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# QUALITY-TOOLS

**HIGHEST QUALITY** **STRONG BRANDS** **OVER 35.000 PRODUCTS**

- Cutting tools
- Clamping systems
- Measuring equipment
- Hand tools
- Abrasives
- Workshop equipment

Fast delivery from Germany to Romania **24-72 Hrs**

ROCAST

Șos. Odăii, Nr. 62 - 68, Otopeni, Jud. Ilfov | Tel.: 0799 402 343 | format@rocast.ro

2017 - 2018

ROCAST

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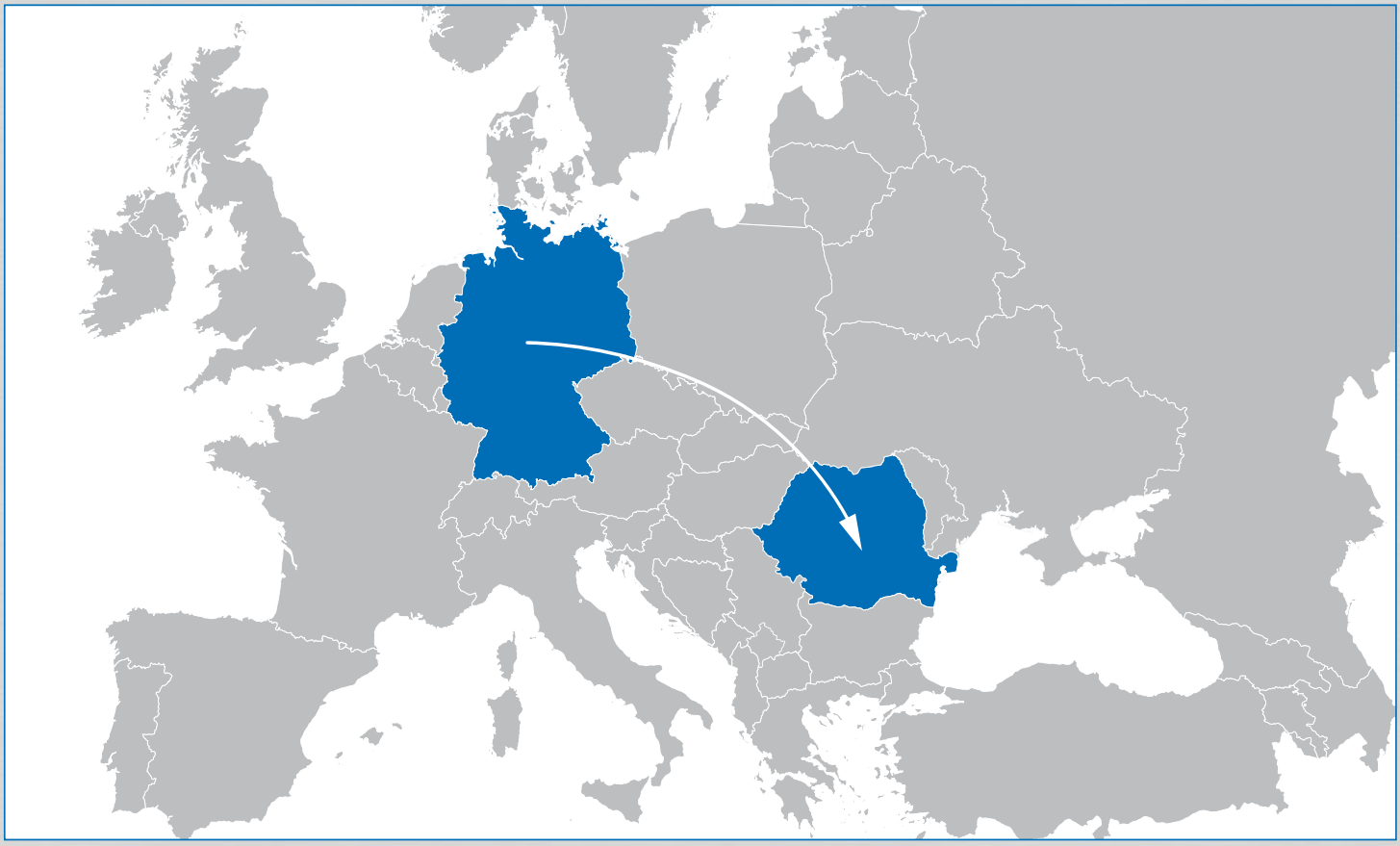
# Un parteneriat de succes

ROCAST vă oferă în România direct din depozitul central din Germania peste 35.000 de unelte și scule de cea mai înaltă calitate la prețuri competitive.

ROCAST vă asigură livrări rapide la prețuri rezonabile:

livrare în 24 de ore - cost livrare 20€
livrare în 72 de ore - cost livrare 15€
livrare în 10 zile - gratuit



Prețurile din catalog sunt exprimate în Euro, nu conțin TVA și se facturează la cursul BNR din ziua respectivă.

## STRONG PARTNER
## IMPRESSIVE CHOICE

Quality, experience and service. An unbeatable combination. As always. See for yourself: on the following pages you will find top quality products for industry and trade. And that's what makes FORMATplus stand out.

Our strength is your advantage.
And we are:

**1 CUSTOMER-DRIVEN**
Take advantage of our years of experience.

**2 REASONABLY PRICED**
We calculate the best price for you. Always.

**3 GUARANTEED**
We guarantee the quality of our tools. Every day.

**4 EFFICIENT**
48 to 72 hour delivery service depending on cost and location.

**5 EXCLUSIVE**
Only from us: FORMAT tools of the highest quality. That's a promise.

**6 VERSATILE**
Peace of mind: More than 36,000 items permanently in stock.

**7 COMPETENT**
Do you need advice on managing your materials? We can help. Every time.

**8 FLEXIBLE**
Special tools needed?
We're happy to get them for you.

# NATIONWIDE **COMPETENCE**

## PREMIUM TRADE TOOLS
ALWAYS CLOSE BY

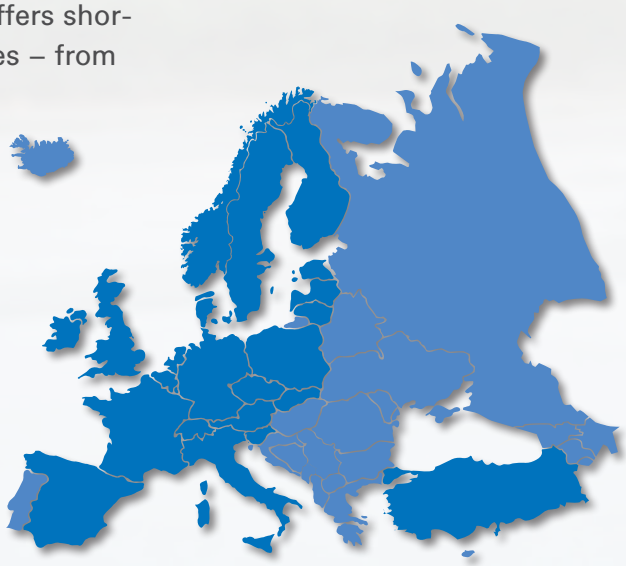
No boundaries: United Kingdom and across Europe, we have been known for many years as a system supplier and tool specialists. We keep moving and share our success with our Partners. In industry, trade, and in various institutions our customers have a wide range of benefits that only a strong and broad-based coalition of leading dealers can offer; long-term.

Your benefits:

- **Fair prices**
- **Highest delivery standards**
- **Perfect service**
- **Proper warehousing**

Proximity to our customers is how we work: our Electronic Logistics Centre (ELC) offers shorter therefore faster routes – from ordering to delivery of goods.

You save time.
You save money.



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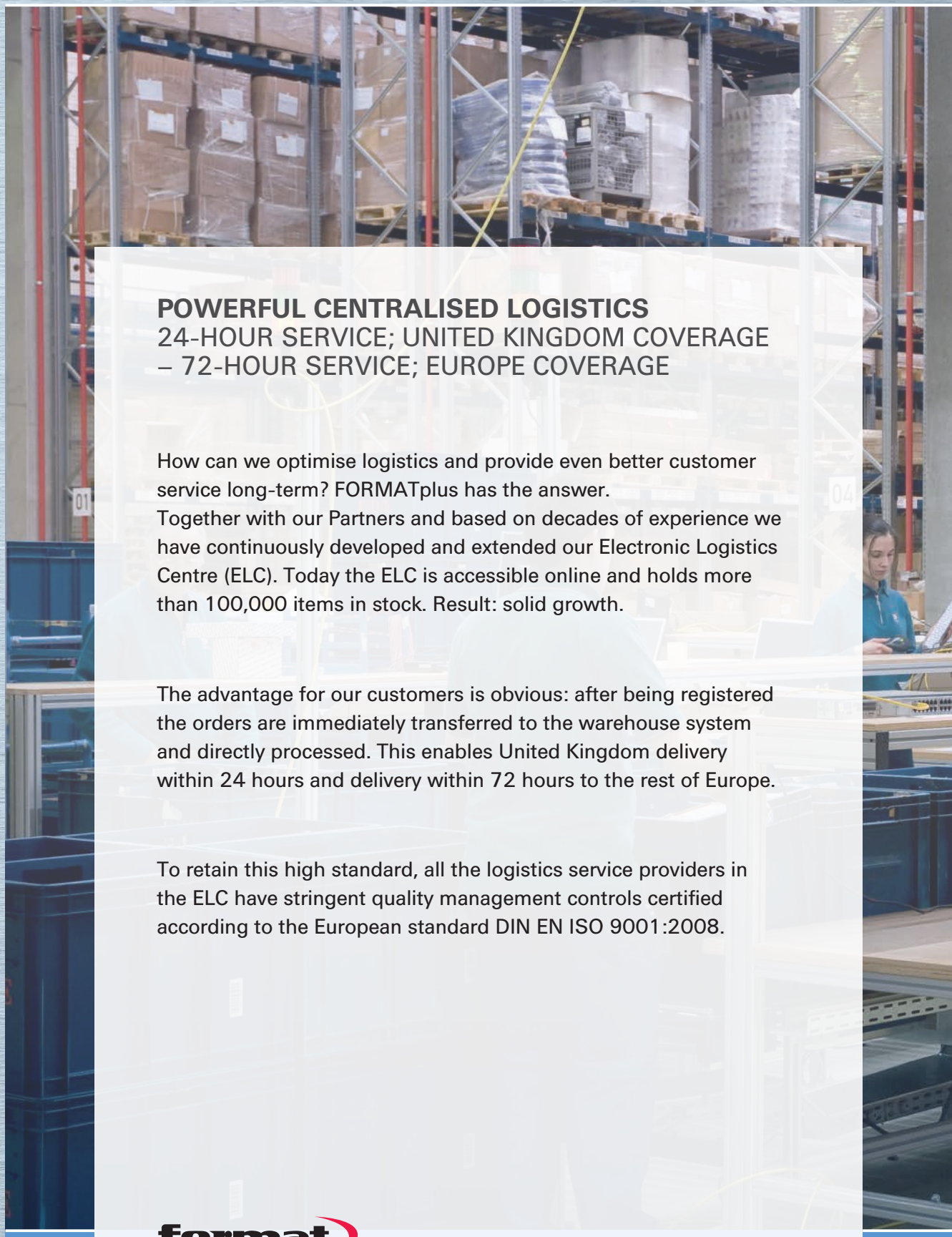
By your side
throughout
Europe.

# SERVICE **BY THE SHORTEST ROUTE**



## POWERFUL CENTRALISED LOGISTICS
24-HOUR SERVICE; UNITED KINGDOM COVERAGE – 72-HOUR SERVICE; EUROPE COVERAGE

How can we optimise logistics and provide even better customer service long-term? FORMATplus has the answer.
Together with our Partners and based on decades of experience we have continuously developed and extended our Electronic Logistics Centre (ELC). Today the ELC is accessible online and holds more than 100,000 items in stock. Result: solid growth.

The advantage for our customers is obvious: after being registered the orders are immediately transferred to the warehouse system and directly processed. This enables United Kingdom delivery within 24 hours and delivery within 72 hours to the rest of Europe.

To retain this high standard, all the logistics service providers in the ELC have stringent quality management controls certified according to the European standard DIN EN ISO 9001:2008.

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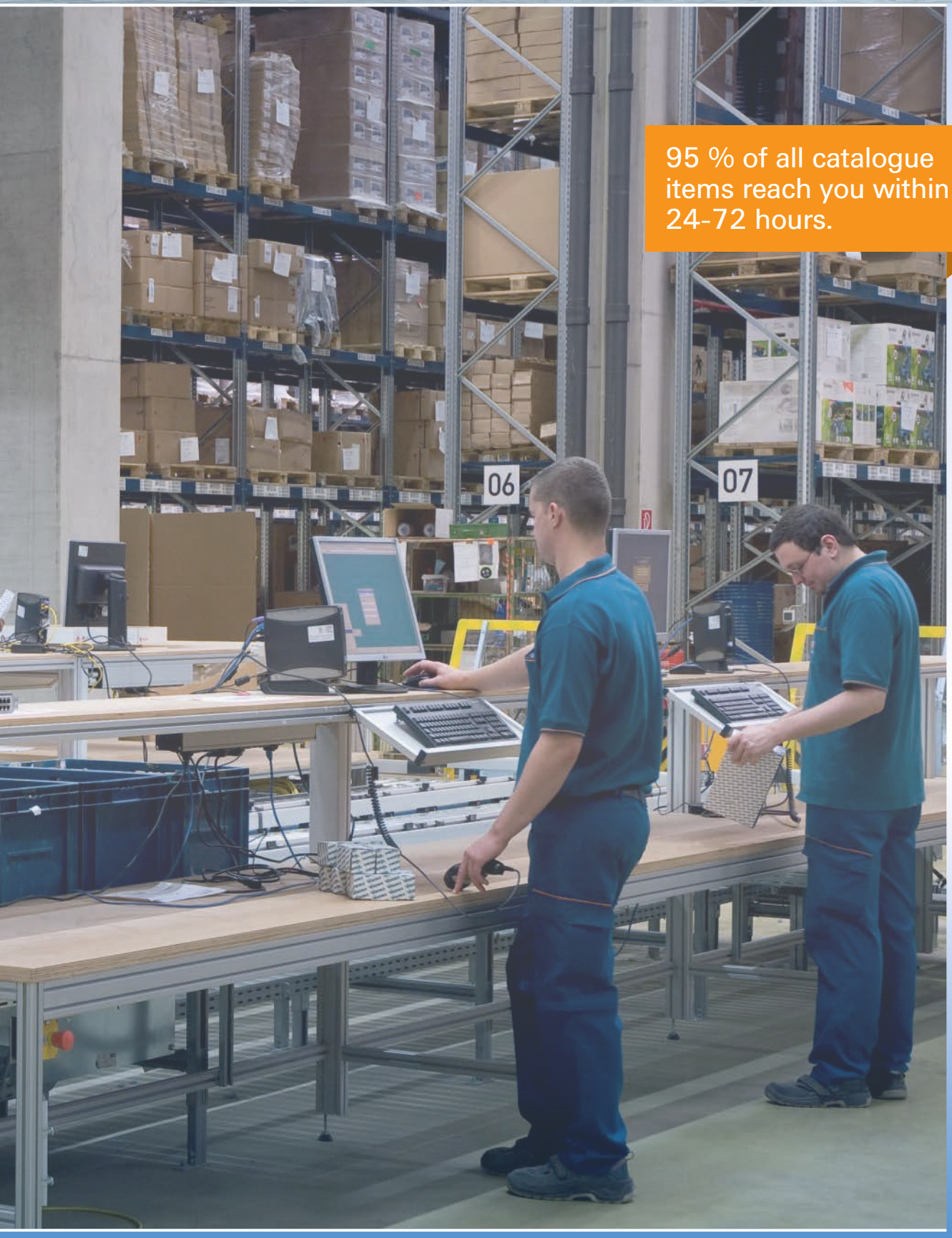


95 % of all catalogue items reach you within 24-72 hours.

# AN ALTERNATIVE WITH **FORMAT**

## QUALITY THROUGHOUT THE RANGE
THE CHOICE SPEAKS FOR ITSELF

The wishes, expectations and requirements of our customers are our top priority: As a Partner of FORMATplus we therefore rely on a two brand strategy.

On the one hand our range offers the branded tools of a leading international manufacturer: every professional knows them. They have been proven through daily use and are the first choice in many companies.

On the other hand in FORMAT we have the economical, high-quality alternative to the branded products: our trade name brand is made by leading manufacturers according to our strict guidelines.

Thus for more than 25 years FORMAT has stood for quality, which is indispensable in industry and trade today and is underlined time and again by its continued growth.

You have the choice.

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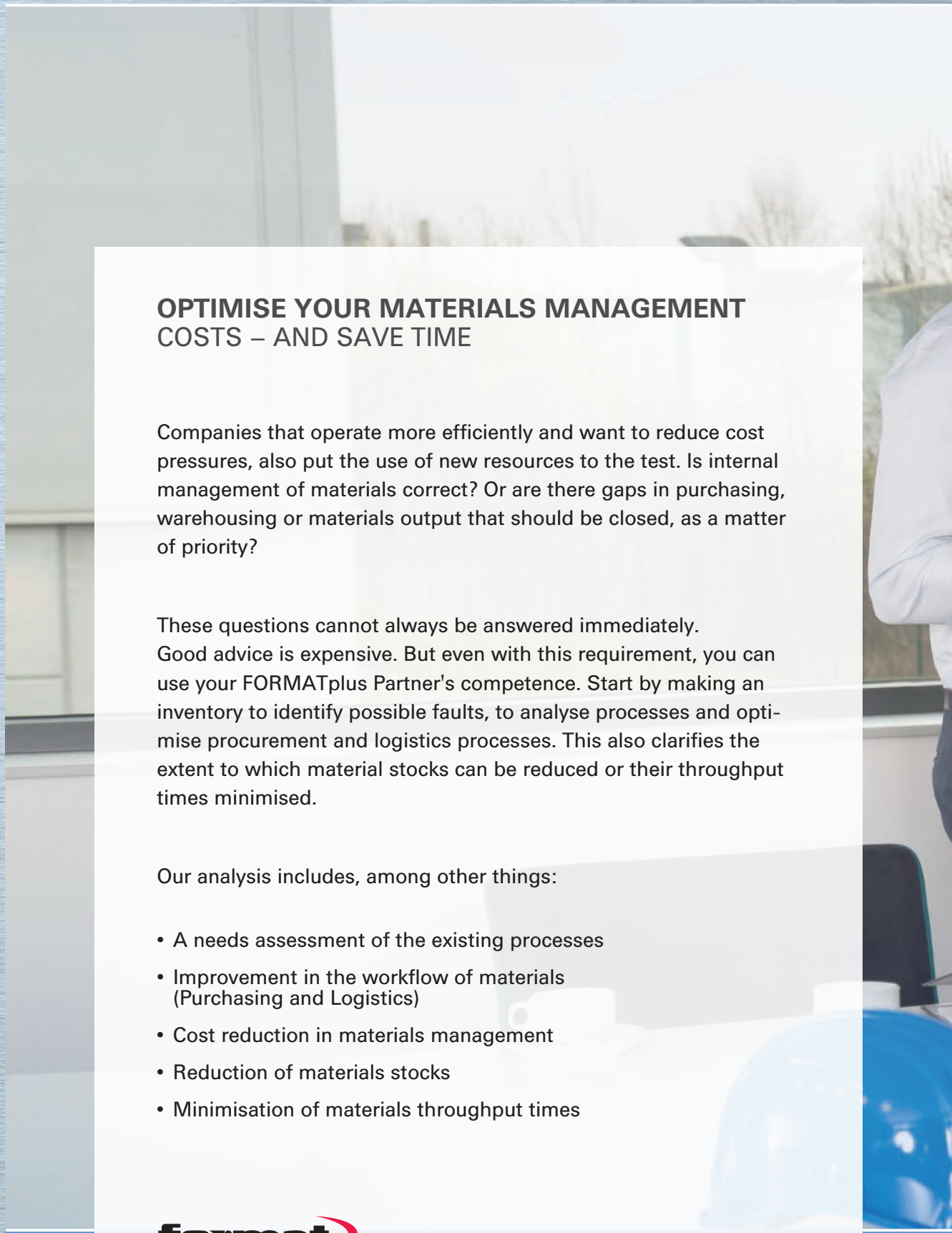
Tried and tested
quality and innovation
for your company.

# PROCESSES **PERFECTED**



## OPTIMISE YOUR MATERIALS MANAGEMENT
COSTS – AND SAVE TIME

Companies that operate more efficiently and want to reduce cost pressures, also put the use of new resources to the test. Is internal management of materials correct? Or are there gaps in purchasing, warehousing or materials output that should be closed, as a matter of priority?

These questions cannot always be answered immediately.
Good advice is expensive. But even with this requirement, you can use your FORMATplus Partner's competence. Start by making an inventory to identify possible faults, to analyse processes and optimise procurement and logistics processes. This also clarifies the extent to which material stocks can be reduced or their throughput times minimised.

Our analysis includes, among other things:

- A needs assessment of the existing processes
- Improvement in the workflow of materials (Purchasing and Logistics)
- Cost reduction in materials management
- Reduction of materials stocks
- Minimisation of materials throughput times

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Together we will
optimise your
running costs.

# INCREASED **EFFICIENCY**

## SYSTEMS FOR OPTIMAL LOGISTICS
PROVEN TECHNOLOGY FOR YOUR BUSINESS

Our "toolbox" is not limited to just transport. If required, we also provide technical systems for efficient materials management:

eproc.III
Die Procurement-Lösung

Electronic procurement solutions specifically for industrial companies

ETT
TOOL TERMINAL

Automatic materials delivery system with computer support

[KANBAN]
LOGISTIKSYSTEM

Shelf system for control of materials in continual demand

Further questions?
We're here to help.
Give us a call.

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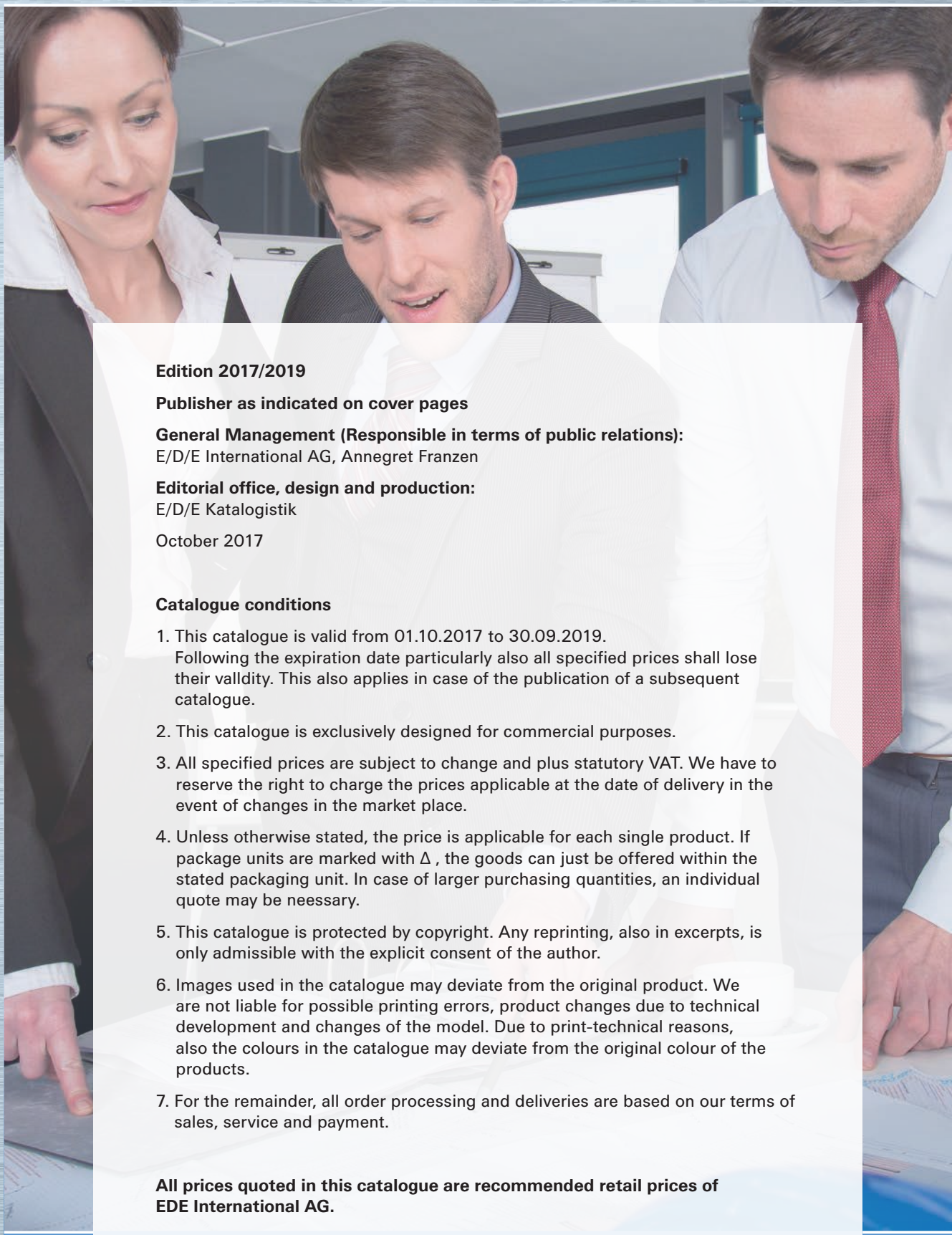
Together we'll
improve your
productivity.

# IMPRINT



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October 2017

**Catalogue conditions**

1. This catalogue is valid from 01.10.2017 to 30.09.2019.
   Following the expiration date particularly also all specified prices shall lose their valldity. This also applies in case of the publication of a subsequent catalogue.
2. This catalogue is exclusively designed for commercial purposes.
3. All specified prices are subject to change and plus statutory VAT. We have to reserve the right to charge the prices applicable at the date of delivery in the event of changes in the market place.
4. Unless otherwise stated, the price is applicable for each single product. If package units are marked with Δ , the goods can just be offered within the stated packaging unit. In case of larger purchasing quantities, an individual quote may be neessary.
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6. Images used in the catalogue may deviate from the original product. We are not liable for possible printing errors, product changes due to technical development and changes of the model. Due to print-technical reasons, also the colours in the catalogue may deviate from the original colour of the products.
7. For the remainder, all order processing and deliveries are based on our terms of sales, service and payment.

**All prices quoted in this catalogue are recommended retail prices of EDE International AG.**

# FOR BETTER **ORIENTATION**

## Item search and order placement made easy!

*Don't forget! Please state in every order!*

**Three details for a secure order processing:**

- 8-digit **article number** of the required article
- **Quantity**
- For control purposes – the **article description**

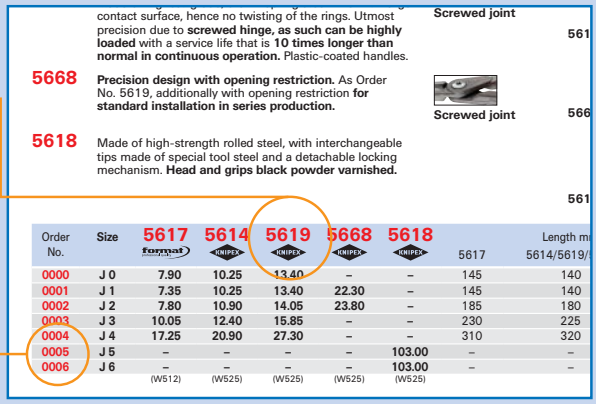
**Product groups:**
Our main catalogue contains a comprehensive tool range. To simplify the product search, the catalogue is divided in **9 product groups**.

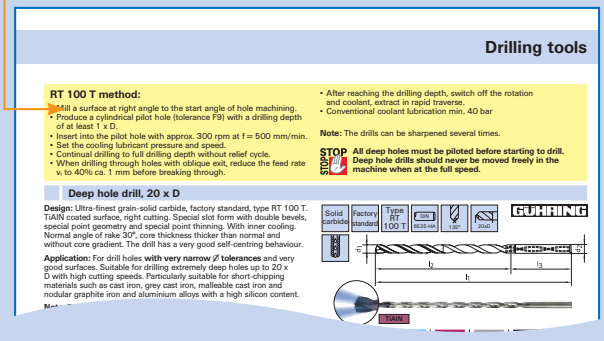
For a faster orientation you can find an overview with images of the content of the respective subgroup in front of every **product group**.

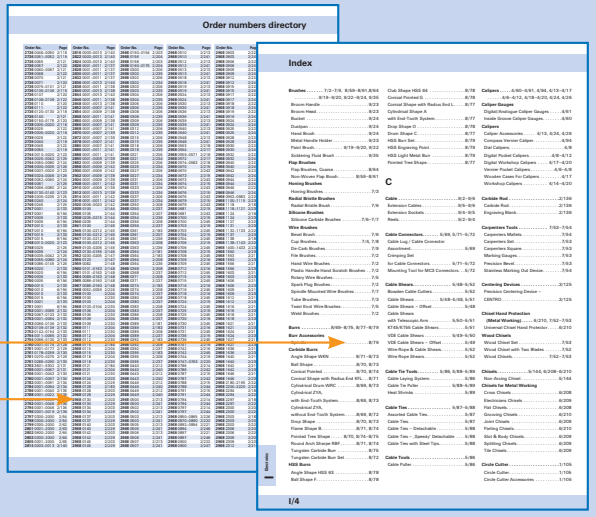
**Item numbers:**
Every single article is identified by an explicit item number. The item number consists of the 4-digit **main number** that you can find above the price column and the 4-digit **end number** that defines the different types or sizes of the respective article.

**All prices incl. VAT per piece (if not stated otherwise).**

**Table of Contents:**
**General reference:**
All texts, that are **highlighted in yellow**, constitute general reference texts.




At the end of the catalogue you will find the **key** and the **number directory**.

**www.format-quality.com**

format professional quality

# Guaranteed over all good dimensions

FORMAT means for you:
Best quality with an outstanding price-performance ratio. An added value that benefits you immediately.

You can be assured of the following: FORMAT products meet the strictest quality requirements and are therefore perfectly suitable for daily use in industry and craft.

With FORMAT you have a bigger choice, more possibilities when equipping your company. What else do you need?

format professional quality GT

NEW

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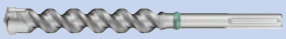

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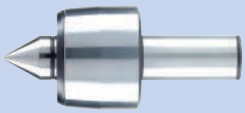

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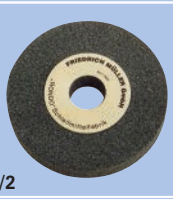

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**Index**
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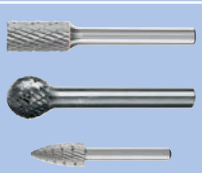
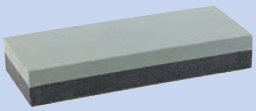
**Order numbers directory**
I/27–I/37

| | | | |
|---|---|---|---|
| NEW 1/129 | 1/138 | 1/234 | Drills, circular cutters, countersinks, reamers, thread-cutters, thread-millers, chisels, drill bits and deburring tools |
| 2/144 | 2/163 | 2/202 | Milling, sawing, broaching tools, lathe tools, knurling tools, indexable tools for milling, drilling, turning, grooving and threading |
| 3/39 | 3/133 | 3/173 | Lathe chucks, centre punches, tool holders, tapping chucks, vices, clamps, vacuum chucks, magnetic clamps |
| NEW 4/89 | 4/104 | 4/131 | Calipers, micrometers, dial indicators, external and internal calipers, measuring stands, gauge blocks, ring gauges and mandrels, magnifiers, microscopes, squares, folding rulers, tape measures, laser measuring technology, water balances, scales, concentricity and shaft testing devices, measurement and control panels, height and marking gauges, surface roughness testers, stopwatches and measuring and testing instruments |
| 5/78 | 5/107 | 5/131 | Screw vices and clamps, electronic water pumps and grip pliers, wire cutters, stripping and crimping tools, tools for photovoltaics, voltage and continuity testers, bolt cutters, screws, ratchets, plugs, hooks, hex and Torx spanners, friction ratchets, sparking tools |
| 6/117 | 6/193 | 6/217 | Socket wrench sets and kits, tool sets, workshop trolleys, sliding and folding workbenches, power socket inserts, torque wrenches, screwdrivers and sets, bits and accessories, tweezers, files, scrapers, metal saws, hammers, chisels, pin punches, punches, strippers and automotive tools |
| 7/35 | 7/47 | 7/81 | Wire brushes, sheet metal shears and punches, pipe wrenches, pipe cleaning and testing equipment, pipe benders and cutters, installation, woodworking and masonry tools, knives, glass cutters, tool boxes and cases |
|  8/69 |  8/87 | NEW 8/89 | Sharpening, cutting and grinding discs, diamond wheels, cutting discs and pins, sharpeners on backing material, fleece, sharpening pins and files, abrasives, handlappers, polishing tools, grinding and polishing pastes |
| 9/60 | 9/79 | 9/131 | Cable drums, current distributors, hand-held and site lamps, painters tools, brooms, soldering and welding equipment, blind rivets, blind rivet nuts, compressed air couplings and treatments, compressed air hoses, tyre inflators, blow-out pistols, cooling systems, marking, chemical products and industrial safety |
| | | | Imprint,<br>Index,<br>Order numbers directory |

NEW

**All items marked with this icon have been added to our range.**

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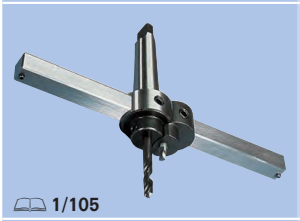
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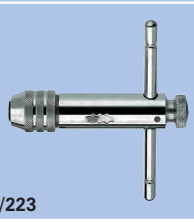
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## Pictogram Abstracts

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tool material | e.g. | HSS | High-speed-HSS | HSS Co5 | HS steel with 5% Cobalt alloy content | Solid carbide | Solid carbide |
| Standard | e.g. | DIN 208-B | Equiv. to DIN 208 Form B – Spiral fluted | DIN 338 | Equiv. to DIN 338 | EN 22568 | Complies with the European standard 22568 |
| Type | e.g. | Type N | Machining of materials with normal resistance and hardness | Type W | Machining of materials with low resistance and hardness | Type H | Machining of materials with high resistance and hardness |
| Number of cutting edges | e.g. | Z 4 | Number of teeth 4 (4 cuts) | | | | |
| Thread | e.g. | M | Metric thread | 60° | With edge angle 60° | 2–3 C | Chamfer 2–3 threads, Form C |
| Tolerance | e.g. | H7 | Tolerance zone H7 | ISO 2 6H | Metric ISO threads/FORUM Usage class 2 Medium tolerance 6H | | |
| Shaft design | e.g. | DIN 1835-B | Cyl. shaft with Carrier surface acc. to DIN 1835 B | | Cylinder shaft | | |
| Point angle | e.g. | 90° | Countersink with 90° point angle | 130° | Spiral drill 130° point angle | | |
| Spiral angle | e.g. | 25–30° | Right spiral with 25° to 30° angle | ca. 7° | Left spiral with approx. 7° angle | | |
| Application | e.g. | | For through and blind holes | | Feed direction | | Dry machining possible |

## Cutting speed and feed rate

**All information regarding cutting speed and feed rate correspond to a recommended guideline.**
**This requires stable machine conditions, a low-vibration workpiece and the use of a suitable coolant.**

**Symbol mapping**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard processing over 60 HRC | Rust and acid resistant steels (INOX) | Ti, Ti-alloy and special steels | Cast-iron materials | Al, Al- and Mg alloy | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1040 | ● | ● | ● | ● | ● | | | | ◐ | | ● | ○ | ● |

● recommended ◐ suitable ○ limited suitability

**Mapping of values**
**Cutting speed $V_c$**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard processing over 60 HRC | Rust and acid resistant steels (INOX) | Ti, Ti-alloy and special steels | Cast-iron materials | Al, Al- and Mg alloy | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1040 | **35** | 35 | 25 | 25 | 19 | | | | 30 | | **30** | 50 | **35** |

**Font bold = recommended** Font normal = suitable

| Order No. | Ø h8 mm | etc. → | Example calculation (Spiral drill Ø 4.0 mm, mild steel up to 850 N / mm²) | | | ← etc. | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0101 | 1.0 | | **Value sought 1:** | $n =$ | number of revolutions per minute (r/min) | | 0,090 |
| 0102 | 2.0 | | Formula: | $n =$ | $\frac{V_c \times 1000}{D \times \pi}$ | | 0,095 |
| 0103 | 3.0 | | Calculation: | $n =$ | 35 m/min x 1000 / 4.0 mm x 3,14159 | | 0,100 |
| 0104 | 4.0 | | Solution: | $n =$ | 2785/min | | 0,105 |
| 0105 | 5.0 | | **Value sought 2:** | $v_f =$ | feed rate (mm/min) | | 0,110 |
| 0106 | 6.0 | | Formula: | $v_f =$ | n x f | | 0,115 |
| etc. | etc. | | Calculation: | $v_f =$ | 2785/min x 0.105 mm/U | | etc. |
| | | | Solution: | $v_f =$ | 292 mm/min | | |

## Surface finishing

Tools made of high speed steel or carbide because of their generally good basic properties are supplied with a bright finish without extra surface treatment. For special applications it is recommended that tools are optimised for diverse applications by surface finishing processes, to achieve the following goals:

- **Extended service life**
- **Lower cutting pressure**
- **Higher cutting speeds and feed rates**
- **Better surface quality**
- **Better dry processing**
- **Optimised hard processing**

### Surface finishing benefits at a glance

| | |
|---|---|
| TiN | Wear- and diffusion resistance |
| TiCN | Hardness, toughness |
| TiAlN AlTiN | Heat hardness, oxidation stability |
| Fire | Hardness, toughness, wear resistance |
| Steam | Lower slippage resistance |
| Nitrated | Hardness, wear resistance on cast iron |
| Signum | Extreme hardness, extreme heat resistance |
| Sirius® | Lower slippage resistance, high wear resistance |
| ZrN | High hardness, low friction coefficient |

### Titanium-nitride coating

TiN

Titanium-nitride is a gold-coloured protective layer applied by a PVD process (Physical Vapour Deposition). Higher hardness combined with a lower friction coefficient achieves a significantly longer service life and improved cutting performance. The TiN coating is primarily used for drills and thread bores.

### Titanium carbon-nitride coating

TiCN

Titanium carbon-nitride is a wear-protection layer applied by PVD, being harder than TiN and having a lower friction coefficient. Tool performance is increased through greater hardness and ductility combined with improved wear.
The TiCN coating is primarily used for NC drill bits, thread bores and end mills

### Titanium aluminium-nitride coating

TiAlN

Titanium aluminium-nitride is a multi-layer ceramic coating applied using the PVD method. The resulting greater hardness and oxidation stability make this coating ideal for higher speeds and feed rates for extended tool life.
The TiAlN coating is used mainly in drilling and milling machine processes, and is also recommended for dry processing.

### Aluminium titanium-nitride coating

AlTiN

Aluminium titanium nitride has a higher Al content compared to titanium aluminium nitride. This ensures an even higher oxidation resistance and has a greater layer hardness. The AlTiN coating is used mainly in drilling and milling machine processes, and is also recommended for dry processing.

### Zirconium nitride coating

ZrN

Zirconium nitride is suitable for machining non-ferrous materials, and especially for aluminium alloys. This coating is not good for cold welding of aluminium. Associated with high layer hardness and oxidation resistance are advantages that increase tool service life and effective feed rate and cutting speed.

### Fire coating (TiAlN/TiN)

Fire

Fire is a TiAlN/TiN multi-layer coating with a gradient structure. The combined benefits of TiAlN and TiN coatings are very good wear resistance with high thermal stability, hardness and toughness. In addition to the conventional wet application, this layer can also be used for minimum quantity lubrication and dry machining.
Fire coating is suitable for all spiral drills, thread bores and end mills, as well as removable discs.

### Steam tempering

steam

Steam tempering is a form of surface processing which reduces slide resistance and prevents edge build-up. Cold welding can also be avoided.
Steam tempering is primarily used with drills and thread bores.

### Nitriding

Nitrated

Nitriding is a surface machining process that increases hardness and wear resistance. Particularly for working with highly abrasive materials such as cast iron, which nitriding is particularly suitable for.
Nitriding is primarily used with drills and thread bores.

### Signum coating (TiALN/SiN)

Signum

Due to the special nano-composite structure with a protective layer of TiALN and SiN, this coating, with 5500 HV, is one of the hardest on the market. Particularly for difficult-to-machine materials. High heat wear resistance combined with high diffusion resistance.

### Sirius coating (TiAlN/zirconium nitride)

Sirius®

Sirius coating for the protection against damages to the thread cutter: the combination of TiAlN and zirconium nitride generates particularly tough tool surface with low friction values.

## Surface finishing processes compared

| Surface finish | Colour | Coating structure | Thickness µm | Hardness HV | Friction coefficient versus steel temperature | Application |
|---|---|---|---|---|---|---|
| TiN | gold-yellow | single-layer | 1–4 | 2300 | 0.50 | max. 600 C° |
| TiCN | light brown | multi-layered | 1–4 | 3000 | 0.40 | max. 400 C° |
| TiAlN AlTiN | violet | multi-layered | 3 | 3200 | 0.55 | max. 750 C° |
| Fire | red | multi-layered | 2–6 | 3300 | 0.60 | max. 850 C° |
| Steam | grey | surface treatment | max. 5 | 400 | – | max. 550 C° |
| Nitrated | silver-grey | surface treatment | 20 | 1300 | – | max. 550 C° |
| Signum | red-bronze | multi-layered | 1–5 | 5500 | 0.55 | max. 800 C° |
| Sirius® | pale gold | multi-layered | 1–5 | 3400 | 0.40 | max. 800 C° |
| ZrN | light-gold | multi-layer | 0.1–3 | 3400 | 0.50 | max. 900 C° |

## Overview – HSS spiral drill programme

| Order No. | 1040 | 1038 | 1041 | 1064 | 1055 | 1056 | 1058 | 1061 | 1063 | 1066 | 1008 | 1035 | 1009 | 1001 | 1002 | 1004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø mm from–to | 0.1–1.00 | 1–10.2 | 1–10.2 | 2.5–6 | 1–14 | 1–20 | 1–20 | 1–20 | 1–14 | 1–14 | 1–16 | 10.5–16 | 1–16 | 0.2–20 | 0.2–20 | 1–16 |
| DIN | 1899-A | | | 1897 | 1897 | 1897 | 1897 | 1897 | 1897 | 1897 | 338 | 338 | 338 | 338 | 338 | 338 |
| Material | HSS Co5 | HSS | HSS | | HSS | HSS | HSS Co5 | HSS Co5 | HSS Co5 | HSS-E-PM | HSS | HSS | HSS | HSS | HSS | HSS |
| Drill type | N | | | | N | N | INOX | INOX | GU500 DZ | GT 500 DZ | N | N | N | N | N | N |
| Coating | Bright | Bright | Bright | Steam | Steam | Steam | Steam | TiN | TiN | TiN | Bright | Bright | Bright | Steam | Steam | TiN |
| Point angle | 118° | | | 118° | 118° | 118° | 130° | 130° | 118° | 130° | 118° | 118° | 118° | 118° | 118° | 118° |
| Thinning | | | | | A | A | A | A | | Special | | | C | | | A |
| Page | 1/8 | 1/8 | 1/8 | 1/9 | 1/9 | 1/9 | 1/10 | 1/10 | 1/12 | 1/13 | 1/14 | 1/15 | 1/16 | 1/17 | 1/17 | 1/20 |

## Material group

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ | ◐ | | ● | ● | ● |
| Steels up to 1000 N/mm² | | ◐ | | | ◐ | ◐ | ◐ | ● | ● | ◐ | ◐ | | | | ◐ | ◐ | ◐ |
| Steels up to 1400 N/mm² | | ◐ | | | ○ | | | ● | ● | ◐ | ● | | | | | | |
| Steels up to 42 HRC | | ◐ | | | | | | ● | ● | | ● | | | | | | |
| Steels up to 52 HRC | | | | | | | | ◐ | ◐ | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | | | | | | ● | ● | ● | ◐ | | | | | | |
| Ti steels, Ti alloys, special steels | | ◐ | | | | | | ◐ | ◐ | | | | | | | | |
| Cast-iron materials | | ◐ | | | ◐ | ● | ● | ◐ | ◐ | ● | ● | ◐ | | | ◐ | ◐ | ● |
| Al, Al- and Mg alloy | | ◐ | ○ | ○ | ○ | ◐ | ◐ | | | ● | | | | | | | |
| Copper, brass, bronze | | ◐ | | | ○ | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ○ | | | ◐ | ◐ | ◐ |

● recommended ◐ suitable ○ limited suitability

## Overview – HSS spiral drill programme

| Order No. | 1006 | 1005 | 1020 | 1010 | 1013 | 1014 | 1016 | 1027 | 1023 | 1018 | 1021 | 1022 | 1025 | 1026 | 1048 | 1045 | 1046 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø mm from–to | 1–16 | 0.2–13 | 1–16 | 1–13 | 1–19 | 1–19 | 1–14.5 | 10.5–20 | 1–13 | 1–13 | 1–14 | 1–13 | 1–13 | 1–13 | 1–13 | 1–13 | 1–13 |
| DIN | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 338 | 340 | 340 | 340 |
| Material | HSS Co 5 | HSS Co 5 | HSS Co 8 | HSS | HSS Co 5 | HSS Co 5 | HSS Co 5 | HSS | HSS Co 5 | HSS Co 5 | HSS-E-PM | HSS Co 5 | HSS Co 5 | HSS Co 5 | HSS roll-forged | HSS | HSS |
| Drill type | N | N | N | W | Ti | Ti | Ti | N | FU | GU 500 DZ | GT 500 DZ | TF | INOX | INOX | N | N | N |
| Coating | Bright | Steam | TiAlN | Bright | Bright | Bright | TiN | Bright | TiN | TiN | TiN | Nitrated | Bright | Bright | | Steam | Steam |
| Point angle | 118° | 118° | 135° | 130° | 130° | 130° | 130° | 118° | 118° | 118° | 130° | 130° | 130° | 130° | 118° | 118° | 118° |
| Thinning | Split point | A | Split point | | C | C | C | | Special | Special | Special | A | | | | | |
| Page | 1/22 | 1/23 | 1/24 | 1/26 | 1/27 | 1/27 | 1/29 | 1/24 | 1/31 | 1/31 | 1/35 | 1/32 | 1/34 | 1/34 | 1/37 | 1/37 | 1/37 |

## Material group

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ◐ | | ◐ | | | ◐ | ● | ● | ● | ◐ | ◐ | | | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ◐ | | | | ◐ | ● | ◐ | ◐ | ◐ | ● | | | | ◐ | ◐ |
| Steels up to 1400 N/mm² | | | ◐ | ◐ | | ◐ | ◐ | ◐ | | ◐ | ◐ | ● | ● | | | | | |
| Steels up to 42 HRC | | | ● | ◐ | | ◐ | ◐ | ◐ | | | | ● | ● | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ◐ | ● | | ● | ● | ● | ● | ● | ● | ◐ | ● | ● | ● | | | |
| Ti steels, Ti alloys, special steels | | ○ | | ● | | ● | ● | ● | ◐ | | | | | ◐ | ◐ | | | |
| Cast-iron materials | | | ◐ | | ◐ | | | | | ● | ● | ● | ◐ | | | ◐ | ◐ | ◐ |
| Al, Al- and Mg alloy | | | | | ● | | | | | ● | ● | | | ● | ● | | | |
| Copper, brass, bronze | | | ◐ | ◐ | ◐ | | | ◐ | | ● | ● | | | ● | ● | | ◐ | ◐ |

● recommended ◐ suitable ○ limited suitability

## Overview – HSS spiral drill programme

| Order No. | 1047 | 1051 | 1053 | 1067 | 1071 | 1052 | 1083 | 1080 | 1081 | 1082 | 1089 | 1085 | 1092 | 1091–1096 | 1100–1107 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø mm from–to | 1–13 | 1–13 | 1–13 | 3–12 | 3–12 | 2.5–12 | 10–50 | 10–50 | 10–50 | 10–34 | 10–50 | 7.8–30 | 8–30 | 16–40 | M3–M12 |
| DIN | 340 | 340 | 340 | 1869 | 1869 | 1898/1 | 345 | 345 | 345 | 345 | 341 | 343 | 1870 | | Factory standard |
| Material | HSS Co5 | HSS Co5 | HSS Co5 | HSS | HSS Co5 | HSS | HSS roll forged | HSS | HSS | HSS Co5 | HSS | HSS | HSS | Solid carbide (plate) | HSS |
| Drill type | Ti | TF | GU500 | TF | TF | N | N | N | N | INOX | N | N | TF | | N |
| Coating | Bright | Nitrated | TiN | Nitrated | TiAlN | Steam | Bright | Steam | Steam | Bright | Steam | Steam | Steam | Bright | TiN / Bright |
| Point angle | 130° | 130° | 118° | 130° | 130° | 118° | 118° | 118° | 118° | 130° | 118° | 120° | 130° | 140° | 118° |
| Thinning | | A | | A | A | A | | A | A | | A | | A | Special | A |
| Page | 1/38 | 1/39 | 1/39 | 1/40 | 1/40 | 1/36 | 1/41 | 1/42 | 1/42 | 1/43 | 1/44 | 1/45 | 1/46 | 1/47 | 1/51 |

## Material group

| | 1047 | 1051 | 1053 | 1067 | 1071 | 1052 | 1083 | 1080 | 1081 | 1082 | 1089 | 1085 | 1092 | 1091–1096 | 1100–1107 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | | ◐ | ● | ● | ◐ | ● | ● | ● | ● | | ● | ● | ● | | ● |
| Steels up to 1000 N/mm² | | | ● | ◐ | | ● | ◐ | | ◐ | ◐ | | ◐ | ◐ | ◐ | | ◐ |
| Steels up to 1400 N/mm² | | ◐ | ● | ◐ | | ● | | | | | | | ◐ | | | |
| Steels up to 42 HRC | | ◐ | ● | | ◐ | ● | | | | | | | | | ● | |
| Steels up to 52 HRC | | | | | | ◐ | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | ● | ◐ | | ● | | | | ● | | | | | ● | ◐ |
| Ti steels, Ti alloys, special steels | | ● | | | | ● | | | | ◐ | | | | | | |
| Cast-iron materials | | | ◐ | ● | ● | | ● | | ◐ | ◐ | | ◐ | ◐ | ● | ● | ◐ |
| Al, Al- and Mg alloy | | | | ● | ◐ | | ◐ | | | | ● | | ◐ | | ● | ◐ |
| Copper, brass, bronze | | | ◐ | ● | | ◐ | | | ◐ | ◐ | ◐ | ◐ | | | | ◐ |

● recommended ◐ suitable ○ limited suitability

## Overview – HSS spiral drill programme

| Order No. | 1109–1115 | 1120–1131 | 1133 | 1129–1135 | 1132–1137 | 1138 | 1139 | 1140 | 1143 | 1146 | 1149 | 1147 | 1150 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø mm from–to | M3–M12 | 0.5–10 | 1–3.15 | 0.5–12.5 | 1–10 | 1.6–10 | 1–10 | 3–20 | 3–20 | 5–20 | 5–20 | 6–12 | 6–12 |
| DIN | 8374–8378 | 333 | Factory standard | 333 | 333 | 333 | 333 | Factory standard | Factory standard | Factory standard | | Factory standard | Factory standard |
| Material | HSS | HSS | HSS | HSS | HSS | HSS | HSS | HSS Co5 | HSS Co5 | HSS Co5 | HSS Co5 | HSS Co5 | HSS Co5 |
| Drill type | N | Centring drill | Centring drill | Centring drill | Centring drill | Centring drill | Centring drill | N | N | N | N | N | TF |
| Coating | Steam | Bright / TiN | Bright | Bright | Bright | Bright | Bright | Bright | Bright | TiN | TiN | TiN | TiN |
| Point angle | 118° | 60°/120° | 60°/120° | 60°/120° | 60°/120° | 60°/120° | 60°/120° | 90° | 120° | 90° | 120° | 90° | 120° |
| Thinning | A | A | A | A | B | A | R | | | | | | |
| Page | 1/52 | 1/53 | 1/54 | 1/54 | 1/55 | 1/55 | 1/56 | 1/56 | 1/57 | 1/56 | 1/57 | 1/57 | 1/57 |

## Material group

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ◐ | ● | ◐ | ● | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ |
| Steels up to 1400 N/mm² | | | ◐ | ◐ | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Steels up to 42 HRC | | | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | ● | ◐ | | ◐ | ◐ | ◐ | ● | ● | ● | ● | ● | ● |
| Ti steels, Ti alloys, special steels | | | ● | ◐ | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Cast-iron materials | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● | ● | ● |
| Al, Al- and Mg alloy | | ◐ | ● | ● | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● | ● | ● |
| Copper, brass, bronze | | ◐ | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● | ● | ● |

● recommended ◐ suitable ○ limited suitability

## Micro drills

**Design:** HSS Co5, DIN 1899-A, type N.
Special drill, bright surface, right cutting, with reinforced shank, high concentricity and precise point geometry.

Ø tolerance: on spiral part 0/–0.004 mm.

**Application:** For drilling small holes with high drilling accuracy. Particularly suitable for high-alloy steels and for short and long chipping materials.

HSS Co5 | DIN 1899-A | Type N | 118° | 25–30°

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1040 | 18 | 14 | 12 | 14 | | | | | 18 | 5 | 18 | 30 | 40 |

| Order No. | Ø mm | 1040 format bright | PU | Spiral length l mm | Total length mm | Shank Ø h8 mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0010 | 0.10 | 7.65 | 10 Δ | 0.5 | 25 | 1.0 | 0.006 |
| 0015 | 0.15 | 7.45 | 10 Δ | 0.8 | 25 | 1.0 | 0.007 |
| 0020 | 0.20 | 5.85 | 10 Δ | 1.5 | 25 | 1.0 | 0.009 |
| 0025 | 0.25 | 5.25 | 10 Δ | 1.9 | 25 | 1.0 | 0.009 |
| 0030 | 0.30 | 4.90 | 10 Δ | 1.9 | 25 | 1.0 | 0.011 |
| 0035 | 0.35 | 4.45 | 10 Δ | 2.4 | 25 | 1.0 | 0.014 |
| 0040 | 0.40 | 3.71 | 10 Δ | 3.0 | 25 | 1.0 | 0.014 |
| 0045 | 0.45 | 4.19 | 10 Δ | 3.0 | 25 | 1.0 | 0.014 |
| 0050 | 0.50 | 3.63 | 10 Δ | 3.4 | 25 | 1.0 | 0.014 |
| 0055 | 0.55 | 3.82 (W100) | 10 Δ | 3.9 | 25 | 1.0 | 0.020 |

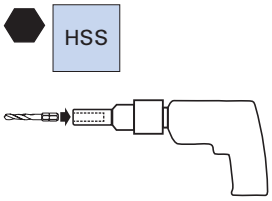
| Order No. | Ø mm | 1040 format bright | PU | Spiral length l mm | Total length mm | Shank Ø h8 mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0060 | 0.60 | 3.50 | 10 Δ | 3.9 | 25 | 1.0 | 0.020 |
| 0065 | 0.65 | 4.08 | 10 Δ | 4.2 | 25 | 1.0 | 0.024 |
| 0070 | 0.70 | 3.39 | 10 Δ | 4.8 | 25 | 1.0 | 0.024 |
| 0075 | 0.75 | 3.71 | 10 Δ | 4.8 | 25 | 1.0 | 0.024 |
| 0080 | 0.80 | 3.58 | 10 Δ | 5.3 | 25 | 1.5 | 0.024 |
| 0085 | 0.85 | 3.82 | 10 Δ | 5.3 | 25 | 1.5 | 0.041 |
| 0090 | 0.90 | 3.58 | 10 Δ | 6.0 | 25 | 1.5 | 0.041 |
| 0095 | 0.95 | 3.92 | 10 Δ | 6.0 | 25 | 1.5 | 0.041 |
| 0100 | 1.00 | 3.58 (W100) | 10 Δ | 6.8 | 25 | 1.5 | 0.041 |

Further dimensions as well as left cutting or in solid carbide available on request. Δ Can only be supplied as a whole packaging unit.

## Twist Drill Bit with 1/4" bit shank DIN 3126

**Design:** HSS, spiral fluted.

**Application:** For drilling soft materials.
For use in hand drills.



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1038 | ● | | | | | | | | | | | ○ | |
| 1041 | ● | | | | | | | | | | | ○ | |

| Order No. | Ø mm | 1038 format | 1041 VÖLKEL | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 0100 | 1.0 | 2.85 | 3.47 | 7 | 32 |
| 0150 | 1.5 | 2.85 | 3.47 | 10 | 32 |
| 0200 | 2.0 | 2.85 | 3.47 | 12 | 34 |
| 0250 | 2.5 | 2.85 | 3.47 | 14 | 36 |
| 0300 | 3.0 | 3.12 | 3.47 | 16 | 38 |
| 0330 | 3.3 | 3.12 | 3.47 | 18 | 40 |
| 0350 | 3.5 | 3.12 | 3.47 | 18 | 40 |
| 0400 | 4.0 | 3.12 | 3.47 | 20 | 44 |
| 0420 | 4.2 | 3.12 | 3.47 | 20 | 45 |
| 0450 | 4.5 | 3.12 | 3.47 | 24 | 46 |
| 0500 | 5.0 | 3.12 | 3.47 | 26 | 50 |
| 0550 | 5.5 | 3.12 (W134) | 3.59 (W161) | 26 | 50 |

| Order No. | Ø mm | 1038 format | 1041 VÖLKEL | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 0600 | 6.0 | 3.12 | 3.59 | 26 | 50 |
| 0650 | 6.5 | 3.12 | 3.59 | 30 | 50 |
| 0680 | 6.8 | 3.12 | 3.59 | 30 | 50 |
| 0700 | 7.0 | 3.24 | 3.59 | 30 | 50 |
| 0750 | 7.5 | 3.24 | 4.21 | 32 | 51 |
| 0800 | 8.0 | 3.24 | 4.21 | 32 | 51 |
| 0850 | 8.5 | 3.24 | 4.83 | 33 | 53 |
| 0900 | 9.0 | 4.02 | 4.83 | 33 | 53 |
| 0950 | 9.5 | 4.02 | 5.40 | 38 | 54 |
| 1000 | 10.0 | 4.02 | 5.40 | 38 | 54 |
| 1020 | 10.2 | 4.02 (W134) | 5.40 (W161) | 38 | 54 |

## Twist drill bit with 1/4" bit shank

**1038** Set consisting of (Order No. 1038).

**1041** Set consisting of (Order No. 1041).

| Order No. | Set contents | 1038 format | 1041 VÖLKEL |
|---|---|---|---|
| 0007 | 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 8.0 | 27.90 | – |
| 0019 | 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5; 5.0; 5.5; 6.0; 6.5; 7.0; 7.5; 8.0; 8.5; 9.0; 9.5; 10.0 | 70.90 (W134) | 59.80 (W161) |

1038 format professional quality

1041 VÖLKEL THREADING SOLUTIONS

## Extra-short sheet metal drills with cyl. Shank

**Design:** HSS, similar to DIN 1897, Type DK 77.
Profile grinding, steam tempered surface, right cutting, with precise double-sided point geometry. With small cross-cutting and curved grinding around the circumference (no bevels). Point thinning according to DIN 1412, form A, Normal angle of rake, core thickness and core gradient.

**Application:** For drilling thin workpieces. For round and accurate drill holes (important for riveting). Particularly suitable for bodywork and metalwork, rivet holes, screw holes etc. as well as for use in hand drills.

**Note:** Further dimensions available on request.

HSS | DIN 1897 | 118° | 25–30°

format professional quality

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1064 | ● | ◐ | ○ | | | | | | | | ◐ | ○ | ○ |

| Order No. | Ø h8 mm | 1064 format steam | PU | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 0250 | 2.5 | 1.37 | 10 | 9.5 | 43 |
| 0300 | 3.0 | 1.19 | 10 | 11.0 | 46 |
| 0310 | 3.1 | 1.21 | 10 | 11.0 | 49 |
| 0320 | 3.2 | 1.21 | 10 | 11.0 | 49 |
| 0330 | 3.3 | 1.21 | 10 | 11.0 | 49 |
| 0350 | 3.5 | 1.31 | 10 | 12.0 | 52 |
| 0400 | 4.0 | 1.56 | 10 | 14.0 | 55 |
| 0410 | 4.1 | 1.56 (W100) | 10 | 14.0 | 55 |

| Order No. | Ø h8 mm | 1064 format steam | PU | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 0420 | 4.2 | 1.56 | 10 | 14.0 | 55 |
| 0450 | 4.5 | 1.60 | 10 | 16.0 | 58 |
| 0480 | 4.8 | 1.87 | 10 | 17.0 | 62 |
| 0500 | 5.0 | 1.72 | 10 | 17.0 | 62 |
| 0510 | 5.1 | 1.99 | 10 | 17.0 | 62 |
| 0520 | 5.2 | 1.99 | 10 | 17.0 | 62 |
| 0600 | 6.0 | 2.26 (W100) | 10 | 19.0 | 66 |

## Machining drill (short drill) with cylinder Shank

**Design:** HSS, DIN 1897, type N.
Profile grinding, right cutting, with precise point geometry. Point thinning up to Ø 2.4 mm similar to cross-grinding; from Ø 2.4 mm according to DIN 1412, form A, Normal angle of rake, core thickness and core gradient.

**Application:** Suitable for use on machines, bench drills and hand drills. Particularly suitable for construction steels and steels up to 800 N/mm² in strength and for thin-walled materials (bodywork).

HSS | DIN 1897 | Type N | 118° | 25–30°

1055 format professional quality

steam

1056 GÜHRING

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1055 | 25 | 20 | | | | | | | | | 25 | 40 | 50 |
| 1056 | 25 | 20 | | | | | | | | | 25 | 40 | 50 |

| Order No. | Ø h8 mm | 1055 format steam | 1056 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.00 | 0.97 | 2.42 | 10 | 6 | 26 | 0.016 |
| 0150 | 1.50 | 0.94 | 2.14 | 10 | 9 | 32 | 0.050 |
| 0200 | 2.00 | 1.12 | 1.54 | 10 | 12 | 38 | 0.050 |
| 0250 | 2.50 | 1.12 | 1.78 | 10 | 14 | 43 | 0.063 |
| 0300 | 3.00 | 1.12 | 1.78 | 10 | 16 | 46 | 0.080 |
| 0310 | 3.10 | 1.12 | 2.34 | 10 | 18 | 49 | 0.080 |
| 0320 | 3.20 | 1.12 | 2.28 | 10 | 18 | 49 | 0.100 |
| 0330 | 3.30 | 1.12 | 2.34 | 10 | 18 | 49 | 0.100 |
| 0340 | 3.40 | 1.12 | 2.94 | 10 | 20 | 52 | 0.100 |
| 0350 | 3.50 | 1.12 | 2.14 | 10 | 20 | 52 | 0.100 |
| 0400 | 4.00 | 1.38 | 2.14 | 10 | 22 | 55 | 0.100 |
| 0410 | 4.10 | 1.50 | 2.56 | 10 | 22 | 55 | 0.100 |
| 0420 | 4.20 | 1.50 | 2.52 | 10 | 22 | 55 | 0.100 |
| 0450 | 4.50 | 1.71 | 2.59 | 10 | 24 | 58 | 0.100 |
| 0500 | 5.00 | 1.84 | 2.70 | 10 | 26 | 62 | 0.100 |
| 0510 | 5.10 | 1.99 | 4.13 | 10 | 26 | 62 | 0.125 |
| 0520 | 5.20 | 2.32 | 4.13 | 10 | 26 | 62 | 0.125 |
| 0550 | 5.50 | 2.32 | 3.57 | 10 | 28 | 66 | 0.125 |
| 0570 | 5.70 | 2.32 (W100) | 4.83 (W101) | 10 | 28 | 66 | 0.125 |

| Order No. | Ø h8 mm | 1055 format steam | 1056 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0580 | 5.80 | 2.32 | 5.25 | 10 | 28 | 66 | 0.125 |
| 0600 | 6.00 | 2.35 | 3.57 | 10 | 28 | 66 | 0.125 |
| 0650 | 6.50 | 2.58 | 4.27 | 5 | 31 | 70 | 0.160 |
| 0680 | 6.80 | 2.88 | 6.70 | 5 | 34 | 74 | 0.160 |
| 0700 | 7.00 | 2.88 | 5.20 | 5 | 34 | 74 | 0.160 |
| 0800 | 8.00 | 3.52 | 5.90 | 5 | 37 | 79 | 0.160 |
| 0850 | 8.50 | 3.90 | 8.55 | 5 | 37 | 79 | 0.200 |
| 0900 | 9.00 | 4.49 | 7.85 | 5 | 40 | 84 | 0.200 |
| 1000 | 10.00 | 5.35 | 9.45 | 5 | 43 | 89 | 0.200 |
| 1100 | 11.00 | 6.00 | 17.30 | 1 | 47 | 95 | 0.200 |
| 1200 | 12.00 | 7.50 | 22.30 | 1 | 51 | 102 | 0.200 |
| 1300 | 13.00 | 11.80 | 23.40 | 1 | 51 | 102 | 0.200 |
| 1400 | 14.00 | 13.65 | 27.70 | 1 | 54 | 107 | 0.200 |
| 1500 | 15.00 | – | 29.90 | 1 | 56 | 111 | 0.200 |
| 1600 | 16.00 | – | 33.50 | 1 | 58 | 115 | 0.200 |
| 1700 | 17.00 | – | 41.10 | 1 | 60 | 119 | 0.200 |
| 1800 | 18.00 | – | 42.50 | 1 | 62 | 123 | 0.200 |
| 1900 | 19.00 | – | 49.00 | 1 | 64 | 127 | 0.200 |
| 2000 | 20.00 | – (W100) | 53.30 (W101) | 1 | 66 | 131 | 0.200 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Machining drill set

**Design:** HSS, DIN 1897, type N.
Profile grinding, right cutting, with precise point geometry. Point thinning up to Ø 2.4 mm similar to cross-grinding; from Ø 2.4 mm according to DIN 1412, form A. Normal angle of rake, core thickness and core gradient. Supplied in a robust, high quality metal cassette with automatic drill setup function when opened.

**Application:** Suitable for use on machines, drill benches and hand drills. Particularly suitable for construction steels and steels up to 800 N/mm² in strength and for thin-walled materials (bodywork).

HSS | DIN 1897 | Type N
118° | 25–30°

format professional quality

steam

| Order No. | Set contents Ø h8 mm | 1055 format steam | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0007 | 1.0–10.5 | 76.50 (W100) | 24 | 0.5 + K.B.* |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## Machining drill (short drill) with cylinder Shank

**Design:** HSS Co5, DIN 1897, type INOX. Profile grinding, right cutting, with precise point geometry and excellent thermal resistance. Point thinning > Ø 2.4 mm according to DIN 1412, form A, Normal angle of rake, core thickness thicker than normal and normal core gradient.

**Application:** Suitable for use on machines, bench drills and hand drills. Particularly suitable for rust/acid-resistant steels (VA steels), spring steel, austenitic steels and special alloys such as Hastelloy, Inconel and Nimonic.

HSS Co5 | DIN 1897 | Type INOX
130° | 25–30°

format professional quality

1058

steam

1061

TiN

**1058** steam — Bright surface, steam tempered from 2.4 mm

**Note:** Available as a set (Order No. 1058 on 📖 1/11).

**1061** TiN — TiN-coated surface

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1058 | 40 | 20 | 15 | 12 | 4 | | | | 18 | 10 | 30 | | 30 |
| 1061 | 44 | 27 | 18 | 14 | 4 | | | | 22 | 11 | 33 | | 40 |

| Order No. | Ø h8 mm | 1058 format steam | 1061 format TiN | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.00 | 1.64 | 5.25 | 10 | 6 | 26 | 0.012 |
| 0110 | 1.10 | 1.64 | 5.40 | 10 | 7 | 28 | 0.032 |
| 0120 | 1.20 | 1.51 | 5.40 | 10 | 8 | 30 | 0.032 |
| 0130 | 1.30 | 1.51 | 5.40 | 10 | 8 | 30 | 0.032 |
| 0140 | 1.40 | 1.51 | 5.40 | 10 | 9 | 32 | 0.032 |
| 0150 | 1.50 | 1.51 | 5.50 | 10 | 9 | 32 | 0.032 |
| 0160 | 1.60 | 1.76 | 6.10 | 10 | 10 | 34 | 0.032 |
| 0170 | 1.70 | 1.76 | 6.10 | 10 | 10 | 34 | 0.032 |
| 0180 | 1.80 | 1.76 | 6.10 | 10 | 11 | 36 | 0.032 |
| 0190 | 1.90 | 1.76 | 5.50 | 10 | 11 | 36 | 0.032 |
| 0200 | 2.00 | 1.76 | 4.92 | 10 | 12 | 38 | 0.032 |
| 0210 | 2.10 | 1.72 | 4.92 | 10 | 12 | 38 | 0.040 |
| 0220 | 2.20 | 1.76 | 5.50 | 10 | 13 | 40 | 0.040 |
| 0230 | 2.30 | 1.76 | 5.60 | 10 | 13 | 40 | 0.040 |
| 0240 | 2.40 | 1.76 | 5.60 | 10 | 14 | 43 | 0.040 |
| 0250 | 2.50 | 1.76 | 5.40 | 10 | 14 | 43 | 0.040 |
| 0260 | 2.60 | 1.76 | 5.60 | 10 | 14 | 43 | 0.050 |
| 0270 | 2.70 | 1.76 | 5.60 | 10 | 16 | 46 | 0.050 |
| 0280 | 2.80 | 1.76 | 5.60 | 10 | 16 | 46 | 0.050 |
| 0290 | 2.90 | 1.76 | 5.60 | 10 | 16 | 46 | 0.050 |
| 0300 | 3.00 | 1.76 | 5.20 | 10 | 16 | 46 | 0.050 |
| 0310 | 3.10 | 1.76 | 5.60 | 10 | 18 | 49 | 0.050 |
| 0320 | 3.20 | 1.76 | 5.50 | 10 | 18 | 49 | 0.063 |
| 0330 | 3.30 | 1.76 | 5.50 | 10 | 18 | 49 | 0.063 |
| 0340 | 3.40 | 1.76 | 5.60 | 10 | 20 | 52 | 0.063 |
| 0350 | 3.50 | 1.76 (W100) | 5.25 (W100) | 10 | 20 | 52 | 0.063 |

| Order No. | Ø h8 mm | 1058 format steam | 1061 format TiN | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0360 | 3.60 | 2.07 | 6.10 | 10 | 20 | 52 | 0.063 |
| 0370 | 3.70 | 2.07 | 6.10 | 10 | 20 | 52 | 0.063 |
| 0380 | 3.80 | 2.07 | 6.10 | 10 | 22 | 55 | 0.063 |
| 0390 | 3.90 | 5.50 | 6.10 | 10 | 22 | 55 | 0.063 |
| 0400 | 4.00 | 3.04 | 5.50 | 10 | 22 | 55 | 0.063 |
| 0410 | 4.10 | 3.04 | 5.70 | 10 | 22 | 55 | 0.063 |
| 0420 | 4.20 | 3.04 | 5.70 | 10 | 22 | 55 | 0.063 |
| 0430 | 4.30 | 3.04 | 6.10 | 10 | 24 | 58 | 0.063 |
| 0440 | 4.40 | 6.35 | 6.10 | 10 | 24 | 58 | 0.063 |
| 0450 | 4.50 | 3.39 | 5.70 | 10 | 24 | 58 | 0.063 |
| 0460 | 4.60 | 3.39 | 7.15 | 10 | 24 | 58 | 0.063 |
| 0470 | 4.70 | 3.39 | 7.15 | 10 | 24 | 58 | 0.063 |
| 0480 | 4.80 | 3.39 | 7.15 | 10 | 26 | 62 | 0.063 |
| 0490 | 4.90 | 3.39 | 7.15 | 10 | 26 | 62 | 0.063 |
| 0500 | 5.00 | 3.39 | 6.10 | 10 | 26 | 62 | 0.063 |
| 0510 | 5.10 | 3.39 | 7.30 | 10 | 26 | 62 | 0.080 |
| 0520 | 5.20 | 3.82 | 7.30 | 10 | 26 | 62 | 0.080 |
| 0530 | 5.30 | 3.78 | 7.30 | 10 | 26 | 62 | 0.080 |
| 0540 | 5.40 | 3.78 | 7.30 | 10 | 28 | 66 | 0.080 |
| 0550 | 5.50 | 3.78 | 6.70 | 10 | 28 | 66 | 0.080 |
| 0560 | 5.60 | 3.99 | 7.35 | 10 | 28 | 66 | 0.080 |
| 0570 | 5.70 | 4.25 | 7.35 | 10 | 28 | 66 | 0.080 |
| 0580 | 5.80 | 3.95 | 7.35 | 10 | 28 | 66 | 0.080 |
| 0590 | 5.90 | 4.68 | 7.35 | 10 | 28 | 66 | 0.080 |
| 0600 | 6.00 | 4.08 | 7.00 | 10 | 28 | 66 | 0.080 |
| 0610 | 6.10 | 4.30 (W100) | 8.60 (W100) | 5 | 31 | 70 | 0.080 |

Continued overleaf

## Machining drill (short drill) with cylinder Shank

Continued

| Order No. | Ø h8 mm | 1058 format steam | 1061 format TiN | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0620 | 6.20 | 4.81 | 8.60 | 5 | 31 | 70 | 0.080 |
| 0630 | 6.30 | 5.10 | 8.60 | 5 | 31 | 70 | 0.080 |
| 0640 | 6.40 | 4.68 | 8.60 | 5 | 31 | 70 | 0.100 |
| 0650 | 6.50 | 4.68 | 8.60 | 5 | 31 | 70 | 0.100 |
| 0660 | 6.60 | 4.81 | 11.30 | 5 | 31 | 70 | 0.100 |
| 0670 | 6.70 | 5.75 | 11.30 | 5 | 31 | 70 | 0.100 |
| 0680 | 6.80 | 5.10 | 11.30 | 5 | 34 | 74 | 0.100 |
| 0690 | 6.90 | 5.55 | 11.30 | 5 | 34 | 74 | 0.100 |
| 0700 | 7.00 | 5.10 | 10.40 | 5 | 34 | 74 | 0.100 |
| 0710 | 7.10 | 6.05 | 10.80 | 5 | 34 | 74 | 0.100 |
| 0720 | 7.20 | 6.35 | 10.80 | 5 | 34 | 74 | 0.100 |
| 0730 | 7.30 | 7.50 | 10.80 | 5 | 34 | 74 | 0.100 |
| 0740 | 7.40 | 5.75 | 10.80 | 5 | 34 | 74 | 0.100 |
| 0750 | 7.50 | 5.70 | 10.80 | 5 | 34 | 74 | 0.100 |
| 0760 | 7.60 | 8.60 | 14.55 | 5 | 37 | 79 | 0.100 |
| 0770 | 7.70 | 7.90 | 12.10 | 5 | 37 | 79 | 0.100 |
| 0780 | 7.80 | 7.10 | 12.10 | 5 | 37 | 79 | 0.100 |
| 0790 | 7.90 | 8.25 | 12.10 | 5 | 37 | 79 | 0.100 |
| 0800 | 8.00 | 6.65 | 11.30 | 5 | 37 | 79 | 0.100 |
| 0810 | 8.10 | 8.05 | 13.40 | 5 | 37 | 79 | 0.125 |
| 0820 | 8.20 | 7.50 | 13.40 | 5 | 37 | 79 | 0.125 |
| 0830 | 8.30 | 8.70 | 13.40 | 5 | 37 | 79 | 0.125 |
| 0840 | 8.40 | 8.60 | 13.40 | 5 | 37 | 79 | 0.125 |
| 0850 | 8.50 | 7.35 | 13.40 | 5 | 37 | 79 | 0.125 |
| 0860 | 8.60 | 8.35 | 13.65 | 5 | 40 | 84 | 0.125 |
| 0870 | 8.70 | 9.20 | 13.65 | 5 | 40 | 84 | 0.125 |
| 0880 | 8.80 | 8.90 | 13.65 | 5 | 40 | 84 | 0.125 |
| 0890 | 8.90 | 9.90 | 17.90 | 5 | 40 | 84 | 0.125 |
| 0900 | 9.00 | 8.05 | 13.65 | 5 | 40 | 84 | 0.125 |
| 0910 | 9.10 | 10.50 | 16.60 | 5 | 40 | 84 | 0.125 |
| 0920 | 9.20 | 9.40 | 16.60 | 5 | 40 | 84 | 0.125 |
| 0930 | 9.30 | 10.00 | 16.60 | 5 | 40 | 84 | 0.125 |
| 0940 | 9.40 | 11.50 | – | 5 | 40 | 84 | 0.125 |
| 0950 | 9.50 | 8.80 | 18.70 | 5 | 40 | 84 | 0.125 |
| 0960 | 9.60 | 10.85 (W100) | 18.70 (W100) | 5 | 43 | 89 | 0.125 |
| 0970 | 9.70 | 10.75 | 18.70 | 5 | 43 | 89 | 0.125 |
| 0980 | 9.80 | 10.30 | 18.70 | 5 | 43 | 89 | 0.125 |
| 0990 | 9.90 | 14.60 | 18.70 | 5 | 43 | 89 | 0.125 |
| 1000 | 10.00 | 9.85 | 16.60 | 5 | 43 | 89 | 0.125 |
| 1020 | 10.20 | 10.40 | 17.05 | 5 | 43 | 89 | 0.125 |
| 1050 | 10.50 | 11.05 | 18.40 | 5 | 43 | 89 | 0.125 |
| 1080 | 10.80 | 14.25 | – | 5 | 47 | 95 | 0.125 |
| 1100 | 11.00 | 12.55 | 18.90 | 5 | 47 | 95 | 0.125 |
| 1120 | 11.20 | 15.55 | – | 5 | 47 | 95 | 0.125 |
| 1150 | 11.50 | 13.95 | 22.00 | 5 | 47 | 95 | 0.125 |
| 1180 | 11.80 | 15.35 | 14.15 | 5 | 47 | 95 | 0.125 |
| 1200 | 12.00 | 15.15 | 23.80 | 5 | 51 | 102 | 0.125 |
| 1250 | 12.50 | 17.10 | 23.80 | 5 | 51 | 102 | 0.125 |
| 1280 | 12.80 | 21.10 | – | 5 | 51 | 102 | 0.160 |
| 1300 | 13.00 | 17.70 | 37.00 | 5 | 51 | 102 | 0.160 |
| 1350 | 13.50 | 19.90 | 46.00 | 1 | 54 | 107 | 0.160 |
| 1380 | 13.80 | 25.80 | 39.10 | 1 | 54 | 107 | 0.160 |
| 1400 | 14.00 | 19.90 | 46.00 | 1 | 54 | 107 | 0.160 |
| 1450 | 14.50 | 23.10 | 55.70 | 1 | 56 | 111 | 0.160 |
| 1480 | 14.80 | 47.30 | – | 1 | 56 | 111 | 0.160 |
| 1500 | 15.00 | 23.50 | 53.40 | 1 | 56 | 111 | 0.160 |
| 1550 | 15.50 | 23.70 | 66.00 | 1 | 58 | 115 | 0.160 |
| 1575 | 15.75 | – | 73.30 | 1 | 58 | 115 | 0.160 |
| 1600 | 16.00 | 27.10 | 78.50 | 1 | 58 | 115 | 0.160 |
| 1650 | 16.50 | 73.90 | 85.00 | 1 | 60 | 119 | 0.200 |
| 1700 | 17.00 | 61.90 | 71.50 | 1 | 60 | 119 | 0.200 |
| 1750 | 17.50 | 61.50 | 70.70 | 1 | 62 | 123 | 0.200 |
| 1775 | 17.75 | – | 70.60 | 1 | 62 | 123 | 0.200 |
| 1800 | 18.00 | 58.70 | 67.40 | 1 | 62 | 123 | 0.200 |
| 1850 | 18.50 | 94.60 | 108.50 | 1 | 64 | 127 | 0.200 |
| 1900 | 19.00 | 75.00 | 86.30 | 1 | 64 | 127 | 0.200 |
| 1950 | 19.50 | 124.50 | 143.50 | 1 | 66 | 131 | 0.200 |
| 1975 | 19.75 | – | 125.00 | 1 | 66 | 131 | 0.200 |
| 2000 | 20.00 | 117.50 (W100) | 135.00 (W100) | 1 | 66 | 131 | 0.200 |

## Machining drill set

**Design:** HSS Co5, DIN 1897, type INOX.
Profile grinding, right cutting, with precise point geometry and excellent thermal resistance. Point thinning from Ø 2.4 mm similar to according to DIN 1412, form A, normal angle of rake, core thickness thicker than normal and normal core gradient. Supplied in a robust, high quality metal cassette with automatic drill setup function when opened.

**Application:** Suitable for use on machines, bench drills and hand drills. Particularly suitable for rust/acid-resistant steels (VA steels), spring steels, austenitic steels and special alloys such as Hastelloy®, Inconel® and Nimonic®.

**Note:** Set consisting of (Order No. 1058).

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1058 | 40 | 20 | 15 | 12 | 4 | | | | 18 | 10 | 30 | | 30 |

| Order No. | Set contents Ø h8 mm | 1058 format steam | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0007 | 1.0–10.5 | 102.00 (W100) | 24 | 0.5 + K.B.* |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Short drill with cylinder Shank

**Design: Profile grinding,** right cutting, with precise point geometry and excellent thermal resistance.
With special point thinning, angle of rake larger than normal, normal core thickness and normal core gradient.

**Application:** Suitable for use on NC machines, revolver benches and hand drills. Particularly suitable for rust/acid-resistant steels (VA steels), alloyed/non-alloyed steels up to 800 N/mm², cold/hot work steels, roller bearing steels, non-ferrous metals, cast iron materials and lots of plastics.

HSS Co5 | DIN 1897 | Type GU 500DZ | 118° | 38°

GÜHRING

1063
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1063 | 35 | 18 | 15 | | | | | | 18 | | 40 | 70 | 63 |

| Order No. | Ø h8 mm | 1063 GÜHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.00 | 4.40 | 10 | 6 | 26 | 0.018 |
| 0110 | 1.10 | 4.40 | 10 | 7 | 28 | 0.063 |
| 0120 | 1.20 | 4.55 | 10 | 8 | 30 | 0.063 |
| 0130 | 1.30 | 4.76 | 10 | 8 | 30 | 0.063 |
| 0140 | 1.40 | 4.35 | 10 | 9 | 32 | 0.063 |
| 0150 | 1.50 | 4.19 | 10 | 9 | 32 | 0.063 |
| 0160 | 1.60 | 4.30 | 10 | 10 | 34 | 0.063 |
| 0170 | 1.70 | 4.35 | 10 | 10 | 34 | 0.063 |
| 0180 | 1.80 | 4.30 | 10 | 11 | 36 | 0.063 |
| 0190 | 1.90 | 4.30 | 10 | 11 | 36 | 0.063 |
| 0200 | 2.00 | 3.62 | 10 | 12 | 38 | 0.063 |
| 0210 | 2.10 | 4.40 | 10 | 12 | 38 | 0.080 |
| 0220 | 2.20 | 4.40 | 10 | 13 | 40 | 0.080 |
| 0230 | 2.30 | 3.73 | 10 | 13 | 40 | 0.080 |
| 0240 | 2.40 | 4.45 | 10 | 14 | 43 | 0.080 |
| 0250 | 2.50 | 3.98 | 10 | 14 | 43 | 0.080 |
| 0260 | 2.60 | 4.61 | 10 | 14 | 43 | 0.100 |
| 0270 | 2.70 | 4.92 | 10 | 16 | 46 | 0.100 |
| 0280 | 2.80 | 4.55 | 10 | 16 | 46 | 0.100 |
| 0290 | 2.90 | 4.81 | 10 | 16 | 46 | 0.100 |
| 0300 | 3.00 | 4.14 | 10 | 16 | 46 | 0.100 |
| 0310 | 3.10 | 4.35 | 10 | 18 | 49 | 0.100 |
| 0320 | 3.20 | 4.19 | 10 | 18 | 49 | 0.125 |
| 0330 | 3.30 | 4.19 | 10 | 18 | 49 | 0.125 |
| 0340 | 3.40 | 4.76 | 10 | 20 | 52 | 0.125 |
| 0350 | 3.50 | 4.19 | 10 | 20 | 52 | 0.125 |
| 0360 | 3.60 | 5.20 | 10 | 20 | 52 | 0.125 |
| 0370 | 3.70 | 4.71 | 10 | 20 | 52 | 0.125 |
| 0380 | 3.80 | 5.05 | 10 | 22 | 55 | 0.125 |
| 0390 | 3.90 | 5.80 | 10 | 22 | 55 | 0.125 |
| 0400 | 4.00 | 4.66 | 10 | 22 | 55 | 0.125 |
| 0410 | 4.10 | 5.50 | 10 | 22 | 55 | 0.125 |
| 0420 | 4.20 | 4.66 | 10 | 22 | 55 | 0.125 |
| 0430 | 4.30 | 5.40 | 10 | 24 | 58 | 0.125 |
| 0440 | 4.40 | 5.80 | 10 | 24 | 58 | 0.125 |
| 0450 | 4.50 | 5.40 | 10 | 24 | 58 | 0.125 |
| 0460 | 4.60 | 5.50 | 10 | 24 | 58 | 0.125 |
| 0470 | 4.70 | 5.80 | 10 | 24 | 58 | 0.125 |
| 0480 | 4.80 | 6.10 | 10 | 26 | 62 | 0.125 |
| 0490 | 4.90 | 6.20 | 10 | 26 | 62 | 0.125 |
| 0500 | 5.00 | 5.20 | 10 | 26 | 62 | 0.125 |
| 0510 | 5.10 | 5.80 | 10 | 26 | 62 | 0.160 |
| 0520 | 5.20 | 6.20 | 10 | 26 | 62 | 0.160 |
| 0530 | 5.30 | 6.40 | 10 | 26 | 62 | 0.160 |
| 0540 | 5.40 | 6.85 | 10 | 28 | 66 | 0.160 |
| 0550 | 5.50 | 5.90 (W115) | 10 | 28 | 66 | 0.160 |

| Order No. | Ø h8 mm | 1063 GÜHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0560 | 5.60 | 6.95 | 10 | 28 | 66 | 0.160 |
| 0570 | 5.70 | 7.45 | 10 | 28 | 66 | 0.160 |
| 0580 | 5.80 | 7.15 | 10 | 28 | 66 | 0.160 |
| 0590 | 5.90 | 7.45 | 10 | 28 | 66 | 0.160 |
| 0600 | 6.00 | 6.30 | 10 | 28 | 66 | 0.160 |
| 0610 | 6.10 | 7.35 | 5 | 31 | 70 | 0.160 |
| 0620 | 6.20 | 7.35 | 5 | 31 | 70 | 0.160 |
| 0630 | 6.30 | 7.75 | 5 | 31 | 70 | 0.160 |
| 0640 | 6.40 | 7.75 | 5 | 31 | 70 | 0.200 |
| 0650 | 6.50 | 7.35 | 5 | 31 | 70 | 0.200 |
| 0660 | 6.60 | 8.20 | 5 | 31 | 70 | 0.200 |
| 0670 | 6.70 | 8.40 | 5 | 31 | 70 | 0.200 |
| 0680 | 6.80 | 9.00 | 5 | 34 | 74 | 0.200 |
| 0690 | 6.90 | 8.90 | 5 | 34 | 74 | 0.200 |
| 0700 | 7.00 | 8.30 | 5 | 34 | 74 | 0.200 |
| 0710 | 7.10 | 10.05 | 5 | 34 | 74 | 0.200 |
| 0720 | 7.20 | 10.25 | 5 | 34 | 74 | 0.200 |
| 0730 | 7.30 | 10.25 | 5 | 34 | 74 | 0.200 |
| 0740 | 7.40 | 10.35 | 5 | 34 | 74 | 0.200 |
| 0750 | 7.50 | 8.60 | 5 | 34 | 74 | 0.200 |
| 0760 | 7.60 | 10.95 | 5 | 37 | 79 | 0.200 |
| 0770 | 7.70 | 11.05 | 5 | 37 | 79 | 0.200 |
| 0780 | 7.80 | 11.05 | 5 | 37 | 79 | 0.200 |
| 0790 | 7.90 | 10.95 | 5 | 37 | 79 | 0.200 |
| 0800 | 8.00 | 10.25 | 5 | 37 | 79 | 0.200 |
| 0810 | 8.10 | 13.05 | 5 | 37 | 79 | 0.250 |
| 0820 | 8.20 | 13.65 | 5 | 37 | 79 | 0.250 |
| 0830 | 8.30 | 13.75 | 5 | 37 | 79 | 0.250 |
| 0840 | 8.40 | 13.75 | 5 | 37 | 79 | 0.250 |
| 0850 | 8.50 | 12.00 | 5 | 37 | 79 | 0.250 |
| 0880 | 8.80 | 15.00 | 5 | 40 | 84 | 0.250 |
| 0900 | 9.00 | 12.20 | 5 | 40 | 84 | 0.250 |
| 0930 | 9.30 | 13.75 | 5 | 40 | 84 | 0.250 |
| 0950 | 9.50 | 13.35 | 5 | 40 | 84 | 0.250 |
| 0980 | 9.80 | 15.95 | 5 | 43 | 89 | 0.250 |
| 1000 | 10.00 | 13.15 | 5 | 43 | 89 | 0.250 |
| 1020 | 10.20 | 16.75 | 5 | 43 | 89 | 0.250 |
| 1050 | 10.50 | 15.85 | 5 | 43 | 89 | 0.250 |
| 1100 | 11.00 | 17.60 | 1 | 47 | 95 | 0.250 |
| 1150 | 11.50 | 20.30 | 1 | 47 | 95 | 0.250 |
| 1200 | 12.00 | 19.85 | 1 | 51 | 102 | 0.250 |
| 1250 | 12.50 | 21.70 | 1 | 51 | 102 | 0.250 |
| 1300 | 13.00 | 21.70 | 1 | 51 | 102 | 0.315 |
| 1350 | 13.50 | 23.30 | 1 | 54 | 107 | 0.315 |
| 1400 | 14.00 | 29.00 (W115) | 1 | 54 | 107 | 0.315 |

## Short drill with cylinder Shank

**Design:** HSSE-PM, DIN 1897, type GT 500 DZ.
Profile grinding, TiN-coated surface, right cutting, with precise point geometry and excellent thermal resistance. With special point thinning. Angle of rake normal, normal core thickness and no core gradient.

**HSSE-PM is characterised by its high toughness (higher edge strength, wear-resistant) and a longer tool life.**

**Application:** Durable and break-proof short drill made from **PM steel** for machining high-alloy steels, tempered and case-hardeing steels, cast iron, brass and bronze.

HSS-E PM | DIN 1897 | Type GT 500DZ | 130° | 25–30°

GÜHRING

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1066 | 40 | 25 | **18** | **15** | | | | | 15 | | **45** | | 40 |

| Order No. | Ø h8 mm | 1066 GÜHRING TiN | PU | Spiral length mm | Total length mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 8.50 | 10 | 7 | 28 | 0.018 |
| 0110 | 1.1 | 8.40 | 10 | 8 | 30 | 0.063 |
| 0120 | 1.2 | 8.60 | 10 | 8 | 30 | 0.063 |
| 0130 | 1.3 | 9.10 | 10 | 9 | 32 | 0.063 |
| 0140 | 1.4 | 8.40 | 10 | 9 | 32 | 0.063 |
| 0150 | 1.5 | 8.05 | 10 | 10 | 34 | 0.063 |
| 0160 | 1.6 | 8.20 | 10 | 10 | 34 | 0.063 |
| 0170 | 1.7 | 8.30 | 10 | 11 | 36 | 0.063 |
| 0180 | 1.8 | 8.40 | 10 | 11 | 36 | 0.063 |
| 0190 | 1.9 | 8.30 | 10 | 12 | 38 | 0.063 |
| 0200 | 2.0 | 6.85 | 10 | 12 | 38 | 0.063 |
| 0210 | 2.1 | 7.65 | 10 | 13 | 40 | 0.080 |
| 0220 | 2.2 | 8.40 | 10 | 13 | 40 | 0.080 |
| 0230 | 2.3 | 8.40 | 10 | 14 | 43 | 0.080 |
| 0240 | 2.4 | 8.80 | 10 | 14 | 43 | 0.080 |
| 0250 | 2.5 | 7.45 | 10 | 14 | 43 | 0.080 |
| 0260 | 2.6 | 8.80 | 10 | 16 | 46 | 0.100 |
| 0270 | 2.7 | 8.30 | 10 | 16 | 46 | 0.100 |
| 0280 | 2.8 | 9.10 | 10 | 16 | 46 | 0.100 |
| 0290 | 2.9 | 8.05 | 10 | 16 | 46 | 0.100 |
| 0300 | 3.0 | 7.65 | 10 | 18 | 49 | 0.100 |
| 0310 | 3.1 | 8.05 | 10 | 18 | 49 | 0.100 |
| 0320 | 3.2 | 8.60 | 10 | 18 | 49 | 0.125 |
| 0330 | 3.3 | 8.80 | 10 | 20 | 52 | 0.125 |
| 0340 | 3.4 | 7.85 | 10 | 20 | 52 | 0.125 |
| 0350 | 3.5 | 8.40 | 10 | 20 | 52 | 0.125 |
| 0360 | 3.6 | 6.85 | 10 | 20 | 52 | 0.125 |
| 0370 | 3.7 | 7.45 | 10 | 22 | 55 | 0.125 |
| 0380 | 3.8 | 8.40 | 10 | 22 | 55 | 0.125 |
| 0390 | 3.9 | 9.50 | 10 | 22 | 55 | 0.125 |
| 0400 | 4.0 | 7.75 | 10 | 22 | 55 | 0.125 |
| 0410 | 4.1 | 9.00 | 10 | 22 | 55 | 0.125 |
| 0420 | 4.2 | 8.05 | 10 | 24 | 58 | 0.125 |
| 0430 | 4.3 | 8.90 | 10 | 24 | 58 | 0.125 |
| 0440 | 4.4 | 9.50 | 10 | 24 | 58 | 0.125 |
| 0450 | 4.5 | 7.85 | 10 | 24 | 58 | 0.125 |
| 0460 | 4.6 | 10.15 | 10 | 24 | 58 | 0.125 |
| 0470 | 4.7 | 9.50 | 10 | 26 | 62 | 0.125 |
| 0480 | 4.8 | 10.25 | 10 | 26 | 62 | 0.125 |
| 0490 | 4.9 | 10.35 | 10 | 26 | 62 | 0.125 |
| 0500 | 5.0 | 8.80 | 10 | 26 | 62 | 0.125 |
| 0510 | 5.1 | 9.00 | 10 | 26 | 62 | 0.160 |
| 0520 | 5.2 | 10.55 | 10 | 26 | 62 | 0.160 |
| 0530 | 5.3 | 10.15 | 10 | 28 | 66 | 0.160 |
| 0540 | 5.4 | 10.85 | 10 | 28 | 66 | 0.160 |
| 0550 | 5.5 | 9.30 (W115) | 10 | 28 | 66 | 0.160 |

| Order No. | Ø h8 mm | 1066 GÜHRING TiN | PU | Spiral length mm | Total length mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|---|
| 0560 | 5.6 | 11.05 | 10 | 28 | 66 | 0.160 |
| 0570 | 5.7 | 11.80 | 10 | 28 | 66 | 0.160 |
| 0580 | 5.8 | 12.10 | 10 | 28 | 66 | 0.160 |
| 0590 | 5.9 | 11.80 | 10 | 28 | 66 | 0.160 |
| 0600 | 6.0 | 9.85 | 10 | 31 | 70 | 0.160 |
| 0610 | 6.1 | 11.70 | 5 | 31 | 70 | 0.160 |
| 0620 | 6.2 | 11.70 | 5 | 31 | 70 | 0.160 |
| 0630 | 6.3 | 12.30 | 5 | 31 | 70 | 0.160 |
| 0640 | 6.4 | 12.20 | 5 | 31 | 70 | 0.200 |
| 0650 | 6.5 | 10.25 | 5 | 31 | 70 | 0.200 |
| 0660 | 6.6 | 12.95 | 5 | 31 | 70 | 0.200 |
| 0670 | 6.7 | 13.25 | 5 | 34 | 74 | 0.200 |
| 0680 | 6.8 | 12.00 | 5 | 34 | 74 | 0.200 |
| 0690 | 6.9 | 13.95 | 5 | 34 | 74 | 0.200 |
| 0700 | 7.0 | 15.65 | 5 | 34 | 74 | 0.200 |
| 0710 | 7.1 | 17.30 | 5 | 34 | 74 | 0.200 |
| 0720 | 7.2 | 17.10 | 5 | 34 | 74 | 0.200 |
| 0730 | 7.3 | 17.10 | 5 | 34 | 74 | 0.200 |
| 0740 | 7.4 | 17.20 | 5 | 34 | 74 | 0.200 |
| 0750 | 7.5 | 16.45 | 5 | 37 | 79 | 0.200 |
| 0760 | 7.6 | 18.10 | 5 | 37 | 79 | 0.200 |
| 0770 | 7.7 | 18.30 | 5 | 37 | 79 | 0.200 |
| 0780 | 7.8 | 15.65 | 5 | 37 | 79 | 0.200 |
| 0790 | 7.9 | 18.10 | 5 | 37 | 79 | 0.200 |
| 0800 | 8.0 | 17.10 | 5 | 37 | 79 | 0.200 |
| 0810 | 8.1 | 21.70 | 5 | 37 | 79 | 0.250 |
| 0820 | 8.2 | 22.30 | 5 | 37 | 79 | 0.250 |
| 0830 | 8.3 | 22.80 | 5 | 37 | 79 | 0.250 |
| 0840 | 8.4 | 22.80 | 5 | 37 | 79 | 0.250 |
| 0850 | 8.5 | 19.15 | 5 | 40 | 84 | 0.250 |
| 0880 | 8.8 | 26.40 | 5 | 40 | 84 | 0.250 |
| 0900 | 9.0 | 20.70 | 5 | 40 | 84 | 0.250 |
| 0930 | 9.3 | 31.60 | 5 | 40 | 84 | 0.250 |
| 0950 | 9.5 | 24.80 | 5 | 43 | 89 | 0.250 |
| 0980 | 9.8 | 27.40 | 5 | 43 | 89 | 0.250 |
| 1000 | 10.0 | 23.80 | 5 | 43 | 89 | 0.250 |
| 1020 | 10.2 | 35.70 | 5 | 43 | 89 | 0.250 |
| 1050 | 10.5 | 34.20 | 5 | 47 | 95 | 0.250 |
| 1100 | 11.0 | 34.20 | 1 | 47 | 95 | 0.250 |
| 1150 | 11.5 | 36.20 | 1 | 51 | 102 | 0.250 |
| 1200 | 12.0 | 41.90 | 1 | 51 | 102 | 0.250 |
| 1250 | 12.5 | 45.50 | 1 | 51 | 102 | 0.250 |
| 1300 | 13.0 | 45.50 | 1 | 54 | 107 | 0.315 |
| 1350 | 13.5 | 48.10 | 1 | 54 | 107 | 0.315 |
| 1400 | 14.0 | 60.00 (W115) | 1 | 54 | 107 | 0.315 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spiral drill cyl. Shank, rolled

**Design:** HSS, DIN 338, type N.
Right cutting, with precise point geometry, rolled.
Robust design

**Application:** The roll forged finish of the spiral drill prevents breaks in the joint. This makes it particularly suitable for robust drilling work - as a cost-effective alternative for handheld machines.

**Note:** Available as a set (Order No. 1008 on 1/15).

HSS | DIN 338 | Type N | 118° | 25–30°

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1008 | ◐ | | | | | | | | | | ◐ | | ○ |

| Order No. | Ø h8 mm | 1008 | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 0.15 | 10 | 12.0 | 34 | 0.016 |
| 0110 | 1.1 | 0.15 | 10 | 14.0 | 36 | 0.050 |
| 0120 | 1.2 | 0.15 | 10 | 16.0 | 38 | 0.050 |
| 0130 | 1.3 | 0.15 | 10 | 16.0 | 38 | 0.050 |
| 0140 | 1.4 | 0.15 | 10 | 18.0 | 40 | 0.050 |
| 0150 | 1.5 | 0.15 | 10 | 18.0 | 40 | 0.050 |
| 0160 | 1.6 | 0.15 | 10 | 20.0 | 43 | 0.050 |
| 0170 | 1.7 | 0.15 | 10 | 20.0 | 43 | 0.050 |
| 0180 | 1.8 | 0.15 | 10 | 22.0 | 46 | 0.050 |
| 0190 | 1.9 | 0.15 | 10 | 22.0 | 46 | 0.050 |
| 0200 | 2.0 | 0.23 | 10 | 24.0 | 49 | 0.050 |
| 0210 | 2.1 | 0.23 | 10 | 24.0 | 49 | 0.063 |
| 0220 | 2.2 | 0.23 | 10 | 27.0 | 53 | 0.063 |
| 0230 | 2.3 | 0.23 | 10 | 27.0 | 53 | 0.063 |
| 0240 | 2.4 | 0.23 | 10 | 30.0 | 57 | 0.063 |
| 0250 | 2.5 | 0.27 | 10 | 30.0 | 57 | 0.063 |
| 0260 | 2.6 | 0.27 | 10 | 30.0 | 57 | 0.080 |
| 0270 | 2.7 | 0.27 | 10 | 33.0 | 61 | 0.080 |
| 0280 | 2.8 | 0.27 | 10 | 33.0 | 61 | 0.080 |
| 0290 | 2.9 | 0.27 | 10 | 33.0 | 61 | 0.080 |
| 0300 | 3.0 | 0.23 | 10 | 33.0 | 61 | 0.080 |
| 0310 | 3.1 | 0.23 | 10 | 36.0 | 65 | 0.080 |
| 0320 | 3.2 | 0.23 | 10 | 36.0 | 65 | 0.100 |
| 0330 | 3.3 | 0.34 | 10 | 36.0 | 65 | 0.100 |
| 0340 | 3.4 | 0.34 | 10 | 39.0 | 70 | 0.100 |
| 0350 | 3.5 | 0.34 | 10 | 39.0 | 70 | 0.100 |
| 0360 | 3.6 | 0.30 | 10 | 39.0 | 70 | 0.100 |
| 0370 | 3.7 | 0.30 | 10 | 39.0 | 70 | 0.100 |
| 0380 | 3.8 | 0.30 | 10 | 43.0 | 75 | 0.100 |
| 0390 | 3.9 | 0.30 | 10 | 43.0 | 75 | 0.100 |
| 0400 | 4.0 | 0.30 | 10 | 43.0 | 75 | 0.100 |
| 0410 | 4.1 | 0.34 | 10 | 43.0 | 75 | 0.100 |
| 0420 | 4.2 | 0.38 | 10 | 43.0 | 75 | 0.100 |
| 0430 | 4.3 | 0.38 | 10 | 47.0 | 80 | 0.100 |
| 0440 | 4.4 | 0.38 | 10 | 47.0 | 80 | 0.100 |
| 0450 | 4.5 | 0.42 | 10 | 47.0 | 80 | 0.100 |
| 0460 | 4.6 | 0.42 | 10 | 47.0 | 80 | 0.100 |
| 0470 | 4.7 | 0.42 | 10 | 47.0 | 80 | 0.100 |
| 0480 | 4.8 | 0.46 | 10 | 52.0 | 86 | 0.100 |
| 0490 | 4.9 | 0.46 | 10 | 52.0 | 86 | 0.100 |
| 0500 | 5.0 | 0.49 | 10 | 52.0 | 86 | 0.100 |
| 0510 | 5.1 | 0.53 | 10 | 52.0 | 86 | 0.125 |
| 0520 | 5.2 | 0.53 | 10 | 52.0 | 86 | 0.125 |
| 0530 | 5.3 | 0.53 | 10 | 52.0 | 86 | 0.125 |
| 0540 | 5.4 | 0.53 | 10 | 57.0 | 93 | 0.125 |
| 0550 | 5.5 | 0.53 | 10 | 57.0 | 93 | 0.125 |
| 0560 | 5.6 | 0.61 | 10 | 57.0 | 93 | 0.125 |
| 0570 | 5.7 | 0.61 | 10 | 57.0 | 93 | 0.125 |
| 0580 | 5.8 | 0.61 | 10 | 57.0 | 93 | 0.125 |
| 0590 | 5.9 | 0.61 | 10 | 57.0 | 93 | 0.125 |
| 0600 | 6.0 | 0.65 | 10 | 57.0 | 93 | 0.125 |
| 0610 | 6.1 | 0.72 | 10 | 63.0 | 101 | 0.125 |

(W118)

| Order No. | Ø h8 mm | 1008 | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|
| 0620 | 6.2 | 0.72 | 10 | 63.0 | 101 | 0.125 |
| 0630 | 6.3 | 0.72 | 10 | 63.0 | 101 | 0.125 |
| 0640 | 6.4 | 0.72 | 10 | 63.0 | 101 | 0.160 |
| 0650 | 6.5 | 0.72 | 10 | 63.0 | 101 | 0.160 |
| 0660 | 6.6 | 0.80 | 10 | 63.0 | 101 | 0.160 |
| 0670 | 6.7 | 0.80 | 10 | 63.0 | 101 | 0.160 |
| 0680 | 6.8 | 0.80 | 10 | 69.0 | 109 | 0.160 |
| 0690 | 6.9 | 0.84 | 10 | 69.0 | 109 | 0.160 |
| 0700 | 7.0 | 0.87 | 10 | 69.0 | 109 | 0.160 |
| 0710 | 7.1 | 0.99 | 10 | 69.0 | 109 | 0.160 |
| 0720 | 7.2 | 0.99 | 10 | 69.0 | 109 | 0.160 |
| 0730 | 7.3 | 0.99 | 10 | 69.0 | 109 | 0.160 |
| 0740 | 7.4 | 0.99 | 10 | 69.0 | 109 | 0.160 |
| 0750 | 7.5 | 1.03 | 10 | 69.0 | 109 | 0.160 |
| 0760 | 7.6 | 1.14 | 10 | 75.0 | 117 | 0.160 |
| 0770 | 7.7 | 1.14 | 10 | 75.0 | 117 | 0.160 |
| 0780 | 7.8 | 1.14 | 10 | 75.0 | 117 | 0.160 |
| 0790 | 7.9 | 1.14 | 10 | 75.0 | 117 | 0.160 |
| 0800 | 8.0 | 1.22 | 10 | 75.0 | 117 | 0.160 |
| 0810 | 8.1 | 1.25 | 10 | 75.0 | 117 | 0.200 |
| 0820 | 8.2 | 1.25 | 10 | 75.0 | 117 | 0.200 |
| 0830 | 8.3 | 1.25 | 10 | 75.0 | 117 | 0.200 |
| 0840 | 8.4 | 1.25 | 10 | 75.0 | 117 | 0.200 |
| 0850 | 8.5 | 1.33 | 10 | 75.0 | 117 | 0.200 |
| 0860 | 8.6 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0870 | 8.7 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0880 | 8.8 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0890 | 8.9 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0900 | 9.0 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0910 | 9.1 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0920 | 9.2 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0930 | 9.3 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0940 | 9.4 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0950 | 9.5 | 1.48 | 10 | 81.0 | 125 | 0.200 |
| 0960 | 9.6 | 1.67 | 10 | 87.0 | 133 | 0.200 |
| 0970 | 9.7 | 1.67 | 10 | 87.0 | 133 | 0.200 |
| 0980 | 9.8 | 1.67 | 10 | 87.0 | 133 | 0.200 |
| 0990 | 9.9 | 1.67 | 10 | 87.0 | 133 | 0.200 |
| 1000 | 10.0 | 1.67 | 10 | 87.0 | 133 | 0.200 |
| 1020 | 10.2 | 1.75 | 10 | 87.0 | 133 | 0.200 |
| 1050 | 10.5 | 1.86 | 5 | 87.0 | 133 | 0.200 |
| 1100 | 11.0 | 2.17 | 5 | 94.0 | 142 | 0.200 |
| 1150 | 11.5 | 2.55 | 5 | 94.0 | 142 | 0.200 |
| 1200 | 12.0 | 2.62 | 5 | 101.0 | 151 | 0.200 |
| 1250 | 12.5 | 3.08 | 5 | 101.0 | 151 | 0.200 |
| 1300 | 13.0 | 3.12 | 5 | 101.0 | 151 | 0.250 |
| 1350 | 13.5 | 3.88 | 5 | 108.0 | 160 | 0.250 |
| 1400 | 14.0 | 4.56 | 5 | 108.0 | 160 | 0.250 |
| 1450 | 14.5 | 5.00 | 5 | 114.0 | 169 | 0.250 |
| 1500 | 15.0 | 5.30 | 5 | 114.0 | 169 | 0.250 |
| 1550 | 15.5 | 5.85 | 5 | 120.0 | 178 | 0.250 |
| 1600 | 16.0 | 6.10 | 5 | 120.0 | 178 | 0.250 |

(W118)

## Spiral drill set with cyl. Shank, rolled

**Design:** Rolled, right cutting, with precise point geometry. Robust design

**Application:** Cost-effective alternative for handheld machines.

HSS | DIN 338 | Type N | 118° | 25–30°

**1008 0001–0009** **Supplied:** Sets consisting of (Order No. 1008) 1 piece of each spiral drill size, in a sturdy metal cassette.

**1008 0011** **Supplied:** Set consisting of (Order No. 1008) 10 of each Ø 1.0–8.0 (increasing by 0.5), 5 of each Ø 8.5–10.0 (increasing by 0.5), in a sturdy metal case with 2 integrated locks and carrying handle.

1008 0001–0009

1008 0011

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1008 | ◐ | | | | | | | | | | ◐ | | ○ |

| Order No. | Set contents Ø h8 mm | 1008 | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0001 | 1.0– 5.9 | 28.80 | 50 | 0.1 |
| 0003 | 6.0–10.0 | 61.00 | 41 | 0.1 |
| 0005 | 1.0–10.0 | 15.70 | 19 | 0.5 |
| 0007 | 1.0–10.5 | 28.20 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 34.50 | 25 | 0.5 |
| 0011 | 1.0–10.0 | 111.00 | 170 | 0.5 |
| | | (W102) | | |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## Spiral drill with reduced shank

**Design:** HSS, DIN 338, type N.
Rolled, right cutting with offset shank. Normal angle of rake, core thickness and core gradient.

**Application:** The roll forged finish of the spiral drill prevents breaks in the joint. This makes it particularly suitable for robust drilling work – as a cost-effective alternative for handheld machines.

HSS | DIN 338 | Type N | 118° | 25–30°

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1035 | 16 | | | | | | | | | | | | |

| Order No. | Ø h8 mm | 1035 format | Spiral length mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 1050 | 10.5 | 4.28 | 87 | 133 | 10 |
| 1100 | 11.0 | 4.59 | 94 | 142 | 10 |
| 1150 | 11.5 | 4.90 | 94 | 142 | 10 |
| 1200 | 12.0 | 5.60 | 101 | 151 | 10 |
| 1250 | 12.5 | 5.75 | 101 | 151 | 10 |
| 1300 | 13.0 | 6.10 | 101 | 151 | 10 |
| 1350 | 13.5 | 7.10 | 108 | 160 | 10 |
| 1351 | 13.5 | 7.10 | 108 | 160 | 13 |
| 1400 | 14.0 | 7.80 | 108 | 160 | 10 |
| 1401 | 14.0 | 7.80 | 108 | 160 | 13 |
| 1450 | 14.5 | 8.75 | 114 | 169 | 10 |
| 1451 | 14.5 | 8.75 | 114 | 169 | 13 |
| 1500 | 15.0 | 10.60 | 114 | 169 | 10 |
| 1501 | 15.0 | 10.60 | 114 | 169 | 13 |
| 1550 | 15.5 | 11.85 | 120 | 178 | 10 |
| 1551 | 15.5 | 11.85 | 120 | 178 | 13 |
| 1600 | 16.0 | 12.70 | 120 | 178 | 10 |
| 1601 | 16.0 | 12.70 | 120 | 178 | 13 |
| | | (W118) | | | |

## Spiral drill with cyl. Ground shank

**Design: Profile grinding,** right cutting, with precise point grind as well as high concentricity and pitch accuracy. Point thinning up to ∅ 2.4 mm similar to cross-grinding, cross-grinding from 3.0 mm according to DIN 1412 C. Normal angle of rake, core thickness and core gradient.

**Application:** High-performance standard drill for drilling alloyed and non-alloyed steel.

HSS | DIN 338 | Type N | 25–30° | 118°

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1009 | 20 | | | | | | | | | | | | |

| Order No. | ∅ h8 mm | 1009 bright | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 0.45 | 10 | 12.0 | 34 | 0.016 |
| 0110 | 1.1 | 0.45 | 10 | 14.0 | 36 | 0.050 |
| 0120 | 1.2 | 0.45 | 10 | 16.0 | 38 | 0.050 |
| 0130 | 1.3 | 0.45 | 10 | 16.0 | 38 | 0.050 |
| 0140 | 1.4 | 0.45 | 10 | 18.0 | 40 | 0.050 |
| 0150 | 1.5 | 0.54 | 10 | 18.0 | 40 | 0.050 |
| 0160 | 1.6 | 0.54 | 10 | 20.0 | 43 | 0.050 |
| 0170 | 1.7 | 0.54 | 10 | 20.0 | 43 | 0.050 |
| 0180 | 1.8 | 0.54 | 10 | 22.0 | 46 | 0.050 |
| 0190 | 1.9 | 0.54 | 10 | 22.0 | 46 | 0.050 |
| 0200 | 2.0 | 0.54 | 10 | 24.0 | 49 | 0.050 |
| 0210 | 2.1 | 0.54 | 10 | 24.0 | 49 | 0.063 |
| 0220 | 2.2 | 0.54 | 10 | 27.0 | 53 | 0.063 |
| 0230 | 2.3 | 0.54 | 10 | 27.0 | 53 | 0.063 |
| 0240 | 2.4 | 0.54 | 10 | 30.0 | 57 | 0.063 |
| 0250 | 2.5 | 0.63 | 10 | 30.0 | 57 | 0.063 |
| 0260 | 2.6 | 0.63 | 10 | 30.0 | 57 | 0.080 |
| 0270 | 2.7 | 0.63 | 10 | 33.0 | 61 | 0.080 |
| 0280 | 2.8 | 0.63 | 10 | 33.0 | 61 | 0.080 |
| 0290 | 2.9 | 0.63 | 10 | 33.0 | 61 | 0.080 |
| 0300 | 3.0 | 0.72 | 10 | 33.0 | 61 | 0.080 |
| 0310 | 3.1 | 0.72 | 10 | 36.0 | 65 | 0.080 |
| 0320 | 3.2 | 0.72 | 10 | 36.0 | 65 | 0.100 |
| 0330 | 3.3 | 0.72 | 10 | 36.0 | 65 | 0.100 |
| 0340 | 3.4 | 0.72 | 10 | 39.0 | 70 | 0.100 |
| 0350 | 3.5 | 0.75 | 10 | 39.0 | 70 | 0.100 |
| 0360 | 3.6 | 0.75 | 10 | 39.0 | 70 | 0.100 |
| 0370 | 3.7 | 0.75 | 10 | 39.0 | 70 | 0.100 |
| 0380 | 3.8 | 0.75 | 10 | 43.0 | 75 | 0.100 |
| 0390 | 3.9 | 0.75 | 10 | 43.0 | 75 | 0.100 |
| 0400 | 4.0 | 0.85 | 10 | 43.0 | 75 | 0.100 |
| 0410 | 4.1 | 0.85 | 10 | 43.0 | 75 | 0.100 |
| 0420 | 4.2 | 0.85 | 10 | 43.0 | 75 | 0.100 |
| 0430 | 4.3 | 0.85 | 10 | 47.0 | 80 | 0.100 |
| 0440 | 4.4 | 0.85 | 10 | 47.0 | 80 | 0.100 |
| 0450 | 4.5 | 0.95 | 10 | 47.0 | 80 | 0.100 |
| 0460 | 4.6 | 0.95 | 10 | 47.0 | 80 | 0.100 |
| 0470 | 4.7 | 0.95 | 10 | 47.0 | 80 | 0.100 |
| 0480 | 4.8 | 0.95 | 10 | 52.0 | 86 | 0.100 |
| 0490 | 4.9 | 0.95 | 10 | 52.0 | 86 | 0.100 |
| 0500 | 5.0 | 1.16 | 10 | 52.0 | 86 | 0.100 |
| 0510 | 5.1 | 1.16 | 10 | 52.0 | 86 | 0.125 |
| 0520 | 5.2 | 1.16 | 10 | 52.0 | 86 | 0.125 |
| 0530 | 5.3 | 1.16 | 10 | 52.0 | 86 | 0.125 |
| 0540 | 5.4 | 1.16 | 10 | 57.0 | 93 | 0.125 |
| 0550 | 5.5 | 1.16 | 10 | 57.0 | 93 | 0.125 |
| 0560 | 5.6 | 1.16 | 10 | 57.0 | 93 | 0.125 |
| 0570 | 5.7 | 1.16 | 10 | 57.0 | 93 | 0.125 |
| 0580 | 5.8 | 1.16 | 10 | 57.0 | 93 | 0.125 |
| 0590 | 5.9 | 1.16 | 10 | 57.0 | 93 | 0.125 |
| 0600 | 6.0 | 1.40 | 10 | 57.0 | 93 | 0.125 |
| 0610 | 6.1 | 1.40 (W118) | 5 | 63.0 | 101 | 0.125 |

| Order No. | ∅ h8 mm | 1009 bright | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0620 | 6.2 | 1.40 | 5 | 63.0 | 101 | 0.125 |
| 0630 | 6.3 | 1.40 | 5 | 63.0 | 101 | 0.125 |
| 0640 | 6.4 | 1.40 | 5 | 63.0 | 101 | 0.160 |
| 0650 | 6.5 | 1.65 | 5 | 63.0 | 101 | 0.160 |
| 0660 | 6.6 | 1.65 | 5 | 63.0 | 101 | 0.160 |
| 0670 | 6.7 | 1.65 | 5 | 63.0 | 101 | 0.160 |
| 0680 | 6.8 | 1.65 | 5 | 69.0 | 109 | 0.160 |
| 0690 | 6.9 | 1.65 | 5 | 69.0 | 109 | 0.160 |
| 0700 | 7.0 | 1.95 | 5 | 69.0 | 109 | 0.160 |
| 0710 | 7.1 | 1.95 | 5 | 69.0 | 109 | 0.160 |
| 0720 | 7.2 | 1.95 | 5 | 69.0 | 109 | 0.160 |
| 0730 | 7.3 | 1.95 | 5 | 69.0 | 109 | 0.160 |
| 0740 | 7.4 | 1.95 | 5 | 69.0 | 109 | 0.160 |
| 0750 | 7.5 | 2.20 | 5 | 69.0 | 109 | 0.160 |
| 0760 | 7.6 | 2.20 | 5 | 75.0 | 117 | 0.160 |
| 0770 | 7.7 | 2.20 | 5 | 75.0 | 117 | 0.160 |
| 0780 | 7.8 | 2.20 | 5 | 75.0 | 117 | 0.160 |
| 0790 | 7.9 | 2.20 | 5 | 75.0 | 117 | 0.160 |
| 0800 | 8.0 | 2.60 | 5 | 75.0 | 117 | 0.160 |
| 0810 | 8.1 | 2.60 | 5 | 75.0 | 117 | 0.200 |
| 0820 | 8.2 | 2.60 | 5 | 75.0 | 117 | 0.200 |
| 0830 | 8.3 | 2.60 | 5 | 75.0 | 117 | 0.200 |
| 0840 | 8.4 | 2.60 | 5 | 75.0 | 117 | 0.200 |
| 0850 | 8.5 | 2.80 | 5 | 75.0 | 117 | 0.200 |
| 0860 | 8.6 | 2.80 | 5 | 81.0 | 125 | 0.200 |
| 0870 | 8.7 | 2.80 | 5 | 81.0 | 125 | 0.200 |
| 0880 | 8.8 | 2.80 | 5 | 81.0 | 125 | 0.200 |
| 0890 | 8.9 | 2.80 | 5 | 81.0 | 125 | 0.200 |
| 0900 | 9.0 | 3.30 | 5 | 81.0 | 125 | 0.200 |
| 0910 | 9.1 | 3.30 | 5 | 81.0 | 125 | 0.200 |
| 0920 | 9.2 | 3.30 | 5 | 81.0 | 125 | 0.200 |
| 0930 | 9.3 | 3.30 | 5 | 81.0 | 125 | 0.200 |
| 0940 | 9.4 | 3.30 | 5 | 81.0 | 125 | 0.200 |
| 0950 | 9.5 | 3.50 | 5 | 81.0 | 125 | 0.200 |
| 0960 | 9.6 | 3.50 | 5 | 87.0 | 133 | 0.200 |
| 0970 | 9.7 | 3.50 | 5 | 87.0 | 133 | 0.200 |
| 0980 | 9.8 | 3.50 | 5 | 87.0 | 133 | 0.200 |
| 0990 | 9.9 | 3.50 | 5 | 87.0 | 133 | 0.200 |
| 1000 | 10.0 | 4.05 | 5 | 87.0 | 133 | 0.200 |
| 1020 | 10.2 | 4.05 | 5 | 87.0 | 133 | 0.200 |
| 1050 | 10.5 | 4.65 | 5 | 87.0 | 133 | 0.200 |
| 1100 | 11.0 | 5.40 | 5 | 94.0 | 142 | 0.200 |
| 1150 | 11.5 | 5.70 | 5 | 94.0 | 142 | 0.200 |
| 1200 | 12.0 | 6.50 | 5 | 101.0 | 151 | 0.200 |
| 1250 | 12.5 | 6.95 | 5 | 101.0 | 151 | 0.200 |
| 1300 | 13.0 | 7.45 | 5 | 101.0 | 151 | 0.250 |
| 1350 | 13.5 | 8.85 | 1 | 108.0 | 160 | 0.250 |
| 1400 | 14.0 | 9.45 | 1 | 108.0 | 160 | 0.250 |
| 1450 | 14.5 | 10.65 | 1 | 114.0 | 169 | 0.250 |
| 1500 | 15.0 | 11.60 | 1 | 114.0 | 169 | 0.250 |
| 1550 | 15.5 | 13.10 | 1 | 120.0 | 178 | 0.250 |
| 1600 | 16.0 | 13.85 (W118) | 1 | 120.0 | 178 | 0.250 |

## Spiral drill with cyl. Ground shank

**Design: Profile grinding,** right cutting, with precise point grind as well as high concentricity and pitch accuracy. Point thinning up to Ø 2.4 mm similar to cross-grinding, cross-grinding from 3.0 mm according to DIN 1412 C. Normal angle of rake, core thickness and core gradient. Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**Application:** High-performance standard drill for drilling alloyed and non-alloyed steel.

HSS | DIN 338 | Type N | 118° | 25–30°

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1009 | 20 | | | | | | | | | | | | |

| Order No. | Set contents Ø h8 mm | 1009 bright | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0001 | 1.0– 5.9 | 40.80 | 50 | 0.1 |
| 0003 | 6.0–10.0 | 97.50 | 41 | 0.1 |
| 0005 | 1.0–10.0 | 30.60 | 19 | 0.5 |
| 0007 | 1.0–10.5 | 50.60 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 56.00 | 25 | 0.5 |
| | | (W102) | | |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## Spiral drill with cyl. Shank, profile grinding

**Design:** HSS, DIN 338, type N.
Right cutting, profile grinding, bright surface, steam tempered from 2.4 mm, with precise point geometry.
Normal angle of rake, core thickness and core gradient.

**Application:** Particularly suitable for steel and steel casting (alloyed and non-alloyed) grey cast iron, malleable cast iron, nodular iron, sintered iron and graphite.

HSS | DIN 338 | Type N | 118° | 25–30°

**1001** steam

**Note:** Available as a set (Order No. 1028 on 📖 1/19).

**1002** steam

**Note:** Available as a set (Order No. 1002 on 📖 1/19).

1001 format professional quality steam

1002 GÜHRING steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | 25 | 18 | | | | | | | | | 25 | | 30 |
| 1002 | 25 | 18 | | | | | | | | | 25 | | 30 |

| Order No. | Ø h8 mm | 1001 format steam | 1002 GÜHRING steam | PU | Spiral length mm | Total length mm | f (Steels up to 850 N/mm²) mm/rev |
|---|---|---|---|---|---|---|---|
| 0020 | 0.2 | 3.06 | 6.10 | 10 | 2.5 | 19 | 0.010 |
| 0030 | 0.3 | 2.17 | 4.41 | 10 | 3.0 | 19 | 0.010 |
| 0040 | 0.4 | 1.78 | 3.78 | 10 | 5.0 | 20 | 0.010 |
| 0050 | 0.5 | 1.40 | 2.90 | 10 | 6.0 | 22 | 0.010 |
| 0060 | 0.6 | 1.38 | 2.90 | 10 | 7.0 | 24 | 0.016 |
| 0070 | 0.7 | 1.30 | 2.62 | 10 | 9.0 | 28 | 0.016 |
| 0075 | 0.75 | – | 3.15 NEW | 10 | 9.0 | 28 | 0.016 |
| 0080 | 0.8 | 1.22 | 2.52 | 10 | 10.0 | 30 | 0.016 |
| 0090 | 0.9 | 1.17 | 2.34 | 10 | 11.0 | 32 | 0.016 |
| 0100 | 1.0 | 1.30 | 2.31 | 10 | 12.0 | 34 | 0.016 |
| 0110 | 1.1 | 1.15 | 2.28 | 10 | 14.0 | 36 | 0.050 |
| 0120 | 1.2 | 1.30 | 2.31 | 10 | 16.0 | 38 | 0.050 |
| | | (W100) | (W105) | | | | |

| Order No. | Ø h8 mm | 1001 format steam | 1002 GÜHRING steam | PU | Spiral length mm | Total length mm | f (Steels up to 850 N/mm²) mm/rev |
|---|---|---|---|---|---|---|---|
| 0125 | 1.25 | – | 2.62 NEW | 10 | 16.0 | 38 | 0.050 |
| 0130 | 1.3 | 1.12 | 2.24 | 10 | 16.0 | 38 | 0.050 |
| 0140 | 1.4 | 1.17 | 2.14 | 10 | 18.0 | 40 | 0.050 |
| 0150 | 1.5 | 1.05 | 1.92 | 10 | 18.0 | 40 | 0.050 |
| 0160 | 1.6 | 0.94 | 1.89 | 10 | 20.0 | 43 | 0.050 |
| 0170 | 1.7 | 1.05 | 1.89 | 10 | 20.0 | 43 | 0.050 |
| 0180 | 1.8 | 0.94 | 1.72 | 10 | 22.0 | 46 | 0.050 |
| 0190 | 1.9 | 0.94 | 1.75 | 10 | 22.0 | 46 | 0.050 |
| 0200 | 2.0 | 0.76 | 1.40 | 10 | 24.0 | 49 | 0.050 |
| 0210 | 2.1 | 0.94 | 1.68 | 10 | 24.0 | 49 | 0.063 |
| 0220 | 2.2 | 0.92 | 1.75 | 10 | 27.0 | 53 | 0.063 |
| 0225 | 2.25 | – | 2.24 NEW | 10 | 27.0 | 53 | 0.063 |
| | | (W100) | (W105) | | | | |

Continued overleaf

## Spiral drill with cyl. Shaft, profile grinding

Continued

| Order No. | Ø h8 mm | 1001 format steam | 1002 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0230 | 2.3 | 0.92 | 1.78 | 10 | 27.0 | 53 | 0.063 |
| 0235 | 2.35 | – | 3.15 NEW | 10 | 27.0 | 53 | 0.063 |
| 0240 | 2.4 | 0.99 | 1.75 | 10 | 30.0 | 57 | 0.063 |
| 0250 | 2.5 | 0.99 | 1.75 | 10 | 30.0 | 57 | 0.063 |
| 0260 | 2.6 | 0.94 | 1.89 | 10 | 30.0 | 57 | 0.080 |
| 0270 | 2.7 | 0.94 | 1.89 | 10 | 33.0 | 61 | 0.080 |
| 0275 | 2.75 | – | 2.52 NEW | 10 | 33.0 | 61 | 0.080 |
| 0280 | 2.8 | 1.05 | 1.89 | 10 | 33.0 | 61 | 0.080 |
| 0290 | 2.9 | 1.05 | 1.89 | 10 | 33.0 | 61 | 0.080 |
| 0300 | 3.0 | 0.92 | 1.58 | 10 | 33.0 | 61 | 0.080 |
| 0310 | 3.1 | 1.10 | 2.00 | 10 | 36.0 | 65 | 0.080 |
| 0320 | 3.2 | 1.10 | 2.00 | 10 | 36.0 | 65 | 0.100 |
| 0325 | 3.25 | – | 2.24 NEW | 10 | 36.0 | 65 | 0.100 |
| 0330 | 3.3 | 1.10 | 2.00 | 10 | 36.0 | 65 | 0.100 |
| 0340 | 3.4 | 1.10 | 2.00 | 10 | 39.0 | 70 | 0.100 |
| 0350 | 3.5 | 0.99 | 1.75 | 10 | 39.0 | 70 | 0.100 |
| 0360 | 3.6 | 1.10 | 2.20 | 10 | 39.0 | 70 | 0.100 |
| 0370 | 3.7 | 1.15 | 2.28 | 10 | 39.0 | 70 | 0.100 |
| 0375 | 3.75 | – | 3.04 NEW | 10 | 39.0 | 70 | 0.100 |
| 0380 | 3.8 | 1.30 | 2.31 | 10 | 43.0 | 75 | 0.100 |
| 0390 | 3.9 | 1.20 | 2.42 | 10 | 43.0 | 75 | 0.100 |
| 0400 | 4.0 | 0.99 | 1.89 | 10 | 43.0 | 75 | 0.100 |
| 0410 | 4.1 | 1.30 | 2.62 | 10 | 43.0 | 75 | 0.100 |
| 0420 | 4.2 | 1.15 | 2.28 | 10 | 43.0 | 75 | 0.100 |
| 0425 | 4.25 | – | 2.98 NEW | 10 | 43.0 | 75 | 0.100 |
| 0430 | 4.3 | 1.30 | 2.62 | 10 | 47.0 | 80 | 0.100 |
| 0440 | 4.4 | 1.30 | 2.62 | 10 | 47.0 | 80 | 0.100 |
| 0450 | 4.5 | 1.17 | 2.34 | 10 | 47.0 | 80 | 0.100 |
| 0460 | 4.6 | 1.30 | 2.70 | 10 | 47.0 | 80 | 0.100 |
| 0470 | 4.7 | 1.33 | 2.76 | 10 | 47.0 | 80 | 0.100 |
| 0475 | 4.75 | – | 4.62 NEW | 10 | 47.0 | 80 | 0.100 |
| 0480 | 4.8 | 1.33 | 2.70 | 10 | 52.0 | 86 | 0.100 |
| 0490 | 4.9 | 1.38 | 2.90 | 10 | 52.0 | 86 | 0.100 |
| 0500 | 5.0 | 1.30 | 2.31 | 10 | 52.0 | 86 | 0.100 |
| 0510 | 5.1 | 1.40 | 2.90 | 10 | 52.0 | 86 | 0.125 |
| 0520 | 5.2 | 1.40 | 2.94 | 10 | 52.0 | 86 | 0.125 |
| 0525 | 5.25 | – | 4.62 NEW | 10 | 52.0 | 86 | 0.125 |
| 0530 | 5.3 | 1.40 | 2.98 | 10 | 52.0 | 86 | 0.125 |
| 0540 | 5.4 | 1.63 | 3.50 | 10 | 57.0 | 93 | 0.125 |
| 0550 | 5.5 | 1.61 | 3.26 | 10 | 57.0 | 93 | 0.125 |
| 0560 | 5.6 | 1.68 | 3.57 | 10 | 57.0 | 93 | 0.125 |
| 0570 | 5.7 | 1.76 | 3.57 | 10 | 57.0 | 93 | 0.125 |
| 0575 | 5.75 | – | 6.30 NEW | 10 | 57.0 | 93 | 0.125 |
| 0580 | 5.8 | 1.78 | 3.57 | 10 | 57.0 | 93 | 0.125 |
| 0590 | 5.9 | 1.78 | 3.78 | 10 | 57.0 | 93 | 0.125 |
| 0600 | 6.0 | 1.61 | 3.26 | 10 | 57.0 | 93 | 0.125 |
| 0610 | 6.1 | 1.94 | 4.06 | 5 | 63.0 | 101 | 0.125 |
| 0620 | 6.2 | 1.94 | 4.06 | 5 | 63.0 | 101 | 0.125 |
| 0625 | 6.25 | – | 6.60 NEW | 10 | 63.0 | 101 | 0.125 |
| 0630 | 6.3 | 1.94 | 4.13 | 5 | 63.0 | 101 | 0.125 |
| 0635 | 6.35 | – | 4.27 NEW | 10 | 63.0 | 101 | 0.160 |
| 0640 | 6.4 | 2.09 | 4.41 | 5 | 63.0 | 101 | 0.160 |
| 0650 | 6.5 | 1.94 | 3.99 | 5 | 63.0 | 101 | 0.160 |
| 0660 | 6.6 | 2.17 | 4.41 | 5 | 63.0 | 101 | 0.160 |
| 0670 | 6.7 | 2.27 | 4.55 | 5 | 63.0 | 101 | 0.160 |
| 0675 | 6.75 | – | 5.30 NEW | 10 | 69.0 | 109 | 0.160 |
| 0680 | 6.8 | 2.65 | 5.30 | 5 | 69.0 | 109 | 0.160 |
| 0690 | 6.9 | 2.65 | 5.30 | 5 | 69.0 | 109 | 0.160 |
| 0700 | 7.0 | 2.35 | 4.83 | 5 | 69.0 | 109 | 0.160 |
| 0710 | 7.1 | 2.68 | 5.65 | 5 | 69.0 | 109 | 0.160 |
| 0720 | 7.2 | 2.75 | 5.80 | 5 | 69.0 | 109 | 0.160 |
| 0725 | 7.25 | – | 9.60 NEW | 10 | 69.0 | 109 | 0.160 |
| 0730 | 7.3 | 2.75 | 5.90 | 5 | 69.0 | 109 | 0.160 |
| 0740 | 7.4 | 2.78 | 6.10 | 5 | 69.0 | 109 | 0.160 |
| 0750 | 7.5 | 2.65 | 5.30 | 5 | 69.0 | 109 | 0.160 |
| | | (W100) | (W105) | | | | |

| Order No. | Ø h8 mm | 1001 format steam | 1002 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0760 | 7.6 | 3.01 | 6.45 | 5 | 75.0 | 117 | 0.160 |
| 0770 | 7.7 | 3.01 | 6.45 | 5 | 75.0 | 117 | 0.160 |
| 0775 | 7.75 | – | 10.50 NEW | 5 | 75.0 | 117 | 0.160 |
| 0780 | 7.8 | 3.06 | 6.10 | 5 | 75.0 | 117 | 0.160 |
| 0790 | 7.9 | 3.09 | 6.60 | 5 | 75.0 | 117 | 0.160 |
| 0800 | 8.0 | 2.65 | 5.30 | 5 | 75.0 | 117 | 0.160 |
| 0810 | 8.1 | 3.49 | 6.80 | 5 | 75.0 | 117 | 0.200 |
| 0820 | 8.2 | 3.60 | 6.80 | 5 | 75.0 | 117 | 0.200 |
| 0825 | 8.25 | – | 8.60 NEW | 5 | 75.0 | 117 | 0.200 |
| 0830 | 8.3 | 3.90 | 7.40 | 5 | 75.0 | 117 | 0.200 |
| 0840 | 8.4 | 3.90 | 7.40 | 5 | 75.0 | 117 | 0.200 |
| 0850 | 8.5 | 3.34 | 6.80 | 5 | 75.0 | 117 | 0.200 |
| 0860 | 8.6 | 4.03 | 8.10 | 5 | 81.0 | 125 | 0.200 |
| 0870 | 8.7 | 4.03 | 8.10 | 5 | 81.0 | 125 | 0.200 |
| 0875 | 8.75 | – | 14.75 NEW | 5 | 81.0 | 125 | 0.200 |
| 0880 | 8.8 | 4.11 | 8.40 | 5 | 81.0 | 125 | 0.200 |
| 0890 | 8.9 | 4.28 | 8.75 | 5 | 81.0 | 125 | 0.200 |
| 0900 | 9.0 | 3.82 | 7.40 | 5 | 81.0 | 125 | 0.200 |
| 0910 | 9.1 | 4.28 | 8.75 | 5 | 81.0 | 125 | 0.200 |
| 0920 | 9.2 | 4.28 | 8.90 | 5 | 81.0 | 125 | 0.200 |
| 0925 | 9.25 | – | 12.45 NEW | 5 | 81.0 | 125 | 0.200 |
| 0930 | 9.3 | 4.74 | 9.10 | 5 | 81.0 | 125 | 0.200 |
| 0940 | 9.4 | 4.74 | 9.10 | 5 | 81.0 | 125 | 0.200 |
| 0950 | 9.5 | 4.69 | 8.55 | 5 | 81.0 | 125 | 0.200 |
| 0960 | 9.6 | 4.74 | 9.85 | 5 | 87.0 | 133 | 0.200 |
| 0970 | 9.7 | 4.74 | 10.10 | 5 | 87.0 | 133 | 0.200 |
| 0975 | 9.75 | – | 14.35 NEW | 5 | 87.0 | 133 | 0.200 |
| 0980 | 9.8 | 5.85 | 10.45 | 5 | 87.0 | 133 | 0.200 |
| 0990 | 9.9 | 5.85 | 10.50 | 5 | 87.0 | 133 | 0.200 |
| 1000 | 10.0 | 4.46 | 9.05 | 5 | 87.0 | 133 | 0.200 |
| 1010 | 10.1 | 6.85 | 11.25 | 5 | 87.0 | 133 | 0.200 |
| 1020 | 10.2 | 5.70 | 11.35 | 5 | 87.0 | 133 | 0.200 |
| 1025 | 10.25 | – | 15.45 NEW | 5 | 87.0 | 133 | 0.200 |
| 1050 | 10.5 | 6.40 | 11.55 | 5 | 87.0 | 133 | 0.200 |
| 1075 | 10.75 | – | 20.50 ◊ NEW | 5 | 94.0 | 142 | 0.200 |
| 1080 | 10.8 | 8.35 | 16.60 | 5 | 94.0 | 142 | 0.200 |
| 1100 | 11.0 | 6.80 | 13.30 | 5 | 94.0 | 142 | 0.200 |
| 1120 | 11.2 | 8.45 | 16.95 | 5 | 94.0 | 142 | 0.200 |
| 1125 | 11.25 | – | 22.30 NEW | 1 | 94.0 | 142 | 0.200 |
| 1150 | 11.5 | 7.45 | 14.75 | 5 | 94.0 | 142 | 0.200 |
| 1175 | 11.75 | – | 23.00 NEW | 1 | 94.0 | 142 | 0.200 |
| 1180 | 11.8 | 9.55 | 18.75 | 5 | 94.0 | 142 | 0.200 |
| 1200 | 12.0 | 8.35 | 16.60 | 5 | 101.0 | 151 | 0.200 |
| 1220 | 12.2 | 11.15 | 22.30 | 5 | 101.0 | 151 | 0.200 |
| 1225 | 12.25 | – | 25.20 NEW | 1 | 101.0 | 151 | 0.200 |
| 1250 | 12.5 | 9.30 | 18.00 | 5 | 101.0 | 151 | 0.200 |
| 1275 | 12.75 | – | 33.90 NEW | 1 | 101.0 | 151 | 0.250 |
| 1280 | 12.8 | 12.50 | 25.20 | 5 | 101.0 | 151 | 0.250 |
| 1300 | 13.0 | 10.20 | 19.80 | 5 | 101.0 | 151 | 0.250 |
| 1320 | 13.2 | 13.35 | 29.20 | 1 | 101.0 | 151 | 0.250 |
| 1350 | 13.5 | 11.85 | 23.00 | 1 | 108.0 | 160 | 0.250 |
| 1380 | 13.8 | 17.15 | 37.40 | 1 | 108.0 | 160 | 0.250 |
| 1400 | 14.0 | 13.10 | 26.30 | 1 | 108.0 | 160 | 0.250 |
| 1420 | 14.2 | 19.55 | 38.20 | 1 | 114.0 | 169 | 0.250 |
| 1450 | 14.5 | 14.10 | 27.70 | 1 | 114.0 | 169 | 0.250 |
| 1480 | 14.8 | 20.80 | 44.70 | 1 | 114.0 | 169 | 0.250 |
| 1500 | 15.0 | 15.10 | 29.90 | 1 | 114.0 | 169 | 0.250 |
| 1520 | 15.2 | 35.50 | 56.90 | 1 | 120.0 | 178 | 0.250 |
| 1550 | 15.5 | 16.65 | 32.80 | 1 | 120.0 | 178 | 0.250 |
| 1580 | 15.8 | 38.00 | 54.00 | 1 | 120.0 | 178 | 0.250 |
| 1600 | 16.0 | 17.85 | 35.60 | 1 | 120.0 | 178 | 0.250 |
| 1650 | 16.5 | 33.10 | 40.30 | 1 | 125.0 | 184 | 0.250 |
| 1700 | 17.0 | 34.30 | 42.50 | 1 | 125.0 | 184 | 0.250 |
| 1750 | 17.5 | 36.50 | 46.80 | 1 | 130.0 | 191 | 0.250 |
| 1800 | 18.0 | 39.30 | 50.40 | 1 | 130.0 | 191 | 0.250 |
| | | (W100) | (W105) | | | | |

Continued overleaf

## Spiral drill with cyl. Shaft, profile grinding

Continued

| Order No. | Ø h8 mm | 1001 format steam | 1002 GÜHRING steam | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|---|
| 1850 | 18.5 | 42.90 | 54.00 | 1 | 135.0 | 198 | 0.250 |
| 1900 | 19.0 | 45.70 (W100) | 59.10 (W105) | 1 | 135.0 | 198 | 0.250 |
| 1950 | 19.5 | 52.50 | 67.70 | 1 | 140.0 | 205 | 0.250 |
| 2000 | 20.0 | 53.40 (W100) | 67.70 (W105) | 1 | 140.0 | 205 | 0.250 |

## Spiral drill set with cyl. Shank, profile grinding

**Design: Profile grinding,** right cutting, with precise point grind as well as high concentricity and pitch accuracy. Point thinning up to Ø 2.4 mm similar to cross-grinding. Normal angle of rake, core thickness and core gradient. Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**Application:** Particularly suitable for steel and steel casting (alloyed and non-alloyed) grey cast iron, malleable cast iron, nodular iron, sintered iron and graphite.

HSS | DIN 338 | Type N | 118° | 25–30°

**1028** steam

Bright surface, steam tempered from 2.4 mm Ø. Normal angle of rake, core thickness and core gradient. Set consisting of (Order No. 1001).

**1002** steam

Bright surface, steam tempered from 2.4 mm Ø. Normal angle of rake, core thickness and core gradient. Set consisting of (Order No. 1002).

1028 format professional quality steam — 1002 GÜHRING steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1028 | 25 | 18 | | | | | | | | | 25 | | 30 |
| 1002 | 25 | 18 | | | | | | | | | 25 | | 30 |

| Order No. | Set contents Ø h8 mm | 1028 format steam | 1002 GÜHRING steam | Number of drills Piece | Increasing mm |
|---|---|---|---|---|---|
| 0001 | 1.0– 5.9 | 67.60 | 151.50 | 50 | 0.1 |
| 0003 | 6.0–10.0 | 145.50 | 320.00 | 41 | 0.1 |
| 0005 | 1.0–10.0 | 42.30 | 92.90 | 19 | 0.5 |
| 0007 | 1.0–10.5 | 64.00 | 134.00 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 85.40 (W100) | 207.50 (W105) | 25 | 0.5 |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## ADVANCEDLINE®

**Especially for industrial production designed as high-performance countersink**

**Benefits:**

- Up to 50 % longer life
- Up to 25 % faster countersinking
- Significantly higher cutting performance

1/115

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spiral drill with cyl. Shank

**Design:** HSS, DIN 338, type N.
Profile grinding, TiN coated surface, right cutting, with precise point geometry. Point thinning < Ø 2.4 mm similar to cross-grinding. Normal angle of rake, core thickness and core gradient.

**Application:** Particularly suitable for steel and steel casting (alloyed and non-alloyed) grey cast iron, malleable cast iron, nodular iron, sintered iron and graphite.

**Note:** Available as a set (Order No. 1029 on 1/21).

HSS | DIN 338 | Type N | 118° | 25–30°

format professional quality

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1004 | 28 | 22 | | | | | | | | | 28 | | 75 |

| Order No. | Ø h8 mm | 1004 format TiN | PU | Spiral length mm | Total length mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 3.37 | 10 | 12 | 34 | 0.018 |
| 0110 | 1.1 | 3.21 | 10 | 14 | 36 | 0.063 |
| 0120 | 1.2 | 3.39 | 10 | 16 | 38 | 0.063 |
| 0130 | 1.3 | 3.07 | 10 | 16 | 38 | 0.063 |
| 0140 | 1.4 | 3.02 | 10 | 18 | 40 | 0.063 |
| 0150 | 1.5 | 2.81 | 10 | 18 | 40 | 0.063 |
| 0160 | 1.6 | 2.68 | 10 | 20 | 43 | 0.063 |
| 0170 | 1.7 | 2.68 | 10 | 20 | 43 | 0.063 |
| 0180 | 1.8 | 2.41 | 10 | 22 | 46 | 0.063 |
| 0190 | 1.9 | 2.49 | 10 | 22 | 46 | 0.063 |
| 0200 | 2.0 | 2.04 | 10 | 24 | 49 | 0.063 |
| 0210 | 2.1 | 2.44 | 10 | 24 | 49 | 0.080 |
| 0220 | 2.2 | 2.49 | 10 | 27 | 53 | 0.080 |
| 0230 | 2.3 | 2.49 | 10 | 27 | 53 | 0.080 |
| 0240 | 2.4 | 2.52 | 10 | 30 | 57 | 0.080 |
| 0250 | 2.5 | 3.39 | 10 | 30 | 57 | 0.080 |
| 0260 | 2.6 | 2.68 | 10 | 30 | 57 | 0.100 |
| 0270 | 2.7 | 2.68 | 10 | 33 | 61 | 0.100 |
| 0280 | 2.8 | 2.68 | 10 | 33 | 61 | 0.100 |
| 0290 | 2.9 | 2.68 | 10 | 33 | 61 | 0.100 |
| 0300 | 3.0 | 2.23 | 10 | 33 | 61 | 0.100 |
| 0310 | 3.1 | 2.84 | 10 | 36 | 65 | 0.100 |
| 0320 | 3.2 | 2.84 | 10 | 36 | 65 | 0.125 |
| 0330 | 3.3 | 2.89 | 10 | 36 | 65 | 0.125 |
| 0340 | 3.4 | 2.86 | 10 | 39 | 70 | 0.125 |
| 0350 | 3.5 | 2.52 | 10 | 39 | 70 | 0.125 |
| 0360 | 3.6 | 3.02 | 10 | 39 | 70 | 0.125 |
| 0370 | 3.7 | 3.21 | 10 | 39 | 70 | 0.125 |
| 0380 | 3.8 | 3.39 | 10 | 43 | 75 | 0.125 |
| 0390 | 3.9 | 3.47 | 10 | 43 | 75 | 0.125 |
| 0400 | 4.0 | 2.68 | 10 | 43 | 75 | 0.125 |
| 0410 | 4.1 | 3.66 | 10 | 43 | 75 | 0.125 |
| 0420 | 4.2 | 3.21 | 10 | 43 | 75 | 0.125 |
| 0430 | 4.3 | 3.71 | 10 | 47 | 80 | 0.125 |
| 0440 | 4.4 | 3.71 | 10 | 47 | 80 | 0.125 |
| 0450 | 4.5 | 3.39 | 10 | 47 | 80 | 0.125 |
| 0460 | 4.6 | 3.71 | 10 | 47 | 80 | 0.125 |
| 0470 | 4.7 | 3.74 | 10 | 47 | 80 | 0.125 |
| 0480 | 4.8 | 3.82 | 10 | 52 | 86 | 0.125 |
| 0490 | 4.9 | 4.06 | 10 | 52 | 86 | 0.125 |
| 0500 | 5.0 | 3.37 | 10 | 52 | 86 | 0.125 |
| 0510 | 5.1 | 4.19 | 10 | 52 | 86 | 0.160 |
| 0520 | 5.2 | 4.21 | 10 | 52 | 86 | 0.160 |
| 0530 | 5.3 | 4.21 | 10 | 52 | 86 | 0.160 |
| 0540 | 5.4 | 4.64 | 10 | 57 | 93 | 0.160 |
| 0550 | 5.5 | 4.64 | 10 | 57 | 93 | 0.160 |
| 0560 | 5.6 | 4.69 | 10 | 57 | 93 | 0.160 |
| 0570 | 5.7 | 4.82 | 10 | 57 | 93 | 0.160 |
| 0580 | 5.8 | 4.85 | 10 | 57 | 93 | 0.160 |
| 0590 | 5.9 | 4.85 | 10 | 57 | 93 | 0.160 |
| 0600 | 6.0 | 4.59 | 10 | 57 | 93 | 0.160 |
| 0610 | 6.1 | 5.50 | 5 | 63 | 101 | 0.160 |
| 0620 | 6.2 | 5.50 | 5 | 63 | 101 | 0.160 |
| 0630 | 6.3 | 5.55 | 5 | 63 | 101 | 0.160 |
| 0640 | 6.4 | 6.15 | 5 | 63 | 101 | 0.200 |
| 0650 | 6.5 | 5.55 | 5 | 63 | 101 | 0.200 |
| 0660 | 6.6 | 6.35 | 5 | 63 | 101 | 0.200 |
| 0670 | 6.7 | 6.50 | 5 | 63 | 101 | 0.200 |
| 0680 | 6.8 | 7.65 | 5 | 69 | 109 | 0.200 |
| 0690 | 6.9 | 7.65 | 5 | 69 | 109 | 0.200 |
| 0700 | 7.0 | 6.70 | 5 | 69 | 109 | 0.200 |
| 0710 | 7.1 | 7.70 | 5 | 69 | 109 | 0.200 |
| 0720 | 7.2 | 7.85 | 5 | 69 | 109 | 0.200 |
| 0730 | 7.3 | 7.85 | 5 | 69 | 109 | 0.200 |
| 0740 | 7.4 | 8.30 | 5 | 69 | 109 | 0.200 |
| 0750 | 7.5 | 7.55 | 5 | 69 | 109 | 0.200 |
| 0760 | 7.6 | 8.90 | 5 | 75 | 117 | 0.200 |
| 0770 | 7.7 | 8.90 | 5 | 75 | 117 | 0.200 |
| 0780 | 7.8 | 8.90 | 5 | 75 | 117 | 0.200 |
| 0790 | 7.9 | 8.95 | 5 | 75 | 117 | 0.200 |
| 0800 | 8.0 | 7.55 | 5 | 75 | 117 | 0.200 |
| 0810 | 8.1 | 9.20 | 5 | 75 | 117 | 0.250 |
| 0820 | 8.2 | 9.40 | 5 | 75 | 117 | 0.250 |
| 0830 | 8.3 | 10.00 | 5 | 75 | 117 | 0.250 |
| 0840 | 8.4 | 10.15 | 5 | 75 | 117 | 0.250 |
| 0850 | 8.5 | 9.80 | 5 | 75 | 117 | 0.250 |
| 0860 | 8.6 | 11.00 | 5 | 81 | 125 | 0.250 |
| 0870 | 8.7 | 11.00 | 5 | 81 | 125 | 0.250 |
| 0880 | 8.8 | 11.00 | 5 | 81 | 125 | 0.250 |
| 0890 | 8.9 | 11.10 | 5 | 81 | 125 | 0.250 |
| 0900 | 9.0 | 10.50 | 5 | 81 | 125 | 0.250 |
| 0910 | 9.1 | 12.20 | 5 | 81 | 125 | 0.250 |
| 0920 | 9.2 | 12.20 | 5 | 81 | 125 | 0.250 |
| 0930 | 9.3 | 12.25 | 5 | 81 | 125 | 0.250 |
| 0940 | 9.4 | 12.25 | 5 | 81 | 125 | 0.250 |
| 0950 | 9.5 | 12.20 | 5 | 81 | 125 | 0.250 |
| 0960 | 9.6 | 12.95 | 5 | 87 | 133 | 0.250 |
| 0970 | 9.7 | 12.95 | 5 | 87 | 133 | 0.250 |
| 0980 | 9.8 | 13.45 | 5 | 87 | 133 | 0.250 |
| 0990 | 9.9 | 13.45 | 5 | 87 | 133 | 0.250 |
| 1000 | 10.0 | 12.80 | 5 | 87 | 133 | 0.250 |
| 1010 | 10.1 | 17.70 | 5 | 87 | 133 | 0.250 |
| 1020 | 10.2 | 15.00 | 5 | 87 | 133 | 0.250 |
| 1050 | 10.5 | 15.00 | 5 | 87 | 133 | 0.250 |
| 1080 | 10.8 | 24.60 | 5 | 94 | 142 | 0.250 |
| 1100 | 11.0 | 16.65 | 5 | 94 | 142 | 0.250 |
| 1120 | 11.2 | 25.90 | 5 | 94 | 142 | 0.250 |
| 1150 | 11.5 | 17.35 | 5 | 94 | 142 | 0.250 |
| 1180 | 11.8 | 30.90 | 5 | 94 | 142 | 0.250 |
| 1200 | 12.0 | 18.55 | 5 | 101 | 151 | 0.250 |
| 1220 | 12.2 | 36.00 | 5 | 101 | 151 | 0.250 |
| 1250 | 12.5 | 20.20 | 5 | 101 | 151 | 0.250 |
| 1280 | 12.8 | 40.30 | 5 | 101 | 151 | 0.315 |
| 1300 | 13.0 | 20.70 | 5 | 101 | 151 | 0.315 |

(W100) (W100)

Continued overleaf

## Spiral drill with cyl. Shank

Continued

| Order No. | Ø h8 mm | 1004 format TiN | PU | Spiral length mm | Total length mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|---|
| 1320 | 13.2 | 42.00 | 1 | 101 | 151 | 0.315 |
| 1350 | 13.5 | 40.60 | 1 | 108 | 160 | 0.315 |
| 1380 | 13.8 | 45.50 | 1 | 108 | 160 | 0.315 |
| 1400 | 14.0 | 39.60 | 1 | 108 | 160 | 0.315 |
| 1420 | 14.2 | 49.00 | 1 | 114 | 169 | 0.315 |
| 1450 | 14.5 | 43.00 (W100) | 1 | 114 | 169 | 0.315 |

| Order No. | Ø h8 mm | 1004 format TiN | PU | Spiral length mm | Total length mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|---|
| 1480 | 14.8 | 64.60 | 1 | 114 | 169 | 0.315 |
| 1500 | 15.0 | 46.50 | 1 | 114 | 169 | 0.315 |
| 1520 | 15.25 | 57.30 | 1 | 120 | 178 | 0.315 |
| 1550 | 15.5 | 53.40 | 1 | 120 | 178 | 0.315 |
| 1580 | 15.8 | 61.90 | 1 | 120 | 178 | 0.315 |
| 1600 | 16.0 | 54.70 (W100) | 1 | 120 | 178 | 0.315 |

## Spiral drill set with cyl. Shank

**Design:** HSS, DIN 338, type N, right cutting, profile grinding, TiN coated surface. Normal angle of rake, core thickness and core gradient. Set consisting of (order no. 1004). **Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1029 | 28 | 22 | | | | | | | | | 28 | | 75 |

| Order No. | Set contents Ø h8 mm | 1029 format TiN | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0001 | 1.0– 5.9 | 151.50 | 50 | 0.1 |
| 0003 | 6.0–10.0 | 343.00 | 41 | 0.1 |
| 0005 | 1.0–10.0 | 107.50 | 19 | 0.5 |
| 0007 | 1.0–10.5 | 169.50 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 230.00 (W100) | 25 | 0.5 |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

These Hand tap set are found on 1/164

## Spiral drill with cyl. shank

NEW

**Design:** Profile grinding, right cutting, with precise cross point geometry, normal angle of rake, core thickness and core gradient.

**Application:** The proportion of cobalt provides for improved thermal resistance, ideal for alloyed and non-alloyed steels (up to 900 N/mm² in strength), hot and cold work steels, tempered and case-hardening steels and for rust and acid-resistant steels.

HSS Co5 | DIN 338 | Type N | 130° | 25–30°

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1006 | 20 | 10 | | | | | | | 12 | 6 | | | |

| Order No. | Ø h8 mm | 1006 bright | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 1.12 | 10 | 12 | 34 | 0.016 |
| 0110 | 1.1 | 1.62 | 10 | 14 | 36 | 0.050 |
| 0120 | 1.2 | 1.35 | 10 | 16 | 38 | 0.050 |
| 0130 | 1.3 | 1.62 | 10 | 16 | 38 | 0.050 |
| 0140 | 1.4 | 1.62 | 10 | 18 | 40 | 0.050 |
| 0150 | 1.5 | 1.62 | 10 | 18 | 40 | 0.050 |
| 0160 | 1.6 | 1.80 | 10 | 20 | 43 | 0.050 |
| 0170 | 1.7 | 1.80 | 10 | 20 | 43 | 0.050 |
| 0180 | 1.8 | 1.80 | 10 | 22 | 46 | 0.050 |
| 0190 | 1.9 | 1.80 | 10 | 22 | 46 | 0.050 |
| 0200 | 2.0 | 1.80 | 10 | 24 | 49 | 0.050 |
| 0210 | 2.1 | 2.16 | 10 | 24 | 49 | 0.063 |
| 0220 | 2.2 | 2.16 | 10 | 27 | 53 | 0.063 |
| 0230 | 2.3 | 2.16 | 10 | 27 | 53 | 0.063 |
| 0240 | 2.4 | 2.16 | 10 | 30 | 57 | 0.063 |
| 0250 | 2.5 | 2.16 | 10 | 30 | 57 | 0.063 |
| 0260 | 2.6 | 2.70 | 10 | 30 | 57 | 0.080 |
| 0270 | 2.7 | 2.70 | 10 | 33 | 61 | 0.080 |
| 0280 | 2.8 | 2.70 | 10 | 33 | 61 | 0.080 |
| 0290 | 2.9 | 2.70 | 10 | 33 | 61 | 0.080 |
| 0300 | 3.0 | 1.44 | 10 | 33 | 61 | 0.080 |
| 0310 | 3.1 | 2.04 | 10 | 36 | 65 | 0.080 |
| 0320 | 3.2 | 2.04 | 10 | 36 | 65 | 0.100 |
| 0330 | 3.3 | 2.04 | 10 | 36 | 65 | 0.100 |
| 0340 | 3.4 | 2.04 | 10 | 39 | 70 | 0.100 |
| 0350 | 3.5 | 1.55 | 10 | 39 | 70 | 0.100 |
| 0360 | 3.6 | 1.85 | 10 | 39 | 70 | 0.100 |
| 0370 | 3.7 | 1.85 | 10 | 39 | 70 | 0.100 |
| 0380 | 3.8 | 1.85 | 10 | 43 | 75 | 0.100 |
| 0390 | 3.9 | 2.15 | 10 | 43 | 75 | 0.100 |
| 0400 | 4.0 | 1.85 | 10 | 43 | 75 | 0.100 |
| 0410 | 4.1 | 2.25 | 10 | 43 | 75 | 0.100 |
| 0420 | 4.2 | 2.25 | 10 | 43 | 75 | 0.100 |
| 0430 | 4.3 | 2.25 | 10 | 47 | 80 | 0.100 |
| 0440 | 4.4 | 2.25 | 10 | 47 | 80 | 0.100 |
| 0450 | 4.5 | 2.25 | 10 | 47 | 80 | 0.100 |
| 0460 | 4.6 | 2.60 | 10 | 47 | 80 | 0.100 |
| 0470 | 4.7 | 2.60 | 10 | 47 | 80 | 0.100 |
| 0480 | 4.8 | 2.60 | 10 | 52 | 86 | 0.100 |
| 0490 | 4.9 | 2.60 | 10 | 52 | 86 | 0.100 |
| 0500 | 5.0 | 2.86 | 10 | 52 | 86 | 0.125 |
| 0510 | 5.1 | 3.30 | 10 | 52 | 86 | 0.125 |
| 0520 | 5.2 | 3.30 | 10 | 52 | 86 | 0.125 |
| 0530 | 5.3 | 3.30 | 10 | 52 | 86 | 0.125 |
| 0540 | 5.4 | 3.30 | 10 | 57 | 93 | 0.125 |
| 0550 | 5.5 | 3.30 | 10 | 57 | 93 | 0.125 |
| 0560 | 5.6 | 3.63 | 10 | 57 | 93 | 0.125 |
| 0570 | 5.7 | 3.63 | 10 | 57 | 93 | 0.125 |
| 0580 | 5.8 | 3.63 | 10 | 57 | 93 | 0.125 |
| 0590 | 5.9 | 3.63 | 10 | 57 | 93 | 0.125 |
| 0600 | 6.0 | 3.30 | 10 | 57 | 93 | 0.125 |
| 0610 | 6.1 | 3.90 | 5 | 63 | 101 | 0.125 |

(W118)

| Order No. | Ø h8 mm | 1006 bright | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0620 | 6.2 | 3.90 | 5 | 63 | 101 | 0.125 |
| 0630 | 6.3 | 3.90 | 5 | 63 | 101 | 0.125 |
| 0640 | 6.4 | 3.90 | 5 | 63 | 101 | 0.160 |
| 0650 | 6.5 | 3.90 | 5 | 63 | 101 | 0.160 |
| 0660 | 6.6 | 4.70 | 5 | 63 | 101 | 0.160 |
| 0670 | 6.7 | 4.70 | 5 | 63 | 101 | 0.160 |
| 0680 | 6.8 | 4.70 | 5 | 69 | 109 | 0.160 |
| 0690 | 6.9 | 4.70 | 5 | 69 | 109 | 0.160 |
| 0700 | 7.0 | 4.70 | 5 | 69 | 109 | 0.160 |
| 0710 | 7.1 | 5.15 | 5 | 69 | 109 | 0.160 |
| 0720 | 7.2 | 5.15 | 5 | 69 | 109 | 0.160 |
| 0730 | 7.3 | 5.15 | 5 | 69 | 109 | 0.160 |
| 0740 | 7.4 | 5.15 | 5 | 69 | 109 | 0.160 |
| 0750 | 7.5 | 5.15 | 5 | 69 | 109 | 0.160 |
| 0760 | 7.6 | 5.75 | 5 | 75 | 117 | 0.160 |
| 0770 | 7.7 | 5.75 | 5 | 75 | 117 | 0.160 |
| 0780 | 7.8 | 5.75 | 5 | 75 | 117 | 0.160 |
| 0790 | 7.9 | 5.75 | 5 | 75 | 117 | 0.160 |
| 0800 | 8.0 | 5.75 | 5 | 75 | 117 | 0.160 |
| 0810 | 8.1 | 6.15 | 5 | 75 | 117 | 0.200 |
| 0820 | 8.2 | 6.15 | 5 | 75 | 117 | 0.200 |
| 0830 | 8.3 | 6.15 | 5 | 75 | 117 | 0.200 |
| 0840 | 8.4 | 6.15 | 5 | 75 | 117 | 0.200 |
| 0850 | 8.5 | 6.15 | 5 | 75 | 117 | 0.200 |
| 0860 | 8.6 | 6.90 | 5 | 81 | 125 | 0.200 |
| 0870 | 8.7 | 6.90 | 5 | 81 | 125 | 0.200 |
| 0880 | 8.8 | 6.90 | 5 | 81 | 125 | 0.200 |
| 0890 | 8.9 | 6.90 | 5 | 81 | 125 | 0.200 |
| 0900 | 9.0 | 6.90 | 5 | 81 | 125 | 0.200 |
| 0910 | 9.1 | 7.35 | 5 | 81 | 125 | 0.200 |
| 0920 | 9.2 | 7.35 | 5 | 81 | 125 | 0.200 |
| 0930 | 9.3 | 7.35 | 5 | 81 | 125 | 0.200 |
| 0940 | 9.4 | 7.35 | 5 | 81 | 125 | 0.200 |
| 0950 | 9.5 | 7.35 | 5 | 81 | 125 | 0.200 |
| 0960 | 9.6 | 8.35 | 5 | 87 | 133 | 0.200 |
| 0970 | 9.7 | 8.35 | 5 | 87 | 133 | 0.200 |
| 0980 | 9.8 | 8.35 | 5 | 87 | 133 | 0.200 |
| 0990 | 9.9 | 8.35 | 5 | 87 | 133 | 0.200 |
| 1000 | 10.0 | 8.35 | 5 | 87 | 133 | 0.200 |
| 1020 | 10.2 | 10.15 | 5 | 87 | 133 | 0.200 |
| 1050 | 10.5 | 10.15 | 5 | 87 | 133 | 0.200 |
| 1100 | 11.0 | 13.35 | 5 | 94 | 142 | 0.200 |
| 1150 | 11.5 | 14.70 | 5 | 94 | 142 | 0.200 |
| 1200 | 12.0 | 15.90 | 5 | 101 | 151 | 0.200 |
| 1250 | 12.5 | 19.10 | 5 | 101 | 151 | 0.200 |
| 1300 | 13.0 | 22.40 | 5 | 101 | 151 | 0.250 |
| 1350 | 13.5 | 23.40 | 1 | 108 | 160 | 0.250 |
| 1400 | 14.0 | 25.20 | 1 | 108 | 160 | 0.250 |
| 1450 | 14.5 | 26.50 | 1 | 114 | 169 | 0.250 |
| 1500 | 15.0 | 29.20 | 1 | 114 | 169 | 0.250 |
| 1550 | 15.5 | 31.10 | 1 | 120 | 178 | 0.250 |
| 1600 | 16.0 | 34.50 | 1 | 120 | 178 | 0.250 |

(W118)

## Spiral drill with cyl. Shank

**Design:** HSS Co5, DIN 338, type N.
Profile grinding, bright surface, steam tempered from 2.4 mm, right cutting, with precise point geometry. Normal angle of rake, core thickness thicker than normal and normal core gradient.
**Application:** Particularly suitable for alloyed/non-alloyed steels and casting types above 800 N/mm² in strength, hot and cold work steels, roller bearing steels, high-alloy steels, tempered steels and case hardening steels.

HSS Co5 | DIN 338 | Type N | 118° | 25–30° | GÜHRING

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1005 | 40 | **20** | 15 | **12** | | | | | 18 | | 30 | | 40 |

| Order No. | Ø h8 mm | 1005 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 42 HRc f mm/rev |
|---|---|---|---|---|---|---|
| 0020 | 0.2 | 11.35 | 10 | 2.5 | 19 | 0.007 |
| 0030 | 0.3 | 9.40 | 10 | 3 | 19 | 0.007 |
| 0040 | 0.4 | 7.05 | 10 | 5 | 20 | 0.007 |
| 0050 | 0.5 | 5.80 | 10 | 6 | 22 | 0.007 |
| 0060 | 0.6 | 5.90 | 10 | 7 | 24 | 0.012 |
| 0070 | 0.7 | 5.30 | 10 | 9 | 28 | 0.012 |
| 0080 | 0.8 | 5.05 | 10 | 10 | 30 | 0.012 |
| 0090 | 0.9 | 4.90 | 10 | 11 | 32 | 0.012 |
| 0100 | 1.0 | 4.27 | 10 | 12 | 34 | 0.012 |
| 0110 | 1.1 | 4.41 | 10 | 14 | 36 | 0.032 |
| 0120 | 1.2 | 4.83 | 10 | 16 | 38 | 0.032 |
| 0130 | 1.3 | 4.55 | 10 | 16 | 38 | 0.032 |
| 0140 | 1.4 | 4.27 | 10 | 18 | 40 | 0.032 |
| 0150 | 1.5 | 3.99 | 10 | 18 | 40 | 0.032 |
| 0160 | 1.6 | 4.27 | 10 | 20 | 43 | 0.032 |
| 0170 | 1.7 | 4.41 | 10 | 20 | 43 | 0.032 |
| 0180 | 1.8 | 4.48 | 10 | 22 | 46 | 0.032 |
| 0190 | 1.9 | 4.41 | 10 | 22 | 46 | 0.032 |
| 0200 | 2.0 | 3.57 | 10 | 24 | 49 | 0.032 |
| 0210 | 2.1 | 4.90 | 10 | 24 | 49 | 0.040 |
| 0220 | 2.2 | 4.90 | 10 | 27 | 53 | 0.040 |
| 0230 | 2.3 | 5.20 | 10 | 27 | 53 | 0.040 |
| 0240 | 2.4 | 4.69 | 10 | 30 | 57 | 0.040 |
| 0250 | 2.5 | 3.85 | 10 | 30 | 57 | 0.040 |
| 0260 | 2.6 | 4.90 | 10 | 30 | 57 | 0.050 |
| 0270 | 2.7 | 5.40 | 10 | 33 | 61 | 0.050 |
| 0280 | 2.8 | 4.90 | 10 | 33 | 61 | 0.050 |
| 0290 | 2.9 | 5.05 | 10 | 33 | 61 | 0.050 |
| 0300 | 3.0 | 3.85 | 10 | 33 | 61 | 0.050 |
| 0310 | 3.1 | 5.05 | 10 | 36 | 65 | 0.050 |
| 0320 | 3.2 | 4.27 | 10 | 36 | 65 | 0.063 |
| 0330 | 3.3 | 4.41 | 10 | 36 | 65 | 0.063 |
| 0340 | 3.4 | 5.30 | 10 | 39 | 70 | 0.063 |
| 0350 | 3.5 | 4.27 | 10 | 39 | 70 | 0.063 |
| 0360 | 3.6 | 6.15 | 10 | 39 | 70 | 0.063 |
| 0370 | 3.7 | 6.15 | 10 | 39 | 70 | 0.063 |
| 0380 | 3.8 | 5.90 | 10 | 43 | 75 | 0.063 |
| 0390 | 3.9 | 6.30 | 10 | 43 | 75 | 0.063 |
| 0400 | 4.0 | 4.62 | 10 | 43 | 75 | 0.063 |
| 0410 | 4.1 | 5.90 | 10 | 43 | 75 | 0.063 |
| 0420 | 4.2 | 5.90 | 10 | 43 | 75 | 0.063 |
| 0430 | 4.3 | 6.15 | 10 | 47 | 80 | 0.063 |
| 0440 | 4.4 | 6.70 | 10 | 47 | 80 | 0.063 |
| 0450 | 4.5 | 5.90 | 10 | 47 | 80 | 0.063 |
| 0460 | 4.6 | 6.60 | 10 | 47 | 80 | 0.063 |
| 0470 | 4.7 | 6.70 | 10 | 47 | 80 | 0.063 |
| 0480 | 4.8 | 6.50 | 10 | 52 | 86 | 0.063 |
| 0490 | 4.9 | 7.05 | 10 | 52 | 86 | 0.063 |
| 0500 | 5.0 | 5.65 | 10 | 52 | 86 | 0.063 |
| 0510 | 5.1 | 6.65 | 10 | 52 | 86 | 0.080 |
| 0520 | 5.2 | 6.70 | 10 | 52 | 86 | 0.080 |
| 0530 | 5.3 | 7.65 | 10 | 52 | 86 | 0.080 |
| 0540 | 5.4 | 8.25 | 10 | 57 | 93 | 0.080 |
| 0550 | 5.5 | 8.00 | 10 | 57 | 93 | 0.080 |
| 0560 | 5.6 | 8.45 | 10 | 57 | 93 | 0.080 |
| 0570 | 5.7 | 8.90 (W107) | 10 | 57 | 93 | 0.080 |

| Order No. | Ø h8 mm | 1005 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 42 HRc f mm/rev |
|---|---|---|---|---|---|---|
| 0580 | 5.8 | 8.05 | 10 | 57 | 93 | 0.080 |
| 0590 | 5.9 | 8.45 | 10 | 57 | 93 | 0.080 |
| 0600 | 6.0 | 7.40 | 10 | 57 | 93 | 0.080 |
| 0610 | 6.1 | 9.05 | 5 | 63 | 101 | 0.080 |
| 0620 | 6.2 | 9.50 | 5 | 63 | 101 | 0.080 |
| 0630 | 6.3 | 9.50 | 5 | 63 | 101 | 0.080 |
| 0640 | 6.4 | 9.85 | 5 | 63 | 101 | 0.100 |
| 0650 | 6.5 | 8.35 | 5 | 63 | 101 | 0.100 |
| 0660 | 6.6 | 9.40 | 5 | 63 | 101 | 0.100 |
| 0670 | 6.7 | 10.70 | 5 | 63 | 101 | 0.100 |
| 0680 | 6.8 | 10.15 | 5 | 69 | 109 | 0.100 |
| 0690 | 6.9 | 10.70 | 5 | 69 | 109 | 0.100 |
| 0700 | 7.0 | 8.75 | 5 | 69 | 109 | 0.100 |
| 0710 | 7.1 | 13.35 | 5 | 69 | 109 | 0.100 |
| 0720 | 7.2 | 14.05 | 5 | 69 | 109 | 0.100 |
| 0730 | 7.3 | 14.05 | 5 | 69 | 109 | 0.100 |
| 0740 | 7.4 | 13.35 | 5 | 69 | 109 | 0.100 |
| 0750 | 7.5 | 9.45 | 5 | 69 | 109 | 0.100 |
| 0760 | 7.6 | 16.25 | 5 | 75 | 117 | 0.100 |
| 0770 | 7.7 | 18.75 | 5 | 75 | 117 | 0.100 |
| 0780 | 7.8 | 15.45 | 5 | 75 | 117 | 0.100 |
| 0790 | 7.9 | 16.25 | 5 | 75 | 117 | 0.100 |
| 0800 | 8.0 | 11.55 | 5 | 75 | 117 | 0.100 |
| 0810 | 8.1 | 16.25 | 5 | 75 | 117 | 0.125 |
| 0820 | 8.2 | 16.25 | 5 | 75 | 117 | 0.125 |
| 0830 | 8.3 | 18.35 | 5 | 75 | 117 | 0.125 |
| 0840 | 8.4 | 17.65 | 5 | 75 | 117 | 0.125 |
| 0850 | 8.5 | 11.55 | 5 | 75 | 117 | 0.125 |
| 0860 | 8.6 | 19.10 | 5 | 81 | 125 | 0.125 |
| 0870 | 8.7 | 18.35 | 5 | 81 | 125 | 0.125 |
| 0880 | 8.8 | 20.50 | 5 | 81 | 125 | 0.125 |
| 0890 | 8.9 | 20.50 | 5 | 81 | 125 | 0.125 |
| 0900 | 9.0 | 15.10 | 5 | 81 | 125 | 0.125 |
| 0910 | 9.1 | 22.30 | 5 | 81 | 125 | 0.125 |
| 0920 | 9.2 | 24.20 | 5 | 81 | 125 | 0.125 |
| 0930 | 9.3 | 24.50 | 5 | 81 | 125 | 0.125 |
| 0940 | 9.4 | 26.70 | 5 | 81 | 125 | 0.125 |
| 0950 | 9.5 | 17.65 | 5 | 81 | 125 | 0.125 |
| 0960 | 9.6 | 27.70 | 5 | 87 | 133 | 0.125 |
| 0970 | 9.7 | 27.70 | 5 | 87 | 133 | 0.125 |
| 0980 | 9.8 | 24.50 | 5 | 87 | 133 | 0.125 |
| 0990 | 9.9 | 27.00 | 5 | 87 | 133 | 0.125 |
| 1000 | 10.0 | 16.60 | 5 | 87 | 133 | 0.125 |
| 1020 | 10.2 | 23.40 | 5 | 87 | 133 | 0.125 |
| 1050 | 10.5 | 24.50 | 5 | 87 | 133 | 0.125 |
| 1080 | 10.8 | 52.60 | 5 | 94 | 142 | 0.125 |
| 1100 | 11.0 | 27.00 | 5 | 94 | 142 | 0.125 |
| 1120 | 11.2 | 61.20 | 5 | 94 | 142 | 0.125 |
| 1150 | 11.5 | 34.20 | 5 | 94 | 142 | 0.125 |
| 1180 | 11.8 | 59.80 | 5 | 94 | 142 | 0.125 |
| 1200 | 12.0 | 38.90 | 5 | 101 | 151 | 0.125 |
| 1220 | 12.2 | 62.60 | 5 | 101 | 151 | 0.125 |
| 1250 | 12.5 | 46.80 | 5 | 101 | 151 | 0.125 |
| 1280 | 12.8 | 79.90 | 5 | 101 | 151 | 0.160 |
| 1300 | 13.0 | 50.40 (W107) | 5 | 101 | 151 | 0.160 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spiral drill with reduced shank

NEW

**Design:** Profile grinding, right cutting, with precise cross point geometry, offset shank, normal angle of rake, core thickness and core gradient.

**Application:** Very well suited to drilling larger drill diameters with all conventional drills with a chuck measuring up to 13.0 mm.

HSS | DIN 338 | Type N | 118° | 20–30°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1027 | 16 | 12 | | | | | | | 5 | 2 | | | |

| Order No. | Ø h8 mm | 1027 format bright | Spiral length mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0105 | 10.5 | 11.80 | 87 | 133 | 10 |
| 0110 | 11.0 | 11.80 | 94 | 142 | 10 |
| 0115 | 11.5 | 12.50 | 94 | 142 | 10 |
| 0120 | 12.0 | 13.30 | 101 | 151 | 10 |
| 0125 | 12.5 | 14.90 | 101 | 151 | 10 |
| 0130 | 13.0 | 14.85 | 101 | 151 | 10 |
| 0135 | 13.5 | 15.50 | 108 | 160 | 10 |
| 0140 | 14.0 | 17.80 | 108 | 160 | 10 |
| 0145 | 14.5 | 19.75 | 114 | 169 | 10 |
| 0150 | 15.0 | 21.90 (W118) | 114 | 169 | 10 |

| Order No. | Ø h8 mm | 1027 format bright | Spiral length mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0155 | 15.5 | 24.30 | 120 | 178 | 10 |
| 0160 | 16.0 | 28.20 | 120 | 178 | 10 |
| 0165 | 16.5 | 30.10 | 125 | 184 | 13 |
| 0170 | 17.0 | 33.60 | 125 | 184 | 13 |
| 0175 | 17.5 | 33.60 | 130 | 191 | 13 |
| 0180 | 18.0 | 33.60 | 130 | 191 | 13 |
| 0185 | 18.5 | 34.20 | 135 | 198 | 13 |
| 0190 | 19.0 | 35.20 | 135 | 198 | 13 |
| 0195 | 19.5 | 35.20 | 140 | 205 | 13 |
| 0200 | 20.0 | 41.80 (W118) | 140 | 205 | 13 |

## High-performance spiral drill with cylinder Shank

**Design:** HSS Co8, DIN 338, type N.
**Profile grinding,** TiAlN coated surface, with high concentricity and graduation precision as well as HSS Co8 for extremely high thermal resistance. Point thinning with cross point according to NAS 907 P3 of the aircraft industry standards. Normal angle of rake, core thickness much thicker than normal and core gradient smaller than normal.

**Application:** High-performance spiral drill for particularly strong and high strength alloys based on CrNi, Hastelloy®, Inconel®, Monel®, Nimonic®, rust, acid and heat-resistant steels, hard-wearing sheets and steels and bronzes up to 1400 N/mm² in strength.
The special cross grind geometry allows very good drilling behaviour, better and cleaner hole accuracy, and excellent hole exit.

HSS Co8 | DIN 338 | Type N | 135° | 30°

format professional quality

TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | | 20 | 15 | 12 | | | | | 22 | 12 | | | 15 |

| Order No. | Ø h8 mm | 1020 format TiAlN | PU | Spiral length mm | Total length mm | Ti steels, Ti alloys, special steels f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 5.80 | 10 | 12 | 34 | 0.008 |
| 0150 | 1.5 | 5.45 | 10 | 18 | 40 | 0.025 |
| 0200 | 2.0 | 5.25 | 10 | 24 | 49 | 0.025 |
| 0250 | 2.5 | 5.25 | 10 | 30 | 57 | 0.032 |
| 0300 | 3.0 | 5.25 | 10 | 33 | 61 | 0.040 |
| 0310 | 3.1 | 6.05 | 10 | 36 | 65 | 0.040 |
| 0320 | 3.2 | 5.80 | 10 | 36 | 65 | 0.050 |
| 0330 | 3.3 | 5.80 | 10 | 36 | 65 | 0.050 |
| 0350 | 3.5 | 5.80 | 10 | 39 | 70 | 0.050 |
| 0400 | 4.0 | 5.90 | 10 | 43 | 75 | 0.050 |
| 0410 | 4.1 | 6.60 | 10 | 43 | 75 | 0.050 |
| 0420 | 4.2 | 6.60 | 10 | 43 | 75 | 0.050 |
| 0450 | 4.5 | 6.60 | 10 | 47 | 80 | 0.050 |
| 0500 | 5.0 | 6.45 | 10 | 52 | 86 | 0.050 |
| 0510 | 5.1 | 7.20 | 10 | 52 | 86 | 0.063 |
| 0520 | 5.2 | 7.20 | 10 | 52 | 86 | 0.063 |
| 0550 | 5.5 | 8.00 | 10 | 57 | 93 | 0.063 |
| 0580 | 5.8 | 7.70 | 10 | 57 | 93 | 0.063 |
| 0600 | 6.0 | 7.45 (W100) | 10 | 57 | 93 | 0.080 |

| Order No. | Ø h8 mm | 1020 format TiAlN | PU | Spiral length mm | Total length mm | Ti steels, Ti alloys, special steels f mm/rev |
|---|---|---|---|---|---|---|
| 0650 | 6.5 | 11.65 | 5 | 63 | 101 | 0.080 |
| 0680 | 6.8 | 12.90 | 5 | 69 | 109 | 0.080 |
| 0700 | 7.0 | 11.90 | 5 | 69 | 109 | 0.080 |
| 0750 | 7.5 | 12.40 | 5 | 69 | 109 | 0.080 |
| 0800 | 8.0 | 13.80 | 5 | 75 | 117 | 0.100 |
| 0850 | 8.5 | 13.80 | 5 | 75 | 117 | 0.100 |
| 0900 | 9.0 | 15.85 | 5 | 81 | 125 | 0.100 |
| 1000 | 10.0 | 17.25 | 5 | 87 | 133 | 0.100 |
| 1020 | 10.2 | 21.60 | 5 | 87 | 133 | 0.100 |
| 1050 | 10.5 | 21.90 | 5 | 87 | 133 | 0.100 |
| 1100 | 11.0 | 23.60 | 5 | 94 | 142 | 0.100 |
| 1150 | 11.5 | 28.70 | 5 | 94 | 142 | 0.100 |
| 1200 | 12.0 | 31.40 | 5 | 101 | 151 | 0.100 |
| 1250 | 12.5 | 35.80 | 5 | 101 | 151 | 0.100 |
| 1300 | 13.0 | 38.50 | 5 | 101 | 151 | 0.125 |
| 1350 | 13.5 | 62.70 | 1 | 108 | 160 | 0.125 |
| 1400 | 14.0 | 53.70 | 1 | 108 | 160 | 0.125 |
| 1500 | 15.0 | 70.60 | 1 | 114 | 169 | 0.125 |
| 1600 | 16.0 | 75.70 (W100) | 1 | 120 | 178 | 0.125 |

## Spiral drill cassette, empty

**Design:** Robust, high quality cassette with automatic drill setup function when opened.

**1034** Metal cassette.

**1036** Plastic cassette.

| Order No. | For drill Ø mm | 1034 format | 1036 format | For number of drills | Increasing mm |
|---|---|---|---|---|---|
| 0001 | 1.00– 5.90 | 17.40 | 17.00 | 50 | 0.1 |
| 0003 | 6.00–10.00 | 31.20 | 29.70 | 41 | 0.1 |
| 0005 | 1.00–10.00 | 9.80 | 9.10 | 19 | 0.5 |
| 0007 | 1.00–10.50 | 17.40 | 16.95 | 24 | 0.5 + K.B.* |
| 0009 | 1.00–13.00 | 13.05 (W100) | 12.75 (W100) | 25 | 0.5 |

* With intermediate sizes for thread core holes: one of each Ø 3.3; 4.2; 6.8; 10.2 mm.

format professional quality

1034

1036

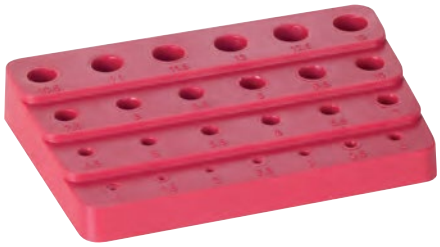
## Plastic stand, empty

**Design:** Made of plastic.

**Application:** To assemble with spiral drills.

| Order No. | For drill Ø mm | 1037 GUHRING | For number of drills | Increasing mm |
|---|---|---|---|---|
| 0005 | 1.0– 5.0 | 5.20 | 41 | 0.1 |
| 0010 | 5.1–10.0 | 6.30 | 50 | 0.1 |
| 0015 | 1.0–13.0 | 4.69 (W101) | 25 | 0.5 |

GUHRING




format professional quality

**Digital calipers waterproof**

Whether dry or wet:
EASY MEASURING,
EXACT WORKING!

4/11

## Spiral drill with cyl. Shank

**Design:** HSS, DIN 338, type W.
Profile grinding, right cutting, bright surface, with precise point geometry as well as wide, ground clamping grooves and narrow twist. Without point thinning. Angle of rake larger than normal, normal core thickness and without core gradient.

**Application:** For drilling soft and long-chipping materials.
Particularly suitable for soft and long chipping materials, aluminium alloys (long chipping), zinc, copper, silumin, electrodes, plastics (soft) and wood.

HSS | DIN 338 | Type W | 130°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1010 | 16 | | | | | | | | | | 30 | **85** | **50** |

| Order No. | Ø h8 mm | 1010 format bright | PU | Spiral length mm | Total length mm | Al, Al and Mg alloys f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 2.34 | 10 | 12 | 34 | 0.016 |
| 0110 | 1.1 | 2.24 | 10 | 14 | 36 | 0.050 |
| 0120 | 1.2 | 2.24 | 10 | 16 | 38 | 0.050 |
| 0130 | 1.3 | 2.24 | 10 | 16 | 38 | 0.050 |
| 0140 | 1.4 | 2.24 | 10 | 18 | 40 | 0.050 |
| 0150 | 1.5 | 2.24 | 10 | 18 | 40 | 0.050 |
| 0160 | 1.6 | 2.02 | 10 | 20 | 43 | 0.050 |
| 0170 | 1.7 | 2.09 | 10 | 20 | 43 | 0.050 |
| 0180 | 1.8 | 2.02 | 10 | 22 | 46 | 0.050 |
| 0190 | 1.9 | 2.02 | 10 | 22 | 46 | 0.050 |
| 0200 | 2.0 | 1.63 | 10 | 24 | 49 | 0.050 |
| 0210 | 2.1 | 1.96 | 10 | 24 | 49 | 0.063 |
| 0220 | 2.2 | 1.96 | 10 | 27 | 53 | 0.063 |
| 0230 | 2.3 | 1.96 | 10 | 27 | 53 | 0.063 |
| 0240 | 2.4 | 2.02 | 10 | 30 | 57 | 0.063 |
| 0250 | 2.5 | 1.66 | 10 | 30 | 57 | 0.063 |
| 0260 | 2.6 | 2.02 | 10 | 30 | 57 | 0.080 |
| 0270 | 2.7 | 2.09 | 10 | 33 | 61 | 0.080 |
| 0280 | 2.8 | 2.32 | 10 | 33 | 61 | 0.080 |
| 0290 | 2.9 | 2.32 | 10 | 33 | 61 | 0.080 |
| 0300 | 3.0 | 1.81 | 10 | 33 | 61 | 0.080 |
| 0310 | 3.1 | 2.32 | 10 | 36 | 65 | 0.080 |
| 0320 | 3.2 | 2.09 | 10 | 36 | 65 | 0.100 |
| 0330 | 3.3 | 2.09 | 10 | 36 | 65 | 0.100 |
| 0340 | 3.4 | 2.32 | 10 | 39 | 70 | 0.100 |
| 0350 | 3.5 | 2.17 | 10 | 39 | 70 | 0.100 |
| 0360 | 3.6 | 2.32 | 10 | 39 | 70 | 0.100 |
| 0370 | 3.7 | 2.34 | 10 | 39 | 70 | 0.100 |
| 0380 | 3.8 | 2.49 | 10 | 43 | 75 | 0.100 |
| 0390 | 3.9 | 2.49 | 10 | 43 | 75 | 0.100 |
| 0400 | 4.0 | 2.24 | 10 | 43 | 75 | 0.100 |
| 0410 | 4.1 | 2.49 | 10 | 43 | 75 | 0.100 |
| 0420 | 4.2 | 2.32 | 10 | 43 | 75 | 0.100 |
| 0430 | 4.3 | 3.10 | 10 | 47 | 80 | 0.100 |
| 0440 | 4.4 | 3.10 | 10 | 47 | 80 | 0.100 |
| 0450 | 4.5 | 2.80 | 10 | 47 | 80 | 0.100 |
| 0460 | 4.6 | 3.10 | 10 | 47 | 80 | 0.100 |
| 0470 | 4.7 | 3.10 | 10 | 47 | 80 | 0.100 |
| 0480 | 4.8 | 3.10 | 10 | 52 | 86 | 0.100 |
| 0490 | 4.9 | 3.10 | 10 | 52 | 86 | 0.100 |
| 0500 | 5.0 | 2.97 | 10 | 52 | 86 | 0.100 |
| 0510 | 5.1 | 3.40 | 10 | 52 | 86 | 0.125 |
| 0520 | 5.2 | 3.46 (W100) | 10 | 52 | 86 | 0.125 |

| Order No. | Ø h8 mm | 1010 format bright | PU | Spiral length mm | Total length mm | Al, Al and Mg alloys f mm/rev |
|---|---|---|---|---|---|---|
| 0530 | 5.3 | 3.46 | 10 | 52 | 86 | 0.125 |
| 0540 | 5.4 | 3.72 | 10 | 57 | 93 | 0.125 |
| 0550 | 5.5 | 3.42 | 10 | 57 | 93 | 0.125 |
| 0560 | 5.6 | 4.00 | 10 | 57 | 93 | 0.125 |
| 0570 | 5.7 | 4.00 | 10 | 57 | 93 | 0.125 |
| 0580 | 5.8 | 4.00 | 10 | 57 | 93 | 0.125 |
| 0590 | 5.9 | 4.00 | 10 | 57 | 93 | 0.125 |
| 0600 | 6.0 | 3.98 | 10 | 57 | 93 | 0.125 |
| 0610 | 6.1 | 4.00 | 5 | 63 | 101 | 0.125 |
| 0620 | 6.2 | 4.00 | 5 | 63 | 101 | 0.125 |
| 0630 | 6.3 | 4.39 | 5 | 63 | 101 | 0.125 |
| 0640 | 6.4 | 4.39 | 5 | 63 | 101 | 0.160 |
| 0650 | 6.5 | 4.17 | 5 | 63 | 101 | 0.160 |
| 0660 | 6.6 | 4.94 | 5 | 63 | 101 | 0.160 |
| 0670 | 6.7 | 4.99 | 5 | 63 | 101 | 0.160 |
| 0680 | 6.8 | 5.25 | 5 | 69 | 109 | 0.160 |
| 0690 | 6.9 | 5.25 | 5 | 69 | 109 | 0.160 |
| 0700 | 7.0 | 4.73 | 5 | 69 | 109 | 0.160 |
| 0710 | 7.1 | 6.50 | 5 | 69 | 109 | 0.160 |
| 0720 | 7.2 | 6.50 | 5 | 69 | 109 | 0.160 |
| 0730 | 7.3 | 6.50 | 5 | 69 | 109 | 0.160 |
| 0740 | 7.4 | 6.50 | 5 | 69 | 109 | 0.160 |
| 0750 | 7.5 | 5.40 | 5 | 69 | 109 | 0.160 |
| 0760 | 7.6 | 7.20 | 5 | 75 | 117 | 0.160 |
| 0770 | 7.7 | 7.20 | 5 | 75 | 117 | 0.160 |
| 0780 | 7.8 | 7.20 | 5 | 75 | 117 | 0.160 |
| 0790 | 7.9 | 8.35 | 5 | 75 | 117 | 0.160 |
| 0800 | 8.0 | 6.05 | 5 | 75 | 117 | 0.160 |
| 0820 | 8.2 | 8.95 | 5 | 75 | 117 | 0.200 |
| 0850 | 8.5 | 7.00 | 5 | 75 | 117 | 0.200 |
| 0880 | 8.8 | 10.50 | 5 | 81 | 125 | 0.200 |
| 0900 | 9.0 | 7.50 | 5 | 81 | 125 | 0.200 |
| 0920 | 9.2 | 11.80 | 5 | 81 | 125 | 0.200 |
| 0950 | 9.5 | 8.90 | 5 | 81 | 125 | 0.200 |
| 0980 | 9.8 | 13.65 | 5 | 87 | 133 | 0.200 |
| 1000 | 10.0 | 9.35 | 5 | 87 | 133 | 0.200 |
| 1020 | 10.2 | 14.15 | 5 | 87 | 133 | 0.200 |
| 1050 | 10.5 | 11.40 | 5 | 87 | 133 | 0.200 |
| 1100 | 11.0 | 13.65 | 5 | 94 | 142 | 0.200 |
| 1150 | 11.5 | 15.45 | 5 | 94 | 142 | 0.200 |
| 1200 | 12.0 | 16.70 | 5 | 101 | 151 | 0.200 |
| 1250 | 12.5 | 16.70 | 5 | 101 | 151 | 0.200 |
| 1300 | 13.0 | 19.65 (W100) | 5 | 101 | 151 | 0.200 |

## Spiral drill with cyl. Shank

**Design:** HSS, Co5, DIN 338.
**Profile grinding,** right cutting, with precise point geometry as well as special point thinning and excellent thermal resistance. Normal core gradient. Angle of rake larger than normal (35°). Core thickness thicker than normal, therefore very robust and flexible use.

**Application:** Suitable for short drilling depths up to 3 x D. Particularly suitable for titanium and titanium alloys, rust/acid/heat-resistant steels and austenitic steels, high strength/short chipping steels from 1400 N/mm² in strength and special alloys such as Hastelloy®, Inconel® and Nimonic®.

HSS Co5 | DIN 338 | Type Ti | 130° | 35°

1013 format professional quality
bright

1014 GUHRING
bright

**1013** Bright
**Note:** Available as a set (Order No. 1030 on 1/29).

**1014** Bright
**Note:** Available as a set (Order No. 1014 on 1/29).

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1013 | | | 15 | 12 | | | | | 18 | 10 | | | |
| 1014 | | | 15 | 12 | | | | | 18 | 10 | | | |

| Order No. | Ø h8 mm | 1013 format bright | 1014 GUHRING bright | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.0 | 1.72 | 4.41 | 10 | 12 | 34 | 0.008 |
| 0110 | 1.1 | 1.56 | 4.55 | 10 | 14 | 36 | 0.025 |
| 0120 | 1.2 | 1.56 | 4.90 | 10 | 16 | 38 | 0.025 |
| 0130 | 1.3 | 1.56 | 4.69 | 10 | 16 | 38 | 0.025 |
| 0140 | 1.4 | 1.56 | 4.41 | 10 | 18 | 40 | 0.025 |
| 0150 | 1.5 | 1.47 | 4.13 | 10 | 18 | 40 | 0.025 |
| 0160 | 1.6 | 1.56 | 4.41 | 10 | 20 | 43 | 0.025 |
| 0170 | 1.7 | 1.56 | 4.55 | 10 | 20 | 43 | 0.025 |
| 0180 | 1.8 | 1.56 | 4.41 | 10 | 22 | 46 | 0.025 |
| 0190 | 1.9 | 1.56 | 4.55 | 10 | 22 | 46 | 0.025 |
| 0200 | 2.0 | 1.47 | 3.64 | 10 | 24 | 49 | 0.025 |
| 0210 | 2.1 | 1.47 | 4.83 | 10 | 24 | 49 | 0.032 |
| 0220 | 2.2 | 1.47 | 4.83 | 10 | 27 | 53 | 0.032 |
| 0230 | 2.3 | 1.47 | 4.83 | 10 | 27 | 53 | 0.032 |
| 0240 | 2.4 | 1.56 | 4.83 | 10 | 30 | 57 | 0.032 |
| 0250 | 2.5 | 1.59 | 3.92 | 10 | 30 | 57 | 0.032 |
| 0260 | 2.6 | 1.70 | 4.90 | 10 | 30 | 57 | 0.040 |
| 0270 | 2.7 | 1.77 | 4.90 | 10 | 33 | 61 | 0.040 |
| 0280 | 2.8 | 1.77 | 5.05 | 10 | 33 | 61 | 0.040 |
| 0290 | 2.9 | 1.82 | 5.05 | 10 | 33 | 61 | 0.040 |
| 0300 | 3.0 | 1.72 | 3.92 | 10 | 33 | 61 | 0.040 |
| 0310 | 3.1 | 1.77 | 5.20 | 10 | 36 | 65 | 0.040 |
| 0320 | 3.2 | 1.77 | 4.41 | 10 | 36 | 65 | 0.050 |
| 0330 | 3.3 | 1.82 | 4.55 | 10 | 36 | 65 | 0.050 |
| 0340 | 3.4 | 2.09 | 5.40 | 10 | 39 | 70 | 0.050 |
| 0350 | 3.5 | 2.05 | 4.41 | 10 | 39 | 70 | 0.050 |
| 0360 | 3.6 | 2.05 | 5.80 | 10 | 39 | 70 | 0.050 |
| 0370 | 3.7 | 2.05 | 5.90 | 10 | 39 | 70 | 0.050 |
| 0380 | 3.8 | 2.23 | 5.75 | 10 | 43 | 75 | 0.050 |
| 0390 | 3.9 | 2.28 | 5.95 | 10 | 43 | 75 | 0.050 |
| 0400 | 4.0 | 2.14 | 4.69 | 10 | 43 | 75 | 0.050 |
| 0410 | 4.1 | 2.25 | 5.95 | 10 | 43 | 75 | 0.050 |
| 0420 | 4.2 | 2.23 | 5.95 | 10 | 43 | 75 | 0.050 |
| 0430 | 4.3 | 2.39 | 5.95 | 10 | 47 | 80 | 0.050 |
| 0440 | 4.4 | 2.39 | 6.50 | 10 | 47 | 80 | 0.050 |
| 0450 | 4.5 | 2.30 | 5.95 | 10 | 47 | 80 | 0.050 |
| 0460 | 4.6 | 2.35 | 6.50 | 10 | 47 | 80 | 0.050 |
| 0470 | 4.7 | 2.35 | 6.80 | 10 | 47 | 80 | 0.050 |
| 0480 | 4.8 | 2.35 | 6.65 | 10 | 52 | 86 | 0.050 |
| 0490 | 4.9 | 2.39 | 6.70 | 10 | 52 | 86 | 0.050 |
| 0500 | 5.0 | 2.39 | 5.80 | 10 | 52 | 86 | 0.050 |
| 0510 | 5.1 | 2.48 | 6.70 | 10 | 52 | 86 | 0.063 |
| 0520 | 5.2 | 2.48 | 6.85 | 10 | 52 | 86 | 0.063 |
| 0530 | 5.3 | 2.48 | 6.85 | 10 | 52 | 86 | 0.063 |
| 0540 | 5.4 | 3.13 (W100) | 8.00 (W107) | 10 | 57 | 93 | 0.063 |

| Order No. | Ø h8 mm | 1013 format bright | 1014 GUHRING bright | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|---|
| 0550 | 5.5 | 3.01 | 8.05 | 10 | 57 | 93 | 0.063 |
| 0560 | 5.6 | 3.29 | 8.10 | 10 | 57 | 93 | 0.063 |
| 0570 | 5.7 | 3.29 | 8.45 | 10 | 57 | 93 | 0.063 |
| 0580 | 5.8 | 3.29 | 7.70 | 10 | 57 | 93 | 0.063 |
| 0590 | 5.9 | 3.29 | 8.55 | 10 | 57 | 93 | 0.063 |
| 0600 | 6.0 | 3.06 | 7.50 | 10 | 57 | 93 | 0.063 |
| 0610 | 6.1 | 3.66 | 8.60 | 5 | 63 | 101 | 0.063 |
| 0620 | 6.2 | 3.66 | 8.60 | 5 | 63 | 101 | 0.063 |
| 0630 | 6.3 | 3.66 | 9.10 | 5 | 63 | 101 | 0.063 |
| 0640 | 6.4 | 3.98 | 9.50 | 5 | 63 | 101 | 0.080 |
| 0650 | 6.5 | 3.63 | 8.55 | 5 | 63 | 101 | 0.080 |
| 0660 | 6.6 | 3.98 | 9.95 | 5 | 63 | 101 | 0.080 |
| 0670 | 6.7 | 3.98 | 9.95 | 5 | 63 | 101 | 0.080 |
| 0680 | 6.8 | 4.26 | 10.45 | 5 | 69 | 109 | 0.080 |
| 0690 | 6.9 | 4.26 | 11.60 | 5 | 69 | 109 | 0.080 |
| 0700 | 7.0 | 3.84 | 9.05 | 5 | 69 | 109 | 0.080 |
| 0710 | 7.1 | 5.25 | 13.45 | 5 | 69 | 109 | 0.080 |
| 0720 | 7.2 | 5.25 | 12.25 | 5 | 69 | 109 | 0.080 |
| 0730 | 7.3 | 5.25 | 14.30 | 5 | 69 | 109 | 0.080 |
| 0740 | 7.4 | 5.25 | 13.50 | 5 | 69 | 109 | 0.080 |
| 0750 | 7.5 | 4.07 | 9.60 | 5 | 69 | 109 | 0.080 |
| 0760 | 7.6 | 6.30 | 18.75 | 5 | 75 | 117 | 0.080 |
| 0770 | 7.7 | 6.30 | 16.60 | 5 | 75 | 117 | 0.080 |
| 0780 | 7.8 | 6.30 | 15.10 | 5 | 75 | 117 | 0.080 |
| 0790 | 7.9 | 6.30 | 16.95 | 5 | 75 | 117 | 0.080 |
| 0800 | 8.0 | 4.81 | 11.90 | 5 | 75 | 117 | 0.080 |
| 0810 | 8.1 | 5.95 | 15.10 | 5 | 75 | 117 | 0.100 |
| 0820 | 8.2 | 5.95 | 15.80 | 5 | 75 | 117 | 0.100 |
| 0830 | 8.3 | 6.30 | 17.65 | 5 | 75 | 117 | 0.100 |
| 0840 | 8.4 | 6.30 | 17.30 | 5 | 75 | 117 | 0.100 |
| 0850 | 8.5 | 4.97 | 11.90 | 5 | 75 | 117 | 0.100 |
| 0860 | 8.6 | 7.35 | 17.65 | 5 | 81 | 125 | 0.100 |
| 0870 | 8.7 | 7.35 | 17.65 | 5 | 81 | 125 | 0.100 |
| 0880 | 8.8 | 7.60 | 18.75 | 5 | 81 | 125 | 0.100 |
| 0890 | 8.9 | 7.60 | 22.00 | 5 | 81 | 125 | 0.100 |
| 0900 | 9.0 | 6.40 | 15.45 | 5 | 81 | 125 | 0.100 |
| 0910 | 9.1 | 8.20 | 21.60 | 5 | 81 | 125 | 0.100 |
| 0920 | 9.2 | 8.20 | 22.30 | 5 | 81 | 125 | 0.100 |
| 0930 | 9.3 | 9.00 | 24.80 | 5 | 81 | 125 | 0.100 |
| 0940 | 9.4 | 9.00 | 27.70 | 5 | 81 | 125 | 0.100 |
| 0950 | 9.5 | 6.55 | 18.00 | 5 | 81 | 125 | 0.100 |
| 0960 | 9.6 | 9.20 | 28.40 | 5 | 87 | 133 | 0.100 |
| 0970 | 9.7 | 9.20 | 26.70 | 5 | 87 | 133 | 0.100 |
| 0980 | 9.8 | 9.40 | 26.70 | 5 | 87 | 133 | 0.100 |
| 0990 | 9.9 | 9.40 (W100) | 28.10 (W107) | 5 | 87 | 133 | 0.100 |

Continued overleaf

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spiral drill with cyl. Shank

Continued

| Order No. | Ø h8 mm | 1013 format bright | 1014 GÜHRING bright | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|---|
| 1000 | 10.0 | 7.35 | 17.30 | 5 | 87 | 133 | 0.100 |
| 1010 | 10.1 | 12.65 | 33.50 | 5 | 87 | 133 | 0.100 |
| 1020 | 10.2 | 10.40 | 24.50 | 5 | 87 | 133 | 0.100 |
| 1050 | 10.5 | 10.40 | 25.60 | 5 | 87 | 133 | 0.100 |
| 1080 | 10.8 | 21.00 | 53.30 | 5 | 94 | 142 | 0.100 |
| 1100 | 11.0 | 13.05 | 27.70 | 5 | 94 | 142 | 0.100 |
| 1120 | 11.2 | 23.20 | 53.30 | 5 | 94 | 142 | 0.100 |
| 1150 | 11.5 | 15.25 | 36.00 | 5 | 94 | 142 | 0.100 |
| 1180 | 11.8 | 25.30 | 64.10 | 5 | 94 | 142 | 0.100 |
| 1200 | 12.0 | 15.55 | 40.30 | 5 | 101 | 151 | 0.100 |
| 1220 | 12.2 | 26.20 | 64.80 | 5 | 101 | 151 | 0.100 |
| 1250 | 12.5 | 20.10 | 46.80 | 5 | 101 | 151 | 0.100 |
| 1280 | 12.8 | 30.60 (W100) | 66.30 (W107) | 5 | 101 | 151 | 0.125 |

| Order No. | Ø h8 mm | 1013 format bright | 1014 GÜHRING bright | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|---|
| 1300 | 13.0 | 22.50 | 51.20 | 5 | 101 | 151 | 0.125 |
| 1350 | 13.5 | 24.30 | 59.10 | 1 | 108 | 160 | 0.125 |
| 1380 | 13.8 | 35.50 | 77.80 | 1 | 108 | 160 | 0.125 |
| 1400 | 14.0 | 21.90 | 67.00 | 1 | 108 | 160 | 0.125 |
| 1450 | 14.5 | 25.20 | 82.10 | 1 | 114 | 169 | 0.125 |
| 1500 | 15.0 | 24.10 | 85.80 | 1 | 114 | 169 | 0.125 |
| 1550 | 15.5 | 36.00 | 103.00 | 1 | 120 | 178 | 0.125 |
| 1600 | 16.0 | 36.40 | 106.00 | 1 | 120 | 178 | 0.125 |
| 1650 | 16.5 | 95.50 | 144.00 | 1 | 125 | 184 | 0.125 |
| 1700 | 17.0 | 99.60 | 147.00 | 1 | 125 | 184 | 0.125 |
| 1750 | 17.5 | 101.00 | 165.50 | 1 | 130 | 191 | 0.125 |
| 1800 | 18.0 | 101.50 | 158.50 | 1 | 130 | 191 | 0.125 |
| 1900 | 19.0 | 128.00 (W100) | 206.00 (W107) | 1 | 135 | 198 | 0.125 |

## Spiral drill set, grinding NEW

**Design: Profile grinding,** right cutting, with precise cross point geometry, normal angle of rake, core thickness and core gradient. Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**Note:** Set consisting of (Order No. 1006).

HSS Co5 | DIN 338 | Type N | 130° | 25–30°

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1006 | 20 | 10 | | | | | | | 12 | 6 | | | |

| Order No. | Set contents Ø h8 mm | 1006 bright | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0005 | 1.0–10.0 | 56.90 | 19 | 0.5 |
| 0007 | 1.0–10.5 | 83.40 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 127.00 (W102) | 25 | 0.5 |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## Spiral drill set with cyl. Shank

**Design:** HSS, Co5, DIN 338.
Profile grinding, right cutting, with precise point geometry as well as special point thinning and excellent thermal resistance. Angle of rake larger than normal (35°), core thickness thicker than normal and normal core gradient. Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**1030** Bright
Bright surface, type Ti.
Set consisting of (order no. 1013).

**1014** Bright
Bright surface, type Ti.
Set consisting of (order no. 1014).

HSS Co5 | DIN 338 | Type Ti | 130° | 35°

1030 bright format professional quality

1014 bright GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1030 | | | 15 | 12 | | | | | **18** | **10** | | | |
| 1014 | | | 15 | 12 | | | | | **18** | **10** | | | |

| Order No. | Set contents Ø h8 mm | 1030 format bright | 1014 GÜHRING bright | Number of drills Piece | Increasing mm |
|---|---|---|---|---|---|
| 0001 | 1.0– 5.9 | 128.50 | 272.00 | 50 | 0.1 |
| 0003 | 6.0–10.0 | 264.50 | 585.50 | 41 | 0.1 |
| 0005 | 1.0–10.0 | 74.00 | 152.50 | 19 | 0.5 |
| 0007 | 1.0–10.5 | 116.00 | 295.50 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 162.50 | 490.00 | 25 | 0.5 |
| | | (W100) | (W107) | | |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## Spiral drill with cyl. Shank

**Design:** HSS, Co5, DIN 338. TiN coated surface Angle of rake larger than normal (35°) Core thickness thicker than normal. Sturdy, powerful model, **profile grinding,** right cutting, with precise point geometry as well as special point thinning and excellent thermal resistance. Normal core gradient.

**Application:** Suitable for short drilling depths up to 3 x D. Particularly suitable for titanium and titanium alloys, rust/acid/heat-resistant steels and austenitic steels, special alloys such as Hastelloy®, Inconel® and Nimonic®.

HSS Co5 | DIN 338 | Type Ti | 130° | 35°

format professional quality

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1016 | 25 | 20 | 18 | 15 | | | | | **20** | **11** | | | 10 |

| Order No. | Ø h8 mm | 1016 format TiN | PU | Spiral length mm | Total length mm | f (Ti steels, Ti alloys, special steels) mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 5.75 | 10 | 12 | 34 | 0.008 |
| 0110 | 1.1 | 5.75 | 10 | 14 | 36 | 0.025 |
| 0120 | 1.2 | 6.00 | 10 | 16 | 38 | 0.025 |
| 0130 | 1.3 | 5.90 | 10 | 16 | 38 | 0.025 |
| 0140 | 1.4 | 5.75 | 10 | 18 | 40 | 0.025 |
| 0150 | 1.5 | 5.45 | 10 | 18 | 40 | 0.025 |
| 0160 | 1.6 | 5.75 | 10 | 20 | 43 | 0.025 |
| 0170 | 1.7 | 5.75 | 10 | 20 | 43 | 0.025 |
| 0180 | 1.8 | 5.75 | 10 | 22 | 46 | 0.025 |
| 0190 | 1.9 | 5.75 | 10 | 22 | 46 | 0.025 |
| 0200 | 2.0 | 5.25 | 10 | 24 | 49 | 0.025 |
| | | (W100) | | | | |

| Order No. | Ø h8 mm | 1016 format TiN | PU | Spiral length mm | Total length mm | f (Ti steels, Ti alloys, special steels) mm/rev |
|---|---|---|---|---|---|---|
| 0210 | 2.1 | 5.90 | 10 | 24 | 49 | 0.032 |
| 0220 | 2.2 | 5.90 | 10 | 27 | 53 | 0.032 |
| 0230 | 2.3 | 5.90 | 10 | 27 | 53 | 0.032 |
| 0240 | 2.4 | 6.00 | 10 | 30 | 57 | 0.032 |
| 0250 | 2.5 | 5.25 | 10 | 30 | 57 | 0.032 |
| 0260 | 2.6 | 6.00 | 10 | 30 | 57 | 0.040 |
| 0270 | 2.7 | 6.00 | 10 | 33 | 61 | 0.040 |
| 0280 | 2.8 | 6.15 | 10 | 33 | 61 | 0.040 |
| 0290 | 2.9 | 6.15 | 10 | 33 | 61 | 0.040 |
| 0300 | 3.0 | 5.25 | 10 | 33 | 61 | 0.040 |
| 0310 | 3.1 | 6.15 | 10 | 36 | 65 | 0.040 |
| | | (W100) | | | | |

Continued overleaf

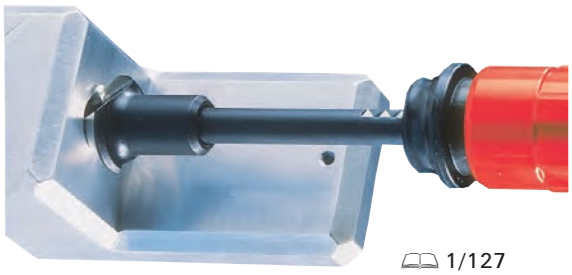
## Spiral drill with cyl. Shank

Continued

| Order No. | Ø h8 mm | 1016 format professional quality TiN | PU | Spiral length mm | Total length mm | Ti steels, Ti alloys, special steels f mm/rev |
|---|---|---|---|---|---|---|
| 0320 | 3.2 | 5.75 | 10 | 36 | 65 | 0.050 |
| 0330 | 3.3 | 5.75 | 10 | 36 | 65 | 0.050 |
| 0340 | 3.4 | 6.30 | 10 | 39 | 70 | 0.050 |
| 0350 | 3.5 | 5.75 | 10 | 39 | 70 | 0.050 |
| 0360 | 3.6 | 6.30 | 10 | 39 | 70 | 0.050 |
| 0370 | 3.7 | 6.50 | 10 | 39 | 70 | 0.050 |
| 0380 | 3.8 | 6.50 | 10 | 43 | 75 | 0.050 |
| 0390 | 3.9 | 6.65 | 10 | 43 | 75 | 0.050 |
| 0400 | 4.0 | 5.90 | 10 | 43 | 75 | 0.050 |
| 0410 | 4.1 | 6.65 | 10 | 43 | 75 | 0.050 |
| 0420 | 4.2 | 6.65 | 10 | 43 | 75 | 0.050 |
| 0430 | 4.3 | 6.65 | 10 | 47 | 80 | 0.050 |
| 0440 | 4.4 | 6.80 | 10 | 47 | 80 | 0.050 |
| 0450 | 4.5 | 6.65 | 10 | 47 | 80 | 0.050 |
| 0460 | 4.6 | 6.95 | 10 | 47 | 80 | 0.050 |
| 0470 | 4.7 | 7.15 | 10 | 47 | 80 | 0.050 |
| 0480 | 4.8 | 7.15 | 10 | 52 | 86 | 0.050 |
| 0490 | 4.9 | 7.25 | 10 | 52 | 86 | 0.050 |
| 0500 | 5.0 | 6.50 | 10 | 52 | 86 | 0.050 |
| 0510 | 5.1 | 7.25 | 10 | 52 | 86 | 0.063 |
| 0520 | 5.2 | 7.25 | 10 | 52 | 86 | 0.063 |
| 0530 | 5.3 | 7.35 | 10 | 52 | 86 | 0.063 |
| 0540 | 5.4 | 7.75 | 10 | 57 | 93 | 0.063 |
| 0550 | 5.5 | 8.00 | 10 | 57 | 93 | 0.063 |
| 0560 | 5.6 | 7.75 | 10 | 57 | 93 | 0.063 |
| 0570 | 5.7 | 7.75 | 10 | 57 | 93 | 0.063 |
| 0580 | 5.8 | 7.75 | 10 | 57 | 93 | 0.063 |
| 0590 | 5.9 | 7.75 | 10 | 57 | 93 | 0.063 |
| 0600 | 6.0 | 7.50 | 10 | 57 | 93 | 0.063 |
| 0610 | 6.1 | 11.85 | 5 | 63 | 101 | 0.063 |
| 0620 | 6.2 | 11.85 | 5 | 63 | 101 | 0.063 |
| 0630 | 6.3 | 11.85 | 5 | 63 | 101 | 0.063 |
| 0640 | 6.4 | 12.20 | 5 | 63 | 101 | 0.080 |
| 0650 | 6.5 | 11.75 | 5 | 63 | 101 | 0.080 |
| 0660 | 6.6 | 12.20 | 5 | 63 | 101 | 0.080 |
| 0670 | 6.7 | 12.20 | 5 | 63 | 101 | 0.080 |
| 0680 | 6.8 | 12.90 (W100) | 5 | 69 | 109 | 0.080 |

| Order No. | Ø h8 mm | 1016 format professional quality TiN | PU | Spiral length mm | Total length mm | Ti steels, Ti alloys, special steels f mm/rev |
|---|---|---|---|---|---|---|
| 0690 | 6.9 | 12.90 | 5 | 69 | 109 | 0.080 |
| 0700 | 7.0 | 11.95 | 5 | 69 | 109 | 0.080 |
| 0710 | 7.1 | 14.15 | 5 | 69 | 109 | 0.080 |
| 0720 | 7.2 | 14.15 | 5 | 69 | 109 | 0.080 |
| 0730 | 7.3 | 14.15 | 5 | 69 | 109 | 0.080 |
| 0740 | 7.4 | 14.15 | 5 | 69 | 109 | 0.080 |
| 0750 | 7.5 | 12.40 | 5 | 69 | 109 | 0.080 |
| 0760 | 7.6 | 16.00 | 5 | 75 | 117 | 0.080 |
| 0770 | 7.7 | 16.00 | 5 | 75 | 117 | 0.080 |
| 0780 | 7.8 | 16.00 | 5 | 75 | 117 | 0.080 |
| 0790 | 7.9 | 16.00 | 5 | 75 | 117 | 0.080 |
| 0800 | 8.0 | 13.85 | 5 | 75 | 117 | 0.080 |
| 0820 | 8.2 | 16.25 | 5 | 75 | 117 | 0.100 |
| 0850 | 8.5 | 13.85 | 5 | 75 | 117 | 0.100 |
| 0880 | 8.8 | 18.10 | 5 | 81 | 125 | 0.100 |
| 0900 | 9.0 | 16.00 | 5 | 81 | 125 | 0.100 |
| 0920 | 9.2 | 20.20 | 5 | 81 | 125 | 0.100 |
| 0950 | 9.5 | 17.85 | 5 | 81 | 125 | 0.100 |
| 0980 | 9.8 | 22.10 | 5 | 87 | 133 | 0.100 |
| 1000 | 10.0 | 17.30 | 5 | 87 | 133 | 0.100 |
| 1010 | 10.1 | 20.20 | 5 | 87 | 133 | 0.100 |
| 1020 | 10.2 | 21.80 | 5 | 87 | 133 | 0.100 |
| 1050 | 10.5 | 22.10 | 5 | 87 | 133 | 0.100 |
| 1080 | 10.8 | 29.80 | 5 | 94 | 142 | 0.100 |
| 1100 | 11.0 | 23.70 | 5 | 94 | 142 | 0.100 |
| 1120 | 11.2 | 32.70 | 5 | 94 | 142 | 0.100 |
| 1150 | 11.5 | 28.80 | 5 | 94 | 142 | 0.100 |
| 1180 | 11.8 | 37.20 | 5 | 94 | 142 | 0.100 |
| 1200 | 12.0 | 31.50 | 5 | 101 | 151 | 0.100 |
| 1220 | 12.2 | 31.50 | 5 | 101 | 151 | 0.100 |
| 1250 | 12.5 | 36.20 | 5 | 101 | 151 | 0.100 |
| 1280 | 12.8 | 48.80 | 5 | 101 | 151 | 0.100 |
| 1300 | 13.0 | 38.30 | 5 | 101 | 151 | 0.100 |
| 1350 | 13.5 | 50.60 | 1 | 108 | 160 | 0.100 |
| 1400 | 14.0 | 45.60 | 1 | 108 | 160 | 0.100 |
| 1450 | 14.5 | 57.40 (W100) | 1 | 114 | 169 | 0.100 |

format professional quality



1/127

**FT deburring countersink EL 1300**

Sturdy universal deburring countersink with blade magazine.

## Spiral drill with cyl. Shank

**Design:** HSS, Co5, DIN 338.
Sturdy, powerful model, profile grinding, right cutting, with precise point geometry as well as special point thinning and excellent thermal resistance. Normal core gradient.

**Application:** Particularly suitable for rust/acid/heat-resistant steels and austenitic steels, high strength/short chipping steels from 900 N/mm² in strength and special alloys such as Hastelloy®, Inconel® and Nimonic®.

HSS Co5 | DIN 338 | 118° | 38°

Type FU

1023 format professional quality
TiN

Type GU 500DZ

1018 GUHRING
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1023 | 35 | 18 | 15 | | | | | | 18 | | 40 | 70 | 63 |
| 1018 | 35 | 18 | 15 | | | | | | 18 | | 40 | 70 | 63 |

| Order No. | Ø h8 mm | 1023 format TiN | 1018 GUHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.0 | 3.23 | 3.47 | 10 | 12 | 34 | 0.018 |
| 0110 | 1.1 | 3.65 | 3.88 | 10 | 14 | 36 | 0.063 |
| 0120 | 1.2 | 3.50 | 3.73 | 10 | 16 | 38 | 0.063 |
| 0130 | 1.3 | 3.65 | 3.88 | 10 | 16 | 38 | 0.063 |
| 0140 | 1.4 | 3.69 | 3.93 | 10 | 18 | 40 | 0.063 |
| 0150 | 1.5 | 3.40 | 3.62 | 10 | 18 | 40 | 0.063 |
| 0160 | 1.6 | 3.40 | 3.62 | 10 | 20 | 43 | 0.063 |
| 0170 | 1.7 | 3.74 | 3.98 | 10 | 20 | 43 | 0.063 |
| 0180 | 1.8 | 3.69 | 3.93 | 10 | 22 | 46 | 0.063 |
| 0190 | 1.9 | 3.69 | 3.93 | 10 | 22 | 46 | 0.063 |
| 0200 | 2.0 | 3.50 | 3.73 | 10 | 24 | 49 | 0.063 |
| 0210 | 2.1 | 3.74 | 3.98 | 10 | 24 | 49 | 0.080 |
| 0220 | 2.2 | 3.88 | 4.14 | 10 | 27 | 53 | 0.080 |
| 0230 | 2.3 | 3.78 | 4.04 | 10 | 27 | 53 | 0.080 |
| 0240 | 2.4 | 3.50 | 3.73 | 10 | 30 | 57 | 0.080 |
| 0250 | 2.5 | 3.65 | 3.88 | 10 | 30 | 57 | 0.080 |
| 0260 | 2.6 | 3.78 | 4.04 | 10 | 30 | 57 | 0.100 |
| 0270 | 2.7 | 3.97 | 4.24 | 10 | 33 | 61 | 0.100 |
| 0280 | 2.8 | 3.91 | 4.19 | 10 | 33 | 61 | 0.100 |
| 0290 | 2.9 | 3.97 | 4.24 | 10 | 33 | 61 | 0.100 |
| 0300 | 3.0 | 3.82 | 4.09 | 10 | 33 | 61 | 0.100 |
| 0310 | 3.1 | 4.18 | 4.45 | 10 | 36 | 65 | 0.100 |
| 0320 | 3.2 | 4.07 | 4.35 | 10 | 36 | 65 | 0.125 |
| 0330 | 3.3 | 4.18 | 4.45 | 10 | 36 | 65 | 0.125 |
| 0340 | 3.4 | 4.46 | 4.76 | 10 | 39 | 70 | 0.125 |
| 0350 | 3.5 | 4.50 | 4.81 | 10 | 39 | 70 | 0.125 |
| 0360 | 3.6 | 4.62 | 4.92 | 10 | 39 | 70 | 0.125 |
| 0370 | 3.7 | 4.62 | 4.92 | 10 | 39 | 70 | 0.125 |
| 0380 | 3.8 | 4.83 | 5.20 | 10 | 43 | 75 | 0.125 |
| 0390 | 3.9 | 4.96 | 5.30 | 10 | 43 | 75 | 0.125 |
| 0400 | 4.0 | 4.75 | 5.05 | 10 | 43 | 75 | 0.125 |
| 0410 | 4.1 | 4.83 | 5.20 | 10 | 43 | 75 | 0.125 |
| 0420 | 4.2 | 4.83 | 5.20 | 10 | 43 | 75 | 0.125 |
| 0430 | 4.3 | 5.25 | 5.60 | 10 | 47 | 80 | 0.125 |
| 0440 | 4.4 | 5.25 | 5.60 | 10 | 47 | 80 | 0.125 |
| 0450 | 4.5 | 5.15 | 5.50 | 10 | 47 | 80 | 0.125 |
| 0460 | 4.6 | 5.40 | 5.80 | 10 | 47 | 80 | 0.125 |
| 0470 | 4.7 | 5.40 | 5.80 | 10 | 47 | 80 | 0.125 |
| 0480 | 4.8 | 5.55 | 5.90 | 10 | 52 | 86 | 0.125 |
| 0490 | 4.9 | 5.65 | 6.00 | 10 | 52 | 86 | 0.125 |
| 0500 | 5.0 | 5.40 | 5.80 | 10 | 52 | 86 | 0.125 |
| 0510 | 5.1 | 5.65 | 6.00 | 10 | 52 | 86 | 0.160 |
| 0520 | 5.2 | 5.65 | 6.00 | 10 | 52 | 86 | 0.160 |
| 0530 | 5.3 | 6.10 | 6.50 | 10 | 52 | 86 | 0.160 |
| 0540 | 5.4 | 6.70 (W100) | 7.15 (W115) | 10 | 57 | 93 | 0.160 |

| Order No. | Ø h8 mm | 1023 format TiN | 1018 GUHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0550 | 5.5 | 6.40 | 6.85 | 10 | 57 | 93 | 0.160 |
| 0560 | 5.6 | 6.80 | 7.25 | 10 | 57 | 93 | 0.160 |
| 0570 | 5.7 | 6.80 | 7.25 | 10 | 57 | 93 | 0.160 |
| 0580 | 5.8 | 6.80 | 7.25 | 10 | 57 | 93 | 0.160 |
| 0590 | 5.9 | 6.90 | 7.35 | 10 | 57 | 93 | 0.160 |
| 0600 | 6.0 | 6.50 | 6.95 | 10 | 57 | 93 | 0.160 |
| 0610 | 6.1 | 7.35 | 7.85 | 5 | 63 | 101 | 0.160 |
| 0620 | 6.2 | 7.30 | 7.75 | 5 | 63 | 101 | 0.160 |
| 0630 | 6.3 | 7.20 | 7.65 | 5 | 63 | 101 | 0.160 |
| 0640 | 6.4 | 7.30 | 7.75 | 5 | 63 | 101 | 0.200 |
| 0650 | 6.5 | 7.85 | 8.40 | 5 | 63 | 101 | 0.200 |
| 0660 | 6.6 | 8.05 | 8.60 | 5 | 63 | 101 | 0.200 |
| 0670 | 6.7 | 8.25 | 8.80 | 5 | 63 | 101 | 0.200 |
| 0680 | 6.8 | 8.85 | 9.40 | 5 | 69 | 109 | 0.200 |
| 0690 | 6.9 | 8.90 | 9.50 | 5 | 69 | 109 | 0.200 |
| 0700 | 7.0 | 8.85 | 9.40 | 5 | 69 | 109 | 0.200 |
| 0710 | 7.1 | 9.80 | 10.45 | 5 | 69 | 109 | 0.200 |
| 0720 | 7.2 | 9.80 | 10.45 | 5 | 69 | 109 | 0.200 |
| 0730 | 7.3 | 10.30 | 10.95 | 5 | 69 | 109 | 0.200 |
| 0740 | 7.4 | 10.30 | 10.95 | 5 | 69 | 109 | 0.200 |
| 0750 | 7.5 | 9.40 | 10.05 | 5 | 69 | 109 | 0.200 |
| 0760 | 7.6 | 11.25 | 12.00 | 5 | 75 | 117 | 0.200 |
| 0770 | 7.7 | 10.95 | 11.70 | 5 | 75 | 117 | 0.200 |
| 0780 | 7.8 | 11.05 | 11.80 | 5 | 75 | 117 | 0.200 |
| 0790 | 7.9 | 11.65 | 12.40 | 5 | 75 | 117 | 0.200 |
| 0800 | 8.0 | 10.60 | 11.30 | 5 | 75 | 117 | 0.200 |
| 0810 | 8.1 | 11.55 | 12.30 | 5 | 75 | 117 | 0.250 |
| 0820 | 8.2 | 11.40 | 12.20 | 5 | 75 | 117 | 0.250 |
| 0830 | 8.3 | 11.40 | 12.20 | 5 | 75 | 117 | 0.250 |
| 0840 | 8.4 | 12.05 | 12.85 | 5 | 75 | 117 | 0.250 |
| 0850 | 8.5 | 10.85 | 11.60 | 5 | 75 | 117 | 0.250 |
| 0880 | 8.8 | 12.70 | 13.55 | 5 | 81 | 125 | 0.250 |
| 0900 | 9.0 | 12.05 | 12.85 | 5 | 81 | 125 | 0.250 |
| 0930 | 9.3 | 12.90 | 13.75 | 5 | 81 | 125 | 0.250 |
| 0950 | 9.5 | 12.50 | 13.35 | 5 | 81 | 125 | 0.250 |
| 0980 | 9.8 | 14.65 | 15.65 | 5 | 87 | 133 | 0.250 |
| 1000 | 10.0 | 14.15 | 15.10 | 5 | 87 | 133 | 0.250 |
| 1020 | 10.2 | 16.40 | 17.50 | 5 | 87 | 133 | 0.250 |
| 1050 | 10.5 | 16.45 | 17.60 | 5 | 87 | 133 | 0.250 |
| 1100 | 11.0 | 17.00 | 18.10 | 5 | 94 | 142 | 0.250 |
| 1150 | 11.5 | 18.90 | 20.20 | 5 | 94 | 142 | 0.250 |
| 1200 | 12.0 | 20.40 | 21.70 | 5 | 101 | 151 | 0.250 |
| 1250 | 12.5 | 20.80 | 22.30 | 5 | 101 | 151 | 0.250 |
| 1300 | 13.0 | 22.30 (W100) | 23.80 (W115) | 5 | 101 | 151 | 0.315 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spiral drill set with cyl. Shank

**Design:** HSS Co5, DIN 338, TiN coated surface, type FU. Profile grinding, right cutting, with precise point geometry as well as special point thinning and excellent thermal resistance. Angle of rake larger than normal (35°), core thickness thicker than normal and normal core gradient. Set consisting of (order no. 1023). Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

HSS Co5 | DIN 338 | Type FU | 118° | 38°

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1024 | 35 | 18 | 15 | | | | | | 18 | | 40 | 70 | 63 |

| Order No. | Set contents Ø h8 mm | 1024 format professional quality TiN | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0005 | 1.0–10.0 | 133.00 | 19 | 0.5 |
| 0007 | 1.0–10.5 | 180.00 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 237.00 | 25 | 0.5 |
| | | (W100) | | |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## Spiral drill with cyl. Shank

**Design:** HSS Co5, DIN 338, type TF. Particularly sturdy model. Profile grinding, right cutting, bright surface, nitrated bevels from Ø 2.4 mm with precise point geometry as well as wide clamping slots with heavily rounded back edges and excellent thermal resistance. Point thinning according to DIN 1412, form A. Angle of rake larger than normal, core thickness thicker than normal and without core gradient.

**Application:** Suitable for drilling depths above 3 x D due to bevel nitration and wide clamping slots. Particularly suitable for alloyed/non-alloyed steels and casting types above 800 N/mm² in strength, hot and cold work steels, roller bearing steels, high-alloy steels, tempered steels and case hardening steels.

HSS Co5 | DIN 338 | Type TF | 130° | 38°

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1022 | 40 | 20 | 15 | 12 | | | | | 18 | | 30 | | |

| Order No. | Ø h8 mm | 1022 format professional quality Nitrated | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 3.26 | 10 | 12 | 34 | 0.012 |
| 0110 | 1.1 | 3.39 | 10 | 14 | 36 | 0.032 |
| 0120 | 1.2 | 3.39 | 10 | 16 | 38 | 0.032 |
| 0130 | 1.3 | 3.32 | 10 | 16 | 38 | 0.032 |
| 0140 | 1.4 | 3.39 | 10 | 18 | 40 | 0.032 |
| 0150 | 1.5 | 3.06 | 10 | 18 | 40 | 0.032 |
| 0160 | 1.6 | 3.08 | 10 | 20 | 43 | 0.032 |
| 0170 | 1.7 | 3.08 | 10 | 20 | 43 | 0.032 |
| 0180 | 1.8 | 3.08 | 10 | 22 | 46 | 0.032 |
| 0190 | 1.9 | 3.08 | 10 | 22 | 46 | 0.032 |
| 0200 | 2.0 | 2.82 | 10 | 24 | 49 | 0.032 |
| 0210 | 2.1 | 3.04 | 10 | 24 | 49 | 0.040 |
| 0220 | 2.2 | 3.04 | 10 | 27 | 53 | 0.040 |
| 0230 | 2.3 | 3.04 | 10 | 27 | 53 | 0.040 |
| 0240 | 2.4 | 3.04 | 10 | 30 | 57 | 0.040 |
| 0250 | 2.5 | 2.86 | 10 | 30 | 57 | 0.040 |
| 0260 | 2.6 | 3.04 | 10 | 30 | 57 | 0.050 |
| | | (W100) | | | | |

| Order No. | Ø h8 mm | 1022 format professional quality Nitrated | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0270 | 2.7 | 3.23 | 10 | 33 | 61 | 0.050 |
| 0280 | 2.8 | 3.32 | 10 | 33 | 61 | 0.050 |
| 0290 | 2.9 | 3.32 | 10 | 33 | 61 | 0.050 |
| 0300 | 3.0 | 2.99 | 10 | 33 | 61 | 0.050 |
| 0310 | 3.1 | 3.23 | 10 | 36 | 65 | 0.050 |
| 0320 | 3.2 | 3.39 | 10 | 36 | 65 | 0.063 |
| 0330 | 3.3 | 3.52 | 10 | 36 | 65 | 0.063 |
| 0340 | 3.4 | 3.89 | 10 | 39 | 70 | 0.063 |
| 0350 | 3.5 | 3.23 | 10 | 39 | 70 | 0.063 |
| 0360 | 3.6 | 3.81 | 10 | 39 | 70 | 0.063 |
| 0370 | 3.7 | 3.89 | 10 | 39 | 70 | 0.063 |
| 0380 | 3.8 | 4.16 | 10 | 43 | 75 | 0.063 |
| 0390 | 3.9 | 4.40 | 10 | 43 | 75 | 0.063 |
| 0400 | 4.0 | 3.54 | 10 | 43 | 75 | 0.063 |
| 0410 | 4.1 | 4.40 | 10 | 43 | 75 | 0.063 |
| 0420 | 4.2 | 4.09 | 10 | 43 | 75 | 0.063 |
| 0430 | 4.3 | 4.58 | 10 | 47 | 80 | 0.063 |
| | | (W100) | | | | |

Continued overleaf

## Spiral drill with cyl. Shank

Continued

| Order No. | Ø h8 mm | 1022 format professional quality Nitrated | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0440 | 4.4 | 4.58 | 10 | 47 | 80 | 0.063 |
| 0450 | 4.5 | 4.27 | 10 | 47 | 80 | 0.063 |
| 0460 | 4.6 | 4.84 | 10 | 47 | 80 | 0.063 |
| 0470 | 4.7 | 4.84 | 10 | 47 | 80 | 0.063 |
| 0480 | 4.8 | 4.84 | 10 | 52 | 86 | 0.063 |
| 0490 | 4.9 | 5.00 | 10 | 52 | 86 | 0.063 |
| 0500 | 5.0 | 4.42 | 10 | 52 | 86 | 0.063 |
| 0510 | 5.1 | 5.00 | 10 | 52 | 86 | 0.080 |
| 0520 | 5.2 | 5.30 | 10 | 52 | 86 | 0.080 |
| 0530 | 5.3 | 5.30 | 10 | 52 | 86 | 0.080 |
| 0540 | 5.4 | 5.60 | 10 | 57 | 93 | 0.080 |
| 0550 | 5.5 | 5.30 | 10 | 57 | 93 | 0.080 |
| 0560 | 5.6 | 5.65 | 10 | 57 | 93 | 0.080 |
| 0570 | 5.7 | 5.65 | 10 | 57 | 93 | 0.080 |
| 0580 | 5.8 | 5.80 | 10 | 57 | 93 | 0.080 |
| 0590 | 5.9 | 6.20 | 10 | 57 | 93 | 0.080 |
| 0600 | 6.0 | 5.80 | 10 | 57 | 93 | 0.080 |
| 0610 | 6.1 | 6.20 | 5 | 63 | 101 | 0.080 |
| 0620 | 6.2 | 6.40 | 5 | 63 | 101 | 0.080 |
| 0630 | 6.3 | 7.20 | 5 | 63 | 101 | 0.080 |
| 0640 | 6.4 | 7.20 | 5 | 63 | 101 | 0.100 |
| 0650 | 6.5 | 6.35 | 5 | 63 | 101 | 0.100 |
| 0660 | 6.6 | 7.35 | 5 | 63 | 101 | 0.100 |
| 0670 | 6.7 | 7.35 | 5 | 63 | 101 | 0.100 |
| 0680 | 6.8 | 7.60 | 5 | 69 | 109 | 0.100 |
| 0690 | 6.9 | 8.10 | 5 | 69 | 109 | 0.100 |
| 0700 | 7.0 | 6.80 | 5 | 69 | 109 | 0.100 |
| 0710 | 7.1 | 10.65 | 5 | 69 | 109 | 0.100 |
| 0720 | 7.2 | 10.65 | 5 | 69 | 109 | 0.100 |
| 0730 | 7.3 | 10.65 | 5 | 69 | 109 | 0.100 |
| 0740 | 7.4 | 10.65 | 5 | 69 | 109 | 0.100 |
| 0750 | 7.5 | 7.95 (W100) | 5 | 69 | 109 | 0.100 |

| Order No. | Ø h8 mm | 1022 format professional quality Nitrated | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0760 | 7.6 | 11.65 | 5 | 75 | 117 | 0.100 |
| 0770 | 7.7 | 11.65 | 5 | 75 | 117 | 0.100 |
| 0780 | 7.8 | 11.65 | 5 | 75 | 117 | 0.100 |
| 0790 | 7.9 | 11.65 | 5 | 75 | 117 | 0.100 |
| 0800 | 8.0 | 9.00 | 5 | 75 | 117 | 0.100 |
| 0810 | 8.1 | 12.35 | 5 | 75 | 117 | 0.125 |
| 0820 | 8.2 | 12.85 | 5 | 75 | 117 | 0.125 |
| 0830 | 8.3 | 13.70 | 5 | 75 | 117 | 0.125 |
| 0840 | 8.4 | 13.70 | 5 | 75 | 117 | 0.125 |
| 0850 | 8.5 | 10.15 | 5 | 75 | 117 | 0.125 |
| 0860 | 8.6 | 15.30 | 5 | 81 | 125 | 0.125 |
| 0870 | 8.7 | 15.30 | 5 | 81 | 125 | 0.125 |
| 0880 | 8.8 | 15.30 | 5 | 81 | 125 | 0.125 |
| 0890 | 8.9 | 15.60 | 5 | 81 | 125 | 0.125 |
| 0900 | 9.0 | 11.70 | 5 | 81 | 125 | 0.125 |
| 0910 | 9.1 | 16.55 | 5 | 81 | 125 | 0.125 |
| 0920 | 9.2 | 17.90 | 5 | 81 | 125 | 0.125 |
| 0930 | 9.3 | 17.90 | 5 | 81 | 125 | 0.125 |
| 0940 | 9.4 | 17.90 | 5 | 81 | 125 | 0.125 |
| 0950 | 9.5 | 12.70 | 5 | 81 | 125 | 0.125 |
| 0960 | 9.6 | 18.90 | 5 | 87 | 133 | 0.125 |
| 0970 | 9.7 | 20.60 | 5 | 87 | 133 | 0.125 |
| 0980 | 9.8 | 20.60 | 5 | 87 | 133 | 0.125 |
| 0990 | 9.9 | 20.60 | 5 | 87 | 133 | 0.125 |
| 1000 | 10.0 | 14.45 | 5 | 87 | 133 | 0.125 |
| 1020 | 10.2 | 20.00 | 5 | 87 | 133 | 0.125 |
| 1050 | 10.5 | 18.25 | 5 | 87 | 133 | 0.125 |
| 1100 | 11.0 | 22.30 | 5 | 94 | 142 | 0.125 |
| 1150 | 11.5 | 26.10 | 5 | 94 | 142 | 0.125 |
| 1200 | 12.0 | 27.70 | 5 | 101 | 151 | 0.125 |
| 1250 | 12.5 | 34.10 | 5 | 101 | 151 | 0.125 |
| 1300 | 13.0 | 34.10 (W100) | 5 | 101 | 151 | 0.160 |

## Spiral drill set with cyl. Shank

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened. Set consisting of (order no. 1022).

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1032 | 40 | 20 | 15 | 12 | | | | | 18 | | 30 | | |

| Order No. | Set contents Ø h8 mm | 1032 format professional quality Nitrated | Number of drills Piece | Increasing mm |
|---|---|---|---|---|
| 0007 | 1.0–10.5 | 176.00 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 274.00 (W100) | 25 | 0.5 |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

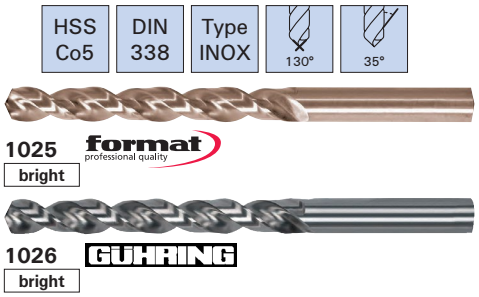
## Spiral drill with cyl. Shank

**Design:** HSS Co5, DIN 338, Typ INOX. Particularly sturdy model. Profile grinding, right cutting, with precise point geometry and excellent thermal resistance. Without point thinning. Angle of rake larger than normal, core thickness thinner than normal and normal core gradient.

**Application:** Particularly suitable for rust/acid/heat-resistant and austenitic steels (INOX).

**1025** Bright
Profile grinding, bright surface.
**Note:** Available as a set (Order No. 1033 on 📖 1/35).

**1026** Bright
Profile grinding, bright surface.
**Note:** Available as a set (Order No. 1026 on 📖 1/34, 1/35).




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1025 | | | | | | | | | **18** | 10 | | **90** | **60** |
| 1026 | | | | | | | | | **18** | 10 | | **90** | **60** |

| Order No. | Ø h8 mm | 1025 format bright | 1026 GÜHRING bright | PU | Spiral length mm | Total length mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.0 | 2.28 | 7.15 | 10 | 12 | 34 | 0.014 |
| 0110 | 1.1 | 3.48 | 8.00 | 10 | 14 | 36 | 0.040 |
| 0120 | 1.2 | 3.93 | 7.90 | 10 | 16 | 38 | 0.040 |
| 0130 | 1.3 | 4.50 | 8.00 | 10 | 16 | 38 | 0.040 |
| 0140 | 1.4 | 4.32 | 6.95 | 10 | 18 | 40 | 0.040 |
| 0150 | 1.5 | 2.73 | 6.35 | 10 | 18 | 40 | 0.040 |
| 0160 | 1.6 | 4.20 | 8.00 | 10 | 20 | 43 | 0.040 |
| 0170 | 1.7 | 4.53 | 7.35 | 10 | 20 | 43 | 0.040 |
| 0180 | 1.8 | 4.35 | 6.95 | 10 | 22 | 46 | 0.040 |
| 0190 | 1.9 | 3.96 | 8.05 | 10 | 22 | 46 | 0.040 |
| 0200 | 2.0 | 2.22 | 5.20 | 10 | 24 | 49 | 0.040 |
| 0210 | 2.1 | 3.96 | 8.20 | 10 | 24 | 49 | 0.050 |
| 0220 | 2.2 | 4.11 | 8.45 | 10 | 27 | 53 | 0.050 |
| 0230 | 2.3 | 4.59 | 8.90 | 10 | 27 | 53 | 0.050 |
| 0240 | 2.4 | 3.93 | 8.75 | 10 | 30 | 57 | 0.050 |
| 0250 | 2.5 | 2.22 | 5.75 | 10 | 30 | 57 | 0.050 |
| 0260 | 2.6 | 3.84 | 8.90 | 10 | 30 | 57 | 0.063 |
| 0270 | 2.7 | 3.75 | 8.90 | 10 | 33 | 61 | 0.063 |
| 0280 | 2.8 | 4.08 | 8.60 | 10 | 33 | 61 | 0.063 |
| 0290 | 2.9 | 4.17 | 7.85 | 10 | 33 | 61 | 0.063 |
| 0300 | 3.0 | 2.31 | 5.55 | 10 | 33 | 61 | 0.063 |
| 0310 | 3.1 | 2.82 | 9.40 | 10 | 36 | 65 | 0.063 |
| 0320 | 3.2 | 2.76 | 6.65 | 10 | 36 | 65 | 0.080 |
| 0330 | 3.3 | 2.82 | 6.30 | 10 | 36 | 65 | 0.080 |
| 0340 | 3.4 | 4.08 | 8.10 | 10 | 39 | 70 | 0.080 |
| 0350 | 3.5 | 2.46 | 5.80 | 10 | 39 | 70 | 0.080 |
| 0360 | 3.6 | 3.13 | 10.15 | 10 | 39 | 70 | 0.080 |
| 0370 | 3.7 | 3.64 | 10.15 | 10 | 39 | 70 | 0.080 |
| 0380 | 3.8 | 4.53 | 9.45 | 10 | 43 | 75 | 0.080 |
| 0390 | 3.9 | 5.45 | 10.65 | 10 | 43 | 75 | 0.080 |
| 0400 | 4.0 | 2.79 | 6.60 | 10 | 43 | 75 | 0.080 |
| 0410 | 4.1 | 3.42 | 10.15 | 10 | 43 | 75 | 0.080 |
| 0420 | 4.2 | 3.18 | 8.10 | 10 | 43 | 75 | 0.080 |
| 0430 | 4.3 | 4.53 | 8.55 | 10 | 47 | 80 | 0.080 |
| 0440 | 4.4 | 5.45 | 11.00 | 10 | 47 | 80 | 0.080 |
| 0450 | 4.5 | 3.27 | 8.40 | 10 | 47 | 80 | 0.080 |
| 0460 | 4.6 | 3.92 | 11.55 | 10 | 47 | 80 | 0.080 |
| 0470 | 4.7 | 4.37 | 10.65 | 10 | 47 | 80 | 0.080 |
| 0480 | 4.8 | 5.45 | 9.25 | 10 | 52 | 86 | 0.080 |
| 0490 | 4.9 | 5.25 | 12.45 | 10 | 52 | 86 | 0.080 |
| 0500 | 5.0 | 3.42 | 7.70 | 10 | 52 | 86 | 0.080 |
| 0510 | 5.1 | 4.20 | 10.35 | 10 | 52 | 86 | 0.100 |
| 0520 | 5.2 | 4.05 | 10.85 | 10 | 52 | 86 | 0.100 |
| 0530 | 5.3 | 6.00 | 12.65 | 10 | 52 | 86 | 0.100 |
| 0540 | 5.4 | 5.85 | 13.60 | 10 | 52 | 86 | 0.100 |
| 0550 | 5.5 | 4.08 | 12.25 | 10 | 57 | 93 | 0.100 |
| 0560 | 5.6 | 3.92 | 14.05 | 10 | 57 | 93 | 0.100 |
| 0570 | 5.7 | 3.97 | 14.05 | 10 | 57 | 93 | 0.100 |
| 0580 | 5.8 | 4.44 (W100) | 14.05 (W107) | 10 | 57 | 93 | 0.100 |

| Order No. | Ø h8 mm | 1025 format bright | 1026 GÜHRING bright | PU | Spiral length mm | Total length mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0590 | 5.9 | 4.00 | 14.05 | 10 | 57 | 93 | 0.100 |
| 0600 | 6.0 | 4.50 | 10.15 | 10 | 57 | 93 | 0.100 |
| 0610 | 6.1 | 8.50 | 15.45 | 5 | 63 | 101 | 0.100 |
| 0620 | 6.2 | 8.75 | 14.15 | 5 | 63 | 101 | 0.100 |
| 0630 | 6.3 | 9.25 | 15.45 | 5 | 63 | 101 | 0.100 |
| 0640 | 6.4 | 9.95 | 17.30 | 5 | 63 | 101 | 0.125 |
| 0650 | 6.5 | 4.86 | 12.45 | 5 | 63 | 101 | 0.125 |
| 0660 | 6.6 | 8.25 | 17.30 | 5 | 63 | 101 | 0.125 |
| 0670 | 6.7 | 9.90 | 17.30 | 5 | 63 | 101 | 0.125 |
| 0680 | 6.8 | 5.90 | 15.45 | 5 | 69 | 109 | 0.125 |
| 0690 | 6.9 | 5.90 | 16.95 | 5 | 69 | 109 | 0.125 |
| 0700 | 7.0 | 5.15 | 12.80 | 5 | 69 | 109 | 0.125 |
| 0710 | 7.1 | 12.35 | 21.60 | 5 | 69 | 109 | 0.125 |
| 0720 | 7.2 | 13.15 | 21.60 | 5 | 69 | 109 | 0.125 |
| 0730 | 7.3 | 14.80 | 18.00 | 5 | 69 | 109 | 0.125 |
| 0740 | 7.4 | 13.30 | 21.60 | 5 | 69 | 109 | 0.125 |
| 0750 | 7.5 | 6.20 | 16.60 | 5 | 69 | 109 | 0.125 |
| 0760 | 7.6 | 14.90 | 17.80 | 5 | 75 | 117 | 0.125 |
| 0770 | 7.7 | 14.15 | 27.00 | 5 | 75 | 117 | 0.125 |
| 0780 | 7.8 | 11.65 | 27.00 | 5 | 75 | 117 | 0.125 |
| 0790 | 7.9 | 12.45 | 27.00 | 5 | 75 | 117 | 0.125 |
| 0800 | 8.0 | 6.65 | 16.60 | 5 | 75 | 117 | 0.125 |
| 0810 | 8.1 | 12.80 | 25.90 | 5 | 75 | 117 | 0.160 |
| 0820 | 8.2 | 12.10 | 23.40 | 5 | 75 | 117 | 0.160 |
| 0830 | 8.3 | 13.55 | 27.00 | 5 | 75 | 117 | 0.160 |
| 0840 | 8.4 | 14.50 | 29.90 | 5 | 75 | 117 | 0.160 |
| 0850 | 8.5 | 7.35 | 15.80 | 5 | 75 | 117 | 0.160 |
| 0860 | 8.6 | 13.70 | 29.90 | 5 | 81 | 125 | 0.160 |
| 0870 | 8.7 | 14.20 | 30.90 | 5 | 81 | 125 | 0.160 |
| 0880 | 8.8 | 13.75 | 34.20 | 5 | 81 | 125 | 0.160 |
| 0890 | 8.9 | 15.80 | 34.90 | 5 | 81 | 125 | 0.160 |
| 0900 | 9.0 | 7.90 | 21.60 | 5 | 81 | 125 | 0.160 |
| 0910 | 9.1 | 16.60 | 38.90 | 5 | 81 | 125 | 0.160 |
| 0920 | 9.2 | 16.55 | 40.30 | 5 | 81 | 125 | 0.160 |
| 0950 | 9.5 | 11.90 | 26.70 | 5 | 81 | 125 | 0.160 |
| 0970 | 9.7 | 22.20 | 42.50 | 5 | 87 | 133 | 0.160 |
| 0980 | 9.8 | 16.55 | 40.30 | 5 | 87 | 133 | 0.160 |
| 1000 | 10.0 | 8.45 | 23.80 | 5 | 87 | 133 | 0.160 |
| 1010 | 10.1 | 23.90 | 49.70 | 5 | 87 | 133 | 0.160 |
| 1020 | 10.2 | 15.15 | 36.00 | 5 | 87 | 133 | 0.160 |
| 1050 | 10.5 | 14.00 | 36.00 | 5 | 87 | 133 | 0.160 |
| 1080 | 10.8 | 32.30 | 84.30 | 5 | 94 | 142 | 0.160 |
| 1100 | 11.0 | 15.15 | 38.90 | 5 | 94 | 142 | 0.160 |
| 1120 | 11.2 | 51.00 | 87.20 | 5 | 94 | 142 | 0.160 |
| 1150 | 11.5 | 16.10 | 53.30 | 5 | 94 | 142 | 0.160 |
| 1180 | 11.8 | 28.10 | 95.10 | 5 | 94 | 142 | 0.160 |
| 1200 | 12.0 | 18.85 | 53.30 | 5 | 101 | 151 | 0.160 |
| 1250 | 12.5 | 42.00 | 67.70 | 5 | 101 | 151 | 0.160 |
| 1300 | 13.0 | 46.20 (W100) | 82.10 (W107) | 5 | 101 | 151 | 0.200 |

## Spiral drill set with cyl. Shank

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**1033** Bright

**Note:** Set consisting of (Order No. 1025).

**1026** Bright

**Note:** Set consisting of (Order No. 1026).

HSS Co5 | DIN 338 | Type INOX | 130° | 35°

1033 bright format professional quality

1026 bright GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1033 | | | | | | | | | **18** | 10 | | **90** | **60** |
| 1026 | | | | | | | | | **18** | 10 | | **90** | **60** |

| Order No. | Set contents Ø h8 mm | 1033 format bright | 1026 GÜHRING bright | Number of drills Piece | Increasing mm |
|---|---|---|---|---|---|
| 0005 | 1.0–10.0 | 144.50 | – | 19 | 0.5 |
| 0007 | 1.0–10.5 | 207.00 | 389.00 | 24 | 0.5 + K.B.* |
| 0009 | 1.0–13.0 | 326.00 | 641.00 | 25 | 0.5 |
| | | (W100) | (W105) | | |

* With intermediate sizes for tapped holes: 1 piece each Ø 3.3; 4.2; 6.8; 10.2 mm.

## Spiral drill with cyl. Shank

**Design:** HSS-E PM, DIN 338, type GT 500 DZ.
TiN coated surface, right cutting, with special point geometry and ratio point thinning. Normal angle of rake, core thickness thicker than normal and without core gradient. The drill has a very good self-centring behaviour and produces short chips, even from long-chipping materials. Sturdy, powerful model, **profile grinding,** right cutting, with precise point geometry as well as special point thinning and excellent thermal resistance. Normal core gradient.

**Application:** Suitable for short drilling depths up to 5 x D. Suitable for construction and carbon steels, high alloy steels, tool steels, castings and casting alloys, magnesium alloys, non-ferrous metals and plastics.

HSS-E PM | DIN 338 | Type GT 500DZ | 130° | 38° | 5xD

GÜHRING

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1021 | 40 | 25 | **18** | **15** | | | | | 15 | | **45** | | |

| Order No. | Ø h8 mm | 1021 GÜHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 9.30 | 10 | 12 | 34 | 0.012 |
| 0110 | 1.1 | 9.20 | 10 | 14 | 36 | 0.032 |
| 0120 | 1.2 | 9.40 | 10 | 16 | 38 | 0.032 |
| 0130 | 1.3 | 10.05 | 10 | 16 | 38 | 0.032 |
| 0140 | 1.4 | 9.20 | 10 | 18 | 40 | 0.032 |
| 0150 | 1.5 | 8.90 | 10 | 18 | 40 | 0.032 |
| 0160 | 1.6 | 9.00 | 10 | 20 | 43 | 0.032 |
| 0170 | 1.7 | 9.10 | 10 | 20 | 43 | 0.032 |
| 0180 | 1.8 | 9.00 | 10 | 22 | 46 | 0.032 |
| | | (W115) | | | | |

| Order No. | Ø h8 mm | 1021 GÜHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0190 | 1.9 | 9.10 | 10 | 22 | 46 | 0.032 |
| 0200 | 2.0 | 7.65 | 10 | 24 | 49 | 0.032 |
| 0210 | 2.1 | 8.40 | 10 | 24 | 49 | 0.040 |
| 0220 | 2.2 | 9.20 | 10 | 27 | 53 | 0.040 |
| 0230 | 2.3 | 9.20 | 10 | 27 | 53 | 0.040 |
| 0240 | 2.4 | 9.50 | 10 | 30 | 57 | 0.040 |
| 0250 | 2.5 | 8.30 | 10 | 30 | 57 | 0.040 |
| 0260 | 2.6 | 10.15 | 10 | 30 | 57 | 0.050 |
| 0270 | 2.7 | 9.40 | 10 | 33 | 61 | 0.050 |
| | | (W115) | | | | |

Continued overleaf

## Spiral drill with cyl. Shank

Continued

| Order No. | Ø h8 mm | 1021 GÜHRING TiN | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|
| 0280 | 2.8 | 10.45 | 10 | 33 | 61 | 0.050 |
| 0290 | 2.9 | 9.20 | 10 | 33 | 61 | 0.050 |
| 0300 | 3.0 | 8.80 | 10 | 33 | 61 | 0.050 |
| 0310 | 3.1 | 9.20 | 10 | 36 | 65 | 0.050 |
| 0320 | 3.2 | 10.05 | 10 | 36 | 65 | 0.063 |
| 0330 | 3.3 | 10.15 | 10 | 36 | 65 | 0.063 |
| 0340 | 3.4 | 9.10 | 10 | 39 | 70 | 0.063 |
| 0350 | 3.5 | 9.50 | 10 | 39 | 70 | 0.063 |
| 0360 | 3.6 | 7.85 | 10 | 39 | 70 | 0.063 |
| 0370 | 3.7 | 8.60 | 10 | 39 | 70 | 0.063 |
| 0380 | 3.8 | 9.50 | 10 | 43 | 75 | 0.063 |
| 0390 | 3.9 | 11.05 | 10 | 43 | 75 | 0.063 |
| 0400 | 4.0 | 8.90 | 10 | 43 | 75 | 0.063 |
| 0410 | 4.1 | 10.35 | 10 | 43 | 75 | 0.063 |
| 0420 | 4.2 | 9.20 | 10 | 43 | 75 | 0.063 |
| 0430 | 4.3 | 10.25 | 10 | 47 | 80 | 0.063 |
| 0440 | 4.4 | 11.05 | 10 | 47 | 80 | 0.063 |
| 0450 | 4.5 | 9.10 | 10 | 47 | 80 | 0.063 |
| 0460 | 4.6 | 11.60 | 10 | 47 | 80 | 0.063 |
| 0470 | 4.7 | 11.05 | 10 | 47 | 80 | 0.063 |
| 0480 | 4.8 | 11.70 | 10 | 52 | 86 | 0.063 |
| 0490 | 4.9 | 12.00 | 10 | 52 | 86 | 0.063 |
| 0500 | 5.0 | 10.15 | 10 | 52 | 86 | 0.063 |
| 0510 | 5.1 | 10.85 | 10 | 52 | 86 | 0.080 |
| 0520 | 5.2 | 12.65 | 10 | 52 | 86 | 0.080 |
| 0530 | 5.3 | 12.10 | 10 | 52 | 86 | 0.080 |
| 0540 | 5.4 | 13.05 | 10 | 57 | 93 | 0.080 |
| 0550 | 5.5 | 11.20 | 10 | 57 | 93 | 0.080 |
| 0560 | 5.6 | 13.25 | 10 | 57 | 93 | 0.080 |
| 0570 | 5.7 | 14.20 | 10 | 57 | 93 | 0.080 |
| 0580 | 5.8 | 14.60 | 10 | 57 | 93 | 0.080 |
| 0590 | 5.9 | 14.20 | 10 | 57 | 93 | 0.080 |
| 0600 | 6.0 | 11.80 | 10 | 57 | 93 | 0.080 |
| 0610 | 6.1 | 13.95 | 5 | 63 | 101 | 0.080 |
| 0620 | 6.2 | 13.95 | 5 | 63 | 101 | 0.080 |
| 0630 | 6.3 | 14.80 | 5 | 63 | 101 | 0.080 |
| 0640 | 6.4 | 14.70 (W115) | 5 | 63 | 101 | 0.100 |
| 0650 | 6.5 | 12.30 | 5 | 63 | 101 | 0.100 |
| 0660 | 6.6 | 15.40 | 5 | 63 | 101 | 0.100 |
| 0670 | 6.7 | 15.95 | 5 | 63 | 101 | 0.100 |
| 0680 | 6.8 | 15.75 | 5 | 69 | 109 | 0.100 |
| 0690 | 6.9 | 16.85 | 5 | 69 | 109 | 0.100 |
| 0700 | 7.0 | 18.75 | 5 | 69 | 109 | 0.100 |
| 0710 | 7.1 | 20.60 | 5 | 69 | 109 | 0.100 |
| 0720 | 7.2 | 20.40 | 5 | 69 | 109 | 0.100 |
| 0730 | 7.3 | 20.40 | 5 | 69 | 109 | 0.100 |
| 0740 | 7.4 | 20.50 | 5 | 69 | 109 | 0.100 |
| 0750 | 7.5 | 19.65 | 5 | 69 | 109 | 0.100 |
| 0760 | 7.6 | 21.70 | 5 | 75 | 117 | 0.100 |
| 0770 | 7.7 | 22.30 | 5 | 75 | 117 | 0.100 |
| 0780 | 7.8 | 18.55 | 5 | 75 | 117 | 0.100 |
| 0790 | 7.9 | 21.70 | 5 | 75 | 117 | 0.100 |
| 0800 | 8.0 | 20.40 | 5 | 75 | 117 | 0.100 |
| 0810 | 8.1 | 27.40 | 5 | 75 | 117 | 0.125 |
| 0820 | 8.2 | 28.50 | 5 | 75 | 117 | 0.125 |
| 0830 | 8.3 | 28.50 | 5 | 75 | 117 | 0.125 |
| 0840 | 8.4 | 28.50 | 5 | 75 | 117 | 0.125 |
| 0850 | 8.5 | 23.80 | 5 | 75 | 117 | 0.125 |
| 0880 | 8.8 | 33.10 | 5 | 81 | 125 | 0.125 |
| 0900 | 9.0 | 26.40 | 5 | 81 | 125 | 0.125 |
| 0930 | 9.3 | 39.30 | 5 | 81 | 125 | 0.125 |
| 0950 | 9.5 | 31.60 | 5 | 81 | 125 | 0.125 |
| 0980 | 9.8 | 33.60 | 5 | 87 | 133 | 0.125 |
| 1000 | 10.0 | 30.50 | 5 | 87 | 133 | 0.125 |
| 1020 | 10.2 | 46.10 | 5 | 87 | 133 | 0.125 |
| 1050 | 10.5 | 45.00 | 5 | 87 | 133 | 0.125 |
| 1100 | 11.0 | 45.00 | 5 | 94 | 142 | 0.125 |
| 1150 | 11.5 | 47.10 | 5 | 94 | 142 | 0.125 |
| 1200 | 12.0 | 54.90 | 5 | 101 | 151 | 0.125 |
| 1250 | 12.5 | 59.00 | 5 | 101 | 151 | 0.125 |
| 1300 | 13.0 | 59.00 | 5 | 101 | 151 | 0.160 |
| 1350 | 13.5 | 63.10 | 1 | 108 | 160 | 0.160 |
| 1400 | 14.0 | 78.70 (W115) | 1 | 108 | 160 | 0.160 |

## Pin hole conical drill with cyl. Shank

**Design:** HSS, DIN 1898/1, type N. Right cutting, surface steam tempered from Ø 3 mm with precise point geometry. Point thinning according to DIN 1412, form A. Normal angle of rake, core thickness and core gradient.

**Note:** Use for manufacturing our pin hole reamer on 1/141.

**Application:** For producing conical holes 1:50 in one step for conical pins according to ISO 2339 (DIN 1) and ISO 8736 (DIN 7978).

HSS | DIN 1898/1 | Type N | 118° | 1:50

GÜHRING

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1052 | 14 | 12 | | | | | | | | | 10 | 18 | |

| Order No. | Ø h8 mm | 1052 GÜHRING steam | Spiral length mm | Total length mm |
|---|---|---|---|---|
| 0250 | 2.5 | 43.20 | 52 | 86 |
| 0300 | 3.0 | 41.80 | 63 | 100 |
| 0400 | 4.0 | 44.70 | 74 | 112 |
| 0500 | 5.0 | 55.40 | 81 | 122 |
| 0600 | 6.0 | 55.40 | 114 | 160 |
| 0800 | 8.0 | 90.00 | 157 | 207 |
| 1000 | 10.0 | 119.50 | 190 | 245 |
| 1200 | 12.0 | 151.50 (W109) | 228 | 290 |

## Spiral drill with cyl. Shank, rolled, long

**Design:** HSS, DIN 340, type N.
Right cutting, with precise point geometry, rolled.
Robust design.
Hole depth 5 x D.

**Application:** Cost-effective design for hand guided machines.

HSS | DIN 340 | Type N | 118° | 25–30°

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1048 | 18 | | | | | | | | | | 18 | | |

| Order No. | Ø h8 mm | 1048 | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 0.32 | 10 | 33 | 56 | 0.016 |
| 0150 | 1.5 | 0.32 | 10 | 45 | 70 | 0.050 |
| 0200 | 2.0 | 0.32 | 10 | 56 | 85 | 0.050 |
| 0250 | 2.5 | 0.40 | 10 | 62 | 95 | 0.063 |
| 0300 | 3.0 | 0.48 | 10 | 66 | 100 | 0.080 |
| 0310 | 3.1 | 0.56 | 10 | 69 | 106 | 0.080 |
| 0320 | 3.2 | 0.56 | 10 | 69 | 106 | 0.100 |
| 0330 | 3.3 | 0.56 | 10 | 69 | 106 | 0.100 |
| 0350 | 3.5 | 0.56 | 10 | 73 | 112 | 0.100 |
| 0400 | 4.0 | 0.76 | 10 | 78 | 119 | 0.100 |
| 0410 | 4.1 | 0.92 | 10 | 78 | 119 | 0.100 |
| 0420 | 4.2 | 0.92 | 10 | 78 | 119 | 0.100 |
| 0450 | 4.5 | 0.92 | 10 | 82 | 126 | 0.100 |
| 0500 | 5.0 | 1.16 | 10 | 87 | 132 | 0.100 |
| 0510 | 5.1 | 1.28 | 10 | 87 | 132 | 0.125 |
| 0520 | 5.2 | 1.28 | 10 | 87 | 132 | 0.125 |
| 0550 | 5.5 | 1.28 | 10 | 91 | 139 | 0.125 |
| 0580 | 5.8 | 1.44 (W118) | 10 | 91 | 139 | 0.125 |

| Order No. | Ø h8 mm | 1048 | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0600 | 6.0 | 1.44 | 10 | 91 | 139 | 0.125 |
| 0650 | 6.5 | 1.56 | 10 | 97 | 148 | 0.160 |
| 0680 | 6.8 | 1.64 | 10 | 102 | 156 | 0.160 |
| 0700 | 7.0 | 1.64 | 10 | 102 | 156 | 0.160 |
| 0750 | 7.5 | 1.80 | 10 | 102 | 156 | 0.160 |
| 0800 | 8.0 | 2.00 | 10 | 109 | 165 | 0.160 |
| 0850 | 8.5 | 2.20 | 10 | 109 | 165 | 0.200 |
| 0900 | 9.0 | 2.40 | 10 | 115 | 175 | 0.200 |
| 0950 | 9.5 | 2.68 | 10 | 115 | 175 | 0.200 |
| 1000 | 10.0 | 3.20 | 10 | 121 | 184 | 0.200 |
| 1020 | 10.2 | 3.60 | 10 | 121 | 184 | 0.200 |
| 1050 | 10.5 | 3.60 | 10 | 121 | 184 | 0.200 |
| 1100 | 11.0 | 4.00 | 10 | 128 | 195 | 0.200 |
| 1150 | 11.5 | 4.36 | 10 | 128 | 195 | 0.200 |
| 1200 | 12.0 | 5.00 | 10 | 134 | 205 | 0.200 |
| 1250 | 12.5 | 5.45 | 10 | 134 | 205 | 0.200 |
| 1300 | 13.0 | 5.70 (W118) | 10 | 134 | 205 | 0.250 |

## Spiral drill with cyl. Shank, profile grinding, long

**Design:** HSS, DIN 340, type N.
Right cutting, bright surface, steam tempered from 2.5 mm, **profile grinding**with precise point geometry. Normal angle of rake, normal core thickness core gradient higher than normal.
Hole depth 10 x D.

**Application:** Particularly suitable for deep drilling in alloyed/ non-alloyed steels and casting types above 800 N/mm², nodular iron, sintered iron, nickel silver and graphite.
**Note:** Further dimensions available on request.

HSS | DIN 340 | Type N | 118° | 25–30°

1045 steam format professional quality

1046 steam GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1045 | 22 | 18 | | | | | | | | | 22 | | 30 |
| 1046 | 22 | 18 | | | | | | | | | 22 | | 30 |

| Order No. | Ø h8 mm | 1045 format steam | 1046 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.0 | 3.01 | 6.30 | 10 | 33 | 56 | 0.016 |
| 0150 | 1.5 | 2.13 | 4.41 | 10 | 45 | 70 | 0.050 |
| 0200 | 2.0 | 1.46 | 2.98 | 10 | 56 | 85 | 0.050 |
| 0250 | 2.5 | 1.48 | 3.22 | 10 | 62 | 95 | 0.063 |
| 0300 | 3.0 | 1.59 | 3.26 | 10 | 66 | 100 | 0.080 |
| 0310 | 3.1 | 1.98 | 4.06 | 10 | 69 | 106 | 0.080 |
| 0320 | 3.2 | 1.66 | 3.43 | 10 | 69 | 106 | 0.100 |
| 0330 | 3.3 | 1.83 | 3.92 | 10 | 69 | 106 | 0.100 |
| 0350 | 3.5 | 1.81 (W100) | 3.85 (W101) | 10 | 73 | 112 | 0.100 |

| Order No. | Ø h8 mm | 1045 format steam | 1046 GÜHRING steam | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0400 | 4.0 | 2.02 | 4.20 | 10 | 78 | 119 | 0.100 |
| 0410 | 4.1 | 2.36 | 4.90 | 10 | 78 | 119 | 0.100 |
| 0420 | 4.2 | 2.02 | 4.27 | 10 | 78 | 119 | 0.100 |
| 0450 | 4.5 | 2.30 | 4.83 | 10 | 82 | 126 | 0.100 |
| 0500 | 5.0 | 2.47 | 5.30 | 10 | 87 | 132 | 0.100 |
| 0510 | 5.1 | 3.29 | 5.90 | 10 | 87 | 132 | 0.125 |
| 0520 | 5.2 | 2.82 | 5.95 | 10 | 87 | 132 | 0.125 |
| 0550 | 5.5 | 2.95 | 6.10 | 10 | 91 | 139 | 0.125 |
| 0580 | 5.8 | 2.95 (W100) | 6.30 (W101) | 10 | 91 | 139 | 0.125 |

Continued overleaf

## Spiral drill with cyl. Shank, profile grinding, long

Continued

| Order No. | Ø h8 mm | 1045 format steam | 1046 GÜHRING steam | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|---|
| 0600 | 6.0 | 3.16 | 6.65 | 10 | 91 | 139 | 0.125 |
| 0650 | 6.5 | 3.42 | 7.20 | 5 | 97 | 148 | 0.160 |
| 0680 | 6.8 | 4.92 | 10.20 | 5 | 102 | 156 | 0.160 |
| 0700 | 7.0 | 3.98 | 8.35 | 5 | 102 | 156 | 0.160 |
| 0750 | 7.5 | 4.71 | 10.00 | 5 | 102 | 156 | 0.160 |
| 0800 | 8.0 | 4.73 | 9.85 | 5 | 109 | 165 | 0.160 |
| 0850 | 8.5 | 5.45 | 11.35 | 5 | 109 | 165 | 0.200 |
| 0900 | 9.0 | 5.80 | 11.90 | 5 | 115 | 175 | 0.200 |
| 0950 | 9.5 | 6.95 (W100) | 14.40 (W101) | 5 | 115 | 175 | 0.200 |

| Order No. | Ø h8 mm | 1045 format steam | 1046 GÜHRING steam | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|---|
| 1000 | 10.0 | 6.80 | 14.05 | 5 | 121 | 184 | 0.200 |
| 1020 | 10.2 | 9.70 | 19.80 | 5 | 121 | 184 | 0.200 |
| 1050 | 10.5 | 9.70 | 19.80 | 5 | 121 | 184 | 0.200 |
| 1100 | 11.0 | 10.00 | 20.50 | 1 | 128 | 195 | 0.200 |
| 1150 | 11.5 | 11.05 | 23.00 | 1 | 128 | 195 | 0.200 |
| 1200 | 12.0 | 12.60 | 26.30 | 1 | 134 | 205 | 0.200 |
| 1250 | 12.5 | 12.60 | 26.30 | 1 | 134 | 205 | 0.200 |
| 1300 | 13.0 | 13.35 (W100) | 27.70 (W101) | 1 | 134 | 205 | 0.250 |

## Spiral drill with cyl. Shank, long

**Design:** HSS Co5, DIN 340, type Ti.
Profile grinding, bright surface. Right cutting, with cone-shaped point.

**Application:** Particularly suitable for titanium and titanium alloys, rust, acid, heat-resistant and austenitic steels, Hastelloy®, Inconel® and Nimonic®. Also suitable for reaming.
**Note:** Further dimensions available on request.

HSS Co5 | DIN 340 | Type Ti | 35° | 130°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1047 | | | 12 | 10 | | | | | 12 | **8** | | | |

| Order No. | Ø h8 mm | 1047 format bright | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 6.00 | 10 | 33 | 56 | 0.008 |
| 0150 | 1.5 | 6.00 | 10 | 45 | 70 | 0.025 |
| 0200 | 2.0 | 4.59 | 10 | 56 | 85 | 0.025 |
| 0250 | 2.5 | 4.90 | 10 | 62 | 95 | 0.032 |
| 0300 | 3.0 | 5.30 | 10 | 66 | 100 | 0.040 |
| 0310 | 3.1 | 8.30 | 10 | 69 | 106 | 0.040 |
| 0320 | 3.2 | 6.40 | 10 | 69 | 106 | 0.050 |
| 0330 | 3.3 | 6.85 | 10 | 69 | 106 | 0.050 |
| 0350 | 3.5 | 6.20 | 10 | 73 | 112 | 0.050 |
| 0400 | 4.0 | 6.45 | 10 | 78 | 119 | 0.050 |
| 0410 | 4.1 | 6.90 | 10 | 78 | 119 | 0.050 |
| 0420 | 4.2 | 7.20 | 10 | 78 | 119 | 0.050 |
| 0450 | 4.5 | 7.60 | 10 | 82 | 126 | 0.050 |
| 0500 | 5.0 | 7.50 | 10 | 87 | 132 | 0.050 |
| 0510 | 5.1 | 9.25 | 10 | 87 | 132 | 0.063 |
| 0520 | 5.2 | 9.40 | 10 | 87 | 132 | 0.063 |
| 0550 | 5.5 | 9.00 | 10 | 91 | 139 | 0.063 |
| 0580 | 5.8 | 11.35 (W100) | 10 | 91 | 139 | 0.063 |

| Order No. | Ø h8 mm | 1047 format bright | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|
| 0600 | 6.0 | 9.90 | 10 | 91 | 139 | 0.063 |
| 0650 | 6.5 | 10.35 | 5 | 97 | 148 | 0.080 |
| 0680 | 6.8 | 14.30 | 5 | 102 | 156 | 0.080 |
| 0700 | 7.0 | 11.65 | 5 | 102 | 156 | 0.080 |
| 0750 | 7.5 | 15.20 | 5 | 102 | 156 | 0.080 |
| 0800 | 8.0 | 13.85 | 5 | 109 | 165 | 0.080 |
| 0850 | 8.5 | 16.60 | 5 | 109 | 165 | 0.100 |
| 0900 | 9.0 | 18.50 | 5 | 115 | 175 | 0.100 |
| 0950 | 9.5 | 23.70 | 5 | 115 | 175 | 0.100 |
| 1000 | 10.0 | 25.60 | 5 | 121 | 184 | 0.100 |
| 1020 | 10.2 | 26.90 | 5 | 121 | 184 | 0.100 |
| 1050 | 10.5 | 34.90 | 5 | 121 | 184 | 0.100 |
| 1100 | 11.0 | 41.60 | 1 | 128 | 195 | 0.100 |
| 1150 | 11.5 | 56.30 | 1 | 128 | 195 | 0.100 |
| 1200 | 12.0 | 46.40 | 1 | 134 | 205 | 0.100 |
| 1250 | 12.5 | 52.40 | 1 | 134 | 205 | 0.100 |
| 1300 | 13.0 | 53.40 (W100) | 1 | 134 | 205 | 0.125 |

## Spiral drill with cyl. Shank, long

**Design:** HSS Co5, DIN 340, type TF. Profile grinding, bright surface, nitrated bevels from Ø 2.5 mm as well as wide clamping slots with heavily rounded back edges and excellent thermal resistance. Good centring characteristics due to point thinning according to DIN 1412, form A. Angle of rake larger than normal, core thickness considerably thicker than normal and without core gradient. Hole depth up to 10 x D.

**Application:** Particularly suitable for alloyed/non-alloyed steels and casting types above 800 N/mm² in strength, hot and cold work steels, roller bearing steels, high-alloy steels, tempered steels and case hardening steels.

HSS Co5 | DIN 340 | Type TF | 130° | 38°

format professional quality

Nitrated

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1051 | 36 | 18 | 13 | 10 | | | | | 12 | | 26 | | 54 |

| Order No. | Ø h8 mm | 1051 format Nitrated | PU | Spiral length mm | Total length mm | Steels up to 1400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 6.90 | 10 | 33 | 56 | 0.012 |
| 0150 | 1.5 | 6.55 | 10 | 45 | 70 | 0.032 |
| 0200 | 2.0 | 5.10 | 10 | 56 | 85 | 0.032 |
| 0250 | 2.5 | 5.40 | 10 | 62 | 95 | 0.040 |
| 0300 | 3.0 | 5.60 | 10 | 66 | 100 | 0.050 |
| 0310 | 3.1 | 6.90 | 10 | 69 | 106 | 0.050 |
| 0320 | 3.2 | 6.70 | 10 | 69 | 106 | 0.063 |
| 0330 | 3.3 | 7.25 | 10 | 69 | 106 | 0.063 |
| 0350 | 3.5 | 8.20 | 10 | 73 | 112 | 0.063 |
| 0400 | 4.0 | 7.10 | 10 | 78 | 119 | 0.063 |
| 0410 | 4.1 | 7.65 | 10 | 78 | 119 | 0.063 |
| 0420 | 4.2 | 7.85 | 10 | 78 | 119 | 0.063 |
| 0450 | 4.5 | 8.40 | 10 | 82 | 126 | 0.063 |
| 0500 | 5.0 | 8.40 | 10 | 87 | 132 | 0.063 |
| 0510 | 5.1 | 9.90 | 10 | 87 | 132 | 0.080 |
| 0520 | 5.2 | 10.30 | 10 | 87 | 132 | 0.080 |
| 0550 | 5.5 | 10.00 | 10 | 91 | 139 | 0.080 |
| 0580 | 5.8 | 11.25 | 10 | 91 | 139 | 0.080 |
| | | (W100) | | | | |

| Order No. | Ø h8 mm | 1051 format Nitrated | PU | Spiral length mm | Total length mm | Steels up to 1400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0600 | 6.0 | 10.40 | 10 | 91 | 139 | 0.080 |
| 0650 | 6.5 | 11.80 | 5 | 97 | 148 | 0.100 |
| 0680 | 6.8 | 14.45 | 5 | 102 | 156 | 0.100 |
| 0700 | 7.0 | 13.15 | 5 | 102 | 156 | 0.100 |
| 0750 | 7.5 | 15.50 | 5 | 102 | 156 | 0.100 |
| 0800 | 8.0 | 14.45 | 5 | 109 | 165 | 0.100 |
| 0850 | 8.5 | 18.20 | 5 | 109 | 165 | 0.125 |
| 0900 | 9.0 | 17.90 | 5 | 115 | 175 | 0.125 |
| 0950 | 9.5 | 24.60 | 5 | 115 | 175 | 0.125 |
| 1000 | 10.0 | 26.80 | 5 | 121 | 184 | 0.125 |
| 1020 | 10.2 | 28.10 | 5 | 121 | 184 | 0.125 |
| 1050 | 10.5 | 36.30 | 5 | 121 | 184 | 0.125 |
| 1100 | 11.0 | 40.40 | 1 | 128 | 195 | 0.125 |
| 1150 | 11.5 | 49.20 | 1 | 128 | 195 | 0.125 |
| 1200 | 12.0 | 49.50 | 1 | 134 | 205 | 0.125 |
| 1250 | 12.5 | 55.50 | 1 | 134 | 205 | 0.125 |
| 1300 | 13.0 | 58.40 | 1 | 134 | 205 | 0.160 |
| | | (W100) | | | | |

## Spiral drill with cyl. Shank, long

**Design:** HSS Co5, DIN 340, type GU 500. **Profile grinding, wide clamping slots. Angle of rake larger than normal, with special profile.**

**Application:** Versatile drill even on powerful machines. Particularly suitable for various casting types, plastics and non-ferrous metals.

HSS Co5 | DIN 340 | Type GU 500 | 118° | 38°

GÜHRING

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1053 | 25 | 13 | 12 | | | | | | 13 | | 28 | 50 | 50 |

| Order No. | Ø h8 mm | 1053 GÜHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.0 | 6.20 | 10 | 33 | 56 | 0.018 |
| 0150 | 1.5 | 6.50 | 10 | 45 | 70 | 0.063 |
| 0200 | 2.0 | 6.40 | 10 | 56 | 85 | 0.063 |
| 0250 | 2.5 | 6.50 | 10 | 62 | 95 | 0.080 |
| 0300 | 3.0 | 7.15 | 10 | 66 | 100 | 0.100 |
| 0310 | 3.1 | 8.50 | 10 | 69 | 106 | 0.100 |
| 0320 | 3.2 | 7.95 | 10 | 69 | 106 | 0.125 |
| 0330 | 3.3 | 8.40 | 10 | 69 | 106 | 0.125 |
| 0350 | 3.5 | 8.50 | 10 | 73 | 112 | 0.125 |
| 0400 | 4.0 | 9.00 | 10 | 78 | 119 | 0.125 |
| 0410 | 4.1 | 9.10 | 10 | 78 | 119 | 0.125 |
| 0420 | 4.2 | 8.80 | 10 | 78 | 119 | 0.125 |
| 0450 | 4.5 | 9.20 | 10 | 82 | 126 | 0.125 |
| 0500 | 5.0 | 10.35 | 10 | 87 | 132 | 0.125 |
| 0510 | 5.1 | 11.40 | 10 | 87 | 132 | 0.160 |
| 0520 | 5.2 | 11.20 | 10 | 87 | 132 | 0.160 |
| | | (W115) | | | | |

| Order No. | Ø h8 mm | 1053 GÜHRING TiN | PU | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0550 | 5.5 | 10.75 | 10 | 91 | 139 | 0.160 |
| 0580 | 5.8 | 13.55 | 10 | 91 | 139 | 0.160 |
| 0600 | 6.0 | 12.95 | 10 | 91 | 139 | 0.160 |
| 0650 | 6.5 | 13.35 | 5 | 97 | 148 | 0.200 |
| 0680 | 6.8 | 16.95 | 5 | 102 | 156 | 0.200 |
| 0700 | 7.0 | 15.95 | 5 | 102 | 156 | 0.200 |
| 0750 | 7.5 | 19.45 | 5 | 102 | 156 | 0.200 |
| 0800 | 8.0 | 17.70 | 5 | 109 | 165 | 0.200 |
| 0850 | 8.5 | 20.70 | 5 | 109 | 165 | 0.250 |
| 0900 | 9.0 | 21.70 | 5 | 115 | 175 | 0.250 |
| 0950 | 9.5 | 21.70 | 5 | 115 | 175 | 0.250 |
| 1000 | 10.0 | 30.50 | 5 | 121 | 184 | 0.250 |
| 1020 | 10.2 | 35.70 | 5 | 121 | 184 | 0.250 |
| 1050 | 10.5 | 39.30 | 5 | 121 | 184 | 0.250 |
| 1100 | 11.0 | 46.10 | 1 | 158 | 195 | 0.250 |
| 1150 | 11.5 | 46.60 | 1 | 158 | 195 | 0.250 |
| | | (W115) | | | | |

Continued overleaf

## Spiral drill with cyl. Shank, long

Continued

| Order No. | Ø h8 mm | 1053 GÜHRING TiN | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|
| 1200 | 12.0 | 47.10 | 1 | 134 | 205 | 0.250 |
| 1250 | 12.5 | 51.80 (W115) | 1 | 134 | 205 | 0.250 |

| Order No. | Ø h8 mm | 1053 GÜHRING TiN | PU | Spiral length mm | Total length mm | f mm/rev |
|---|---|---|---|---|---|---|
| 1300 | 13.0 | 56.90 (W115) | 1 | 134 | 205 | 0.315 |

## Spiral drill with cyl. Shank, extra long

**Design:** DIN 1869, type TF. Sturdy special drill, profile grinding, right cutting, with precise point geometry as well as wide clamping slots with heavily rounded back edges. Point thinning according to DIN 1412, form A. Angle of rake larger than normal, core thickness considerably thicker than normal and without core gradient.

**Application:** Versatile drill for drilling extremely deep holes up to 10 x D under difficult conditions such as poor chip removal, therefore causing deficient cooling of the drill tip. Particularly suitable for extremely deep holes in grey cast iron and steels up to 1000 N/mm² in strength as well as CrNi steels and INOX steels.

DIN 1869 | Type TF | 130° | 38° | >10xD

format professional quality

HSS

1067 Nitrated

HSS Co5

1071 TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1067 | 18 | | | 8 | 3 | | | | 10 | 6 | 20 | 30 | |
| 1071 | 33 | 14 | 10 | | | | | | | | | | 45 |

| Order No. | Ø h8 x total length mm | 1067 format Nitrated | 1071 format TiAlN | PU | Spiral length mm | Steels up to 42 HRc f mm/rev |
|---|---|---|---|---|---|---|
| 0001 | 3.0 x 150 | 8.95 | 15.85 | 5 | 100 | 0.040 |
| 0003 | 3.0 x 190 | 12.05 | 33.40 | 5 | 130 | 0.040 |
| 0067 | 3.3 x 155 | 9.95 | 16.15 | 5 | 105 | 0.050 |
| 0069 | 3.3 x 200 | 14.10 | 40.40 | 5 | 135 | 0.050 |
| 0071 | 3.3 x 250 | 21.90 | 44.20 | 5 | 170 | 0.050 |
| 0005 | 3.5 x 165 | 8.95 | 16.30 | 5 | 115 | 0.050 |
| 0007 | 3.5 x 210 | 12.30 | 40.30 | 5 | 145 | 0.050 |
| 0009 | 4.0 x 175 | 9.25 | 16.30 | 5 | 120 | 0.050 |
| 0011 | 4.0 x 220 | 13.10 | 41.00 | 5 | 150 | 0.050 |
| 0013 | 4.0 x 280 | 16.50 | 52.70 | 5 | 190 | 0.050 |
| 0073 | 4.2 x 175 | 10.70 | 23.00 | 5 | 120 | 0.050 |
| 0075 | 4.2 x 220 | 16.05 | 36.60 | 5 | 150 | 0.050 |
| 0077 | 4.2 x 280 | 21.20 | 48.10 | 5 | 180 | 0.050 |
| 0015 | 4.5 x 185 | 9.95 | 36.00 | 5 | 125 | 0.050 |
| 0017 | 4.5 x 235 | 13.90 | 42.40 | 5 | 160 | 0.050 |
| 0019 | 5.0 x 195 | 10.55 | 18.30 | 5 | 135 | 0.050 |
| 0021 | 5.0 x 245 | 13.90 | 44.00 | 5 | 170 | 0.050 |
| 0023 | 5.0 x 315 | 19.90 | 59.70 | 5 | 210 | 0.050 |
| 0025 | 5.5 x 205 | 11.50 | 21.90 | 5 | 140 | 0.063 |
| 0027 | 5.5 x 260 | 17.20 | 47.70 | 5 | 180 | 0.063 |
| 0029 | 6.0 x 205 | 11.50 | 21.30 | 5 | 140 | 0.063 |
| 0031 | 6.0 x 260 | 16.75 | 35.70 | 5 | 180 | 0.063 |
| 0033 | 6.0 x 330 | 22.80 | 62.40 | 5 | 225 | 0.063 |
| 0035 | 6.5 x 215 | 17.70 | 30.10 | 5 | 150 | 0.080 |
| 0037 | 6.5 x 275 | 19.35 | 53.50 | 5 | 190 | 0.080 |
| 0038 | 6.8 x 225 | 19.65 | 33.90 | 5 | 155 | 0.080 |
| 0079 | 6.8 x 290 | 27.00 | 48.10 | 1 | 200 | 0.080 |
| 0081 | 6.8 x 370 | 40.10 | 59.10 | 1 | 250 | 0.080 |
| 0039 | 7.0 x 225 | 16.50 | 35.10 | 1 | 155 | 0.080 |
| 0041 | 7.0 x 290 | 21.10 | 55.90 | 1 | 200 | 0.080 |
| 0040 | 7.5 x 225 | 18.25 | 54.70 | 1 | 155 | 0.080 |
| 0042 | 7.5 x 290 | 24.00 | 59.80 | 1 | 200 | 0.080 |
| 0043 | 8.0 x 240 | 20.60 | 38.00 | 1 | 165 | 0.080 |
| 0045 | 8.0 x 305 | 24.60 | 66.00 | 1 | 210 | 0.080 |
| 0047 | 8.0 x 390 | 36.80 | 73.40 | 1 | 265 | 0.080 |
| 0049 | 8.5 x 240 | 26.40 | 43.40 | 1 | 165 | 0.100 |
| 0051 | 8.5 x 305 | 38.60 | 64.80 | 1 | 210 | 0.100 |
| 0053 | 9.0 x 250 | 28.30 | 59.10 | 1 | 175 | 0.100 |
| 0054 | 9.0 x 320 | 36.40 (W100) | 71.80 (W100) | 1 | 220 | 0.100 |

Continued overleaf

## Spiral drill with cyl. Shank, extra long

Continued

| Order No. | Ø h8 x total length mm | 1067 format Nitrated | 1071 format TiAlN | PU | Spiral length mm | Steels up to 42 HRc f mm/rev |
|---|---|---|---|---|---|---|
| 0056 | 9.5 x 320 | 41.90 | 74.80 | 1 | 220 | 0.100 |
| 0055 | 10.0 x 265 | 29.30 | 59.80 | 1 | 185 | 0.100 |
| 0057 | 10.0 x 340 | 39.90 | 77.60 | 1 | 235 | 0.100 |
| 0059 | 10.0 x 430 | 58.50 | 99.90 | 1 | 295 | 0.100 |
| 0083 | 10.2 x 265 | 51.10 | 64.60 | 1 | 185 | 0.100 |
| 0060 | 10.2 x 340 | 43.50 | 83.00 | 1 | 235 | 0.100 |
| 0061 | 10.5 x 340 | 58.70 | – | 1 | 235 | 0.100 |
| 0063 | 12.0 x 375 | 70.90 | 97.80 | 1 | 260 | 0.100 |
| 0065 | 12.0 x 480 | 88.20 (W100) | 106.00 (W100) | 1 | 330 | 0.100 |

## Spiral drill with Morse taper Shank, rolled

**Design:** HSS, DIN 345, Typ N. Right hand cutting, roll forged/extruded without interruption structure, with precise point grind. Point thinning according to DIN 1412, form A, Normal angle of rake, core thickness and core gradient.

**Application:** Particularly suitable for steel and steel casting (alloyed and non-alloyed) grey cast iron, malleable cast iron, nodular iron, sintered iron and graphite. Rolled/extruded, without joint disconnection

**Note:** Cost-effective tool for small and medium batch sizes.

HSS | DIN 345 | Type N | MK 1–4 | 25–30° | 118°

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1083 | 15 | | | | | | | | | | | | |

| Order No. | Ø h8 mm | 1083 | Spiral length mm | Total length mm | MK | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 1000 | 10.00 | 4.49 | 87 | 168 | 1 | 0.200 |
| 1050 | 10.50 | 4.49 | 87 | 168 | 1 | 0.200 |
| 1100 | 11.00 | 4.49 | 94 | 175 | 1 | 0.200 |
| 1150 | 11.50 | 4.49 | 94 | 175 | 1 | 0.200 |
| 1200 | 12.00 | 4.75 | 101 | 182 | 1 | 0.200 |
| 1250 | 12.50 | 4.75 | 101 | 182 | 1 | 0.200 |
| 1300 | 13.00 | 4.75 | 101 | 182 | 1 | 0.500 |
| 1350 | 13.50 | 5.10 | 108 | 189 | 1 | 0.500 |
| 1400 | 14.00 | 5.10 | 108 | 189 | 1 | 0.500 |
| 1450 | 14.50 | 6.05 | 114 | 212 | 2 | 0.500 |
| 1500 | 15.00 | 6.05 | 114 | 212 | 2 | 0.500 |
| 1550 | 15.50 | 6.85 | 120 | 218 | 2 | 0.500 |
| 1600 | 16.00 | 6.85 | 120 | 218 | 2 | 0.500 |
| 1650 | 16.50 | 8.15 | 125 | 223 | 2 | 0.315 |
| 1700 | 17.00 | 8.15 | 125 | 223 | 2 | 0.315 |
| 1750 | 17.50 | 8.90 | 130 | 228 | 2 | 0.315 |
| 1800 | 18.00 | 8.90 | 130 | 228 | 2 | 0.315 |
| 1850 | 18.50 | 9.95 | 135 | 233 | 2 | 0.315 |
| 1900 | 19.00 | 9.95 | 135 | 233 | 2 | 0.315 |
| 1950 | 19.50 | 11.40 | 140 | 238 | 2 | 0.315 |
| 2000 | 20.00 | 11.40 | 140 | 238 | 2 | 0.315 |
| 2050 | 20.50 | 12.65 | 145 | 243 | 2 | 0.400 |
| 2100 | 21.00 | 12.65 | 145 | 243 | 2 | 0.400 |
| 2150 | 21.50 | 14.20 | 150 | 248 | 2 | 0.400 |
| 2200 | 22.00 | 14.20 | 150 | 248 | 2 | 0.400 |
| 2250 | 22.50 | 15.55 | 155 | 253 | 2 | 0.400 |
| 2300 | 23.00 | 15.55 | 155 | 253 | 2 | 0.400 |
| 2350 | 23.50 | 18.45 | 155 | 276 | 3 | 0.400 |
| 2400 | 24.00 | 18.45 | 160 | 281 | 3 | 0.400 |
| 2450 | 24.50 | 20.60 | 160 | 281 | 3 | 0.400 |
| 2500 | 25.00 | 20.60 | 160 | 281 | 3 | 0.400 |
| 2550 | 25.50 | 22.50 | 165 | 286 | 3 | 0.400 |
| 2600 | 26.00 | 22.50 | 165 | 286 | 3 | 0.400 |
| 2650 | 26.50 | 24.60 | 165 | 286 | 3 | 0.400 |
| 2700 | 27.00 | 24.60 | 170 | 291 | 3 | 0.400 |
| 2750 | 27.50 | 25.70 (W103) | 170 | 291 | 3 | 0.400 |

| Order No. | Ø h8 mm | 1083 | Spiral length mm | Total length mm | MK | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 2800 | 28.00 | 25.70 | 170 | 291 | 3 | 0.400 |
| 2850 | 28.50 | 27.20 | 175 | 296 | 3 | 0.400 |
| 2900 | 29.00 | 27.20 | 175 | 296 | 3 | 0.400 |
| 2950 | 29.50 | 29.00 | 175 | 296 | 3 | 0.400 |
| 3000 | 30.00 | 29.00 | 175 | 296 | 3 | 0.400 |
| 3050 | 30.50 | 31.50 | 180 | 301 | 3 | 0.400 |
| 3100 | 31.00 | 31.50 | 180 | 301 | 3 | 0.400 |
| 3150 | 31.50 | 35.60 | 180 | 301 | 3 | 0.400 |
| 3200 | 32.00 | 35.60 | 185 | 334 | 4 | 0.500 |
| 3250 | 32.50 | 39.60 | 185 | 334 | 4 | 0.500 |
| 3300 | 33.00 | 39.60 | 185 | 334 | 4 | 0.500 |
| 3350 | 33.50 | 41.70 | 185 | 334 | 4 | 0.500 |
| 3400 | 34.00 | 41.70 | 190 | 339 | 4 | 0.500 |
| 3450 | 34.50 | 45.30 | 190 | 339 | 4 | 0.500 |
| 3500 | 35.00 | 45.30 | 190 | 339 | 4 | 0.500 |
| 3550 | 35.50 | 49.30 | 190 | 339 | 4 | 0.500 |
| 3600 | 36.00 | 49.30 | 195 | 344 | 4 | 0.500 |
| 3650 | 36.50 | 56.00 | 195 | 344 | 4 | 0.500 |
| 3700 | 37.00 | 56.00 | 195 | 344 | 4 | 0.500 |
| 3750 | 37.50 | 61.00 | 195 | 344 | 4 | 0.500 |
| 3800 | 38.00 | 61.00 | 200 | 349 | 4 | 0.500 |
| 3850 | 38.50 | 66.10 | 200 | 349 | 4 | 0.500 |
| 3900 | 39.00 | 66.10 | 200 | 349 | 4 | 0.500 |
| 3950 | 39.50 | 66.10 | 200 | 349 | 4 | 0.500 |
| 4000 | 40.00 | 66.10 | 200 | 349 | 4 | 0.500 |
| 4100 | 41.00 | 66.10 | 205 | 354 | 4 | 0.630 |
| 4200 | 42.00 | 66.10 | 205 | 354 | 4 | 0.630 |
| 4300 | 43.00 | 74.30 | 210 | 359 | 4 | 0.630 |
| 4400 | 44.00 | 74.30 | 210 | 359 | 4 | 0.630 |
| 4500 | 45.00 | 84.90 | 210 | 359 | 4 | 0.630 |
| 4600 | 46.00 | 84.90 | 215 | 364 | 4 | 0.630 |
| 4700 | 47.00 | 95.60 | 215 | 364 | 4 | 0.630 |
| 4800 | 48.00 | 95.60 | 220 | 369 | 4 | 0.630 |
| 4900 | 49.00 | 95.60 | 220 | 369 | 4 | 0.630 |
| 5000 | 50.00 | 105.50 (W103) | 220 | 369 | 4 | 0.630 |

## Spiral drill with Morse taper Shank

**Design:** HSS, DIN 345, type N.
Right cutting, **profile grinding,** steam tempered surface, with precise point geometry.
Point thinning according to DIN 1412, form A. Normal angle of rake, core thickness and core gradient.

**Application:** Particularly suitable for steel and steel casting (alloyed and non-alloyed) grey cast iron, malleable cast iron, nodular iron, sintered iron and graphite.

HSS | DIN 345 | Type N | MK 1–4 | 118° | 25–30°

1080 format professional quality steam

1081 GÜHRING steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1080 | 25 | 18 | | | | | | | | | 25 | | 30 |
| 1081 | 25 | 18 | | | | | | | | | 25 | | 30 |

| Order No. | Ø h8 mm | 1080 format steam | 1081 GÜHRING steam | Spiral length mm | Total length mm | MK | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 1000 | 10.00 | 12.35 | 23.40 | 87 | 168 | 1 | 0.200 |
| 1025 | 10.25 | 18.05 | 41.10 | 87 | 168 | 1 | 0.200 |
| 1050 | 10.50 | 12.80 | 25.90 | 87 | 168 | 1 | 0.200 |
| 1075 | 10.75 | – | 42.50 | 94 | 168 | 1 | 0.200 |
| 1075 | 10.75 | 17.75 | – | 94 | 175 | 1 | 0.200 |
| 1100 | 11.00 | 13.20 | 25.60 | 94 | 175 | 1 | 0.200 |
| 1125 | 11.25 | 16.70 | 49.70 | 94 | 175 | 1 | 0.200 |
| 1150 | 11.50 | 15.20 | 30.60 | 94 | 175 | 1 | 0.200 |
| 1175 | 11.75 | 17.55 | 38.90 | 94 | 175 | 1 | 0.200 |
| 1200 | 12.00 | 13.70 | 26.30 | 101 | 182 | 1 | 0.200 |
| 1225 | 12.25 | 17.75 | 44.70 | 101 | 182 | 1 | 0.200 |
| 1250 | 12.50 | 14.45 | 27.70 | 101 | 182 | 1 | 0.200 |
| 1275 | 12.75 | 17.75 | 43.20 | 101 | 182 | 1 | 0.250 |
| 1300 | 13.00 | 15.00 | 28.80 | 101 | 182 | 1 | 0.250 |
| 1325 | 13.25 | 18.35 | 43.20 | 108 | 189 | 1 | 0.250 |
| 1350 | 13.50 | 17.00 | 32.40 | 108 | 189 | 1 | 0.250 |
| 1375 | 13.75 | 19.35 | 43.20 | 108 | 189 | 1 | 0.250 |
| 1400 | 14.00 | 15.80 | 29.90 | 108 | 189 | 1 | 0.250 |
| 1425 | 14.25 | 17.30 | 51.90 | 114 | 212 | 2 | 0.250 |
| 1450 | 14.50 | 16.55 | 32.10 | 114 | 212 | 2 | 0.250 |
| 1475 | 14.75 | 25.30 | 56.90 | 114 | 212 | 2 | 0.250 |
| 1500 | 15.00 | 17.55 | 33.50 | 114 | 212 | 2 | 0.250 |
| 1525 | 15.25 | 23.40 | 49.00 | 120 | 218 | 2 | 0.250 |
| 1550 | 15.50 | 18.90 | 36.00 | 120 | 218 | 2 | 0.250 |
| 1575 | 15.75 | 21.40 | 49.70 | 120 | 218 | 2 | 0.250 |
| 1600 | 16.00 | 18.90 | 36.00 | 120 | 218 | 2 | 0.250 |
| 1625 | 16.25 | 28.90 | 60.50 | 125 | 223 | 2 | 0.315 |
| 1650 | 16.50 | 20.40 | 38.90 | 125 | 223 | 2 | 0.315 |
| 1675 | 16.75 | 28.90 | 55.40 | 125 | 223 | 2 | 0.315 |
| 1700 | 17.00 | 21.10 | 41.10 | 125 | 223 | 2 | 0.315 |
| 1725 | 17.25 | 26.60 | 59.10 | 130 | 228 | 2 | 0.315 |
| 1750 | 17.50 | 21.70 | 41.80 | 130 | 228 | 2 | 0.315 |
| 1775 | 17.75 | 26.80 | 56.90 | 130 | 228 | 2 | 0.315 |
| 1800 | 18.00 | 22.80 | 44.00 | 130 | 228 | 2 | 0.315 |
| 1825 | 18.25 | 27.30 | 65.50 | 135 | 233 | 2 | 0.315 |
| 1850 | 18.50 | 18.35 | 46.80 | 135 | 233 | 2 | 0.315 |
| 1875 | 18.75 | 28.70 | 62.60 | 135 | 233 | 2 | 0.315 |
| 1900 | 19.00 | 24.60 | 46.80 | 135 | 233 | 2 | 0.315 |
| 1925 | 19.25 | 30.70 | 72.70 | 140 | 238 | 2 | 0.315 |
| 1950 | 19.50 | 28.40 | 54.00 | 140 | 238 | 2 | 0.315 |
| 1975 | 19.75 | 32.00 | 70.60 | 140 | 238 | 2 | 0.315 |
| 2000 | 20.00 | 26.10 | 50.40 | 140 | 238 | 2 | 0.315 |
| 2025 | 20.25 | 35.10 | 82.10 | 145 | 243 | 2 | 0.400 |
| 2050 | 20.50 | 27.60 | 53.30 | 145 | 243 | 2 | 0.400 |
| 2075 | 20.75 | 31.40 | 79.20 | 145 | 243 | 2 | 0.400 |
| 2100 | 21.00 | 29.40 | 56.90 | 145 | 243 | 2 | 0.400 |
| 2125 | 21.25 | 39.60 (W100) | 85.80 (W101) | 150 | 248 | 2 | 0.400 |

| Order No. | Ø h8 mm | 1080 format steam | 1081 GÜHRING steam | Spiral length mm | Total length mm | MK | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 2150 | 21.50 | 33.80 | 64.80 | 150 | 248 | 2 | 0.400 |
| 2175 | 21.75 | 38.20 | 81.40 | 150 | 248 | 2 | 0.400 |
| 2200 | 22.00 | 32.80 | 62.60 | 150 | 248 | 2 | 0.400 |
| 2225 | 22.25 | 39.20 | 85.80 | 150 | 248 | 2 | 0.400 |
| 2250 | 22.50 | 35.30 | 67.70 | 155 | 253 | 2 | 0.400 |
| 2275 | 22.75 | 40.20 | 85.80 | 155 | 253 | 2 | 0.400 |
| 2300 | 23.00 | 38.50 | 73.50 | 155 | 253 | 2 | 0.400 |
| 2325 | 23.25 | 48.50 | 106.50 | 155 | 276 | 3 | 0.400 |
| 2350 | 23.50 | 38.20 | 72.70 | 155 | 276 | 3 | 0.400 |
| 2375 | 23.75 | 52.60 | 113.00 | 160 | 281 | 3 | 0.400 |
| 2400 | 24.00 | 40.00 | 77.10 | 160 | 281 | 3 | 0.400 |
| 2425 | 24.25 | 59.50 | 127.00 | 160 | 281 | 3 | 0.400 |
| 2450 | 24.50 | 41.50 | 79.20 | 160 | 281 | 3 | 0.400 |
| 2475 | 24.75 | 57.80 | 123.00 | 160 | 281 | 3 | 0.400 |
| 2500 | 25.00 | 44.20 | 85.80 | 160 | 281 | 3 | 0.400 |
| 2525 | 25.25 | 64.10 | 124.50 | 165 | 286 | 3 | 0.400 |
| 2550 | 25.50 | 45.90 | 87.20 | 165 | 286 | 3 | 0.400 |
| 2575 | 25.75 | 59.90 | 127.50 | 165 | 286 | 3 | 0.400 |
| 2600 | 26.00 | 50.80 | 97.20 | 165 | 286 | 3 | 0.400 |
| 2625 | 26.25 | 69.10 | 157.00 | 165 | 286 | 3 | 0.400 |
| 2650 | 26.50 | 49.00 | 94.40 | 165 | 286 | 3 | 0.400 |
| 2675 | 26.75 | 77.40 | 180.00 | 170 | 291 | 3 | 0.400 |
| 2700 | 27.00 | 50.60 | 97.20 | 170 | 291 | 3 | 0.400 |
| 2725 | 27.25 | 75.70 | 130.50 | 170 | 291 | 3 | 0.400 |
| 2750 | 27.50 | 52.10 | 100.00 | 170 | 291 | 3 | 0.400 |
| 2775 | 27.75 | 74.10 | 167.00 | 170 | 291 | 3 | 0.400 |
| 2800 | 28.00 | 55.70 | 106.00 | 170 | 291 | 3 | 0.400 |
| 2825 | 28.25 | 83.00 | 163.00 | 175 | 296 | 3 | 0.400 |
| 2850 | 28.50 | 68.70 | 132.00 | 175 | 296 | 3 | 0.400 |
| 2875 | 28.75 | 77.40 | 219.00 | 175 | 296 | 3 | 0.400 |
| 2900 | 29.00 | 60.30 | 115.00 | 175 | 296 | 3 | 0.400 |
| 2925 | 29.25 | 85.90 | 212.00 | 175 | 296 | 3 | 0.400 |
| 2950 | 29.50 | 61.90 | 119.50 | 175 | 296 | 3 | 0.400 |
| 2975 | 29.75 | 79.00 | 168.50 | 175 | 296 | 3 | 0.400 |
| 3000 | 30.00 | 60.30 | 115.00 | 175 | 296 | 3 | 0.400 |
| 3025 | 30.25 | 87.60 | 171.50 | 180 | 301 | 3 | 0.400 |
| 3050 | 30.50 | 73.80 | 141.00 | 180 | 301 | 3 | 0.400 |
| 3075 | 30.75 | 93.20 | 173.00 | 180 | 301 | 3 | 0.400 |
| 3100 | 31.00 | 71.60 | 138.50 | 180 | 301 | 3 | 0.400 |
| 3125 | 31.25 | 95.40 | 249.00 | 180 | 301 | 3 | 0.400 |
| 3150 | 31.50 | 81.60 | 157.00 | 180 | 301 | 3 | 0.400 |
| 3175 | 31.75 | 92.10 | 163.00 | 185 | 306 | 3 | 0.500 |
| 3200 | 32.00 | 75.50 | 144.00 | 185 | 334 | 4 | 0.500 |
| 3250 | 32.50 | 86.70 | 176.00 | 185 | 334 | 4 | 0.500 |
| 3300 | 33.00 | 80.90 | 155.50 | 185 | 334 | 4 | 0.500 |
| 3350 | 33.50 | 89.60 | 191.50 | 185 | 334 | 4 | 0.500 |
| 3400 | 34.00 | 94.80 (W100) | 181.50 (W101) | 190 | 339 | 4 | 0.500 |

Continued overleaf

## Spiral drill with Morse taper Shank

Continued

| Order No. | Ø h8 mm | 1080 format steam | 1081 GÜHRING steam | Spiral length mm | Total length mm | MK | f mm/rev |
|---|---|---|---|---|---|---|---|
| 3450 | 34.50 | 105.00 | 212.00 | 190 | 339 | 4 | 0.500 |
| 3500 | 35.00 | 96.40 | 186.00 | 190 | 339 | 4 | 0.500 |
| 3550 | 35.50 | 111.50 | 240.50 | 190 | 339 | 4 | 0.500 |
| 3600 | 36.00 | 104.00 | 200.50 | 195 | 344 | 4 | 0.500 |
| 3650 | 36.50 | 116.50 | 248.00 | 195 | 344 | 4 | 0.500 |
| 3700 | 37.00 | 113.50 | 217.50 | 195 | 344 | 4 | 0.500 |
| 3750 | 37.50 | 128.00 | 245.00 | 195 | 344 | 4 | 0.500 |
| 3800 | 38.00 | 120.50 | 230.50 | 200 | 349 | 4 | 0.500 |
| 3850 | 38.50 | 144.50 | 291.00 | 200 | 349 | 4 | 0.500 |
| 3900 | 39.00 | 131.50 | 255.00 | 200 | 349 | 4 | 0.500 |
| 3950 | 39.50 | 165.00 (W100) | 318.50 (W101) | 200 | 349 | 4 | 0.500 |

| Order No. | Ø h8 mm | 1080 format steam | 1081 GÜHRING steam | Spiral length mm | Total length mm | MK | f mm/rev |
|---|---|---|---|---|---|---|---|
| 4000 | 40.00 | 136.50 | 263.50 | 200 | 349 | 4 | 0.500 |
| 4100 | 41.00 | 147.00 | 281.00 | 205 | 354 | 4 | 0.630 |
| 4200 | 42.00 | 160.00 | 310.00 | 205 | 354 | 4 | 0.630 |
| 4300 | 43.00 | 170.00 | 324.00 | 210 | 359 | 4 | 0.630 |
| 4400 | 44.00 | 178.00 | 343.00 | 210 | 359 | 4 | 0.630 |
| 4500 | 45.00 | 185.50 | 356.00 | 210 | 359 | 4 | 0.630 |
| 4600 | 46.00 | 193.50 | 367.50 | 215 | 364 | 4 | 0.630 |
| 4700 | 47.00 | 206.50 | 396.00 | 215 | 364 | 4 | 0.630 |
| 4800 | 48.00 | 211.50 | 403.50 | 220 | 369 | 4 | 0.630 |
| 4900 | 49.00 | 222.00 | 446.50 | 220 | 369 | 4 | 0.630 |
| 5000 | 50.00 | 227.00 (W100) | 439.50 (W101) | 220 | 369 | 4 | 0.630 |

## Spiral drill with Morse taper Shank

**Design:** HSS Co5, DIN 345, Type INOX. Profile grinding, bright surface, right cutting, with precise point geometry and excellent thermal resistance. Angle of rake larger than normal, core thickness thinner than normal and normal core gradient.

**Application:** Particularly suitable for rust/acid/heat-resistant and austenitic steels (INOX).

HSS Co5 | DIN 345 | Type INOX | MK 1–4 | 130° | 38° | GÜHRING

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1082 | | | | | | | | | **18** | 10 | | **90** | 60 |

| Order No. | Ø h8 mm | 1082 GÜHRING bright | Spiral length mm | Total length mm | MK | f mm/rev |
|---|---|---|---|---|---|---|
| 1000 | 10.00 | 66.10 | 87 | 168 | 1 | 0.160 |
| 1020 | 10.20 | 68.50 | 87 | 168 | 1 | 0.160 |
| 1050 | 10.50 | 64.80 | 87 | 168 | 1 | 0.160 |
| 1080 | 10.80 | 92.00 | 94 | 175 | 1 | 0.160 |
| 1100 | 11.00 | 74.70 | 94 | 175 | 1 | 0.160 |
| 1120 | 11.20 | 98.80 | 94 | 175 | 1 | 0.160 |
| 1150 | 11.50 | 75.30 | 94 | 175 | 1 | 0.160 |
| 1180 | 11.80 | 85.20 | 94 | 175 | 1 | 0.160 |
| 1200 | 12.00 | 71.60 | 101 | 182 | 1 | 0.160 |
| 1220 | 12.20 | 88.90 | 101 | 182 | 1 | 0.160 |
| 1250 | 12.50 | 82.10 | 101 | 182 | 1 | 0.160 |
| 1300 | 13.00 | 73.50 | 101 | 182 | 1 | 0.200 |
| 1350 | 13.50 | 90.80 | 108 | 189 | 1 | 0.200 |
| 1380 | 13.80 | 118.50 | 108 | 189 | 1 | 0.200 |
| 1400 | 14.00 | 70.40 | 108 | 189 | 1 | 0.200 |
| 1425 | 14.25 | 134.50 | 114 | 212 | 2 | 0.200 |
| 1450 | 14.50 | 91.40 | 114 | 212 | 2 | 0.200 |
| 1475 | 14.75 | 141.00 | 114 | 212 | 2 | 0.200 |
| 1500 | 15.00 | 88.90 | 114 | 212 | 2 | 0.200 |
| 1525 | 15.25 | 138.50 | 120 | 218 | 2 | 0.200 |
| 1550 | 15.50 | 90.10 | 120 | 218 | 2 | 0.200 |
| 1575 | 15.75 | 100.50 | 120 | 218 | 2 | 0.200 |
| 1600 | 16.00 | 87.70 | 120 | 218 | 2 | 0.200 |
| 1625 | 16.25 | 160.50 | 125 | 223 | 2 | 0.250 |
| 1650 | 16.50 | 100.50 | 125 | 223 | 2 | 0.250 |
| 1675 | 16.75 | 107.50 | 125 | 223 | 2 | 0.250 |
| 1700 | 17.00 | 84.60 | 125 | 223 | 2 | 0.250 |
| 1750 | 17.50 | 93.20 | 130 | 228 | 2 | 0.250 |
| 1775 | 17.75 | 94.40 | 130 | 228 | 2 | 0.250 |
| 1800 | 18.00 | 95.70 | 130 | 228 | 2 | 0.250 |
| 1825 | 18.25 | 126.00 | 135 | 233 | 2 | 0.250 |
| 1850 | 18.50 | 103.50 (W116) | 135 | 233 | 2 | 0.250 |

| Order No. | Ø h8 mm | 1082 GÜHRING bright | Spiral length mm | Total length mm | MK | f mm/rev |
|---|---|---|---|---|---|---|
| 1875 | 18.75 | 132.00 | 135 | 233 | 2 | 0.250 |
| 1900 | 19.00 | 103.50 | 135 | 233 | 2 | 0.250 |
| 1925 | 19.25 | 141.00 | 140 | 238 | 2 | 0.250 |
| 1950 | 19.50 | 118.50 | 140 | 238 | 2 | 0.250 |
| 2000 | 20.00 | 107.00 | 140 | 238 | 2 | 0.250 |
| 2025 | 20.25 | 168.00 | 145 | 243 | 2 | 0.250 |
| 2050 | 20.50 | 127.00 | 145 | 243 | 2 | 0.315 |
| 2075 | 20.75 | 163.00 | 145 | 243 | 2 | 0.315 |
| 2100 | 21.00 | 127.00 | 145 | 243 | 2 | 0.315 |
| 2150 | 21.50 | 150.50 | 150 | 248 | 2 | 0.315 |
| 2175 | 21.75 | 254.50 | 150 | 248 | 2 | 0.315 |
| 2200 | 22.00 | 134.50 | 150 | 248 | 2 | 0.315 |
| 2250 | 22.50 | 194.00 | 155 | 253 | 2 | 0.315 |
| 2300 | 23.00 | 163.00 | 155 | 253 | 2 | 0.315 |
| 2350 | 23.50 | 184.00 | 155 | 276 | 3 | 0.315 |
| 2400 | 24.00 | 190.00 | 160 | 281 | 3 | 0.315 |
| 2450 | 24.50 | 202.50 | 160 | 281 | 3 | 0.315 |
| 2500 | 25.00 | 238.50 | 160 | 281 | 3 | 0.315 |
| 2550 | 25.50 | 304.00 | 165 | 286 | 3 | 0.315 |
| 2600 | 26.00 | 236.00 | 165 | 286 | 3 | 0.315 |
| 2650 | 26.50 | 280.50 | 165 | 286 | 3 | 0.315 |
| 2700 | 27.00 | 260.50 | 170 | 291 | 3 | 0.315 |
| 2750 | 27.50 | 333.50 | 170 | 291 | 3 | 0.315 |
| 2800 | 28.00 | 289.00 | 170 | 291 | 3 | 0.315 |
| 2850 | 28.50 | 401.50 | 175 | 296 | 3 | 0.315 |
| 2900 | 29.00 | 305.00 | 175 | 296 | 3 | 0.315 |
| 3000 | 30.00 | 264.00 | 175 | 296 | 3 | 0.315 |
| 3100 | 31.00 | 327.00 | 180 | 301 | 3 | 0.315 |
| 3150 | 31.50 | 383.00 | 180 | 301 | 3 | 0.315 |
| 3200 | 32.00 | 407.50 | 185 | 334 | 4 | 0.400 |
| 3300 | 33.00 | 364.50 | 185 | 334 | 4 | 0.400 |
| 3400 | 34.00 | 549.50 (W116) | 190 | 339 | 4 | 0.400 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Boring bush drill with Morse taper Shank

**Design:** HSS, DIN 341, type N.
Profile grinding, steam tempered surface, right cutting, with precise point geometry. Good centring characteristics due to point thinning according to DIN 1412, form A. Angle of rake, core thickness and core gradient normal.

**Application:** Suitable for drilling through boring bushes (important for sloped and uneven surfaces) as well as drilling deep holes up to 10 x D. Particularly suitable for alloyed and non-alloyed steels, steel casting, grey cast iron, malleable cast iron, nodular iron, sintered iron, nickel silver and graphite.

HSS | DIN 341 | Type N | MK 1–4 | 118° | 25–30° | 10xD

format professional quality

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1089 | 22 | 18 | | | | | | | | | 22 | | 30 |

| Order No. | Ø h8 | 1089 format professional quality steam | Spiral length | Total length | MK | Steels up to 850 N/mm² f |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | | mm/rev |
| 1000 | 10.0 | 20.70 | 116 | 197 | 1 | 0.200 |
| 1050 | 10.5 | 21.20 | 116 | 197 | 1 | 0.200 |
| 1100 | 11.0 | 21.80 | 125 | 206 | 1 | 0.200 |
| 1150 | 11.5 | 21.80 | 125 | 206 | 1 | 0.200 |
| 1200 | 12.0 | 21.80 | 134 | 215 | 1 | 0.200 |
| 1250 | 12.5 | 22.00 | 134 | 215 | 1 | 0.200 |
| 1300 | 13.0 | 22.00 | 134 | 215 | 1 | 0.250 |
| 1350 | 13.5 | 24.50 | 142 | 223 | 1 | 0.250 |
| 1400 | 14.0 | 24.80 | 142 | 223 | 1 | 0.250 |
| 1450 | 14.5 | 31.40 | 147 | 245 | 2 | 0.250 |
| 1500 | 15.0 | 31.10 | 147 | 245 | 2 | 0.250 |
| 1550 | 15.5 | 30.30 | 153 | 251 | 2 | 0.250 |
| 1600 | 16.0 | 32.50 | 153 | 251 | 2 | 0.250 |
| 1650 | 16.5 | 34.10 | 159 | 257 | 2 | 0.315 |
| 1700 | 17.0 | 33.90 | 159 | 257 | 2 | 0.315 |
| 1750 | 17.5 | 38.80 | 165 | 263 | 2 | 0.315 |
| 1800 | 18.0 | 38.50 | 165 | 263 | 2 | 0.315 |
| 1850 | 18.5 | 46.50 | 171 | 269 | 2 | 0.315 |
| 1900 | 19.0 | 42.40 | 171 | 269 | 2 | 0.315 |
| 1950 | 19.5 | 48.70 | 177 | 275 | 2 | 0.315 |
| 2000 | 20.0 | 46.60 | 177 | 275 | 2 | 0.315 |
| 2050 | 20.5 | 58.40 | 184 | 282 | 2 | 0.400 |
| 2100 | 21.0 | 53.10 | 184 | 282 | 2 | 0.400 |
| 2150 | 21.5 | 62.80 | 191 | 289 | 2 | 0.400 |
| 2200 | 22.0 | 57.80 | 191 | 289 | 2 | 0.400 |
| 2250 | 22.5 | 63.90 | 198 | 296 | 2 | 0.400 |
| 2300 | 23.0 | 60.00 | 198 | 296 | 2 | 0.400 |
| 2400 | 24.0 | 73.70 | 206 | 327 | 3 | 0.400 |
| 2500 | 25.0 | 74.40 | 206 | 327 | 3 | 0.400 |
| 2600 | 26.0 | 85.40 | 214 | 335 | 3 | 0.400 |
| 2700 | 27.0 | 91.50 | 222 | 343 | 3 | 0.400 |
| 2800 | 28.0 | 102.00 | 222 | 343 | 3 | 0.400 |
| 2900 | 29.0 | 118.00 | 230 | 351 | 3 | 0.400 |
| 3000 | 30.0 | 117.50 | 230 | 351 | 3 | 0.400 |
| 3100 | 31.0 | 155.00 | 239 | 360 | 3 | 0.400 |
| 3200 | 32.0 | 163.50 | 248 | 397 | 4 | 0.500 |
| 3300 | 33.0 | 163.50 | 248 | 397 | 4 | 0.500 |
| 3400 | 34.0 | 205.50 | 257 | 406 | 4 | 0.500 |
| 3500 | 35.0 | 199.50 | 257 | 406 | 4 | 0.500 |
| 3600 | 36.0 | 229.00 | 267 | 416 | 4 | 0.500 |
| 3700 | 37.0 | 259.00 | 267 | 416 | 4 | 0.500 |
| 3800 | 38.0 | 247.00 | 277 | 426 | 4 | 0.500 |
| 3900 | 39.0 | 265.00 | 277 | 426 | 4 | 0.500 |
| 4000 | 40.0 | 277.00 | 277 | 426 | 4 | 0.500 |
| 4500 | 45.0 | 464.50 | 298 | 447 | 4 | 0.630 |
| 5000 | 50.0 | 464.50 (W100) | 321 | 470 | 4 | 0.630 |

## Counterbore with Morse taper Shank

**Design:** HSS, DIN 343, type N.
Profile grinding, steam tempered surface, right cutting.
Normal angle of rake, normal core thickness and without core gradient.
The spiral length is longer than the height of the bushes.

**Application:** For drilling out pre-drilled, pre-cast or pre-punched holes. The sturdy construction and 3 blades means that alignment inaccuracies and runouts in pre-drilled holes are corrected. Furthermore, the drill wall surface is improved so that a reamer can be subsequently used for perfect final reaming. Please pay attention to the column "smallest Ø of pre-drilled hole".

**Note:** The cut diameter must be smaller than the hole to be drilled out. Further dimensions or HSS-E designs or VHM/HM assembly or long flute counter bores according to DIN 1864 available on request.

HSS | DIN 343 | Type N | Z 3 | MK 1–3 | 120° | 22°

GÜHRING

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1085 | 30 | 25 | 10 | | | | | | | | 25 | 45 | |

| Order No. | Ø h8 mm | 1085 GÜHRING steam | Spiral length mm | Total length mm | Smallest Ø of pre-drilled hole mm | MK |
|---|---|---|---|---|---|---|
| 0780 | 7.80 | 38.90 | 75 | 156 | 5.6 | 1 |
| 0880 | 8.80 | 56.90 ◊ | 81 | 162 | 6.3 | 1 |
| 0980 | 9.80 | 41.10 | 87 | 168 | 7.0 | 1 |
| 1000 | 10.00 | 50.40 | 87 | 168 | 7.0 | 1 |
| 1075 | 10.75 | 61.20 ◊ | 94 | 175 | 7.7 | 1 |
| 1100 | 11.00 | 45.40 | 94 | 175 | 7.7 | 1 |
| 1175 | 11.75 | 46.10 | 101 | 182 | 8.4 | 1 |
| 1200 | 12.00 | 43.20 | 101 | 182 | 8.4 | 1 |
| 1275 | 12.75 | 53.30 | 101 | 182 | 9.1 | 1 |
| 1300 | 13.00 | 47.50 | 101 | 182 | 9.1 | 1 |
| 1375 | 13.75 | 53.30 | 108 | 189 | 9.8 | 1 |
| 1400 | 14.00 | 48.20 | 108 | 189 | 9.8 | 1 |
| 1475 | 14.75 | 62.00 | 114 | 212 | 10.5 | 2 |
| 1500 | 15.00 | 54.00 | 114 | 212 | 10.5 | 2 |
| 1575 | 15.75 | 56.90 | 120 | 218 | 11.2 | 2 |
| 1600 | 16.00 | 55.40 | 120 | 218 | 11.2 | 2 |
| 1675 | 16.75 | 68.50 | 125 | 223 | 11.9 | 2 |
| 1700 | 17.00 | 59.10 | 125 | 223 | 11.9 | 2 |
| 1775 | 17.75 | 64.80 | 130 | 228 | 12.6 | 2 |
| 1800 | 18.00 | 60.50 | 130 | 228 | 12.6 | 2 |
| 1870 | 18.70 | 72.70 | 135 | 233 | 13.3 | 2 |
| 1900 | 19.00 | 63.40 | 135 | 233 | 13.3 | 2 |
| 1970 | 19.70 | 67.70 | 140 | 238 | 14.0 | 2 |
| 2000 | 20.00 | 59.80 | 140 | 238 | 14.0 | 2 |
| 2070 | 20.70 | 85.00 | 145 | 243 | 14.6 | 2 |
| 2100 | 21.00 | 79.20 ◊ | 145 | 243 | 14.6 | 2 |
| 2170 | 21.70 | 85.00 | 150 | 248 | 15.3 | 2 |
| 2200 | 22.00 | 79.20 | 150 | 248 | 15.3 | 2 |
| 2270 | 22.70 | 89.30 | 155 | 253 | 16.0 | 2 |
| 2300 | 23.00 | 84.30 | 155 | 253 | 16.0 | 2 |
| 2370 | 23.70 | 96.50 ◊ | 160 | 281 | 16.6 | 3 |
| 2400 | 24.00 | 92.20 | 160 | 281 | 16.6 | 3 |
| 2470 | 24.70 | 100.00 | 160 | 281 | 17.3 | 3 |
| 2500 | 25.00 | 87.80 | 160 | 281 | 17.3 | 3 |
| 2570 | 25.70 | 102.50 ◊ | 165 | 286 | 18.0 | 3 |
| 2600 | 26.00 | 99.40 | 165 | 286 | 18.0 | 3 |
| 2670 | 26.70 | 152.50 ◊ | 170 | 291 | 18.6 | 3 |
| 2700 | 27.00 | 119.00 | 170 | 291 | 18.6 | 3 |
| 2770 | 27.70 | 123.00 ◊ | 170 | 291 | 19.3 | 3 |
| 2800 | 28.00 | 109.00 | 170 | 291 | 19.3 | 3 |
| 2870 | 28.70 | 148.50 ◊ | 175 | 296 | 20.0 | 3 |
| 2900 | 29.00 | 132.50 | 175 | 296 | 20.0 | 3 |
| 2970 | 29.70 | 125.50 | 175 | 296 | 20.5 | 3 |
| 3000 | 30.00 | 132.00 (W109) | 175 | 296 | 20.5 | 3 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spiral drill with morse taper shank, extra long

**Design:** HSS, DIN 1870, Typ TF.
Particularly stable model, profile grinding, cutting to the right, up to Ø 16,0 mm nitrated chamfers, from Ø 16.0 mm steam tempered surface, with precise point grind and wide clamping grooves with heavily rounded back edges. Good centring characteristics due to point thinning according to DIN 1412, form A. Angle of rake larger than normal, core thickness considerably thicker than normal and without core gradient.

**Application:** Suitable for drilling extremely deep holes under difficult conditions e.g. poor chip removal, therefore causing deficient cooling of the drill tip. Particularly suitable for grey cast iron and steels up to 850 N/mm² in strength.

HSS | DIN 1870 | Type TF | MK 1–3 | 130° | 38°

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1092 | **18** | 15 | | | | | | | | | **20** | | |

| Order No. | Ø h8 x total length mm | 1092 format | Spiral length mm | MK | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|
| 1080 | 8.0 x 265 | 43.10 | 165 | 1 | 0.125 |
| 2080 | 8.0 x 330 | 65.80 | 210 | 1 | 0.125 |
| 2085 | 8.5 x 330 | 73.50 | 210 | 1 | 0.160 |
| 1090 | 9.0 x 275 | 47.00 | 175 | 1 | 0.160 |
| 2090 | 9.0 x 345 | 74.20 | 220 | 1 | 0.160 |
| 1100 | 10.0 x 285 | 49.70 | 185 | 1 | 0.160 |
| 2100 | 10.0 x 360 | 74.90 | 235 | 1 | 0.160 |
| 1105 | 10.5 x 285 | 60.50 | 185 | 1 | 0.160 |
| 2105 | 10.5 x 360 | 93.80 | 235 | 1 | 0.160 |
| 1110 | 11.0 x 300 | 57.90 | 195 | 1 | 0.160 |
| 2110 | 11.0 x 375 | 85.80 | 250 | 1 | 0.160 |
| 1115 | 11.5 x 300 | 60.80 | 195 | 1 | 0.160 |
| 2115 | 11.5 x 375 | 91.00 | 250 | 1 | 0.160 |
| 1120 | 12.0 x 310 | 61.60 | 205 | 1 | 0.160 |
| 2120 | 12.0 x 395 | 104.00 | 260 | 1 | 0.160 |
| 1125 | 12.5 x 310 | 63.40 | 205 | 1 | 0.160 |
| 1130 | 13.0 x 310 | 64.20 | 205 | 1 | 0.200 |
| 2130 | 13.0 x 395 | 109.00 | 260 | 1 | 0.200 |
| 1135 | 13.5 x 325 | 74.10 | 220 | 1 | 0.200 |
| 2135 | 13.5 x 410 | 116.50 | 275 | 1 | 0.200 |
| 1140 | 14.0 x 325 | 72.00 | 220 | 1 | 0.200 |
| 2140 | 14.0 x 410 | 116.50 | 275 | 1 | 0.200 |
| 1145 | 14.5 x 340 | 74.80 | 220 | 2 | 0.200 |
| 2145 | 14.5 x 425 | 117.00 | 275 | 2 | 0.200 |
| 1150 | 15.0 x 340 | 78.70 | 220 | 2 | 0.200 |
| 2150 | 15.0 x 425 | 118.00 | 275 | 2 | 0.200 |
| 1155 | 15.5 x 355 | 85.90 | 230 | 2 | 0.200 |
| 2155 | 15.5 x 445 | 123.00 | 295 | 2 | 0.200 |
| 1160 | 16.0 x 355 | 82.00 | 230 | 2 | 0.200 |
| 2160 | 16.0 x 445 | 120.50 (W100) | 295 | 2 | 0.200 |

| Order No. | Ø h8 x total length mm | 1092 format | Spiral length mm | MK | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|
| 1165 | 16.5 x 355 | 82.70 | 230 | 2 | 0.250 |
| 2165 | 16.5 x 445 | 138.50 | 295 | 2 | 0.250 |
| 1170 | 17.0 x 355 | 84.60 | 230 | 2 | 0.250 |
| 2170 | 17.0 x 445 | 130.00 | 295 | 2 | 0.250 |
| 1175 | 17.5 x 370 | 88.70 | 245 | 2 | 0.250 |
| 2175 | 17.5 x 465 | 140.50 | 310 | 2 | 0.250 |
| 1180 | 18.0 x 370 | 91.90 | 245 | 2 | 0.250 |
| 2180 | 18.0 x 465 | 146.50 | 310 | 2 | 0.250 |
| 1185 | 18.5 x 370 | 96.70 | 245 | 2 | 0.250 |
| 2185 | 18.5 x 465 | 146.50 | 310 | 2 | 0.250 |
| 1190 | 19.0 x 370 | 103.00 | 245 | 2 | 0.250 |
| 2190 | 19.0 x 465 | 160.00 | 310 | 2 | 0.250 |
| 1195 | 19.5 x 385 | 112.00 | 260 | 2 | 0.250 |
| 1200 | 20.0 x 385 | 118.50 | 260 | 2 | 0.250 |
| 2200 | 20.0 x 490 | 180.00 | 325 | 2 | 0.250 |
| 1205 | 20.5 x 385 | 150.00 | 260 | 2 | 0.315 |
| 1210 | 21.0 x 385 | 136.00 | 260 | 2 | 0.315 |
| 1220 | 22.0 x 405 | 143.00 | 270 | 2 | 0.315 |
| 2220 | 22.0 x 515 | 229.00 | 345 | 2 | 0.315 |
| 1230 | 23.0 x 405 | 168.50 | 270 | 2 | 0.315 |
| 2230 | 23.0 x 515 | 233.00 | 345 | 2 | 0.315 |
| 1240 | 24.0 x 440 | 188.50 | 290 | 3 | 0.315 |
| 1250 | 25.0 x 440 | 192.00 | 290 | 3 | 0.315 |
| 2250 | 25.0 x 555 | 265.50 | 365 | 3 | 0.315 |
| 1260 | 26.0 x 440 | 205.00 | 290 | 3 | 0.315 |
| 2260 | 26.0 x 555 | 309.50 | 365 | 3 | 0.315 |
| 1280 | 28.0 x 460 | 238.00 | 305 | 3 | 0.315 |
| 1300 | 30.0 x 460 | 274.50 | 305 | 3 | 0.315 |
| 2300 | 30.0 x 580 | 422.00 (W100) | 385 | 3 | 0.315 |

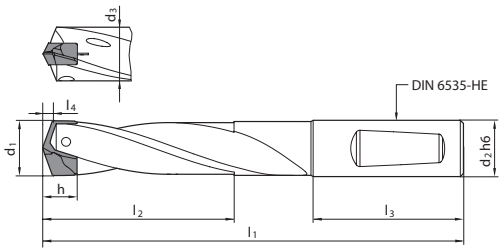
## Changeable head holder HT 800

**Design:** Made of high quality, high strength tool steel. Optimised flute shank according to DIN 6535, collar according to DIN 6595, stepped holder back. Absolutely backlash-free due to elastic clamping protection. High efficiency due to high feed.

DIN 6535-HE | Factory standard

GÜHRING

**Application:** Surface nickel plated, giving less wear.



1091 + 1093 + 1096

| Order No. | Cutting Ø range mm | 1093 GÜHRING 3 x D | 1091 GÜHRING 5 x D | 1096 GÜHRING 7 x D | Nominal dimension $d_1$ mm | Shank Ø $d_2$ h6 mm | Carrier Ø range $d_3$ mm | Shank length $l_3$ mm 1093 | 1091 | 1096 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0110 | 11.00–11.49 | 253.10 ◊ | 306.60 ◊ | 323.10 ◊ | 11.0 | 12.0 | 10.7 | 45 | 45 | 45 |
| 0115 | 11.50–11.99 | 253.10 ◊ | 306.60 ◊ | 323.10 ◊ | 11.5 | 12.7 | 10.7 | 45 | 45 | 45 |
| 0120 | 12.00–12.49 | 253.10 ◊ | 306.60 ◊ | 323.10 ◊ | 12.0 | 12.0 | 11.7 | 45 | 45 | 45 |
| 0125 | 12.50–12.99 | 253.10 ◊ | 306.60 ◊ | 323.10 ◊ | 12.5 | 14.0 | 12.2 | 45 | 45 | 45 |
| 0130 | 13.00–13.49 | 253.10 ◊ | 306.60 ◊ | 323.10 ◊ | 13.0 | 14.0 | 12.7 | 45 | 45 | 45 |
| 0135 | 13.50–13.99 | 253.10 ◊ | 306.60 ◊ | 323.10 ◊ | 13.5 | 14.0 | 13.2 | 45 | 45 | 45 |
| 0140 | 14.00–14.49 | 271.70 ◊ | 323.10 ◊ | 354.00 ◊ | 14.0 | 14.0 | 13.7 | 45 | 45 | 45 |
| 0145 | 14.50–14.99 | 271.70 ◊ | 323.10 ◊ | 354.00 ◊ | 14.5 | 16.0 | 14.2 | 48 | 48 | 45 |
| 0150 | 15.00–15.49 | 271.70 ◊ | 323.10 ◊ | 354.00 ◊ | 15.0 | 16.0 | 14.7 | 48 | 48 | 48 |
| 0155 | 15.50–15.99 | 271.70 ◊ | 323.10 ◊ | 354.00 ◊ | 15.5 | 16.0 | 15.2 | 48 | 48 | 48 |
| 0160 | 16.00–16.49 | 341.60 ◊ | 364.30 ◊ | 438.40 ◊ | 16.0 | 16.0 | 15.7 | 48 | 48 | 48 |
| 0165 | 16.50–16.99 | 341.60 ◊ | 364.30 ◊ | 438.40 ◊ | 16.5 | 18.0 | 16.2 | 48 | 48 | 48 |
| 0170 | 17.00–17.49 | 341.60 ◊ | 364.30 ◊ | 438.40 ◊ | 17.0 | 18.0 | 16.7 | 48 | 48 | 48 |
| 0175 | 17.50–17.99 | 341.60 ◊ | 364.30 ◊ | 438.40 ◊ | 17.5 | 18.0 | 17.2 | 48 | 48 | 48 |
| 0180 | 18.00–18.49 | 364.30 ◊ | 395.10 ◊ | 475.40 ◊ | 18.0 | 18.0 | 17.7 | 48 | 48 | 48 |
| 0185 | 18.50–18.99 | 364.30 ◊ | 395.10 ◊ | 475.40 ◊ | 18.5 | 20.0 | 18.2 | 50 | 50 | 48 |
| 0190 | 19.00–19.49 | 364.30 ◊ | 395.10 ◊ | 475.40 ◊ | 19.0 | 20.0 | 18.7 | 50 | 50 | 48 |
| 0195 | 19.50–19.99 | 364.30 ◊ | 395.10 ◊ | 475.40 ◊ | 19.5 | 20.0 | 19.2 | 50 | 50 | 48 |
| 0200 | 20.00–20.49 | 364.30 ◊ | 395.10 ◊ | 475.40 ◊ | 20.0 | 20.0 | 19.7 | 50 | 50 | 48 |
| 0205 | 20.50–20.99 | 364.30 ◊ | 395.10 ◊ | 475.40 ◊ | 20.5 | 25.0 | 20.2 | 56 | 56 | 56 |
| 0210 | 21.00–21.49 | 403.40 ◊ | 438.40 ◊ | 475.40 ◊ | 21.0 | 25.0 | 20.7 | 56 | 56 | 56 |
| 0215 | 21.50–21.99 | 403.40 ◊ | 438.40 ◊ | 475.40 ◊ | 21.5 | 25.0 | 21.2 | 56 | 56 | 56 |
| 0220 | 22.00–22.49 | 403.40 ◊ | 438.40 ◊ | 475.40 ◊ | 22.0 | 25.0 | 21.7 | 56 | 56 | 56 |
| 0225 | 22.50–22.99 | 403.40 ◊ | 438.40 ◊ | 475.40 ◊ | 22.5 | 25.0 | 22.2 | 56 | 56 | 56 |
| 0230 | 23.00–23.49 | 458.90 ◊ | 498.00 ◊ | 535.10 ◊ | 23.0 | 25.0 | 22.7 | 56 | 56 | 56 |
| 0235 | 23.50–23.99 | 458.90 ◊ | 498.00 ◊ | 535.10 ◊ | 23.5 | 25.0 | 23.2 | 56 | 56 | 56 |
| 0240 | 24.00–24.49 | 458.90 ◊ | 498.00 ◊ | 535.10 ◊ | 24.0 | 25.0 | 23.7 | 56 | 56 | 56 |
| 0245 | 24.50–24.99 | 458.90 ◊ | 498.00 ◊ | 535.10 ◊ | 24.5 | 25.0 | 24.2 | 56 | 56 | 56 |
| 0250 | 25.00–25.49 | 458.90 ◊ | 498.00 ◊ | 535.10 ◊ | 25.0 | 25.0 | 24.7 | 56 | 56 | 56 |
| 0255 | 25.50–25.99 | 458.90 ◊ | 498.00 ◊ | 535.10 ◊ | 25.5 | 32.0 | 25.2 | 60 | 60 | 60 |
| 0260 | 26.00–26.49 | 458.90 ◊ | 498.00 ◊ | 535.10 ◊ | 26.0 | 32.0 | 25.7 | 60 | 60 | 60 |
| 0265 | 26.50–26.99 | 524.80 ◊ | – | 627.70 ◊ | 26.5 | 32.0 | 26.2 | 60 | – | 60 |
| 0270 | 27.00–27.49 | 524.80 ◊ | 565.90 ◊ | 627.70 ◊ | 27.0 | 32.0 | 26.7 | 60 | 60 | 60 |
| 0275 | 27.50–27.99 | 524.80 ◊ | – | 627.70 ◊ | 27.5 | 32.0 | 27.2 | 60 | – | 60 |
| 0280 | 28.00–28.49 | 524.80 ◊ | 565.90 ◊ | 627.70 ◊ | 28.0 | 32.0 | 27.7 | 60 | 60 | 60 |
| 0285 | 28.50–28.99 | 586.50 ◊ | 638.00 ◊ | 720.30 ◊ | 28.5 | 32.0 | 28.2 | 60 | 60 | 60 |
| 0290 | 29.00–29.49 | 586.50 ◊ | 638.00 ◊ | 720.30 ◊ | 29.0 | 32.0 | 28.7 | 60 | 60 | 60 |
| 0295 | 29.50–29.99 | 586.50 ◊ | 638.00 ◊ | 720.30 ◊ | 29.5 | 32.0 | 29.2 | 60 | 60 | 60 |
| 0300 | 30.00–30.49 | 586.50 ◊ | 638.00 ◊ | 720.30 ◊ | 30.0 | 32.0 | 29.7 | 60 | 60 | 60 |
| 0305 | 30.50–30.99 | 627.70 ◊ | 761.50 ◊ | 874.70 ◊ | 30.5 | 32.0 | 30.2 | 60 | 60 | 60 |
| 0310 | 31.00–31.49 | 627.70 ◊ | 761.50 ◊ | 874.70 ◊ | 31.0 | 32.0 | 30.7 | 60 | 60 | 60 |
| 0315 | 31.50–31.99 | 627.70 ◊ | 761.50 ◊ | 874.70 ◊ | 31.5 | 32.0 | 31.2 | 60 | 60 | 60 |
| 0320 | 32.00–32.99 | 627.70 ◊ | 761.50 ◊ | – | 32.0 | 32.0 | 31.7 | 60 | 60 | – |
| 0330 | 33.00–33.99 | 627.70 ◊ | 761.50 ◊ | – | 33.0 | 32.0 | 32.7 | 60 | 60 | – |
| 0340 | 34.00–34.99 | 627.70 ◊ | 761.50 ◊ | – | 34.0 | 32.0 | 33.7 | 60 | 60 | – |
| 0350 | 35.00–35.99 | 761.50 ◊ | 915.80 ◊ | – | 35.0 | 32.0 | 34.7 | 60 | 60 | – |
| 0360 | 36.00–36.99 | 761.50 ◊ | 915.80 ◊ | – | 36.0 | 32.0 | 35.7 | 60 | 60 | – |
| 0370 | 37.00–37.99 | 761.50 ◊ | 915.80 ◊ | – | 37.0 | 32.0 | 36.7 | 60 | 60 | – |
| 0380 | 38.00–38.99 | 761.50 ◊ | 915.80 ◊ | – | 38.0 | 32.0 | 37.7 | 60 | 60 | – |
| 0390 | 39.00–39.99 | 761.50 ◊ | 915.80 ◊ | – | 39.0 | 32.0 | 38.7 | 60 | 60 | – |
| | | (W113) | (W113) | (W113) | | | | | | |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Changeable head holder HT 800

Technical information

| Carrier size | 1093 | | 1091 | | 1096 | |
|---|---|---|---|---|---|---|
| | Total length including WP $l_1$ | Flute length $l_2$ | Total length including WP $l_1$ | Flute length $l_2$ | Total length including WP $l_1$ | Flute length $l_2$ |
| | mm | | mm | | mm | |
| 110 | 101 | 36.6 | 124 | 59.6 | 147 | 82.6 |
| 115 | 103 | 38.1 | 127 | 62.1 | 151 | 86.1 |
| 120 | 106 | 39.7 | 131 | 64.7 | 156 | 89.7 |
| 125 | 108 | 41.3 | 134 | 67.3 | 160 | 93.3 |
| 130 | 110 | 42.9 | 137 | 69.9 | 164 | 96.9 |
| 135 | 113 | 44.6 | 141 | 72.6 | 169 | 100.6 |
| 140 | 115 | 46.2 | 144 | 75.2 | 173 | 104.2 |
| 145 | 120 | 47.8 | 150 | 77.8 | 180 | 107.8 |
| 150 | 123 | 49.3 | 154 | 80.3 | 185 | 111.3 |
| 155 | 125 | 5.9 | 157 | 82.9 | 189 | 114.9 |
| 160 | 127 | 52.9 | 160 | 85.9 | 193 | 118.9 |
| 165 | 130 | 54,. | 164 | 88.1 | 198 | 122.1 |
| 170 | 132 | 55.8 | 167 | 90.8 | 202 | 125.8 |
| 175 | 134 | 57.4 | 170 | 93.4 | 206 | 129.4 |
| 180 | 137 | 58.9 | 174 | 95.9 | 211 | 132.9 |
| 185 | 141 | 60.5 | 179 | 98.5 | 217 | 136.5 |
| 190 | 143 | 62.1 | 182 | 101.1 | 221 | 140.1 |
| 195 | 146 | 63.7 | 186 | 103.7 | 226 | 143.7 |
| 200 | 148 | 65.3 | 189 | 106.3 | 230 | 147.3 |
| 205 | 159 | 67.0 | 201 | 109.0 | 243 | 151.0 |
| 210 | 161 | 68.6 | 204 | 111.6 | 247 | 154.6 |
| 215 | 163 | 70.1 | 207 | 114.1 | 251 | 158.1 |
| 220 | 165 | 71.7 | 210 | 116.7 | 255 | 161.7 |
| 225 | 168 | 73.3 | 214 | 119.3 | 260 | 165.3 |
| 230 | 170 | 74.9 | 217 | 121.9 | 264 | 168.9 |
| 235 | 173 | 76.5 | 221 | 124.5 | 269 | 172.5 |
| 240 | 175 | 78.1 | 224 | 127.1 | 273 | 176.1 |
| 245 | 177 | 79.1 | 227 | 129.7 | 277 | 179.7 |
| 250 | 180 | 81.3 | 231 | 132.3 | 282 | 183.3 |
| 255 | 187 | 82.9 | 239 | 134.9 | 291 | 186.9 |
| 260 | 191 | 84.0 | 244 | 137.0 | 297 | 190.0 |
| 265 | 193 | 86.1 | – | – | 301 | 194.0 |
| 270 | 196 | 87.2 | 251 | 142.2 | 306 | 197.2 |
| 275 | 198 | 88.9 | – | – | 310 | 200.8 |
| 280 | 200 | 90.5 | 257 | 147.4 | 314 | 204.4 |
| 285 | 202 | 92.5 | 260 | 150.4 | 318 | 208.4 |
| 290 | 205 | 94.6 | 264 | 153.5 | 323 | 212.5 |
| 295 | 207 | 95.1 | 267 | 155.1 | 327 | 215.1 |
| 300 | 210 | 96.7 | 271 | 157.6 | 332 | 218.6 |
| 305 | 212 | 98.3 | 274 | 160.2 | 336 | 222.2 |
| 310 | 214 | 99.8 | 277 | 162.8 | 340 | 225.8 |
| 315 | 216 | 101.4 | 280 | 165.4 | 344 | 229.4 |
| 320 | 221 | 104.6 | 287 | 170.6 | – | – |
| 330 | 226 | 107.8 | 294 | 175.8 | – | – |
| 340 | 230 | 111.0 | 300 | 181.0 | – | – |
| 350 | 235 | 114.2 | 307 | 186.2 | – | – |
| 360 | 240 | 117.3 | 314 | 191.3 | – | – |
| 370 | 245 | 120.5 | 321 | 196.5 | – | – |
| 380 | 249 | 123.7 | 327 | 201.7 | – | – |
| 390 | 254 | 126.9 | 334 | 206.9 | – | – |

## Change plate HT 800 WP

**Design:** Ultra-finest grain-solid carbide.
High toughness and bend break-resistance. The precise point geometry, 140° point angle and the ratio point thinning result in a self-centring blade geometry. Cutting tolerance h7.

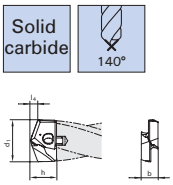
**Note:** Further dimensions available on request.

**1098** Fire
Cutting tolerance: h7
**Application:** Steel, steel castings and stainless steel (ferritic and martensitic).

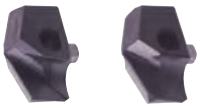
**1099** Fire
Cutting tolerance: m7
**Application:** Grey cast iron, nodular graphite casting and malleable cast iron.

**1102** Bright
Cutting tolerance: h7
**Application:** Aluminium and other non-ferrite metals.

**1105** TiAlN
Cutting tolerance: h7
**Application:** Stainless steel and steel castings (austenitic and austenitic/ferritic).




GÜHRING



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1098 | | | | ● | | | | | | | | | |
| 1099 | | | | | | | | | | | ● | | |
| 1102 | | | | | | | | | | | | ● | |
| 1105 | | | | | | | | | ● | | | | |

| Order No. | Nominal dimension $d_1$ mm | 1098 GÜHRING Fire | 1099 GÜHRING Fire | 1102 GÜHRING bright | 1105 GÜHRING TiAlN | Cutting tip $l_4$ mm | Width b mm | Height H mm |
|---|---|---|---|---|---|---|---|---|
| 1100 | 11.0 | 87.50 ◊ | – | 75.10 ◊ | 97.80 ◊ | 2.1 | 4.5 | 7.5 |
| 1150 | 11.5 | 87.50 ◊ | – | 75.10 ◊ | 97.80 ◊ | 2.1 | 4.5 | 7.5 |
| 1200 | 12.0 | 87.50 ◊ | 92.60 ◊ | 75.10 ◊ | 97.80 ◊ | 2.2 | 5.0 | 7.7 |
| 1250 | 12.5 | 87.50 ◊ | – | 75.10 ◊ | 97.80 ◊ | 2.2 | 5.0 | 7.7 |
| 1300 | 13.0 | 87.50 ◊ | 92.60 ◊ | 75.10 ◊ | 97.80 ◊ | 2.4 | 5.5 | 8.5 |
| 1350 | 13.5 | 87.50 ◊ | 92.60 ◊ | 75.10 ◊ | 97.80 ◊ | 2.4 | 5.5 | 8.5 |
| 1400 | 14.0 | 87.50 ◊ | 92.60 ◊ | 75.10 ◊ | 97.80 ◊ | 2.5 | 6.0 | 9.6 |
| 1450 | 14.5 | 87.50 ◊ | 92.60 ◊ | 75.10 ◊ | 97.80 ◊ | 2.6 | 6.0 | 9.6 |
| 1500 | 15.0 | 94.70 ◊ | 100.80 ◊ | 81.30 ◊ | 106.00 ◊ | 2.7 | 6.0 | 9.8 |
| 1550 | 15.5 | 94.70 ◊ | 100.80 ◊ | 81.30 ◊ | 106.00 ◊ | 2.8 | 6.0 | 9.8 |
| 1600 | 16.0 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 2.9 | 7.0 | 11.0 |
| 1650 | 16.5 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 3.0 | 7.0 | 11.0 |
| 1700 | 17.0 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 3.0 | 7.0 | 11.0 |
| 1750 | 17.5 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 3.2 | 7.0 | 11.0 |
| 1800 | 18.0 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 3.3 | 8.0 | 12.6 |
| 1850 | 18.5 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 3.4 | 8.0 | 12.6 |
| 1900 | 19.0 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 3.5 | 8.0 | 12.6 |
| 1950 | 19.5 | 107.00 ◊ | 113.20 ◊ | 92.60 ◊ | 120.40 ◊ | 3.6 | 8.0 | 12.6 |
| 2000 | 20.0 | 113.20 ◊ | 117.30 ◊ | 96.70 ◊ | 125.50 ◊ | 3.7 | 9.0 | 13.9 |
| 2050 | 20.5 | 113.20 ◊ | 117.30 ◊ | 96.70 ◊ | 125.50 ◊ | 3.8 | 9.0 | 13.9 |
| 2100 | 21.0 | 113.20 ◊ | 117.30 ◊ | 96.70 ◊ | 125.50 ◊ | 3.9 | 9.0 | 13.9 |
| 2150 | 21.5 | 113.20 ◊ | 117.30 ◊ | 96.70 ◊ | 125.50 ◊ | 4.0 | 9.0 | 13.9 |
| 2200 | 22.0 | 113.20 ◊ | 117.30 ◊ | 96.70 ◊ | 125.50 ◊ | 4.1 | 10.0 | 15.3 |
| 2250 | 22.5 | 113.20 ◊ | 117.30 ◊ | 96.70 ◊ | 125.50 ◊ | 4.1 | 10.0 | 15.3 |
| 2300 | 23.0 | 133.80 ◊ | 139.90 ◊ | 113.20 ◊ | 149.20 ◊ | 4.2 | 10.0 | 15.3 |
| 2350 | 23.5 | 133.80 ◊ | – | 113.20 ◊ | 149.20 ◊ | 4.3 | 10.0 | 15.3 |
| 2400 | 24.0 | 133.80 ◊ | 139.90 ◊ | 113.20 ◊ | 149.20 ◊ | 4.4 | 11.0 | 15.8 |
| 2450 | 24.5 | 133.80 ◊ | 139.90 ◊ | 113.20 ◊ | 149.20 ◊ | 4.5 | 11.0 | 15.8 |
| 2500 | 25.0 | 133.80 ◊ | 139.90 ◊ | 113.20 ◊ | 149.20 ◊ | 4.6 | 11.0 | 15.8 |
| 2550 | 25.5 | 133.80 ◊ | 139.90 ◊ | 113.20 ◊ | 149.20 ◊ | 4.7 | 11.0 | 15.8 |
| 2600 | 26.0 | 169.80 ◊ | 177.00 ◊ | 146.10 ◊ | 171.80 ◊ | 4.8 | 12.0 | 20.0 |
| 2650 | 26.5 | 169.80 ◊ | 177.00 ◊ | 146.10 ◊ | 171.80 ◊ | 4.9 | 12.0 | 20.0 |
| 2700 | 27.0 | 169.80 ◊ | 177.00 ◊ | 146.10 ◊ | 171.80 ◊ | 5.0 | 12.0 | 20.0 |
| 2750 | 27.5 | – | 177.00 ◊ | 146.10 ◊ | 171.80 ◊ | 5.1 | 12.0 | 20.0 |
| 2800 | 28.0 | 169.80 ◊ | 177.00 ◊ | 146.10 ◊ | 171.80 ◊ | 5.1 | 13.0 | 20.7 |
| 2850 | 28.5 | 182.10 ◊ | 189.30 ◊ | 159.50 ◊ | 186.20 ◊ | 5.2 | 13.0 | 20.7 |
| 2900 | 29.0 | 182.10 ◊ | 189.30 ◊ | 159.50 ◊ | 186.20 ◊ | 5.3 | 13.0 | 20.7 |
| 2950 | 29.5 | 182.10 ◊ | 189.30 ◊ | 159.50 ◊ | 186.20 ◊ | 5.4 | 13.0 | 20.7 |
| 3000 | 30.0 | 182.10 ◊ | 189.30 ◊ | 159.50 ◊ | 186.20 ◊ | 5.5 | 14.0 | 22.3 |
| 3050 | 30.5 | – | 202.70 ◊ | 174.90 ◊ | 207.90 ◊ | 5.6 | 14.0 | 22.3 |
| 3100 | 31.0 | 197.60 ◊ | 202.70 ◊ | 174.90 ◊ | 207.90 ◊ | 5.7 | 14.0 | 22.3 |
| 3150 | 31.5 | – | 202.70 ◊ | 174.90 ◊ | 207.90 ◊ | 5.8 | 14.0 | 22.3 |
| 3200 | 32.0 | 197.60 ◊ | 202.70 ◊ | 174.90 ◊ | 207.90 ◊ | 5.9 | 15.0 | 23.1 |
| 3250 | 32.5 | – | 214.00 ◊ | 186.20 ◊ | 220.20 ◊ | 6.0 | 15.0 | 23.1 |
| 3300 | 33.0 | – | 214.00 ◊ | 186.20 ◊ | 220.20 ◊ | 6.1 | 15.0 | 23.1 |
| | | (W113) | (W113) | (W113) | (W113) | | | |

Continued overleaf

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Change plate HT 800 WP

Continued

| Order No. | Nominal dimension $d_1$ mm | 1098 GÜHRING Fire | 1099 GÜHRING Fire | 1102 GÜHRING bright | 1105 GÜHRING TiAlN | Cutting tip $l_4$ mm | Width b mm | Height H mm |
|---|---|---|---|---|---|---|---|---|
| 3350 | 33.5 | – | 214.00 ◊ | 186.20 ◊ | 220.20 ◊ | 6.1 | 15.0 | 23.1 |
| 3400 | 34.0 | 207.90 ◊ | 214.00 ◊ | 186.20 ◊ | 220.20 ◊ | 6.2 | 15.0 | 23.1 |
| 3450 | 34.5 | – | 234.60 ◊ | 205.80 ◊ | 232.60 ◊ | 6.3 | 15.0 | 23.1 |
| 3500 | 35.0 | 230.50 ◊ | 234.60 ◊ | 205.80 ◊ | 232.60 ◊ | 6.4 | 15.0 | 23.1 |
| 3550 | 35.5 | – | 234.60 ◊ | 205.80 ◊ | 232.60 ◊ | 6.5 | 15.0 | 23.1 |
| 3600 | 36.0 | – | 234.60 ◊ | 205.80 ◊ | 232.60 ◊ | 6.6 | 16.0 | 23.9 |
| 3650 | 36.5 | 240.80 ◊ | 247.00 ◊ | 218.10 ◊ | 244.90 ◊ | 6.7 | 16.0 | 23.9 |
| 3700 | 37.0 | – | 247.00 ◊ | 218.10 ◊ | 244.90 ◊ | 6.8 | 16.0 | 23.9 |
| 3750 | 37.5 | 240.80 ◊ | 247.00 ◊ | 218.10 ◊ | 244.90 ◊ | 6.9 | 16.0 | 23.9 |
| 3800 | 38.0 | 240.80 ◊ | 247.00 ◊ | 218.10 ◊ | 244.90 ◊ | 7.0 | 16.0 | 23.9 |
| 3850 | 38.5 | 251.10 ◊ | 259.30 ◊ | 228.40 ◊ | 257.30 ◊ | 7.1 | 16.0 | 23.9 |
| 3900 | 39.0 | – | 259.30 ◊ | 228.40 ◊ | 257.30 ◊ | 7.1 | 16.0 | 23.9 |
| 3950 | 39.5 | 251.10 ◊ (W113) | 259.30 ◊ (W113) | 228.40 ◊ (W113) | 257.30 ◊ (W113) | 7.2 | 16.0 | 23.9 |

## Tightening screw

**Design:** Clamping screw with TORX® mount.

**Application:** For clamping the removable plate for drilling system HT 800 WP.

GÜHRING

| Order No. | For carrier size | 1108 GÜHRING | Thread G mm | Length $l_1$ mm | For TORX® |
|---|---|---|---|---|---|
| 0011 | 110; 115 | 5.70 ◊ | M2.2 | 9.50 | T 7 |
| 0012 | 120; 125 | 5.70 ◊ | M2.2 | 10.50 | T 7 |
| 0013 | 130; 135 | 5.70 ◊ | M2.5 | 11.40 | T 8 |
| 0014 | 140; 145 | 5.70 ◊ | M3.0 | 12.10 | T 9 |
| 0015 | 150; 155 | 5.70 ◊ | M3.0 | 13.10 | T 9 |
| 0016 | 160–175 | 5.70 ◊ | M3.5 | 14.25 | T 10 |
| 0018 | 180–190 | 5.70 ◊ (W113) | M4.0 | 16.00 | T 15 |

| Order No. | For carrier size | 1108 GÜHRING | Thread G mm | Length $l_1$ mm | For TORX® |
|---|---|---|---|---|---|
| 0020 | 200–210 | 5.70 ◊ | M4.5 | 18.00 | T 15 |
| 0022 | 220–230 | 5.70 ◊ | M5.0 | 19.75 | T 20 |
| 0024 | 240–250 | 5.70 ◊ | M5.0 | 21.75 | T 20 |
| 0026 | 260–295 | 5.10 ◊ | M5.0 | 23.40 | T 20 |
| 0030 | 300–315 | 5.10 ◊ | M6.0 | 27.00 | T 25 |
| 0032 | 320–350 | 5.80 ◊ | M6.0 | 28.50 | T 25 |
| 0036 | 360–390 | 5.80 ◊ (W113) | M6.0 | 32.50 | T 25 |

## TORX®-Schraubendreher

**Design:** Blade made of chrome-vanadium steel.

**Application:** Especially for fixing solid carbide indexable inserts.

format professional quality

5879

5880

| Order No. | Size | 5879 format professional quality | 5880 format professional quality | Blade length mm |
|---|---|---|---|---|
| 0003 | T 7 | 2.46 | – | 35 |
| 0004 | T 8 | 2.46 | – | 40 |
| 0005 | T 9 | 2.13 | – | 40 |
| 0010 | T 10 | 2.16 | – | 40 |
| 0015 | T 15 | 2.25 | – | 45 |
| 0025 | T 20 | 2.46 | – | 45 |
| 0035 | T 25 | – (W528) | 4.65 (W528) | 100 |

## Torque screwdriver for clamping screws

GEDORE

**Design:** With ergonomic and slip resistant rubber handle. Simple and exact value setting by means of the micrometer scale ring. The set values are automatically fixed by the "Positive Lock" mechanism. With precision circulation ball coupling for controlled right and left tightening. Constant repeatability with a tolerance of ±6 % of set value. When reaching the set value, the automatic slip mechanism releases clearly and prevents exceeding the value. Suitable for activating 1/4"hexagon bits according to C 6.3 DIN 3126 or with adapter piece (included in delivery) for socket wrench inserts according to DIN 3124. Conforms to EPA (Electro Protected Area).
Scope of delivery: Torque wrench with certification according to DIN EN ISO 6789, 1/4" adapter gear coupling, user manual and handle with slider.

**Application.** In the electrical and electronics industry as well as apparatus manufacturing industry. Fast and controlled tightening of screws allows application in series production and quality control.

| Order No. | Scale range | 6230 GEDORE | Scale graduation | Actuation accuracy % | Length mm |
|---|---|---|---|---|---|
| 0050 | 1.2–6 N•m | 361.00 (W522) | 0.1 Nm | ± 6 | 196 |

## Short stepped drill with cyl. Shank

**Design:** HSS, according to factory standard, type N.
Very torsion stable model, profile grinding, right cutting, with precise point geometry. Short form according to DIN 1897, point thinning according to DIN 1412, form A. Normal angle of rake, core thickness and core gradient. Drilling and countersinking are produced in a single step, aligned to each other. Ø tolerance: $d_1$ = h6.

HSS | Factory standard | Type N | 118°

**Note:** The cutting speed is orientated towards the large diameter, the feed towards the small diameter.

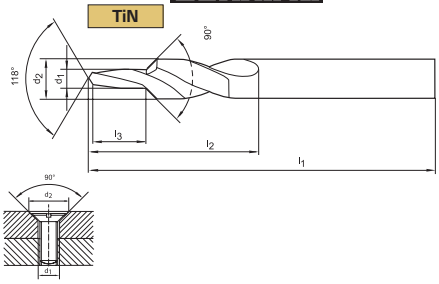
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1100 | 30 | 16 | | | | | | | 8 | | 30 | 50 | 50 |
| 1101 | 30 | 18 | | | | | | | 10 | | 33 | 50 | 65 |
| 1103 | 30 | 16 | | | | | | | 8 | | 30 | 50 | 50 |
| 1104 | 30 | 18 | | | | | | | 10 | | 33 | 50 | 65 |
| 1106 | 30 | 16 | | | | | | | 8 | | 30 | 50 | 50 |
| 1107 | 30 | 18 | | | | | | | 10 | | 33 | 50 | 65 |

## 90° short stepped drill for through-holes

**Design:** 90° countersink angle, fine.

**Application:** For screw through-holes according to DIN EN 20273 and 90° screw head countersinking. Form A and B according to DIN 74, part 1. For screws according to DIN 963 and DIN 964. Particularly suitable for CNC or NC machines.

| Order No. | For tapped holes | 1100 format bright | 1101 GÜHRING TiN | Drill Ø $d_1$ x countersink Ø $d_2$ mm | Overall length $l_1$ mm | Spiral length $l_2$ mm | Drill step length $l_3$ mm |
|---|---|---|---|---|---|---|---|
| 0030 | M3 | 13.80 | 21.80 | 3.2 x 6.0 | 66 | 28 | 9 |
| 0040 | M4 | 15.65 | 23.90 | 4.3 x 8.0 | 79 | 37 | 11 |
| 0050 | M5 | 19.70 | 30.70 | 5.3 x 10.0 | 89 | 43 | 13 |
| 0060 | M6 | 23.00 | 34.60 | 6.4 x 11.5 | 95 | 47 | 15 |
| 0080 | M8 | 26.50 | 44.40 | 8.4 x 15.0 | 111 | 56 | 19 |
| 0100 | M10 | 40.00 (W104) | 66.50 (W109) | 10.5 x 19.0 | 127 | 64 | 23 |





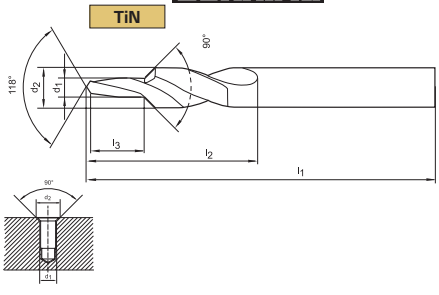


## 90° short stepped drill for thread core holes

**Design:** 90° countersink angle.

**Application:** For thread core holes according to DIN 336, part 1 and 90° free countersinking corresponding with the through-holes according to DIN EN 20273. Particularly suitable for CNC or NC machines.

| Order No. | For tapped holes | 1103 format bright | 1104 GÜHRING TiN | Drill Ø $d_1$ x countersink Ø $d_2$ mm | Overall length $l_1$ mm | Spiral length $l_2$ mm | Drill step length $l_3$ mm |
|---|---|---|---|---|---|---|---|
| 0030 | M3 | 12.90 | 18.80 | 2.5 x 3.4 | 52 | 20 | 8.8 |
| 0040 | M4 | 13.30 | 18.80 | 3.3 x 4.5 | 58 | 24 | 11.4 |
| 0050 | M5 | 14.40 | 20.50 | 4.2 x 5.5 | 66 | 28 | 13.6 |
| 0060 | M6 | 14.80 | 21.80 | 5.0 x 6.6 | 70 | 31 | 16.5 |
| 0080 | M8 | 17.70 | 26.00 | 6.8 x 9.0 | 84 | 40 | 21.0 |
| 0100 | M10 | 22.80 | 33.30 | 8.5 x 11.0 | 95 | 47 | 25.5 |
| 0120 | M12 | 29.20 (W104) | 42.70 (W109) | 10.2 x 13.5 | 107 | 54 | 30.0 |





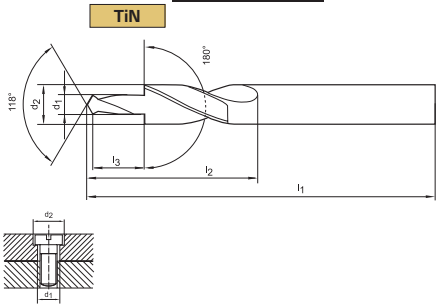


## 180° short stepped drill for through-holes

**Design:** 180° countersink angle, medium.

**Application:** For screw through-holes according to DIN EN 20273 and 180° screw head countersinking. Form H, J and K according to DIN 84, DIN 912, DIN 6912, DIN 7513 and DIN 7984. Particularly suitable for CNC or NC machines.

| Order No. | For tapped holes | 1106 format bright | 1107 GÜHRING TiN | Drill Ø $d_1$ x countersink Ø $d_2$ mm | Overall length $l_1$ mm | Spiral length $l_2$ mm | Drill step length $l_3$ mm |
|---|---|---|---|---|---|---|---|
| 0030 | M3 | 13.00 | 20.90 | 3.4 x 6 | 66 | 28 | 9 |
| 0040 | M4 | 18.10 | 23.50 | 4.5 x 8 | 79 | 37 | 11 |
| 0050 | M5 | 22.30 | 29.40 | 5.5 x 10 | 89 | 43 | 13 |
| 0060 | M6 | 21.30 | 34.10 | 6.6 x 11 | 95 | 47 | 15 |
| 0080 | M8 | 26.80 | 42.70 | 9.0 x 15 | 111 | 56 | 19 |
| 0100 | M10 | 40.60 (W104) | 65.70 (W109) | 11.0 x 18 | 123 | 62 | 23 |



## Multiple twist stepped drill with cyl. Shank

HSS | Type N | 118° | 25–30° | format professional quality

**Design:** HSS, type N.
Profile grinding, steam tempered surface, right cutting, with precise point geometry. Point thinning according to DIN 1412, form A. Normal angle of rake, core thickness and core gradient. Drilling and countersinking are produced in a single step, aligned to each other.
Ø tolerance: $d_1$ = h9
$d_2$ = h8

**Note:** The cutting speed is orientated towards the large diameter, the feed towards the small diameter.

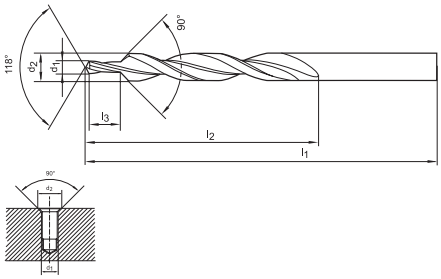
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1109 | 30 | 16 | | | | | | | 8 | | 30 | 50 | 50 |
| 1112 | 30 | 16 | | | | | | | 8 | | 30 | 50 | 50 |
| 1115 | 30 | 16 | | | | | | | 8 | | 30 | 50 | 50 |

## 90° multiple twist stepped drill for core holes

DIN 8378

**Design:** DIN 8378, 90° countersink angle.

**Application:** For thread core holes according to DIN 336, part 1 and 90° free countersinking corresponding with the through-holes according to DIN EN 20273.







| Order No. | For tapped holes | 1109 format steam | Drill Ø $d_1$ x countersink Ø $d_2$ mm | Overall length $l_1$ mm | Spiral length $l_2$ mm | Drill step length $l_3$ mm |
|---|---|---|---|---|---|---|
| 0030 | M3 | 16.00 | 2.5 x 3.4 | 70 | 39 | 8.8 |
| 0040 | M4 | 17.45 | 3.3 x 4.5 | 80 | 47 | 11.4 |
| 0050 | M5 | 17.85 | 4.2 x 5.5 | 93 | 57 | 13.6 |
| 0060 | M6 | 24.00 | 5.0 x 6.6 | 101 | 63 | 16.5 |
| 0080 | M8 | 29.70 | 6.8 x 9.0 | 125 | 81 | 21.0 |
| 0100 | M10 | 36.50 | 8.5 x 11.0 | 142 | 94 | 25.5 |
| 0120 | M12 | 38.00 | 10.2 x 13.5 | 160 | 108 | 30.0 |

(W104)

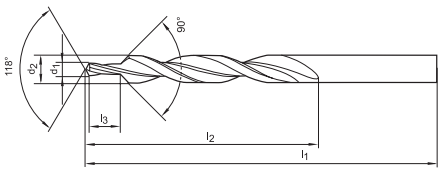
With Morse taper Shank DIN 8379 or VHM design available on request.

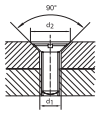
## 90° multiple twist stepped drill for through-holes

DIN 8374

**Design:** DIN 8374, 90° countersink angle, fine.

**Application:** For screw through-holes according to DIN EN 20273 and 90° screw head countersinking. Form A and B according to DIN 74, part 1. For screws according to DIN 963 and DIN 964.




| Order No. | For tapped holes | 1112 format steam | Drill Ø $d_1$ x countersink Ø $d_2$ mm | Overall length $l_1$ mm | Spiral length $l_2$ mm | Drill step length $l_3$ mm |
|---|---|---|---|---|---|---|
| 0030 | M3 | 19.30 | 3.2 x 6.0 | 93 | 57 | 9 |
| 0040 | M4 | 22.30 | 4.3 x 8.0 | 117 | 75 | 11 |
| 0050 | M5 | 28.20 | 5.3 x 10.0 | 133 | 87 | 13 |
| 0060 | M6 | 31.60 | 6.4 x 11.5 | 142 | 94 | 15 |
| 0080 | M8 | 52.60 | 8.4 x 15.0 | 169 | 114 | 19 |
| 0100 | M10 | 81.10 | 10.5 x 19.0 | 198 | 135 | 23 |

(W104)

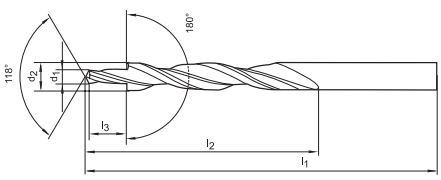
With Morse taper Shank DIN 8375 available on request.

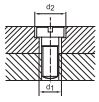
## 180° multiple twist stepped drill for through-holes

DIN 8376

**Design:** DIN 8376, 180° countersink angle, medium.

**Application:** For screw through-holes according to DIN EN 20273 and 180° screw head countersinking. Form H, J and K according to DIN 84, DIN 912, DIN 6912, DIN 7513 and DIN 7984.




| Order No. | For tapped holes | 1115 format steam | Drill Ø $d_1$ x countersink Ø $d_2$ mm | Overall length $l_1$ mm | Spiral length $l_2$ mm | Drill step length $l_3$ mm |
|---|---|---|---|---|---|---|
| 0030 | M3 | 19.40 | 3.4 x 6 | 93 | 57 | 9 |
| 0040 | M4 | 22.50 | 4.5 x 8 | 117 | 75 | 11 |
| 0050 | M5 | 27.30 | 5.5 x 10 | 133 | 87 | 13 |
| 0060 | M6 | 31.50 | 6.6 x 11 | 142 | 94 | 15 |
| 0080 | M8 | 39.60 | 9.0 x 15 | 169 | 114 | 19 |
| 0100 | M10 | 82.30 | 11.0 x 18 | 191 | 130 | 23 |

(W104)

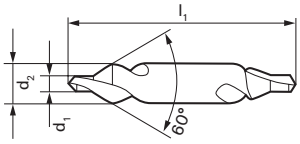
With Morse taper Shank DIN 8377 or VHM design available on request.

## Centre drill

**Design:** DIN 333-A, 60° countersink angle. Profile ground
Ø tolerance: Ø 1.0–2.5 = + 0.14 mm
Ø 3.15–5.0 = + 0.18 mm
Ø 6.3 = + 0.22 mm

DIN 333-A

**Application:** Standard centre drill for producing centre holes according to DIN 332, sheet 1, form A (protective countersinking).




**1120** Bright — HSS, bright surface, right cutting

HSS

**1121** Bright — HSS, bright surface, right cutting

HSS

**1123** TiN — HSS, TiAlN coated surface, right cutting.

HSS

**1126** Bright — HSS, Co5, bright surface, right cutting.

HSS Co5

**1130** Bright — HSS bright surface, left cutting

HSS

**1131** TiN — HSS, TiAlN coated surface, right cutting.

HSS

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1120 | **12** | 10 | | | | | | | | | 20 | **45** | **45** |
| 1121 | **12** | 10 | 6 | | | | | | | | 20 | **30** | 60 |
| 1123 | **20** | **10** | 10 | | | | | | 10 | 3 | 25 | 40 | 60 |
| 1126 | 12 | 10 | 8 | | | | | | **10** | **5** | 22 | 50 | 50 |
| 1130 | **12** | 10 | 6 | | | | | | 10 | 3 | 20 | **30** | 60 |
| 1131 | **20** | **10** | 10 | | | | | | **10** | **5** | 25 | 40 | 90 |

| Order No. | Drill Ø $d_1$ k12 mm | 1120 format bright | 1121 GÜHRING bright | 1123 format TiN | 1126 format bright | 1130 GÜHRING bright | 1131 GÜHRING TiN | PU | Shank Ø $d_2$ h8 mm | $l_1$ mm | For work-piece Ø mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0050 | 0.50* | – | 8.10 | – | – | 12.40 | 19.80 | 10 | 3.15 | 25.0 | > 4 | 0.02 |
| 0080 | 0.80* | – | 7.85 | – | – | 12.25 | 19.45 | 10 | 3.15 | 25.0 | 4– 6 | 0.02 |
| 0100 | 1.00 | 2.43 | 7.20 | 7.80 | 3.92 | 11.55 | 16.95 | 10 | 3.15 | 31.5 | 6– 8 | 0.02 |
| 0125 | 1.25 | 2.43 | 8.40 | 7.80 | – | 13.35 | 19.45 | 10 | 3.15 | 31.5 | 8– 10 | 0.02 |
| 0160 | 1.60 | 2.55 | 7.20 | 8.05 | 3.86 | 10.55 | 15.80 | 10 | 4.00 | 35.5 | 10– 15 | 0.02 |
| 0200 | 2.00 | 2.90 | 6.85 | 8.25 | 4.70 | 12.45 | 16.60 | 10 | 5.00 | 40.0 | 15– 20 | 0.03 |
| 0250 | 2.50 | 3.40 | 8.10 | 9.05 | 5.40 | 12.90 | 19.45 | 10 | 6.30 | 45.0 | 20– 30 | 0.03 |
| 0315 | 3.15 | 4.38 | 11.50 | 10.25 | 6.45 | 17.30 | 23.40 | 10 | 8.00 | 50.0 | 30– 40 | 0.04 |
| 0400 | 4.00 | 6.25 | 16.60 | 12.15 | 8.95 | 22.30 | 38.20 | 10 | 10.00 | 56.0 | 40– 63 | 0.05 |
| 0500 | 5.00 | 8.70 | 23.40 | – | 15.35 | 36.00 | 55.40 | 1 | 12.50 | 63.0 | 63–100 | 0.07 |
| 0630 | 6.30 | 14.20 | 34.20 | – | 19.55 | 64.10 | 85.80 | 1 | 16.00 | 71.0 | 100–150 | 0.09 |
| 0800 | 8.00 | 22.00 | 54.00 | – | – | 92.20 | 133.50 | 1 | 20.00 | 80.0 | 150–250 | 0.10 |
| 1000 | 10.00 | 46.50 | 108.00 | – | – | 200.50 | – | 1 | 25.00 | 100.0 | < 250 | 0.12 |
| 1250 | 12.50 | – | – | – | – | 305.50 | – | 1 | 31.50 | 125.0 | < 250 | 0.12 |
| | | (W106) | (W101) | (W106) | (W106) | (W101) | (W101) | | | | | |

* Single-sided cutting

Articles marked ◊ are not held in stock, procurement is effected at short notice.

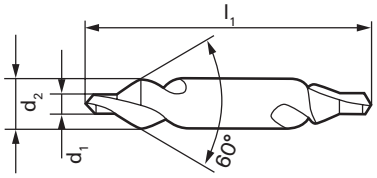
## Centre drill, extra long

**Design:** DIN 333-A, 60° countersink angle.
**Profile grinding**, right cutting.
Ø Tolerance: Ø 1.0–2.5 = + 0.14 mm
Ø 3.15–5.0 = + 0.18 mm
Ø 6.3 = + 0.22 mm

**Application:** Longer special drill for producing centre holes according to DIN 332, page 1, Form A (without reduction) for deeper lying centring points.

HSS | Factory standard | 60° A

GÜHRING



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1133 | 20 | 10 | 6 | | | | | | 10 | 3 | 20 | 30 | 60 |

| Order No. | Drill Ø $d_1$ k12 mm | 1133 GÜHRING bright | PU | Shank Ø $d_2$ h8 mm | $l_1$ mm | For workpiece Ø mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.00 | 18.00 | 10 | 4.00 | 120.0 | 6– 8 | 0.02 |
| 0160 | 1.60 | 17.65 | 10 | 5.00 | 120.0 | 10–15 | 0.02 |
| 0200 | 2.00 | 16.60 | 10 | 6.00 | 120.0 | 15–20 | 0.03 |
| 0250 | 2.50 | 19.80 | 10 | 8.00 | 120.0 | 20–30 | 0.03 |
| 0315 | 3.15 | 38.20 (W101) | 10 | 10.00 | 120.0 | 30–40 | 0.04 |

## Centre drill

**Design:** HSS, DIN 333-R, with radius (minimal danger of breaking), 60° countersink angle, profile grinding, bright surface.
Ø tolerance: Ø 1.0–2.5 = + 0.14 mm
Ø 3.15–5.0 = + 0.18 mm
Ø 6.3 = + 0.22 mm

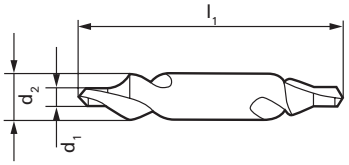
**Application:** Standard centre drill for producing centre holes according to DIN 332, sheet 1, form R (with radius).

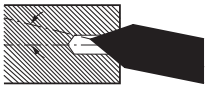
**1129** Bright — Right-hand cutting.

**1134** Bright — Right-hand cutting.

**1135** Bright — Left-hand cutting.

HSS | DIN 333-R | 60° R



1129 format professional quality
bright

1134 GÜHRING
bright

1135 GÜHRING
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1129 | 12 | 10 | | | | | | | | | 20 | 45 | 45 |
| 1134 | 20 | 10 | 6 | | | | | | 6 | 3 | 20 | 45 | 45 |
| 1135 | 20 | 10 | 6 | | | | | | 8 | 3 | 20 | 45 | 45 |

| Order No. | Drill Ø $d_1$ k12 mm | 1129 format bright | 1134 GÜHRING bright | 1135 GÜHRING bright | Shank Ø $d_2$ h8 mm | $l_1$ mm | For workpiece Ø mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|
| 0050 | 0.50* | – | 9.10 | – | 3.15 | 25.0 | > 4 | 0.02 |
| 0080 | 0.80* | – | 8.75 | 16.60 | 3.15 | 25.0 | 4– 6 | 0.02 |
| 0100 | 1.00 | 2.70 | 7.15 | 16.95 | 3.15 | 31.5 | 6– 8 | 0.02 |
| 0125 | 1.25 | 2.70 | 8.45 | 19.45 | 3.15 | 31.5 | 8– 10 | 0.02 |
| 0160 | 1.60 | 2.97 | 6.80 | 12.95 | 4.00 | 35.5 | 10– 15 | 0.02 |
| 0200 | 2.00 | 3.16 | 6.85 | 15.45 | 5.00 | 40.0 | 15– 20 | 0.03 |
| 0240 | 2.40 | – | – | 14.05 | 6.30 | 45.0 | 15– 20 | 0.03 |
| 0250 | 2.50 | 3.46 | 8.10 | 14.15 | 6.30 | 45.0 | 20– 30 | 0.03 |
| 0315 | 3.15 | 4.62 | 11.00 | 20.50 | 8.00 | 50.0 | 30– 40 | 0.04 |
| 0400 | 4.00 | 6.25 | 15.10 | 26.30 | 10.00 | 56.0 | 40– 63 | 0.05 |
| 0500 | 5.00 | 10.00 | 23.00 | 45.40 | 12.50 | 63.0 | 63–100 | 0.07 |
| 0630 | 6.30 | 14.70 | 34.20 | – | 16.00 | 71.0 | 100–150 | 0.09 |
| 0800 | 8.00 | – | 54.00 | – | 20.00 | 80.0 | 150–250 | 0.10 |
| 1000 | 10.00 | – | 108.00 | – | 25.00 | 100.0 | < 250 | 0.12 |
| 1250 | 12.50 | – (W106) | 223.50 (W101) | – (W101) | 31.50 | 125.0 | < 250 | 0.12 |

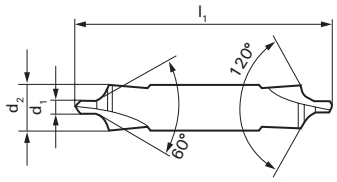
* Single-sided cutting

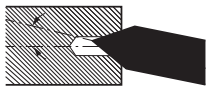
## Centre drill

**Design:** HSS, DIN 333-B, 60/120° countersink angle, **profile grinding,** bright surface.
Ø tolerance: Ø 1.0–2.5 = + 0.14 mm
Ø 3.15–5.0 = + 0.18 mm
Ø 6.3 = + 0.22 mm

**Application:** Standard centre drill for producing centre holes according to DIN 332, sheet 1, form B (with 120° protective countersinking).

HSS | DIN 333-B | 120° 60° B



**1132** format professional quality
**bright**

Right-hand cutting.

**1136** GÜHRING
**bright**

Right-hand cutting.

**1137** GÜHRING
**bright**

Left-hand cutting.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1132 | 12 | 10 | | | | | | | | | 20 | 45 | 45 |
| 1136 | 20 | 10 | 6 | | | | | | 8 | 3 | 20 | 45 | 45 |
| 1137 | 20 | 10 | 6 | | | | | | 8 | 3 | 20 | 45 | 45 |

| Order No. | Drill Ø $d_1$ k12 mm | 1132 format bright | 1136 GÜHRING bright | 1137 GÜHRING bright | Shank Ø $d_2$ h8 mm | $l_1$ mm | For workpiece Ø mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|
| 0100 | 1.00 | – | 11.85 | 30.90 | 4.0 | 35.5 | 6– 8 | 0.02 |
| 0125 | 1.25 | 4.65 | 14.15 | 44.70 | 5.0 | 40.0 | 8– 10 | 0.02 |
| 0160 | 1.60 | 4.74 | 11.55 | 38.20 | 6.3 | 45.0 | 10– 15 | 0.02 |
| 0200 | 2.00 | 5.35 | 12.75 | 38.90 | 8.0 | 50.0 | 15– 20 | 0.03 |
| 0250 | 2.50 | 6.80 | 15.45 | 38.90 | 10.0 | 56.0 | 20– 30 | 0.03 |
| 0315 | 3.15 | 7.35 | 22.70 | 56.20 | 11.2 | 60.0 | 30– 40 | 0.04 |
| 0400 | 4.00 | 12.00 | 28.80 | 55.40 | 14.0 | 67.0 | 40– 63 | 0.05 |
| 0500 | 5.00 | 16.65 | 36.00 | 53.30 | 18.0 | 75.0 | 63–100 | 0.07 |
| 0630 | 6.30 | 22.80 | 58.30 | 82.10 | 20.0 | 80.0 | 100–150 | 0.09 |
| 0800 | 8.00 | – | 102.50 | 183.00 | 25.0 | 100.0 | 150–250 | 0.10 |
| 1000 | 10.00 | – (W106) | 207.50 (W101) | 374.50 (W101) | 31.5 | 125.0 | < 250 | 0.12 |

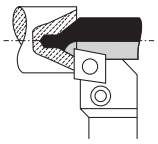
## Centre drill with surface

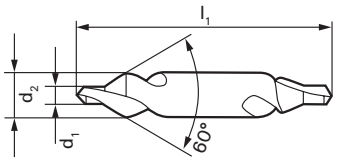
**Design:** DIN 333-A, 60° countersink angle.
**Profile grinding,** right cutting.
Ø tolerance: Ø 1.0–2.5 = + 0.14 mm
Ø 3.15–5.0 = + 0.18 mm
Ø 6.3 = + 0.22 mm

**Application:** Special centre drill for producing centre holes according to DIN 332, sheet 1, form A (without protective countersinking).

HSS | DIN 333-A | 60° A

GÜHRING





**bright**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1138 | 20 | 10 | 6 | | | | | | 8 | 3 | 20 | 45 | 45 |

| Order No. | Drill Ø $d_1$ k12 mm | 1138 GÜHRING bright | Shank Ø $d_2$ h8 mm | $l_1$ mm | For workpiece Ø mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0160 | 1.60 | 12.65 | 4.0 | 35.5 | 10– 15 | 0.02 |
| 0200 | 2.00 | 10.50 | 5.0 | 40.0 | 15– 20 | 0.03 |
| 0250 | 2.50 | 11.60 | 6.3 | 45.0 | 20– 30 | 0.03 |
| 0315 | 3.15 | 14.05 | 8.0 | 50.0 | 30– 40 | 0.04 |
| 0400 | 4.00 | 19.80 | 10.0 | 56.0 | 40– 63 | 0.05 |
| 0500 | 5.00 | 33.50 | 12.5 | 63.0 | 63–100 | 0.07 |
| 0630 | 6.30 | 56.20 | 16.0 | 71.0 | 100–150 | 0.09 |
| 0800 | 8.00 | 94.40 | 20.0 | 80.0 | 150–250 | 0.10 |
| 1000 | 10.00 | 171.50 (W101) | 25.0 | 100.0 | < 250 | 0.12 |

## Centre drill with surface

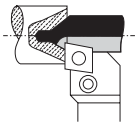
**Design:** DIN 333-A, 60° countersink angle. **Profile grinding**, right cutting.
Ø Tolerance: Ø 1.0–2.5 = + 0.14 mm
Ø 3.15–5.0 = + 0.18 mm
Ø 6.3 = + 0.22 mm

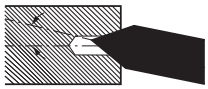
HSS | DIN 333-R | 60° R

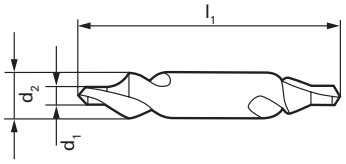
**Application:** Special centre drill for producing centre holes according to DIN 332, sheet 1, form R (without protective countersinking).

GÜHRING

bright








| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1139 | 20 | 10 | 6 | | | | | | 8 | 3 | 20 | 45 | 45 |

| Order No. | Drill Ø $d_1$ k12 mm | 1139 GÜHRING bright | Shank Ø $d_2$ h8 mm | $l_1$ mm | For workpiece Ø mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0100 | 1.00 | 12.65 | 3.15 | 31.5 | 6– 8 | 0.02 |
| 0160 | 1.60 | 10.15 | 4.00 | 35.5 | 10– 15 | 0.02 |
| 0200 | 2.00 | 10.00 | 5.00 | 40.0 | 15– 20 | 0.03 |
| 0250 | 2.50 | 10.90 | 6.30 | 45.0 | 20– 30 | 0.03 |
| 0315 | 3.15 | 14.05 | 8.00 | 50.0 | 30– 40 | 0.04 |
| 0400 | 4.00 | 19.80 | 10.0 | 56.0 | 40– 63 | 0.05 |
| 0500 | 5.00 | 29.20 | 12.50 | 63.0 | 63–100 | 0.07 |
| 0630 | 6.30 | 51.20 | 16.00 | 71.0 | 100–150 | 0.09 |
| 0800 | 8.00 | 99.40 | 20.00 | 80.0 | 150–250 | 0.10 |
| 1000 | 10.00 | 200.50 (W101) | 25.00 | 100.0 | < 250 | 0.12 |

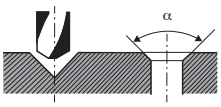
## NC drilling device with cyl. Shank

**Design:** HSS Co5, according to factory standard.
Very sturdy model, profile grinding, right cutting, with precise point geometry and narrow cross blade. With a side clearance angle of 12°/30°. Helix angle smaller than normal, core thickness considerably smaller than normal and taper normal.
From Ø 6 mm with carrier surface according to DIN 1835-B.
Ø tolerance: h6.

**Application:** For precise drill positioning. Used for centring and chamfering thread holes in one step.

HSS Co5 | Factory standard | DIN 1835-B | 90°

format professional quality



1140
bright

1146
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1140 | 12 | 10 | 8 | | | | | | 8 | 3 | 22 | 50 | 40 |
| 1146 | 12 | 15 | 10 | | | | | | 8 | 3 | 22 | 50 | 75 |

| Order No. | Ø h8 mm | 1140 format bright | 1146 format TiN | Slot length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0300 | 3 | 4.08 | – | 12 | 46 | 0.05 |
| 0400 | 4 | 4.46 | – | 12 | 55 | 0.06 |
| 0500 | 5 | 5.20 | 7.25 | 14 | 62 | 0.07 |
| 0600 | 6 | 6.85 | 9.70 | 16 | 66 | 0.09 |
| 0800 | 8 | 8.50 | 14.00 | 21 | 79 | 0.10 |
| 1000 | 10 | 11.60 | 18.90 | 25 | 89 | 0.13 |
| 1200 | 12 | 13.75 | 22.10 | 30 | 102 | 0.16 |
| 1600 | 16 | 22.60 | 31.30 | 38 | 115 | 0.20 |
| 2000 | 20 | 33.00 (W106) | 46.30 (W106) | 45 | 131 | 0.23 |

## NC drilling device with cyl. Shank, long

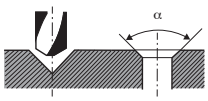
NEW

**Design:** HSS Co5, according to factory standard.
Profile grinding, right cutting, with precise point geometry and narrow cross blade. With a side clearance angle of 12°/30°. Helix angle smaller than normal, core thickness considerably smaller than normal and taper normal.
From Ø 6 mm with carrier surface according to DIN 1835-B.
Ø tolerance: h6.

**Application:** For precise drill positioning. Used for centring and chamfering thread holes in one step.

HSS Co5 | Factory standard | DIN 1835-B | 90°

format professional quality



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1147 | 12 | 10 | 10 | | | | | | 8 | 3 | 22 | 50 | 75 |

| Order No. | Ø h8 mm | 1147 format TiN | Slot length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|
| 0600 | 6 | 26.60 | 20 | 140 | 0.09 |
| 0800 | 8 | 29.40 (W106) | 25 | 140 | 0.10 |

| Order No. | Ø h8 mm | 1147 format TiN | Slot length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|
| 1000 | 10 | 38.00 | 25 | 170 | 0.13 |
| 1200 | 12 | 47.40 (W106) | 30 | 170 | 0.16 |

## NC drilling device with cyl. Shank

**Design:** HSS Co5, according to factory standard.
Very sturdy model, profile grinding, right cutting, with precise point geometry and narrow cross blade. With a side clearance angle of 12°/30°. Helix angle smaller than normal, core thickness considerably smaller than normal and taper normal.
From Ø 6 mm with carrier surface according to DIN 1835-B.
Ø tolerance: h6.

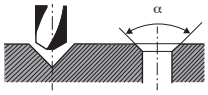
**Application:** For precise drill positioning. Used for centring and chamfering thread holes in one step.

HSS Co5 | Factory standard | DIN 1835-B | 120°

format professional quality

1143
bright

1149
TiN




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1143 | 12 | 10 | 8 | | | | | | 8 | 3 | 22 | 50 | 40 |
| 1149 | 12 | 15 | 10 | | | | | | 8 | 3 | 22 | 50 | 75 |

| Order No. | Ø h8 mm | 1143 format bright | 1149 format TiN | Slot length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0300 | 3 | 2.31 | – | 12 | 46 | 0.04 |
| 0400 | 4 | 2.37 | – | 12 | 55 | 0.05 |
| 0500 | 5 | 3.09 | 7.25 | 14 | 62 | 0.07 |
| 0600 | 6 | 6.65 | 9.70 | 16 | 66 | 0.09 |
| 0800 | 8 | 8.50 (W106) | 14.00 (W106) | 21 | 79 | 0.10 |

| Order No. | Ø h8 mm | 1143 format bright | 1149 format TiN | Slot length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 1000 | 10 | 11.60 | 18.90 | 25 | 89 | 0.13 |
| 1200 | 12 | 13.75 | 22.10 | 30 | 102 | 0.16 |
| 1600 | 16 | 22.60 | 31.30 | 38 | 115 | 0.20 |
| 2000 | 20 | 33.00 (W106) | 46.30 (W106) | 45 | 131 | 0.23 |

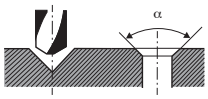
## NC drilling device with cyl. Shank, long

**Design:** HSS Co5, according to factory standard.
Profile grinding, right cutting, with precise point geometry and narrow cross blade. With a side clearance angle of 12°/30°. Helix angle smaller than normal, core thickness considerably smaller than normal and taper normal.
From Ø 6 mm with carrier surface according to DIN 1835-B.
Ø tolerance: h6.

**Application:** For precise drill positioning. Used for centring and chamfering thread holes in one step.

HSS Co5 | Factory standard | DIN 1835-B | 120°

format professional quality



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1150 | 12 | 15 | 10 | | | | | | 8 | 3 | 22 | 50 | 75 |

| Order No. | Ø h8 mm | 1150 format TiN | Slot length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|
| 0600 | 6 | 26.60 | 20 | 140 | 0.09 |
| 0800 | 8 | 29.40 (W106) | 25 | 140 | 0.10 |

| Order No. | Ø h8 mm | 1150 format TiN | Slot length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|
| 1000 | 10 | 38.00 | 25 | 170 | 0.13 |
| 1200 | 12 | 47.40 (W106) | 30 | 170 | 0.16 |

## Overview - Solid carbide spiral drill programme

| Order No. | 1180 | 1172 | 1176 | 1191 | 1183 | 1184 | 1192 | 1186 | 1187 | 1196 | 1190 | 1200 | 1203 | 1206 | 1209 | 1210 | 1211 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ø mm from–to | 1–6.3 | 2–20 | 2–20 | 2–16 | 1–12 | 1–12 | 1–12 | 1–12 | 1–12 | 1–12 | 2.6–12 | 3–20 | 3–20 | 3–20 | 3–20 | 3–16 | 1.4–2.9 |
| DIN | Factory standard | NC drilling device | | 8037 | 6539 | 6539 | 6539 | Factory standard | Factory standard | Factory standard | 6537 K | 6537 short | 6537 short | 6537 short | 6537 short | 6537 | Factory standard |
| Material | Solid carbide | Solid carbide | Solid carbide | Carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide |
| Drill type | Centring drill | N | N | N | N | N | N | N | N | N | H | RT 100U | RT 100U | RT 100U | RT 100U | RT 100VA | – |
| Coating | Bright | TiAlN | TiAlN | Bright | Bright | TiN | TiAlN | Bright | TiN | TiAlN | TiAlN | Fire | Fire | Fire | Fire | TiAlN | TiAlN |
| Point angle | 60° | 90° | 142° | 118° | 118° | 118° | 118° | 118° | 118° | 118° | 120° | 140° | 140° | 140° | 140° | 140° | 140° |
| Thinning | A | | | A | | | | | | | | Special | Special | Special | Special | Ratio | Ratio |
| Drilling depth | | | | | 3 x D | 3 x D | 3 x D | 5 x D | 5 x D | 5 x D | 3 x D | 3 x D | 3 x D | 3 x D | 3 x D | 3 x D | 5 x D |
| Shaft design | | HB | HB | | | | | | | | | HA | HE | HA | HE | HA | |
| Cooling channels IK | | | | | | | | | | | | | | IC | IC | IC | IC |
| Page | 1/60 | 1/60 | 1/60 | 1/61 | 1/62 | 1/62 | 1/62 | 1/64 | 1/64 | 1/64 | 1/69 | 1/66 | 1/66 | 1/66 | 1/66 | 1/69 | 1/71 |

## Material group

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ◐ | ● | ● | ◐ | ● | ● | | ● | ● | ● | ● | | ● |
| Steels up to 1400 N/mm² | | ● | ● | ● | | ◐ | ● | | ◐ | ● | | ◐ | ● | ● | ● | ● | | ● |
| Steels up to 42 HRC | | | | | ◐ | | | ◐ | | | ◐ | ● | ◐ | ◐ | ◐ | ◐ | | |
| Steels up to 52 HRC | | | | | ◐ | | | | | | | ● | ◐ | ◐ | ◐ | ◐ | | |
| Steels up to 56 HRC | | | | | ◐ | | | | | | | ● | ◐ | ◐ | ◐ | ◐ | | |
| Steels up to 60 HRC | | | | | ◐ | | | | | | | ● | ◐ | ◐ | ◐ | ◐ | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | ◐ | ◐ | ◐ | ◐ | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | ◐ | ◐ | | ● | ● | ● | ● | ● | ● | | ◐ | ◐ | ◐ | ◐ | ● | |
| Ti steels, Ti alloys, special steels | | ◐ | ◐ | ◐ | | ◐ | ● | ◐ | ◐ | ● | ◐ | | ◐ | ◐ | ◐ | ◐ | ◐ | |
| Cast-iron materials | | ● | ● | ● | ● | ◐ | ● | ● | ◐ | ● | ● | ◐ | ● | ● | ● | ● | | ◐ |
| Al, Al- and Mg alloy | | ◐ | ◐ | ◐ | | ◐ | ● | ● | ◐ | ● | ● | | ◐ | ◐ | ◐ | ◐ | | |
| Copper, brass, bronze | | ● | ● | ● | ● | ◐ | ● | ● | ◐ | ● | ● | | ◐ | ◐ | ◐ | ◐ | | |

● recommended ◐ suitable ○ limited suitability

## Overview - Solid carbide spiral drill programme

| Order No. | 1212 | 1215 | 1218 | 1221 | 1223 | 1224 | 1227 | 1228 | 1234 | 1235 | 1236 | 1237–1238 | 1239–1240 | 1233 | 1232 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ∅ mm from–to | 3–20 | 3–20 | 3–20 | 3–20 | 3–16 | 3–20 | 3–20 | 3–20 | 3–14 | 3–12 | 3–10 | 1.2–5.0 | 4–12 | 3–20 | 5.98–20 |
| DIN | 6537 long | 6537 long | 6537 long | 6537 long | 6537 | Factory standard | Factory standard | Factory standard | Factory standard | Factory standard | Factory standard | Factory standard | Factory standard | 6537 | Factory standard |
| Material | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Solid carbide | Carbide coated | Solid carbide | Solid carbide |
| Drill type | RT 100U | RT 100U | RT 100U | RT 100U | RT 100 VA | RT 100U | RT 100U | RT 100U | RT 100T | RT 100T | RT 100T | EB 100 | | FT 200 | |
| Coating | Fire | Fire | Fire | Fire | TiAlN | Fire | Fire | Fire | TiAlN | TiAlN | TiAlN | Bright | TiN | Bright | TiAlN |
| Point angle | 140° | 140° | 140° | 140° | 140° | 140° | 140° | 140° | 135° | 135° | 135° | | | 130° | 140° |
| Thinning | Special | Special | Special | Special | Ratio | Special | Special | Special | Special | Special | Special | | | | |
| Drilling depth | 5 x D | 5 x D | 5 x D | 5 x D | 5 x D | 7 x D | 7 x D | 12 x D | 20 x D | 25 x D | 30 x D | | 20 x D 40 x D | 5 x D | 5 x D |
| Shaft design | HA | HE | HA | HE | HA | HA | HE | HA | HA | HA | HA | | | HA | HA |
| Cooling channels IK | | | IC | IC | IC | IC | IC | IC | IC | IC | IC | | | | IC |
| Page | 1/71 | 1/71 | 1/71 | 1/71 | 1/74 | 1/76 | 1/76 | 1/78 | 1/79 | 1/79 | 1/80 | 1/81 | 1/80 | 1/82 | 1/81 |

## Material group

| | 1212 | 1215 | 1218 | 1221 | 1223 | 1224 | 1227 | 1228 | 1234 | 1235 | 1236 | 1237–1238 | 1239–1240 | 1233 | 1232 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● | ◐ | ◐ | | ● |
| Steels up to 1000 N/mm² | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● | ◐ | ◐ | | ● |
| Steels up to 1400 N/mm² | ● | ● | ● | ● | | ◐ | ◐ | ● | ● | ● | ● | ◐ | ◐ | | |
| Steels up to 42 HRC | ◐ | ◐ | ◐ | ◐ | | ◐ | ◐ | ● | ● | ● | ● | ◐ | ◐ | | |
| Steels up to 52 HRC | ◐ | ◐ | ◐ | ◐ | | ◐ | ◐ | | ● | ● | ● | ◐ | ◐ | | |
| Steels up to 56 HRC | | | | | | | | | | | | | | | |
| Steels up to 60 HRC | ◐ | ◐ | ◐ | ◐ | | ◐ | ◐ | | | | | ◐ | ◐ | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ◐ | ● | ● | ● | ● | ◐ | ◐ | | |
| Ti steels, Ti alloys, special steels | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | | | | | ◐ | ◐ | | |
| Cast-iron materials | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● | ◐ | ◐ | ● | ○ |
| Al, Al- and Mg alloy | ◐ | ◐ | ◐ | ◐ | | ● | ● | ● | | | | ◐ | ◐ | ● | |
| Copper, brass, bronze | ◐ | ◐ | ◐ | ◐ | | ◐ | ◐ | ● | ● | ● | ● | ◐ | ◐ | ● | |

● recommended ◐ suitable ○ limited suitability

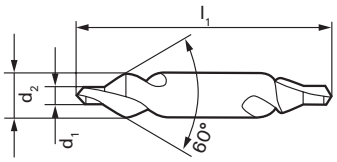
## Solid carbide centre drill

**Design:** solid carbide (K10/K20), according to factory standard. Profile grinding, bright surface, right cutting, with precise point geometry. Point thinning > Ø 1.60 mm according to DIN 1412, form A.
Ø tolerance: Ø 1.00–2.5 = + 0.14 mm
Ø 3.15–5.0 = + 0.18 mm
Ø 6.30 = + 0.22 mm

**Application:** For centring holes without protective countersinking. Particularly suitable for abrasive materials, AISI alloys, fibre-reinforced plastics, duroplasts with a sanding effect on blades and fibres, high strength steels, steel castings, grey cast iron, hard castings, manganese hard steel, CrNi steels, bronzes and light and non-ferrous metals.

Solid carbide | Factory standard | 60° A

format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1180 | 70 | 60 | 30 | | | | | | 30 | 25 | 70 | 150 | 150 |

| Order No. | Drill Ø $d_1$ mm | 1180 format bright | PU | Shank Ø $d_2$ h9 mm | $l_1$ mm | For work-piece Ø mm |
|---|---|---|---|---|---|---|
| 0100 | 1.00 | 28.60 | 10 | 3.15 | 31.5 | 6– 8 |
| 0125 | 1.25 | 31.50 | 10 | 3.15 | 31.5 | 8–10 |
| 0160 | 1.60 | 30.30 | 10 | 4.00 | 35.5 | 10–15 |
| 0200 | 2.00 | 32.90 | 10 | 5.00 | 40.0 | 15–20 |
| 0250 | 2.50 | 37.10 (W108) | 10 | 6.30 | 45.0 | 20–30 |

| Order No. | Drill Ø $d_1$ mm | 1180 format bright | PU | Shank Ø $d_2$ h9 mm | $l_1$ mm | For work-piece Ø mm |
|---|---|---|---|---|---|---|
| 0315 | 3.15 | 49.50 | 10 | 8.00 | 50.0 | 30– 40 |
| 0400 | 4.00 | 55.10 | 10 | 10.00 | 56.0 | 40– 63 |
| 0500 | 5.00 | 96.00 | 1 | 12.50 | 63.0 | 63–100 |
| 0630 | 6.30 | 139.50 (W108) | 1 | 16.00 | 71.0 | 100–150 |

## Solid carbide NC drill bit with cyl. Shank

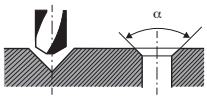
**Design:** Solid carbide (K10/K20), type N, according to factory standard. Very sturdy model, profile grinding, right cutting, with precise point geometry and narrow cross blade. Without point thinning, with a clear side angle of 12°/30°. Angle of rake smaller than normal, core thickness much thinner than normal and normal core gradient. From Ø 6 mm with carrier surface according to DIN 6535-HB.
Ø tolerance: up to Ø 10 mm = h6,
from Ø 10 mm: cutting tolerance = h8.

**Application:**
90° –For drilling and simultaneous countersinking if a spiral drill with a smaller Ø follows.
142° –For intervening with the main blade of the following spiral drill.

Especially suitable for precise positioning and fast boring on NC machines and jig boring machines. Used for centring and chamfering thread holes in one step. Only suitable for drilling. Particularly suitable for high strength steels, steel castings, grey cast iron, hard castings, manganese hard steel, CrNi steels, bronzes and light and non-ferrous metals.

Solid carbide | Factory standard | Type N | DIN 6535-HB | 90° | 142°

format professional quality



1172 / 1176

**1172** 90°

**1176** 142°
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1172 | 65 | 55 | 35 | | | | | | 30 | 40 | 90 | 100 | 180 |
| 1176 | 65 | 55 | 35 | | | | | | 30 | 35 | 90 | 200 | 180 |

| Order No. | Ø h6 mm | 1172 format TiAlN | 1176 format TiAlN | Slot length mm | Total length mm |
|---|---|---|---|---|---|
| 0200 | 2 | 19.40 | 21.10 | 8 | 38 |
| 0300 | 3 | 19.40 | 21.10 | 12 | 46 |
| 0400 | 4 | 21.10 | 22.90 | 12 | 55 |
| 0500 | 5 | 24.00 | 24.70 | 14 | 62 |
| 0600 | 6 | 26.60 (W108) | 27.00 (W108) | 16 | 66 |

| Order No. | Ø h6 mm | 1172 format TiAlN | 1176 format TiAlN | Slot length mm | Total length mm |
|---|---|---|---|---|---|
| 0800 | 8 | 43.40 | 40.40 | 21 | 79 |
| 1000 | 10 | 59.60 | 48.10 | 25 | 89 |
| 1200 | 12 | 78.20 | 57.80 | 30 | 102 |
| 1600 | 16 | 107.00 | 127.50 | 37 | 115 |
| 2000 | 20 | 199.50 (W108) | 208.00 (W108) | 45 | 131 |

## Carbide tipped spiral drill with cyl. Shank

**Design:** Carbide (K10), DIN 8037, type N.
Right cutting, bright surface, with precise point geometry, steam tempered slots and carbide tipped cutting inserts according to DIN 8010. Point thinning according to DIN 1412, form A. Normal angle of rake, core thickness and core gradient. Delivery from Ø 3 mm: shank with carrier according to DIN 1809

**Application:** Particularly suitable for spring band steel, hard castings above 300 HB, pure molybdenum and tough bronzes.

Carbide | DIN 8037 | Type N | 118°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1191 | 80 | 70 | | 25 | 20 | 10 | 10 | | | | 80 | | 180 |

| Order No. | Ø h8 mm | 1191 format bright | Spiral length mm | Total length mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|
| 0200 | 2.0 | 10.30 | 18 | 45 | 0.063 |
| 0220 | 2.2 | 12.25 | 18 | 45 | 0.063 |
| 0250 | 2.5 | 10.30 | 18 | 45 | 0.063 |
| 0280 | 2.8 | 12.25 | 20 | 50 | 0.063 |
| 0300 | 3.0 | 10.15 | 20 | 50 | 0.063 |
| 0310 | 3.1 | 11.85 | 25 | 56 | 0.063 |
| 0320 | 3.2 | 11.85 | 25 | 56 | 0.080 |
| 0330 | 3.3 | 11.85 | 25 | 56 | 0.080 |
| 0340 | 3.4 | 11.85 | 25 | 56 | 0.080 |
| 0350 | 3.5 | 9.05 | 25 | 56 | 0.080 |
| 0360 | 3.6 | 10.35 | 25 | 56 | 0.080 |
| 0370 | 3.7 | 10.35 | 25 | 56 | 0.080 |
| 0380 | 3.8 | 10.35 | 25 | 56 | 0.080 |
| 0400 | 4.0 | 9.05 | 25 | 56 | 0.080 |
| 0410 | 4.1 | 10.50 | 28 | 63 | 0.080 |
| 0420 | 4.2 | 10.50 | 28 | 63 | 0.080 |
| 0430 | 4.3 | 10.50 | 28 | 63 | 0.080 |
| 0450 | 4.5 | 9.40 | 28 | 63 | 0.080 |
| 0480 | 4.8 | 10.50 | 28 | 63 | 0.080 |
| 0500 | 5.0 | 9.25 | 28 | 63 | 0.080 |
| 0510 | 5.1 | 10.50 | 32 | 71 | 0.100 |
| 0520 | 5.2 | 11.50 | 32 | 71 | 0.100 |
| 0540 | 5.4 | 11.50 (W110) | 32 | 71 | 0.100 |

| Order No. | Ø h8 mm | 1191 format bright | Spiral length mm | Total length mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|
| 0550 | 5.5 | 9.75 | 32 | 71 | 0.100 |
| 0580 | 5.8 | 11.50 | 32 | 71 | 0.100 |
| 0600 | 6.0 | 9.75 | 32 | 71 | 0.100 |
| 0650 | 6.5 | 10.35 | 32 | 71 | 0.125 |
| 0680 | 6.8 | 10.50 | 40 | 80 | 0.125 |
| 0700 | 7.0 | 11.10 | 40 | 80 | 0.125 |
| 0750 | 7.5 | 11.50 | 40 | 80 | 0.125 |
| 0800 | 8.0 | 11.50 | 40 | 80 | 0.125 |
| 0850 | 8.5 | 14.10 | 50 | 90 | 0.160 |
| 0900 | 9.0 | 12.40 | 50 | 90 | 0.160 |
| 0950 | 9.5 | 15.05 | 50 | 90 | 0.160 |
| 1000 | 10.0 | 15.75 | 56 | 100 | 0.160 |
| 1020 | 10.2 | 24.10 | 56 | 100 | 0.160 |
| 1050 | 10.5 | 17.85 | 56 | 100 | 0.160 |
| 1100 | 11.0 | 16.15 | 56 | 100 | 0.160 |
| 1150 | 11.5 | 21.70 | 63 | 112 | 0.160 |
| 1200 | 12.0 | 18.70 | 63 | 112 | 0.160 |
| 1250 | 12.5 | 24.70 | 63 | 112 | 0.160 |
| 1300 | 13.0 | 23.20 | 63 | 112 | 0.200 |
| 1350 | 13.5 | 30.50 | 71 | 125 | 0.200 |
| 1400 | 14.0 | 29.80 | 71 | 125 | 0.200 |
| 1500 | 15.0 | 34.40 | 71 | 125 | 0.200 |
| 1600 | 16.0 | 39.40 (W110) | 80 | 140 | 0.200 |


Under the umbrella of **FORMATplus** originates from a highly efficient connection that combines existing synergies, ensures quality and guarantees a high level of performance.

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High-tech tools for better performance, quality and productivity - with us you are always one step ahead!

GÜHRING

1678

## Solid Carbide spiral drill with cyl. Shank

**Design:** Solid carbide, DIN 6539, Type N. Right cutting, with precise point geometry. Normal angle of rake, core thickness and core gradient.

**Application:** Stable spiral drill especially well suited for automated cash machines/revolver banks.

Solid carbide | DIN 6539 | Type N | 118° | 25–30° | 3xD

format professional quality

**1183**
bright

**1184**
TiN

**1192**
TiAlN NEW

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1183 | 80 | 75 | 45 | | | | | | 25 | 20 | 80 | 180 | 85 |
| 1184 | 90 | 85 | 75 | | | | | | 35 | 20 | 90 | 200 | 90 |
| 1192 | 104 | 91 | | 26 | | | | | 32 | 20 | 100 | 210 | 100 |

| Order No. | Ø h7 mm | 1183 format bright | 1184 format TiN | 1192 format TiAlN | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.0 | 3.03 | 3.96 | 5.20 | 6 | 26 | 0.020 |
| 0110 | 1.1 | 3.16 | 4.12 | 5.35 | 7 | 28 | 0.020 |
| 0120 | 1.2 | 3.34 | 4.34 | 5.70 | 8 | 30 | 0.020 |
| 0130 | 1.3 | 3.46 | 4.50 | 5.90 | 8 | 30 | 0.020 |
| 0140 | 1.4 | 2.54 | 3.28 | 4.31 | 9 | 32 | 0.020 |
| 0150 | 1.5 | 3.10 | 3.94 | 5.15 | 9 | 32 | 0.020 |
| 0160 | 1.6 | 2.69 | 3.49 | 4.56 | 10 | 34 | 0.020 |
| 0170 | 1.7 | 3.42 | 4.46 | 5.85 | 10 | 34 | 0.020 |
| 0180 | 1.8 | 3.46 | 4.50 | 5.90 | 11 | 36 | 0.020 |
| 0190 | 1.9 | 2.77 | 3.58 | 4.67 | 11 | 36 | 0.020 |
| 0200 | 2.0 | 3.71 | 4.64 | 6.05 | 12 | 38 | 0.020 |
| 0210 | 2.1 | 3.71 | 4.68 | 6.10 | 12 | 38 | 0.020 |
| 0220 | 2.2 | 3.71 | 4.84 | 6.30 | 13 | 40 | 0.020 |
| 0230 | 2.3 | 3.83 | 5.00 | 6.60 | 13 | 40 | 0.020 |
| 0240 | 2.4 | 3.71 | 4.68 | 6.10 | 14 | 43 | 0.020 |
| 0250 | 2.5 | 3.71 | 4.54 | 6.00 | 14 | 43 | 0.020 |
| 0260 | 2.6 | 3.71 | 5.95 | 7.80 | 14 | 43 | 0.020 |
| 0270 | 2.7 | 5.45 | 6.60 | 8.65 | 16 | 46 | 0.020 |
| 0280 | 2.8 | 5.45 | 7.30 | 9.55 | 16 | 46 | 0.020 |
| 0290 | 2.9 | 5.45 | 7.05 | 9.25 | 16 | 46 | 0.020 |
| 0300 | 3.0 | 5.45 | 6.75 | 8.80 | 16 | 46 | 0.020 |
| 0310 | 3.1 | 5.45 | 6.90 | 9.05 | 18 | 49 | 0.020 |
| 0320 | 3.2 | 5.45 | 6.90 | 9.00 | 18 | 49 | 0.020 |
| 0330 | 3.3 | 6.70 | 8.50 | 11.15 | 18 | 49 | 0.020 |
| 0340 | 3.4 | 5.70 | 7.20 | 9.45 | 20 | 52 | 0.020 |
| 0350 | 3.5 | 5.70 | 7.20 | 9.40 | 20 | 52 | 0.020 |
| 0360 | 3.6 | 6.15 | 7.80 | 10.25 | 20 | 52 | 0.020 |
| 0370 | 3.7 | 6.15 | 7.80 | 10.20 | 20 | 52 | 0.020 |
| 0380 | 3.8 | 6.70 | 8.45 | 11.10 | 22 | 55 | 0.020 |
| 0390 | 3.9 | 6.75 | 8.55 | 11.15 | 22 | 55 | 0.020 |
| 0400 | 4.0 | 6.75 | 8.30 | 10.85 | 22 | 55 | 0.020 |
| 0410 | 4.1 | 7.40 | 9.35 | 12.30 | 22 | 55 | 0.020 |
| 0420 | 4.2 | 7.40 | 9.00 | 11.85 | 22 | 55 | 0.020 |
| 0430 | 4.3 | 7.40 | 9.40 | 12.30 | 24 | 58 | 0.020 |
| 0440 | 4.4 | 7.40 | 9.35 | 12.25 | 24 | 58 | 0.020 |
| 0450 | 4.5 | 7.40 | 9.40 | 12.30 | 24 | 58 | 0.020 |
| 0460 | 4.6 | 7.85 | 9.95 | 13.05 | 24 | 58 | 0.020 |
| 0470 | 4.7 | 7.85 | 10.00 | 13.10 | 24 | 58 | 0.020 |
| 0480 | 4.8 | 7.85 (W110) | 10.00 (W110) | 13.10 (W110) | 26 | 62 | 0.020 |

Continued overleaf

## Solid Carbide spiral drill with cyl. Shank

Continued

| Order No. | Ø h7 mm | 1183 format bright | 1184 format TiN | 1192 format TiAlN | Spiral length mm | Total length mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0490 | 4.9 | 7.85 | 10.00 | 13.10 | 26 | 62 | 0.020 |
| 0500 | 5.0 | 7.85 | 9.65 | 12.65 | 26 | 62 | 0.020 |
| 0510 | 5.1 | 9.15 | 11.60 | 15.20 | 26 | 62 | 0.020 |
| 0520 | 5.2 | 10.15 | 12.85 | 16.85 | 26 | 62 | 0.020 |
| 0530 | 5.3 | 10.15 | 12.90 | 16.85 | 26 | 62 | 0.020 |
| 0540 | 5.4 | 10.95 | 13.80 | 18.15 | 28 | 66 | 0.020 |
| 0550 | 5.5 | 10.15 | 12.85 | 16.85 | 28 | 66 | 0.020 |
| 0560 | 5.6 | 10.50 | 13.30 | 17.40 | 28 | 66 | 0.020 |
| 0570 | 5.7 | 10.65 | 13.45 | 17.60 | 28 | 66 | 0.020 |
| 0580 | 5.8 | 10.70 | 13.60 | 17.80 | 28 | 66 | 0.020 |
| 0590 | 5.9 | 10.90 | 13.85 | 18.15 | 28 | 66 | 0.020 |
| 0600 | 6.0 | 10.70 | 13.15 | 17.20 | 28 | 66 | 0.020 |
| 0650 | 6.5 | 18.35 | 22.40 | 29.40 | 31 | 70 | 0.020 |
| 0680 | 6.8 | 17.00 | 20.40 | 26.70 | 34 | 74 | 0.020 |
| 0700 | 7.0 | 18.50 | 22.60 | 29.70 | 34 | 74 | 0.020 |
| 0750 | 7.5 | 19.00 | 23.20 | 30.40 | 34 | 74 | 0.020 |
| 0800 | 8.0 | 21.90 | 26.30 | 34.50 | 37 | 79 | 0.020 |
| 0850 | 8.5 | 27.10 | 31.50 | 41.20 | 37 | 79 | 0.045 |
| 0900 | 9.0 | 28.50 | 33.40 | 43.80 | 40 | 84 | 0.045 |
| 0950 | 9.5 | 30.40 | 35.60 | 46.60 | 40 | 84 | 0.045 |
| 1000 | 10.0 | 32.80 | 38.40 | 50.30 | 43 | 89 | 0.045 |
| 1020 | 10.2 | 41.90 | 49.10 | 64.30 | 43 | 89 | 0.045 |
| 1050 | 10.5 | 38.00 | 44.50 | 58.30 | 43 | 89 | 0.045 |
| 1100 | 11.0 | 41.80 | 49.00 | 64.10 | 47 | 95 | 0.045 |
| 1200 | 12.0 | 47.50 (W110) | 55.70 (W110) | 72.90 (W110) | 51 | 102 | 0.045 |

## Solid carbide spiral drill set with cyl. shank

**Note:** Set consisting of (Order No. 1025).

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1192 | 104 | 91 | | 26 | | | | | 32 | 20 | 100 | 210 | 100 |

| Order No. | Set contents Ø h7 mm | 1192 format TiAlN | Number of drills Piece | Content mm |
|---|---|---|---|---|
| 0000 | 3.0–10.0 | 117.50 | 6 | 3; 4; 5; 6; 8; 10 |
| 0003 | 2.5– 8.5 | 97.10 (W110) | 6 | 2.5; 3.3; 4.2; 5.0; 6.8; 8.5 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide spiral drill with cyl. Shank

**Design:** Solid carbide, standard, Type N. Right hand cutting with precise point grind. Normal angle of rake, core thickness and core gradient.

**Application:** Stable spiral drill especially well suited for CNC machines/bench drills.

Solid carbide | Factory standard | Type N | 118° | 25–30° | 5xD

format professional quality

1186
bright

1187
TiN

1196
TiAlN NEW

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1186 | 80 | 70 | 35 | | | | | | 25 | 15 | 80 | 120 | 80 |
| 1187 | 85 | 85 | 75 | | | | | | 35 | 20 | 90 | 140 | 80 |
| 1196 | 104 | 91 | | 26 | | | | | 32 | 20 | 100 | 210 | 100 |

| Order No. | Ø h7 mm | 1186 format bright | 1187 format TiN | 1196 format TiAlN | Spiral length mm | Total length mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0100 | 1.0 | 4.62 | 5.85 | 7.65 | 12 | 34 | 0.050 |
| 0110 | 1.1 | 2.82 | 3.58 | 4.67 | 14 | 36 | 0.050 |
| 0120 | 1.2 | 4.34 | 5.50 | 7.20 | 16 | 38 | 0.050 |
| 0130 | 1.3 | 4.56 | 5.70 | 7.45 | 16 | 38 | 0.050 |
| 0140 | 1.4 | 3.33 | 4.18 | 5.50 | 18 | 40 | 0.050 |
| 0150 | 1.5 | 3.29 | 4.07 | 5.30 | 18 | 40 | 0.050 |
| 0160 | 1.6 | 3.48 | 4.41 | 5.75 | 20 | 43 | 0.050 |
| 0170 | 1.7 | 4.47 | 5.65 | 7.40 | 20 | 43 | 0.050 |
| 0180 | 1.8 | 4.56 | 5.70 | 7.45 | 22 | 46 | 0.050 |
| 0190 | 1.9 | 3.61 | 4.52 | 5.90 | 22 | 46 | 0.050 |
| 0200 | 2.0 | 4.73 | 5.70 | 7.45 | 24 | 49 | 0.050 |
| 0210 | 2.1 | 5.40 | 6.85 | 8.95 | 24 | 49 | 0.063 |
| 0220 | 2.2 | 6.00 | 7.55 | 9.90 | 27 | 53 | 0.063 |
| 0230 | 2.3 | 6.00 | 7.55 | 9.90 | 27 | 53 | 0.063 |
| 0240 | 2.4 | 6.00 | 7.55 | 9.90 | 30 | 57 | 0.063 |
| 0250 | 2.5 | 6.00 | 7.35 | 9.60 | 30 | 57 | 0.063 |
| 0260 | 2.6 | 8.25 | 10.40 | 13.65 | 30 | 57 | 0.063 |
| 0270 | 2.7 | 8.25 | 10.40 | 13.65 | 33 | 61 | 0.063 |
| 0280 | 2.8 | 8.25 | 10.40 | 13.65 | 33 | 61 | 0.063 |
| 0290 | 2.9 | 8.25 | 10.40 | 13.65 | 33 | 61 | 0.063 |
| 0300 | 3.0 | 7.75 | 9.35 | 12.25 | 33 | 61 | 0.063 |
| 0310 | 3.1 | 7.75 | 9.55 | 12.50 | 36 | 65 | 0.080 |
| 0320 | 3.2 | 7.75 | 9.55 | 12.50 | 36 | 65 | 0.080 |
| 0330 | 3.3 | 8.75 | 10.80 | 14.15 | 36 | 65 | 0.080 |
| 0340 | 3.4 | 8.90 | 10.95 | 14.35 | 39 | 70 | 0.080 |
| 0350 | 3.5 | 8.25 | 10.15 | 13.35 | 39 | 70 | 0.080 |
| 0360 | 3.6 | 9.45 | 11.70 | 15.25 | 39 | 70 | 0.080 |
| 0370 | 3.7 | 9.45 | 11.70 | 15.25 | 39 | 70 | 0.080 |
| 0380 | 3.8 | 9.45 | 11.70 | 15.25 | 43 | 75 | 0.080 |
| 0390 | 3.9 | 9.45 | 11.65 | 15.25 | 43 | 75 | 0.080 |
| 0400 | 4.0 | 9.45 | 11.25 | 14.75 | 43 | 75 | 0.080 |
| 0410 | 4.1 | 10.05 | 12.40 | 16.25 | 43 | 75 | 0.100 |
| 0420 | 4.2 | 10.05 | 11.95 | 15.65 | 43 | 75 | 0.100 |
| 0430 | 4.3 | 12.20 | 15.00 | 19.65 | 47 | 80 | 0.100 |
| 0440 | 4.4 | 12.20 | 15.05 | 19.70 | 47 | 80 | 0.100 |
| 0450 | 4.5 | 11.85 | 14.60 | 19.10 | 47 | 80 | 0.100 |
| 0460 | 4.6 | 13.65 | 16.85 | 22.10 | 47 | 80 | 0.100 |
| 0470 | 4.7 | 13.65 | 16.80 | 22.00 | 47 | 80 | 0.100 |
| 0480 | 4.8 | 13.65 | 16.80 | 22.00 | 52 | 86 | 0.100 |
| 0490 | 4.9 | 13.65 | 16.85 | 22.10 | 52 | 86 | 0.100 |
| | | (W110) | (W110) | (W110) | | | |

Continued overleaf

## Solid Carbide spiral drill with cyl. Shank

Continued

| Order No. | Ø h7 | 1186 format professional quality | 1187 format professional quality | 1196 format professional quality | Spiral length | Total length | Steels up to 850 N/mm² |
|---|---|---|---|---|---|---|---|
| | mm | bright | TiN | TiAlN | mm | mm | f mm/rev |
| 0500 | 5.0 | 13.05 | 15.50 | 20.30 | 52 | 86 | 0.100 |
| 0510 | 5.1 | 15.65 | 19.30 | 25.30 | 52 | 86 | 0.125 |
| 0520 | 5.2 | 17.65 | 21.70 | 28.50 | 52 | 86 | 0.125 |
| 0530 | 5.3 | 17.10 | 21.10 | 27.60 | 52 | 86 | 0.125 |
| 0540 | 5.4 | 18.65 | 22.90 | 30.00 | 57 | 93 | 0.125 |
| 0550 | 5.5 | 17.80 | 22.00 | 28.80 | 57 | 93 | 0.125 |
| 0560 | 5.6 | 18.05 | 22.30 | 29.10 | 57 | 93 | 0.125 |
| 0570 | 5.7 | 18.35 | 22.70 | 29.70 | 57 | 93 | 0.125 |
| 0580 | 5.8 | 17.50 | 21.60 | 28.30 | 57 | 93 | 0.125 |
| 0590 | 5.9 | 19.20 | 23.70 | 31.00 | 57 | 93 | 0.125 |
| 0600 | 6.0 | 18.45 | 22.00 | 28.80 | 57 | 93 | 0.125 |
| 0650 | 6.5 | 22.90 | 27.20 | 35.70 | 63 | 101 | 0.160 |
| 0680 | 6.8 | 27.40 | 32.00 | 42.00 | 69 | 109 | 0.160 |
| 0700 | 7.0 | 27.40 | 32.60 | 42.70 | 69 | 109 | 0.160 |
| 0750 | 7.5 | 27.40 | 32.60 | 42.80 | 69 | 109 | 0.160 |
| 0800 | 8.0 | 31.90 | 37.40 | 48.90 | 75 | 117 | 0.160 |
| 0850 | 8.5 | 37.40 | 55.80 | 73.10 | 75 | 117 | 0.160 |
| 0900 | 9.0 | 38.90 | 56.60 | 74.10 | 81 | 125 | 0.160 |
| 0950 | 9.5 | 42.80 | 48.80 | 63.90 | 81 | 125 | 0.160 |
| 1000 | 10.0 | 47.80 | 54.50 | 71.40 | 87 | 133 | 0.160 |
| 1020 | 10.2 | 54.70 | 62.30 | 81.50 | 87 | 133 | 0.160 |
| 1050 | 10.5 | 55.80 | 63.60 | 83.30 | 87 | 133 | 0.160 |
| 1100 | 11.0 | 66.80 | 76.10 | 99.70 | 94 | 142 | 0.160 |
| 1200 | 12.0 | 77.70 (W110) | 88.60 (W110) | 116.00 (W110) | 101 | 151 | 0.160 |

## Solid carbide spiral drill set with cyl. shank

**Note:** Set consisting of (Order No. 1025).

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1196 | 104 | 91 | | 26 | | | | | 32 | 20 | 100 | 210 | 100 |

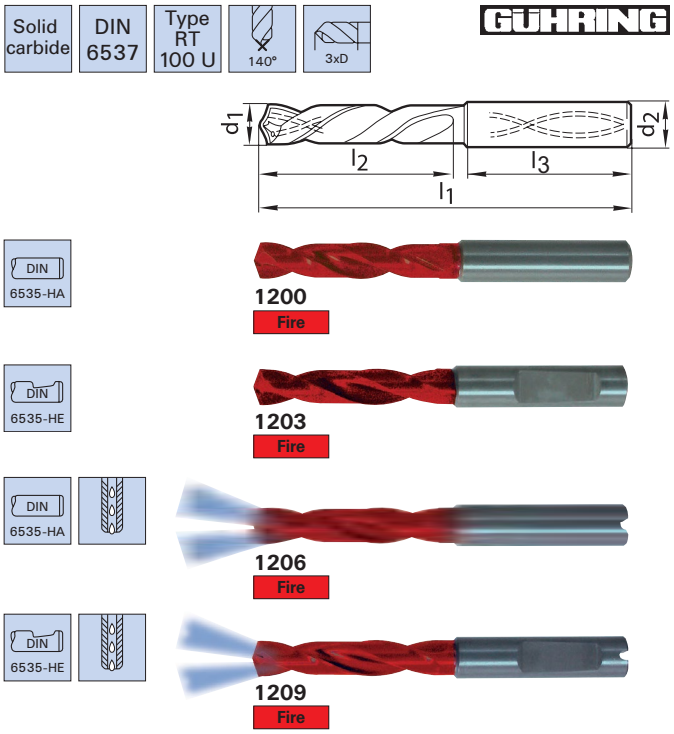
| Order No. | Set contents Ø h7 | 1196 format professional quality | Number of drills | Content |
|---|---|---|---|---|
| | mm | TiAlN | Piece | mm |
| 0000 | 3.0–10.0 | 171.50 | 6 | 3; 4; 5; 6; 8; 10 |
| 0003 | 2.5– 8.5 | 153.50 (W110) | 6 | 2.5; 3.3; 4.2; 5.0; 6.8; 8.5 |

## Solid Carbide spiral drill, SuperLine, 3 x D

**Design:** Ultra-finest grain-solid carbide, DIN 6537, type RT 100 U. Fire coated surface, right cutting with special point geometry and ratio point thinning. Normal angle of rake, core thickness thicker than normal and without core gradient. The drill has a very good self-centring behaviour and produces short chips, even from long-chipping materials.

Carbide application group: K/P – universal use.
(Ultra-fine grain K05–K50/P05–P50)

**Application:** For accurate holes with narrow Ø tolerances and good surfaces. Suitable for drilling holes up to 3 x D with the best cutting values. Particularly suitable for long and short-chipping materials such as GGS and ADI, casting materials, grey cast iron, nodular graphite iron and malleable cast iron, high alloy AISi alloys and alloy steels up to 1200 N/mm² in strength.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1200 | 110 | 105 | 85 | 55 | 45 | 35 | 25 | 15 | 55 | 40 | 155 | 260 | 270 |
| 1203 | 110 | 105 | 85 | 55 | 45 | 35 | 25 | 15 | 55 | 40 | 155 | 260 | 270 |
| 1206 | 125 | 120 | 85 | 65 | 55 | 45 | 35 | 25 | 60 | 45 | 140 | 310 | 325 |
| 1209 | 125 | 120 | 85 | 65 | 55 | 45 | 35 | 25 | 60 | 45 | 140 | 310 | 325 |

| Order No. | Ø $d_1$ = m7 mm | 1200 GÜHRING Fire | 1203 GÜHRING Fire | 1206 GÜHRING Fire | 1209 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 0300 | 3.00 | 29.50 | 30.50 | 37.00 | 38.00 | 20 | 36 | 62 | 6 | 0.080 |
| 0310 | 3.10 | 29.50 | 30.50 | 37.00 | 38.00 | 20 | 36 | 62 | 6 | 0.080 |
| 0317 | 3.17 | 29.50 | 30.50 | 37.00 | 38.00 ◊ | 20 | 36 | 62 | 6 | 0.100 |
| 0320 | 3.20 | 29.50 | 30.50 | 37.00 | 38.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0325 | 3.25 | 29.50 | 30.50 | 37.00 ◊ | 38.00 ◊ | 20 | 36 | 62 | 6 | 0.100 |
| 0330 | 3.30 | 29.50 | 30.50 | 37.00 | 38.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0340 | 3.40 | 29.50 | 30.50 | 37.00 | 38.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0350 | 3.50 | 29.50 | 30.50 | 37.00 | 38.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0357 | 3.57 | 29.50 ◊ | 30.50 | 37.00 ◊ | 38.00 ◊ | 20 | 36 | 62 | 6 | 0.100 |
| 0360 | 3.60 | 29.50 | 30.50 ◊ | 37.00 | 38.00 ◊ | 20 | 36 | 62 | 6 | 0.100 |
| 0370 | 3.70 | 29.50 | 30.50 | 37.00 | 38.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0380 | 3.80 | 29.50 | 30.50 | 37.00 | 38.00 | 24 | 36 | 66 | 6 | 0.100 |
| 0390 | 3.90 | 29.50 | 30.50 | 37.00 | 38.00 | 24 | 36 | 66 | 6 | 0.100 |
| 0397 | 3.97 | 29.50 | 30.50 ◊ | 37.00 | 38.00 ◊ | 24 | 36 | 66 | 6 | 0.100 |
| 0400 | 4.00 | 29.50 | 30.50 | 40.00 | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0410 | 4.10 | 29.50 | 30.50 | 40.00 | 41.50 ◊ | 24 | 36 | 66 | 6 | 0.100 |
| 0420 | 4.20 | 29.50 | 30.50 | 40.00 | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0430 | 4.30 | 29.50 | 30.50 | 40.00 | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0437 | 4.37 | 29.50 | 30.50 ◊ | 40.00 ◊ | 41.50 ◊ | 24 | 36 | 66 | 6 | 0.100 |
| 0440 | 4.40 | 29.50 | 30.50 | 40.00 ◊ | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0450 | 4.50 | 29.50 | 30.50 | 40.00 | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0460 | 4.60 | 29.50 | 30.50 | 40.00 | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0465 | 4.65 | 29.50 | 30.50 | 40.00 | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0470 | 4.70 | 29.50 | 30.50 | 40.00 | 41.50 | 24 | 36 | 66 | 6 | 0.100 |
| 0476 | 4.76 | 29.50 | 30.50 ◊ | 40.00 | 41.50 ◊ | 28 | 36 | 66 | 6 | 0.100 |
| 0480 | 4.80 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.100 |
| 0490 | 4.90 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.100 |
| 0500 | 5.00 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.100 |
| 0510 | 5.10 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| | | (W112) | (W112) | (W112) | (W112) | | | | | |

Continued overleaf

## Solid Carbide spiral drill, SuperLine, 3 x D

Continued

| Order No. | Ø $d_1$ = m7 mm | 1200 GÜHRING Fire | 1203 GÜHRING Fire | 1206 GÜHRING Fire | 1209 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 0516 | 5.16 | 29.50 | 30.50 ◊ | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0520 | 5.20 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0530 | 5.30 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0540 | 5.40 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0550 | 5.50 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0555 | 5.55 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0556 | 5.56 | 29.50 | 30.50 ◊ | 40.00 | 41.50 ◊ | 28 | 36 | 66 | 6 | 0.125 |
| 0560 | 5.60 | 29.50 | 30.50 ◊ | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0570 | 5.70 | 29.50 | 30.50 ◊ | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0580 | 5.80 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0590 | 5.90 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0595 | 5.95 | 29.50 | 30.50 ◊ | 40.00 ◊ | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0600 | 6.00 | 29.50 | 30.50 | 40.00 | 41.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0610 | 6.10 | 29.50 | 30.50 | 55.00 | 57.00 | 28 | 36 | 79 | 8 | 0.125 |
| 0620 | 6.20 | 29.50 | 30.50 | 55.00 | 57.00 | 28 | 36 | 79 | 8 | 0.125 |
| 0630 | 6.30 | 29.50 | 30.50 | 55.00 | 57.00 | 28 | 36 | 79 | 8 | 0.125 |
| 0635 | 6.35 | 29.50 | 30.50 ◊ | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0640 | 6.40 | 29.50 | 30.50 | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0650 | 6.50 | 29.50 | 30.50 | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0660 | 6.60 | 29.50 | 30.50 | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0670 | 6.70 | 29.50 | 30.50 | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0675 | 6.75 | 29.50 | 30.50 | 55.00 | 57.00 ◊ | 34 | 36 | 79 | 8 | 0.160 |
| 0680 | 6.80 | 29.50 | 30.50 | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0690 | 6.90 | 29.50 | 30.50 | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0700 | 7.00 | 29.50 | 30.50 | 55.00 | 57.00 | 34 | 36 | 79 | 8 | 0.160 |
| 0710 | 7.10 | 29.50 | 30.50 | 55.00 | 57.00 ◊ | 34 | 36 | 79 | 8 | 0.160 |
| 0714 | 7.14 | 29.50 | 30.50 ◊ | 55.00 ◊ | 57.00 ◊ | 41 | 36 | 79 | 8 | 0.160 |
| 0720 | 7.20 | 29.50 | 30.50 ◊ | 55.00 | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0730 | 7.30 | 29.50 | 30.50 | 55.00 | 57.00 ◊ | 41 | 36 | 79 | 8 | 0.160 |
| 0740 | 7.40 | 29.50 | 30.50 | 55.00 | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0750 | 7.50 | 29.50 | 30.50 | 55.00 | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0754 | 7.54 | 29.50 | 30.50 ◊ | 55.00 | 57.00 ◊ | 41 | 36 | 79 | 8 | 0.160 |
| 0760 | 7.60 | 29.50 | 30.50 ◊ | 55.00 ◊ | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0770 | 7.70 | 29.50 | 30.50 | 55.00 | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0780 | 7.80 | 29.50 | 30.50 | 55.00 | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0790 | 7.90 | 29.50 | 30.50 | 55.00 | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0794 | 7.94 | 29.50 | 30.50 | 55.00 ◊ | 57.00 ◊ | 41 | 36 | 79 | 8 | 0.160 |
| 0800 | 8.00 | 29.50 | 30.50 | 55.00 | 57.00 | 41 | 36 | 79 | 8 | 0.160 |
| 0810 | 8.10 | 32.50 | 34.00 | 61.00 | 63.00 | 41 | 40 | 89 | 10 | 0.200 |
| 0820 | 8.20 | 32.50 | 34.00 | 61.00 | 63.00 | 41 | 40 | 89 | 10 | 0.200 |
| 0830 | 8.30 | 32.50 | 34.00 | 61.00 | 63.00 | 41 | 40 | 89 | 10 | 0.200 |
| 0833 | 8.33 | 32.50 | 34.00 ◊ | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0840 | 8.40 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0850 | 8.50 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0860 | 8.60 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0870 | 8.70 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0873 | 8.73 | 32.50 | 34.00 ◊ | 61.00 ◊ | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0880 | 8.80 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0890 | 8.90 | 32.50 | 34.00 ◊ | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0900 | 9.00 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0910 | 9.10 | 32.50 | 34.00 ◊ | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0913 | 9.13 | 32.50 | 34.00 ◊ | 61.00 ◊ | 63.00 ◊ | 47 | 40 | 89 | 10 | 0.200 |
| 0920 | 9.20 | 32.50 | 34.00 ◊ | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0925 | 9.25 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0930 | 9.30 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0940 | 9.40 | 32.50 | 34.00 ◊ | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0950 | 9.50 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0952 | 9.52 | 32.50 ◊ | 34.00 | 61.00 | 63.00 ◊ | 47 | 40 | 89 | 10 | 0.200 |
| 0960 | 9.60 | 32.50 | 34.00 ◊ | 61.00 ◊ | 63.00 ◊ | 47 | 40 | 89 | 10 | 0.200 |
| 0970 | 9.70 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0980 | 9.80 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0990 | 9.90 | 32.50 | 34.00 ◊ | 61.00 ◊ | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 0992 | 9.92 | 32.50 | 34.00 ◊ | 61.00 ◊ | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 1000 | 10.00 | 32.50 | 34.00 | 61.00 | 63.00 | 47 | 40 | 89 | 10 | 0.200 |
| 1010 | 10.10 | 49.00 | 51.00 | 87.00 | 90.00 | 47 | 45 | 102 | 12 | 0.200 |
| | | (W112) | (W112) | (W112) | (W112) | | | | | |

Continued overleaf

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide spiral drill, SuperLine, 3 x D

Continued

| Order No. | Ø $d_1$ = m7 mm | 1200 GÜHRING Fire | 1203 GÜHRING Fire | 1206 GÜHRING Fire | 1209 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | 10.20 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1030 | 10.30 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1032 | 10.32 | 49.00 ◊ | 51.00 ◊ | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1040 | 10.40 | 49.00 | 51.00 | 87.00 | 90.00 ◊ | 55 | 45 | 102 | 12 | 0.200 |
| 1050 | 10.50 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1060 | 10.60 | 49.00 | 51.00 ◊ | 87.00 | 90.00 ◊ | 55 | 45 | 102 | 12 | 0.200 |
| 1070 | 10.70 | 49.00 | 51.00 | 87.00 ◊ | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1080 | 10.80 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1090 | 10.90 | 49.00 | 51.00 ◊ | 87.00 | 90.00 ◊ | 55 | 45 | 102 | 12 | 0.200 |
| 1100 | 11.00 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1110 | 11.10 | 49.00 | 51.00 ◊ | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1111 | 11.11 | 49.00 ◊ | 51.00 ◊ | 87.00 ◊ | 90.00 ◊ | 55 | 45 | 102 | 12 | 0.200 |
| 1120 | 11.20 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1130 | 11.30 | 49.00 | 51.00 ◊ | 87.00 | 90.00 ◊ | 55 | 45 | 102 | 12 | 0.200 |
| 1140 | 11.40 | 49.00 | 51.00 ◊ | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1150 | 11.50 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1160 | 11.60 | 49.00 | 51.00 | 87.00 ◊ | 90.00 ◊ | 55 | 45 | 102 | 12 | 0.200 |
| 1170 | 11.70 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1180 | 11.80 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1190 | 11.90 | 49.00 | 51.00 ◊ | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1191 | 11.91 | 49.00 ◊ | 51.00 ◊ | 87.00 ◊ | 90.00 ◊ | 55 | 45 | 102 | 12 | 0.200 |
| 1200 | 12.00 | 49.00 | 51.00 | 87.00 | 90.00 | 55 | 45 | 102 | 12 | 0.200 |
| 1220 | 12.20 | 65.00 | 68.00 | 122.00 | 126.00 | 55 | 45 | 107 | 14 | 0.200 |
| 1250 | 12.50 | 65.00 | 68.00 | 122.00 | 126.00 | 60 | 45 | 107 | 14 | 0.200 |
| 1270 | 12.70 | 65.00 | 68.00 | 122.00 | 126.00 | 60 | 45 | 107 | 14 | 0.250 |
| 1300 | 13.00 | 65.00 | 68.00 | 122.00 | 126.00 | 60 | 45 | 107 | 14 | 0.250 |
| 1350 | 13.50 | 65.00 | 68.00 | 122.00 | 126.00 | 60 | 45 | 107 | 14 | 0.250 |
| 1370 | 13.70 | 65.00 | 68.00 | 122.00 | 126.00 | 60 | 45 | 107 | 14 | 0.250 |
| 1400 | 14.00 | 65.00 | 68.00 | 122.00 | 126.00 | 60 | 45 | 107 | 14 | 0.250 |
| 1420 | 14.20 | 84.00 | 88.00 | 148.00 ◊ | 154.00 | 60 | 48 | 115 | 16 | 0.250 |
| 1429 | 14.29 | 84.00 | 88.00 ◊ | 148.00 ◊ | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1450 | 14.50 | 84.00 | 88.00 | 148.00 | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1470 | 14.70 | 84.00 | 88.00 | 148.00 | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1500 | 15.00 | 84.00 | 88.00 | 148.00 | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1520 | 15.20 | 84.00 | 88.00 | 148.00 | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1550 | 15.50 | 84.00 | 88.00 | 148.00 | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1570 | 15.70 | 84.00 | 88.00 | 148.00 | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1600 | 16.00 | 84.00 | 88.00 | 148.00 | 154.00 | 65 | 48 | 115 | 16 | 0.250 |
| 1650 | 16.50 | 144.00 | 154.00 | 238.00 | 248.00 ◊ | 73 | 48 | 123 | 18 | 0.315 |
| 1700 | 17.00 | 144.00 | 154.00 | 238.00 | 248.00 | 73 | 48 | 123 | 18 | 0.315 |
| 1750 | 17.50 | 144.00 | 154.00 | 238.00 | 248.00 | 73 | 48 | 123 | 18 | 0.315 |
| 1800 | 18.00 | 144.00 | 154.00 | 238.00 | 248.00 | 73 | 48 | 123 | 18 | 0.315 |
| 1850 | 18.50 | 158.00 | 167.00 | 260.00 ◊ | 270.00 ◊ | 79 | 50 | 131 | 20 | 0.315 |
| 1900 | 19.00 | 158.00 | 167.00 ◊ | 260.00 | 270.00 | 79 | 50 | 131 | 20 | 0.315 |
| 1950 | 19.50 | 158.00 | 167.00 | 260.00 | 270.00 | 79 | 50 | 131 | 20 | 0.315 |
| 2000 | 20.00 | 158.00 | 167.00 | 260.00 | 270.00 | 79 | 50 | 131 | 20 | 0.315 |
| | | (W112) | (W112) | (W112) | (W112) | | | | | |

## Solid carbide spiral drill, 3 x D

**Design:** solid carbide, DIN 6537 K, type H.
TiAlN coated surface, right cutting with 4 surface point. Convex flutes give the tool extremely high stability and ensure the optimum chip breaking. The slot profile adapted to suit hard machining safely transports the chips out of the hole.

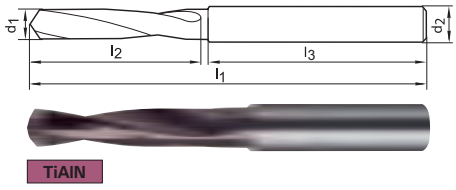
Carbide application group: K/P –universal use.
(Ultra-finest grain K05–K50/P05–P50)

**Application:** Suitable for holes in annealed steels up to 62 HRC.

**Note:** The drills can be sharpened and recoated several times.

Solid carbide | DIN 6537 K | Type H | DIN 6535-HA | 120° | 15° | 3xD

GÜHRING




TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1190 | | | 65 | 40 | 40 | 30 | 30 | | | | 80 | | |

| Order No. | Ø $d_1$ = h7 mm | 1190 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 62 HRc f mm/rev |
|---|---|---|---|---|---|---|---|
| 0260 | 2.6 | 46.80 | 20 | 36 | 62 | 6 | 0.032 |
| 0300 | 3.0 | 46.80 | 20 | 36 | 62 | 6 | 0.032 |
| 0400 | 4.0 | 57.60 | 24 | 36 | 66 | 6 | 0.040 |
| 0500 | 5.0 | 64.10 | 28 | 36 | 66 | 6 | 0.040 |
| | | (W117) | | | | | |

| Order No. | Ø $d_1$ = h7 mm | 1190 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 62 HRc f mm/rev |
|---|---|---|---|---|---|---|---|
| 0600 | 6.0 | 86.40 | 28 | 36 | 66 | 6 | 0.050 |
| 0800 | 8.0 | 111.00 | 41 | 36 | 79 | 8 | 0.063 |
| 1000 | 10.0 | 168.50 | 47 | 40 | 89 | 10 | 0.080 |
| 1200 | 12.0 | 210.50 | 55 | 45 | 102 | 12 | 0.080 |
| | | (W117) | | | | | |

## Solid carbide spiral drill, 4 x D

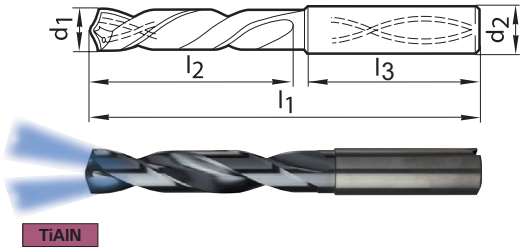
**Design:** solid carbide, DIN 6537 K, type RT 100 VA.
TiAlN coated surface, right cutting with special point geometry and cross point thinning. Normal angle of rake, normal core thickness and without core gradient. The drill has a very good self-centring behaviour and produces short chips.

**Application:** For accurate alignment drilling **with narrow Ø tolerances** and good surfaces. Suitable for drilling holes up to 4 x D with high cutting values. Particularly suitable for cutting stainless steels.

**Note:** The drills can be sharpened and recoated several times.

Solid carbide | DIN 6537 | Type RT 100 VA | DIN 6535-HA | 140° | 30° | 3xD

GÜHRING




TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1210 | | | | | | | | | 80 | 35 | | | |

| Order No. | Ø$d_1$ = m7 mm | 1210 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0300 | 3.00 | 62.60 | 20 | 36 | 62 | 6 | 0.080 |
| 0310 | 3.10 | 67.00 | 20 | 36 | 62 | 6 | 0.080 |
| 0317 | 3.17 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0320 | 3.20 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0325 | 3.25 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0330 | 3.30 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0340 | 3.40 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0350 | 3.50 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0357 | 3.57 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0360 | 3.60 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0370 | 3.70 | 67.00 | 20 | 36 | 62 | 6 | 0.100 |
| 0380 | 3.80 | 67.00 | 24 | 36 | 66 | 6 | 0.100 |
| 0390 | 3.90 | 67.00 | 24 | 36 | 66 | 6 | 0.100 |
| 0397 | 3.97 | 67.00 | 24 | 36 | 66 | 6 | 0.100 |
| 0400 | 4.00 | 67.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0410 | 4.10 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0420 | 4.20 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0430 | 4.30 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0437 | 4.37 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0440 | 4.40 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| | | (W117) | | | | | |

| Order No. | Ø$d_1$ = m7 mm | 1210 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0450 | 4.50 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0460 | 4.60 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0465 | 4.65 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0470 | 4.70 | 72.70 | 24 | 36 | 66 | 6 | 0.100 |
| 0476 | 4.76 | 72.70 | 28 | 36 | 66 | 6 | 0.100 |
| 0480 | 4.80 | 72.70 | 28 | 36 | 66 | 6 | 0.100 |
| 0490 | 4.90 | 72.70 | 28 | 36 | 66 | 6 | 0.100 |
| 0500 | 5.00 | 67.70 | 28 | 36 | 66 | 6 | 0.100 |
| 0510 | 5.10 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0516 | 5.16 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0520 | 5.20 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0530 | 5.30 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0540 | 5.40 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0550 | 5.50 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0555 | 5.55 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0556 | 5.56 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0560 | 5.60 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0570 | 5.70 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0580 | 5.80 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0590 | 5.90 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| | | (W117) | | | | | |

Continued overleaf

## Solid carbide spiral drill, 4 x D

Continued

| Order No. | Ø$d_1$ = m7 mm | 1210 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0595 | 5.95 | 72.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0600 | 6.00 | 67.70 | 28 | 36 | 66 | 6 | 0.125 |
| 0610 | 6.10 | 85.80 | 28 | 36 | 79 | 8 | 0.125 |
| 0620 | 6.20 | 85.80 | 28 | 36 | 79 | 8 | 0.125 |
| 0630 | 6.30 | 85.80 | 28 | 36 | 79 | 8 | 0.125 |
| 0635 | 6.35 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0640 | 6.40 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0650 | 6.50 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0660 | 6.60 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0670 | 6.70 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0675 | 6.75 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0680 | 6.80 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0690 | 6.90 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0700 | 7.00 | 79.20 | 34 | 36 | 79 | 8 | 0.160 |
| 0710 | 7.10 | 85.80 | 34 | 36 | 79 | 8 | 0.160 |
| 0714 | 7.14 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0720 | 7.20 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0730 | 7.30 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0740 | 7.40 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0750 | 7.50 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0754 | 7.54 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0760 | 7.60 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0770 | 7.70 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0780 | 7.80 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0790 | 7.90 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0794 | 7.94 | 85.80 | 41 | 36 | 79 | 8 | 0.160 |
| 0800 | 8.00 | 79.20 | 41 | 36 | 79 | 8 | 0.160 |
| 0810 | 8.10 | 98.70 | 41 | 40 | 89 | 10 | 0.200 |
| 0820 | 8.20 | 98.70 | 41 | 40 | 89 | 10 | 0.200 |
| 0830 | 8.30 | 98.70 | 41 | 40 | 89 | 10 | 0.200 |
| 0833 | 8.33 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0840 | 8.40 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0850 | 8.50 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0860 | 8.60 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0870 | 8.70 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0873 | 8.73 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0880 | 8.80 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0890 | 8.90 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0900 | 9.00 | 90.80 | 47 | 40 | 89 | 10 | 0.200 |
| 0910 | 9.10 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0913 | 9.13 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0920 | 9.20 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0925 | 9.25 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0930 | 9.30 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0940 | 9.40 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0950 | 9.50 | 98.70 (W117) | 47 | 40 | 89 | 10 | 0.200 |

| Order No. | Ø$d_1$ = m7 mm | 1210 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0952 | 9.52 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0960 | 9.60 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0970 | 9.70 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0980 | 9.80 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0990 | 9.90 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 0992 | 9.92 | 98.70 | 47 | 40 | 89 | 10 | 0.200 |
| 1000 | 10.00 | 90.80 | 47 | 40 | 89 | 10 | 0.200 |
| 1010 | 10.10 | 137.50 | 47 | 45 | 102 | 12 | 0.200 |
| 1020 | 10.20 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1030 | 10.30 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1032 | 10.32 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1040 | 10.40 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1050 | 10.50 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1060 | 10.60 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1070 | 10.70 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1080 | 10.80 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1090 | 10.90 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1100 | 11.00 | 127.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1110 | 11.10 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1111 | 11.11 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1120 | 11.20 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1130 | 11.30 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1140 | 11.40 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1150 | 11.50 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1160 | 11.60 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1170 | 11.70 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1180 | 11.80 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1190 | 11.90 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1191 | 11.91 | 137.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1200 | 12.00 | 127.50 | 55 | 45 | 102 | 12 | 0.200 |
| 1220 | 12.20 | 174.50 | 55 | 45 | 107 | 14 | 0.200 |
| 1250 | 12.50 | 174.50 | 60 | 45 | 107 | 14 | 0.200 |
| 1270 | 12.70 | 174.50 | 60 | 45 | 107 | 14 | 0.250 |
| 1300 | 13.00 | 163.00 | 60 | 45 | 107 | 14 | 0.250 |
| 1350 | 13.50 | 174.50 | 60 | 45 | 107 | 14 | 0.250 |
| 1370 | 13.70 | 174.50 | 60 | 45 | 107 | 14 | 0.250 |
| 1400 | 14.00 | 163.00 | 60 | 45 | 107 | 14 | 0.250 |
| 1420 | 14.20 | 214.50 | 60 | 48 | 115 | 16 | 0.250 |
| 1429 | 14.29 | 214.50 | 65 | 48 | 115 | 16 | 0.250 |
| 1450 | 14.50 | 214.50 | 65 | 48 | 115 | 16 | 0.250 |
| 1470 | 14.70 | 214.50 | 65 | 48 | 115 | 16 | 0.250 |
| 1500 | 15.00 | 201.50 | 65 | 48 | 115 | 16 | 0.250 |
| 1520 | 15.20 | 214.50 | 65 | 48 | 115 | 16 | 0.250 |
| 1550 | 15.50 | 214.50 | 65 | 48 | 115 | 16 | 0.250 |
| 1570 | 15.70 | 214.50 | 65 | 48 | 115 | 16 | 0.250 |
| 1600 | 16.00 | 201.50 (W117) | 65 | 48 | 115 | 16 | 0.250 |

## Solid carbide small diameter drill, 5 x D

NEW

GÜHRING

Solid carbide | Factory standard | 140° | 30° | 5xD

**Design:** solid carbide, according to factory standard.
TiAlN coated surface, right cutting, with special point geometry and ratio point thinning. Normal angle of rake, without core gradient. Drill with internal cooling. The drill has a very good self-centring behaviour and produces short chips, even from long-chipping materials.

**Application:** For accurate alignment drilling **with very narrow Ø tolerances** and good surfaces. Suitable for drilling holes up to 5 x D with high cutting values. Particularly suitable for long and short-chipping materials such as construction and case-hardening steels, steel castings, tempered steels, carbon steels, bronzes, castings, high alloy AlSi alloys and alloy steels up to 1400 N/mm² in strength.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1211 | 70 | 65 | 50 | | | | | | | | 55 | | |

| Order No. | Ø = m 7 mm | 1211 GÜHRING TiAlN | Spiral length mm | Total length mm | Shank Ø = h 6 mm | Steels up to 1,000 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0014 | 1.4 | 60.90 ◊ | 11 | 52 | 4 | 0.045 |
| 0015 | 1.5 | 60.90 ◊ | 12 | 52 | 4 | 0.045 |
| 0016 | 1.6 | 60.90 ◊ | 13 | 52 | 4 | 0.045 |
| 0017 | 1.7 | 63.40 ◊ | 14 | 56 | 4 | 0.045 |
| 0018 | 1.8 | 63.40 ◊ | 14 | 56 | 4 | 0.045 |
| 0019 | 1.9 | 63.40 ◊ | 15 | 56 | 4 | 0.045 |
| 0020 | 2.0 | 65.80 ◊ | 16 | 56 | 4 | 0.055 |
| 0021 | 2.1 | 65.80 ◊ (W117) | 17 | 62 | 4 | 0.055 |

| Order No. | Ø = m 7 mm | 1211 GÜHRING TiAlN | Spiral length mm | Total length mm | Shank Ø = h 6 mm | Steels up to 1,000 N/mm² f mm/rev |
|---|---|---|---|---|---|---|
| 0022 | 2.2 | 65.80 ◊ | 18 | 62 | 4 | 0.055 |
| 0023 | 2.3 | 67.50 ◊ | 18 | 62 | 4 | 0.055 |
| 0024 | 2.4 | 67.50 ◊ | 19 | 62 | 4 | 0.055 |
| 0025 | 2.5 | 67.50 ◊ | 20 | 62 | 4 | 0.055 |
| 0026 | 2.6 | 67.50 ◊ | 21 | 66 | 4 | 0.055 |
| 0027 | 2.7 | 67.50 ◊ | 22 | 66 | 4 | 0.055 |
| 0028 | 2.8 | 69.10 ◊ | 22 | 66 | 4 | 0.055 |
| 0029 | 2.9 | 69.10 ◊ (W117) | 23 | 66 | 4 | 0.055 |

## Solid Carbide spiral drill, SuperLine, 5 x D

GÜHRING

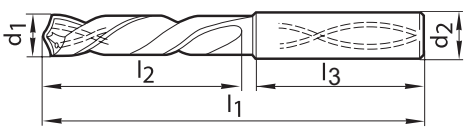
Solid carbide | DIN 6537 | Type RT 100 U | 140° | 5xD

**Design:** Ultra-finest grain-solid carbide, DIN 6537, type RT 100 U. Fire coated surface, right cutting with special point geometry and ratio point thinning. Normal angle of rake, core thickness thicker than normal and without core gradient. The drill has a very good self-centring behaviour and produces short chips, even from long-chipping materials.

Carbide application group: K/P –universal use.
(Ultra-fine grain K05–K50/P05–P50)

**Application:** For accurate alignment drilling with narrow Ø tolerances and good surfaces. Suitable for drilling holes up to 5 x D with high cutting values. Particularly suitable for long and short-chipping materials such as construction and case-hardening steels, steel castings, tempered steels, carbon steels, bronzes, castings, high alloy AlSi alloys and alloy steels up to 1200 N/mm² in strength.

**Note:** The drills can be sharpened and recoated several times.




DIN 6535-HA

1212
Fire

DIN 6535-HE

1215
Fire

DIN 6535-HA

1218
Fire

DIN 6535-HE

1221
Fire

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1212 | 110 | 105 | 85 | 55 | 45 | | 25 | | 55 | 40 | 155 | 260 | 270 |
| 1215 | 110 | 105 | 85 | 55 | 45 | | 25 | | 55 | 40 | 155 | 260 | 270 |
| 1218 | 125 | 120 | 85 | 65 | 55 | | 35 | | 60 | 45 | 140 | 310 | 325 |
| 1221 | 125 | 120 | 85 | 65 | 55 | | 35 | | 60 | 45 | 140 | 310 | 325 |

| Order No. | Ø $d_1$ = m7 mm | 1212 GÜHRING Fire | 1215 GÜHRING Fire | 1218 GÜHRING Fire | 1221 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 0300 | 3.00 | 33.00 (W112) | 35.00 (W112) | 48.00 (W112) | 49.00 (W112) | 28 | 36 | 66 | 6 | 0.080 |

Continued overleaf

## Solid Carbide spiral drill, SuperLine, 5 x D

Continued

| Order No. | Ø $d_1$ = m7 mm | 1212 GÜHRING Fire | 1215 GÜHRING Fire | 1218 GÜHRING Fire | 1221 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 0310 | 3.10 | 33.00 | 35.00 | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.080 |
| 0317 | 3.17 | 33.00 | 35.00 | 48.00 | 49.00 ◊ | 28 | 36 | 66 | 6 | 0.100 |
| 0320 | 3.20 | 33.00 | 35.00 | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.100 |
| 0325 | 3.25 | 33.00 | 35.00 | 48.00 | 49.00 ◊ | 28 | 36 | 66 | 6 | 0.100 |
| 0330 | 3.30 | 33.00 | 35.00 | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.100 |
| 0340 | 3.40 | 33.00 | 35.00 | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.100 |
| 0350 | 3.50 | 33.00 | 35.00 | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.100 |
| 0357 | 3.57 | 33.00 ◊ | 35.00 ◊ | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.100 |
| 0360 | 3.60 | 33.00 ◊ | 35.00 ◊ | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.100 |
| 0370 | 3.70 | 33.00 | 35.00 | 48.00 | 49.00 | 28 | 36 | 66 | 6 | 0.100 |
| 0380 | 3.80 | 33.00 | 35.00 | 48.00 | 49.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0390 | 3.90 | 33.00 | 35.00 | 48.00 | 49.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0397 | 3.97 | 33.00 ◊ | 35.00 ◊ | 48.00 ◊ | 49.00 ◊ | 36 | 36 | 74 | 6 | 0.100 |
| 0400 | 4.00 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0410 | 4.10 | 33.00 | 35.00 ◊ | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0420 | 4.20 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0430 | 4.30 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0437 | 4.37 | 33.00 ◊ | 35.00 ◊ | 51.00 ◊ | 54.00 ◊ | 36 | 36 | 74 | 6 | 0.100 |
| 0440 | 4.40 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0450 | 4.50 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0460 | 4.60 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0465 | 4.65 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0470 | 4.70 | 33.00 | 35.00 | 51.00 | 54.00 | 36 | 36 | 74 | 6 | 0.100 |
| 0476 | 4.76 | 33.00 ◊ | 35.00 ◊ | 51.00 | 54.00 ◊ | 44 | 36 | 82 | 6 | 0.100 |
| 0480 | 4.80 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.100 |
| 0490 | 4.90 | 33.00 | 35.00 ◊ | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.100 |
| 0500 | 5.00 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.100 |
| 0510 | 5.10 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0516 | 5.16 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0520 | 5.20 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0530 | 5.30 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0540 | 5.40 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0550 | 5.50 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0555 | 5.55 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0556 | 5.56 | 33.00 | 35.00 ◊ | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0560 | 5.60 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0570 | 5.70 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0580 | 5.80 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0590 | 5.90 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0595 | 5.95 | 33.00 | 35.00 ◊ | 51.00 | 54.00 ◊ | 44 | 36 | 82 | 6 | 0.125 |
| 0600 | 6.00 | 33.00 | 35.00 | 51.00 | 54.00 | 44 | 36 | 82 | 6 | 0.125 |
| 0610 | 6.10 | 34.00 | 36.00 | 57.00 | 59.00 | 44 | 36 | 91 | 8 | 0.125 |
| 0620 | 6.20 | 34.00 | 36.00 | 57.00 | 59.00 | 44 | 36 | 91 | 8 | 0.125 |
| 0630 | 6.30 | 34.00 | 36.00 | 57.00 | 59.00 | 44 | 36 | 91 | 8 | 0.125 |
| 0635 | 6.35 | 34.00 | 36.00 | 57.00 | 59.00 ◊ | 53 | 36 | 91 | 8 | 0.160 |
| 0640 | 6.40 | 34.00 | 36.00 ◊ | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0650 | 6.50 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0660 | 6.60 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0670 | 6.70 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0675 | 6.75 | 34.00 | 36.00 ◊ | 57.00 ◊ | 59.00 ◊ | 53 | 36 | 91 | 8 | 0.160 |
| 0680 | 6.80 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0690 | 6.90 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0700 | 7.00 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0710 | 7.10 | 34.00 | 36.00 ◊ | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0714 | 7.14 | 34.00 | 36.00 ◊ | 57.00 ◊ | 59.00 ◊ | 53 | 36 | 91 | 8 | 0.160 |
| 0720 | 7.20 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0730 | 7.30 | 34.00 ◊ | 36.00 ◊ | 57.00 ◊ | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0740 | 7.40 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0750 | 7.50 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0754 | 7.54 | 34.00 | 36.00 ◊ | 57.00 ◊ | 59.00 ◊ | 53 | 36 | 91 | 8 | 0.160 |
| 0760 | 7.60 | 34.00 | 36.00 ◊ | 57.00 ◊ | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0770 | 7.70 | 34.00 | 36.00 ◊ | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0780 | 7.80 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0790 | 7.90 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0794 | 7.94 | 34.00 | 36.00 ◊ | 57.00 ◊ | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| | | (W112) | (W112) | (W112) | (W112) | | | | | |

Continued overleaf

## Solid Carbide spiral drill, SuperLine, 5 x D

Continued

| Order No. | Ø $d_1$ = m7 mm | 1212 GÜHRING Fire | 1215 GÜHRING Fire | 1218 GÜHRING Fire | 1221 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 0800 | 8.00 | 34.00 | 36.00 | 57.00 | 59.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0810 | 8.10 | 37.50 | 40.50 | 65.00 | 68.00 | 53 | 40 | 103 | 10 | 0.200 |
| 0820 | 8.20 | 37.50 | 40.50 | 65.00 | 68.00 | 53 | 40 | 103 | 10 | 0.200 |
| 0830 | 8.30 | 37.50 | 40.50 | 65.00 | 68.00 | 53 | 40 | 103 | 10 | 0.200 |
| 0833 | 8.33 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0840 | 8.40 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0850 | 8.50 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0860 | 8.60 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0870 | 8.70 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0873 | 8.73 | 37.50 | 40.50 ◊ | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0880 | 8.80 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0890 | 8.90 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0900 | 9.00 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0910 | 9.10 | 37.50 | 40.50 | 65.00 ◊ | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0913 | 9.13 | 37.50 | 40.50 ◊ | 65.00 ◊ | 68.00 ◊ | 61 | 40 | 103 | 10 | 0.200 |
| 0920 | 9.20 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0925 | 9.25 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0930 | 9.30 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0940 | 9.40 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0950 | 9.50 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0952 | 9.52 | 37.50 ◊ | 40.50 ◊ | 65.00 ◊ | 68.00 ◊ | 61 | 40 | 103 | 10 | 0.200 |
| 0960 | 9.60 | 37.50 | 40.50 ◊ | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0970 | 9.70 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0980 | 9.80 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0990 | 9.90 | 37.50 | 40.50 ◊ | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0992 | 9.92 | 37.50 | 40.50 ◊ | 65.00 | 68.00 ◊ | 61 | 40 | 103 | 10 | 0.200 |
| 1000 | 10.00 | 37.50 | 40.50 | 65.00 | 68.00 | 61 | 40 | 103 | 10 | 0.200 |
| 1010 | 10.10 | 56.00 | 60.00 | 95.00 | 98.00 | 61 | 45 | 118 | 12 | 0.200 |
| 1020 | 10.20 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1030 | 10.30 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1032 | 10.32 | 56.00 | 60.00 ◊ | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1040 | 10.40 | 56.00 | 60.00 ◊ | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1050 | 10.50 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1060 | 10.60 | 56.00 | 60.00 | 95.00 ◊ | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1070 | 10.70 | 56.00 | 60.00 ◊ | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1080 | 10.80 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1090 | 10.90 | 56.00 | 60.00 ◊ | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1100 | 11.00 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1110 | 11.10 | 56.00 | 60.00 ◊ | 95.00 | 98.00 ◊ | 71 | 45 | 118 | 12 | 0.200 |
| 1111 | 11.11 | 56.00 ◊ | 60.00 ◊ | 95.00 | 98.00 ◊ | 71 | 45 | 118 | 12 | 0.200 |
| 1120 | 11.20 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1130 | 11.30 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1140 | 11.40 | 56.00 | 60.00 ◊ | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1150 | 11.50 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1160 | 11.60 | 56.00 | 60.00 ◊ | 95.00 | 98.00 ◊ | 71 | 45 | 118 | 12 | 0.200 |
| 1170 | 11.70 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1180 | 11.80 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1190 | 11.90 | 56.00 ◊ | 60.00 ◊ | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1191 | 11.91 | 56.00 ◊ | 60.00 ◊ | 95.00 ◊ | 98.00 ◊ | 71 | 45 | 118 | 12 | 0.200 |
| 1200 | 12.00 | 56.00 | 60.00 | 95.00 | 98.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1220 | 12.20 | 74.00 | 79.00 | 127.00 | 132.00 | 71 | 45 | 124 | 14 | 0.200 |
| 1250 | 12.50 | 74.00 | 79.00 | 127.00 | 132.00 | 77 | 45 | 124 | 14 | 0.200 |
| 1270 | 12.70 | 74.00 | 79.00 | 127.00 | 132.00 | 77 | 45 | 124 | 14 | 0.250 |
| 1300 | 13.00 | 74.00 | 79.00 | 127.00 | 132.00 | 77 | 45 | 124 | 14 | 0.250 |
| 1350 | 13.50 | 74.00 | 79.00 | 127.00 | 132.00 | 77 | 45 | 124 | 14 | 0.250 |
| 1370 | 13.70 | 74.00 | 79.00 | 127.00 | 132.00 | 77 | 45 | 124 | 14 | 0.250 |
| 1400 | 14.00 | 74.00 | 79.00 | 127.00 | 132.00 | 77 | 45 | 124 | 14 | 0.250 |
| 1420 | 14.20 | 96.00 | 102.00 | 158.00 | 164.00 | 77 | 48 | 133 | 16 | 0.250 |
| 1429 | 14.29 | 96.00 ◊ | 102.00 ◊ | 158.00 ◊ | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1450 | 14.50 | 96.00 | 102.00 | 158.00 | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1470 | 14.70 | 96.00 | 102.00 | 158.00 | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1500 | 15.00 | 96.00 | 102.00 | 158.00 | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1520 | 15.20 | 96.00 | 102.00 | 158.00 | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1550 | 15.50 | 96.00 | 102.00 | 158.00 | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1570 | 15.70 | 96.00 | 102.00 | 158.00 | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| | | (W112) | (W112) | (W112) | (W112) | | | | | |

Continued overleaf

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide spiral drill, SuperLine, 5 x D

Continued

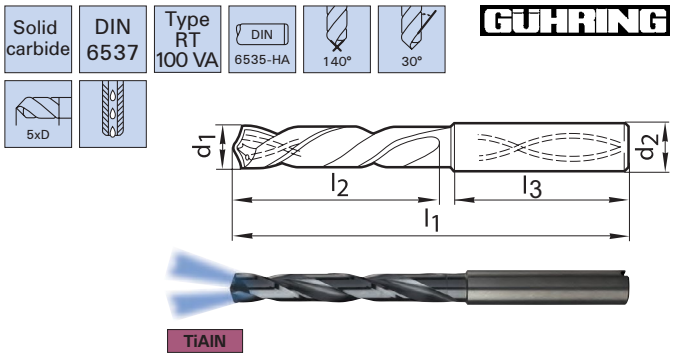
| Order No. | Ø $d_1$ = m7 mm | 1212 GÜHRING Fire | 1215 GÜHRING Fire | 1218 GÜHRING Fire | 1221 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 1600 | 16.00 | 96.00 | 102.00 | 158.00 | 164.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1650 | 16.50 | 153.00 | 163.00 | 252.00 | 262.00 | 93 | 48 | 143 | 18 | 0.315 |
| 1700 | 17.00 | 153.00 | 163.00 | 252.00 | 262.00 | 93 | 48 | 143 | 18 | 0.315 |
| 1750 | 17.50 | 153.00 | 163.00 | 252.00 | 262.00 | 93 | 48 | 143 | 18 | 0.315 |
| 1800 | 18.00 | 153.00 | 163.00 | 252.00 | 262.00 | 93 | 48 | 143 | 18 | 0.315 |
| 1850 | 18.50 | 166.00 | 176.00 ◊ | 274.00 | 284.00 | 101 | 50 | 153 | 20 | 0.315 |
| 1900 | 19.00 | 166.00 | 176.00 | 274.00 | 284.00 | 101 | 50 | 153 | 20 | 0.315 |
| 1905 | 19.05 | – | – | 274.00 | 284.00 ◊ | 101 | 50 | 153 | 20 | 0.315 |
| 1950 | 19.50 | 166.00 | 176.00 | 274.00 | 284.00 | 101 | 50 | 153 | 20 | 0.315 |
| 2000 | 20.00 | 166.00 | 176.00 | 274.00 | 284.00 | 101 | 50 | 153 | 20 | 0.315 |
| | | (W112) | (W112) | (W112) | (W112) | | | | | |

## Solid carbide spiral drill, 5 x D

**Design:** Solid carbide, DIN 6537 L, type RT 100 VA.
TiAlN coated surface, right cutting with special point geometry and cross point thinning. Normal angle of rake, normal core thickness and without core gradient, with internal cooling. The drill has a very good self-centring behaviour and produces short chips.

**Application:** For accurate alignment drilling **with very narrow Ø tolerances** and good surfaces. Suitable for drilling holes up to 5 x D with high cutting values. Particularly suitable for cutting stainless steels, titanium and Ti-alloys and special alloys.

**Note:** The drills can be sharpened and recoated several times.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1223 | | | | | | | | | 80 | 35 | | | |

| Order No. | Ø $d_1$ = m7 mm | 1223 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0300 | 3.00 | 75.60 | 28 | 36 | 66 | 6 | 0.080 |
| 0310 | 3.10 | 80.60 | 28 | 36 | 66 | 6 | 0.080 |
| 0317 | 3.17 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0320 | 3.20 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0325 | 3.25 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0330 | 3.30 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0340 | 3.40 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0350 | 3.50 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0357 | 3.57 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0360 | 3.60 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0370 | 3.70 | 80.60 | 28 | 36 | 66 | 6 | 0.100 |
| 0380 | 3.80 | 80.60 | 36 | 36 | 74 | 6 | 0.100 |
| 0390 | 3.90 | 80.60 | 36 | 36 | 74 | 6 | 0.100 |
| 0397 | 3.97 | 80.60 | 36 | 36 | 74 | 6 | 0.100 |
| 0400 | 4.00 | 82.10 | 36 | 36 | 74 | 6 | 0.100 |
| 0410 | 4.10 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0420 | 4.20 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0430 | 4.30 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0437 | 4.37 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0440 | 4.40 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0450 | 4.50 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0460 | 4.60 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0465 | 4.65 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0470 | 4.70 | 87.20 | 36 | 36 | 74 | 6 | 0.100 |
| 0476 | 4.76 | 87.20 | 44 | 36 | 82 | 6 | 0.100 |
| 0480 | 4.80 | 87.20 | 44 | 36 | 82 | 6 | 0.100 |
| 0490 | 4.90 | 87.20 | 44 | 36 | 82 | 6 | 0.100 |
| 0500 | 5.00 | 82.10 | 44 | 36 | 82 | 6 | 0.100 |
| | | (W117) | | | | | |

| Order No. | Ø $d_1$ = m7 mm | 1223 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0510 | 5.10 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0516 | 5.16 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0520 | 5.20 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0530 | 5.30 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0540 | 5.40 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0550 | 5.50 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0555 | 5.55 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0556 | 5.56 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0560 | 5.60 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0570 | 5.70 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0580 | 5.80 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0590 | 5.90 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0595 | 5.95 | 87.20 | 44 | 36 | 82 | 6 | 0.125 |
| 0600 | 6.00 | 82.10 | 44 | 36 | 82 | 6 | 0.125 |
| 0610 | 6.10 | 103.50 | 44 | 36 | 91 | 8 | 0.125 |
| 0620 | 6.20 | 103.50 | 44 | 36 | 91 | 8 | 0.125 |
| 0630 | 6.30 | 103.50 | 44 | 36 | 91 | 8 | 0.125 |
| 0635 | 6.35 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0640 | 6.40 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0650 | 6.50 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0660 | 6.60 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0670 | 6.70 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0675 | 6.75 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0680 | 6.80 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0690 | 6.90 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0700 | 7.00 | 95.80 | 53 | 36 | 91 | 8 | 0.160 |
| 0710 | 7.10 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0714 | 7.14 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| | | (W117) | | | | | |

Continued overleaf

## Solid carbide spiral drill, 5 x D

Continued

| Order No. | Ø $d_1$ = m7 mm | 1223 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 0720 | 7.20 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0730 | 7.30 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0740 | 7.40 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0750 | 7.50 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0754 | 7.54 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0760 | 7.60 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0770 | 7.70 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0780 | 7.80 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0790 | 7.90 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0794 | 7.94 | 103.50 | 53 | 36 | 91 | 8 | 0.160 |
| 0800 | 8.00 | 95.80 | 53 | 36 | 91 | 8 | 0.160 |
| 0810 | 8.10 | 120.50 | 53 | 40 | 103 | 10 | 0.200 |
| 0820 | 8.20 | 120.50 | 53 | 40 | 103 | 10 | 0.200 |
| 0830 | 8.30 | 120.50 | 53 | 40 | 103 | 10 | 0.200 |
| 0833 | 8.33 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0840 | 8.40 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0850 | 8.50 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0860 | 8.60 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0870 | 8.70 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0873 | 8.73 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0880 | 8.80 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0890 | 8.90 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0900 | 9.00 | 111.00 | 61 | 40 | 103 | 10 | 0.200 |
| 0910 | 9.10 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0913 | 9.13 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0920 | 9.20 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0925 | 9.25 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0930 | 9.30 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0940 | 9.40 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0950 | 9.50 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0952 | 9.52 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0960 | 9.60 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0970 | 9.70 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0980 | 9.80 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0990 | 9.90 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 0992 | 9.92 | 120.50 | 61 | 40 | 103 | 10 | 0.200 |
| 1000 | 10.00 | 111.00 | 61 | 40 | 103 | 10 | 0.200 |
| 1010 | 10.10 | 164.00 (W117) | 61 | 45 | 118 | 12 | 0.200 |

| Order No. | Ø $d_1$ = m7 mm | 1223 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Stainless and acid-resistant steels (INOX) f mm/rev |
|---|---|---|---|---|---|---|---|
| 1020 | 10.20 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1030 | 10.30 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1032 | 10.32 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1040 | 10.40 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1050 | 10.50 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1060 | 10.60 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1070 | 10.70 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1080 | 10.80 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1090 | 10.90 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1100 | 11.00 | 154.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1110 | 11.10 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1111 | 11.11 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1120 | 11.20 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1130 | 11.30 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1140 | 11.40 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1150 | 11.50 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1160 | 11.60 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1170 | 11.70 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1180 | 11.80 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1190 | 11.90 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1191 | 11.91 | 164.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1200 | 12.00 | 154.00 | 71 | 45 | 118 | 12 | 0.200 |
| 1220 | 12.20 | 210.50 | 71 | 45 | 124 | 14 | 0.200 |
| 1250 | 12.50 | 210.50 | 77 | 45 | 124 | 14 | 0.200 |
| 1270 | 12.70 | 210.50 | 77 | 45 | 124 | 14 | 0.250 |
| 1300 | 13.00 | 200.50 | 77 | 45 | 124 | 14 | 0.250 |
| 1350 | 13.50 | 210.50 | 77 | 45 | 124 | 14 | 0.250 |
| 1370 | 13.70 | 210.50 | 77 | 45 | 124 | 14 | 0.250 |
| 1400 | 14.00 | 200.50 | 77 | 45 | 124 | 14 | 0.250 |
| 1420 | 14.20 | 258.00 | 77 | 48 | 133 | 16 | 0.250 |
| 1429 | 14.29 | 258.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1450 | 14.50 | 258.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1470 | 14.70 | 258.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1500 | 15.00 | 240.50 | 83 | 48 | 133 | 16 | 0.250 |
| 1520 | 15.20 | 258.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1550 | 15.50 | 258.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1570 | 15.70 | 258.00 | 83 | 48 | 133 | 16 | 0.250 |
| 1600 | 16.00 | 240.50 (W117) | 83 | 48 | 133 | 16 | 0.250 |

High-performance cooling lubricant OPTA is found on 📖 9/106.

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide spiral drill, SuperLine, 7 x D

**Design:** Ultra-finest grain-solid carbide, according to factory standard, type RT 100 U.
Fire coated surface, right cutting with special point geometry and ratio point thinning. Normal angle of rake, core thicker than normal and without core gradient, with internal cooling. The drill has a very good self-centring behaviour and produces short chips, even from long-chipping materials.

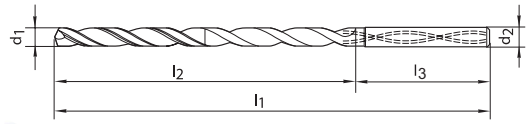
Hard metal application group: K/P –universal use.
(Ultra-fine grain K05–K50/P05–P50)

**Application:** For accurate alignment drilling with narrow Ø tolerances and good surfaces. Suitable for drilling deep holes up to 7 x D with high cutting values. Particularly suitable for long and short-chipping materials such as construction and case-hardening steels, steel castings, tempered steels, carbon steels, bronzes, castings, high alloy AlSi alloys and alloy steels up to 1200 N/mm² in strength.

**Note:** The drills can be sharpened and recoated several times.

Solid carbide | Factory standard | Type RT 100 U | 140° | 7XD

GÜHRING




DIN 6535-HA

**1224** Fire

DIN 6535-HE

**1227** Fire

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1224 | 125 | 120 | 85 | 65 | 55 | | 35 | | 60 | 40 | **160** | **310** | 325 |
| 1227 | 125 | 120 | 85 | 65 | 55 | | 35 | | 60 | 40 | **160** | **310** | 325 |

| Order No. | Ø $d_1$ = m7 mm | 1224 GÜHRING Fire | 1227 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,000 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|
| 0300 | 3.00 | 105.00 | 107.00 | 30.0 | 36 | 70 | 6 | 0.100 |
| 0310 | 3.10 | 105.00 | 107.00 | 30.0 | 36 | 70 | 6 | 0.100 |
| 0317 | 3.17 | 105.00 ◊ | 107.00 ◊ | 30.0 | 36 | 70 | 6 | 0.125 |
| 0320 | 3.20 | 105.00 | 107.00 ◊ | 30.0 | 36 | 70 | 6 | 0.125 |
| 0325 | 3.25 | 105.00 ◊ | 107.00 | 30.0 | 36 | 70 | 6 | 0.125 |
| 0330 | 3.30 | 105.00 | 107.00 | 30.0 | 36 | 70 | 6 | 0.125 |
| 0340 | 3.40 | 105.00 | 107.00 | 35.5 | 36 | 75 | 6 | 0.125 |
| 0350 | 3.50 | 105.00 | 107.00 | 35.5 | 36 | 75 | 6 | 0.125 |
| 0357 | 3.57 | 105.00 ◊ | 107.00 ◊ | 35.5 | 36 | 75 | 6 | 0.125 |
| 0360 | 3.60 | 105.00 | 107.00 ◊ | 35.5 | 36 | 75 | 6 | 0.125 |
| 0370 | 3.70 | 105.00 | 107.00 | 35.5 | 36 | 75 | 6 | 0.125 |
| 0380 | 3.80 | 105.00 | 107.00 ◊ | 37.5 | 36 | 75 | 6 | 0.125 |
| 0390 | 3.90 | 105.00 ◊ | 107.00 ◊ | 37.5 | 36 | 75 | 6 | 0.125 |
| 0397 | 3.97 | 105.00 ◊ | 107.00 ◊ | 37.5 | 36 | 75 | 6 | 0.125 |
| 0400 | 4.00 | 105.00 | 107.00 | 37.5 | 36 | 75 | 6 | 0.125 |
| 0410 | 4.10 | 105.00 ◊ | 107.00 ◊ | 37.5 | 36 | 75 | 6 | 0.125 |
| 0420 | 4.20 | 105.00 | 107.00 | 37.5 | 36 | 75 | 6 | 0.125 |
| 0430 | 4.30 | 105.00 ◊ | 107.00 ◊ | 37.5 | 36 | 85 | 6 | 0.125 |
| 0437 | 4.37 | 105.00 ◊ | 107.00 ◊ | 45.0 | 36 | 85 | 6 | 0.125 |
| 0440 | 4.40 | 105.00 ◊ | 107.00 | 45.0 | 36 | 85 | 6 | 0.125 |
| 0450 | 4.50 | 105.00 | 107.00 ◊ | 45.0 | 36 | 85 | 6 | 0.125 |
| 0460 | 4.60 | 105.00 | 107.00 ◊ | 45.0 | 36 | 85 | 6 | 0.125 |
| 0465 | 4.65 | 105.00 | 107.00 ◊ | 45.0 | 36 | 85 | 6 | 0.125 |
| 0470 | 4.70 | 105.00 | 107.00 ◊ | 45.0 | 36 | 85 | 6 | 0.125 |
| 0476 | 4.76 | 105.00 ◊ | 107.00 ◊ | 50.0 | 36 | 90 | 6 | 0.125 |
| 0480 | 4.80 | 105.00 | 107.00 ◊ | 50.0 | 36 | 90 | 6 | 0.125 |
| 0490 | 4.90 | 105.00 ◊ | 107.00 ◊ | 50.0 | 36 | 90 | 6 | 0.125 |
| 0500 | 5.00 | 105.00 | 107.00 | 50.0 | 36 | 90 | 6 | 0.125 |
| 0510 | 5.10 | 105.00 | 107.00 | 50.0 | 36 | 90 | 6 | 0.160 |
| 0516 | 5.16 | 105.00 | 107.00 | 50.0 | 36 | 90 | 6 | 0.160 |
| 0520 | 5.20 | 105.00 | 107.00 | 50.0 | 36 | 90 | 6 | 0.160 |
| 0530 | 5.30 | 105.00 ◊ | 107.00 | 50.0 | 36 | 90 | 6 | 0.160 |
| 0540 | 5.40 | 105.00 ◊ | 107.00 ◊ | 50.0 | 36 | 97 | 6 | 0.160 |
| 0550 | 5.50 | 105.00 | 107.00 | 57.0 | 36 | 97 | 6 | 0.160 |
| 0570 | 5.70 | 105.00 ◊ | 107.00 ◊ | 57.0 | 36 | 97 | 6 | 0.160 |
| 0580 | 5.80 | 105.00 | 107.00 | 57.0 | 36 | 97 | 6 | 0.160 |
| 0590 | 5.90 | 105.00 | 107.00 ◊ | 57.0 | 36 | 97 | 6 | 0.160 |
| 0600 | 6.00 | 105.00 | 107.00 | 57.0 | 36 | 97 | 6 | 0.160 |
| 0620 | 6.20 | 122.00 | 124.00 | 57.0 | 36 | 106 | 8 | 0.160 |
| 0630 | 6.30 | 122.00 ◊ | 124.00 | 57.0 | 36 | 106 | 8 | 0.160 |
| 0635 | 6.35 | 122.00 (W112) | 124.00 ◊ (W112) | 66.0 | 36 | 106 | 8 | 0.200 |

Continued overleaf

## Solid Carbide spiral drill, SuperLine, 7 x D

Continued

| Order No. | Ø $d_1$ = m7 | 1224 GÜHRING Fire | 1227 GÜHRING Fire | Spiral length $l_2$ | Shank length $l_3$ | Overall length $l_1$ | Shank Ø $d_2$ = h6 | Steels up to 1,000 N/mm² f |
|---|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | mm | mm/rev |
| 0650 | 6.50 | 122.00 | 124.00 | 66.0 | 36 | 106 | 8 | 0.200 |
| 0660 | 6.60 | 122.00 | 124.00 | 66.0 | 36 | 106 | 8 | 0.200 |
| 0670 | 6.70 | 122.00 | 124.00 ◊ | 66.0 | 36 | 106 | 8 | 0.200 |
| 0680 | 6.80 | 122.00 | 124.00 | 66.0 | 36 | 106 | 8 | 0.200 |
| 0690 | 6.90 | 122.00 | 124.00 | 66.0 | 36 | 116 | 8 | 0.200 |
| 0700 | 7.00 | 122.00 | 124.00 | 76.0 | 36 | 116 | 8 | 0.200 |
| 0710 | 7.10 | 122.00 | 124.00 | 76.0 | 36 | 116 | 8 | 0.200 |
| 0720 | 7.20 | 122.00 ◊ | 124.00 ◊ | 76.0 | 36 | 116 | 8 | 0.200 |
| 0750 | 7.50 | 122.00 | 124.00 | 76.0 | 36 | 116 | 8 | 0.200 |
| 0760 | 7.60 | 122.00 ◊ | 124.00 | 76.0 | 36 | 116 | 8 | 0.200 |
| 0770 | 7.70 | 122.00 | 124.00 | 76.0 | 36 | 116 | 8 | 0.200 |
| 0780 | 7.80 | 122.00 | 124.00 | 76.0 | 36 | 116 | 8 | 0.200 |
| 0800 | 8.00 | 122.00 | 124.00 | 76.0 | 36 | 116 | 8 | 0.200 |
| 0810 | 8.10 | 147.00 | 150.00 | 76.0 | 40 | 131 | 10 | 0.250 |
| 0820 | 8.20 | 147.00 | 150.00 | 76.0 | 40 | 131 | 10 | 0.250 |
| 0840 | 8.40 | 147.00 | 150.00 ◊ | 76.0 | 40 | 131 | 10 | 0.250 |
| 0850 | 8.50 | 147.00 | 150.00 | 87.0 | 40 | 131 | 10 | 0.250 |
| 0860 | 8.60 | 147.00 | 150.00 | 87.0 | 40 | 131 | 10 | 0.250 |
| 0870 | 8.70 | 147.00 | 150.00 | 87.0 | 40 | 131 | 10 | 0.250 |
| 0880 | 8.80 | 147.00 | 150.00 ◊ | 87.0 | 40 | 131 | 10 | 0.250 |
| 0900 | 9.00 | 147.00 | 150.00 | 87.0 | 40 | 131 | 10 | 0.250 |
| 0910 | 9.10 | 147.00 | 150.00 | 87.0 | 40 | 139 | 10 | 0.250 |
| 0920 | 9.20 | 147.00 | 150.00 | 87.0 | 40 | 139 | 10 | 0.250 |
| 0930 | 9.30 | 147.00 | 150.00 ◊ | 87.0 | 40 | 139 | 10 | 0.250 |
| 0940 | 9.40 | 147.00 | 150.00 | 87.0 | 40 | 139 | 10 | 0.250 |
| 0950 | 9.50 | 147.00 | 150.00 | 95.0 | 40 | 139 | 10 | 0.250 |
| 0952 | 9.52 | 147.00 ◊ | 150.00 ◊ | 95.0 | 40 | 139 | 10 | 0.250 |
| 0970 | 9.70 | 147.00 | 150.00 | 95.0 | 40 | 139 | 10 | 0.250 |
| 0980 | 9.80 | 147.00 | 150.00 | 95.0 | 40 | 139 | 10 | 0.250 |
| 0990 | 9.90 | 147.00 ◊ | 150.00 | 95.0 | 40 | 139 | 10 | 0.250 |
| 1000 | 10.00 | 147.00 | 150.00 | 95.0 | 40 | 139 | 10 | 0.250 |
| 1020 | 10.20 | 194.00 | 198.00 | 106.0 | 45 | 155 | 12 | 0.250 |
| 1050 | 10.50 | 194.00 | 198.00 | 106.0 | 45 | 155 | 12 | 0.250 |
| 1080 | 10.80 | 194.00 | 198.00 | 106.0 | 45 | 155 | 12 | 0.250 |
| 1100 | 11.00 | 194.00 | 198.00 | 106.0 | 45 | 155 | 12 | 0.250 |
| 1120 | 11.20 | 194.00 | 198.00 ◊ | 106.0 | 45 | 163 | 12 | 0.250 |
| 1150 | 11.50 | 194.00 | 198.00 | 114.0 | 45 | 163 | 12 | 0.250 |
| 1180 | 11.80 | 194.00 | 198.00 | 114.0 | 45 | 163 | 12 | 0.250 |
| 1200 | 12.00 | 194.00 | 198.00 | 114.0 | 45 | 163 | 12 | 0.250 |
| 1220 | 12.20 | 276.00 | 280.00 | 114.0 | 45 | 182 | 14 | 0.250 |
| 1250 | 12.50 | 276.00 | 280.00 | 133.0 | 45 | 182 | 14 | 0.250 |
| 1270 | 12.70 | 276.00 | 280.00 | 133.0 | 45 | 182 | 14 | 0.315 |
| 1300 | 13.00 | 276.00 | 280.00 | 133.0 | 45 | 182 | 14 | 0.315 |
| 1350 | 13.50 | 276.00 | 280.00 | 133.0 | 45 | 182 | 14 | 0.315 |
| 1400 | 14.00 | 276.00 | 280.00 | 133.0 | 45 | 182 | 14 | 0.315 |
| 1420 | 14.20 | 344.00 | 350.00 ◊ | 133.0 | 48 | 204 | 16 | 0.315 |
| 1450 | 14.50 | 344.00 | 350.00 | 152.0 | 48 | 204 | 16 | 0.315 |
| 1500 | 15.00 | 344.00 | 350.00 | 152.0 | 48 | 204 | 16 | 0.315 |
| 1550 | 15.50 | 344.00 | 350.00 | 152.0 | 48 | 204 | 16 | 0.315 |
| 1600 | 16.00 | 344.00 | 350.00 | 152.0 | 48 | 204 | 16 | 0.315 |
| 1650 | 16.50 | 430.00 | 442.00 | 171.0 | 48 | 223 | 18 | 0.400 |
| 1700 | 17.00 | 430.00 | 442.00 | 171.0 | 48 | 223 | 18 | 0.400 |
| 1750 | 17.50 | 430.00 | 442.00 | 171.0 | 48 | 223 | 18 | 0.400 |
| 1800 | 18.00 | 430.00 | 442.00 | 171.0 | 48 | 223 | 18 | 0.400 |
| 1850 | 18.50 | 510.00 | 520.00 | 190.0 | 50 | 244 | 20 | 0.400 |
| 1900 | 19.00 | 510.00 | 520.00 ◊ | 190.0 | 50 | 244 | 20 | 0.400 |
| 1905 | 19.05 | 510.00 ◊ | 520.00 ◊ | 190.0 | 50 | 244 | 20 | 0.400 |
| 1950 | 19.50 | 510.00 ◊ | 520.00 ◊ | 190.0 | 50 | 244 | 20 | 0.400 |
| 2000 | 20.00 | 510.00 (W112) | 520.00 (W112) | 190.0 | 50 | 244 | 20 | 0.400 |

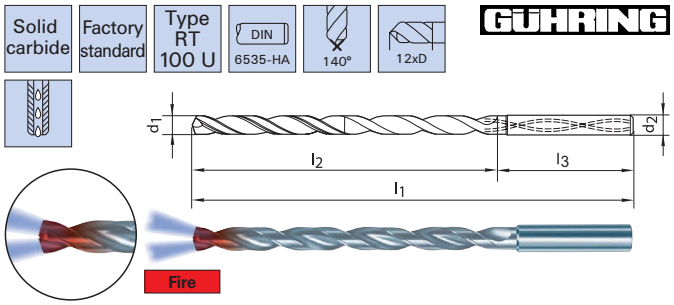
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid carbide spiral drill, SuperLine, 12 x D

**Design:** Ultra-finest grain-solid carbide, according to factory standard, type RT 100 U. Fire coated surface, right cutting with special point geometry and ratio point thinning. With internal cooling. Normal angle of rake, core thickness thicker than normal and without core gradient. The drill has a very good self-centring behaviour and produces short chips, even from long-chipping materials. Hard metal application group: K/P –universal use. (Ultra-fine grain K05–K50/P05–P50)

**Application:** For accurate holes with narrow Ø tolerances and good surfaces. Suitable for drilling deep holes up to 12 x D with high cutting values. Particularly suitable for economical production of deep drill holes in steel, castings and non-ferrous metals.

**Note:** The drills can be sharpened and recoated several times.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1228 | 80 | 80 | 60 | 40 | | | | | 40 | | 90 | 150 | 120 |

| Order No. | Ø $d_1$ = m7 mm | 1228 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,000 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0300 | 3.00 | 141.00 | 50 | 36 | 90 | 6 | 0.100 |
| 0310 | 3.10 | 141.00 | 50 | 36 | 90 | 6 | 0.100 |
| 0317 | 3.17 | 141.00 ◊ | 50 | 36 | 90 | 6 | 0.125 |
| 0320 | 3.20 | 141.00 | 50 | 36 | 90 | 6 | 0.125 |
| 0330 | 3.30 | 141.00 | 50 | 36 | 90 | 6 | 0.125 |
| 0340 | 3.40 | 141.00 | 50 | 36 | 90 | 6 | 0.125 |
| 0350 | 3.50 | 141.00 | 50 | 36 | 90 | 6 | 0.125 |
| 0360 | 3.60 | 141.00 | 50 | 36 | 90 | 6 | 0.125 |
| 0370 | 3.70 | 141.00 ◊ | 50 | 36 | 90 | 6 | 0.125 |
| 0380 | 3.80 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0390 | 3.90 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0400 | 4.00 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0410 | 4.10 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0420 | 4.20 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0430 | 4.30 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0440 | 4.40 | 141.00 ◊ | 64 | 36 | 102 | 6 | 0.125 |
| 0450 | 4.50 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0460 | 4.60 | 141.00 ◊ | 64 | 36 | 102 | 6 | 0.125 |
| 0470 | 4.70 | 141.00 | 64 | 36 | 102 | 6 | 0.125 |
| 0480 | 4.80 | 141.00 | 64 | 36 | 116 | 6 | 0.125 |
| 0490 | 4.90 | 141.00 | 64 | 36 | 116 | 6 | 0.125 |
| 0500 | 5.00 | 141.00 | 78 | 36 | 116 | 6 | 0.125 |
| 0510 | 5.10 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0520 | 5.20 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0530 | 5.30 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0540 | 5.40 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0550 | 5.50 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0560 | 5.60 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0570 | 5.70 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0580 | 5.80 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0590 | 5.90 | 141.00 ◊ | 78 | 36 | 116 | 6 | 0.160 |
| 0600 | 6.00 | 141.00 | 78 | 36 | 116 | 6 | 0.160 |
| 0610 | 6.10 | 165.00 ◊ | 78 | 36 | 146 | 8 | 0.160 |
| 0620 | 6.20 | 165.00 | 78 | 36 | 146 | 8 | 0.160 |
| 0630 | 6.30 | 165.00 ◊ | 78 | 36 | 146 | 8 | 0.160 |
| 0635 | 6.35 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0640 | 6.40 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0650 | 6.50 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0660 | 6.60 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0670 | 6.70 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0680 | 6.80 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0690 | 6.90 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0700 | 7.00 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0710 | 7.10 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0720 | 7.20 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0730 | 7.30 | 165.00 ◊ | 108 | 36 | 146 | 8 | 0.200 |
| 0740 | 7.40 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0750 | 7.50 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0760 | 7.60 | 165.00 (W112) | 108 | 36 | 146 | 8 | 0.200 |

| Order No. | Ø $d_1$ = m7 mm | 1228 GÜHRING Fire | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,000 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0770 | 7.70 | 165.00 ◊ | 108 | 36 | 146 | 8 | 0.200 |
| 0780 | 7.80 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0790 | 7.90 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0800 | 8.00 | 165.00 | 108 | 36 | 146 | 8 | 0.200 |
| 0810 | 8.10 | 208.00 | 108 | 40 | 162 | 10 | 0.250 |
| 0820 | 8.20 | 208.00 | 108 | 40 | 162 | 10 | 0.250 |
| 0830 | 8.30 | 208.00 | 108 | 40 | 162 | 10 | 0.250 |
| 0840 | 8.40 | 208.00 ◊ | 108 | 40 | 162 | 10 | 0.250 |
| 0850 | 8.50 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0860 | 8.60 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0870 | 8.70 | 208.00 ◊ | 120 | 40 | 162 | 10 | 0.250 |
| 0880 | 8.80 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0890 | 8.90 | 208.00 ◊ | 120 | 40 | 162 | 10 | 0.250 |
| 0900 | 9.00 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0910 | 9.10 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0920 | 9.20 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0930 | 9.30 | 208.00 ◊ | 120 | 40 | 162 | 10 | 0.250 |
| 0940 | 9.40 | 208.00 ◊ | 120 | 40 | 162 | 10 | 0.250 |
| 0950 | 9.50 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0952 | 9.52 | 208.00 ◊ | 120 | 40 | 162 | 10 | 0.250 |
| 0960 | 9.60 | 208.00 ◊ | 120 | 40 | 162 | 10 | 0.250 |
| 0970 | 9.70 | 208.00 ◊ | 120 | 40 | 162 | 10 | 0.250 |
| 0980 | 9.80 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 0990 | 9.90 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 1000 | 10.00 | 208.00 | 120 | 40 | 162 | 10 | 0.250 |
| 1020 | 10.20 | 276.00 | 156 | 45 | 204 | 12 | 0.250 |
| 1050 | 10.50 | 276.00 | 156 | 45 | 204 | 12 | 0.250 |
| 1100 | 11.00 | 276.00 | 156 | 45 | 204 | 12 | 0.250 |
| 1150 | 11.50 | 276.00 | 156 | 45 | 204 | 12 | 0.250 |
| 1200 | 12.00 | 276.00 | 156 | 45 | 204 | 12 | 0.250 |
| 1250 | 12.50 | 342.00 | 182 | 45 | 230 | 14 | 0.250 |
| 1270 | 12.70 | 342.00 ◊ | 182 | 45 | 230 | 14 | 0.315 |
| 1300 | 13.00 | 342.00 | 182 | 45 | 230 | 14 | 0.315 |
| 1350 | 13.50 | 342.00 | 182 | 45 | 230 | 14 | 0.315 |
| 1400 | 14.00 | 342.00 | 182 | 45 | 230 | 14 | 0.315 |
| 1450 | 14.50 | 484.00 | 208 | 48 | 260 | 16 | 0.315 |
| 1500 | 15.00 | 484.00 | 208 | 48 | 260 | 16 | 0.315 |
| 1550 | 15.50 | 484.00 | 208 | 48 | 260 | 16 | 0.315 |
| 1600 | 16.00 | 484.00 | 208 | 48 | 260 | 16 | 0.315 |
| 1650 | 16.50 | 540.00 | 234 | 48 | 285 | 18 | 0.400 |
| 1700 | 17.00 | 540.00 ◊ | 234 | 48 | 285 | 18 | 0.400 |
| 1750 | 17.50 | 540.00 ◊ | 234 | 48 | 285 | 18 | 0.400 |
| 1800 | 18.00 | 540.00 | 234 | 48 | 285 | 18 | 0.400 |
| 1850 | 18.50 | 770.00 | 234 | 50 | 310 | 20 | 0.400 |
| 1900 | 19.00 | 770.00 ◊ | 258 | 50 | 310 | 20 | 0.400 |
| 1905 | 19.05 | 770.00 ◊ | 258 | 50 | 310 | 20 | 0.400 |
| 1950 | 19.50 | 770.00 ◊ | 258 | 50 | 310 | 20 | 0.400 |
| 2000 | 20.00 | 770.00 (W112) | 258 | 50 | 310 | 20 | 0.400 |

## RT 100 T method:

- Mill a surface at right angle to the start angle of hole machining.
- Produce a cylindrical pilot hole (tolerance F9) with a drilling depth of at least 1 x D.
- Insert into the pilot hole with approx. 300 rpm at f = 500 mm/min.
- Set the cooling lubricant pressure and speed.
- Continual drilling to full drilling depth without relief cycle.
- When drilling through holes with oblique exit, reduce the feed rate $v_f$ to 40% ca. 1 mm before breaking through.
- After reaching the drilling depth, switch off the rotation and coolant, extract in rapid traverse.
- Conventional coolant lubrication min. 40 bar

**Note:** The drills can be sharpened several times.

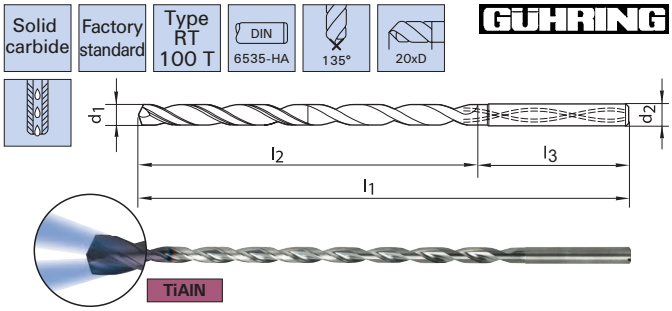
**STOP** **All deep holes must be piloted before starting to drill. Deep hole drills should never be moved freely in the machine when at the full speed.**

## Deep hole drill, 20 x D

**Design:** Ultra-finest grain-solid carbide, factory standard, type RT 100 T. TiAlN coated surface, right cutting. Special slot form with double bevels, special point geometry and special point thinning. With inner cooling. Normal angle of rake 30°, core thickness thicker than normal and without core gradient. The drill has a very good self-centring behaviour.

**Application:** For drill holes **with very narrow Ø tolerances** and very good surfaces. Suitable for drilling extremely deep holes up to 20 x D with high cutting speeds. Particularly suitable for short-chipping materials such as cast iron, grey cast iron, malleable cast iron and nodular graphite iron and aluminium alloys with a high silicon content.

**Note:** The drills can be sharpened several times.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1234 | 110 | 110 | 110 | 80 | 50 | | | | 110 | | 100 | | 120 |

| Order No. | Ø m7/h7 mm | 1234 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0300 | 3.0 | 238.70 | 70 | 36 | 100 | 6 | 0.100 |
| 0350 | 3.5 | 238.70 ◊ | 96 | 36 | 136 | 6 | 0.125 |
| 0400 | 4.0 | 253.10 | 96 | 36 | 136 | 6 | 0.125 |
| 0450 | 4.5 | 281.90 ◊ | 118 | 36 | 158 | 6 | 0.125 |
| 0500 | 5.0 | 288.10 | 118 | 36 | 158 | 6 | 0.125 |
| 0550 | 5.5 | 300.50 | 140 | 36 | 180 | 6 | 0.160 |
| 0600 | 6.0 | 333.40 | 140 | 36 | 180 | 6 | 0.160 |
| 0650 | 6.5 | 362.20 (W114) | 162 | 36 | 202 | 8 | 0.200 |

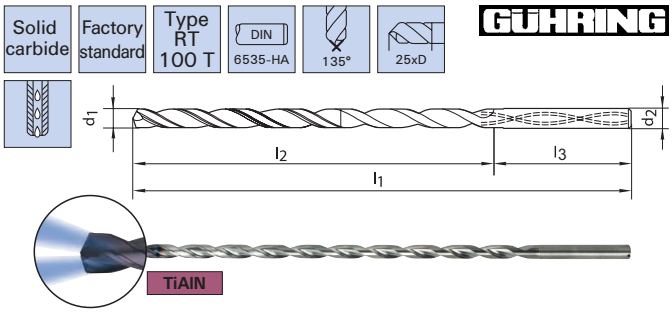
| Order No. | Ø m7/h7 mm | 1234 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0700 | 7.0 | 368.40 | 162 | 36 | 202 | 8 | 0.200 |
| 0750 | 7.5 | 399.30 | 183 | 36 | 223 | 8 | 0.200 |
| 0800 | 8.0 | 432.20 | 183 | 36 | 223 | 8 | 0.200 |
| 0850 | 8.5 | 475.40 | 205 | 40 | 249 | 10 | 0.250 |
| 0900 | 9.0 | 481.60 | 205 | 40 | 249 | 10 | 0.250 |
| 1000 | 10.0 | 481.60 | 227 | 40 | 271 | 10 | 0.250 |
| 1200 | 12.0 | 535.10 | 274 | 45 | 323 | 12 | 0.250 |
| 1400 | 14.0 | 761.50 (W114) | 318 | 45 | 367 | 14 | 0.315 |

## Deep hole drill, 25 x D

**Design:** Ultra-finest grain-solid carbide, factory standard. TiAlN coated surface, right cutting. Special slot form with double bevels, special point geometry and special point thinning. With inner cooling. Normal angle of rake 30°, core thickness thicker than normal and without core gradient. The drill has a very good self-centring behaviour.

**Application:** For drill holes **with very narrow Ø tolerances** and very good surfaces. Suitable for drilling extremely deep holes up to 25 x D with high cutting speeds. Particularly suitable for short-chipping materials such as cast iron, grey cast iron, malleable cast iron and nodular graphite iron and aluminium alloys with a high silicon content.

**Note:** The drills can be sharpened several times.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1235 | 100 | 100 | 100 | 70 | 50 | | | | 100 | | 130 | | 110 |

| Order No. | Ø m7/h7 mm | 1235 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0300 | 3.0 | 261.40 | 85 | 36 | 125 | 6 | 0.100 |
| 0350 | 3.5 | 261.40 ◊ | 116 | 36 | 156 | 6 | 0.125 |
| 0400 | 4.0 | 281.90 | 116 | 36 | 156 | 6 | 0.125 |
| 0450 | 4.5 | 316.90 | 143 | 36 | 183 | 6 | 0.125 |
| 0500 | 5.0 | 329.30 | 143 | 36 | 183 | 6 | 0.125 |
| 0550 | 5.5 | 343.70 ◊ | 170 | 36 | 210 | 6 | 0.160 |
| 0600 | 6.0 | 393.10 | 170 | 36 | 210 | 6 | 0.160 |
| 0650 | 6.5 | 405.40 (W114) | 197 | 36 | 237 | 8 | 0.200 |

| Order No. | Ø m7/h7 mm | 1235 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1,400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0700 | 7.0 | 413.70 | 197 | 36 | 237 | 8 | 0.200 |
| 0750 | 7.5 | 458.90 ◊ | 223 | 36 | 263 | 8 | 0.200 |
| 0800 | 8.0 | 500.10 | 223 | 36 | 263 | 8 | 0.200 |
| 0850 | 8.5 | 545.40 ◊ | 250 | 40 | 294 | 10 | 0.250 |
| 0900 | 9.0 | 607.10 ◊ | 250 | 40 | 294 | 10 | 0.250 |
| 1000 | 10.0 | 607.10 ◊ | 277 | 40 | 321 | 10 | 0.250 |
| 1200 | 12.0 | 699.70 (W114) | 337 | 45 | 386 | 12 | 0.250 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Deep hole drill, 30 x D

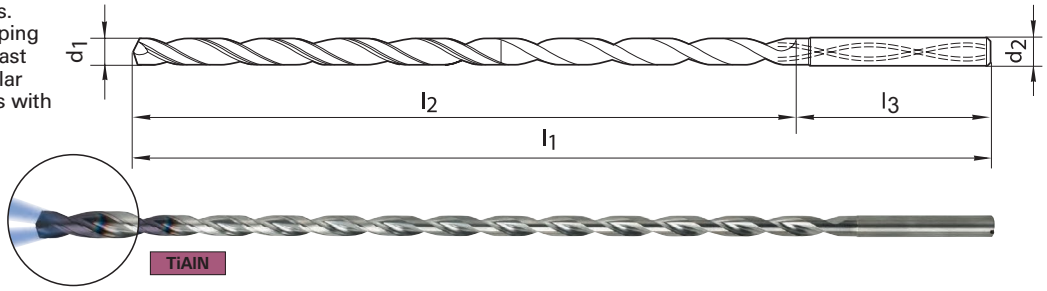
**Design:** Ultra-finest grain-solid carbide, factory standard. TiAlN coated surface, right cutting. Special slot form with double bevels, special point geometry and special point thinning. With inner cooling. Angle of rake 30°

**Application:** For drill holes **with very narrow Ø tolerances** and very good surfaces. Suitable for drilling extremely deep holes up to 30 x D with high cutting speeds. Particularly suitable for short-chipping materials such as cast iron, grey cast iron, malleable cast iron and nodular graphite iron and aluminium alloys with a high silicon content.

**Note:** The drills can be sharpened several times.

Solid carbide | Factory standard | Type RT 100 T | DIN 6535-HA | 135° | 30xD

GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1236 | 80 | 80 | 80 | 70 | 50 | | | | 80 | | 120 | | 100 |

| Order No. | Ø m7/ h7 mm | 1236 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0300 | 3.0 | 296.40 | 100 | 36 | 140 | 6 | 0.100 |
| 0350 | 3.5 | 296.40 | 136 | 36 | 176 | 6 | 0.125 |
| 0400 | 4.0 | 321.00 | 136 | 36 | 176 | 6 | 0.125 |
| 0450 | 4.5 | 374.60 | 168 | 36 | 208 | 6 | 0.125 |
| 0500 | 5.0 | 380.70 | 168 | 36 | 208 | 6 | 0.125 |
| 0550 | 5.5 | 401.30 | 200 | 36 | 240 | 6 | 0.160 |
| 0600 | 6.0 | 448.60 (W114) | 200 | 36 | 240 | 6 | 0.160 |

| Order No. | Ø m7/ h7 mm | 1236 GÜHRING TiAlN | Spiral length $l_2$ mm | Shank length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ = h6 mm | Steels up to 1400 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|
| 0650 | 6.5 | 485.70 ◊ | 232 | 36 | 272 | 8 | 0.200 |
| 0700 | 7.0 | 485.70 ◊ | 232 | 36 | 272 | 8 | 0.200 |
| 0750 | 7.5 | 545.40 ◊ | 263 | 36 | 303 | 8 | 0.200 |
| 0800 | 8.0 | 576.20 | 263 | 36 | 303 | 8 | 0.200 |
| 0850 | 8.5 | 607.10 ◊ | 295 | 40 | 339 | 10 | 0.250 |
| 0900 | 9.0 | 648.30 ◊ | 295 | 40 | 339 | 10 | 0.250 |
| 1000 | 10.0 | 648.30 (W114) | 327 | 40 | 371 | 10 | 0.250 |

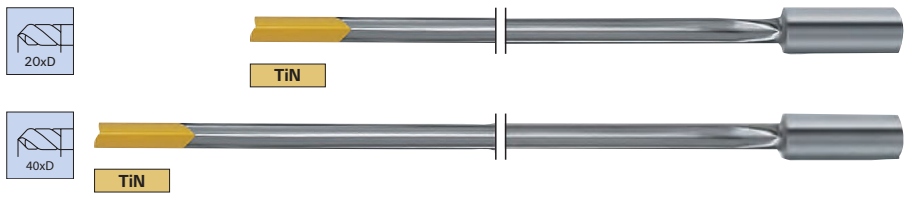
## HM single flute drill

**Design:** Solid carbide, factory standard, type EB 80. TiN coated surface, right cutting, 1-edged, standard point geometry, lengthways divider, larger oil chamber, circumference form G.

**Application:** For long chipping steels.

Carbide | Factory standard | Type EB 80

GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1239 | 80 | 75 | 65 | 65 | 30 | | 25 | | 55 | 35 | 80 | 150 | 120 |
| 1240 | 80 | 75 | 65 | 65 | 30 | | 25 | | 55 | 35 | 80 | 150 | 120 |

| Order No. | Ø $d_1$ mm | 1239 GÜHRING TiN | 1240 GÜHRING TiN | Clamping length $l_2$ mm 1239 | Clamping length $l_2$ mm 1240 | Overall length $l_1$ mm 1239 | Overall length $l_1$ mm 1240 | Shank length $l_3$ mm | Shank Ø $d_2$ mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 0400 | 4.0 | – | 77.20 ◊ | – | 185 | – | 230 | 45 | 12 | 0.008 |
| 0420 | 4.2 | – | 81.30 ◊ | – | 195 | – | 240 | 45 | 12 | 0.010 |
| 0450 | 4.5 | 75.10 ◊ | 82.30 ◊ | 120 | 205 | 170 | 250 | 45 | 12 | 0.010 |
| 0500 | 5.0 | 77.20 ◊ | 83.30 ◊ | 130 | 232 | 180 | 280 | 48 | 16 | 0.010 |
| 0550 | 5.5 | 79.20 ◊ | 84.40 ◊ | 140 | 252 | 190 | 300 | 48 | 16 | 0.010 |
| 0600 | 6.0 | 83.30 ◊ | 87.50 ◊ | 160 | 272 | 210 | 320 | 48 | 16 | 0.010 |
| 0650 | 6.5 | 84.40 ◊ | 89.50 ◊ | 170 | 292 | 220 | 340 | 48 | 16 | 0.013 |
| 0700 | 7.0 | 85.40 ◊ | 93.60 ◊ | 185 | 322 | 235 | 370 | 48 | 16 | 0.013 |
| 0800 | 8.0 | 89.50 ◊ | 97.80 ◊ | 210 | 372 | 260 | 420 | 48 | 16 | 0.013 |
| 0900 | 9.0 | 95.70 ◊ | – | 230 | – | 280 | – | 48 | 16 | 0.022 |
| 1000 | 10.0 | 102.90 ◊ | 110.10 ◊ | 260 | 406 | 320 | 510 | 50 | 20 | 0.022 |
| 1200 | 12.0 | 123.50 ◊ (W113) | 129.70 ◊ (W113) | 310 | 550 | 370 | 600 | 50 | 20 | 0.028 |

## Solid Carbide single fleute drill

**Design:** solid carbide, factory standard, type EB 100.
Bright surface, right cutting, 1-edged, standard point geometry, circumference form G.

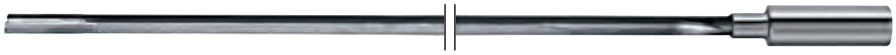
Solid carbide | Factory standard | Type EB 100

GÜHRING

**Application:** For all materials.

**1237** Long design.

**1238** Extra long design.



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1237 | 80 | 75 | 65 | 65 | 30 | | 25 | | 55 | 35 | 80 | 150 | 120 |
| 1238 | 80 | 75 | 65 | 65 | 30 | | 25 | | 55 | 35 | 80 | 150 | 120 |

| Order No. | Ø $d_1$ mm | 1237 GÜHRING | 1238 GÜHRING | Clamping length $l_2$ mm 1237 | Clamping length $l_2$ mm 1238 | Overall length $l_1$ mm 1237 | Overall length $l_1$ mm 1238 | Shank length $l_3$ mm | Shank Ø $d_2$ mm | Steels up to 850 N/mm² f mm/rev |
|---|---|---|---|---|---|---|---|---|---|---|
| 0120 | 1.2 | 159.50 ◊ | – | 80 | – | 125 | – | 28 | 4 | 0.008 |
| 0150 | 1.5 | 155.40 ◊ | 167.70 ◊ | 80 | 120 | 125 | 165 | 28 | 4 | 0.008 |
| 0160 | 1.6 | 151.30 ◊ | 166.70 ◊ | 80 | 120 | 125 | 165 | 28 | 4 | 0.010 |
| 0200 | 2.0 | 151.30 ◊ | 166.70 ◊ | 80 | 120 | 125 | 165 | 28 | 4 | 0.010 |
| 0250 | 2.5 | 150.20 ◊ | 164.60 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.012 |
| 0270 | 2.7 | 146.10 ◊ | 161.60 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.016 |
| 0300 | 3.0 | 138.90 ◊ | 151.30 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.016 |
| 0320 | 3.2 | 141.00 ◊ | 155.40 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.016 |
| 0350 | 3.5 | 159.50 ◊ | 174.90 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.016 |
| 0400 | 4.0 | 159.50 ◊ | 174.90 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.016 |
| 0420 | 4.2 | 160.50 ◊ | 177.00 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.024 |
| 0450 | 4.5 | 161.60 ◊ | 178.00 ◊ | 80 | 120 | 135 | 165 | 40 | 10 | 0.024 |
| 0500 | 5.0 | 164.60 ◊ (W113) | 181.10 ◊ (W113) | 80 | 120 | 135 | 165 | 40 | 10 | 0.024 |

## Solid carbide drill reamer, 4 flute, 5 x D

NEW

**Design:** Right cutting, 4 cutting edge, special bevel and special thinning.

**Application:** For drilling and reaming into the full piece **in one step**, with a possible achievable drill hole tolerance of IT7. This significantly reduces the main and additional, with the same surface quality, dimensional accuracy and roundness as reaming.

Solid carbide | Factory standard | Type N | Z 4 | DIN 6535-HA | 140° | 5xD

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1232 | 60 | 45 | 30 | | | | | | | | 50 | | |

| Order No. | Nominal Ø mm | 1232 format bright | Spiral length mm | Total length mm | Shank Ø = h 6 mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|---|
| 0598 | 5.98 | 95.00 | 44 | 81 | 6 | 0.180 |
| 0599 | 5.99 | 95.00 | 44 | 81 | 6 | 0.180 |
| 0600 | 6.00 | 95.00 | 44 | 81 | 6 | 0.180 |
| 0601 | 6.01 | 95.00 | 44 | 81 | 6 | 0.180 |
| 0602 | 6.02 | 95.00 | 53 | 91 | 6 | 0.180 |
| 0798 | 7.98 | 95.00 | 53 | 91 | 8 | 0.200 |
| 0799 | 7.99 | 95.00 | 53 | 91 | 8 | 0.200 |
| 0800 | 8.00 | 95.00 | 53 | 91 | 8 | 0.200 |
| 0801 | 8.01 | 95.00 | 53 | 91 | 8 | 0.200 |
| 0802 | 8.02 | 95.00 | 53 | 91 | 8 | 0.200 |
| 0998 | 9.98 | 135.00 | 61 | 103 | 10 | 0.250 |
| 0999 | 9.99 | 135.00 (W201) | 61 | 103 | 10 | 0.250 |

| Order No. | Nominal Ø mm | 1232 format bright | Spiral length mm | Total length mm | Shank Ø = h 6 mm | Cast iron materials f mm/rev |
|---|---|---|---|---|---|---|
| 1000 | 10.00 | 135.00 | 61 | 103 | 10 | 0.250 |
| 1001 | 10.01 | 135.00 | 61 | 103 | 10 | 0.250 |
| 1002 | 10.02 | 135.00 | 61 | 103 | 10 | 0.250 |
| 1198 | 11.98 | 194.00 | 71 | 118 | 12 | 0.250 |
| 1199 | 11.99 | 194.00 | 71 | 118 | 12 | 0.250 |
| 1200 | 12.00 | 194.00 | 71 | 118 | 12 | 0.250 |
| 1201 | 12.01 | 194.00 | 71 | 118 | 12 | 0.350 |
| 1202 | 12.02 | 194.00 | 71 | 118 | 12 | 0.350 |
| 1400 | 14.00 | 264.00 | 77 | 124 | 14 | 0.350 |
| 1600 | 16.00 | 327.00 | 83 | 133 | 16 | 0.350 |
| 1800 | 18.00 | 455.00 | 93 | 143 | 18 | 0.400 |
| 2000 | 20.00 | 552.00 (W201) | 101 | 153 | 20 | 0.400 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## VHM spiral drill, SuperLine, 5 x D

**Design:** Ultra-finest grain-solid carbide, DIN 6537, type FT 200. Surface bright, right hand cut, 3 cutting edges with point-like tip, special bevel and special thinning. Normal angle of rake 28°, core thickness thicker than normal and without core gradient.

**Application:** For drilling into the full piece for holes with an accurate position and shape up to 5 x D. Particularly for castings and long chipping al-alloys.

Solid carbide | DIN 6537 | Type FT 200 | Z 3 | DIN 6535-HA | 130° | 28° | 5xD

GÜHRING

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1233 | | | | | | | | | | | 80 | 180 | 180 |

| Order No. | Ø = m 7 mm | 1233 GÜHRING bright | Spiral length mm | Shank length $l_3$ mm | Total length mm | Shank Ø = h 6 mm | f (Cast iron materials) mm/rev |
|---|---|---|---|---|---|---|---|
| 0300 | 3.0 | 37.50 | 28 | 36 | 66 | 6 | 0.100 |
| 0310 | 3.1 | 37.50 | 28 | 36 | 66 | 6 | 0.100 |
| 0320 | 3.2 | 37.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0330 | 3.3 | 37.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0350 | 3.5 | 37.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0370 | 3.7 | 37.50 | 28 | 36 | 66 | 6 | 0.125 |
| 0380 | 3.8 | 37.50 | 36 | 36 | 74 | 6 | 0.125 |
| 0400 | 4.0 | 37.50 | 36 | 36 | 74 | 6 | 0.125 |
| 0410 | 4.1 | 37.50 | 36 | 36 | 74 | 6 | 0.125 |
| 0420 | 4.2 | 37.50 | 36 | 36 | 74 | 6 | 0.125 |
| 0450 | 4.5 | 37.50 | 36 | 36 | 74 | 6 | 0.125 |
| 0480 | 4.8 | 37.50 | 44 | 36 | 82 | 6 | 0.125 |
| 0500 | 5.0 | 37.50 | 44 | 36 | 82 | 6 | 0.125 |
| 0510 | 5.1 | 37.50 | 44 | 36 | 82 | 6 | 0.160 |
| 0520 | 5.2 | 37.50 | 44 | 36 | 82 | 6 | 0.160 |
| 0530 | 5.3 | 37.50 | 44 | 36 | 82 | 6 | 0.160 |
| 0550 | 5.5 | 37.50 | 44 | 36 | 82 | 6 | 0.160 |
| 0580 | 5.8 | 37.50 | 44 | 36 | 82 | 6 | 0.160 |
| 0600 | 6.0 | 37.50 | 44 | 36 | 82 | 6 | 0.160 |
| 0610 | 6.1 | 45.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0620 | 6.2 | 45.00 | 53 | 36 | 91 | 8 | 0.160 |
| 0640 | 6.4 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0650 | 6.5 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0670 | 6.7 | 45.00 ◊ | 53 | 36 | 91 | 8 | 0.200 |
| 0680 | 6.8 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0700 | 7.0 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0710 | 7.1 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0740 | 7.4 | 45.00 (W112) | 53 | 36 | 91 | 8 | 0.200 |

| Order No. | Ø = m 7 mm | 1233 GÜHRING bright | Spiral length mm | Shank length $l_3$ mm | Total length mm | Shank Ø = h 6 mm | f (Cast iron materials) mm/rev |
|---|---|---|---|---|---|---|---|
| 0750 | 7.5 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0780 | 7.8 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0800 | 8.0 | 45.00 | 53 | 36 | 91 | 8 | 0.200 |
| 0810 | 8.1 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0820 | 8.2 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0840 | 8.4 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0850 | 8.5 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0860 | 8.6 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0870 | 8.7 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0880 | 8.8 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0900 | 9.0 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0910 | 9.1 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0950 | 9.5 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 0980 | 9.8 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 1000 | 10.0 | 51.00 | 61 | 40 | 103 | 10 | 0.250 |
| 1010 | 10.1 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1020 | 10.2 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1030 | 10.3 | 76.00 ◊ | 71 | 45 | 118 | 12 | 0.250 |
| 1050 | 10.5 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1100 | 11.0 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1120 | 11.2 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1150 | 11.5 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1180 | 11.8 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1200 | 12.0 | 76.00 | 71 | 45 | 118 | 12 | 0.250 |
| 1210 | 12.1 | 100.00 | 77 | 45 | 124 | 14 | 0.250 |
| 1250 | 12.5 | 100.00 | 77 | 45 | 124 | 14 | 0.250 |
| 1300 | 13.0 | 100.00 (W112) | 77 | 45 | 124 | 14 | 0.315 |

skantek

3/10

**POSISTOP**

Workpiece stop for clamping short parts with a workpiece diameter of 15-130 mm.

## SDS-plus hammer drill

**Design:** SDS-plus mounting shank, quiet drilling and effective drill dust transportation thanks to aggressive tip and helix design allow the optimum impact energy rate. Certified by the Prüfgemeinschaft Mauerbohrer (PGM) according to the requirements of the Deutschen Instituts für Bautechnik (DIBt).

**Application:** For hammer drills with SDS-plus mounting shank.

**1250** With special blade for concrete, limestone, masonry.

**1272** NEW With 4 cutting edges for concrete, masonry, natural stone, sand-lime brick, ceramic tile, marble, brick.

**1255** With bionic blade for concrete, masonry, concrete reinforcement, limestone, marble, brick.

SDS plus

2 cutting edges

1250 format professional quality

4 cutting edges

1272 format professional quality

2 cutting edges

1255 heller get a bit more

| Order No. | ∅ mm | 1250 format | 1272 format | 1255 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|---|---|
| 0411 | 4.0 | 2.09 | – | 3.44 | 50 | 110 |
| 0416 | 4.0 | – | – | 3.80 | 100 | 160 |
| 0511 | 5.0 | 1.69 | 5.00 | 2.77 | 50 | 110 |
| 0516 | 5.0 | 1.83 | 5.35 | 2.99 | 100 | 160 |
| 0521 | 5.0 | – | – | 3.55 | 150 | 210 |
| 0550 | 5.5 | – | – | 2.77 | 50 | 110 |
| 0551 | 5.5 | – | – | 2.99 | 100 | 160 |
| 0552 | 5.5 | – | – | 7.15 | 150 | 210 |
| 0611 | 6.0 | 1.65 | 5.35 | 2.74 | 50 | 110 |
| 0616 | 6.0 | 1.83 | 5.60 | 2.99 | 100 | 160 |
| 0621 | 6.0 | 3.10 | 8.95 | 5.10 | 150 | 210 |
| 0626 | 6.0 | 3.76 | 11.20 | 6.20 | 200 | 260 |
| 0631 | 6.0 | – | – | 9.25 | 250 | 310 |
| 0635 | 6.0 | – | – | 13.95 | 300 | 350 |
| 0650 | 6.5 | – | – | 2.74 | 50 | 110 |
| 0651 | 6.5 | – | – | 3.80 | 100 | 160 |
| 0653 | 6.5 | 3.61 | – | 5.90 | 150 | 210 |
| 0654 | 6.5 | – | – | 11.75 | 230 | 295 |
| 0711 | 7.0 | – | – | 3.80 | 50 | 110 |
| 0716 | 7.0 | 2.44 | – | 4.00 | 100 | 160 |
| 0721 | 7.0 | – | – | 5.00 | 150 | 210 |
| 0811 | 8.0 | 2.20 | 6.10 | 3.59 | 50 | 110 |
| 0816 | 8.0 | 2.27 | 6.70 | 3.69 | 100 | 160 |
| 0821 | 8.0 | 2.71 | 8.95 | 4.40 | 150 | 210 |
| 0826 | 8.0 | 3.04 | 10.65 | 4.97 | 200 | 260 |
| 0831 | 8.0 | 4.91 | 14.55 | 8.00 | 250 | 310 |
| 0846 | 8.0 | 7.50 | 22.40 | 12.25 | 400 | 460 |
| 0860 | 8.0 | – | – | 17.55 | 550 | 600 |
| 0916 | 9.0 | – | – | 4.15 | 100 | 160 |
| 1011 | 10.0 | 2.51 | 7.25 | 4.15 | 50 | 110 |
| 1016 | 10.0 | 2.64 | 7.80 | 4.36 | 100 | 160 |
| 1021 | 10.0 | 3.06 | 9.50 | 5.00 | 150 | 210 |
| 1026 | 10.0 | 3.76 | 11.20 | 6.20 | 200 | 260 |
| 1031 | 10.0 | 4.31 | 12.85 | 7.05 | 250 | 310 |
| 1035 | 10.0 | – | – | 8.70 | 300 | 350 |
| 1046 | 10.0 | 6.30 | – | – | 400* | 450 |
| 1046 | 10.0 | – | 19.60 | 10.30 | 400* | 460 |
| 1060 | 10.0 | – | – | 17.80 | 550* | 600 |
| | | (W120) | (W120) | (W119) | | |

| Order No. | ∅ mm | 1250 format | 1272 format | 1255 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|---|---|
| 1000 | 10.0 | – | – | 45.20 | 950 | 1000 |
| 1116 | 11.0 | – | – | 5.65 | 100 | 160 |
| 1121 | 11.0 | – | – | 6.55 | 150 | 210 |
| 1126 | 11.0 | – | – | 8.15 | 200 | 260 |
| 1131 | 11.0 | – | – | 9.85 | 250 | 310 |
| 1216 | 12.0 | 2.88 | 8.95 | 4.71 | 100 | 160 |
| 1221 | 12.0 | 3.37 | 12.30 | 5.50 | 150 | 210 |
| 1226 | 12.0 | 4.31 | 12.85 | 7.05 | 200 | 260 |
| 1230 | 12.0 | 5.95 | – | – | 250 | 300 |
| 1231 | 12.0 | – | 19.60 | 9.75 | 250 | 310 |
| 1245 | 12.0 | – | 22.40 | 12.30 | 400 | 450 |
| 1246 | 12.0 | 7.50 | – | – | 400* | 460 |
| 1260 | 12.0** | 12.30 | 36.40 | 20.10 | 550* | 600 |
| 1200 | 12.0 | – | – | 50.00 | 950 | 1000 |
| 1299 | 12.0 | – | – | 123.50 | 1350 | 1400 |
| 1315 | 13.0 | – | – | 5.30 | 100 | 150 |
| 1321 | 13.0 | 8.75 | – | – | 150 | 210 |
| 1325 | 13.0 | – | – | 10.05 | 200 | 250 |
| 1330 | 13.0 | – | – | 10.65 | 250 | 300 |
| 1345 | 13.0 | – | – | 21.20 | 400 | 450 |
| 1416 | 14.0 | 4.40 | 14.00 | 7.20 | 100 | 160 |
| 1420 | 14.0 | – | – | 8.80 | 150 | 200 |
| 1421 | 14.0 | – | 16.80 | – | 150 | 200 |
| 1421 | 14.0 | 5.35 | – | – | 150 | 210 |
| 1425 | 14.0 | – | 19.60 | 9.70 | 200 | 250 |
| 1426 | 14.0 | 5.95 | – | – | 200 | 260 |
| 1430 | 14.0 | – | – | 10.30 | 250 | 300 |
| 1431 | 14.0 | – | 22.40 | – | 250 | 300 |
| 1431 | 14.0 | 6.30 | – | – | 250 | 310 |
| 1445 | 14.0 | – | 28.00 | 15.15 | 400 | 450 |
| 1446 | 14.0 | 9.25 | – | – | 400* | 460 |
| 1460 | 14.0** | 19.60 | 42.00 | 22.50 | 550* | 600 |
| 1400 | 14.0 | – | – | 54.90 | 950 | 1000 |
| 1515 | 15.0 | – | – | 9.55 | 100 | 150 |
| 1516 | 15.0 | 8.35 | – | – | 100 | 160 |
| 1520 | 15.0 | – | – | 10.35 | 150 | 200 |
| 1525 | 15.0 | – | – | 11.30 | 200 | 250 |
| 1526 | 15.0 | 9.85 | – | – | 200 | 250 |
| | | (W120) | (W120) | (W119) | | |

* Pre-drill at least 150 mm deep with a short drill of the same diameter.
** Designed as a twist hammer drill.

Continued overleaf

## SDS-plus hammer drill

Continued

| Order No. | Ø mm | 1250 format | 1272 format | 1255 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|---|---|
| 1545 | 15.0 | – | – | 24.20 | 400 | 450 |
| 1615 | 16.0 | 5.95 | – | 9.70 | 100 | 150 |
| 1620 | 16.0 | – | – | 10.80 | 150 | 200 |
| 1621 | 16.0 | – | 22.40 | – | 150 | 200 |
| 1621 | 16.0 | 6.60 | – | – | 150 | 210 |
| 1625 | 16.0 | 11.70 | 25.20 | 13.40 | 200 | 250 |
| 1630 | 16.0 | – | 28.00 | – | 250 | 300 |
| 1630 | 16.0** | 9.70 | – | 15.90 | 250 | 300 |
| 1645 | 16.0 | 12.80 | 39.20 | 21.00 | 400* | 450 |
| 1660 | 16.0** | 14.05 | 44.80 | 23.00 | 550* | 600 |
| 1680 | 16.0 | – | – | 32.30 | 750 | 800 |
| 1600 | 16.0 | – | – | 58.70 | 950 | 1000 |
| 1699 | 16.0 | – | – | 134.50 | 1350 | 1400 |
| 1820 | 18.0** | 15.80 | – | 18.10 | 150 | 200 |
| 1825 | 18.0 | – | – | 19.85 | 200 | 250 |
| 1825 | 18.0 | 12.10 | – | – | 200 | 260 |
| 1830 | 18.0 | 13.25 | – | 21.70 | 250 | 300 |
| 1845 | 18.0** | 14.05 | – | 23.00 | 400* | 450 |
| 1860 | 18.0 | – | – | 33.80 | 550 | 600 |
| 1880 | 18.0 | – | – | 45.00 | 750 | 800 |
| 1800 | 18.0 | – (W120) | – (W120) | 67.10 (W119) | 950 | 1000 |

| Order No. | Ø mm | 1250 format | 1272 format | 1255 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|---|---|
| 1920 | 19.0 | – | – | 21.30 | 150 | 200 |
| 1945 | 19.0 | – | – | 25.60 | 400 | 450 |
| 2020 | 20.0** | 19.10 | – | 21.90 | 150 | 200 |
| 2030 | 20.0 | 15.25 | – | 25.00 | 250 | 300 |
| 2045 | 20.0** | 16.10 | – | 26.40 | 400* | 450 |
| 2060 | 20.0 | – | – | 34.50 | 550 | 600 |
| 2000 | 20.0 | – | – | 75.00 | 950 | 1000 |
| 2225 | 22.0 | – | – | 31.70 | 200 | 250 |
| 2245 | 22.0** | 25.60 | – | 41.90 | 400* | 450 |
| 2260 | 22.0 | – | – | 55.20 | 550 | 600 |
| 2280 | 22.0 | – | – | 70.20 | 780 | 800 |
| 2200 | 22.0 | – | – | 77.90 | 950 | 1000 |
| 2425 | 24.0 | – | – | 37.70 | 200 | 250 |
| 2445 | 24.0** | 28.70 | – | 47.10 | 400* | 450 |
| 2525 | 25.0 | – | – | 38.70 | 200 | 250 |
| 2530 | 25.0 | – | – | 44.70 | 250 | 300 |
| 2545 | 25.0 | 30.60 | – | 50.10 | 400 | 450 |
| 2500 | 25.0 | – | – | 93.20 | 950 | 1000 |
| 2625 | 26.0 | – | – | 38.60 | 200 | 250 |
| 2645 | 26.0** | 40.90 (W120) | – (W120) | 51.60 (W119) | 400* | 450 |

* Pre-drill at least 150 mm deep with a short drill of the same diameter.
** Designed as a twist hammer drill

## SDS-plus hammer drill set

**1253** Set consisting of (order no. 1250).

**0010** Supplied in plastic cassette
**0005** Supplied in metal cassette.

**1272** NEW Set consisting of (order no. 1250).

**0010** Supplied in plastic cassette
**0005** Supplied in metal cassette.

**1255** Set consisting of (order no. 1255).

Supplied in Heller Maxxbox.

SDS plus

1253 0010

1253 0005

format professional quality

1272 0004

1272 0007

format professional quality

1255 0010

heller get a bit more

1255 0005

| Order No. | Design | 1253 format | 1272 format | 1255 heller | Set contents mm |
|---|---|---|---|---|---|
| 0004 | 4-piece | – | 26.30 | – | 5 x 110; 6 x 110; 6 x 160; 8 x 160; 10 x 160 |
| 0010 | 5-piece | 10.85 | – | 16.55 | 5 x 110; 6 x 110; 6 x 160; 8 x 160; 10 x 160 |
| 0005 | 7-piece | 16.30 | – | 24.90 | 5 x 110; 6 x 110; 6 x 160; 8 x 110; 8 x 160; 10 x 160; 12 x 160 |
| 0007 | 7-piece | – (W120) | 45.80 (W120) | – (W119) | 5 x 110; 6 x 110; 6 x 160; 8 x 110; 8 x 160; 10 x 160; 12 x 160 |

## SDS-plus drill

**1254** **Design:** Paddle blade with 3 wings for improved effectiveness in material removal and better force transfer when drilling due to the waved head design. The embedded carbide head withstands armouring hits. Long service life due to the extremely durable single-phase carbide alloy, very fast drilling dust removal without deflagration due to the wide twist shape, vibration optimised triple twist, DuraTec annealing process using high temperature soldering and shot-blasting technology. Certified by Prüfgemeinschaft Mauerbohrer (PGM) according to the requirements of the Deutschen Instituts für Bautechnik (DIBt).

**Application:** Concrete of even the hardest qualities, reinforced concrete, natural stone, masonry, brick.

**1252** **Design:** Blade profile in Y-shape for even better cutting performance and smooth running. High drilling speed, ergonomically optimised - protects joints and muscles. The computer calculated Twinmax twist profile guarantees an optimised impact energy rate. HST annealed surface for higher break-resistance in hammer drilling operation and higher strength for armouring hits. Certified by the Prüfgemeinschaft Mauerbohrer (PGM) according to the requirements of the Deutschen Instituts für Bautechnik (DIBt).

**Application:** Concrete, stone, masonry, marble, brick.

heller get a bit more

3 cutting edges

1254

4 cutting edges

1252

| Order No. | Ø mm | 1254 heller get a bit more | 1252 heller get a bit more | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 0511 | 5.0 | 7.50 | – | 50 | 110 |
| 0516 | 5.0 | 8.00 | – | 100 | 160 |
| 0611 | 6.0 | 8.00 | – | 50 | 110 |
| 0616 | 6.0 | 8.30 | – | 100 | 160 |
| 0621 | 6.0 | 13.30 | – | 150 | 210 |
| 0626 | 6.0 | 16.65 | – | 200 | 260 |
| 0652 | 6.5 | 14.15 | – | 150 | 210 |
| 0811 | 8.0 | 9.15 | – | 50 | 110 |
| 0816 | 8.0 | 10.00 | – | 100 | 160 |
| 0821 | 8.0 | 13.30 | – | 150 | 210 |
| 0826 | 8.0 | 15.85 | – | 200 | 260 |
| 0845 | 8.0 | 33.40 | – | 400 | 450 |
| 1011 | 10.0 | 10.80 | – | 50 | 110 |
| 1016 | 10.0 | 11.65 | – | 100 | 160 |
| 1021 | 10.0 | 14.15 | – | 150 | 210 |
| 1026 | 10.0 | 16.65 | – | 200 | 260 |
| 1030 | 10.0 | 19.15 | – | 250 | 310 |
| 1046 | 10.0 | 29.20 | – | 400 | 450 |
| 1216 | 12.0 | 13.30 | – | 100 | 160 |
| 1221 | 12.0 | 18.35 | – | 150 | 210 |
| 1226 | 12.0 | 19.15 | – | 200 | 260 |
| 1230 | 12.0 | 29.20 | – | 250 | 310 |
| 1246 | 12.0 | 33.40 | – | 400 | 450 |
| | | (W119) | (W119) | | |

| Order No. | Ø mm | 1254 heller get a bit more | 1252 heller get a bit more | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 1260 | 12.0 | 54.30 | – | 550 | 600 |
| 1416 | 14.0 | 20.80 | – | 100 | 160 |
| 1421 | 14.0 | 25.00 | – | 150 | 200 |
| 1426 | 14.0 | 29.20 | – | 200 | 250 |
| 1430 | 14.0 | 33.40 | – | 250 | 300 |
| 1446 | 14.0 | 41.70 | – | 400 | 450 |
| 1621 | 16.0 | 33.40 | – | 150 | 200 |
| 1626 | 16.0 | 37.50 | – | 200 | 250 |
| 1630 | 16.0 | 41.70 | – | 250 | 300 |
| 1646 | 16.0 | 58.40 | – | 400 | 450 |
| 1660 | 16.0 | 66.80 | – | 550 | 600 |
| 1830 | 18.0 | – | 33.80 | 250 | 300 |
| 1845 | 18.0 | – | 35.90 | 400 | 450 |
| 2030 | 20.0 | – | 39.00 | 250 | 300 |
| 2045 | 20.0 | – | 41.10 | 400 | 450 |
| 2245 | 22.0 | – | 65.30 | 400 | 450 |
| 2425 | 24.0 | – | 59.00 | 200 | 250 |
| 2445 | 24.0 | – | 73.60 | 400 | 450 |
| 2545 | 25.0 | – | 78.10 | 400 | 450 |
| 2825 | 28.0 | – | 77.70 | 200 | 250 |
| 2845 | 28.0 | – | 89.60 | 400 | 450 |
| 3045 | 30.0 | – | 91.00 | 400 | 450 |
| | | (W119) | (W119) | | |

## SDS-plus drill set TriJET

**Design:** Set consisting of: (order no. 1254), supplied in Heller Maxxbox.

| Order No. | Set contents mm | 1254 heller get a bit more |
|---|---|---|
| 5000 | 5 x 110; 6 x 110; 8 x 110; 6 x 160; 8 x 160; 10 x 160; 12 x 160 | 54.30 |
| | | (W119) |

## SDS-max hammer drill

**1265**

**Design:** 2 blades for faster drilling results. High drilling speed thanks to optimised head geometry. Precise initial drilling behaviour due to special blade design. The wide twist shape ensures good drilling progress. HST annealed surface for higher break-resistance in hammer drilling operation. Certified by the Prüfgemeinschaft Mauerbohrer (PGM) according to the requirements of the Deutschen Instituts für Bautechnik (DIBt).

**Application:** Concrete, stone, masonry.

**1269**

**Design:** Triple wing blade for increased effectiveness in material removal. Higher transfer of force when drilling due to wave-shaped head design. Extended service life due to single-phase carbide alloy. Embedded carbide head - withstands armouring hits. Very fast drilling dust removal without deflagration due to the wide twist shape. Vibration-optimised triple helix. DuraTec annealing process using high temperature soldering and shotblasting technology. Certified by the Prüfgemeinschaft Mauerbohrer (PGM) according to the requirements of the Deutschen Instituts für Bautechnik (DIBt).

**Application:** Concrete of even the hardest qualities, reinforced concrete, natural stone, masonry, brick.

**1270**

**Design:** Robust cutting profile in Y-form enables precise positioning and ideal drill start behaviour. Particularly powerful and strong, even in case of armouring hits, thanks to the stabilised main blade. High service life in concrete and armouring due to enlarged, rounded secondary blade. Better hold when starting to drill and prevention of splintering due to reinforced 2-point centring tip. Extremely fast drilling rate due to large-volume Twinmax 3D spiral. With DuraTec annealing process using high temperature soldering and shot-blasting technology. Certified by the Prüfgemeinschaft Mauerbohrer (PGM) according to the requirements of the Deutschen Instituts für Bautechnik (DIBt).

**Application:** Concrete, stone, masonry, marble, brick.

| Order No. | Ø mm | 1265 format | 1269 heller | 1270 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|---|---|
| 1234 | 12 | 37.40 | 59.10 | – | 200 | 340 |
| 1254 | 12 | 44.20 | 70.30 | – | 400 | 540 |
| 1274 | 12 | – | 85.50 | – | 600 | 740 |
| 1334 | 13 | – | 59.90 | – | 200 | 340 |
| 1354 | 13 | – | 71.10 | – | 400 | 540 |
| 1434 | 14 | 38.50 | 60.70 | – | 200 | 340 |
| 1454 | 14 | 45.60 | 71.90 | – | 400* | 540 |
| 1474 | 14 | – | 87.10 | – | 600 | 740 |
| 1534 | 15 | – | 61.50 | – | 200 | 340 |
| 1554 | 15 | – | 72.70 | – | 400 | 540 |
| 1634 | 16 | 39.50 | 62.30 | – | 200 | 340 |
| 1654 | 16 | 46.70 | 73.50 | – | 400* | 540 |
| 1674 | 16 | – | 87.90 | – | 600 | 740 |
| 1694 | 16 | – | 91.10 | – | 800 | 940 |
| 1699 | 16 | – | 154.50 | – | 1200 | 1340 |
| 1834 | 18 | 40.00 | – | 63.10 | 200 | 340 |
| 1854 | 18 | 47.00 | – | 74.10 | 400* | 540 |
| 1874 | 18 | – | – | 88.60 | 600 | 740 |
| 1894 | 18 | – | – | 91.90 | 800* | 940 |
| 1932 | 19 | – | – | 63.60 | 200 | 320 |
| 1954 | 19 | – | – | 75.60 | 400 | 540 |
| 2032 | 20 | 40.60 | – | 64.00 | 200 | 320 |
| 2052 | 20 | 49.00 | – | 77.20 | 400* | 520 |
| 2072 | 20 | – | – | 90.00 | 600 | 720 |
| 2092 | 20 | – | – | 93.30 | 800* | 920 |
| 2232 | 22 | 43.20 | – | 68.10 | 200 | 320 |
| 2252 | 22 | 50.50 | – | 79.60 | 400* | 520 |
| 2272 | 22 | – | – | 93.50 | 600 | 720 |
| 2292 | 22 | – | – | 95.00 | 800 | 920 |
| 2299 | 22 | – | – | 194.00 | 1200 | 1320 |
| 2432 | 24 | 44.00 | – | 69.40 | 200 | 320 |
| 2452 | 24 | 51.10 | – | 80.60 | 400* | 520 |
| 2532 | 25 | 45.50 | – | 71.60 | 200 | 320 |
| 2552 | 25 | 51.70 | – | 81.50 | 400* | 520 |
| 2572 | 25 | – | – | 103.00 | 600 | 720 |
| 2592 | 25 | – | – | 115.50 | 800* | 920 |
| | | (W120) | (W119) | (W119) | | |

| Order No. | Ø mm | 1265 format | 1269 heller | 1270 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|---|---|
| 2599 | 25 | – | – | 200.00 | 1200 | 1320 |
| 2634 | 26 | – | – | 81.70 | 200 | 320 |
| 2652 | 26 | – | – | 91.80 | 400 | 520 |
| 2837 | 28 | – | – | 82.40 | 200 | 320 |
| 2837 | 28 | 52.20 | – | – | 250 | 370 |
| 2857 | 28 | – | – | 92.40 | 400* | 520 |
| 2857 | 28 | 58.60 | – | – | 450* | 570 |
| 2867 | 28 | – | – | 108.50 | 600* | 720 |
| 2892 | 28 | – | – | 125.50 | 800 | 920 |
| 3037 | 30 | – | – | 84.70 | 200 | 320 |
| 3037 | 30 | 53.80 | – | – | 250 | 370 |
| 3057 | 30 | – | – | 93.20 | 400* | 520 |
| 3057 | 30 | 59.10 | – | – | 450* | 570 |
| 3072 | 30 | – | – | 113.50 | 600 | 720 |
| 3237 | 32 | 54.20 | – | 85.50 | 200 | 320 |
| 3257 | 32 | – | – | 98.90 | 400* | 520 |
| 3257 | 32 | 62.80 | – | – | 450* | 570 |
| 3272 | 32 | – | – | 116.50 | 600 | 720 |
| 3292 | 32 | – | – | 136.00 | 800 | 920 |
| 3299 | 32 | – | – | 240.00 | 1200 | 1320 |
| 3537 | 35 | – | – | 88.30 | 200 | 320 |
| 3557 | 35 | – | – | 111.00 | 400* | 520 |
| 3557 | 35 | 70.30 | – | – | 450* | 570 |
| 3567 | 35 | – | – | 151.00 | 600 | 720 |
| 3837 | 38 | – | – | 92.50 | 200 | 320 |
| 3857 | 38 | – | – | 135.00 | 400* | 520 |
| 3872 | 38 | – | – | 155.50 | 600 | 720 |
| 4037 | 40 | – | – | 95.90 | 200 | 320 |
| 4057 | 40 | – | – | 157.00 | 400* | 520 |
| 4057 | 40 | 99.60 | – | – | 450* | 570 |
| 4072 | 40 | – | – | 179.00 | 600 | 720 |
| 4092 | 40 | – | – | 206.50 | 800 | 920 |
| 4099 | 40 | – | – | 303.00 | 1200 | 1320 |
| 4557 | 45 | – | – | 202.50 | 400 | 520 |
| 5057 | 50 | – | – | 241.50 | 400 | 520 |
| | | (W120) | (W119) | (W119) | | |

* Pre-drill at least 150 mm with a short drill with the same diameter.

## Carbide core cutter

**Design:** Stable bits/socket/cutter set with SDS-plus or hex drive shank and hardened steel body with M16 internal thread. The optimum round motion ensures clean holes and the low-wear carbide teeth ensure maximum stability. High quality slot soldering with long tool life, including in hard materials. Supplied incl. replaceable centre drill. Max. drilling depth 50 mm.

**Application:** For concrete, stone, masonry, brick, tile and light construction materials etc.

**Note:** Suitable mount shank and centre drill (order no. 1274).

| Order No. | Ø mm | 1271 format | Area of use | Shank |
|---|---|---|---|---|
| 0650 | 68 | 54.60 | Switch boxes | Hexagon SW 12 mm |
| 0800 | 80 | 64.40 | Junction boxes | Hexagon SW 12 mm |
| 0651 | 68 | 56.70 | Switch boxes | SDS-plus |
| 0801 | 80 | 64.40 (W120) | Junction boxes | SDS-plus |

## Diamond bit

**Design:** Diamond socket countersink with extremely durable high-end diamond blades for excellent material removal and high drilling speeds. The innovative drill head with special twist shape endures high drilling speed, fast drilling dust removal and reduce segment wear. Extremely precise and clean results, even in damp sandstone. Perfect for installations thanks to the exact cut in dry drilling with low levels of wear. Max. drilling depth 60 mm.

**Application:** For sandstone, masonry.

| Order No. | Ø mm | 1274 format | Area of use | Number of segments |
|---|---|---|---|---|
| 0680 | 68 | 91.70 | Switch boxes | 3 |
| 0820 | 82 | 100.50 (W120) | Junction boxes | 4 |

## Mandrel

**Design:** Mount shank for diamond drill bits (order no. 1271/1274).

| Order No. | Mandrel | 1274 format |
|---|---|---|
| 0005 | Hexagon SW 12 mm | 15.40 |
| 0006 | SDS-plus | 20.50 (W120) |

## HM centre drill

**Design:** Carbide centre drill in sturdy design for fast and safe drill start on all surfaces. To suit mount Shank (order no. 1271/1274).

| Order No. | Ø mm | 1274 format | Length mm | Suitable for |
|---|---|---|---|---|
| 0008 | 9 | 4.13 | 120 | HM-Bohrkrone Bestell-Nr. 1271 |
| 0010 | 8 | 4.13 NEW (W120) | 130 | Diamant-Bohrkrone Bestell-Nr. 1274 |

## Carbide hammer drill bit RatioQuick

**Design:** Increased drilling dust removal due to alternate flat and trapezoidal tooth design. Extremely fast propulsion, perfect mix of chisels and drills in one step, strong penetration even in armoured concrete.

**Application:** For concrete, stone, masonry, marble, brick. Use with centre drill (order no. 1276 1000).

| Order No. | Ø mm | 1276 heller | Area of use | Number of Carbide teeth |
|---|---|---|---|---|
| 0065 | 65 | 125.00 | Switch boxes | 6 |
| 0080 | 80 | 150.00 (W119) | Junction boxes | 8 |

## HM centre drill Ratio Quick

**Design:** Centre drill in sturdy design for fast and safe drill start on all surfaces. For carbide hammer drill bit Ratio Quick

| Order No. | Ø mm | 1276 heller | Length mm |
|---|---|---|---|
| 1000 | 12 | 21.40 (W119) | 155 |

## RebarCutter armouring drill

**Design:** With embedded and individually soldered carbide teeth. The drill also has an integrated ejector aid for simple removal of the armouring from the drill body. The shank has a thread for quick changeover between the armouring drill and hammer drill.

**Application:** For use with SDS-plus ratio adapter, 100 % suitable for hammer drills. Ideal for reinforced concrete with the usual building site armouring. The hammer drill hits armouring. The armouring drill is used and the armouring drilled through. Then the hammer drill is used again and drilling continues.

**Note:** Only cut through armouring with authorisation from a structural engineer.

| Order No. | Ø mm | 1266 heller | Drilling depth mm | Total length mm |
|---|---|---|---|---|
| 0120 | 12 | 97.70 | 190 | 230 |
| 0140 | 14 | 97.70 | 190 | 230 |
| 0160 | 16 | 118.00 | 190 | 230 |
| 0180 | 18 | 126.00 | 190 | 230 |
| 0200 | 20 | 129.00 | 190 | 230 |
| 0250 | 25 | 146.50 | 190 | 230 |
| 0280 | 28 | 150.50 | 190 | 230 |
| 0300 | 30 | 159.00 (W119) | 190 | 230 |

## Adapter for Ratio Quick hammer drills

**Application:** For armouring drill RebarCutter (order no. 1266) and Ratio carbide hammer drill (order no. 1276) in SDS-plus or SDS-max hammer drills.

| Order No. | Mandrel | 1267 heller | Length mm |
|---|---|---|---|
| 0010 | SDS-plus | 37.20 | 108 |
| 0020 | SDS-max | 37.20 (W119) | 185 |

## Multi-purpose keyhole saw Allmat

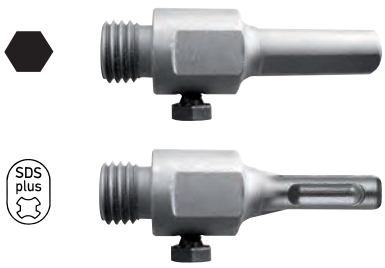
**Design:** High drill bit with sturdy base and ground carbide teeth on all sides, which can be sharpened. The clamping area is large and therefore ensures quick drill dust removal without sticking. Drilling residues are also easy to remove. Max. drilling depth 65 mm.

**Application:** Ideal for installation of sockets and junction boxes. **Torsion-free drilling**is guaranteed and sockets are countersunk in one step due to the high and sturdy drill body. The partially ground teeth prevent burning when drilling in wood. Suitable for a number of materials such as aluminium, insulation, gas concrete, plasterboard, wood and sandstone. For use on machines with SDS-plus and hexagon shank.

| Order No. | Ø mm | 1275 heller | Area of use |
|---|---|---|---|
| 0680 | 68 | 33.90 | Switch boxes |
| 0820 | 82 | 43.60 (W121) | Junction boxes |

## Mount shank Allmat

**Application:** Multi-purpose keyhole saw Allmat (order no. 1275).




| Order No. | Mandrel | 1275 heller |
|---|---|---|
| 0050 | Hexagonal | 10.65 |
| 0055 | SDS-plus | 10.65 (W121) |

## Centre drill Allmat

**Design:** Centre drill in sturdy design for fast and safe drill start on all surfaces.
To suit mount shank (order no. 1275).

| Order No. | Ø mm | 1275 heller | Length mm |
|---|---|---|---|
| 0010 | 8 | 4.80 (W121) | 100 |

## Stone and concrete drill

**Design:** With round shank. The computer calculated twist profile ensures optimum removal of drilling dust, smoother drilling and optimum impact energy transport. Extremely long tool lives are achieved by the high strength soldering of carbide plates and the annealed surface, which results in a guaranteed higher break-resistance in impacts and higher strength for armouring hits. Up to 50% more holes than standard concrete drills. Certified by the Prüfgemeinschaft Mauerbohrer.

**Application:** For concrete, stone, masonry, brick, light construction materials, granite and marble.

| Order No. | Ø mm | 1259 format | Spiral length mm | Total length approx. mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0300 | 3 | 2.00 | 40 | 70 | 3 |
| 0400 | 4 | 1.83 | 40 | 75 | 4 |
| 0500 | 5 | 1.89 | 50 | 85 | 5 |
| 0600 | 6 | 2.09 | 60 | 100 | 6 |
| 0700 | 7 | 2.46 | 60 | 100 | 7 |
| 0800 | 8 | 2.38 (W120) | 80 | 120 | 8 |

| Order No. | Ø mm | 1259 format | Spiral length mm | Total length approx. mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0900 | 9 | 2.82 | 80 | 120 | 9 |
| 1000 | 10 | 3.50 | 80 | 120 | 10 |
| 1200 | 12 | 4.03 | 90 | 150 | 12 |
| 1400 | 14 | 6.40 | 90 | 150 | 12 |
| 1600 | 16 | 8.35 (W120) | 100 | 160 | 12 |

1268 0010

## Stone and concrete drill set

**Design:** Supplied in full steel cassette. Set consisting of (order no. 1259).

| Order No. | Set contents mm | 1268 format |
|---|---|---|
| 0010 | 4; 5; 2 x 6; 8; 10; 12 | 15.70 (W120) |

## Stone drill set

**Design:** Impact drill with round shank. Rolled spirals for normal loads. Equipped with carbide cutting plate for standard drilling performance. Supplied in plastic cassette

**Application:** For stone, masonry, brick and light construction materials.

| Order No. | Set contents mm | 1268 format |
|---|---|---|
| 0005 | 4; 5; 6; 8; 10 | 6.95 (W120) |

1268 0005

## Concrete and natural stone drill ProXtreme

**Design:** Triangular mount prevents "slipping" in the chuck. Wide range of applications and perfect centring thanks to the partially ground carbide plate. Excellent speed due to optimum head geometry and the large volume twist design. The special hard-jet technique ensures extremely good performance properties, a long service life and excellent drill start behaviour.

**Application:** Concrete, granite, marble, masonry, wall tiles, sandstone, stone.

| Order No. | Ø mm | 1258 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|
| 0400 | 4.0 | 3.93 | 45 | 115 |
| 0500 | 5.0 | 4.09 | 50 | 115 |
| 0600 | 6.0 | 4.25 | 60 | 125 |
| 0602 | 6.0 | 5.50 | 110 | 175 |
| 0604 | 6.0 | 7.10 | 185 | 250 |
| 0601 | 7.0 | 4.72 | 60 | 125 |
| 0800 | 8.0 | 5.50 (W119) | 80 | 145 |

| Order No. | Ø mm | 1258 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|
| 0804 | 8.0 | 7.90 | 185 | 250 |
| 0900 | 9.0 | 5.75 | 80 | 145 |
| 1000 | 10.0 | 6.15 | 80 | 145 |
| 1004 | 10.0 | 8.70 | 185 | 250 |
| 1200 | 12.0 | 7.75 | 90 | 150 |
| 1400 | 14.0 | 12.65 (W119) | 90 | 150 |

## Concrete and natural stone ProXtreme set

**Design:** Supplied in plastic cassette Set consisting of (order no. 1258).

| Order No. | Set contents mm | 1258 heller |
|---|---|---|
| 0005 | 4; 5; 6 x 125; 8; 10 | 23.90 (W119) |

## Allmat universal drill

**Design:** Universal drill with round shank. Easy drill start, even on smooth and hard surfaces, thanks to the diamond-ground carbide cross blade. With a ground outer diameter for exact drilling holes. Designed for a longer service life.

**Application:** For masonry, wall tiles, marble, plastics, light materials, metal, non-ferrous metals and coated chipboard. Also suitable for use with light impacts.

| Order No. | Ø mm | 1261 heller | Spiral length mm | Total length mm |
|---|---|---|---|---|
| 0040 | 4 | 4.05 | 40 | 75 |
| 0050 | 5 | 4.19 | 50 | 85 |
| 0060 | 6 | 4.61 | 60 | 100 |
| 0080 | 8 | 5.50 | 80 | 120 |
| 0100 | 10 | 6.60 | 80 | 120 |
| 0120 | 12 | 8.85 (W119) | 90 | 150 |

## Allmat universal drill set

**Design:** Set consisting of: (order no. 1261). Supplied in plastic cassette.

| Order No. | Set contents mm | 1261 heller |
|---|---|---|
| 1000 | 5; 6; 8; 10 | 20.90 (W119) |

## Glass drill QuickBit CeramicMaster

**Design:** With tapering cross blade and refined surface for less friction and a longer service life. Exact drill start, including on smooth and sensitive surfaces. The blades can be sharpened. **With 1/4" hexagon shank.**

**Application:** Glass and tile drill. Exact holes on sensitive and smooth surfaces are achieved by the geometry of the cross blade. For ceramic, tiles, hard-fired tiles, glass, Perspex, mirror glass etc.

| Order No. | Ø mm | 1263 heller | Total length mm |
|---|---|---|---|
| 0030 | 3 | 4.71 | 75 |
| 0040 | 4 | 4.80 | 75 |
| 0050 | 5 | 5.20 | 75 |
| 0060 | 6 | 5.40 | 75 |
| 0070 | 7 | 7.05 | 85 |
| 0080 | 8 | 7.50 | 85 |
| 0100 | 10 | 9.90 | 85 |
| 0130 | 13 | 11.45 | 100 |
| 0140 | 14 | 12.65 (W119) | 100 |

## Glass drill set QuickBit CeramicMaster

**Design:** Set consisting of: (order no. 1263). Supplied in blister packaging.

| Order No. | Set contents mm | 1263 |
|---|---|---|
| 1000 | 4; 5; 6; 8; 10 | 30.30 (W119) |

## SDS-plus chisel

**Design:** Sturdy model **with SDS-plus mount shank,** forged from one piece, possible to sharpen. Long service life.

| Order No. | Design | 1256 format | Width mm | Length mm |
|---|---|---|---|---|
| 0005 | Pointed chisel | 9.20 | – | 250 |
| 0010 | Flat chisel | 9.20 | 20 | 250 |
| 0015 | Hollow chisel | 14.90 | 22 | 250 |
| 0020 | Spade chisel | 15.05 | 35 | 250 |
| 0025 | Tile chisel | 18.85 | 40 | 250 |
| 0030 | Wing chisel | 31.20 | 20 | 250 |
| | | (W120) | | |

## SDS-max Enduro chisel

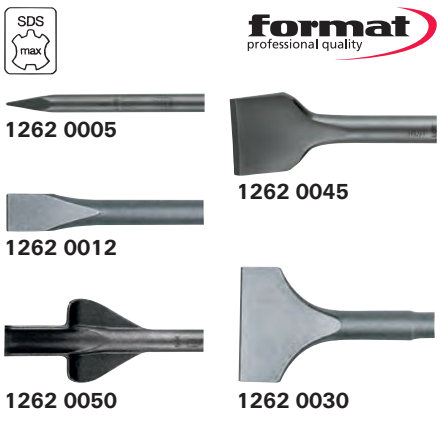
**Design:** Long service life thanks to innovative chisel design with increased blade length, with SDS-plus mounting shank.
Higher comfort thanks to low vibration transmission. Reduced tread wear throughout the entire service life.
Made of special steel.

| Order No. | Design | 1251 heller | Width mm | Length mm |
|---|---|---|---|---|
| 0005 | Pointed chisel | 14.25 | – | 250 |
| 0010 | Flat chisel | 14.25 | 20 | 250 |
| 0020 | Spade chisel | 23.80 | 40 | 250 |
| | | (W119) | | |

## SDS-max chisel

**Design:** Sturdy model with SDS-max mount shank, forged from one piece, possible to sharpen. Long service life.

| Order No. | Design | 1262 format | Width mm | Length mm |
|---|---|---|---|---|
| 0002 | Pointed chisel | 10.85 | – | 280 |
| 0005 | Pointed chisel | 10.85 | – | 400 |
| 0010 | Pointed chisel | 15.55 | – | 600 |
| 0012 | Flat chisel | 11.55 | 25 | 280 |
| 0015 | Flat chisel | 10.85 | 25 | 400 |
| 0020 | Flat chisel | 15.95 | 25 | 600 |
| 0030 | Spade chisel | 20.70 | 50 | 400 |
| 0035 | Spade chisel | 29.00 | 80 | 300 |
| 0040 | Spade chisel | 48.20 | 115 | 350 |
| 0045 | Tile chisel | 26.40 | 50 | 300 |
| 0050 | Wing chisel | 38.40 | 35 | 380 |
| | | (W120) | | |




## SDS-max chisel

NEW

**Design:** Sturdy model with SDS-max mount shank, forged from one piece, possible to sharpen. Long service life.

| Order No. | Design | 1278 heller | Width mm | Length mm |
|---|---|---|---|---|
| 0007 | Pointed chisel | 19.80 | – | 350 |
| 0017 | Flat chisel | 19.80 | 25 | 350 |
| 0032 | Spade chisel | 34.10 | 50 | 350 |
| | | (W119) | | |

## Wood spiral drill

**Design:** Exact drill start and clean drill holes due to sharpened centring tip and two shoulder cutters, high durability and break-resistance thanks to wear-resistant CV steel, fast transport of chips.

**Application:** For soft and hard wood, plywood, and chipboard. Also suitable for use with battery-powered drills.

| Order No. | Ø mm | 1288 format | Spiral length mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0300 | 3 | 1.58 | 30 | 60 | 3.0 |
| 0400 | 4 | 1.58 | 43 | 75 | 4.0 |
| 0500 | 5 | 1.72 | 50 | 85 | 5.0 |
| 0600 | 6 | 1.76 | 52 | 90 | 6.0 |
| 0700 | 7 | 1.87 | 68 | 110 | 7.0 |
| 0800 | 8 | 2.27 | 75 | 120 | 8.0 |
| 1000 | 10 | 2.51 | 80 | 130 | 10.0 |
| 1200 | 12 | 2.73 | 100 | 150 | 8.0 |
| 1400 | 14 | 3.74 | 105 | 160 | 9.5 |
| 1600 | 16 | 4.09 | 115 | 180 | 9.5 |
| 2000 | 20 | 10.85 (W122) | 130 | 200 | 9.5 |

## Wood spiral drill set

**Design:** Supplied in plastic cassette. Set consisting of (order no. 1288).

| Order No. | Set contents mm | 1289 format |
|---|---|---|
| 0005 | 4; 5; 6; 8; 10 | 8.70 (W122) |

## Attachment countersink

**Design:** For drilling and countersinking in one step, 5 blade geometry for clean countersinking, including in hard materials, **Countersinking angle 90°,** also for use as a depth stop at the same time.

**Countersink**

**Stop**

| Order No. | For drill Ø mm | 1297 format | Countersink Ø mm |
|---|---|---|---|
| 0300 | 3 | 10.05 | 16 |
| 0400 | 4 | 10.05 | 16 |
| 0500 | 5 | 10.05 | 16 |
| 0600 | 6 | 10.05 | 16 |
| 0800 | 8 | 11.10 | 16 |
| 1000 | 10 | 11.60 (W122) | 16 |

## LEWIS auger

**Design:** With self retracting thread tip for on the spot drilling, extremely sturdy, the annealed front and main blade ensure a long tool life. The Lewis twist ensures the fastest possible removal of chips. With hexagonal shank.

**Application:** For hard and soft wood, end grain wood and beams.

| Order No. | Ø mm | 1291 format | Spiral length mm | Total length mm |
|---|---|---|---|---|
| 0845 | 8 | 12.90 | 380 | 450 |
| 1045 | 10 | 12.90 | 380 | 450 |
| 1245 | 12 | 14.15 | 380 | 450 |
| 1445 | 14 | 15.95 | 380 | 450 |
| 1645 | 16 | 17.35 | 380 | 450 |
| 1845 | 18 | 19.00 | 380 | 450 |
| 2045 | 20 | 20.40 (W122) | 380 | 450 |

## Formwork drill

**Design:** High durability and break protection thanks to wear-resistant CV steel, the offset shank with open twist discharge prevents the drill from sticking, excellent round motion for precise holes, optimum removal of chips - even from deep drilling holes.

**Application:** For slabs and facings, hard and soft word, isolation and insulating materials.

**1294** **Total length 400 mm.**

**1295** **Total length 600 mm.**

| Order No. | Ø mm | 1294 format | 1295 format | Shank Ø mm |
|---|---|---|---|---|
| 0800 | 8 | 6.45 | 6.55 | 6 |
| 1000 | 10 | 7.10 | 7.70 | 8 |
| 1200 | 12 | 9.05 | 9.80 | 8 |
| 1400 | 14 | 10.80 | 11.70 | 8 |
| 1600 | 16 | 13.15 | 13.80 | 10 |
| 1800 | 18 | 17.60 | 19.05 | 10 |
| 2000 | 20 | 20.60 | 22.20 | 10 |
| 2200 | 22 | 22.80 | 25.00 | 10 |
| 2400 | 24 | 30.20 | – | 11 |
| 2600 | 26 | – | 38.20 | 11 |
| 2800 | 28 | – | 41.10 | 11 |
| 3000 | 30 | – | 46.40 | 11 |
| | | (W122) | (W122) | |

## Forstner drill bit

**Design:** Corresponding with DIN 7483 G, with precision ground centring tip for a precise drill start. Two circumference blades and two main blades guarantee precise holes, including at the edge.

**Application:** For soft and hard wood, veneer wood, plastic-coated boards.

| Order No. | Ø mm | 1285 format | Length mm | Shank Ø mm | Max. speed for soft wood $min^{-1}$ | Max. speed for hard wood $min^{-1}$ |
|---|---|---|---|---|---|---|
| 1000 | 10 | 7.60 | 90 | 9.5 | 1200–1400 | 1000–1200 |
| 1500 | 15 | 8.90 | 90 | 9.5 | 1200–1400 | 1000–1200 |
| 2000 | 20 | 10.70 | 90 | 9.5 | 1200–1400 | 1000–1200 |
| 2500 | 25 | 11.45 | 90 | 9.5 | 1000–1200 | 800–1000 |
| 3000 | 30 | 13.40 | 90 | 9.5 | 1000–1200 | 800–1000 |
| 3200 | 32 | 14.80 | 90 | 9.5 | 800–1000 | 600– 800 |
| 3500 | 35 | 15.50 | 90 | 9.5 | 800–1000 | 600– 800 |
| 4000 | 40 | 21.60 | 90 | 9.5 | 800–1000 | 600– 800 |
| | | (W122) | | | | |


# DampMaster Compact

Wood and building moisture analyser for 3 groups of wood and 8 construction materials.

Laserliner Innovation in Tools

4/153

## Precision sheet spiral drill (spiral counter bore)

**Design:** According to factory standard, CBN deep sharpened, straight fluted. Chuck slippage is avoided by the 3-surface shank. With cross point and laser print of hole Ø and speed. The hole Ø can still be read with the tool rotating.

**Application:** For burr-free drilling and reaming of sheets, pipes and profiles. Works without burrs and chatter marks and can be used in hand drills and box column drills. No punch marking required.

| | |
|---|---|
| For steel plate | 0.1–2.0 mm |
| Nirosta sheet (V2A) | 0.1–1.0 mm |
| Plastics | up to 10.0 mm |
| Non-ferrous metals | 0.1–5.0 mm |

**Note:** To increase the service life, we recommend the use of drilling paste (Order No. 1312 0005, 📖 1/97).

Factory standard

format professional quality

HSS

**1300**
steam

HSS

**1303**
TiN

HSS-E

**1305**
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | ● | ● | ○ | | | | | | ○ | | ● | ● | ● |
| 1303 | ● | ● | ● | | | | | | ● | ○ | ● | ● | ● |
| 1305 | ● | ● | ● | ○ | | | | | ● | ○ | ● | ○ | ● |

| Order No. | Drilling area mm | 1300 format steam | 1303 format TiN | 1305 format TiAlN | Size | Total length mm | Shank length mm | Shank Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0010 | 3.0–14.0 | 9.50 | 16.90 | 22.90 | 1 | 58 | 20 | 6 |
| 0070 | 4.0–31.0 | 30.60 | 45.10 | 64.80 | 7 | 103 | 25 | 9 |
| 0020 | 4.0–20.0 | 12.90 | 19.50 | 27.40 | 2 | 71 | 22 | 8 |
| 0030 | 16.0–30.5 | 22.50 | 40.60 | 53.50 | 3 | 76 | 22 | 9 |
| 0040 | 24.0–40.0 | 42.20 | 86.00 | 100.50 | 4 | 89 | 30 | 10 |
| 0050 | 36.0–50.0 | 77.00 | 123.50 | 144.00 | 5 | 97 | 30 | 12 |
| 0060 | 40.0–61.0 | 131.00 (W124) | 190.50 (W124) | 222.00 (W124) | 6 | 103 | 30 | 12 |

## Precision sheet spiral drill set (spiral counterbore)

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened incl. 1 tube of drilling paste.

**Note:** To increase the service life, we recommend the use of the drilling paste included in the set (Order No. 1312 0005, 📖 1/97).

| Order No. | Set contents mm | 1306 format steam | 1309 format TiN | 1310 format TiAlN |
|---|---|---|---|---|
| 0100 | 3.0–14.0; 4.0–20.0; 16.0–30.5 | 59.60 (W124) | 89.30 (W124) | 108.00 (W124) |

**1306**
steam

**1310**
TiAlN

**1309**
TiN

## Precision sheet spiral drill (spiral counter bore)

HSS | Factory standard | format professional quality

**Design:** HSS, according to factory standard, CBN deep-ground, spiral fluted. Chuck slippage is avoided by the 3-surface shank. With cross point and laser print of hole Ø and speed. The hole Ø can still be read with the tool rotating.

**Application:** For burr-free drilling and reaming of sheets, pipes and profiles. Works without burrs and chatter marks and can be used in hand drills and box column drills. No punch marking required.

For steel plate 0.1–2.0 mm
Nirosta sheet (V2A) 0.1–1.0 mm
Plastics up to 10.0 mm
Non-ferrous metals 0.1–5.0 mm

**Note:** To increase the service life, we recommend the use of drilling paste (Order No. 1312 0005, 📖 1/97).

1302
bright

1304
TiN

1301
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1302 | ● | ● | ○ | | | | | | ○ | | ● | ● | ● |
| 1304 | ● | ● | ● | | | | | | ● | ○ | ● | ● | ● |
| 1301 | ● | ● | ● | ○ | | | | | ● | ○ | ● | ○ | ● |

| Order No. | Drilling area mm | 1302 format bright | 1304 format TiN | 1301 format TiAlN | Size | Total length mm | Shank length mm | Shank Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0015 | 5–20 | 27.40 | 35.60 | 43.80 | 2A | 76 | 20 | 8 |
| 0080 | 5–31 | 52.10 (W124) | 67.80 (W124) | 87.20 (W124) | LA | 103 | 24 | 10 |

## Precision sheet spiral drill set (spiral counterbore)

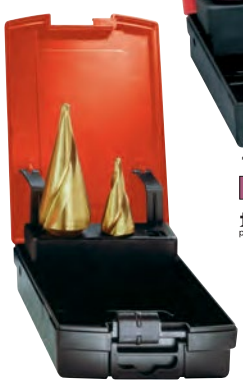
**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**Note:** To increase the service life, we recommend the use of drilling paste (Order No. 1312 0005, 📖 1/97).

| Order No. | Set contents mm | 1308 format bright | 1311 format TiN | 1307 format TiAlN |
|---|---|---|---|---|
| 0100 | 5–20; 5–31 | 91.70 (W124) | 113.00 (W124) | 140.50 (W124) |

1308
bright
format professional quality

1307
TiAlN
format professional quality



1311
TiN
format professional quality

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Universal stepped drill

**Design:** HSS, according to factory standard, straight fluted. Chuck slippage is avoided by the 3-surface shank. Laser print of hole Ø and speed. The hole Ø can still be read with the tool rotating.

**Application:** For burr-free drilling and reaming of sheets, pipes and profiles up to 6 mm materials thickness.
Deburring up to 1.5 mm material thickness. Works without burrs and chatter marks and can be used in hand drills or box column drills. No punch marking required.

**Note:** To increase the service life, we recommend the use of drilling paste (Order No. 1312 0005, 📖 1/96, 1/97, 1/231).

HSS | Factory standard

format professional quality

1315
bright

1312
TiN

1313
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1315 | ● | ○ | ○ | | | | | | ○ | | ● | ● | ● |
| 1312 | ● | ● | ● | | | | | | ● | ○ | ● | ● | ● |
| 1313 | ● | ● | ● | | | | | | ● | ○ | ● | ○ | ● |

| Order No. | Diameter of drill steps mm | 1315 format bright | 1312 format TiN | 1313 format TiAlN | Step length mm | Total length mm | Shank Ø h8 mm |
|---|---|---|---|---|---|---|---|
| 0010 | 4; 5; 6; 7; 8; 9; 10; 11; 12 | 18.50 | 23.90 | 25.30 | 5 | 80 | 6 |
| 0020 | 4; 6; 8; 10; 12; 14; 16; 18; 20 | 21.70 | 27.80 | 29.40 | 4 | 67 | 8 |
| 0023 | 12; 13; 14; 15; 16; 17; 18; 19; 20 | 29.90 | 37.40 | 39.60 | 4 | 76 | 9 |
| 0026 | 20; 21; 22; 23; 24; 25; 26; 27; 28; 29; 30 | 44.60 | 57.20 | 60.70 | 4 | 88 | 12 |
| 0030 | 6; 8; 10; 12; 14; 16; 18; 20; 22; 24; 26; 28; 30 | 36.70 | 47.00 | 49.80 | 4 | 98 | 10 |
| 0033 | 30; 31; 32; 33; 34; 35; 36; 37; 38; 39; 40 | 93.80 | 120.00 | 127.00 | 4 | 98 | 13 |
| 0036 | 40; 41; 42; 43; 44; 45; 46; 47; 48; 49; 50 | 119.50 | 153.00 | 162.50 | 4 | 107 | 13 |
| 0039 | 50; 51; 52; 53; 54; 55; 56; 57; 58; 59; 60 | 172.00 | 220.50 | 233.00 | 4 | 120 | 13 |
| 0040 | For PG through-hole 12.5 (PG7); 15.2 (PG9); 18.6 (PG11); 20.4 (PG13.5); 22.5 (PG16); 28.3 (PG21); 33.0 (–); 37.0 (PG29) | 59.30 | 79.90 | 91.90 | 4 | 92 | 12 |
| 0050 | For PG through-hole 12.5 (PG7); 15.2 (PG9); 18.6 (PG11); 20.4 (PG13.5); (PG16); (PG21); 30.5 (–) | 47.40 | 60.70 | 69.90 | 4 | 85 | 12 |
| 0060 | For PG core hole 11.4 (PG7); 14 (PG9); 17.25 (PG11); 19 (PG13.5); 21.25 (PG16); 26.75 (PG21) | 47.40 | 60.70 | 69.90 | 6 | 92 | 12 |
| 0070 | For general mechanical engineering 9; 12; 15; 18; 21; 24; 27; 30; 33; 36 | 47.80 | 62.70 | 66.50 | 3 | 86 | 12 |
| | | (W124) | (W124) | (W124) | | | |

## Universal stepped drill set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**Note:** To increase the service life, we recommend the use of drilling paste (Order No. 1312 0005, 📖 1/96, 1/97, 1/231).

| Order No. | Set contents mm | 1318 format bright | 1312 format TiN | 1313 format TiAlN |
|---|---|---|---|---|
| 0200 | 4–12; 12–20; 20–30 | 95.40 | 111.50 | 118.00 |
| 0100 | 4–12; 4–20; 6–30 | 93.90 (W124) | 111.00 (W124) | 117.00 (W124) |

1318
bright

1312
TiN

1313
TiAlN

## Plastic cassette, empty

**Design:** Robust, high quality plastic cassette with automatic stepped drill setup function when opened.

| Order No. | For drill Ø mm | 1312 format | Number of drills |
|---|---|---|---|
| 0001 | 4–30 | 13.05 | 4–12; 4–20; 6–30 |
| 0004 | 4–30 | 12.45 (W124) | 4–12; 12–20; 20–30 |

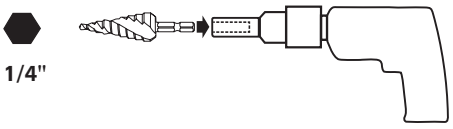
## Universal stepped drill bit 1/4"

**Design:** HSS, spiral fluted. 1/4" bit drive (6.35 mm), shank length 27 mm.

**Application:** For burr-free drilling and reaming of sheets, pipes and profiles.

HSS

format professional quality



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1322 | ● | ○ | | | | | | | ○ | | ○ | ● | ● |

| Order No. | Ø mm | 1322 format | Step length mm | Total length mm |
|---|---|---|---|---|
| 0010 | 4–12 | 29.70 | 5 | 72 |
| 0015 | 4–20 | 37.90 | 4 | 81 |
| 0030 | 4–30 | 60.30 (W134) | 4 | 105 |

## Universal stepped drill 1/4" bit set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

| Order No. | Set contents mm | 1322 format |
|---|---|---|
| 0100 | 4–12; 4–20; 4–30 | 123.00 (W134) |

## Drilling paste

**Design:** Lubricant for metalwork. Drilling paste as a hinge pin with 30g contents.

**Application:** For sheet spiral drill, stepped drill, countersink bits.

format professional quality

| Order No. | Drilling paste | 1312 format |
|---|---|---|
| 0005 | 30g hinge pin | 4.43 (W124) |

## Stepped drill for crash barrier assembly

**Design:** HSS, TiCN coated surface.
Stepped drill with cross point and variable spiral slot. Chuck slippage is avoided by the 3-surface shank. The special cone in the cylindrical area prevents tipping or catching during the drilling process. Drill chuck protection with integrated attachment ring. With laser print of hole Ø and speed. The hole Ø can still be read with the tool rotating.

**Application:** Specially for holes in crash barriers and fully galvanised materials. Insert depth up to 3.5 mm.

**Note:** Use of drilling oils possible.

HSS

EXACT PRÄZISIONSWERKZEUGE

TiCN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1312 | ● | ◐ | | | | | | | ◐ | | ● | ○ | ● |

| Order No. | Drill steps Ø mm | 1312 EXACT TiCN | Step length mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0618 | 6–18 | 58.20 (W135) | 4–6 | 67 | 10.0 |

## Universal stepped drill

HSS | Factory standard

format professional quality

**Design:** HSS, according to factory standard, spiral fluted.
Chuck slippage is avoided by the 3-surface shank. Laser print of hole Ø and speed. The hole Ø can still be read with the tool rotating.

**Application:** For burr-free drilling and reaming of sheets, pipes and profiles up to 6 mm materials thickness.
Deburring up to 1.5 mm material thickness. Works without burrs and chatter marks and can be used in hand drills or box column drills. No punch marking required.

**Note:** To increase the service life, we recommend the use of drilling paste (Bestell-Nr. 1312 0005, 📖 1/97).

**1314**
bright

**1320**
TiN

**1316**
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1314 | ● | ○ | ○ | | | | | | ○ | | ● | ● | ● |
| 1320 | ● | ● | ● | | | | | | ● | ○ | ● | ● | ● |
| 1316 | ● | ● | ● | | | | | | ● | ○ | ● | ○ | ● |

| Order No. | Diameter of drill steps mm | 1314 format bright | 1320 format TiN | 1316 format TiAlN | Step length mm | Total length mm | Shank Ø h8 mm |
|---|---|---|---|---|---|---|---|
| 0010 | 4; 5; 6; 7; 8; 9; 10; 11; 12 | 27.70 | 31.90 | 41.00 | 5 | 80 | 6 |
| 0015 | 4; 6; 8; 10; 12; 14; 16; 18; 20 | 35.30 | 40.60 | 55.00 | 4 | 67 | 8 |
| 0030 | 6; 8; 10; 12; 14; 16; 18; 20; 22; 24; 26; 28; 30 | 56.10 | 64.50 | 77.80 | 4 | 98 | 10 |
| 0035 | 6; 9; 12; 15; 18; 21; 24; 27; 30; 33; 36 | 64.80 | 73.00 | 124.00 | 3 | 82 | 12 |
| 0037 | Thread core holes for cable connections: 7; 10.5 (M12 x 1.5); 14.5 (M16 x 1.5); 18.5 (M20 x 1.5); 23.5 (M25 x 1.5); 30.5 (M32 x 1.5) | 55.80 | 71.10 | 75.20 | 6 (core hole) 3 (through-hole) | 96 | 12 |
| 0038 | Thread core holes for cable connections: 7; 10.5 (M12 x 1.5); 14.5 (M16 x 1.5); 18.5 (M20 x 1.5); 23.5 (M25 x 1.5); 30.5 (M32 x 1.5); 38.5 (M40 x 1.5) Through-holes for cable connections: 7; 12.5 (M12 x 1.5); 16.5 (M16 x 1.5); 20.5 (M20 x 1.5); 25.5 (M25 x 1.5); 32.5 (M32 x 1.5); 40.5 (M40 x 1.5) | 81.90 | 95.80 | 100.00 | 6 (core hole) 3 (through-hole) | 110 | 12 |
| | | (W124) | (W124) | (W124) | | | |

## Universal stepped drill set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

**Note:** To increase the service life, we recommend the use of drilling paste (Order No. 1312 0005, 📖 1/96, 1/97, 1/231).

| Order No. | Set contents mm | 1317 format bright | 1320 format TiN | 1319 format TiAlN |
|---|---|---|---|---|
| 0100 | 4–12; 4–20; 6–30 | 126.50 (W124) | 145.50 (W124) | 178.00 (W124) |

**1317**
bright

**1320**
TiN

**1319**
TiAlN

**Information on articles for cable screw-connections**
The threads are metric ISO precision thread, each with a gradient of 1.5 for all sizes. In distribution cabinets with wall thicknesses up to max. 3-5.5 mm, cable screw connections are screwed into the body. The thread core hole is drilled with one of our stepped drills for cable screw connections. Special cutting tap bits (M12-M32) have been developed for the corresponding thread. The cutting taps have a long pilot tip, which is used to fix the tool in the hole in order to create a 100 % aligned thread, even with single-sided pressure. The tap drive is designed so that it can be operated with a standard hexagon insert ("nut) and a ratchet using just one hand. This type of drive saves time and space.

## Special cutting tap bit for cable screw connections

NEW

**Design:** Short design with hexagon drive for working with one hand, including in difficult to access areas. Guide pins for thread core holes for perfect, aligned threads.
Drive with nut and ratchet.
For metric ISO precision thread DIN 13.

**Application:** Specially for processing distribution boxes with wall thicknesses of 3.0 mm to max. 5.5 mm.

MF | HSS | ISO 2 6H

EXACT PRÄZISIONSWERKZEUGE

| Order No. | Thread | 1311 EXACT | Gradient mm | Total length mm | Cutting length mm | Thread Ø mm | Width of keys |
|---|---|---|---|---|---|---|---|
| 0012 | M12 x 1.5 | 13.40 | 1.5 | 51 | 16.5 | 10.5 | SW 8 |
| 0016 | M16 x 1.5 | 22.10 | 1.5 | 51 | 16.5 | 14.5 | SW 10 |
| 0020 | M20 x 1.5 | 30.30 | 1.5 | 51 | 16.5 | 18.5 | SW 13 |
| 0025 | M25 x 1.5 | 40.40 | 1.5 | 51 | 16.5 | 23.5 | SW 13 |
| 0032 | M32 x 1.5 | 67.20 (W135) | 1.5 | 51 | 16.5 | 30.5 | SW 13 |

## Electrical assortment

**Design:** Supplied in a robust plastic case with foam inlays for safe tool storage.

MF | HSS | ISO 2 6H

format professional quality

| Order No. | Set contents | 1311 format | |
|---|---|---|---|
| 1000 | Special cutting tap bits<br>M12 x 1.5; 16 x 1.5; 20 x 1.5; 25 x 1.5; 32 x 1.5<br>Stepped drill with spiral slots EC 10 for Ø 7–32.5/M12 x 1.5/M32 x 1.5 | 206.00 (W135) | |

## Milling stepped drill

**Design:** HSS, TiN coated surface.
Milling stepped drill with cross point. Chuck slippage is avoided by the 3-surface shank. With laser print of hole Ø and speed.

**Application:** For burr-free drilling and reaming of sheets, pipes and profiles as well as for milling long holes and contours.

HSS

format professional quality

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1323 | ● | ● | ○ | | | | | | ○ | | ○ | ● | ● |

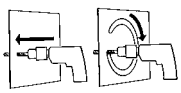
| Order No. | Drill steps Ø mm | 1323 format TiN | Step length mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0412 | 4–12 | 26.40 (W124) | 10 | 80 | 6 |

## Universal milling drill cyl. Shank

NEW

**Design:** HSS.
Short model. Milling blades with chip breakers.

**Application:** Suitable for drilling and milling thin-walled materials.



HSS | Type N | 118°

EXACT PRÄZISIONSWERKZEUGE

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1323 | ● | ● | | | | | | | | | ○ | ○ | ◐ |

| Order No. | Ø mm | 1323 EXACT | Total length mm | Shank Ø mm |
|---|---|---|---|---|
| 0060 | 6 | 5.80 | 90 | 6 |
| 0080 | 8 | 7.95 (W135) | 90 | 8 |

## Spot weld drill cylindrical shank

**Design:** Easy centring, drilling and precisely round drilling is guaranteed by the special point geometry with 90° centre tip.

**Application:** For clean and burr-free drilling out of steel sheet, brass sheet, aluminium sheet, zinc sheet, copper sheet and plastic boards.

HSS Co5 | DIN 1897 | 25–30°

format professional quality

1325 0600–0800
bright

1325 0060–0080
TiCN

**1325**
TiCN
0060 + 0080
NEW

**Note:** Particularly suitable for lubricating materials such as aluminium and VA.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1325 | ● | ● | | | | | | | | | ○ | ○ | ◐ |
| 1325 | ● | ● | | | | | | | | | ● | ● | ● |

| Order No. | Ø mm | 1325 format professional quality bright | Spiral length mm | Total length mm |
|---|---|---|---|---|
| 0600 | 6 | 5.15 | 28 | 66 |
| 0800 | 8 | 6.65 (W124) | 37 | 79 |

| Order No. | Ø mm | 1325 format professional quality TiCN | Spiral length mm | Total length mm |
|---|---|---|---|---|
| 0060 | 6 | 6.15 | 28 | 66 |
| 0080 | 8 | 8.00 (W124) | 37 | 79 |

## Spot weld miller hexagon shank

**Design:** HSS.
With double-sided cutting, replaceable and rotating milling bit as well as setting screw for precisely setting the milling depth. The hexagonal shank causes a 100% power transfer, thus in every bushing the countersink is extremely slip-free. Scope of supply: spot weld milling cutter with milling bit and centring pin.

**Application:** For detaching spot welded sheet parts without misshaping the sheet or pulling it out.

HSS

format professional quality

| Order No. | Design | 1321 format professional quality | Milling cutter Ø mm | Total length mm |
|---|---|---|---|---|
| 0050 | Compl. spot weld cutter | 11.50 | 10 | 72 |
| 0100 | Spare milling bit | 5.10 | 10 | – |
| 0150 | Spare centring pin | 0.66 (W124) | – | – |

optrel swiss made

9/38

**Welding protection helmet Optrel e650**

Suitable for electrodes, metal inert gas, high performance, cored wire, TIG, plasma and micro-plasma welding as well as plasma cutting.

## Core drills

NEW

format professional quality

**Design:** HSS-Co, AlTiN coated surface, with Weldon shank ∅ 19 mm, 2 carrier surfaces and 1 countersink for Rota-Quick®.
Inner hole 6.35 mm.

**Application:** For use in magnetic base drills and column drills with MK mount. The core drill only machines a thin material ring. The remaining drill core is ejected by a guide and ejector pin using spring force. The chips are quickly moved up for disposal and the risk of breakage minimised. Even large drilling diameters require relatively low amounts of energy. The core drill machines only a small part of the overall area in comparison to the spiral drill. This results in huge savings in power and time.

HSS Co

**1337**
bright

HSS

**1338**
TiAlN

HSS Co

**1339**
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1337 | **30** | 20 | | | | | | | | | 40 | 42 | |
| 1338 | **30** | 20 | | | | | | | | | 40 | 42 | |
| 1339 | **30** | 20 | 12 | **8** | 6 | | | | **15** | 22 | 40 | 42 | |

| Order No. | Drill ∅ mm | 1337 format professional quality bright | 1338 format professional quality TiAlN | 1339 format professional quality TiAlN |
|---|---|---|---|---|
| 1230 | 12 | 18.00 | 15.85 | 19.55 |
| 1330 | 13 | 18.25 | 16.05 | 19.85 |
| 1430 | 14 | 18.40 | 16.15 | 19.95 |
| 1530 | 15 | 19.65 | 17.30 | 21.40 |
| 1630 | 16 | 21.00 | 18.50 | 22.90 |
| 1730 | 17 | 22.30 | 19.60 | 24.20 |
| 1830 | 18 | 23.60 | 20.80 | 25.70 |
| 1930 | 19 | 24.90 | 21.90 | 27.10 |
| 2030 | 20 | 26.20 | 23.10 | 28.50 |
| 2130 | 21 | 27.60 | 24.30 | 30.00 |
| 2230 | 22 | 26.10 | 23.00 | 28.40 |
| 2330 | 23 | 27.30 | 24.00 | 29.70 |
| 2430 | 24 | 28.50 | 25.10 | 30.90 |
| 2530 | 25 | 29.70 | 26.10 | 32.30 |
| 2630 | 26 | 30.80 | 27.10 | 33.50 |
| 2730 | 27 | 32.00 | 28.20 | 34.80 |
| 2830 | 28 | 33.20 | 29.20 | 36.10 |
| 2930 | 29 | 34.40 | 30.30 | 37.40 |
| 3030 | 30 | 35.60 | 31.30 | 38.60 |
| 3130 | 31 | 36.80 (W123) | 32.30 (W123) | 39.90 (W123) |

| Order No. | Drill ∅ mm | 1337 format professional quality bright | 1338 format professional quality TiAlN | 1339 format professional quality TiAlN |
|---|---|---|---|---|
| 3230 | 32 | 41.90 | 36.90 | 45.60 |
| 3330 | 33 | 43.30 | 38.10 | 47.00 |
| 3430 | 34 | 47.70 | 42.00 | 51.90 |
| 3530 | 35 | 52.40 | 46.10 | 57.00 |
| 3630 | 36 | 53.90 | 47.40 | 58.50 |
| 3730 | 37 | 55.40 | 48.80 | 60.30 |
| 3830 | 38 | 56.90 | 50.10 | 61.80 |
| 3930 | 39 | 58.40 | 51.40 | 63.50 |
| 4030 | 40 | 59.90 | 52.70 | 65.10 |
| 4130 | 41 | 61.40 | 54.00 | 66.70 |
| 4230 | 42 | 63.00 | 55.40 | 68.40 |
| 4330 | 43 | 64.40 | 56.70 | 70.00 |
| 4430 | 44 | 65.90 | 58.00 | 71.60 |
| 4530 | 45 | 67.40 | 59.30 | 73.20 |
| 4630 | 46 | 68.90 | 60.60 | 74.90 |
| 4730 | 47 | 70.30 | 61.90 | 76.40 |
| 4830 | 48 | 71.90 | 63.30 | 78.20 |
| 4930 | 49 | 73.40 | 64.60 | 79.80 |
| 5030 | 50 | 74.90 (W123) | 65.90 (W123) | 81.40 (W123) |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Core drills

NEW

format professional quality

**Design:** HSS-Co, AlTiN coated surface, with Weldon shank Ø 19 mm, 2 carrier surfaces and 1 countersink for Rota-Quick®.
Inner hole 6.35 mm.

**Application:** For use in magnetic base drills and column drills with MK mount. The core drill only machines a thin material ring. The remaining drill core is ejected by a guide and ejector pin using spring force. The chips are quickly moved up for disposal and the risk of breakage minimised. Even large drilling diameters require relatively low amounts of energy. The core drill machines only a small part of the overall area in comparison to the spiral drill. This results in huge savings in power and time.

HSS Co

**1340**
bright

HSS

**1341**
TiAlN

HSS Co

**1342**
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1340 | 30 | 20 | | | | | | | | | 40 | 42 | |
| 1341 | 30 | 20 | | | | | | | | | 40 | 42 | |
| 1342 | 28 | 18 | 10 | 6 | 4 | | | | 13 | 20 | 38 | 40 | |

| Order No. | Drill Ø mm | 1340 format bright | 1341 format TiAlN | 1342 format TiAlN |
|---|---|---|---|---|
| 1255 | 12 | 24.30 | 21.40 | 26.40 |
| 1355 | 13 | 25.40 | 22.30 | 27.60 |
| 1455 | 14 | 26.20 | 23.10 | 28.50 |
| 1555 | 15 | 28.10 | 24.70 | 30.60 |
| 1655 | 16 | 30.00 | 26.40 | 32.60 |
| 1755 | 17 | 31.80 | 28.00 | 34.60 |
| 1855 | 18 | 33.70 | 29.70 | 36.70 |
| 1955 | 19 | 35.60 | 31.30 | 38.70 |
| 2055 | 20 | 37.50 | 33.00 | 40.70 |
| 2155 | 21 | 39.30 | 34.60 | 42.80 |
| 2255 | 22 | 41.20 | 36.20 | 44.80 |
| 2355 | 23 | 43.10 | 37.90 | 46.80 |
| 2455 | 24 | 45.00 | 39.60 | 48.90 |
| 2555 | 25 | 46.80 | 41.20 | 50.90 |
| 2655 | 26 | 48.70 | 42.80 | 52.90 |
| 2755 | 27 | 50.60 | 44.50 | 55.00 |
| 2855 | 28 | 52.40 | 46.10 | 57.00 |
| 2955 | 29 | 54.30 | 47.80 | 59.00 |
| 3055 | 30 | 56.10 | 49.40 | 61.00 |
| 3155 | 31 | 58.00 (W123) | 51.10 (W123) | 63.10 (W123) |

| Order No. | Drill Ø mm | 1340 format bright | 1341 format TiAlN | 1342 format TiAlN |
|---|---|---|---|---|
| 3255 | 32 | 59.90 | 52.70 | 65.10 |
| 3355 | 33 | 61.70 | 54.30 | 67.10 |
| 3455 | 34 | 63.60 | 56.00 | 69.20 |
| 3555 | 35 | 65.60 | 57.70 | 71.30 |
| 3655 | 36 | 70.00 | 61.60 | 76.10 |
| 3755 | 37 | 72.10 | 63.40 | 78.30 |
| 3855 | 38 | 74.00 | 65.10 | 80.40 |
| 3955 | 39 | 75.90 | 66.80 | 82.50 |
| 4055 | 40 | 77.90 | 68.50 | 84.60 |
| 4155 | 41 | 79.80 | 70.20 | 86.70 |
| 4255 | 42 | 81.70 | 71.90 | 88.80 |
| 4355 | 43 | 83.60 | 73.50 | 90.80 |
| 4455 | 44 | 85.40 | 75.20 | 92.90 |
| 4555 | 45 | 85.80 | 75.50 | 93.30 |
| 4655 | 46 | 89.60 | 78.90 | 97.40 |
| 4755 | 47 | 91.50 | 80.50 | 99.50 |
| 4855 | 48 | 93.40 | 82.20 | 101.50 |
| 4955 | 49 | 95.30 | 83.90 | 103.50 |
| 5055 | 50 | 97.20 (W123) | 85.60 (W123) | 105.50 (W123) |

## Core drills

**Design:** HSS-Co, AlTiN coated surface, with Weldon shank Ø 19 mm, 2 carrier surfaces and 1 countersink for Rota-Quick®.
Inner hole 6.35 mm.

**Application:** For use in magnetic base drills and column drills with MK mount. The core drill only machines a thin material ring. The remaining drill core is ejected by a guide and ejector pin using spring force. The chips are quickly moved up for disposal and the risk of breakage minimised. Even large drilling diameters require relatively low amounts of energy. The core drill machines only a small part of the overall area in comparison to the spiral drill. This results in huge savings in power and time.

**1326** AlTiN — 30 mm cutting depth

**1327** AlTiN — 50 mm cutting depth

HSS Co

ALFRA

1 Roughing tap
2 Finish tap

1326
AlTiN

1327
AlTiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1326 | **30** | 20 | 12 | **8** | 6 | | | | **15** | 22 | 40 | 42 | |
| 1327 | **28** | 18 | 10 | **6** | 4 | | | | **13** | 20 | 38 | 40 | |

| Order No. | Drill Ø mm | 1326 ALFRA AlTiN | 1327 ALFRA AlTiN |
|---|---|---|---|
| 0121 | 12 | 24.50 | 33.00 |
| 0131 | 13 | 24.80 | 34.50 |
| 0141 | 14 | 25.00 | 35.60 |
| 0151 | 15 | 26.70 | 38.20 |
| 0161 | 16 | 28.60 | 40.80 |
| 0171 | 17 | 30.20 | 43.30 |
| 0181 | 18 | 32.10 | 45.80 |
| 0191 | 19 | 33.80 | 48.30 |
| 0201 | 20 | 35.60 | 50.90 |
| 0211 | 21 | 37.50 | 53.50 |
| 0221 | 22 | 35.50 | 56.00 |
| 0231 | 23 | 37.10 | 58.50 |
| 0241 | 24 | 38.70 | 61.10 |
| 0251 | 25 | 40.30 | 63.60 |
| 0261 | 26 | 41.90 | 66.10 |
| 0271 | 27 | 43.50 | 68.70 |
| 0281 | 28 | 45.10 | 71.20 |
| 0291 | 29 | 46.70 | 73.80 |
| 0301 | 30 | 48.30 | 76.30 |
| 0311 | 31 | 49.90 (W125) | 78.80 (W125) |

| Order No. | Drill Ø mm | 1326 ALFRA AlTiN | 1327 ALFRA AlTiN |
|---|---|---|---|
| 0321 | 32 | 57.00 | 81.40 |
| 0331 | 33 | 58.80 | 83.90 |
| 0341 | 34 | 64.80 | 86.50 |
| 0351 | 35 | 71.20 | 89.10 |
| 0361 | 36 | 73.20 | 95.20 |
| 0371 | 37 | 75.30 | 97.90 |
| 0381 | 38 | 77.30 | 100.50 |
| 0391 | 39 | 79.40 | 103.00 |
| 0401 | 40 | 81.30 | 106.00 |
| 0411 | 41 | 83.40 | 108.50 |
| 0421 | 42 | 85.50 | 111.00 |
| 0431 | 43 | 87.50 | 114.00 |
| 0441 | 44 | 89.60 | 116.00 |
| 0451 | 45 | 91.60 | 119.00 |
| 0461 | 46 | 93.60 | 121.50 |
| 0471 | 47 | 95.60 | 124.50 |
| 0481 | 48 | 97.70 | 127.00 |
| 0491 | 49 | 99.70 | 129.50 |
| 0501 | 50 | 102.00 (W125) | 132.00 (W125) |

## Core drills set

**Design:** Supplied in plastic cassette, 7 piece.

Core drill set 1328 0101 consisting of core drills (order no. 1326).
Core drill set 1328 0151 consisting of core drills (order no. 1327).

| Order No. | Set contents | 1328 ALFRA AlTiN | Cutting depth mm |
|---|---|---|---|
| 0101 | 1 Ø 12; 14; 16; 18; 22; 26 mm; 1 ejector pin | 198.00 | 30 |
| 0151 | 1 Ø 14; 16; 18; 20; 22; 26 mm; 1 ejector pin | 260.00 (W125) | 50 |

AlTiN

## Accessories for core drills

**1326** **Design:** Guide pin for core drill. To suit core drill (order no. 1326 and 1327).

**1327 2019 + 3019** **Design:** Tool holder AMK2/AMK3 morse cone 2 or 3 for core drills with Weldon shank Ø 12–60 mm. With automatic internal cooling and nipple for coolant tube. To suit all machines with drilling spindle MK2 or MK3. New, improved and lighter design with soft-touch grip element for better handling and lower machine loads. Supply includes coolant connection nipple.

**1327 4019 + 5019** **Design:** Quick-change mount holder Rota-Quick® morse cone 2 or 3 for all machines with drilling spindle MK3, Ø 12–60 mm. With automatic internal cooling and nipple for coolant tube.
The quick-clamp mount Rota-Quick® allows a very quick tool change without additional tools. Supply includes coolant connection nipple and stable plastic case.

**Functions:** Turn the ring in a clockwise direction and hold - insert the core drill in the mount - let go of the ring - it stops automatically.
To suit core drill (order no. 1326 and 1327).

| Order No. | Design mm | 1326 | 1327 |
|---|---|---|---|
| 1001 | Ø 6.35 x 77 | 6.40 | – |
| 1002 | Ø 6.35 x 102 | 7.35 | – |
| 2019 | Weldon/MK2 | – | 98.60 |
| 3019 | Weldon/MK3 | – | 98.60 |
| 4019 | Rota-Quick/MK2 | – | 150.00 |
| 5019 | Rota-Quick/MK3 | – | 150.00 |
| | | (W129) | (W129) |

1326

1327 2019-3019

1327 4019-5019

## Accessories for core drills

**Design:** Adapter for use of all core drills with Weldon shanks on the FEIN-QuickIN quick-change system.

| Order No. | Design | 1326 |
|---|---|---|
| 1005 | Weldon | 37.40 (W129) |

1326 1005

| Order No. | Design | 1326 |
|---|---|---|
| 1010 | Core drill QuickIN | 37.40 (W129) |

1326 1010

## Accessories for core drills

**Design:** Ejector pin to suit core drill QuickIN adapter.

| Order No. | Design mm | 1326 |
|---|---|---|
| 1011 | 6.35 x 125 | 10.35 (W129) |

1326 1011

## Circle cutter

**Application:** Metal sheets up to 5 mm in thickness and plastics and sealing materials etc. up to 30 mm in thickness can be cut with GFS circle cutters. Thicker materials can also be cut out by using special blades. The various Ø can easily be set by moving the clamping device. For cutting out holes in sheet metal, composite materials and plastics. Cuts elastic materials with the corresponding blades (HSS-E, HSS-E, TiN coated; carbide soldered) without losses.

The circle cutters are available in 3 sizes:

**Type Liliput:** Suitable for holes from 18 mm to 80 mm. The blades are clamped directly in crossbars. Mounts for straight and drawing cuts are available.

**Type 00:** Suitable for holes from 30 mm to 200 mm. The blades are clamped in special steel holders. The tools with cyl. or MK2 shank are only suitable for machining metals with Ø up to 120 mm.

**Type 00a:** Suitable for holes from 30 mm to 400 mm. The blades are clamped in special steel holders. Vertical design.

## Circle cutter

**Design:** Liliput, scope of delivery:
1 centre drill Ø 5 mm.
1 HSS blade no. 122 for thin-walled sheets. Mount option for drawing blade no. 122 and straight blade no. 2 and no. 3.

| Order No. | Type | 1330 afs | Cutting range mm | Shank Ø mm |
|---|---|---|---|---|
| 0005 | Liliput | 168.50 (W126) | 18–80 | 10 |

**Design:** 00/00a, scope of delivery:
1 centre drill Ø 6 mm for type 00 or Ø 8 mm for type 00a.
1 HSS blade no. 422 with drawing cut for sheets.
1 steel holder no. 422-00 or 422-00a.

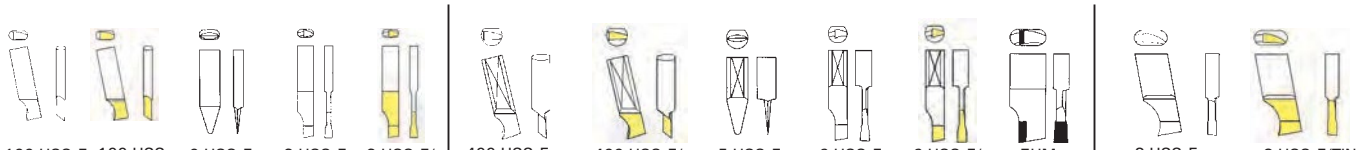
| Order No. | Type | 1331 afs | Cutting range mm | Shank Ø MK/mm |
|---|---|---|---|---|
| 0005 | 00 | 282.50 | 30–200 | 12 |
| 0010 | 00 | 282.50 | 30–200 | MK2 |
| 0015 | 00 | 296.00 | 30–200 | MK3 |
| 0020 | 00a | 388.00 (W126) | 30–400 | MK3 |

## Steel holder for circle cutter

**Design:** To suit circle cutter, type 00 and 00a (order no. 1331).

| Order No. | Type | 1332 afs | For blade |
|---|---|---|---|
| 0005 | 00 | 90.00 | 422 |
| 0010 | 00 | 82.50 | 5 and 6 |
| 0015 | 00 | 98.90 | 7 |
| 0020 | 00a | 121.50 | 422 |
| 0025 | 00a | 117.00 | 5 and 6 |
| 0030 | 00a | 125.50 | 7 |
| 0035 | 00a | 125.50 (W127) | 8 |

## Spare blade for circle cutter




| Order No. | Blade number | 1333 afs TC | 1334 afs HSS-E | 1335 afs TiN | PU Piece | Type | Application |
|---|---|---|---|---|---|---|---|
| 0001 | 122 | 50.00 | 28.30 | 55.20 | 5 | Liliput | For sheet metals, steel and non-ferrous metals, cutting depth 5 mm |
| 0003 | 2 | – | 28.30 | – | 5 | Liliput | For soft plastic, rubber, sealing material and leather cutting depth of 5 mm |
| 0005 | 3 | 50.00 | 29.60 | 63.70 | 5 | Liliput | For hard PVC, Perspex and polyamide. Cutting depth 15 mm |
| 0007 | 422 | 50.00 | 28.30 | 53.90 | 5 | 00+00a | For sheet metals, steel and non-ferrous metals, cutting depth 5 mm |
| 0009 | 5 | – | 28.30 | – | 5 | 00+00a | For soft plastic, rubber, sealing material and leather cutting depth of 5 mm |
| 0011 | 6 | 50.00 | 28.30 | 63.00 | 5 | 00+00a | For hard PVC, Perspex and polyamide. Cutting depth 15 mm |
| 0013 | 7 | 59.10 | – | – | 5 | 00+00a | For hard PVC and press materials, cutting depth 20 mm |
| 0015 | 8 (only for 00a) | 59.10 (W127) | 51.30 (W127) | 93.10 (W127) | 5 | 00a | For thicker sheet metals up to approx. 12 mm and Ø 150 mm |

## For through-hole, fine quality grade

**Design:** HSS, DIN 373.
Spiral fluted with fixed pilot pin

**Application:** For countersinking inner hexagon screws DIN 912, DIN 6912 and DIN 7984 as well as cylinder screws DIN 84 (ISO 1207).

HSS | DIN 373 | Z 3

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1400 | ● | ○ | | | | | | | ○ | | ○ | ● | ● |
| 1401 | ● | ● | ○ | | | | | | ● | | ● | ○ | ● |

| Order No. | For thread | 1400 format bright | 1401 format TiN | Countersink Ø mm | Pin Ø mm | Shank Ø mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0300 | M3 | 10.65 | 13.40 | 6 | 3.2 | 5.0 | 71 |
| 0400 | M4 | 9.35 | 13.40 | 8 | 4.3 | 5.0 | 71 |
| 0500 | M5 | 9.90 | 14.55 | 10 | 5.3 | 8.0 | 80 |
| 0600 | M6 | 10.65 | 15.00 | 11 | 6.4 | 8.0 | 80 |
| 0800 | M8 | 15.45 | 19.60 | 15 | 8.4 | 12.5 | 100 |
| 1000 | M10 | 19.25 | 24.50 | 18 | 10.5 | 12.5 | 100 |
| 1200 | M12 | 21.50 (W134) | 28.30 (W134) | 20 | 13.0 | 12.5 | 100 |

1400
bright

1401
TiN

## For through-hole, medium quality grade

**Design:** HSS, DIN 373.
Spiral fluted with fixed pilot pin

**Application:** For countersinking inner hexagon screws DIN 912, DIN 6912 and DIN 7984 as well as cylinder screws DIN 84 (ISO 1207).

HSS | DIN 373 | Z 3

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1403 | ● | ○ | | | | | | | ○ | | ○ | ● | ● |
| 1404 | ● | ● | ○ | | | | | | ● | | ● | ○ | ● |

| Order No. | For thread | 1403 format bright | 1404 format TiN | Countersink Ø mm | Pin Ø mm | Shank Ø mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0300 | M3 | 10.65 | 13.40 | 6 | 3.4 | 5.0 | 71 |
| 0400 | M4 | 9.35 | 13.40 | 8 | 4.5 | 5.0 | 71 |
| 0500 | M5 | 9.90 | 14.55 | 10 | 5.5 | 8.0 | 80 |
| 0600 | M6 | 10.65 | 15.00 | 11 | 6.6 | 8.0 | 80 |
| 0800 | M8 | 15.45 | 19.60 | 15 | 9.0 | 12.5 | 100 |
| 1000 | M10 | 19.25 | 24.50 | 18 | 11.0 | 12.5 | 100 |
| 1200 | M12 | 21.50 (W134) | 28.30 (W134) | 20 | 13.5* | 12.5 | 100 |

* Not standardised.

1403
bright

1404
TiN

## For core hole

**Design:** HSS, DIN 373.
Spiral fluted with fixed pilot pin.

**Application:** For countersinking inner hexagon screws DIN 912, DIN 6912 and DIN 7984 as well as cylinder screws DIN 84 (ISO 1207).

HSS | DIN 373 | Z 3

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1406 | ● | ○ | | | | | | | ○ | | ○ | ● | ● |
| 1407 | ● | ● | ○ | | | | | | ● | | ● | ○ | ● |

| Order No. | For thread | 1406 format bright | 1407 format TiN | Countersink Ø mm | Pin Ø mm | Shank Ø mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0300 | M3 | 10.65 | 13.40 | 6 | 2.5 | 5.0 | 71 |
| 0400 | M4 | 9.35 | 13.40 | 8 | 3.3 | 5.0 | 71 |
| 0500 | M5 | 9.90 | 14.55 | 10 | 4.2 | 8.0 | 80 |
| 0600 | M6 | 10.65 | 15.00 | 11 | 5.0 | 8.0 | 80 |
| 0800 | M8 | 15.45 | 19.60 | 15 | 6.8 | 12.5 | 100 |
| 1000 | M10 | 19.25 | 24.50 | 18 | 8.5 | 12.5 | 100 |
| 1200 | M12 | 21.50 (W134) | 28.30 (W134) | 20 | 10.2 | 12.5 | 100 |

1406
bright

1407
TiN

## Flat countersink set 180° with cylinder Shank

**Design:** HSS, DIN 373.
Spiral fluted with fixed pilot pin. Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened.

1409 0005 Set consisting of (order no. 1400).
1409 0010 Set consisting of (order no. 1403).
1409 0015 Set consisting of (order no. 1406).
1410 0005 Set consisting of (order no. 1401).
1410 0010 Set consisting of (order no. 1404).
1410 0015 Set consisting of (order no. 1407).

HSS | DIN 373 | Z 3

format professional quality

1409
bright

1410
TiN

| Order No. | Design | 1409 format bright | 1410 format TiN | Set contents |
|---|---|---|---|---|
| 0005 | Fine quality grade, for through-hole | 91.10 | 112.50 | M3; 4; 5; 6; 8; 10 |
| 0010 | Medium quality grade, for through-hole | 91.10 | 112.50 | M3; 4; 5; 6; 8; 10 |
| 0015 | For core hole | 91.10 (W134) | 112.50 (W134) | M3; 4; 5; 6; 8; 10 |

## Plastic cassette, empty

**Design:** Robust, high quality cassette with automatic drill setup function when opened.

| Order No. | Size | 1400 format |
|---|---|---|
| 0001 | M3–M10 | 12.85 (W134) |

**Drilling paste**

is found on 1/97, 1/231.

format professional quality

## Counter bore – fine quality grade, for through-hole

**Design:** HSS. Spiral fluted with fixed pilot pin.

**Application:** For countersinking inner hexagon screws DIN 912, DIN 6912 and DIN 7984 as well as cylinder screws DIN 84 (ISO 1207).

**Note:** Further dimensions available on request.

HSS | Z 3 | MK 2–3 | format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1412 | ● | ○ | | | | | | | ○ | | ○ | ● | ● |

| Order No. | For thread | 1412 format bright | Countersink Ø mm | Pin Ø mm | Shank MK | Total length mm |
|---|---|---|---|---|---|---|
| 1000 | M10 | 31.90 | 18 | 10.5 | 2 | 150 |
| 1200 | M12 | 32.70 | 20 | 13.0 | 2 | 150 |
| 1400 | M14 | 38.60 | 24 | 15.0 | 2 | 190 |
| 1600 | M16 | 43.80 | 26 | 17.0 | 3 | 190 |
| 1800 | M18 | 52.40 | 30 | 19.0 | 3 | 190 |
| 2000 | M20 | 60.70 | 33 | 21.0 | 3 | 190 |
| 2200 | M22 | 81.00 | 36 | 23.0 | 3 | 205 |
| 2400 | M24 | 87.30 (W134) | 40 | 25.0 | 3 | 205 |

bright

## Counter bore – medium quality grade, for through-hole

**Design:** HSS. Spiral fluted with fixed pilot pin.

**Application:** For countersinking inner hexagon screws DIN 912, DIN 6912 and DIN 7984 as well as cylinder screws DIN 84 (ISO 1207).

**Note:** Further dimensions available on request.

HSS | Z 3 | MK 2–3 | format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1415 | ● | ○ | | | | | | | | | | ● | ● |

| Order No. | For thread | 1415 format bright | Countersink Ø mm | Pin Ø mm | Shank MK | Total length mm |
|---|---|---|---|---|---|---|
| 1000 | M10 | 35.30 | 18 | 11.0 | 2 | 150 |
| 1200 | M12 | 35.80 | 20 | 13.5 | 2 | 150 |
| 1400 | M14 | 43.50 | 24 | 15.5 | 2 | 190 |
| 1600 | M16 | 47.70 | 26 | 17.5 | 3 | 190 |
| 1800 | M18 | 56.90 | 30 | 20.0 | 3 | 190 |
| 2000 | M20 | 66.40 | 33 | 22.0 | 3 | 190 |
| 2200 | M22 | 84.30 | 36 | 24.0 | 3 | 205 |
| 2400 | M24 | 95.80 (W134) | 40 | 26.0 | 3 | 205 |

bright

## Counter bore – for core hole

**Design:** HSS. Spiral fluted with fixed pilot pin.

**Application:** For countersinking inner hexagon screws DIN 912, DIN 6912 and DIN 7984 as well as cylinder screws DIN 84 (ISO 1207).

**Note:** Further dimensions available on request.

HSS | Z 3 | MK 2–3 | format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1418 | ● | ○ | | | | | | | | | | ● | ● |

| Order No. | For thread | 1418 format bright | Countersink Ø mm | Pin Ø mm | Shank MK | Total length mm |
|---|---|---|---|---|---|---|
| 1000 | M10 | 36.00 | 18 | 8.5 | 2 | 150 |
| 1200 | M12 | 36.50 | 20 | 10.2 | 2 | 150 |
| 1400 | M14 | 44.30 | 24 | 12.0 | 2 | 190 |
| 1600 | M16 | 48.50 | 26 | 14.0 | 3 | 190 |
| 1800 | M18 | 58.00 | 30 | 15.5 | 3 | 190 |
| 2000 | M20 | 67.70 | 33 | 17.5 | 3 | 190 |
| 2200 | M22 | 86.00 | 36 | 19.5 | 3 | 205 |
| 2400 | M24 | 97.70 (W134) | 40 | 21.0 | 3 | 205 |

bright

## Countersink bit 90° with 1/4" hexagonal shank

HSS | DIN 335-C | Z 3 | 90°

format professional quality

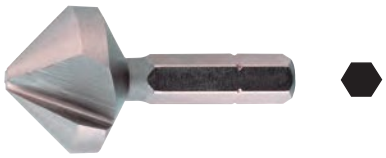
**Design:** HSS, DIN 335-C. 90° countersink angle. Radial taper-ground, bright surface, with straight clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.
The hexagonal shank (1/4" bit shank according to DIN 2126) causes a 100 % power transfer, thus in every bushing the countersink is extremely slip-free.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking, milling and deburring work. The countersink bit can also be used as a hand deburrer together with the corresponding activation tools such as grips, toggles or ratchets with a 1/4" hexagon mount.

**Note:** Sufficient supply of coolant is essential.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1420 | ● | ○ | | | | | | | | | | ● | |

| Order No. | Nominal Ø mm | 1420 format professional quality bright | Smallest Ø mm | Total length mm | For countersink screws |
|---|---|---|---|---|---|
| 0630 | 6.3 | 4.86 | 1.5 | 31 | M3 |
| 0830 | 8.3 | 5.75 | 2.0 | 31 | M4 |
| 1040 | 10.4 | 6.60 | 2.5 | 34 | M5 |
| 1240 | 12.4 | 8.90 | 2.8 | 35 | M6 |
| 1650 | 16.5 | 9.95 | 3.2 | 40 | M8 |
| 2050 | 20.5 | 11.75 (W134) | 3.5 | 41 | M10 |

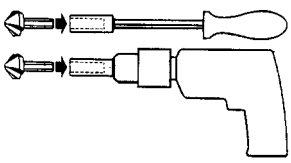


bright

## Countersink bit set 90° with hexagonal shank

**Design:** Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened incl. universal holder, handle with 1/4" internal hexagon mount and drilling paste.

| Order No. | Nominal Ø mm | 1422 format professional quality bright | Design |
|---|---|---|---|
| 0005 | 6.3–20.5 | 70.40 (W134) | 9-piece |



bright

## Spiral drill bit

is found on 1/8, 6/153.

## Cross hole countersink, 90°

**Design:** HSS, 90° countersink angle, with cylinder shank. With evenly running special taper-ground in the cone coat. The good blade geometry results in a light, spiral cut. The chips are pushed up in the shank direction by the inclined hole and cannot damage the countersink. This makes the countersink round and protects the machine spindle.

**Application:** Suitable for light and chatter-free hole deburring and countersinking. **Particularly suitable for long chipping materials.** Sharpening is possible by simply resharpening using an abrasive pencil on the blade front. Spiral fluted with fixed pilot pin

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1424 | ● | ○ | | | | | | | | | ○ | ● | ● |

| Order No. | Countersink area mm | 1424 format professional quality bright | Total length mm | Shank Ø mm | Head Ø mm |
|---|---|---|---|---|---|
| 0100 | 2– 5 | 7.10 | 45 | 6 | 10 |
| 0140 | 5–10 | 8.95 | 48 | 8 | 14 |
| 0210 | 10–15 | 15.55 | 65 | 10 | 21 |
| 0275 | 15–20 | 28.20 | 84 | 12 | 28 |
| 0350 | 20–25 | 36.80 | 102 | 12 | 35 |
| 0440 | 25–30 | 49.00 | 115 | 15 | 44 |
| 0480 | 30–35 | 73.40 | 127 | 15 | 48 |
| 0530 | 35–40 | 102.00 | 136 | 15 | 53 |
| 0640 | 40–50 | 145.50 | 166 | 20 | 60 |
| | | (W134) | | | |

HSS | Z 1 | 90°

bright

bright

## Cross hole countersink set, 90°

**Design:** Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened.
Set consisting of: (order no. 1424).

| Order No. | Set contents mm | 1427 format professional quality bright |
|---|---|---|
| 0001 | 2–5; 5–10; 10–15; 15–20 | 86.40 (W134) |

## Cross hole countersink, 90°

**Design:** HSS, Co5. 90° countersink angle. With evenly running special taper-ground in the cone coat. The good blade geometry results in a light, spiral cut. The chips are pushed up in the shank direction by the inclined hole and cannot damage the countersink. This makes the countersink round and protects the machine spindle.

**Application:** Suitable for light and chatter-free hole deburring and countersinking. Equally suitable for almost all materials due to the excellent cutting properties. Sharpening is possible by simply resharpening using an abrasive pencil on the blade front.

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1425 | ● | ○ | ○ | | | | | | ● | | ◐ | ● | ◐ |

| Order No. | Countersink area mm | 1425 format professional quality bright | Total length mm | Shank Ø mm | Head Ø mm |
|---|---|---|---|---|---|
| 0100 | 2– 5 | 8.15 | 45 | 6 | 10 |
| 0140 | 5–10 | 10.50 | 48 | 8 | 14 |
| 0210 | 10–15 | 18.15 | 65 | 10 | 21 |
| 0275 | 15–20 | 33.20 | 84 | 12 | 28 |
| 0350 | 20–25 | 44.40 | 102 | 12 | 35 |
| 0440 | 25–30 | 57.80 | 115 | 15 | 44 |
| 0480 | 30–35 | 103.00 | 127 | 15 | 48 |
| 0530 | 35–40 | 138.50 | 136 | 15 | 53 |
| 0640 | 40–50 | 224.00 | 166 | 20 | 60 |
| | | (W134) | | | |

HSS-E | Z 1 | 90°

bright

bright

## 90° cross hole countersink set

**Design:** Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened. Set consisting of: (order no. 1425).

| Order No. | Set contents mm | 1427 format professional quality bright |
|---|---|---|
| 0005 | 2–5; 5–10; 10–15; 15–20 | 101.50 (W134) |

## 90° countersinks and deburring countersinks with cylinder Shank

**Design:** DIN 335-C. 90° countersink angle. Axial and radial taper-ground and CBN deep-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965 and DIN 966 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential for uncoated designs.

DIN 335-C | Z 3 | 90°

format professional quality

HSS

**1430**
bright

HSS

**1433**
TiN

HSS

**1434**
TiAlN

HSS Co5

**1436**
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1430 | ● | ● | | | | | | | ○ | | ○ | ● | ● |
| 1433 | ● | ● | ○ | | | | | | ○ | ○ | ○ | ● | ● |
| 1434 | ● | ● | ○ | | | | | | ● | ○ | ○ | ○ | ● |
| 1436 | ● | ● | ● | | | | | | ○ | ● | ● | ○ | ○ |

| Order No. | Nominal Ø | 1430 format bright | 1433 format TiN | 1434 format TiAlN | 1436 format bright | Smallest Ø | Total length | Shank Ø |
|---|---|---|---|---|---|---|---|---|
| | mm | | | | | mm | mm | mm |
| 0430 | 4.3 | 6.30 | 11.20 | 14.40 | 9.60 | 1.3 | 40 | 4 |
| 0500 | 5.0 | 6.30 | 11.20 | 14.40 | 9.60 | 1.5 | 40 | 4 |
| 0530 | 5.3 | 8.80 | 13.15 | 13.70 | 9.60 | 1.5 | 40 | 4 |
| 0580 | 5.8 | 8.80 | 13.15 | – | – | 1.5 | 45 | 5 |
| 0600 | 6.0 | 7.10 | 11.20 | 13.70 | 10.15 | 1.5 | 45 | 5 |
| 0630 | 6.3 | 7.10 | 11.20 | 13.80 | 8.85 | 1.5 | 45 | 5 |
| 0700 | 7.0 | 9.90 | 12.10 | – | – | 1.8 | 50 | 6 |
| 0730 | 7.3 | 7.65 | 12.20 | – | – | 1.8 | 50 | 6 |
| 0800 | 8.0 | 7.65 | 12.20 | 14.95 | 10.15 | 2.0 | 50 | 6 |
| 0830 | 8.3 | 7.65 | 12.20 | 15.00 | 9.55 | 2.0 | 50 | 6 |
| 0940 | 9.4 | 9.90 | 13.50 | – | – | 2.2 | 50 | 6 |
| 1000 | 10.0 | 8.10 | 13.50 | 16.50 | 13.30 | 2.5 | 50 | 6 |
| 1040 | 10.4 | 8.10 | 13.50 | 17.35 | 9.80 | 2.5 | 50 | 6 |
| 1150 | 11.5 | 9.25 | 15.70 | 19.10 | 13.30 | 2.8 | 56 | 8 |
| 1240 | 12.4 | 9.25 | 15.70 | 20.30 | 11.40 | 2.8 | 56 | 8 |
| 1340 | 13.4 | 11.60 | 18.00 | – | – | 2.9 | 56 | 8 |
| 1500 | 15.0 | 11.60 | 18.00 | 22.00 | 12.80 | 3.2 | 60 | 10 |
| 1650 | 16.5 | 11.60 | 19.45 | 24.00 | 12.80 | 3.2 | 60 | 10 |
| 1900 | 19.0 | 16.25 | 24.70 | 30.20 | 18.95 | 3.5 | 63 | 10 |
| 2050 | 20.5 | 16.25 | 25.90 | 31.90 | 17.25 | 3.5 | 63 | 10 |
| 2300 | 23.0 | 23.60 | 34.40 | 42.00 | 26.30 | 3.8 | 67 | 10 |
| 2500 | 25.0 | 23.60 | 34.40 | 42.40 | 23.60 | 3.8 | 67 | 10 |
| 2800 | 28.0 | 26.20 | 43.40 | 53.10 | 27.70 | 4.0 | 71 | 12 |
| 3000 | 30.0 | 29.40 | 43.40 | – | – | 4.2 | 71 | 12 |
| 3100 | 31.0 | 29.40 | 43.40 | 53.60 | 31.30 | 4.2 | 71 | 12 |
| 4000 | 40.0 | 51.20 (W134) | 74.30 (W134) | 74.50 (W134) | 52.80 (W134) | 5.0 | 80 | 15 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Plastic cassette, empty

**Design:** Robust, high quality cassette with automatic drill setup function when opened.

| Order No. | Size mm | 1440 format professional quality |
|---|---|---|
| 0001 | 6.3–20.5 | 12.20 |
| 0002 | 6.3–25.0 | 12.85 (W134) |

## 90° countersinks and deburring countersinks sets with cylinder Shank

**Design:** DIN 335-C. 90° countersink angle. Axial and radial taper-ground and CBN deep-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials. Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened.

DIN 335-C | Z 3 | 90°

**Note:** Sufficient supply of coolant is essential for uncoated designs. Other set arrangements available on request.

**1440** Bright — HSS, bright surface Set consisting of (order no. 1430).

**1442** TiN — HSS, TiN coated surface Set consisting of (order no. 1433).

**1443** TiAlN — HSS, TiAlN coated surface Set consisting of (order no. 1434).

**1444** Bright — HSS-Co5, bright surface Set consisting of (order no. 1436).

1440 bright — HSS

1442 TiN — HSS

1443 TiAlN — HSS

1444 bright — HSS Co5

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1440 | ● | ● | | | | | | | ○ | | ○ | ● | ● |
| 1442 | ● | ● | ○ | | | | | | ○ | ○ | ○ | ● | ● |
| 1443 | ● | ● | ○ | ○ | | | | | ● | ○ | ○ | ○ | ● |
| 1444 | ● | ● | ● | | | | | | ○ | ● | ● | ○ | ○ |

| Order No. | Set contents mm | 1440 format professional quality bright | 1442 format professional quality TiN | 1443 format professional quality TiAlN | 1444 format professional quality bright |
|---|---|---|---|---|---|
| 0010 | 6.3; 10.4; 16.5; 20.5; 25.0 | 73.20 | 107.50 | 128.50 | 80.90 |
| 0005 | 6.3; 8.3, 10.4; 12.4; 16.5; 20.5 | 53.20 (W134) | 101.50 (W134) | 123.50 (W134) | 80.90 (W134) |

## 90° countersinks and deburring countersinks with cylinder with uneven pitch

NEW

**Design:** With radial taper, **uneven pitch** and straight clamping slots. Also provided with cutting and clearance angles for the most common materials.

**Application:** The strong uneven pitch allows a particularly smooth run when countersinking meaning that the surface is cleaner and that the cutting load is reduced to a minimum. Suitable for countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965, and DIN 966 in one step.

HSS | DIN 335-C | Z 3

90°

BECK MAPAL GROUP

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1428 | ● | ● | ○ | | | | | | ○ | | ● | | |

| Order No. | Nominal Ø mm | 1428 BECK MAPAL GROUP ZrN | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0430 | 4.3 | 18.95 | 1.3 | 40 | 4 |
| 0600 | 6.0 | 20.20 | 1.5 | 45 | 5 |
| 0630 | 6.3 | 20.40 | 1.5 | 45 | 5 |
| 0800 | 8.0 | 22.10 | 2.0 | 50 | 6 |
| 0830 | 8.3 | 22.50 | 2.0 | 50 | 6 |
| 1000 | 10.0 | 23.00 | 2.5 | 50 | 6 |
| 1040 | 10.4 | 23.20 | 2.5 | 50 | 6 |
| 1150 | 11.5 | 26.30 | 2.8 | 56 | 8 |
| 1240 | 12.4 | 27.60 | 2.8 | 56 | 8 |
| 1500 | 15.0 | 31.20 | 3.2 | 60 | 10 |
| 1650 | 16.5 | 31.80 | 3.2 | 60 | 10 |
| 1900 | 19.0 | 35.20 | 3.5 | 63 | 10 |
| 2050 | 20.5 | 39.60 | 3.5 | 63 | 10 |
| 2300 | 23.0 | 43.40 | 3.8 | 67 | 10 |
| 2500 | 25.0 | 47.80 | 3.8 | 67 | 10 |
| 3100 | 31.0 | 58.50 (W141) | 4.2 | 71 | 12 |

ZrN

## 90° countersinks and deburring countersinks set with cylinder with uneven pitch

NEW

**Design:** Supplied in a plastic box.

**Note:** Set consisting of (Order No. 1058).

**Bonus price due to set compilation.**

| Order No. | Set contents mm | 1428 BECK MAPAL GROUP ZrN |
|---|---|---|
| 0010 | 6.3; 10.4; 16.5; 20.5; 25.0 | 156.50 (W141) |

ZrN

## 90° manual deburrer

**Design:** HSS, DIN 335-D, 90° countersink angle. Axial and radial taper-ground and CBN deep-ground, bright surface With straight clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials as well as a user-friendly 2-component handle.

**Application:** For drilling, countersinking and deburring work by hand for countersunk screws DIN 963, DIN 964, DIN 965 and DIN 966 and DIN 7991.

HSS | DIN 335-D | Z 3

90°

format professional quality

| Order No. | Nominal Ø mm | 1468 format professional quality bright |
|---|---|---|
| 1250 | 12.4 | 19.25 |
| 1500 | 15.0 | 22.40 NEW |
| 1650 | 16.5 | 22.40 |
| 2050 | 20.5 | 26.90 |
| 2500 | 25.0 | 32.70 (W134) |

bright

# ADVANCEDLINE®

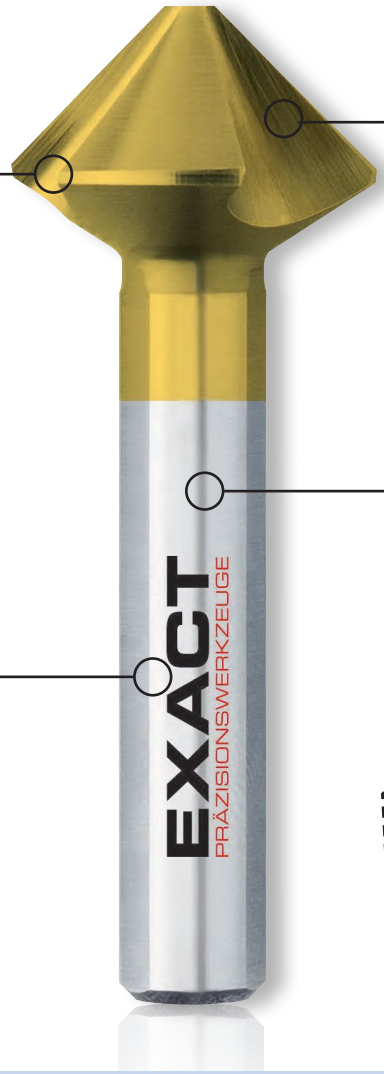
## THE SENKER INNOVATION

**NEW**
**CUTTING GEOMETRY**

Harmonious division prevents uneven wear of cutting edges

**OPTIMISED GRINDING PROCESS**

Extremely high rotation accuracy with noticeably reduced effort




**PATENTED ROTASTOP®-SHAFT**

100 % security against slipping of countersink in chuck with optimum torque transmission

**MORE PERFORMANCE**

Extreme high wear and heat resistance guarantees maximum life spans

TEST IT

## ADVANTAGE THROUGH INNOVATION

### Advantages

+ up to 50% longer life
+ up to 25 % quicker sinking
+ extremely quiet run
+ no slipping in chuck
+ optimum sinking pattern

Also available in various coatings

EXACT
PRÄZISIONSWERKZEUGE

## 90° "ADVANCED LINE®" countersinks and deburring countersinks with Rotastop-shank®

**Design:** Similar to DIN 335-C. New, innovative taper-ground process. Optimised machining geometry resulting in up to 50% longer tool life. Rotastop-shank® for good torque transmission, no spinning in the drill chuck. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965 and DIN 966 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential for uncoated designs.

Factory standard | Z 3 | 90° | EXACT PRÄZISIONSWERKZEUGE

HSS

HSS-E

1431(HSS) blank

HSS

1435 TiN

Rotastop-shank®

HSS-E

1432 TiN NEW

HSS

1438 TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1431 | ● | ● | | | | | | | ○ | | ○ | ● | ● |
| 1435 | ● | ● | | | | | | | ○ | ○ | ○ | ● | ● |
| 1438 | ● | ● | ● | ● | ● | ○ | | | ○ | ● | ● | ● | ○ |
| 1439 | ● | ● | ● | ● | ● | ● | | | ● | ● | ● | ● | ● |
| 1432 | ● | ● | | | | | | | ● | | | ● | |

| Order No. | Nominal Ø mm | 1431 EXACT Bright HSS | 1435 EXACT TiN HSS | 1438 EXACT TiAlN HSS | 1439 EXACT Bright HSS-E | 1432 EXACT TiN HSS | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|---|---|---|---|
| 0630 | 6.3 | 11.40 | 16.30 | 17.30 | 14.05 | 17.95 | 1.5 | 45 | 5 |
| 0830 | 8.3 | 12.75 | 18.25 | 19.35 | 15.30 | 19.20 | 2.0 | 50 | 6 |
| 1040 | 10.4 | 15.30 | 21.90 | 23.40 | 18.90 | 23.20 | 2.5 | 50 | 6 |
| 1240 | 12.4 | 16.55 | 23.60 | 25.30 | 20.50 | 25.60 | 2.8 | 56 | 8 |
| 1500 | 15.0 | 18.75 | 26.70 | 28.40 | 23.10 | 28.60 | 3.2 | 60 | 10 |
| 1650 | 16.5 | 19.80 | 28.40 | 30.60 | 24.40 | 31.60 | 3.2 | 60 | 10 |
| 1900 | 19.0 | 28.30 | 40.50 | 42.90 | 34.90 | 44.00 | 3.5 | 63 | 10 |
| 2050 | 20.5 | 29.00 | 41.50 | 44.00 | 35.70 | 44.90 | 3.5 | 63 | 10 |
| 2300 | 23.0 | 35.00 | 50.20 | 53.20 | 43.30 | 55.10 | 3.8 | 67 | 10 |
| 2500 | 25.0 | 40.00 | 57.30 | 60.20 | 49.40 | 61.50 | 3.8 | 67 | 10 |
| 3100 | 31.0 | 53.90 (W135) | 77.20 (W135) | 81.10 (W135) | 66.50 (W135) | 81.90 (W135) | 4.2 | 71 | 12 |

## 90° "ADVANCED LINE®" countersinks and deburring countersinks with Rotastop-shank®

**Design:** Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened.

**1440** HSS, bright surface
Set consisting of (order no. 1431).

**1442** HSS, TiN coated surface
Set consisting of (order no. 1435).

**1444** HSS, TiAlN coated surface
Set consisting of (order no. 1438).

**1439** HSS-E, bright surface
Set consisting of (order no. 1439).

**1432** TiN NEW
HSS, TiN coated surface
Set consisting of (order no. 1435).

1440 + 1439 bright

1442 TiN

1444 TiAlN

1432 TiN

| Order No. | Set contents mm | 1440 EXACT bright | 1442 EXACT TiN | 1444 EXACT TiAlN | 1439 EXACT bright | 1432 EXACT TiN |
|---|---|---|---|---|---|---|
| 0050 | 6.3; 10.4; 16.5; 20.5; 25.0 | 120.50 | 156.00 | 169.00 | – | – |
| 0055 | 6.3; 10.4; 16.5; 20.5; 25.0 | – | – | – | 120.00 | 164.00 |
| 0050 | 6.3; 8.3; 10.4; 12.4; 16.5; 20.5 | – | – | – | 126.00 | 166.50 |
| 0055 | 6.3; 8.3; 10.4; 12.4; 16.5; 20.5 | 115.00 (W135) | 148.50 (W135) | 161.50 (W135) | – (W135) | – (W135) |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## 90° countersinks and deburring countersinks with cylinder Shank

**Design:** HSS, DIN 335-C, bright surface. 90° countersink angle. Axial and radial taper-ground and CBN deep-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965, DIN 966 and DIN 7991 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential.

DIN 335-C | Z 3 | 90°

format professional quality

**1445** Bright — Long design.

**1454** Bright NEW — Long design.

**1446** Bright — Extra long design.

**1455** Bright NEW — Extra long design.

HSS

**1445, long**
bright

HSS-E

**1454, lang**
bright

HSS

**1446, extra long**
bright

HSS-E

**1455, extra long**
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1445 | ● | ● | | | | | | | ○ | | ○ | ● | ● |
| 1454 | ● | ● | | | | | | | ● | | | ● | |
| 1446 | ● | ● | | | | | | | ○ | | | ● | ● |
| 1455 | ● | ● | | | | | | | ● | | | ● | |

| Order No. | Nominal Ø mm | 1445 format bright | 1454 format bright | 1446 format bright | 1455 format bright | Length mm 1445 | 1454 | 1446 | 1455 | Smallest Ø mm | Shank Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0630 | 6.3 | 25.20 | 32.70 | 31.50 | 41.10 | 85 | 85 | 154 | 154 | 1.5 | 5 |
| 0830 | 8.3 | 26.50 | 35.10 | 32.80 | 42.00 | 85 | 85 | 155 | 155 | 2.0 | 6 |
| 1040 | 10.4 | 29.00 | 38.20 | 36.60 | 47.50 | 88 | 88 | 157 | 157 | 2.5 | 6 |
| 1240 | 12.4 | 30.30 | 40.70 | 41.80 | 55.40 | 108 | 108 | 158 | 158 | 2.8 | 8 |
| 1650 | 16.5 | 37.90 | 48.70 | 49.20 | 65.60 | 112 | 112 | 161 | 161 | 3.2 | 10 |
| 2050 | 20.5 | 53.00 | 69.00 | 68.10 | 89.90 | 115 | 115 | 164 | 164 | 3.5 | 10 |
| 2500 | 25.0 | 51.80 | 67.00 | 63.40 | 84.70 | 118 | 118 | 165 | 165 | 3.8 | 10 |
| 3100 | 31.0 | 58.50 | 77.00 | 73.10 | 96.30 | 140 | 140 | 169 | 169 | 4.2 | 12 |
| 4000 | 40.0 | 75.40 (W134) | 101.50 (W134) | 91.10 (W134) | 120.00 (W134) | 124 | 124 | 169 | 169 | 4.5 | 15 |

## 90° countersinks and deburring countersinks set, long/extra long with cylinder Shank

**Design:** Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened.

**1445** Bright — HSS, bright surface
Set consisting of (order no. 1445).

**1446** Bright — HSS, bright surface
Set consisting of (order no. 1446).

| Order No. | Set contents mm | 1445 format bright | 1446 format bright |
|---|---|---|---|
| 0005 | 6.3; 8.3; 10.4; 12.4; 16.5; 20.5 | 235.50 (W134) | 271.50 (W134) |

**1445, long**
bright

**1446, extra long**
bright

## Countersinks and deburring countersinks 90° ASP

HSS-E PM | DIN 335-C | Z 3 | 90°

format professional quality

**Design:** HSS-E PM, ASP2030®, DIN 335-C. 90° countersink angle. Axial and radial taper-ground and CBN deep-ground, bright. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Particularly suitable for the highest loads in INOX steel, stainless steel and Hardox. Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965, DIN 966 and DIN 7991 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential. HSS-E PM has, in comparison to conventional HSS steels, a consistent, fine grained material structure. This means they have good hot hardness, pressure resistance and resistance to wear.

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1448 | ● | ● | ○ | ○ | | | | | ● | ● | ● | ○ | ● |

| Order No. | Nominal Ø mm | 1448 format professional quality bright | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0630 | 6.3 | 15.10 | 1.5 | 45 | 5 |
| 0830 | 8.3 | 17.30 | 2.0 | 50 | 6 |
| 1040 | 10.4 | 19.90 | 2.5 | 50 | 6 |
| 1240 | 12.4 | 25.80 | 2.8 | 56 | 8 |
| 1650 | 16.5 | 33.60 | 3.2 | 60 | 10 |
| 2050 | 20.5 | 45.60 | 3.5 | 63 | 10 |
| 2500 | 25.0 | 64.10 | 3.8 | 67 | 10 |
| 3100 | 31.0 | 99.80 | 4.2 | 71 | 12 |
| 4000 | 40.0 | 152.00 (W134) | 5.0 | 80 | 15 |

## Countersinks and deburring countersinks set 90° ASP

Set consisting of (order no. 1448).

bright

| Order No. | Set contents mm | 1448 format professional quality bright |
|---|---|---|
| 0005 | 6.3; 8.3; 10.4; 12.4; 16.5; 20.5 | 137.50 |
| 0010 | 6.3; 10.4; 16.5; 20.5; 25.0 | 176.50 (W134) |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## 90° countersinks and deburring countersinks, carbide

**Design:** K20 carbide, DIN 335-C. 90° countersink angle. Axial and taper-ground and CBN deep-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. For tough materials such as Hardox 400/500, steels up to 60 HRC.

**Application:** The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential.

Solid carbide | DIN 335-C | Z 3 | 90°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1447 | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ○ | ● |

| Order No. | Nominal Ø mm | 1447 format bright | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0630 | 6.3 | 74.60 | 1.5 | 45 | 5 |
| 0830 | 8.3 | 75.80 | 2.0 | 50 | 6 |
| 1040 | 10.4 | 77.50 | 2.5 | 50 | 6 |
| 1240 | 12.4 | 78.20 | 2.8 | 56 | 8 |
| | | (W136) | | | |

| Order No. | Nominal Ø mm | 1447 format bright | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 1650 | 16.5 | 90.70 | 3.2 | 60 | 10 |
| 2050 | 20.5 | 119.50 | 3.5 | 63 | 10 |
| 2500 | 25.0 | 163.00 | 3.8 | 67 | 10 |
| 3100 | 31.0 | 225.50 | 4.2 | 71 | 12 |
| | | (W136) | With morse taper shank available on request. | | |

## 90° countersinks and deburring countersinks set, carbide

Set consisting of (order no. 1447).

| Order No. | Set contents mm | 1447 format bright |
|---|---|---|
| 0005 | 6.3; 8.3; 10.4; 12.4; 16.5; 20.5 | 444.00 |
| 0010 | 6.3; 10.4; 16.5; 20.5; 25.0 | 556.50 |
| | | (W136) |

bright

## 90° countersinks and deburring countersinks, carbide

NEW

**Design:** K20 carbide, DIN 335-C. 90° countersink angle. Axial and taper-ground and CBN deep-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. For tough materials such as Hardox 400/500, steels up to 60 HRC.

**Application:** The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential.

Solid carbide | DIN 335-C | Z 3 | 90°

BECK MAPAL GROUP

ZrN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1449 | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● |

| Order No. | Nominal Ø mm | 1449 BECK ZrN | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 0630 | 6.3 | 99.40 | 1.5 | 45 | 5 |
| 0830 | 8.3 | 107.50 | 2.0 | 50 | 6 |
| 1040 | 10.4 | 112.00 | 2.5 | 50 | 6 |
| 1240 | 12.4 | 117.50 | 2.8 | 56 | 8 |
| | | (W141) | | | |

| Order No. | Nominal Ø mm | 1449 BECK ZrN | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|
| 1650 | 16.5 | 144.00 | 3.2 | 60 | 10 |
| 2050 | 20.5 | 165.00 | 3.5 | 63 | 10 |
| 2500 | 25.0 | 190.50 | 3.8 | 67 | 10 |
| 3100 | 31.0 | 226.00 | 4.2 | 71 | 12 |
| | | (W141) | | | |

## 90° countersinks and deburring countersinks with morse taper shank

HSS | DIN 335-D | Z 3 | MK 1–4 | 90°

format professional quality

**Design:** HSS, DIN 335-D, 90° countersink angle. Axial and radial taper-ground and CBN deep-ground. With straight clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965, DIN 966 and DIN 7991 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential for uncoated designs.

Same performance and quality features as **1430**or **1433, but with morse taper shank.**

**1450**
bright

**1453**
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1450 | ● | ○ | | | | | | | ○ | | | ● | |
| 1453 | ● | ● | ○ | | | | | | ○ | ○ | ○ | ● | ● |

| Order No. | Nominal Ø mm | 1450 format bright | 1453 format TiN | Smallest Ø mm | Total length mm | Shank MK |
|---|---|---|---|---|---|---|
| 1500 | 15.0 | 34.90 | – | 3.2 | 85 | 1 |
| 1650 | 16.5 | 34.30 | 43.70 | 3.2 | 85 | 1 |
| 2050 | 20.5 | 39.60 | 50.50 | 3.5 | 100 | 2 |
| 2300 | 23.0 | 40.60 | – | 3.8 | 106 | 2 |
| 2500 | 25.0 | 40.60 | 48.10 | 3.8 | 106 | 2 |
| 2600 | 26.0 | 46.00 | – | 3.8 | 106 | 2 |
| 3000 | 30.0 | 46.00 | 58.60 | 4.2 | 112 | 2 |
| 3100 | 31.0 | 47.30 (W134) | 63.10 (W134) | 4.2 | 112 | 2 |

| Order No. | Nominal Ø mm | 1450 format bright | 1453 format TiN | Smallest Ø mm | Total length mm | Shank MK |
|---|---|---|---|---|---|---|
| 3400 | 34.0 | 47.30 | 63.10 | 4.5 | 118 | 2 |
| 3700 | 37.0 | 54.50 | 90.40 | 4.8 | 118 | 2 |
| 4000 | 40.0 | 68.90 | 90.40 | 10.0 | 140 | 3 |
| 4500 | 45.0 | 86.60 | – | 12.0 | 145 | 3 |
| 5000 | 50.0 | 85.70 | 135.50 | 14.0 | 150 | 3 |
| 6300 | 63.0 | 140.50 | 218.00 | 16.0 | 180 | 4 |
| 8000 | 80.0 | 161.50 (W134) | 250.50 (W134) | 22.0 | 190 | 4 |

## 60° countersinks and deburring countersinks with cylinder Shank

HSS | DIN 334-C | Z 3 | 60°

format professional quality

**Design:** HSS, DIN 335-C. 60° countersink angle. Axial and radial taper-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965, DIN 966 and DIN 7991 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential for uncoated designs.

**1456**
bright

**1459**
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1456 | ● | ○ | | | | | | | ○ | | | ● | |
| 1459 | ● | ● | ○ | | | | | | ○ | ○ | ○ | ● | ● |

| Order No. | Nominal Ø mm | 1456 format bright | 1459 format TiN | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|---|
| 0630 | 6.3 | 7.55 | 12.45 | 1.7 | 45 | 5 |
| 0800 | 8.0 | 7.85 | 13.00 | 2.1 | 50 | 6 |
| 1000 | 10.0 | 9.60 | 16.15 | 2.6 | 53 | 6 |
| 1250 | 12.5 | 10.15 | 17.50 | 3.3 | 56 | 8 |
| 1600 | 16.0 | 12.65 (W134) | 21.40 (W134) | 4.1 | 63 | 10 |

| Order No. | Nominal Ø mm | 1456 format bright | 1459 format TiN | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|---|
| 2000 | 20.0 | 17.60 | 29.10 | 5.1 | 67 | 10 |
| 2500 | 25.0 | 24.30 | 38.80 | 6.4 | 71 | 10 |
| 3150 | 31.5 | 40.60 | 60.60 | 10.01 | 76 | 12 |
| 4000 | 40.0 | 66.70 (W134) | 94.70 (W134) | 10.01 | 91 | 15 |

## 75° countersinks and deburring countersinks with cylinder Shank

**Design:** HSS, according to factory standard, form C. 75° countersink angle. Axial and radial taper-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965, DIN 966 and DIN 7991 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential.

HSS | Factory standard | Z 3 | 75°

format professional quality

**1462**
bright

**1463**
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1462 | ● | ○ | | | | | | | ○ | | | ● | |
| 1463 | ● | ● | ○ | | | | | | ○ | ○ | ○ | ● | ○ |

| Order No. | Nominal Ø | 1462 format professional quality bright | 1463 format professional quality TiN | Smallest Ø | Total length | Shank Ø |
|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm |
| 0630 | 6.3 | 10.85 | 13.85 | 1.6 | 45 | 5 |
| 0830 | 8.3 | 11.35 | 14.45 | 2.2 | 50 | 6 |
| 1040 | 10.4 | 13.45 | 17.20 | 2.7 | 51 | 6 |
| 1240 | 12.4 | 14.25 | 18.15 | 3.2 | 55 | 8 |
| 1650 | 16.5 | 18.20 | 23.20 | 3.7 | 61 | 10 |
| 2050 | 20.5 | 26.30 | 33.50 | 4.2 | 65 | 10 |
| 2500 | 25.0 | 35.10 | 44.80 | 5.2 | 69 | 10 |
| 3100 | 31.0 | 48.30 | 62.80 | 6.2 | 73 | 12 |
| 4000 | 40.0 | 71.30 (W134) | 90.50 (W134) | 8.1 | 82 | 15 |

## 75° countersinks and deburring countersinks sets with cylinder Shank

**Design:** Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened.

**1462**
Bright
Set consisting of (order no. 1462).

**1463**
TiN
Set consisting of (order no. 1463).

**1462**
bright

**1463**
TiN

| Order No. | Set contents | 1462 format professional quality bright | 1463 format professional quality TiN |
|---|---|---|---|
| | mm | | |
| 0010 | 6.3; 10.4; 16.5; 20.5; 25.0 | 107.50 | 133.50 |
| 0005 | 6.3; 8.3; 10.4; 12.4; 16.5; 20.5 | 98.70 (W134) | 122.00 (W134) |

## 120° countersinks and deburring countersinks with cylinder Shank

**Design:** HSS, according to factory standard, form C. 120° countersink angle. Axial and radial taper-ground. With straight, u-shaped clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking and deburring work for countersunk screws DIN 963, DIN 964, DIN 965, DIN 966 and DIN 7991 in one step. Please note the large countersink range!
The excellent cutting properties and easy machining process result from the cone-shaped back taper on the coat and angle of rake. The countersink achieves the best results with the strongest feed and lowest cutting speed.

**Note:** Sufficient supply of coolant is essential.

HSS | Factory standard | Z 3 | 120°

format professional quality

1465
bright

1466
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1465 | ● | ○ | | | | | | | ○ | | | ● | |
| 1466 | ● | ● | ○ | | | | | | ● | ○ | ○ | ● | ○ |

| Order No. | Nominal Ø mm | 1465 format bright | 1466 format TiN | Smallest Ø mm | Total length mm | Shank Ø mm |
|---|---|---|---|---|---|---|
| 0630 | 6.3 | 11.30 | 14.45 | 1.7 | 44.0 | 5 |
| 0830 | 8.3 | 11.85 | 15.05 | 2.2 | 48.5 | 6 |
| 1040 | 10.4 | 14.05 | 17.90 | 2.7 | 50.0 | 6 |
| 1240 | 12.4 | 14.85 | 18.95 | 3.2 | 53.0 | 8 |
| 1650 | 16.5 | 18.95 | 24.20 | 3.7 | 56.0 | 10 |
| 2050 | 20.5 | 27.40 | 35.00 | 4.2 | 59.0 | 10 |
| 2500 | 25.0 | 36.70 | 46.70 | 5.2 | 61.0 | 10 |
| 3100 | 31.0 | 50.40 | 65.50 | 8.1 | 68.0 | 12 |
| 4000 | 40.0 | – | 94.40 | 10.0 | 74.0 | 12 |
| 4000 | 40.0 | 74.30 (W134) | – (W134) | 10.0 | 74.0 | 15 |

## 120° countersinks and deburring countersinks sets with cylinder Shank

Design: Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened.

**1465** Bright — Set consisting of (order no. 1465).

**1466** TiN — Set consisting of (order no. 1466).

1465
bright

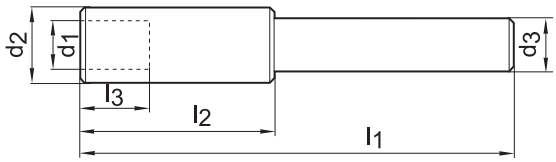
1466
TiN

| Order No. | Set contents mm | 1465 format bright | 1466 format TiN |
|---|---|---|---|
| 0010 | 6.3; 10.4; 16.5; 20.5; 25.0 | 110.00 | 136.50 |
| 0005 | 6.3; 8.3; 10.4; 12.4; 16.5; 20.5 | 101.00 (W134) | 125.00 (W134) |

## Piloted countersink holder, cyl. Shank

**Design:** HSS. Annealed and grinding The countersink and pin are each clamped by one screw, whereby the countersink is additionally secured against turning by a stud.

HSS

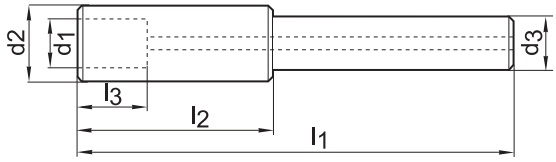


| Order No. | Size | 1473 afs | Shank Ø $d_3$ mm | Overall length $l_1$ mm | Head length $l_2$ mm | Head Ø $d_2$ mm | Length $l_3$ mm | Hole $d_1$ mm |
|---|---|---|---|---|---|---|---|---|
| 0005 | 01 | 90.10 | 10 | 86 | 45 | 14 | 12 | 7 |
| 0010 | 0 | 78.00 | 10 | 92 | 42 | 18 | 18 | 10 |
| 0020 | 1 | 95.00 (W138) | 12 | 120 | 55 | 24 | 20 | 14 |

## Piloted countersink holder, cyl. Shank with internal cooling

**Design:** HSS, with internal cooling. Annealed and grinding The countersink and pin are each clamped by one screw, whereby the countersink is additionally secured against turning by a stud.

HSS | DIN 1835-B

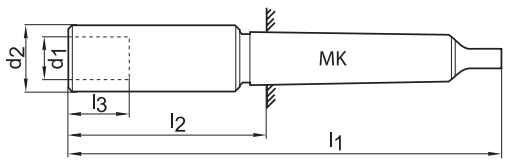


| Order No. | Size | 1475 afs | Shank cyl. Carrier surface DIN 1835-B | Overall length $l_1$ mm | Head length $l_2$ mm | Head Ø $d_2$ mm | Length $l_3$ mm | Hole $d_1$ mm |
|---|---|---|---|---|---|---|---|---|
| 0005 | 1 | 100.00 | 20 | 105 | 55 | 24 | 20 | 14 |
| 0010 | 2 | 111.50 (W138) | 25 | 135 | 75 | 34 | 28 | 22 |

## Piloted countersink holder, Morse taper shank

**Design:** HSS. Annealed and grinding. The countersink and pin are each clamped by one screw, whereby the countersink is additionally secured against turning by a stud.

HSS | MK 1–3



| Order No. | Size | 1473 afs | Shank | Overall length $l_1$ mm | Head length $l_2$ mm | Head Ø $d_2$ mm | Length $l_3$ mm | Hole $d_1$ mm |
|---|---|---|---|---|---|---|---|---|
| 0015 | 0 | 79.40 | MK 1 | 111 | 42 | 18 | 18 | 10 |
| 0025 | 1 | 100.00 | MK 2 | 135 | 55 | 24 | 20 | 14 |
| 0030 | 2 | 111.50 | MK 2 | 155 | 75 | 34 | 28 | 22 |
| 0035 | 2 | 111.50 (W138) | MK 3 | 174 | 75 | 34 | 28 | 22 |

## Piloted countersink

**Design:** HSS. Annealed and grinding. The countersink and pin are each clamped by one screw, whereby the countersink is additionally secured against turning by a stud.

**Application:** Suitable for DIN countersinks and with the corresponding pin/countersink combinations for step holes or countersinks outside of the norm.

### Piloted countersink – size 01

HSS | Z 2

| Order No. | Countersink Ø (K8) D mm | 1477 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0500 | 5.0 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0550 | 5.5 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0600 | 6.0 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0650 | 6.5 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0700 | 7.0 | 50.50 (W138) | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |

| Order No. | Countersink Ø (K8) D mm | 1477 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0750 | 7.5 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0800 | 8.0 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0850 | 8.5 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0900 | 9.0 | 50.50 | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |
| 0950 | 9.5 | 50.50 (W138) | 7.0 | 28.0 | 11.0 | 17.0 | 2.4 |

### Piloted countersink – size 0

Ø 8.0– 9.5 mm double edged.
Ø 10.0–16.5 mm triple edged.

HSS | Z 2 | Z 3

| Order No. | Countersink Ø (K8) D mm | 1481 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0800 | 8.0 | 31.00 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 0850 | 8.5 | 31.00 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 0900 | 9.0 | 35.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 0950 | 9.5 | 35.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1000 | 10.0 | 35.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1050 | 10.5 | 35.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1100 | 11.0 | 38.80 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1150 | 11.5 | 38.80 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1200 | 12.0 | 38.80 (W138) | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |

| Order No. | Countersink Ø (K8) D mm | 1481 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 1250 | 12.5 | 38.80 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1300 | 13.0 | 45.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1350 | 13.5 | 45.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1400 | 14.0 | 45.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1450 | 14.5 | 45.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1500 | 15.0 | 49.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1550 | 15.5 | 49.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1600 | 16.0 | 49.10 | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |
| 1650 | 16.5 | 49.10 (W138) | 10.0 | 40.0 | 19.0 | 21.0 | 4.0 |

### Piloted countersink – size 1

HSS | Z 3

| Order No. | Countersink Ø (K8) D mm | 1485 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 1400 | 14.0 | 46.90 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1450 | 14.5 | 46.90 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1500 | 15.0 | 46.90 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1550 | 15.5 | 46.90 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1600 | 16.0 | 52.30 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1650 | 16.5 | 52.30 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1700 | 17.0 | 52.30 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1750 | 17.5 | 52.30 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1800 | 18.0 | 58.80 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1850 | 18.5 | 58.80 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1900 | 19.0 | 58.80 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 1950 | 19.5 | 58.80 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2000 | 20.0 | 65.20 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2050 | 20.5 | 65.20 (W138) | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |

| Order No. | Countersink Ø (K8) D mm | 1485 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 2100 | 21.0 | 65.20 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2150 | 21.5 | 65.20 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2200 | 22.0 | 70.20 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2250 | 22.5 | 70.20 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2300 | 23.0 | 70.20 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2350 | 23.5 | 70.20 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2400 | 24.0 | 76.40 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2450 | 24.5 | 76.40 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2500 | 25.0 | 76.40 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2550 | 25.5 | 76.40 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2600 | 26.0 | 82.50 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2650 | 26.5 | 82.50 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2700 | 27.0 | 82.50 | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |
| 2750 | 27.5 | 82.50 (W138) | 14.0 | 50.0 | 22.0 | 28.0 | 6.0 |

## Piloted countersink – size 2

Ø 24.0–33.0 mm triple edged.
Ø 34.0–66.0 mm quadruple edged.

| HSS | Z 3 | Z 4 |
|---|---|---|

| Order No. | Countersink Ø (K8) D mm | 1489 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 2400 | 24.0 | 79.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2450 | 24.5 | 79.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2500 | 25.0 | 79.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2550 | 25.5 | 79.00 ◊ | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2600 | 26.0 | 89.40 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2650 | 26.5 | 89.40 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2700 | 27.0 | 89.40 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2750 | 27.5 | 89.40 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2800 | 28.0 | 91.20 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2850 | 28.5 | 91.20 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2900 | 29.0 | 91.20 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 2950 | 29.5 | 91.20 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3000 | 30.0 | 92.70 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3050 | 30.5 | 92.70 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3100 | 31.0 | 92.70 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3200 | 32.0 | 92.70 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3300 | 33.0 | 97.30 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3400 | 34.0 | 97.30 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3500 | 35.0 | 97.30 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3600 | 36.0 | 97.30 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3700 | 37.0 | 117.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3800 | 38.0 | 117.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 3900 | 39.0 | 117.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4000 | 40.0 | 117.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |

(W138)

| Order No. | Countersink Ø (K8) D mm | 1489 afs | Shank Ø mm | Total length mm | Head length mm | Shank length mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 4100 | 41.0 | 161.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4200 | 42.0 | 161.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4300 | 43.0 | 161.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4400 | 44.0 | 161.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4500 | 45.0 | 167.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4600 | 46.0 | 167.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4700 | 47.0 | 167.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4800 | 48.0 | 167.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 4900 | 49.0 | 214.00 ◊ | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5000 | 50.0 | 214.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5100 | 51.0 | 214.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5200 | 52.0 | 214.00 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5300 | 53.0 | 237.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5400 | 54.0 | 237.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5500 | 55.0 | 237.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5600 | 56.0 | 237.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5700 | 57.0 | 268.50 ◊ | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 5800 | 58.0 | 268.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 6000 | 60.0 | 268.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 6200 | 62.0 | 268.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 6400 | 64.0 | 268.50 ◊ | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 6500 | 65.0 | 268.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |
| 6600 | 66.0 | 268.50 | 22.0 | 60.0 | 27.0 | 33.0 | 10.0 |

(W138)

Up to Ø 85 mm available on request.

## Pilot pin – size 01

Fixed without internal cooling.

| Order No. | Pin Ø (e8) D mm | 1479 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 0240 | 2.4 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0250 | 2.5 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0260 | 2.6 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0270 | 2.7 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0280 | 2.8 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0290 | 2.9 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0300 | 3.0 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0310 | 3.1 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0320 | 3.2 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0330 | 3.3 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0340 | 3.4 | 18.30 | 2.4 | 40.0 | 6.0 |

(W138)

| Order No. | Pin Ø (e8) D mm | 1479 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 0350 | 3.5 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0360 | 3.6 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0370 | 3.7 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0380 | 3.8 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0390 | 3.9 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0400 | 4.0 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0410 | 4.1 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0420 | 4.2 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0430 | 4.3 | 18.30 ◊ | 2.4 | 40.0 | 6.0 |
| 0440 | 4.4 | 18.30 | 2.4 | 40.0 | 6.0 |
| 0450 | 4.5 | 18.30 | 2.4 | 40.0 | 6.0 |

(W138)

## Pilot pin – size 0

Fixed without internal cooling.

| Order No. | Pin Ø (e8) D mm | 1483 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 0400 | 4.0 | 12.05 | 4.0 | 59.0 | 9.0 |
| 0410 | 4.1 | 12.05 | 4.0 | 59.0 | 9.0 |
| 0420 | 4.2 | 12.05 | 4.0 | 59.0 | 9.0 |
| 0430 | 4.3 | 12.05 ◊ | 4.0 | 59.0 | 9.0 |
| 0450 | 4.5 | 12.05 | 4.0 | 59.0 | 9.0 |
| 0480 | 4.8 | 12.05 | 4.0 | 59.0 | 9.0 |
| 0490 | 4.9 | 12.05 | 4.0 | 59.0 | 9.0 |
| 0500 | 5.0 | 12.05 | 4.0 | 59.0 | 9.0 |
| 0530 | 5.3 | 12.05 | 4.0 | 59.0 | 9.0 |

(W138)

| Order No. | Pin Ø (e8) D mm | 1483 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 0550 | 5.5 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0580 | 5.8 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0590 | 5.9 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0600 | 6.0 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0610 | 6.1 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0640 | 6.4 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0650 | 6.5 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0660 | 6.6 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0670 | 6.7 | 13.30 | 4.0 | 59.0 | 9.0 |

(W138)

Continued overleaf

## Pilot pin – size 0

Continued

| Order No. | Pin Ø (e8) D mm | 1483 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 0680 | 6.8 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0690 | 6.9 | 13.30 | 4.0 | 59.0 | 9.0 |
| 0700 | 7.0 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0740 | 7.4 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0750 | 7.5 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0760 | 7.6 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0780 | 7.8 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0790 | 7.9 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0800 | 8.0 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0820 | 8.2 | 13.65 | 4.0 | 59.0 | 9.0 |
| | | (W138) | | | |

| Order No. | Pin Ø (e8) D mm | 1483 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 0840 | 8.4 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0850 | 8.5 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0900 | 9.0 | 13.65 | 4.0 | 59.0 | 9.0 |
| 0950 | 9.5 | 14.00 | 4.0 | 59.0 | 9.0 |
| 0990 | 9.9 | 14.00 | 4.0 | 59.0 | 9.0 |
| 1000 | 10.0 | 14.00 | 4.0 | 59.0 | 9.0 |
| 1020 | 10.2 | 14.00 | 4.0 | 59.0 | 9.0 |
| 1050 | 10.5 | 14.00 | 4.0 | 59.0 | 9.0 |
| 1100 | 11.0 | 14.00 | 4.0 | 59.0 | 9.0 |
| 1150 | 11.5 | 14.00 | 4.0 | 59.0 | 9.0 |
| | | (W138) | | | |

## Pilot pin – size 1

Ø 6.6– 8.4 mm fixed without internal cooling.
Ø 8.5–18.0 mm rotating and with internal cooling.

| Order No. | Pin Ø (e8) D mm | 1487 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 0660 | 6.6 | 13.65 | 6.0 | 79.0 | 15.0 |
| 0670 | 6.7 | 13.65 ◊ | 6.0 | 79.0 | 15.0 |
| 0680 | 6.8 | 13.65 | 6.0 | 79.0 | 15.0 |
| 0690 | 6.9 | 13.65 | 6.0 | 79.0 | 15.0 |
| 0700 | 7.0 | 13.65 | 6.0 | 79.0 | 15.0 |
| 0740 | 7.4 | 13.65 ◊ | 6.0 | 79.0 | 15.0 |
| 0750 | 7.5 | 13.65 | 6.0 | 79.0 | 15.0 |
| 0760 | 7.6 | 13.65 ◊ | 6.0 | 79.0 | 15.0 |
| 0780 | 7.8 | 13.65 | 6.0 | 79.0 | 15.0 |
| 0790 | 7.9 | 13.65 | 6.0 | 79.0 | 15.0 |
| 0800 | 8.0 | 14.85 | 6.0 | 79.0 | 15.0 |
| 0820 | 8.2 | 14.85 ◊ | 6.0 | 79.0 | 15.0 |
| 0840 | 8.4 | 14.85 | 6.0 | 79.0 | 15.0 |
| 0850 | 8.5 | 16.90 | 6.0 | 79.0 | 15.0 |
| 0900 | 9.0 | 16.90 | 6.0 | 79.0 | 15.0 |
| 0950 | 9.5 | 16.90 | 6.0 | 79.0 | 15.0 |
| 0990 | 9.9 | 17.15 | 6.0 | 79.0 | 15.0 |
| 1000 | 10.0 | 17.15 | 6.0 | 79.0 | 15.0 |
| | | (W138) | | | |

| Order No. | Pin Ø (e8) D mm | 1487 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 1020 | 10.2 | 17.15 | 6.0 | 79.0 | 15.0 |
| 1050 | 10.5 | 17.15 | 6.0 | 79.0 | 15.0 |
| 1100 | 11.0 | 17.15 | 6.0 | 79.0 | 15.0 |
| 1150 | 11.5 | 17.15 | 6.0 | 79.0 | 15.0 |
| 1200 | 12.0 | 17.15 | 6.0 | 79.0 | 15.0 |
| 1250 | 12.5 | 18.75 | 6.0 | 79.0 | 15.0 |
| 1300 | 13.0 | 18.75 | 6.0 | 79.0 | 15.0 |
| 1350 | 13.5 | 18.75 | 6.0 | 79.0 | 15.0 |
| 1400 | 14.0 | 18.75 | 6.0 | 79.0 | 15.0 |
| 1450 | 14.5 | 18.75 | 6.0 | 79.0 | 15.0 |
| 1500 | 15.0 | 18.75 | 6.0 | 79.0 | 15.0 |
| 1550 | 15.5 | 19.60 ◊ | 6.0 | 79.0 | 15.0 |
| 1600 | 16.0 | 19.60 | 6.0 | 79.0 | 15.0 |
| 1650 | 16.5 | 19.60 | 6.0 | 79.0 | 15.0 |
| 1700 | 17.0 | 19.60 | 6.0 | 79.0 | 15.0 |
| 1750 | 17.5 | 19.60 | 6.0 | 79.0 | 15.0 |
| 1800 | 18.0 | 19.60 | 6.0 | 79.0 | 15.0 |
| | | (W138) | | | |

## Pilot pin – size 2

Ø 10.0–13.5 mm fixed without internal cooling.
Ø 14.0–40.0 mm rotating and with internal cooling.

| Order No. | Pin Ø (e8) D mm | 1491 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 1000 | 10.0 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1020 | 10.2 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1050 | 10.5 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1100 | 11.0 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1150 | 11.5 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1200 | 12.0 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1250 | 12.5 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1300 | 13.0 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1350 | 13.5 | 22.20 | 10.0 | 105.0 | 18.0 |
| 1400 | 14.0 | 25.90 | 10.0 | 105.0 | 18.0 |
| 1450 | 14.5 | 25.90 | 10.0 | 105.0 | 18.0 |
| 1500 | 15.0 | 25.90 | 10.0 | 105.0 | 18.0 |
| 1550 | 15.5 | 25.90 | 10.0 | 105.0 | 18.0 |
| 1600 | 16.0 | 25.90 | 10.0 | 105.0 | 18.0 |
| 1650 | 16.5 | 27.00 | 10.0 | 105.0 | 18.0 |
| 1700 | 17.0 | 27.00 | 10.0 | 105.0 | 18.0 |
| 1750 | 17.5 | 27.00 | 10.0 | 105.0 | 18.0 |
| 1800 | 18.0 | 27.00 | 10.0 | 105.0 | 18.0 |
| 1850 | 18.5 | 27.00 | 10.0 | 105.0 | 18.0 |
| 1900 | 19.0 | 27.70 | 10.0 | 105.0 | 18.0 |
| | | (W138) | | | |

| Order No. | Pin Ø (e8) D mm | 1491 afs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 1950 | 19.5 | 27.70 | 10.0 | 105.0 | 18.0 |
| 2000 | 20.0 | 27.70 | 10.0 | 105.0 | 18.0 |
| 2050 | 20.5 | 27.70 | 10.0 | 105.0 | 18.0 |
| 2100 | 21.0 | 27.70 | 10.0 | 105.0 | 18.0 |
| 2150 | 21.5 | 29.00 | 10.0 | 105.0 | 18.0 |
| 2200 | 22.0 | 29.00 | 10.0 | 105.0 | 18.0 |
| 2250 | 22.5 | 29.00 ◊ | 10.0 | 105.0 | 18.0 |
| 2300 | 23.0 | 29.00 | 10.0 | 105.0 | 18.0 |
| 2350 | 23.5 | 31.10 ◊ | 10.0 | 105.0 | 18.0 |
| 2400 | 24.0 | 31.10 | 10.0 | 105.0 | 18.0 |
| 2450 | 24.5 | 31.10 | 10.0 | 105.0 | 18.0 |
| 2500 | 25.0 | 31.10 | 10.0 | 105.0 | 18.0 |
| 2550 | 25.5 | 41.90 ◊ | 10.0 | 105.0 | 18.0 |
| 2600 | 26.0 | 41.90 | 10.0 | 105.0 | 18.0 |
| 2650 | 26.5 | 41.90 | 10.0 | 105.0 | 18.0 |
| 2700 | 27.0 | 41.90 ◊ | 10.0 | 105.0 | 18.0 |
| 2750 | 27.5 | 41.90 | 10.0 | 105.0 | 18.0 |
| 2800 | 28.0 | 41.90 | 10.0 | 105.0 | 18.0 |
| 2850 | 28.5 | 41.90 ◊ | 10.0 | 105.0 | 18.0 |
| 2900 | 29.0 | 41.90 ◊ | 10.0 | 105.0 | 18.0 |
| | | (W138) | | | |

Continued overleaf

## Pilot pin – size 2

Continued

| Order No. | Pin Ø (e8) D mm | 1491 gfs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 2950 | 29.5 | 41.90 ◊ | 10.0 | 105.0 | 18.0 |
| 3000 | 30.0 | 41.90 | 10.0 | 105.0 | 18.0 |
| 3300 | 33.0 | 52.40 (W138) | 10.0 | 105.0 | 18.0 |

| Order No. | Pin Ø (e8) D mm | 1491 gfs | Shank Ø mm | Total length mm | Head length mm |
|---|---|---|---|---|---|
| 3500 | 35.0 | 52.40 | 10.0 | 105.0 | 18.0 |
| 3800 | 38.0 | 58.60 ◊ | 10.0 | 105.0 | 18.0 |
| 4000 | 40.0 | 58.60 ◊ (W138) | 10.0 | 105.0 | 18.0 |

## Piloted countersink combination system

HSS

**Design:** Consisting of holder, countersink pilot pins.
The GFS pin-countersink combination system covers a wide range of drilling and countersinking combinations due to the holder variation options with the countersinks and pilot pins.

**This results in the following advantages:**

1. Only 4 holder sizes are required for a working range of 5 mm to 85 mm.
2. The pilot pins rotating versions in size 1 from Ø 8.5 mm and in size 2 from Ø 14.0 mm and are provided with internal cooling.
3. Pin countersinks HSS-TiN coated and with soldered carbide blades are available from stock.
4. Pin countersinks are also available with turning plate assembly from Ø 32 mm.
5. The individual elements can be combined in anyway within one size.
6. The pilot pins can be replaced without removing the countersink.

**Application:** Suitable for DIN countersinks and with the corresponding pin/countersink combinations for step holes or countersinks outside of the norm. The holder remains in the machine when changing. The countersink and pin are clamped using a hexagon screwdriver according to DIN 911.

**Note:** Sufficient supply of coolant is essential.

| Order No. | Countersink area mm | 1470 gfs | Set contents |
|---|---|---|---|
| 0005 | 5 – 9 | 586.50 | 1 each pilot counter bore 5; 5.5; 6; 6.5; 7; 8; 9 (Order No. 1477)<br>1 each pilot pin 2.4; 2.5; 2.7; 3; 3.3; 3.5; 4; 4.5 (Order No. 1479)<br>1 holder shank 10 mm cyl. |
| 0010 | 8.5–16.5 | 508.50 | 1 of each piloted countersink 8.5; 9.5; 10.5; 11.5; 13.5; 16.5 (order no. 1481)<br>1 of each pilot pin 4; 4.5; 5; 5.5; 6; 6.5; 7; 8; 8.5; 9; 9.5; 10; 10.5 (order no. 1483)<br>1 holder shank 10 mm cyl. |
| 0015 | 8.5–16.5 | 508.50 | 1 of each piloted countersink 8.5; 9.5; 10.5; 11.5; 13.5; 16.5 (order no. 1481)<br>1 of each pilot pin 4; 4.5; 5; 5.5; 6; 6.5; 7; 8; 8.5; 9; 9.5; 10; 10.5 (order no. 1483)<br>1 holder shank MK 1 |
| 0020 | 14.5–24.5 | 706.50 | 1 of each piloted countersink 14.5; 16.5; 18.5; 20.5; 22.5; 24.5 (order no. 1485)<br>1 of each pilot pin 7; 7.5; 8; 8.5; 9; 9.5; 10; 10.5; 11; 11.5; 12; 13; 14; 15 (order no. 1487)<br>1 holder shank 12 mm cyl. |
| 0025 | 14.5–24.5 | 706.50 | 1 of each piloted countersink 14.5; 16.5; 18.5; 20.5; 22.5; 24.5 (order no. 1485)<br>1 of each pilot pin 7; 7.5; 8; 8.5; 9; 9.5; 10; 10.5; 11; 11.5; 12; 13; 14; 15 (order no. 1487)<br>1 holder shank MK 2 |
| 0030 | 26 –36 | 1094.00 | 1 of each piloted countersink 26; 28; 30; 32; 33; 34; 36 (order no. 1489)<br>1 of each pilot pin 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25 (order no. 1491)<br>1 holder shank MK 2 |
| 0035 | 26 –36 | 1094.00 (W138) | 1 of each piloted countersink 26; 28; 30; 32; 33; 34; 36 (order no. 1489)<br>1 of each pilot pin 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25 (order no. 1491)<br>1 holder shank MK 3 |

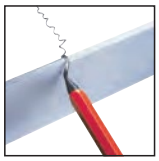
## FT quick deburrer tool set RB 1000

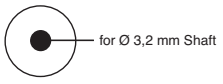
**Design:** Set consisting of:
1 sturdy 12 mm hexagon aluminium handlef with blade mount made of steel

1 replaceble HSS blade E 100 (order no. 1498 0240)

**Application:** Manageable deburring tool for occasional deburring work.

| Order No. | 1494 |
|---|---|
| 0010 | 8.70 (W193) |





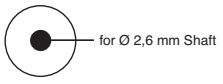

format professional quality

## FT universal deburrer set B – EL 1100

**Design:** Set consisting of:
1 universal plastic handle EL 1000 FT with blade magazine
1 blade holder EL 0100 FT
1 HSS blade B 10 (order no. 1498 0200)
1 HSS blade B 20 (order no. 1498 0220)

**Application:** Universal deburring tool for all fine and medium deburring work on holes as well as on straight, convex and concave edges.

| Order No. | 1484 |
|---|---|
| 0010 | 11.70 (W193) |

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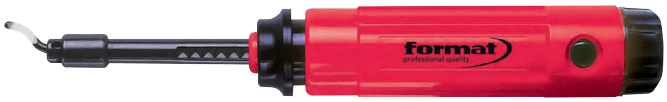
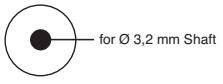



## FT universal deburrer set E – EL 1200

**Design:** Set consisting of:
1 universal plastic handle EL 1000 FT with blade magazine
1 blade holder EL 0200 FT
1 HSS blade E 100 (order no. 1498 0240)
1 HSS blade E 200 (order no. 1498 0260)
1 HSS blade E 300 (order no. 1498 0270)

**Application:** Universal deburring tool for all medium and the heaviest deburring work on holes as well as on straight, convex and concave edges.

| Order No. | 1486 |
|---|---|
| 0010 | 14.25 (W193) |




format professional quality

## FT deburring countersink EL 1300

**Design:** Set consisting of:
1 universal plastic handle EL 1000 FT with blade magazine
1 blade holder EL 0300 FT
For all countersinks type C
1 HSS countersink head C20 (order no. 1498 0530)

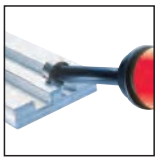
**Application:** Sturdy universal deburring countersink for holes above Ø 4 mm. For HSS countersink heads up to Ø 30 mm.

| Order No. | 1488 |
|---|---|
| 0010 | 35.20 (W193) |

format professional quality

## FT keyway deburrer EL 1400

**Design:** Set consisting of:
1 length adjustable blade holder EL 0400 FT for blades with the ID letter "K"
1 blade FT N80K
1 universal plastic handle EL 1000 FT
**Application:** For keyways, shanks and drill holes. For slot widths corresponding with the blade size.

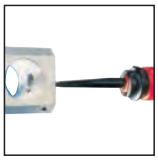


| Order No. | 1488 format |
|---|---|
| 0015 | 19.90 (W193) |

## FT inner deburrer EL 1501

**Design:** Set consisting of:
1 length blade holder EL 0500 FT
1 45° offset deburring blade FT D66
1 universal plastic handle EL 1000 FT
1 Allen key EL DK10 FT

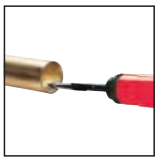
**Application:** For deburring the insides of cross-holes, piercings and indentations.



| Order No. | 1488 format |
|---|---|
| 0020 | 25.10 (W193) |

## FT medium triangular scraper EL 1600

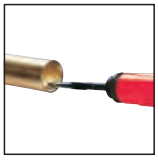
**Design:** Set consisting of:
1 blade holder EL 0602 FT with inner thread (NF 10)
1 replaceable triangular blade FT T40 with outer thread
1 universal plastic handle EL 1000 FT
1 protective cap

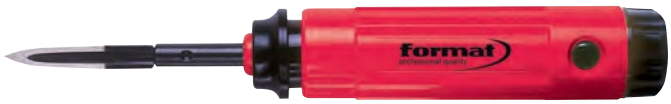


| Order No. | 1490 format |
|---|---|
| 0005 | 20.40 (W193) |

## FT maxi-triangular scraper EL 1601

**Design:** Set consisting of:
1 universal plastic handle EL 1000 FT with blade magazine
1 blade holder EL 0602 FT with length adjustment 6-125 mm
For all scrapers type T
1 HSS triangular scraper blade T60 with protective cap
**Application:** Sturdy triangular scraper for deburring difficult areas.





| Order No. | 1490 format |
|---|---|
| 0010 | 23.40 (W193) |

## FT double sheet deburrer tool set DB 2000

**Design:** Set consisting of:
1 sturdy plastic handle with hand protection
2 round HSS cutting discs N 80
(order no. 1498 0600)

**Application:** The blade runs along the full length on both sides. This allows sheets and bars up to 12 mm in thickness to be deburred on both sides at the same time. For stainless steel sheets corresponding cutting discs N 80 M 42 (Order No. 1498 0610) are available.

| Order No. | 1492 format |
|---|---|
| 0010 | 22.10 (W193) |

## FT deburrer tool set EL 7000

**Design:** Supplied in a plastic case.

**Application:** The hand deburrer set covers 80 % of all applicable deburring work. Concave edges, holes, cross-holes, surfaces and slots can be deburred with this set. The deburring tools used most often immediately at hand.

| Order No. | Set contents | | 1496 format |
|---|---|---|---|
| 0007 | 1 quick deburrer EL-RB 1000 | (order no. 1494 0010) | 115.00 |
| | 1 E-set EL 1200 | (order no. 1486 0010) | |
| | 1 B-set EL 1100 | (order no. 1484 0010) | |
| | 1 medium triangular scraper EL 1600 | (order no. 1490 0005) | |
| | 1 deburring countersink EL 1300 | (order no. 1488 0010) | |
| | 1 slot deburrer EL 1400 | (order no. 1488 0015) | |
| | 1 inner deburrer EL 1501 | (order no. 1488 0020) | |

(W193)

## FT deburrer tool set GT 1000

NEW

**Design:** 4 standard deburring tools, handy and practical in pocket knife format. Lightweight and space-saving. All blades can be replaced.
**Application:** For individual deburring on outer and inner surfaces and for drill holes.

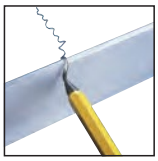
| Order No. | Set contents | 6725 format |
|---|---|---|
| 0004 | GT-E100 blade,<br>GT-B20 blade,<br>GT-D50 triangular scraper,<br>GT-BC1040 crank countersink | 57.70 |

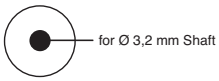
(W193)

## Quick deburrer tool set RB 1000

**Design:** Set consisting of:
1 sturdy 12 mm hexagon aluminium handlef
with blade mount made of steel
1 replaceble HSS blade E 100
(order no. 6719 0240)

**Application:** Manageable deburring tool for occasional deburring work.





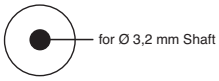

GRATTEC

| Order No. | 6713 GRATTEC |
|---|---|
| 0010 | 9.40 (W554) |

## Compact deburrer set GT-K

**Design:** Set consisting of:
1 compact handle with wear-resistant steel blade guide
1 HSS blade GT-E 100 (Order No. 6719 0240)
1 HSS blade GT-E 200 (Order No. 6719 0260)
1 HSS blade GT-E 300 (Order No. 6719 0270)

**Application:** Universal deburring tool for all deburring work on holes as well as on straight, convex an concave edges.



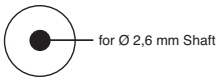

GRATTEC

| Order No. | 6703 GRATTEC |
|---|---|
| 0010 | 15.45 (W554) |

## FT universal deburrer set B – EL 1100

**Design:** Set consisting of:
1 universal plastic handle EL 1000 GT with blade magazine
(Order No. 6719 0010)
1 blade holder EL 0100 GT
(Order No. 6719 0100)
1 HSS blade B 10
(Order No. 6719 0200)
1 HSS blade B 20
(Order No. 6719 0220)

**Application:** Universal deburring tool for all fine and medium deburring of holes as well as on straight, convex and concave edges.



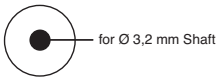

GRATTEC

| Order No. | 6704 GRATTEC |
|---|---|
| 0010 | 12.65 (W554) |

## FT universal deburrer set B – EL 1200

**Design:** Set consisting of:
1 universal plastic handle EL 1000 GT with blade magazine
(order no. 6719 0010)
1 blade holder EL 0200 GT
(order no. 6719 0110)1
1 HSS blade E 100
(order no. 6719 0240)
1 HSS blade E 200
(order no. 6719 0260)
1 HSS blade E 300
(order no. 6719 0270)

**Application:** Universal deburring tool for all medium and the heaviest deburring work on holes as well as on straight, convex and concave edges.




GRATTEC

| Order No. | 6705 GRATTEC |
|---|---|
| 0010 | 15.30 (W554) |

## Deburring countersink EL 1300

**Design:** Set consisting of:
1 universal plastic handle EL 1000 GT with blade magazine (order no. 6719 0010)
1 blade holder EL 0300 GT For all countersinks type C (order no. 6719 0130)
1 HSS countersink head C20 (order no. 6719 0530)

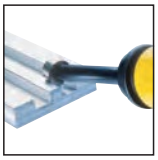
**Application:** Sturdy universal deburring countersink for holes above ∅ 4 mm. For HSS countersink heads up to ∅ 30 mm.

| Order No. | 6706 GRATTEC |
|---|---|
| 0010 | 36.70 (W554) |

## GT keyway deburrer EL 1400

**Design:** Set consisting of:
1 length adjustable blade holder EL 0400 GT for blades with the ID letter "K"
1 blade GT N80K
1 universal plastic handle EL 1000 GT

**Application:** For keyways, shanks and drill holes. For slot widths corresponding with the blade size.



| Order No. | 6706 GRATTEC |
|---|---|
| 0015 | 20.80 (W554) |

## GT inner deburrer EL 1501

**Design:** Set consisting of:
1 blade holder EL 0500 GT (order no. 6719 0150)
1 45° offset deburring blade GT D66 (order no. 6719 0440)
1 universal plastic handle EL 1000 GT (order no. 6719 0010)
1 Allwn key EL DK10 GT

**Application:** For deburring the insides of cross-holes, piercings and indentations.

| Order No. | 6706 GRATTEC |
|---|---|
| 0020 | 26.20 (W554) |

## GT medium triangular scraper EL 1600

**Design:** Set consisting of:
1 blade holder EL 0602 GT with inner thread (NF 10) (order no. 6719 0120)
1 replaceable triangular blade GT T40 with outer thread (order no. 6719 0400)
1 universal plastic handle EL 1000 GT (order no. 6719 0010)
1 protective cap.

| Order No. | 6707 GRATTEC |
|---|---|
| 0005 | 21.20 (W554) |

## Maxi-triangular scraper EL 1601

**Design:** Set consisting of:
1 universal plastic handle EL 1000 GT with blade magazine
(order no. 6719 0010)
1 blade holder EL 0602 GT with length adjustment 6-125 mm
For all scrapers type T
(order no. 6719 0120)
1 HSS triangular scraper blade T60 with protective cap
(order no. 6719 0410)

**Application:** Sturdy triangular scraper for deburring difficult areas.

GRATTEC

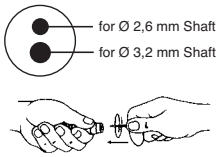
| Order No. | 6707 GRATTEC |
|---|---|
| 0010 | 25.40 (W554) |

## Softgrip deburrer set SG 1000

**Design:** Set consisting of:
1 robust, ergonomically shaped softgrip handle EL SG 3000 GT
with comfortable finger hollow and blade magazine
(order no. 6719 0020)
1 HSS-Plus blade B 10 S
(order no. 6719 0210)
1 HSS-Plus blade E 100S
(order no. 6719 0250)

**Application:** Due to the twin mount, all B-blades with a Ø 2.6 mm and all E-blades with a Ø 3.2 mm shank can be used.

**Note:** The Plus-blades are distinguished by a long tool life and suitability for stainless steels.



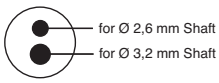

GRATTEC

| Order No. | 6708 GRATTEC |
|---|---|
| 0010 | 16.10 (W554) |

## Softgrip deburring countersinks set SG 1500

**Design:** Set consisting of:
1 robust, ergonomically shaped softgrip handle EL SG 3000 GT
with comfortable finger hollow and blade magazine
(order no. 6719 0020)
1 HSS crank countersink head BC 1650 Ø 3.2 mm, outer Ø 16.5 mm
(order no. 6719 0500)

**Application:** Due to the twin mount, all B-blades with a Ø 2.6 mm and all E-blades with a Ø 3.2 mm shank can be used. By connecting with the countersunk head, faster countersinking and chamfering with less fatigue is enabled for drill holes up to Ø 16.5 mm.



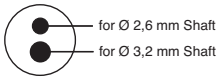

GRATTEC

| Order No. | 6709 GRATTEC |
|---|---|
| 0010 | 32.80 (W554) |

## Softgrip chamfering tool set SG 1100

**Design:** Set consisting of:
1 robust, ergonomically shaped softgrip handle EL SG 3000 GT
with comfortable finger hollow and blade magazine
(order no. 6719 0020)
1 HSS crank countersink bell EX 2000 Ø 3.2 mm, outer Ø 4-18 mm
(order no. 6719 0510)

**Application:** Due to the twin mount, all B-blades with a Ø 2.6 mm and all E-blades with a Ø 3.2 mm shank can be used. Deburring and chamfering of round material up to Ø 18 mm are enabled by connecting with the deburring bell.



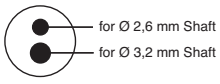

GRATTEC

| Order No. | 6710 GRATTEC |
|---|---|
| 0010 | 26.80 (W554) |

## Softgrip piercing deburrer set SG 1200

**Design:** Set consisting of:
1 robust, ergonomically shaped softgrip handle EL SG 3000 GT with comfortable finger hollow and blade magazine (order no. 6719 0020)
1 HSS crank piercing deburrer BO 1000 Ø 3.2 mm (order no. 6719 0300)

**Application:** Due to the twin mount, all B-blades with a Ø 2.6 mm and all E-blades with a Ø 3.2 mm shank can be used. Inner piercings and slots for o-rings as well as securing rings can easily be deburred by connecting with the crank piercing deburrer.




GRATTEC

| Order No. | 6711 GRATTEC |
|---|---|
| 0010 | 21.80 (W554) |

## Double sheet deburrer tool set DB 2000

**Design:** Set consisting of:
1 sturdy plastic handle with hand protection
2 round HSS cutting discs N 80 (order no. 6719 0600)

**Application:** The blade runs along the full length on both sides. This allows sheets and bars up to 12 mm in thickness to be deburred on both sides at the same time. For stainless steel sheets corresponding cutting discs N 80 M 42 (Order No. 6719 0610) are available.

GRATTEC

| Order No. | 6712 GRATTEC |
|---|---|
| 0010 | 23.80 (W554) |

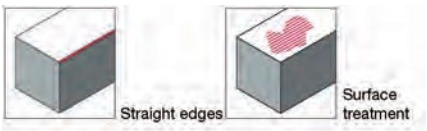
## Keramicut deburrer

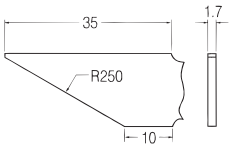
**Design:** Keramicut deburrers are the perfect tool for deburring problems with plastic and light metal workpieces. This results in the following advantages:

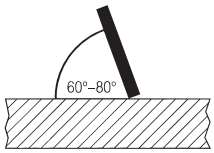
1. Due to the extra hard ceramic blade, plastics and other soft materials are easily deburred.
2. Due to the wear-resistant and sturdy ceramic blade, the tool has a long service life.
3. Damage-free work without rejects is possible due to the spherical blade (r = 250 mm).
4. There is no risk of injury due to the blunt 90° blade angle.

**Application:** For on-the-spot removal of materials on plastic and light metal workpieces. Position the blade on the area for deburring at an angle of 60–80° and draw over the workpiece in a continual motion. Do not apply excessive pressure.

GRATTEC




**6713** Robust, ergonomically shaped softgrip handle with comfortable finger hollow and fixed ceramic blade.

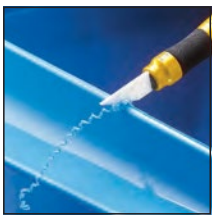
**6700** Oval plastic grip with replaceable ceramic blade CR 2200.

Ceramic blade CR 2200
order no. (6719 0810) straight design
(6719 0820) sickle-shaped design

6713

6700

| Order No. | 6713 GRATTEC | 6700 GRATTEC |
|---|---|---|
| 0050 | 42.70 | – |
| 0010 | – (W554) | 30.20 (W554) |



## FT deburrer tool set EL 7000 GT

**Design:** Supplied in a plastic case.

**Application:** The hand deburrer set covers 80 % of all applicable deburring work. Concave edges, holes, cross-holes, surfaces and slots can be deburred with this set. The deburring tools used most often immediately at hand.

| Order No. | Set contents | | 6717 GRATTEC |
|---|---|---|---|
| 0007 | 1 quick deburrer EL-RB 1000 | (order no. 6713 0010) | 120.50 |
| | 1 E-set EL 1200 | ( order no. 6705 0010) | |
| | 1 B-set EL 1100 | (order no. 6704 0010) | |
| | 1 medium triangular scraper EL 1600 | (order no. 6707 0005) | |
| | 1 deburring countersink EL 1300 | (order no. 6706 0010) | |
| | 1 slot deburrer EL 1400 | (order no. 6706 0015) | |
| | 1 inner deburrer EL 1501 | (order no. 6106 0020) | |

(W554)

## Deburrer box EL 2000

**Design:** Supplied in a plastic case.

**Application:** For all possible deburring work.

| Order No. | Set contents | | 6717 GRATTEC |
|---|---|---|---|
| 0010 | 1 hexagon wrench | | 126.00 |
| | 1 double sheet deburrer DB 2000 | (order no. 6712 0010) | |
| | 1 universal plastic handle EL 1000 | (order no. 6719 0010) | |
| | Blade magazine with 6 blade holders consisting of: | | |
| | EL 0103 | (order no. 6719 0100) | |
| | EL 0200 | (order no. 6719 0110) | |
| | EL 0400 incl. cutting disc | (order no. 6719 0140) | |
| | N 80 K | (order no. 6179 0600) | |
| | EL 0300 incl. 90° countersink | (order no. 6719 0130) | |
| | C 20 | (order no. 6719 0530) | |
| | EL 0500 incl. triangular scraper | (order no. 6719 0150) | |
| | GT-D 50 | (order no. 6719 0420) | |
| | EL 0500 incl. triangular scraper | (order no. 6719 0150) | |
| | GT-D 66 | (order no. 6719 0440) | |
| | C 12 countersink 90° | (order no. 6719 0520) | |
| | 5 HSS blade consisting of: | | |
| | B 10 | (order no. 6719 0200) | |
| | B 20 | (order no. 6719 0220) | |
| | E 100 | (order no. 6719 0240) | |
| | E 200 | (order no. 6719 0260) | |
| | E 300 | (order no. 6719 0270) | |

(W554)

## Softgrip set SG 2000/SG 2001

**Design:** Robust, ergonomically shaped softgrip handle with comfortable finger hollow and blade magazine. The Plus-blades are distinguished by a long tool life and suitability for stainless steels.

for Ø 2,6 mm Shaft
for Ø 3,2 mm Shaft

**Application:** Due to the twin mount, all B-blades with a Ø 2.6 mm and all E-blades with a Ø 3.2 mm shank can be used. The deburring tool is suitable for all fine, medium and the hardest deburring work.

| Order No. | Set contents | | 6718 GRATTEC |
|---|---|---|---|
| 0010 | 1 Soft handle EL SG 3000GT | (order no. 6719 0020) | 41.70 |
| | 21 HSS-Plus blade E 100 S | (order no. 6719 0250) | |
| | 1 HSS-Plus blade B 10 S | (order no. 6719 0210) | |
| 0015 | 1 Soft handle EL SG 3000 GT | (order no. 6719 0020) | 39.20 |
| | 11 HSS-Plus blade B 10 S | (order no. 6719 0210) | |
| | 11 HSS-Plus blade E 100 S | (order no. 6719 0250) | |

(W554)

## Universal deburrer set

**Design:** With sturdy handles. Scope of supply:

for Ø 3,2 mm Shaft

Red: HSS blade GT-E 200 for casting and brass.
Yellow: HSS blade E 150 for plastics. Particularly suitable for fine deburring work.
Blue: HSS-Co blade E 100 S for steel, stainless steel and aluminium.

| Order No. | Design | 6718 GRATTEC |
|---|---|---|
| 0021 | 3-piece | 17.90 |

(W554)

## Adjustable triangular scraper

**Design:** 1 aluminium hexagon handle (12 mm anodised) with clamping sleeve to set the blade length. 1 blade GT-T 80 (double-ended triangular scraper). The blade can be used on both sides.

GRATTEC

| Order No. | 6719 GRATTEC |
|---|---|
| 0412 | 29.20 (W554) |

## Reverse deburrer RC 1000/RC 2000/RC 2200

**Design:** Sturdy, round aluminium handle with hexagon wrench to change the blade in the hollow handle. The pivoting HSS blades cut both sides and can be replaced.

**Application:** By pressing the back button, the blade pivots in the shank and the tool can be guided through the hole (see diagram).

GRATTEC

**6714** Handle RC 1000 with blade BR 1000 for holes with Ø 3–5.5 mm (order no. 6719 0700).

6714

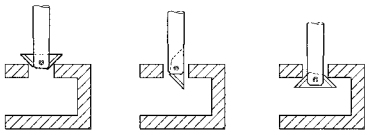
**6715** Handle RC 2000 with blade BR 2000 for holes with Ø 5.5–10 mm (order no. 6719 0710).

6715

**6722** Handle RC 2200 with blade BR 2200 for holes with Ø 10–22 mm (order no. 6719 0720).

6722

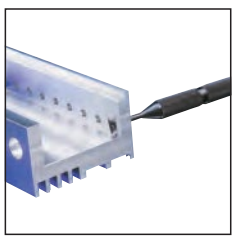
| Order No. | 6714 GRATTEC | 6715 GRATTEC | 6722 GRATTEC |
|---|---|---|---|
| 0010 | 36.80 | 41.20 | – |
| 0020 | – | – | 54.30 |
| | (W554) | (W554) | (W554) |

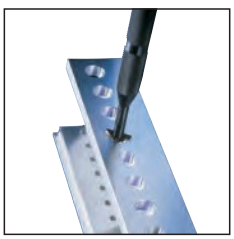


## Reverse deburrer set RC 3000

**Design:** Supplied in a plastic case.

GRATTEC





| Order No. | Set contents | 6717 GRATTEC |
|---|---|---|
| 0005 | 1 reverse deburrer RC 1000 (order no. 6714 0005)<br>1 reverse deburrer RC 2000 (order no. 6715 0005)<br>1 reverse deburrer RC 2200 (order no. 6716 0010) | 122.00 (W554) |

## Accessories for deburring tool

| Order No. | Articles | 6719 GRATTEC | Design |
|---|---|---|---|
| 0010 | EL 1000 GT | 7.45 | Universal plastic handle for all GRATTEC blade holders, blade magazine in hollow grip. |
| 0020 | EL SG 3000 GT | 12.15 | Softgrip handle in ergonomic shape with comfortable finger hollow. Due to the twin mount, all B-blades with a Ø 2.6 mm and all E-blades with a Ø 3.2 mm shank can be used. |
| 0100 | EL 0100 GT | 8.50 | Length adjustable blade holder B made of tool steel, for all type "B" blades. Blade shank Ø 2.6 mm. Length 131 mm. |
| 0110 | EL 0200 GT | 8.50 | Length adjustable blade holder E made of tool steel, for all type "E" blades. Blade shank Ø 3.2 mm. Length 131 mm. |
| 0120 | EL 0602 GT | 8.50 | Length adjustable blade holder T made of tool steel for scraper T40 and T60. |
| 0130 | EL 0300 GT | 8.50 | Length adjustable blade holder C made of tool steel, for all type "C" countersinks. M7 thread. |
| 0140 | EL 0400 GT | 10.05 | Blade holder for all K-blades. |
| 0150 | EL 0500 GT | 10.80 | Blade holder for scraper D50/55/66/75/77. |
| | | (999) | |

## Spare blade for deburring tool

| Order No. | Articles | 1498 format | 6719 GRATTEC | Design |
|---|---|---|---|---|
| 0200 | B 10 | 1.24 | 1.28 | HSS blade for normal deburring work on steel, aluminium and plastic (Ø 2.6 mm). |
| 0210 | B 10 S | 1.30 | 1.39 | The Plus-blade made of high alloy HSS for a particularly long tool life (Ø 2.6 mm). |
| 0220 | B 20 ∩ | 1.24 | 1.28 | HSS blade for normal deburring work on brass and castings (Ø 2.6 mm). |
| 0230 | B 30 | 1.64 | 1.68 | HSS blade for simultaneous removal of inner and outer burrs (Ø 2.6 mm). |
| 0240 | E 100 | 1.35 | 1.45 | HSS blade for heavy deburring work on steel, aluminium and plastic (Ø 3.2 mm). |
| 0250 | E 100 S | 2.12 | 2.28 | HSS-Co blade for wear resistance (Ø 3.2 mm). |
| 0252 | E 150 | 2.59 | 2.69 | HSS blade with thick shank (Ø 3.2 mm) and a thin blade for small holes from Ø 1.2 mm. Blade for deburring tool E 150 HSS. |
| 0260 | E 200 ∩ | 1.47 | 1.53 | HSS blade for heavy deburring work on brass and castings (Ø 3.2 mm). |
| 0270 | E 300 | 1.70 | 1.78 | HSS blade for simultaneous removal of heavy inner and outer burrs on drill holes in plates and pipes (Ø 3.2 mm). |
| 0280 | E 350 | 1.89 | 1.97 | HSS blade for heavy burrs on straight edges (Ø 3.2 mm). |
| 0290 | E 600 | 4.97 | 5.10 | HSS blade for heavy burrs on transverse drill holes (Ø 3.2 mm). |
| 0300 | BO 1000 | – | 8.60 | Patented HSS blade for O-ring slots up to 3 mm on the inner diameter (Ø 3.2 mm) |
| 0310 | BC 1000 | – | 7.35 | Patented HSS blade with thick shank and a thin blade for small holes from Ø 1.2 mm. |
| 0400 | T 40 | – | 8.95 | Triangular scraper, 5 x 40 mm. Fits in holder EL 0602. |
| 0410 | T 60 | – | 13.20 | Triangular scraper, 7 x 60 mm. Fits in holder EL 0602. |
| | | (999) | (999) | |

## Spare blade for deburring tool

Continued

| Order No. | Articles | 1498 format | 6719 GRATTEC | Design | |
|---|---|---|---|---|---|
| 0420 | GT-D50 | – | 10.45 | Triangular scraper (Ø 3.2 mm), D50 3.2 x 50 mm. Fits in holder EL 0500. | |
| 0430 | GT-D55 | – | 21.50 | Triangular scraper (Ø 3.2 mm), D55 3.2 x 50 mm VHM. Fits in holder EL 0500. | |
| 0440 | GT-D66 | – | 7.90 | Triangular scraper (Ø 3.2 mm), D66 3.2 x 50 mm for inside of transverse drill holes. Fits in holder EL 0500. | |
| 0450 | GT-D77 | – | 10.45 | Triangular scraper (Ø 3.2 mm), D77 3.2 x 75 mm. Fits in holder EL 0500. | |
| 0460 | GT-D75 | – | 10.45 | Triangular scraper (Ø 3.2 mm), D75 3.2 x 75 mm. Fits in holder EL 0500. |  |
| 0500 | BC 1650 | – | 24.10 | Patented HSS crank countersink with Ø 16.5 mm (shank Ø 3.2 mm). | |
| 0502 | BC 3200 | – | 15.40 | Patented HSS BC 3200 for holes up to 3.0 mm (shank Ø 3.2 mm). | |
| 0504 | BC 6300 | – | 16.85 | Patented HSS BC 6300 for holes up to 6.3 mm holes (shank Ø 3.2 mm). | |
| 0506 | BC 8300 | – | 17.15 | Patented HSS BC 8300 for holes up to 8.3 mm holes (shank Ø 3.2 mm). | |
| 0508 | BC 1040 | – | 19.40 | Patented HSS BC 1040 for holes up to 10.4 mm holes (shank Ø 3.2 mm). | |
| 0510 | EX 2000 | – | 14.95 | Patented HSS crank countersink for outer diameter 4–18 mm (shank Ø 3.2 mm). | |
| 0520 | C 12 | – | 15.95 | HSS 90° countersink, Ø 12 mm. | |
| 0530 | C 20 | 20.80 | 21.70 | HSS 90° countersink, Ø 20 mm. | |
| 0540 | C 30 | – | 30.80 | HSS 90° countersink, Ø 30 mm. | |
| 0600 | N 80 | 5.55 | 6.00 | Round cutting discs for the double deburrer. The blade runs along the full length on both sides. Long service life. | |
| 0610 | N 80 M 42 | 7.30 | 7.85 | Same as N 80, but annealed to HRC 68 For stainless steel. | |
| 0700 | BR 1000 | – | 18.70 | HSS blade with screw for reverse deburrer RC 1000. | |
| 0710 | BR 2000 | – | 20.20 | HSS blade with screw for reverse deburrer RC 2000. | |
| 0720 | BR 2200 | – | 23.30 | HSS blade with screw for reverse deburrer RC 2200. | |
| 0810 | CR 2200 | – | 21.80 | Ceramic blade - straight design for Keramicut II. Convex blade for deburring and cleaning of surfaces. Hardness: 1250HV. |  |
| 0820 | CR 2500 | – | 23.90 | Ceramic blade - a crescent shape for Keramicut II, sickle blade for deburring edges, tight spots and holes. The special blade shape allows a very good guide. Hardness: 1250HV. |  |
| | | (999) | (999) | | |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Hand reamer

**Design:** HSS, DIN 206-B, with approx. 7° left spirals and long, conical point (approx. 1/3 of cutting length). The uneven tooth pitch ensure chatter-free and accurate drilling. With cylinder shank with square drive. Bright surface

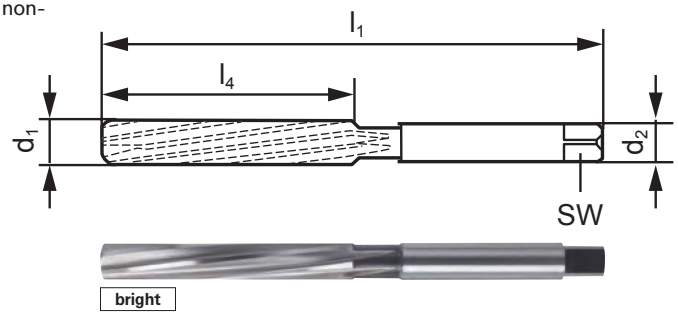
**Application:** Perfectly suited for single production or repair work, only for reaming through-holes. Not suitable for machining blind holes due to the long, conical point geometry. Also suitable for holes with interrupted cut. Particularly suitable for steel materials up to 500 N/mm² in strength e.g. general construction steels, steel materials up to 900 N/mm² in strength such as machine steels, tempered steels, tool steels, case-hardening steels, casting materials and non-ferrous metals such as aluminium, brass, copper and bronzes.

**Note:** Tap wrenches for manual actuation - see 1/223.

HSS | DIN 206-B | H7

format professional quality

approx. 7°






bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1500 | ● | ● | ○ | | | | | | ○ | ○ | ◐ | ◐ | ◐ |

| Order No. | Nominal Ø $d_1$ mm | 1500 format bright | Cutting lenghth $l_4$ mm | Overall length $l_1$ mm | Square SW mm |
|---|---|---|---|---|---|
| 0200 | 2.0 | 15.80 | 25 | 50 | 1.6 |
| 0250 | 2.5 | 16.05 | 29 | 58 | 2.1 |
| 0300 | 3.0 | 15.80 | 31 | 62 | 2.1 |
| 0350 | 3.5 | 18.55 | 35 | 71 | 2.7 |
| 0400 | 4.0 | 14.35 | 38 | 76 | 3.0 |
| 0450 | 4.5 | 17.15 | 41 | 81 | 3.4 |
| 0500 | 5.0 | 16.65 | 44 | 87 | 3.8 |
| 0550 | 5.5 | 18.40 | 47 | 93 | 4.3 |
| 0600 | 6.0 | 16.40 | 47 | 93 | 4.3 |
| 0650 | 6.5 | 18.85 | 50 | 100 | 4.9 |
| 0700 | 7.0 | 18.00 | 54 | 107 | 5.5 |
| 0750 | 7.5 | 20.50 | 54 | 107 | 5.5 |
| 0800 | 8.0 | 18.55 | 58 | 115 | 6.2 |
| 0850 | 8.5 | 22.30 | 58 | 115 | 6.2 |
| 0900 | 9.0 | 21.10 | 62 | 124 | 7.0 |
| 0950 | 9.5 | 22.80 | 62 | 124 | 7.0 |
| 1000 | 10.0 | 22.00 | 66 | 133 | 8.0 |
| 1100 | 11.0 | 24.50 | 71 | 142 | 9.0 |
| 1200 | 12.0 | 26.40 | 76 | 152 | 10.0 |
| 1300 | 13.0 | 38.70 (W140) | 76 | 152 | 10.0 |

| Order No. | Nominal Ø $d_1$ mm | 1500 format bright | Cutting lenghth $l_4$ mm | Overall length $l_1$ mm | Square SW mm |
|---|---|---|---|---|---|
| 1400 | 14.0 | 42.10 | 81 | 163 | 11.0 |
| 1500 | 15.0 | 44.40 | 81 | 163 | 11.0 |
| 1600 | 16.0 | 46.20 | 87 | 175 | 12.0 |
| 1700 | 17.0 | 49.10 | 87 | 175 | 12.0 |
| 1800 | 18.0 | 54.20 | 93 | 188 | 14.5 |
| 1900 | 19.0 | 58.20 | 93 | 188 | 14.5 |
| 2000 | 20.0 | 57.10 | 100 | 201 | 16.0 |
| 2200 | 22.0 | 66.20 | 107 | 215 | 18.0 |
| 2400 | 24.0 | 76.50 | 115 | 231 | 20.0 |
| 2500 | 25.0 | 78.20 | 115 | 231 | 20.0 |
| 2600 | 26.0 | 83.30 | 115 | 231 | 20.0 |
| 2800 | 28.0 | 106.50 | 124 | 247 | 22.0 |
| 3000 | 30.0 | 112.50 | 124 | 247 | 22.0 |
| 3200 | 32.0 | 124.50 | 133 | 265 | 24.0 |
| 3400 | 34.0 | 153.00 | 142 | 284 | 26.0 |
| 3500 | 35.0 | 169.00 | 142 | 284 | 29.0 |
| 3600 | 36.0 | 177.50 | 142 | 284 | 24.0 |
| 3800 | 38.0 | 195.50 | 152 | 305 | 29.0 |
| 4000 | 40.0 | 203.00 (W140) | 152 | 305 | 32.0 |

Further dimensions or straight fluted available on request.

format professional quality

1/224

**Tap wrenches**

for mounting hand reamers.

## Hand reamer, adjustable

HSS | DIN 859 | Form B

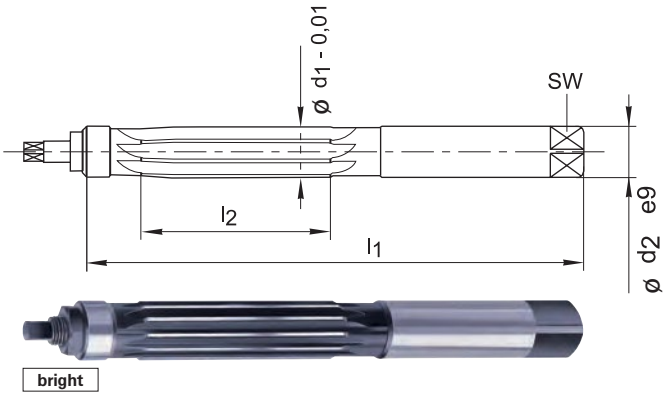
approx. 7°

BECK MAPAL GROUP

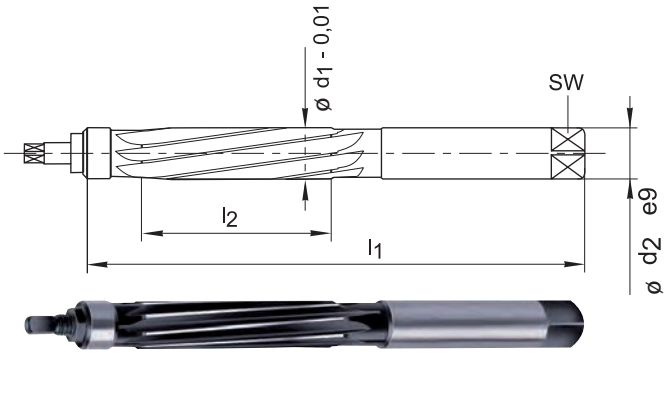
**Design:** HSS, DIN 859, form B, with cylinder shank and square drive.
The uneven tooth pitch ensure chatter-free and accurate drilling. The body of the reamer is slotted, the nominal Ø can be increased to approx. 1/100 by turning the head screw in. The setting should be made using a ring gauge ( order no. 4411). All required adaptations can be set and wear compensated. Reamers are set to the nominal size.
Store depressurised.
The Ø 4 and 5 mm are straight fluted, spiral fluted from Ø 6 mm (left spiral 7°).

**Application:** Perfectly suited for single production or repair work, only for reaming through-holes. Not suitable for machining blind holes due to the conical point geometry and head screw. Also suitable for holes with interrupted cut. Particularly suitable for steel materials up to 500 N/mm² in strength e.g. general construction steels, steel materials up to 900 N/mm² in strength such as machine steels, tempered steels, tool steels, case-hardening steels, casting materials and non-ferrous metals such as aluminium, brass, copper and bronzes.

**Note:** The hand reamer is sensitive to impacts and chips should therefore not be knocked out, but blown or washed out. Tap wrenches for manual actuation see 📖 1/223.




bright




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1504 | ● | ○ | | | | | | | | | ○ | ○ | ○ |

| Order No. | Nominal Ø $d_1$ mm | 1504 BECK bright | Overall length $l_1$ mm | Cutting edge length $l_2$ mm | Shank Ø $d_2$ mm |
|---|---|---|---|---|---|
| 0400 | 4.0* | 52.30 | 76 | 24 | 4 |
| 0500 | 5.0* | 52.60 | 87 | 30 | 5 |
| 0600 | 6.0 | 52.60 | 93 | 33 | 6 |
| 0700 | 7.0 | 64.70 | 107 | 38 | 7 |
| 0800 | 8.0 | 63.70 | 115 | 42 | 8 |
| 0900 | 9.0 | 68.50 | 124 | 46 | 9 |
| 1000 | 10.0 | 69.70 | 133 | 50 | 10 |
| 1100 | 11.0 | 84.00 | 142 | 51 | 11 |
| 1200 | 12.0 | 79.00 | 152 | 56 | 12 |
| 1300 | 13.0 | 92.30 | 152 | 56 | 13 |
| | | (W141) | | | |

| Order No. | Nominal Ø $d_1$ mm | 1504 BECK bright | Overall length $l_1$ mm | Cutting edge length $l_2$ mm | Shank Ø $d_2$ mm |
|---|---|---|---|---|---|
| 1400 | 14.0 | 94.80 | 163 | 61 | 14 |
| 1500 | 15.0 | 97.20 | 163 | 61 | 15 |
| 1600 | 16.0 | 121.00 | 175 | 67 | 16 |
| 1800 | 18.0 | 127.00 | 188 | 68 | 18 |
| 1900 | 19.0 | 130.00 | 188 | 68 | 19 |
| 2000 | 20.0 | 134.00 | 201 | 75 | 20 |
| 2200 | 22.0 | 161.00 | 215 | 82 | 22 |
| 2400 | 24.0 | 176.00 | 231 | 85 | 24 |
| 2500 | 25.0 | 176.00 | 231 | 85 | 25 |
| 3000 | 30.0 | 228.50 | 247 | 94 | 30 |
| | | (W141) | | | |

* Straight fluted

## Limit plug gauge

for testing drilled holes.

HELIOS·PREISSER

📖 4/72

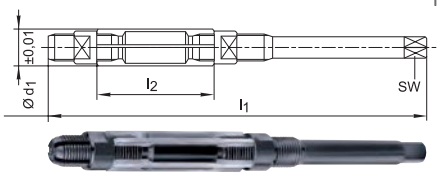
## Hand reamer, quick adjustment

**Design:** Right cutting, with replaceable blades made of HSS, factory standard and cylinder shank with square drive. The uneven blade pitch ensure chatter-free and accurate drilling. The reamer can be progressively set within the stated adjustment range. The setting should be made using a ring gauge (order no. 4411). Bright surface.

**Application:** Particularly suitable for repair work. Only for reaming through-holes. Not suitable for machining blind holes due to the head screw. Particularly suitable for steel materials up to 500 N/mm² in strength e.g. general construction steels, steel materials up to 900 N/mm² in strength such as machine steels, tempered steels, tool steels, case-hardening steels, casting materials and non-ferrous metals such as aluminium, brass, copper and bronzes.

**Note:** Tap wrenches for manual actuation – see 1/223.

HSS | Factory standard | BECK MAPAL GROUP






bright

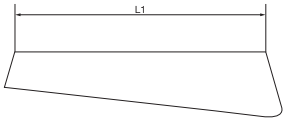
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1505 | ● | ○ | | | | | | | | | ○ | ○ | ○ |

| Order No. | Nominal Ø $d_1$ mm | 1505 BECK bright mm | Adjustment range Ø mm | Size | Overall length $l_1$ mm | Cutting edge length $l_2$ mm | Width of keys mm | Number of blades |
|---|---|---|---|---|---|---|---|---|
| 0100 | 6.4 | 72.00 | 6.4– 7.2 | 000 | 110 | 32 | 3.0 | 4 |
| 0105 | 7.2 | 72.00 | 7.2– 8.0 | 00 | 110 | 32 | 3.4 | 4 |
| 0110 | 8.0 | 72.00 | 8.0– 9.0 | 0 | 115 | 34 | 3.8 | 5 |
| 0115 | 9.0 | 75.70 | 9.0–10.0 | 1 | 115 | 34 | 4.3 | 5 |
| 0120 | 10.0 | 75.70 | 10.0–11.0 | 2 | 115 | 34 | 4.9 | 5 |
| 0125 | 11.0 | 75.70 | 11.0–12.0 | 3 | 125 | 35 | 4.9 | 5 |
| 0130 | 12.0 | 85.00 | 12.0–13.5 | 4 | 135 | 41 | 6.2 | 5 |
| 0135 | 13.5 | 95.80 | 13.5–15.5 | 5 | 146 | 50 | 7.0 | 5 |
| 0140 | 15.5 | 98.30 | 15.5–18.0 | 6 | 166 | 60 | 8.0 | 5 |
| 0145 | 18.0 | 106.50 | 18.0–21.0 | 7 | 178 | 65 | 9.0 | 5 |
| 0150 | 21.0 | 128.00 | 21.0–24.0 | 8 | 195 | 76 | 11.0 | 5 |
| 0155 | 24.0 | 135.50 | 24.0–27.5 | 9 | 218 | 82 | 12.0 | 5 |
| 0160 | 27.5 | 166.50 | 27.5–31.5 | 10 | 245 | 86 | 14.5 | 5 |
| 0165 | 31.5 | 232.50 | 31.5–37.0 | 11 | 280 | 98 | 18.0 | 6 |
| 0170 | 37.0 | 300.50 | 37.0–45.0 | 12 | 325 | 108 | 20.0 | 6 |
| 0175 | 45.0 | 407.00 (W141) | 45.0–55.0 | 13 | 370 | 118 | 26.0 | 6 |

## Spare blade for hand reamer, adjustable NEW

**Note:** Supply only possible in sets.

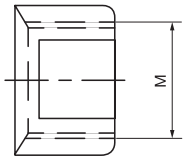
HSS




| Order No. | Size | 1506 BECK | Knife length mm | Number of blades |
|---|---|---|---|---|
| 0000 | 000 | 52.40 | 32 | 4 |
| 0001 | 00 | 52.40 | 32 | 4 |
| 0002 | 0 | 52.40 | 34 | 5 |
| 0010 | 1 | 58.30 | 34 | 5 |
| 0020 | 2 | 61.70 | 34 | 5 |
| 0030 | 3 | 61.70 | 35 | 5 |
| 0040 | 4 | 68.90 | 41 | 5 |
| 0050 | 5 | 71.60 (W141) | 50 | 5 |

| Order No. | Size | 1506 BECK | Knife length mm | Number of blades |
|---|---|---|---|---|
| 0060 | 6 | 77.10 | 60 | 5 |
| 0070 | 7 | 82.10 | 65 | 5 |
| 0080 | 8 | 102.00 | 76 | 5 |
| 0090 | 9 | 106.00 | 82 | 5 |
| 0100 | 10 | 124.50 | 86 | 5 |
| 0110 | 11 | 191.00 | 98 | 6 |
| 0120 | 12 | 216.00 | 108 | 6 |
| 0130 | 13 | 289.00 (W141) | 118 | 6 |

## Adjustment nut for hand reamer, adjustable NEW




| Order No. | Size | 1506 BECK | Thread |
|---|---|---|---|
| 5000 | 000 | 2.54 | M5 x 0.75 |
| 5001 | 00 | 2.54 | M5.5 x 0.75 |
| 5002 | 0 | 2.54 | M6.5 x 0.75 |
| 5010 | 1 | 2.54 | M7 x 0.75 |
| 5020 | 2 | 2.54 | M7.5 x 0.75 |
| 5030 | 3 | 2.54 | M8 x 0.75 |
| 5040 | 4 | 2.54 | M9.5 x 1.00 |
| 5050 | 5 | 2.54 (W141) | M10.5 x 1.00 |

| Order No. | Size | 1506 BECK | Thread |
|---|---|---|---|
| 5060 | 6 | 3.37 | M12.5 x 1.25 |
| 5070 | 7 | 3.78 | M14 x 1.25 |
| 5080 | 8 | 4.84 | M16 x 1.25 |
| 5090 | 9 | 5.25 | M18 x 1.25 |
| 5100 | 10 | 5.70 | M22 x 1.50 |
| 5110 | 11 | 8.65 | M25 x 1.50 |
| 5120 | 12 | 11.80 | M30 x 1.50 |
| 5130 | 13 | 20.60 (W141) | M37 x 1.50 |

## Hand cone reamer

**Design:** HSS, DIN 9-B with left spiral approx. 7°. The uneven tooth pitch ensure chatter-free and accurate drilling. With cylinder shank with square drive. Bright surface

**Application:** For reaming conical holes for taper pins according to DIN 1, DIN 258, DIN 1447, DIN 7977 and DIN 7978. Perfectly suited for single production or repair work. Also suitable for holes with interrupted cut. Pre-drill with a cylindrical spiral drill or pin drill.
Particularly suitable for steels up to 500 N/mm² in strength such as non-ferrous metals, plastics, steels up to 1000 N/mm² amd casting materials.

**Note:** Tap wrenches for manual actuation – see 1/223.

HSS | DIN 9-B | approx. 7° | 1:50

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1508 | ● | ● | ○ | | | | | | ○ | ○ | ◐ | ◐ | ◐ |

| Order No. | Nominal Ø | 1508 format bright | Small/large Ø | Cutting length | Total length | Width of keys |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0300 | 3 | 19.30 | 2.90/ 4.06 | 58 | 80 | 3.0 |
| 0400 | 4 | 21.90 | 3.90/ 5.26 | 68 | 93 | 3.8 |
| 0500 | 5 | 23.00 | 4.90/ 6.36 | 73 | 100 | 4.9 |
| 0600 | 6 | 27.90 | 5.90/ 8.00 | 105 | 135 | 6.2 |
| 0800 | 8 | 43.20 | 7.90/10.80 | 145 | 180 | 8.0 |
| 1000 | 10 | 61.00 | 9.90/13.40 | 175 | 215 | 10.0 |
| 1200 | 12 | 77.60 | 11.80/16.00 | 210 | 255 | 11.0 |
| 1300 | 13 | 90.30 | 12.80/17.00 | 210 | 255 | 12.0 |
| 1400 | 14 | 95.40 | 13.80/18.00 | 210 | 255 | 12.0 |
| 1600 | 16 | 107.50 | 15.80/20.40 | 230 | 280 | 14.5 |
| 2000 | 20 | 140.00 (W140) | 19.80/24.80 | 250 | 310 | 18.0 |

## Machine cone reamer

**Design:** HSS, DIN 2179 with left spiral approx. 45°. The uneven tooth pitch ensure chatter-free and accurate drilling. With cylinder shank Bright surface

**Application:** For reaming conical holes for taper pins according to DIN 1, DIN 258, DIN 1447, DIN 7977 and DIN 7978. Perfectly suited for single and serial production. Optimum angle accuracy for the reamed hole when using a floating reamer chuck. Pre-drill with a pin drill (order no. 1052).
Particularly suitable for steels up to 500 N/mm² in strength such as non-ferrous metals, plastics, steels up to 1000 N/mm² amd casting materials.

HSS-E | DIN 2179 | approx. 45° | 1:50

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1510 | ● | ● | ○ | | | | | | ○ | ○ | ◐ | ◐ | ◐ |

| Order No. | Nominal Ø | 1510 format bright | Small/large Ø | Cutting length | Total length | Shank Ø h9 |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0200 | 2.0 | 24.80 | 1.90/ 2.86 | 48 | 86 | 3.15 |
| 0250 | 2.5 | 29.60 | 2.40/ 3.36 | 48 | 86 | 3.15 |
| 0300 | 3.0 | 27.00 | 2.90/ 4.06 | 58 | 100 | 4.00 |
| 0400 | 4.0 | 27.30 | 3.90/ 5.26 | 68 | 112 | 5.00 |
| 0500 | 5.0 | 29.00 | 4.90/ 6.36 | 73 | 122 | 6.30 |
| 0600 | 6.0 | 33.20 | 5.90/ 8.00 | 105 | 160 | 8.00 |
| 0800 | 8.0 | 49.50 | 7.90/10.80 | 145 | 207 | 10.00 |
| 1000 | 10.0 | 63.40 | 9.90/13.40 | 175 | 245 | 12.50 |
| 1200 | 12.0 | 79.20 (W140) | 11.80/16.00 | 210 | 290 | 16.00 |

## Rivet hole reamer

**Design:** HSS, DIN 311, with approx. 25° left spirals and long, conical point 1:10. The uneven tooth pitch ensure chatter-free and accurate drilling. With morse taper shank Bright surface.

**Application:** For correcting too small and offset holes. Particularly suitable for steel materials such as general construction steels, machine steels, tempered steels, case-hardening steels, tool steels, high speed steels, casting iron, nodular graphite iron and malleable cast iron, and soft non-ferrous metals such as aluminium and brass.

HSS | DIN 311 | approx. 25°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1512 | ● | ● | ○ | | | | | | ○ | ○ | ◐ | ◐ | ◐ |

| Order No. | Nominal Ø k11 mm | 1512 format bright | Small Ø mm | Cutting length mm | First cut length mm | Total length mm | Number of teeth | MK |
|---|---|---|---|---|---|---|---|---|
| 1000 | 10 | 50.10 | 7.0 | 95 | 30 | 171 | 4 | 1 |
| 1200 | 12 | 54.40 | 8.4 | 105 | 39 | 199 | 4 | 2 |
| 1300 | 13 | 54.40 | 9.1 | 105 | 39 | 199 | 4 | 2 |
| 1400 | 14 | 55.70 | 9.8 | 115 | 42 | 209 | 5 | 2 |
| 1500 | 15 | 58.60 | 10.5 | 125 | 45 | 219 | 5 | 2 |
| 1600 | 16 | 61.60 | 11.2 | 135 | 48 | 229 | 5 | 2 |
| 1700 | 17 | 72.40 | 11.9 | 135 | 51 | 251 | 5 | 3 |
| 1800 | 18 | 78.60 | 12.6 | 145 | 58 | 261 | 5 | 3 |
| 2000 | 20 | 86.40 | 14.0 | 155 | 62 | 271 | 5 | 3 |
| 2100 | 21 | 90.00 | 14.7 | 155 | 62 | 271 | 5 | 3 |
| 2200 | 22 | 95.40 | 15.4 | 165 | 66 | 281 | 5 | 3 |
| 2500 | 25 | 109.00 | 17.5 | 180 | 72 | 296 | 5 | 3 |
| 2800 | 28 | 133.00 | 19.6 | 195 | 78 | 311 | 5 | 3 |
| 3000 | 30 | 152.00 (W140) | 21.0 | 195 | 78 | 311 | 5 | 3 |

## Shell reamer

**Design:** HSS, DIN 219, form B, with approx. 7° left spirals.

**Application:** For reaming through-holes or blind holes. For placing on holders according to DIN 217 (order no. 1520). Particularly suitable for steel materials such as general construction steels, machine steels, tempered steels, case-hardening steels, tool steels, high speed steels, casting iron, nodular graphite iron and malleable cast iron, and soft non-ferrous metals such as aluminium and brass.

HSS-E | DIN 219 | H7 | approx. 7°

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1517 | ● | ● | ○ | | | | | | ○ | ○ | ◐ | ◐ | ◐ |

| Order No. | Nominal Ø mm | 1517 format | Cutting length mm | Total length mm | Hole Ø mm |
|---|---|---|---|---|---|
| 2500 | 25 | 95.50 | 32 | 45 | 13 |
| 2600 | 26 | 99.20 | 32 | 45 | 13 |
| 2700 | 27 | 130.00 | 32 | 45 | 13 |
| 2800 | 28 | 103.00 | 32 | 45 | 13 |
| 3000 | 30 | 101.50 | 32 | 45 | 13 |
| 3200 | 32 | 113.50 | 36 | 50 | 16 |
| 3400 | 34 | 123.50 | 36 | 50 | 16 |
| 3500 | 35 | 123.50 | 36 | 50 | 16 |
| 3600 | 36 | 129.00 | 40 | 56 | 19 |
| 3800 | 38 | 134.50 | 40 | 56 | 19 |
| 4000 | 40 | 134.50 | 40 | 56 | 19 |
| 4200 | 42 | 139.50 | 40 | 56 | 19 |
| 4400 | 44 | 188.50 | 45 | 63 | 22 |
| 4500 | 45 | 188.50 | 45 | 63 | 22 |
| 4600 | 46 | 204.00 | 45 | 63 | 22 |
| 4700 | 47 | 204.00 | 45 | 63 | 22 |
| 4800 | 48 | 196.00 | 45 | 63 | 22 |
| 5000 | 50 | 181.00 (W140) | 45 | 63 | 22 |

## Shell holder

**Design:** DIN 217, cone 1:30. With morse taper shank
Scope of supply: withdrawal nut, carrier ring and disc spring DIN 6888.

**Application:** For shell reamers (order no. 1517).

DIN 217 | MK 3–4

format professional quality

| Order No. | Nominal Ø mm | 1520 format | Total length mm | For DIN 219 mm | MK |
|---|---|---|---|---|---|
| 0013 | 13 | 109.00 | 250 | 25–30 | 3 |
| 0016 | 16 | 119.50 | 261 | 31–35 | 3 |
| 0019 | 19 | 143.00 | 298 | 36–42 | 4 |
| 0022 | 22 | 178.00 | 312 | 44–50 | 4 |
| | | (W140) | | | |

## Jet reamer set

**Design:** Made of special steel tool, induction hardened and ground, conical shape. 5-edged, shape with square angling for attachment to the metal holder.
Supplied in plastic sleeve.

**Application:** For cleaning nozzles.

TURNUS

| Order No. | Set contents | 1513 TURNUS |
|---|---|---|
| 0050 | 11 reamers Ø 0.60; 0.65; 0.70; 0.80; 0.85; 0.90; 1.00; 1.30; 1.50; 1.70; 1.90 mm<br>1 nickel-plated metal holder | 24.60 |
| | | (W175) |

## Machine reamer

**Design:** HSS-E, DIN 212-1 (nominal Ø 1.0–3.5 mm) or DIN 212-2 (nominal Ø 4.0–20.0 mm), with approx. 7° left spirals, short point and uneven tooth pitch. This achieves clean and exact drilling. With cylinder shank. Tolerance h9.

**Application:** For reaming through holes. Particularly suitable for steel materials such as general construction steels, machine steels, tempered steels, case-hardening steels, tool steels, high speed steels, casting iron, nodular graphite iron and malleable cast iron, and soft non-ferrous metals such as aluminium and brass.

HSS-E | DIN 212-1/2 | H7 | approx. 7°

1531 bright — format professional quality

1535 TiN — BECK MAPAL GROUP

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1531 | 10 | 8 | 5 | | | | | | 4 | 4 | 6 | 18 | 12 |
| 1535 | 12 | 10 | 5 | | | | | | | | 8 | | |

| Order No. | Nominal Ø mm | 1531 format bright | 1535 BECK TiN | Cutting length mm | Total length mm | Shank Ø h9 mm |
|---|---|---|---|---|---|---|
| 0100 | 1.0* | 19.05 | – | 5.5 | 34 | 1.0 |
| 0120 | 1.2* | 18.65 | – | 7.5 | 38 | 1.2 |
| 0140 | 1.4* | 17.40 | – | 8.0 | 40 | 1.4 |
| 0150 | 1.5* | 14.85 | – | 8.0 | 40 | 1.5 |
| 0160 | 1.6* | 16.35 | – | 9.0 | 43 | 1.6 |
| 0180 | 1.8* | 16.35 | – | 10.0 | 46 | 1.8 |
| 0200 | 2.0* | 13.90 | – | 11.0 | 49 | 2.0 |
| 0220 | 2.2* | 17.35 | – | 12.0 | 53 | 2.2 |
| 0250 | 2.5* | 13.90 | – | 14.0 | 57 | 2.5 |
| 0280 | 2.8* | 18.00 | – | 15.0 | 61 | 2.8 |
| 0300 | 3.0* | 12.35 | 35.00 | 15.0 | 61 | 3.0 |
| 0320 | 3.2* | 17.00 | – | 16.0 | 65 | 3.2 |
| 0350 | 3.5* | 14.50 | – | 18.0 | 70 | 3.5 |
| 0400 | 4.0 | 13.90 | 35.20 | 19.0 | 75 | 4.0 |
| 0450 | 4.5 | 14.50 | – | 21.0 | 80 | 4.5 |
| 0500 | 5.0 | 14.85 | 34.00 | 23.0 | 86 | 5.0 |
| 0550 | 5.5 | 16.85 | – | 26.0 | 93 | 5.6 |
| 0600 | 6.0 | 15.10 | 36.30 | 26.0 | 93 | 5.6 |
| | | (W140) | (W141) | | | |

| Order No. | Nominal Ø mm | 1531 format bright | 1535 BECK TiN | Cutting length mm | Total length mm | Shank Ø h9 mm |
|---|---|---|---|---|---|---|
| 0650 | 6.5 | 17.90 | – | 28.0 | 101 | 6.3 |
| 0700 | 7.0 | 17.90 | – | 31.0 | 109 | 7.1 |
| 0750 | 7.5 | 19.85 | – | 31.0 | 109 | 7.1 |
| 0800 | 8.0 | 18.40 | 45.40 | 33.0 | 117 | 8.0 |
| 0850 | 8.5 | 23.40 | – | 33.0 | 117 | 8.0 |
| 0900 | 9.0 | 23.40 | – | 36.0 | 125 | 9.0 |
| 0950 | 9.5 | 23.50 | – | 36.0 | 125 | 9.0 |
| 1000 | 10.0 | 21.80 | 53.40 | 38.0 | 133 | 10.0 |
| 1100 | 11.0 | 32.10 | – | 41.0 | 142 | 10.0 |
| 1200 | 12.0 | 33.30 | 77.60 | 44.0 | 151 | 10.0 |
| 1300 | 13.0 | 37.10 | – | 44.0 | 151 | 10.0 |
| 1400 | 14.0 | 38.50 | – | 47.0 | 160 | 12.5 |
| 1500 | 15.0 | 39.60 | – | 50.0 | 162 | 12.5 |
| 1600 | 16.0 | 41.50 | – | 52.0 | 170 | 12.5 |
| 1700 | 17.0 | 48.40 | – | 54.0 | 175 | 14.0 |
| 1800 | 18.0 | 49.70 | – | 56.0 | 182 | 14.0 |
| 1900 | 19.0 | 58.50 | – | 58.0 | 189 | 16.0 |
| 2000 | 20.0 | 54.00 | – | 60.0 | 195 | 16.0 |
| | | (W140) | (W141) | | | |

* Form B

## Machine reamer

**Design:** HSS-E, DIN 208-B, with approx. 7° left spirals, short point and uneven tooth pitch. This achieves clean and exact drilling. With morse taper shank.

**Application:** For reaming through holes. Particularly suitable for steel materials such as general construction steels, machine steels, tempered steels, case-hardening steels, tool steels, high speed steels, casting iron, nodular graphite iron and malleable cast iron, and soft non-ferrous metals such as aluminium and brass.

HSS-E | DIN 208-B | H7 | approx. 7° | MK 1–4

1537 format professional quality
bright

1541 BECK MAPAL GROUP
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1537 | 10 | 8 | 5 | | | | | | 4 | 4 | 6 | 18 | 12 |
| 1541 | 12 | 10 | 5 | | | | | | | | 8 | | |

| Order No. | Nominal Ø mm | 1537 format bright | 1541 BECK TiN | Cutting length mm | Total length mm | MK |
|---|---|---|---|---|---|---|
| 1000 | 10 | 31.50 | 76.30 | 38 | 168 | 1 |
| 1100 | 11 | 34.40 | – | 41 | 175 | 1 |
| 1200 | 12 | 33.80 | 83.60 | 44 | 182 | 1 |
| 1300 | 13 | 35.60 | – | 44 | 182 | 1 |
| 1400 | 14 | 36.20 | 88.30 | 47 | 189 | 1 |
| 1500 | 15 | 44.00 | 107.50 | 50 | 204 | 2 |
| 1600 | 16 | 44.50 | 110.00 | 52 | 210 | 2 |
| 1700 | 17 | 47.70 | – | 54 | 214 | 2 |
| 1800 | 18 | 49.40 (W140) | 122.00 (W141) | 56 | 219 | 2 |

| Order No. | Nominal Ø mm | 1537 format bright | 1541 BECK TiN | Cutting length mm | Total length mm | MK |
|---|---|---|---|---|---|---|
| 1900 | 19 | 52.50 | – | 58 | 223 | 2 |
| 2000 | 20 | 52.50 | 129.00 | 60 | 228 | 2 |
| 2200 | 22 | 59.00 | – | 64 | 237 | 2 |
| 2400 | 24 | 70.00 | – | 68 | 268 | 3 |
| 2500 | 25 | 71.80 | – | 68 | 268 | 3 |
| 2600 | 26 | 77.20 | – | 70 | 273 | 3 |
| 2800 | 28 | 85.00 | – | 71 | 277 | 3 |
| 3000 | 30 | 88.00 | – | 73 | 281 | 3 |
| 3200 | 32 | 116.00 (W140) | – (W141) | 77 | 317 | 4 |

## NC machine reamer

**Design:** HSS-E, dimensions similar to 212. Centring up to Ø 3.70 mm on both sides with 90° full point, above with inner centring, with straight shank Ø for standardised mounting in hydraulic expansion chucks and high accuracy chucks. The clamping accuracy is significantly improved due to the narrow tolerance of the shanks. With cylinder shank, tolerance h6. Bright surface.

Reamer manufacturing tolerances:
– full diameter and 1/10 mm dimensions H7,
– 1/100 mm dimensions of Ø 1.01 to 5.03 mm 0.00/+0.004 mm, over Ø 5.03 mm 0.00/+0.005 mm.

**Application:** For reaming through holes, because of the short trim cut (from 3.8 mm) conditionally suitable for reaming blind holes.

HSS-E | ≈DIN 212

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1545 | 12 | 10 | 8 | 2 | | | | | 4 | 4 | 10 | 18 | 14 |

| Order No. | Nominal Ø mm | 1545 format bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0100 | 1.00 | 16.05 | 6 | 35 | 1 |
| 0101 | 1.01 | 16.05 | 6 | 35 | 1 |
| 0102 | 1.02 | 16.05 | 6 | 35 | 1 |
| 0103 | 1.03 | 16.05 | 6 | 35 | 1 |
| 0150 | 1.50 | 11.80 | 8 | 40 | 2 |
| 0151 | 1.51 | 13.80 | 9 | 43 | 2 |
| 0152 | 1.52 | 13.80 | 9 | 43 | 2 |
| 0153 | 1.53 | 13.80 | 9 | 43 | 2 |
| 0160 | 1.60 | 13.40 | 9 | 43 | 2 |
| 0170 | 1.70 | 13.40 | 9 | 43 | 2 |
| 0180 | 1.80 | 13.40 | 10 | 46 | 2 |
| 0190 | 1.90 | 13.40 | 10 | 46 | 2 |
| 0197 | 1.97 | 14.65 | 11 | 49 | 2 |
| 0198 | 1.98 | 14.65 | 11 | 49 | 2 |
| 0199 | 1.99 | 14.65 (W144) | 11 | 49 | 2 |

| Order No. | Nominal Ø mm | 1545 format bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0200 | 2.00 | 11.90 | 11 | 49 | 2 |
| 0201 | 2.01 | 14.90 | 11 | 49 | 2 |
| 0202 | 2.02 | 14.90 | 11 | 49 | 2 |
| 0203 | 2.03 | 14.90 | 11 | 49 | 2 |
| 0210 | 2.10 | 13.70 | 11 | 49 | 2 |
| 0220 | 2.20 | 13.70 | 12 | 53 | 2 |
| 0230 | 2.30 | 13.70 | 12 | 53 | 3 |
| 0240 | 2.40 | 13.70 | 14 | 57 | 3 |
| 0247 | 2.47 | 14.90 | 14 | 57 | 3 |
| 0248 | 2.48 | 14.90 | 14 | 57 | 3 |
| 0249 | 2.49 | 14.90 | 14 | 57 | 3 |
| 0250 | 2.50 | 11.65 | 14 | 57 | 3 |
| 0251 | 2.51 | 14.90 | 14 | 57 | 3 |
| 0252 | 2.52 | 14.90 | 14 | 57 | 3 |
| 0253 | 2.53 | 14.90 (W144) | 14 | 57 | 3 |

Continued overleaf

## NC machine reamer

Continued

| Order No. | Nominal Ø mm | 1545 format bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0260 | 2.60 | 14.20 | 14 | 57 | 3 |
| 0270 | 2.70 | 14.20 | 15 | 61 | 3 |
| 0280 | 2.80 | 14.20 | 15 | 61 | 3 |
| 0290 | 2.90 | 14.20 | 15 | 61 | 3 |
| 0297 | 2.97 | 15.50 | 15 | 61 | 3 |
| 0298 | 2.98 | 15.50 | 15 | 61 | 3 |
| 0299 | 2.99 | 15.50 | 15 | 61 | 3 |
| 0300 | 3.00 | 10.60 | 15 | 61 | 3 |
| 0301 | 3.01 | 15.50 | 16 | 65 | 4 |
| 0302 | 3.02 | 15.50 | 16 | 65 | 4 |
| 0303 | 3.03 | 15.50 | 16 | 65 | 4 |
| 0310 | 3.10 | 13.40 | 16 | 65 | 4 |
| 0320 | 3.20 | 13.40 | 16 | 65 | 4 |
| 0330 | 3.30 | 13.40 | 16 | 65 | 4 |
| 0340 | 3.40 | 13.40 | 18 | 70 | 4 |
| 0350 | 3.50 | 11.65 | 18 | 70 | 4 |
| 0360 | 3.60 | 14.90 | 18 | 70 | 4 |
| 0370 | 3.70 | 14.90 | 18 | 70 | 4 |
| 0380 | 3.80 | 14.90 | 19 | 75 | 4 |
| 0390 | 3.90 | 14.90 | 19 | 75 | 4 |
| 0397 | 3.97 | 16.30 | 19 | 75 | 4 |
| 0398 | 3.98 | 16.30 | 19 | 75 | 4 |
| 0399 | 3.99 | 16.30 | 19 | 75 | 4 |
| 0400 | 4.00 | 11.40 | 19 | 75 | 4 |
| 0401 | 4.01 | 16.30 | 19 | 75 | 4 |
| 0402 | 4.02 | 16.30 | 19 | 75 | 4 |
| 0403 | 4.03 | 16.30 | 19 | 75 | 4 |
| 0410 | 4.10 | 14.65 | 19 | 75 | 4 |
| 0420 | 4.20 | 14.65 | 19 | 75 | 4 |
| 0430 | 4.30 | 14.65 | 21 | 80 | 5 |
| 0440 | 4.40 | 14.65 | 21 | 80 | 5 |
| 0450 | 4.50 | 12.35 | 21 | 80 | 5 |
| 0460 | 4.60 | 14.70 | 21 | 80 | 5 |
| 0470 | 4.70 | 14.70 | 21 | 80 | 5 |
| 0480 | 4.80 | 14.70 | 23 | 86 | 5 |
| 0490 | 4.90 | 14.70 | 23 | 86 | 5 |
| 0497 | 4.97 | 16.55 | 23 | 86 | 5 |
| 0498 | 4.98 | 16.55 | 23 | 86 | 5 |
| 0499 | 4.99 | 16.55 | 23 | 86 | 5 |
| 0500 | 5.00 | 11.70 | 23 | 86 | 5 |
| 0501 | 5.01 | 16.55 | 23 | 86 | 5 |
| 0502 | 5.02 | 16.55 | 23 | 86 | 5 |
| 0503 | 5.03 | 16.55 | 23 | 86 | 5 |
| 0510 | 5.10 | 15.25 | 23 | 86 | 5 |
| 0520 | 5.20 | 15.25 | 23 | 86 | 5 |
| 0530 | 5.30 | 15.25 | 23 | 86 | 5 |
| 0540 | 5.40 | 15.25 | 26 | 93 | 6 |
| 0550 | 5.50 | 13.70 | 26 | 93 | 6 |
| 0560 | 5.60 | 14.70 | 26 | 93 | 6 |
| 0570 | 5.70 | 14.70 | 26 | 93 | 6 |
| 0580 | 5.80 | 14.70 | 26 | 93 | 6 |
| 0590 | 5.90 | 14.70 | 26 | 93 | 6 |
| 0597 | 5.97 | 16.55 | 26 | 93 | 6 |
| 0598 | 5.98 | 16.55 | 26 | 93 | 6 |
| 0599 | 5.99 | 16.55 | 26 | 93 | 6 |
| 0600 | 6.00 | 12.70 | 26 | 93 | 6 |
| 0601 | 6.01 | 17.00 | 28 | 101 | 6 |
| 0602 | 6.02 | 17.00 | 28 | 101 | 6 |
| 0603 | 6.03 | 17.00 | 28 | 101 | 6 |
| 0610 | 6.10 | 15.60 | 28 | 101 | 6 |
| 0620 | 6.20 | 15.55 | 28 | 101 | 6 |
| 0630 | 6.30 | 15.55 | 28 | 101 | 6 |
| 0640 | 6.40 | 15.55 | 28 | 101 | 6 |
| 0650 | 6.50 | 15.55 (W144) | 28 | 101 | 6 |

| Order No. | Nominal Ø mm | 1545 format bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0660 | 6.60 | 15.55 | 28 | 101 | 6 |
| 0670 | 6.70 | 15.55 | 28 | 101 | 6 |
| 0680 | 6.80 | 15.55 | 31 | 109 | 8 |
| 0690 | 6.90 | 15.55 | 31 | 109 | 8 |
| 0700 | 7.00 | 15.55 | 31 | 109 | 8 |
| 0710 | 7.10 | 16.70 | 31 | 109 | 8 |
| 0720 | 7.20 | 16.70 | 31 | 109 | 8 |
| 0730 | 7.30 | 16.70 | 31 | 109 | 8 |
| 0740 | 7.40 | 16.70 | 31 | 109 | 8 |
| 0750 | 7.50 | 16.70 | 31 | 109 | 8 |
| 0760 | 7.60 | 17.55 | 33 | 117 | 8 |
| 0770 | 7.70 | 17.55 | 33 | 117 | 8 |
| 0780 | 7.80 | 17.55 | 33 | 117 | 8 |
| 0790 | 7.90 | 17.55 | 33 | 117 | 8 |
| 0797 | 7.97 | 17.00 | 33 | 117 | 8 |
| 0798 | 7.98 | 17.00 | 33 | 117 | 8 |
| 0799 | 7.99 | 17.00 | 33 | 117 | 8 |
| 0800 | 8.00 | 14.90 | 33 | 117 | 8 |
| 0801 | 8.01 | 17.00 | 33 | 117 | 8 |
| 0802 | 8.02 | 17.00 | 33 | 117 | 8 |
| 0803 | 8.03 | 17.00 | 33 | 117 | 8 |
| 0810 | 8.10 | 20.70 | 33 | 117 | 8 |
| 0820 | 8.20 | 20.70 | 33 | 117 | 8 |
| 0830 | 8.30 | 20.70 | 33 | 117 | 8 |
| 0840 | 8.40 | 20.70 | 33 | 117 | 8 |
| 0850 | 8.50 | 18.75 | 33 | 117 | 8 |
| 0860 | 8.60 | 19.50 | 36 | 125 | 10 |
| 0870 | 8.70 | 19.50 | 36 | 125 | 10 |
| 0880 | 8.80 | 19.50 | 36 | 125 | 10 |
| 0890 | 8.90 | 19.50 | 36 | 125 | 10 |
| 0900 | 9.00 | 17.70 | 36 | 125 | 10 |
| 0901 | 9.01 | 21.60 | 36 | 125 | 10 |
| 0902 | 9.02 | 21.60 | 36 | 125 | 10 |
| 0903 | 9.03 | 21.60 | 36 | 125 | 10 |
| 0910 | 9.10 | 19.80 | 36 | 125 | 10 |
| 0920 | 9.20 | 19.80 | 36 | 125 | 10 |
| 0930 | 9.30 | 19.80 | 36 | 125 | 10 |
| 0940 | 9.40 | 19.80 | 36 | 125 | 10 |
| 0950 | 9.50 | 19.75 | 36 | 125 | 10 |
| 0960 | 9.60 | 19.80 | 38 | 133 | 10 |
| 0970 | 9.70 | 20.20 | 38 | 133 | 10 |
| 0980 | 9.80 | 20.20 | 38 | 133 | 10 |
| 0990 | 9.90 | 20.20 | 38 | 133 | 10 |
| 0997 | 9.97 | 21.60 | 38 | 133 | 10 |
| 0998 | 9.98 | 21.60 | 38 | 133 | 10 |
| 0999 | 9.99 | 21.60 | 38 | 133 | 10 |
| 1000 | 10.00 | 18.75 | 38 | 133 | 10 |
| 1001 | 10.01 | 21.60 | 38 | 133 | 10 |
| 1002 | 10.02 | 21.60 | 38 | 133 | 10 |
| 1003 | 10.03 | 21.60 | 38 | 133 | 10 |
| 1100 | 11.00 | 25.90 | 41 | 142 | 10 |
| 1197 | 11.97 | 33.20 | 44 | 151 | 10 |
| 1198 | 11.98 | 33.20 | 44 | 151 | 10 |
| 1199 | 11.99 | 33.20 | 44 | 151 | 10 |
| 1200 | 12.00 | 26.80 | 44 | 151 | 10 |
| 1300 | 13.00 | 28.30 | 44 | 151 | 10 |
| 1400 | 14.00 | 29.40 | 47 | 160 | 14 |
| 1500 | 15.00 | 30.40 | 50 | 162 | 14 |
| 1600 | 16.00 | 31.30 | 52 | 170 | 14 |
| 1700 | 17.00 | 36.80 | 54 | 175 | 14 |
| 1800 | 18.00 | 38.00 | 56 | 182 | 14 |
| 1900 | 19.00 | 44.50 | 58 | 189 | 16 |
| 2000 | 20.00 | 42.60 (W144) | 60 | 195 | 16 |

## NC machine reamer

NEW

**Design:** HSS-E, dimensions similar to 212. Centring up to Ø 3.70 mm on both sides with 90° full point, above with inner centring, with straight shank Ø for standardised mounting in hydraulic expansion chucks and high accuracy chucks. The clamping accuracy is significantly improved due to the narrow tolerance of the shanks. With cylinder shank, tolerance h6. Bright surface.

HSS | Factory standard | H7

BECK MAPAL GROUP

Reamer manufacturing tolerances:
– full diameter and 1/10 mm dimensions H7,
– 1/100 mm dimensions of Ø 1.01 to 5.03 mm 0.00/+0.004 mm, over Ø 5.03 mm 0.00/+0.005 mm.

**Application:** For reaming through holes, because of the short trim cut (from 3.8 mm) conditionally suitable for reaming blind holes.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1539 | 35 | 35 | 35 | | | | | | | | 20 | | |

| Order No. | Nominal Ø mm | 1539 BECK bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0600 | 6.00 | 76.00 | 16 | 100 | 8 |
| 0700 | 7.00 | 78.50 | 16 | 100 | 8 |
| 0800 | 8.00 | 79.50 | 16 | 100 | 8 |
| 0900 | 9.00 | 82.00 | 20 | 100 | 10 |
| 1000 | 10.00 | 82.80 | 20 | 120 | 10 |
| 1100 | 11.00 | 86.90 | 20 | 120 | 12 |
| 1200 | 12.00 | 88.00 | 20 | 120 | 12 |
| 1300 | 13.00 | 92.50 | 22 | 130 | 14 |
| 1400 | 14.00 | 99.10 | 22 | 130 | 14 |
| 1500 | 15.00 | 107.50 | 22 | 130 | 16 |
| 1600 | 16.00 | 110.00 | 25 | 150 | 16 |
| 1700 | 17.00 | 132.00 | 25 | 150 | 18 |

(W143)

| Order No. | Nominal Ø mm | 1539 BECK bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 1800 | 18.00 | 133.00 | 25 | 150 | 18 |
| 1900 | 19.00 | 137.00 | 25 | 150 | 20 |
| 2000 | 20.00 | 139.00 | 25 | 150 | 20 |
| 2200 | 22.00 | 193.50 | 25 | 160 | 20 |
| 2400 | 24.00 | 202.00 | 25 | 180 | 20 |
| 2500 | 25.00 | 186.00 | 25 | 180 | 20 |
| 2800 | 28.00 | 228.00 | 25 | 180 | 25 |
| 3000 | 30.00 | 217.50 | 25 | 200 | 25 |
| 3200 | 32.00 | 227.00 | 25 | 200 | 25 |
| 3600 | 36.00 | 261.50 | 25 | 200 | 25 |
| 4000 | 40.00 | 316.50 | 25 | 200 | 25 |

(W143)

## NC machine reamer

NEW

**Design:** HSS-E, dimensions similar to 212. Centring up to Ø 3.70 mm on both sides with 90° full point, above with inner centring, with straight shank Ø for standardised mounting in hydraulic expansion chucks and high accuracy chucks. The clamping accuracy is significantly improved due to the narrow tolerance of the shanks. With cylinder shank, tolerance h6. Bright surface.

HSS | Factory standard | H7

BECK MAPAL GROUP

Reamer manufacturing tolerances:
– full diameter and 1/10 mm dimensions H7,
– 1/100 mm dimensions of Ø 1.01 to 5.03 mm 0.00/+0.004 mm, over Ø 5.03 mm 0.00/+0.005 mm.

**Application:** For reaming through holes, because of the short trim cut (from 3.8 mm) conditionally suitable for reaming blind holes.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1542 | 35 | 35 | 35 | | | | | | | | 20 | | |

| Order No. | Nominal Ø mm | 1542 BECK bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0600 | 6.00 | 68.20 | 16 | 100 | 8 |
| 0700 | 7.00 | 70.60 | 16 | 100 | 8 |
| 0800 | 8.00 | 71.70 | 16 | 100 | 8 |
| 0900 | 9.00 | 75.30 | 20 | 100 | 10 |
| 1000 | 10.00 | 77.50 | 20 | 120 | 10 |
| 1100 | 11.00 | 82.30 | 20 | 120 | 12 |
| 1200 | 12.00 | 83.50 | 20 | 120 | 12 |
| 1300 | 13.00 | 88.00 | 22 | 130 | 14 |

(W143)

| Order No. | Nominal Ø mm | 1542 BECK bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 1400 | 14.00 | 93.20 | 22 | 130 | 14 |
| 1500 | 15.00 | 101.50 | 22 | 130 | 16 |
| 1600 | 16.00 | 104.00 | 25 | 150 | 16 |
| 1700 | 17.00 | 123.50 | 25 | 150 | 18 |
| 1800 | 18.00 | 124.00 | 25 | 150 | 18 |
| 1900 | 19.00 | 128.00 | 25 | 150 | 20 |
| 2000 | 20.00 | 130.00 | 25 | 150 | 20 |

(W143)

**Hydraulic chucks**

are found on 3/81.

## Carbide machine reamer

**Design:** Solid carbide up to nominal Ø 9.0 mm, carbide (K10) from nominal Ø 10.0 mm DIN 8093, with approx. 7° left spirals, with long cutting section, short point and uneven tooth pitch. This achieves clean and exact drilling.
With cylinder shank Tolerance h7. Bright surface.

Carbide | DIN 8093 | H7 | approx. 7°

format professional quality

**Application:** For reaming through-holes and also suitable for reaming blind holes due to the short point. Particularly suitable for high alloy and annealed steels up to 52 HRC, casting materials and soft non-ferrous metals such as aluminium and brass.

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1546 | ● | ● | ● | ● | ○ | | | | ● | ● | ● | ● | ● |

| Order No. | Nominal Ø mm | 1546 format bright | Cutting length mm | Total length mm | Shank Ø h9 mm |
|---|---|---|---|---|---|
| 0100 | 1.0 | 25.50 | 5.5 | 34 | 1.0 |
| 0120 | 1.2 | 27.00 | 7.5 | 38 | 1.2 |
| 0140 | 1.4 | 27.00 | 8.0 | 40 | 1.4 |
| 0150 | 1.5 | 22.80 | 8.0 | 40 | 1.5 |
| 0180 | 1.8 | 32.30 | 9.0 | 46 | 1.8 |
| 0200 | 2.0 | 26.40 | 11.0 | 49 | 2.0 |
| 0220 | 2.2 | 34.40 | 12.0 | 53 | 2.2 |
| 0250 | 2.5 | 30.40 | 14.0 | 57 | 2.5 |
| 0280 | 2.8 | 35.50 | 15.0 | 61 | 2.8 |
| 0300 | 3.0 | 31.30 | 15.0 | 61 | 3.0 |
| 0320 | 3.2 | 36.80 | 16.0 | 65 | 3.2 |

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| Order No. | Nominal Ø mm | 1546 format bright | Cutting length mm | Total length mm | Shank Ø h9 mm |
|---|---|---|---|---|---|
| 0350 | 3.5 | 35.00 | 18.0 | 70 | 3.5 |
| 0400 | 4.0 | 36.10 | 19.0 | 75 | 4.0 |
| 0450 | 4.5 | 42.40 | 21.0 | 80 | 4.5 |
| 0500 | 5.0 | 43.60 | 23.0 | 86 | 5.0 |
| 0600 | 6.0 | 52.90 | 26.0 | 93 | 5.6 |
| 0700 | 7.0 | 63.30 | 31.0 | 109 | 7.1 |
| 0800 | 8.0 | 66.90 | 33.0 | 117 | 8.0 |
| 0900 | 9.0 | 76.10 | 36.0 | 125 | 9.0 |
| 1000 | 10.0* | 54.60 | 38.0 | 133 | 10.0 |
| 1100 | 11.0* | 68.10 | 41.0 | 142 | 10.0 |
| 1200 | 12.0* | 62.60 | 44.0 | 151 | 10.0 |

(W146)

*According to factory standard.

## Carbide machine reamer

**Design:** Carbide (K10) DIN 8094, with approx. 7° left spirals, with long cutting section, short point and uneven tooth pitch. This achieves clean and exact drilling.
With morse taper shank Bright surface.

Carbide | DIN 8094 | H7 | approx. 7° | MK 1–3

format professional quality

**Application:** For reaming through-holes and also suitable for reaming blind holes due to the short point. Particularly suitable for high alloy and annealed steels up to 52 HRC, casting materials and soft non-ferrous metals such as aluminium and brass.

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1549 | ● | ● | ● | ● | | | | | ● | ● | ● | ● | ● |

| Order No. | Nominal Ø mm | 1549 format bright | Cutting length mm | Total length mm | MK |
|---|---|---|---|---|---|
| 1000 | 10 | 66.90 | 38 | 168 | 1 |
| 1100 | 11 | 71.90 | 41 | 175 | 1 |
| 1200 | 12 | 67.50 | 44 | 182 | 1 |
| 1300 | 13 | 73.00 | 44 | 182 | 1 |
| 1400 | 14 | 78.50 | 47 | 189 | 1 |
| 1500 | 15 | 86.40 | 50 | 204 | 2 |
| 1600 | 16 | 89.50 | 52 | 210 | 2 |
| 1700 | 17 | 98.00 | 54 | 214 | 2 |
| 1800 | 18 | 91.90 | 56 | 219 | 2 |

(W146)

| Order No. | Nominal Ø mm | 1549 format bright | Cutting length mm | Total length mm | MK |
|---|---|---|---|---|---|
| 1900 | 19 | 109.50 | 58 | 223 | 2 |
| 2000 | 20 | 102.50 | 60 | 228 | 2 |
| 2200 | 22 | 117.50 | 64 | 237 | 2 |
| 2400 | 24 | 146.00 | 68 | 268 | 3 |
| 2500 | 25 | 146.00 | 68 | 268 | 3 |
| 2600 | 26 | 161.00 | 70 | 273 | 3 |
| 2800 | 28 | 202.50 | 71 | 277 | 3 |
| 3000 | 30 | 189.50 | 73 | 281 | 3 |

(W146)

## Solide Carbide-NC machine reamer

**Design:** Ultra-finest grain-solid carbide, dimensions similar to DIN 212. Centring on both sides with 90° full point, with straight shank Ø for standardised mounting in hydraulic expansion chucks and high accuracy chucks. The clamping accuracy is significantly improved due to the narrow tolerance of the shanks. With cylinder shank. Tolerance h6. Bright surface.

Reamer manufacturing tolerances:
- full diameter and 1/10 mm dimensions correspond to H7,
- 1/100 mm dimensions from Ø 1.01 to 5.03 mm have a tolerance of 0.00/+0.004 mm, from Ø 5.97 to 12.03 mm have a tolerance of 0.00/+0.005 mm.

**Application:** For reaming through-holes, also conditionally suitable for reaming blind holes due to the short trim cut. Particularly suitable for high alloy and annealed steels up to 52 HRC, casting materials and soft non-ferrous metals such as aluminium and brass.

Solid carbide | ≈DIN 212 | H7 | approx. 7°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1581 | ● | ● | ● | ● | ○ | | | | ● | ● | ● | ● | ● |

| Order No. | Nominal Ø mm | 1581 format bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0100 | 1.00 | 40.10 | 6 | 50 | 4 |
| 0200 | 2.00 | 46.50 | 12 | 50 | 4 |
| 0201 | 2.01 | 46.50 | 12 | 50 | 4 |
| 0202 | 2.02 | 46.50 | 12 | 50 | 4 |
| 0240 | 2.40 | 46.50 | 16 | 60 | 4 |
| 0250 | 2.50 | 46.50 | 16 | 60 | 4 |
| 0300 | 3.00 | 46.50 | 17 | 64 | 4 |
| 0301 | 3.01 | 46.50 | 17 | 64 | 4 |
| 0302 | 3.02 | 46.50 | 17 | 64 | 4 |
| 0303 | 3.03 | 46.50 | 17 | 64 | 4 |
| 0310 | 3.10 | 46.50 | 18 | 68 | 4 |
| 0320 | 3.20 | 46.50 | 18 | 68 | 4 |
| 0340 | 3.40 | 46.50 | 20 | 74 | 4 |
| 0350 | 3.50 | 46.50 | 20 | 74 | 4 |
| 0360 | 3.60 | 46.50 | 20 | 74 | 4 |
| 0370 | 3.70 | 46.50 | 20 | 74 | 4 |
| 0380 | 3.80 | 46.50 | 21 | 77 | 4 |
| 0390 | 3.90 | 46.50 | 21 | 77 | 4 |
| 0399 | 3.99 | 46.50 | 21 | 77 | 4 |
| 0400 | 4.00 | 46.50 | 21 | 77 | 4 |
| 0401 | 4.01 | 46.50 | 21 | 77 | 4 |
| 0402 | 4.02 | 46.50 | 21 | 77 | 4 |
| 0403 | 4.03 | 46.50 | 21 | 77 | 4 |
| 0410 | 4.10 | 57.50 | 21 | 77 | 4 |
| 0420 | 4.20 | 57.50 | 21 | 82 | 6 |
| 0430 | 4.30 | 57.50 | 23 | 82 | 6 |
| 0440 | 4.40 | 57.50 | 23 | 82 | 6 |
| 0450 | 4.50 | 57.50 | 23 | 82 | 6 |
| 0460 | 4.60 | 57.50 | 23 | 82 | 6 |
| 0480 | 4.80 | 57.50 | 26 | 93 | 6 |
| 0490 | 4.90 | 57.50 | 26 | 93 | 6 |
| 0498 | 4.98 | 57.50 | 26 | 93 | 6 |
| 0499 | 4.99 | 57.50 | 26 | 93 | 6 |
| 0500 | 5.00 | 57.50 | 26 | 93 | 6 |
| 0501 | 5.01 | 57.50 | 26 | 93 | 6 |
| 0502 | 5.02 | 57.50 | 26 | 93 | 6 |
| 0503 | 5.03 | 57.50 | 26 | 93 | 6 |
| 0510 | 5.10 | 57.50 | 26 | 93 | 6 |
| 0520 | 5.20 | 57.50 | 26 | 93 | 6 |
| 0530 | 5.30 | 57.50 | 26 | 93 | 6 |
| 0540 | 5.40 | 57.50 | 26 | 93 | 6 |
| 0550 | 5.50 | 57.50 | 26 | 93 | 6 |
| 0560 | 5.60 | 57.50 | 26 | 93 | 6 |
| 0570 | 5.70 | 57.50 | 26 | 93 | 6 |
| 0590 | 5.90 | 57.50 | 26 | 93 | 6 |

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| Order No. | Nominal Ø mm | 1581 format bright | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0598 | 5.98 | 57.50 | 26 | 93 | 6 |
| 0599 | 5.99 | 57.50 | 26 | 93 | 6 |
| 0600 | 6.00 | 57.50 | 26 | 93 | 6 |
| 0601 | 6.01 | 57.50 | 26 | 93 | 6 |
| 0602 | 6.02 | 57.50 | 26 | 93 | 6 |
| 0603 | 6.03 | 57.50 | 26 | 93 | 6 |
| 0610 | 6.10 | 71.50 | 28 | 101 | 8 |
| 0620 | 6.20 | 71.50 | 28 | 101 | 8 |
| 0640 | 6.40 | 71.50 | 28 | 101 | 8 |
| 0650 | 6.50 | 71.50 | 28 | 101 | 8 |
| 0660 | 6.60 | 71.50 | 28 | 101 | 8 |
| 0670 | 6.70 | 71.50 | 28 | 101 | 8 |
| 0690 | 6.90 | 71.50 | 31 | 109 | 8 |
| 0700 | 7.00 | 71.50 | 31 | 109 | 8 |
| 0710 | 7.10 | 71.50 | 31 | 109 | 8 |
| 0720 | 7.20 | 71.50 | 31 | 109 | 8 |
| 0750 | 7.50 | 71.50 | 31 | 109 | 8 |
| 0770 | 7.70 | 71.50 | 33 | 117 | 8 |
| 0790 | 7.90 | 71.50 | 33 | 117 | 8 |
| 0797 | 7.97 | 71.50 | 33 | 117 | 8 |
| 0798 | 7.98 | 71.50 | 33 | 117 | 8 |
| 0800 | 8.00 | 71.50 | 33 | 117 | 8 |
| 0801 | 8.01 | 71.50 | 33 | 117 | 8 |
| 0802 | 8.02 | 71.50 | 33 | 117 | 8 |
| 0803 | 8.03 | 71.50 | 33 | 117 | 8 |
| 0810 | 8.10 | 87.70 | 33 | 117 | 10 |
| 0820 | 8.20 | 87.70 | 33 | 117 | 10 |
| 0850 | 8.50 | 87.70 | 33 | 117 | 10 |
| 0860 | 8.60 | 87.70 | 33 | 117 | 10 |
| 0890 | 8.90 | 87.70 | 36 | 125 | 10 |
| 0900 | 9.00 | 87.70 | 36 | 125 | 10 |
| 0920 | 9.20 | 87.70 | 36 | 125 | 10 |
| 0950 | 9.50 | 87.70 | 36 | 125 | 10 |
| 0990 | 9.90 | 87.70 | 41 | 133 | 10 |
| 0999 | 9.99 | 87.70 | 41 | 133 | 10 |
| 1000 | 10.00 | 87.70 | 41 | 133 | 10 |
| 1001 | 10.01 | 87.70 | 41 | 133 | 10 |
| 1002 | 10.02 | 87.70 | 41 | 133 | 10 |
| 1003 | 10.03 | 87.70 | 41 | 150 | 10 |
| 1197 | 11.97 | 115.50 | 44 | 150 | 12 |
| 1199 | 11.99 | 115.50 | 44 | 150 | 12 |
| 1200 | 12.00 | 115.50 | 44 | 150 | 12 |
| 1201 | 12.01 | 115.50 | 44 | 150 | 12 |
| 1202 | 12.02 | 115.50 | 44 | 150 | 12 |
| 1203 | 12.03 | 115.50 | 44 | 150 | 12 |

(W145)

Further dimensions available on request.

## Solide Carbide-NC machine reamer

**Design:** Solid carbide, similar DIN 8093, right cutting, twist fluted, EU pitch, for mounting in hydraulic expansion chucks, shrink chucks and high accuracy chucks. TiAlN coated surface For H7 fits.

**Application:** For reaming through holes. Particularly suitable for high alloy and annealed steels up to 52 HRC as well as casting materials.

Solid carbide | DIN 8093-2 | Form B | H7

BECK MAPAL GROUP

TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1582 | 15 | 12 | 8 | 6 | 4 | | | | | | 16 | | |

| Order No. | Nominal Ø mm | 1582 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0100 | 1.0 | 57.10 | 6 | 50.0 | 3 |
| 0150 | 1.5 | 57.10 | 9 | 50.0 | 3 |
| 0200 | 2.0 | 54.30 | 12 | 50.0 | 3 |
| 0250 | 2.5 | 57.10 | 16 | 60.0 | 3 |
| 0300 | 3.0 | 57.10 | 17 | 65.0 | 4 |
| 0320 | 3.2 | 68.00 | 18 | 65.0 | 4 |
| 0350 | 3.5 | 68.00 | 18 | 75.0 | 4 |
| 0400 | 4.0 | 68.00 | 19 | 75.0 | 4 |
| 0450 | 4.5 | 76.20 | 21 | 80.0 | 6 |
| 0500 | 5.0 | 76.20 | 23 | 93.0 | 6 |
| 0550 | 5.5 | 81.90 | 26 | 93.0 | 6 |

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| Order No. | Nominal Ø mm | 1582 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0600 | 6.0 | 81.90 | 26 | 93.0 | 6 |
| 0650 | 6.5 | 105.50 | 28 | 101.0 | 6 |
| 0700 | 7.0 | 105.50 | 31 | 109.0 | 8 |
| 0750 | 7.5 | 105.50 | 31 | 109.0 | 8 |
| 0800 | 8.0 | 105.50 | 33 | 117.0 | 8 |
| 0850 | 8.5 | 124.50 | 33 | 117.0 | 8 |
| 0900 | 9.0 | 124.50 | 36 | 125.0 | 10 |
| 0950 | 9.5 | 124.50 | 36 | 125.0 | 10 |
| 1000 | 10.0 | 124.50 | 38 | 133.0 | 10 |
| 1200 | 12.0 | 159.50 | 44 | 151.0 | 12 |

(W141)

## High performance reamer HNC for through-hole

**Design:** High performance reamer HNC with internal cooling for through-hole with special HPC cutting geometry, right cutting, twist fluted, EU pitch, for mounting in hydraulic expansion chucks, shrink chucks and high accuracy chucks. TiAlN coated surface Full Ø fit H7, hundredth Ø tolerance +0.004/0.

**Application:** For reaming through holes. Particularly suitable for high alloy and steels as well as casting materials.

Solid carbide | Factory standard | DIN 6535-HA | H7

BECK MAPAL GROUP

TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1583 | 180 | 140 | 80 | | | | | | | | 90 | | |

| Order No. | Nominal Ø mm | 1583 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0397 | 3.97 | 103.00 ◊ | 12 | 75 | 6 |
| 0398 | 3.98 | 103.00 ◊ | 12 | 75 | 6 |
| 0399 | 3.99 | 103.00 ◊ | 12 | 75 | 6 |
| 0400 | 4.00 | 95.60 ◊ | 12 | 75 | 6 |
| 0401 | 4.01 | 103.00 ◊ | 12 | 75 | 6 |
| 0402 | 4.02 | 103.00 ◊ | 12 | 75 | 6 |
| 0403 | 4.03 | 103.00 ◊ | 12 | 75 | 6 |
| 0450 | 4.50 | 107.50 ◊ | 12 | 75 | 6 |
| 0497 | 4.97 | 107.50 ◊ | 12 | 75 | 6 |
| 0498 | 4.98 | 107.50 ◊ | 12 | 75 | 6 |
| 0499 | 4.99 | 107.50 ◊ | 12 | 75 | 6 |
| 0500 | 5.00 | 98.40 ◊ | 12 | 75 | 6 |
| 0501 | 5.01 | 107.50 ◊ | 12 | 75 | 6 |
| 0502 | 5.02 | 107.50 ◊ | 12 | 75 | 6 |
| 0503 | 5.03 | 107.50 ◊ | 12 | 75 | 6 |
| 0550 | 5.50 | 110.00 ◊ | 12 | 75 | 6 |
| 0597 | 5.97 | 110.00 ◊ | 12 | 75 | 6 |
| 0598 | 5.98 | 110.00 ◊ | 12 | 75 | 6 |
| 0599 | 5.99 | 110.00 ◊ | 12 | 75 | 6 |
| 0600 | 6.00 | 101.50 ◊ | 12 | 75 | 6 |
| 0601 | 6.01 | 110.00 ◊ | 12 | 75 | 6 |
| 0602 | 6.02 | 110.00 ◊ | 12 | 75 | 6 |

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| Order No. | Nominal Ø mm | 1583 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0603 | 6.03 | 110.00 ◊ | 12 | 75 | 6 |
| 0650 | 6.50 | 105.50 ◊ | 16 | 100 | 8 |
| 0700 | 7.00 | 98.70 ◊ | 16 | 100 | 8 |
| 0750 | 7.50 | 116.00 ◊ | 16 | 100 | 8 |
| 0797 | 7.97 | 116.00 ◊ | 16 | 100 | 8 |
| 0798 | 7.98 | 116.00 ◊ | 16 | 100 | 8 |
| 0799 | 7.99 | 116.00 ◊ | 16 | 100 | 8 |
| 0800 | 8.00 | 107.50 ◊ | 16 | 100 | 8 |
| 0801 | 8.01 | 116.00 ◊ | 16 | 100 | 8 |
| 0802 | 8.02 | 116.00 ◊ | 16 | 100 | 8 |
| 0803 | 8.03 | 116.00 ◊ | 16 | 100 | 8 |
| 0850 | 8.50 | 132.50 ◊ | 20 | 100 | 10 |
| 0900 | 9.00 | 125.00 ◊ | 20 | 100 | 10 |
| 0950 | 9.50 | 132.50 ◊ | 20 | 120 | 10 |
| 0997 | 9.97 | 132.50 ◊ | 20 | 120 | 10 |
| 0998 | 9.98 | 132.50 ◊ | 20 | 120 | 10 |
| 0999 | 9.99 | 132.50 ◊ | 20 | 120 | 10 |
| 1000 | 10.00 | 154.50 ◊ | 20 | 120 | 10 |
| 1001 | 10.01 | 161.50 ◊ | 20 | 120 | 10 |
| 1002 | 10.02 | 161.50 ◊ | 20 | 120 | 10 |
| 1003 | 10.03 | 161.50 ◊ | 20 | 120 | 10 |
| 1050 | 10.50 | 200.00 ◊ | 20 | 120 | 12 |

(W143)

Continued overleaf

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## High performance reamer HNC for through-hole

Continued

| Order No. | Nominal Ø mm | 1583 BECK TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 1100 | 11.00 | 200.00 ◊ | 20 | 120 | 12 |
| 1150 | 11.50 | 200.00 ◊ | 20 | 120 | 12 |
| 1197 | 11.97 | 216.00 ◊ | 20 | 120 | 12 |
| 1198 | 11.98 | 216.00 ◊ | 20 | 120 | 12 |
| 1199 | 11.99 | 216.00 ◊ | 20 | 120 | 12 |
| 1200 | 12.00 | 205.50 ◊ | 20 | 120 | 12 |
| 1201 | 12.01 | 216.00 ◊ | 20 | 120 | 12 |
| 1202 | 12.02 | 216.00 ◊ | 20 | 120 | 12 |
| 1203 | 12.03 | 216.00 ◊ | 20 | 120 | 12 |

(W143)

| Order No. | Nominal Ø mm | 1583 BECK TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 1300 | 13.00 | 220.50 ◊ | 22 | 130 | 14 |
| 1400 | 14.00 | 227.50 ◊ | 22 | 130 | 14 |
| 1500 | 15.00 | 227.50 ◊ | 22 | 130 | 16 |
| 1600 | 16.00 | 235.00 ◊ | 25 | 150 | 16 |
| 1700 | 17.00 | 235.00 ◊ | 25 | 150 | 18 |
| 1800 | 18.00 | 272.00 ◊ | 25 | 150 | 18 |
| 1900 | 19.00 | 272.00 ◊ | 25 | 150 | 20 |
| 2000 | 20.00 | 291.00 ◊ | 25 | 150 | 20 |

(W143)

## High performance reamer HNC for blind hole

**Design:** High performance reamer HNC with internal cooling for blind hole with special HPC cutting geometry, right cutting, straight fluted, EU pitch, for mounting in hydraulic expansion chucks, shrink chucks and high accuracy chucks. TiAlN coated surface Full Ø fit H7, hundredth Ø tolerance +0.004/0.

**Application:** For reaming through holes. Particularly suitable for high alloy and steels as well as casting materials.

Solid carbide | Factory standard | H7 | DIN 6535-HA

BECK MAPAL GROUP

TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1584 | 180 | 140 | 80 | | | | | | | | 90 | | |

| Order No. | Nominal Ø mm | 1584 BECK TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0397 | 3.97 | 103.00 ◊ | 12 | 75 | 6 |
| 0398 | 3.98 | 103.00 ◊ | 12 | 75 | 6 |
| 0399 | 3.99 | 103.00 ◊ | 12 | 75 | 6 |
| 0400 | 4.00 | 95.60 ◊ | 12 | 75 | 6 |
| 0401 | 4.01 | 103.00 ◊ | 12 | 75 | 6 |
| 0402 | 4.02 | 103.00 ◊ | 12 | 75 | 6 |
| 0403 | 4.03 | 103.00 ◊ | 12 | 75 | 6 |
| 0450 | 4.50 | 107.50 ◊ | 12 | 75 | 6 |
| 0497 | 4.97 | 107.50 ◊ | 12 | 75 | 6 |
| 0498 | 4.98 | 107.50 ◊ | 12 | 75 | 6 |
| 0499 | 4.99 | 107.50 ◊ | 12 | 75 | 6 |
| 0500 | 5.00 | 98.40 ◊ | 12 | 75 | 6 |
| 0501 | 5.01 | 107.50 ◊ | 12 | 75 | 6 |
| 0502 | 5.02 | 107.50 ◊ | 12 | 75 | 6 |
| 0503 | 5.03 | 107.50 ◊ | 12 | 75 | 6 |
| 0550 | 5.50 | 110.00 ◊ | 12 | 75 | 6 |
| 0597 | 5.97 | 110.00 ◊ | 12 | 75 | 6 |
| 0598 | 5.98 | 110.00 ◊ | 12 | 75 | 6 |
| 0599 | 5.99 | 110.00 ◊ | 12 | 75 | 6 |
| 0600 | 6.00 | 101.50 ◊ | 12 | 75 | 6 |
| 0601 | 6.01 | 110.00 ◊ | 12 | 75 | 6 |
| 0602 | 6.02 | 110.00 ◊ | 12 | 75 | 6 |
| 0603 | 6.03 | 110.00 ◊ | 12 | 75 | 6 |
| 0650 | 6.50 | 105.50 ◊ | 16 | 100 | 8 |
| 0700 | 7.00 | 98.70 ◊ | 16 | 100 | 8 |
| 0750 | 7.50 | 116.00 ◊ | 16 | 100 | 8 |
| 0797 | 7.97 | 116.00 ◊ | 16 | 100 | 8 |
| 0798 | 7.98 | 116.00 ◊ | 16 | 100 | 8 |
| 0799 | 7.99 | 116.00 ◊ | 16 | 100 | 8 |
| 0800 | 8.00 | 107.50 ◊ | 16 | 100 | 8 |
| 0801 | 8.01 | 116.00 ◊ | 16 | 100 | 8 |

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| Order No. | Nominal Ø mm | 1584 BECK TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0802 | 8.02 | 116.00 ◊ | 16 | 100 | 8 |
| 0803 | 8.03 | 116.00 ◊ | 16 | 100 | 8 |
| 0850 | 8.50 | 132.50 ◊ | 20 | 100 | 10 |
| 0900 | 9.00 | 125.00 ◊ | 20 | 100 | 10 |
| 0950 | 9.50 | 132.50 ◊ | 20 | 120 | 10 |
| 0997 | 9.97 | 132.50 ◊ | 20 | 120 | 10 |
| 0998 | 9.98 | 132.50 ◊ | 20 | 120 | 10 |
| 0999 | 9.99 | 132.50 ◊ | 20 | 120 | 10 |
| 1000 | 10.00 | 154.50 ◊ | 20 | 120 | 10 |
| 1001 | 10.01 | 161.50 ◊ | 20 | 120 | 10 |
| 1002 | 10.02 | 161.50 ◊ | 20 | 120 | 10 |
| 1003 | 10.03 | 161.50 ◊ | 20 | 120 | 10 |
| 1050 | 10.50 | 200.00 ◊ | 20 | 120 | 12 |
| 1100 | 11.00 | 200.00 ◊ | 20 | 120 | 12 |
| 1150 | 11.50 | 200.00 ◊ | 20 | 120 | 12 |
| 1197 | 11.97 | 216.00 ◊ | 20 | 120 | 12 |
| 1198 | 11.98 | 216.00 ◊ | 20 | 120 | 12 |
| 1199 | 11.99 | 216.00 ◊ | 20 | 120 | 12 |
| 1200 | 12.00 | 205.50 ◊ | 20 | 120 | 12 |
| 1201 | 12.01 | 216.00 ◊ | 20 | 120 | 12 |
| 1202 | 12.02 | 216.00 ◊ | 20 | 120 | 12 |
| 1203 | 12.03 | 216.00 ◊ | 20 | 120 | 12 |
| 1300 | 13.00 | 220.50 ◊ | 22 | 130 | 14 |
| 1400 | 14.00 | 227.50 ◊ | 22 | 130 | 14 |
| 1500 | 15.00 | 227.50 ◊ | 22 | 130 | 16 |
| 1600 | 16.00 | 235.00 ◊ | 25 | 150 | 16 |
| 1700 | 17.00 | 235.00 ◊ | 25 | 150 | 18 |
| 1800 | 18.00 | 272.00 ◊ | 25 | 150 | 18 |
| 1900 | 19.00 | 272.00 ◊ | 25 | 150 | 20 |
| 2000 | 20.00 | 291.00 ◊ | 25 | 150 | 20 |

(W143)

## High performance reamer HNC-VA for through-hole

**Design:** High performance reamer HNC-VA with internal cooling for through-hole with special HPC cutting geometry, right cutting, twist fluted, EU pitch, for mounting in hydraulic expansion chucks, shrink chucks and high accuracy chucks. TiAlN coated surface For H7 fits.

**Application:** For reaming through holes. Suitable for rust and acid resistant steels.

Solid carbide | Factory standard | H7 | DIN 6535-HA

BECK MAPAL GROUP

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1585 | | | | | | | | | 25 | | | | |

| Order No. | Nominal Ø mm | 1585 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0400 | 4.00 | on request ◊ | 12 | 75 | 6 |
| 0450 | 4.50 | on request ◊ | 12 | 75 | 6 |
| 0500 | 5.00 | on request ◊ | 12 | 75 | 6 |
| 0550 | 5.50 | on request ◊ | 12 | 75 | 6 |
| 0600 | 6.00 | on request ◊ | 12 | 75 | 6 |
| 0650 | 6.50 | on request ◊ | 16 | 100 | 8 |
| 0700 | 7.00 | on request ◊ | 16 | 100 | 8 |
| 0750 | 7.50 | on request ◊ | 16 | 100 | 8 |
| 0800 | 8.00 | on request ◊ | 16 | 100 | 8 |
| 0850 | 8.50 | on request ◊ | 20 | 100 | 10 |
| 0900 | 9.00 | on request ◊ | 20 | 100 | 10 |
| 0950 | 9.50 | on request ◊ | 20 | 120 | 10 |
| 1000 | 10.00 | on request ◊ | 20 | 120 | 10 |

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| Order No. | Nominal Ø mm | 1585 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 1050 | 10.50 | on request ◊ | 20 | 120 | 12 |
| 1100 | 11.00 | on request ◊ | 20 | 120 | 12 |
| 1150 | 11.50 | on request ◊ | 20 | 120 | 12 |
| 1200 | 12.00 | on request ◊ | 20 | 120 | 12 |
| 1300 | 13.00 | on request ◊ | 22 | 130 | 14 |
| 1400 | 14.00 | on request ◊ | 22 | 130 | 14 |
| 1500 | 15.00 | on request ◊ | 22 | 130 | 16 |
| 1600 | 16.00 | on request ◊ | 25 | 150 | 16 |
| 1700 | 17.00 | on request ◊ | 25 | 150 | 18 |
| 1800 | 18.00 | on request ◊ | 25 | 150 | 18 |
| 1900 | 19.00 | on request ◊ | 25 | 150 | 20 |
| 2000 | 20.00 | on request ◊ | 25 | 150 | 20 |

(999)

## High performance reamer HNC-VA for through-hole

NEW

**Design:** High performance reamer HNC-VA with internal cooling for through-hole with special HPC cutting geometry, right cutting, twist fluted, EU pitch, for mounting in hydraulic expansion chucks, shrink chucks and high accuracy chucks. TiAlN coated surface For H7 fits.

**Application:** For reaming through holes. Suitable for rust and acid resistant steels.

Solid carbide | Factory standard | H7 | DIN 6535-HA

BECK MAPAL GROUP

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1586 | | | | | | | | | 25 | | | | |

| Order No. | Nominal Ø mm | 1586 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 0400 | 4.00 | on request | 12 | 75 | 6 |
| 0450 | 4.50 | on request | 12 | 75 | 6 |
| 0500 | 5.00 | on request | 12 | 75 | 6 |
| 0550 | 5.50 | on request | 12 | 75 | 6 |
| 0600 | 6.00 | on request | 12 | 75 | 6 |
| 0650 | 6.50 | on request | 16 | 100 | 8 |
| 0700 | 7.00 | on request | 16 | 100 | 8 |
| 0750 | 7.50 | on request | 16 | 100 | 8 |
| 0800 | 8.00 | on request | 16 | 100 | 8 |
| 0850 | 8.50 | on request | 20 | 100 | 10 |
| 0900 | 9.00 | on request | 20 | 100 | 10 |
| 0950 | 9.50 | on request | 20 | 120 | 10 |
| 1000 | 10.00 | on request | 20 | 120 | 10 |

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| Order No. | Nominal Ø mm | 1586 BECK MAPAL GROUP TiAlN | Cutting length mm | Total length mm | Shank Ø h6 mm |
|---|---|---|---|---|---|
| 1050 | 10.50 | on request | 20 | 120 | 12 |
| 1100 | 11.00 | on request | 20 | 120 | 12 |
| 1150 | 11.50 | on request | 20 | 120 | 12 |
| 1200 | 12.00 | on request | 20 | 120 | 12 |
| 1300 | 13.00 | on request | 22 | 130 | 14 |
| 1400 | 14.00 | on request | 22 | 130 | 14 |
| 1500 | 15.00 | on request | 22 | 130 | 16 |
| 1600 | 16.00 | on request | 25 | 150 | 16 |
| 1700 | 17.00 | on request | 25 | 150 | 18 |
| 1800 | 18.00 | on request | 25 | 150 | 18 |
| 1900 | 19.00 | on request | 25 | 150 | 20 |
| 2000 | 20.00 | on request | 25 | 150 | 20 |

(999)

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Overview – Hand and machine thread taps

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M-LH | MF | BSW | G | UNF | UNC |
| **Colour ring** | | | | | | | | |
| **Order No.** | 1604 | 1618 | 1612 | 1627 | 1635 | 1640 | 1650 | 1647 |
| **Threaded section** | M1–M30 | M2–M20 | M3–M20 | M2–M52 | W 1/8"–W 1" | G 1/8"–G 2" | Nr. 0–80"–1–12" | Nr. 1–64"–1–8" |
| **For through threads** | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **For blind holes** | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **Type/form** | N | INOX | N | N | N | N | N | N |
| **Material** | HSS | HSS-E | HSS | HSS | HSS | HSS | HSS | HSS |
| **Tolerance zone** | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | mittel | ISO 228/1 | 2 B | 2 B |
| **Surface** | Bright | Bright | Bright | Bright | Bright | Bright | Bright | Bright |
| **Page** | 1/164 | 1/165 | 1/165 | 1/166 | 1/167 | 1/168 | 1/168 | 1/169 |

## Material group

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Steels up to 42 HRC | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Steels up to 52 HRC | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | ● | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Ti steels, Ti alloys, special steels | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Cast-iron materials | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Al, Al- and Mg alloy | | ● | ● | ● | ● | ● | ● | ● | ● |
| Copper, brass, bronze | | ● | ● | ● | ● | ● | ● | ● | ● |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Overview – Hand and machine thread taps

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M | G | G | M | M | NPT |
| **Colour ring** | | | | | | | | |
| **Order No.** | 1649 | 1651 | 1649 | 1649 | 1649 | 1673 | 1738 | 1670 |
| **Threaded section** | M3–M10 | M3–M10 | M12–M20 | G 1/8" | G 1/4"–G 1" | M2–M20 | M3–M20 | 1/16"–1" |
| **For through threads** | | ≤ 1 x D | | | | ≤ 3 x D | | ≤ 1,5 x D |
| **For blind holes** | | | | | | | ≤ 1,5 x D | ≤ 1,5 x D |
| **Type/form** | | | | | | N/B | NR 15/C | N/C |
| **Material** | HSS | HSS | HSS | HSS | HSS | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | | | | | | ISO 2 6H | ISO 2 6H | |
| **Surface** | Bright | Bright | Bright | Bright | Bright | Bright | Bright | Bright |
| **Page** | 1/175 | 1/176 | 1/179 | 1/179 | 1/180 | 1/184 | 1/185 | 1/185 |

## Material group

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | ● | ● | ● | ● | ● | ◐ | ◐ | ● |
| Steels up to 1000 N/mm² | | | | | | | | |
| Steels up to 1400 N/mm² | | | | | | | | |
| Steels up to 42 HRC | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | | | |
| Ti steels, Ti alloys, special steels | | | | | | | | |
| Cast-iron materials | | | | | | | | ◐ |
| Al, Al- and Mg alloy | ○ | ● | ○ | ○ | ○ | ◐ | ◐ | ● |
| Copper, brass, bronze | | ● | | | | | | |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M | M | M | M | M | M | M | M |
| **Colour ring** | yellow | yellow | yellow | yellow | yellow | green | green | green | green | green |
| **Order No.** | 1676 | 1679 | 1678 | 1682 | 1671 | 1683 | 1672 | 1684 | 1700 | 1674 |
| **Threaded section** | M1–M10 | M3–M30 | M1,4–M30 | M2–M30 | M2–M30 | M2–M30 | M3–M20 | M2–M30 | M3–M20 | M3–M20 |
| **For through threads** | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | | | ≤ 3 x D | ≤ 3 x D | | | |
| **For blind holes** | | | | ≤ 3 x D | ≤ 3 x D | | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **Type/form** | N/B | N/B | N/B | NR 40/C | N/C | N/B | N/B | NR 40/C | NR 40/C | N/C |
| **Material** | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H |
| **Surface** | Steam | Steam | TiN | Steam | TiN | Steam | TiN | Steam | TiN | TiN |
| **Page** | 1/187 | 1/187 | 1/187 | 1/188 | 1/188 | 1/189 | 1/189 | 1/190 | 1/190 | 1/190 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | | | | | | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | | | | | | | | | | |
| Steels up to 42 HRC | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | | ◐ | ◐ | | | |
| Ti steels, Ti alloys, special steels | | | | | | | | | | | |
| Cast-iron materials | | | | | | | | | ◐ | ◐ | ◐ |
| Al, Al- and Mg alloy | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | | | |
| Copper, brass, bronze | | | | | | | | | | | |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M | M | M | M | M | M | M | M |
| **Colour ring** | blue | blue | blue | blue | blue | blue | blue | blue | blue | blue |
| **Order No.** | 1686 | 1675 | 1698 | 1694 | 1699 | 1693 | 1690 | 1701 | 1703 | 1704 |
| **Threaded section** | M2–M30 | M3–M20 | M3–M20 | M2–M20 | M2–M20 | M2–M30 | M3–M30 | M2–M30 | M3–M20 | M3–M20 |
| **For through threads** | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | | | | |
| **For blind holes** | | | | | | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **Type/form** | INOX/B | INOX/B | INOX/B | INOX/B | INOX/B | INOX/B | INOX/C | INOX/C | INOX/C | INOX/C |
| **Material** | HSS-E | HSS-E | HSS-E | HSS-E PM | HSS-E PM | HSS-E | HSS-E | HSS-E | HSS-E PM | HSS-E PM |
| **Tolerance zone** | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | 6HX | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H |
| **Surface** | Bright | Steam | TiN | Bright | TiN | Sirius® | Bright | Steam | Bright | TiN |
| **Page** | 1/191 | 1/191 | 1/191 | 1/191 | 1/191 | 1/191 | 1/193 | 1/193 | 1/194 | 1/194 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | | | | | | ● | | | |
| Steels up to 1000 N/mm² | | | | | | | ● | | | |
| Steels up to 1400 N/mm² | | | | | | | | | | |
| Steels up to 42 HRC | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Ti steels, Ti alloys, special steels | | | | | | | ● | | | |
| Cast-iron materials | | | | | | | ● | | | |
| Al, Al- and Mg alloy | | ◐ | ● | ● | ● | ● | ● | ◐ | ◐ | ◐ | ◐ |
| Copper, brass, bronze | | | | | | | | | | |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M | M | M | M | M | M | M | M |
| **Colour ring** | blue | blue | red | red | red | red | red | red | red | red |
| **Order No.** | 1691 | 1707 | 1705 | 1708 | 1710 | 1709 | 1728 | 1711 | 1711 | 1712 |
| **Threaded section** | M3–M20 | M3–M20 | M2–M24 | M3–M20 | M2–M24 | M6–M20 | M3–M20 | M5–M10 | M5–M12 | M3–M20 |
| **For through threads** | | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | | | |
| **For blind holes** | ≤ 3 x D | ≤ 3 x D | | | | | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **Type/form** | INOX R 40/C | INOX/C Syncro | H/B | H/B | H/B | H/B | H /B | H/E | H/C | HR 40/C |
| **Material** | HSS-E | HSS-E PM | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E PM | HSS-E PM | HSS-E |
| **Tolerance zone** | ISO 3 6G | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | 6HX | ISO 2 6H |
| **Surface** | Steam | TiN | Bright | Steam | TiCN | TiAlN | Bright | TiAlN | TiAlN | Bright |
| **Page** | 1/194 | 1/195 | 1/195 | 1/195 | 1/195 | 1/195 | 1/196 | 1/196 | 1/197 | 1/197 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | | ● | | | | | | ● | ● | |
| Steels up to 1000 N/mm² | | | ● | ● | ● | ● | ● | ● | ● | ● | |
| Steels up to 1400 N/mm² | | | | ◐ | ◐ | ◐ | ◐ | ◐ | ● | ● | ● |
| Steels up to 42 HRC | | | | | | | | | ◐ | ◐ | ◐ |
| Steels up to 52 HRC | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ● | | | | | | | | |
| Ti steels, Ti alloys, special steels | | | | | | | | | | | |
| Cast-iron materials | | | | | | | | | ◐ | ◐ | |
| Al, Al- and Mg alloy | | ◐ | ◐ | | | | | | | | |
| Copper, brass, bronze | | | | | | | | | | | |

● recommended ◐ suitable ○ limited suitability

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M | M | M | M | M | M | M | MF |
| **Colour ring** | red | red | red | | | black | black | white | white | |
| **Order No.** | 1714 | 1718 | 1715 | 1716 | 1717 | 1722 | 1725 | 1731 | 1719 | 1734 |
| **Threaded section** | M3–M20 | M3–M20 | M6–M20 | M6–M12 | M3–M12 | M3–M20 | M1,6–M24 | M3–M20 | M3–M20 | M3–M10 |
| **For through threads** | | | | ≤ 1,5 x D | ≤ 1,5 x D | 3 x D | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **For blind holes** | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | | | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **Type/form** | H/C | HR 40/C | H/C | H/D | H/D | W/B | WR 45/C | GG/C | GG/C | MS/C |
| **Material** | HSS-E | HSS-E | HSS-E PM | HSS-E PM | Solid carbide | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6HX | ISO 2 6HX | ISO 2 6H |
| **Surface** | Steam | TiCN | TiAlN | TiCN | TiCN | Bright | Bright | Nitrated | TiAlN | Bright |
| **Page** | 1/197 | 1/197 | 1/197 | 1/202 | 1/202 | 1/203 | 1/203 | 1/204 | 1/204 | 1/204 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | | | | | | | | | |
| Steels up to 1000 N/mm² | | | | | | | | | | |
| Steels up to 1400 N/mm² | | ● | ● | ● | | | | | | |
| Steels up to 42 HRC | | ○ | ○ | ◐ | ● | | | | | |
| Steels up to 52 HRC | | | | | ● | ● | | | | |
| Steels up to 56 HRC | | | | | ● | ● | | | | |
| Steels up to 60 HRC | | | | | | ● | | | | |
| Hard processing over 60 HRC | | | | | | ● | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | | | | | |
| Ti steels, Ti alloys, special steels | | | | | | | | | | |
| Cast-iron materials | | | | | | | | ● | ● | |
| Al, Al- and Mg alloy | | | | | | ● | ● | | | |
| Copper, brass, bronze | | | | | | | | | | ● |

● recommended ◐ suitable ○ limited suitability

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M-LH | M-LH | M | MF | MF | MF | MF | MF |
| **Colour ring** | | | yellow | yellow | | yellow | yellow | yellow | yellow | green |
| **Order No.** | 1720 | 1721 | 1737 | 1724 | 1750 | 1753 | 1727 | 1755 | 1729 | 1736 |
| **Threaded section** | M3–M10 | M3–M10 | M3–M20 | M3–M20 | M3–M20 | M3–M30 | M3–M30 | M4–M30 | M4–M24 | M3–M30 |
| **For through threads** | ≤ 3 x D | | ≤ 3 x D | | ≤ 1,5 x D | ≤ 3 x D | ≤ 3 x D | | | ≤ 3 x D |
| **For blind holes** | ≤ 3 x D | ≤ 3 x D | | ≤ 3 x D | | | | ≤ 3 x D | ≤ 3 x D | |
| **Type/form** | MS/C | H/C | N/B | N/C | N | N/B | N/B | NR 40/C | NR 40/C | N/B |
| **Material** | HSS-E | Solid carbide | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | ISO 2 6G | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H |
| **Surface** | Bright | Bright | Bright | Bright | Bright | Steam | TiN | Steam | TiN | Steam |
| **Page** | 1/204 | 1/205 | 1/205 | 1/206 | 1/206 | 1/207 | 1/207 | 1/207 | 1/207 | 1/208 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | | ◐ | ● | ● | ● | ◐ | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | | ◐ | | | ◐ | | | | | ● |
| Steels up to 1400 N/mm² | | | ◐ | | | | | | | | |
| Steels up to 42 HRC | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | | | | | | ◐ |
| Ti steels, Ti alloys, special steels | | | | | | | | | | | |
| Cast-iron materials | | | ● | | | | | | ● | ● | |
| Al, Al- and Mg alloy | | | ● | ● | ● | | ◐ | ● | | | ● |
| Copper, brass, bronze | | ● | ● | | | | | | | | |

● recommended ◐ suitable ○ limited suitability

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | MF | MF | MF | MF | MF | MF | MF | MF | G | G |
| **Colour ring** | green | green | green | blue | blue | blue | blue | red | yellow | yellow |
| **Order No.** | 1739 | 1741 | 1742 | 1757 | 1730 | 1759 | 1733 | 1776 | 1763 | 1744 |
| **Threaded section** | M8–M24 | M5–M30 | M8–M24 | M4–M24 | M4–M20 | M3–M24 | M8–M20 | M3–M24 | G 1/8"–G 1.1/2" | G 1/8"–G 1.1/2" |
| **For through threads** | ≤ 3 x D | | | ≤ 3 x D | ≤ 3 x D | | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D |
| **For blind holes** | | ≤ 3 x D | ≤ 3 x D | | | ≤ 3 x D | ≤ 3 x D | | | |
| **Type/form** | N/B | N/C | N/C | INOX/B | INOX/B | INOX R 40/C | INOX/C | H/B | N/B | N/B |
| **Material** | HSS-E PM | HSS-E | HSS-E PM | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 228 | ISO 228 |
| **Surface** | TiN | Steam | TiN | Steam | TiN | Steam | TiN | TiCN | Bright | Steam |
| **Page** | 1/208 | 1/209 | 1/209 | 1/209 | 1/209 | 1/210 | 1/210 | 1/210 | 1/213 | 1/213 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | | | | | | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | | | | | ● | | |
| Steels up to 1400 N/mm² | | | | | | | | | ● | | |
| Steels up to 42 HRC | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | | | ● | ● | ● | ● | | | |
| Ti steels, Ti alloys, special steels | | | | | | | | | | | |
| Cast-iron materials | | | | | | | | | | | |
| Al, Al- and Mg alloy | | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | | ● | ● |
| Copper, brass, bronze | | | | | | | | | | | |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | G | G | G | UNC | UNC | UNC | UNC | UNF | UNF | UNF |
| **Colour ring** | yellow | yellow | blue | yellow | yellow | green | green | yellow | yellow | green |
| **Order No.** | 1765 | 1745 | 1766 | 1768 | 1770 | 1746 | 1747 | 1772 | 1774 | 1748 |
| **Threaded section** | G 1/8"–G 1.1/2" | G 1/8"– G 1" | G 1/8"–G 1" | Nr. 2–56"–1–8" | Nr. 4–40"–1–8" | Nr. 4–40"–3/4–10" | Nr. 4–40"–7/8–9" | Nr. 10–32"–1–12" | Nr. 10–32"–1–12" | Nr. 10–32"–1–12" |
| **For through threads** | | | | ≤ 3 x D | | ≤ 3 x D | | ≤ 3 x D | | ≤ 3 x D |
| **For blind holes** | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | | ≤ 3 x D | | ≤ 3 x D | | ≤ 3 x D | |
| **Type/form** | NR 40/C | NR 40/C | INOX R 40/C | N/B | NR 40/C | N/B | N/C | N/B | NR 40/C | N/B |
| **Material** | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | ISO 228 | ISO 228 | ISO 228 | 2 B | 2 B | 2 B | 2 B | 2 B | 2 B | 2 B |
| **Surface** | Bright | Steam | TiCN | Bright | Bright | Steam | Steam | Bright | Bright | Steam |
| **Page** | 1/213 | 1/213 | 1/214 | 1/215 | 1/215 | 1/216 | 1/216 | 1/218 | 1/218 | 1/219 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | | | | | | ● | ● | | | |
| Steels up to 1400 N/mm² | | | | | | | | | | | |
| Steels up to 42 HRC | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | ● | | | ◐ | | | | |
| Ti steels, Ti alloys, special steels | | | | | | | | | | | |
| Cast-iron materials | | | | | | | | | | | |
| Al, Al- and Mg alloy | | ● | ● | | ● | ● | ● | ● | ● | ● | ● |
| Copper, brass, bronze | | | | | | | | | | | |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Overview - Machine thread drills

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | UNF | Pg | M | M | M | M | MF | MF | M | M |
| **Colour ring** | green | | | | | | | | blue/red | blue/red |
| **Order No.** | 1749 | 1777 | 1780 | 1783 | 1784 | 1787 | 1785 | 1789 | 1660 | 1661 |
| **Threaded section** | Nr. 10–32"–1–12" | 7–36 | M3–M16 | M3–M12 | M3–M16 | M3–M16 | M6–M20 | M6–M20 | M3–M10 | M3–M20 |
| **For through threads** | | ≤ 1,5 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≤ 3 x D | ≤ 3 x D |
| **For blind holes** | ≤ 3 x D | ≤ 1,5 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | ≥ 1,0 x D | | |
| **Type/form** | N/C | N/C | N | N | N | INOX | N | INOX | N | N |
| **Material** | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E PM | HSS-E | HSS-E PM | HSS-E | HSS-E |
| **Tolerance zone** | 2 B | | 6 HX | 6 GX | 6 HX | 6 HX | 6 HX | 6 HX | ISO 2 6H | ISO 2 6H |
| **Surface** | Steam | Bright | TiN | TiN | TiN | TiN | TiN | TiN | Steam | Steam |
| **Page** | 1/219 | 1/221 | 1/221 | 1/221 | 1/221 | 1/222 | 1/222 | 1/222 | 1/199 | 1/199 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | | | ● | ● | ● | ● | ● | ● | | |
| Steels up to 42 HRC | | | | | | | | ● | | | |
| Steels up to 52 HRC | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Ti steels, Ti alloys, special steels | | | | ● | ● | ● | ● | ● | ● | | |
| Cast-iron materials | | | | | | | | | | ● | ● |
| Al, Al- and Mg alloy | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Copper, brass, bronze | | | | | | | | | | | |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Overview - Machine thread drills

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | M | M | M | M | M | M | M | M | MF |
| **Colour ring** | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red |
| **Order No.** | 1662 | 1663 | 1664 | 1665 | 1666 | 1667 | 1668 | 1669 | 1779 |
| **Threaded section** | M3–M10 | M2–M20 | M3–M10 | M3–M20 | M3–M10 | M3–M20 | M3–M16 | M3–M16 | M4 x 0,5–M20 x 1,5 |
| **For through threads** | ≤ 3 x D | ≤ 3 x D | | | | | | | ≤ 3 x D |
| **For blind holes** | | | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | ≤ 3 x D | |
| **Type/form** | N | N | N | N | N | N | N | N | N |
| **Material** | HSS-E | HSS-E PM | HSS-E | HSS-E | HSS-E | HSS-E PM | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | ISO 3 6G | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 3 6G | ISO 2 6H | ISO 2 6H | 6HX | ISO 2 6H |
| **Surface** | Steam | TiN | Steam | Steam | Steam | TiN | Steam | TiN | Bright |
| **Page** | 1/199 | 1/199 | 1/200 | 1/200 | 1/200 | 1/200 | 1/201 | 1/201 | 1/211 |

## Material group

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | | ● | | | | ● | | | ● |
| Steels up to 42 HRC | | | | | | | ● | | | |
| Steels up to 52 HRC | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Ti steels, Ti alloys, special steels | | | ● | | | | ● | | | ● |
| Cast-iron materials | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Al, Al- and Mg alloy | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Copper, brass, bronze | | | ● | ● | ● | ● | ● | ● | ● | ● |

● recommended ◐ suitable ○ limited suitability

## Overview - Machine thread drills

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Thread type** | MF | MF | MF | G | G | UNC | UNC | UNF | UNF |
| **Colour ring** | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red | blue/red |
| **Order No.** | 1794 | 1796 | 1797 | 1798 | 1799 | 1696 | 1697 | 1658 | 1659 |
| **Threaded section** | M8 x 1,0–M24 x 2,0 | M4 x 0,5–M20 x 1,5 | M8 x 1,0–M24 x 2,0 | G1/8–G1 | G1/8–G1 | Nr. 4–40"–3/4–10" | Nr. 4–40"–3/4–10" | Nr. 4–48"–5/8–18" | Nr. 4–48"–5/8–18" |
| **For through threads** | ≤ 3 x D | | | ≤ 3 x D | | ≤ 3 x D | | ≤ 3 x D | |
| **For blind holes** | | ≤ 3 x D | ≤ 3 x D | | ≤ 3 x D | | ≤ 3 x D | | ≤ 3 x D |
| **Type/form** | N | N | N | N | N | N | N | N | N |
| **Material** | HSS-E PM | HSS-E | HSS-E PM | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E | HSS-E |
| **Tolerance zone** | ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 228 | ISO 228 | 2 B | 2 B | 2 B | 2 B |
| **Surface** | TiN | Bright | TiN | Bright | Bright | Bright | Bright | Bright | Bright |
| **Page** | 1/211 | 1/212 | 1/212 | 1/214 | 1/214 | 1/217 | 1/217 | 1/220 | 1/220 |

## Material group

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | | | ● | | ● | | ● | |
| Steels up to 42 HRC | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Ti steels, Ti alloys, special steels | | ● | | | ● | | ● | | ● | |
| Cast-iron materials | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Al, Al- and Mg alloy | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Copper, brass, bronze | | ● | ● | ● | ● | ● | ● | ● | ● | ● |

● **recommended** ◐ **suitable** ○ **limited suitability**

## Hand tap

**Design:** HSS, DIN 352, tolerance range ISO 2/6H, type N, bright surface.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

M | HSS | DIN 352 | ISO 2 6H | Type N | 60° | ≤ 3xd

format professional quality

**1600** Bright — Roughing tap with point form A (6–8 threads).

**1601** Bright — Second tap with point form D (3.5–5 threads).

**1603** Bright — Finish tap with point form C (2–3 threads).

**1604** Bright — 3 piece set consisting of (order no. 1600, 1601, 1603).

Roughing tap
bright

**Intermediate tap**
bright

**Finish tap**
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1600 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |
| 1601 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |
| 1603 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |
| 1604 | ● | ● | ○ | ◐ | | | | | ◐ | ○ | ◐ | ● | ● |

| Order No. | Thread | 1600 format bright | 1601 format bright | 1603 format bright | 1604 format bright | Gradient mm | Total length mm | Square shank mm | Core hole ∅ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | M1 | 18.25 | 18.25 | 18.25 | 53.70 | 0.25 | 32 | 2.1 | 0.75 |
| 0012 | M1.2 | 16.90 | 16.90 | 16.90 | 50.00 | 0.25 | 32 | 2.1 | 0.95 |
| 0014 | M1.4 | 15.35 | 15.35 | 15.35 | 45.70 | 0.30 | 32 | 2.1 | 1.10 |
| 0016 | M1.6 | 14.25 | 14.25 | 14.25 | 42.40 | 0.35 | 32 | 2.1 | 1.25 |
| 0017 | M1.7 | 14.60 | 14.60 | 14.60 | 43.20 | 0.35 | 32 | 2.1 | 1.30 |
| 0020 | M2 | 10.80 | 10.80 | 10.80 | 31.40 | 0.40 | 36 | 2.1 | 1.60 |
| 0022 | M2.2 | 11.95 | 11.95 | 11.95 | 35.20 | 0.45 | 36 | 2.1 | 1.75 |
| 0023 | M2.3 | 11.95 | 11.95 | 11.95 | 35.20 | 0.40 | 36 | 2.1 | 1.90 |
| 0025 | M2.5 | 9.05 | 9.05 | 9.05 | 26.10 | 0.45 | 40 | 2.1 | 2.05 |
| 0026 | M2.6 | 10.40 | 10.40 | 10.40 | 30.10 | 0.45 | 40 | 2.1 | 2.10 |
| 0030 | M3 | 4.96 | 4.96 | 4.96 | 14.45 | 0.50 | 40 | 2.7 | 2.50 |
| 0035 | M3.5 | 9.70 | 9.70 | 9.70 | 28.00 | 0.60 | 45 | 3.0 | 2.90 |
| 0040 | M4 | 4.96 | 4.96 | 4.96 | 14.45 | 0.70 | 45 | 3.4 | 3.30 |
| 0045 | M4.5 | 12.30 | 12.30 | 12.30 | 36.60 | 0.75 | 50 | 4.9 | 3.70 |
| 0050 | M5 | 5.35 | 5.35 | 5.35 | 15.35 | 0.80 | 50 | 4.9 | 4.20 |
| 0060 | M6 | 5.35 | 5.35 | 5.35 | 15.35 | 1.00 | 50 | 4.9 | 5.00 |
| 0070 | M7 | 11.40 | 11.40 | 11.40 | 34.10 | 1.00 | 50 | 4.9 | 6.00 |
| 0080 | M8 | 6.00 | 6.00 | 6.00 | 17.30 | 1.25 | 56 | 4.9 | 6.80 |
| 0090 | M9 | 15.10 | 15.10 | 15.10 | 44.70 | 1.25 | 63 | 5.5 | 7.80 |
| 0100 | M10 | 7.05 | 7.05 | 7.05 | 20.40 | 1.50 | 70 | 5.5 | 8.50 |
| 0110 | M11 | 20.30 | 20.30 | 20.30 | 58.90 | 1.50 | 70 | 6.2 | 9.50 |
| 0120 | M12 | 8.85 | 8.85 | 8.85 | 25.50 | 1.75 | 75 | 7.0 | 10.20 |
| 0140 | M14 | 14.10 | 14.10 | 14.10 | 40.90 | 2.00 | 80 | 9.0 | 12.00 |
| 0160 | M16 | 17.35 | 17.35 | 17.35 | 50.40 | 2.00 | 80 | 9.0 | 14.00 |
| 0180 | M18 | 29.90 | 29.90 | 29.90 | 86.70 | 2.50 | 95 | 11.0 | 15.50 |
| 0200 | M20 | 31.90 | 31.90 | 31.90 | 92.30 | 2.50 | 95 | 12.0 | 17.50 |
| 0220 | M22 | 38.30 | 38.30 | 38.30 | 113.50 | 2.50 | 100 | 14.5 | 19.50 |
| 0240 | M24 | 40.30 | 40.30 | 40.30 | 119.50 | 3.00 | 110 | 14.5 | 21.00 |
| 0270 | M27 | 59.50 | 59.50 | 59.50 | 176.50 | 3.00 | 110 | 16.0 | 24.00 |
| 0300 | M30 | 72.20 (W160) | 72.20 (W160) | 72.20 (W160) | 214.00 (W160) | 3.50 | 125 | 18.0 | 26.50 |

## Hand tap set

**Design:** HSS-E, DIN 352, tolerance range ISO 2/6H, type INOX, bright surface.
3 piece set consisting of roughing tap with point form A (6–8 threads), second tap with point form D (3.5–5 threads) and finish tap with point form C (2–3 threads).

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

M | HSS-E | DIN 352 | ISO 2 6H | Type INOX | 60° | ≤ 3xd

format professional quality

Roughing tap

Intermediate tap

Finish tap

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1618 | ● | ● | ◐ | ○ | | | | | ● | ○ | ◐ | ● | ● |

| Order No. | Thread | 1618 format bright | Gradient mm | Total length mm | Square shank mm | Core hole ∅ mm |
|---|---|---|---|---|---|---|
| 0020 | M2 | 65.60 | 0.40 | 36 | 2.1 | 1.60 |
| 0025 | M2.5 | 58.00 | 0.45 | 40 | 2.1 | 2.05 |
| 0030 | M3 | 42.80 | 0.50 | 40 | 2.7 | 2.50 |
| 0035 | M3.5 | 53.10 | 0.60 | 45 | 3.0 | 2.90 |
| 0040 | M4 | 42.80 | 0.70 | 45 | 3.4 | 3.30 |
| 0050 | M5 | 45.40 | 0.80 | 50 | 4.9 | 4.20 |
| 0060 | M6 | 48.00 (W160) | 1.00 | 50 | 4.9 | 5.00 |

| Order No. | Thread | 1618 format bright | Gradient mm | Total length mm | Square shank mm | Core hole ∅ mm |
|---|---|---|---|---|---|---|
| 0080 | M8 | 53.10 | 1.25 | 56 | 4.9 | 6.80 |
| 0100 | M10 | 65.60 | 1.50 | 70 | 5.5 | 8.50 |
| 0120 | M12 | 82.10 | 1.75 | 75 | 7.0 | 10.20 |
| 0140 | M14 | 113.50 | 2.00 | 80 | 9.0 | 12.00 |
| 0160 | M16 | 88.40 | 2.00 | 80 | 9.0 | 14.00 |
| 0200 | M20 | 134.00 (W160) | 2.50 | 95 | 12.0 | 17.50 |

## Hand tap set for left thread

**Design:** HSS, DIN 352, tolerance range ISO 2/6H, type N, bright surface.
3 piece set consisting of roughing tap with point form A (6–8 threads), second tap with point form D (3.5–5 threads) and finish tap with point form C (2–3 threads).

**Application:** For metric left threads according to DIN ISO 13. Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

M-LH | HSS | DIN 352 | ISO 2 6H | Type N | 60° | ≤ 3xd

format professional quality

Roughing tap

Intermediate tap

Finish tap

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1612 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |

| Order No. | Thread | 1612 format bright | Gradient mm | Total length mm | Square shank mm | Core hole ∅ mm |
|---|---|---|---|---|---|---|
| 0030 | M3 | 48.00 | 0.50 | 40 | 2.7 | 2.50 |
| 0040 | M4 | 48.50 | 0.70 | 45 | 3.4 | 3.30 |
| 0050 | M5 | 48.50 | 0.80 | 50 | 4.9 | 4.20 |
| 0060 | M6 | 49.50 | 1.00 | 50 | 4.9 | 5.00 |
| 0080 | M8 | 60.10 | 1.25 | 56 | 4.9 | 6.80 |
| 0100 | M10 | 74.60 (W160) | 1.50 | 70 | 5.5 | 8.50 |

| Order No. | Thread | 1612 format bright | Gradient mm | Total length mm | Square shank mm | Core hole ∅ mm |
|---|---|---|---|---|---|---|
| 0120 | M12 | 87.90 | 1.75 | 75 | 7.0 | 10.20 |
| 0140 | M14 | 125.00 | 2.00 | 80 | 9.0 | 12.00 |
| 0160 | M16 | 142.00 | 2.00 | 80 | 9.0 | 14.00 |
| 0180 | M18 | 196.00 | 2.50 | 95 | 11.0 | 15.50 |
| 0200 | M20 | 176.00 (W160) | 2.50 | 95 | 12.0 | 17.50 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Hand tap set

**Design:** HSS, DIN 2181, tolerance range ISO 2/6H, type N, bright surface.
2 piece set consisting of roughing tap with point form A (6–8 threads) and finish tap with point form C (2–3 threads).

**Application:** For metric precision threads according to ISO DIN 13. Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

MF | HSS | DIN 2181 | ISO 2 6H | Type N | 60° | ≤ 3xd

format professional quality

**Roughing tap**

**Finish tap**
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1627 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |

| Order No. | Thread x gradient mm | 1627 format bright | Total length mm | Square shank mm | Core hole ∅ mm |
|---|---|---|---|---|---|
| 0001 | M2 x 0.25 | 40.50 | 36 | 2.1 | 1.75 |
| 0003 | M2.5 x 0.35 | 27.00 | 40 | 2.1 | 2.15 |
| 0005 | M2.6 x 0.35 | 27.00 | 40 | 2.1 | 2.25 |
| 0007 | M3 x 0.35 | 18.05 | 40 | 2.7 | 2.65 |
| 0009 | M4 x 0.35 | 18.05 | 45 | 3.4 | 3.65 |
| 0011 | M4 x 0.50 | 18.05 | 45 | 3.4 | 3.50 |
| 0013 | M5 x 0.50 | 16.60 | 50 | 4.9 | 4.50 |
| 0015 | M6 x 0.50 | 18.05 | 50 | 4.9 | 5.50 |
| 0017 | M6 x 0.75 | 16.25 | 50 | 4.9 | 5.20 |
| 0019 | M7 x 0.75 | 21.90 | 50 | 4.9 | 6.20 |
| 0021 | M8 x 0.50 | 23.00 | 50 | 4.9 | 7.50 |
| 0023 | M8 x 0.75 | 19.95 | 50 | 4.9 | 7.20 |
| 0025 | M8 x 1.00 | 18.90 | 56 | 4.9 | 7.00 |
| 0027 | M9 x 1.00 | 37.00 | 63 | 5.5 | 8.00 |
| 0029 | M10 x 0.75 | 29.00 | 63 | 5.5 | 9.20 |
| 0031 | M10 x 1.00 | 21.70 | 63 | 5.5 | 9.00 |
| 0033 | M10 x 1.25 | 23.50 | 70 | 5.5 | 8.80 |
| 0035 | M11 x 1.00 | 30.50 | 63 | 6.2 | 10.00 |
| 0037 | M12 x 1.00 | 26.00 | 70 | 7.0 | 11.00 |
| 0039 | M12 x 1.25 | 26.00 | 70 | 7.0 | 10.80 |
| 0041 | M12 x 1.50 | 25.40 | 70 | 7.0 | 10.50 |
| 0043 | M14 x 1.00 | 38.80 | 70 | 9.0 | 13.00 |
| 0045 | M14 x 1.25 | 38.10 | 70 | 9.0 | 12.80 |
| 0047 | M14 x 1.50 | 31.80 | 70 | 9.0 | 12.50 |
| 0049 | M15 x 1.00 | 49.40 | 70 | 9.0 | 14.00 |
| 0051 | M15 x 1.50 | 43.50 | 70 | 9.0 | 13.50 |
| 0053 | M16 x 1.00 | 45.30 | 70 | 9.0 | 15.00 |
| 0055 | M16 x 1.50 | 38.90 | 70 | 9.0 | 14.50 |
| 0057 | M18 x 1.00 | 55.40 | 80 | 11.0 | 17.00 |
| 0059 | M18 x 1.50 | 45.80 | 80 | 11.0 | 16.50 |
| 0061 | M18 x 2.00 | 64.00 | 80 | 11.0 | 16.00 |
| 0063 | M20 x 1.00 | 57.60 | 80 | 12.0 | 19.00 |
| 0065 | M20 x 1.50 | 50.00 | 80 | 12.0 | 18.50 |
| 0067 | M20 x 2.00 | 76.70 | 80 | 12.0 | 18.00 |

(W160)

| Order No. | Thread x gradient mm | 1627 format bright | Total length mm | Square shank mm | Core hole ∅ mm |
|---|---|---|---|---|---|
| 0069 | M22 x 1.00 | 83.20 | 80 | 14.5 | 21.00 |
| 0071 | M22 x 1.50 | 67.70 | 80 | 14.5 | 20.50 |
| 0073 | M22 x 2.00 | 70.80 | 80 | 14.5 | 20.00 |
| 0075 | M24 x 1.50 | 54.70 | 90 | 14.5 | 22.50 |
| 0077 | M24 x 2.00 | 83.20 | 90 | 14.5 | 22.00 |
| 0079 | M25 x 1.50 | 103.00 | 90 | 14.5 | 23.50 |
| 0081 | M26 x 1.50 | 103.50 | 90 | 14.5 | 24.50 |
| 0083 | M27 x 1.50 | 106.50 | 90 | 16.0 | 25.50 |
| 0085 | M27 x 2.00 | 118.00 | 90 | 16.0 | 25.00 |
| 0087 | M28 x 1.50 | 110.50 | 90 | 16.0 | 26.50 |
| 0089 | M30 x 1.00 | 147.00 | 90 | 18.0 | 29.00 |
| 0091 | M30 x 1.50 | 121.00 | 90 | 18.0 | 28.50 |
| 0093 | M30 x 2.00 | 141.00 | 90 | 18.0 | 28.00 |
| 0095 | M32 x 1.50 | 140.50 | 90 | 18.0 | 30.50 |
| 0097 | M33 x 1.50 | 161.00 | 100 | 20.0 | 31.50 |
| 0099 | M33 x 2.00 | 187.50 | 100 | 20.0 | 31.00 |
| 0101 | M34 x 1.50 | 160.50 | 100 | 22.0 | 32.50 |
| 0103 | M35 x 1.50 | 173.50 | 100 | 22.0 | 33.50 |
| 0105 | M36 x 1.50 | 184.00 | 100 | 22.0 | 34.50 |
| 0107 | M36 x 2.00 | 199.50 | 125 | 22.0 | 34.00 |
| 0109 | M36 x 3.00 | 210.00 | 125 | 22.0 | 33.00 |
| 0111 | M38 x 1.50 | 199.50 | 110 | 22.0 | 36.50 |
| 0113 | M39 x 2.00 | 282.00 | 125 | 24.0 | 37.00 |
| 0115 | M39 x 3.00 | 280.50 | 125 | 24.0 | 36.00 |
| 0117 | M40 x 1.50 | 255.50 | 110 | 24.0 | 38.50 |
| 0119 | M42 x 2.00 | 311.50 | 125 | 24.0 | 40.00 |
| 0121 | M42 x 3.00 | 307.00 | 125 | 24.0 | 39.00 |
| 0123 | M45 x 1.50 | 310.00 | 110 | 29.0 | 43.50 |
| 0125 | M45 x 2.00 | 326.50 | 125 | 29.0 | 43.00 |
| 0127 | M48 x 1.50 | 341.50 | 140 | 29.0 | 46.50 |
| 0129 | M48 x 3.00 | 389.50 | 140 | 29.0 | 45.00 |
| 0131 | M50 x 1.50 | 374.50 | 140 | 29.0 | 48.50 |
| 0133 | M52 x 2.00 | 404.50 | 140 | 32.0 | 50.00 |

(W160)

## Hand tap set

**Design:** HSS, DIN 2184, type N, bright surface.
3 piece set consisting of roughing tap with point form A (6–8 threads), second tap with point form D (3.5–5 threads) and finish tap with point form C (2–3 threads).

**Application:** For Whitworth threads according to DIN 11. Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

BSW | HSS | DIN 2184 | Type N | 55° | ≤ 3xd

format professional quality

**Roughing tap**

**Second tap**

**Finish tap**

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1635 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |

| Order No. | Thread | 1635 format professional quality bright | Threads | Thread Ø | Total length | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | inch | | inch | mm | mm | mm | mm |
| 0001 | W 1/8 | 27.00 | 40 | 3.175 | 40 | 3.0 | 2.50 |
| 0003 | W 5/32 | 30.70 | 32 | 3.969 | 45 | 3.4 | 3.20 |
| 0005 | W 3/16 | 28.00 | 24 | 4.762 | 50 | 4.9 | 3.60 |
| 0007 | W 7/32 | 34.70 | 24 | 5.556 | 56 | 4.9 | 4.50 |
| 0009 | W 1/4 | 28.80 | 20 | 6.350 | 56 | 4.9 | 5.10 |
| 0011 | W 5/16 | 35.40 | 18 | 7.938 | 63 | 4.9 | 6.50 |
| 0013 | W 3/8 | 38.50 | 16 | 9.525 | 70 | 5.5 | 7.90 |
| 0015 | W 7/16 | 54.60 | 14 | 11.113 | 70 | 6.2 | 9.20 |
| 0017 | W 1/2 | 57.40 | 12 | 12.700 | 75 | 7.0 | 10.50 |
| 0019 | W 9/16 | 88.30 | 12 | 14.287 | 80 | 9.0 | 12.00 |
| 0021 | W 5/8 | 80.30 | 11 | 15.876 | 80 | 9.0 | 13.50 |
| 0023 | W 3/4 | 111.50 | 10 | 19.051 | 95 | 12.0 | 16.50 |
| 0025 | W 7/8 | 149.00 | 9 | 22.226 | 100 | 14.5 | 19.20 |
| 0027 | W 1 | 186.00 (W160) | 8 | 25.401 | 110 | 18.0 | 22.00 |

## Tap wrenches

can be found on 1/223

format professional quality

## Hand tap

**Design:** HSS, DIN 5157, type N, bright surface.

**Application:** For pipe threads according to DIN ISO 228/1 (DIN 259). Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

G | HSS | DIN 5157 | Type N | 55° | ≤ 3xd

format professional quality

**1638** Bright — Roughing tap with point form A (6–8 threads).

Roughing tap
bright

**1639** Bright — Finish tap with point form C (2–3 threads).

Finish tap
bright

**1640** Bright — 2 piece set consisting of (order no. 1638, 1639).

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1638 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |
| 1639 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |
| 1640 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |

| Order No. | Thread inch | 1638 format bright | 1639 format bright | 1640 format bright | Threads per inch | Thread Ø mm | Total length mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|
| 0001 | G 1/8 | 11.35 | 11.35 | 20.90 | 28 | 9.728 | 63 | 5.5 | 8.80 |
| 0003 | G 1/4 | 13.90 | 13.90 | 25.40 | 19 | 13.157 | 70 | 9.0 | 11.80 |
| 0005 | G 3/8 | 18.15 | 18.15 | 33.60 | 19 | 16.662 | 70 | 9.0 | 15.25 |
| 0007 | G 1/2 | 26.50 | 26.50 | 48.60 | 14 | 20.955 | 80 | 12.0 | 19.00 |
| 0009 | G 5/8 | 35.50 | 35.50 | 65.10 | 14 | 22.911 | 80 | 14.5 | 21.00 |
| 0011 | G 3/4 | 43.90 | 43.90 | 80.60 | 14 | 26.441 | 90 | 16.0 | 24.50 |
| 0013 | G 7/8 | 60.70 | 60.70 | 112.00 | 14 | 30.201 | 90 | 18.0 | 28.25 |
| 0015 | G 1 | 73.40 | 73.40 | 135.00 | 11 | 33.249 | 100 | 20.0 | 30.75 |
| 0017 | G 1.1/4 | 172.50 | 172.50 | 316.00 | 11 | 41.910 | 125 | 24.0 | 39.50 |
| 0019 | G 1.1/2 | 215.00 | 215.00 | 396.50 | 11 | 47.803 | 140 | 29.0 | 45.25 |
| 0021 | G 2 | 316.00 (W160) | 316.00 (W160) | 576.50 (W160) | 11 | 59.614 | 160 | 35.0 | 57.00 |

## Hand tap set

**Design:** HSS, DIN 2184, type N, bright surface.
2 piece set consisting of roughing tap with point form A (6–8 threads) and finish tap with point form C (2–3 threads).

**Application:** For UNF fine thread unit ANSI B1.1. Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

UNF | HSS | DIN 2184 | Type N | 60° | ≤ 3xd

format professional quality

Roughing tap

Finish tap
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1650 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |

| Order No. | Thread inch | 1650 format bright | Threads per inch | Thread Ø mm | Total length mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0001 | UNF Nr. 0 | 33.80 | 80 | 1.524 | 32 | 2.1 | 1.30 |
| 0003 | UNF Nr. 1 | 30.40 | 72 | 1.854 | 36 | 2.1 | 1.60 |
| 0005 | UNF Nr. 2 | 28.80 | 64 | 2.184 | 36 | 2.1 | 1.90 |
| 0007 | UNF Nr. 3 | 26.50 | 56 | 2.515 | 40 | 2.1 | 2.10 |
| 0009 | UNF Nr. 4 | 23.40 | 48 | 2.845 | 40 | 2.7 | 2.40 |
| 0011 | UNF Nr. 5 | 22.40 | 44 | 3.175 | 40 | 3.0 | 2.70 |
| 0013 | UNF Nr. 6 | 22.40 | 40 | 3.505 | 45 | 3.0 | 3.00 |
| 0015 | UNF Nr. 8 | 21.40 | 36 | 4.166 | 45 | 4.9 | 3.50 |
| 0017 | UNF Nr. 10 | 22.40 | 32 | 4.826 | 50 | 4.9 | 4.10 |
| 0019 | UNF Nr. 12 | 23.90 (W160) | 28 | 5.486 | 56 | 4.9 | 4.70 |

Continued overleaf

## Hand tap set

Continued

| Order No. | Thread inch | 1650 format professional quality bright | Threads per inch | Thread Ø mm | Total length mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0021 | UNF 1/4 | 20.80 | 28 | 6.350 | 56 | 4.9 | 5.50 |
| 0023 | UNF 4/16 | 26.20 | 24 | 7.938 | 63 | 4.9 | 6.90 |
| 0025 | UNF 3/8 | 28.20 | 24 | 9.525 | 63 | 5.5 | 8.50 |
| 0027 | UNF 7/16 | 36.00 | 20 | 11.113 | 70 | 6.2 | 9.90 |
| 0029 | UNF 1/2 | 39.00 | 20 | 12.700 | 70 | 9.0 | 11.50 |
| 0031 | UNF 9/16 | 56.40 | 18 | 14.288 | 70 | 9.0 | 12.90 |
| 0033 | UNF 5/8 | 52.40 | 18 | 15.875 | 70 | 9.0 | 14.50 |
| 0035 | UNF 3/4 | 74.10 | 16 | 19.050 | 80 | 12.0 | 17.50 |
| 0037 | UNF 7/8 | 88.60 | 14 | 22.225 | 80 | 14.5 | 20.40 |
| 0039 | UNF 1 | 125.50 (W160) | 12 | 25.400 | 90 | 14.5 | 23.20 |

## Hand tap set

**Design:** HSS, DIN 2184, type N, bright surface.
3 piece set consisting of roughing tap with point form A (6–8 threads), second tap with point form D (3.5–5 threads) and finish tap with point form C (2–3 threads).

**Application:** For UNC unit ANSI B1.1 coarse thread. Particularly suitable for high strength materials up to 1200 N/mm² in strength and rust-free and acid-resistant steels.

UNC | HSS | DIN 2184 | Type N | 60° | ≤ 3xd

format professional quality

**Roughing tap**

**Second tap**

**Finish tap**

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1647 | ● | ● | ◐ | ○ | | | | | ◐ | ○ | ◐ | ● | ● |

| Order No. | Thread inch | 1647 format professional quality bright | Threads per inch | Thread Ø mm | Total length mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0001 | UNC Nr. 1 | 36.90 | 64 | 1.854 | 36 | 2.1 | 1.50 |
| 0003 | UNC Nr. 2 | 36.90 | 56 | 2.184 | 36 | 2.1 | 1.80 |
| 0005 | UNC Nr. 3 | 31.10 | 48 | 2.515 | 40 | 2.1 | 2.10 |
| 0007 | UNC Nr. 4 | 28.20 | 40 | 2.845 | 40 | 2.7 | 2.30 |
| 0009 | UNC Nr. 5 | 27.90 | 40 | 3.175 | 45 | 3.0 | 2.60 |
| 0011 | UNC Nr. 6 | 27.40 | 32 | 3.505 | 45 | 3.0 | 2.85 |
| 0013 | UNC Nr. 8 | 28.20 | 32 | 4.166 | 45 | 4.9 | 3.50 |
| 0015 | UNC Nr. 10 | 29.20 | 24 | 4.826 | 50 | 4.9 | 3.90 |
| 0017 | UNC Nr. 12 | 31.40 | 24 | 5.486 | 56 | 4.9 | 4.50 |
| 0019 | UNC 1/4 | 25.10 | 20 | 6.350 | 56 | 4.9 | 5.20 |
| 0021 | UNC 5/16 | 33.30 | 18 | 7.938 | 63 | 4.9 | 6.60 |
| 0023 | UNC 3/8 | 38.30 | 16 | 9.525 | 70 | 5.5 | 8.00 |
| 0025 | UNC 7/16 | 45.00 | 14 | 11.113 | 70 | 6.2 | 9.40 |
| 0027 | UNC 1/2 | 53.70 | 13 | 12.700 | 75 | 7.0 | 10.70 |
| 0029 | UNC 9/16 | 75.90 | 12 | 14.288 | 80 | 9.0 | 12.20 |
| 0031 | UNC 5/8 | 70.00 | 11 | 15.875 | 80 | 9.0 | 13.50 |
| 0033 | UNC 3/4 | 101.00 | 10 | 19.050 | 95 | 12.0 | 16.50 |
| 0035 | UNC 7/8 | 127.50 | 9 | 22.225 | 100 | 14.5 | 19.50 |
| 0037 | UNC 1 | 163.50 (W160) | 8 | 25.400 | 110 | 16.0 | 22.20 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Hand thread cutting tool set

**Design:** Supplied in a robust, high quality metal cassette with automatic drill setup function when opened.

M | HSS | DIN 352 | DIN 338 | EN 22568 | 60°

format professional quality

NEW 1795 0080

1795 0100

1795 0120

1795 0150

| Order No. | Size | 1795 format | Set contents |
|---|---|---|---|
| 0080 | M3–M12 | 34.80 | **7 cutting tap bits, 1 piece,** DIN 352, M3; 4; 5; 6; 8; 10; 12<br>**7 sprial drills** HSS, DIN 338 RN, in the respective core drill dimensions Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**1 adjustable tap wrench,** DIN 1814, size 1.1/2 |
| 0100 | M3–M12 | 54.10 | **7 tap sets, 3 piece** DIN 352 M3; 4; 5; 6; 8; 10; 12 |
| 0120 | M3–M12 | 85.80 | **7 tap sets 3-piece,** DIN 352 M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills** HSS, DIN 338 RN, in the respective core drilling dimensions Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**1 tap wrench, adjustable** DIN 1814, size 1.1/2 |
| 0150 | M3–M12 | 63.60 | **Each 2 cut taps,** DIN 352 M3; 4; 5; 6; 8; 10; 12<br>**1 tap wrench,** adjustable, DIN 1814, size 1.1/2<br>**1 tool holder,** size 1 |
| | | (W162) | |

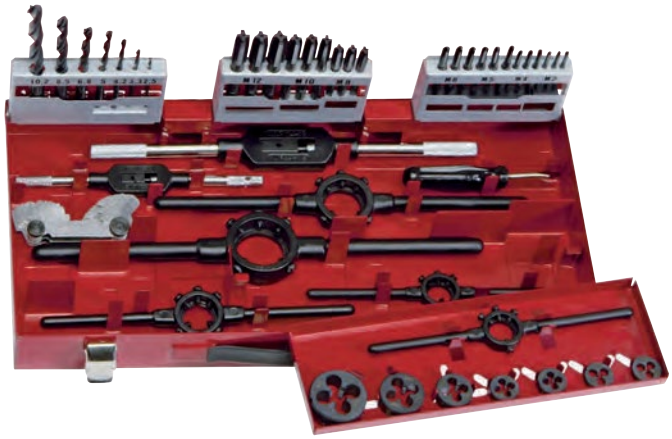
## Hand thread cutting tool set

**Design:** Drill in HSS-G, HSS die stocks, surface **vaporised,**30 piece. Supplied in a sturdy steel case with carry handles and 2 locks. The tools are kept in various holders and are readily available.

**Application:** For metric outer and inner M3-M12 threads. The best possible handling is guaranteed due to the different sized die holder and tap wrench.

M | HSS | HSS G | DIN 352 | DIN 338 | EN 22568 | 60°

format professional quality



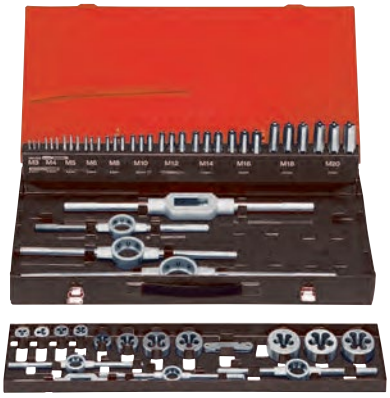
| Order No. | Size | 1795 format | Set contents |
|---|---|---|---|
| 0225 | M3–M12 | 167.50 | **7 tap sets 3-piece, HSS-G,** DIN 352, M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drill, HSS-G,** DIN 338 N, in the respective core drilling dimensions Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**7 dies HSS,** DIN EN 22568, M3; 4; 5; 6; 8; 10; 12<br>**5 die holder,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14 mm<br>**2 tap wrench, adjustable,** DIN 1814, size 1; 2<br>**1 screwdriver** for slot screws, 4.5 mm<br>**1 thread template,** metric |
| | | (W162) | |

## Hand thread cutting tool set, HSS + HSS-E

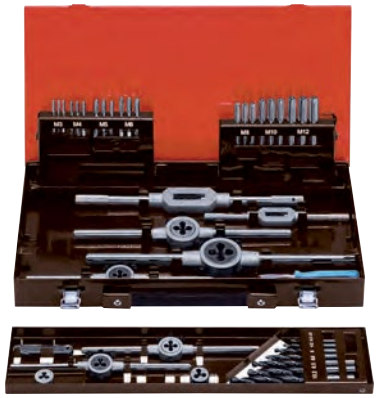
**Design:** Supplied in a sturdy steel case with carry handles and 2 locks. The tools, bright surface, are kept in various holders and are readily available.

M | MF | HSS | HSS-E | DIN 352 | DIN 338 | EN 22568 | 60°

format professional quality



1795 0200/0222/0224



1795 0220

1795 0240

| Order No. | Size | 1795 format | Set contents |
|---|---|---|---|
| 0220 | M3 –M12 | 134.50 | **7 x 3 piece tap sets,** HSS, DIN 352, M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills,** HSS, DIN 338 N, in the respective core drilling dimensions Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**7 die stocks** HSS, DIN EN 22568, M3; 4; 5; 6; 8; 10; 12<br>**5 die stock holders,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14 mm<br>**2 adjustable tap wrenches,** DIN 1814, size 1; 2<br>**1 screwdriver** for slotted screws, 4.5 mm<br>**1 thread template,** metric |
| 0222 | M3 –M12 | 205.00 | **7 tap sets 3-piece, HSS-E,** DIN 352, M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drill, HSS-E,** DIN 338 N, in the respective core drilling dimensions Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**7 dies, HSS-E,** M3; 4; 5; 6; 8; 10; 12<br>**5 die holders,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14<br>**2 tap wrenches,** adjustable DIN 1814, size 1; 2 |
| 0224 | MF3–MF12 | 141.50 | **7 tap sets 2-piece,** HSS, DIN 352, M3 x 0.35; 4 x 0.5; 5 x 0.5; 6 x 0.75; 8 x 1.0; 10 x 1.0; 12 x 1.5<br>**7 spiral drills,** HSS, DIN 338 N, in the respective drilling dimensions Ø 2.6; 3.5; 4.5; 5.2; 7.0; 9.0; 10.5 mm<br>**7 dies, HSS,** M3x0.35; 4x0.5; 5x0.5; 6x0.75; 8x1.0; 10x1.0; 12x1.5<br>**5 die holders,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14<br>**2 tap wrenches,** adjustable DIN 1814, size 1; 2 |
| 0200 | M3 –M20 | 292.50 | **11 x 3 piece tap sets,** HSS, DIN 352, M3; 4; 5; 6; 8; 10; 12; 14; 16; 18; 20<br>**11 die stocks** HSS, DIN EN 22568, M3; 4; 5; 6; 8; 10; 12; 14; 16; 18; 20<br>**6 die stock holders,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14; 45 x 18 mm<br>**2 adjustable tap wrenches,** DIN 1814, size 1; 3<br>**1 screwdriver** for slotted screws, 4.5 mm<br>**1 thread template,** metric |
| 0240 | M3 –M24 | 430.00 | **13 x 3 piece hand tap sets,** HSS, DIN 352, M3; 4; 5; 6; 8; 10; 12; 14; 16; 18; 20; 22; 24<br>**13 die stocks,** HSS, DIN EN 22568, M3; 4; 5; 6; 8; 10; 12; 14; 16; 18; 20; 22; 24<br>**7 die stock holders,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14; 45 x 18; 55 x 22 mm<br>**3 adjustable tap wrenches,** DIN 1814, size 0; 2; 4 |

(W162)

## Hand thread cutting tool set, HSS

NEW

**Design:** Supplied in a sturdy plastic case with carry handles and 2 locks. The tools, bright surface, are kept in various holders and are readily available.

| | | |
|---|---|---|
| M | HSS | DIN 352 |
| DIN 338 | EN 22568 | 60° |

format professional quality

| Order No. | Size | 1795 format | Set contents |
|---|---|---|---|
| 0250 | M3–M12 | 96.90 | **7 x 3 piece tap sets,** HSS, DIN 352, M3; 4; 5; 6; 8; 10; 12<br>**7 x spiral drills,** HSS, DIN 338 N, in the respective core drilling dimensions Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**7 die stocks HSS**, DIN 223, M3; 4; 5; 6; 8; 10; 12<br>**7 guides,** DIN 223, M3; 4; 5; 6; 8; 10; 12<br>**5 die stock holders**, DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14 mm<br>**1 adjustable tap wrench**, DIN 1814, size 1 + 2<br>**1 tool holder,** size 1<br>**1 thread gauge**<br>**1 screwdriver**<br>**1 handbook on thread cutting** |

(W001)

## Thread cutting tool assortment, HSS

**Design:** HSS, supplied in a very robust, high quality plastic cassette with removable foam inlays for storage in shelf-workshop trolley systems.

| |
|---|
| HSS |

EXACT PRÄZISIONSWERKZEUGE

| Order No. | Size | 1795 EXACT | Set contents |
|---|---|---|---|
| 0600 | M3–M12 | 227.00 | **7 Hand tap sets 3-piece,** DIN 352, M3; 4; 5; 6; 8; 10; 12<br>**7 machine taps,** DIN 371/376 Form B, M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills,** DIN 338, Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**7 dies,** DIN EN 22568, M3; 4; 5; 6; 8; 10; 12<br>**7 guides,** M3; 4; 5; 6; 8; 10; 12<br>**5 die holders,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14 mm<br>**2 tap wrenches, adjustable,** DIN 1814, size 1; 2<br>**1 hand deburrer,** Ø 12.4 mm<br>**1 tool holder,** size 2<br>**1 drilling paste** 20 g<br>**1 thread gauge** Standard<br>**1 screwdriver** Standard<br>**1 manual** thread cutting |

(W001)

## Thread cutting tool assortment, HSS-E

**Design:** HSS-E, supplied in a very robust, high quality plastic cassette with removable foam inlays for storage in shelf-workshop trolley systems.

HSS-E

EXACT PRÄZISIONSWERKZEUGE

| Order No. | Size | 1795 EXACT | Set contents |
|---|---|---|---|
| 0601 | M3–M12 | 292.00 | **7 Hand tap sets 3-piece,** DIN 352, M3; 4; 5; 6; 8; 10; 12<br>**7 machine taps,** DIN 371/376 Form B, M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills,** DIN 338, ∅ 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm<br>**7 dies,** DIN EN 22568, M3; 4; 5; 6; 8; 10; 12<br>**7 guides,** M3; 4; 5; 6; 8; 10; 12<br>**5 die holders,** DIN 225, 20 x 5; 20 x 7; 25 x 9; 30 x 11; 38 x 14 mm<br>**2 tap wrenches, adjustable,** DIN 1814, size 1; 2<br>**1 hand deburrer,** ∅ 12.4 mm<br>**1 tool holder,** size 2<br>**1 drilling paste** 20 g<br>**1 thread gauge** Standard<br>**1 screwdriver** Standard<br>**1 manual** thread cutting |

(W001)

## Hand taps- and dies set

**Design:** Supplied in a high quality plastic case with foam inserts for perfect tool handling.

HSS | DIN 2184 | EN 22568 | DIN 1814

format professional quality

| Order No. | Size | 1650 format | Set contents |
|---|---|---|---|
| 0041 | UNF1/4-1" | 326.00 | **9 Hand taps,** DIN 2184 (2-piece) – 1/4 - 5/16 – 3/8 – 7/16 – 1/2 - 5/8 – 3/4 - 7/8 – 1″<br>**9 dies,** DIN EN 22568 – 1/4 – 5/16 – 3/8 – 7/16 – 1/2 - 5/8 – 3/4 - 7/8 – 1″<br>**2 tap wrenches,** DIN 1814 – No. 1 1/2 / Nr. 4<br>**6 dies holders,** DIN 225 – 20x7 / 25x9 / 30x11 / 38x10 / 45x14 / 55x16<br>**1 screwdriver**<br>**1 thread gauge** |

(W162)

## Hand taps- and dies set

**Design:** Supplied in a high quality plastic case with foam inserts for perfect tool handling.

HSS | DIN 2184
EN 22568 | DIN 1814

format professional quality

| Order No. | Size | 1647 format | Set contents |
|---|---|---|---|
| 0039 | UNC1/4-1" | 439.50 | **9 Hand taps,** DIN 2184 (3-piece) – 1/4 – 5/16 – 3/8 – 7/16 – 1/2 - 5/8 – 3/4 - 7/8 – 1"<br>**9 dies,** DIN EN 22568 – 1/4 – 5/16 – 3/8 – 7/16 – 1/2 - 5/8 – 3/4 - 7/8 – 1"<br>**2 tap wrenches,** DIN 1814 – No. 1.1/2 / Nr. 4<br>**6 dies holders,** DIN 225 - 20x7 / 25x9 / 30x11 / 38x14 / 45x18 / 55x22<br>**1 screwdriver**<br>**1 thread gauge** |
| | | (W162) | |

## Hand taps- and dies set

**Design:** Supplied in a high quality plastic case with foam inserts for perfect tool handling.

HSS | DIN 2184
EN 22568 | DIN 1814

format professional quality

| Order No. | Size | 1646 format | Set contents |
|---|---|---|---|
| 0001 | BSP1/8-1" | 361.50 | **12 Hand taps,** DIN 5157 (2-piece) - 1/8 – 1/4 – 3/8 – 1/2 – 3/4 – 1"<br>**6 dies,** DIN EN 22568 – 1/8 – 1/4 – 3/8 – 1/2 – 3/4 – 1"<br>**2 tap wrenches,** DIN 1814 – No. 3 / No. 5<br>**5 dies holders,** DIN 225 - 30x11 / 38x10 / 45x14 / 55x16 / 65x18<br>**1 screwdriver**<br>**1 thread gauge** |
| | | (W162) | |

## Thread cutting handbook

**Design:** Handbook with practical tips for everyday use, including the subjects of occupational safety, thread types, thread cutting mistakes, thread identification, repairs, terms and dimension explanations. DIN A6, over 60 pages, hardcover.

format professional quality

| Order No. | Design | 1796 format |
|---|---|---|
| 0000 | German | 2.69 |
| 1000 | English | 2.69 |
| 2000 | French | 2.69 |
| 3000 | Dutch | 2.69 |
| 4000 | Spanish | 2.69 |
| 5000 | Polish | 2.69 |
| | | (W001) |

## Cutting tap 1/4" bit

**Design:** Tap bit, 1/4" hexagon mount for metric ISO thread according to DIN 13.

**Application:** Cutting tap bits are designed for thread drilling with cordless screw drills and handheld drills with left and right motion. However, they are also suitable for drilling by hand and on stationary drilling machines. Your cordless screw drill should have a minimum power of 7.5 Volt. Make sure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil.
rpm: lowest settings (0–450 $min^{-1}$),
torque: maximum setting.

DIN 13 | M | HSS | VÖLKEL THREADING SOLUTIONS

1/4"

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1649 | ● | | | | | | | | | | | ○ | |

| Order No. | Nominal Ø mm | 1649 VÖLKEL | Total length mm | Cutting length mm | Width of keys mm |
|---|---|---|---|---|---|
| 0030 | M3 | 3.45 | 33 | 11 | 6.35 |
| 0040 | M4 | 3.45 | 35 | 12 | 6.35 |
| 0050 | M5 | 4.26 | 36 | 15 | 6.35 |
| 0060 | M6 | 4.26 | 39 | 18 | 6.35 |
| 0080 | M8 | 6.20 | 40 | 19 | 6.35 |
| 0100 | M10 | 7.25 | 41 | 21 | 6.35 |
| | | (W161) | | | |

## Cutting tap 1/4" bit set

**Design:** Supplied in a plastic box.

1649 0105

1649 0110

| Order No. | Size | 1649 VÖLKEL | Set contents |
|---|---|---|---|
| 0105 | M3–M10 | 27.30 | **6 tap bits,** M3; 4; 5; 6; 8; 10 |
| 0110 | M3–M10 | 43.90 | **1 bit holder**<br>**6 tap bits,** M3; 4; 5; 6; 8; 10<br>**6 core hole drill bits,** Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5 |
| | | (W161) | |

## Combi-bit 1/4"

**Design:** HSS, bright surface. With 1/4" hexagon shank

**Application:** For drilling core holes, thread drilling and deburring in one step, for regular metric threads according to ISO DIN 13.
Combi-bits are designed for thread drilling with cordless drills and handheld drills with left and right motion. However, they are also suitable for drilling by hand and on stationary drilling machines. Only through-holes with up to a maximum thread depth of 1 x D can be produced. Particularly suitable for assembly work and small batches. Make sure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil (order no. 9829).

M | HSS | DIN 13

60° | ≤ 1xd

1/4"

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1651 | ● | | | | | | | | | | | ● | ● |

| Order No. | Thread | 1651 bright | Gradient | Drill Ø | Total length |
|---|---|---|---|---|---|
| | | | mm | mm | mm |
| 0001 | M3 | 6.65 | 0.50 | 2.5 | 36 |
| 0003 | M4 | 6.65 | 0.70 | 3.3 | 39 |
| 0005 | M5 | 6.65 | 0.80 | 4.2 | 41 |
| 0007 | M6 | 6.65 | 1.00 | 5.0 | 44 |
| 0009 | M8 | 9.20 | 1.25 | 6.8 | 50 |
| 0011 | M10 | 11.00 (W161) | 1.50 | 8.5 | 59 |

## Combi-bit set 1/4"

**Design:** Supplied in a plastic box.

| Order No. | Size | 1651 | Set contents |
|---|---|---|---|
| 0020 | M3–M10 | 47.70 (W161) | **1 bit holder**<br>**6 combi-bits** M3; 4; 5; 6; 8; 10 |

format
professional quality

# ALL-ROUNDER AT YOUR SIDE

**Unbeatable – three tools in one.** This team player saves space, time and money: It is always the winning combination when out on the road, as the FORMAT Combi-Bit allows core hole drilling, tapping and deburring in one step.
The advantages of this combination speak for themselves in the long run - reduced set-up time and up to 50 percent longer service life. Also the risk of fracture is much lower.
The heat-treated induction zone makes this tool perfect, as it allows for greater bend and elasticity.
Proven FORMAT quality meets technical innovation: this all-rounder leaves no prayers unanswered for professional use.
**Time is precious.**

Combi-bit SGE 1/4" (order no. 1656 0001, 📖 1/178, 6/156)

**3 IN 1 TOOL**

## Combi-bit 1/4"

**Design:** With cross-grinding and 1/4" hexagon shank.

**Application:** For drilling core holes, thread drilling and deburring in 1 step. The heat-treated induction zone allows for increased bending elasticity, thus significantly reducing the risk of fracture, thereby up to **50% higher** life. Combi-bits are designed for thread drilling with cordless drills and handheld drills with left and right motion. However, they are also suitable for drilling by hand and on stationary drilling machines. Material thickness not more than nominal thread Ø (M6 = 6 mm material thickness). Particularly suitable for assembly work and small batches. Make sure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil (Order No. 9829).

M | HSS | HSS-E | 60° | ≤ 1xd

format professional quality

1/4"

**1656** HSS
Bright

**1657** HSS-E
Bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1656 | ● | ○ | | | | | | | ○ | | | ● | ● |
| 1657 | ● | ○ | | | | | | | ● | | | ● | ● |

| Order No. | Thread | 1656 format professional quality bright | 1657 format professional quality bright | Gradient mm | Drill Ø mm | Total length mm |
|---|---|---|---|---|---|---|
| 0001 | M3 | 5.65 | 8.90 | 0.50 | 2.5 | 36 |
| 0003 | M4 | 5.65 | 8.90 | 0.70 | 3.3 | 39 |
| 0005 | M5 | 5.65 | 8.90 | 0.80 | 4.2 | 41 |
| 0007 | M6 | 5.65 | 8.90 | 1.00 | 5.0 | 44 |
| 0009 | M8 | 7.70 | 10.25 | 1.25 | 6.8 | 50 |
| 0011 | M10 | 9.40 | 12.25 | 1.50 | 8.5 | 59 |
| 0013 | M12 | 14.45 (W161) | 23.20 (W161) | 1.75 | 10.2 | 66 |

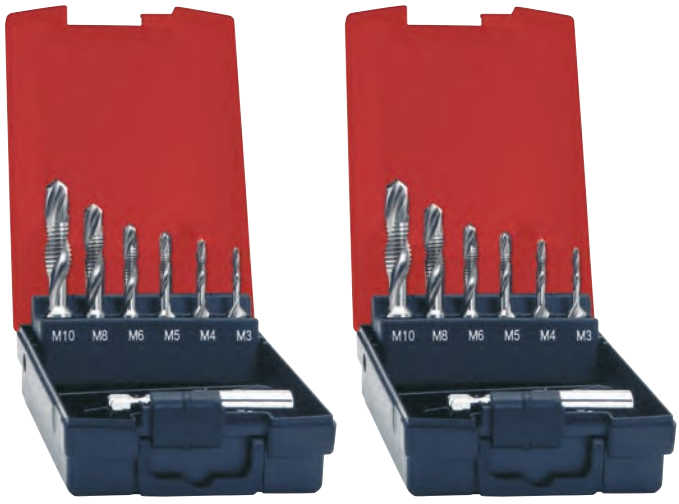
## Combi-bit set 1/4"

**Design:** With cross-grinding and 1/4" hexagon shank. Supplied in a plastic box.

**Application:** For drilling core holes, thread drilling and deburring in 1 step.
The heat-treated induction zone allows for increased bending elasticity, thus significantly reducing the risk of fracture, thereby up to **50% higher** life.

**1656** HSS
Bright

**1657** HSS-E
Bright




HSS **1656** bright

HSS-E **1657** bright

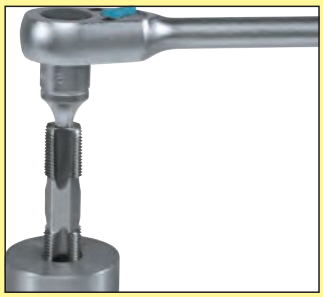
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1656 | ● | | | | | | | | ○ | | | ● | ● |
| 1657 | ● | ○ | | | | | | | ● | | | ● | ● |

| Order No. | Size | 1656 format professional quality bright | 1657 format professional quality bright | Set contents |
|---|---|---|---|---|
| 0020 | M3–M10 | 43.60 (W161) | 61.90 (W161) | **1 Bit holder with adapter**<br>**6 combi-bits,** M3; 4; 5; 6; 8; 10 |

Threading tool assortment **HexTap**

**Application:**
for general use
- Easy to machine materials up to 900 N/mm²
- Non-alloyed and low alloy steels
- For through-holes and blind holes
- For manual use

**Benefits:**
- Pilot pins for accurately aligned fixing
- Roughing and finish tap in one tool
- Use for difficult to access areas
- For producing new threads
- For drilling and repairing damaged threads



## Cutting tap bit HexTap S

**Design:** Tap bit, 1/4" hexagonal mount for pipe threads according to DIN ISO 228.

**Application:** Cutting tap bits are designed for thread drilling with cordless screw drills and handheld drills with left and right motion. However, they are also suitable for drilling by hand and on stationary drilling machines. Your cordless screw drill should have a minimum power of 7.5 Volt. Make sure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil.

G | HSS | DIN ISO 228

VÖLKEL THREADING SOLUTIONS

1/4"

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1649 | ● | | | | | | | | | | | ○ | |

| Order No. | Nominal Ø inch | 1649 VÖLKEL | Total length mm | Cutting length mm | Width of keys mm |
|---|---|---|---|---|---|
| 0250 | G 1/8 | 6.90 (W161) | 40.5 | 17 | 6.35 |

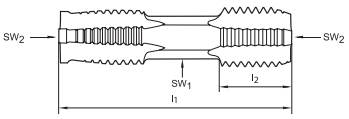
## Cutting tap bit HexTap DS

**Design:** Double-sided tap Multi-Drive for metric ISO thread according to DIN 13.

**Application:** For general use in materials with good machining properties up to 900 N/mm². For non-alloy and low alloy steels, through-holes and blind holes The tap is designed for manual use.

M | HSS | DIN 13

VÖLKEL THREADING SOLUTIONS



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1649 | ● | | | | | | | | | | | ○ | |

| Order No. | Nominal Ø mm | 1649 VÖLKEL | Overall length $l_1$ mm | Cutting edge length $l_2$ mm | Wrench size 1 mm | Wrench size 2 mm |
|---|---|---|---|---|---|---|
| 0120 | M12 | 14.95 | 70 | 22 | 8 | 4 |
| 0140 | M14 | 17.20 | 70 | 22 | 10 | 4 |
| 0160 | M16 | 19.50 | 70 | 22 | 10 | 4 |
| 0180 | M18 | 21.80 | 80 | 24 | 13 | 5 |
| 0200 | M20 | 24.10 (W161) | 80 | 24 | 13 | 6 |

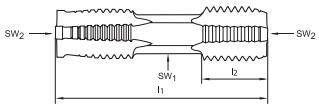
## Cutting tap bit HexTap DS

**Design:** Double-sided tap, Multi-Drive for pipe thread according to DIN 228.

**Application:** For general use in materials with good machining properties up to 900 N/mm². For non-alloy and low alloy steels, through-holes and blind holes The tap is designed for manual use.

G | DIN ISO 228

VÖLKEL THREADING SOLUTIONS



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1649 | ● | | | | | | | | | | | ○ | |

| Order No. | Nominal Ø inch | 1649 VÖLKEL | Overall length $l_1$ mm | Cutting edge length $l_2$ mm | Wrench size 1 mm | Wrench size 2 mm |
|---|---|---|---|---|---|---|
| 0260 | G 1/4 | 11.50 | 70 | 22 | 8 | 4 |
| 0270 | G 3/8 | 17.00 | 70 | 22 | 12 | 4 |
| 0280 | G 1/2 | 23.00 | 80 | 24 | 15 | 6 |
| 0290 | G 3/4 | 34.40 | 90 | 27 | 19 | 8 |
| 0300 | G 1 | 58.50 (W161) | 100 | 29 | 24 | 10 |

## HexTap set

**Design:** Supplied in a wooden case.

**Application:** For general use in materials with good machining properties up to 900 N/mm². For non-alloy and low alloy steels, through-holes and blind holes The tap is designed for manual use.

| Order No. | Size | 1649 VÖLKEL | Set contents |
|---|---|---|---|
| 0201 | M3–M20 | 149.00 | M3; 4; 5; 6; 8; 10; 12; 14; 16; 18; 20 |
| 0301 | G 1/8" –1" | 183.50 (W161) | G 1/8; 1/4; 3/8; 1/2; 3/4; 1" |

## HexTap tap assortment

**Design:** Supplied in a wooden case.

**Application:** For general use in materials with good machining properties up to 900 N/mm². For non-alloy and low alloy steels, through-holes and blind holes The taps and hexagon **cutting nuts** (DIN 382) are designed for manual use.

| Order No. | Size | 1649 VÖLKEL | Set contents |
|---|---|---|---|
| 0203 | M3–M20 | 310.00 | M3; 4; 5; 6; 8; 10; 12; 14; 16; 18; 20 |
| 0303 | G 1/8" –1" | 378.50 (W161) | G 1/8; 1/4; 3/8; 1/2; 3/4; 1" |

## V-COIL thread repair set

**Drilling:** Bore out damaged thread with normal spiral drills. Boring out is not required for spark plug threads - the combined drilling and cutting tool should be used. Please note that larger holes are required for thread formers.

**Check:** Check the tap and thread bolt for the same thread and gradient.

**Thread:** Cut the mounting thread in the bored out hole with the special V-COIL taps. The use of cutting oil is recommended.

**Installing the thread insert:** Place the insert on the tool and make sure that the carrier pin is in the slot opening and then make the right setting with the adjustment ring. Then turn in the thread insert in the thread direction applying light pressure.
**Do not turn against the running direction,** as the pin can break off.

**Breaking the pin:** After installation, take the insertion tool out and remove the carrier pin with the pin breaker. The pin should be removed with long nose pliers for larger dimensions and spark plug threads. After completing these steps, a thread is produced that is often better and stronger than the original thread due to the narrow and exact tolerances as well as the spring thread forming.

Supplied in a plastic cassette up to M12, and in a metal cassette from M14.

**Application:** Thread armouring of materials with low shearing resistance e.g. aluminium and magnesium alloys, in mechanical engineering, in automobile, electro and medical technology and in aviation and aerospace. Thread repair of damaged or worn threads. Reject recovery.

| Order No. | Size | 1651 V-COIL | Set contents |
|---|---|---|---|
| 0100 | M2 | 23.00 | 1 tap M2;<br>1 spiral drill 2.1 mm;<br>1 hand installation tool with fixing ring no. 2;<br>1 pin breaker no. 2;<br>20 thread inserts 1.5 x D |
| 0110 | M2.5 | 23.00 | 1 tap M2.5;<br>1 spiral drill 2.6 mm;<br>1 hand installation tool with fixing ring no. 3;<br>1 pin breaker no. 3;<br>20 thread inserts 1.5 x D |
| 0120 | M3 | 23.00 | 1 tap M3;<br>1 spiral drill 3.2 mm;<br>1 hand installation tool with fixing ring no. 4;<br>1 pin breaker no. 4;<br>20 thread inserts 1.5 x D |
| 0130 | M4 | 23.00 | 1 tap M4;<br>1 spiral drill 4.2 mm;<br>1 hand installation tool with fixing ring no. 6;<br>1 pin breaker no. 6;<br>20 thread inserts 1.5 x D |
| 0140 | M5 | 23.90 | 1 tap M5;<br>1 spiral drill 5.2 mm;<br>1 hand installation tool with fixing ring no. 8;<br>1 pin breaker no. 8;<br>20 thread inserts 1.5 x D |
| 0150 | M6 | 25.80 | 1 tap M6;<br>1 spiral drill 6.3 mm;<br>1 hand installation tool with fixing ring no. 9;<br>1 pin breaker no. 9;<br>20 thread inserts 1.5 x D |
| 0160 | M8 | 32.90 | 1 tap M8;<br>1 spiral drill 8.3 mm;<br>1 hand installation tool with fixing ring no. 11;<br>1 pin breaker no. 11;<br>20 thread inserts 1.5 x D |

(W161)

| Order No. | Size | 1651 V-COIL | Set contents |
|---|---|---|---|
| 0170 | MF8 x 1.00 | 32.90 | 1 tap MF8 x 1.0;<br>1 spiral drill 8.3 mm;<br>1 hand installation tool with fixing ring no. 11;<br>1 pin breaker no. 11;<br>20 thread inserts 1.5 x D |
| 0180 | M10 | 35.10 | 1 tap M10 x 1.5;<br>1 spiral drill 10.4 mm;<br>1 hand installation tool with fixing ring no. 13;<br>1 pin breaker no. 13;<br>15 thread inserts 1.5 x D |
| 0190 | MF10 x 1.00 | 35.10 | 1 tap MF10 x 1.0;<br>1 spiral drill 10.3 mm;<br>1 hand installation tool with fixing ring no. 13;<br>1 pin breaker no. 13;<br>15 thread inserts 1.5 x D |
| 0200 | M12 | 39.40 | 1 tap M12;<br>1 spiral drill 12.4 mm;<br>1 hand installation tool with fixing ring no. 15;<br>1 pin breaker no. 15;<br>10 thread inserts 1.5 x D |
| 0210 | M14 | 44.00 | 1 tap M14 x 2.0;<br>1 hand installation tool with fixing ring No. 16;<br>10 thread inserts 1.5 x D |
| 0230 | MF14 x 1.25 | 44.00 | 1 tap MF14 x 1.25;<br>1 hand installation tool with fixing ring no. 17;<br>10 thread inserts 1.5 x D |
| 0220 | M16 | 53.30 | 1 tap M16;<br>1 hand installation tool with fixing ring no. 18;<br>10 thread inserts 1.5 x D |

(W161)

## V-COIL thread repair assortment

**Drilling:** Bore out damaged thread with normal spiral drills. Boring out is not required for spark plug threads - the combined drilling and cutting tool should be used. Please note that larger holes are required for thread formers.

**Check:** Check the tap and thread bolt for the same thread and gradient.

**Thread:** Cut the mounting thread in the bored out hole with the special V-COIL taps. The use of cutting oil is recommended.

**Installing the thread insert:** Place the insert on the tool and make sure that the carrier pin is in the slot opening and then make the right setting with the adjustment ring. Then turn in the thread insert in the thread direction applying light pressure.
**Do not turn against the running direction,** as the pin can break off.

**Breaking the pin:** After installation, take the insertion tool out and remove the carrier pin with the pin breaker. The pin should be removed with long nose pliers for larger dimensions and spark plug threads. After completing these steps, a thread is produced that is often better and stronger than the original thread due to the narrow and exact tolerances as well as the spring thread forming.

Supplied in plastic cassette: thread extractor, spiral drill in core hole dimensions, tap and thread inserts (1.5 x D).

**Application:** Thread armouring of materials with low shearing resistance e.g. aluminium and magnesium alloys, in mechanical engineering, in automobile, electro and medical technology and in aviation and aerospace. Thread repair of damaged or worn threads. Reject recovery.

| Order No. | Set contents | 1652 V-COIL |
|---|---|---|
| 0050 | M5–M12 | 152.00 |
| 0075 | M6–M10 | 90.60 |
| 0100 | M6–M12 + M14 x 1.25 | 175.50 |
| | | (W161) |

## Thread inserts

**Design:** Standard thread insert, free running made of stainless steel. **1.0 x D.**

| Order No. | Size | 1652 V-COIL | PU |
|---|---|---|---|
| 0160 | M2 | 65.50 NEW | 100 Δ |
| 0180 | M2.5 | 19.50 NEW | 100 Δ |
| 0200 | M3 | 14.60 | 100 Δ |
| 0210 | M4 | 14.60 | 100 Δ |
| 0220 | M5 | 16.75 | 100 Δ |
| 0230 | M6 | 17.75 | 100 Δ |
| 0240 | M8 | 18.80 | 100 Δ |
| 0250 | M10 | 24.00 | 100 Δ |
| 0260 | M12 | 35.50 | 100 Δ |
| | | (W161) | |

**Design:** Standard thread insert, free running made of stainless steel. **1.5 x D.**

| Order No. | Size | 1652 V-COIL | PU |
|---|---|---|---|
| 0590 | M3 | 15.65 | 100 Δ |
| 0595 | M4 | 15.65 | 100 Δ |
| 0600 | M5 | 13.60 | 100 Δ |
| 0605 | M6 | 14.60 | 100 Δ |
| 0214 | MF8 x 1.0 | 29.30 NEW | 100 Δ |
| 0610 | M8 | 18.80 | 100 Δ |
| 0245 | MF10 x 1.0 | 34.80 NEW | 100 Δ |
| 0615 | M10 | 26.10 | 100 Δ |
| 0620 | M12 | 40.70 | 100 Δ |
| 0622 | MF14 x 1.25 | 57.50 NEW | 100 Δ |
| 0623 | M14 | 76.60 NEW | 100 Δ |
| 0624 | M16 | 94.70 NEW | 100 Δ |
| | | (W161) | |

**Design:** Standard thread insert, free running made of stainless steel. **2.0 x D.**

| Order No. | Size | 1653 V-COIL | PU |
|---|---|---|---|
| 0300 | M3 | 16.75 | 100 Δ |
| 0310 | M4 | 16.75 | 100 Δ |
| 0320 | M5 | 18.80 | 100 Δ |
| 0330 | M6 | 22.00 | 100 Δ |
| 0340 | M8 | 26.10 | 100 Δ |
| 0350 | M10 | 30.30 | 100 Δ |
| 0360 | M12 | 46.00 | 100 Δ |
| | | (W161) | |

**Design:** Standard thread insert, free running made of stainless steel **for spark plug thread.**

| Order No. | Size | 1653 V-COIL | PU | Length of thread mm |
|---|---|---|---|---|
| 0840 | MF14 x 1.25 | 28.70 | 50 Δ | 8.4 |
| 1240 | MF14 x 1.25 | 28.70 | 50 Δ | 12.4 |
| 1640 | MF14 x 1.25 | 28.70 | 50 Δ | 16.4 |
| | | (W161) | | |

Δ Can only be supplied as a whole packaging unit.

## V-COIL rapid thread repair set

**Drilling:** Bore out damaged thread with the V-COIL rapid spiral drills.

**Check:** Check the tap and thread bolt for the same thread and gradient.

**Thread:** Cut the mounting thread in the bored out hole with the special V-COIL taps. The use of cutting oil is recommended.

**Installing the thread insert:** Place the insert on the installation tool and turn open. Then turn in the thread insert applying light pressure.

**Breaking the pin:** After installation, take the insertion tool out using a cordless screwdriver turning to the left and remove the carrier pin with the pin breaker.

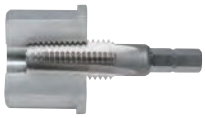
After completing these steps, a thread is produced that is often better and stronger than the original thread due to the narrow and exact tolerances as well as the spring thread forming. Supplied in a plastic cassette: tap, spiral drill in core hole dimensions, installation tool, pin breaker **each with 1/4" hexagon mount,** a universal holder with quick-change chuck and thread inserts.

**Application:** Thread armouring of materials with low shearing resistance e.g. aluminium and magnesium alloys, in mechanical engineering, in automobile, electro and medical technology and in aviation and aerospace. Thread repair of damaged or worn threads. Reject recovery.

HSS | DIN 8140

V-COIL THREAD INSERT SYSTEM

1/4"



| Order No. | Size | 1654 V-COIL | Set contents |
|---|---|---|---|
| 0100 | M3 | 21.50 | 1 tap M3;<br>1 spiral drill 3.2 mm;<br>1 installation tool with 1/4" hexagon mount;<br>1 pin breaker;<br>1 universal holder;<br>10 thread inserts 1.5 x D |
| 0110 | M4 | 21.50 | 1 tap M4;<br>1 spiral drill 4.2 mm;<br>1 installation tool with 1/4" hexagon mount;<br>1 pin breaker;<br>1 universal holder;<br>10 thread inserts 1.5 x D |
| 0120 | M5 | 22.40 | 1 tap M5;<br>1 spiral drill 5.2 mm;<br>1 installation tool with 1/4" hexagon mount;<br>1 pin breaker;<br>1 universal holder;<br>10 thread inserts 1.5 x D |
| 0130 | M6 | 24.10 | 1 tap M6;<br>1 spiral drill 6.3 mm;<br>1 installation tool with 1/4" hexagon mount;<br>1 pin breaker;<br>1 universal holder;<br>10 thread inserts 1.5 x D |
| 0140 | M8 | 30.70 | 1 tap M8;<br>1 spiral drill 8.3 mm;<br>1 installation tool with 1/4" hexagon mount;<br>1 pin breaker;<br>1 universal holder;<br>10 thread inserts 1.5 x D |
| 0150 | M10 | 32.80 | 1 tap M10;<br>1 spiral drill 10.4 mm;<br>1 installation tool with 1/4" hexagon mount;<br>1 pin breaker;<br>1 universal holder;<br>10 thread inserts 1.5 x D |
| 0160 | M12 | 36.80 | 1 tap M12;<br>1 spiral drill 12.4 mm;<br>1 installation tool with 1/4" hexagon mount;<br>1 pin breaker;<br>1 universal holder;<br>6 thread inserts 1.5 x D |

(W161)

## V-COIL rapid thread repair set

**Drilling:** Bore out damaged thread with the V-COIL rapid spiral drills.

**Check:** Check the tap and thread bolt for the same thread and gradient.

**Thread:** Cut the mounting thread in the bored out hole with the special V-COIL taps. The use of cutting oil is recommended.

**Installing the thread insert:** Place the insert on the installation tool and turn open. Then turn in the thread insert applying light pressure.

**Breaking the pin:** After installation, take the insertion tool out using a cordless screwdriver turning to the left and remove the carrier pin with the pin breaker.

After completing these steps, a thread is produced that is often better and stronger than the original thread due to the narrow and exact tolerances as well as the spring thread forming.

Supplied in a plastic cassette: tap, spiral drill in core hole dimensions, installation tool, pin breaker **each with 1/4" hexagon mount,** a universal holder with quick-change chuck and thread inserts (1.5 x D).

**Application:** Thread armouring of materials with low shearing resistance e.g. aluminium and magnesium alloys, in mechanical engineering, in automobile, electro and medical technology and in aviation and aerospace. Thread repair of damaged or worn threads. Reject recovery.

HSS | DIN 8140

V-COIL THREAD INSERT SYSTEM

1654 1100

1654 1000

| Order No. | Set contents | 1654 V-COIL |
|---|---|---|
| 1100 | M6–M10 | 90.60 |
| 1000 | M5–M12 | 156.00 (W161) |

## Machine tap, short/cutting tap

**Design:** HSS-E, DIN 352, tolerance range ISO 2/6H, type N, with spiral point form B (4-5 threads) for trhough-holes. Bright surface

**Application:** For regular metric threads according to ISO DIN 13.

**Note:** These taps can be used as both through-hole machine taps and as manual taps (finish taps only).

M | HSS-E | DIN 352 | ISO 2 6H | Type N | 60°

format professional quality

B | ≤ 3xd

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1673 | 10 | | | | | | | | | | | 15 | |

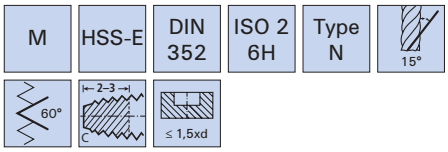
| Order No. | Thread | 1673 format bright | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0020 | M2 | 18.10 | 0.40 | 36 | 2.8 | 2.1 | 1.60 |
| 0030 | M3 | 7.60 | 0.50 | 40 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 7.60 | 0.70 | 45 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 7.80 | 0.80 | 50 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 8.25 | 1.00 | 56 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 9.55 | 1.25 | 63 | 6.0 | 4.9 | 6.80 |
| 0100 | M10 | 12.50 | 1.50 | 70 | 7.0 | 5.5 | 8.50 |
| 0120 | M12 | 17.30 | 1.75 | 75 | 9.0 | 7.0 | 10.20 |
| 0160 | M16 | 39.50 | 2.00 | 80 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | 63.70 (W164) | 2.50 | 95 | 16.0 | 12.0 | 17.50 |

## Machine tap, short/cutting tap

**Design:** HSS-E, DIN 352, tolerance range ISO 2/6H, type N, with point form C (2–3 threads) for blind holes. Bright surface

**Application:** For regular metric threads according to ISO DIN 13.

**Note:** These taps can be used as both blind hole machine taps and as manual taps (finish taps only).




format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1738 | 10 | | | | | | | | | | | 15 | |

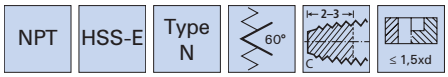
| Order No. | Thread | 1738 format bright | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 5.95 | 0.50 | 40 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 5.95 | 0.70 | 45 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 6.15 | 0.80 | 50 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 6.45 | 1.00 | 50 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 8.60 | 1.25 | 56 | 6.0 | 4.9 | 6.80 |
| 0100 | M10 | 11.10 | 1.50 | 70 | 7.0 | 5.5 | 8.50 |
| 0120 | M12 | 14.55 | 1.75 | 75 | 9.0 | 7.0 | 10.20 |
| 0160 | M16 | 52.70 | 2.00 | 80 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | 79.10 (W164) | 2.50 | 95 | 16.0 | 12.0 | 17.50 |

## Machine tap, short/cutting tap

**Design:** HSS-E, type N, with point form C (2–3 threads) for blind holes. Bright surface.

**Application:** For NPT threads.

**Note:** These taps can be used as both blind hole machine taps and as manual taps (finish taps only).




format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1670 | 10 | | | | | | | | | | 10 | 15 | |

| Order No. | Thread | 1670 format bright | Threads per inch | Thread Ø | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | inch | | | mm | mm | mm | mm | mm |
| 0001 | NPT 1/16 | 31.60 | 27.0 | 8.190 | 56 | 6 | 4.9 | 6.30 |
| 0003 | NPT 1/8 | 37.40 | 27.0 | 10.620 | 63 | 7 | 5.5 | 8.50 |
| 0005 | NPT 1/4 | 47.20 | 18.0 | 14.140 | 63 | 11 | 9.0 | 11.10 |
| 0007 | NPT 3/8 | 55.70 | 18.0 | 17.570 | 70 | 12 | 9.0 | 14.50 |
| 0009 | NPT 1/2 | 75.80 | 14.0 | 21.900 | 80 | 16 | 12.0 | 17.70 |
| 0011 | NPT 3/4 | 102.00 | 14.0 | 27.230 | 100 | 20 | 16.0 | 23.00 |
| 0013 | NPT 1* | 143.00 (W164) | 11.5 | 34.180 | 110 | 25 | 20.0 | 29.00 |

* HSS

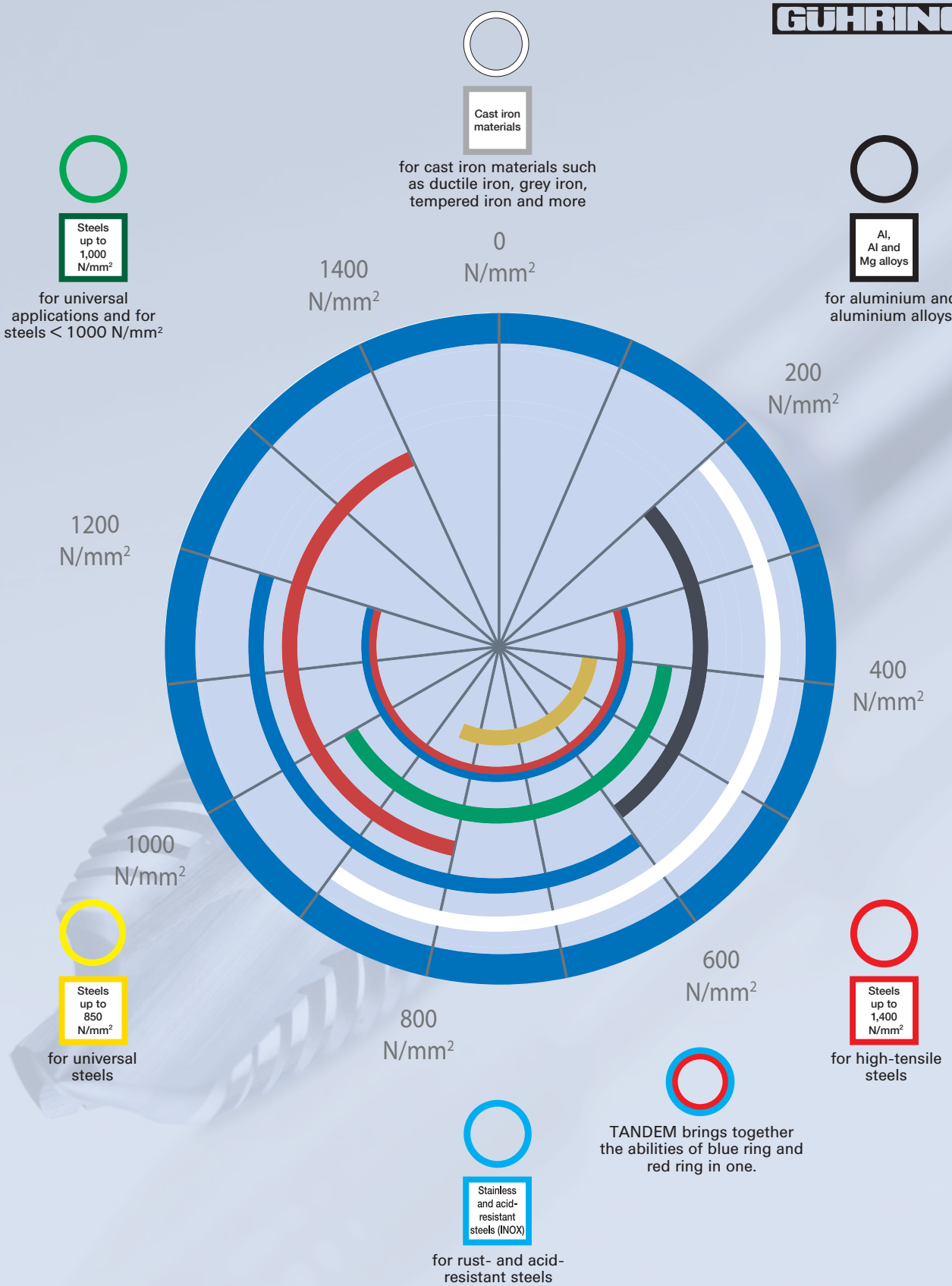
## Threading tool compass

**Materials-based selection guide for the most suitable threading tool.**

**Note: The colour ring on the thread bore shaft enables direct mapping of the material to be processed!**

format professional quality

GÜHRING



## Through-hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 2/6H, type N, with spiral point form B (4-5 threads).

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

M | HSS-E | ISO 2 6H | Type N | 60° | 4–5 threads | ≤ 3xd

**1676** steam — M1–M10 DIN 371 with reinforced shank. Steam tempered surface.

**1679** steam — M3–M30 DIN 376 with overflow shank. Steam tempered surface.

**1678** TiN — M1-M10 DIN 371 with reinforced shank. M12–M30 DIN 376 with overflow shank, TiN coated surface.

DIN 371 | DIN 376 | 1676 steam | format professional quality

DIN 376 | 1679 steam | format professional quality

DIN 371 | DIN 376 | 1678 TiN | GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1676 | 12 | | | | | | | | | | | 17 | |
| 1679 | 12 | | | | | | | | | | | 17 | |
| 1678 | 20 | | | | | | | | | | | 25 | |

| Order No. | Thread | 1676 format steam | 1679 format steam | 1678 GÜHRING TiN | Gradient | Total length | Shank Ø DIN 371 | Square shank DIN 371 | Shank Ø DIN 376 mm | | | Square shank DIN 376 mm | | | Core hole Ø |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mm | mm | mm | mm | 1676 | 1679 | 1678 | 1676 | 1679 | 1678 | mm |
| 0010 | M1 | 28.70 | – | – | 0.25 | 40 | 2.5 | 2.1 | – | – | – | – | – | – | 0.75 |
| 0012 | M1.2 | 27.60 | – | – | 0.25 | 40 | 2.5 | 2.1 | – | – | – | – | – | – | 0.95 |
| 0014 | M1.4 | 22.70 | – | 55.60 | 0.30 | 40 | 2.5 | 2.1 | – | – | 2.5 | – | – | 2.1 | 1.10 |
| 0016 | M1.6 | 20.20 | – | 45.70 | 0.35 | 40 | 2.5 | 2.1 | – | – | 2.5 | – | – | 2.1 | 1.25 |
| 0018 | M1.8 | 20.20 | – | 49.40 | 0.35 | 40 | 2.5 | 2.1 | – | – | 2.5 | – | – | 2.1 | 1.45 |
| 0020 | M2 | 11.45 | – | 28.10 | 0.40 | 45 | 2.8 | 2.1 | – | – | 2.8 | – | – | 2.1 | 1.60 |
| 0025 | M2.5 | 11.15 | – | 26.90 | 0.45 | 50 | 2.8 | 2.1 | – | – | 2.8 | – | – | 2.1 | 2.00 |
| 0030 | M3 | 8.30 | 10.15 * | 23.20 | 0.50 | 56 | 3.5 | 2.7 | 2.2 | 2.2 | 3.5 | 1.8 | 1.8 | 2.7 | 2.50 |
| 0040 | M4 | 8.60 | 10.15 | 25.00 | 0.70 | 63 | 4.5 | 3.4 | 2.8 | 2.8 | 4.5 | 2.1 | 2.1 | 3.4 | 3.30 |
| 0050 | M5 | 8.80 | 10.55 | 25.30 | 0.80 | 70 | 6.0 | 4.9 | 3.5 | 3.5 | 6.0 | 2.7 | 2.7 | 4.9 | 4.20 |
| 0060 | M6 | 8.80 | 10.55 | 32.10 | 1.00 | 80 | 6.0 | 4.9 | 4.5 | 4.5 | 6.0 | 3.4 | 3.4 | 4.9 | 5.00 |
| 0080 | M8 | 10.35 | 12.80 | 35.80 | 1.25 | 90 | 8.0 | 6.2 | 6.0 | 6.0 | 8.0 | 4.9 | 4.9 | 6.2 | 6.80 |
| 0100 | M10 | 12.70 | 15.65 | 43.90 | 1.50 | 100 | 10.0 | 8.0 | 7.0 | 7.0 | 10.0 | 5.5 | 5.5 | 8.0 | 8.50 |
| 0120 | M12 | – | 18.15 | 50.00 | 1.75 | 110 | – | – | – | 9.0 | 9.0 | – | 7.0 | 7.0 | 10.20 |
| 0140 | M14 | – | 25.10 | 72.20 | 2.00 | 110 | – | – | – | 11.0 | 11.0 | – | 9.0 | 9.0 | 12.00 |
| 0160 | M16 | – | 26.00 | 70.40 | 2.00 | 110 | – | – | – | 12.0 | 12.0 | – | 9.0 | 9.0 | 14.00 |
| 0180 | M18 | – | 40.70 | 123.50 | 2.50 | 125 | – | – | – | 14.0 | 14.0 | – | 11.0 | 11.0 | 15.50 |
| 0200 | M20 | – | 40.40 | 120.50 | 2.50 | 140 | – | – | – | 16.0 | 16.0 | – | 12.0 | 12.0 | 17.50 |
| 0220 | M22 | – | 52.90 | 207.50 | 2.50 | 140 | – | – | – | 18.0 | 18.0 | – | 14.5 | 14.5 | 19.50 |
| 0240 | M24 | – | 54.30 | 149.50 | 3.00 | 160 | – | – | – | 18.0 | 18.0 | – | 14.5 | 14.5 | 21.00 |
| 0270 | M27 | – | 67.50 | 238.50 | 3.00 | 160 | – | – | – | 20.0 | 20.0 | – | 16.0 | 16.0 | 24.00 |
| 0300 | M30 | – | 84.20 | 242.00 | 3.50 | 180 | – | – | – | 22.0 | 22.0 | – | 18.0 | 18.0 | 26.50 |
| | | (W164) | (W164) | (W165) | | | | | | | | | | | |

* Without square.

## Through-hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

M3–M10 DIN 371 with reinforced shank.
M12 DIN 376 with overflow shank.

1790 steam | format professional quality

1790 TiN | GÜHRING

| Order No. | Size | 1790 format steam | Set contents |
|---|---|---|---|
| 0100 | M3–M12 | 13.85 | **Empty cassette** |
| 0150 | M3–M12 + K.B.* | 15.30 | **Empty cassette** |
| 1000 | M3–M12 | 97.60 | **6 Taps (order no. 1676)** M3; 4; 5; 6; 8; 10<br>**1 Tap (order no. 1679)** M12 |
| 1500 | M3–M12 | 129.50 | **6 taps (order no. 1676)** M3; 4; 5; 6; 8; 10<br>**1 tap (order no. 1679)** M12<br>**7 spiral drills (order no 1001)** Ø 2.5; 3.3; 4.2; 6.8; 8.5; 10.2 mm |
| | | (W164) | |

* With recesses for core hole drills: 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2.

| Order No. | Size | 1790 GÜHRING TiN | Set contents |
|---|---|---|---|
| 1001 | M3–M12 | 237.00 | **7 Taps (Order No. 1678)** M3; 4; 5; 6; 8; 10; 12 |
| 1501 | M3–M12 | 264.00 | **7 Taps (Order No. 1678)** M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills (Order No. 1001)** Ø 2.5; 3.3; 4.2; 6.8; 8.5; 10.2 mm |
| | | (W165) | |

## Blind hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 2/6 H, type N, with point form C (2–3 threads).

M2 –M10 DIN 371 with reinforced shank,
M12–M30 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

1682 format professional quality steam

1671 GÜHRING TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1682 | 8 | | | | | | | | | | | 10 | |
| 1671 | 20 | | | | | | | | | | | 25 | |

| Order No. | Thread | 1682 format professional quality steam | 1671 GÜHRING TiN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | | | | mm | mm | mm | mm | mm |
| 0020 | M2 | 11.50 | 28.70 | 0.40 | 45 | 2.8 | 2.1 | 1.60 |
| 0025 | M2.5 | 11.30 | 34.60 | 0.45 | 50 | 2.8 | 2.1 | 2.00 |
| 0030 | M3 | 8.50 | 23.20 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 8.65 | 25.30 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 8.85 | 25.60 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 8.85 | 33.40 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 10.55 | 36.40 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 13.65 | 45.70 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 18.05 | 53.70 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 25.50 | 79.60 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 28.80 | 74.10 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 37.50 | 129.50 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 40.60 | 126.00 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| 0220 | M22 | 52.30 | 207.50 | 2.50 | 140 | 18.0 | 14.5 | 19.50 |
| 0240 | M24 | 51.50 | 150.50 | 3.00 | 160 | 18.0 | 14.5 | 21.00 |
| 0270 | M27 | 69.40 | 212.50 | 3.00 | 160 | 20.0 | 16.0 | 24.00 |
| 0300 | M30 | 86.00 | 250.50 | 3.50 | 180 | 22.0 | 18.0 | 26.50 |
| | | (W164) | (W165) | | | | | |

## Blind hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

M3–M10 DIN 371 with reinforced shank,
M12 DIN 376 with overflow shank.

1790 format professional quality steam

1790 GÜHRING TiN

| Order No. | Size | 1790 format professional quality steam | Set contents |
|---|---|---|---|
| 2000 | M3–M12 | 97.60 | **7 Taps (order no. 1682)**<br>M3; 4; 5; 6; 8; 10; 12 |
| 2500 | M3–M12 | 127.00 | **7 Taps (order no. 1682)**<br>M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills (order no. 1001)**<br>Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm |
| | | (W164) | |

| Order No. | Size | 1790 GÜHRING TiN | Set contents |
|---|---|---|---|
| 2001 | M3–M12 | 247.00 | **7 Taps (order no. 1671)**<br>M3; 4; 5; 6; 8; 10; 12 |
| 2501 | M3–M12 | 274.00 | **7 Taps (order no. 1671)**<br>M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills (order no. 1002)**<br>Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm |
| | | (W165) | |

## Through-hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 2/6H, type N, with spiral point form B (4-5 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M30 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for universal materials such as construction steels, machining steels, case-hardening steels, tempered steels, nitriding steels and nodular graphite iron.

| M | HSS-E | DIN 371 | DIN 376 | ISO 2 6H | Type N | 60° | 4–5 B | ≤ 3xd |
|---|---|---|---|---|---|---|---|---|

1683 format professional quality
steam

1672 GÜHRING
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1683 | 12 | 12 | | | | | | | 8 | | | 17 | |
| 1672 | 20 | 20 | | | | | | | 10 | | | 25 | |

| Order No. | Thread | 1683 format steam | 1672 GÜHRING TiN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | | | | mm | mm | mm | mm | mm |
| 0020 | M2 | 14.90 | – | 0.40 | 45 | 2.8 | 2.1 | 1.60 |
| 0030 | M3 | 12.30 | 29.60 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 12.65 | 27.50 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 13.10 | 30.50 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 13.10 | 35.80 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 15.25 | 40.70 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 18.90 | 53.70 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 25.70 | 63.60 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 35.40 | 97.00 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 36.80 | 90.10 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 57.00 | 158.00 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 57.00 | 162.00 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| 0220 | M22 | 74.20 | – | 2.50 | 140 | 18.0 | 14.5 | 19.50 |
| 0240 | M24 | 76.40 | – | 3.00 | 160 | 18.0 | 14.5 | 21.00 |
| 0270 | M27 | 101.50 | – | 3.00 | 160 | 20.0 | 16.0 | 24.00 |
| 0300 | M30 | 128.50 | – | 3.50 | 180 | 22.0 | 18.0 | 26.50 |
| | | (W164) | (W165) | | | | | |

## Through-hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

M3–M10 DIN 371 with reinforced shank,
M12 DIN 376 with overflow shank.

1791 3000 format professional quality
steam

1791 3001 GÜHRING
TiN

| Order No. | Size | 1791 format steam | Set contents |
|---|---|---|---|
| 3000 | M3–M12 | 108.00 | 7 Taps (order no. 1683) M3; 4; 5; 6; 8; 10; 12 |
| | | (W166) | |

| Order No. | Size | 1791 GÜHRING TiN | Set contents |
|---|---|---|---|
| 3001 | M3–M12 | 280.50 | 7 Taps (order no. 1672) M3; 4; 5; 6; 8; 10; 12 |
| | | (W165) | |

## Blind hole machine tap

**Design:** DIN 371 or DIN 376, tolerance range ISO 2/6H, type N, with point form C (2–3 threads).

M2 –M10 DIN 371 with reinforced shank,
M12–M30 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for universal materials such as construction steels, machining steels, case-hardening steels, tempered steels, nitriding steels and nodular graphite iron.

**1684** steam — HSS-E, steam tempered surface.

**1700** TiN — HSS-E, TiN coated surface.

**1674** TiN — HSS-E PM, TiN coated surface.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life. Advantages: Significantly higher process reliability, up to 1/3 longer life and better thread surface.

| M | DIN 371 | DIN 376 | ISO 2 6H | Type N | 40° | 60° | 2–3 C | ≤ 3xd |
|---|---|---|---|---|---|---|---|---|

HSS-E

1684 steam — format professional quality

HSS-E

1700 TiN — format professional quality

HSS-E PM

1674 TiN — GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1684 | 12 | 12 | | | | | | | | | | 17 | |
| 1700 | 20 | 20 | | | | | | | | | | 25 | |
| 1674 | 20 | 20 | | | | | | | | | | 25 | |

| Order No. | Thread | 1684 format steam | 1700 format TiN | 1674 GÜHRING TiN | Gradient | Total length | Shank ∅ | Square shank | Core hole ∅ |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | mm | mm | mm | mm | mm |
| 0020 | M2 | 18.55 | – | – | 0.40 | 45 | 2.8 | 2.1 | 1.60 |
| 0022 | M2.2 | 19.70 | – | – | 0.45 | 45 | 2.8 | 2.1 | 1.75 |
| 0023 | M2.3* | 20.80 | – | – | 0.40 | 45 | 2.8 | 2.1 | 1.90 |
| 0025 | M2.5 | 17.45 | – | – | 0.45 | 50 | 2.8 | 2.1 | 2.05 |
| 0026 | M2.6* | 19.30 | – | – | 0.45 | 50 | 2.8 | 2.1 | 2.10 |
| 0030 | M3 | 15.25 | 17.75 | 32.10 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0035 | M3.5 | 16.00 | – | – | 0.60 | 56 | 4.0 | 3.0 | 2.90 |
| 0040 | M4 | 15.25 | 17.90 | 30.80 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 15.70 | 18.40 | 31.50 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 15.70 | 18.70 | 39.50 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 18.55 | 21.60 | 43.20 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 22.20 | 26.90 | 56.20 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 28.70 | 40.20 | 67.30 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 38.40 | – | 112.50 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 40.70 | 55.10 | 96.30 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 59.20 | – | 149.50 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 59.20 | 81.90 | 154.50 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| 0220 | M22 | 85.40 | – | – | 2.50 | 140 | 18.0 | 14.5 | 19.50 |
| 0240 | M24 | 78.30 | – | – | 3.00 | 160 | 18.0 | 14.5 | 21.00 |
| 0270 | M27 | 107.00 | – | – | 3.00 | 160 | 20.0 | 16.0 | 24.00 |
| 0300 | M30 | 129.00 | – | – | 3.50 | 180 | 22.0 | 18.0 | 26.50 |
| | | (W164) | (W166) | (W165) | | | | | |

* No longer included in DIN 13.

## Blind hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened. TiN coated surface

M3–M10 DIN 371 with reinforced shank,
M12 DIN 376 with overflow shank.

1791 2000 steam — format professional quality

1791 2001 TiN — GÜHRING

| Order No. | Size | 1791 format steam | Set contents |
|---|---|---|---|
| 2000 | M3–M12 | 183.50 | 7 Taps (order no. 1684) M3; 4; 5; 6; 8; 10; 12 |
| | | (W166) | |

| Order No. | Size | 1791 GÜHRING TiN | Set contents |
|---|---|---|---|
| 2001 | M3–M12 | 289.00 | 7 Taps (order no. 1674) M3; 4; 5; 6; 8; 10; 12 |
| | | (W165) | |

## Through-hole machine tap

**Design:** DIN 371 or DIN 376, tolerance range ISO 2/6H, type INOX, with spiral point form B (4-5 threads).

M2 –M10 DIN 371 with reinforced shank,
M12–M30 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.

M | DIN 371 | DIN 376 | Type INOX | 60° | 4–5 | B | ≤ 3xd

**1686** Bright — HSS-E, bright surface. — HSS-E | ISO 2 6H

1686 bright — format professional quality

**1675** steam — HSS-E, steam tempered surface. — HSS-E | ISO 2 6H

1675 steam — format professional quality

**1698** TiN — HSS-E, TiN coated surface. — HSS-E | ISO 2 6H

1698 TiN — format professional quality

**1694** Bright — HSS-E PM (high-speed steel: powder metallurgical), bright surface. — HSS-E PM | ISO 2 6H

1694 bright — format professional quality

**1699** TiN — HSS-E PM (high-speed steel: powder metallurgical), TiN coated surface.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life. — HSS-E PM | ISO 2 6H

1699 TiN — GÜHRING

**1693** Sirius® NEW — HSS-E PM (high-speed steel: powder metallurgical), TiN coated surface.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life. — HSS-E | 6HX

1693 Sirius® — GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1686 | | | | | | | | | 10 | | | 15 | |
| 1675 | | | | | | | | | 10 | | | 17 | |
| 1698 | | | | | | | | | 15 | | | 20 | |
| 1694 | | | | | | | | | 5 | | | 17 | |
| 1699 | | | | | | | | | 10 | | | 25 | |
| 1693 | 19 | 18 | | | | | | | 12 | 3 | 25 | 30 | |

| Order No. | Thread | 1686 format bright | 1675 format steam | 1698 format TiN | 1694 format bright | 1699 GÜHRING TiN | 1693 GÜHRING Sirius® | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | M2 | 9.40 | – | – | 15.45 | 29.30 | 32.70 | 0.40 | 45 | 2.8 | 2.1 | 1.60 |
| 0025 | M2.5 | – | – | – | – | – | 31.50 | 0.45 | 50 | 2.8 | 2.1 | 2.05 |
| 0030 | M3 | 9.95 | 11.20 | 16.70 | 14.85 | 25.00 | 30.50 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 10.20 | 11.50 | 18.55 | 15.25 | 25.30 | 30.80 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 10.20 | 11.50 | 19.10 | 16.40 | 26.20 | 30.80 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 10.50 | 11.85 | 23.30 | 16.55 | 35.80 | 32.10 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 12.20 | 13.80 | 25.00 | 18.50 | 38.90 | 37.70 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 14.90 | 16.45 | 34.00 | 21.20 | 46.30 | 46.30 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 18.90 | 20.90 | 38.10 | 23.70 | 52.50 | 55.00 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 27.60 | 30.50 | – | 43.30 | 62.00 | 83.90 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 28.40 | 31.20 | 36.00 | 43.10 | 60.90 | 83.30 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | – | – | – | 73.00 | 81.80 | 138.50 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 42.80 | 47.10 | 60.90 | 82.80 | 91.80 | 123.50 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| 0240 | M24 | 82.30 | – | – | – | – | 183.00 | 3.00 | 160 | 18.0 | 14.5 | 21.00 |
| 0270 | M27 | 114.50 | – | – | – | – | – | 3.00 | 160 | 20.0 | 16.0 | 24.00 |
| 0300 | M30 | 130.50 (W164) | – (W164) | – (W166) | – (W164) | – (W165) | 220.00 (W165) | 3.50 | 180 | 22.0 | 18.0 | 26.50 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Through-hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

M3–M10 DIN 371 with reinforced shank,
M12 DIN 376 with overflow shank.

M | HSS-E | DIN 371 | DIN 376 | ISO 2 6H | 60° | ≤ 3xd

format professional quality

**1793 1000**
bright

**1791 1000**
TiN

**1793 1001**
steam

| Order No. | Size | 1793 format bright | Set contents |
|---|---|---|---|
| 1000 | M3–M12 | 149.00 (W164) | **7 Taps (order no. 1686)** M3; 4; 5; 6; 8; 10; 12 |

| Order No. | Size | 1791 format TiN | Set contents |
|---|---|---|---|
| 1000 | M3–M12 | 183.50 (W166) | **7 Taps (order no. 1698)** M3; 4; 5; 6; 8; 10; 12 |

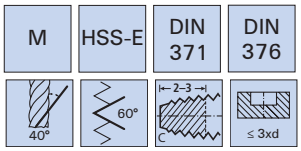
| Order No. | Size | 1793 format steam | Set contents |
|---|---|---|---|
| 1001 | M3–M12 | 207.50 (W164) | **7 Taps (order no. 1675)** M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills (order no. 1025)** ∅ 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm |

## Blind hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 2/6 H, type INOX, with point form C (2–3 threads).

M2 –M10 DIN 371 with reinforced shank,
M12-M30 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.




format professional quality

**1690**
bright

**1701**
steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1690 | | | | | | | | | 8 | | | 15 | |
| 1701 | | | | | | | | | **10** | | | 17 | |

| Order No. | Thread | 1690 format bright | 1701 format steam | Gradient | Total length | Shank ∅ | Square shank | Core hole ∅ |
|---|---|---|---|---|---|---|---|---|
| | | | | mm | mm | mm | mm | mm |
| 0020 | M2 | – | 16.45 | 0.40 | 45 | 2.8 | 2.1 | 1.60 |
| 0030 | M3 | 10.20 | 15.05 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 10.50 | 15.45 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 10.90 | 16.15 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 10.90 | 16.40 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 11.55 | 19.40 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 14.70 | 23.30 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 16.50 | 29.50 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 23.20 | 42.00 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 31.30 | 43.40 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | 47.00 | 65.00 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| 0240 | M24 | 88.20 | – | 3.00 | 160 | 18.0 | 14.5 | 21.00 |
| 0300 | M30 | 131.00 (W164) | – (W164) | 3.50 | 180 | 22.0 | 18.0 | 26.50 |

## Blind hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

M3–M10 DIN 371 with reinforced shank,
M12 DIN 376 with overflow shank.

**1793 2000**
bright

**1793 2001**
steam

| Order No. | Size | 1793 format bright | Set contents |
|---|---|---|---|
| 2000 | M3–M12 | 142.00 (W164) | **7 Taps (order no. 1690)** M3; 4; 5; 6; 8; 10; 12 |

| Order No. | Size | 1793 format steam | Set contents |
|---|---|---|---|
| 2001 | M3–M12 | 208.00 (W164) | **7 Taps (order no. 1701)** M3; 4; 5; 6; 8; 10; 12<br>7 spiral drills (order no. 1025)<br>**∅ 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm** |

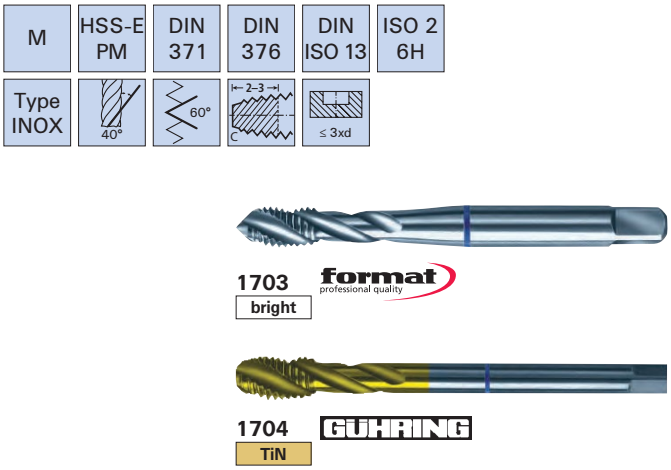
## Blind hole machine tap

**Design:** HSS-E PM, DIN 371 or DIN 376, tolerance range ISO 2/6 H, type INOX, with point form C (2–3 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.




1703 format professional quality
bright

1704 GÜHRING
TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1703 | | | | | | | | | 8 | | | 15 | |
| 1704 | | | | | | | | | **25** | | | 25 | |

| Order No. | Thread | 1703 format bright | 1704 GÜHRING TiN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 16.85 | 22.90 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 16.85 | 25.00 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 17.85 | 25.30 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 17.85 | 32.10 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 21.10 | 35.20 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 25.40 | 48.80 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 31.10 | 51.20 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0160 | M16 | 45.00 | 64.80 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | 67.10 (W164) | 128.50 (W165) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

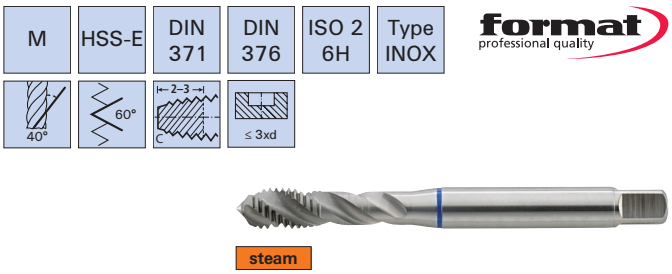
## Blind hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 3/6 G, type INOX, with point form C (2–3 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.

**Tolerance range ISO 3/6G with excess.** Steam tempered surface.




steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1691 | | | | | | | | | **10** | | | 15 | |

| Order No. | Thread | 1691 format steam | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 13.05 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 13.35 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 13.70 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 14.00 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 16.55 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 20.10 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 19.70 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 27.40 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 36.90 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | 56.00 (W164) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

## Blind hole machine tap "Synchro"

**Design:** HSS-E PM, DIN 371 or DIN 376, tolerance range ISO 2/6 H, type INOX, with point form C (2–3 threads). TiN coated surface

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life. Only for use in connection with synchronised drilling chuck (📖 3/115) as well as only for CNC machining.

| M | HSS-E PM | DIN 371 | DIN 376 | ISO 2 6H | 6HX |
|---|---|---|---|---|---|
| Type INOX | 50° | 60° | 2–3 C | ≤ 3xd | |

GÜHRING

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1707 | 25 | 25 | | | | | | | 15 | | | 30 | |

| Order No. | Thread | 1707 GÜHRING TiN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0030 | M3 | 32.70 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 33.40 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 35.80 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 42.00 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 50.60 (W165) | 1.25 | 90 | 8.0 | 6.2 | 6.80 |

| Order No. | Thread | 1707 GÜHRING TiN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0100 | M10 | 61.10 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 69.10 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0160 | M16 | 100.50 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | 144.50 (W165) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

## Through-hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 2/6H, type H, with spiral point form B (4-5 threads).

M2 –M10 DIN 371 with reinforced shank,
M12–M24 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for high strength steels such as tempered steels, alloyed cold work steels and high-speed steels.

| M | HSS-E | DIN 371 | DIN 376 | ISO 2 6H | Type H | 60° | 4–5 B | ≤ 3xd |
|---|---|---|---|---|---|---|---|---|

1705 format professional quality — bright

1708 format professional quality — steam

1710 format professional quality — TiCN

1709 GÜHRING — TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1705 | | | 8 | 6 | | | | | | | | | |
| 1708 | | | 10 | 8 | | | | | | | | | |
| 1710 | | | 12 | 8 | | | | | | | | | |
| 1709 | | | 12 | 8 | | | | | | | | | |

| Order No. | Thread | 1705 format bright | 1708 format steam | 1710 format TiCN | 1709 GÜHRING TiAlN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | M2 | 16.80 | – | 37.00 | – | 0.40 | 45 | – | 2.1 | 1.60 |
| 0025 | M2.5 | 18.65 | – | 36.70 | – | 0.45 | 50 | – | 2.1 | 2.05 |
| 0026 | M2.6* | – | – | 36.70 | – | 0.45 | 50 | – | 2.1 | 2.10 |
| 0030 | M3 | 10.45 | 12.05 | 18.25 | – | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 10.45 | 12.05 | 16.30 | – | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 11.00 | 12.75 | 17.30 | – | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 11.00 | 12.75 | 18.90 | 47.50 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 12.60 | 14.60 | 21.20 | 46.30 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 15.35 | 17.75 | 25.70 | 59.30 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 20.00 | 23.10 | 41.80 | 75.30 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 25.30 | 29.20 | 67.80 | 127.00 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 28.30 | 32.60 | 71.40 | 103.00 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | – | 47.60 | – | – | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 41.60 | 47.90 | 99.90 | 164.00 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| 0240 | M24 | 94.80 (W164) | – (W164) | 117.00 (W166) | – (W165) | 3.00 | 160 | 18.0 | 14.5 | 21.50 |

* No longer included in DIN 13.

## Through-hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 2/6H, type H, with spiral point form B (4-5 threads) and exposed teeth. Bright surface

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for high strength steels such as tempered steels, alloyed cold work steels and high-speed steels.

M | HSS-E | Type H | DIN 371 | DIN 376 | ISO 2 6H

format professional quality

60° | 4–5 B | ≤ 3xd

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1728 | | | 10 | 8 | | | | | | | | | |

| Order No. | Thread | 1728 format bright | Gradient | Total length | Shank ∅ | Square shank | Core hole ∅ |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 22.80 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 22.80 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 21.00 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 21.40 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 23.80 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 28.50 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 33.90 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 49.80 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 48.50 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 76.70 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 74.40 (W164) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

## Through-hole machine tap

**Design:** HSS-E PM, DIN 371, tolerance range 6HX, type H, form E (1.5–2 threads) with internal cooling, TiAlN coated surface.

M5–M10 DIN 371 with reinforced shank

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for high strength steels such as tempered steels, alloyed cold work steels and high-speed steels.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.

M | HSS-E PM | Type H | DIN 371 | 6HX | 60°

2–3 C | ≤ 3xd

GÜHRING

TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1711 | 14 | 12 | 10 | 6 | | | | | | | 20 | | |

| Order No. | Thread | 1711 GÜHRING TiAlN | Gradient | Total length | Shank ∅ | Square shank | Core hole ∅ |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0500 | M5 | 49.40 | 0.80 | 70 | 6 | 4.9 | 4.20 |
| 0600 | M6 | 45.10 | 1.00 | 80 | 6 | 4.9 | 5.00 |
| 0800 | M8 | 57.40 | 1.25 | 90 | 8 | 6.2 | 6.80 |
| 1000 | M10 | 77.20 (W165) | 1.50 | 100 | 10 | 8.0 | 8.50 |

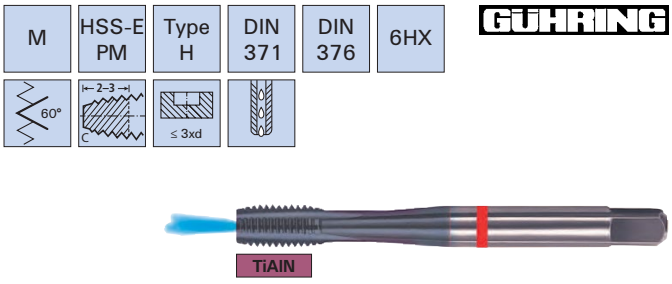
## Blind hole machine tap

**Design:** HSS-E PM, DIN 371 or DIN 376, tolerance range 6HX, type H, form C (2–3 threads) with internal cooling, TiAlN coated surface.

M5–M10 DIN 371 with reinforced shank,
M12 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for high strength steels such as tempered steels, alloyed cold work steels and high-speed steels.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1711 | | 12 | 10 | 6 | | | | | | | 20 | | |

| Order No. | Thread | 1711 GÜHRING TiAlN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0050 | M5 | 44.50 | 0.80 | 70 | 6 | 4.9 | 4.20 |
| 0060 | M6 | 42.00 | 1.00 | 80 | 6 | 4.9 | 5.00 |
| 0080 | M8 | 50.60 (W165) | 1.25 | 90 | 8 | 6.2 | 6.80 |

| Order No. | Thread | 1711 GÜHRING TiAlN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0100 | M10 | 71.60 | 1.50 | 100 | 10 | 8.0 | 8.50 |
| 0120 | M12 | 66.10 (W165) | 1.75 | 110 | 9 | 7.0 | 10.20 |

## Blind hole machine tap

**Design:** DIN 371 or DIN 376, tolerance range ISO 2/6H, type H, with point form C (2–3 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for high strength steels such as tempered steels, alloyed cold work steels and high-speed steels.

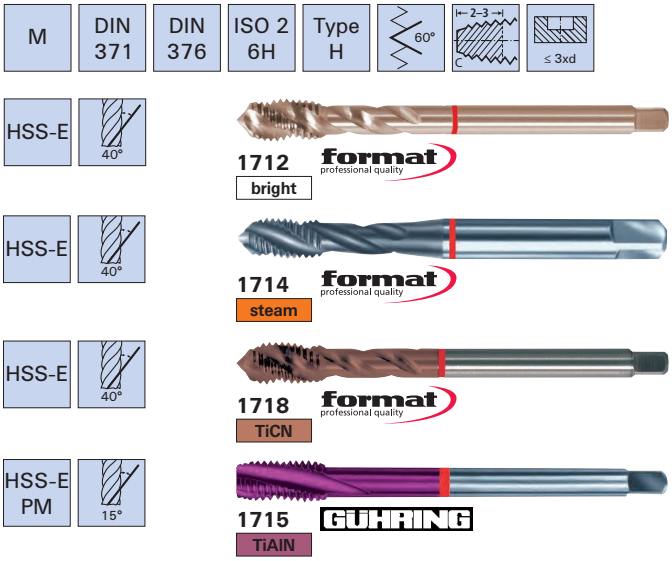
**1712** Bright — HSS-E, bright surface.

**1714** steam — HSS-E, steam tempered surface.

**1718** TiCN — HSS-E, TiCN coated surface.

**1715** TiAlN — HSS-E PM, TiAlN coated surface.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1712 | | | 8 | 6 | | | | | | | | | |
| 1714 | | | 10 | 8 | | | | | | | | | |
| 1718 | | | 12 | 8 | | | | | | | | | |
| 1715 | | | 12 | 8 | | | | | | | | | |

| Order No. | Thread | 1712 format bright | 1714 format steam | 1718 format TiCN | 1715 GÜHRING TiAlN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0030 | M3 | 10.30 | 12.05 | 30.70 | – | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 10.65 | 12.40 | 31.60 | – | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 11.05 | 12.85 | 32.20 | – | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 11.05 | 12.85 | 32.80 | 49.40 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 12.30 | 14.25 | 42.30 | 50.00 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 15.60 | 18.10 | 51.20 | 64.20 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 21.70 | 25.00 | 64.00 | 76.00 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 28.80 | 33.70 | – | – | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 30.10 | 34.70 | 105.00 | 98.80 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 43.10 | 49.80 | – | – | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 44.40 (W164) | 51.40 (W164) | 135.00 (W166) | 169.00 (W165) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

## Blue and red: TANDEM taps

Two in one: The **taps with a blue and red coloured ring** allow machining of rust and acid-resistant steels as well as high-strength steels. They are universal geniuses that can sustainably reduce your tool costs. We can offer you these quality products from German production at an attractive price.
**Note:** Machine taps are found from 📖 1/199.

## Through-hole machine tap

**Design:** With chamfer form B (2-3 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** Universal taps with a broad range of metric regulation thread according to DIN ISO 13.

M | Type N | 60° | 4–5 | B | ≤ 3xd

format professional quality

**1660** steam — HSS-E, steam tempered surface.

HSS-E | ISO 2 6H | DIN 371

1660 steam

**1661** steam — HSS-E, steam tempered surface, DIN 376, tolerance range ISO 2/6H.

HSS-E | ISO 2 6H | DIN 376

1661 steam

**1662** steam — HSS-E, steam tempered surface, DIN 376, tolerance range ISO 3/6G.

HSS-E | ISO 3 6G | DIN 371

1662 steam

**1663** TiN — HSS-E PM, TiN coated surface.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.

HSS-E PM | ISO 2 6H | DIN 371
DIN 376

1663 TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1660 | 12 | 10 | | | | | | | 8 | | 15 | 15 | |
| 1661 | 12 | 10 | | | | | | | 8 | | 15 | 15 | |
| 1662 | 12 | 10 | | | | | | | 8 | | 15 | 15 | |
| 1663 | 20 | 15 | 8 | | | | | | 12 | 2 | 15 | 20 | 20 |

| Order No. | Thread | 1660 format steam | 1661 format steam | 1662 format steam | 1663 format TiN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | M2 | – | – | – | 11.30 | 0.40 | 45 | 2.8 | 2.1 | 1.60 |
| 0030 | M3 | – | 10.00 | – | – | 0.50 | 56 | 2.2 | – | 2.50 |
| 0030 | M3 | 9.05 | – | 10.50 | 14.15 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | – | 9.85 | – | – | 0.70 | 63 | 2.8 | 2.1 | 3.30 |
| 0040 | M4 | 9.20 | – | 10.50 | 12.95 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | – | 9.85 | – | – | 0.80 | 70 | 3.5 | 2.7 | 4.20 |
| 0050 | M5 | 9.20 | – | 10.85 | 14.45 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | – | 10.35 | – | – | 1.00 | 80 | 4.5 | 3.4 | 5.00 |
| 0060 | M6 | 9.35 | – | 9.70 | 17.25 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | – | 12.15 | – | – | 1.25 | 90 | 6.0 | 4.9 | 6.80 |
| 0080 | M8 | 10.85 | – | 11.15 | 19.30 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 12.95 | – | 15.80 | 25.40 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0100 | M10 | – | 13.95 | – | – | 1.50 | 100 | 7.0 | 5.5 | 8.50 |
| 0120 | M12 | – | 16.40 | – | 30.40 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | – | 24.20 | – | 46.00 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | – | 24.20 | – | 42.70 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | – | – | – | 74.70 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | – | 38.60 | – | 77.20 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| | | (W163) | (W163) | (W163) | (W163) | | | | | |

## Through-hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

| Order No. | Size | 1661 format steam | 1663 format TiN | Set contents |
|---|---|---|---|---|
| 1000 | M3–M12 | 87.50 | – | **7 Taps (order no. 1661)**<br>M3; 4; 5; 6; 8; 10; 12 |
| 1000 | M3–M12 | – | 121.50 | **7 Taps (Order No. 1663)**<br>M3; 4; 5; 6; 8; 10; 12<br>**7 spiral drills**<br>**Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm** |
| | | (W163) | (W163) | |

1661 steam

1663 TiN

## Blind hole machine tap

**Design:** Type N, with chamfered form C (2–3 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** Universal taps with a broad range of metric regulation thread according to DIN ISO 13.

M | Type N | 60° | 2–3 | C | ≤ 3xd

format professional quality

**1664** steam — HSS-E, steam tempered surface.

HSS-E | ISO 2 6H | DIN 371

1664 steam

**1665** steam — HSS-E, steam tempered surface.

HSS-E | ISO 2 6H | DIN 376

1665 steam

**1666** steam — HSS-E, steam tempered surface.

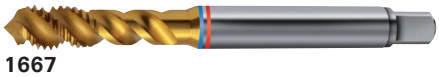
HSS-E | ISO 3 6G | DIN 371

1666 steam

**1667** TiN — HSS-E PM, TiN coated surface.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.

HSS-E PM | ISO 2 6H | DIN 371 | DIN 376



1667 TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1664 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |
| 1665 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |
| 1666 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |
| 1667 | 20 | 15 | 6 | 4 | | | | | 8 | 2 | 15 | 20 | 20 |

| Order No. | Thread | 1664 format steam | 1665 format steam | 1666 format steam | 1667 format TiN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0030 | M3 | – | 11.70 | – | – | 0.50 | 56 | 2.2 | – | 2.50 |
| 0030 | M3 | 9.55 | – | 11.00 | 16.10 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | – | 10.50 | – | – | 0.70 | 63 | 2.8 | 2.1 | 3.30 |
| 0040 | M4 | 9.55 | – | 10.00 | 16.10 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | – | 10.35 | – | – | 0.80 | 70 | 3.5 | 2.7 | 4.20 |
| 0050 | M5 | 10.00 | – | 11.30 | 17.25 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | – | 10.15 | – | – | 1.00 | 80 | 4.5 | 3.4 | 5.00 |
| 0060 | M6 | 10.35 | – | 10.85 | 20.10 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | – | 10.70 | – | – | 1.25 | 90 | 6.0 | 4.9 | 6.80 |
| 0080 | M8 | 12.15 | – | 12.85 | 23.80 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 13.95 | – | 16.85 | 30.00 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0100 | M10 | – | 14.45 | – | – | 1.50 | 100 | 7.0 | 5.5 | 8.50 |
| 0120 | M12 | – | 15.90 | – | 35.30 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | – | – | – | 50.90 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | – | 23.40 | – | 50.90 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | – | 35.30 | – | 58.30 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| | | (W163) | (W163) | (W163) | (W163) | | | | | |

## Blind hole machine tap set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

| Order No. | Size | 1665 format steam | 1667 format TiN | Set contents |
|---|---|---|---|---|
| 1000 | M3–M12 | 91.90 | – | **7 Taps (order no. 1665)** M3; 4; 5; 6; 8; 10; 12 |
| 1000 | M3–M12 | – | 138.50 | **7 Taps (Order No. 1667)** M3; 4; 5; 6; 8; 10; 12 **7 spiral drills** Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5; 10.2 mm |
| | | (W163) | (W163) | |

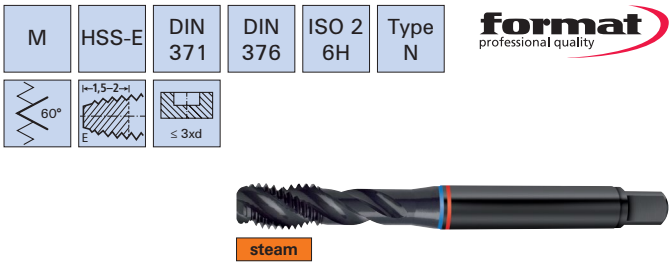
1665 steam

1667 TiN

## Blind hole machine tap

**Design:** With chamfer form E (2-3 threads).

**Application:** Universal taps with a broad range of metric regulation thread according to DIN ISO 13.



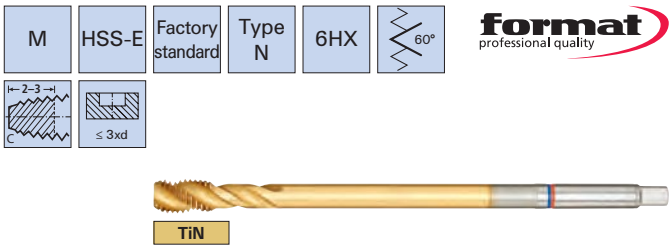

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1668 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |

| Order No. | Thread | 1668 format steam | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 10.00 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 11.00 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 10.00 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 10.15 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 12.30 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 16.10 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 18.70 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0160 | M16 | 27.30 (W163) | 2.00 | 110 | 12.0 | 9.0 | 14.00 |

## Blind hole machine tap, extra long

**Design:** With chamfer form C (2-3 threads).

**Application:** Universal taps with a broad range of metric regulation thread according to DIN ISO 13.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1669 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |

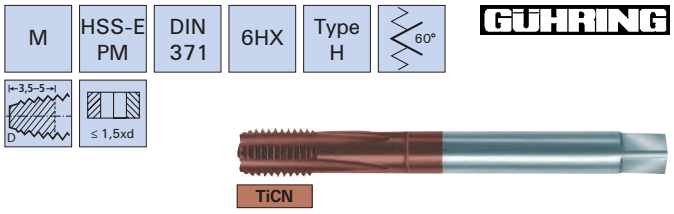
| Order No. | Thread | 1669 format TiN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 34.10 | 0.50 | 112 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 30.40 | 0.70 | 112 | 2.8 | 2.1 | 3.30 |
| 0050 | M5 | 30.40 | 0.80 | 125 | 3.5 | 2.7 | 4.20 |
| 0060 | M6 | 30.40 | 1.00 | 125 | 4.5 | 3.4 | 5.00 |
| 0080 | M8 | 31.20 | 1.25 | 140 | 6.0 | 4.9 | 6.80 |
| 0100 | M10 | 37.80 | 1.50 | 160 | 7.0 | 5.5 | 8.50 |
| 0120 | M12 | 43.50 | 1.75 | 180 | 9.0 | 7.0 | 10.20 |
| 0160 | M16 | 60.00 | 2.00 | 220 | 12.0 | 9.0 | 14.00 |
| 0200 | M20 | 89.50 (W163) | 2.50 | 280 | 16.0 | 12.0 | 17.50 |

## Through-hole machine tap

**Design:** HSS-E PM, tolerance range 6HX, type H, with spiral point form D (6-7 threads).

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for annealed steels up to 56 HRC.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1716 | | | | 6 | 6 | 4 | | | | | | | |

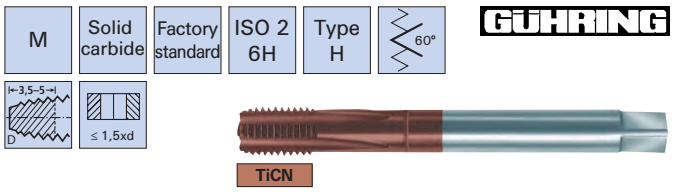
| Order No. | Thread | 1716 GÜHRING TiCN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0060 | M6 | 45.10 | 1.00 | 80 | 6 | 4.9 | 5.00 |
| 0080 | M8 | 50.00 | 1.25 | 90 | 8 | 6.2 | 6.80 |
| 0100 | M10 | 64.80 | 1.50 | 100 | 10 | 8.0 | 8.50 |
| 0120 | M12 | 77.20 (W165) | 1.75 | 110 | 12 | 9.0 | 10.20 |

## Solid carbide through-hole machine tap

**Design:** Solid carbide, factory standard, tolerance range ISO 2/6H, type H, with point form D (4-5 threads).

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for annealed steels up to 62 HRC.

**Note:** Different core hole Ø (refer to table).




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1717 | | | | | | 4 | 2 | 2 | | | | | |

| Order No. | Thread | 1717 GÜHRING TiCN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 143.00 | 0.50 | 56 | 3.5 | 2.7 | 2.60 |
| 0040 | M4 | 136.00 | 0.70 | 63 | 4.5 | 3.4 | 3.40 |
| 0050 | M5 | 157.00 | 0.80 | 70 | 6.0 | 4.9 | 4.30 |
| 0060 | M6 | 190.00 | 1.00 | 80 | 6.0 | 4.9 | 5.10 |
| 0080 | M8 | 225.00 | 1.25 | 90 | 8.0 | 6.2 | 6.90 |
| 0100 | M10 | 278.00 | 1.50 | 100 | 10.0 | 8.0 | 8.60 |
| 0120 | M12 | 308.50 (W165) | 1.75 | 110 | 9.0 | 7.0 | 10.40 |

format professional quality

1/224

**Tap extension**

for threading in workpieces with extremely deep internal threads.

## Through-hole machine tap

**Design:** HSS-E, tolerance range ISO 2/6H, type W, with spiral point form B (4-5 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for Al and Al-alloys such as pure aluminium alloy, aluminium wrought alloy, Al-alloy <10% Si and Al-alloy >10% Si.

| M | HSS-E | DIN 371 | DIN 376 | ISO 2 6H | Type W |
|---|---|---|---|---|---|

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1722 | | | | | | | | | | | | 18 | |

| Order No. | Thread | 1722 format bright | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 9.75 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 9.75 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 9.95 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 9.95 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 12.25 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 14.65 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 21.00 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 24.50 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 28.90 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 39.00 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 42.40 (W164) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

## Blind-hole machine tap

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range ISO 2/6 H, type W, with point form C (2–3 threads).

M1.6–M10 DIN 371 with reinforced shank,
M12 –M24 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for Al and Al-alloys such as pure aluminium alloy, al wrought alloy, al-alloy < 10% Si and Al-alloy > 10% Si.

| M | HSS-E | DIN 371 | DIN 376 | ISO 2 6H | Type W |
|---|---|---|---|---|---|

1725
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1725 | | | | | | | | | | | | 15 | |

| Order No. | Thread | 1725 format bright | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0016 | M1.6 | 18.25 | 0.35 | 40 | 2.5 | 2.1 | 1.25 |
| 0020 | M2 | 15.90 | 0.40 | 45 | 2.8 | 2.1 | 1.60 |
| 0025 | M2.5 | 15.05 | 0.45 | 50 | 2.8 | 2.1 | 2.05 |
| 0030 | M3 | 9.75 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 9.80 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 9.95 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 9.95 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 10.95 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 14.15 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 21.00 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 25.90 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 29.00 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 40.70 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 44.30 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| 0240 | M24 | 69.00 (W164) | 3.00 | 160 | 18.0 | 14.5 | 21.00 |

## Through-hole and blind hole machine taps

**Design:** HSS-E, DIN 371 or DIN 376, tolerance range 6HX, type GG, with point form C (2–3 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for casting materials, grey cast iron, malleable cast iron, ductile cast iron and cast iron with vermicular graphite.

M | HSS-E | DIN 371 | DIN 376 | 6HX | Type GG

1731 format professional quality
Nitrated

1719 GÜHRING
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1731 | | | | | | | | | | | 10 | | |
| 1719 | | | | | | | | | | | 20 | | |

| Order No. | Thread | 1731 format Nitrated | 1719 GÜHRING TiAlN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 9.25 | 46.30 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 9.50 | 49.40 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 9.50 | 50.60 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 9.50 | 45.70 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 10.65 | 52.50 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 13.45 | 64.80 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 20.20 | 74.70 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 24.40 | 90.80 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 26.50 | 95.10 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 38.30 | 170.50 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 41.70 (W164) | 178.00 (W165) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

## Through-hole and blind hole machine taps

**Design:** HSS-E, DIN 371, type MS, with point form C (2–3 threads). With reinforced shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for short and long-chipping non-ferrous metals.

**1734** Bright
Bright surface, tolerance range ISO 2/6H.

**1720** Bright
Bright surface, tolerance range ISO 2/6G with excess.

M | HSS-E | DIN 371 | Type MS | 60° | 1,5–2 | E | ≤ 3xd

ISO 2 6H

1734 format professional quality
bright

ISO 2 6G

1720 GÜHRING
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1734 | | | | | | | | | | | | | 12 |
| 1720 | | | | | | | | | | | | | 12 |

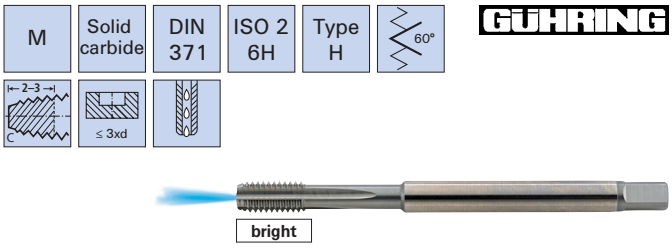
| Order No. | Thread | 1734 format bright | 1720 GÜHRING bright | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 11.60 | 17.90 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 12.05 | 18.85 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 12.05 | 18.85 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 12.90 | 19.75 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 13.65 | 21.00 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 16.60 (W164) | 25.90 (W165) | 1.50 | 100 | 10.0 | 8.0 | 8.50 |

## Solid carbide blind hole machine tap

**Design:** Ultra-finest grain-solid carbide, DIN 371, tolerance range ISO 2/6H, type H, form C (2–3 threads). With reinforced shank, bright surface.

**Application:** For metric threads according to DIN ISO 13. Particularly suitable for aluminium and aluminium alloys.

**Note:** From M5 with internal cooling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1721 | | | | | | | | | | | 30 | 50 | 40 |

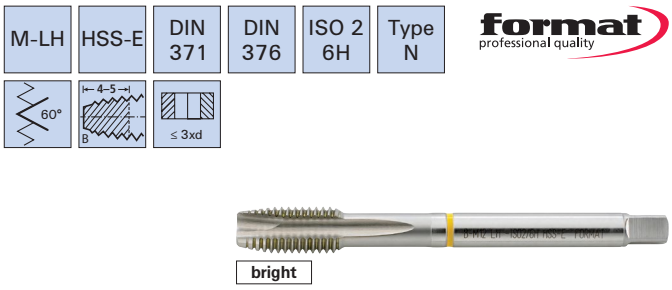
| Order No. | Thread | 1721 GÜHRING bright | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 68.30 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 52.80 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 94.20 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 81.80 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 123.00 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 131.50 (W167) | 1.50 | 100 | 10.0 | 8.0 | 8.50 |

## Through-hole machine tap, left thread

**Design:** HSS-E, tolerance range ISO 2/6H, type N, with spiral point form B (4-5 threads). Bright surface.

M3 –M10 DIN 371with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For metric left threads according to DIN ISO 13. Particularly suitable for general steels, construction steels, machining steels and case-hardening steels.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1737 | 10 | | | | | | | | | | | 15 | |

| Order No. | Thread | 1737 format bright | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 21.00 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 21.00 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 22.20 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 22.20 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 25.50 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 31.80 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 49.20 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 66.50 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 70.50 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 106.50 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 107.50 (W164) | 2.50 | 140 | 16.0 | 12.0 | 17.50 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Blind hole machine tap, left thread

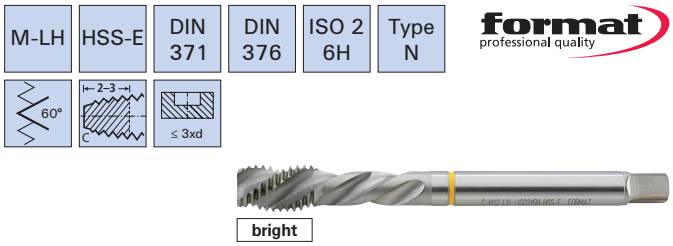
**Design:** HSS-E, tolerance range ISO 2/6H, type N, with spiral point form C (2-3 threads). Bright surface.

M3 –M10 DIN 371 with reinforced shank,
M12–M20 DIN 376 with overflow shank.

**Application:** For metric left threads according to DIN ISO 13. Particularly suitable for general steels, construction steels, machining steels and case-hardening steels.

M-LH | HSS-E | DIN 371 | DIN 376 | ISO 2 6H | Type N

format professional quality




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1724 | 10 | | | | | | | | | | | 15 | |

| Order No. | Thread | 1724 format bright | Gradient | Total length | Shank ∅ | Square shank | Core hole ∅ |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 26.70 | 0.50 | 56 | 3.5 | 2.7 | 2.50 |
| 0040 | M4 | 24.40 | 0.70 | 63 | 4.5 | 3.4 | 3.30 |
| 0050 | M5 | 25.50 | 0.80 | 70 | 6.0 | 4.9 | 4.20 |
| 0060 | M6 | 24.40 | 1.00 | 80 | 6.0 | 4.9 | 5.00 |
| 0080 | M8 | 30.20 | 1.25 | 90 | 8.0 | 6.2 | 6.80 |
| 0100 | M10 | 34.40 | 1.50 | 100 | 10.0 | 8.0 | 8.50 |
| 0120 | M12 | 48.70 | 1.75 | 110 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 68.00 | 2.00 | 110 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 69.60 | 2.00 | 110 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 95.90 | 2.50 | 125 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 102.00 | 2.50 | 140 | 16.0 | 12.0 | 17.50 |
| | | (W164) | | | | | |

## Through-hole machine tap (nut tap)

**Design:** HSS-E, DIN 357, tolerance range ISO 2/6H, type N, extra long, the point length is approx. 21-23 threads. Bright surface

**Application:** For regular metric threads according to ISO DIN 13. Especially for thread cutting in hard to access areas. Particularly suitable for general steels, construction steels, machining steels and case-hardening steels.

M | HSS-E | DIN 357 | ISO 2 6H | Type N | 60°

format professional quality

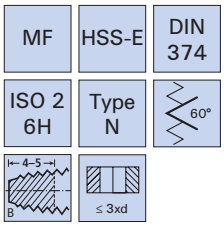
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1750 | 10 | 10 | | | | | | | | | | | |

| Order No. | Thread | 1750 format bright | Gradient | Total length | Shank ∅ | Square shank | Core hole ∅ |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0030 | M3 | 19.90 | 0.50 | 70 | 2.2 | – | 2.50 |
| 0035 | M3.5 | 23.10 | 0.60 | 80 | 2.5 | 2.1 | 2.90 |
| 0040 | M4 | 19.05 | 0.70 | 90 | 2.8 | 2.1 | 3.30 |
| 0050 | M5 | 20.60 | 0.80 | 100 | 3.5 | 2.7 | 4.20 |
| 0060 | M6 | 21.30 | 1.00 | 110 | 4.5 | 3.4 | 5.00 |
| 0080 | M8 | 27.70 | 1.25 | 125 | 6.0 | 4.9 | 6.80 |
| 0100 | M10 | 32.40 | 1.50 | 140 | 7.0 | 5.5 | 8.50 |
| 0120 | M12 | 42.90 | 1.75 | 180 | 9.0 | 7.0 | 10.20 |
| 0140 | M14 | 55.10 | 2.00 | 200 | 11.0 | 9.0 | 12.00 |
| 0160 | M16 | 62.40 | 2.00 | 200 | 12.0 | 9.0 | 14.00 |
| 0180 | M18 | 116.00 | 2.50 | 220 | 14.0 | 11.0 | 15.50 |
| 0200 | M20 | 128.00 | 2.50 | 250 | 16.0 | 12.0 | 17.50 |
| | | (W164) | | | | | |

## Through-hole machine tap

**Design:** HSS-E, DIN 374, tolerance range ISO 2/6H, type N, with spiral point form B (4-5 threads).

**Application:** For metric precision threads according to DIN ISO 13. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.



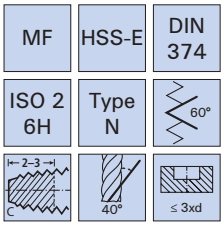
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1753 | 11 | | | | | | | | | | | 20 | |
| 1727 | **25** | | | | | | | | | | | **25** | |

| Order No. | Thread x gradient mm | 1753 format steam | 1727 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0001 | M3 x 0.35 | 17.35 | 40.10 | 56 | 2.2 | – | 2.65 |
| 0003 | M4 x 0.50 | 17.05 | 45.10 | 63 | 2.8 | 2.1 | 3.50 |
| 0005 | M5 x 0.50 | 16.80 | 43.90 | 70 | 3.5 | 2.7 | 4.50 |
| 0007 | M6 x 0.50 | 14.30 | 55.00 | 80 | 4.5 | 3.4 | 5.50 |
| 0009 | M6 x 0.75 | 14.25 | 54.40 | 80 | 4.5 | 3.4 | 5.20 |
| 0011 | M8 x 0.50 | 19.05 | 69.10 | 80 | 6.0 | 4.9 | 7.50 |
| 0013 | M8 x 0.75 | 16.55 | 58.00 | 80 | 6.0 | 4.9 | 7.20 |
| 0015 | M8 x 1.00 | 15.50 | 51.20 | 90 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 0.75 | 22.80 | 80.90 | 90 | 7.0 | 5.5 | 9.20 |
| 0019 | M10 x 1.00 | 17.35 | 56.20 | 90 | 7.0 | 5.5 | 9.00 |
| 0021 | M10 x 1.25 | 18.80 | 63.60 | 100 | 7.0 | 5.5 | 8.80 |
| 0023 | M12 x 1.00 | 20.50 | 73.50 | 100 | 9.0 | 7.0 | 11.00 |
| 0025 | M12 x 1.25 | 21.80 | 62.30 | 100 | 9.0 | 7.0 | 10.80 |
| 0027 | M12 x 1.50 | 19.55 | 69.10 | 100 | 9.0 | 7.0 | 10.50 |
| 0029 | M14 x 1.00 | 27.00 | 93.20 | 100 | 11.0 | 9.0 | 13.00 |
| 0031 | M14 x 1.25 | 25.80 | 92.00 | 100 | 11.0 | 9.0 | 12.80 |
| 0033 | M14 x 1.50 | 25.50 | 72.20 | 100 | 11.0 | 9.0 | 12.50 |
| 0035 | M16 x 1.00 | 31.80 | 102.00 | 100 | 12.0 | 9.0 | 15.00 |
| 0037 | M16 x 1.50 | 30.40 | 90.80 | 100 | 12.0 | 9.0 | 14.50 |
| 0039 | M18 x 1.50 | 36.40 | 115.50 | 110 | 14.0 | 11.0 | 16.50 |
| 0041 | M20 x 1.00 | 46.40 | 168.00 | 125 | 16.0 | 12.0 | 19.00 |
| 0043 | M20 x 1.50 | 42.60 | 149.50 | 125 | 16.0 | 12.0 | 18.50 |
| 0045 | M22 x 1.50 | 44.80 | 180.50 | 125 | 18.0 | 14.5 | 20.50 |
| 0047 | M24 x 1.50 | 48.70 | 200.00 | 140 | 18.0 | 14.5 | 22.50 |
| 0049 | M27 x 1.50 | 76.80 | 238.50 | 140 | 20.0 | 16.0 | 25.50 |
| 0051 | M30 x 1.50 | 77.30 (W164) | 301.50 (W165) | 150 | 22.0 | 18.0 | 28.50 |

## Blind hole machine tap

**Design:** HSS-E, DIN 374, tolerance range ISO 2/6 H, type N, with point form C (2–3 threads).

**Application:** For metric precision threads according to DIN ISO 13. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1755 | 10 | | | | | | | | | | | 15 | |
| 1729 | **23** | | | | | | | | | | | **20** | |

| Order No. | Thread x gradient mm | 1755 format steam | 1729 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0001 | M4 x 0.50 | 17.55 | 43.20 | 63 | 2.8 | 2.1 | 3.50 |
| 0003 | M5 x 0.50 | 17.25 | 45.70 | 70 | 3.5 | 2.7 | 4.50 |
| 0005 | M6 x 0.50 | 15.35 (W164) | 56.80 (W165) | 80 | 4.5 | 3.4 | 5.50 |

Continued overleave

## Blind hole machine tap

Continued

| Order No. | Thread x gradient mm | 1755 format steam | 1729 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0007 | M6 x 0.75 | 15.30 | 55.00 | 80 | 4.5 | 3.4 | 5.20 |
| 0009 | M8 x 0.50 | 20.40 | 56.80 | 80 | 6.0 | 4.9 | 7.50 |
| 0011 | M8 x 0.75 | 17.80 | 59.30 | 80 | 6.0 | 4.9 | 7.20 |
| 0013 | M8 x 1.00 | 16.60 | 46.90 | 90 | 6.0 | 4.9 | 7.00 |
| 0015 | M10 x 0.75 | 24.40 | 62.30 | 90 | 7.0 | 5.5 | 9.20 |
| 0017 | M10 x 1.00 | 18.60 | 55.60 | 90 | 7.0 | 5.5 | 9.00 |
| 0019 | M10 x 1.25 | 20.20 | 64.80 | 100 | 7.0 | 5.5 | 8.80 |
| 0021 | M12 x 1.00 | 23.40 | 74.10 | 100 | 9.0 | 7.0 | 11.00 |
| 0023 | M12 x 1.25 | 23.40 | 74.10 | 100 | 9.0 | 7.0 | 10.80 |
| 0025 | M12 x 1.50 | 21.80 | 63.60 | 100 | 9.0 | 7.0 | 10.50 |
| 0027 | M14 x 1.00 | 28.00 | 99.40 | 100 | 11.0 | 9.0 | 13.00 |
| 0029 | M14 x 1.25 | 28.70 | 101.50 | 100 | 11.0 | 9.0 | 12.80 |
| 0031 | M14 x 1.50 | 26.80 | 79.60 | 100 | 11.0 | 9.0 | 12.50 |
| 0033 | M16 x 1.00 | 33.50 | 107.50 | 100 | 12.0 | 9.0 | 15.00 |
| 0035 | M16 x 1.50 | 33.20 | 93.20 | 100 | 12.0 | 9.0 | 14.50 |
| 0037 | M18 x 1.50 | 42.90 | 115.00 | 110 | 14.0 | 11.0 | 16.50 |
| 0039 | M20 x 1.00 | 49.00 | 145.50 | 125 | 16.0 | 12.0 | 19.00 |
| 0041 | M20 x 1.50 | 45.30 | 142.00 | 125 | 16.0 | 12.0 | 18.50 |
| 0043 | M22 x 1.50 | 53.40 | 184.00 | 125 | 18.0 | 14.5 | 20.50 |
| 0045 | M24 x 1.50 | 64.60 | 225.00 | 140 | 18.0 | 14.5 | 22.50 |
| 0047 | M27 x 1.50 | 104.50 | – | 140 | 20.0 | 16.0 | 25.50 |
| 0049 | M30 x 1.50 | 108.00 | – | 150 | 22.0 | 18.0 | 28.50 |
| | | (W164) | (W165) | | | | |

## Through-hole machine tap

**Design:** DIN 374, tolerance range ISO 2/6H, type N, with spiral point form B (4-5 threads).

**Application:** For metric precision threads according to DIN ISO 13.

**1736** dampf. HSS-E

**1739** TiN **Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.

MF | DIN 374 | ISO 2 6H | Type N | 60° | 4–5 | B | ≤ 3xd

HSS-E

1736 steam format professional quality

HSS-E PM

1739 TiN GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1736 | 12 | 12 | | | | | | | 8 | | | 17 | |
| 1739 | 20 | 20 | | | | | | | 10 | | | 25 | |

| Order No. | Thread x gradient mm | 1736 format steam | 1739 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0001 | M3 x 0.35 | 25.20 | – | 56 | 2.2 | – | 2.65 |
| 0005 | M5 x 0.50 | 24.10 | – | 70 | 3.5 | 2.7 | 4.50 |
| 0009 | M6 x 0.75 | 24.10 | – | 80 | 4.5 | 3.4 | 5.20 |
| 0013 | M8 x 0.75 | 26.80 | – | 80 | 6.0 | 4.9 | 7.20 |
| 0015 | M8 x 1.00 | 24.10 | 52.50 | 90 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 1.00 | 25.20 | 61.10 | 90 | 7.0 | 5.5 | 9.00 |
| 0019 | M12 x 1.00 | 29.20 | 74.70 | 100 | 9.0 | 7.0 | 11.00 |
| 0021 | M12 x 1.50 | 32.70 | 69.10 | 100 | 9.0 | 7.0 | 10.50 |
| 0023 | M14 x 1.50 | 36.90 | 85.80 | 100 | 11.0 | 9.0 | 12.50 |
| 0025 | M16 x 1.50 | 42.30 | 96.30 | 100 | 12.0 | 9.0 | 14.50 |
| 0027 | M18 x 1.50 | 51.00 | 128.50 | 110 | 14.0 | 11.0 | 16.50 |
| 0029 | M20 x 1.50 | 59.00 | 173.00 | 125 | 16.0 | 12.0 | 18.50 |
| 0031 | M22 x 1.50 | 82.50 | 162.00 | 125 | 18.0 | 14.5 | 20.50 |
| 0033 | M24 x 1.50 | 71.20 | 186.50 | 140 | 18.0 | 14.5 | 22.50 |
| 0035 | M26 x 1.50 | 88.60 | – | 140 | 18.0 | 14.5 | 24.50 |
| 0037 | M28 x 1.50 | 105.50 | – | 140 | 20.0 | 16.0 | 26.50 |
| 0039 | M30 x 1.50 | 107.50 | – | 150 | 22.0 | 18.0 | 28.50 |
| | | (W164) | (W165) | | | | |

## Blind hole machine tap

**Design:** DIN 374, tolerance range ISO 2/6H, type N, with point form C (2–3 threads).

**Application:** For metric precision threads according to DIN ISO 13.

**1741** dampf. HSS-E

**1742** TiN **Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.

MF | DIN 374 | ISO 2 6H | Type N | 60° | 2–3 C | 40° | ≤ 3xd

HSS-E

1741 steam format professional quality

HSS-E PM

1742 TiN GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1741 | 12 | 12 | | | | | | | | | | 17 | |
| 1742 | 20 | 20 | | | | | | | | | | 25 | |

| Order No. | Thread x gradient mm | 1741 format steam | 1742 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0005 | M5 x 0.50 | 24.10 | – | 70 | 3.5 | 2.7 | 4.50 |
| 0009 | M6 x 0.75 | 25.50 | – | 80 | 4.5 | 3.4 | 5.20 |
| 0015 | M8 x 1.00 | 23.80 | 51.80 | 90 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 1.00 | 24.50 | 67.30 | 90 | 7.0 | 5.5 | 9.00 |
| 0019 | M12 x 1.00 | 30.20 | 77.20 | 100 | 9.0 | 7.0 | 11.00 |
| 0021 | M12 x 1.50 | 28.90 | 74.10 | 100 | 9.0 | 7.0 | 10.50 |
| 0023 | M14 x 1.50 | 39.60 | 87.70 | 100 | 11.0 | 9.0 | 12.50 |
| 0025 | M16 x 1.50 | 45.60 | 113.50 | 100 | 12.0 | 9.0 | 14.50 |
| 0027 | M18 x 1.50 | 60.40 | 148.00 | 110 | 14.0 | 11.0 | 16.50 |
| 0029 | M20 x 1.50 | 57.70 | 170.50 | 125 | 16.0 | 12.0 | 18.50 |
| 0031 | M22 x 1.50 | 79.90 | 186.50 | 125 | 18.0 | 14.5 | 20.50 |
| 0033 | M24 x 1.50 | 85.30 | 191.50 | 140 | 18.0 | 14.5 | 22.50 |
| 0035 | M26 x 1.50 | 112.00 | – | 140 | 18.0 | 14.5 | 24.50 |
| 0037 | M28 x 1.50 | 131.00 | – | 140 | 20.0 | 16.0 | 26.50 |
| 0039 | M30 x 1.50 | 129.00 (W164) | – (W165) | 150 | 22.0 | 18.0 | 28.50 |

## Through-hole machine tap

**Design:** HSS-E, DIN 374, tolerance range ISO 2/6H, type INOX, with spiral point form B (4-5 threads).

**Application:** For metric precision threads according to DIN ISO 13. Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.

MF | HSS-E | DIN 374 | ISO 2 6H | Type INOX | 60° | 4–5 B | ≤ 3xd

1757 steam format professional quality

1730 TiN GÜHRING

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1757 | | | | | | | | | 8 | | | 17 | |
| 1730 | | | | | | | | | 10 | | | 20 | |

| Order No. | Thread x gradient mm | 1757 format steam | 1730 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0001 | M4 x 0.50 | 17.95 | 36.40 | 63 | 2.8 | 2.1 | 3.50 |
| 0003 | M5 x 0.50 | 18.20 | 37.70 | 70 | 3.5 | 2.7 | 4.50 |
| 0005 | M6 x 0.75 | 20.30 | 50.60 | 80 | 4.5 | 3.4 | 5.20 |
| 0007 | M8 x 0.75 | 22.20 | 53.70 | 80 | 6.0 | 4.9 | 7.20 |
| 0009 | M8 x 1.00 | 21.30 | 52.50 | 90 | 6.0 | 4.9 | 7.00 |
| 0011 | M10 x 1.00 | 22.60 | 57.40 | 90 | 7.0 | 5.5 | 9.00 |
| 0013 | M12 x 1.00 | 26.10 | 64.20 | 100 | 9.0 | 7.0 | 11.00 |
| 0015 | M12 x 1.50 | 29.70 | 62.30 | 100 | 9.0 | 7.0 | 10.50 |
| 0017 | M14 x 1.50 | 32.30 | 77.80 | 100 | 11.0 | 9.0 | 12.50 |
| 0019 | M16 x 1.50 | 39.40 (W164) | 89.50 (W165) | 100 | 12.0 | 9.0 | 14.50 |

Continued overleave

## Through-hole machine tap

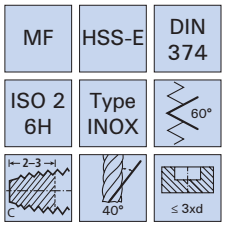
Continued

| Order No. | Thread x gradient mm | 1757 format steam | 1730 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0021 | M18 x 1.50 | 46.80 | 118.00 | 110 | 14.0 | 11.0 | 16.50 |
| 0023 | M20 x 1.50 | 57.20 | 157.00 | 125 | 16.0 | 12.0 | 18.50 |
| 0025 | M22 x 1.50 | 62.00 | – | 125 | 18.0 | 14.5 | 20.50 |
| 0027 | M24 x 1.50 | 66.80 | – | 140 | 18.0 | 14.5 | 22.50 |
| | | (W164) | (W165) | | | | |

## Blind hole machine tap

**Design:** HSS-E, DIN 374, tolerance range ISO 2/6 H, type INOX, with point form C (2–3 threads).

**Application:** For metric precision threads according to DIN ISO 13. Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.



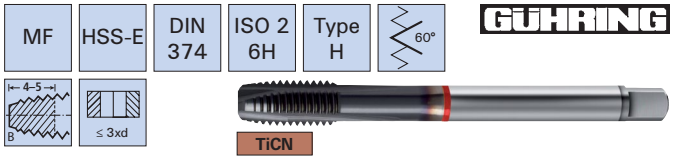
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1759 | | | | | | | | | 8 | | | 17 | |
| 1733 | | | | | | | | | 10 | | | 20 | |

| Order No. | Thread x gradient mm | 1759 format steam | 1733 GÜHRING TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0001 | M3 x 0.35 | 34.30 | – | 56 | 2.2 | – | 2.65 |
| 0003 | M4 x 0.50 | 20.00 | – | 63 | 2.8 | 2.1 | 3.50 |
| 0005 | M5 x 0.50 | 19.75 | – | 70 | 3.5 | 2.7 | 4.50 |
| 0007 | M6 x 0.50 | 19.00 | – | 80 | 4.5 | 3.4 | 5.50 |
| 0009 | M6 x 0.75 | 18.80 | – | 80 | 4.5 | 3.4 | 5.20 |
| 0011 | M8 x 0.50 | 25.20 | – | 80 | 6.0 | 4.9 | 7.50 |
| 0013 | M8 x 0.75 | 22.50 | – | 80 | 6.0 | 4.9 | 7.20 |
| 0015 | M8 x 1.00 | 22.00 | 52.50 | 90 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 1.00 | 23.40 | 59.30 | 90 | 7.0 | 5.5 | 9.00 |
| 0019 | M12 x 1.00 | 30.30 | 70.40 | 100 | 9.0 | 7.0 | 11.00 |
| 0021 | M12 x 1.50 | 28.50 | 67.90 | 100 | 9.0 | 7.0 | 10.50 |
| 0023 | M14 x 1.50 | 36.80 | 84.60 | 100 | 11.0 | 9.0 | 12.50 |
| 0025 | M16 x 1.50 | 43.20 | 96.30 | 100 | 12.0 | 9.0 | 14.50 |
| 0027 | M18 x 1.50 | 53.90 | 133.50 | 110 | 14.0 | 11.0 | 16.50 |
| 0029 | M20 x 1.50 | 58.50 | 168.00 | 125 | 16.0 | 12.0 | 18.50 |
| 0031 | M22 x 1.50 | 66.70 | – | 125 | 18.0 | 14.5 | 20.50 |
| 0033 | M24 x 1.50 | 74.80 | – | 140 | 18.0 | 14.5 | 22.50 |
| | | (W164) | (W165) | | | | |

## Through-hole machine tap

**Design:** HSS-E, DIN 374, tolerance range ISO 2/6 H, type H, with point form B (4–5 threads).

**Application:** For metric precision threads according to DIN ISO 13. Particularly suitable for high strength steels such as tempered steels, alloyed cold work steels and high-speed steels.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1776 | | | 12 | 8 | | | | | | | | | |

| Order No. | Thread x gradient mm | 1776 GÜHRING TiCN | Total length mm | Shank Ø mm | Square Shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|
| 0001 | M3 x 0.35 | 32.70 | 56 | 2.2 | – | 2.65 |
| 0003 | M4 x 0.50 | 33.30 | 63 | 2.8 | 2.1 | 3.50 |
| 0005 | M5 x 0.50 | 38.60 | 70 | 3.5 | 2.7 | 4.50 |
| 0007 | M6 x 0.50 | 39.00 | 80 | 4.5 | 3.4 | 5.50 |
| | | (W165) | | | | |

| Order No. | Thread x gradient mm | 1776 GÜHRING TiCN | Total length mm | Shank Ø mm | Square Shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|
| 0009 | M6 x 0.75 | 37.00 | 80 | 4.5 | 3.4 | 5.20 |
| 0013 | M8 x 0.75 | 47.00 | 80 | 6.0 | 4.9 | 7.20 |
| 0015 | M8 x 1.00 | 45.80 | 90 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 1.00 | 51.80 | 90 | 7.0 | 5.5 | 9.00 |
| | | (W165) | | | | |

Continued overleave

## Through-hole machine tap

Continued

| Order No. | Thread x gradient mm | 1776 GÜHRING TiCN | Total length mm | Shank Ø mm | Square Shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|
| 0019 | M12 x 1.00 | 58.30 | 100 | 9.0 | 7.0 | 11.00 |
| 0021 | M12 x 1.50 | 58.30 | 100 | 9.0 | 7.0 | 10.50 |
| 0023 | M14 x 1.50 | 73.50 | 100 | 11.0 | 9.0 | 12.50 |
| 0025 | M16 x 1.50 | 90.00 (W165) | 100 | 12.0 | 9.0 | 14.50 |

| Order No. | Thread x gradient mm | 1776 GÜHRING TiCN | Total length mm | Shank Ø mm | Square Shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|
| 0027 | M18 x 1.50 | 115.00 | 110 | 14.0 | 11.0 | 16.50 |
| 0029 | M20 x 1.50 | 159.50 | 125 | 16.0 | 12.0 | 18.50 |
| 0031 | M22 x 1.50 | 177.50 | 125 | 18.0 | 14.5 | 20.50 |
| 0033 | M24 x 1.50 | 254.00 (W165) | 140 | 18.0 | 14.5 | 22.50 |

## Blind hole machine tap

**Design:** HSS-E, DIN 374, tolerance range ISO 2/6 H, type H, with point form C (2–3 threads).

**Application:** For metric precision threads according to DIN ISO 13. Particularly suitable for high strength steels such as tempered steels, alloyed cold work steels and high-speed steels.

MF | HSS-E | DIN 374 | ISO 2 6H | Type H | 60° | 2–3 | C | 40° | ≤ 3xd

GÜHRING

TiCN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1778 | | | 12 | 8 | | | | | | | | | |

| Order No. | Thread x gradient mm | 1778 GÜHRING TiCN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|
| 0001 | M3 x 0.35 | 28.80 | 56 | 2.2 | – | 2.65 |
| 0003 | M4 x 0.50 | 28.80 | 63 | 2.8 | 2.1 | 3.50 |
| 0005 | M5 x 0.50 | 34.00 | 70 | 3.5 | 2.7 | 4.50 |
| 0007 | M6 x 0.50 | 34.60 | 80 | 4.5 | 3.4 | 5.50 |
| 0009 | M6 x 0.75 | 34.00 | 80 | 4.5 | 3.4 | 5.20 |
| 0013 | M8 x 0.75 | 45.10 | 80 | 6.0 | 4.9 | 7.20 |
| 0015 | M8 x 1.00 | 32.90 | 93 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 1.00 | 48.10 (W165) | 93 | 7.0 | 5.5 | 9.00 |

| Order No. | Thread x gradient mm | 1778 GÜHRING TiCN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|
| 0019 | M12 x 1.00 | 53.70 | 100 | 9.0 | 7.0 | 11.00 |
| 0021 | M12 x 1.50 | 53.70 | 100 | 9.0 | 7.0 | 10.50 |
| 0023 | M14 x 1.50 | 64.40 | 100 | 11.0 | 9.0 | 12.50 |
| 0025 | M16 x 1.50 | 79.00 | 100 | 12.0 | 9.0 | 14.50 |
| 0027 | M18 x 1.50 | 105.00 | 110 | 14.0 | 11.0 | 16.50 |
| 0029 | M20 x 1.50 | 145.00 | 125 | 16.0 | 12.0 | 18.50 |
| 0031 | M22 x 1.50 | 148.00 | 125 | 18.0 | 14.5 | 20.50 |
| 0033 | M24 x 1.50 | 188.50 (W165) | 140 | 18.0 | 14.5 | 22.50 |

## Through-hole machine tap

**Design:** With chamfer form B (4-5 threads).

**Application:** Universal taps with a broad range of metric fine thread according to DIN ISO 13.

MF | DIN 374 | ISO 2 6H | Type N | 60° | 4–5 | B | ≤ 3xd

format professional quality

**1779** dampf. — HSS-E

HSS-E

1779 steam

**1794** TiN — **Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.

HSS-E PM

1794 TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1779 | 15 | 12 | 4 | | | | | | 10 | 2 | 10 | 15 | 15 |
| 1794 | 20 | 15 | 8 | | | | | | 12 | 2 | 15 | 20 | 20 |

| Order No. | Thread x gradient mm | 1779 format steam | 1794 format TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0003 | M4 x 0.50 | 21.00 | – | 63 | 2.8 | 2.1 | 3.50 |
| 0005 | M5 x 0.50 | 21.00 | – | 70 | 3.5 | 2.7 | 4.50 |
| 0009 | M6 x 0.75 | 21.00 | – | 80 | 4.5 | 3.4 | 5.20 |
| 0015 | M8 x 1.00 | 18.75 | 30.40 | 90 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 1.00 | 19.35 (W163) | 34.90 (W163) | 90 | 7.0 | 5.5 | 9.00 |

Continued overleave

## Through-hole machine tap

Continued

| Order No. | Thread x gradient mm | 1779 format steam | 1794 format TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0018 | M10 x 1.25 | – | 37.40 | 100 | 7.0 | 5.5 | 8.80 |
| 0019 | M12 x 1.00 | 25.00 | 42.90 | 100 | 9.0 | 7.0 | 11.00 |
| 0020 | M12 x 1.25 | – | 44.90 | 100 | 9.0 | 7.0 | 10.80 |
| 0021 | M12 x 1.50 | 21.90 | 39.90 | 100 | 9.0 | 7.0 | 10.50 |
| 0022 | M14 x 1.00 | – | 51.90 | 100 | 11.0 | 9.0 | 13.00 |
| 0023 | M14 x 1.50 | 31.40 | 49.40 | 100 | 11.0 | 9.0 | 12.50 |
| 0025 | M16 x 1.50 | 32.50 | 55.90 | 100 | 12.0 | 9.0 | 14.50 |
| 0027 | M18 x 1.50 | – | 73.90 | 110 | 14.0 | 11.0 | 16.50 |
| 0029 | M20 x 1.50 | 49.90 | 99.80 | 125 | 16.0 | 12.0 | 18.50 |
| 0031 | M22 x 1.50 | – | 93.80 | 125 | 18.0 | 14.5 | 20.50 |
| 0033 | M24 x 1.50 | – | 108.00 | 140 | 18.0 | 14.5 | 22.50 |
| 0035 | M24 x 2.00 | – (W163) | 123.00 (W163) | 140 | 18.0 | 14.5 | 22.00 |

## Blind hole machine tap

**Design:** With chamfer form C (2-3 threads).

**Application:** Universal taps with a broad range of metric fine thread according to DIN ISO 13.

MF | DIN 374 | ISO 2 6H | Type N | 60° | 2–3 C | ≤ 3xd

format professional quality

**1796** steam — HSS-E

HSS-E

1796 steam

**1797** TiN — HSS-E PM

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a longer tool life.

HSS-E PM

1797 TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1796 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |
| 1797 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |

| Order No. | Thread x gradient mm | 1796 format steam | 1797 format TiN | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0003 | M4 x 0.50 | 21.00 | – | 63 | 2.8 | 2.1 | 3.50 |
| 0005 | M5 x 0.50 | 21.00 | – | 70 | 3.5 | 2.7 | 4.50 |
| 0009 | M6 x 0.75 | 22.50 | – | 80 | 4.5 | 3.4 | 5.20 |
| 0015 | M8 x 1.00 | 18.20 | 29.90 | 90 | 6.0 | 4.9 | 7.00 |
| 0017 | M10 x 1.00 | 18.95 | 38.90 | 90 | 7.0 | 5.5 | 9.00 |
| 0018 | M10 x 1.25 | 21.00 | 37.90 | 100 | 7.0 | 5.5 | 8.80 |
| 0019 | M12 x 1.00 | 25.50 | 44.40 | 100 | 9.0 | 7.0 | 11.00 |
| 0020 | M12 x 1.25 | 29.90 | 48.40 | 100 | 9.0 | 7.0 | 10.80 |
| 0021 | M12 x 1.50 | 22.50 | 42.90 | 100 | 9.0 | 7.0 | 10.50 |
| 0022 | M14 x 1.00 | 33.40 | 51.90 | 100 | 11.0 | 9.0 | 13.00 |
| 0023 | M14 x 1.50 | 30.40 | 50.90 | 100 | 11.0 | 9.0 | 12.50 |
| 0024 | M16 x 1.00 | 35.90 | – | 100 | 12.0 | 9.0 | 15.00 |
| 0025 | M16 x 1.50 | 34.90 | 65.90 | 100 | 12.0 | 9.0 | 14.50 |
| 0027 | M18 x 1.50 | – | 85.80 | 110 | 14.0 | 11.0 | 16.50 |
| 0029 | M20 x 1.50 | 44.40 | 97.80 | 125 | 16.0 | 12.0 | 18.50 |
| 0031 | M22 x 1.50 | – | 108.00 | 125 | 18.0 | 14.5 | 20.50 |
| 0033 | M24 x 1.50 | – | 110.00 | 140 | 18.0 | 14.5 | 22.50 |
| 0035 | M24 x 2.00 | – (W163) | 128.00 (W163) | 140 | 18.0 | 14.5 | 22.00 |

## Through-hole machine tap

**Design:** HSS-E, DIN 5156, tolerance, type N, with spiral point form B (4-5 threads).

**Application:** For pipe threads DIN ISO 228 (DIN 259). Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

1763 format professional quality
bright

1744 GÜHRING
steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1763 | 10 | | | | | | | | | | | 15 | |
| 1744 | 12 | | | | | | | | | | | 15 | |

| Order No. | Thread inch | 1763 format bright | 1744 GÜHRING steam | Thread Ø mm | Threads per inch | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|
| 0001 | G 1/8 | 19.50 | 40.10 | 9.728 | 28 | 90 | 7 | 5.5 | 8.80 |
| 0003 | G 1/4 | 25.80 | 50.60 | 13.157 | 19 | 100 | 11 | 9.0 | 11.80 |
| 0005 | G 3/8 | 32.70 | 71.00 | 16.662 | 19 | 100 | 12 | 9.0 | 15.25 |
| 0007 | G 1/2 | 43.70 | 95.10 | 20.955 | 14 | 125 | 16 | 12.0 | 19.00 |
| 0009 | G 3/4 | 69.50 | 169.00 | 26.441 | 14 | 140 | 20 | 16.0 | 24.50 |
| 0011 | G 1" | 97.30 | 201.50 | 33.249 | 11 | 160 | 25 | 20.0 | 30.75 |
| 0015 | G 1.1/4* | 161.00 | 307.50 | 41.910 | 11 | 170 | 32 | 24.0 | 39.50 |
| 0017 | G 1.1/2* | 222.00 (W164) | 432.00 (W165) | 47.803 | 11 | 190 | 36 | 29.0 | 45.25 |

* HSS

## Blind hole machine tap

**Design:** HSS-E, DIN 5156, type N, with point form C (2–3 threads).

**Application:** For pipe threads DIN ISO 228 (DIN 259). Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

1765 format professional quality
bright

1745 GÜHRING
steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1765 | 10 | | | | | | | | | | | 15 | |
| 1745 | 12 | | | | | | | | | | | 15 | |

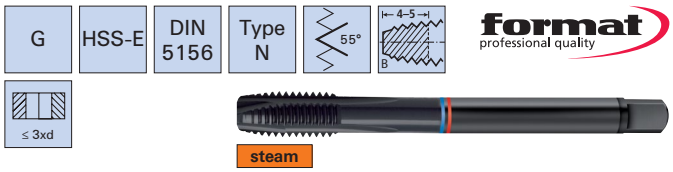
| Order No. | Thread inch | 1765 format bright | 1745 GÜHRING steam | Thread Ø mm | Threads per inch | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|
| 0001 | G 1/8 | 21.10 | 40.10 | 9.728 | 28 | 90 | 7 | 5.5 | 8.80 |
| 0003 | G 1/4 | 28.00 | 51.80 | 13.157 | 19 | 100 | 11 | 9.0 | 11.80 |
| 0005 | G 3/8 | 30.80 | 67.30 | 16.662 | 19 | 100 | 12 | 9.0 | 15.25 |
| 0007 | G 1/2 | 45.50 | 93.20 | 20.955 | 14 | 125 | 16 | 12.0 | 19.00 |
| 0009 | G 3/4 | 74.80 | 163.00 | 26.441 | 14 | 140 | 20 | 16.0 | 24.50 |
| 0011 | G 1" | 113.00 | 231.00 | 33.249 | 11 | 160 | 25 | 20.0 | 30.75 |
| 0015 | G 1.1/4* | 212.50 | – | 41.910 | 11 | 170 | 32 | 24.0 | 39.50 |
| 0017 | G 1.1/2* | 292.50 (W164) | – (W165) | 47.803 | 11 | 190 | 36 | 29.0 | 45.25 |

* HSS

## Through-hole machine tap

**Design:** HSS-E, DIN 5156, with chamfered form C (2–3 threads).

**Application:** Universal taps with a broad range of pipe thread according to DIN ISO 228 (DIN 259).



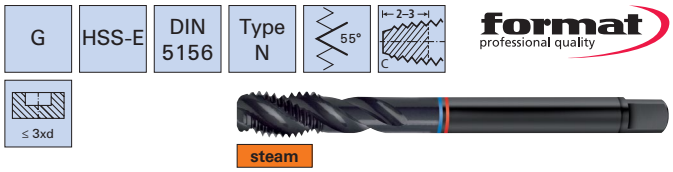

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1798 | 15 | 12 | 4 | | | | | | 10 | 2 | 10 | 15 | 15 |

| Order No. | Thread inch | 1798 format steam | Thread Ø mm | Threads per inch | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | G 1/8 | 17.65 | 9.728 | 28 | 90 | 7.0 | 5.5 | 8.80 |
| 0003 | G 1/4 | 23.80 | 13.157 | 19 | 100 | 11.0 | 9.0 | 11.80 |
| 0005 | G 3/8 | 29.10 | 16.662 | 19 | 100 | 12.0 | 9.0 | 15.25 |
| 0007 | G 1/2 | 40.20 | 20.955 | 14 | 125 | 16.0 | 12.0 | 19.00 |
| 0009 | G 3/4 | 78.80 | 26.441 | 14 | 140 | 20.0 | 16.0 | 24.50 |
| 0011 | G 1 | 87.00 (W163) | 33.249 | 11 | 160 | 25.0 | 20.0 | 30.75 |

## Blind hole machine tap

**Design:** HSS-E, DIN 5156, with chamfered form C (2–3 threads).

**Application:** Universal taps with a broad range of pipe thread according to DIN ISO 228 (DIN 259).



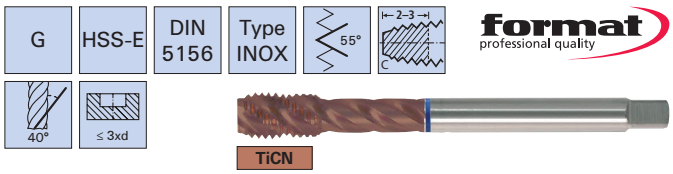

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1799 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |

| Order No. | Thread inch | 1799 format steam | Thread Ø mm | Threads per inch | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | G 1/8 | 18.50 | 9.728 | 28 | 90 | 7.0 | 5.5 | 8.80 |
| 0003 | G 1/4 | 26.30 | 13.157 | 19 | 100 | 11.0 | 9.0 | 11.80 |
| 0005 | G 3/8 | 38.20 | 16.662 | 19 | 100 | 12.0 | 9.0 | 15.25 |
| 0007 | G 1/2 | 49.30 | 20.955 | 14 | 125 | 16.0 | 12.0 | 19.00 |
| 0009 | G 3/4 | 75.50 | 26.441 | 14 | 140 | 20.0 | 16.0 | 24.50 |
| 0011 | G 1 | 105.00 (W163) | 33.249 | 11 | 160 | 25.0 | 20.0 | 30.75 |

## Blind hole machine tap

**Design:** HSS-E, DIN 5156, type INOX, with point form C (2–3 threads).

**Application:** For pipe threads DIN ISO 228 (DIN 259). Particularly suitable for rust/acid-resistant steels such as sulphured steels, austenitic steels, martensitic steels and ferritic steels.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1766 | | | | | | | | | 8 | | | | |

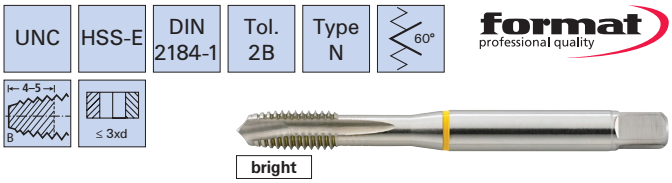
| Order No. | Thread inch | 1766 format TiCN | Thread Ø mm | Threads per inch | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | G 1/8 | 42.40 | 9.728 | 28 | 90 | 7 | 5.5 | 8.80 |
| 0003 | G 1/4 | 55.60 | 13.157 | 19 | 100 | 11 | 9.0 | 11.80 |
| 0005 | G 3/8 | 74.10 | 16.662 | 19 | 100 | 12 | 9.0 | 15.25 |
| 0007 | G 1/2 | 101.00 | 20.955 | 14 | 125 | 16 | 12.0 | 19.00 |
| 0009 | G 3/4 | 157.00 | 26.441 | 14 | 140 | 20 | 16.0 | 24.50 |
| 0011 | G 1 | 239.50 (W166) | 33.249 | 11 | 160 | 25 | 20.0 | 30.75 |

## Through-hole machine tap

**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with spiral point form B (4-5 threads).

UNC No. 2–56 to 3/8–16 with reinforced shank,
UNC 7/16–14 to 1–8 with overflow shank.

**Application:** For UNC thread, unified coarse thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1768 | 10 | | | | | | | | | | | 15 | |

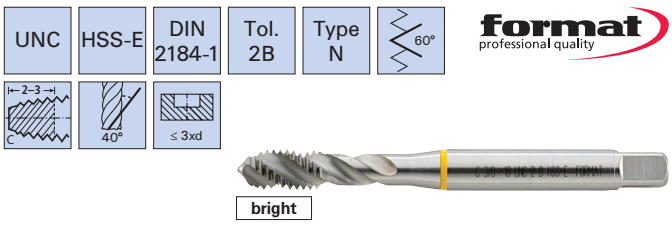
| Order No. | Thread inch | 1768 format bright | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNC No.2 | 24.40 | 56 | 2.184 | 45 | 2.8 | 2.1 | 1.85 |
| 0003 | UNC No.3 | 20.50 | 48 | 2.515 | 50 | 2.8 | 2.1 | 2.10 |
| 0005 | UNC No.4 | 18.05 | 40 | 2.845 | 56 | 3.5 | 2.7 | 2.35 |
| 0007 | UNC No.5 | 17.15 | 40 | 3.175 | 56 | 3.5 | 2.7 | 2.65 |
| 0009 | UNC No.6 | 16.70 | 32 | 3.505 | 56 | 4.0 | 3.0 | 2.85 |
| 0011 | UNC No.8 | 16.15 | 32 | 4.166 | 63 | 4.5 | 3.4 | 3.50 |
| 0013 | UNC No.10 | 18.05 | 24 | 4.826 | 70 | 6.0 | 4.9 | 3.90 |
| 0015 | UNC No.12 | 20.50 | 24 | 5.486 | 80 | 6.0 | 4.9 | 4.50 |
| 0017 | UNC 1/4 | 18.45 | 20 | 6.350 | 80 | 7.0 | 5.5 | 5.10 |
| 0019 | UNC 5/16 | 21.20 | 18 | 7.938 | 90 | 8.0 | 6.2 | 6.60 |
| 0021 | UNC 3/8 | 24.10 | 16 | 9.525 | 100 | 9.0 | 8.0 | 8.00 |
| 0023 | UNC 7/16 | 29.80 | 14 | 11.113 | 100 | 8.0 | 6.2 | 9.40 |
| 0025 | UNC 1/2 | 32.40 | 13 | 12.700 | 110 | 9.0 | 7.0 | 10.80 |
| 0027 | UNC 5/8 | 42.20 | 11 | 15.875 | 110 | 12.0 | 9.0 | 13.50 |
| 0029 | UNC 3/4 | 54.70 | 10 | 19.050 | 125 | 14.0 | 11.0 | 16.50 |
| 0031 | UNC 7/8 | 68.10 | 9 | 22.225 | 140 | 18.0 | 14.5 | 19.50 |
| 0033 | UNC 1 | 89.00 (W164) | 8 | 25.400 | 160 | 18.0 | 14.5 | 22.25 |

## Blind hole machine tap

**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with point form C (2–3 threads).

UNC No. 4–40 to 3/8–16 with reinforced shank,
UNC 7/16–14 to 1–8 with overflow shank.

**Application:** For UNC thread, unified coarse thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1770 | 10 | | | | | | | | | | | 15 | |

| Order No. | Thread inch | 1770 format bright | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNC No.4 | 16.60 | 40 | 2.845 | 56 | 3.5 | 2.7 | 2.35 |
| 0003 | UNC No.5 | 16.35 | 40 | 3.175 | 56 | 3.5 | 2.7 | 2.65 |
| 0005 | UNC No.6 | 15.50 | 32 | 3.505 | 56 | 4.0 | 3.0 | 2.85 |
| 0007 | UNC No.8 | 16.35 | 32 | 4.166 | 63 | 4.5 | 3.4 | 3.50 |
| 0009 | UNC No.10 | 16.60 | 24 | 4.826 | 70 | 6.0 | 4.9 | 3.90 |
| 0011 | UNC No.12 | 19.80 | 24 | 5.486 | 80 | 6.0 | 4.9 | 4.50 |
| 0013 | UNC 1/4 | 18.65 | 20 | 6.350 | 80 | 7.0 | 5.5 | 5.10 |
| 0015 | UNC 5/16 | 19.80 | 18 | 7.938 | 90 | 8.0 | 6.2 | 6.60 |
| 0017 | UNC 3/8 | 24.10 | 16 | 9.525 | 100 | 9.0 | 7.0 | 8.00 |
| 0019 | UNC 7/16 | 29.40 | 14 | 11.113 | 100 | 8.0 | 6.2 | 9.40 |
| 0021 | UNC 1/2 | 32.40 | 13 | 12.700 | 110 | 9.0 | 7.0 | 10.80 |
| 0023 | UNC 9/16 | 46.30 | 12 | 14.288 | 110 | 11.0 | 9.0 | 12.20 |
| 0025 | UNC 5/8 | 40.80 | 11 | 15.875 | 110 | 12.0 | 9.0 | 13.50 |
| 0027 | UNC 3/4 | 50.30 | 10 | 19.050 | 125 | 14.0 | 11.0 | 16.50 |
| 0029 | UNC 7/8 | 61.40 | 9 | 22.225 | 140 | 18.0 | 14.5 | 19.50 |
| 0031 | UNC 1 | 82.20 (W164) | 8 | 25.400 | 160 | 18.0 | 14.5 | 22.25 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Through-hole machine tap

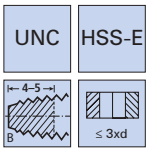
**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with point form B (4–5 threads).

UNC No. 4–40 to 3/8–16 with reinforced shank, UNC 7/16–14 to 7/8–8 with overflow shank.

**Application:** For UNC thread, unified coarse thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

UNC | HSS-E | DIN 2184-1 | Tol. 2B | Type N | 60°

GÜHRING



steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1746 | 12 | 12 | | | | | | | 8 | | | 17 | |

| Order No. | Thread | 1746 GÜHRING steam | Threads | Thread Ø | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | inch | | per inch | mm | mm | mm | mm | mm |
| 0005 | UNC No. 4 | 30.20 | 40 | 2.845 | 56 | 4.0 | 3.0 | 2.35 |
| 0007 | UNC No. 5 | 34.60 | 40 | 3.175 | 63 | 4.5 | 3.4 | 2.65 |
| 0009 | UNC No. 6 | 26.50 | 32 | 3.505 | 70 | 6.0 | 4.9 | 2.85 |
| 0011 | UNC No. 8 | 27.50 | 32 | 4.166 | 80 | 6.0 | 4.9 | 3.50 |
| 0013 | UNC No.10 | 36.40 | 24 | 4.826 | 80 | 7.0 | 5.5 | 3.90 |
| 0015 | UNC No.12 | 42.00 | 24 | 5.486 | 90 | 8.0 | 6.2 | 4.50 |
| 0017 | UNC 1/4 | 29.60 | 20 | 6.350 | 100 | 9.0 | 7.0 | 5.10 |
| 0019 | UNC 5/16 | 35.80 | 18 | 7.938 | 100 | 8.0 | 6.2 | 6.60 |
| 0021 | UNC 3/8 | 46.90 | 16 | 9.525 | 110 | 9.0 | 7.0 | 8.00 |
| 0023 | UNC 7/16 | 47.50 | 14 | 11.113 | 110 | 11.0 | 9.0 | 9.40 |
| 0025 | UNC 1/2 | 58.00 | 13 | 12.700 | 110 | 12.0 | 9.0 | 10.80 |
| 0027 | UNC 5/8 | 73.50 | 11 | 15.875 | 125 | 14.0 | 11.0 | 13.50 |
| 0029 | UNC 3/4 | 95.10 | 10 | 19.050 | 140 | 18.0 | 14.5 | 16.50 |
| 0033 | UNC 1 | 180.50 | 8 | 25.400 | 160 | 18.0 | 14.5 | 22.25 |

(W165)

## Blind hole machine tap

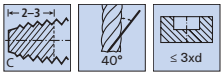
**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with point form C (2–3 threads).

UNC No. 4–40 to 3/8–16 with reinforced shank, UNC 7/16–14 to 7/8–9 with overflow shank.

**Application:** For UNC thread, unified coarse thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

UNC | HSS-E | DIN 2184-1 | Tol. 2B | Type N | 60°

GÜHRING



steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1747 | 12 | 12 | | | | | | | | | | 17 | |

| Order No. | Thread | 1747 GÜHRING steam | Threads | Thread Ø | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|---|
| | inch | | per inch | mm | mm | mm | mm | mm |
| 0001 | UNC No. 4 | 38.30 | 40 | 2.845 | 56 | 3.5 | 2.7 | 2.35 |
| 0003 | UNC No. 5 | 34.60 | 40 | 3.175 | 56 | 3.5 | 2.7 | 2.65 |
| 0005 | UNC No. 6 | 32.70 | 32 | 3.505 | 56 | 4.0 | 3.0 | 2.85 |
| 0007 | UNC No. 8 | 35.20 | 32 | 4.166 | 63 | 4.5 | 3.4 | 3.50 |
| 0009 | UNC No.10 | 34.60 | 24 | 4.826 | 70 | 6.0 | 4.9 | 3.90 |
| 0011 | UNC No.12 | 42.00 | 24 | 5.486 | 80 | 6.0 | 4.9 | 4.50 |
| 0013 | UNC 1/4 | 37.70 | 20 | 6.350 | 80 | 7.0 | 5.5 | 5.10 |
| 0015 | UNC 5/16 | 36.40 | 18 | 7.938 | 90 | 8.0 | 6.2 | 6.60 |
| 0017 | UNC 3/8 | 39.50 | 16 | 9.525 | 100 | 9.0 | 7.0 | 8.00 |
| 0019 | UNC 7/16 | 63.00 | 14 | 11.113 | 100 | 8.0 | 6.2 | 9.40 |
| 0021 | UNC 1/2 | 58.00 | 13 | 12.700 | 110 | 9.0 | 7.0 | 10.80 |
| 0023 | UNC 9/16 | 92.00 | 12 | 14.288 | 110 | 11.0 | 9.0 | 12.20 |
| 0025 | UNC 5/8 | 73.50 | 11 | 15.875 | 110 | 12.0 | 9.0 | 13.50 |
| 0027 | UNC 3/4 | 101.50 | 10 | 19.050 | 125 | 14.0 | 11.0 | 16.50 |
| 0029 | UNC 7/8 | 147.00 | 9 | 22.225 | 140 | 18.0 | 14.5 | 19.50 |

(W165)

## Through-hole machine tap

**Design:** HSS-E, DIN 371/376, Type N, with chamfered form B (4-5 threads).

**Application:** Universal taps with a broad range of UNC thread, unified coarse thread, ANSI B1.1.

UNC | HSS-E | ≈DIN 371 | ≈DIN 376 | Tol. 2B | Type N

format professional quality

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1696 | 15 | 12 | 4 | | | | | | 10 | 2 | 10 | 15 | 15 |

| Order No. | Thread inch | 1696 format steam | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNC No. 4 | 17.35 | 40 | 2.845 | 56 | 3.5 | 2.7 | 2.35 |
| 0005 | UNC No. 6 | 15.40 | 32 | 3.505 | 56 | 4.0 | 3.0 | 2.85 |
| 0007 | UNC No. 8 | 15.75 | 32 | 4.166 | 63 | 4.5 | 3.4 | 3.50 |
| 0009 | UNC No.10 | 21.00 | 24 | 4.826 | 70 | 6.0 | 4.9 | 3.90 |
| 0013 | UNC 1/4 | 17.15 | 20 | 6.350 | 80 | 7.0 | 5.5 | 5.10 |
| 0015 | UNC 5/16 | 21.00 | 18 | 7.938 | 90 | 8.0 | 6.2 | 6.60 |
| 0017 | UNC 3/8 | 26.90 | 16 | 9.525 | 100 | 10.0 | 7.0 | 8.00 |
| 0019 | UNC 7/16 | 27.50 | 14 | 11.113 | 100 | 8.0 | 6.2 | 9.40 |
| 0021 | UNC 1/2 | 33.40 | 13 | 12.700 | 110 | 9.0 | 7.0 | 10.80 |
| 0025 | UNC 5/8 | 42.40 | 11 | 15.875 | 110 | 12.0 | 9.0 | 13.50 |
| 0027 | UNC 3/4 | 54.90 | 10 | 19.050 | 125 | 14.0 | 11.0 | 16.50 |
| | | (W163) | | | | | | |

## Blind hole machine tap

**Design:** HSS-E, DIN 371/376, Type N, with chamfered form C (2–3 threads).

**Application:** Universal taps with a broad range of UNC thread, unified coarse thread, ANSI B1.1.

UNC | HSS-E | ≈DIN 371 | ≈DIN 376 | Tol. 2B | Type N

format professional quality

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1697 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |

| Order No. | Thread inch | 1697 format steam | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNC No. 4 | 18.05 | 40 | 2.845 | 56 | 3.5 | 3.0 | 2.35 |
| 0005 | UNC No. 6 | 15.60 | 32 | 3.505 | 56 | 4.0 | 4.9 | 2.85 |
| 0007 | UNC No. 8 | 16.85 | 32 | 4.166 | 63 | 4.5 | 4.9 | 3.50 |
| 0009 | UNC No.10 | 16.40 | 24 | 4.826 | 70 | 6.0 | 5.5 | 3.90 |
| 0013 | UNC 1/4 | 17.65 | 20 | 6.350 | 80 | 7.0 | 5.5 | 5.10 |
| 0015 | UNC 5/16 | 17.25 | 18 | 7.938 | 90 | 8.0 | 6.2 | 6.60 |
| 0017 | UNC 3/8 | 18.90 | 16 | 9.525 | 100 | 10.0 | 7.0 | 8.00 |
| 0019 | UNC 7/16 | 30.00 | 14 | 11.113 | 100 | 8.0 | 9.0 | 9.40 |
| 0021 | UNC 1/2 | 27.50 | 13 | 12.700 | 110 | 9.0 | 9.0 | 10.80 |
| 0025 | UNC 5/8 | 34.90 | 11 | 15.875 | 110 | 12.0 | 11.0 | 13.50 |
| 0027 | UNC 3/4 | 47.60 | 10 | 19.050 | 125 | 14.0 | 14.5 | 16.50 |
| | | (W163) | | | | | | |

## Through-hole machine tap

**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with spiral point form B (4-5 threads).

**Application:** For UNF thread, unified fine thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

UNF | HSS-E | DIN 2184-1 | Tol. 2B | Type N | 60° | format professional quality

4–5 | B | ≤ 3xd

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1772 | 10 | | | | | | | | | | | 15 | |

| Order No. | Thread inch | 1772 format bright | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNF No.10 | 20.50 | 32 | 4.826 | 70 | 3.5 | 2.7 | 4.10 |
| 0003 | UNF No.12 | 24.60 | 38 | 5.486 | 80 | 4.0 | 3.0 | 4.60 |
| 0005 | UNF 1/4 | 25.40 | 28 | 6.350 | 80 | 4.5 | 3.4 | 5.50 |
| 0007 | UNF 5/16 | 25.00 | 24 | 7.938 | 90 | 6.0 | 4.9 | 6.90 |
| 0009 | UNF 3/8 | 26.00 | 24 | 9.525 | 90 | 7.0 | 5.5 | 8.50 |
| 0011 | UNF 7/16 | 33.10 | 20 | 11.113 | 100 | 8.0 | 6.2 | 9.90 |
| 0013 | UNF 1/2 | 33.10 | 20 | 12.700 | 100 | 9.0 | 7.0 | 11.50 |
| 0015 | UNF 5/8 | 44.80 | 18 | 15.875 | 100 | 12.0 | 9.0 | 14.50 |
| 0017 | UNF 3/4 | 58.20 | 16 | 19.050 | 110 | 14.0 | 11.0 | 17.50 |
| 0019 | UNF 7/8 | 72.90 | 14 | 22.225 | 125 | 18.0 | 14.5 | 20.40 |
| 0021 | UNF 1 | 96.70 | 12 | 25.400 | 140 | 18.0 | 14.5 | 23.25 |
| | | (W164) | | | | | | |

## Blind hole machine tap

**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with point form C (2–3 threads).

**Application:** For UNF thread, unified fine thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

UNF | HSS-E | DIN 2184-1 | Tol. 2B | Type N | 60° | format professional quality

2–3 | C | 40° | ≤ 3xd

bright

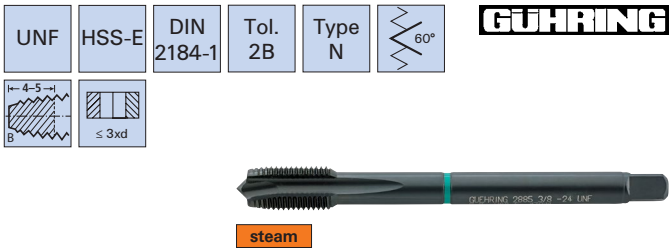
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1774 | 10 | | | | | | | | | | | 15 | |

| Order No. | Thread inch | 1774 format bright | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNF No.10 | 21.60 | 32 | 4.826 | 70 | 3.5 | 2.7 | 4.10 |
| 0003 | UNF No.12 | 24.60 | 28 | 5.486 | 80 | 4.0 | 3.0 | 4.60 |
| 0005 | UNF 1/4 | 26.30 | 28 | 6.350 | 80 | 4.5 | 3.4 | 5.50 |
| 0007 | UNF 5/16 | 27.60 | 24 | 7.938 | 90 | 6.0 | 4.9 | 6.90 |
| 0009 | UNF 3/8 | 28.40 | 24 | 9.525 | 90 | 7.0 | 5.5 | 8.50 |
| 0011 | UNF 7/16 | 33.70 | 20 | 11.113 | 100 | 8.0 | 6.2 | 9.90 |
| 0013 | UNF 1/2 | 34.10 | 20 | 12.700 | 100 | 9.0 | 7.0 | 11.50 |
| 0015 | UNF 9/16 | 50.70 | 18 | 14.288 | 100 | 11.0 | 9.0 | 12.90 |
| 0017 | UNF 5/8 | 46.80 | 18 | 15.875 | 100 | 12.0 | 9.0 | 14.50 |
| 0019 | UNF 3/4 | 59.40 | 16 | 19.050 | 110 | 14.0 | 11.0 | 17.50 |
| 0021 | UNF 7/8 | 73.90 | 14 | 22.225 | 125 | 18.0 | 14.5 | 20.40 |
| 0023 | UNF 1 | 104.00 | 12 | 25.400 | 140 | 18.0 | 14.5 | 23.25 |
| | | (W164) | | | | | | |

## Through-hole machine tap

**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with spiral point form B (4-5 threads).

**Application:** For UNF thread, unified fine thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.



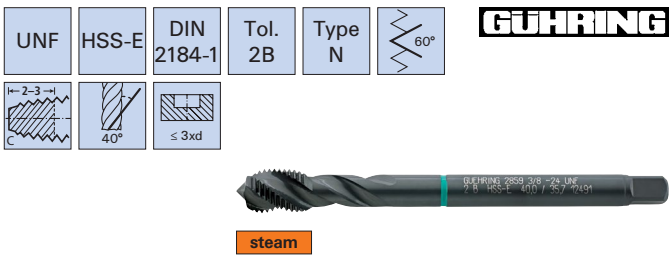

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1748 | 12 | 12 | | | | | | | 8 | | | 17 | |

| Order No. | Thread inch | 1748 GÜHRING steam | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNF No.10 | 41.30 | 32 | 4.826 | 70 | 3.5 | 2.7 | 4.10 |
| 0003 | UNF No.12 | 46.30 | 28 | 5.486 | 80 | 4.0 | 3.0 | 4.60 |
| 0005 | UNF 1/4 | 51.20 | 28 | 6.350 | 80 | 4.5 | 3.4 | 5.50 |
| 0009 | UNF 3/8 | 55.60 | 24 | 9.525 | 90 | 7.0 | 5.5 | 8.50 |
| 0015 | UNF 5/8 | 94.40 | 18 | 15.875 | 100 | 12.0 | 9.0 | 14.50 |
| 0019 | UNF 7/8 | 145.50 | 14 | 22.225 | 125 | 18.0 | 14.5 | 20.40 |
| 0021 | UNF 1 | 150.50 (W165) | 12 | 25.400 | 140 | 18.0 | 14.5 | 23.25 |

## Blind hole machine tap

**Design:** HSS-E, DIN 2184-1, tolerance range 2B, type N, with point form C (2–3 threads).

**Application:** For UNF thread, unified fine thread, ANSI B1.1. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1749 | 12 | 12 | | | | | | | | | | 17 | |

| Order No. | Thread inch | 1749 GÜHRING steam | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | UNF No.10 | 36.40 | 32 | 4.826 | 70 | 3.5 | 2.7 | 4.10 |
| 0005 | UNF 1/4 | 43.20 | 28 | 6.350 | 80 | 4.5 | 3.4 | 5.50 |
| 0007 | UNF 5/16 | 44.50 | 24 | 7.938 | 90 | 6.0 | 4.9 | 6.90 |
| 0009 | UNF 3/8 | 46.90 | 24 | 9.525 | 90 | 7.0 | 5.5 | 8.50 |
| 0011 | UNF 7/16 | 61.10 | 20 | 11.113 | 100 | 8.0 | 6.2 | 9.90 |
| 0013 | UNF 1/2 | 71.60 | 20 | 12.700 | 100 | 9.0 | 7.0 | 11.50 |
| 0017 | UNF 5/8 | 96.30 | 18 | 15.875 | 100 | 12.0 | 9.0 | 14.50 |
| 0021 | UNF 7/8 | 158.00 | 14 | 22.225 | 125 | 18.0 | 14.5 | 20.40 |
| 0023 | UNF 1 | 201.50 (W165) | 12 | 25.400 | 140 | 18.0 | 14.5 | 23.25 |

## Through-hole machine tap

**Design:** HSS-E, DIN 374, Type N, with chamfered form B (4-5 threads).

**Application:** Universal taps with a broad range of UNF thread, unified fine thread, ANSI B1.1.

UNF | HSS-E | ≈DIN 374 | Tol. 2B | Type N | 60° | format professional quality

steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1658 | 15 | 12 | 4 | | | | | | 10 | 2 | 10 | 15 | 15 |

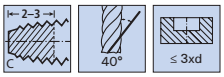
| Order No. | Thread inch | 1658 format steam | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0000 | UNF No.4 | 19.70 | 48 | 2.845 | 56 | 2.2 | – | 2.40 |
| 0002 | UNF No.6 | 19.70 | 40 | 3.505 | 56 | 2.5 | 2.1 | 2.95 |
| 0001 | UNF No.10 | 19.70 | 32 | 4.826 | 70 | 3.5 | 2.7 | 4.10 |
| 0005 | UNF 1/4 | 24.20 | 28 | 6.350 | 80 | 4.5 | 3.4 | 5.50 |
| 0009 | UNF 3/8 | 26.30 | 24 | 9.525 | 90 | 7.0 | 5.5 | 8.50 |
| 0017 | UNF 5/8 | 44.30 (W163) | 18 | 15.875 | 100 | 12.0 | 9.0 | 14.50 |

## Blind hole machine tap

**Design:** HSS-E, DIN 374, Type N, with chamfered form C (2–3 threads).

**Application:** Universal taps with a broad range of UNF thread, unified fine thread, ANSI B1.1.

UNF | HSS-E | ≈DIN 374 | Tol. 2B | Type N | 60° | format professional quality



steam

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1659 | 12 | 10 | | | | | | | 6 | | 10 | 15 | 15 |

| Order No. | Thread inch | 1659 format steam | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square Shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0000 | UNF No.4 | 22.20 | 48 | 2.845 | 56 | 2.2 | – | 2.40 |
| 0002 | UNF No.6 | 18.50 | 40 | 3.505 | 56 | 2.5 | 2.1 | 2.95 |
| 0001 | UNF No.10 | 17.25 | 32 | 4.826 | 70 | 3.5 | 2.7 | 4.10 |
| 0005 | UNF 1/4 | 20.50 | 28 | 6.350 | 80 | 4.5 | 3.4 | 5.50 |
| 0009 | UNF 3/8 | 22.20 | 24 | 9.525 | 90 | 7.0 | 5.5 | 8.50 |
| 0017 | UNF 5/8 | 46.00 (W163) | 18 | 15.875 | 100 | 12.0 | 9.0 | 14.50 |

## Machine tap, short

**Design:** HSS-E, DIN 40432, type N, with point form C (2–3 threads).

**Application:** For steel casing pipe threads DIN 40430. Particularly suitable for general steels, construction steels, machining steels, case-hardening steels and tempered steels.

PG | HSS-E | DIN 40432 | Type N | 80° | 2–3 | C | ≤ 1,5xd

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1777 | 10 | | | | | | | | | | | 15 | |

| Order No. | Thread | 1777 format professional quality bright | Threads per inch | Thread Ø mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | PG 7 | 27.70 | 20 | 12.5 | 70 | 9 | 7.0 | 11.50 |
| 0003 | PG 9 | 38.20 | 18 | 15.2 | 70 | 12 | 9.0 | 14.00 |
| 0005 | PG 11 | 40.40 | 18 | 18.6 | 80 | 14 | 11.0 | 17.25 |
| 0007 | PG 13.5 | 40.80 | 18 | 20.4 | 80 | 16 | 12.0 | 19.00 |
| 0009 | PG 16 | 66.10 | 18 | 22.5 | 80 | 18 | 14.5 | 21.25 |
| 0011 | PG 21 | 96.00 | 16 | 28.3 | 90 | 22 | 18.0 | 27.00 |
| 0013 | PG 29 | 136.50 | 16 | 37.0 | 100 | 28 | 22.0 | 35.50 |
| 0015 | PG 36 | 237.00 (W164) | 16 | 47.0 | 140 | 36 | 29.0 | 45.50 |

## Machine thread former (with lubricating slots)

**Design:** HSS-E, DIN 371 or DIN 376, with feed length form C (2–3 threads).

M3 –M10 DIN 371 with reinforced shank,
M12–M16 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for all forming materials such as construction steels, machining steels, case-hardening steels, cold work steels, hot work steels, nitriding steels and stainless steels, aluminium, al-alloys, copper, Cu-alloys, brass and bronzes.

M | HSS-E | DIN 371 | DIN 376 | Type N | 60° | 2–3 | C | ≤ 3xd

**1780** TiN — Tolerance range 6HX. Normal thread connection. — 6HX

1780 format professional quality TiN

**1783** TiN — Tolerance range 6GX with **excess 0.02–0.04 mm.** For use with workpieces that tend to spring back when cutting, are galvanised or easily shrink when hardening. — 6GX

1783 format professional quality TiN

**1784** TiCN — Tolerance range 6HX. Normal thread connection. — 6HX

1784 GÜHRING TiCN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1780 | 10 | 12 | 8 | | | | | | 8 | 6 | | 15 | |
| 1783 | 10 | 12 | 8 | | | | | | 8 | 6 | | 15 | |
| 1784 | 10 | 12 | 8 | | | | | | 8 | 6 | | 15 | |

| Order No. | Thread | 1780 format professional quality TiN | 1783 format professional quality TiN | 1784 GÜHRING TiCN | Gradient mm | Total length mm | Shank Ø mm | Square shank mm | Core hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|
| 0001 | M3 | 20.80 | 30.80 | 43.20 | 0.50 | 56 | 3.5 | 2.7 | 2.80 |
| 0003 | M4 | 20.80 | 32.50 | 37.70 | 0.70 | 63 | 4.5 | 3.4 | 3.70 |
| 0005 | M5 | 22.00 | 33.80 | 38.90 | 0.80 | 70 | 6.0 | 4.9 | 4.65 |
| 0007 | M6 | 22.00 | 33.70 | 45.10 | 1.00 | 80 | 6.0 | 4.9 | 5.55 |
| 0009 | M8 | 25.80 | 40.90 | 50.60 | 1.25 | 90 | 8.0 | 6.2 | 7.40 |
| 0011 | M10 | 33.20 | 52.20 | 69.10 | 1.50 | 100 | 10.0 | 8.0 | 9.25 |
| 0013 | M12 | 40.00 | 62.10 | 84.60 | 1.75 | 110 | 9.0 | 7.0 | 11.20 |
| 0015 | M16 | 65.70 (W170) | – (W170) | 137.00 (W165) | 2.00 | 110 | 12.0 | 9.0 | 15.00 |

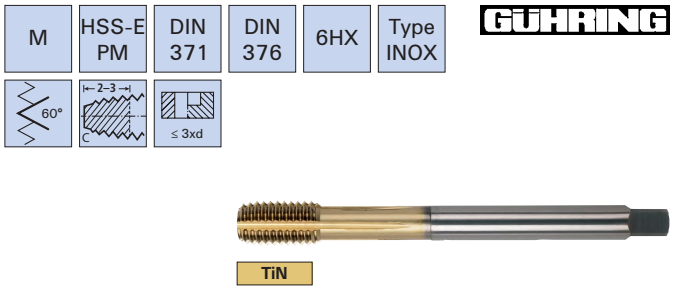
## Machine thread former (with lubricating slots)

**Design:** HSS-E PM, DIN 371 or DIN 376, tolerance range 6HX, type INOX, with feed length form C (2–3 threads). TiN coated surface

M3 –M10 DIN 371 with reinforced shank,
M12–M16 DIN 376 with overflow shank.

**Application:** For regular metric threads according to ISO DIN 13. Particularly suitable for all forming materials such as construction steels, machining steels, case-hardening steels, cold work steels, hot work steels, nitriding steels and stainless steels, aluminium, al-alloys, copper, Cu-alloys, brass and bronzes.

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a higher tool life.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1787 | 12 | 14 | 10 | | | | | | 8 | 6 | | 18 | |

| Order No. | Thread | 1787 GÜHRING TiN | Gradient | Total length | Shank Ø | Square shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm |
| 0001 | M3 | 59.90 | 0.50 | 56 | 3.5 | 2.7 | 2.80 |
| 0003 | M4 | 52.50 | 0.70 | 63 | 4.5 | 3.4 | 3.70 |
| 0005 | M5 | 59.30 | 0.80 | 70 | 6.0 | 4.9 | 4.65 |
| 0007 | M6 | 67.90 | 1.00 | 80 | 6.0 | 4.9 | 5.55 |
| 0009 | M8 | 75.30 | 1.25 | 90 | 8.0 | 6.2 | 7.40 |
| 0011 | M10 | 98.20 | 1.50 | 100 | 10.0 | 8.0 | 9.25 |
| 0013 | M12 | 120.50 | 1.75 | 110 | 9.0 | 7.0 | 11.20 |
| 0015 | M16 | 207.50 (W165) | 2.00 | 110 | 12.0 | 9.0 | 15.10 |

## Machine thread former (with lubricating slots)

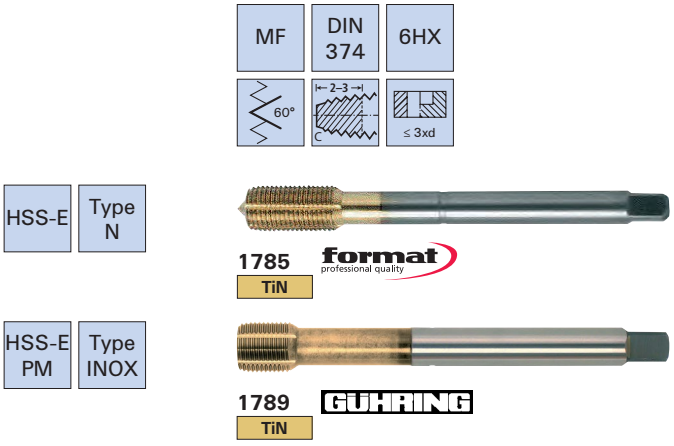
**Design:** HSS-E PM, DIN 374, tolerance range 6HX, with feed length form C (2–3 threads).

**Application:** For metric precision threads according to DIN ISO 13. Particularly suitable for all forming materials such as construction steels, machining steels, case-hardening steels, cold work steels, hot work steels, nitriding steels and stainless steels, aluminium, al-alloys, copper, Cu-alloys, brass and bronzes.

**1785** TiN — HSS-E

**1789** TiN — HSS-E PM

**Note:** HSS-E PM is distinguished by its high resilience (stronger edge stability, wear resistance) and a longer tool life.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1785 | 10 | 12 | 8 | 14 | | | | | 8 | 6 | | 15 | |
| 1789 | 12 | 14 | 10 | | | | | | 15 | 8 | | 18 | |

| Order No. | Thread x gradient | 1785 format TiN | 1789 GÜHRING TiN | Total length | Shank Ø | Square Shank | Core hole Ø |
|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | mm |
| 0001 | M6 x 0.75 | 54.20 | 103.00 | 80 | 4.5 | 3.4 | 5.65 |
| 0003 | M8 x 0.75 | 54.20 | – | 80 | 6.0 | 4.9 | 7.65 |
| 0005 | M8 x 1.00 | 50.70 | 107.50 | 90 | 6.0 | 4.9 | 7.55 |
| 0007 | M10 x 1.00 | 58.40 | – | 90 | 7.0 | 5.5 | 9.55 |
| 0009 | M10 x 1.25 | 68.90 | 121.50 | 100 | 7.0 | 5.5 | 9.40 |
| 0011 | M12 x 1.00 | 71.50 | – | 100 | 9.0 | 7.0 | 11.55 |
| 0013 | M12 x 1.25 | 73.00 | – | 100 | 9.0 | 7.0 | 11.40 |
| 0015 | M12 x 1.50 | 73.40 | 133.50 | 100 | 9.0 | 7.0 | 11.30 |
| 0017 | M16 x 1.50 | 93.60 | 242.00 | 100 | 12.0 | 9.0 | 15.30 |
| 0019 | M18 x 1.50 | 111.00 | 292.50 | 110 | 14.0 | 11.0 | 17.30 |
| 0021 | M20 x 1.50 | 126.50 (W170) | 300.00 (W165) | 125 | 16.0 | 12.0 | 19.30 |

## Tool holder

**Design:** Chrome-plated full steel design, the ratchet can be changed over from left to right motion or with central locking. With annealed, parallel clamping jaws and adjustable cross handle.

**Application:** For clamping square shanks - particularly suitable for work in enclosed spaces due to the adjustable cross handle.

| Order No. | Square span mm | 1850 format | For Tap shanks according to DIN | For Tap shanks according to ISO | Total length mm |
|---|---|---|---|---|---|
| 0001 | 2.4–5.5 | 8.60 | M3–10 | M1– 6 | 85 |
| 0003 | 2.4–5.5 | 14.25 | M3– 8 | M1– 6 | 250 |
| 0005 | 4.5–8.0 | 11.35 | M5–12 | M6–12 | 100 |
| 0007 | 4.5–8.0 | 18.85 (W176) | M5–12 | M6–12 | 300 |

## Spare jaws set with spring

**Design:** Spare jaws set with spring for tool holder (order no. 1850).

| Order No. | Size | 1850 format | For square span mm |
|---|---|---|---|
| 0004 | M1–M6 | 2.18 | 2.4–5.5 |
| 0008 | M6–M12 | 3.49 (W176) | 4.5–8.0 |

## Adjustable tap wrench

**Design:** The jaws are case-hardened and phosphated, with a removable and galvanised steel handle.

**Application:** For mounting hand taps with a square drive. Use in difficult to access areas is possible as the steel handle can be unscrewed.

DIN 1814

**1860** Housing made of fine zinc die casting ZL 0410. For normal loads.

**1860**

**1861** Housing 0–2 made of forged steel, housing 3–7/8 made of ST 37 steel, welded construction.

**1861**

| Order No. | Size | 1860 format | 1861 format | DIN 352 | For tap DIN 5157 | DIN 2184 | Square span mm | Length mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | 0 | 3.64 | – | M1 – 8 | – | BSW 1/16" –1/4" | 2.0– 5.0 | 130 |
| 0003 | 1 | 3.98 | – | M1 –10 | G 1/8" | BSW 1/16" –3/8" | 2.0– 6.3 | 176 |
| 0005 | 1.1/2 | 4.00 | 6.45 | M1 –12 | G 1/8" | BSW 1/16" –1/2" | 2.1– 8.0 | 176 |
| 0007 | 2 | – | 10.25 | M4 –12 | G 1/8" –1/4" | BSW 3/32" –1/2" | 3.0– 9.0 | 280 |
| 0007 | 2 | 6.40 | – | M4 –12 | G 1/8" –1/4" | BSW 5/32" –1/2" | 3.0– 9.0 | 280 |
| 0009 | 3 | 11.55 | 18.60 | M5 –20 | G 1/8" –1/2" | BSW 7/32" –3/4" | 4.9–12.0 | 380 |
| 0011 | 4 | 21.80 | – | M11–27 | G 1/4" –3/4" | BSW 7/16" –1" | 5.5–16.0 | 505 |
| 0011 | 4 | – | 34.70 | M11–27 | G 1/8" –3/4" | BSW 7/16" –1" | 5.5–16.0 | 505 |
| 0013 | 5 | 33.50 | 53.50 | M13–32 | G 1/4" –1" | BSW 1/2" –1.1/4" | 7.0–20.0 | 700 |
| 0015 | 6 | – | 57.40 | M18–42 | G 1/4" –1.1/4" | BSW 3/4" –1.1/2" | 11.0–24.0 | 1000 |
| 0017 | 7 | – (W176) | 102.00 (W176) | M27–52 | G 3/4" –1.3/4" | BSW 1.1/8" –2" | 16.0–32.0 | 1250 |

## Tap and die extension

**Design:** Made of steel, annealed and bronzed (rust protected). The outer and inner squares are the same size.

**Application:** For extending hand taps, hand reamers and other tools with a square mount.

DIN 377

format professional quality

| Order No. | Square mm | 1870 format | Length mm | For tap DIN 352 | For tap DIN 5157 |
|---|---|---|---|---|---|
| 0210 | 2.1 | 3.06 | 60 | M1 – 2.6 | – |
| 0270 | 2.7 | 3.06 | 80 | M3 | – |
| 0340 | 3.4 | 3.06 | 95 | M4 | – |
| 0430 | 4.3 | 4.39 | 105 | – | – |
| 0490 | 4.9 | 3.45 | 110 | M4.5– 8 | – |
| 0550 | 5.5 | 3.89 | 115 | M9 –10 | G 1/8" |
| 0620 | 6.2 | 4.28 | 120 | M11 | – |
| 0700 | 7.0 | 5.25 | 125 | M12 | – |
| 0800 | 8.0 | 6.60 | 125 | – | – |
| 0900 | 9.0 | 7.20 | 130 | M13/16 | G 1/4" + 3/8" |
| 1100 | 11.0 | 10.85 | 150 | M18 | – |
| 1200 | 12.0 | 14.15 | 155 | M20 | G 1/2" |
| 1450 | 14.5 | 19.40 | 175 | M22 –24 | G 5/8" |
| 1600 | 16.0 | 20.60 | 180 | M27 | G 3/4" |
| 1800 | 18.0 | 24.00 | 200 | M30 | G 7/8" |
| 2000 | 20.0 | 30.80 (W176) | 220 | M33 | G 1" |

## Tap and die machine extension

**Design:** The front end of the extension is designed as a collet. Torque transmission occurs by means of square.

**Application:** For threading in workpieces with extremely deep internal threads or thread cutting directly to interfering edges.

format professional quality

| Order No. | Size | 1872 format | Tap and die shank Ø mm | Tap and die square mm | Extension shank Ø mm | Extension square mm | L mm |
|---|---|---|---|---|---|---|---|
| 0113 | 1 | 121.00 | 2.8 | 2.1 | 6 | 4.9 | 130 |
| 0123 | 1 | 133.00 | 2.8 | 2.1 | 6 | 4.9 | 230 |
| 0213 | 2 | 121.00 | 3.5 | 2.7 | 6 | 4.9 | 130 |
| 0223 | 2 | 133.00 | 3.5 | 2.7 | 6 | 4.9 | 230 |
| 0313 | 3 | 121.00 | 4.5 | 3.4 | 6 | 4.9 | 130 |
| 0323 | 3 | 133.00 | 4.5 | 3.4 | 6 | 4.9 | 230 |
| 0413 | 4 | 121.00 | 6.0 | 4.9 | 7 | 5.5 | 130 |
| 0423 | 4 | 133.00 | 6.0 | 4.9 | 7 | 5.5 | 230 |
| 0513 | 5 | 125.50 | 7.0 | 5.5 | 7 | 5.5 | 130 |
| 0523 | 5 | 137.00 | 7.0 | 5.5 | 7 | 5.5 | 230 |
| 0613 | 6 | 125.50 | 8.0 | 6.2 | 8 | 6.2 | 130 |
| 0623 | 6 | 137.00 | 8.0 | 6.2 | 8 | 6.2 | 230 |
| 0713 | 7 | 125.50 | 9.0 | 7.0 | 9 | 7.0 | 130 |
| 0723 | 7 | 137.00 | 9.0 | 7.0 | 9 | 7.0 | 230 |
| 0813 | 8 | 125.50 | 10.0 | 8.0 | 10 | 8.0 | 130 |
| 0823 | 8 | 137.00 | 10.0 | 8.0 | 10 | 8.0 | 230 |
| 0913 | 9 | 133.00 | 11.0 | 9.0 | 11 | 9.0 | 130 |
| 0923 | 9 | 145.50 | 11.0 | 9.0 | 11 | 9.0 | 230 |
| 1013 | 10 | 133.00 | 12.0 | 9.0 | 12 | 9.0 | 130 |
| 1023 | 10 | 145.50 | 12.0 | 9.0 | 12 | 9.0 | 230 |
| 1113 | 11 | 220.50 | 14.0 | 11.0 | 14 | 11.0 | 200 |
| 1123 | 11 | 244.00 | 14.0 | 11.0 | 14 | 11.0 | 330 |
| 1213 | 12 | 220.50 | 16.0 | 12.0 | 16 | 12.0 | 200 |
| 1223 | 12 | 244.00 | 16.0 | 12.0 | 16 | 12.0 | 330 |
| 1313 | 13 | 240.50 | 18.0 | 14.5 | 18 | 14.5 | 200 |
| 1323 | 13 | 264.00 (W191) | 18.0 | 14.5 | 18 | 14.5 | 330 |

## Die stocks

**Design:** HSS, EN 22568, closed, pre-slotted form, with spiral point form on both sides from M3.

**Application:** For regular metric threads according to ISO DIN 13.

M | EN 22568 | 60°

HSS **1800** bright

HSS **1801** bright

HSS-E **1804** Nitrated

**1800** Bright — HSS, tolerance range 6g

**1801** Bright — HSS, **tolerance range 6e with undersize 0.03 mm.**

**1804** Nitrated — HSS-E, lapped and nitrated (from M3), tolerance range 6g.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1800 | 9 | | | | | | | | | | | | |
| 1801 | 9 | | | | | | | | | | | | |
| 1804 | 9 | 5 | | | | | | | 5 | | | | |

| Order No. | Thread | 1800 format bright | 1801 format bright | 1804 format Nitrated | Gradient mm | Outer Ø x height mm |
|---|---|---|---|---|---|---|
| 0020 | M2 | 15.10 | – | 37.20 | 0.40 | 16 x 5 |
| 0025 | M2.5 | 14.10 | – | 32.00 | 0.45 | 16 x 5 |
| 0030 | M3 | 12.10 | 26.50 | 24.50 | 0.50 | 20 x 5 |
| 0040 | M4 | 12.10 | 25.30 | 23.10 | 0.70 | 20 x 5 |
| 0050 | M5 | 12.10 | 22.40 | 21.50 | 0.80 | 20 x 7 |
| 0060 | M6 | 12.10 | 22.40 | 21.50 | 1.00 | 20 x 7 |
| 0070 | M7 | 21.50 | – | 38.50 | 1.00 | 25 x 9 |
| 0080 | M8 | 13.25 | 24.70 | 25.80 | 1.25 | 25 x 9 |
| 0090 | M9 | 28.20 | – | 103.50 | 1.25 | 25 x 9 |
| 0100 | M10 | 16.35 (W174) | 29.50 (W174) | 30.90 (W174) | 1.50 | 30 x 11 |

| Order No. | Thread | 1800 format bright | 1801 format bright | 1804 format Nitrated | Gradient mm | Outer Ø x height mm |
|---|---|---|---|---|---|---|
| 0120 | M12 | 21.30 | 39.30 | 41.20 | 1.75 | 38 x 14 |
| 0140 | M14 | 21.90 | – | 42.20 | 2.00 | 38 x 14 |
| 0160 | M16 | 28.50 | – | 55.20 | 2.00 | 45 x 18 |
| 0180 | M18 | 30.10 | – | 56.70 | 2.50 | 45 x 18 |
| 0200 | M20 | 30.10 | – | 56.70 | 2.50 | 45 x 18 |
| 0220 | M22 | 44.20 | – | 84.70 | 2.50 | 55 x 22 |
| 0240 | M24 | 44.20 | – | 84.70 | 3.00 | 55 x 22 |
| 0270 | M27 | 73.70 | – | 146.50 | 3.00 | 65 x 25 |
| 0300 | M30 | 73.70 (W174) | – (W174) | 169.50 (W174) | 3.50 | 65 x 25 |

## Die stocks set

**Design:** EN 22568, closed, pre-slotted form, with spiral point form on both sides from M3. Die stocks set M3–M12 in plastic cassette.

**Application:** For regular metric threads according to ISO DIN 13.

**1800** Bright — HSS

**1804** Nitrated — HSS-E

| Order No. | Set contents | 1800 format bright | 1804 format Nitrated |
|---|---|---|---|
| 0001 | M3; 4; 5; 6; 8; 10; 12 | 107.50 (W174) | 192.50 (W174) |

## Die stocks for left thread

**Design:** HSS, EN 22568, tolerance range 6g, closed, pre-slotted form, with spiral point form on both sides from M3.

**Application:** For metric left threads according to DIN ISO 13.

M-LH | HSS | EN 22568 | 60°

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1808 | 9 | | | | | | | | | | | | |

| Order No. | Thread | 1808 format bright | Gradient mm | Outer Ø x height mm |
|---|---|---|---|---|
| 0020 | M2 | 38.50 | 0.40 | 16 x 5 |
| 0030 | M3 | 28.50 | 0.50 | 20 x 5 |
| 0040 | M4 | 27.00 | 0.70 | 20 x 5 |
| 0050 | M5 | 25.10 | 0.80 | 20 x 7 |
| 0060 | M6 | 25.10 | 1.00 | 20 x 7 |
| 0080 | M8 | 27.60 (W174) | 1.25 | 25 x 9 |

| Order No. | Thread | 1808 format bright | Gradient mm | Outer Ø x height mm |
|---|---|---|---|---|
| 0100 | M10 | 33.30 | 1.50 | 30 x 11 |
| 0120 | M12 | 44.10 | 1.75 | 38 x 14 |
| 0160 | M16 | 57.70 | 2.00 | 45 x 18 |
| 0200 | M20 | 57.70 | 2.50 | 45 x 18 |
| 0240 | M24 | 84.00 (W174) | 3.00 | 55 x 22 |

## Drilling nuts

**Design:** HSS, DIN 382, tolerance range 6g, outer hexagon without spiral point.

**Application:** For subsequently cutting damaged threads and for thread cutting in hard to access areas. For regular metric threads according to ISO DIN 13.

M | HSS | DIN 382 | 60°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1831 | 3 | | | | | | | | | | | 3 | 3 |

| Order No. | Thread | 1831 format bright | Gradient mm | SW x height mm |
|---|---|---|---|---|
| 0030 | M3 | 19.60 | 0.50 | 18 x 5 |
| 0040 | M4 | 18.65 | 0.70 | 18 x 5 |
| 0050 | M5 | 18.30 | 0.80 | 18 x 7 |
| 0060 | M6 | 18.30 | 1.00 | 18 x 7 |
| 0080 | M8 | 19.65 | 1.25 | 21 x 9 |
| 0100 | M10 | 24.50 | 1.50 | 27 x 11 |
| 0120 | M12 | 32.60 | 1.75 | 36 x 14 |
| | | (W174) | | |

| Order No. | Thread | 1831 format bright | Gradient mm | SW x height mm |
|---|---|---|---|---|
| 0160 | M16 | 42.10 | 2.00 | 41 x 18 |
| 0200 | M20 | 44.20 | 2.50 | 41 x 18 |
| 0240 | M24 | 65.60 | 3.00 | 50 x 22 |
| 0270 | M27 | 102.50 | 3.00 | 60 x 25 |
| 0300 | M30 | 102.50 | 3.50 | 60 x 25 |
| 0320 | M33 | 107.00 | 3.50 | 60 x 25 |
| 0360 | M36 | 104.50 | 4.00 | 60 x 25 |
| | | (W174) | | |

## Die stocks

**Design:** HSS, EN 22568, closed, pre-slotted form with spiral point form on both sides.

**Application:** For metric precision threads according to DIN ISO 13.

MF | HSS | EN 22568 | 60°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1811 | 9 | | | | | | | | | | | | |

| Order No. | Thread x gradient mm | 1811 format bright | Outer Ø x height mm |
|---|---|---|---|
| 0001 | M3 x 0.35 | 24.70 | 20 x 5 |
| 0003 | M4 x 0.35 | 24.70 | 20 x 5 |
| 0005 | M4 x 0.50 | 21.60 | 20 x 5 |
| 0007 | M5 x 0.50 | 21.60 | 20 x 5 |
| 0009 | M6 x 0.50 | 21.60 | 20 x 5 |
| 0011 | M6 x 0.75 | 18.50 | 20 x 7 |
| 0012 | M7 x 0.75 | 25.00 | 25 x 9 |
| 0013 | M8 x 0.50 | 30.00 | 25 x 9 |
| 0015 | M8 x 0.75 | 21.00 | 25 x 9 |
| 0017 | M8 x 1.00 | 20.10 | 25 x 9 |
| 0018 | M9 x 1.00 | 27.70 | 25 x 9 |
| 0019 | M10 x 0.75 | 25.50 | 30 x 11 |
| 0021 | M10 x 1.00 | 23.50 | 30 x 11 |
| 0023 | M10 x 1.25 | 25.10 | 30 x 11 |
| 0025 | M12 x 1.00 | 31.00 | 38 x 10 |
| 0027 | M12 x 1.25 | 33.40 | 38 x 10 |
| | | (W174) | |

| Order No. | Thread x gradient mm | 1811 format bright | Outer Ø x height mm |
|---|---|---|---|
| 0029 | M12 x 1.50 | 28.40 | 38 x 10 |
| 0031 | M14 x 1.00 | 32.80 | 38 x 10 |
| 0033 | M14 x 1.25 | 34.50 | 38 x 10 |
| 0035 | M14 x 1.50 | 28.40 | 38 x 10 |
| 0037 | M16 x 1.00 | 46.70 | 45 x 14 |
| 0039 | M16 x 1.50 | 39.40 | 45 x 14 |
| 0041 | M18 x 1.00 | 56.70 | 45 x 14 |
| 0043 | M18 x 1.50 | 39.40 | 45 x 14 |
| 0045 | M20 x 1.00 | 48.10 | 45 x 14 |
| 0047 | M20 x 1.50 | 39.40 | 45 x 14 |
| 0049 | M22 x 1.00 | 75.60 | 55 x 16 |
| 0051 | M22 x 1.50 | 57.50 | 55 x 16 |
| 0053 | M24 x 1.50 | 57.20 | 55 x 16 |
| 0055 | M27 x 1.50 | 88.10 | 65 x 18 |
| 0057 | M30 x 1.50 | 85.50 | 65 x 18 |
| | | (W174) | |

Further dimensions available on request.

## Die stocks

**Design:** HSS-E, EN 22568, closed, pre-slotted form, lapped, nitrated with spiral point form on both sides. Bright surface

**Application:** For metric precision threads according to DIN ISO 13.

MF | HSS-E | EN 22568 | 60°

Nitrated

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1813 | 9 | 5 | | | | | | | 5 | | | | |

| Order No. | Thread x gradient mm | 1813 format Nitrated | Outer Ø x height mm |
|---|---|---|---|
| 0011 | M6 x 0.75 | 31.00 | 20 x 7 |
| 0015 | M8 x 0.75 | 36.70 | 25 x 9 |
| 0017 | M8 x 1.00 | 31.70 | 25 x 9 |
| 0021 | M10 x 1.00 | 38.00 | 30 x 11 |
| 0023 | M10 x 1.25 | 51.10 | 30 x 11 |
| 0025 | M12 x 1.00 | 49.30 | 38 x 10 |
| 0027 | M12 x 1.25 | 77.50 | 38 x 10 |
| 0029 | M12 x 1.50 | 47.20 (W174) | 38 x 10 |

| Order No. | Thread x gradient mm | 1813 format Nitrated | Outer Ø x height mm |
|---|---|---|---|
| 0031 | M14 x 1.00 | 49.30 | 38 x 10 |
| 0035 | M14 x 1.50 | 47.20 | 38 x 10 |
| 0037 | M16 x 1.00 | 68.20 | 45 x 14 |
| 0039 | M16 x 1.50 | 64.80 | 45 x 14 |
| 0043 | M18 x 1.50 | 64.80 | 45 x 14 |
| 0047 | M20 x 1.50 | 64.80 | 45 x 14 |
| 0053 | M24 x 1.50 | 90.70 (W174) | 55 x 16 |

## Die stocks

**Design:** HSS, EN 24231, closed, pre-slotted form with spiral point form on both sides.

**Application:** For pipe threads DIN ISO 228, tolerance class A.

G | HSS | EN 24231 | 55°

bright

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1817 | 9 | | | | | | | | | | | | |

| Order No. | Thread inch | 1817 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0001 | G 1/8 | 25.60 | 28 | 30 x 11 |
| 0003 | G 1/4 | 27.10 | 19 | 38 x 10 |
| 0005 | G 3/8 | 36.30 | 19 | 45 x 14 |
| 0007 | G 1/2 | 36.30 (W174) | 14 | 45 x 14 |

| Order No. | Thread inch | 1817 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0009 | G 5/8 | 57.50 | 14 | 55 x 16 |
| 0011 | G 3/4 | 58.40 | 14 | 55 x 16 |
| 0013 | G 7/8 | 83.40 | 14 | 65 x 18 |
| 0015 | G 1 | 79.90 (W174) | 11 | 65 x 18 |

## Drilling nuts

**Design:** HSS, DIN 382, outer hexagon without spiral point.

**Application:** For subsequently cutting damaged threads and for thread cutting in hard to access areas. For Whitworth pipe threads DIN ISO 228, tolerance class A.

G | HSS | DIN 382 | 55°

bright

format professional quality

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1834 | 3 | | | | | | | | | | | 3 | 3 |

| Order No. | Thread inch | 1834 format bright | Threads per inch | SW x height mm |
|---|---|---|---|---|
| 0001 | G 1/8 | 30.10 | 28 | 27 x 11 |
| 0003 | G 1/4 | 34.20 | 19 | 36 x 10 |
| 0005 | G 3/8 | 44.90 | 19 | 41 x 14 |
| 0007 | G 1/2 | 44.90 (W174) | 14 | 41 x 14 |

| Order No. | Thread inch | 1834 format bright | Threads per inch | SW x height mm |
|---|---|---|---|---|
| 0009 | G 3/4 | 79.40 | 14 | 50 x 16 |
| 0011 | G 1 | 97.50 | 11 | 60 x 18 |
| 0013 | G 1.1/4 | 134.50 | 11 | 70 x 20 |
| 0015 | G 1.1/2 | 182.00 (W174) | 11 | 85 x 22 |

## Die stocks

**Design:** HSS, EN 22568, closed, pre-slotted form with spiral point form on both sides.

**Application:** For Whitworth threads BS 84, medium tolerance range.

BSW | HSS | EN 22568 | 55°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1814 | 9 | | | | | | | | | | | | |

| Order No. | Thread inch | 1814 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0001 | BSW 1/8 | 23.50 | 40 | 20 x 5 |
| 0003 | BSW 5/32 | 25.90 | 32 | 20 x 7 |
| 0005 | BSW 3/16 | 21.70 | 24 | 20 x 7 |
| 0007 | BSW 7/32 | 26.40 | 24 | 20 x 7 |
| 0009 | BSW 1/4 | 20.80 | 20 | 20 x 7 |
| 0011 | BSW 5/16 | 23.50 | 18 | 25 x 9 |
| 0013 | BSW 3/8 | 28.10 (W174) | 16 | 30 x 11 |

| Order No. | Thread inch | 1814 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0015 | BSW 7/16 | 30.40 | 14 | 30 x 11 |
| 0017 | BSW 1/2 | 35.30 | 12 | 38 x 14 |
| 0019 | BSW 9/16 | 39.60 | 12 | 38 x 14 |
| 0021 | BSW 5/8 | 46.50 | 11 | 45 x 18 |
| 0023 | BSW 3/4 | 46.50 | 10 | 45 x 18 |
| 0025 | BSW 7/8 | 76.30 | 9 | 55 x 22 |
| 0027 | BSW 1 | 76.30 (W174) | 8 | 55 x 22 |

## Die stocks

**Design:** HSS, DIN 40434, closed, pre-slotted form with spiral point form on both sides.

**Application:** For steel casing pipe threads DIN 40430.

PG | HSS | DIN 40434 | 80°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1825 | 9 | | | | | | | | | | | | |

| Order No. | Thread | 1825 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0001 | PG 7 | 49.30 | 20 | 38 x 10 |
| 0003 | PG 9 | 49.30 | 18 | 38 x 10 |
| 0005 | PG 11 | 58.60 | 18 | 45 x 14 |
| 0007 | PG 13.5 | 58.60 (W174) | 18 | 45 x 14 |

| Order No. | Thread | 1825 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0009 | PG 16 | 78.40 | 18 | 55 x 16 |
| 0011 | PG 21 | 116.00 | 16 | 65 x 18 |
| 0013 | PG 29 | 116.00 | 16 | 65 x 18 |
| 0015 | PG 36 | 259.00 (W174) | 16 | 90 x 22 |

## Die stocks

**Design:** HSS, closed, pre-slotted form with spiral point on one side.

**Application:** For NPT conical American pipe thread ANSI B!.20.1 cone 1:16, for thread with sealant.

NPT | HSS | 60°

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1828 | 5 | | | | | | | | | | | | |

| Order No. | Thread inch | 1828 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0001 | NPT 1/16 | 54.00 | 27.0 | 25 x 9 |
| 0003 | NPT 1/8 | 54.00 | 27.0 | 30 x 11 |
| 0005 | NPT 1/4 | 55.10 | 18.0 | 38 x 14 |
| 0007 | NPT 3/8 | 72.70 | 18.0 | 45 x 14 |
| | | (W174) | | |

| Order No. | Thread inch | 1828 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0009 | NPT 1/2 | 72.70 | 14.0 | 45 x 18 |
| 0011 | NPT 3/4 | 120.50 | 14.0 | 55 x 22 |
| 0013 | NPT 1 | 154.00 | 11.5 | 65 x 25 |
| | | (W174) | | |

## Die stocks

**Design:** HSS, EN 22568, tolerance range 2A, closed, pre-slotted form with single sided spiral point, with spiral point form on both sides from no. 5.

**1820** Bright — UNC coarse thread ANSI B1.1

**1822** Bright — UNF fine-pitch thread ANSI B1.1

HSS | EN 22568 | 60° | Tol. 2A

format professional quality

UNC

1820 bright

UNF

1822 bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1820 | 9 | | | | | | | | | | | | |
| 1822 | 9 | | | | | | | | | | | | |

| Order No. | Thread inch | 1820 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0001 | UNC Nr. 1 | 40.20 | 64 | 16 x 5 |
| 0003 | UNC Nr. 2 | 30.40 | 56 | 16 x 5 |
| 0005 | UNC Nr. 3 | 42.70 | 48 | 16 x 5 |
| 0007 | UNC Nr. 4 | 27.10 | 40 | 16 x 5 |
| 0009 | UNC Nr. 5 | 24.70 | 40 | 20 x 5 |
| 0011 | UNC Nr. 6 | 23.80 | 32 | 20 x 7 |
| 0013 | UNC Nr. 8 | 22.70 | 32 | 20 x 7 |
| 0015 | UNC Nr. 10 | 22.70 | 24 | 20 x 7 |
| 0017 | UNC Nr. 12 | 24.40 | 24 | 20 x 7 |
| 0019 | UNC 1/4 | 21.80 | 20 | 20 x 7 |
| 0021 | UNC 5/16 | 24.70 | 18 | 25 x 9 |
| 0023 | UNC 3/8 | 29.50 | 16 | 30 x 11 |
| 0025 | UNC 7/16 | 29.50 | 14 | 30 x 11 |
| 0027 | UNC 1/2 | 37.00 | 13 | 38 x 14 |
| 0029 | UNC 9/16 | 38.50 | 12 | 38 x 14 |
| 0031 | UNC 5/8 | 48.90 | 11 | 45 x 18 |
| 0033 | UNC 3/4 | 48.90 | 10 | 45 x 18 |
| 0035 | UNC 7/8 | 79.30 | 9 | 55 x 22 |
| 0037 | UNC 1 | 79.30 | 8 | 55 x 22 |
| | | (W174) | | |

| Order No. | Thread inch | 1822 format bright | Threads per inch | Outer Ø x height mm |
|---|---|---|---|---|
| 0015 | UNF Nr. 10 | 23.30 | 32 | 20 x 7 |
| 0017 | UNF Nr. 12 | 25.20 | 28 | 20 x 7 |
| 0019 | UNF 1/4 | 22.80 | 28 | 20 x 7 |
| 0021 | UNF 5/16 | 25.80 | 24 | 25 x 9 |
| 0023 | UNF 3/8 | 30.90 | 24 | 30 x 11 |
| 0025 | UNF 7/16 | 30.90 | 20 | 30 x 11 |
| 0027 | UNF 1/2 | 38.80 | 20 | 38 x 10 |
| 0031 | UNF 5/8 | 51.30 | 18 | 45 x 14 |
| 0033 | UNF 3/4 | 51.30 | 16 | 45 x 14 |
| 0035 | UNF 7/8 | 75.60 | 14 | 55 x 16 |
| 0037 | UNF 1 | 78.00 | 12 | 55 x 16 |
| | | (W174) | | |

Further dimensions available on request.

## Die holder

**Design:** Housing large dimensions, turnbuckles according to DIN sizes.

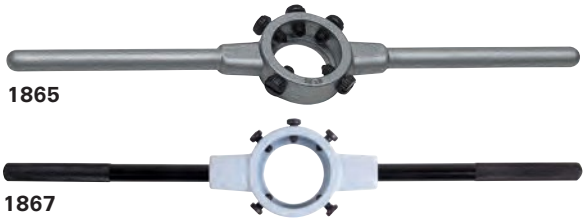
**Application:** For directly mounting closed and slotted die stocks according to EN 22568 and EN 24801.

format professional quality

**1865** Housing die-cast alloy, grey hammered coating, handles from size 20 x 5 mm made of galvanised, rust protected machine steel. Can be unscrewed from size 45 x 14.

**1867** Body made of powder metal and painted, handles steam tempered, nitrated and polished.

DIN 250




| Order No. | For die stocks Ø x height mm | 1865 format | 1867 format | For metric die stocks | For precision metric die stocks | For Whitworth pipe die stocks | For Whitworth die stocks | For UNC die stocks | For UNF die stocks | Length mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | 16 x 5 | 2.53 | 4.19 | M1 – 2.6 | M2 – 2.5 | – | 1/16"–3/32" | No. 1–3 | No. 0–3 | 160 |
| 1003 | 20 x 5 | 2.62 | 4.19 | M3 – 4 | M3 – 4 | – | 1/8" –5/32" | No. 4–5 | No. 4–6 | 200 |
| 1005 | 20 x 7 | 2.58 | 5.10 | M4.5– 6 | M5* – 6* | – | 3/16"–1/4" | No. 6–1/4" | No. 8–1/4" | 200 |
| 1007 | 25 x 9 | 2.89 | 5.10 | M7 – 9 | M7 – 9 | – | 5/16" | 5/16" | 5/16" | 224 |
| 1009 | 30 x 11 | 4.77 | 6.25 | M10 –11 | M10–11 | G 1/8" | 3/8" –7/16" | 3/8" –7/16" | 3/8" –7/16" | 280 |
| 1011 | 38 x 10 | 7.40 | – | – | M12–15 | G 1/4" | – | – | 1/2" –9/16" | 315 |
| 1013 | 38 x 14 | 7.40 | 10.10 | M12 –14 | – | – | 1/2" –9/16" | 1/2" –9/16" | – | 315 |
| 1015 | 45 x 14 | 8.70 | 15.30 | – | M16–20 | G 3/8" –1/2" | – | – | 5/8" –3/4" | 450 |
| 1017 | 45 x 18 | 8.70 | 15.30 | M16 –20 | – | – | 5/8" –13/16" | 5/8" –3/4" | – | 450 |
| 1019 | 55 x 16 | 11.45 | 20.70 | – | M22–26 | G 5/8" –3/4" | – | – | 7/8" –1" | 560 |
| 1021 | 55 x 22 | 11.45 | – | M22 –24 | – | – | 7/8" –1" | 7/8" –1" | – | 560 |
| 1023 | 65 x 18 | 19.05 | 39.20 | – | M27–36 | G 7/8" –1" | – | – | 1.1/8"–1.1/2" | 630 |
| 1025 | 65 x 25 | 19.05 (W176) | – (W176) | M27 –36 | – | – | 1.1/8"–1.3/8" | 1.1/8"–1.1/2" | – | 630 |

* Gradient 0.75

## Tap extractor

**Design:** Very durable tool with spring tempered and adjustable fingers. The guide sleeve can be moved lengthways and therefore takes very high torsion forces.

**Application:** For loosening and unscrewing broken taps with 3 slots (order no. 1852) or 4 slots (order no. 1848). The fingers are inserted into the slots on the broken tap and secured with the guide bush by sliding the upper retainer ring. The broken off tap piece is moved back and forth with a tap wrench until it loosens and can be screwed out.

WALTON COMPANY

**1852** For 3-slot tap.

**1848** For 4-slot tap.

| Order No. | Thread | 1852 WALTON | 1848 WALTON | BSW thread 1852 | BSW thread 1848 | UNC/UNF thread 1852 | UNC/UNF thread 1848 |
|---|---|---|---|---|---|---|---|
| 0030 | M3 | 24.40 | – | 1/8 | – | Nr. 5 | – |
| 0040 | M4 | 24.40 | 24.40 | 5/32 | 5/32 | Nr. 8 | – |
| 0050 | M5 | 24.40 | 24.40 | 3/16 | 3/16 | – | Nr. 8 |
| 0060 | M6 | 25.10 | 25.10 | 1/4 | 1/4 | – | – |
| 0080 | M8 | 26.30 (W178) | 26.30 (W178) | 5/16 | 5/16 | – | – |
| 0100 | M10 | 26.20 | 26.20 | 3/8 | 3/8 | – | – |
| 0120 | M12 | 29.30 | 29.30 | 1/2 | 1/2 | – | – |
| 0140 | M14 | 40.40 | – | 9/16 | – | – | – |
| 0160 | M16 | 43.70 | 43.70 | 5/8 | 5/8 | – | – |
| 0200 | M20 | – (W178) | 56.30 (W178) | – | 3/4 | – | – |

## Replacement finger set

**1853** 3 piece set for 3-slot tap.

**1849** 4 piece set for 4-slot tap.

| Order No. | Thread | 1853 WALTON | 1849 WALTON | PU | BSW thread | UNC/UNF thread 1853 | UNC/UNF thread 1849 |
|---|---|---|---|---|---|---|---|
| 0030 | M3 | 1.38 | – | 3 Δ | 1/8 | Nr. 5 | – |
| 0040 | M4 | 1.38 | – | 3 Δ | 5/32 | Nr. 8 | – |
| 0040 | M4 | – | 1.38 | 4 Δ | 5/32 | – | – |
| 0050 | M5 | 1.92 | – | 3 Δ | 3/16 | – | – |
| 0050 | M5 | – | 1.92 | 4 Δ | 3/16 | – | Nr. 8 |
| 0060 | M6 | 2.38 | – | 3 Δ | 1/4 | – | – |
| 0060 | M6 | – | 2.38 | 4 Δ | 1/4 | – | – |
| 0080 | M8 | 2.67 | – | 3 Δ | 5/16 | – | – |
| 0080 | M8 | – (W178) | 2.67 (W178) | 4 Δ | 5/16 | – | – |
| 0100 | M10 | 2.67 | – | 3 Δ | 3/8 | – | – |
| 0100 | M10 | – | 2.67 | 4 Δ | 3/8 | – | – |
| 0120 | M12 | 3.40 | – | 3 Δ | 1/2 | – | – |
| 0120 | M12 | – | 3.40 | 4 Δ | 1/2 | – | – |
| 0140 | M14 | 3.94 | – | 3 Δ | 9/16 | – | – |
| 0160 | M16 | 4.86 | – | 3 Δ | 5/8 | – | – |
| 0160 | M16 | – | 4.86 | 4 Δ | 5/8 | – | – |
| 0200 | M20 | – (W178) | 5.50 (W178) | 4 Δ | 3/4 | – | – |

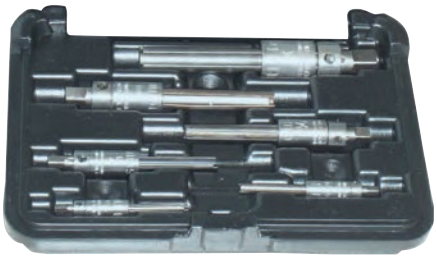
Δ Can only be supplied as a whole packaging unit.

## Tap extractor set

**Design:** Supplied in a sturdy plastic cassette, incl. respective tap extractors and the right replacement finger sets.

WALTON COMPANY

| Order No. | Number | 1854 WALTON COMPANY | Design | Set contents |
|---|---|---|---|---|
| 0010 | 6-piece | 163.00 | 3-slot | M4; 5; 6; 8; 10; 12 |
| 0020 | 10-piece | 325.50 | 3-slot | M3; 4; 5; 6; 8; 10; 12; 14; 16; 20 |
| 0030 | 6-piece | 163.00 | 4-slot | M4; 5; 6; 8; 10; 12 |
| 0040 | 10-piece | 359.00 (W178) | 4-slot | M 4; 5; 6; 8; 10; 12; 14; 16; 20; 22 |



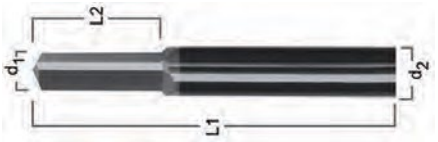
## Tap borer

**Design:** Solid carbide, type N. The Tap borer has 3 blades.

**Application:** Extraction must take place dry at ca. 1500–3500 rpm. With use of the right tap bore-out tool, the core of the tap is quickly bored out and the rest of the tap can be cleanly blown out of the drill hole. The workpiece must be clamped very steadily so that movement does not happen at higher speeds. A centring must be produced first by starting the tap bore-out tool up several times if the tap has broken off at an angle. Boring out can only be started now. Furthermore, the chips should be removed by "air blow" several times.
A vibration can be felt just before the end of the bore-out process. The extractor should now be removed.
The new thread can then be cut with a tap. Due to the high stresses caused by boring out, the cutting edges of the tap bore-out tool need to be resharpened from time to time.

| Solid carbide | Type N | Z 3 | DIN 6535-HA |
|---|---|---|---|

format professional quality




| Order No. | Ø $d_1$ h10 mm | 1854 format | Thread | Total length L1 mm | Cutting edge length L2 mm |
|---|---|---|---|---|---|
| 0400 | 3.3 | 37.60 | M4 | 50 | 15 |
| 0500 | 4.2 | 39.90 | M5 | 50 | 15 |
| 0600 | 5.0 | 44.10 | M6 | 50 | 15 |
| 0800 | 6.8 | 59.50 (W176) | M8 | 60 | 20 |

| Order No. | Ø $d_1$ h10 mm | 1854 format | Thread | Total length L1 mm | Cutting edge length L2 mm |
|---|---|---|---|---|---|
| 1000 | 8.5 | 75.00 | M10 | 70 | 25 |
| 1200 | 10.2 | 92.20 | M12 | 75 | 30 |
| 1600 | 14.0 | 157.00 | M16 | 100 | 40 |
| 2000 | 17.5 | 275.50 (W176) | M20 | 100 | 50 |

## Drilling paste

**Design:** Lubricant for metalwork. Drilling paste as hinge pin with 30 or 50 g contents.

**Application:** For sheet spiral drill, stepped drill, countersink bits.

format professional quality

| Order No. | Drilling paste | 1312 format | 1312 format |
|---|---|---|---|
| 0005 | 30g hinge pin | 4.43 | – |
| 0007 | 50g hinge pin | – (W001,W124) | 5.30 (W001,W124) |

## Cutting oil spray

**Design:** The cutting oil spray provides excellent separation and cooling effect. It increases the surface quality and tool life.

**Appllication:** Especially suitable for drilling, turning, milling and thread cutting of hard and brittle materials.

format professional quality

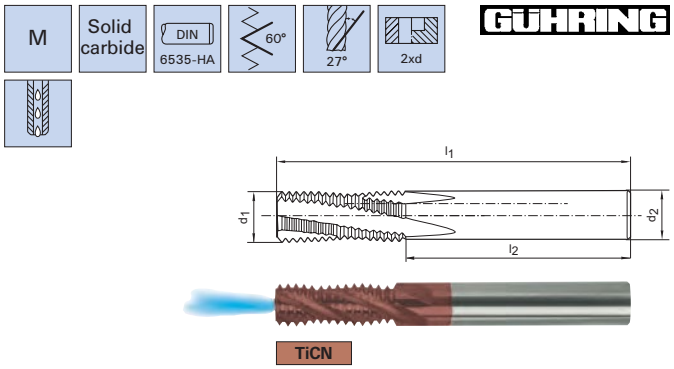
| Order No. | Contents ml | 1336 format |
|---|---|---|
| 0050 | 50 | 3.15 |
| 0420 | 420 | 6.50 (W001) |

## Solid carbide thread milling cutter TM SP for inner thread

**Design:** Ultra-finest grain-solid carbide, with internal supply of coolant and 27° right spiral slots to achieve optimum cutting conditions. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base.

**Application:** For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** Solid carbide thread milling cutter for additional thread types (UNC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1881 | 80 | 80 | **80** | **70** | | | **50** | | **60** | **50** | **90** | 200 | |

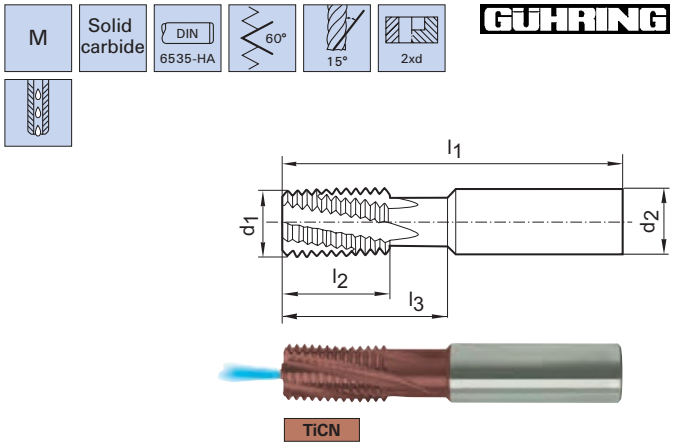
| Order No. | Thread | 1881 GÜHRING TiCN | Gradient mm | Cutting length mm | Total length $l_1$ mm | Shank Ø $d_2$ mm | Number of slots |
|---|---|---|---|---|---|---|---|
| 0006 | M6 | 187.00 | 1.00 | 13.5 | 54 | 6 | 3 |
| 0008 | M8 | 207.50 | 1.25 | 18.1 | 54 | 6 | 3 |
| 0010 | M10 | 229.00 | 1.50 | 21.7 | 64 | 8 | 4 |
| 0012 | M12 | 281.00 | 1.75 | 25.4 | 74 | 10 | 4 |
| 0014 | M14 | 318.50 | 2.00 | 31.0 | 74 | 10 | 4 |
| 0016 | M16 | 358.50 (W175) | 2.00 | 35.0 | 80 | 12 | 4 |

## Solid carbide thread milling cutter GFM for inner thread

**Design:** Ultra-finest grain-solid carbide, with internal supply of coolant and 15° right spiral slots to achieve optimum cutting conditions. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base. Larger Ø ranges can also be processed under consideration of the thread gradient.

**Application:** For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** Solid carbide thread milling cutter for additional thread types (UNC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1884 | 80 | 80 | **80** | **70** | | | | **50** | **60** | **50** | **90** | 200 | |

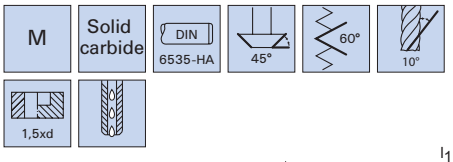
| Order No. | Ø $d_1$ mm | 1884 GÜHRING TiCN | Gradient mm | Cutting edge length $l_2$ mm | d ≥ für Gew.-Ø mm | Effective length $l_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | Number of slots |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | 10 | 279.50 | 1.00 | 16 | 14 | 25 | 70 | 10 | 4 |
| 0012 | 12 | 358.50 | 1.00 | 20 | 18 | 31 | 80 | 12 | 4 |
| 0013 | 12 | 341.50 | 1.50 | 20 | 18 | 31 | 80 | 12 | 4 |
| 0016 | 16 | 425.00 | 1.50 | 25 | 24 | 40 | 90 | 16 | 5 |
| 0017 | 16 | 454.00 | 2.00 | 25 | 24 | 40 | 90 | 16 | 5 |
| 0020 | 20 | 612.50 | 1.50 | 33 | 30 | 50 | 105 | 20 | 5 |
| 0021 | 20 | 670.00 | 2.00 | 33 | 30 | 50 | 105 | 20 | 5 |
| 0023 | 20 | 598.00 (W175) | 3.00 | 33 | 30 | 50 | 105 | 20 | 5 |

## Solid carbide thread milling cutter TMC SP for inner thread

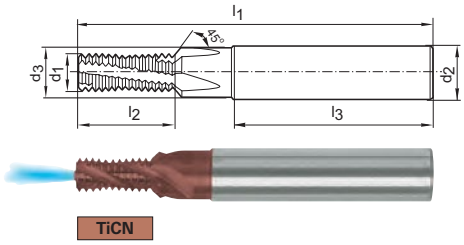
**Design:** Ultra-finest grain-solid carbide, with internal supply of coolant (from thread size M4) and 27° right spiral slots to achieve optimum cutting conditions. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base.

**Application:** For thread cutting and countersinking with a single tool. For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** Solid carbide thread milling cutter for additional thread types (UNC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1888 | 80 | 80 | **80** | **70** | | | | **50** | **60** | **50** | **90** | 200 | |

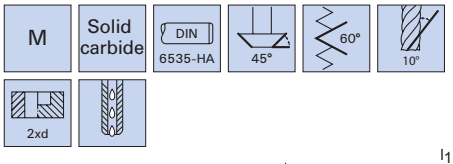
| Order No. | Thread | 1888 GÜHRING TiCN | Gradient mm | Cutting edge length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | Shank length $l_3$ mm | Number of slots |
|---|---|---|---|---|---|---|---|---|
| 0003 | M3 | 191.50 ◊ | 0.50 | 5.2 | 48 | 6 | 36 | 3 |
| 0004 | M4 | 183.00 ◊ | 0.70 | 7.3 | 48 | 6 | 36 | 3 |
| 0005 | M5 | 183.00 ◊ | 0.80 | 9.2 | 54 | 6 | 36 | 3 |
| 0006 | M6 | 201.50 ◊ | 1.00 | 10.5 | 62 | 8 | 36 | 3 |
| 0008 | M8 | 240.50 ◊ | 1.25 | 13.7 | 74 | 10 | 40 | 3 |
| 0010 | M10 | 282.50 ◊ | 1.50 | 17.2 | 80 | 12 | 45 | 4 |
| 0012 | M12 | 403.50 ◊ | 1.75 | 20.1 | 90 | 14 | 45 | 4 |
| 0014 | M14 | 468.00 ◊ | 2.00 | 25.0 | 102 | 16 | 48 | 4 |
| 0016 | M16 | 590.50 ◊ (W175) | 2.00 | 27.0 | 102 | 18 | 48 | 4 |

## Solid carbide thread milling cutter TMC SP for inner thread

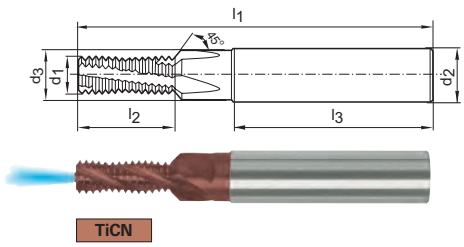
**Design:** Ultra-finest grain-solid carbide, with internal supply of coolant (from thread size M4) and 27° right spiral slots to achieve optimum cutting conditions. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base.

**Application:** For thread cutting and countersinking with a single tool. For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** Solid carbide thread milling cutter for additional thread types (UNC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1891 | 80 | 80 | **80** | **70** | | | | **50** | **60** | **50** | **90** | 200 | |

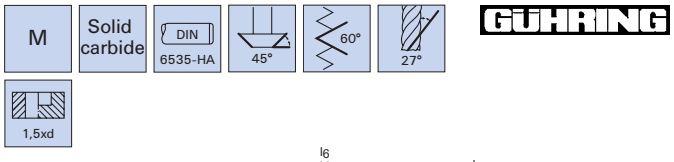
| Order No. | Thread | 1891 GÜHRING TiCN | Gradient mm | Cutting edge length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | Shank length $l_3$ mm | Number of slots |
|---|---|---|---|---|---|---|---|---|
| 0003 | M3 | 191.50 | 0.50 | 6.7 | 48 | 6 | 36 | 3 |
| 0004 | M4 | 183.00 | 0.70 | 8.7 | 48 | 6 | 36 | 3 |
| 0005 | M5 | 183.00 | 0.80 | 10.8 | 54 | 6 | 36 | 3 |
| 0006 | M6 | 201.50 | 1.00 | 13.5 | 62 | 8 | 36 | 3 |
| 0008 | M8 | 240.50 | 1.25 | 18.1 | 74 | 10 | 40 | 3 |
| 0010 | M10 | 282.50 | 1.50 | 21.7 | 80 | 12 | 45 | 4 |
| 0012 | M12 | 403.50 | 1.75 | 25.4 | 90 | 14 | 45 | 4 |
| 0014 | M14 | 468.00 | 2.00 | 31.0 | 102 | 16 | 48 | 4 |
| 0016 | M16 | 590.50 (W175) | 2.00 | 35.0 | 102 | 18 | 48 | 4 |

## Solid carbide thread milling cutter DTMC-SP for inner thread

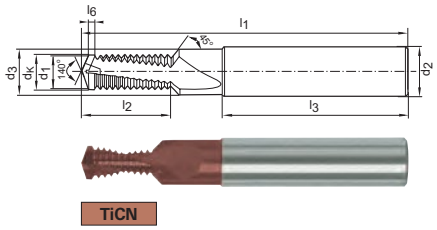
**Design:** Ultra-finest grain-solid carbide, with 27° right spiral slots to achieve optimum cutting conditions as well as with 45° countersink bevel. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base.

**Application:** For drilling, countersinking and thread cutting with a single tool. For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** Solid carbide thread milling cutter for additional thread types (NC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 | | | | | | | | | | | 120 | 200 | 200 |

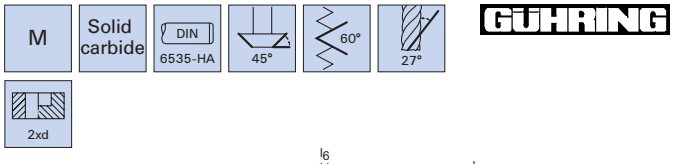
| Order No. | Thread | 1893 GÜHRING TiCN | Gradient | Cutting edge length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ | $l_3$ | $l_6$ | $D_3$ | $d_k$ | Number of slots |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm | mm | mm | mm | |
| 0003 | M3 | 307.00 ◊ | 0.50 | 5.4 | 48 | 6 | 36 | 0.50 | 3.4 | 2.5 | 2 |
| 0004 | M4 | 275.00 ◊ | 0.70 | 6.9 | 48 | 6 | 36 | 0.70 | 4.5 | 3.3 | 2 |
| 0005 | M5 | 266.50 ◊ | 0.80 | 8.7 | 54 | 6 | 36 | 0.80 | 5.5 | 4.2 | 2 |
| 0006 | M6 | 266.50 ◊ | 1.00 | 10.9 | 62 | 8 | 36 | 1.00 | 6.6 | 5.0 | 2 |
| 0008 | M8 | 328.50 ◊ | 1.25 | 13.7 | 74 | 10 | 40 | 1.25 | 9.0 | 6.8 | 2 |
| 0010 | M10 | 389.00 ◊ | 1.50 | 18.0 | 80 | 12 | 45 | 1.50 | 11.0 | 8.5 | 2 |
| 0012 | M12 | 533.00 ◊ | 1.75 | 20.8 | 90 | 14 | 45 | 1.50 | 13.5 | 10.2 | 2 |
| 0014 | M14 | 720.50 ◊ | 2.00 | 23.6 | 102 | 16 | 48 | 1.50 | 15.5 | 12.0 | 2 |
| 0016 | M16 | 763.50 ◊ (W175) | 2.00 | 26.0 | 102 | 18 | 48 | 1.50 | 17.5 | 14.0 | 2 |

## Solid carbide thread milling cutter DTMC-SP for inner thread

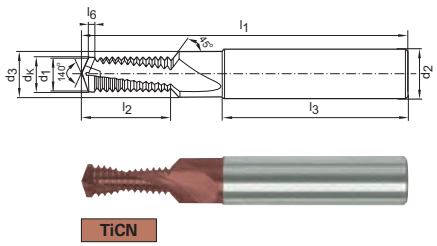
**Design:** Ultra-finest grain-solid carbide, with 27° right spiral slots to achieve optimum cutting conditions as well as with 45° countersink bevel. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base.

**Application:** For drilling, countersinking and thread cutting with a single tool. For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** Solid carbide tap milling cutter for additional thread types (UNC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1895 | | | | | | | | | | | 120 | 200 | 200 |

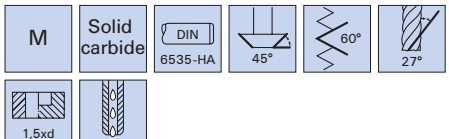
| Order No. | Thread | 1895 GÜHRING TiCN | Gradient | Cutting edge length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ | $l_3$ | $l_6$ | $D_3$ | $d_k$ | Number of slots |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm | mm | mm | mm | mm | |
| 0003 | M3 | 307.00 ◊ | 0.50 | 6.9 | 48 | 6 | 36 | 0.50 | 3.4 | 2.5 | 2 |
| 0004 | M4 | 275.00 ◊ | 0.70 | 9.0 | 48 | 6 | 36 | 0.70 | 4.5 | 3.3 | 2 |
| 0005 | M5 | 266.50 ◊ | 0.80 | 11.1 | 54 | 6 | 36 | 0.80 | 5.5 | 4.2 | 2 |
| 0006 | M6 | 266.50 ◊ | 1.00 | 13.9 | 62 | 8 | 36 | 1.00 | 6.6 | 5.0 | 2 |
| 0008 | M8 | 328.50 ◊ | 1.25 | 18.7 | 74 | 10 | 40 | 1.25 | 9.0 | 6.8 | 2 |
| 0010 | M10 | 389.00 ◊ | 1.50 | 22.5 | 80 | 12 | 45 | 1.50 | 11.0 | 8.5 | 2 |
| 0012 | M12 | 533.00 ◊ | 1.75 | 26.1 | 90 | 14 | 45 | 1.50 | 13.5 | 10.2 | 2 |
| 0014 | M14 | 720.50 ◊ | 2.00 | 31.6 | 102 | 16 | 48 | 1.50 | 15.5 | 12.0 | 2 |
| 0016 | M16 | 778.00 ◊ (W175) | 2.00 | 36.0 | 102 | 18 | 48 | 1.50 | 17.5 | 14.0 | 2 |

## Solid carbide tap drill DTMC-SP for inner thread

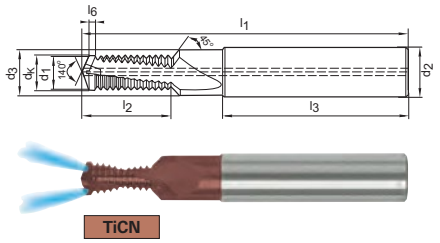
**Design:** Ultra-finest grain-solid carbide, with internal supply of coolant and 27° right spiral slots to achieve optimum cutting conditions as well as with 45° countersink bevel. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base.

**Application:** For drilling, countersinking and thread cutting with a single tool. For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** Solid carbide tap milling cutter for additional thread types (UNC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1897 | | | | | | | | | | | 120 | 200 | 200 |

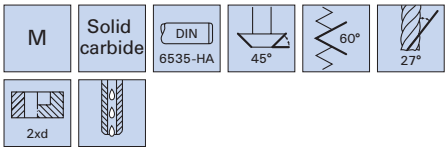
| Order No. | Thread | 1897 GÜHRING TiCN | Gradient mm | Cutting edge length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | $l_3$ mm | $l_6$ mm | $D_3$ mm | $d_k$ mm | Number of slots |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0004 | M4 | 354.50 ◊ | 0.70 | 6.9 | 48 | 6 | 36 | 0.70 | 4.5 | 3.3 | 2 |
| 0005 | M5 | 350.00 ◊ | 0.80 | 8.7 | 54 | 6 | 36 | 0.80 | 5.5 | 4.2 | 2 |
| 0006 | M6 | 353.00 ◊ | 1.00 | 10.9 | 62 | 8 | 36 | 1.00 | 6.6 | 5.0 | 2 |
| 0008 | M8 | 410.50 ◊ | 1.25 | 13.7 | 74 | 10 | 40 | 1.25 | 9.0 | 6.8 | 2 |
| 0010 | M10 | 468.00 ◊ | 1.50 | 18.0 | 80 | 12 | 45 | 1.50 | 11.0 | 8.5 | 2 |
| 0012 | M12 | 612.50 ◊ | 1.75 | 20.8 | 90 | 14 | 45 | 1.50 | 13.5 | 10.2 | 2 |
| 0014 | M14 | 778.00 ◊ | 2.00 | 23.6 | 102 | 16 | 48 | 1.50 | 15.5 | 12.0 | 2 |
| 0016 | M16 | 879.00 ◊ (W175) | 2.00 | 26.0 | 102 | 18 | 48 | 1.50 | 17.5 | 14.0 | 2 |

## VHM thread milling cutter DTMC-SP for inner thread

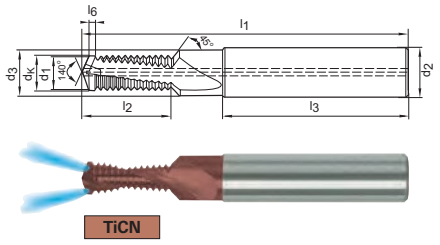
**Design:** Ultra-finest grain-solid carbide, with internal supply of coolant and 27° right spiral slots to achieve optimum cutting conditions as well as with 45° countersink bevel. The milling principle results in an exact thread depth, a very high surface quality in the thread, process-reliable machining of difficult to cut materials and thread production very close down to the base.

**Application:** For drilling, countersinking and thread cutting with a single tool. For regular metric threads (both right and left thread) according to ISO DIN 13 for through-holes and blind holes.

**Note:** VHM tap milling cutter for additional thread types (UNC, UNF, pipe thread etc.) on request. You will further information in the technical appendix.




GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1899 | | | | | | | | | | | 120 | 200 | 200 |

| Order No. | Thread | 1899 GÜHRING TiCN | Gradient mm | Cutting edge length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | $l_3$ mm | $l_6$ mm | $D_3$ mm | $d_k$ mm | Number of slots |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0004 | M4 | 354.50 ◊ | 0.70 | 9.0 | 48 | 6 | 36 | 0.70 | 4.5 | 3.3 | 2 |
| 0005 | M5 | 350.00 ◊ | 0.80 | 11.1 | 54 | 6 | 36 | 0.80 | 5.5 | 4.2 | 2 |
| 0006 | M6 | 353.00 ◊ | 1.00 | 13.9 | 62 | 8 | 36 | 1.00 | 6.6 | 5.0 | 2 |
| 0008 | M8 | 410.50 ◊ | 1.25 | 18.7 | 74 | 10 | 40 | 1.25 | 9.0 | 6.8 | 2 |
| 0010 | M10 | 468.00 ◊ | 1.50 | 22.5 | 80 | 12 | 45 | 1.50 | 11.0 | 8.5 | 2 |
| 0012 | M12 | 612.50 ◊ | 1.75 | 26.1 | 90 | 14 | 45 | 1.50 | 13.5 | 10.2 | 2 |
| 0014 | M14 | 778.00 ◊ | 2.00 | 31.6 | 102 | 16 | 48 | 1.50 | 15.5 | 12.0 | 2 |
| 0016 | M16 | 879.00 ◊ (W175) | 2.00 | 36.0 | 102 | 18 | 48 | 1.50 | 17.5 | 14.0 | 2 |

**NEW**

**All items marked with this icon have been added to our range.**

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2/65

2/10

2/10

2/12


2/15

2/16

2/20


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NEW

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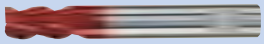
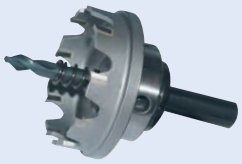
| | | | | |
|---|---|---|---|---|
| 2/13 | 2/14 | 2/14 | Bore Type Milling Cutters | 2/10–2/14 |
| 2/30 | 2/32 | 2/33 | End mills, HSS | 2/15–2/35 |
| 2/49 |  2/50 | NEW 2/53 | End mills, solid carbide | 2/46–2/53 |
| 2/67 | 2/71 | 2/99 | End mills, solid carbide | 2/53–2/100 |
| 2/112 | NEW 2/113 |  2/115 | Circular saw blades<br>HSS-/HM-equipped<br>Hole saws/accessories | <br>2/101–2/109<br>2/110–2/116 |
| 2/126 | 2/128 |  2/133 | Jig-/saber saw blades<br>Machine-/band saw blades<br>Hand saw blades | 2/117–2/126<br>2/128–2/133<br>2/133 |
| 2/144 | 2/147 | 2/151 | Tool bits<br>Lathes<br>Knurling tools<br>Broaching tools | 2/134–2/136<br>2/137–2/142<br>2/144–2/148<br>2/149–2/151 |
| 2/173 | 2/176 | 2/177 | Indexable Milling / Drilling Tools | 2/163–2/189 |
| 2/242 | 2/250 | 2/259 | Indexable Turning<br>Threading Tools<br>Part-Off Tools | 2/202–2/247<br>2/250–2/254<br>2/256–2/260 |

## Short Codes

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Materials | e.g. | HSS | High-speed-HSS | HSS Co | High speed-steel with cobalt | HSS-E PM | Powder metallurgical high performance high-speed steel |
| | e.g. | Solid carbide | Solid carbide | | | | |
| Standard | e.g. | DIN 844-K | Equivalent to DIN 884 design, short | DIN 6527 | Equivalent to DIN 6527 | Factory standard | Factory standard |
| Type | e.g. | Type W | Finishing teeth for soft material | Type N | Finishing teeth for normal material | Type H | Finishing teeth for hard material |
| | e.g. | Type NF | Roughing finishing teeth for normal materials | Type NRf | Fine-roughing teeth for materials with greater durability | | |
| | e.g. | Type WR | Course-roughing teeth for soft materials | Type NR | Normal roughing teeth for normal materials | Type HR | Fine-roughing teeth for hard materials |
| Number of cutting edges | e.g. | Z 6–8 | 6-8 cutting edges | | | | |
| Shank design | e.g. | DIN 1835-B | Cyl. shank with carrier surface acc. to DIN 1835 B | DIN 6535-HA | Unit cyl. shank | DIN 6535-HB | Unit shank with lateral carrier surface |
| Angles | e.g. | 45° | Right spiral with 45° angle | | | | |
| Application | e.g. | | Feed direction | | Dry machining possible | | Design: extra-short, short, long, extra-long |
| | e.g. | K | Cast, weak interrupted cut | P | Steel, strong interrupted cut | | |

## Cutting speed and feed rate

**All information regarding cutting speed and feed rate correspond to a recommended guideline.**
**This requires stable machine conditions, a low-vibration workpiece and the use of a suitable coolant.**

**Symbol mapping**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9999 | ● | ● | ● | ● | ● | | | | ◐ | | ● | ○ | ● |

● recommended ◐ suitable ○ limited suitability

**Mapping of values** — **cutting speed Vc**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9999 | **35** | **35** | **25** | **25** | **19** | | | | 30 | | **30** | 50 | **35** |

**font size bold = recommended** font size normal = suitable

| Order no. | Ø e8 mm | etc. → |
|---|---|---|
| 0101 | 1.0 | |
| 0102 | 1.5 | |
| 0103 | 2.0 | |
| 0104 | 2.5 | |
| 0105 | 2.8 | |
| 0106 | 3.0 | |
| etc. | etc. | |

**Example calculation (Ø 4.0 mm end mill, mild steel up to 850 N / mm2)**

| | | |
|---|---|---|
| Value sought 1: | n = | number of revolutions per minute (r/min) |
| Formula: | n = | $\frac{v_c \times 1000}{D \times \pi}$ |
| Calculation: | n = | $\frac{35 \text{ m/min} \times 1000}{2.5 \text{ mm} \times 3.14159}$ |
| Solution: | n = | 4450/min |
| Value sought 2: | $v_f$ = | feed rate (mm/min) |
| Formula: | $v_f$ = | $n \times z \times f_z$ |
| Calculation: | $v_f$ = | 3820/min x 2 x 0.003 mm |
| Solution: | $v_f$ = | 22.9 mm/min |

| ← etc. | teeth-number | $f_z$ mm |
|---|---|---|
| | 2 | 0.003 |
| | 2 | 0.003 |
| | 2 | 0.003 |
| | 2 | 0.003 |
| | 2 | 0.003 |
| | 2 | 0.007 |
| | etc. | etc. |

The stated feed values relate to the groove cutters.

## Surface finishing

Tools made of high speed steel or carbide because of their generally good basic properties are supplied with a bright finish without extra surface treatment. For special applications it is recommended that tools are optimised for diverse applications at surface finishing processes, to achieve the following goals:

**– Extension of the tool's life**

**– Reduced cutting force**

**– Increased cutting speed and feed rate**

**– Improved surface finish**

**– Improved dry processing**

**– Optimised hard processing**

### Surface finishing benefits at a glance

| | |
|---|---|
| TiN | Wear- and diffusion resistance |
| TiCN | Hardness, toughness |
| TiAlN | Heat hardness, oxidation stability |
| Fire | Hardness, toughness, wear resistance |
| Steam tempered | Lower slippage resistance |
| Nitrated | Hardness, wear resistance on cast iron |
| Signum | Extreme hardness, extreme heat resistance |
| ZrN | High hardness, low friction coefficient |

### Titanium-nitride coating — TiN

Titanium-nitride is a gold-coloured protective layer applied by a PVD process (Physical Vapour Deposition). Higher hardness combined with a lower friction coefficient achieves a significantly longer service life and improved cutting performance. TiN coating is primarily used for drills and thread bores.

### Titanium carbon-nitride coating — TiCN

Titanium carbon-nitride is a wear-protection layer applied by PVD, being harder than TiN and having a lower friction coefficient. Tool performance is increased through greater hardness and ductility combined with improved wear.
The TiCN coating is primarily used for NC drill bits, thread bores and end mills.

### Titaninum aluminium-nitride coating — TiAlN

Titanium aluminium-nitride is a multi-layer ceramic coating applied using the PVD method. The resulting greater hardness and oxidation stability make this coating ideal for higher speeds and feed rates for extended tool life.
The TiAlN coating is used mainly in drilling and milling machine processes, and is also recommended for dry processing.

### Titaninum aluminium-nitride S coating — TiAlN-S

This coating is particularly recommended for machining hardened materials (> 70 HRC). It is used mainly for end mills and is characterised by high wear resistance. Dry machining is also possible as is HSC machining.

### Diamond coating — Diamond

This coating is particularly suitable for the processing of reinforced plastics, aluminum and copper alloys.
The friction coefficient on steel is very low.

### Fire coating (TiAlN/TiN) — Fire

Fire is a TiAlN/TiN multi-layer coating with a gradient structure. The combined benefits of TiAlN and TiN coatings are very good wear resistance with high thermal stability, hardness and toughness. In addition to the conventional wet application, this layer can also be used for minimum quantity lubrication and dry machining.

### Zirconium nitride coating — ZrN

Zirconium-nitride is suitable for machining non-ferrous materials, and especially for aluminum alloys. This coating is not good for cold welding of aluminium. Associated with high layer hardness and oxidation resistance are advantages that increase tool service life and effective feed rate and cutting speed.

### Steam tempering — Steam tempered

Steam tempering is a form of surface processing which reduces slide resistance and prevents edge build-up. Cold welding can also be avoided.
Steam tempering is primarily used with drills and thread bores.

### Nitriding — Nitrated

Nitriding is a surface machining process that increases hardness and wear resistance. Particularly for working with highly abrasive materials such as cast iron, which nitriding is particularly suitable for.
Nitriding is primarily used with drills and thread bores.

### Signum coating (TiALN/SiN) — Signum

Due to the special nano-composite structure with a protective layer of TiALN and SiN, this coating, with 5500 HV, is one of the hardest on the market. Particularly for hard machinability materials. High heat wear resistance combined with high diffusion resistance.

## Surface finishing processes compared

| Surface Finish | Colour | Coating structure | Thickness µm | Hardness HV | Friction coefficient versus steel temperature | Application |
|---|---|---|---|---|---|---|
| TiN | gold-yellow | single-layer | 1 –4 | 2300 | 0.50 | max. 600° |
| TiCN | light brown | multi-layer | 1 –4 | 3000 | 0.40 | max. 400° |
| TiAlN | violet | multi-layer | 3 | 3200 | 0.55 | max. 750° |
| TiAlN-S | blue | multi-layer | 0.5–4 | 4500 | 0.45 | max. 1200° |
| Diamond | black | – | 0.5–2 | 5000 | 0.15 | max. 350° |
| Fire | red | multi-layer | 2 –6 | 3300 | 0.60 | max. 850° |
| ZrN | light-gold | multi-layer | 0.1–3 | 3400 | 0.50 | max. 900° |
| Steam tempered | grey | surface treatment | max. 5 | 400 | – | max. 550° |
| Nitrated | silver-grey | surface treatment | 20 | 1300 | – | max. 550° |
| Signum | red-bronze | multi-layer | 1 –5 | 5500 | 0.55 | max. 800° |

## Overview – HSS/HSS-E milling programme

| Description | Shell end mills | | | | | | | | Disc cutters | Narrow disc cutters |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 8–10 | 8–12 | 4–6 | 6–10 | 6–10 | 6–10 | 8–12 | 8–12 | 10–18 | 28–48 |
| DIN | 1880 | 1880 | 1880 | 1880 | 1880 | 1880 | 1880 | 1880 | 885-A | 1834-A |
| Tool type | N | N | W | NF | NR | NR | HR | HR | N | N |
| Tool material | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co5 | HSS Co5 |
| Surface/ coating | Bright | TiAlN | Bright | Bright | Bright | TiAlN | Bright | TiAlN | Bright | Bright |
| Order No. | 2010 | 2013 | 2016 | 2019 | 2022 | 2025 | 2028 | 2031 | 2049 | 2043 |
| Page | 2/10 | 2/10 | 2/10 | 2/11 | 2/11 | 2/11 | 2/11 | 2/11 | 2/12 | 2/12 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | | ● | ● | ● | ● | ● | ◐ | ● |
| Steels up to 1400 N/mm² | | ◐ | ◐ | | ◐ | ◐ | ◐ | ● | ● | ◐ | ◐ |
| Steels up to 42 HRC | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | ◐ | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | |
| Ti steels, Ti alloys, special steels | | | | | ◐ | | ◐ | ◐ | ◐ | | |
| Cast-iron materials | | | | | | | | | | ◐ | ● |
| Al, Al- and Mg alloy | | | | ● | | | | | | ◐ | ◐ |
| Copper, brass, bronze | | | ◐ | ◐ | | ◐ | ◐ | | | ◐ | ◐ |

● recommended ◐ suitable

## Overview – HSS/HSS-E milling programme

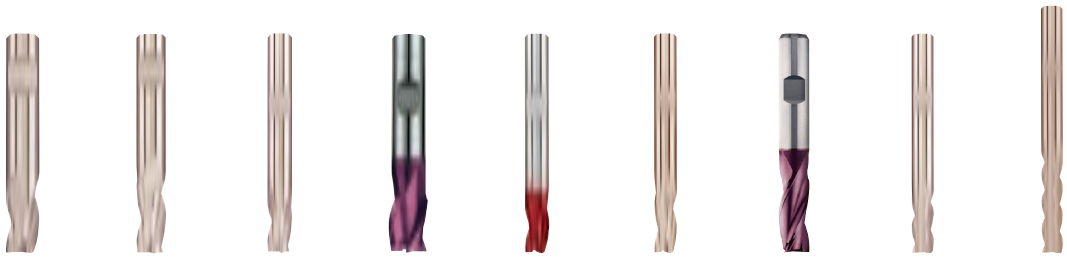
| Description | Form cutters | | | | Single Flute Router | | Milling Cutters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 12–14 | 12–14 | 16–28 | 14–22 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| DIN | 856 | 855 | 847 | 842-A | Factory standard | Factory standard | 844-K | 327-D | 327-D | 327-D | DIN 844-L |
| Tool type | | | H | H | W | W | N | N | N | N | N |
| Tool material | HSS | HSS | HSS | HSS | HSS Co5 | HSS Co5 | HSS Co8 | HSS Co8 | HSS-E PM | HSS Co8 | HSS Co8 |
| Surface/ coating | Bright | Bright | Bright | Bright | Bright | TiAlN | Bright | Bright | TiAlN | Fire | Bright |
| Order No. | 2052 | 2055 | 2058 | 2061 | 2100 | 2103 | 2116 | 2106 | 2113 | 2114 | 2115 |
| Page | 2/13 | 2/13 | 2/14 | 2/14 | 2/15 | 2/15 | 2/15 | 2/16 | 2/16 | 2/16 | 2/17 |

## Material group

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ◐ | ◐ | ◐ | ◐ | | | | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ◐ | ◐ | ◐ | ◐ | | | | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | | | | | | | | ● | ● | ● | ● |
| Steels up to 42 HRC | | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | | | | | ● | | |
| Ti steels, Ti alloys, special steels | | | | | | | | | | | ● | |
| Cast-iron materials | | ● | ● | ● | ● | | | | | ● | ● | |
| Al, Al- and Mg alloy | | ◐ | ◐ | ◐ | ◐ | ● | ● | ● | ● | | ◐ | ● |
| Copper, brass, bronze | | ◐ | ◐ | ◐ | ◐ | | | | | | ◐ | |

● recommended ◐ suitable

## Overview – HSS/HSS-E milling programme



| Description | Mini Slot Drills | | Slot Drills | | | | | End mills | |
|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| DIN | Factory standard | Factory standard | 327 | 327 | 327 | 844-K | 844-K | 844-K | 844-L |
| Tool type | N | N | N | N | N | N | N | W | W |
| Tool material | HSS Co8 | HSS Co8 | HSS Co8 | HSS-E PM | HSS Co8 | HSS Co8 | HSS-E PM | HSS Co8 | HSS Co8 |
| Surface/ coating | Bright | Bright | Bright | TiAlN | Fire | Bright | TiAlN | Bright | Bright |
| Order No. | 2127 | 2133 | 2145 | 2149 | 2156 | 2154 | 2155 | 2160 | 2163 |
| Page | 2/17 | 2/18 | 2/19 | 2/19 | 2/19 | 2/20 | 2/20 | 2/21 | 2/21 |

## Material group

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| Steels up to 1400 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| Steels up to 42 HRC | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | ● | ◐ | | ● | | |
| Ti steels, Ti alloys, special steels | | | | | | ◐ | | | | |
| Cast-iron materials | | | | | ● | ● | | ● | | |
| Al, Al- and Mg alloy | | ◐ | ◐ | ◐ | | ◐ | ◐ | | ● | ● |
| Copper, brass, bronze | | | | | | ● | | | | |

● recommended ◐ suitable

## Overview – HSS/HSS-E milling programme

| Description | End Mill | | | | | | Rippa Cutter | | |
|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 4–6 | 4–6 | 4 | 4 | 4–6 | 4 | 3 | 3–5 | 3–5 |
| DIN | 844-K | 844-K | 844-K | 844-K | 844-L | 844-L | 844-K | 844-K | 844-L |
| Tool type | N | N | N | N | N | N | NF | NF | NF |
| Tool material | HSS Co8 | HSS Co8 | HSS-E PM | HSS-E PM | HSS Co8 | HSS-E PM | HSS Co8 | HSS Co8 | HSS Co8 |
| Surface/ coating | Bright | TiAlN | TiAlN | Fire | Bright | TiAlN | TiAlN | Bright | Bright |
| Order No. | 2169 | 2175 | 2176 | 2168 | 2178 | 2179 | 2158 | 2184 | 2187 |
| Page | 2/22 | 2/22 | 2/23 | 2/23 | 2/24 | 2/24 | 2/25 | 2/25 | 2/26 |

## Material group

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | ● | ● | | ● | ● | ● | ● | ● |
| Steels up to 42 HRC | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | ● | | | ● | | | |
| Ti steels, Ti alloys, special steels | | | | | ● | | | | | |
| Cast-iron materials | | | | ● | ● | | ● | | | |
| Al, Al- and Mg alloy | | ◐ | ◐ | | ◐ | ◐ | | ◐ | ● | ● |
| Copper, brass, bronze | | | | | ◐ | | | | | |

● recommended ◐ suitable

## Overview – HSS/HSS-E milling programme

| Description | Rippa Cutter | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 3 | 4 | 3–4 | 3–4 | 3–4 | 3–4 | 3–4 | 3–4 | 3–4 |
| DIN | 844-K | 844-K | 844-K | 844-K | 844-L | 844-K | 844-K | 844-K | 844-L |
| Tool type | NR | HR | NR | NR | NR | HR | HR | NRf | HR |
| Tool material | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS Co8 | HSS-E PM | HSS-E PM | HSS Co8 |
| Surface/ coating | TiAlN | Fire | Bright | TiAlN | Bright | TiAlN | TiAlN | Fire | Bright |
| Order No. | 2165 | 2209 | 2190 | 2196 | 2199 | 2223 | 2214 | 2218 | 2226 |
| Page | 2/26 | 2/27 | 2/27 | 2/27 | 2/28 | 2/28 | 2/29 | 2/30 | 2/30 |

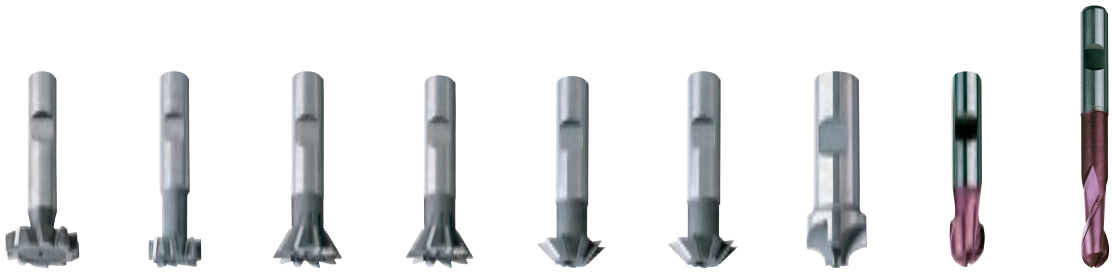
NEW

## Material group

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 42 HRC | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | | | | ● | |
| Ti steels, Ti alloys, special steels | | | | | | | | | ● | |
| Cast-iron materials | | | | | | | | ● | ● | |
| Al, Al- and Mg alloy | | ◐ | ○ | ◐ | ◐ | ◐ | ◐ | | | ◐ |
| Copper, brass, bronze | | | | | | | | | ● | |

● recommended ◐ suitable ○ limited suitability

## Overview – HSS/HSS-E milling programme



| Description | Slot cutter | T-slot cutter | Dovetail Cutters | | | | Corner Rounding Cutters | Ball Nose Cutters | |
|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 8–12 | 6–8 | 6–12 | 6–12 | 6–12 | 6–12 | 4 | 2 | 2 |
| DIN | 850-D | 851-AB | 1833-C/45° | 1833-C/60° | 1833-D/45° | 1833-D/60° | 6518-B | 327-D | 1889 |
| Tool type | N | N | N | N | N | N | N | N | N |
| Tool material | HSS Co5 | HSS Co5 | HSS Co5 | HSS Co5 | HSS Co5 | HSS Co5 | HSS Co8 | HSS Co8 | HSS Co8 |
| Surface/ coating | Bright | Bright | Bright | Bright | Bright | Bright | Bright | TiAlN | TiAlN |
| Order No. | 2250 | 2253 | 2256 | 2257 | 2258 | 2259 | 2262 | 2122 | 2125 |
| Page | 2/31 | 2/32 | 2/32 | 2/32 | 2/32 | 2/32 | 2/33 | 2/33 | 2/33 |

## Material group

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 42 HRC | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | | | | | |
| Ti steels, Ti alloys, special steels | | | | | | | | | | |
| Cast-iron materials | | | | | | | | | | |
| Al, Al- and Mg alloy | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Copper, brass, bronze | | | | | | | | | | |

● recommended ◐ suitable

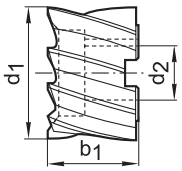
## Shell end mill

**Design:** HSS Co8, DIN 1880, profile ground, with longitudinal and crosswise slot.

**Application:** Can be used as a surface, corner and rolling mill.

HSS Co8 | DIN 1880 | Type N | DIN 138 | 30°

format professional quality



2010
bright

2013
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 35 | 30 | 20 | | | | | | | | | | |
| 2013 | 51 | 44 | 29 | | | | | | 19 | | | | 50 |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2010 format bright | 2013 format TiAlN | Bore $d_2$ H7 mm | Number of teeth | Steels up to 850 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0001 | 40 x 32 | 56.40 | 103.50 | 16 | 8 | 0.070 |
| 0004 | 50 x 36 | 78.80 | 151.50 | 22 | 8 | 0.078 |
| 0007 | 63 x 40 | 107.50 | 185.50 | 27 | 8 | 0.092 |
| 0010 | 80 x 45 | 179.50 | 283.50 | 27 | 10 | 0.100 |
| 0013 | 100 x 50 | 301.50 | – | 32 | 10 | 0.115 |
| 0013 | 100 x 50 | – (W200) | 439.00 (W202) | 32 | 12 | 0.115 |

## Shell end mill

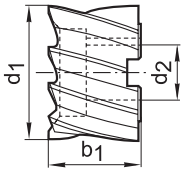
**Design:** HSS Co8, type W, DIN 1880, 42°, bright, profile ground, with longitudinal and crosswise slot.

**Application:** Can be used as a surface, corner and rolling mill.

HSS Co5 | DIN 1880 | Type W | DIN 138 | 42°

format professional quality

bright




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | | | | | | | | | | | | 17 | 40 |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2016 format bright | Bore $d_2$ H7 mm | Number of teeth | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|
| 0001 | 40 x 32 | 81.40 | 16 | 4 | 0.219 |
| 0004 | 50 x 36 | 94.60 | 22 | 4 | 0.214 |
| 0007 | 63 x 40 | 129.50 | 27 | 5 | 0.267 |
| 0010 | 80 x 45 | 219.50 (W200) | 27 | 6 | 0.333 |

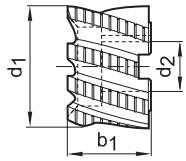
## Shell end mill

**Design:** HSS Co8, DIN 1880, 30°, profile relief-ground, with longitudinal and crosswise slot.

**Application:** Can be used as a surface, corner and rolling mill.

HSS Co8 | DIN 1880 | DIN 138 | 30°

format professional quality




**2019** Bright — Type NF, bright, rough finish toothed.

**2022** Bright — Type NR, bright, rough toothed.

**2025** TiAlN — Type NR, **TiAlN-coated,** rough toothed.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

Type NF

2019 bright

Type NR

2022 bright

Type NR

2025 TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019 | 35 | 30 | 20 | | | | | | 9 | 4 | | | |
| 2022 | 35 | 30 | 20 | | | | | | 9 | | | | 40 |
| 2025 | 51 | 44 | 29 | | | | | | 19 | 4 | | | 50 |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2019 format bright | 2022 format bright | 2025 format TiAlN | Bore $d_2$ H7 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 40 x 32 | 73.50 | 71.00 | 112.00 | 16 | 6 | 0.071 |
| 0004 | 50 x 36 | 98.20 | 95.10 | 159.50 | 22 | 8 | 0.077 |
| 0007 | 63 x 40 | 142.00 | 123.50 | 204.50 | 27 | 8 | 0.091 |
| 0010 | 80 x 45 | 220.50 | 200.50 | 308.50 | 27 | 8 | 0.100 |
| 0013 | 100 x 50 | 345.00 (W200) | 314.50 (W200) | 458.50 (W202) | 32 | 10 | 0.119 |

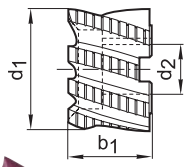
## Shell end mill

**Design:** HSS Co5, type HR, DIN 1880, 30°, fine roughing teeth, with longitudinal and crosswise slot.

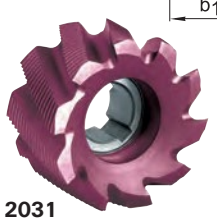
**Application:** Can be used as a surface, corner and rolling mill.

HSS Co5 | Type HR | DIN 1880 | DIN 138 | 30°

format professional quality



2028 bright



2031 TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2028 | 35 | 30 | 20 | | | | | | 9 | 4 | | | |
| 2031 | 51 | 44 | 29 | | | | | | 19 | 5 | | | |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2028 format bright | 2031 format TiAlN | Bore $d_2$ H7 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0001 | 40 x 32 | 93.40 | 112.00 | 16 | 8 | 0.071 |
| 0004 | 50 x 36 | 125.00 | 159.50 | 22 | 8 | 0.078 |
| 0007 | 63 x 40 | 166.50 | 204.50 | 27 | 10 | 0.090 |
| 0010 | 80 x 45 | 246.00 | 308.50 | 27 | 10 | 0.094 |
| 0013 | 100 x 50 | 350.50 (W200) | 458.50 (W202) | 32 | 12 | 0.117 |

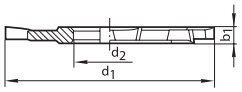
## Disk mill

**Design:** HSS Co5, Type N, DIN 885-A, bright, cross cut.

**Application:** Can be used for slot cutting. Right- and left-cutting.

HSS Co5 | Type N | DIN 885-A | DIN 138

format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2049 | 30 | 18 | 16 | | | | | | 10 | | 17 | 240 | 90 |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2049 format bright | Bore $d_2$ H7 mm | Number of teeth | Steels up to 850 N/mm² $f_z$ mm |
|---|---|---|---|---|---|
| 0001 | 50 x 4 | 55.80 | 16 | 10 | 0.05 |
| 0004 | 50 x 5 | 56.70 | 16 | 10 | 0.05 |
| 0010 | 50 x 8 | 64.10 | 16 | 10 | 0.05 |
| 0013 | 50 x 10 | 68.90 | 16 | 10 | 0.05 |
| 0019 | 63 x 5 | 64.50 | 22 | 12 | 0.06 |
| 0022 | 63 x 6 | 67.10 | 22 | 12 | 0.06 |
| 0025 | 63 x 8 | 70.10 | 22 | 12 | 0.06 |
| 0028 | 63 x 10 | 78.90 | 22 | 12 | 0.06 |
| 0040 | 80 x 5 | 81.90 | 27 | 14 | 0.07 |
| 0043 | 80 x 6 | 83.80 | 27 | 14 | 0.07 |
| 0046 | 80 x 8 | 88.80 | 27 | 14 | 0.07 |
| 0049 | 80 x 10 | 91.00 | 27 | 14 | 0.07 |
| 0052 | 80 x 12 | 102.50 | 27 | 14 | 0.07 |
| 0058 | 80 x 16 | 127.00 | 27 | 14 | 0.07 |
| 0067 | 100 x 6 | 109.50 (W204) | 32 | 16 | 0.08 |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2049 format bright | Bore $d_2$ H7 mm | Number of teeth | Steels up to 850 N/mm² $f_z$ mm |
|---|---|---|---|---|---|
| 0070 | 100 x 8 | 120.00 | 32 | 16 | 0.08 |
| 0073 | 100 x 10 | 126.50 | 32 | 16 | 0.08 |
| 0076 | 100 x 12 | 136.50 | 32 | 16 | 0.08 |
| 0079 | 100 x 14 | 152.50 | 32 | 16 | 0.08 |
| 0085 | 100 x 18 | 189.00 | 32 | 16 | 0.08 |
| 0088 | 100 x 20 | 187.00 | 32 | 16 | 0.08 |
| 0094 | 125 x 8 | 149.00 | 32 | 16 | 0.09 |
| 0097 | 125 x 10 | 168.00 | 32 | 16 | 0.09 |
| 0100 | 125 x 12 | 182.50 | 32 | 16 | 0.09 |
| 0103 | 125 x 14 | 205.50 | 32 | 16 | 0.09 |
| 0115 | 160 x 10 | 248.00 | 40 | 18 | 0.09 |
| 0118 | 160 x 12 | 263.50 | 40 | 18 | 0.09 |
| 0121 | 160 x 14 | 292.50 | 40 | 18 | 0.09 |
| 0130 | 160 x 20 | 355.00 (W204) | 40 | 18 | 0.09 |

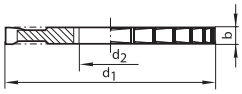
## Narrow disk mill

**Design:** HSS Co5, type N, DIN 1834-A, bright, fine cross cut.

**Application:** Can be used for notch or slot cutting. Right- and left-cutting. For excellent precision and clean milled surface

HSS Co5 | Type N | DIN 1834-A | DIN 138

format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2043 | 30 | 18 | 16 | | | | | | | | 22 | 250 | 100 |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2043 format bright | Bore $d_2$ H7 mm | Number of teeth | Steels up to 850 N/mm² $f_z$ mm |
|---|---|---|---|---|---|
| 0001 | 63 x 1.6 | 70.50 | 22 | 28 | 0.06 |
| 0004 | 63 x 2.0 | 62.40 | 22 | 28 | 0.06 |
| 0007 | 63 x 2.5 | 63.70 | 22 | 28 | 0.06 |
| 0010 | 63 x 3.0 | 65.50 | 22 | 28 | 0.06 |
| 0013 | 63 x 4.0 | 71.40 | 22 | 28 | 0.06 |
| 0016 | 80 x 1.6 | 75.10 | 27 | 32 | 0.07 |
| 0019 | 80 x 2.0 | 73.00 | 27 | 32 | 0.07 |
| 0022 | 80 x 2.5 | 74.20 | 27 | 32 | 0.07 |
| 0025 | 80 x 3.0 | 76.60 | 27 | 32 | 0.07 |
| 0028 | 80 x 4.0 | 85.20 | 27 | 32 | 0.07 |
| 0031 | 100 x 1.6 | 94.30 | 32 | 36 | 0.08 |
| 0034 | 100 x 2.0 | 92.40 | 32 | 36 | 0.08 |
| 0037 | 100 x 2.5 | 89.70 | 32 | 36 | 0.08 |
| 0040 | 100 x 3.0 | 91.20 | 32 | 36 | 0.08 |
| 0043 | 100 x 4.0 | 99.70 (W204) | 32 | 36 | 0.08 |

| Order No. | Ø x width $d_1$ x $b_1$ mm | 2043 format bright | Bore $d_2$ H7 mm | Number of teeth | Steels up to 850 N/mm² $f_z$ mm |
|---|---|---|---|---|---|
| 0046 | 100 x 5.0 | 105.50 | 32 | 36 | 0.08 |
| 0049 | 125 x 1.6 | 120.00 | 32 | 40 | 0.09 |
| 0052 | 125 x 2.0 | 115.00 | 32 | 40 | 0.09 |
| 0055 | 125 x 2.5 | 112.50 | 32 | 40 | 0.09 |
| 0058 | 125 x 3.0 | 115.00 | 32 | 40 | 0.09 |
| 0061 | 125 x 4.0 | 123.50 | 32 | 40 | 0.09 |
| 0064 | 125 x 5.0 | 132.00 | 32 | 40 | 0.09 |
| 0067 | 125 x 6.0 | 142.00 | 32 | 40 | 0.09 |
| 0070 | 160 x 2.0 | 185.50 | 40 | 48 | 0.09 |
| 0073 | 160 x 2.5 | 179.00 | 40 | 48 | 0.09 |
| 0076 | 160 x 3.0 | 178.50 | 40 | 48 | 0.09 |
| 0079 | 160 x 4.0 | 183.00 | 40 | 48 | 0.09 |
| 0082 | 160 x 5.0 | 194.00 | 40 | 48 | 0.09 |
| 0085 | 160 x 6.0 | 214.00 (W204) | 40 | 48 | 0.09 |

## Convex Milling Cutter

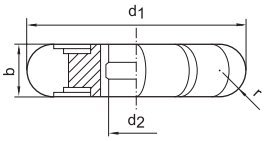
**Design:** HSS, DIN 856, bright, **convex** relieved, radius tolerance h11.

**Application:** Can be used for milling semi-circular grooves.

**Note:** The milling cutters can be reground several times without the profile being changed.

HSS | DIN 856 | DIN 138

format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2052 | **26** | 15 | | | | | | | | | **17** | 140 | 90 |

| Order No. | Radius r | 2052 format professional quality bright | Ø $d_1$ | Width b | Bore $d_2$ H7 | Number of teeth | Steels up to 850 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | | mm |
| 0001 | **1.0** | **60.30** | 50 | 2 | 16 | 14 | 0.08 |
| 0004 | **1.5** | **60.30** | 50 | 3 | 16 | 14 | 0.08 |
| 0007 | **2.0** | **60.30** | 50 | 4 | 16 | 14 | 0.08 |
| 0010 | **2.5** | **59.80** | 63 | 5 | 22 | 12 | 0.10 |
| 0013 | **3.0** | **61.80** | 63 | 6 | 22 | 12 | 0.10 |
| 0016 | **3.5** | **64.50** | 63 | 7 | 22 | 12 | 0.10 |
| 0019 | **4.0** | **66.00** | 63 | 8 | 22 | 12 | 0.10 |
| 0022 | **4.5** | **74.00** | 63 | 9 | 22 | 12 | 0.10 |
| 0025 | **5.0** | **87.90** | 63 | 10 | 22 | 12 | 0.10 |
| 0028 | **5.5** | **93.50** | 80 | 11 | 27 | 12 | 0.12 |
| 0031 | **6.0** | **102.00** | 80 | 12 | 27 | 12 | 0.12 |
| 0034 | **6.5** | **111.00** | 80 | 13 | 27 | 12 | 0.12 |
| 0037 | **7.0** | **113.00** | 80 | 14 | 27 | 12 | 0.12 |
| 0040 | **7.5** | **115.00** | 80 | 15 | 27 | 12 | 0.12 |
| 0043 | **8.0** | **124.00** | 80 | 16 | 27 | 12 | 0.12 |
| 0046 | **8.5** | **135.50** | 100 | 17 | 32 | 12 | 0.14 |
| 0049 | **9.0** | **148.00** | 100 | 18 | 32 | 12 | 0.14 |
| 0052 | **10.0** | **177.00** (W204) | 100 | 20 | 32 | 12 | 0.14 |

## Concave Milling Cutter

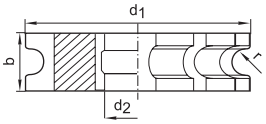
**Design:** HSS, DIN 855, bright, **concave,** relieved, radius tolerance h11.

**Application:** Can be used for milling semi-circular profiles and for rounding edges.

**Note:** The milling cutters can be reground several times without the profile being changed.

HSS | DIN 855 | DIN 138

format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2055 | **26** | 15 | | | | | | | | | **17** | 240 | 90 |

| Order No. | Radius r | 2055 format professional quality bright | Ø $d_1$ | Width b | Bore $d_2$ H7 | Number of teeth | Steels up to 850 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | | mm |
| 0001 | **1** | **73.60** | 50 | 6 | 16 | 14 | 0.08 |
| 0004 | **2** | **73.60** | 50 | 9 | 16 | 14 | 0.08 |
| 0007 | **3** | **78.30** | 63 | 12 | 22 | 12 | 0.10 |
| 0010 | **4** | **83.70** | 63 | 16 | 22 | 12 | 0.10 |
| 0013 | **5** | **111.50** | 63 | 20 | 22 | 12 | 0.10 |
| 0016 | **6** | **129.50** | 80 | 24 | 27 | 12 | 0.12 |
| 0019 | **8** | **157.00** | 80 | 32 | 27 | 12 | 0.12 |
| 0022 | **10** | **224.50** (W204) | 100 | 36 | 32 | 12 | 0.14 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

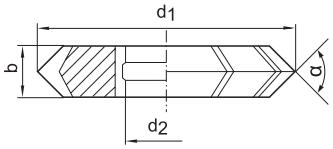
## Double equal-angle milling cutter

**Design:** HSS, type H, DIN 847, bright, straight-grooved. Circumferential cutting.

**Application:** Usable for milling of prism-shaped guides, notches etc..

HSS | Type H | DIN 847 | DIN 138

format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2058 | 26 | 15 | | | | | | | | | 17 | 140 | 90 |

| Order No. | Ø $d_1$ mm | 2058 format bright | Angle α ° | Width b mm | Bore $d_2$ H7 mm | Number of teeth | Steels up to 850 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 50 | 67.10 | 45 | 8 | 16 | 22 | 0.030 |
| 0004 | 63 | 80.30 | 45 | 10 | 22 | 24 | 0.035 |
| 0007 | 80 | 96.20 | 45 | 12 | 27 | 26 | 0.040 |
| 0010 | 100 | 166.50 | 45 | 18 | 32 | 28 | 0.045 |
| 0013 | 50 | 70.50 | 60 | 10 | 16 | 18 | 0.030 |
| 0016 | 63 | 84.30 | 60 | 14 | 22 | 20 | 0.035 |
| 0019 | 80 | 101.00 | 60 | 18 | 27 | 22 | 0.040 |
| 0022 | 100 | 171.50 | 60 | 25 | 32 | 24 | 0.045 |
| 0025 | 50 | 74.10 | 90 | 14 | 16 | 16 | 0.030 |
| 0028 | 63 | 88.40 | 90 | 20 | 22 | 18 | 0.035 |
| 0031 | 80 | 106.00 | 90 | 22 | 27 | 20 | 0.040 |
| 0034 | 100 | 177.00 (W204) | 90 | 32 | 32 | 24 | 0.045 |

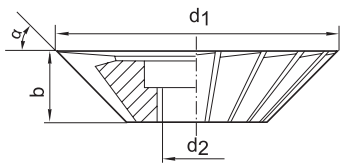
## Single Angle Milling Cutter

**Design:** HSS, type H, DIN 842 A, bright, straight-grooved.

**Application:** Usable for milling of angle guide according to DIN 69052 in tool and machine construction as well as face and peripheral milling.

HSS | Type H | DIN 842A | DIN 138

format professional quality



bright

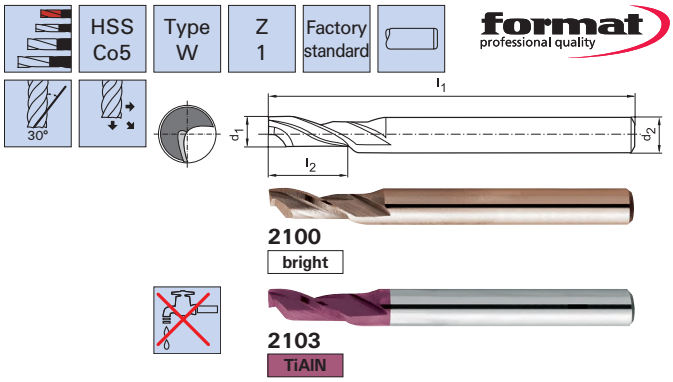
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2061 | 26 | 15 | | | | | | | | | 17 | 240 | 90 |

| Order No. | Ø $d_1$ mm | 2061 format bright | Angle α ° | Width b mm | Bore $d_2$ H7 mm | Number of teeth | Steels up to 850 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 40 | 73.00 | 45 | 10 | 10 | 14 | 0.030 |
| 0004 | 50 | 76.40 | 45 | 13 | 13 | 16 | 0.030 |
| 0007 | 63 | 81.70 | 45 | 18 | 16 | 18 | 0.035 |
| 0010 | 80 | 129.50 | 45 | 22 | 22 | 20 | 0.040 |
| 0013 | 50 | 76.40 | 60 | 16 | 13 | 16 | 0.030 |
| 0016 | 63 | 81.70 | 60 | 20 | 16 | 18 | 0.035 |
| 0019 | 80 | 129.50 | 60 | 25 | 22 | 20 | 0.040 |
| 0022 | 100 | 212.00 (W204) | 60 | 32 | 27 | 22 | 0.045 |

## Single Flute Router Cutter

**Design:** HSS Co5, type W, according to factory standard, 30°.

**Application:** Can be used for end milling. Cutting external-Ø, for milling out slots and notches on windows, doors and other profiles made of aluminium and plastic. For copier profiling machines such as those from Elu, Haffner, Rotox, Striffler, Wegoma etc.



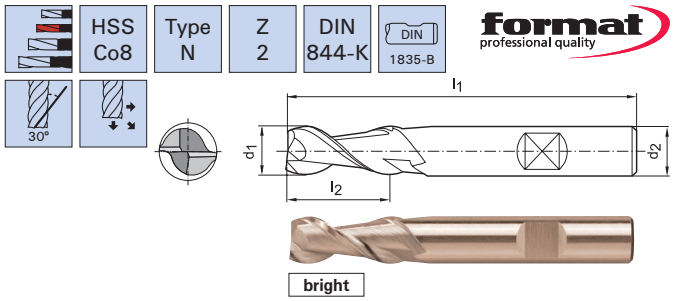

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2100 | | | | | | | | | | | | 220 | |
| 2103 | | | | | | | | | | | | 325 | |

| Order No. | Ø $d_1$ j16 mm | 2100 format bright | 2103 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h8 mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0300 | 3 | 10.60 | 16.05 | 12 | 60 | 8 | 0.055 |
| 0400 | 4 | 10.60 | 16.05 | 12 | 60 | 8 | 0.053 |
| 0500 | 5 | 10.60 | 16.05 | 14 | 60 | 8 | 0.054 |
| 0600 | 6 | 11.45 | 16.75 | 14 | 60 | 8 | 0.055 |
| 0700 | 8 | 11.45 | 21.00 | 14 | 80 | 8 | 0.053 |
| 0800 | 10 | 15.50 (W206) | 25.90 (W208) | 14 | 80 | 8 | 0.054 |

## 2 Flute Slot Drill For Aluminium

**Design:** HSS Co8, type N, DIN 844-K, 30°, bright, with centre cut.

**Application:** Can be used for plunge cutting, slot cutting and peripheral milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2116 | | | | | | | | | | | | 150 | |

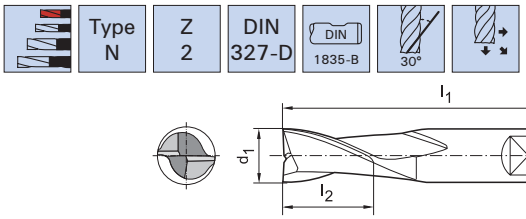
| Order No. | Ø $d_1$ e8 mm | 2116 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|
| 0200 | 2.0 | 12.60 | 7 | 48 | 6 | 0.035 |
| 0250 | 2.5 | 12.60 | 8 | 49 | 6 | 0.035 |
| 0300 | 3.0 | 12.60 | 8 | 49 | 6 | 0.035 |
| 0350 | 3.5 | 12.60 | 10 | 50 | 6 | 0.035 |
| 0400 | 4.0 | 12.60 | 11 | 51 | 6 | 0.035 |
| 0450 | 4.5 | 12.60 | 11 | 51 | 6 | 0.035 |
| 0500 | 5.0 | 12.60 | 13 | 52 | 6 | 0.035 |
| 0600 | 6.0 | 12.60 | 13 | 52 | 6 | 0.050 |
| 0650 | 6.5 | 17.10 | 16 | 60 | 10 | 0.050 |
| 0800 | 8.0 | 17.10 | 19 | 61 | 10 | 0.071 |
| 1000 | 10.0 | 17.10 | 22 | 63 | 10 | 0.120 |
| 1200 | 12.0 | 22.70 | 26 | 73 | 12 | 0.120 |
| 1600 | 16.0 | 30.50 | 32 | 79 | 16 | 0.177 |
| 1800 | 18.0 | 37.70 | 32 | 79 | 16 | 0.283 |
| 2000 | 20.0 | 45.10 (W206) | 38 | 88 | 20 | 0.283 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## 2 Flute Slot Drills

**Design:** Type N, DIN 327-D, 30°, with central cut.

**Application:** Can be used for milling keyways and feather key grooves, Ø tolerance e8 for fit P9.




**2106** Bright — HSS Co8, bright.

HSS Co8

2106 format professional quality bright

**2113** TiAlN — HSS-E PM, **TiAlN-coated.**

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

HSS-E PM

2113 format professional quality TiAlN

**2114** Fire — HSS Co8, **Fire-coated.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

HSS Co8

2114 GÜHRING Fire

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2106 | 30 | 25 | 15 | | | | | | | | | 105 | |
| 2113 | 51 | 44 | 22 | | | | | | 22 | | 51 | | |
| 2114 | 50 | 45 | 25 | | | | | | | 22 | 45 | 200 | 90 |

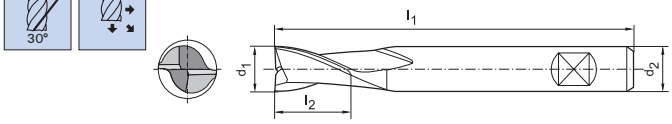
| Order No. | Ø $d_1$ e8 mm | 2106 format bright | 2113 format TiAlN | 2114 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0100 | 1.00 | 10.00 | – | – | 2.5 | 47 | 6 | 0.003 |
| 0150 | 1.50 | 9.55 | – | – | 3.0 | 47 | 6 | 0.003 |
| 0200 | 2.00 | 8.20 | 15.00 | 16.15 | 4.0 | 48 | 6 | 0.003 |
| 0250 | 2.50 | 8.20 | 15.00 | – | 5.0 | 49 | 6 | 0.003 |
| 0280 | 2.80 | 8.20 | – | – | 5.0 | 49 | 6 | 0.003 |
| 0300 | 3.00 | 6.35 | 15.00 | 15.45 | 5.0 | 49 | 6 | 0.007 |
| 0350 | 3.50 | 8.20 | 15.00 | – | 6.0 | 50 | 6 | 0.007 |
| 0380 | 3.80 | 8.20 | – | – | 7.0 | 51 | 6 | 0.007 |
| 0400 | 4.00 | 6.35 | 15.00 | 15.35 | 7.0 | 51 | 6 | 0.013 |
| 0450 | 4.50 | 8.20 | 15.00 | – | 7.0 | 51 | 6 | 0.013 |
| 0500 | 5.00 | 6.90 | 15.00 | 15.30 | 8.0 | 52 | 6 | 0.019 |
| 0550 | 5.50 | 8.20 | 15.00 | – | 8.0 | 52 | 6 | 0.019 |
| 0600 | 6.00 | 6.90 | 15.00 | 14.00 | 8.0 | 52 | 6 | 0.025 |
| 0650 | 6.50 | 11.90 | – | – | 10.0 | 60 | 10 | 0.025 |
| 0700 | 7.00 | 10.00 | – | – | 10.0 | 60 | 10 | 0.025 |
| 0750 | 7.50 | 11.90 | – | – | 10.0 | 60 | 10 | 0.025 |
| 0800 | 8.00 | 9.20 | 23.80 | 18.10 | 11.0 | 61 | 10 | 0.041 |
| 0850 | 8.50 | 11.90 | – | – | 11.0 | 61 | 10 | 0.041 |
| 0900 | 9.00 | 11.90 | – | – | 11.0 | 61 | 10 | 0.041 |
| 0950 | 9.50 | 11.90 | – | – | 11.0 | 61 | 10 | 0.041 |
| 1000 | 10.00 | 10.00 | 24.50 | 21.80 | 13.0 | 63 | 10 | 0.050 |
| 1100 | 11.00 | 15.80 | – | – | 13.0 | 70 | 12 | 0.050 |
| 1200 | 12.00 | 13.25 | 31.10 | 28.00 | 16.0 | 73 | 12 | 0.063 |
| 1300 | 13.00 | 17.40 | – | – | 16.0 | 73 | 12 | 0.063 |
| 1400 | 14.00 | 17.40 | 33.90 | 33.40 | 16.0 | 73 | 12 | 0.064 |
| 1500 | 15.00 | 20.30 | – | – | 16.0 | 73 | 12 | 0.064 |
| 1600 | 16.00 | 21.20 | 40.90 | 37.80 | 19.0 | 79 | 16 | 0.080 |
| 1700 | 17.00 | 26.20 | – | – | 19.0 | 79 | 16 | 0.080 |
| 1800 | 18.00 | 26.20 | 51.10 | 44.50 | 19.0 | 79 | 16 | 0.090 |
| 2000 | 20.00 | 31.40 | 67.00 | 56.00 | 22.0 | 88 | 20 | 0.100 |
| 2500 | 25.00 | 50.40 (W206) | – (W208) | – (W205) | 26.0 | 102 | 25 | 0.100 |

## Long Series 2 Flute Slot Drills

**Design:** HSS Co8, type N, DIN 844, extra-long, 30°, bright, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves, Ø tolerance e8 for fit P9.

HSS Co8 | Type N | Z 2 | DIN 844-L | DIN 1835-B | format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2115 | 30 | 25 | 15 | | | | | | | | | 105 | |

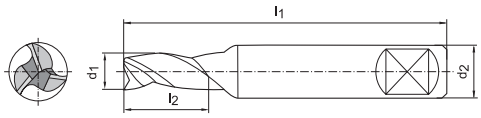
| Order No. | Ø $d_1$ e8 | 2115 format professional quality bright | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0200 | 2.0 | 11.20 | 7 | 56 | 6 | 0.003 |
| 0300 | 3.0 | 11.20 | 8 | 56 | 6 | 0.006 |
| 0400 | 4.0 | 11.20 | 11 | 63 | 6 | 0.014 |
| 0500 | 5.0 | 11.20 | 13 | 68 | 6 | 0.019 |
| 0600 | 6.0 | 11.20 | 13 | 68 | 6 | 0.025 |
| 0800 | 8.0 | 15.80 | 19 | 88 | 10 | 0.040 |
| 1000 | 10.0 | 15.80 | 22 | 95 | 10 | 0.050 |
| 1200 | 12.0 | 20.90 | 26 | 110 | 12 | 0.063 |
| 1400 | 14.0 | 24.00 | 26 | 110 | 12 | 0.071 |
| 1600 | 16.0 | 29.30 (W206) | 32 | 123 | 16 | 0.080 |

## Mini 3 Flute Slot Drill

**Design:** HSS Co8, type N, according to factory standard, 30°, with versatile cutting edge geometry and centre cut.

**Application:** Can be used for milling keyways and feather key grooves, Ø tolerance e8 for fit P9 as well as for peripheral milling.

HSS Co8 | Type N | Z 3 | Factory standard | DIN 1835-B | format professional quality



2127
bright

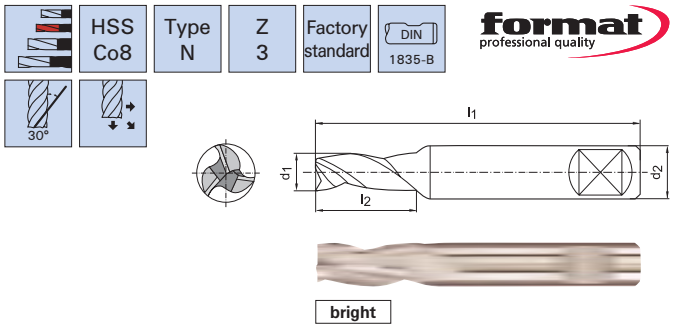
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2127 | 30 | 25 | 15 | | | | | | | | | 100 | |

| Order No. | Ø $d_1$ e8 | 2127 format professional quality bright | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0100 | 1.00 | 5.20 | 2 | 34 | 6 | 0.003 |
| 0150 | 1.50 | 5.20 | 3 | 34 | 6 | 0.003 |
| 0200 | 2.00 | 5.20 | 4 | 35 | 6 | 0.003 |
| 0250 | 2.50 | 5.20 | 5 | 36 | 6 | 0.003 |
| 0300 | 3.00 | 5.20 | 5 | 36 | 6 | 0.006 |
| 0350 | 3.50 | 5.20 | 6 | 37 | 6 | 0.006 |
| 0400 | 4.00 | 5.20 | 7 | 38 | 6 | 0.014 |
| 0450 | 4.50 | 5.20 | 7 | 38 | 6 | 0.014 |
| 0500 | 5.00 | 5.20 | 8 | 39 | 6 | 0.019 |
| 0600 | 6.00 | 5.20 | 8 | 39 | 6 | 0.025 |
| 0800 | 8.00 | 6.00 | 11 | 43 | 8 | 0.039 |
| 1000 | 10.00 | 7.80 (W206) | 13 | 50 | 10 | 0.048 |

## Long Series Mini 3 Flute Slot Drill

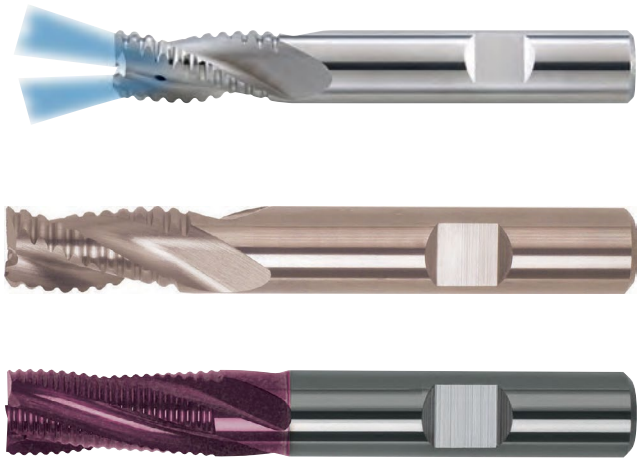
**Design:** HSS Co8, type N, according to factory standard, 30°, with versatile cutting edge geometry and centre cut.

**Application:** Can be used for milling keyways and feather key grooves, Ø tolerance e8 for fit P9 as well as for peripheral milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2133 | 30 | 25 | 15 | | | | | | | | | 100 | |

| Order No. | Ø $d_1$ e8 | 2133 format professional quality bright | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0200 | 2.0 | 5.80 | 7 | 38 | 6 | 0.003 |
| 0300 | 3.0 | 5.80 | 8 | 39 | 6 | 0.006 |
| 0400 | 4.0 | 5.80 | 11 | 42 | 6 | 0.014 |
| 0500 | 5.0 | 5.80 | 13 | 44 | 6 | 0.019 |
| 0600 | 6.0 | 5.80 | 13 | 44 | 6 | 0.025 |
| 0800 | 8.0 | 6.70 | 19 | 51 | 8 | 0.039 |
| 1000 | 10.0 | 8.70 (W206) | 22 | 59 | 10 | 0.048 |

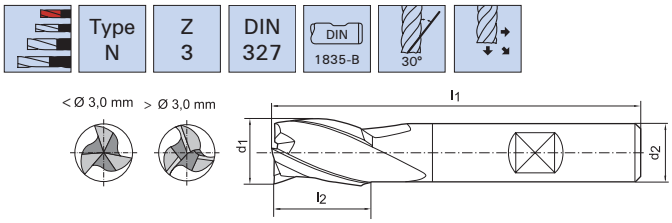


Solid carbide roughing cutters can be found from 2/78.

## 3 Flute Slot Drill

**Design:** Type N, DIN 327, 30°, from Ø 3.0 mm with central cut.

**Application:** Can be used for milling keyways and feather key grooves, Ø tolerance e8 for fit P9 as well as for peripheral milling.




**2145** Bright

HSS Co8, bright.

**2149** TiAlN

HSS-E PM, **TiAlN-coated**

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**2156** Fire

HSS Co8, **Fire-coated.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2145 | 30 | 25 | 15 | | | | | | | | | 100 | |
| 2149 | 66 | 51 | 29 | | | | | | 29 | | 66 | | |
| 2156 | 50 | 45 | 35 | | | | | | 30 | 22 | 45 | 200 | 90 |

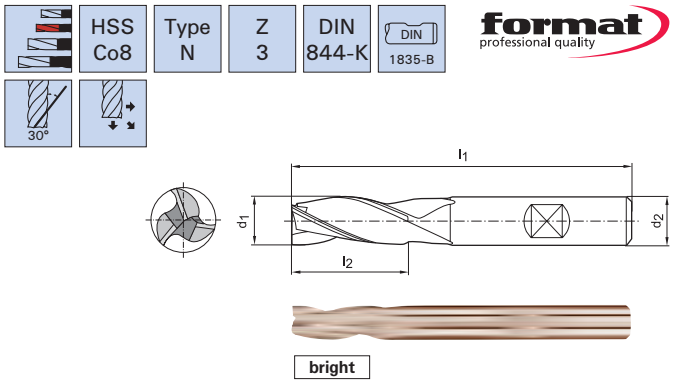
| Order No. | Ø $d_1$ e8 | 2145 format bright | 2149 format TiAlN | 2156 GÜHRING Fire | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | | | mm | mm | mm | mm |
| 0200 | 2.0 | 7.00 | 15.80 | – | 4 | 48 | 6 | 0.004 |
| 0250 | 2.5 | – | 15.80 | – | 5 | 49 | 6 | 0.004 |
| 0300 | 3.0 | 7.00 | 15.80 | 17.70 | 5 | 49 | 6 | 0.008 |
| 0350 | 3.5 | – | 15.80 | – | 6 | 50 | 6 | 0.008 |
| 0400 | 4.0 | 7.00 | 15.80 | 16.90 | 7 | 51 | 6 | 0.012 |
| 0450 | 4.5 | – | 15.80 | – | 7 | 51 | 6 | 0.012 |
| 0500 | 5.0 | 7.00 | 15.80 | 16.40 | 8 | 52 | 6 | 0.019 |
| 0550 | 5.5 | – | 15.80 | – | 8 | 52 | 6 | 0.019 |
| 0600 | 6.0 | 7.00 | 15.80 | 14.90 | 8 | 52 | 6 | 0.025 |
| 0650 | 6.5 | 10.20 | 25.10 | – | 10 | 60 | 10 | 0.025 |
| 0700 | 7.0 | 10.20 | 25.10 | – | 10 | 60 | 10 | 0.025 |
| 0800 | 8.0 | 10.20 | 25.10 | 18.95 | 11 | 61 | 10 | 0.039 |
| 0850 | 8.5 | 10.20 | 25.90 | – | 11 | 61 | 10 | 0.039 |
| 0900 | 9.0 | 10.20 | 25.90 | – | 11 | 61 | 10 | 0.039 |
| 1000 | 10.0 | 10.20 | 25.90 | 22.20 | 13 | 63 | 10 | 0.050 |
| 1100 | 11.0 | – | 32.90 | – | 13 | 70 | 12 | 0.050 |
| 1200 | 12.0 | 13.50 | 32.90 | 30.50 | 16 | 73 | 12 | 0.064 |
| 1300 | 13.0 | – | 35.70 | – | 16 | 73 | 12 | 0.064 |
| 1400 | 14.0 | 14.85 | 35.70 | 39.10 | 16 | 73 | 12 | 0.071 |
| 1500 | 15.0 | – | 43.20 | – | 16 | 73 | 12 | 0.071 |
| 1600 | 16.0 | 18.15 | 43.20 | 42.80 | 19 | 79 | 16 | 0.078 |
| 1800 | 18.0 | – | 53.90 | 51.80 | 19 | 79 | 16 | 0.088 |
| 2000 | 20.0 | 26.80 | 70.70 | 63.40 | 22 | 88 | 20 | 0.088 |
| 2500 | 25.0 | 43.10 | – | – | 26 | 102 | 25 | 0.097 |
| 2800 | 28.0 | 67.80 | – | – | 26 | 102 | 25 | 0.097 |
| 3000 | 30.0 | 72.50 | – | – | 26 | 102 | 25 | 0.100 |
| 3200 | 32.0 | 81.90 (W206) | – (W208) | – (W205) | 32 | 112 | 32 | 0.100 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## 3 Flute Slot Drills

**Design:** HSS Co8, type N, DIN 844-K, 30°, bright, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves, Ø tolerance e8 for fit P9 as well as for peripheral milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2154 | 30 | 25 | 15 | | | | | | | | | 100 | |

| Order No. | Ø $d_1$ e8 mm | 2154 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0300 | 3.0 | 9.00 | 8 | 52 | 6 | 0.006 |
| 0400 | 4.0 | 9.00 | 11 | 55 | 6 | 0.014 |
| 0500 | 5.0 | 9.00 | 13 | 57 | 6 | 0.019 |
| 0600 | 6.0 | 9.00 | 13 | 57 | 6 | 0.025 |
| 0700 | 7.0 | 12.20 | 16 | 66 | 10 | 0.025 |
| 0800 | 8.0 | 12.20 (W206) | 19 | 69 | 10 | 0.039 |

| Order No. | Ø $d_1$ e8 mm | 2154 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0900 | 9.0 | 12.20 | 19 | 69 | 10 | 0.039 |
| 1000 | 10.0 | 12.20 | 22 | 72 | 10 | 0.036 |
| 1200 | 12.0 | 16.15 | 26 | 83 | 12 | 0.047 |
| 1600 | 16.0 | 21.90 | 32 | 92 | 16 | 0.058 |
| 2000 | 20.0 | 32.20 | 38 | 104 | 20 | 0.074 |
| 2200 | 22.0 | 35.90 (W206) | 38 | 104 | 20 | 0.059 |

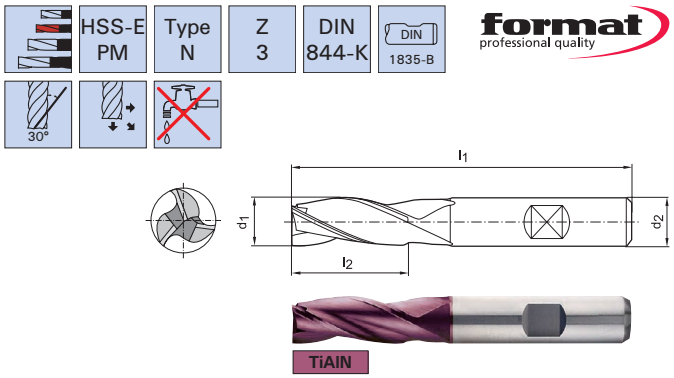
## 3 Flute Slot Drills

**Design:** HSS-E PM, type N, DIN 844-K, 30°, **TiAlN-coated,** with centre cut.

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for milling keyways and feather key grooves, Ø tolerance e8 for fit P9 as well as for peripheral milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2155 | 66 | 51 | 29 | | | | | | 29 | | 66 | | |

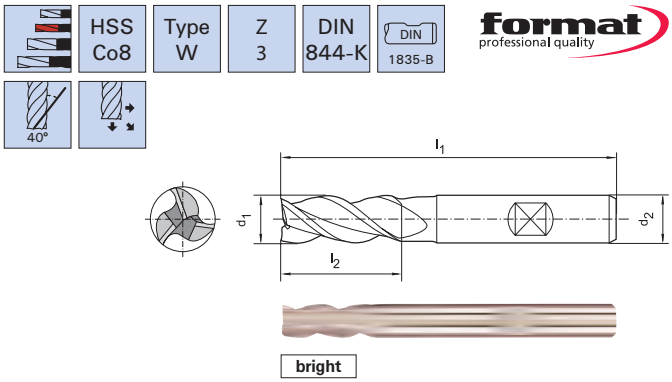
| Order No. | Ø $d_1$ e8 mm | 2155 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0300 | 3.0 | 17.75 | 8 | 52 | 6 | 0.008 |
| 0350 | 3.5 | 17.75 | 10 | 54 | 6 | 0.008 |
| 0400 | 4.0 | 17.75 | 11 | 55 | 6 | 0.012 |
| 0450 | 4.5 | 17.75 | 11 | 55 | 6 | 0.012 |
| 0500 | 5.0 | 17.75 | 13 | 57 | 6 | 0.013 |
| 0550 | 5.5 | 17.75 | 13 | 57 | 6 | 0.013 |
| 0600 | 6.0 | 17.75 | 13 | 57 | 6 | 0.020 |
| 0650 | 6.5 | 26.70 | 16 | 66 | 10 | 0.020 |
| 0700 | 7.0 | 26.70 | 16 | 66 | 10 | 0.020 |
| 0800 | 8.0 | 26.70 | 19 | 69 | 10 | 0.030 |
| 0850 | 8.5 | 27.70 (W208) | 19 | 69 | 10 | 0.030 |

| Order No. | Ø $d_1$ e8 mm | 2155 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0900 | 9.0 | 27.70 | 19 | 69 | 10 | 0.030 |
| 1000 | 10.0 | 27.70 | 22 | 72 | 10 | 0.042 |
| 1100 | 11.0 | 36.70 | 22 | 79 | 12 | 0.042 |
| 1200 | 12.0 | 36.70 | 26 | 83 | 12 | 0.049 |
| 1300 | 13.0 | 40.90 | 26 | 83 | 12 | 0.049 |
| 1400 | 14.0 | 40.90 | 26 | 83 | 12 | 0.053 |
| 1500 | 15.0 | 48.60 | 26 | 83 | 12 | 0.053 |
| 1600 | 16.0 | 48.60 | 32 | 92 | 16 | 0.061 |
| 1800 | 18.0 | 60.90 | 32 | 92 | 16 | 0.062 |
| 2000 | 20.0 | 79.00 | 38 | 104 | 20 | 0.068 |
| 2500 | 25.0 | 117.00 (W208) | 45 | 121 | 25 | 0.108 |

## 3 Flute Aluminium End Mills

**Design:** HSS Co8, Type W, DIN 844-K, 40°, bright, with special cutting edge geometry and centre cut.

**Application:** Can be used for the peripheral milling and drilling cutting of soft to tough materials.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2160 | 30 | 25 | 15 | | | | | | | | | 100 | |

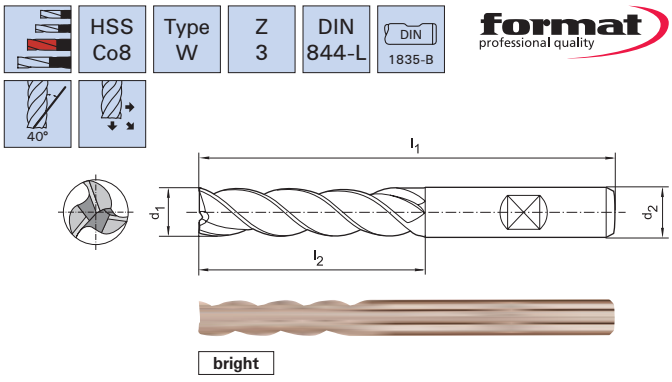
| Order No. | Ø $d_1$ k10 mm | 2160 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|
| 0300 | 3 | 12.35 | 8 | 52 | 6 | 0.012 |
| 0400 | 4 | 12.35 | 11 | 55 | 6 | 0.018 |
| 0500 | 5 | 12.35 | 13 | 57 | 6 | 0.025 |
| 0600 | 6 | 12.35 | 13 | 57 | 6 | 0.028 |
| 0800 | 8 | 16.65 (W206) | 19 | 69 | 10 | 0.048 |

| Order No. | Ø $d_1$ k10 mm | 2160 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|
| 1000 | 10 | 16.65 | 22 | 72 | 10 | 0.048 |
| 1200 | 12 | 22.30 | 26 | 83 | 12 | 0.057 |
| 1600 | 16 | 29.90 | 32 | 92 | 16 | 0.066 |
| 2000 | 20 | 44.20 | 38 | 104 | 20 | 0.075 |
| 2500 | 25 | 70.80 (W206) | 45 | 121 | 25 | 0.070 |

## Long Series 3 Flute Aluminium End Mills

**Design:** HSS Co8, Type W, DIN 844-L, 40°, bright, with special cutting edge geometry and centre cut.

**Application:** Can be used for the peripheral milling and drilling cutting of soft to tough materials.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2163 | 30 | 25 | 15 | | | | | | | | | 100 | |

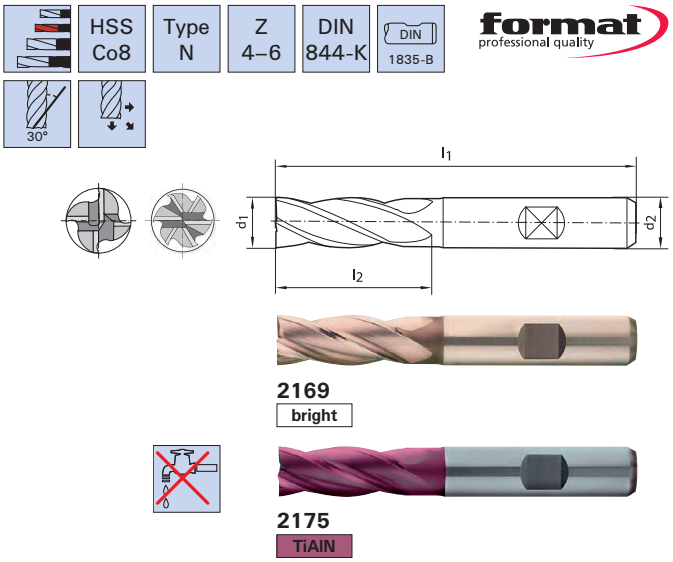
| Order No. | Ø $d_1$ k10 mm | 2163 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|
| 0600 | 6 | 13.80 | 24 | 68 | 6 | 0.028 |
| 0800 | 8 | 19.40 | 38 | 88 | 10 | 0.048 |
| 1000 | 10 | 19.40 | 45 | 95 | 10 | 0.065 |
| 1200 | 12 | 25.70 (W206) | 53 | 110 | 12 | 0.076 |

| Order No. | Ø $d_1$ k10 mm | 2163 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|
| 1400 | 14 | 29.30 | 53 | 110 | 12 | 0.080 |
| 1600 | 16 | 35.90 | 63 | 123 | 16 | 0.088 |
| 2000 | 20 | 53.00 (W206) | 75 | 141 | 20 | 0.100 |

## End mill

**Design:** Type N, DIN 844-K, 30°, with central cut.

**Application:** Can be used for peripheral and end milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2169 | 30 | 25 | 15 | | | | | | | | | 100 | |
| 2175 | 44 | 36 | 22 | | | | | | | | | 145 | |

| Order No. | Ø $d_1$ k10 | 2169 format professional quality bright | 2175 format professional quality TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Number of teeth | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | | mm |
| 0200 | 2 | 7.35 | 9.60 | 7 | 51 | 6 | 4 | 0.002 |
| 0300 | 3 | 7.35 | 9.60 | 8 | 52 | 6 | 4 | 0.005 |
| 0400 | 4 | 7.35 | 9.60 | 11 | 55 | 6 | 4 | 0.010 |
| 0500 | 5 | 7.35 | 9.60 | 13 | 57 | 6 | 4 | 0.014 |
| 0600 | 6 | 7.35 | 9.60 | 13 | 57 | 6 | 4 | 0.019 |
| 0700 | 7 | 9.95 | 14.25 | 16 | 66 | 10 | 4 | 0.019 |
| 0800 | 8 | 9.95 | 14.25 | 19 | 69 | 10 | 4 | 0.029 |
| 0900 | 9 | 9.95 | 14.80 | 19 | 69 | 10 | 4 | 0.029 |
| 1000 | 10 | 9.95 | 14.80 | 22 | 72 | 10 | 4 | 0.036 |
| 1100 | 11 | 13.75 | – | 22 | 79 | 12 | 4 | 0.036 |
| 1200 | 12 | 13.75 | 18.85 | 26 | 83 | 12 | 4 | 0.047 |
| 1300 | 13 | 15.30 | 20.30 | 26 | 83 | 12 | 4 | 0.047 |
| 1400 | 14 | 15.30 | 20.90 | 26 | 83 | 12 | 4 | 0.054 |
| 1500 | 15 | 17.80 | 23.30 | 26 | 83 | 12 | 4 | 0.054 |
| 1600 | 16 | 18.60 | 24.40 | 32 | 92 | 16 | 4 | 0.058 |
| 1800 | 18 | 23.10 | 29.90 | 32 | 92 | 16 | 4 | 0.065 |
| 2000 | 20 | 27.50 | 39.40 | 38 | 104 | 20 | 4 | 0.074 |
| 2200 | 22 | 30.70 | 43.30 | 38 | 104 | 20 | 6 | 0.049 |
| 2400 | 24 | – | 55.70 | 45 | 121 | 25 | 6 | 0.049 |
| 2500 | 25 | 44.20 | 56.30 | 45 | 121 | 25 | 6 | 0.046 |
| 3000 | 30 | 74.60 | – | 45 | 121 | 25 | 6 | 0.047 |
| 3200 | 32 | 84.10 (W206) | – (W208) | 53 | 133 | 32 | 6 | 0.054 |

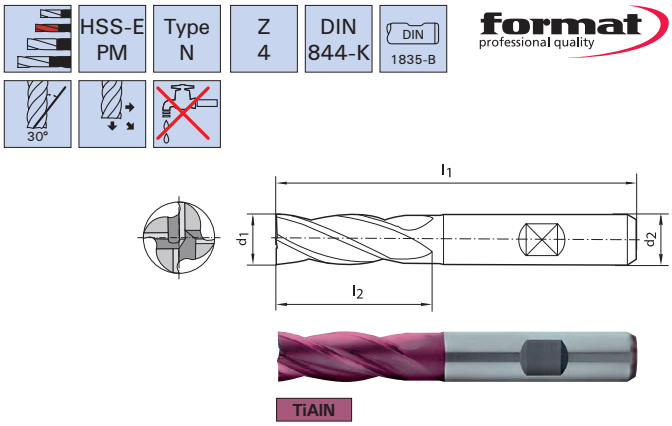
## End mill

**Design:** HSS-E PM, type N, DIN 844-K, 30°, **TiAlN-coated,** with centre cut.

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral and end milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2176 | 66 | 51 | 29 | | | | | | 29 | | 66 | | |

| Order No. | Ø $d_1$ k10 mm | 2176 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0100 | 1 | 16.75 | 3 | 49 | 6 | 0.006 |
| 0200 | 2 | 15.15 | 7 | 51 | 6 | 0.006 |
| 0300 | 3 | 15.15 | 8 | 52 | 6 | 0.012 |
| 0400 | 4 | 15.15 | 11 | 55 | 6 | 0.018 |
| 0500 | 5 | 15.15 | 13 | 57 | 6 | 0.022 |
| 0600 | 6 | 15.15 | 13 | 57 | 6 | 0.028 |
| 0800 | 8 | 22.80 (W208) | 19 | 69 | 10 | 0.038 |

| Order No. | Ø $d_1$ k10 mm | 2176 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 1000 | 10 | 23.70 | 22 | 72 | 10 | 0.052 |
| 1200 | 12 | 31.40 | 26 | 83 | 12 | 0.058 |
| 1400 | 14 | 35.00 | 26 | 83 | 12 | 0.061 |
| 1600 | 16 | 41.60 | 32 | 92 | 16 | 0.067 |
| 1800 | 18 | 52.00 | 32 | 92 | 16 | 0.070 |
| 2000 | 20 | 67.50 | 38 | 104 | 20 | 0.071 |
| 2500 | 25 | 100.00 (W208) | 45 | 121 | 25 | 0.083 |

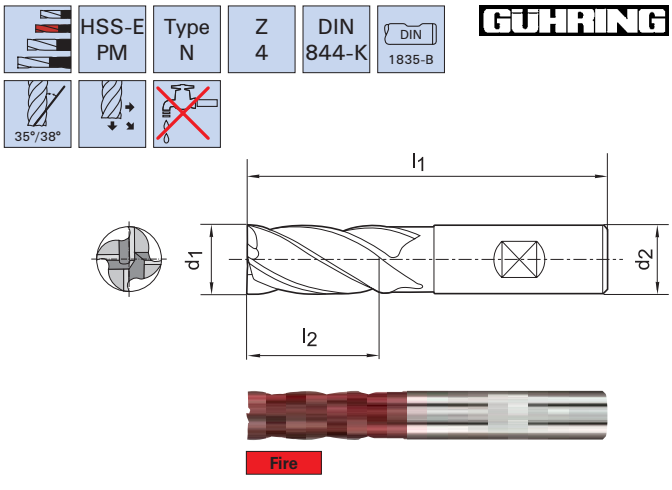
## End mill

**Design:** HSS-E PM, type N, DIN 844-K, 30/32°, **fire-coated,** with centre cut.

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral and end milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2168 | 60 | 54 | | | | | | | | 22 | 45 | 200 | 90 |

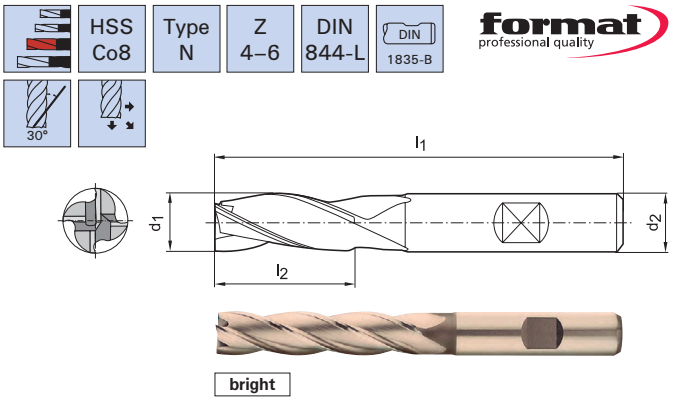
| Order No. | Ø $d_1$ k10 mm | 2168 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0080 | 8 | 43.60 | 19 | 69 | 10 | 0.042 |
| 0100 | 10 | 44.50 | 22 | 72 | 10 | 0.050 |
| 0120 | 12 | 50.20 | 26 | 83 | 12 | 0.059 |
| 0140 | 14 | 67.50 | 26 | 83 | 12 | 0.071 |
| 0160 | 16 | 66.60 | 32 | 92 | 16 | 0.071 |
| 0200 | 20 | 81.50 (W205) | 38 | 104 | 20 | 0.090 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Long Series End Mills

**Design:** HSS Co8, type NF, DIN 844-L, 30°, bright, up to Ø 28 mm with centre cut.

**Application:** Can be used for peripheral and end milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2178 | 30 | 25 | 15 | | | | | | | | | 100 | |

| Order No. | Ø $d_1$ k10 mm | 2178 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0500 | 5 | 9.30 | 24 | 68 | 6 | 4 | 0.014 |
| 0600 | 6 | 9.25 | 24 | 68 | 6 | 4 | 0.019 |
| 0700 | 7 | 13.00 | 30 | 80 | 10 | 4 | 0.019 |
| 0800 | 8 | 12.85 | 38 | 88 | 10 | 4 | 0.029 |
| 0900 | 9 | 13.85 | 38 | 88 | 10 | 4 | 0.029 |
| 1000 | 10 | 12.85 | 45 | 95 | 10 | 4 | 0.036 |
| 1100 | 11 | 19.10 | 45 | 102 | 12 | 4 | 0.036 |
| 1200 | 12 | 17.65 | 53 | 110 | 12 | 4 | 0.047 |
| 1400 | 14 | 20.10 | 53 | 110 | 12 | 4 | 0.054 |
| 1600 | 16 | 24.60 (W206) | 63 | 123 | 16 | 4 | 0.058 |

| Order No. | Ø $d_1$ k10 mm | 2178 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1800 | 18 | 30.30 | 63 | 123 | 16 | 4 | 0.065 |
| 2000 | 20 | 36.30 | 75 | 141 | 20 | 4 | 0.074 |
| 2200 | 22 | 51.00 | 75 | 141 | 20 | 5 | 0.049 |
| 2400 | 24 | 73.40 | 90 | 166 | 25 | 6 | 0.049 |
| 2500 | 25 | 58.10 | 90 | 166 | 25 | 6 | 0.046 |
| 2600 | 26 | 78.20 | 90 | 166 | 25 | 6 | 0.046 |
| 2800 | 28 | 78.60 | 90 | 166 | 25 | 6 | 0.047 |
| 3000 | 30 | 84.30 | 90 | 166 | 25 | 6 | 0.047 |
| 3200 | 32 | 95.00 (W206) | 106 | 186 | 32 | 6 | 0.054 |

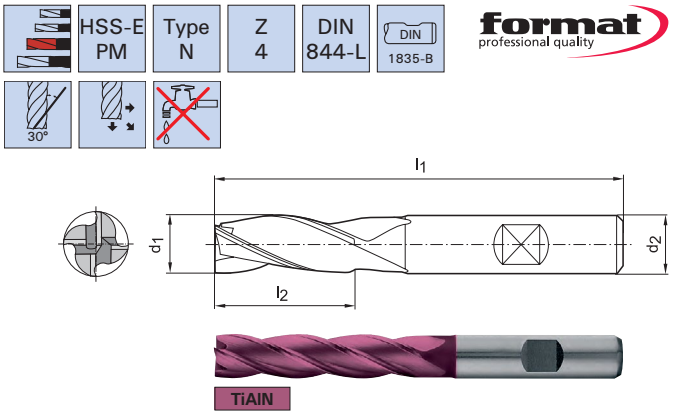
## Long Series End Mills

**Design:** HSS-E PM, Type N, DIN 844-L, 30°, **TiAlN-coated.**

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral and end milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2179 | 66 | 51 | 29 | | | | | | 29 | | 66 | | |

| Order No. | Ø $d_1$ k10 mm | 2179 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0500 | 5 | 15.35 | 24 | 68 | 6 | 4 | 0.022 |
| 0600 | 6 | 15.35 | 24 | 68 | 6 | 4 | 0.028 |
| 0700 | 7 | 24.10 | 30 | 80 | 10 | 4 | 0.028 |
| 0800 | 8 | 24.10 | 38 | 88 | 10 | 4 | 0.038 |
| 0900 | 9 | 24.40 | 38 | 88 | 10 | 4 | 0.038 |
| 1000 | 10 | 24.40 (W208) | 45 | 95 | 10 | 4 | 0.052 |

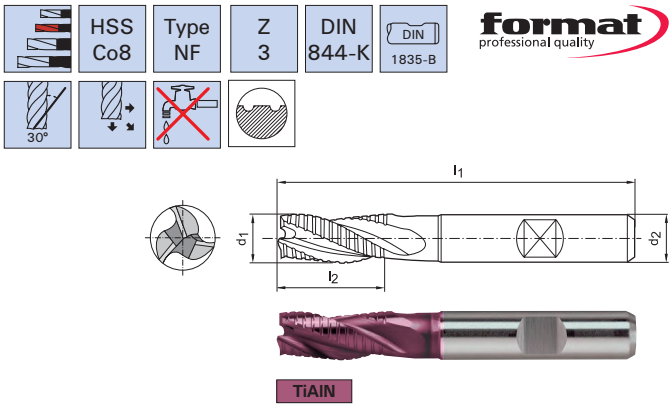
| Order No. | Ø $d_1$ k10 mm | 2179 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1200 | 12 | 33.80 | 53 | 110 | 12 | 4 | 0.058 |
| 1400 | 14 | 38.10 | 53 | 110 | 12 | 4 | 0.061 |
| 1600 | 16 | 46.70 | 63 | 123 | 16 | 4 | 0.067 |
| 1800 | 18 | 59.60 | 63 | 123 | 16 | 4 | 0.070 |
| 2000 | 20 | 77.70 | 75 | 141 | 20 | 4 | 0.071 |
| 2500 | 25 | 125.50 (W208) | 90 | 166 | 25 | 4 | 0.083 |

## 3 Flute Flat Top Rippa Cutters

**Design:** HSS Co8, type NF, DIN 844-K, 30°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling and drill cutting.



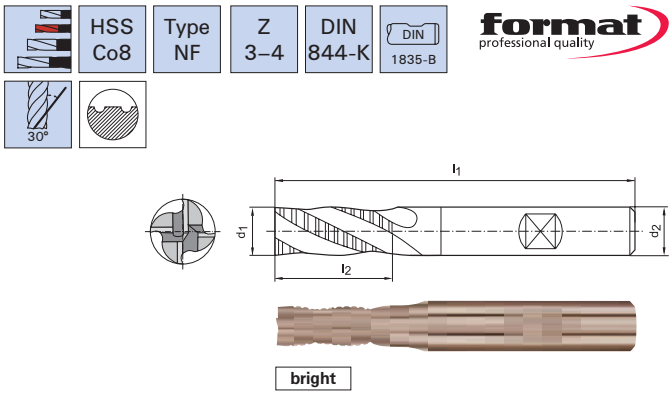

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2158 | 44 | 36 | 22 | | | | | | | | | 125 | |

| Order No. | Ø $d_1$ k12 mm | 2158 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0600 | 6 | 32.80 | 13 | 57 | 6 | 0.010 |
| 0800 | 8 | 38.90 | 19 | 69 | 10 | 0.018 |
| 1000 | 10 | 39.80 | 22 | 72 | 10 | 0.037 |
| 1200 | 12 | 44.40 | 26 | 83 | 12 | 0.046 |
| 1400 | 14 | 54.50 | 26 | 83 | 12 | 0.052 |
| 1600 | 16 | 60.40 | 32 | 92 | 16 | 0.065 |
| 1800 | 18 | 65.70 | 32 | 92 | 16 | 0.073 |
| 2000 | 20 | 82.80 | 38 | 104 | 20 | 0.083 |
| 2200 | 22 | 99.40 | 38 | 104 | 20 | 0.106 |
| 2500 | 25 | 117.00 (W208) | 45 | 121 | 25 | 0.130 |

## Flat Top Rippa Cutters

**Design:** HSS Co8, Type NF, DIN 844-K, 30°, bright, with centre cut, suitable for drilling

**Application**: Can be used for peripheral and end milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2184 | 30 | 25 | 15 | | | | | | | | | 85 | |

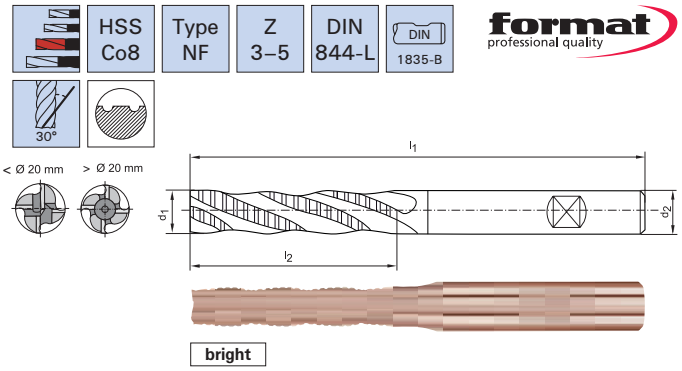
| Order No. | Ø $d_1$ k12 mm | 2184 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 18.90 | 13 | 57 | 6 | 3 | 0.010 |
| 0800 | 8 | 20.10 | 19 | 69 | 10 | 4 | 0.013 |
| 1000 | 10 | 20.10 | 22 | 72 | 10 | 4 | 0.028 |
| 1200 | 12 | 22.40 | 26 | 83 | 12 | 4 | 0.034 |
| 1600 | 16 | 31.90 | 32 | 92 | 16 | 4 | 0.049 |
| 2000 | 20 | 38.50 (W206) | 38 | 104 | 20 | 4 | 0.063 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Long Series Flat Top Rippa Cutters

**Design:** HSS Co8, type NF, DIN 844-L, 30°, bright, up to Ø 20 mm with centre cut.

**Application:** Can be used for peripheral and end milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2187 | 30 | 25 | 15 | | | | | | | | | 85 | |

| Order No. | Ø $d_1$ k12 mm | 2187 format professional quality bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 24.40 | 24 | 68 | 6 | 3 | 0.010 |
| 0800 | 8 | 26.40 | 38 | 88 | 10 | 4 | 0.013 |
| 1000 | 10 | 26.40 | 45 | 95 | 10 | 4 | 0.028 |
| 1200 | 12 | 30.50 (W206) | 53 | 110 | 12 | 4 | 0.034 |

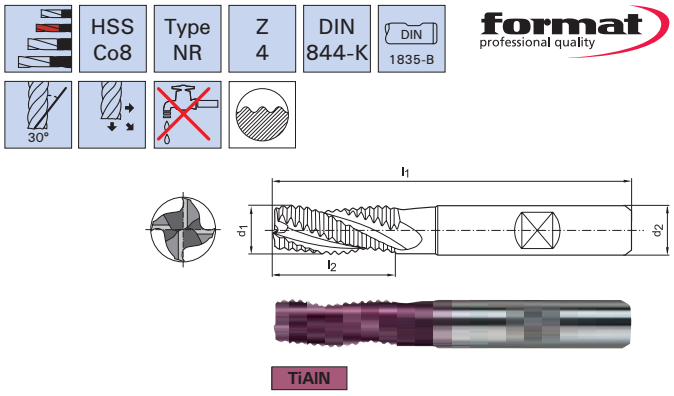
| Order No. | Ø $d_1$ k12 mm | 2187 format professional quality bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1600 | 16 | 44.70 | 63 | 123 | 16 | 4 | 0.049 |
| 2000 | 20 | 55.80 | 75 | 141 | 20 | 4 | 0.063 |
| 2500 | 25 | 85.20 (W206) | 90 | 166 | 25 | 5 | 0.078 |

## 3 Flute Rippa Cutters

**Design:** HSS Co8, type NR, DIN 844-K, 30°, with centre cut.

**Application:** Can be used for peripheral milling and drill cutting.

**Note:** For diameters below 10 mm please use (Order No. 2190/2196) 📖 2/27.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2165 | 30 | 25 | 15 | | | | | | | | | 75 | |

| Order No. | Ø $d_1$ k12 mm | 2165 format professional quality TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 1000 | 10 | 26.20 | 22 | 72 | 10 | 0.044 |
| 1100 | 11 | 29.10 | 22 | 79 | 12 | 0.044 |
| 1200 | 12 | 29.10 | 26 | 83 | 12 | 0.058 |
| 1400 | 14 | 35.80 | 26 | 83 | 12 | 0.067 |
| 1500 | 15 | 39.70 (W208) | 26 | 83 | 12 | 0.067 |

| Order No. | Ø $d_1$ k12 mm | 2165 format professional quality TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 1600 | 16 | 39.70 | 32 | 92 | 16 | 0.083 |
| 1800 | 18 | 43.20 | 32 | 92 | 16 | 0.093 |
| 2000 | 20 | 54.40 | 38 | 104 | 20 | 0.106 |
| 2500 | 25 | 84.30 (W208) | 45 | 121 | 25 | 0.157 |

**End mills can be found from 📖 2/163**

## Roughing cutter

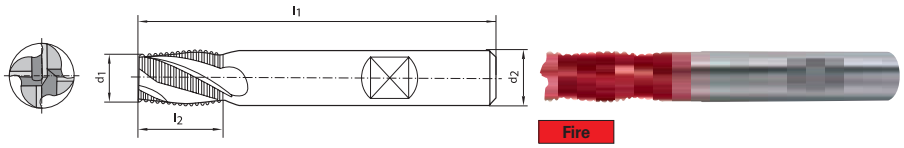
NEW

GÜHRING

**Design:** HSS Co8, Type NR, 30°, with centre cut.

**Application:** Can be used for peripheral and end milling.

HSS Co8 | Type NR | Z 4 | DIN 844-K | DIN 1835-B | 30°




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2209 | 55 | 45 | 35 | | | | | | | | | 110 | |

| Order No. | Ø $d_1$ k12 mm | 2209 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0600 | 6 | 28.80 | 13 | 57 | 6 | 0.028 |
| 0800 | 8 | 30.50 | 19 | 69 | 10 | 0.037 |
| 1000 | 10 | 30.50 | 22 | 72 | 10 | 0.046 |
| 1200 | 12 | 42.00 (W205) | 26 | 83 | 12 | 0.055 |

| Order No. | Ø $d_1$ k12 mm | 2209 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 1400 | 14 | 46.10 | 26 | 83 | 12 | 0.060 |
| 1600 | 16 | 51.80 | 32 | 92 | 16 | 0.067 |
| 1800 | 18 | 53.50 | 32 | 92 | 16 | 0.070 |
| 2000 | 20 | 71.60 (W205) | 38 | 104 | 20 | 0.085 |

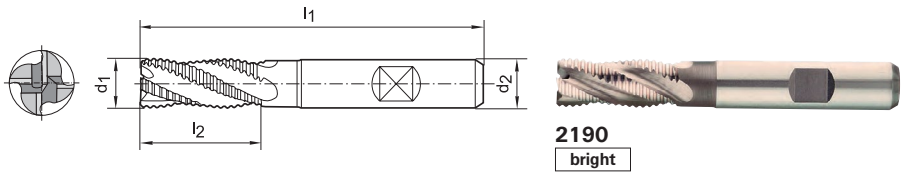
## Rippa Cutters

format professional quality

**Design:** Type NR, DIN 844-K, 30°. With centre cut, suitable for drilling.

**Application:** Can be used for peripheral and end milling.

HSS Co8 | Type NR | Z 3–4 | DIN 844-K | DIN 1835-B | 30°






2190
bright

2196
TiAlN

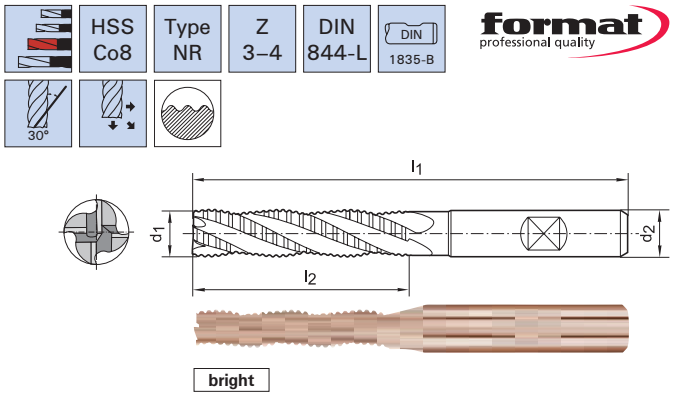
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2190 | 30 | 25 | 15 | | | | | | | | | 85 | |
| 2196 | 44 | 36 | 22 | | | | | | | | | 125 | |

| Order No. | Ø $d_1$ k12 mm | 2190 format bright | 2196 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 14.30 | 18.05 | 13 | 57 | 6 | 3 | 0.013 |
| 0700 | 7 | – | 21.70 | 16 | 66 | 10 | 3 | 0.013 |
| 0800 | 8 | 15.20 | 21.70 | 19 | 69 | 10 | 3 | 0.021 |
| 0900 | 9 | – | 22.30 | 19 | 69 | 10 | 3 | 0.021 |
| 1000 | 10 | 15.20 | 22.30 | 22 | 72 | 10 | 4 | 0.044 |
| 1100 | 11 | – | 24.70 | 22 | 79 | 12 | 4 | 0.044 |
| 1200 | 12 | 16.90 | 24.70 | 26 | 83 | 12 | 4 | 0.058 |
| 1400 | 14 | 21.50 | 30.20 | 26 | 83 | 12 | 4 | 0.067 |
| 1600 | 16 | 24.10 | 33.60 | 32 | 92 | 16 | 4 | 0.083 |
| 1800 | 18 | 25.30 | 36.70 | 32 | 92 | 16 | 4 | 0.093 |
| 1900 | 19 | 29.30 | – | 32 | 92 | 16 | 4 | 0.096 |
| 2000 | 20 | 29.30 (W206) | 46.70 (W208) | 38 | 104 | 20 | 4 | 0.106 |

## Long Series Rippa Cutters

**Design:** HSS Co8, Type NR, DIN 844-L, 30°.
With centre cut, suitable for drilling.

**Application:** Can be used for peripheral and end milling.



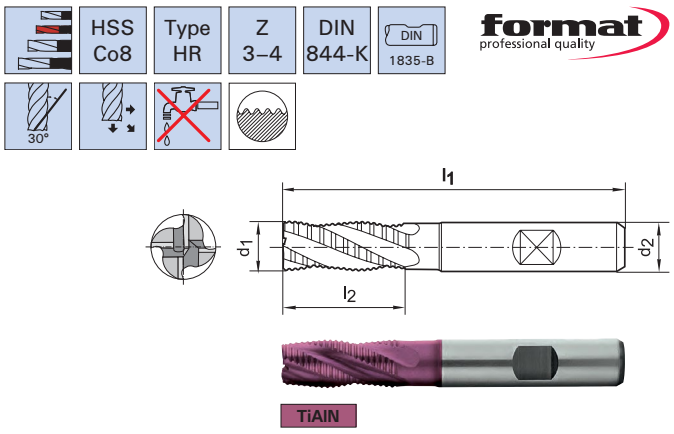

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2199 | 30 | 25 | 15 | | | | | | | | | 85 | |

| Order No. | Ø $d_1$ k12 mm | 2199 format professional quality bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 19.80 | 24 | 68 | 6 | 3 | 0.013 |
| 0800 | 8 | 21.50 | 38 | 88 | 10 | 3 | 0.021 |
| 1000 | 10 | 21.50 | 45 | 95 | 10 | 4 | 0.044 |
| 1200 | 12 | 24.80 | 53 | 110 | 12 | 4 | 0.058 |
| 1600 | 16 | 36.40 | 63 | 123 | 16 | 4 | 0.083 |
| 1800 | 18 | 41.30 | 63 | 123 | 16 | 4 | 0.093 |
| 2000 | 20 | 45.50 (W206) | 75 | 141 | 20 | 4 | 0.106 |

## Fine Pitch Rippa Cutters

**Design:** HSS Co8, Type HR, DIN 844-K, 30°.
With centre cut, suitable for drilling.

**Application:** Can be used for peripheral milling and drill cutting.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2223 | 44 | 36 | 22 | | | | | | | | | 125 | |

| Order No. | Ø $d_1$ k12 mm | 2223 format professional quality TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0400 | 4 | 23.30 | 11 | 55 | 6 | 3 | 0.013 |
| 0500 | 5 | 23.30 | 13 | 57 | 6 | 3 | 0.013 |
| 0600 | 6 | 23.30 | 13 | 57 | 6 | 3 | 0.013 |
| 0800 | 8 | 27.80 | 19 | 69 | 10 | 3 | 0.016 |
| 1000 | 10 | 28.50 | 22 | 72 | 10 | 4 | 0.033 |
| 1200 | 12 | 31.70 | 26 | 83 | 12 | 4 | 0.044 |
| 1400 | 14 | 38.90 | 26 | 83 | 12 | 4 | 0.050 |
| 1600 | 16 | 43.20 | 32 | 92 | 16 | 4 | 0.063 |
| 2000 | 20 | 59.60 (W208) | 38 | 104 | 20 | 4 | 0.053 |

## Fine Pitch Rippa Cutters

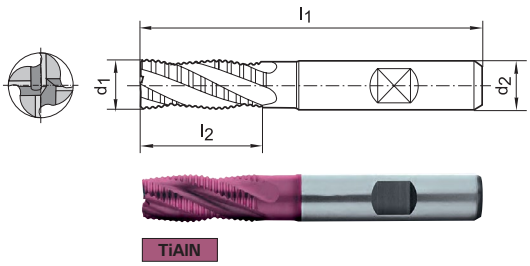
**Design:** HSS-E PM, Type HR, DIN 844-K, 30°. With centre cut, suitable for drilling. **TiAlN-coated.**

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling and drill cutting.

format professional quality




TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2214 | 44 | 36 | 30 | | | | | | | | 51 | | |

| Order No. | Ø $d_1$ k12 mm | 2214 format professional quality TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0400 | 4 | 25.40 | 11 | 55 | 6 | 3 | 0.324 |
| 0600 | 6 | 25.40 | 13 | 57 | 6 | 3 | 0.324 |
| 0800 | 8 | 34.20 | 19 | 69 | 10 | 3 | 0.311 |
| 1000 | 10 | 35.10 | 22 | 72 | 10 | 4 | 0.232 |
| 1200 | 12 | 41.80 | 26 | 83 | 12 | 4 | 0.233 |
| 1400 | 14 | 51.50 | 26 | 83 | 12 | 4 | 0.235 |
| 1600 | 16 | 57.90 | 32 | 92 | 16 | 4 | 0.233 |
| 2000 | 20 | 81.20 (W208) | 38 | 104 | 20 | 4 | 0.229 |

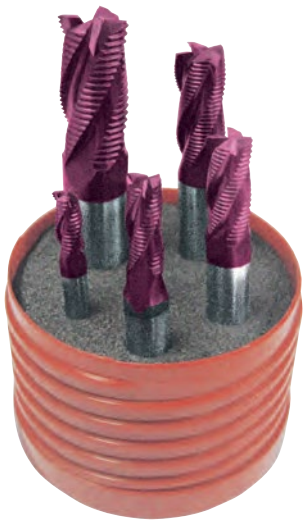
## Set of Fine Pitch Rippa Cutters

**Design:** HSS-E PM, Type HR, DIN 844-K, 30°, **TiAlN-coated,** with centre cut.

**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling and drill cutting.



TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2214 | 44 | 36 | 30 | | | | | | | | 51 | | |

| Order No. | Set content Ø mm | 2214 format professional quality TiAlN |
|---|---|---|
| 0010 | 6; 8; 10; 12; 16 (order no. 2214) | 148.50 (W208) |

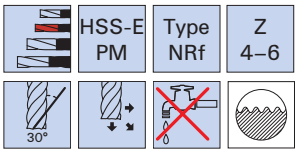
## Fine Pitch Rippa Cutter

**Design:** HSS-E PM, type NRf, DIN 844-K, 30°, **fire-coated,** up to Ø 25 mm with centre cut.

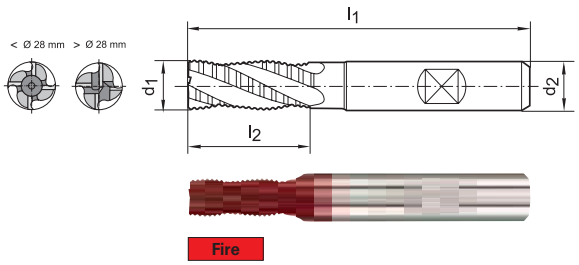
**HSS-E PM has outstanding durability (greater edge stability, more wear-resistant) and a longer tool life.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Particularly suitable for roughing steels up to 1000 N/mm².




GÜHRING






Fire

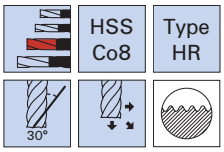
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2218 | 70 | 60 | 50 | | | | | | 35 | 30 | 60 | | 80 |

| Order No. | Ø $d_1$ k12 mm | 2218 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0060 | 6 | 33.80 | 13 | 57 | 6 | 4 | 0.029 |
| 0080 | 8 | 41.10 | 19 | 69 | 10 | 4 | 0.042 |
| 0100 | 10 | 42.80 | 22 | 72 | 10 | 4 | 0.053 |
| 0120 | 12 | 48.60 | 26 | 83 | 12 | 4 | 0.063 |
| 0140 | 14 | 68.30 | 26 | 83 | 12 | 4 | 0.079 |
| 0160 | 16 | 83.10 | 32 | 92 | 16 | 4 | 0.079 |
| 0180 | 18 | 98.80 | 32 | 92 | 16 | 4 | 0.097 |
| 0200 | 20 | 99.60 | 38 | 104 | 20 | 4 | 0.097 |
| 0250 | 25 | 140.00 | 45 | 121 | 25 | 5 | 0.14 |
| 0320 | 32 | 192.50 (W205) | 53 | 133 | 32 | 6 | 0.14 |

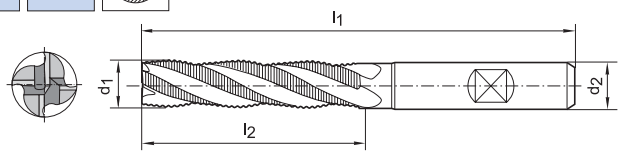
## Roughing cutter

**Design:** Type HR, DIN 844-L, HSS Co8, 30°. With centre cut, suitable for drilling.

**Application:** Can be used for peripheral and end milling.




format professional quality



bright

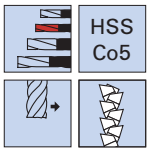
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2226 | 30 | 25 | 15 | | | | | | | | | 85 | |

| Order No. | Ø $d_1$ k12 mm | 2226 format professional quality bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 23.70 | 24 | 68 | 6 | 3 | 0.013 |
| 0800 | 8 | 25.70 | 38 | 88 | 10 | 3 | 0.021 |
| 1000 | 10 | 25.70 | 45 | 95 | 10 | 4 | 0.033 |
| 1200 | 12 | 29.60 | 53 | 110 | 12 | 4 | 0.044 |
| 1600 | 16 | 43.30 | 63 | 123 | 16 | 4 | 0.063 |
| 1800 | 18 | 49.30 | 63 | 123 | 16 | 4 | 0.070 |
| 2000 | 20 | 54.40 (W206) | 75 | 141 | 20 | 4 | 0.080 |

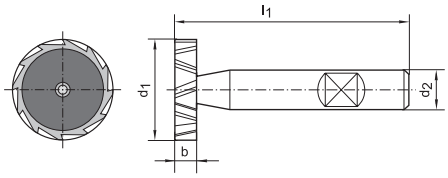
## Woodruff Cutter

**Design:** HSS Co5, type N, DIN 850-D, bright, cross cut.

**Application:** Can be used for milling woodruff key grooves according to DIN 6888 or small slots. Cut free at sides.




format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2250 | 20 | 17 | 11 | | | | | | | | | 100 | |

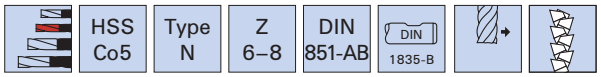
| Order No. | Ø x width $d_1$ = h11 x b = e8 mm | 2250 format professional quality bright | For woodruff keys mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 13.5 x 2.0 | 24.20 | 2.0 x 5.0 | 56 | 10 | 8 | 0.007 |
| 0007 | 13.5 x 3.0 | 24.20 | 3.0 x 5.0 | 56 | 10 | 8 | 0.007 |
| 0010 | 13.5 x 4.0 | 24.20 | 4.0 x 5.0 | 56 | 10 | 8 | 0.007 |
| 0016 | 16.5 x 3.0 | 26.60 | 3.0 x 6.5 | 56 | 10 | 8 | 0.017 |
| 0019 | 16.5 x 4.0 | 26.60 | 4.0 x 6.5 | 56 | 10 | 8 | 0.017 |
| 0022 | 16.5 x 5.0 | 26.60 | 5.0 x 6.5 | 56 | 10 | 8 | 0.017 |
| 0025 | 19.5 x 3.0 | 34.00 | 3.0 x 7.5 | 56 | 10 | 8 | 0.023 |
| 0028 | 19.5 x 4.0 | 34.00 | 4.0 x 7.5 | 63 | 10 | 10 | 0.023 |
| 0031 | 19.5 x 5.0 | 34.00 | 5.0 x 7.5 | 63 | 10 | 10 | 0.023 |
| 0032 | 19.5 x 6.0 | 35.80 NEW | 6.0 x 7.5 | 63 | 10 | 10 | 0.023 |
| 0034 | 22.5 x 4.0 | 36.10 | 4.0 x 9.0 | 63 | 10 | 10 | 0.033 |
| 0037 | 22.5 x 5.0 | 36.10 | 5.0 x 9.0 | 63 | 10 | 10 | 0.033 |
| 0040 | 22.5 x 6.0 | 36.10 | 6.0 x 9.0 | 63 | 10 | 10 | 0.033 |
| 0041 | 22.5 x 8.0 | 38.00 NEW | 8.0 x 9.0 | 63 | 10 | 10 | 0.033 |
| 0043 | 25.5 x 5.0 | 45.90 | 5.0 x 10.0 | 63 | 10 | 10 | 0.033 |
| 0046 | 25.5 x 6.0 | 45.90 | 6.0 x 10.0 | 63 | 10 | 10 | 0.033 |
| 0052 | 25.5 x 8.0 | 46.70 | 8.0 x 10.0 | 63 | 10 | 10 | 0.033 |
| 0055 | 28.5 x 5.0 | 50.70 | 5.0 x 11.0 | 63 | 10 | 10 | 0.417 |
| 0058 | 28.5 x 6.0 | 49.90 | 6.0 x 11.0 | 63 | 10 | 10 | 0.417 |
| 0064 | 28.5 x 8.0 | 49.90 | 8.0 x 11.0 | 63 | 10 | 10 | 0.417 |
| 0065 | 28.5 x 10.0 | 52.50 NEW | 10.0 x 11.0 | 71 | 10 | 10 | 0.417 |
| 0067 | 32.5 x 5.0 | 55.90 | 5.0 x 13.0 | 71 | 12 | 12 | 0.060 |
| 0070 | 32.5 x 6.0 | 54.80 | 6.0 x 13.0 | 71 | 12 | 12 | 0.060 |
| 0071 | 32.5 x 7.0 | 57.70 NEW | 7.0 x 13.0 | 71 | 12 | 12 | 0.060 |
| 0073 | 32.5 x 8.0 | 55.90 | 8.0 x 13.0 | 71 | 12 | 12 | 0.060 |
| 0076 | 32.5 x 10.0 | 57.70 NEW (W204) | 10.0 x 13.0 | 71 | 12 | 12 | 0.060 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

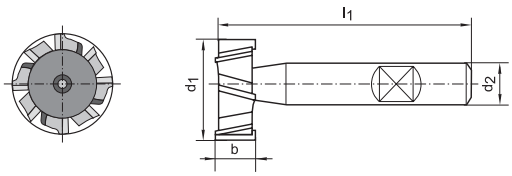
## T-slot cutters

**Design:** HSS Co5, type N, DIN 851-AB, bright, cross cut.

**Application:** Can be used for milling T-slots in compliance with DIN 650. Cuts on both sides.




format professional quality



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2253 | 20 | 15 | | | | | | | | | | 100 | |

| Order No. | Ø x width $d_1$ = d11 x b = e8 mm | 2253 format bright | For T-slots DIN 650 | Neck Ø approx. mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | 12.5 x 6.0 | 28.70 | 6 | 5.0 | 57 | 10 | 6 | 0.005 |
| 0004 | 16.0 x 8.0 | 36.20 | 8 | 6.5 | 62 | 10 | 6 | 0.007 |
| 0007 | 18.0 x 8.0 | 38.10 | 8 | 8.0 | 70 | 12 | 6 | 0.010 |
| 0010 | 21.0 x 9.0 | 49.40 | 9 | 10.0 | 74 | 12 | 6 | 0.017 |
| 0013 | 25.0 x 11.0 | 62.70 | 11 | 12.0 | 82 | 16 | 6 | 0.022 |
| 0016 | 28.0 x 12.0 | 69.80 | 12 | 13.0 | 83 | 16 | 6 | 0.028 |
| 0019 | 32.0 x 14.0 | 74.90 | 14 | 15.0 | 90 | 16 | 8 | 0.025 |
| 0022 | 36.0 x 16.0 | 106.50 | 16 | 17.0 | 103 | 25 | 8 | 0.025 |
| 0025 | 40.0 x 18.0 | 135.50 (W204) | 18 | 19.0 | 108 | 25 | 8 | 0.025 |

## Dovetail Cutters

**Design:** HSS-E, type N, bright.

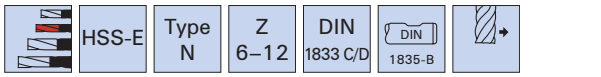
**Application:** Can be used for milling dovetail guides with an angle tolerance of α ± 15'.

**2256** Bright — DIN 1833 C, 45°.

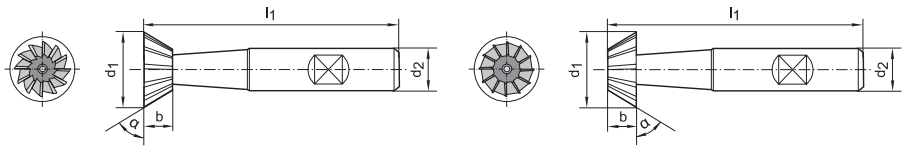
**2257** Bright — DIN 1833 C, 60°.

**2258** Bright — DIN 1833 D, 45°.

**2259** Bright — DIN 1833 D, 60°.




format professional quality



Shape: C
bright

Shape: D
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2256 | 17 | 12 | 9 | | | | | | | | | 95 | |
| 2257 | 17 | 12 | 9 | | | | | | | | | 95 | |
| 2258 | 17 | 12 | 9 | | | | | | | | | 95 | |
| 2259 | 17 | 12 | 9 | | | | | | | | | 95 | |

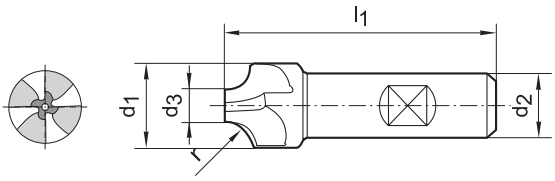
| Order No. | Ø $d_1$ js16 mm | 2256 format bright | 2257 format bright | 2258 format bright | 2259 format bright | Height of cutting blade a 45° b = js14 mm | Height of cutting blade a 60° b = js14 mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0160 | 16 | 27.60 | 27.50 | 27.40 | 27.40 | 4.0 | 6.3 | 60 | 12 | 6 | 0.021 |
| 0200 | 20 | 35.00 | 34.90 | 34.80 | 34.80 | 5.0 | 8.0 | 63 | 12 | 6 | 0.020 |
| 0250 | 25 | 52.10 | 51.70 | 51.90 | 51.90 | 6.3 | 10.0 | 67 | 16 | 8 | 0.020 |
| 0320 | 32 | 63.50 | 63.00 | 63.30 | 63.30 | 8.0 | 12.5 | 71 | 16 | 10 | 0.020 |
| 0400 | 40 | 104.50 NEW | – | – | – | 10.0 | 16.0 | 80 | 16 | 12 | 0.020 |
| 0400 | 40 | – (W204) | 104.50 NEW (W204) | – (W204) | – (W204) | 16.0 | 16.0 | 80 | 16 | 12 | 0.020 |

## Corner Rounding Cutters

**Design:** HSS Co8, Type N, DIN 6518-B, bright, **concave.**

**Application:** Suitable for rounding outer edges.

HSS Co8 | Type N | Z 4 | DIN 6518-B | DIN 1835-B



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2262 | 16 | 13 | 13 | | | | | | | | | 90 | |

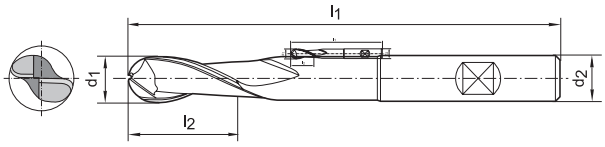
| Order No. | Radius r = h11 | 2262 format professional quality bright | Largest Ø $d_1$ | Smallest Ø $d_3$ = js14 | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm |
| 0100 | 1.0 | 27.20 | 8 | 6 | 60 | 10 | 0.036 |
| 0150 | 1.5 | 27.20 | 9 | 6 | 60 | 10 | 0.046 |
| 0200 | 2.0 | 27.20 | 10 | 6 | 60 | 10 | 0.039 |
| 0250 | 2.5 | 28.20 | 11 | 6 | 60 | 10 | 0.048 |
| 0300 | 3.0 | 31.40 | 12 | 6 | 60 | 12 | 0.048 |
| 0400 | 4.0 | 33.40 | 14 | 6 | 60 | 12 | 0.046 |
| 0500 | 5.0 | 36.20 | 16 | 6 | 60 | 12 | 0.060 |
| 0600 | 6.0 | 39.80 | 20 | 8 | 67 | 16 | 0.068 |
| 0800 | 8.0 | 52.40 | 24 | 8 | 71 | 16 | 0.081 |
| 1000 | 10.0 | 67.50 | 28 | 8 | 85 | 25 | 0.100 |
| 1200 | 12.0 | 94.40 | 34 | 10 | 90 | 25 | 0.095 |
| 1600 | 16.0 | 165.00 (W204) | 48 | 16 | 100 | 25 | 0.100 |

## Ball Nose 2 Flute Slot Drills

**Design:** HSS Co8, Type N, 30°, with centre cut.

**Application:** Can be used for milling semi-circular profiles. Can be used as a copy and traverse mill in mould-making.

HSS Co8 | Type N | Z 2 | DIN 1835-B | 30°




DIN 327

2122
TiAlN

DIN 1889

2125
TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2122 | 48 | 29 | 21 | | | | | | | | | 155 | |
| 2125 | 48 | 29 | 21 | | | | | | | | | 155 | |

| Order No. | Ø $d_1$ e8 | 2122 format professional quality TiAlN | 2125 format professional quality TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | mm |
| 0200 | 2 | 16.45 | – | 4 | 48 | 6 | 0.007 |
| 0300 | 3 | 16.45 | – | 5 | 49 | 6 | 0.007 |
| 0300 | 3 | – | 20.20 | 8 | 56 | 6 | 0.007 |
| 0400 | 4 | 16.45 | – | 7 | 51 | 6 | 0.013 |
| 0400 | 4 | – | 20.20 | 11 | 63 | 6 | 0.013 |
| | | (W208) | (W208) | | | | |

Continued overleaf

## Ball Nose 2 Flute Slot Drills

Continued

| Order No. | Ø $d_1$ e8 mm | 2122 format TiAlN | 2125 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0500 | 5 | 16.45 | – | 8 | 52 | 6 | 0.013 |
| 0500 | 5 | – | 20.20 | 13 | 68 | 6 | 0.013 |
| 0600 | 6 | 16.45 | – | 8 | 52 | 6 | 0.018 |
| 0600 | 6 | – | 20.20 | 13 | 68 | 6 | 0.018 |
| 0700 | 7 | 23.20 | – | 10 | 60 | 10 | 0.018 |
| 0700 | 7 | – | 28.40 | 16 | 80 | 10 | 0.018 |
| 0800 | 8 | 23.20 | – | 11 | 61 | 10 | 0.030 |
| 0800 | 8 | – | 28.40 | 19 | 88 | 10 | 0.030 |
| 0900 | 9 | 24.00 | – | 11 | 61 | 10 | 0.030 |
| 0900 | 9 | – | 29.20 | 19 | 88 | 10 | 0.030 |
| 1000 | 10 | 24.00 | – | 13 | 63 | 10 | 0.044 |
| 1000 | 10 | – | 29.20 | 22 | 95 | 10 | 0.044 |
| 1100 | 11 | 29.30 | – | 13 | 70 | 12 | 0.044 |
| 1100 | 11 | – | 36.20 | 22 | 102 | 12 | 0.044 |
| 1200 | 12 | 29.30 | – | 16 | 73 | 12 | 0.055 |
| 1200 | 12 | – | 37.50 | 26 | 110 | 12 | 0.055 |
| 1300 | 13 | 31.90 | – | 16 | 73 | 12 | 0.055 |
| 1300 | 13 | – | 41.50 | 26 | 110 | 12 | 0.055 |
| 1400 | 14 | 32.10 | – | 16 | 73 | 12 | 0.055 |
| 1400 | 14 | – | 42.00 | 26 | 110 | 12 | 0.055 |
| 1500 | 15 | 34.90 | – | 16 | 73 | 12 | 0.055 |
| 1500 | 15 | – | 46.00 | 26 | 110 | 12 | 0.055 |
| 1600 | 16 | 37.20 | – | 19 | 79 | 16 | 0.070 |
| 1600 | 16 | – | 49.20 | 32 | 123 | 16 | 0.070 |
| 1700 | 17 | 44.50 | – | 19 | 79 | 16 | 0.070 |
| 1700 | 17 | – | 57.80 | 32 | 123 | 16 | 0.070 |
| 1800 | 18 | 55.90 | – | 19 | 79 | 16 | 0.070 |
| 1800 | 18 | – | 61.10 | 32 | 123 | 16 | 0.070 |
| 1900 | 19 | 53.10 | – | 19 | 79 | 16 | 0.070 |
| 1900 | 19 | – | 70.30 | 32 | 123 | 16 | 0.070 |
| 2000 | 20 | 58.00 | – | 22 | 88 | 20 | 0.088 |
| 2000 | 20 | – | 78.70 | 38 | 141 | 20 | 0.088 |
| 2200 | 22 | 64.70 | – | 22 | 88 | 20 | 0.088 |
| 2200 | 22 | – | 84.80 | 38 | 141 | 20 | 0.088 |
| 2400 | 24 | 79.70 | – | 26 | 102 | 25 | 0.088 |
| 2400 | 24 | – | 121.50 | 45 | 166 | 25 | 0.088 |
| 2500 | 25 | 80.60 | – | 26 | 102 | 25 | 0.094 |
| 2500 | 25 | – | 122.00 | 45 | 166 | 25 | 0.094 |
| 3000 | 30 | 122.00 | – | 26 | 102 | 25 | 0.094 |
| 3000 | 30 | – | 169.50 | 45 | 166 | 25 | 0.094 |
| 3200 | 32 | 131.50 (W208) | – (W208) | 32 | 112 | 32 | 0.094 |

# GÜHRING

**Under the PREMIUM trade tools umbrella is the ultra-efficient combination of synergies, quality assurance and guaranteed service delivery.**

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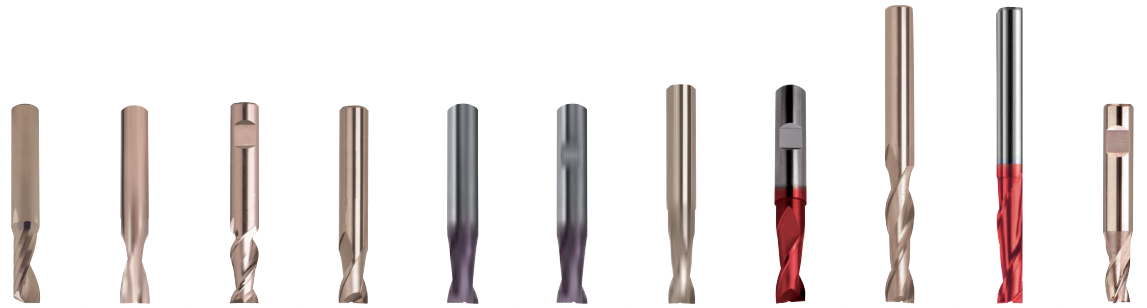
Good reasons for choosing **Gühring:**

- Unique hard-metal technology
- Unique coating technology
- Unique finishing technology
- Unique research & development on geometry, coatings and cutting materials
- 700 field technicians for applications
- Production & service centres close to customers on all continents

➤ Unique quality, customer-friendly service and one of the biggest tool programmes with 90,000 items from a single source!

## Overview – Solide carbide milling programme



| Description | Single Flute Router | Slot Drill | | | | | | | | | Mini cutters |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| DIN | Factory standard | Factory standard | Factory standard | 6527 | 6527 | 6527 | 6527 | 6527 | Factory standard | Factory standard | Factory standard |
| Tool type | N-short | W-extra-short | W-extra-short | N-short | N-short | N-short | N-long | N-long | N-extra-long | N-extra-long | N-extra-short |
| Surface/ Coating | Bright | Bright | Bright | Bright | TiAlN | TiAlN | Bright | Fire | Bright | Fire | Bright |
| Shank design | HA | HA | HB | HA | HA | HB | HA | HB | HA | HA | HB |
| Order No. | 2310 | 2479 | 2477 | 2315 | 2319 | 2322 | 2327 | 2466 | 2354 | 2482 | 2351 |
| Page number | 2/46 | 2/46 | 2/47 | 2/47 | 2/47 | 2/47 | 2/48 | 2/48 | 2/49 | 2/49 | 2/49 |

## Material group

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | | | | | ● | ● | | ● | | ● | ● |
| Steels up to 42 HRC | | | | | | | | | ● | | | |
| Steels up to 52 HRC | | | | | | | | | ◐ | | | |
| Steels up to 56 HRC | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | |
| Hard proces-sing over 60 HRC | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | ● | ● | | ● | | | ◐ |
| Ti steels, Ti alloys, special steels | | | | | ● | ● | ● | ● | ● | ● | ● | |
| Cast-iron materials | | | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Al, Al- and Mg alloy | | ● | ● | ● | ◐ | ◐ | ◐ | ◐ | ◐ | | | ◐ |
| Copper, brass, bronze | | ◐ | ◐ | ● | ◐ | ◐ | ◐ | ◐ | ◐ | | | ◐ |

● recommended ◐ suitable

## Overview – Solide carbide milling programme

| Description | Mini cutters | | End mill | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| DIN | Factory standard | Factory standard | Factory standard | 6527 | Factory standard | Factory standard | 6527 | 6527 | 6527 | 6527 | 6527 | 6527 |
| Tool type | N-extra-short | N-extra-short | W-long | N-short | UNI short | INOX short | N-long | N-long | N-long | N-long | W-long | NH-long |
| Surface/ coating | Fire | Fire | Bright | TiAlN | TiAlN | TiAlN | Bright | TiAlN | Fire | TiAlN | Bright | Fire |
| Shank design | HB | HB | HA | HA/HB | HB | HB | HA | HA | HB | HB | HB | HB |
| Order No. | 2472 | 2474 | 2370 | 2325/2345 | 2797 | 2798 | 2330 | 2332 | 2468 | 2348 | 2360 | 2476 |
| Page number | 2/49 | 2/50 | 2/51 | 2/53 | 2/54 | 2/54 | 2/55 | 2/55 | 2/55 | 2/56 | 2/57 | 2/57 |
| | | | | | NEW | NEW | | | | | | |

## Material group

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | | ● | ● | | ● | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ◐ | | ● | ● | | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | ● | | | | | | ● | ● | | ● | ● |
| Steels up to 42 HRC | | | | | | | | | | | | | ● |
| Steels up to 52 HRC | | ◐ | | | ◐ | | | | ◐ | ◐ | | | ● |
| Steels up to 56 HRC | | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ● | | | | ● | | | ● | | | ● |
| Ti steels, Ti alloys, special steels | | ● | ● | | ● | | ● | ● | ● | ● | ● | | ◐ |
| Cast-iron materials | | ● | ● | | ● | ● | | ● | ● | ● | ● | ● | ● |
| Al, Al- and Mg alloy | | ◐ | ◐ | ● | ◐ | | | ◐ | ◐ | ◐ | ◐ | ● | |
| Copper, brass, bronze | | ◐ | ◐ | ◐ | ◐ | | | ◐ | ◐ | ◐ | ◐ | ● | |

● recommended ◐ suitable

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Overview – Solide carbide milling programme

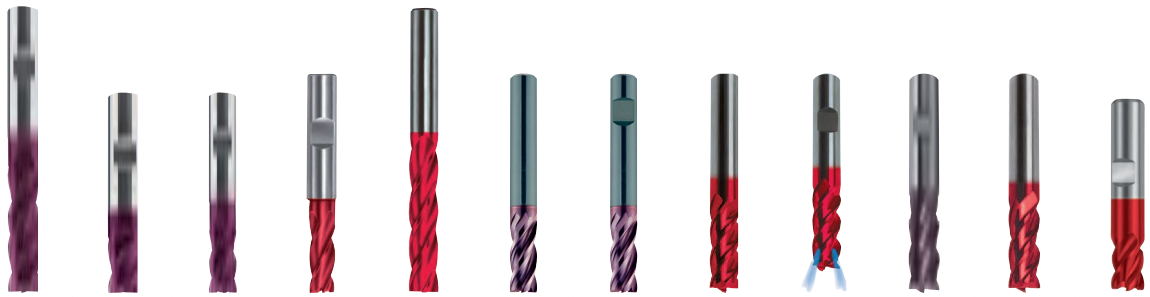
| Description | End mills | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 3 | 3 | 3 | 3 | 3–4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| DIN | 6527 | Factory standard | Factory standard | 6527 | Factory standard | 6527 | 6527 | Factory standard | 6527 | 6527 | Factory standard | Factory standard |
| Tool type | NH-long | N-extra-long | N-extra-long | Ratio NH-long | INOX long | N-short | N-short | N-short | N-long | N-long | UNI short | UNI long |
| Surface/ Coating | TiAlN | Bright | Fire | Fire | TiAlN | Bright | TiAlN | TiAlN | Bright | TiAlN | TiAlN | TiAlN |
| Shank design | HB | HA | HA | HB | HB | HA | HB | HB | HA | HB | HB | HB |
| Order No. | 2361 | 2357 | 2355 | 2371 | 2365 | 2363 | 2375 | 2377 | 2366 | 2378 | 2799 | 2801 |
| Page number | 2/57 | 2/58 | 2/58 | 2/59 | 2/59 | 2/60 | 2/60 | 2/61 | 2/61 | 2/61 | 2/62 | 2/63 |
| | | | | | | | | | | | NEW | NEW |

## Material group

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ◐ | ● | ● | ◐ | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | | ● | ● | ● | ● | ● | ● | ● | ● | | |
| Steels up to 42 HRC | | | | | ● | ● | ◐ | ● | | ◐ | ● | | |
| Steels up to 52 HRC | | | | | | ● | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | | | | ● | ● | ◐ | ◐ | ● | ◐ | ◐ | |
| Ti steels, Ti alloys, special steels | | | ● | ● | ◐ | ● | | | ● | | | | |
| Cast-iron materials | | ● | ● | ● | ● | | ◐ | ● | | ◐ | ● | ● | ● |
| Al, Al- and Mg alloy | | ◐ | | | ● | | ◐ | ◐ | | ◐ | ◐ | | |
| Copper, brass, bronze | | ● | | | ● | | ◐ | ◐ | | ◐ | ◐ | | |

● recommended ◐ suitable

## Overview – Solide carbide milling programme



| Description | End mills | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| DIN | Factory standard | Factory standard | Factory standard | 6527 | Factory standard | 6527 | 6527 | 6527 | 6527 | 6527 | 6527 | 6527 |
| Tool type | UNI extra long | INOX short | INOX short | N-long | N-extra-long | N-long | N-long | NH | NH | N-long | Ratio N-long | Ratio N-short |
| Surface/ coating | TiAlN | TiAlN | TiAlN | Fire | Fire | TiAlN | TiAlN | Fire | Fire | TiAlN | Fire | Fire |
| Shank design | HB | HB | HB | HB | HA | HA | HB | HA | HB | HB | HA | HB |
| Order No. | 2802 | 2803 | 2805 | 2470 | 2471 | 2459 | 2461 | 2513 | 2454 | 2483 | 2448 | 2460 |
| Page number | 2/64 | 2/64 | 2/65 | 2/66 | 2/66 | 2/67 | 2/67 | 2/67 | 2/68 | 2/68 | 2/68 | 2/69 |
| | NEW | NEW | NEW | | | | | | | | | |

## Material group

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | | ● | ● | ◐ | ◐ | ● | ● | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | | | | ● | ● | ● | ● | ◐ | ◐ | ● | ● | ● |
| Steels up to 42 HRC | | | | | | | | | ◐ | ◐ | ◐ | ● | ● |
| Steels up to 52 HRC | | | | | ◐ | | | | | | ◐ | ● | ● |
| Steels up to 56 HRC | | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | | ● | ● | ● | | ● | ● | ● | ● | | | |
| Ti steels, Ti alloys, special steels | | | ● | ● | ● | ● | | | ◐ | ◐ | | ● | ● |
| Cast-iron materials | | ● | ● | | ● | ● | ● | ● | ● | ◐ | ● | ● | ● |
| Al, Al- and Mg alloy | | | | | ◐ | | ● | ● | ● | | ● | | |
| Copper, brass, bronze | | | | | ◐ | | | | ◐ | ◐ | ● | | |

● recommended ◐ suitable

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Overview – Solide carbide milling programme

| Description | End mills | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 6–8 | 6–8 | 6 |
| DIN | 6527 | Factory standard | 6527 | 6527 | Factory standard | 6527 | 6527 | 6527 | Factory standard | Factory standard | Factory standard |
| Tool type | Ratio N-long | N | Ratio N-short | Ratio N-long | N-long | W-long | N | NH | N-long | H-long | N-extra-long |
| Surface/ Coating | Fire | Fire | TiAlN | TiAlN | TiAlN | Bright | Signum | Fire | TiAlN | TiAlN | TiAlN |
| Shank design | HB | HA | HB | HB | HB | HB | | HA | HB | HA | HA |
| Order No. | 2462 | 2463 | 2407 | 2409 | 2439 | 2455 | 2498/2503 | 2456 | 2383 | 2381 | 2380 |
| Page number | 2/69 | 2/70 | 2/71 | 2/71 | 2/72 | 2/72 | 2/73 | 2/74 | 2/74 | 2/75 | 2/75 |

## Material group

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | | ● | ● | ◐ | ◐ | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | ● | | | | | ● | ● | ● | ● | ● |
| Steels up to 42 HRC | | ● | ● | | | | | | ● | ● | ● | ● |
| Steels up to 52 HRC | | ● | ● | | | | | | ● | | ● | ● |
| Steels up to 56 HRC | | | | | | | | | | | ● | ● |
| Steels up to 60 HRC | | | | | | | | | | | ● | ● |
| Hard proces-sing over 60 HRC | | | | | | | | | | | ◐ | ◐ |
| Stainless and acid-resistant steels (INOX) | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Ti steels, Ti alloys, special steels | | ● | ● | ● | ● | ● | | | ● | ● | | |
| Cast-iron materials | | ● | ● | ● | ● | ● | | ● | ● | | | |
| Al, Al- and Mg alloy | | | ◐ | ◐ | ◐ | ◐ | ● | ● | ◐ | | | |
| Copper, brass, bronze | | | ● | ◐ | ◐ | ◐ | ● | | ◐ | | | |

● recommended ◐ suitable

## Overview – Solide carbide milling programme

| Description | End mills | | | | Rippa Cutters | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 6–10 | 6–8 | 6–8 | 6–8 | 3 | 3 | 3–4 | 3–4 | 4 | 4 | 4 |
| DIN | 6527 | Factory standard | 6527 | Factory standard | 6527 | 6527 | Factory standard | Factory standard | 6527 | 6527 | 6527 |
| Tool type | NH | NH-extra-long | H-long | N-extra-long | WR-long | WR-long | HR-long | HR-long | Ratio NF-long | Ratio NF-long | NRF-long |
| Surface/ Coating | Fire | Signum | Signum | Signum | Bright | Bright | TiAlN | TiAlN | Fire | TiAlN | Fire |
| Shank design | HA | HA | HA | HA | HB | HB | HB | HB | HB | HB | HB |
| Order No. | 2484 | 2485 | 2385 | 2386 | 2358 | 2473 | 2393 | 2397 | 2389 | 2392 | 2391 |
| Page number | 2/77 | 2/77 | 2/76 | 2/76 | 2/78 | 2/78 | 2/78 | 2/79 | 2/80 | 2/79 | 2/81 |

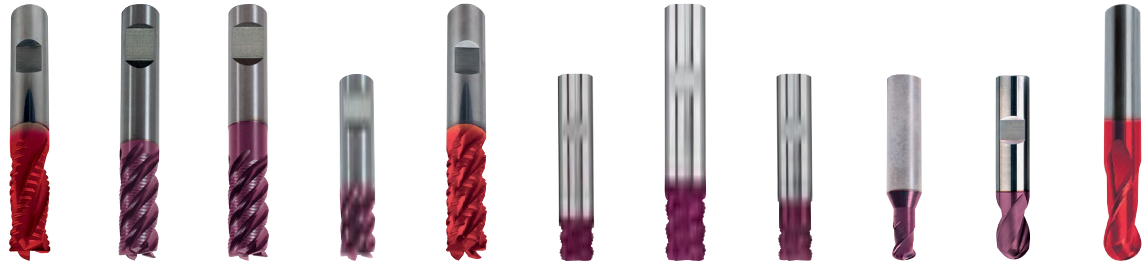
## Material group

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | | | | ◐ | ◐ | ◐ | ● | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ◐ | | | | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | ● | ◐ | | | | ● | ● | ● | ● | ◐ |
| Steels up to 42 HRC | | ● | ● | ● | ● | | | ● | | ● | | |
| Steels up to 52 HRC | | ◐ | ◐ | ● | ● | | | ● | | ● | | |
| Steels up to 56 HRC | | | | ● | ● | | | ● | | | | |
| Steels up to 60 HRC | | | | ● | ● | | | ● | | | | |
| Hard processing over 60 HRC | | | | ● | ● | | | ◐ | | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ● | | | | | ● | ● | | ● | ● |
| Ti steels, Ti alloys, special steels | | ● | ● | | | | | | ● | ● | ◐ | ● |
| Cast-iron materials | | ● | ● | ◐ | ◐ | | | | | ◐ | ● | ● |
| Al, Al- and Mg alloy | | ◐ | ◐ | | | ● | ● | | | | | |
| Copper, brass, bronze | | ◐ | ◐ | | | ◐ | ◐ | | | | ◐ | ● |

● recommended ◐ suitable

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Overview – Solide carbide milling programme



| Description | Rippa Cutters | | | | | | | | Ball Nose Cutters | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 4 | 3–6 | 4–6 | 4–6 | 5–6 | 4–5 | 4–5 | 4–5 | 2 | 2 | 2 |
| DIN | 6527 | Factory standard | Factory standard | Factory standard | 6527 | Factory standard | Factory standard | Factory standard | Factory standard | Factory standard | 6527 |
| Tool type | NF-long | HR-long | HR-long | HR-short | NF-long | HR-short | HR-long | HR-short | N-extra-short | N-short | N-long |
| Surface/ Coating | Fire | TiAlN | TiAlN | TiAlN | Fire | TiAlN | TiAlN | TiAlN | TiAlN | TiAlN | Fire |
| Shank design | HB | HB | HB | HB | HB | HB | HB | HB | HA | HB | HA |
| Order No. | 2394 | 2400 | 2401 | 2398 | 2395 | 2408 | 2411 | 2412 | 2403 | 2413 | 2465 |
| Page number | 2/80 | 2/82 | 2/82 | 2/81 | 2/83 | 2/83 | 2/84 | 2/84 | 2/86 | 2/85 | 2/85 |

## Material group

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ◐ | ◐ | ◐ | ● | ● | ● | ● | ◐ | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Steels up to 1400 N/mm² | | ● | ● | ● | ● | ● | ◐ | ◐ | ◐ | ● | ● | ● |
| Steels up to 42 HRC | | | | | | ● | | | | ● | | ● |
| Steels up to 52 HRC | | | | | | ● | | | | ● | | |
| Steels up to 56 HRC | | | | | | ● | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | ● | ● | ● | | | | | | | ● |
| Ti steels, Ti alloys, special steels | | ● | ● | ● | ● | ● | | | | | | ● |
| Cast-iron materials | | ● | | | | ● | ◐ | ◐ | ◐ | | ● | ● |
| Al, Al- and Mg alloy | | | | | | | | | | | ◐ | ● |
| Copper, brass, bronze | | ● | | | | | | | | | | ● |

● recommended ◐ suitable

## Overview – Solide carbide milling programme

| Description | Ball Nose Cutters | | | | | | Ball Nose Cutters | | | Torus cutters |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| DIN | 6527 | Factory standard | 6527 | Factory standard | Factory standard | Factory standard | Factory standard | Factory standard | Factory standard | 6527 |
| Tool type | N-long | N-long | N-long | N-short | N-long | N-extra-long | N-short | H-long | N-extra-long | N-long |
| Surface/ Coating | Fire | TiAlN | Fire | Signum | Signum | Signum | TiAlN-S | Signum | Signum | Fire |
| Shank design | HB | HA | HA | HA | HA | HA | HA | HA | HA | HA |
| Order No. | 2464 | 2414 | 2420 | 2485 | 2486 | 2488 | 2422 | 2423 | 2426 | 2491 |
| Page number | 2/85 | 2/87 | 2/88 | 2/88 | 2/89 | 2/89 | 2/90 | 2/90 | 2/91 | 2/91 |

## Material group

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ◐ | ● | ● | ● | ● | | | | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | | | | ● |
| Steels up to 1400 N/mm² | | ● | ● | ● | ● | ● | ● | | | | ● |
| Steels up to 42 HRC | | ● | ● | ● | ● | ● | ● | ◐ | ● | ● | ● |
| Steels up to 52 HRC | | | ● | | ● | ● | ● | ● | ● | ● | ◐ |
| Steels up to 56 HRC | | | ● | | ◐ | ◐ | ◐ | ● | ● | ● | |
| Steels up to 60 HRC | | | ● | | | | | ● | ● | ● | |
| Hard proces-sing over 60 HRC | | | ◐ | | | | | ● | ● | ● | |
| Stainless and acid-resistant steels (INOX) | | ● | | ● | ● | ● | ● | | | | ● |
| Ti steels, Ti alloys, special steels | | ● | | ● | ● | ● | ● | | | | ● |
| Cast-iron materials | | ● | | ● | ● | ● | ● | | ● | ● | ● |
| Al, Al- and Mg alloy | | ● | | | | | | | | | ◐ |
| Copper, brass, bronze | | ● | | | | | | | | | ◐ |

● recommended ◐ suitable

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Overview – Solide carbide milling programme

| Description | Torus cutters | | | Ratio mills | | End mills | | | | | Corner Rounding Cutters |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 4 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 6 | 6–8 | 4 |
| DIN | 6527 | Factory Standard | 6527 | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | 6527 | Factory Standard |
| Tool type | N-long | N-long | N-extra-long | W-short | N-extra-short | N-long | N-extra-long | N-long | N-extra-long | N-long | N-short |
| Surface/ Coating | Fire | Signum | Signum | Bright | TiAlN | Signum | Signum | TiAlN | Signum | Fire | TiAlN |
| Shank design | HA | HA | HA | HA | HA | HA | HA | HA | HA | HA | HA |
| Order No. | 2492 | 2430 | 2432 | 2429 | 2436 | 2434 | 2435 | 2437 | 2388 | 2493 | 2451 |
| Page number | 2/94 | 2/92 | 2/92 | 2/93 | 2/94 | 2/95 | 2/95 | 2/96 | 2/96 | 2/97 | 2/97 |

NEW

## Material group

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | | ◐ | | | ◐ | | ● | ● |
| Steels up to 1000 N/mm² | | ● | ● | ● | | ● | ● | ● | ● | | ● | ● |
| Steels up to 1400 N/mm² | | ● | ● | ● | | ● | ● | ● | ● | | ● | ● |
| Steels up to 42 HRC | | ● | ● | ● | | ● | ● | ● | ● | | ● | ● |
| Steels up to 52 HRC | | ◐ | ● | ● | | ● | ● | ● | ● | ● | ◐ | ● |
| Steels up to 56 HRC | | | ◐ | ◐ | | ● | ● | ● | ● | ● | | |
| Steels up to 60 HRC | | | | | | ● | ● | ● | ● | | | |
| Hard processing over 60 HRC | | | | | | ◐ | ● | ● | ◐ | | | |
| Stainless and acid-resistant steels (INOX) | | ● | ● | ● | | | | | | | ● | ● |
| Ti steels, Ti alloys, special steels | | ● | ● | ● | | | | | | | ● | ◐ |
| Cast-iron materials | | ● | ● | ● | ● | | ● | ● | | ● | ● | ◐ |
| Al, Al- and Mg alloy | | ◐ | | | ● | | | | | | ● | ◐ |
| Copper, brass, bronze | | ◐ | | | ◐ | | | | | | ● | ◐ |

● recommended ◐ suitable

## Overview – Solide carbide milling programme

| Description | Spot Drills / Chamfer Tool | | | Deburring and Chamfer Cutters | | | | | | | Engraver cutter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of teeth | 2 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 1 |
| DIN | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard | Factory Standard |
| Tool type | N-60° | N-90° | N-120° | N-90° | N-90° | N-60° | N-60° | N-120° | N-120° | N-45° | N |
| Surface/ Coating | Bright | Bright | Bright | Bright | TiAlN | Bright | TiAlN | Bright | TiAlN | Bright | Bright |
| Shank design | HA | HA | HA | HB | HB | HB | HB | HB | HB | HA | HA |
| Order No. | 2442 | 2440 | 2446 | 2440 | 2441 | 2442 | 2443 | 2446 | 2449 | 2444 | 2444 |
| Page number | 2/98 | 2/98 | 2/98 | 2/99 | 2/99 | 2/99 | 2/99 | 2/99 | 2/99 | 2/100 | 2/100 |

## Material group

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Steels up to 850 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ |
| Steels up to 1000 N/mm² | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ◐ | ◐ |
| Steels up to 1400 N/mm² | | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ● | ◐ | ● | ◐ | |
| Steels up to 42 HRC | | | | | | | | | | | | |
| Steels up to 52 HRC | | | | | | | | | | | | |
| Steels up to 56 HRC | | | | | | | | | | | | |
| Steels up to 60 HRC | | | | | | | | | | | | |
| Hard processing over 60 HRC | | | | | | | | | | | | |
| Stainless and acid-resistant steels (INOX) | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | |
| Ti steels, Ti alloys, special steels | | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ | |
| Cast-iron materials | | ◐ | ◐ | ◐ | ◐ | ● | ◐ | ● | ◐ | ● | ◐ | |
| Al, Al- and Mg alloy | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Copper, brass, bronze | | | | | | | | | | | ● | ● |

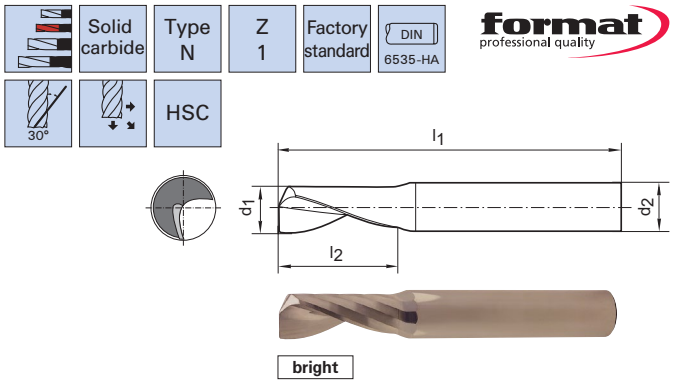
● recommended ◐ suitable

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide Single Flute Router

**Design:** Solid carbide, type N, according to factory standard, 30°, bright, with 1 cutting edge. Flute finest cut (mirror cut).

**Application:** Suitable for contour and plunge milling as well as milling out slots and notches on windows, doors and other profiles made of aluminium and plastic. Also suitable for other non-ferrous metals under certain conditions.



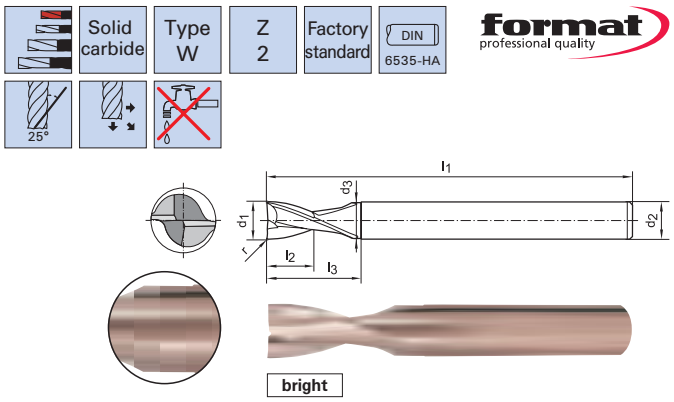

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2310 | | | | | | | | | | | | **180** | 135 |

| Order No. | Ø $d_1$ h10 | 2310 format professional quality bright | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0200 | **2** | **23.00** | 10 | 40 | 2 | 0.052 |
| 0300 | **3** | **23.00** | 12 | 40 | 3 | 0.089 |
| 0400 | **4** | **23.40** | 15 | 40 | 4 | 0.126 |
| 0500 | **5** | **24.00** | 16 | 50 | 5 | 0.157 |
| 0600 | **6** | **25.10** | 20 | 57 | 6 | 0.188 |
| 0800 | **8** | **32.30** | 22 | 63 | 8 | 0.265 |
| 1000 | **10** | **51.70** | 25 | 72 | 10 | 0.349 |
| 1200 | **12** | **77.60** (W210) | 35 | 83 | 12 | 0.419 |

## Solid Carbide 2 Flute Slot Drill for Aluminium

**Design:** Solid carbide (K10/K20), type W, according to factory standard, 25°, bright, offset shank, with centre cut. Polish grinding, stable cutting edges.

**Application:** Can be used for milling keyways and feather key grooves as well as for trimming and finishing milling. Besides the main use with machining aluminium, it is suitable for working with plastic.



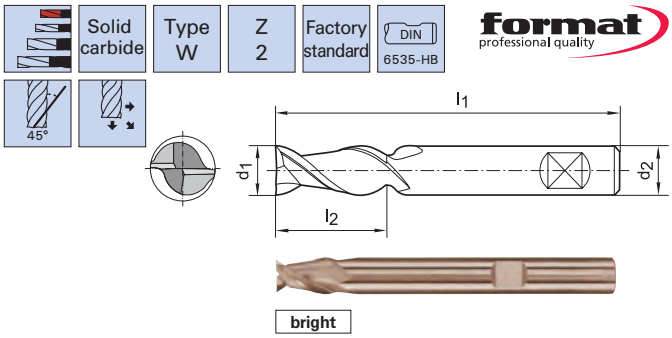

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2479 | | | | | | | | | | | | **163** | 150 |

| Order No. | Ø $d_1$ h10 | 2479 format professional quality bright | Radius r | Neck Ø $d_3$ | Cutting length $l_2$ | Overall length $l_1$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm | mm |
| 0200 | **2** | **12.25** | 0.2 | 1.9 | 3 | 40 | 6 | 3 | 0.015 |
| 0300 | **3** | **12.25** | 0.2 | 2.9 | 4 | 40 | 8 | 3 | 0.026 |
| 0400 | **4** | **13.65** | 0.2 | 3.8 | 5 | 50 | 12 | 4 | 0.046 |
| 0500 | **5** | **14.20** | 0.2 | 4.8 | 8 | 50 | 14 | 5 | 0.063 |
| 0600 | **6** | **22.50** | 0.2 | 5.7 | 8 | 65 | 18 | 6 | 0.087 |
| 0800 | **8** | **25.50** | 0.2 | 7.7 | 10 | 70 | 22 | 8 | 0.139 |
| 1000 | **10** | **38.90** | 0.2 | 9.7 | 14 | 80 | 28 | 10 | 0.212 |
| 1200 | **12** | **54.60** | 0.2 | 11.5 | 16 | 90 | 35 | 12 | 0.312 |
| 1600 | **16** | **94.20** | 0.2 | 15.5 | 20 | 90 | 40 | 16 | 0.385 |
| 2000 | **20** | **152.50** (W212) | 0.2 | 19.5 | 25 | 100 | 50 | 20 | 0.385 |

## Solid Carbide 2 Flute Slot Drill for Aluminium

**Design:** Solid carbide (K10/K20), type W, according to factory standard, 45°, with centre cut.

**Application:** Can be used for peripheral milling and drill cutting. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided. Particularly suitable for machining aluminium.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2477 | | | | | | | | | | | | 220 | 150 |

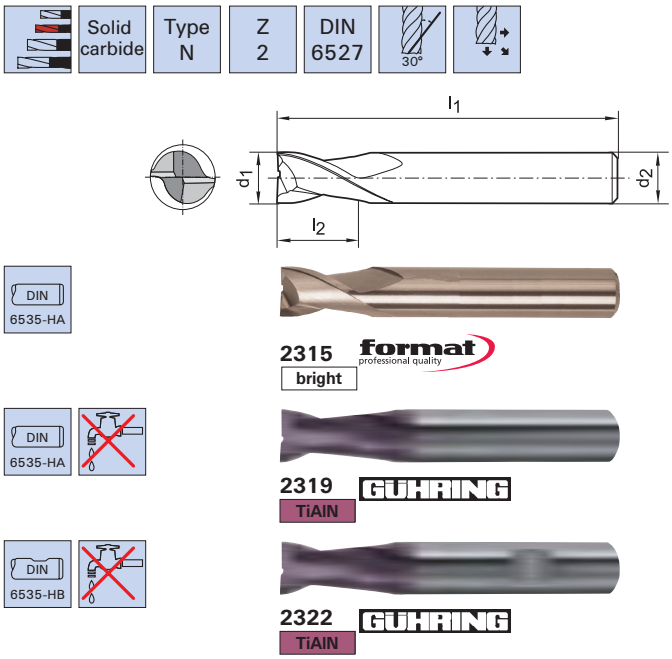
| Order No. | Ø $d_1$ e8 mm | 2477 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0300 | 3 | 13.70 | 4 | 50 | 6 | 0.020 |
| 0400 | 4 | 15.65 | 5 | 54 | 6 | 0.035 |
| 0500 | 5 | 15.80 | 6 | 54 | 6 | 0.048 |
| 0600 | 6 | 14.60 | 7 | 54 | 6 | 0.069 |
| 0800 | 8 | 22.50 (W210) | 9 | 58 | 8 | 0.108 |

| Order No. | Ø $d_1$ e8 mm | 2477 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 1000 | 10 | 33.90 | 11 | 66 | 10 | 0.164 |
| 1200 | 12 | 47.50 | 12 | 73 | 12 | 0.243 |
| 1600 | 16 | 85.80 | 16 | 82 | 16 | 0.293 |
| 2000 | 20 | 144.50 (W210) | 20 | 92 | 20 | 0.308 |

## Solid Carbide 2 Flute Slot Drills

**Design:** Solid carbide (K10/K20), type N, DIN 6527, 30°, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves P9 as well as for universal machining.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2315 | 60 | 60 | | | | | | | | 25 | 70 | 180 | 50 |
| 2319 | 100 | 100 | 60 | | | | | | 50 | 40 | 120 | 300 | 100 |
| 2322 | 100 | 100 | 60 | | | | | | 50 | 40 | 120 | 300 | 100 |

| Order No. | Ø $d_1$ h10 mm | 2315 format bright | 2319 GÜHRING TiAlN | 2322 GÜHRING TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0200 | 2 | 13.25 | 16.30 | 18.45 | 3 | 50 | 6 | 0.005 |
| 0300 | 3 | 11.75 | 15.95 | 18.00 | 4 | 50 | 6 | 0.010 |
| 0400 | 4 | 11.05 (W210) | 15.40 (W205) | 17.10 (W205) | 5 | 54 | 6 | 0.020 |

Continued overleaf

## Solid Carbide 2 Flute Slot Drills

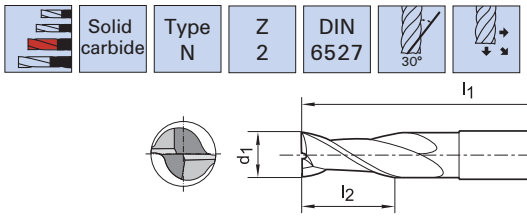
Continued

| Order No. | Ø $d_1$ h10 mm | 2315 format bright | 2319 GÜHRING TiAlN | 2322 GÜHRING TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0500 | 5 | 11.05 | 15.40 | 17.10 | 6 | 54 | 6 | 0.020 |
| 0600 | 6 | 10.90 | 14.75 | 16.75 | 7 | 54 | 6 | 0.024 |
| 0800 | 8 | 12.95 | 20.30 | 22.20 | 9 | 58 | 8 | 0.032 |
| 1000 | 10 | 21.40 | 30.10 | 32.80 | 11 | 66 | 10 | 0.038 |
| 1200 | 12 | 30.80 | 44.00 | 45.80 | 12 | 73 | 12 | 0.046 |
| 1400 | 14 | 42.30 | 61.10 | 64.80 | 14 | 75 | 14 | 0.054 |
| 1600 | 16 | 51.30 | 70.40 | 76.00 | 16 | 82 | 16 | 0.054 |
| 1800 | 18 | 74.20 | 108.50 | 112.00 | 18 | 84 | 18 | 0.066 |
| 2000 | 20 | 86.80 (W210) | 115.50 (W205) | 119.50 (W205) | 20 | 92 | 20 | 0.066 |

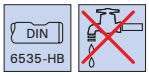
## Solid Carbide 2 Flute Slot Drills

**Design:** Ultra-fine grit solid carbide, type N, DIN 6527, 30°, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining.
**For milling depths up to max. 1.5 x D.**



2327 format professional quality bright



2466 GÜHRING Fire

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining above 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2327 | 60 | 60 | | | | | | | | 25 | 70 | 180 | 50 |
| 2466 | 100 | 100 | 60 | 55 | 30 | | | | 50 | 40 | 120 | 300 | 100 |

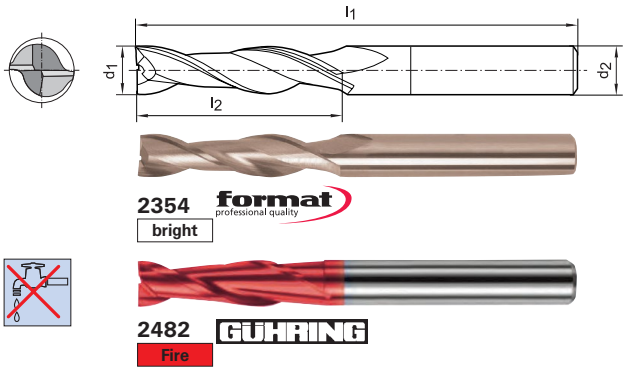
| Order No. | Ø $d_1$ = h10 mm | 2327 format bright | 2466 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shaft Ø $d_2$ = h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0200 | 2.00 | 0.02 | 0.02 | 6 | 57 | 6 | 0.005 |
| 0250 | 2.50 | 0.02 NEW | – | 7 | 57 | 6 | 0.005 |
| 0280 | 2.80 | 0.02 | – | 7 | 57 | 6 | 0.010 |
| 0300 | 3.00 | 0.02 | 0.02 | 7 | 57 | 6 | 0.010 |
| 0380 | 3.80 | 0.02 | – | 8 | 57 | 6 | 0.020 |
| 0400 | 4.00 | 0.02 | 0.02 | 8 | 57 | 6 | 0.020 |
| 0480 | 4.80 | 0.02 | – | 10 | 57 | 6 | 0.020 |
| 0500 | 5.00 | 0.02 | 0.02 | 10 | 57 | 6 | 0.020 |
| 0575 | 5.75 | 0.02 NEW | – | 10 | 57 | 6 | 0.020 |
| 0600 | 6.00 | 0.02 | 0.02 | 10 | 57 | 6 | 0.024 |
| 0700 | 7.00 | 0.02 | 0.02 | 13 | 63 | 8 | 0.032 |
| 0775 | 7.75 | 0.02 NEW | – | 16 | 63 | 8 | 0.032 |
| 0800 | 8.00 | 0.02 | 0.02 | 16 | 63 | 8 | 0.032 |
| 0900 | 9.00 | 0.02 | 0.02 | 16 | 72 | 10 | 0.038 |
| 0970 | 9.70 | 0.02 NEW | – | 19 | 72 | 10 | 0.038 |
| 1000 | 10.00 | 0.02 | 0.02 | 19 | 72 | 10 | 0.038 |
| 1100 | 11.00 | 0.02 | – | 22 | 83 | 12 | 0.038 |
| 1170 | 11.70 | 0.02 NEW | – | 22 | 83 | 12 | 0.038 |
| 1200 | 12.00 | 0.02 | 0.02 | 22 | 83 | 12 | 0.046 |
| 1400 | 14.00 | 0.02 | 0.02 | 22 | 83 | 14 | 0.054 |
| 1600 | 16.00 | 0.02 | 0.02 | 26 | 92 | 16 | 0.054 |
| 1800 | 18.00 | – | 0.02 | 26 | 92 | 18 | 0.066 |
| 2000 | 20.00 | 0.02 NEW (999) | 0.02 (999) | 32 | 104 | 20 | 0.066 |

## Long Series Solid Carbide 2 Flute Slot Drills

**Design:** Type N, according to factory standard, 30°, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining. **For milling depths up to max. 3 x D.** Ideal for use in mould-making.

Solid carbide | Type N | Z 2 | Factory standard | DIN 6535-HA | 30°




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2354 | 80 | 70 | | | | | | | | 25 | 90 | | |
| 2482 | 100 | 100 | 60 | | | | | | | 40 | 120 | | |

| Order No. | Ø $d_1$ h10 mm | 2354 format bright | 2482 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0300 | 3 | 19.40 | 23.30 | 20 | 75 | 3 | 0.007 |
| 0400 | 4 | 21.40 | 25.90 | 25 | 75 | 4 | 0.014 |
| 0500 | 5 | 22.70 | 27.40 | 30 | 75 | 5 | 0.014 |
| 0600 | 6 | 22.70 | 27.40 | 30 | 75 | 6 | 0.017 |
| 0800 | 8 | 38.90 | 52.80 | 40 | 100 | 8 | 0.024 |
| 1000 | 10 | 54.50 (W210) | 64.20 (W220) | 40 | 100 | 10 | 0.030 |

| Order No. | Ø $d_1$ h10 mm | 2354 format bright | 2482 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1200 | 12 | 82.50 | 99.40 | 45 | 150 | 12 | 0.036 |
| 1400 | 14 | – | 121.00 | 45 | 150 | 14 | 0.054 |
| 1600 | 16 | 130.50 | 159.50 | 65 | 150 | 16 | 0.045 |
| 1800 | 18 | – | 191.50 | 65 | 150 | 18 | 0.066 |
| 2000 | 20 | 179.00 (W210) | 215.50 (W220) | 65 | 150 | 20 | 0.057 |

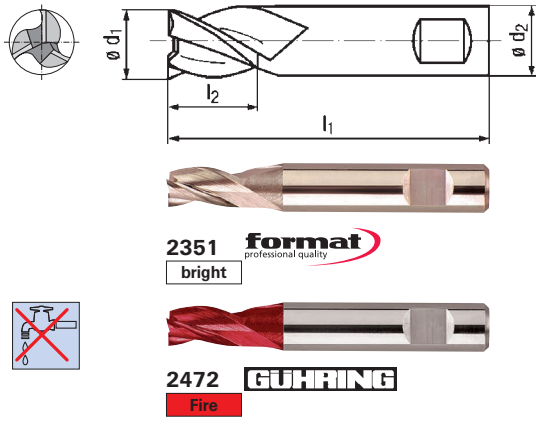
## Solid Carbide 3 Flute Mini Slot Drills

**Design:** Type N, according to factory standard, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining.

**Note:** Not designed for re-grinding.

Solid carbide | Type N | Z 3 | Factory standard | DIN 6535-HB | 30°




**2351** Bright — Ø $d_1$ = h10

**2472** Fire — Ø $d_1$ = e8

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2351 | 80 | 75 | 50 | | | | | | 35 | | 100 | 150 | 75 |
| 2472 | 100 | 100 | 60 | | 30 | | | | 50 | 40 | 120 | 230 | 110 |

| Order No. | Ø $d_1$ mm | 2351 format bright | 2472 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0050 | 0.50* | 9.20 | 14.60 | 1.5 | 38 | 3 | 0.005 |
| 0060 | 0.60* | 9.20 | 14.60 | 1.5 | 38 | 3 | 0.005 |
| 0080 | 0.80* | 7.90 (W210) | 11.80 (W220) | 2.0 | 38 | 3 | 0.005 |

| Order No. | Ø $d_1$ mm | 2351 format bright | 2472 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0100 | 1.00* | 7.10 | 9.75 | 2.0 | 38 | 3 | 0.005 |
| 0120 | 1.20* | 9.70 | 15.20 | 2.0 | 38 | 3 | 0.005 |
| 0150 | 1.50* | 7.10 (W210) | 9.75 (W220) | 2.0 | 38 | 3 | 0.005 |

* With cyl. shank, shape HA.

Continued overleaf

## Solid Carbide 3 Flute Mini Slot Drills

Continued

| Order No. | Ø $d_1$ mm | 2351 format bright | 2472 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0180 | 1.80* | – | 15.20 | 2.0 | 38 | 3 | 0.005 |
| 0200 | 2.00 | 8.75 | 12.95 | 4.0 | 38 | 6 | 0.005 |
| 0250 | 2.50 | 9.20 | 13.55 | 5.0 | 38 | 6 | 0.010 |
| 0300 | 3.00 | 8.75 | 12.95 | 5.0 | 38 | 6 | 0.010 |
| 0350 | 3.50 | 9.70 | 13.55 | 6.0 | 38 | 6 | 0.020 |
| 0400 | 4.00 | 8.75 | 12.95 | 7.0 | 38 | 6 | 0.020 |
| 0450 | 4.50 | 9.70 | 15.20 | 8.0 | 38 | 6 | 0.020 |
| 0500 | 5.00 | 8.75 | 14.60 | 8.0 | 38 | 6 | 0.020 |
| 0550 | 5.50 | – | 15.20 | 8.0 | 38 | 6 | 0.024 |
| 0575 | 5.75 | – | 16.85 | 8.0 | 38 | 6 | 0.024 |
| 0600 | 6.00 | 8.75 | 14.60 | 8.0 | 38 | 6 | 0.024 |
| 0675 | 6.75 | – (W210) | 22.30 (W220) | 10.0 | 42 | 8 | 0.032 |
| 0700 | 7.00 | – | 20.40 | 10.0 | 42 | 8 | 0.032 |
| 0775 | 7.75 | – | 20.70 | 10.0 | 42 | 8 | 0.032 |
| 0800 | 8.00 | 12.40 | 20.40 | 11.0 | 43 | 8 | 0.032 |
| 0870 | 8.70 | – | 31.00 | 11.0 | 48 | 10 | 0.038 |
| 0900 | 9.00 | – | 30.00 | 11.0 | 48 | 10 | 0.038 |
| 0970 | 9.70 | – | 31.00 | 11.0 | 48 | 10 | 0.038 |
| 1000 | 10.00 | 19.70 | 29.50 | 13.0 | 50 | 10 | 0.038 |
| 1200 | 12.00 | 23.90 | 34.70 | 15.0 | 55 | 12 | 0.046 |
| 1400 | 14.00 | – | 47.60 | 15.0 | 58 | 14 | 0.054 |
| 1600 | 16.00 | – | 62.10 | 18.0 | 62 | 16 | 0.054 |
| 1800 | 18.00 | – | 74.50 | 20.0 | 70 | 18 | 0.066 |
| 2000 | 20.00 | – (W210) | 99.40 (W220) | 22.0 | 75 | 20 | 0.066 |

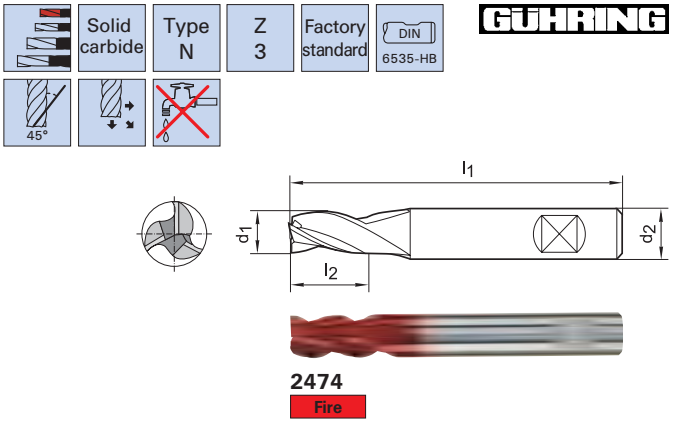
* With cyl. shank, shape HA.

## Solid Carbide 3 Flute Mini Slot Drills

**Design:** Ultra-fine grit solid carbide, 45°, **fire-coated.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. Air cooling recommended.**

**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining. Feed is approx. 50% higher than with a 2-edged cutter.
The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2474 | 140 | 140 | 80 | | | | | | 70 | 70 | 200 | 330 | 110 |

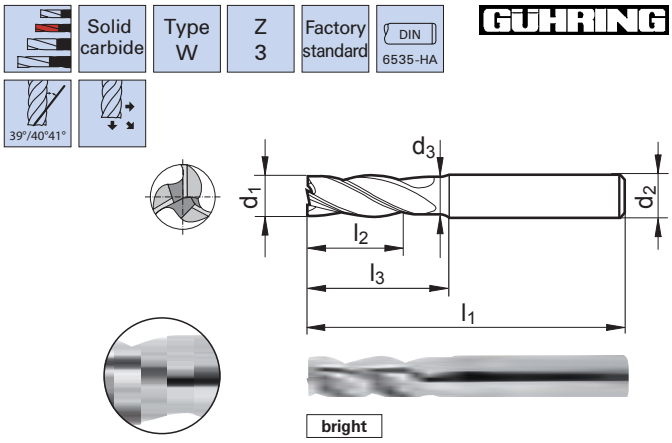
| Order No. | Ø $d_1$ e8 mm | 2474 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0100 | 1.00* | 12.95 | 2.0 | 38 | 3 | 0.005 |
| 0120 | 1.20* | 15.95 | 2.0 | 38 | 3 | 0.005 |
| 0150 | 1.50* | 12.95 | 3.0 | 38 | 3 | 0.005 |
| 0180 | 1.80* | 15.95 | 3.0 | 38 | 3 | 0.005 |
| 0200 | 2.00 | 17.80 | 4.0 | 45 | 6 | 0.005 |
| 0250 | 2.50 | 18.55 | 5.0 | 45 | 6 | 0.010 |
| 0300 | 3.00 | 17.80 | 6.0 | 45 | 6 | 0.010 |
| 0350 | 3.50 | 17.80 | 6.0 | 45 | 6 | 0.020 |
| 0400 | 4.00 | 17.80 | 7.0 | 45 | 6 | 0.020 |
| 0450 | 4.50 | 19.15 | 8.0 | 45 | 6 | 0.020 |
| 0500 | 5.00 | 17.80 | 8.0 | 45 | 6 | 0.020 |
| 0550 | 5.50 | 19.15 | 8.0 | 45 | 6 | 0.024 |
| 0575 | 5.75 | 19.15 | 10.0 | 45 | 6 | 0.024 |
| 0600 | 6.00 | 17.80 | 10.0 | 45 | 6 | 0.024 |
| 0675 | 6.75 | 24.80 | 10.0 | 55 | 8 | 0.032 |
| 0700 | 7.00 | 24.30 | 12.0 | 55 | 8 | 0.032 |
| 0775 | 7.75 | 24.30 | 12.0 | 55 | 8 | 0.032 |
| 0800 | 8.00 | 24.30 | 13.0 | 55 | 8 | 0.032 |
| 0870 | 8.70 | 33.10 | 14.0 | 55 | 10 | 0.038 |
| 0900 | 9.00 | 31.60 | 14.0 | 55 | 10 | 0.038 |
| 0970 | 9.70 | 33.60 | 16.0 | 55 | 10 | 0.038 |
| 1000 | 10.00 | 32.60 (W220) | 16.0 | 55 | 10 | 0.038 |

* With cyl. shank, shape HA.

## Solid Carbide 3 Flute Slot Drill for Aluminium

**Design:** Solid carbide, according to factory standard, 45°, bright, with centre cut.

**Application:** For the machining of aluminium, aluminium alloys, short- and long-chipping brass, general construction steels, short-chipping bronze, low-alloy copper, magnesium alloys.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2370 | | | | | | | | | | | | 450 | 220 |

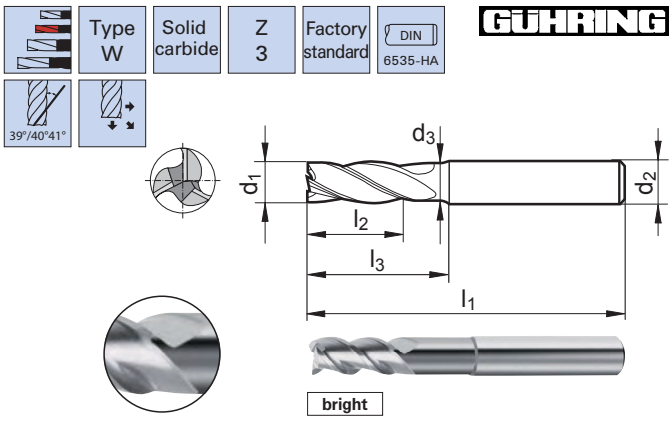
| Order No. | Ø $d_1$ e8 | 2370 GÜHRING bright | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm |
| 0300 | 3 | 25.90 | 8 | 57 | 2.7 | 15 | 6 | 0.010 |
| 0400 | 4 | 23.40 | 11 | 57 | 3.7 | 18 | 6 | 0.018 |
| 0500 | 5 | 23.40 | 13 | 57 | 4.7 | 18 | 6 | 0.020 |
| 0600 | 6 | 25.90 | 13 | 57 | 5.5 | 20 | 6 | 0.025 |
| 0800 | 8 | 28.80 | 21 | 63 | 7.5 | 26 | 8 | 0.032 |
| 1000 | 10 | 48.60 | 22 | 72 | 9.2 | 30 | 10 | 0.039 |
| 1200 | 12 | 71.60 | 26 | 83 | 11.2 | 36 | 12 | 0.048 |
| 1600 | 16 | 127.50 | 36 | 92 | 15.0 | 42 | 16 | 0.058 |
| 2000 | 20 | 206.00 (W221) | 41 | 104 | 19.0 | 52 | 20 | 0.073 |

## Solid carbide rough mill for aluminium

NEW

**Design:** Solid carbide, factory standard, with centre cut. Surface polished.

**Application:** For the machining of aluminium, aluminium alloys, short- and long-chipping brass. For many applications, the complete milling process can be covered with one miller.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2370 | | | | | | | | | | | | 440 | |

| Order No. | Ø $d_1$ e8 | 2370 GÜHRING bright | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Shank Ø $d_2$ h6 | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm |
| 0601 | 6 | 28.00 | 13 | 65 | 5.5 | 6 | 0.050 |
| 0801 | 8 | 31.30 | 19 | 75 | 7.5 | 8 | 0.065 |
| 1001 | 10 | 52.70 | 22 | 80 | 9.2 | 10 | 0.080 |
| 1201 | 12 | 79.00 | 26 | 93 | 11.2 | 12 | 0.120 |
| 1601 | 16 | 140.00 | 32 | 108 | 15.0 | 16 | 0.150 |
| 2001 | 20 | 224.00 (W221) | 38 | 126 | 19.0 | 20 | 0.180 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

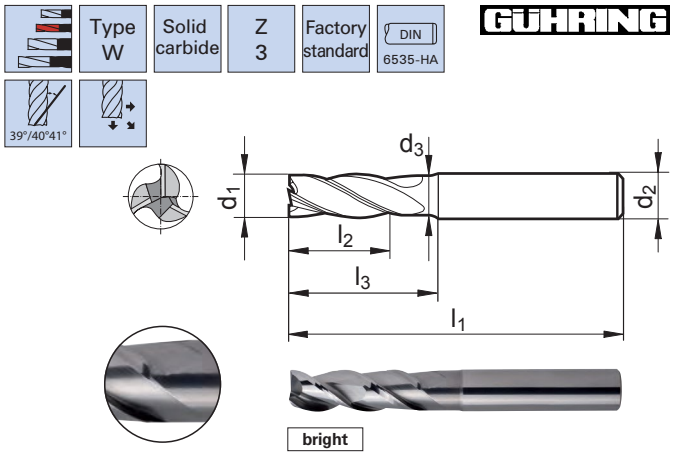
## Solid carbide roughing cutter for aluminium 3 x D

NEW

GÜHRING

**Design:** Solid carbide, factory standard, bright, core fissure, nano-polished cutting edges, with centre cut. Surface polished.

**Application:** For the machining of aluminium, aluminium alloys, short- and long-chipping brass.
Tools with a cutting length of 3 x D are core reinforced and are suitable for keyway/roughing of $a_p = 1 \times D$, HPC-roughing and smoothing over the entire cutting length.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2370 | | | | | | | | | | | | 440 | |

| Order No. | Ø $d_1$ e8 | 2370 GÜHRING bright | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Shank Ø $d_2$ h6 | Corner chamfer 45° | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm |
| 0502 | 5 | 30.90 | 15 | 57 | 4.7 | 6 | 0.05 | 0.030 |
| 0602 | 6 | 30.90 | 18 | 65 | 5.7 | 6 | 0.05 | 0.040 |
| 0802 | 8 | 34.60 | 24 | 75 | 7.7 | 8 | 0.10 | 0.050 |
| 1002 | 10 | 57.60 | 30 | 80 | 9.5 | 10 | 0.10 | 0.065 |
| 1202 | 12 | 86.40 | 36 | 93 | 11.5 | 12 | 0.15 | 0.080 |
| 1602 | 16 | 154.00 | 48 | 108 | 15.5 | 16 | 0.15 | 0.095 |
| 2002 | 20 | 245.50 (W221) | 60 | 126 | 19.5 | 20 | 0.15 | 0.110 |

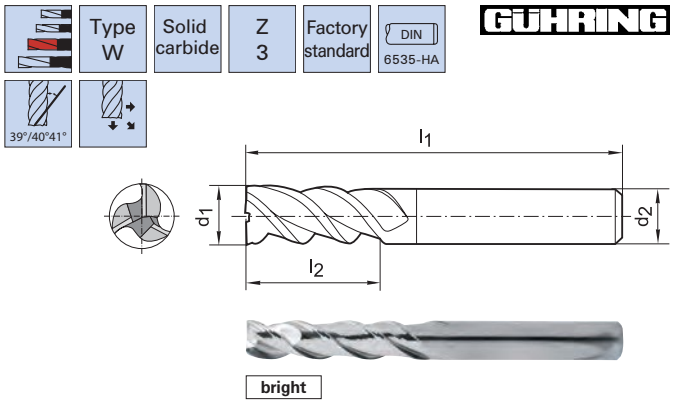
## Solid carbide roughing cutter for aluminium 4 x D

NEW

GÜHRING

**Design:** Solid carbide, factory standard, bright, core fissure, nano-polished cutting edges, with centre cut. Surface polished.

**Application:** For the machining of aluminium, aluminium alloys, short- and long-chipping brass.
Tools with a cutting length of 4 x D are core reinforced and are suitable for keyway/roughing of $a_p = 1 \times D$, HPC-roughing and smoothing over the entire cutting length.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2370 | | | | | | | | | | | | 440 | |

| Order No. | Ø $d_1$ e8 | 2370 GÜHRING bright | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Corner chamfer 45° | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm |
| 0603 | 6 | 37.00 | 24 | 65 | 6 | 0.05 | 0.050 |
| 0803 | 8 | 41.10 | 32 | 75 | 8 | 0.10 | 0.080 |
| 1003 | 10 | 70.00 | 40 | 100 | 10 | 0.10 | 0.100 |
| 1203 | 12 | 104.00 | 48 | 100 | 12 | 0.15 | 0.120 |
| 1603 | 16 | 184.50 | 64 | 125 | 16 | 0.15 | 0.150 |
| 2003 | 20 | 294.50 (W221) | 80 | 150 | 20 | 0.15 | 0.170 |

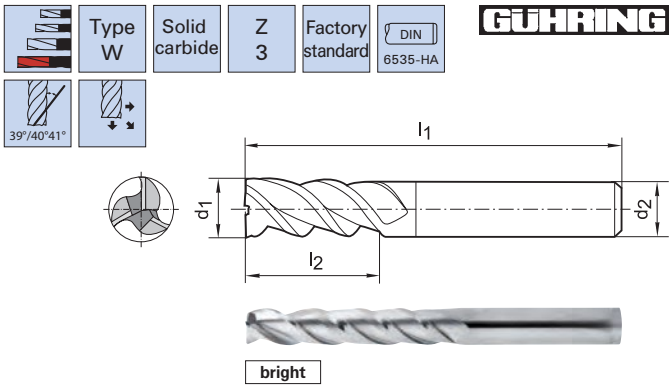
## Solid carbide roughing cutter for aluminium 5 x D

NEW

GÜHRING

**Design:** Solid carbide, factory standard, bright, core fissure, nano-polished cutting edges, with centre cut. Surface polished.

**Application:** For the machining of aluminium, aluminium alloys, short- and long-chipping brass.
Tools with a cutting length of 5 x D are core reinforced and are suitable for keyway/roughing of $a_p = 1 \times D$, HPC-roughing and smoothing over the entire cutting length.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2370 | | | | | | | | | | | | 440 | |

| Order No. | Ø $d_1$ e8 mm | 2370 GÜHRING bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Corner chamfer 45° mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0604 | 6 | 40.30 | 30 | 75 | 6 | 0.05 | 0.035 |
| 0804 | 8 | 45.30 | 40 | 86 | 8 | 0.10 | 0.045 |
| 1004 | 10 | 74.90 (W221) | 50 | 100 | 10 | 0.10 | 0.060 |

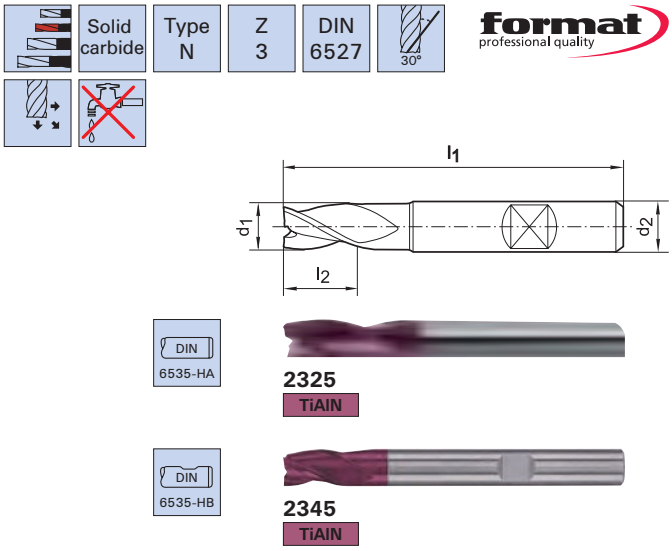
| Order No. | Ø $d_1$ e8 mm | 2370 GÜHRING bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Corner chamfer 45° mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1204 | 12 | 113.00 | 60 | 120 | 12 | 0.15 | 0.080 |
| 1604 | 16 | 199.00 | 80 | 150 | 16 | 0.15 | 0.090 |
| 2004 | 20 | 319.50 (W221) | 100 | 175 | 20 | 0.15 | 0.100 |

## Solid Carbide 3 Flute Slot Drill

format professional quality

**Design:** Solid carbide (K10/K20), type N, DIN 6527, 30°, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining. Feed is approx. 50% higher than with a 2-edged cutter.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2325 | 100 | 100 | | | 30 | | | | | 40 | 120 | 300 | 80 |
| 2345 | 100 | 100 | | | 30 | | | | | 40 | 120 | 300 | 80 |

| Order No. | Ø $d_1$ h10 mm | 2325 format TiAlN | 2345 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0200 | 2.0 | 17.70 | 17.45 | 3 | 50 | 6 | 0.005 |
| 0250 | 2.5 | 19.00 | 19.35 | 3 | 50 | 6 | 0.010 |
| 0300 | 3.0 | 17.70 | 17.45 | 4 | 50 | 6 | 0.010 |
| 0350 | 3.5 | 19.00 | 17.30 | 4 | 50 | 6 | 0.020 |
| 0400 | 4.0 | 17.90 | 16.85 | 5 | 54 | 6 | 0.020 |
| 0500 | 5.0 | 18.60 | 16.85 | 6 | 54 | 6 | 0.020 |
| 0600 | 6.0 | 17.20 | 16.25 | 7 | 54 | 6 | 0.024 |
| 0700 | 7.0 | 24.70 (W220) | 21.50 (W212) | 8 | 58 | 8 | 0.032 |

| Order No. | Ø $d_1$ h10 mm | 2325 format TiAlN | 2345 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0800 | 8.0 | 23.70 | 22.00 | 9 | 58 | 8 | 0.032 |
| 0900 | 9.0 | 37.00 | 34.00 | 10 | 66 | 10 | 0.038 |
| 1000 | 10.0 | 34.50 | 31.90 | 11 | 66 | 10 | 0.038 |
| 1200 | 12.0 | 48.90 | 45.40 | 12 | 73 | 12 | 0.046 |
| 1400 | 14.0 | 63.80 | 59.90 | 14 | 75 | 14 | 0.054 |
| 1600 | 16.0 | 78.20 | 73.80 | 16 | 82 | 16 | 0.054 |
| 1800 | 18.0 | 120.40 | 109.50 | 18 | 84 | 18 | 0.066 |
| 2000 | 20.0 | 128.60 (W220) | 117.00 (W212) | 20 | 92 | 20 | 0.066 |

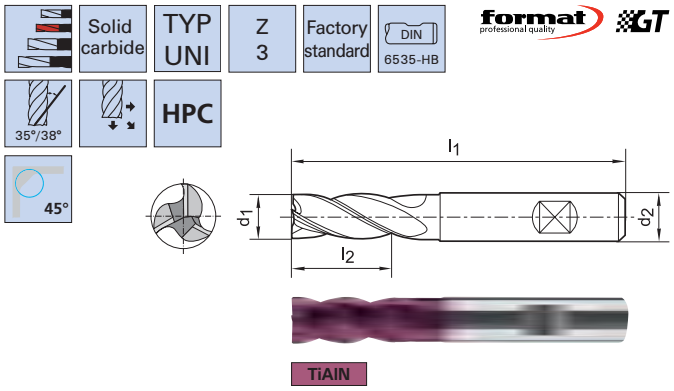
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid carbide high performance cutter FORMAT GT, UNI

NEW

**Design:** Solid carbide, type UNI, according to factory standard, TiAlN-coated, unevenly twisted and unevenly pitched, cutting tips with 45° cutting corner chamfer, extended flutes.

**Application:** Universally applicable for roughing and smoothing, for large cutting depths with utmost machining performance at very regular run. **The dynamic rotation allows HPC application with increased cutting values at ideal chipping values.**




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2797 | 230 | 140 | | | | | | | | | 160 | | |

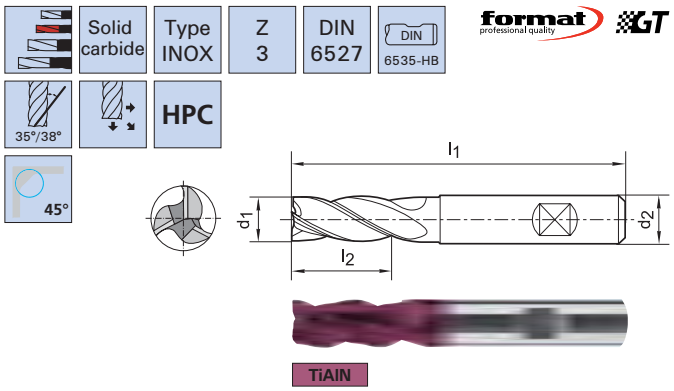
| Order No. | Ø $d_1$ h10 | 2797 TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Corner chamfer 45° | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm |
| 0300 | 3 | 12.50 | 8 | 57 | 6 | 0.10 | 0.028 |
| 0400 | 4 | 12.00 | 11 | 57 | 6 | 0.10 | 0.035 |
| 0500 | 5 | 13.10 | 13 | 57 | 6 | 0.15 | 0.035 |
| 0600 | 6 | 13.65 | 13 | 57 | 6 | 0.20 | 0.040 |
| 0800 | 8 | 18.50 | 19 | 63 | 8 | 0.20 | 0.050 |
| 1000 | 10 | 24.30 | 22 | 72 | 10 | 0.20 | 0.070 |
| 1200 | 12 | 33.96 | 26 | 83 | 12 | 0.30 | 0.090 |
| 1600 | 16 | 53.44 | 32 | 92 | 16 | 0.30 | 0.130 |
| 2000 | 20 | 82.60 (W201) | 38 | 104 | 20 | 0.40 | 0.170 |

## Solid carbide high performance cutter FORMAT GT, INOX

NEW

**Design:** Solid carbide, type INOX, DIN 6527, TiAlN-coated, unevenly twisted and unevenly pitched, cutting tips with 45° cutting corner chamfer, extended flutes.

**Application:** For INOX and titanium materials, for roughing and smoothing, for large cutting depths with utmost machining performance at very regular run and soft cut. **The dynamic rotation allows HPC application with increased cutting values at ideal chipping values.**



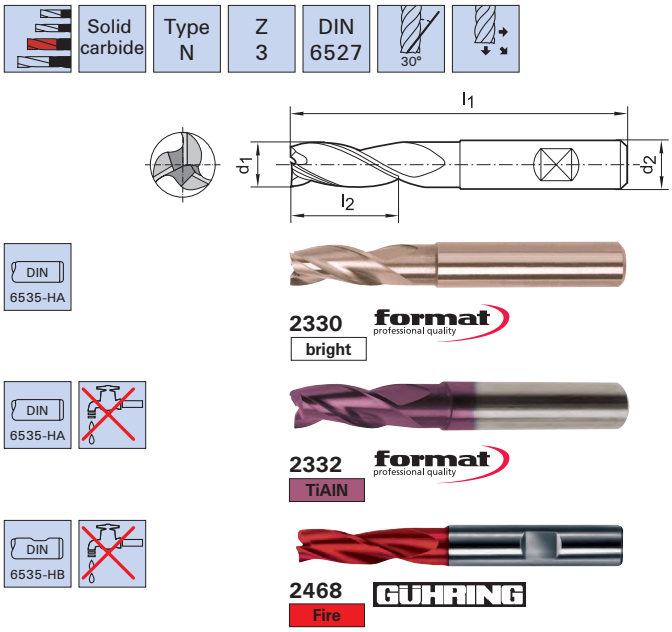

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2798 | | | | | | | | | 86 | 35 | | | |

| Order No. | Ø $d_1$ h10 | 2798 TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Corner chamfer 45° | Stainless and acid-resistant steels (INOX) $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm |
| 0300 | 3 | 18.00 | 8 | 57 | 6 | 0.05 | 0.015 |
| 0400 | 4 | 18.00 | 11 | 57 | 6 | 0.05 | 0.020 |
| 0500 | 5 | 18.00 | 13 | 57 | 6 | 0.08 | 0.024 |
| 0600 | 6 | 18.00 | 13 | 57 | 6 | 0.08 | 0.028 |
| 0800 | 8 | 24.40 | 19 | 63 | 8 | 0.10 | 0.038 |
| 1000 | 10 | 34.00 | 22 | 72 | 10 | 0.10 | 0.050 |
| 1200 | 12 | 48.00 | 26 | 83 | 12 | 0.15 | 0.055 |
| 1600 | 16 | 78.00 | 32 | 92 | 16 | 0.20 | 0.080 |
| 2000 | 20 | 125.00 (W201) | 38 | 104 | 20 | 0.20 | 0.090 |

## Long Series Solid Carbide 3 Flute Slot Drills

**Design:** Suitable for drilling.

**Application:** Can be used for milling keyways and feather key grooves P9 as well as for universal machining.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2330 | 60 | 60 | | | | | | | | 25 | 70 | 180 | 50 |
| 2332 | 100 | 100 | 80 | | 30 | | | | | 40 | 120 | 300 | 100 |
| 2468 | 100 | 100 | 80 | | 30 | | | | 60 | 40 | 120 | 300 | 100 |

| Order No. | Ø $d_1$ h10 | 2330 format bright | 2332 format TiAlN | 2468 GÜHRING Fire | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | | | mm | mm | mm | mm |
| 0200 | 2 | 16.25 | 18.25 | 21.20 | 6 | 57 | 6 | 0.005 |
| 0300 | 3 | 16.25 | 18.25 | 21.20 | 7 | 57 | 6 | 0.010 |
| 0400 | 4 | 15.70 | 17.35 | 20.40 | 8 | 57 | 6 | 0.020 |
| 0500 | 5 | 15.70 | 17.35 | 20.40 | 10 | 57 | 6 | 0.020 |
| 0600 | 6 | 15.45 | 16.95 | 19.05 | 10 | 57 | 6 | 0.024 |
| 0700 | 7 | – | – | 30.00 | 13 | 63 | 8 | 0.032 |
| 0800 | 8 | 17.95 | 22.90 | 25.90 | 16 | 63 | 8 | 0.032 |
| 0900 | 9 | – | – | 43.50 | 16 | 72 | 10 | 0.038 |
| 1000 | 10 | 29.40 | 33.10 | 38.30 | 19 | 72 | 10 | 0.038 |
| 1100 | 11 | 46.30 | – | – | 22 | 83 | 12 | 0.042 |
| 1200 | 12 | 42.30 | 47.30 | 53.80 | 22 | 83 | 12 | 0.046 |
| 1400 | 14 | 57.80 | 61.30 | 74.50 | 22 | 83 | 14 | 0.054 |
| 1600 | 16 | 68.80 | 77.10 | 90.00 | 26 | 92 | 16 | 0.054 |
| 1800 | 18 | – | 114.50 | 129.50 | 26 | 92 | 18 | 0.066 |
| 2000 | 20 | 118.00 (W210) | 121.00 (W212) | 135.50 (W220) | 32 | 104 | 20 | 0.066 |

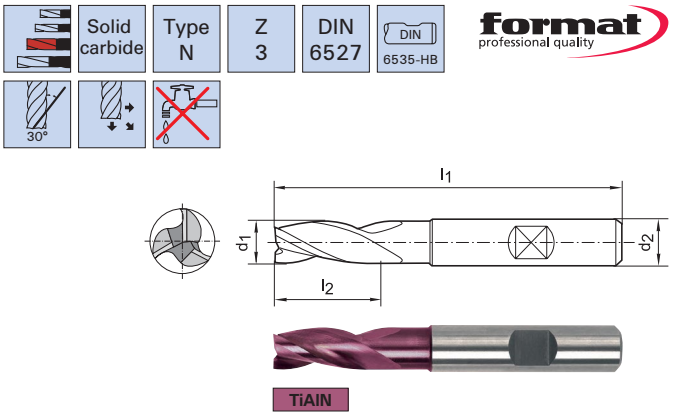
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide 3 Flute Slot Drills

**Design:** Solid carbide (K10/K20), type N, DIN 6527, 30°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining. **For milling depths up to max. 1.5 x D.** Feed is approx. 50% higher than with a 2-edged cutter.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2348 | 100 | 100 | | | | | | | | 40 | 120 | 300 | 80 |

| Order No. | Ø $d_1$ h10 mm | 2348 format TiAlN mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0200 | 2 | 19.80 | 6 | 57 | 6 | 0.005 |
| 0300 | 3 | 19.80 | 7 | 57 | 6 | 0.010 |
| 0400 | 4 | 18.85 | 8 | 57 | 6 | 0.020 |
| 0500 | 5 | 18.85 | 10 | 57 | 6 | 0.020 |
| 0600 | 6 | 18.45 | 10 | 57 | 6 | 0.024 |
| 0800 | 8 | 24.70 | 16 | 63 | 8 | 0.032 |
| 1000 | 10 | 36.00 | 19 | 72 | 10 | 0.038 |
| 1200 | 12 | 51.30 | 22 | 83 | 12 | 0.046 |
| 1400 | 14 | 66.60 | 22 | 83 | 14 | 0.054 |
| 1600 | 16 | 83.70 | 26 | 92 | 16 | 0.054 |
| 1800 | 18 | 124.00 | 26 | 92 | 18 | 0.066 |
| 2000 | 20 | 131.00 (W212) | 32 | 104 | 20 | 0.066 |

## Solid Carbide 3 Flute Slot Drill Set

**Design:** Solid carbide (K10/K20), type N, DIN 6527, 30°, **TiAlN-coated,** with centre cut.
**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

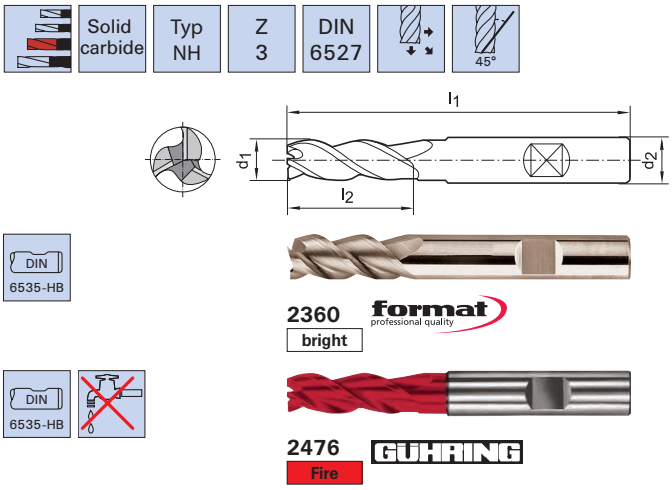
**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining.
**For milling depths up to max. 1.5 x D.** Feed is approx. 50% higher than with a 2-edged cutter.

| Order No. | Set content Ø mm | 2348 format TiAlN |
|---|---|---|
| 0010 | 4; 5; 6; 8; 10; 12 (order no. 2348) | 156.50 (W212) |

## Solid Carbide 3 Flute Slot Drill

**Design:** Type NH, DIN 6527, 45°, with centre cut.

**Application:** Can be used for universal machining. Feed is approx. 50% higher than with a 2-edged cutter. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2360 | 110 | 110 | 70 | | | | | | | | 40 | 100 | 76 |
| 2476 | 170 | 170 | 120 | 70 | 50 | | | | 70 | 60 | 200 | | |

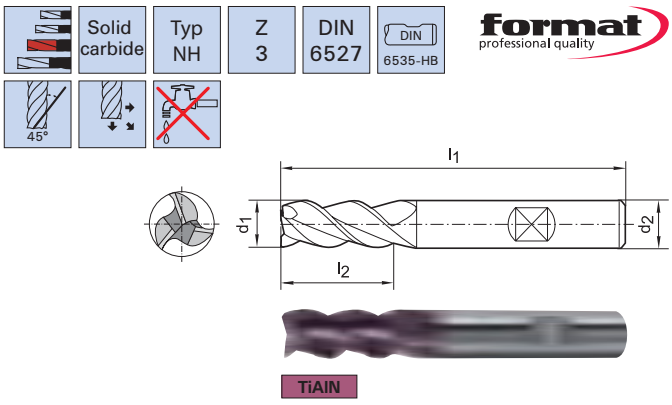
| Order No. | Ø $d_1$ h10 mm | 2360 format bright | 2476 GUHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0300 | 3 | 16.95 | 20.70 | 7 | 57 | 6 | 0.005 |
| 0400 | 4 | 16.95 | 20.70 | 8 | 57 | 6 | 0.008 |
| 0500 | 5 | 16.95 | 20.70 | 10 | 57 | 6 | 0.011 |
| 0600 | 6 | 16.95 | 20.70 | 10 | 57 | 6 | 0.014 |
| 0800 | 8 | 20.00 | 27.40 | 16 | 63 | 8 | 0.018 |
| 1000 | 10 | 32.80 | 39.30 | 19 | 72 | 10 | 0.023 |
| 1200 | 12 | 48.20 | 59.00 | 22 | 83 | 12 | 0.027 |
| 1600 | 16 | 83.10 | 101.50 | 26 | 92 | 16 | 0.045 |
| 2000 | 20 | 130.00 (W210) | – (W220) | 32 | 104 | 20 | 0.056 |

## Solid Carbide Hi-Helix 3 Flute Slot Drill

**Design:** Solid carbide (K10/K20), type NH, DIN 6527, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for universal machining. Feed is approx. 50% higher than with a 2-edged cutter. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2361 | 120 | 120 | 80 | | | | | | | | 120 | 145 | 106 |

| Order No. | Ø $d_1$ h10 mm | 2361 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0300 | 3 | 17.50 | 7 | 57 | 6 | 0.005 |
| 0400 | 4 | 17.50 | 8 | 57 | 6 | 0.007 |
| 0500 | 5 | 17.50 | 10 | 57 | 6 | 0.008 |
| 0600 | 6 | 17.50 (W212) | 10 | 57 | 6 | 0.012 |

| Order No. | Ø $d_1$ h10 mm | 2361 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0700 | 7 | 23.80 | 13 | 63 | 8 | 0.014 |
| 0800 | 8 | 23.30 | 16 | 63 | 8 | 0.016 |
| 0900 | 9 | 34.40 | 16 | 72 | 10 | 0.018 |
| 1000 | 10 | 33.80 (W212) | 19 | 72 | 10 | 0.020 |

Continued overleaf

## Solid Carbide Hi-Helix 3 Flute Slot Drill

Continued

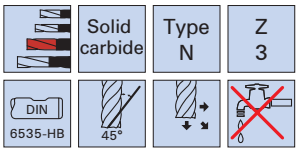
| Order No. | Ø $d_1$ h10 mm | 2361 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 1200 | 12 | 48.90 | 22 | 83 | 12 | 0.024 |
| 1400 | 14 | 62.30 | 22 | 83 | 14 | 0.028 |
| 1600 | 16 | 82.70 (W212) | 26 | 92 | 16 | 0.038 |
| 1800 | 18 | 108.00 | 26 | 92 | 18 | 0.043 |
| 2000 | 20 | 130.00 (W212) | 32 | 104 | 20 | 0.048 |

## Solid Carbide Hi-Helix 3 Flute Slot Drills

**Design:** Solid carbide (K10/K20), type NH, DIN 6527, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for universal machining. Feed is approx. 50% higher than with a 2-edged cutter. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided.

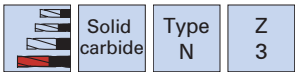


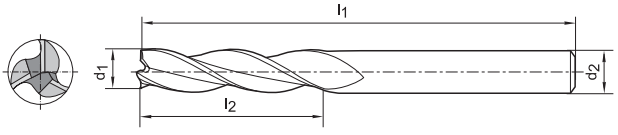
| Order No. | Set content Ø mm | 2361 format TiAlN |
|---|---|---|
| 0010 | 4; 5; 6; 8; 10; 12 (order no. 2361) | 119.00 (W212) |

## Solid Carbide Long Series 3 Flute Slot Drills

**Design:** Type N, according to factory standard, 30°, with centre cut.

**Application:** Can be used for slot cutting as well as for universal machining. **For milling depths up to 3 x D.** Ideal for use in mould-making. Feed is approx. 50% higher than with a 2-edged cutter.



2357 format professional quality bright

2355 GÜHRING Fire

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2357 | 60 | 60 | | | | | | | | 25 | 70 | | |
| 2355 | 100 | 100 | 60 | | | | | | | 40 | 120 | | |

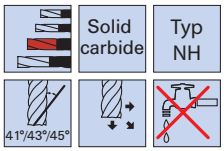
| Order No. | Ø $d_1$ h10 mm | 2357 format bright | 2355 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0300 | 3 | 22.20 | 28.80 | 20 | 75 | 3 | 0.010 |
| 0400 | 4 | 24.80 | 31.30 | 25 | 75 | 4 | 0.020 |
| 0500 | 5 | 27.00 | 34.60 | 30 | 75 | 5 | 0.020 |
| 0600 | 6 | 34.90 | 45.30 | 30 | 75 | 6 | 0.024 |
| 0800 | 8 | 49.10 | 58.50 | 40 | 100 | 8 | 0.032 |
| 1000 | 10 | 68.20 | 76.60 | 40 | 100 | 10 | 0.038 |
| 1200 | 12 | 107.50 | 109.50 | 45 | 150 | 12 | 0.046 |
| 1600 | 16 | 192.00 (W210) | 206.00 (W221) | 65 | 150 | 16 | 0.054 |

## Solid Carbide Vari-Helix 3 Flute Slot Drill

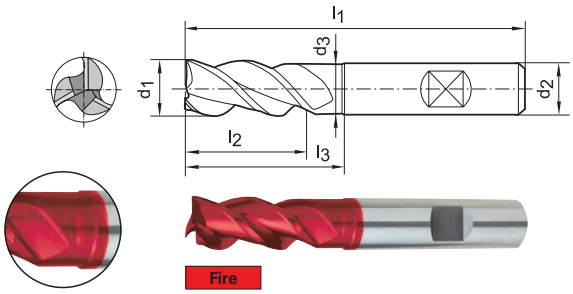
**Design:** Ultra-fine grit solid carbide, type NH, DIN 6527, 41°/43°/45°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling as well as for universal machining. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 41°/43°/45° results in particularly smooth running and thus extremely good workpiece surface quality for finishing milling operations. In addition, feeds higher by up to 60% can be realized for slot cutting and rough milling. A much longer tool life is achieved than with conventional tools. The 3-edged cutter has a larger gullet and can thus also be used for very large cutting depths.




GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2371 | 200 | 170 | 140 | 110 | 100 | | | | 80 | 70 | 200 | 250 | 150 |

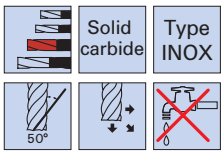
| Order No. | Ø $d_1$ e8 mm | 2371 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0300 | 3.0 | 30.10 | 8 | 57 | 2.7 | 21 | 6 | 0.019 |
| 0350 | 3.5 | 33.00 | 10 | 57 | 3.2 | 21 | 6 | 0.019 |
| 0370 | 3.7 | 34.20 | 11 | 57 | 3.4 | 21 | 6 | 0.019 |
| 0400 | 4.0 | 30.10 | 11 | 57 | 3.7 | 21 | 6 | 0.028 |
| 0450 | 4.5 | 33.00 | 11 | 57 | 4.2 | 21 | 6 | 0.028 |
| 0470 | 4.7 | 34.20 | 13 | 57 | 4.4 | 21 | 6 | 0.028 |
| 0500 | 5.0 | 30.10 | 13 | 57 | 4.7 | 21 | 6 | 0.028 |
| 0550 | 5.5 | 33.00 | 13 | 57 | 5.2 | 21 | 6 | 0.028 |
| 0570 | 5.7 | 34.20 | 13 | 57 | 5.4 | 21 | 6 | 0.028 |
| 0600 | 6.0 | 37.40 | 13 | 57 | 5.5 | 21 | 6 | 0.039 |
| 0650 | 6.5 | 41.10 (W221) | 16 | 63 | 6.0 | 27 | 8 | 0.039 |

| Order No. | Ø $d_1$ e8 mm | 2371 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0700 | 7.0 | 44.50 | 16 | 63 | 6.5 | 27 | 8 | 0.039 |
| 0750 | 7.5 | 48.60 | 19 | 63 | 7.0 | 27 | 8 | 0.039 |
| 0800 | 8.0 | 51.00 | 19 | 63 | 7.5 | 27 | 8 | 0.053 |
| 0850 | 8.5 | 56.00 | 19 | 72 | 8.0 | 32 | 10 | 0.053 |
| 0900 | 9.0 | 63.40 | 19 | 72 | 8.5 | 32 | 10 | 0.053 |
| 0950 | 9.5 | 70.00 | 22 | 72 | 9.0 | 32 | 10 | 0.053 |
| 1000 | 10.0 | 75.80 | 22 | 72 | 9.2 | 32 | 10 | 0.065 |
| 1200 | 12.0 | 98.00 | 26 | 83 | 11.2 | 38 | 12 | 0.079 |
| 1600 | 16.0 | 168.00 | 32 | 92 | 15.0 | 44 | 16 | 0.095 |
| 2000 | 20.0 | 255.00 (W221) | 38 | 104 | 19.0 | 54 | 20 | 0.110 |

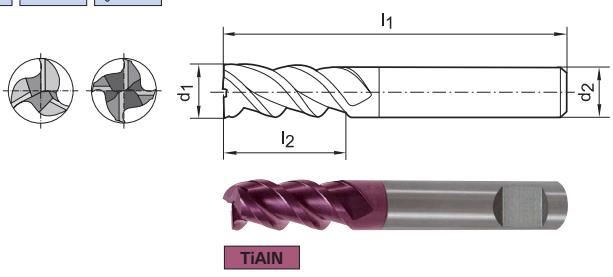
## Solid Carbide Hi-Helix End Mills

**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 50°, **TiAlN-coated,** with centre cut.

**Application:** For slot cutting and for universal machining. Also suitable for trimming and finishing milling. Feed is approx. 50% higher than with a 2-edged cutter. The extremely high spiral lead results in particularly smooth running and thus low deviation in shape and a very good surface on the workpiece. Particularly suitable for **VA machining**.




format professional quality




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2365 | 107 | 107 | 66 | 66 | | | | | 54 | 54 | | | |

| Order No. | Ø $d_1$ h10 mm | 2365 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Stainless and acid-resistant steels (INOX) $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 34.40 | 13 | 50 | 6 | 3 | 0.019 |
| 0800 | 8 | 44.10 | 19 | 60 | 8 | 3 | 0.025 |
| 1000 | 10 | 65.20 | 22 | 70 | 10 | 3 | 0.027 |
| 1200 | 12 | 89.50 (W212) | 25 | 75 | 12 | 3 | 0.028 |

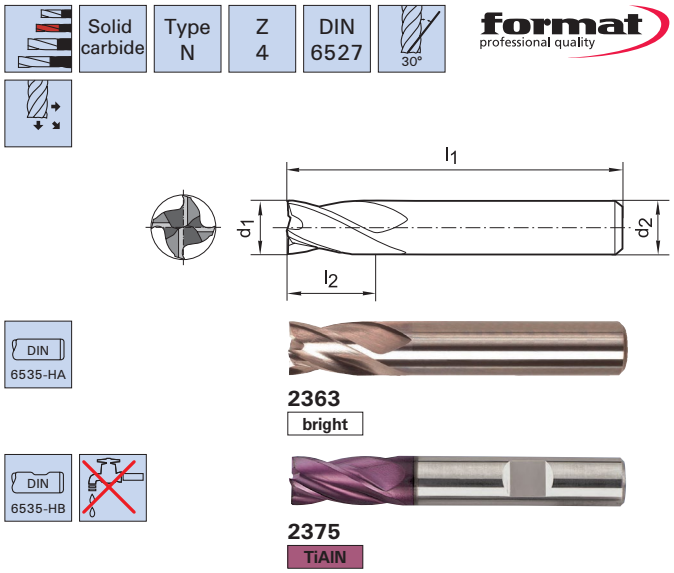
| Order No. | Ø $d_1$ h10 mm | 2365 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Stainless and acid-resistant steels (INOX) $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1600 | 16 | 148.50 | 32 | 90 | 16 | 3 | 0.031 |
| 1800 | 18 | 217.00 | 32 | 90 | 18 | 3 | 0.030 |
| 2000 | 20 | 246.00 | 38 | 100 | 20 | 4 | 0.020 |
| 2500 | 25 | 394.00 (W212) | 45 | 120 | 25 | 4 | 0.022 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide 4 Flute End Mill

**Design:** Solid carbide (K10/K20), type N, DIN 6527, 30°, bright, with centre cut.

**Application:** Can be used for peripheral milling as well as for universal machining. Can also be used for trimming and finishing milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2363 | 35 | 35 | 30 | 30 | | | | | 52 | | 68 | 100 | 76 |
| 2375 | 45 | 45 | 40 | 40 | | | | | 68 | | 88 | 130 | 99 |

| Order No. | Ø $d_1$ h10 | 2363 format bright | 2375 format TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | mm |
| 0200 | 2 | 13.05 | 14.40 | 4 | 50 | 6 | 0.004 |
| 0300 | 3 | 11.95 | 13.30 | 5 | 50 | 6 | 0.007 |
| 0400 | 4 | 11.95 | 13.30 | 8 | 54 | 6 | 0.014 |
| 0500 | 5 | 11.95 | 13.30 | 9 | 54 | 6 | 0.014 |
| 0600 | 6 | 11.95 | 13.30 | 10 | 54 | 6 | 0.017 |
| 0800 | 8 | 16.60 | 19.00 | 12 | 58 | 8 | 0.024 |
| 1000 | 10 | 27.10 | 29.50 | 14 | 66 | 10 | 0.030 |
| 1200 | 12 | 38.20 | 41.70 | 16 | 73 | 12 | 0.036 |
| 1400 | 14 | 51.80 | 54.00 | 18 | 75 | 14 | 0.045 |
| 1600 | 16 | 75.90 | 78.10 | 22 | 82 | 16 | 0.045 |
| 1800 | 18 | 97.90 | 100.50 | 24 | 84 | 18 | 0.057 |
| 2000 | 20 | 121.00 (W210) | 125.50 (W212) | 26 | 92 | 20 | 0.057 |

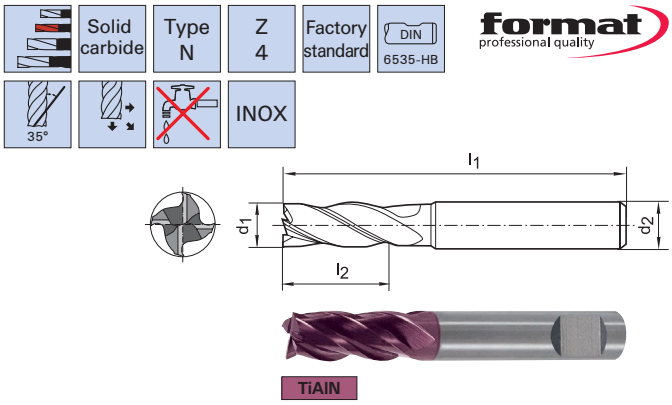
**Hydro-expansion chucks can be found from 3/81.**

## Solid Carbide 4 Flute End Mills

**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 35°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling as well as for universal machining. Can also be used for trimming and finishing milling. Particularly suitable for **machining stainless steel**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2377 | 107 | **107** | **66** | | | | | | **54** | **54** | | | |

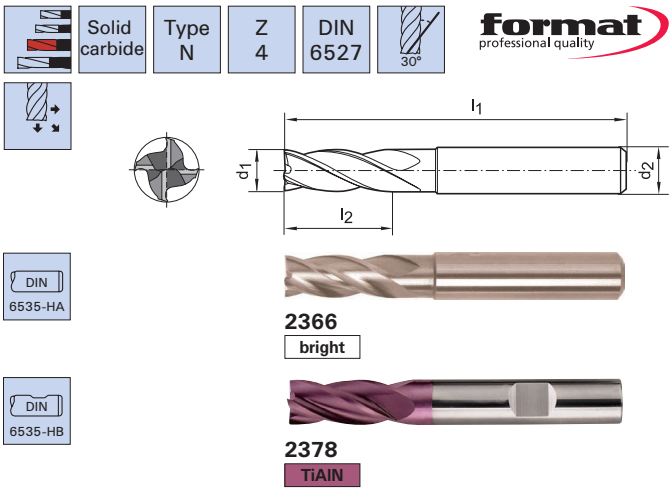
| Order No. | Ø $d_1$ h10 mm | 2377 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0200 | 2.0 | 26.50 | 6 | 40 | 6 | 0.004 |
| 0250 | 2.5 | 26.50 | 8 | 40 | 6 | 0.005 |
| 0300 | 3.0 | 26.50 | 8 | 45 | 6 | 0.007 |
| 0350 | 3.5 | 26.50 | 10 | 45 | 6 | 0.009 |
| 0400 | 4.0 | 26.50 | 11 | 45 | 6 | 0.016 |
| 0450 | 4.5 | 26.50 | 11 | 45 | 6 | 0.019 |
| 0500 | 5.0 | 26.50 | 13 | 50 | 6 | 0.022 |
| 0550 | 5.5 | 26.50 | 13 | 50 | 6 | 0.024 |
| 0600 | 6.0 | 26.50 (W212) | 13 | 50 | 6 | 0.029 |

| Order No. | Ø $d_1$ h10 mm | 2377 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0800 | 8.0 | 34.00 | 19 | 60 | 8 | 0.041 |
| 0850 | 8.5 | 50.20 | 19 | 70 | 10 | 0.043 |
| 1000 | 10.0 | 50.20 | 22 | 70 | 10 | 0.044 |
| 1200 | 12.0 | 68.80 | 26 | 75 | 12 | 0.042 |
| 1400 | 14.0 | 114.00 | 26 | 85 | 16 | 0.049 |
| 1600 | 16.0 | 114.00 | 32 | 100 | 16 | 0.051 |
| 2000 | 20.0 | 189.50 | 38 | 105 | 20 | 0.044 |
| 2500 | 25.0 | 303.00 (W212) | 45 | 120 | 25 | 0.040 |

## Solid Carbide 4 Flute End Mills

**Design:** With centre cut, suitable for drilling.

**Application:** Can be used for peripheral milling as well as for universal machining. Can also be used for trimming and finishing milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2366 | **35** | **35** | **30** | 30 | | | | | 52 | | 68 | 100 | 76 |
| 2378 | **45** | **45** | **40** | **40** | | | | | 68 | | **88** | 130 | 99 |

| Order No. | Ø $d_1$ h10 mm | 2366 format bright | 2378 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0200 | 2 | 16.55 | – | 7 | 57 | 6 | 0.009 |
| 0300 | 3 | 16.55 | 19.45 | 8 | 57 | 6 | 0.014 |
| 0400 | 4 | 17.20 | 20.20 | 11 | 57 | 6 | 0.036 |
| 0500 | 5 | 17.20 (W210) | 20.20 (W212) | 13 | 57 | 6 | 0.047 |

Continued overleaf

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide 4 Flute End Mills

Continued

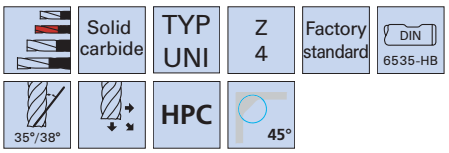
| Order No. | Ø $d_1$ h10 mm | 2366 format bright | 2378 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 17.20 | 20.20 | 13 | 57 | 6 | 0.061 |
| 0700 | 7 | 19.95 | 24.50 | 16 | 63 | 8 | 0.071 |
| 0800 | 8 | 19.95 | 24.50 | 19 | 63 | 8 | 0.088 |
| 0900 | 9 | 31.70 | 37.30 | 19 | 72 | 10 | 0.099 |
| 1000 | 10 | 31.70 | 37.30 | 22 | 72 | 10 | 0.094 |
| 1100 | 11 | 47.00 | – | 26 | 83 | 12 | 0.101 |
| 1200 | 12 | 47.00 | 54.20 | 26 | 83 | 12 | 0.094 |
| 1400 | 14 | 62.20 | 70.80 | 26 | 83 | 14 | 0.103 |
| 1600 | 16 | 85.50 | 96.10 | 32 | 92 | 16 | 0.103 |
| 1800 | 18 | 110.50 | 123.50 | 32 | 92 | 18 | 0.099 |
| 2000 | 20 | 135.00 (W210) | 153.50 (W212) | 38 | 104 | 20 | 0.099 |

## Solid carbide high performance cutter FORMAT GT, UNI

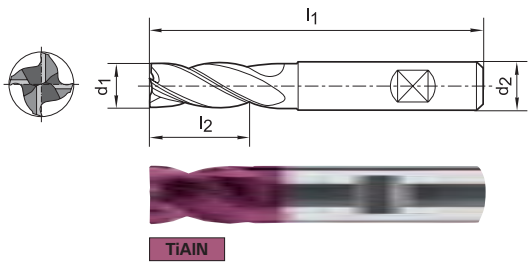
NEW

**Design:** Solid carbide, type UNI, according to factory standard, TiAlN-coated, unevenly twisted and unevenly pitched, cutting tips with 45° corner cutting chamfer.

**Application:** Universally applicable for roughing and smoothing, with utmost machining performance at very regular run. **The dynamic rotation allows HPC application with increased cutting values at ideal chipping values.**




format professional quality GT




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2799 | 230 | 140 | | | | | | | | | 160 | | |

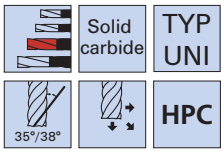
| Order No. | Ø $d_1$ h10 mm | 2799 format GT TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Corner chamfer 45° mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0300 | 3 | 11.60 | 6 | 54 | 6 | 0.13 | 0.028 |
| 0400 | 4 | 11.60 | 8 | 54 | 6 | 0.18 | 0.035 |
| 0500 | 5 | 11.60 | 9 | 54 | 6 | 0.20 | 0.035 |
| 0600 | 6 | 11.60 | 10 | 54 | 6 | 0.20 | 0.040 |
| 0800 | 8 | 15.50 | 12 | 58 | 8 | 0.20 | 0.050 |
| 1000 | 10 | 20.60 | 14 | 66 | 10 | 0.20 | 0.070 |
| 1200 | 12 | 28.50 | 16 | 73 | 12 | 0.30 | 0.090 |
| 1600 | 16 | 48.90 | 22 | 82 | 16 | 0.30 | 0.130 |
| 2000 | 20 | 71.90 (W201) | 26 | 92 | 20 | 0.40 | 0.170 |

## Solid carbide high performance cutter FORMAT GT, UNI

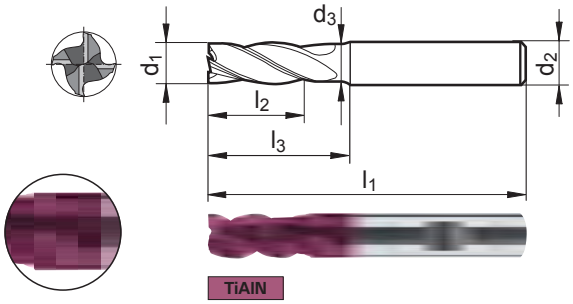
NEW

**Design:** Solid carbide, type UNI, according to factory standard, TiAlN-coated, unevenly twisted and unevenly pitched, cutting tips with 45° corner cutting chamfer with ground away shank.

**Application:** Universally applicable for roughing and smoothing, with utmost machining performance at very regular run. **The dynamic rotation allows HPC application with increased cutting values at ideal chipping values.**




format professional quality GT




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2801 | 230 | 140 | | | | | | | | | 160 | | |

| Order No. | ∅ $d_1$ h10 mm | 2801 format GT TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck ∅ $d_3$ mm | Clear area $l_3$ mm | Shank ∅ $d_2$ h6 mm | Corner chamfer 45° mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0300 | 3 | 16.00 | 8 | 57 | 2.8 | 18 | 6 | 0.13 | 0.028 |
| 0400 | 4 | 16.00 | 11 | 57 | 3.8 | 21 | 6 | 0.18 | 0.035 |
| 0500 | 5 | 16.00 | 13 | 57 | 4.8 | 21 | 6 | 0.20 | 0.035 |
| 0600 | 6 | 16.00 | 13 | 57 | 5.5 | 21 | 6 | 0.20 | 0.040 |
| 0800 | 8 | 22.50 | 19 | 63 | 7.5 | 27 | 8 | 0.20 | 0.050 |
| 1000 | 10 | 28.00 | 22 | 72 | 9.5 | 32 | 10 | 0.20 | 0.070 |
| 1200 | 12 | 39.00 | 26 | 83 | 11.5 | 38 | 12 | 0.30 | 0.090 |
| 1600 | 16 | 59.90 | 32 | 92 | 15.5 | 44 | 16 | 0.30 | 0.130 |
| 2000 | 20 | 89.00 (W201) | 38 | 104 | 19.5 | 54 | 20 | 0.40 | 0.170 |

## Solid carbide high performance cutter set FORMAT GT, UNI

NEW

**Design:** Set consisting of: (order no. 2801).

**Bonus price due to set compilation.**

2801 0001
TiAlN

2801 0003
TiAlN

| Order No. | Set content ∅ mm | 2801 format GT TiAlN |
|---|---|---|
| 0001 | 6; 8; 10; 12 (order no. 2801) | 95.00 |
| 0003 | 6; 8; 10; 12; 16 (order no. 2801) | 159.00 (W201) |

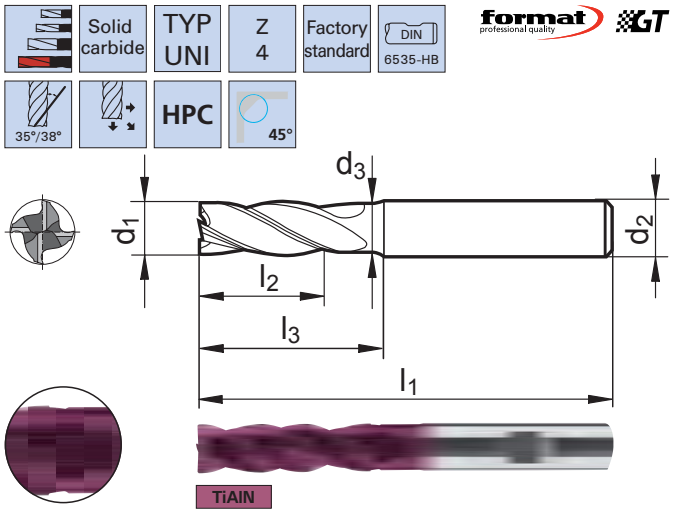
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid carbide high performance cutter FORMAT GT, UNI

NEW

**Design:** Solid carbide, type UNI, according to factory standard, TiAlN-coated, unevenly twisted and unevenly pitched, cutting tips with 45° corner cutting chamfer with ground away shank.

**Application:** Universally applicable for roughing and smoothing, with utmost machining performance at very regular run. **The dynamic rotation allows HPC application with increased cutting values at ideal chipping values.**




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2802 | 230 | 140 | | | | | | | | | 160 | | |

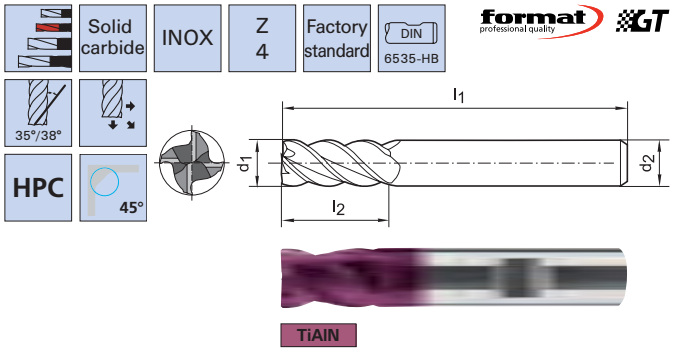
| Order No. | Ø $d_1$ h10 mm | 2802 TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Corner chamfer 45° mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 25.50 | 22 | 63 | 5.5 | 30 | 6 | 0.20 | 0.040 |
| 0800 | 8 | 31.50 | 28 | 80 | 7.5 | 36 | 8 | 0.20 | 0.050 |
| 1000 | 10 | 41.00 | 33 | 100 | 9.5 | 54 | 10 | 0.20 | 0.070 |
| 1200 | 12 | 53.00 | 42 | 100 | 11.5 | 54 | 12 | 0.30 | 0.090 |
| 1600 | 16 | 96.00 | 53 | 150 | 15.5 | 69 | 16 | 0.30 | 0.130 |
| 2000 | 20 | 140.00 (W201) | 84 | 150 | 19.5 | 84 | 20 | 0.40 | 0.170 |

## Solid carbide high performance cutter FORMAT GT, INOX

NEW

**Design:** Solid carbide, type INOX, according to factory standard, TiAlN-coated, unevenly twisted and unevenly pitched, cutting tips with 45° corner cutting chamfer with ground away shank.

**Application:** Universally applicable for roughing and smoothing, with utmost machining performance at very regular run. For INOX and titanium materials, for large cutting depths. **The dynamic rotation allows HPC application with increased cutting values at ideal chipping values.**




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2803 | | | | | | | | | 90 | 45 | | | |

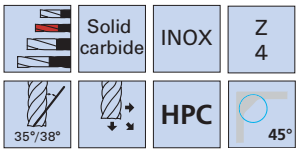
| Order No. | Ø $d_1$ h10 mm | 2803 TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Corner chamfer 45° mm | Stainless and acid-resistant steels (INOX) $f_z$ mm |
|---|---|---|---|---|---|---|
| 0300 | 3 | 14.50 | 6 | 54 | 0.13 | 0.012 |
| 0400 | 4 | 14.50 | 8 | 54 | 0.18 | 0.016 |
| 0500 | 5 | 14.50 | 9 | 54 | 0.20 | 0.020 |
| 0600 | 6 | 14.50 | 10 | 54 | 0.20 | 0.022 |
| 0800 | 8 | 18.00 | 12 | 58 | 0.20 | 0.034 |
| 1000 | 10 | 25.20 | 14 | 66 | 0.20 | 0.045 |
| 1200 | 12 | 36.00 | 16 | 73 | 0.30 | 0.050 |
| 1600 | 16 | 62.10 | 22 | 82 | 0.30 | 0.075 |
| 2000 | 20 | 93.60 (W201) | 26 | 92 | 0.40 | 0.080 |

## Solid carbide high performance cutter FORMAT GT, INOX

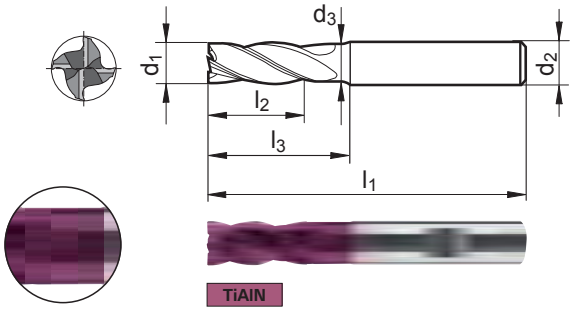
NEW

**Design:** Solid carbide, type INOX, according to factory standard, TiAlN-coated, unevenly twisted and unevenly pitched, cutting tips with 45° corner cutting chamfer with ground away shank.

**Application:** Universally applicable for roughing and smoothing, with utmost machining performance at very regular run. For INOX and titanium materials, for large cutting depths. **The dynamic rotation allows HPC application with increased cutting values at ideal chipping values.**




format professional quality GT




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2805 | | | | | | | | | 90 | 45 | | | |

| Order No. | Ø $d_1$ h10 mm | 2805 format GT TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Corner chamfer 45° mm | Stainless and acid-resistant steels (INOX) $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0300 | 3 | 18.00 | 8 | 57 | 2.8 | 12 | 6 | 0.13 | 0.012 |
| 0400 | 4 | 18.00 | 11 | 57 | 3.8 | 15 | 6 | 0.18 | 0.016 |
| 0500 | 5 | 18.00 | 13 | 57 | 4.8 | 17 | 6 | 0.20 | 0.020 |
| 0600 | 6 | 18.00 | 13 | 57 | 5.5 | 21 | 6 | 0.20 | 0.022 |
| 0800 | 8 | 24.40 | 19 | 63 | 7.5 | 27 | 8 | 0.20 | 0.033 |
| 1000 | 10 | 33.50 | 22 | 72 | 9.5 | 32 | 10 | 0.20 | 0.043 |
| 1200 | 12 | 46.00 | 26 | 83 | 11.5 | 38 | 12 | 0.30 | 0.065 |
| 1600 | 16 | 70.50 | 32 | 92 | 15.5 | 44 | 16 | 0.30 | 0.073 |
| 2000 | 20 | 104.50 (W201) | 38 | 104 | 19.5 | 54 | 20 | 0.40 | 0.077 |

## Solid carbide high performance cutter set FORMAT GT, INOX

NEW

**Design:** Set consisting of (Order No. 2805).

**Bonus price due to set compilation.**

**2805 0001**
TiAlN

**2805 0003**
TiAlN

| Order No. | Set content Ø mm | 2805 format GT TiAlN |
|---|---|---|
| 0001 | 6; 8; 10; 12 (order no. 2805) | 115.00 |
| 0003 | 6; 8; 10; 12; 16 (order no. 2805) | 179.00 (W201) |

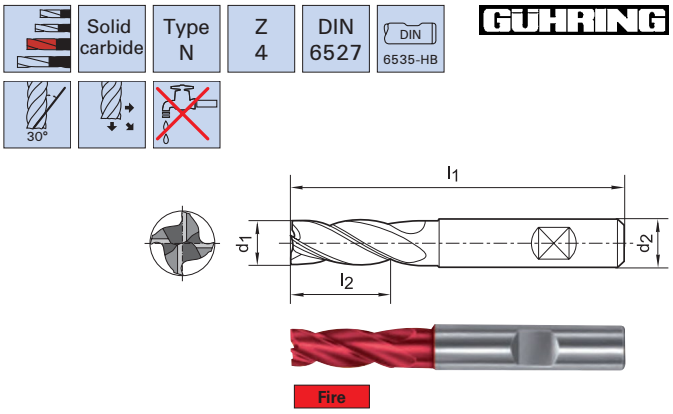
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide 4 Flute End Mills

**Design:** Ultra-fine grit solid carbide, type N, DIN 6527, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 2 x D.** Can also be used for trimming and finishing milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2470 | 100 | 100 | 60 | | 30 | | | | 50 | 40 | 120 | 300 | 100 |

| Order No. | Ø $d_1$ h10 mm | 2470 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0200 | 2 | 23.80 | 7 | 57 | 6 | 0.006 |
| 0300 | 3 | 23.80 | 8 | 57 | 6 | 0.010 |
| 0400 | 4 | 23.30 | 11 | 57 | 6 | 0.020 |
| 0500 | 5 | 23.30 | 13 | 57 | 6 | 0.020 |
| 0600 | 6 | 25.90 | 13 | 57 | 6 | 0.025 |
| 0700 | 7 | 30.50 | 16 | 63 | 8 | 0.032 |
| 0800 | 8 | 30.50 (W220) | 19 | 63 | 8 | 0.032 |

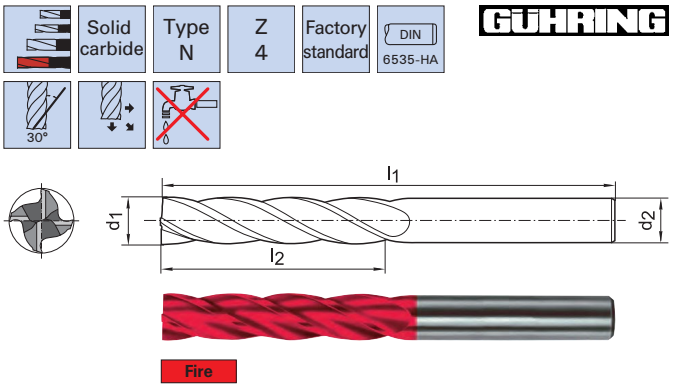
| Order No. | Ø $d_1$ h10 mm | 2470 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0900 | 9 | 39.30 | 19 | 72 | 10 | 0.039 |
| 1000 | 10 | 48.10 | 22 | 72 | 10 | 0.039 |
| 1200 | 12 | 65.20 | 26 | 83 | 12 | 0.048 |
| 1400 | 14 | 83.80 | 26 | 83 | 14 | 0.058 |
| 1600 | 16 | 110.50 | 32 | 92 | 16 | 0.058 |
| 1800 | 18 | 141.00 | 32 | 92 | 18 | 0.073 |
| 2000 | 20 | 175.00 (W220) | 38 | 104 | 20 | 0.073 |

## Solid Carbide Long Series 4 Flute End Mill

**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 3 x D.** Ideal for use in mould-making. Also suitable for trimming and finishing milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2471 | 100 | 100 | 80 | | | | | | | 40 | 120 | | |

| Order No. | Ø $d_1$ h10 mm | 2471 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 0300 | 3 | 27.40 | 20 | 75 | 3 | 0.010 |
| 0400 | 4 | 31.00 | 25 | 75 | 4 | 0.020 |
| 0500 | 5 | 33.10 | 30 | 75 | 5 | 0.020 |
| 0600 | 6 | 41.90 | 30 | 75 | 6 | 0.024 |
| 0800 | 8 | 43.00 | 40 | 100 | 8 | 0.032 |
| 1000 | 10 | 62.10 (W220) | 40 | 100 | 10 | 0.038 |

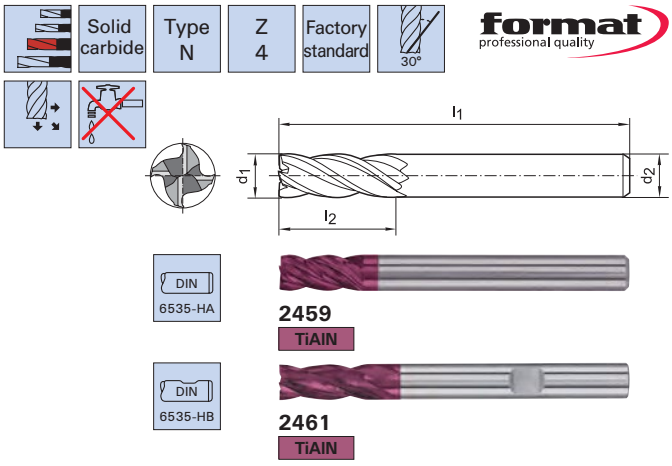
| Order No. | Ø $d_1$ h10 mm | 2471 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | $f_z$ mm |
|---|---|---|---|---|---|---|
| 1200 | 12 | 99.40 | 45 | 150 | 12 | 0.046 |
| 1400 | 14 | 118.00 | 45 | 150 | 14 | 0.054 |
| 1600 | 16 | 148.00 | 65 | 150 | 16 | 0.054 |
| 1800 | 18 | 166.50 | 65 | 150 | 18 | 0.066 |
| 2000 | 20 | 194.50 (W220) | 65 | 150 | 20 | 0.066 |

## Solid Carbide 4 Flute End Mill

**Design:** Solid carbide (K10/K20), type N, according to factory standard, with irregular pitch, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling and drill cutting. The irregular pitch results in low-vibration running and thus a high surface quality. Burr formation on the cutting edges is avoided.



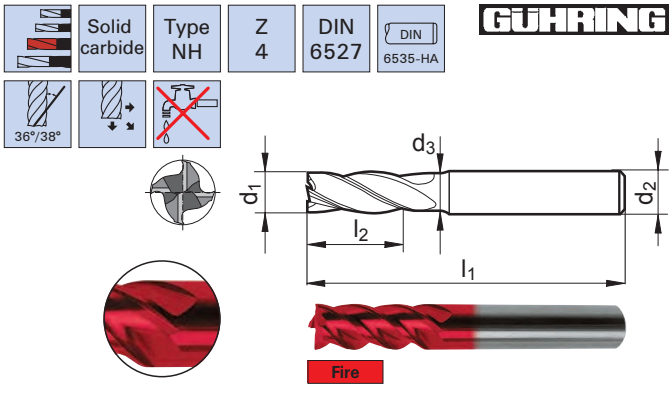

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2459 | 140 | **140** | 130 | | | | | | **80** | | **100** | 160 | |
| 2461 | 140 | **140** | 130 | | | | | | **80** | | **100** | 160 | |

| Order No. | Ø $d_1$ h10 mm | 2459 format TiAlN | 2461 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0300 | **3** | **18.40** | **18.40** | 8 | 57 | 6 | 0.005 |
| 0400 | **4** | **18.40** | **18.40** | 11 | 57 | 6 | 0.007 |
| 0500 | **5** | **18.40** | **18.40** | 13 | 57 | 6 | 0.010 |
| 0600 | **6** | **18.40** | **18.40** | 13 | 57 | 6 | 0.015 |
| 0800 | **8** | **26.10** | **26.10** | 19 | 63 | 8 | 0.025 |
| 1000 | **10** | **38.70** | **38.70** | 22 | 72 | 10 | 0.039 |
| 1200 | **12** | **49.80** | **49.80** | 26 | 83 | 12 | 0.047 |
| 1400 | **14** | **66.50** | – | 26 | 83 | 14 | 0.049 |
| 1600 | **16** | **86.70** | **86.70** | 32 | 92 | 16 | 0.053 |
| 1800 | **18** | **121.00** | – | 32 | 92 | 18 | 0.059 |
| 2000 | **20** | **134.00** (W212) | **134.00** (W212) | 38 | 104 | 20 | 0.065 |

## Solid Carbide Vari-Helix 4 Flute Endmill

**Design:** Ultra-fine grit solid carbide, type NH, DIN 6527, 40/42°, **fire-coated,** with centre cut.

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 2 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 36°/38° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2513 | **200** | **160** | 130 | 100 | | | | | **60** | 70 | **180** | **350** | 200 |

| Order No. | Ø $d_1$ h10 mm | 2513 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0400 | **4** | **27.70** | 11 | 57 | 3.7 | 6 | 0.028 |
| 0500 | **5** | **27.70** | 13 | 57 | 4.7 | 6 | 0.028 |
| 0600 | **6** | **33.90** | 13 | 57 | 5.5 | 6 | 0.039 |
| 0800 | **8** | **46.80** (W221) | 19 | 63 | 7.5 | 8 | 0.053 |

| Order No. | Ø $d_1$ h10 mm | 2513 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1000 | **10** | **71.30** | 22 | 72 | 9.2 | 10 | 0.065 |
| 1200 | **12** | **90.80** | 26 | 83 | 11.2 | 12 | 0.079 |
| 1600 | **16** | **157.00** | 32 | 92 | 15.0 | 16 | 0.095 |
| 2000 | **20** | **243.50** (W221) | 38 | 104 | 19.0 | 20 | 0.110 |

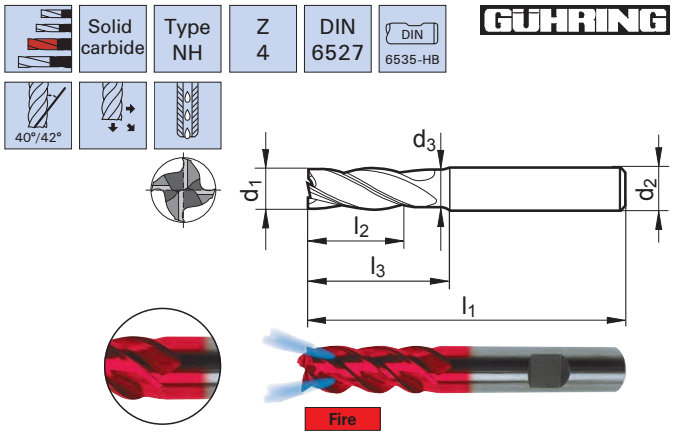
## Solid Carbide Vari-Helix 4 Flute End Mill with Through Coolant

**Design:** Ultra-fine grit solid carbide, type NH, DIN 6527, 40/42°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**With inner cooling: Increase in tool life of up to 50%, since chip blockage is reduced.**

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 2 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 40°/42° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2454 | 170 | 170 | 140 | | | | | | 70 | 70 | 200 | | 130 |

| Order No. | Ø $d_1$ h10 mm | 2454 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 65.80 | 13 | 57 | 5.5 | 6 | 0.039 |
| 0800 | 8 | 86.40 | 19 | 63 | 7.5 | 8 | 0.053 |
| 1000 | 10 | 128.50 (W221) | 22 | 72 | 9.2 | 10 | 0.065 |

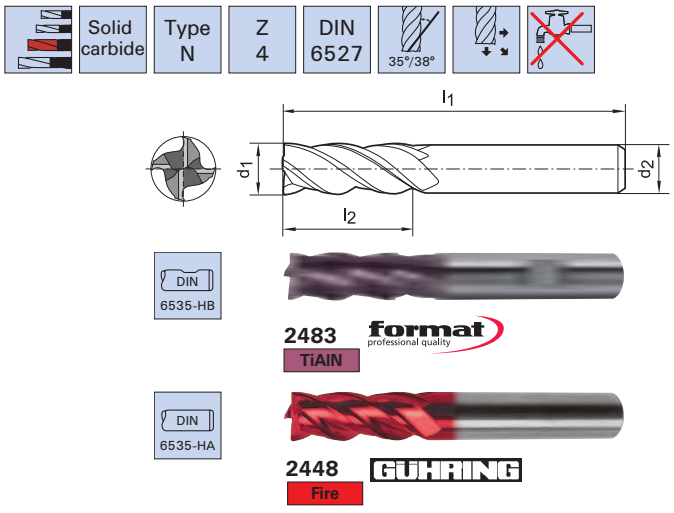
| Order No. | Ø $d_1$ h10 mm | 2454 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1200 | 12 | 164.50 | 26 | 83 | 11.2 | 12 | 0.079 |
| 1600 | 16 | 285.00 | 32 | 92 | 15.0 | 16 | 0.095 |
| 2000 | 20 | 436.50 (W221) | 38 | 104 | 19.0 | 20 | 0.110 |

## Solid carbide end mill with 35°/38° spiral lead

**Design:** Ultra-fine grit solid carbide, type N, DIN 6527, 35°/38°, with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. Air cooling recommended.**

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 2 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 35°/38° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools, as well as maximum stability during machining. In addition, feeds higher by up to 60% can be realized.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2483 | 180 | 160 | 120 | 80 | 60 | | | | | | 100 | 300 | 80 |
| 2448 | 200 | 180 | 160 | 130 | 100 | | | | | 70 | 200 | | |

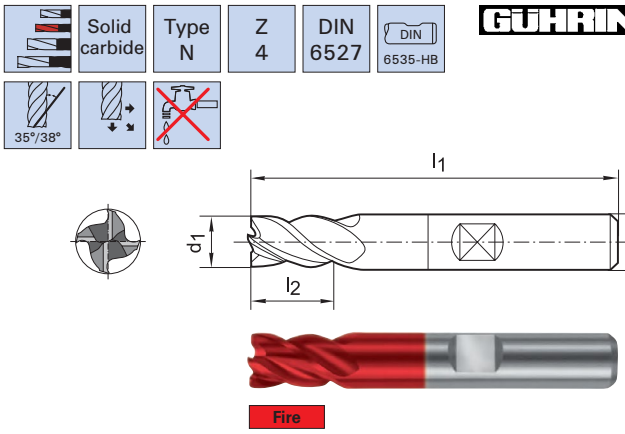
| Order No. | Ø $d_1$ h10 mm | 2483 format TiAlN | 2448 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 22.40 | 26.40 | 13 | 57 | 6 | 0.039 |
| 0800 | 8 | 30.90 | 37.30 | 19 | 63 | 8 | 0.053 |
| 1000 | 10 | 45.40 | 55.90 | 22 | 72 | 10 | 0.065 |
| 1200 | 12 | 57.60 | 71.40 | 26 | 83 | 12 | 0.079 |
| 1400 | 14 | 77.90 | 95.20 | 26 | 83 | 14 | 0.095 |
| 1600 | 16 | 101.50 | 124.00 | 32 | 92 | 16 | 0.095 |
| 1800 | 18 | 139.50 | 174.00 | 32 | 92 | 18 | 0.110 |
| 2000 | 20 | 154.50 (W212) | 192.50 (W220) | 38 | 104 | 20 | 0.110 |

## Solid Carbide Vari-Helix 4 Flute End Mill

**Design:** Ultra-fine grit solid carbide, type NH, DIN 6527, 35/38°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. Air cooling recommended.**

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 1 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 35°/38° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools, as well as maximum stability during machining. In addition, feeds higher by up to 60% can be realized.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2460 | 200 | 180 | 160 | 130 | 120 | | | | | 70 | 200 | | |

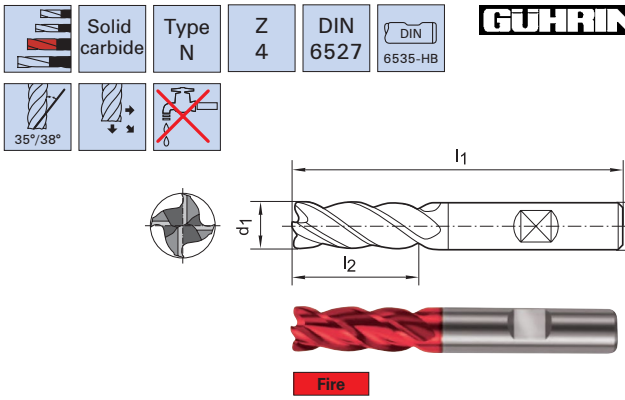
| Order No. | Ø $d_1$ h10 | 2460 GÜHRING Fire | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0600 | 6 | 23.30 | 10 | 54 | 6 | 0.039 |
| 0800 | 8 | 33.10 | 12 | 58 | 8 | 0.053 |
| 1000 | 10 | 46.60 | 14 | 66 | 10 | 0.065 |
| 1200 | 12 | 62.10 | 16 | 73 | 12 | 0.079 |
| 1400 | 14 | 76.60 | 18 | 75 | 14 | 0.095 |
| 1600 | 16 | 101.50 | 22 | 82 | 16 | 0.095 |
| 1800 | 18 | 148.00 | 24 | 84 | 18 | 0.110 |
| 2000 | 20 | 154.00 (W220) | 26 | 92 | 20 | 0.110 |

## Solid carbide end mill with 35°/38° spiral lead

**Design:** Ultra-fine grit solid carbide, type N, DIN 6527, 35°/38°, with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. Air cooling recommended.**

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 2 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 35°/38° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools, as well as maximum stability during machining. In addition, feeds higher by up to 60% can be realized.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2462 | 200 | 180 | 160 | 130 | 100 | | | | | 70 | 200 | | |

| Order No. | Ø $d_1$ h10 | 2462 GÜHRING Fire | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0600 | 6 | 28.50 | 13 | 57 | 6 | 0.039 |
| 0800 | 8 | 39.30 | 19 | 63 | 8 | 0.053 |
| 1000 | 10 | 58.00 | 22 | 72 | 10 | 0.065 |
| 1200 | 12 | 73.50 | 26 | 83 | 12 | 0.079 |
| 1400 | 14 | 99.40 | 26 | 83 | 14 | 0.095 |
| 1600 | 16 | 129.50 | 32 | 92 | 16 | 0.095 |
| 1800 | 18 | 178.00 | 32 | 92 | 18 | 0.110 |
| 2000 | 20 | 196.50 (W220) | 38 | 104 | 20 | 0.110 |

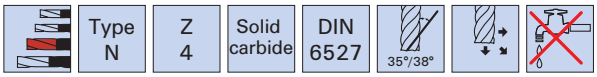
## Solid Carbide Vari-Helix 4 Flute End Mill Set

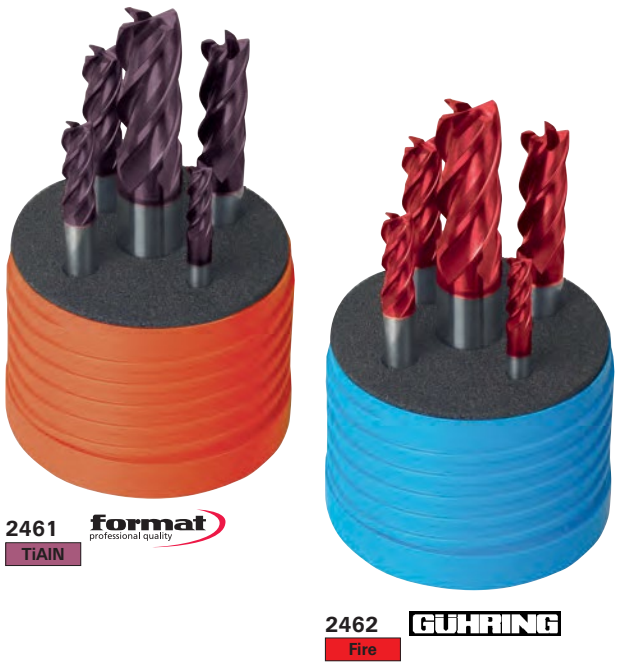
**Design:** Solid carbide, type N, DIN 6527, with centre cut.

**Application:** Can be used for milling keyways and feather key grooves as well as for universal machining.

**2461** TiAlN — Set consisting of (order no. 2483).

**2462** Fire — Set consisting of (order no. 2462).



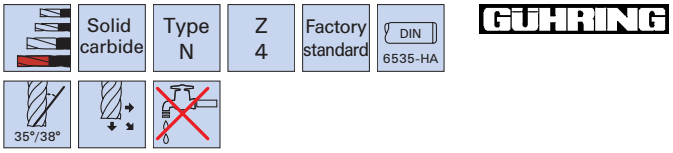

| Order No. | Set content Ø mm | 2461 format TiAlN | 2462 GÜHRING Fire |
|---|---|---|---|
| 0020 | 6; 8; 10; 12; 16 | 170.50 (W212) | 296.00 (W220) |

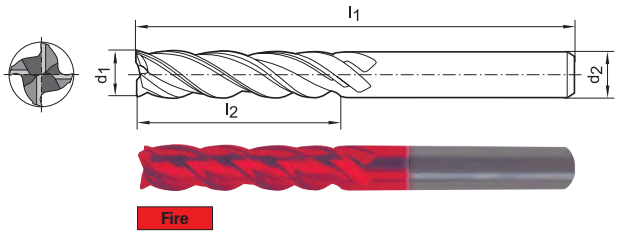
## Solid Carbide Long Series Vari-Helix 4 Flute End Mills

**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 35°/38°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. Air cooling recommended.**

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 3 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 35°/38° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools, as well as maximum stability during machining. In addition, feeds higher by up to 60% can be realized.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2463 | 170 | 170 | 130 | 110 | 100 | | | | 50 | 50 | 200 | 520 | 130 |

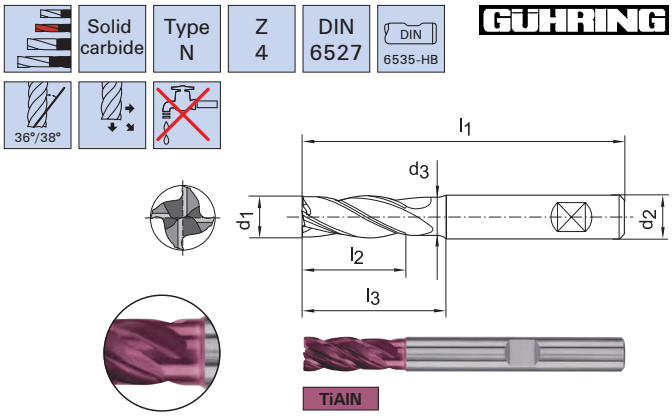
| Order No. | Ø $d_1$ h10 mm | 2463 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 1000 | 10 | 90.00 | 40 | 100 | 10 | 0.065 |
| 1200 | 12 | 130.50 | 45 | 150 | 12 | 0.079 |
| 1600 | 16 | 246.50 | 65 | 150 | 16 | 0.095 |
| 2000 | 20 | 327.00 | 65 | 150 | 20 | 0.110 |
| 2500 | 25 | 443.00 (W220) | 75 | 150 | 25 | 0.165 |

## Solid Carbide Vari-Helix 4 Flute End Mills

**Design:** Ultra-fine grit solid carbide, type NH, DIN 6527, 36/38°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling as well as for universal machining. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 36°/38° results in particularly smooth running and thus extremely good workpiece surface quality for finishing milling operations. In addition, feeds higher by up to 60% can be realized for slot cutting and rough milling. A much longer tool life is achieved than with conventional tools.



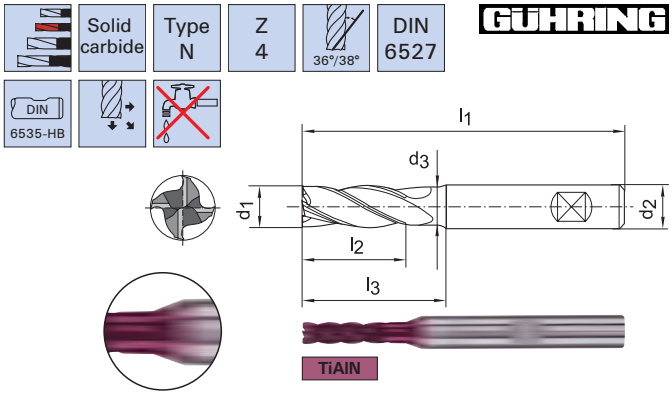

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2407 | 170 | 170 | | | | | | | 100 | 70 | 200 | 520 | 130 |

| Order No. | Ø $d_1$ h10 | 2407 GÜHRING TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm |
| 0400 | 4 | 35.00 | 8 | 54 | 3.7 | 18 | 6 | 0.028 |
| 0500 | 5 | 35.00 | 9 | 54 | 4.7 | 18 | 6 | 0.028 |
| 0600 | 6 | 35.00 | 10 | 54 | 5.5 | 18 | 6 | 0.039 |
| 0800 | 8 | 47.80 | 12 | 58 | 7.5 | 22 | 8 | 0.053 |
| 1000 | 10 | 71.60 | 14 | 66 | 9.2 | 26 | 10 | 0.065 |
| 1200 | 12 | 90.60 | 16 | 73 | 11.2 | 28 | 12 | 0.079 |
| 1600 | 16 | 158.00 | 22 | 82 | 15.0 | 34 | 16 | 0.095 |
| 2000 | 20 | 240.50 (W221) | 26 | 92 | 19.0 | 42 | 20 | 0.110 |

## Solid Carbide Necked Vari-Helix 4 Flute End Mills

**Design:** Solid carbide, type N, DIN 6527, 35°/38°, **TiAlN-coated,** with centre cut.

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 1 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 35°/38° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools, as well as maximum stability during machining. In addition, feeds higher by up to 60% can be realized.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2409 | 180 | 140 | | | | | | | 70 | 70 | 170 | 200 | 80 |

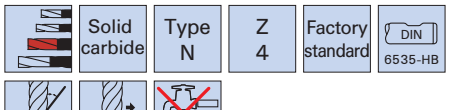
| Order No. | Ø $d_1$ h10 | 2409 GÜHRING TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Stainless and acid-resistant steels (INOX) $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm |
| 0300 | 3 | 35.40 | 8 | 57 | 2.7 | 21 | 6 | 0.015 |
| 0400 | 4 | 33.80 | 11 | 57 | 3.7 | 21 | 6 | 0.015 |
| 0500 | 5 | 33.80 | 13 | 57 | 4.7 | 21 | 6 | 0.025 |
| 0600 | 6 | 41.10 | 13 | 57 | 5.5 | 21 | 6 | 0.039 |
| 0800 | 8 | 56.00 | 19 | 63 | 7.5 | 27 | 8 | 0.053 |
| 1000 | 10 | 84.00 | 22 | 72 | 9.2 | 32 | 10 | 0.065 |
| 1200 | 12 | 107.00 | 26 | 83 | 11.2 | 38 | 12 | 0.079 |
| 1600 | 16 | 184.50 | 32 | 92 | 15.0 | 44 | 16 | 0.095 |
| 2000 | 20 | 283.00 (W221) | 38 | 104 | 19.0 | 54 | 20 | 0.110 |

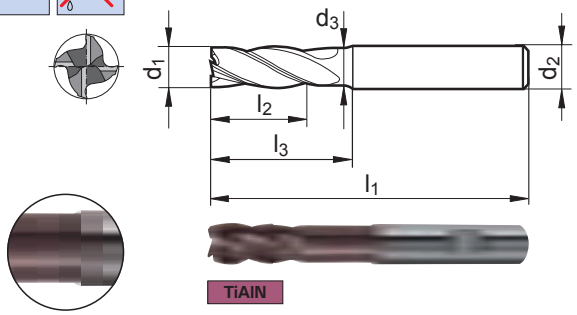
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide Necked Vari-Helix 4 Flute End Mills

**Design:** Solid carbide, type N, according to factory standard, 35°/38°, **TiAlN-coated,** with centre cut.

**Application:** Can be used for peripheral milling as well as for universal machining. Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools, as well as maximum stability during machining. In addition, feeds higher by up to 60% can be realised.



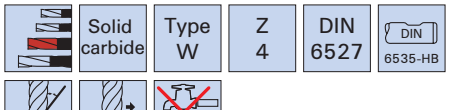

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2439 | 170 | 170 | | | | | | | 100 | 70 | 200 | 520 | 130 |

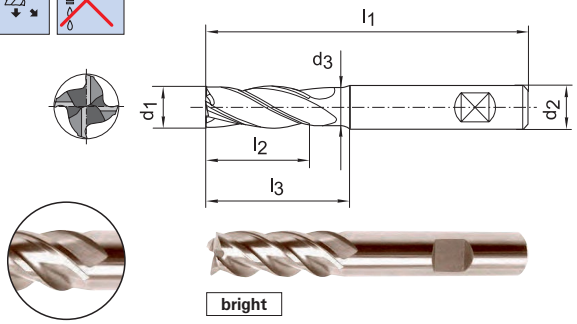
| Order No. | Ø $d_1$ h10 | 2439 GÜHRING TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm |
| 0600 | 6 | 46.10 | 10 | 65 | 5.5 | 29 | 6 | 0.039 |
| 0800 | 8 | 60.90 | 12 | 75 | 7.5 | 39 | 8 | 0.053 |
| 1000 | 10 | 92.20 | 14 | 80 | 9.2 | 40 | 10 | 0.065 |
| 1200 | 12 | 118.50 | 16 | 93 | 11.2 | 48 | 12 | 0.079 |
| 1600 | 16 | 206.00 | 22 | 108 | 15.0 | 60 | 16 | 0.095 |
| 2000 | 20 | 309.50 (W220) | 26 | 126 | 19.0 | 76 | 20 | 0.110 |

## Solid Carbide Vari-Helix 4 Flute End Mill for Aluminium

**Design:** Ultra-fine grit solid carbide, type W, DIN 6527, 40°/42°, with centre cut.

**Application:** Can be used for peripheral milling as well as for universal machining. **For milling depths up to 2 x D.** Can also be used for trimming and finishing milling. Can be used for rough grinding, slot cutting and finishing milling. The irregular spiral lead 40°/42° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools, as well as maximum stability during machining. In addition, feeds higher by up to 60% can be realized.



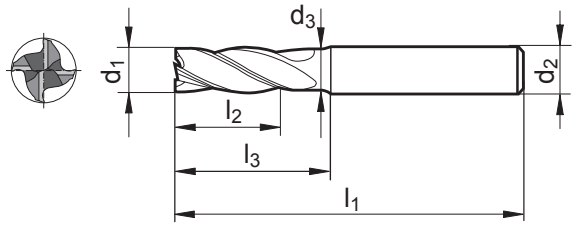

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2455 | | | | | | | | | | | | 520 | 130 |

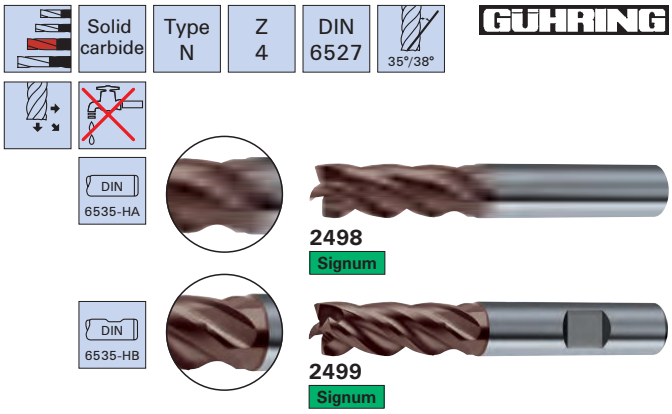
| Order No. | Ø $d_1$ h10 | 2455 GÜHRING bright | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm |
| 0400 | 4 | 28.80 | 11 | 57 | 3.7 | 21 | 6 | 0.026 |
| 0500 | 5 | 28.80 | 13 | 57 | 4.7 | 21 | 6 | 0.026 |
| 0600 | 6 | 28.80 | 13 | 57 | 5.5 | 21 | 6 | 0.033 |
| 0800 | 8 | 33.00 | 19 | 63 | 7.5 | 27 | 8 | 0.047 |
| 1000 | 10 | 55.10 | 22 | 72 | 9.2 | 32 | 10 | 0.059 |
| 1200 | 12 | 76.60 | 26 | 83 | 11.2 | 38 | 12 | 0.072 |
| 1600 | 16 | 127.00 | 32 | 92 | 15.0 | 44 | 16 | 0.088 |
| 2000 | 20 | 210.50 (W221) | 38 | 104 | 19.0 | 54 | 20 | 0.100 |

## Solid Carbide Necked Var-Helix 4 Flute End Mill

**Design:** Solid carbide, type N, DIN 6527L, 35°/38°, **Signum-coated,** with centre cut.

**Application:** Can be used for grooving, ramping (up to 45°), roughing, smoothing and drilling with high speeds with one tool in various materials.



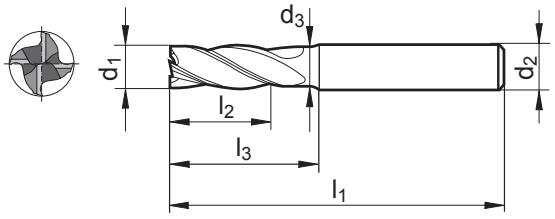

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2498 | 270 | 240 | 200 | | | | | | 100 | | 160 | 340 | |
| 2499 | 270 | 240 | 200 | | | | | | 100 | | 160 | 340 | |

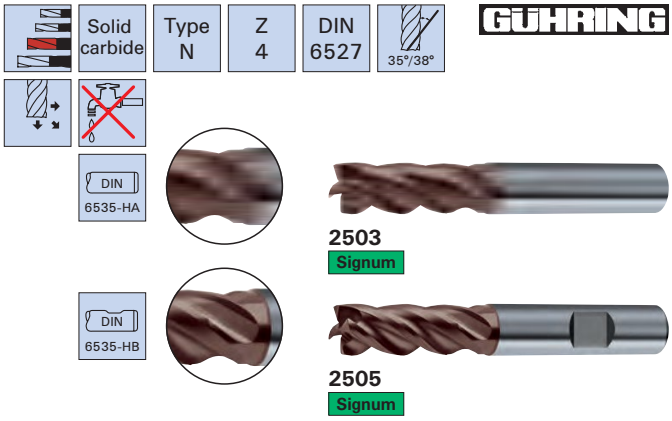
| Order No. | Ø $d_1$ h10 mm | 2498 GÜHRING Signum | 2499 GÜHRING Signum | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0570 | 5.7 | 39.50 | 41.10 | 13 | 57 | 5.7 | 21 | 6 | 0.010 |
| 0770 | 7.7 | 54.30 | 56.00 | 19 | 63 | 7.4 | 27 | 8 | 0.015 |
| 0970 | 9.7 | 81.50 | 84.00 | 22 | 72 | 9.3 | 32 | 10 | 0.025 |
| 1170 | 11.7 | 105.50 | 108.00 | 26 | 83 | 11.3 | 38 | 12 | 0.030 |
| 1370 | 13.7 | 139.00 | 142.50 | 26 | 83 | 13.2 | 38 | 14 | 0.030 |
| 1560 | 15.6 | 181.00 | 186.00 | 32 | 92 | 15.1 | 44 | 16 | 0.035 |
| 1950 | 19.5 | 278.00 (W220) | 283.00 (W220) | 38 | 104 | 19.0 | 54 | 20 | 0.040 |

## Solid Carbide Necked Vari-Helix 4 Flute End Mills

**Design:** Solid carbide, type N, DIN 6527 L, 35°/38°, **Signum-coated,** with centre cut.

**Application:** Can be used for grooving, ramping (up to 45°), roughing, smoothing and drilling with high speeds with one tool in various materials.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2503 | 270 | 240 | 200 | | | | | | 100 | | 160 | 340 | |
| 2505 | 270 | 240 | 200 | | | | | | 100 | | 160 | 340 | |

| Order No. | Ø $d_1$ h10 mm | 2503 GÜHRING Signum | 2505 GÜHRING Signum | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 39.50 | 41.10 | 13 | 57 | 5.7 | 20 | 6 | 0.010 |
| 0800 | 8 | 54.30 | 56.00 | 19 | 63 | 7.7 | 26 | 8 | 0.015 |
| 1000 | 10 | 81.50 | 84.00 | 22 | 72 | 9.5 | 30 | 10 | 0.025 |
| 1200 | 12 | 105.50 | 108.00 | 26 | 83 | 11.5 | 36 | 12 | 0.030 |
| 1400 | 14 | 139.00 | 142.50 | 26 | 83 | 13.5 | 36 | 14 | 0.030 |
| 1600 | 16 | 181.00 | 186.00 | 32 | 92 | 15.5 | 42 | 16 | 0.035 |
| 2000 | 20 | 278.00 (W220) | 283.00 (W220) | 38 | 104 | 19.5 | 52 | 20 | 0.040 |

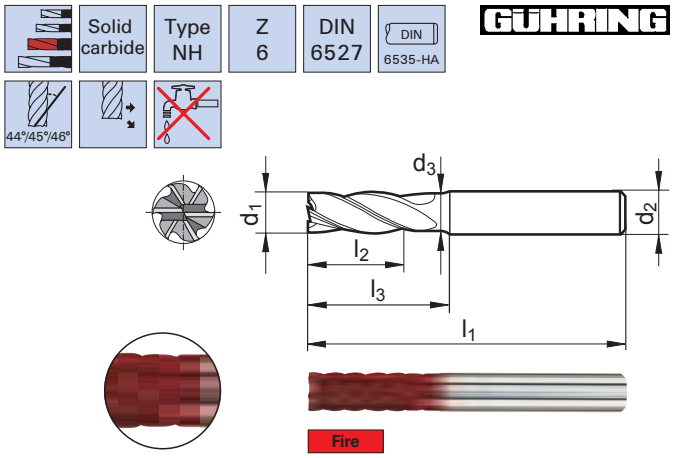
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide Multi-Flute Vari-Helix End Mill

**Design:** Ultra-fine grit solid carbide, type NH, DIN 6527, 44°/45°/46°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling as well as for universal machining. Can also be used for trimming and finishing milling. Can be used for rough grinding and finishing milling. The irregular spiral lead 44°/45°/46° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2456 | 250 | 220 | 180 | 140 | 100 | | | | 120 | 70 | 200 | 520 | 130 |

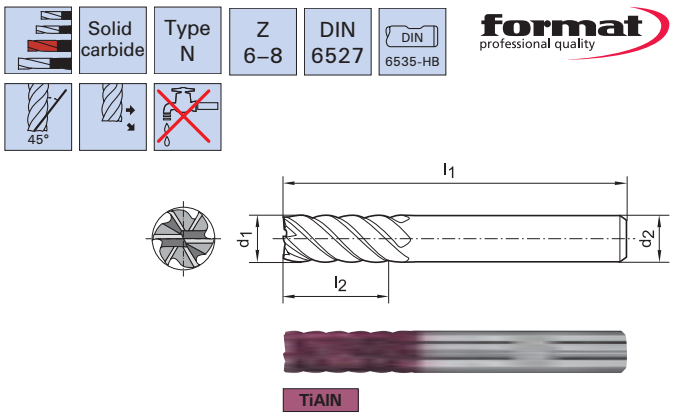
| Order No. | Ø $d_1$ h10 mm | 2456 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0800 | 8 | 43.60 | 19 | 63 | 7.5 | 26 | 8 | 0.053 |
| 1000 | 10 | 70.00 | 22 | 72 | 9.2 | 30 | 10 | 0.065 |
| 1200 | 12 | 93.80 | 26 | 83 | 11.2 | 36 | 12 | 0.079 |
| 1600 | 16 | 169.50 | 32 | 92 | 15.0 | 42 | 16 | 0.095 |
| 2000 | 20 | 242.00 | 38 | 104 | 19.0 | 52 | 20 | 0.110 |
| 2500 | 25 | 454.50 (W221) | 45 | 121 | 23.5 | 63 | 25 | 0.165 |

## Solid carbide end mill

**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided. Particularly suitable for **machining stainless steel**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2383 | 118 | 118 | 87 | 87 | | | | | 67 | 67 | | | |

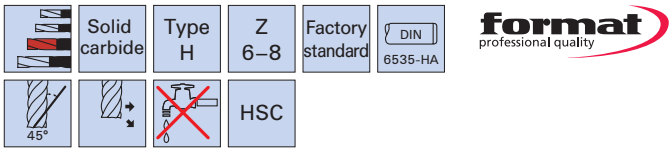
| Order No. | Ø $d_1$ h10 mm | 2383 format professional quality TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 23.50 | 13 | 57 | 6 | 6 | 0.052 |
| 0800 | 8 | 29.60 | 19 | 63 | 8 | 6 | 0.069 |
| 1000 | 10 | 44.40 | 22 | 72 | 10 | 6 | 0.086 |
| 1200 | 12 | 60.40 | 26 | 83 | 12 | 6 | 0.094 |
| 1400 | 14 | 75.40 | 26 | 83 | 14 | 6 | 0.109 |
| 1600 | 16 | 101.50 | 32 | 92 | 16 | 6 | 0.096 |
| 1800 | 18 | 119.00 | 32 | 92 | 18 | 8 | 0.081 |
| 2000 | 20 | 149.00 (W212) | 38 | 104 | 20 | 8 | 0.073 |

## Solid Carbide Multi-Flute Carbide End Mill for Hard Machining

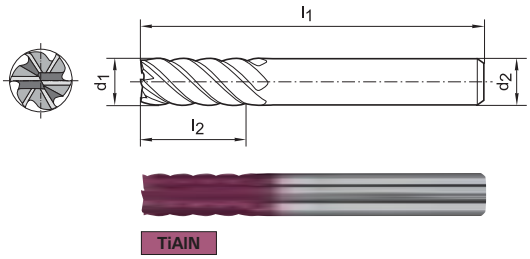
**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided. **Suitable for HSC machining up to 62 HRC.**




format professional quality




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2381 | 118 | 118 | 87 | 87 | 34 | 34 | 34 | 34 | | | | | |

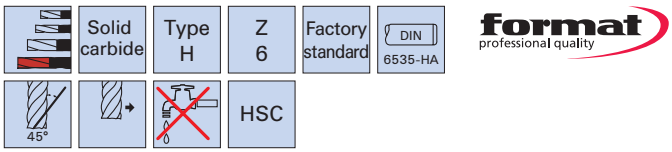
| Order No. | Ø $d_1$ e8 mm | 2381 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0060 | 6 | 28.10 | 13 | 57 | 6 | 6 | 0.012 |
| 0080 | 8 | 35.50 | 19 | 63 | 8 | 6 | 0.016 |
| 0100 | 10 | 53.20 | 22 | 72 | 10 | 6 | 0.020 |
| 0120 | 12 | 72.30 | 26 | 83 | 12 | 6 | 0.020 |
| 0160 | 16 | 121.50 | 32 | 92 | 16 | 6 | 0.017 |
| 0200 | 20 | 178.50 | 38 | 104 | 20 | 8 | 0.014 |
| 0250 | 25 | 315.00 (W212) | 44 | 104 | 25 | 8 | 0.014 |

## Solid Carbide Multi-Flute Long Series End Mill for Hard Machining

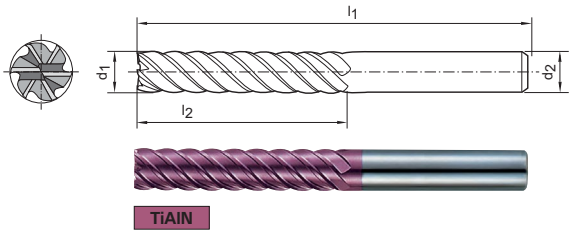
**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided.
**Suitable for HSC machining up to 62 HRC.**




format professional quality




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2380 | 43 | 43 | 43 | 32 | 32 | 27 | 27 | 27 | | | | | |

| Order No. | Ø $d_1$ e8 mm | 2380 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|
| 0600 | 6 | 36.40 | 26 | 70 | 6 | 0.023 |
| 0800 | 8 | 47.90 | 36 | 90 | 8 | 0.028 |
| 1000 | 10 | 74.60 | 46 | 100 | 10 | 0.031 |
| 1200 | 12 | 105.00 | 56 | 110 | 12 | 0.035 |
| 1600 | 16 | 182.50 | 66 | 130 | 16 | 0.040 |
| 2000 | 20 | 286.00 | 76 | 140 | 20 | 0.047 |
| 2500 | 25 | 536.00 (W212) | 92 | 180 | 25 | 0.046 |

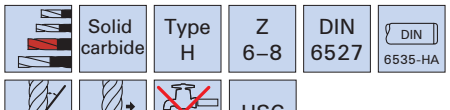
## Solid Carbide Multi-Flute End Mill for Hard Machining

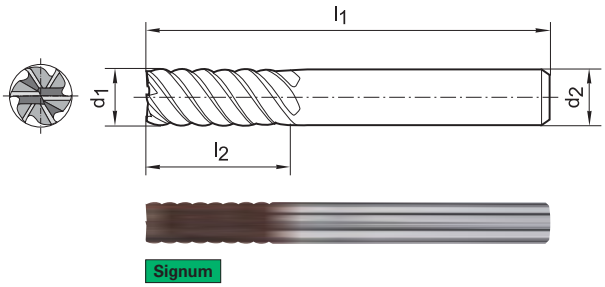
**Design:** Ultra-fine grid solid carbide (K50), type H, DIN 6527, 55°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing.

The extremely high spiral lead and reinforced core results in particularly smooth running and thus low deviation in shape and a very good surface on the workpiece.
**Suitable for HSC machining up to 56 HRC.**




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2385 | | | | 180 | 120 | 80 | 55 | 45 | | | 200 | | |

| Order No. | Ø $d_1$ h10 | 2385 GÜHRING Signum | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Number of teeth | Steels up to 56 HRc $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | | mm |
| 0300 | 3 | 47.00 | 8 | 57 | 6 | 6 | 0.003 |
| 0400 | 4 | 43.60 | 11 | 57 | 6 | 6 | 0.009 |
| 0500 | 5 | 42.00 | 13 | 57 | 6 | 6 | 0.009 |
| 0600 | 6 | 42.00 | 13 | 57 | 6 | 6 | 0.011 |
| 0800 | 8 | 47.80 | 19 | 63 | 8 | 6 | 0.016 |
| 1000 | 10 | 83.10 | 22 | 72 | 10 | 6 | 0.021 |
| 1200 | 12 | 113.00 | 26 | 83 | 12 | 6 | 0.026 |
| 1600 | 16 | 199.00 | 32 | 92 | 16 | 6 | 0.032 |
| 2000 | 20 | 285.00 (W221) | 38 | 104 | 20 | 8 | 0.038 |

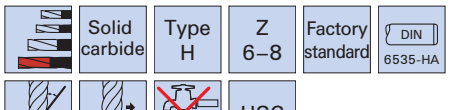
## Solid Carbide Long Series Multi-Flute End Mill for Hard Machining

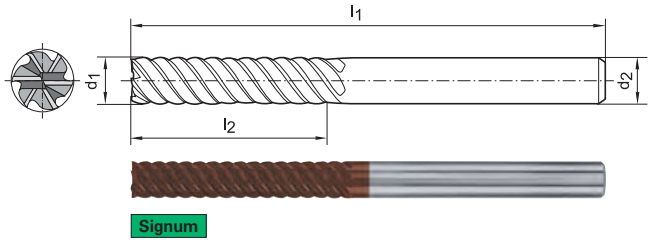
**Design:** Ultra-fine grit solid carbide (K50), type H, according to factory standard, 55°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing. **For milling depths up to 3 x D.** Ideal for use in mould-making.

The extremely high spiral lead and reinforced core results in particularly smooth running and thus low deviation in shape and a very good surface on the workpiece.
**Suitable for HSC machining up to 56 HRC.**




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2386 | | | | 180 | 120 | 80 | 55 | 45 | | | 200 | | |

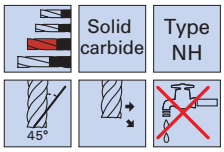
| Order No. | Ø $d_1$ h10 | 2386 GÜHRING Signum | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Number of teeth | Steels up to 56 HRc $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | | mm |
| 0600 | 6 | 50.20 | 30 | 75 | 6 | 6 | 0.011 |
| 0800 | 8 | 57.60 | 40 | 100 | 8 | 6 | 0.016 |
| 1000 | 10 | 97.10 | 40 | 100 | 10 | 6 | 0.021 |
| 1200 | 12 | 136.00 | 45 | 150 | 12 | 6 | 0.026 |
| 1600 | 16 | 248.50 | 65 | 150 | 16 | 6 | 0.032 |
| 2000 | 20 | 365.50 (W221) | 65 | 150 | 20 | 8 | 0.038 |

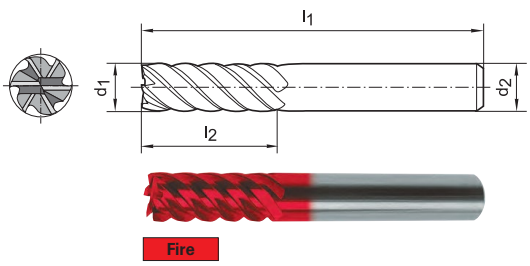
## Solid Carbide Multi-Flute End Mill

**Design:** Ultra-fine grit solid carbide, type NH, DIN 6527 L, 45°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing. The high spiral lead of 45° results in particularly smooth running and thus very good surface on the workpiece. A much longer tool life is achieved than with conventional tools.
Particularly suitable for **machining stainless steel**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2484 | 170 | 170 | 150 | 120 | 55 | | | | 120 | 105 | 200 | 900 | 220 |

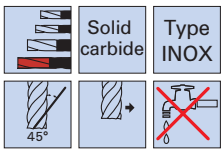
| Order No. | Ø d1 h10 mm | 2484 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0030 | 3 | 27.90 | 8 | 57 | 6 | 6 | 0.015 |
| 0040 | 4 | 26.40 | 11 | 57 | 6 | 6 | 0.025 |
| 0050 | 5 | 24.80 | 13 | 57 | 6 | 6 | 0.025 |
| 0060 | 6 | 24.80 | 13 | 57 | 6 | 6 | 0.031 |
| 0080 | 8 | 30.50 | 19 | 63 | 8 | 6 | 0.042 |
| 0100 | 10 | 46.60 | 22 | 72 | 10 | 6 | 0.050 |
| 0120 | 12 | 64.20 | 26 | 83 | 12 | 6 | 0.059 |
| 0160 | 16 | 115.00 | 32 | 92 | 16 | 6 | 0.071 |
| 0200 | 20 | 160.50 | 38 | 104 | 20 | 8 | 0.090 |
| 0250 | 25 | 265.00 (W220) | 45 | 121 | 25 | 10 | 0.130 |

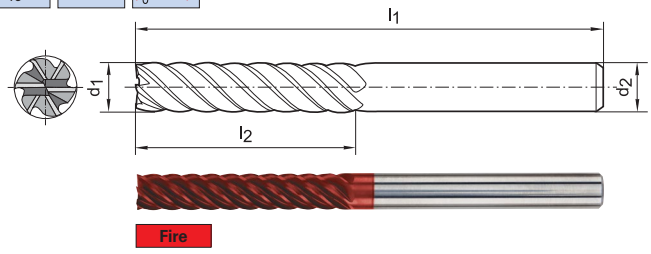
## Solid Carbide Long Series Multi-Flute End Mill

**Design:** Ultra-fine grit solid carbide, type NH, according to factory standard, 45°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided. A much longer tool life is achieved than with conventional tools.
Particularly suitable for **machining stainless steel**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2485 | 170 | 170 | 150 | 120 | 55 | | | | 90 | 105 | 200 | 900 | 220 |

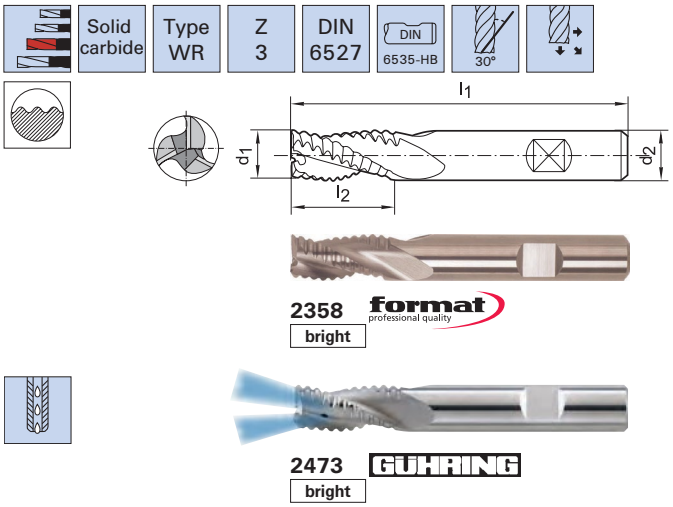
| Order No. | Ø $d_1$ h10 mm | 2485 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 36.20 | 30 | 75 | 6 | 6 | 0.031 |
| 0800 | 8 | 41.90 | 40 | 100 | 8 | 6 | 0.042 |
| 1000 | 10 | 74.50 | 40 | 100 | 10 | 6 | 0.050 |
| 1200 | 12 | 103.50 | 45 | 150 | 12 | 6 | 0.059 |
| 1600 | 16 | 186.50 | 65 | 150 | 16 | 6 | 0.071 |
| 2000 | 20 | 279.50 | 65 | 150 | 20 | 8 | 0.090 |
| 2500 | 25 | 761.50 (W220) | 75 | 150 | 25 | 10 | 0.130 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide 3 Flute Rippa for Aluminium

**Design:** Solid carbide (K10/20), type WR, DIN 6527, 30°, with centre cut.

**Application:** Can be used for rough milling and slot cutting. The rough cord toothing produces small chips which are easy to remove.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2358 | | | | | | | | | | | | **500** | 120 |
| 2473 | 100 | | | | | | | | | | | **500** | 120 |

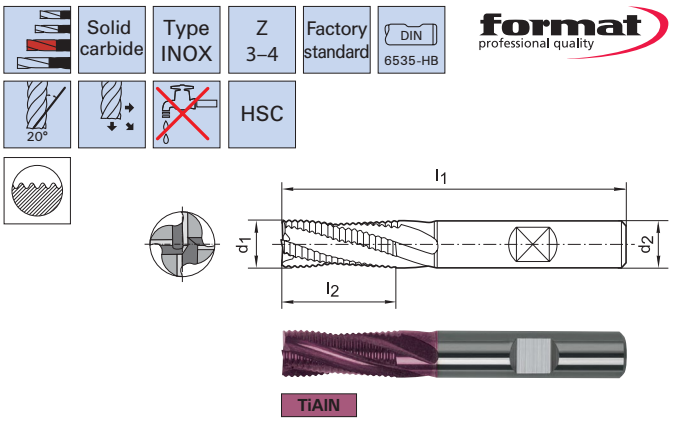
| Order No. | Ø $d_1$ h10 mm | 2358 format bright | 2473 GÜHRING bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Al, Al and Mg alloys $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | **6** | **37.00** | – | 10 | 57 | 6 | 0.029 |
| 0800 | **8** | **40.20** | **74.10** | 16 | 63 | 8 | 0.030 |
| 1000 | **10** | **48.10** | **80.60** | 19 | 72 | 10 | 0.053 |
| 1200 | **12** | **60.10** | **113.00** | 22 | 83 | 12 | 0.060 |
| 1600 | **16** | **91.50** | **159.00** | 26 | 92 | 16 | 0.079 |
| 2000 | **20** | **170.00** (W210) | **273.50** (W221) | 32 | 104 | 20 | 0.097 |

## Solid Carbide Rippa Cutter for Hard Machining

**Design:** Ultra-fine grit solid carbide, type HR, according to factory standard, 20°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish.
Particularly suitable for **INOX machining** and **for HSC machining up to 62 HRC.**




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2393 | 150 | **150** | **130** | **70** | **70** | **47** | **47** | 47 | **100** | | | | |

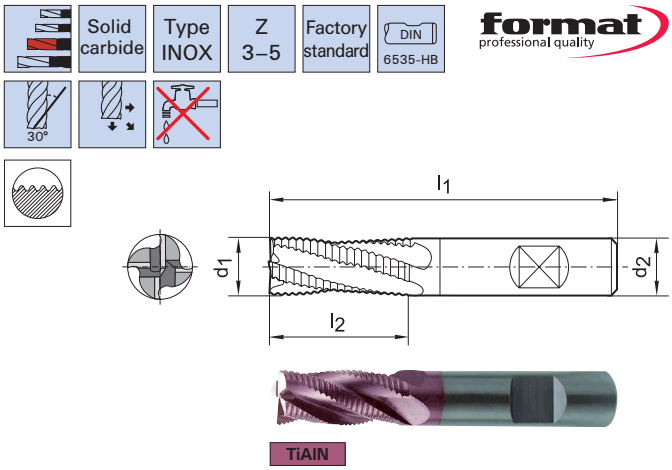
| Order No. | Ø $d_1$ h10 mm | 2393 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | **6** | **38.60** | 13 | 57 | 6 | 3 | 0.025 |
| 0800 | **8** | **45.10** | 19 | 63 | 8 | 3 | 0.032 |
| 1000 | **10** | **67.40** | 22 | 72 | 10 | 4 | 0.032 |
| 1200 | **12** | **86.60** | 26 | 83 | 12 | 4 | 0.038 |
| 1600 | **16** | **141.00** | 32 | 92 | 16 | 4 | 0.029 |
| 2000 | **20** | **227.00** (W212) | 38 | 104 | 20 | 4 | 0.033 |

## Solid carbide Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 30°, **TiAlN-coated.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish. Particularly suitable for **VA machining**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2397 | 150 | 150 | 130 | | | | | | 100 | 70 | | | |

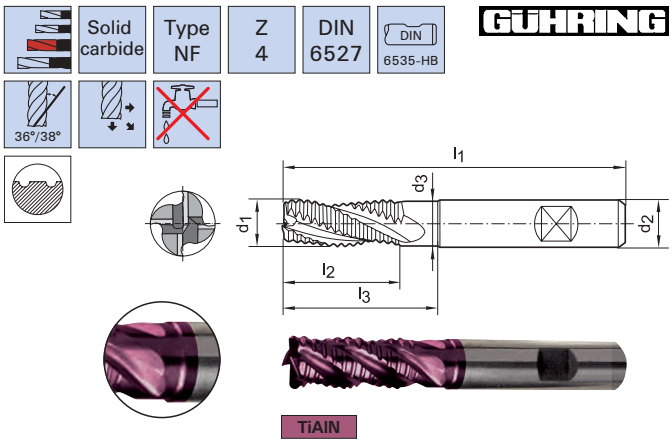
| Order No. | ∅ $d_1$ h10 | 2397 format TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank ∅ $d_2$ h6 | Number of teeth | Stainless and acid-resistant steels (INOX) $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | | mm |
| 0600 | 6 | 37.80 | 16 | 57 | 6 | 3 | 0.021 |
| 0800 | 8 | 44.20 | 16 | 63 | 8 | 3 | 0.028 |
| 1000 | 10 | 65.90 | 22 | 72 | 10 | 4 | 0.026 |
| 1200 | 12 | 84.70 | 26 | 83 | 12 | 4 | 0.032 |
| 1600 | 16 | 138.00 | 32 | 92 | 16 | 4 | 0.038 |
| 2000 | 20 | 222.00 (W212) | 38 | 104 | 20 | 4 | 0.033 |

## Solid Carbide 4 Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type NF, DIN 6527, 36/38°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling, slot cutting and finishing milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish. The irregular spiral lead 36°/38° results in low-vibration running and thus a very high surface quality. A much longer tool life is achieved than with conventional tools.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2392 | 150 | 150 | 130 | | | | | | 80 | 60 | 150 | | 130 |

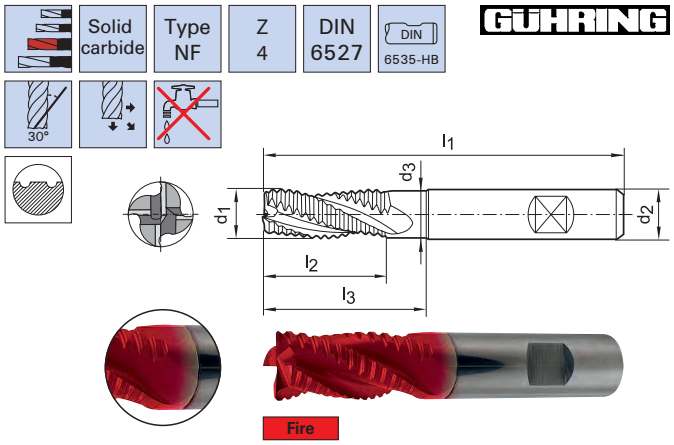
| Order No. | ∅ $d_1$ h10 | 2392 GÜHRING TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Neck ∅ $d_3$ | Clear area $l_3$ | Shank ∅ $d_2$ h6 | Steels up to 1,000 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm |
| 0600 | 6 | 74.10 | 13 | 57 | 5.5 | 21 | 6 | 0.025 |
| 0800 | 8 | 89.80 | 19 | 63 | 7.5 | 27 | 8 | 0.032 |
| 1000 | 10 | 103.00 | 22 | 72 | 9.2 | 32 | 10 | 0.039 |
| 1200 | 12 | 122.50 | 26 | 83 | 11.2 | 38 | 12 | 0.048 |
| 1600 | 16 | 194.00 | 32 | 92 | 15.0 | 44 | 16 | 0.058 |
| 2000 | 20 | 298.00 (W221) | 38 | 104 | 19.0 | 54 | 20 | 0.073 |

## Solid Carbide 4 Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type NF, DIN 6527 L, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling and slot cutting. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2394 | 130 | 130 | | | | | | | | 60 | 115 | | 130 |

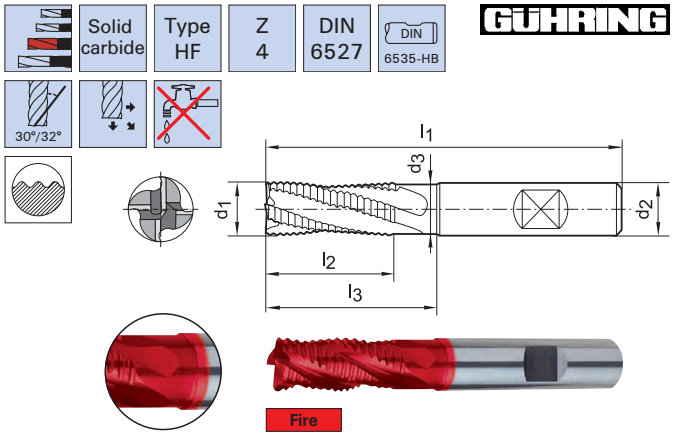
| Order No. | Ø $d_1$ h10 mm | 2394 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 75.80 | 13 | 57 | 5.7 | 21 | 6 | 4 | 0.025 |
| 0800 | 8 | 92.20 | 19 | 63 | 7.7 | 27 | 8 | 4 | 0.032 |
| 1000 | 10 | 98.00 | 22 | 72 | 9.5 | 32 | 10 | 4 | 0.039 |
| 1200 | 12 | 116.00 | 26 | 83 | 11.5 | 38 | 12 | 4 | 0.048 |
| 1400 | 14 | 168.00 | 26 | 83 | 13.5 | 38 | 14 | 4 | 0.058 |
| 1600 | 16 | 187.50 | 32 | 92 | 15.5 | 44 | 16 | 4 | 0.058 |
| 1800 | 18 | 253.50 | 32 | 92 | 17.5 | 44 | 18 | 4 | 0.073 |
| 2000 | 20 | 285.00 (W221) | 38 | 104 | 19.5 | 54 | 20 | 4 | 0.073 |

## Solid Carbide Necked 4 Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type NF, DIN 6527, 30/32°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish. The irregular spiral lead 30°/32° results in low-vibration running and thus a very high surface quality. A much longer tool life is achieved than with conventional tools.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2389 | 150 | 150 | 130 | 90 | 30 | | | | | 60 | 150 | | |

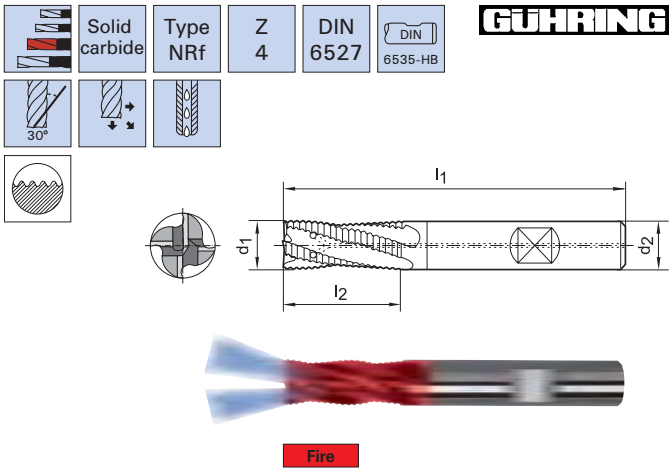
| Order No. | Ø $d_1$ h10 mm | 2389 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0060 | 6 | 74.10 | 13 | 57 | 5.5 | 21 | 6 | 0.027 |
| 0080 | 8 | 89.80 | 19 | 63 | 7.5 | 27 | 8 | 0.035 |
| 0100 | 10 | 103.00 | 22 | 72 | 9.2 | 32 | 10 | 0.044 |
| 0120 | 12 | 122.50 | 26 | 83 | 11.2 | 38 | 12 | 0.052 |
| 0160 | 16 | 196.00 | 32 | 92 | 15.0 | 44 | 16 | 0.063 |
| 0200 | 20 | 298.00 (W221) | 38 | 104 | 19.0 | 54 | 20 | 0.080 |

## Solid Carbide 4 Flute Rippa Cutter with Through Coolant

**Design:** Ultra-fine grit solid carbide, type NRf, DIN 6527, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**
**With inner cooling: Increase in tool life of up to 50%, since chip blockage is reduced.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2391 | 150 | 150 | | | 30 | | | | 80 | 60 | 115 | | 130 |

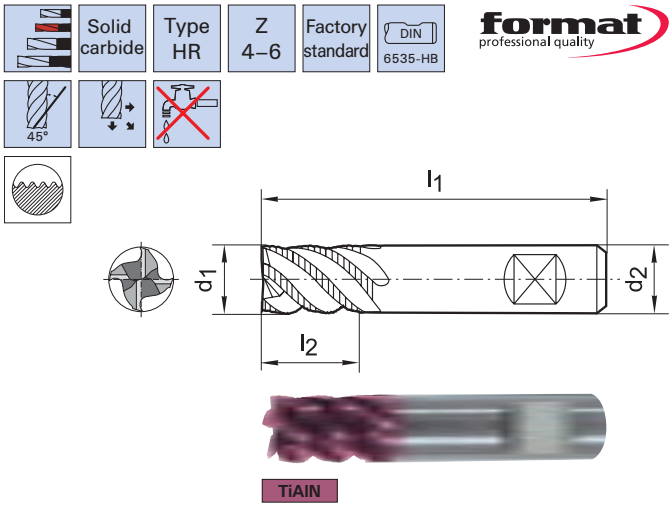
| Order No. | Ø $d_1$ h10 mm | 2391 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|
| 0600 | 6 | 104.00 | 13 | 57 | 6 | 0.017 |
| 0800 | 8 | 113.00 | 19 | 63 | 8 | 0.024 |
| 1000 | 10 | 123.50 | 22 | 72 | 10 | 0.030 |
| 1200 | 12 | 150.50 | 26 | 83 | 12 | 0.036 |
| 1600 | 16 | 232.00 | 32 | 92 | 16 | 0.045 |
| 2000 | 20 | 346.00 (W221) | 38 | 104 | 20 | 0.057 |

## Solid Carbide Stub Multi-Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type HR, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish. Particularly suitable for **machining stainless steel**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2398 | 338 | 338 | 252 | | | | | | 170 | 170 | | | |

| Order No. | Ø $d_1$ h10 mm | 2398 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Stainless and acid-resistant steels (INOX) $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0600 | 6 | 35.90 | 7 | 54 | 6 | 4 | 0.016 |
| 0800 | 8 | 42.00 | 9 | 58 | 8 | 4 | 0.021 |
| 1000 | 10 | 62.70 (W212) | 14 | 66 | 10 | 4 | 0.026 |

| Order No. | Ø $d_1$ h10 mm | 2398 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Stainless and acid-resistant steels (INOX) $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1200 | 12 | 80.60 | 16 | 73 | 12 | 4 | 0.032 |
| 1600 | 16 | 131.00 | 22 | 82 | 16 | 5 | 0.030 |
| 2000 | 20 | 211.00 (W212) | 26 | 92 | 20 | 6 | 0.022 |

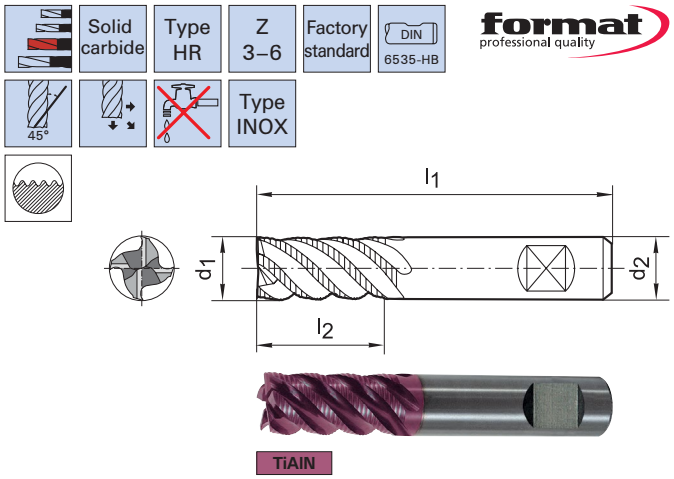
Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide Multi-Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type HR, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish. Particularly suitable for **machining stainless steel**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2400 | 338 | 338 | 252 | | | | | | 170 | 170 | | | |

| Order No. | Ø $d_1$ h10 mm | 2400 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0400 | 4 | 37.80 | 11 | 57 | 6 | 3 | 0.014 |
| 0500 | 5 | 37.80 | 13 | 57 | 6 | 4 | 0.013 |
| 0600 | 6 | 37.80 | 16 | 57 | 6 | 4 | 0.016 |
| 0700 | 7 | 44.20 | 16 | 63 | 8 | 4 | 0.018 |
| 0800 | 8 | 44.20 | 16 | 63 | 8 | 4 | 0.021 |
| 0900 | 9 | 65.90 (W212) | 19 | 72 | 10 | 4 | 0.024 |

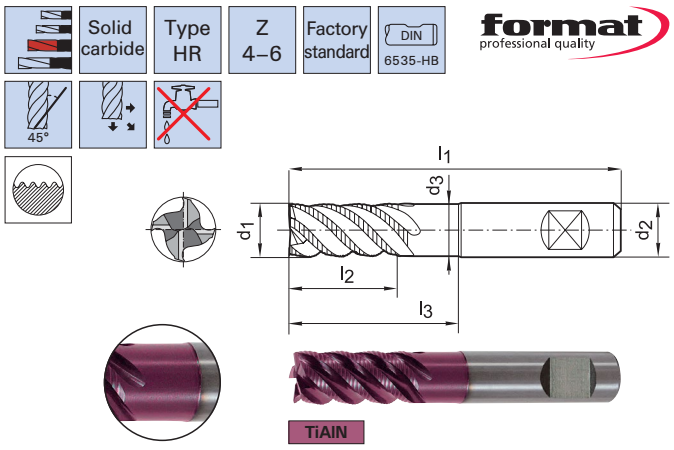
| Order No. | Ø $d_1$ h10 mm | 2400 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 1000 | 10 | 65.90 | 22 | 72 | 10 | 4 | 0.026 |
| 1200 | 12 | 84.70 | 26 | 83 | 12 | 4 | 0.028 |
| 1400 | 14 | 103.00 | 26 | 83 | 14 | 5 | 0.022 |
| 1600 | 16 | 138.00 | 32 | 92 | 16 | 5 | 0.021 |
| 2000 | 20 | 222.00 | 38 | 104 | 20 | 6 | 0.025 |
| 2500 | 25 | 389.50 (W212) | 45 | 121 | 25 | 6 | 0.032 |

## Solid Carbide Necked Multi-Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type HR, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish. Particularly suitable for **machining stainless steel**.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2401 | 338 | 338 | 252 | | | | | | 170 | 170 | | | |

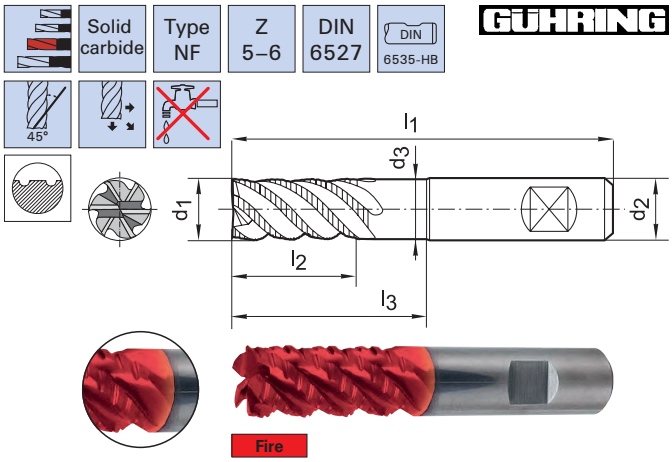
| Order No. | Ø $d_1$ h10 mm | 2401 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Stainless and acid-resistant steels (INOX) $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 45.30 | 16 | 57 | 5.5 | 20 | 6 | 4 | 0.016 |
| 0800 | 8 | 53.00 | 16 | 63 | 7.5 | 26 | 8 | 4 | 0.021 |
| 1000 | 10 | 79.10 | 22 | 72 | 9.5 | 31 | 10 | 4 | 0.026 |
| 1200 | 12 | 101.50 | 26 | 83 | 11.5 | 37 | 12 | 4 | 0.032 |
| 1600 | 16 | 165.50 | 51 | 100 | 15.5 | 51 | 16 | 5 | 0.030 |
| 2000 | 20 | 266.50 (W212) | 38 | 110 | 19.2 | 59 | 20 | 6 | 0.022 |

## Solid Carbide Necked Multi-Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type NF, DIN 6527 L, 45°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rough milling. The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish.



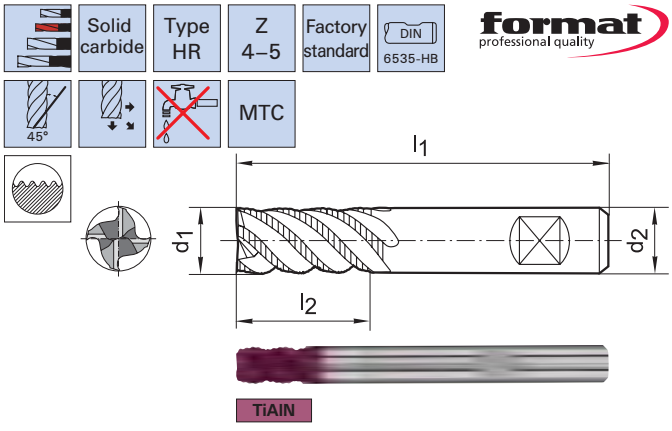

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2395 | | 130 | 120 | 80 | 30 | 20 | | | | | 130 | | |

| Order No. | Ø $d_1$ h10 mm | 2395 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 83.10 | 13 | 57 | 5.7 | 21 | 6 | 5 | 0.025 |
| 0800 | 8 | 98.80 | 19 | 63 | 7.7 | 27 | 8 | 5 | 0.032 |
| 1000 | 10 | 111.00 | 22 | 72 | 9.5 | 32 | 10 | 5 | 0.039 |
| 1200 | 12 | 127.50 | 26 | 83 | 11.5 | 38 | 12 | 5 | 0.048 |
| 1400 | 14 | 184.50 | 26 | 83 | 13.5 | 38 | 14 | 5 | 0.058 |
| 1600 | 16 | 202.50 | 32 | 92 | 15.5 | 44 | 16 | 6 | 0.058 |
| 1800 | 18 | 280.00 | 32 | 92 | 17.5 | 44 | 18 | 6 | 0.073 |
| 2000 | 20 | 303.00 (W221) | 38 | 104 | 19.5 | 54 | 20 | 6 | 0.073 |

## Solid Carbide Multi-Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type HR, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Application:** Can be used for MTC (Multi-Task-Cutting) on new generation lathing/milling machines (MTM). The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2408 | 225 | 225 | 200 | | | | | | | | 200 | | |

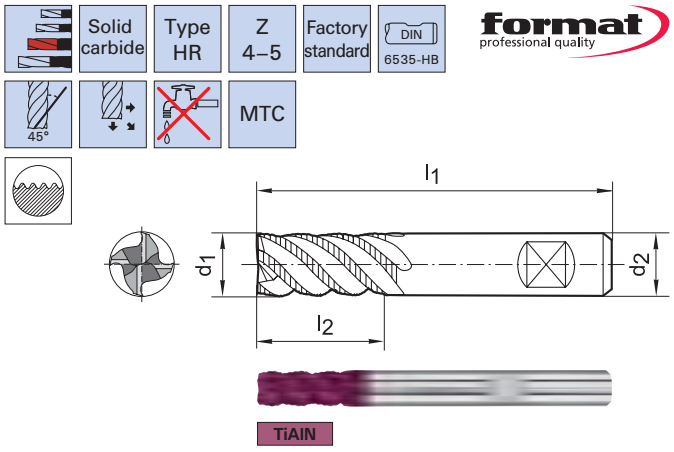
| Order No. | Ø $d_1$ mm | 2408 format TiAlN | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 38.40 | 0.5 | 9 | 57 | 6 | 4 | 0.032 |
| 0800 | 8 | 43.70 | 0.5 | 12 | 63 | 8 | 4 | 0.045 |
| 1000 | 10 | 64.60 | 0.5 | 15 | 72 | 10 | 4 | 0.057 |
| 1200 | 12 | 90.90 | 0.5 | 18 | 83 | 12 | 4 | 0.064 |
| 1600 | 16 | 130.00 | 1.0 | 24 | 92 | 16 | 4 | 0.066 |
| 2000 | 20 | 209.50 (W212) | 1.0 | 30 | 104 | 20 | 5 | 0.074 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Solid Carbide Multi-Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type HR, according to factory standard, 45°, **TiAlN-coated,** with centre cut.

**Application:** Can be used for MTC (Multi-Task-Cutting) on new generation lathing/milling machines (MTM). The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish.



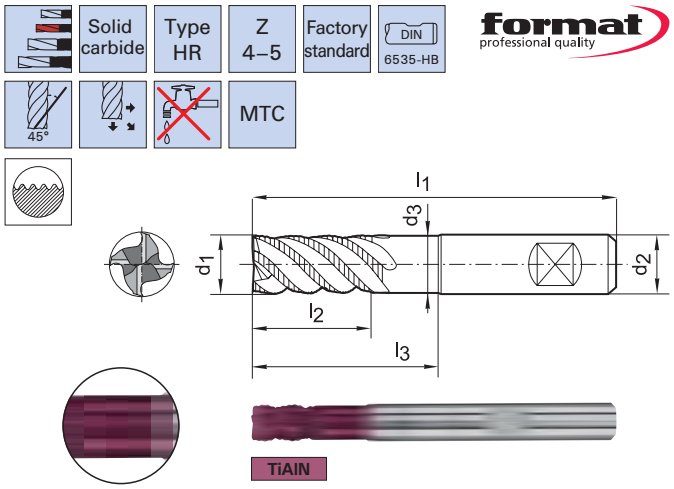

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2411 | 225 | 225 | 200 | | | | | | | | 200 | | |

| Order No. | Ø $d_1$ mm | 2411 format TiAlN | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 41.40 | 0.5 | 12 | 57 | 6 | 4 | 0.032 |
| 0800 | 8 | 47.20 | 0.5 | 16 | 63 | 8 | 4 | 0.045 |
| 1000 | 10 | 70.00 | 0.5 | 20 | 72 | 10 | 4 | 0.057 |
| 1200 | 12 | 101.50 | 0.5 | 24 | 83 | 12 | 4 | 0.064 |
| 1600 | 16 | 143.00 | 1.0 | 32 | 92 | 16 | 4 | 0.066 |
| 2000 | 20 | 231.50 (W212) | 1.0 | 40 | 104 | 20 | 5 | 0.074 |

## Solid Carbide Necked Multi-Flute Rippa Cutter

**Design:** Ultra-fine grit solid carbide, type HR according to factory standard, 45°, **TiAlN-coated**, with centre cut and **free zone.**

**Application:** Can be used for MTC (Multi-Task-Cutting) on new generation lathing/milling machines (MTM). The fine cord toothing produces small chips which are easy to remove. This improves tool life and achieves a better surface finish.



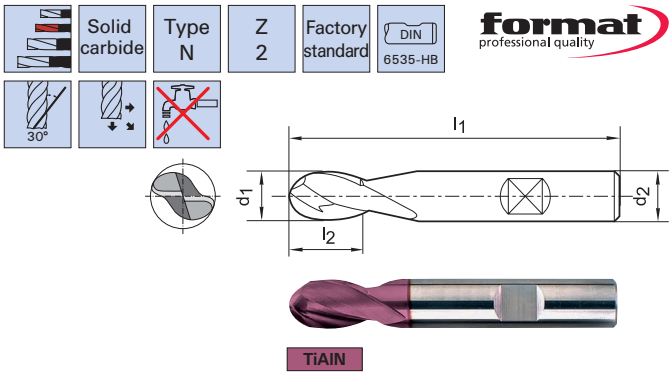

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2412 | 225 | 225 | 200 | | | | | | | | 200 | | |

| Order No. | Ø $d_1$ mm | 2412 format TiAlN | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ mm | Number of teeth | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 40.80 | 0.5 | 9 | 57 | 18 | 6 | 4 | 0.032 |
| 0800 | 8 | 46.10 | 0.5 | 12 | 63 | 24 | 8 | 4 | 0.045 |
| 1000 | 10 | 68.00 | 0.5 | 15 | 72 | 30 | 10 | 4 | 0.057 |
| 1200 | 12 | 95.00 | 0.5 | 18 | 83 | 36 | 12 | 4 | 0.064 |
| 1600 | 16 | 135.00 | 1.0 | 24 | 92 | 48 | 16 | 4 | 0.066 |
| 2000 | 20 | 263.00 (W212) | 1.0 | 30 | 104 | 60 | 20 | 5 | 0.074 |

## Solid Carbide 2 Flute Ball Nose Slot Drills

**Design:** Solid carbide (K10/20), type N, according to factory standard, 30°, TiAlN, with centre cut.

**Application:** Universal milling cutter for copy-milling work. Can be used to a limited extent for plunge cutting, traversing, peripheral milling, traverse milling and slot cutting.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2413 | 42 | 42 | 35 | | | | | | | | 58 | 176 | |

| Order No. | Ø $d_1$ h10 | 2413 format TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm |
| 0100 | 1.0* | 15.40 | 2.0 | 38 | 3 | 0.002 |
| 0150 | 1.5* | 15.40 | 2.5 | 38 | 3 | 0.003 |
| 0200 | 2.0* | 14.00 | 3.0 | 38 | 3 | 0.005 |
| 0300 | 3.0 | 18.50 | 5.0 | 50 | 6 | 0.008 |
| 0400 | 4.0 | 18.50 | 8.0 | 54 | 6 | 0.011 |
| 0500 | 5.0 | 19.35 | 9.0 | 54 | 6 | 0.013 |
| 0600 | 6.0 | 21.00 | 10.0 | 54 | 6 | 0.016 |
| 0800 | 8.0 | 30.60 | 12.0 | 58 | 8 | 0.022 |
| 1000 | 10.0 | 49.40 | 14.0 | 66 | 10 | 0.027 |
| 1200 | 12.0 | 63.60 (W212) | 16.0 | 73 | 12 | 0.032 |

* With cyl. shank + DIN 6535-HA.

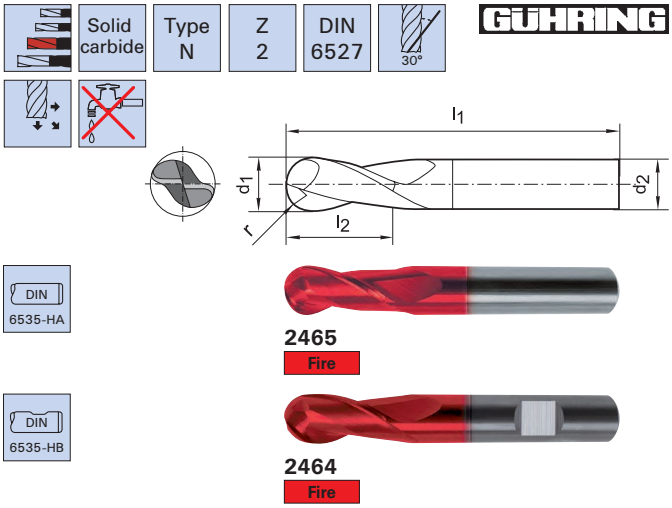
## Solid Carbide 2 Flute Ball Nose Slot Drills

**Design:** Ultra-fine grit solid carbide, type N, DIN 6527, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for copy milling and slot cutting as well as for universal machining.

**Note:** Copy milling, cutting values preferred at ap = 0.05 x $d_1$ and ae = 0.1 x $d_1$.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2465 | 180 | 160 | 140 | 120 | | | | | 130 | 80 | 140 | 200 | 140 |
| 2464 | 180 | 160 | 140 | 120 | | | | | 130 | 80 | 140 | 200 | 140 |

| Order No. | Ø $d_1$ h10 | 2465 GÜHRING Fire | 2464 GÜHRING Fire | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | mm |
| 0200 | 2 | 20.70 | – | 6 | 57 | 6 | 0.020 |
| 0300 | 3 | 20.70 | – | 7 | 57 | 6 | 0.020 |
| 0400 | 4 | 20.70 (W220) | 22.30 (W220) | 8 | 57 | 6 | 0.025 |

Continued overleaf

## Solid Carbide 2 Flute Ball Nose Slot Drills

Continued

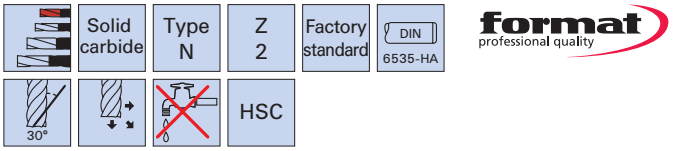
| Order No. | Ø $d_1$ h10 mm | 2465 GÜHRING Fire | 2464 GÜHRING Fire | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0500 | 5 | 20.70 | 22.30 | 10 | 57 | 6 | 0.030 |
| 0600 | 6 | 20.70 | 22.30 | 10 | 57 | 6 | 0.030 |
| 0800 | 8 | 26.40 | 28.50 | 16 | 63 | 8 | 0.035 |
| 1000 | 10 | 34.20 | 36.70 | 19 | 72 | 10 | 0.040 |
| 1200 | 12 | 47.60 (W220) | 49.20 (W220) | 22 | 83 | 12 | 0.050 |

## Solid Carbide Mini 2 Flute Necked Ball Nose Slot Drills for Hard Machining

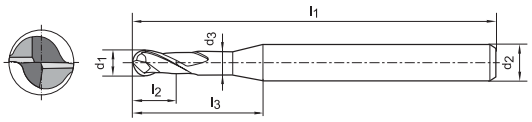
**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 30°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Tapered neck makes it suitable for copy milling and slot cutting especially in deep areas. **Suitable for HSC machining up to 52 HRC.**




format professional quality



| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2403 | 138 | 138 | 98 | 98 | 98 | | | | | | | | |

| Order No. | Ø $d_1$ mm | 2403 format professional quality TiAlN | Radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 52 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0401 | 0.4 | 39.90 | 0.20 | 0.6 | 45 | 0.37 | 1 | 4 | 0.001 |
| 0403 | 0.4 | 45.90 | 0.20 | 0.6 | 45 | 0.37 | 3 | 4 | 0.001 |
| 0502 | 0.5 | 39.90 | 0.25 | 0.7 | 45 | 0.45 | 2 | 4 | 0.001 |
| 0504 | 0.5 | 39.90 | 0.25 | 0.7 | 45 | 0.45 | 4 | 4 | 0.001 |
| 0508 | 0.5 | 45.90 | 0.25 | 0.7 | 45 | 0.45 | 8 | 4 | 0.001 |
| 0602 | 0.6 | 39.90 | 0.30 | 0.9 | 45 | 0.55 | 2 | 4 | 0.002 |
| 0604 | 0.6 | 39.90 | 0.30 | 0.9 | 45 | 0.55 | 4 | 4 | 0.002 |
| 0608 | 0.6 | 45.90 | 0.30 | 0.9 | 45 | 0.55 | 8 | 4 | 0.002 |
| 0802 | 0.8 | 31.10 | 0.40 | 1.2 | 45 | 0.75 | 2 | 4 | 0.003 |
| 0806 | 0.8 | 31.10 | 0.40 | 1.2 | 45 | 0.75 | 6 | 4 | 0.003 |
| 1003 | 1.0 | 28.70 | 0.50 | 1.5 | 45 | 0.95 | 3 | 4 | 0.003 |
| 1005 | 1.0 | 28.70 | 0.50 | 1.5 | 45 | 0.95 | 5 | 4 | 0.003 |
| 1006 | 1.0 | 28.70 | 0.50 | 1.5 | 45 | 0.95 | 6 | 4 | 0.003 |
| 1007 | 1.0 | 28.70 | 0.50 | 1.5 | 45 | 0.95 | 7 | 4 | 0.003 |
| 1008 | 1.0 | 28.70 | 0.50 | 1.5 | 45 | 0.95 | 8 | 4 | 0.003 |
| 1009 | 1.0 | 28.70 | 0.50 | 1.5 | 45 | 0.95 | 9 | 4 | 0.003 |
| 1010 | 1.0 | 28.70 | 0.50 | 1.5 | 45 | 0.95 | 10 | 4 | 0.003 |
| 1012 | 1.0 | 30.50 | 0.50 | 1.5 | 45 | 0.95 | 12 | 4 | 0.003 |
| 1016 | 1.0 | 32.50 | 0.50 | 1.5 | 50 | 0.95 | 16 | 4 | 0.003 |
| 1020 | 1.0 | 34.40 | 0.50 | 1.5 | 55 | 0.95 | 20 | 4 | 0.003 |
| 1208 | 1.2 | 28.70 | 0.60 | 1.8 | 45 | 1.15 | 8 | 4 | 0.004 |
| 1408 | 1.4 | 28.70 | 0.70 | 2.1 | 45 | 1.35 | 8 | 4 | 0.004 |
| 1506 | 1.5 | 28.70 | 0.75 | 2.3 | 45 | 1.45 | 6 | 4 | 0.005 |
| 1520 | 1.5 | 32.50 | 0.75 | 2.3 | 55 | 1.45 | 20 | 4 | 0.005 |
| 1608 | 1.6 | 28.70 | 0.80 | 2.4 | 45 | 1.55 | 8 | 4 | 0.005 |
| 1808 | 1.8 | 28.70 | 0.90 | 2.7 | 45 | 1.75 | 8 | 4 | 0.006 |
| 2004 | 2.0 | 26.80 | 1.00 | 3.0 | 45 | 1.95 | 4 | 4 | 0.006 |
| 2006 | 2.0 | 26.80 | 1.00 | 3.0 | 45 | 1.95 | 6 | 4 | 0.006 |
| 2008 | 2.0 | 26.80 | 1.00 | 3.0 | 45 | 1.95 | 8 | 4 | 0.006 |
| 2010 | 2.0 | 26.80 (W212) | 1.00 | 3.0 | 45 | 1.95 | 10 | 4 | 0.006 |

Continued overleaf

## Solid Carbide Mini 2 Flute Necked Ball Nose Slot Drills for Hard Machining

Continued

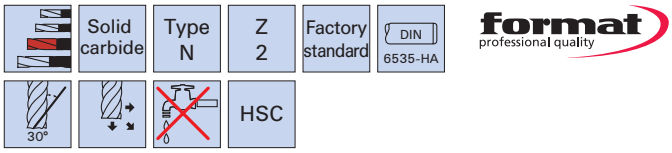
| Order No. | Ø $d_1$ mm | 2403 format TiAlN | Radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 52 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 2012 | 2.0 | 26.80 | 1.00 | 3.0 | 50 | 1.95 | 12 | 4 | 0.006 |
| 2014 | 2.0 | 28.60 | 1.00 | 3.0 | 50 | 1.95 | 14 | 4 | 0.006 |
| 2016 | 2.0 | 28.60 | 1.00 | 3.0 | 50 | 1.95 | 16 | 4 | 0.006 |
| 2020 | 2.0 | 30.60 | 1.00 | 3.0 | 55 | 1.95 | 20 | 4 | 0.006 |
| 2030 | 2.0 | 35.10 | 1.00 | 3.0 | 70 | 1.95 | 30 | 4 | 0.006 |
| 3008 | 3.0 | 33.00 | 1.50 | 4.5 | 50 | 2.85 | 8 | 6 | 0.010 |
| 3010 | 3.0 | 33.00 | 1.50 | 4.5 | 50 | 2.85 | 10 | 6 | 0.010 |
| 3012 | 3.0 | 33.00 | 1.50 | 4.5 | 50 | 2.85 | 12 | 6 | 0.010 |
| 3016 | 3.0 | 39.80 | 1.50 | 4.5 | 55 | 2.85 | 16 | 6 | 0.010 |
| 3020 | 3.0 | 42.70 | 1.50 | 4.5 | 60 | 2.85 | 20 | 6 | 0.010 |
| 3025 | 3.0 | 42.70 | 1.50 | 4.5 | 65 | 2.85 | 25 | 6 | 0.010 |
| 3030 | 3.0 | 46.10 | 1.50 | 4.5 | 70 | 2.85 | 30 | 6 | 0.010 |
| 3035 | 3.0 | 50.70 | 1.50 | 4.5 | 80 | 2.85 | 35 | 6 | 0.010 |
| 4010 | 4.0 | 33.00 | 2.00 | 6.0 | 60 | 3.85 | 10 | 6 | 0.013 |
| 4012 | 4.0 | 33.00 | 2.00 | 6.0 | 60 | 3.85 | 12 | 6 | 0.013 |
| 4016 | 4.0 | 39.80 | 2.00 | 6.0 | 60 | 3.85 | 16 | 6 | 0.013 |
| 4020 | 4.0 | 42.70 | 2.00 | 6.0 | 65 | 3.85 | 20 | 6 | 0.013 |
| 4025 | 4.0 | 42.70 | 2.00 | 6.0 | 70 | 3.85 | 25 | 6 | 0.013 |
| 4030 | 4.0 | 46.10 | 2.00 | 6.0 | 70 | 3.85 | 30 | 6 | 0.013 |
| 4050 | 4.0 | 60.90 | 2.00 | 6.0 | 100 | 3.85 | 50 | 6 | 0.013 |
| 5016 | 5.0 | 39.80 | 2.50 | 7.5 | 60 | 4.85 | 16 | 6 | 0.016 |
| 5025 | 5.0 | 42.70 | 2.50 | 7.5 | 70 | 4.85 | 25 | 6 | 0.016 |
| 6020 | 6.0 | 42.70 | 3.00 | 9.0 | 80 | 5.85 | 20 | 6 | 0.019 |
| 6030 | 6.0 | 46.10 | 3.00 | 9.0 | 90 | 5.85 | 30 | 6 | 0.019 |
| 6040 | 6.0 | 50.70 | 3.00 | 9.0 | 100 | 5.85 | 40 | 6 | 0.019 |
| 6050 | 6.0 | 60.90 (W212) | 3.00 | 9.0 | 110 | 5.85 | 50 | 6 | 0.019 |

## Solid Carbide 2 Flute Ball Nose Slot Drills for Hard Machining

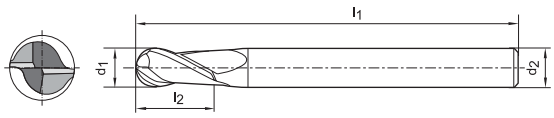
**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 30°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for copy milling.
**Suitable for HSC machining up to 62 HRC.**




format professional quality



TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2414 | 150 | 150 | 88 | 66 | 66 | 66 | 66 | 66 | | | | | |

| Order No. | Ø $d_1$ e8 mm | 2414 format TiAlN | Radius r ± 0.02 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0100 | 1.0 | 29.10 | 0.50 | 2.5 | 50 | 6 | 0.002 |
| 0150 | 1.5 | 29.10 | 0.75 | 4.0 | 50 | 6 | 0.004 |
| 0200 | 2.0 | 26.40 | 1.00 | 5.0 | 50 | 6 | 0.007 |
| 0250 | 2.5 | 26.40 | 1.25 | 6.0 | 60 | 6 | 0.009 |
| 0300 | 3.0 | 26.40 | 1.50 | 8.0 | 60 | 6 | 0.011 |
| 0400 | 4.0 | 27.60 | 2.00 | 8.0 | 70 | 6 | 0.017 |
| 0500 | 5.0 | 28.50 | 2.50 | 10.0 | 80 | 6 | 0.021 |
| 0600 | 6.0 | 30.90 (W212) | 3.00 | 12.0 | 90 | 6 | 0.027 |

| Order No. | Ø $d_1$ e8 mm | 2414 format TiAlN | Radius r ± 0.02 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0800 | 8.0 | 48.30 | 4.00 | 14.0 | 100 | 8 | 0.042 |
| 1000 | 10.0 | 77.10 | 5.00 | 18.0 | 100 | 10 | 0.054 |
| 1200 | 12.0 | 98.20 | 6.00 | 22.0 | 110 | 12 | 0.070 |
| 1400 | 14.0 | 163.50 | 7.00 | 26.0 | 110 | 16 | 0.082 |
| 1600 | 16.0 | 163.50 | 8.00 | 30.0 | 140 | 16 | 0.093 |
| 1800 | 18.0 | 178.00 | 9.00 | 34.0 | 140 | 18 | 0.107 |
| 2000 | 20.0 | 255.00 (W212) | 10.00 | 38.0 | 160 | 20 | 0.119 |

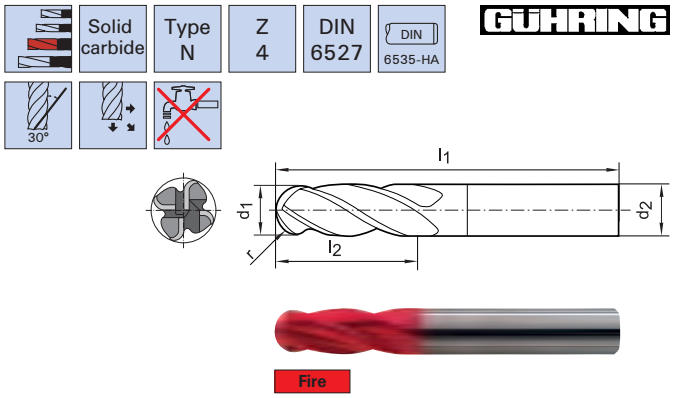
## Solid carbide radius cutter

**Design:** Ultra-fine grit solid carbide, type N, DIN 6527, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for copy and finishing milling as well as for trimming and peripheral milling. Particularly suitable for **INOX machining**.

**Note:** Copy milling, cutting values preferred at ap = 0.05 x $d_1$ and ae = 0.1 x $d_1$.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2420 | 180 | 160 | 140 | 120 | | | | | 130 | 80 | 140 | | |

| Order No. | Ø $d_1$ h10 | 2420 GÜHRING Fire | Radius r | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Stainless and acid-resistant steels (INOX) $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm |
| 0400 | 4 | 23.00 | 2.0 | 11 | 57 | 6 | 0.025 |
| 0500 | 5 | 23.00 | 2.5 | 13 | 57 | 6 | 0.030 |
| 0600 | 6 | 23.00 | 3.0 | 13 | 57 | 6 | 0.030 |
| 0800 | 8 | 26.70 | 4.0 | 19 | 63 | 8 | 0.035 |
| 1000 | 10 | 35.80 | 5.0 | 22 | 72 | 10 | 0.040 |
| 1200 | 12 | 51.80 | 6.0 | 26 | 83 | 12 | 0.050 |
| 1400 | 14 | 66.60 | 7.0 | 26 | 83 | 14 | 0.060 |
| 1600 | 16 | 81.50 | 8.0 | 32 | 92 | 16 | 0.070 |
| 2000 | 20 | 133.50 (W221) | 10.0 | 38 | 104 | 20 | 0.085 |

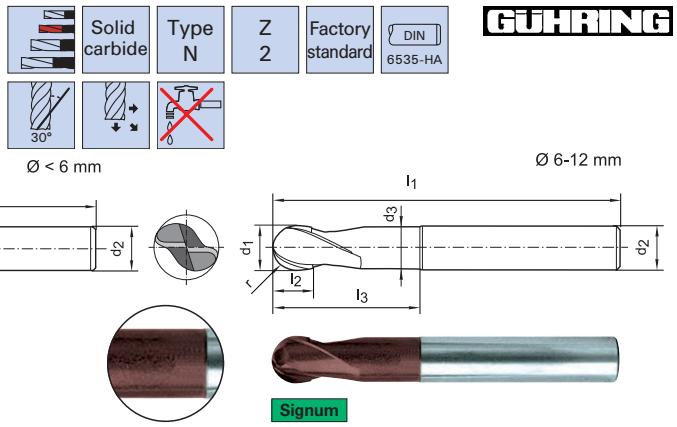
## Solid Carbide 2 Flute Necked Ball Nose Slot Drills

**Design:** Ultra-fine grit solid carbide, type N, according to cfactory standard, 30°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**
**These tools should only be used in shrink or hydro-.expansion chucks.**

**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. Suitable for machining hardened materials **up to 54 HRC**.

**Note:** Copy milling; cutting values preferred at ap = 0.05 x $d_1$ and ae = 0.1 x $d_1$.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2485 | 200 | 200 | 180 | 160 | 120 | 100 | | | 160 | 90 | 200 | | |

| Order No. | Ø $d_1$ h8 | 2485 GÜHRING Signum | Radius r ± 0.01 | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Steels up to 52 HRc $f_z$ |
|---|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm | mm |
| 0020 | 2 | 61.60 | 1.0 | 3.0 | 57 | 1.8 | 20 | 6 | 0.030 |
| 0030 | 3 | 61.60 | 1.5 | 3.5 | 57 | 2.8 | 20 | 6 | 0.040 |
| 0040 | 4 | 60.10 | 2.0 | 4.0 | 57 | 3.8 | 20 | 6 | 0.045 |
| 0060 | 6 | 60.10 | 3.0 | 6.0 | 57 | 5.6 | 20 | 6 | 0.050 |
| 0080 | 8 | 60.90 | 4.0 | 7.0 | 63 | 7.6 | 26 | 8 | 0.070 |
| 0100 | 10 | 74.90 | 5.0 | 8.0 | 72 | 9.6 | 30 | 10 | 0.100 |
| 0120 | 12 | 111.00 (W221) | 6.0 | 10.0 | 83 | 11.5 | 35 | 12 | 0.120 |

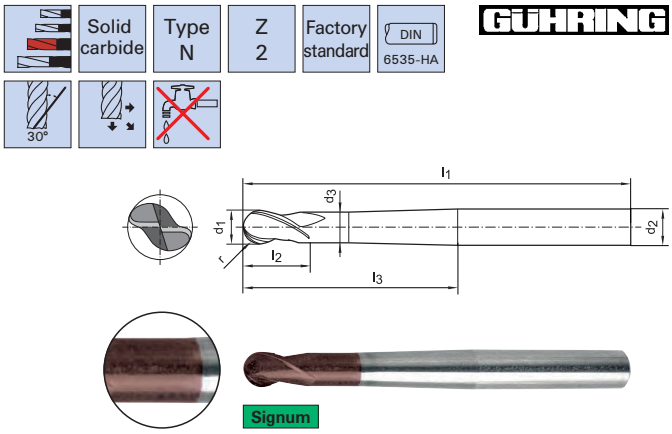
## Solid Carbide 2 Flute Necked & Tapered Ball Nose Slot Drills

**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 30°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools.**
**Dry machining possible.**
**These tools should only be used in shrink or hydro-.expansion chucks.**

**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. Suitable for machining hardened materials **up to 54 HRC**.

**Note:** Copy milling, cutting values preferred at ap = 0.05 x $d_1$ and ae = 0.1 x $d_1$.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2486 | 200 | 200 | 180 | 160 | 120 | 100 | | | 160 | 90 | 200 | | |

| Order No. | Ø $d_1$ h8 mm | 2486 GÜHRING Signum | Radius r ± 0.01 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Angle of taper in degrees | Shank Ø $d_2$ h6 mm | Steels up to 52 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | 2 | 81.60 | 1.0 | 3.0 | 80 | 1.8 | 40 | 2.9 | 6 | 0.030 |
| 0030 | 3 | 81.60 | 1.5 | 3.5 | 80 | 2.8 | 40 | 2.2 | 6 | 0.040 |
| 0040 | 4 | 79.00 | 2.0 | 4.0 | 80 | 3.8 | 40 | 1.4 | 6 | 0.045 |
| 0060 | 6 | 96.30 | 3.0 | 6.0 | 100 | 5.6 | 60 | 1.0 | 8 | 0.050 |
| 0080 | 8 | 116.00 | 4.0 | 7.0 | 120 | 7.6 | 75 | 0.8 | 10 | 0.070 |
| 0100 | 10 | 155.00 | 5.0 | 8.0 | 120 | 9.6 | 70 | 0.8 | 12 | 0.100 |
| 0120 | 12 | 266.50 (W221) | 6.0 | 10.0 | 150 | 11.5 | 100 | 1.2 | 16 | 0.120 |

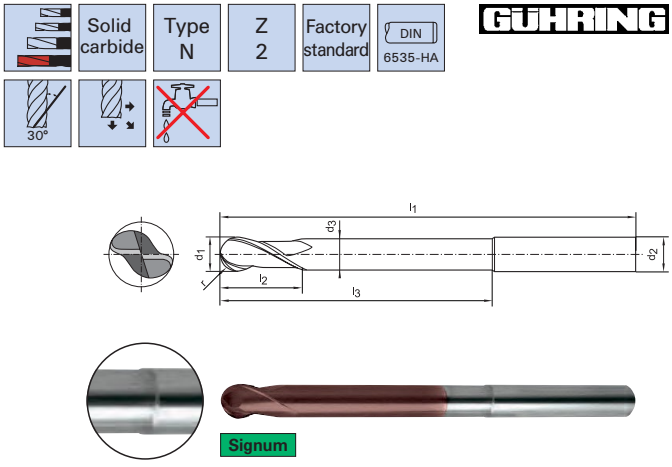
## Solid Carbide Long Series 2 Flute Necked Ball Nose Slot Drills

**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 30°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools.**
**Dry machining possible.**
**These tools should only be used in shrink or hydro-.expansion chucks.**

**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. Suitable for machining hardened materials **up to 54 HRC**.

**Note:** Copy milling, cutting values preferred at ap = 0.05 x $d_1$ and ae = 0.1 x $d_1$.
Shrunk-fit chucks can be found on 📖 3/89.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2488 | 200 | 200 | 180 | 160 | 120 | 100 | | | 160 | 90 | 200 | | |

| Order No. | Ø $d_1$ h8 mm | 2488 GÜHRING Signum | Radius r ± 0.01 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 42 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0060 | 6 | 65.80 | 3 | 6 | 80 | 1.8 | 45 | 6 | 0.050 |
| 0080 | 8 | 74.90 | 4 | 7 | 100 | 2.8 | 65 | 8 | 0.070 |
| 0100 | 10 | 123.50 | 5 | 8 | 120 | 3.8 | 80 | 10 | 0.100 |
| 0120 | 12 | 161.50 (W221) | 6 | 10 | 120 | 5.6 | 75 | 12 | 0.120 |

## Solid Carbide Necked 2 Flute Ball Nose Slot Drills for hard Machining

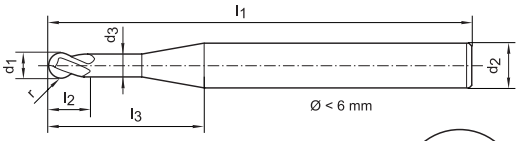
**Design:** Solid carbide **NANO,** type N, according to factory standard, 30°, **TiAlN-S-coated,** with centre cut.

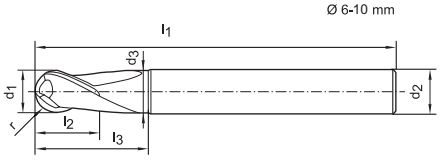
**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

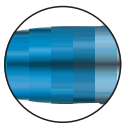
**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. The tool life increases with minimal amount lubrication or air cooling. The tool can either be used with a pivoted or straight spindle.
Suitable for HSC machining up **to 70 HRC**.

Solid carbide | Type N | Z 2 | Factory standard | DIN 6535-HA | 30° | HSC

format professional quality



TiAlN-S

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2422 | | | | 229 | 229 | 190 | 190 | 190 | | | | | |

| Order No. | Ø $d_1$ h8 mm | 2422 format TiAlN-S | Radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Hard machining over 60 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 2050 | 0.5 | 35.30 | 0.25 | 0.7 | 40 | – | – | 4 | 0.005 |
| 2100 | 1.0 | 35.80 | 0.50 | 1.5 | 50 | 0.95 | 3 | 6 | 0.022 |
| 2150 | 1.5 | 33.00 | 0.75 | 2.0 | 50 | 1.45 | 4 | 6 | 0.034 |
| 2200 | 2.0 | 33.00 | 1.00 | 2.5 | 50 | 1.95 | 5 | 6 | 0.046 |
| 2300 | 3.0 | 33.00 (W212) | 1.50 | 4.0 | 60 | 2.85 | 10 | 6 | 0.069 |

| Order No. | Ø $d_1$ h8 mm | 2422 format TiAlN-S | Radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Hard machining over 60 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 2400 | 4.0 | 33.00 | 2.00 | 5.0 | 60 | 3.85 | 10 | 6 | 0.093 |
| 2500 | 5.0 | 35.50 | 2.50 | 6.0 | 60 | 4.85 | 12 | 6 | 0.105 |
| 2600 | 6.0 | 35.50 | 3.00 | 7.0 | 60 | 5.85 | 15 | 6 | 0.107 |
| 2800 | 8.0 | 59.50 | 4.00 | 9.0 | 80 | 7.70 | 15 | 8 | 0.122 |
| 3000 | 10.0 | 98.30 (W212) | 5.00 | 11.0 | 80 | 9.70 | 25 | 10 | 0.136 |

## Solid Carbide 2 Flute Necked Ball Nose Slot Drills

**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 30°, **Signum-coated,** with centre cut.

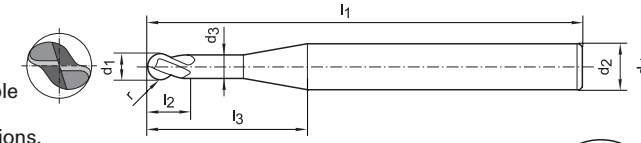
**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

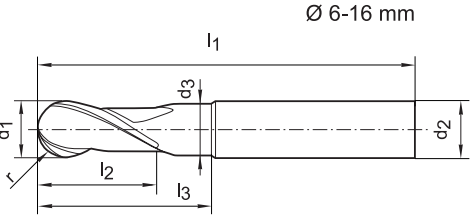
**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. The tool life increases with minimal amount lubrication or air cooling. The tool can either be used with a pivoted or straight spindle. Suitable for HSC machining **up to 62 HRC**.

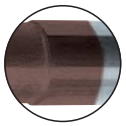
**Note:** Copy milling, cutting values preferred at ap = 0.05 x $d_1$ and ae = 0.1 x $d_1$.

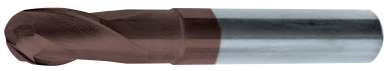
Solid carbide | Type H | Z 2 | Factory standard | DIN 6535-HA | 30° | HSC

GÜHRING





Signum

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2423 | | | | 200 | 150 | 130 | 100 | 80 | | | 200 | | |

| Order No. | Ø $d_1$ h8 mm | 2423 GÜHRING Signum | Radius r ± 0.015 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0050 | 0.5 | 43.60 | 0.25 | 0.75 | 38 | 0.4 | 10 | 3 | 0.010 |
| 0080 | 0.8 | 43.60 | 0.40 | 1.20 | 38 | 0.7 | 10 | 3 | 0.012 |
| 0100 | 1.0 | 38.70 | 0.50 | 1.50 | 38 | 0.9 | 10 | 3 | 0.015 |
| 0150 | 1.5 | 38.70 | 0.75 | 2.25 | 38 | 1.4 | 10 | 3 | 0.020 |
| 0200 | 2.0 | 37.80 | 1.00 | 3.00 | 57 | 1.9 | 21 | 6 | 0.025 |
| 0300 | 3.0 | 38.70 | 1.50 | 5.00 | 57 | 2.7 | 21 | 6 | 0.030 |
| 0400 | 4.0 | 40.70 (W221) | 2.00 | 6.00 | 57 | 3.7 | 21 | 6 | 0.035 |

| Order No. | Ø $d_1$ h8 mm | 2423 GÜHRING Signum | Radius r ± 0.015 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0500 | 5.0 | 40.70 | 2.50 | 8.00 | 57 | 4.7 | 21 | 6 | 0.038 |
| 0600 | 6.0 | 41.10 | 3.00 | 9.00 | 57 | 5.7 | 21 | 6 | 0.040 |
| 0800 | 8.0 | 51.80 | 4.00 | 12.00 | 63 | 7.7 | 27 | 8 | 0.050 |
| 1000 | 10.0 | 70.00 | 5.00 | 15.00 | 72 | 9.5 | 32 | 10 | 0.070 |
| 1200 | 12.0 | 93.80 | 6.00 | 18.00 | 83 | 11.5 | 38 | 12 | 0.080 |
| 1600 | 16.0 | 159.00 (W221) | 8.00 | 24.00 | 92 | 15.5 | 44 | 16 | 0.100 |

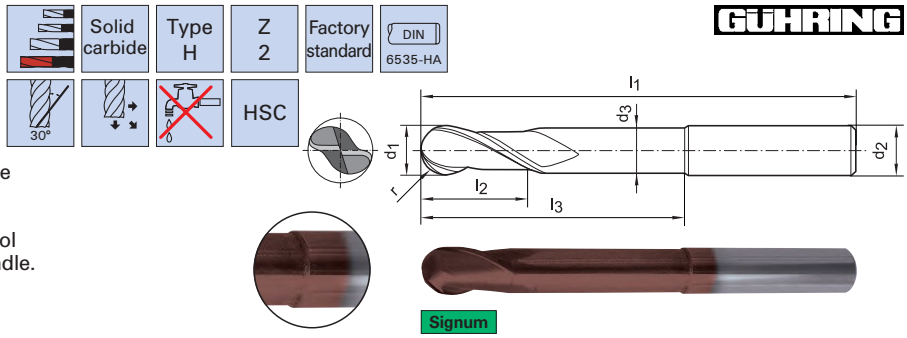
## Solid Carbide Long Series 2 Flute Necked Ball Nose Slot Drills for Hard Machining

**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 30°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. The tool life increases with minimal amount lubrication or air cooling. The tool can either be used with a pivoted or straight spindle. Suitable for HSC machining up **to 62 HRC**.

**Note:** Copy milling, cutting values preferred at ap = 0.05 x $d_1$ and ae = 0.1 x $d_1$.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2426 | | | | 200 | 150 | 130 | 100 | 80 | | | | | |

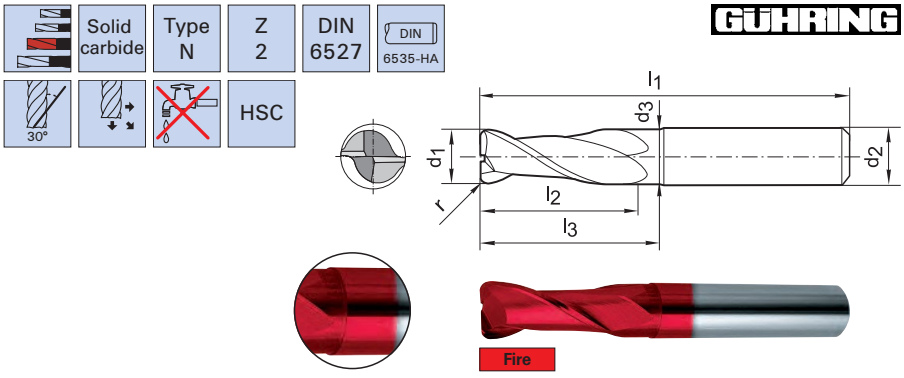
| Order No. | Ø $d_1$ h8 mm | 2426 GÜHRING Signum | Radius r ± 0.015 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Hard machining over 60 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0300 | 3 | 63.40 | 1.5 | 5 | 75 | 2.7 | 39 | 6 | 0.030 |
| 0400 | 4 | 70.00 | 2.0 | 6 | 75 | 3.7 | 39 | 6 | 0.035 |
| 0500 | 5 | 74.10 | 2.5 | 8 | 75 | 4.7 | 39 | 6 | 0.038 |
| 0600 | 6 | 77.40 | 3.0 | 9 | 75 | 5.7 | 39 | 6 | 0.040 |
| 0800 | 8 | 95.50 | 4.0 | 12 | 100 | 7.7 | 64 | 8 | 0.050 |
| 1000 | 10 | 122.50 | 5.0 | 15 | 100 | 9.5 | 60 | 10 | 0.070 |
| 1200 | 12 | 184.50 | 6.0 | 18 | 150 | 11.5 | 105 | 12 | 0.080 |
| 1600 | 16 | 275.00 (W221) | 8.0 | 24 | 150 | 15.5 | 102 | 16 | 0.100 |

## Solid Carbide 2 Flute Slot Drill with Corner Radius

**Design:** Ultra-fine grit solid carbide, type N, DIN 6527, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. These tools should only be used in shrink or hydro-.expansion chucks.**

**Application:** Can be used for copy milling and slot cutting as well as for universal machining with corner radius to avoid notching effects on the workpiece – less corner wear during slot cutting. Suitable for HSC machining..




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2491 | 130 | 130 | 120 | 80 | 30 | | | | 80 | 40 | 120 | 300 | 130 |

| Order No. | Ø $d_1$ h10 mm | 2491 GÜHRING Fire | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0605 | 6 | 20.20 | 0.5 | 10 | 57 | 5.7 | 21 | 6 | 0.024 |
| 0610 | 6 | 20.20 | 1.0 | 10 | 57 | 5.7 | 21 | 6 | 0.024 |
| 0805 | 8 | 27.20 | 0.5 | 16 | 63 | 7.7 | 27 | 8 | 0.032 |
| 0810 | 8 | 27.20 | 1.0 | 16 | 63 | 7.7 | 27 | 8 | 0.032 |
| 0815 | 8 | 27.20 | 1.5 | 16 | 63 | 7.7 | 27 | 8 | 0.032 |
| 0820 | 8 | 27.20 | 2.0 | 16 | 63 | 7.7 | 27 | 8 | 0.032 |
| 1005 | 10 | 40.70 | 0.5 | 19 | 72 | 9.5 | 32 | 10 | 0.038 |
| 1010 | 10 | 40.70 | 1.0 | 19 | 72 | 9.5 | 32 | 10 | 0.038 |
| 1015 | 10 | 40.70 | 1.5 | 19 | 72 | 9.5 | 32 | 10 | 0.038 |
| 1020 | 10 | 40.70 (W221) | 2.0 | 19 | 72 | 9.5 | 32 | 10 | 0.038 |

| Order No. | Ø $d_1$ h10 mm | 2491 GÜHRING Fire | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 1205 | 12 | 59.30 | 0.5 | 22 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1210 | 12 | 59.30 | 1.0 | 22 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1215 | 12 | 59.30 | 1.5 | 22 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1220 | 12 | 59.30 | 2.0 | 22 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1610 | 16 | 95.50 | 1.0 | 26 | 92 | 15.5 | 44 | 16 | 0.054 |
| 1620 | 16 | 95.50 | 2.0 | 26 | 92 | 15.5 | 44 | 16 | 0.054 |
| 2010 | 20 | 146.50 | 1.0 | 32 | 104 | 19.5 | 54 | 20 | 0.066 |
| 2015 | 20 | 146.50 | 1.5 | 32 | 104 | 19.5 | 54 | 20 | 0.066 |
| 2020 | 20 | 146.50 (W221) | 2.0 | 32 | 104 | 19.5 | 54 | 20 | 0.066 |

## Solid Carbide 2 Flute Torus Cutter with Corner Radius for Hard Machining

**Design:** Solid carbide (K05/10), type N, according to factory standard, 30°, **Signum-coated,** with tapered neck – see dimension $l_3/l_4$ (clear area) and centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. These tools should only be used in shrink or hydro-.expansion chucks.**

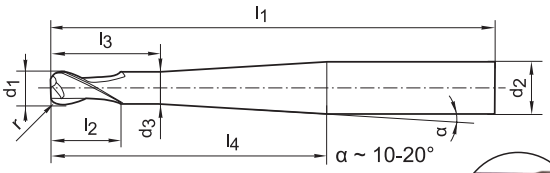
**Application:** Can be used for copy milling, traverse and slot cutting. The tool life increases with MQL or air cooling. The tool can either be used with a pivoted or straight spindle. Recommended for HSC machining **up to 56 HRC**.

**Note:** Copy milling, cutting values preferred at ap = 0.1 x $d_1$ and ae = 0.5 x $d_1$.

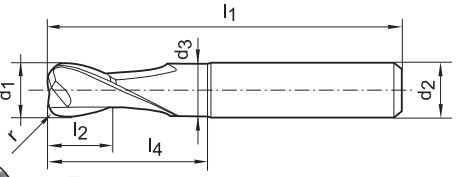
Solid carbide | Type N | Z 2 | Factory standard | DIN 6535-HA | 30° | HSC

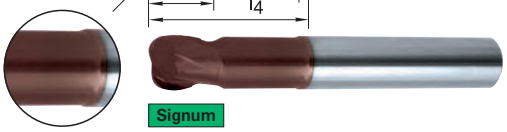
GÜHRING

Ø < 6 mm




Ø 6 - 12 mm




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2430 | 200 | 200 | 180 | 160 | 140 | 80 | | | 120 | 80 | 200 | | |

| Order No. | Ø $d_1$ h8 mm | 2430 GÜHRING Signum | Corner radius r ± 0.01 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Clear area $l_4$ mm | Shank Ø $d_2$ h6 mm | Steels up to 52 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0200 | 2 | 57.60 | 0.5 | 3.0 | 57 | 1.8 | 6.2 | 20 | 6 | 0.020 |
| 0300 | 3 | 58.50 | 0.5 | 3.5 | 57 | 2.8 | 8.4 | 20 | 6 | 0.030 |
| 0400 | 4 | 54.30 | 1.0 | 4.0 | 57 | 3.8 | 9.4 | 20 | 6 | 0.035 |
| 0600 | 6 | 59.30 | 2.0 | 6.0 | 57 | 5.6 | – | 20 | 6 | 0.040 |
| 0800 | 8 | 68.30 | 2.0 | 7.0 | 63 | 7.6 | – | 25 | 8 | 0.050 |
| 1000 | 10 | 77.40 | 3.0 | 8.0 | 72 | 9.6 | – | 30 | 10 | 0.070 |
| 1200 | 12 | 117.00 (W221) | 4.0 | 10.0 | 83 | 11.5 | – | 35 | 12 | 0.080 |

## Solid Carbide 2 Flute Necked and Tapered Torus Cutter with Corner Radius for Hard Machining

**Design:** Solid carbide (K05/10), type N, DIN 6527, 30°, **Signum-coated,** with tapered neck – see dimension $l_3/l_4$ (clear area) and centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. These tools should only be used in shrink or hydro-.expansion chucks.**

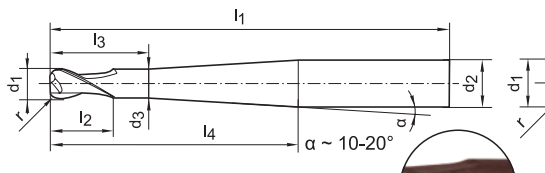
**Application:** Can be used for copy milling, traverse and slot cutting. The tool life increases with MQL or air cooling. Suitable for HSC machining **up to 56 HRC**.

**Note:** Copy milling, cutting values preferred at ap = 0.1 x $d_1$ and ae = 0.5 x $d_1$.

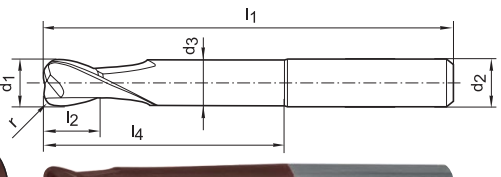
Solid carbide | Type N | Z 2 | DIN 6527 | DIN 6535-HA | 30° | HSC

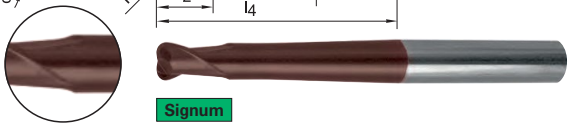
GÜHRING

Ø < 6 mm




Ø 6 - 12 mm




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2432 | 200 | 200 | 180 | 160 | 140 | 80 | | | 120 | 80 | 200 | | |

| Order No. | Ø $d_1$ h8 mm | 2432 GÜHRING Signum | Corner radius r ± 0.01 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Clear area $l_4$ mm | Shank Ø $d_2$ h6 mm | Steels up to 52 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0200 | 2 | 107.00 | 0.5 | 3.0 | 80 | 1.8 | 8 | 40 | 6 | 0.02 |
| 0300 | 3 | 93.80 | 0.5 | 3.5 | 80 | 2.8 | 12 | 40 | 6 | 0.03 |
| 0400 | 4 | 65.80 | 1.0 | 4.0 | 80 | 3.8 | 20 | 40 | 6 | 0.035 |
| 0600 | 6 | 98.00 | 2.0 | 6.0 | 100 | 5.6 | 25 | 60 | 8 | 0.04 |
| 0800 | 8 | 127.00 | 2.0 | 7.0 | 100 | 7.6 | 30 | 75 | 10 | 0.05 |
| 1000 | 10 | 149.00 | 3.0 | 8.0 | 120 | 9.6 | 30 | 70 | 12 | 0.07 |
| 1200 | 12 | 248.50 (W221) | 4.0 | 10.0 | 160 | 11.5 | 30 | 100 | 16 | 0.08 |

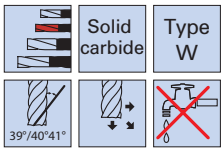
## Solid carbide ratio mill for aluminium treatment

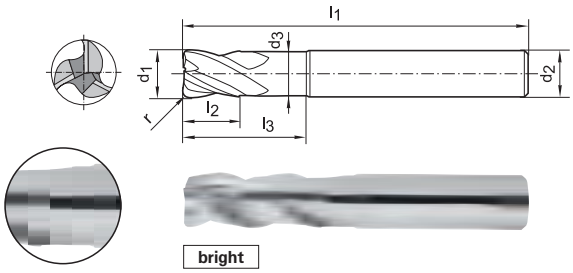
NEW

GÜHRING

**Design:** Solid carbide (K05/10), type W, DIN 6527, 39° 40° 41°, **nano-polished.**

**Application:** Suitable for grooving, roughing and smoothing in aluminium and aluminium alloys. Low in vibrations due to nano-polished cutting with micro support chamfers Traverse cutting with split point with reinforced cutting and more chipping space for drill and chamfer milling.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2429 | | | | | | | | | | | **280** | **700** | 275 |

| Order No. | Ø $d_1$ e8 | 2429 GÜHRING bright | Corner radius r ± 0.01 | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Al, Al and Mg alloys $f_z$ |
|---|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm | mm |
| 0605 | 6 | 36.20 | 0.5 | 13.0 | 57 | 5.7 | 20 | 6 | 0.05 |
| 0610 | 6 | 36.20 | 1.0 | 13.0 | 57 | 5.7 | 20 | 6 | 0.05 |
| 0805 | 8 | 39.50 | 0.5 | 19.0 | 63 | 7.7 | 26 | 8 | 0.065 |
| 0810 | 8 | 39.50 | 1.0 | 19.0 | 63 | 7.7 | 26 | 8 | 0.065 |
| 1005 | 10 | 65.80 | 0.5 | 22.0 | 72 | 9.5 | 30 | 10 | 0.08 |
| 1010 | 10 | 65.80 | 1.0 | 22.0 | 72 | 9.5 | 30 | 10 | 0.08 |
| 1015 | 10 | 65.80 | 1.5 | 22.0 | 72 | 9.5 | 30 | 10 | 0.08 |
| 1210 | 12 | 95.50 | 1.0 | 26.0 | 83 | 11.5 | 36 | 12 | 0.12 |
| 1215 | 12 | 95.50 | 1.5 | 26.0 | 83 | 11.5 | 36 | 12 | 0.12 |
| 1220 | 12 | 95.50 | 2.0 | 26.0 | 83 | 11.5 | 36 | 12 | 0.12 |
| 1225 | 12 | 95.50 | 2.5 | 26.0 | 83 | 11.5 | 36 | 12 | 0.12 |
| 1230 | 12 | 95.50 | 3.0 | 26.0 | 83 | 11.5 | 36 | 12 | 0.12 |
| 1240 | 12 | 95.50 | 4.0 | 26.0 | 83 | 11.5 | 36 | 12 | 0.12 |
| 1610 | 16 | 162.00 | 1.0 | 32.0 | 92 | 15.5 | 42 | 16 | 0.15 |
| 1620 | 16 | 162.00 | 2.0 | 32.0 | 92 | 15.5 | 42 | 16 | 0.15 |
| 1625 | 16 | 162.00 | 2.5 | 32.0 | 92 | 15.5 | 42 | 16 | 0.15 |
| 1630 | 16 | 162.00 | 3.0 | 32.0 | 92 | 15.5 | 42 | 16 | 0.15 |
| 1640 | 16 | 162.00 | 4.0 | 32.0 | 92 | 15.5 | 42 | 16 | 0.15 |
| 2010 | 20 | 253.50 | 1.0 | 38.0 | 104 | 19.5 | 52 | 20 | 0.18 |
| 2020 | 20 | 253.50 | 2.0 | 38.0 | 104 | 19.5 | 52 | 20 | 0.18 |
| 2025 | 20 | 253.50 | 2.5 | 38.0 | 104 | 19.5 | 52 | 20 | 0.18 |
| 2030 | 20 | 253.50 | 3.0 | 38.0 | 104 | 19.5 | 52 | 20 | 0.18 |
| 2040 | 20 | 253.50 (W221) | 4.0 | 38.0 | 104 | 19.5 | 52 | 20 | 0.18 |

## Solid carbide torus cutter for hard machining.

**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 30°, **TiAlN-coated,** with centre cut.

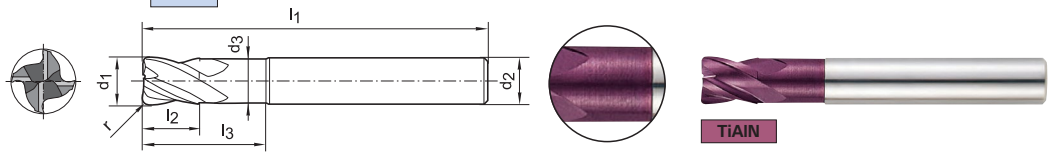
**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling. With corner radius to avoid notching effects on the workpiece. Suitable for HSC machining up **to 62 HRC.**

Solid carbide | Type N | Z 4 | Factory standard | DIN 6535-HA | 30° | HSC

format professional quality

Ø 6-10 mm




TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2436 | 133 | 133 | 82 | 82 | 82 | 55 | 50 | 25 | | | | | |

| Order No. | Ø $d_1$ mm | 2436 format TiAlN | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0300 | 3 | 29.80 | 0.30 | 4.0 | 50 | 2.8 | 7 | 6 | 0.003 |
| 0400 | 4 | 29.80 | 0.40 | 5.0 | 50 | 3.7 | 9 | 6 | 0.004 |
| 0500 | 5 | 29.80 (W212) | 0.50 | 6.0 | 50 | 4.6 | 12 | 6 | 0.005 |

| Order No. | Ø $d_1$ mm | 2436 format TiAlN | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 29.80 | 0.60 | 7.0 | 55 | 5.6 | 14 | 6 | 0.006 |
| 0800 | 8 | 38.20 | 0.80 | 10.0 | 60 | 7.4 | 18 | 8 | 0.008 |
| 1000 | 10 | 56.50 (W212) | 1.00 | 12.0 | 70 | 9.4 | 25 | 10 | 0.009 |

## Solid Carbide 4 Flute End Mill with Corner Radius

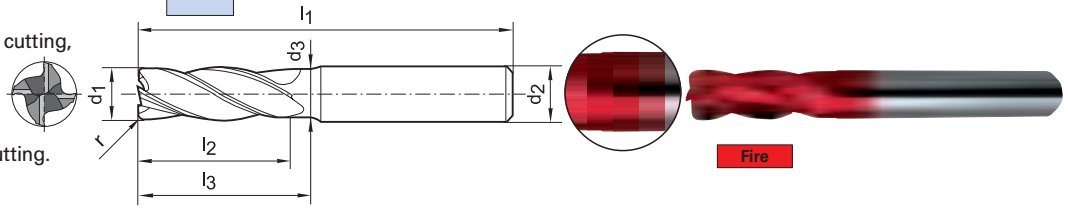
**Design:** Ultra-fine grit solid carbide, type N, DIN 6527 L, 30°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible. These tools should only be used in shrink or hydro-.expansion chucks.**

**Application:** Suitable for plunge cutting, slot cutting and contour milling with corner radius to avoid notching effects on the workpiece – less corner wear during plunge cutting and slot cutting. Suitable for HSC machining.

Solid carbide | Type N | Z 4 | DIN 6527 | DIN 6535-HA | 30° | HSC

GÜHRING




Fire

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2492 | 130 | 130 | 120 | 80 | 30 | | | | 80 | 40 | 120 | 300 | 130 |

| Order No. | Ø $d_1$ h10 mm | 2492 GÜHRING Fire | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0605 | 6 | 27.20 | 0.5 | 13 | 57 | 5.7 | 21 | 6 | 0.024 |
| 0610 | 6 | 27.20 | 1.0 | 13 | 57 | 5.7 | 21 | 6 | 0.024 |
| 0805 | 8 | 37.80 | 0.5 | 19 | 63 | 7.7 | 27 | 8 | 0.032 |
| 0810 | 8 | 37.80 | 1.0 | 19 | 63 | 7.7 | 27 | 8 | 0.032 |
| 0815 | 8 | 37.80 | 1.5 | 19 | 63 | 7.7 | 27 | 8 | 0.032 |
| 0820 | 8 | 37.80 | 2.0 | 19 | 63 | 7.7 | 27 | 8 | 0.032 |
| 1005 | 10 | 56.00 | 0.5 | 22 | 72 | 9.5 | 32 | 10 | 0.038 |
| 1010 | 10 | 56.00 | 1.0 | 22 | 72 | 9.5 | 32 | 10 | 0.038 |
| 1015 | 10 | 56.00 | 1.5 | 22 | 72 | 9.5 | 32 | 10 | 0.038 |
| 1020 | 10 | 56.00 | 2.0 | 22 | 72 | 9.5 | 32 | 10 | 0.038 |
| 1205 | 12 | 71.60 | 0.5 | 26 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1210 | 12 | 71.60 | 1.0 | 26 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1215 | 12 | 71.60 | 1.5 | 26 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1220 | 12 | 71.60 | 2.0 | 26 | 83 | 11.5 | 38 | 12 | 0.046 |
| 1610 | 16 | 119.50 | 1.0 | 32 | 92 | 15.5 | 44 | 16 | 0.054 |
| 1615 | 16 | 119.50 | 1.5 | 32 | 92 | 15.5 | 44 | 16 | 0.054 |
| 1620 | 16 | 119.50 | 2.0 | 32 | 92 | 15.5 | 44 | 16 | 0.054 |
| 2010 | 20 | 178.00 | 1.0 | 38 | 104 | 19.5 | 54 | 20 | 0.066 |
| 2015 | 20 | 178.00 | 1.5 | 38 | 104 | 19.5 | 54 | 20 | 0.066 |
| 2020 | 20 | 178.00 (W221) | 2.0 | 38 | 104 | 19.5 | 54 | 20 | 0.066 |

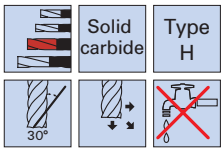
## Solid Carbide 4 Flute Necked End Mill with Corner Radius for Hard Machining

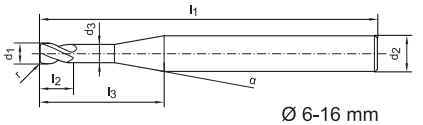
**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 30°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

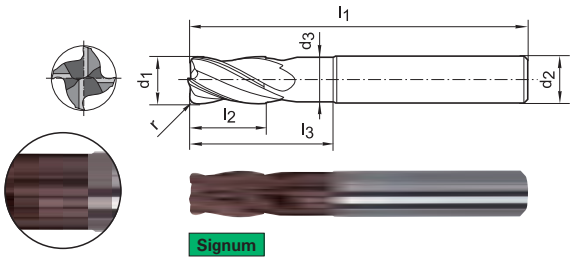
**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. The tool life increases with MQL or air cooling. The tool can either be used with a pivoted or straight spindle. Suitable for machining hardened materials **up to 62 HRC**.

**Note:** Copy milling, cutting values preferred at ap = 0.1 x $d_1$ and ae = 0.5 x $d_1$.




Ø 6-16 mm




Signum

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2434 | | 200 | 180 | 160 | 120 | 100 | 80 | 80 | | | 200 | | |

| Order No. | Ø $d_1$ h8 mm | 2434 GÜHRING Signum | Corner radius r ± 0.02 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0305 | 3 | 41.10 | 0.5 | 5 | 57 | 2.7 | 21 | 6 | 0.030 |
| 0405 | 4 | 41.10 | 0.5 | 6 | 57 | 3.7 | 21 | 6 | 0.035 |
| 0505 | 5 | 41.10 | 0.5 | 8 | 57 | 4.7 | 21 | 6 | 0.038 |
| 0610 | 6 | 44.50 | 1.0 | 9 | 57 | 5.7 | 21 | 6 | 0.040 |
| 0810 | 8 | 56.00 | 1.0 | 12 | 63 | 7.7 | 27 | 8 | 0.050 |
| 1015 | 10 | 75.80 | 1.5 | 15 | 72 | 9.5 | 32 | 10 | 0.070 |
| 1215 | 12 | 103.00 | 1.5 | 18 | 83 | 11.5 | 38 | 12 | 0.080 |
| 1620 | 16 | 169.50 (W221) | 2.0 | 24 | 92 | 15.5 | 44 | 16 | 0.100 |

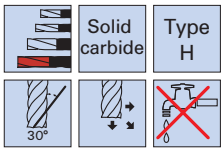
## Solid Carbide Long Series 4 Flute Necked End Mill with Corner Radius for Hard Machining

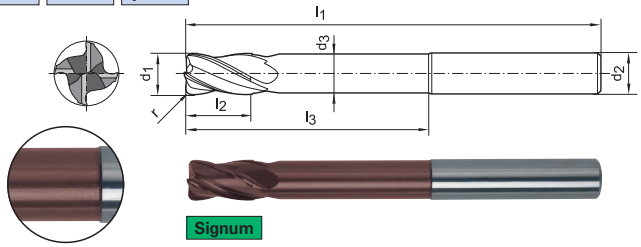
**Design:** Ultra-fine grit solid carbide, type H, according to factory standard, 30°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for copy milling. The neck chip channel makes optimum tool range possible and thus makes it suitable for mould-making applications. The tool life increases with MQL or air cooling. The tool can either be used with a pivoted or straight spindle. Suitable for machining hardened materials **up to 62 HRC**.

**Note:** Copy milling, cutting values preferred at ap = 0.1 x $d_1$ and ae = 0.5 x $d_1$.




Signum

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2435 | | 200 | 180 | 160 | 120 | 100 | 80 | 80 | | | 200 | | |

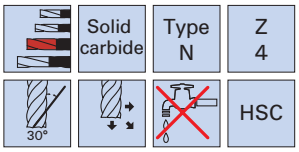
| Order No. | Ø $d_1$ h8 mm | 2435 GÜHRING Signum | Corner radius r ± 0.02 mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Steels up to 62 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0610 | 6 | 84.00 | 1.0 | 9 | 75 | 5.7 | 39 | 6 | 0.040 |
| 0810 | 8 | 99.60 | 1.0 | 12 | 100 | 7.7 | 64 | 8 | 0.050 |
| 1015 | 10 | 128.50 | 1.5 | 15 | 100 | 9.5 | 60 | 10 | 0.070 |
| 1215 | 12 | 192.50 | 1.5 | 18 | 150 | 11.5 | 105 | 12 | 0.080 |
| 1620 | 16 | 299.50 (W221) | 2.0 | 24 | 150 | 15.5 | 102 | 16 | 0.100 |

## Solid Carbide 4 Flute End Mill with Corner Radius for Hard Machining

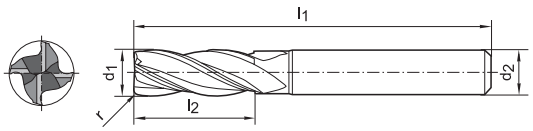
**Design:** Ultra-fine grit solid carbide, type N, according to factory standard, 30°, **TiAlN-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling. With corner radius to avoid notching effects on the workpiece. Suitable for HSC machining **up to 70 HRC**.




format professional quality



TiAlN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2437 | 80 | 80 | 52 | 52 | 52 | 32 | 32 | 32 | | | | | |

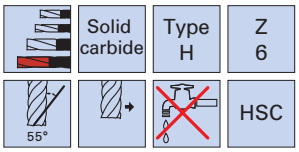
| Order No. | Ø $d_1$ e8 | 2437 format professional quality | Corner radius r | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 62 HRc $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | TiAlN | mm | mm | mm | mm | mm |
| 0300 | 3 | 37.60 | 0.3 | 12 | 50 | 6 | 0.002 |
| 0400 | 4 | 37.60 | 0.3 | 15 | 50 | 6 | 0.003 |
| 0500 | 5 | 37.60 | 0.3 | 20 | 60 | 6 | 0.005 |
| 0602 | 6 | 37.60 | 0.5 | 20 | 60 | 6 | 0.007 |
| 0800 | 8 | 48.10 | 0.3 | 25 | 70 | 8 | 0.010 |
| 0802 | 8 | 48.10 | 0.5 | 25 | 70 | 8 | 0.010 |
| 1002 | 10 | 71.20 | 0.5 | 30 | 90 | 10 | 0.012 |
| 1202 | 12 | 97.60 | 0.5 | 30 | 90 | 12 | 0.012 |
| 2006 | 20 | 305.00 | 1.5 | 55 | 110 | 20 | 0.012 |
| 2008 | 20 | 305.00 (W212) | 2.0 | 55 | 110 | 20 | 0.012 |

## Solid Carbide Long Series Multi Flute Necked End Mill with Corner Radius for Hard Machining

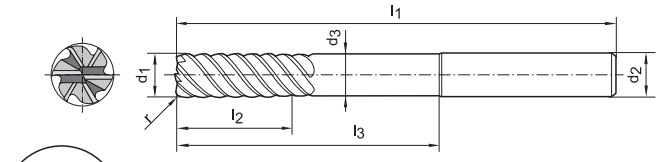
**Design:** Ultra-fine grit solid carbide (K50), type H, according to factory standard, 55°, **Signum-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing. **For large milling depth up to 3 x D.** Ideal for use in mould-making and dip working thanks to the neck chip channel and corner radius with long range. The extremely high spiral lead and reinforced core results in particularly smooth running and thus low deviation in shape and a very good surface on the workpiece. Suitable for HSC machining **up to 62 HRC**.




GÜHRING



Signum

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2388 | | | | | 55 | 45 | 40 | 40 | | | 200 | | |

| Order No. | Ø $d_1$ h10 | 2388 GÜHRING Signum | Corner radius r | Cutting length $l_2$ | Overall length $l_1$ | Neck Ø $d_3$ | Clear area $l_3$ | Shank Ø $d_2$ h6 | Steels up to 56 HRc $f_z$ |
|---|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm | mm |
| 0600 | 6 | 43.60 | 0.5 | 13 | 75 | 5.7 | 39 | 6 | 0.024 |
| 0800 | 8 | 48.60 | 0.5 | 19 | 100 | 7.7 | 64 | 8 | 0.032 |
| 1000 | 10 | 86.40 | 0.5 | 22 | 100 | 9.5 | 60 | 10 | 0.038 |
| 1200 | 12 | 121.00 | 1.0 | 26 | 150 | 11.5 | 105 | 12 | 0.046 |
| 1600 | 16 | 215.50 (W221) | 1.0 | 32 | 150 | 15.5 | 102 | 16 | 0.054 |

## Solid Carbide Long Series Multi Flute Necked End Mill with Corner Radius for Hard Machining

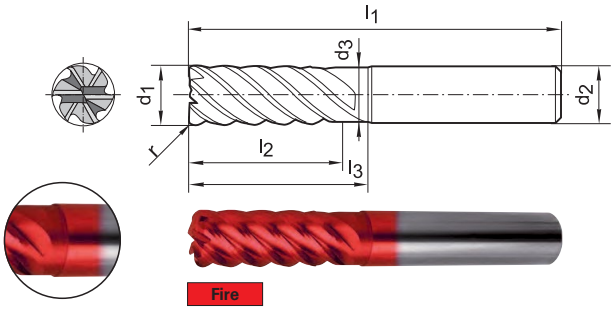
**Design:** Ultra-fine grit solid carbide, type N, DIN 6527 L, 45°, **fire-coated,** with centre cut.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for peripheral milling, trimming and high-precision finishing, with corner radius to avoid notching effects on the workpiece – less corner wear during plunge cutting and slot cutting. The 45° spiral results in a soft and peeling cut and thus a high surface quality. Burr formation on the cutting edges is avoided. Suitable for HSC machining.

Solid carbide | Type N | Z 6–8 | DIN 6527 | DIN 6535-HA | 45° | HSC

GÜHRING




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2493 | 170 | 170 | 140 | 100 | 55 | | | | 120 | 105 | 200 | 900 | 220 |

| Order No. | Ø $d_1$ h10 mm | 2493 GÜHRING Fire | Corner radius r mm | Cutting length $l_2$ mm | Overall length $l_1$ mm | Neck Ø $d_3$ mm | Clear area $l_3$ mm | Shank Ø $d_2$ h6 mm | Number of teeth | Cast iron materials $f_z$ mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0605 | 6 | 42.80 | 0.5 | 13 | 57 | 5.7 | 21 | 6 | 6 | 0.029 |
| 0610 | 6 | 42.80 | 1.0 | 13 | 57 | 5.7 | 21 | 6 | 6 | 0.029 |
| 0805 | 8 | 55.10 | 0.5 | 19 | 63 | 7.7 | 27 | 8 | 6 | 0.042 |
| 0810 | 8 | 57.60 | 1.0 | 19 | 63 | 7.7 | 27 | 8 | 6 | 0.042 |
| 0815 | 8 | 57.60 | 1.5 | 19 | 63 | 7.7 | 27 | 8 | 6 | 0.042 |
| 0820 | 8 | 57.60 | 2.0 | 19 | 63 | 7.7 | 27 | 8 | 6 | 0.042 |
| 1005 | 10 | 84.00 | 0.5 | 22 | 72 | 9.5 | 32 | 10 | 6 | 0.053 |
| 1010 | 10 | 82.30 | 1.0 | 22 | 72 | 9.5 | 32 | 10 | 6 | 0.053 |
| 1015 | 10 | 86.40 | 1.5 | 22 | 72 | 9.5 | 32 | 10 | 6 | 0.053 |
| 1020 | 10 | 84.00 | 2.0 | 22 | 72 | 9.5 | 32 | 10 | 6 | 0.053 |
| 1205 | 12 | 116.00 | 0.5 | 26 | 83 | 11.5 | 38 | 12 | 6 | 0.063 |
| 1210 | 12 | 116.00 | 1.0 | 26 | 83 | 11.5 | 38 | 12 | 6 | 0.063 |
| 1215 | 12 | 116.00 | 1.5 | 26 | 83 | 11.5 | 38 | 12 | 6 | 0.063 |
| 1220 | 12 | 113.00 | 2.0 | 26 | 83 | 11.5 | 38 | 12 | 6 | 0.063 |
| 1610 | 16 | 194.00 | 1.0 | 32 | 92 | 15.5 | 44 | 16 | 6 | 0.079 |
| 1615 | 16 | 199.00 | 1.5 | 32 | 92 | 15.5 | 44 | 16 | 6 | 0.079 |
| 1620 | 16 | 194.00 | 2.0 | 32 | 92 | 15.5 | 44 | 16 | 6 | 0.079 |
| 2010 | 20 | 270.00 | 1.0 | 38 | 104 | 19.5 | 54 | 20 | 8 | 0.097 |
| 2015 | 20 | 270.00 | 1.5 | 38 | 104 | 19.5 | 54 | 20 | 8 | 0.097 |
| 2020 | 20 | 276.50 (W221) | 2.0 | 38 | 104 | 19.5 | 54 | 20 | 8 | 0.097 |

## Solid carbide quarter-round milling cutter (concave cutter)

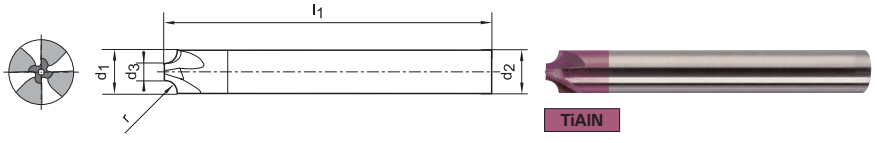
**Design:** Solid carbide (K10/20), type N, according to factory standard, **TiAlN-coated.**

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

**Application:** Can be used for rounding edges and deburring edges and contours.

Solid carbide | Type N | Z 4 | Factory standard | DIN 6535-HA

format professional quality




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2451 | 100 | 90 | 70 | 90 | 90 | | | | 60 | 45 | 90 | 500 | 190 |

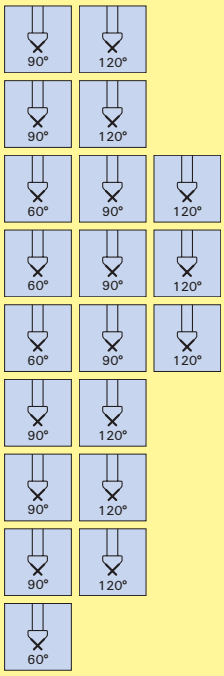
| Order No. | r = H11 mm | 2451 format TiAlN | Largest Ø $d_1$ mm | Smallest Ø $d_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | Steels up to 52 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0050 | 0.5 | 77.80 | 10 | 9 | 75 | 10 | 0.04 |
| 0100 | 1.0 | 77.80 | 10 | 8 | 75 | 10 | 0.04 |
| 0150 | 1.5 | 77.80 | 10 | 7 | 75 | 10 | 0.05 |
| 0200 | 2.0 | 77.80 (W212) | 10 | 6 | 75 | 10 | 0.05 |

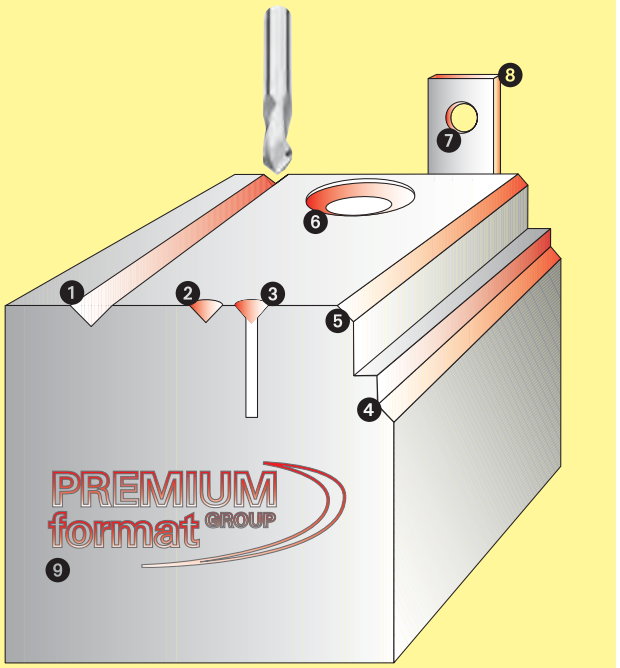
| Order No. | r = H11 mm | 2451 format TiAlN | Largest Ø $d_1$ mm | Smallest Ø $d_3$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ mm | Steels up to 52 HRc $f_z$ mm |
|---|---|---|---|---|---|---|---|
| 0250 | 2.5 | 80.40 | 10 | 5 | 75 | 10 | 0.06 |
| 0300 | 3.0 | 80.40 | 10 | 4 | 75 | 10 | 0.06 |
| 0400 | 4.0 | 88.90 | 12 | 4 | 75 | 12 | 0.07 |
| 0500 | 5.0 | 126.50 (W212) | 16 | 6 | 75 | 16 | 0.08 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spot Drill / Chamfer Tool

1 V-groove cutting
2 Spot drilling
3 Chamfering
4 Contour milling
5 Contour milling
6 Circular milling
7 Drilling
8 Contour milling
9 Engraving

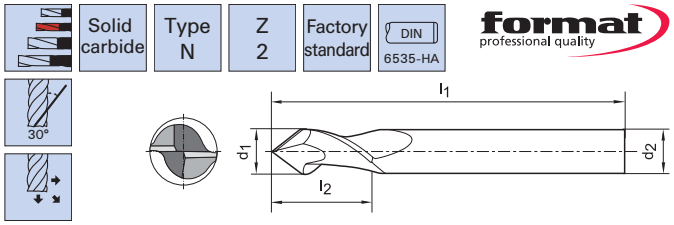


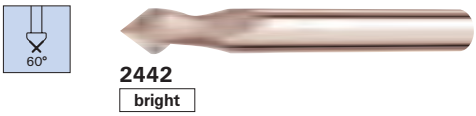

## Spot Drill / Chamfer Tool

**Design:** Solid carbide (K10/K20), type N, according to factory standard, 30°, bright, with centre cut.

**Application:** Suitable for chamfering edges, burr-free engraving of contours and general milling jobs.

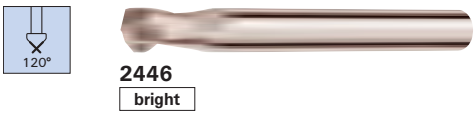



**2442** Bright — 60°




**2440** Bright — 90°

**2446** Bright — 120°




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2442 | 75 | 60 | 35 | | | | | | 35 | 30 | 35 | 120 | |
| 2440 | 75 | 60 | 35 | | | | | | 35 | 30 | 35 | 120 | |
| 2446 | 75 | 60 | 35 | | | | | | 35 | 30 | 35 | 120 | |

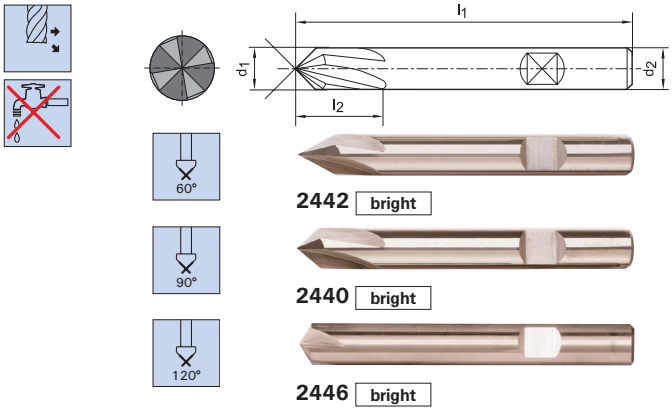
| Order No. | Ø $d_1$ h10 mm | 2442 format professional quality bright | 2440 format professional quality bright | 2446 format professional quality bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0030 | 3 | 41.40 | 32.60 | 32.60 | 6 | 50 | 4 | 0.006 |
| 0040 | 4 | 42.30 | 33.70 | 33.70 | 8 | 50 | 4 | 0.008 |
| 0050 | 5 | 44.40 | 35.90 | 35.90 | 10 | 50 | 6 | 0.009 |
| 0060 | 6 | 54.40 | 43.40 | 43.40 | 12 | 60 | 8 | 0.013 |
| 0080 | 8 | 76.20 | 61.30 | 61.30 | 16 | 70 | 10 | 0.020 |
| 0100 | 10 | 98.00 | 78.30 | 78.30 | 18 | 70 | 12 | 0.025 |
| 0120 | 12 | 99.40 | 80.40 | 80.40 | 20 | 70 | 12 | 0.040 |
| 0160 | 16 | 137.00 | 111.00 | 111.00 | 26 | 80 | 16 | 0.052 |
| 0200 | 20 | 238.00 (W210) | 191.50 (W210) | 191.50 (W210) | 32 | 100 | 20 | 0.062 |

## Solid Carbide Chamfer Tool

**Design:** Solid carbide (K10/K20), type N, according to factory standard, similar to DIN 6527, bright.

**Application**: Suitable for deburring and chamfering edges. Suitable for contouring.

Solid carbide | Type N | Z 4 | Factory standard | DIN 6535-HB | format professional quality




**2442** Bright — 60°

**2440** Bright — 90°

**2446** Bright — 120°

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2440 | 75 | 60 | 35 | | | | | | 35 | 30 | 35 | 120 | |
| 2442 | 75 | 60 | 35 | | | | | | 35 | 30 | 35 | 120 | |
| 2446 | 75 | 60 | 35 | | | | | | 35 | 30 | 35 | 120 | |

| Order No. | Ø $d_1$ h11 mm | 2442 format bright | 2440 format bright | 2446 format bright | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,000 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0400 | 4* | 19.90 | 19.90 | 19.90 | 8 | 54 | 4 | 0.010 |
| 0600 | 6 | 19.90 | 19.90 | 19.90 | 10 | 57 | 6 | 0.014 |
| 0800 | 8 | 25.30 | 25.30 | 25.30 | 12 | 63 | 8 | 0.020 |
| 1000 | 10 | 35.40 | 35.40 | 35.40 | 14 | 72 | 10 | 0.025 |
| 1200 | 12 | 50.60 | 50.60 | 50.60 | 16 | 83 | 12 | 0.040 |
| 1600 | 16 | 101.50 | 101.50 | 101.50 | 18 | 92 | 16 | 0.050 |
| 2000 | 20 | 149.00 (W210) | 149.00 (W210) | 149.00 (W210) | 20 | 104 | 20 | 0.060 |

* Ø 4 mm with shank HA DIN 6535

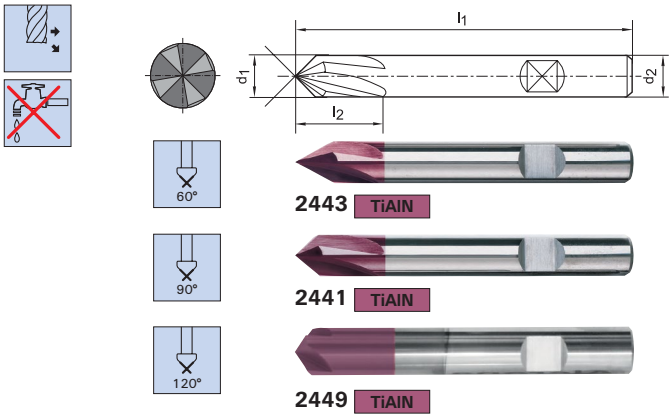
## Solid Carbide Chamfer Tool

**Design:** Solid carbide (K10/K20), type N, according to factory standard, similar DIN 6527, **TiAlN-coated.**

**Application**: Suitable for deburring and chamfering edges. Suitable for contouring.

**Cutting speed approx. 50% higher than with non-coated tools. Dry machining possible.**

Solid carbide | Type N | Z 4 | Factory standard | DIN 6535-HB | format professional quality




**2443** TiAlN — 60°

**2441** TiAlN — 90°

**2449** TiAlN — 120°

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2441 | 90 | 70 | 40 | | | | | | 40 | 35 | 40 | 145 | |
| 2443 | 90 | 70 | 40 | | | | | | 40 | 35 | 40 | 145 | |
| 2449 | 90 | 70 | 40 | | | | | | 40 | 35 | 40 | 145 | |

| Order No. | Ø $d_1$ h11 mm | 2443 format TiAlN | 2441 format TiAlN | 2449 format TiAlN | Cutting length $l_2$ mm | Overall length $l_1$ mm | Shank Ø $d_2$ h6 mm | Steels up to 1,400 N/mm² $f_z$ mm |
|---|---|---|---|---|---|---|---|---|
| 0400 | 4* | 23.20 (W212) | 23.20 (W212) | 23.20 (W212) | 8 | 54 | 4 | 0.008 |

* Ø 4 mm with shank HA DIN 6535

Continued overleaf

## Solid Carbide Chamfer Tool

Continued

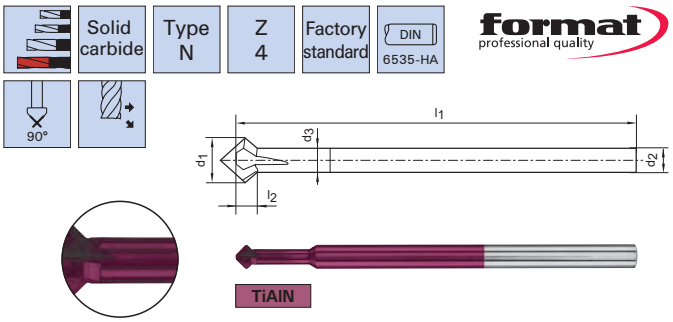
| Order No. | Ø $d_1$ h11 | 2443 format professional quality TiAlN | 2441 format professional quality TiAlN | 2449 format professional quality TiAlN | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 1,400 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|---|
| | mm | | | | mm | mm | mm | mm |
| 0600 | 6 | 25.40 | 25.40 | 25.40 | 10 | 57 | 6 | 0.013 |
| 0800 | 8 | 29.20 | 29.20 | 29.20 | 12 | 63 | 8 | 0.020 |
| 1000 | 10 | 39.90 | 39.90 | 39.90 | 14 | 72 | 10 | 0.025 |
| 1200 | 12 | 63.80 | 63.80 | 63.80 | 16 | 83 | 12 | 0.040 |
| 1600 | 16 | 112.00 | 112.00 | 130.00 | 18 | 92 | 16 | 0.050 |
| 2000 | 20 | 160.50 (W212) | 160.50 (W212) | 186.00 (W212) | 20 | 104 | 20 | 0.060 |

* Ø 4 mm with shank HA DIN 6535

## Solid Carbide Forward & Reverse Chamfer Tool

**Design:** Solid carbide (K10/K20), type N, according to factory standard, 90°, TiAlN.

**Application:** Can be used for linear and circular forward and reverse deburring or chamfering.



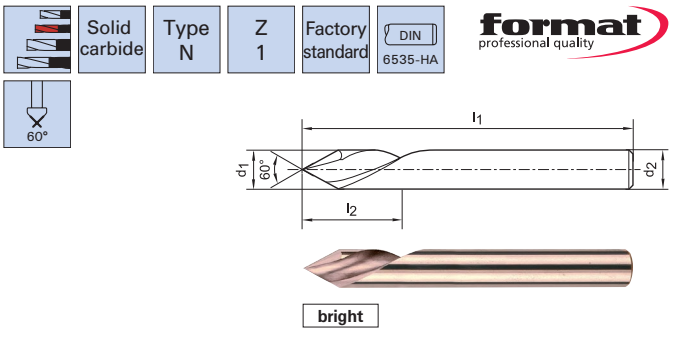

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2444 | 90 | 80 | 60 | | | | | | 50 | 40 | 60 | 230 | 150 |

| Order No. | Ø $d_1$ h8 | 2444 format professional quality TiAlN | Neck Ø $d_3$ | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ h6 | Steels up to 850 N/mm² $f_z$ |
|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm |
| 0040 | 4 | 55.20 | 2.2 | 0.5 | 75 | 4 | 0.010 |
| 0060 | 6 | 61.20 | 3.9 | 0.5 | 100 | 6 | 0.014 |
| 0080 | 8 | 79.60 | – | 0.5 | 100 | 6 | 0.018 |
| 0100 | 10 | 98.00 | – | 0.5 | 100 | 6 | 0.022 |
| 0120 | 12 | 110.00 (W212) | – | 0.5 | 100 | 6 | 0.026 |

## Solid Carbide Engraving Cutter 60deg

**Design:** Solid carbide (K10/K20) type N, according to factory standard, 60°, bright with relief grinding, milling width (width of lettering) 0.1 mm.

**Application:** Can be used for the burr-free engraving of contours.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2444 | ◐ | ◐ | | | | | | | | | | ● | ● |

| Order No. | Ø $d_1$ h11 | 2444 format professional quality bright | Cutting length $l_2$ | Overall length $l_1$ | Shank Ø $d_2$ |
|---|---|---|---|---|---|
| | mm | | mm | mm | mm |
| 0300 | 3 | 26.50 | 15 | 38 | 3 |
| 0400 | 4 | 29.50 | 15 | 50 | 4 |
| 0600 | 6 | 38.90 (W210) | 15 | 50 | 6 |

## HSSe Metal Slitting Saw Blade for GF Saws

**Design:** material no. 1.3243 HSS-E DMo5, bright, hardened and repeatedly annealed to **65-66 HRC.** With collar, without pin holes
Tooth shape: BW

**Application:** Can be used with portable GF pipe saws.. For cutting construction steels, non-alloyed tool steel, chrome steel and stainless steel, pipes made of high-alloyed steels (stainless steel). The saw blades can be re-sharpened several times.

HSS-E DMo5

format professional quality

bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2654 | ● | | | | | | | | ● | | | | |

| Order No. | Ø x width x bore mm | 2654 format bright | For wall thicknesses mm | Number of teeth BW | Tooth pitch T mm |
|---|---|---|---|---|---|
| 0001 | 63 x 1.6 x 16 | 36.20 | 2.5–5.5 | 44 | 4.5 |
| 0004 | 63 x 1.6 x 16 | 36.20 | 1.2–2.5 | 64 | 3.1 |
| 0007 | 68 x 1.6 x 16 | 36.20 | 2.5–7.0 | 44 | 4.9 |
| 0010 | 68 x 1.6 x 16 | 38.90 | 1.5–4.0 | 64 | 3.3 |
| 0013 | 68 x 1.6 x 16 | 38.90 | 1.0–2.5 | 84 | 2.6 |
| 0016 | 80 x 1.8 x 16 | 48.90 | from 2.5 | 64 | 3.9 |
| 0019 | 80 x 1.8 x 16 | 48.90 (W242) | 1.2–2.5 | 80 | 3.1 |

## HSS Metal Slitting Saw Blade

**Design:** Precision of keyway cutting in accordance with DIN 1840, hollow-ground.
HSS-DMo5, bright, hardened and repeatedly annealed to **63–65 HRC** – with or without collar according to manufacturer's specifications – high-precision ground. Without pin holes.

HSS DMo5 | DIN 1837 | DIN 1838

K T S Sägetechnik

**2655** blank

**DIN 1837 A – herringbone tooth,** fine tooth pitch.

**Application:** For thin-walled materials and shallow cutting depths. For machining short-chipping materials.

**2656** blank

**DIN 1838 B – curved tooth,** coarse tooth pitch.

**Application:** For thick-walled materials and larger cutting depths.

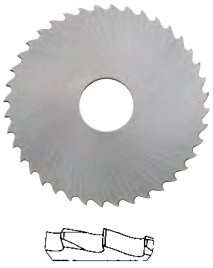
**2657** blank

**DIN 1838 C – curved tooth with roughing and finishing teeth,** coarse tooth pitch

**Application:** High stock removal capacity possible thanks to chip breaking. For thick-walled materials and medium to large cutting depths.

Tooth shape: **Herringbone tooth A**
bright

Tooth shape: **Curved tooth B**
bright



Tooth shape: **Curved tooth C**
bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2655 | ● | | | | | | | | | | | | |
| 2656 | ● | | | | | | | | | | | | |
| 2657 | ● | | | | | | | | | | | | |

| Order No. | Ø j15 mm | 2655 K T S Sägetechnik bright Shape A | 2656 K T S Sägetechnik bright Shape B | 2657 K T S Sägetechnik bright Shape C | Width j11 mm | Bore H7 mm | Number of teeth shape A | Number of teeth shape B | Number of teeth shape C |
|---|---|---|---|---|---|---|---|---|---|
| 0001 | 20 | 13.50 | – | – | 0.20 | 5 | 80 | – | – |
| 0004 | 20 | 13.50 | – | – | 0.25 | 5 | 64 | – | – |
| 0007 | 20 | 12.30 | – | – | 0.30 | 5 | 64 | – | – |
| 0010 | 20 | 12.30 | – | – | 0.40 | 5 | 64 | – | – |
| 0013 | 20 | 11.60 | – | – | 0.50 | 5 | 48 | – | – |
| 0016 | 20 | 11.60 | – | – | 0.60 | 5 | 48 | – | – |
| 0019 | 20 | 11.60 | – | – | 0.80 | 5 | 48 | – | – |
| 0022 | 20 | 11.60 | – | – | 1.00 | 5 | 40 | – | – |
| 0025 | 20 | 13.10 | – | – | 1.20 | 5 | 40 | – | – |
| 0028 | 20 | 14.40 | – | – | 1.60 | 5 | 40 | – | – |
| 0031 | 20 | 14.80 | – | – | 2.00 | 5 | 32 | – | – |

Carbide available on request. (W240) (W240) (W240)

Continued overleaf

## HSS Metal Slitting Saw Blade

Continued

| Order No. | Ø j15 | 2655 KTS Sägetechnik bright | 2656 KTS Sägetechnik bright | 2657 KTS Sägetechnik bright | Width j11 | Bore H7 | Number of teeth shape A | Number of teeth shape B | Number of teeth shape C |
|---|---|---|---|---|---|---|---|---|---|
| | mm | Shape A | Shape B | Shape C | mm | mm | | | |
| 0034 | 20 | 15.60 | – | – | 2.50 | 5 | 32 | – | – |
| 0037 | 20 | 17.00 | – | – | 3.00 | 5 | 32 | – | – |
| 0040 | 20 | 20.50 ◊ | – | – | 4.00 | 5 | 24 | – | – |
| 0043 | 20 | 23.90 ◊ | – | – | 5.00 | 5 | 24 | – | – |
| 0046 | 20 | 28.00 ◊ | – | – | 6.00 | 5 | 24 | – | – |
| 0049 | 25 | 14.00 ◊ | – | – | 0.20 | 8 | 80 | – | – |
| 0052 | 25 | 14.00 ◊ | – | – | 0.25 | 8 | 80 | – | – |
| 0055 | 25 | 13.00 | – | – | 0.30 | 8 | 80 | – | – |
| 0058 | 25 | 13.00 | – | – | 0.40 | 8 | 64 | – | – |
| 0061 | 25 | 12.45 | – | – | 0.50 | 8 | 64 | – | – |
| 0064 | 25 | 12.45 | – | – | 0.60 | 8 | 64 | – | – |
| 0067 | 25 | 12.45 ◊ | – | – | 0.80 | 8 | 48 | – | – |
| 0070 | 25 | 12.45 | – | – | 1.00 | 8 | 48 | – | – |
| 0073 | 25 | 13.70 | – | – | 1.20 | 8 | 48 | – | – |
| 0076 | 25 | 14.60 ◊ | – | – | 1.60 | 8 | 40 | – | – |
| 0079 | 25 | 15.60 | – | – | 2.00 | 8 | 40 | – | – |
| 0082 | 25 | 16.85 | – | – | 2.50 | 8 | 40 | – | – |
| 0085 | 25 | 18.95 | – | – | 3.00 | 8 | 32 | – | – |
| 0088 | 25 | 22.60 ◊ | – | – | 4.00 | 8 | 32 | – | – |
| 0091 | 25 | 26.30 ◊ | – | – | 5.00 | 8 | 32 | – | – |
| 0094 | 25 | 29.90 ◊ | – | – | 6.00 | 8 | 24 | – | – |
| 0097 | 32 | 14.85 ◊ | – | – | 0.20 | 8 | 100 | – | – |
| 0100 | 32 | 14.85 | – | – | 0.25 | 8 | 100 | – | – |
| 0103 | 32 | 13.50 | – | – | 0.30 | 8 | 80 | – | – |
| 0106 | 32 | 13.50 | – | – | 0.40 | 8 | 80 | – | – |
| 0109 | 32 | 13.00 | – | – | 0.50 | 8 | 80 | – | – |
| 0112 | 32 | 13.00 | – | – | 0.60 | 8 | 64 | – | – |
| 0115 | 32 | 13.00 | – | – | 0.80 | 8 | 64 | – | – |
| 0118 | 32 | 13.00 | – | – | 1.00 | 8 | 64 | – | – |
| 0121 | 32 | 14.45 ◊ | – | – | 1.20 | 8 | 48 | – | – |
| 0124 | 32 | 15.05 | – | – | 1.60 | 8 | 48 | – | – |
| 0127 | 32 | 16.35 | – | – | 2.00 | 8 | 48 | – | – |
| 0130 | 32 | 18.30 | – | – | 2.50 | 8 | 40 | – | – |
| 0133 | 32 | 20.60 | – | – | 3.00 | 8 | 40 | – | – |
| 0136 | 32 | 24.70 ◊ | – | – | 4.00 | 8 | 40 | – | – |
| 0139 | 32 | 29.50 | – | – | 5.00 | 8 | 32 | – | – |
| 0142 | 32 | 31.60 ◊ | – | – | 6.00 | 8 | 32 | – | – |
| 0145 | 40 | 16.25 | – | – | 0.20 | 10 | 128 | – | – |
| 0148 | 40 | 16.25 ◊ | – | – | 0.25 | 10 | 100 | – | – |
| 0151 | 40 | 15.55 | – | – | 0.30 | 10 | 100 | – | – |
| 0154 | 40 | 15.55 | – | – | 0.40 | 10 | 100 | – | – |
| 0157 | 40 | 14.50 | – | – | 0.50 | 10 | 80 | – | – |
| 0160 | 40 | 14.50 ◊ | – | – | 0.60 | 10 | 80 | – | – |
| 0163 | 40 | 14.50 | – | – | 0.80 | 10 | 80 | – | – |
| 0166 | 40 | 14.50 | – | – | 1.00 | 10 | 64 | – | – |
| 0169 | 40 | 14.85 | – | – | 1.20 | 10 | 64 | – | – |
| 0172 | 40 | 16.00 | – | – | 1.60 | 10 | 64 | – | – |
| 0175 | 40 | 17.30 | – | – | 2.00 | 10 | 48 | – | – |
| 0178 | 40 | 19.25 | – | – | 2.50 | 10 | 48 | – | – |
| 0181 | 40 | 22.90 | – | – | 3.00 | 10 | 48 | – | – |
| 0184 | 40 | 27.30 | – | – | 4.00 | 10 | 40 | – | – |
| 0187 | 40 | 33.90 | – | – | 5.00 | 10 | 40 | – | – |
| 0190 | 40 | 37.40 ◊ | – | – | 6.00 | 10 | 40 | – | – |
| 0193 | 50 | 19.05 | – | – | 0.20 | 13 | 128 | – | – |
| 0196 | 50 | 19.05 | – | – | 0.25 | 13 | 128 | – | – |
| 0199 | 50 | 17.35 | – | – | 0.30 | 13 | 128 | – | – |
| 0202 | 50 | 17.35 | – | – | 0.40 | 13 | 100 | – | – |
| 0205 | 50 | 16.30 | 16.30 | – | 0.50 | 13 | 100 | 48 | – |
| 0208 | 50 | 16.30 | 16.30 | – | 0.60 | 13 | 100 | 48 | – |
| 0211 | 50 | 16.30 | 16.30 | – | 0.80 | 13 | 80 | 40 | – |
| 0214 | 50 | 16.30 | 16.30 | 21.20 | 1.00 | 13 | 80 | 40 | 40 |
| 0217 | 50 | 16.30 | 16.30 | 25.30 | 1.20 | 13 | 80 | 40 | 40 |
| 0220 | 50 | 17.85 | 17.85 | 22.70 | 1.60 | 13 | 64 | 32 | 32 |
| 0223 | 50 | 19.20 | 19.20 | 23.60 ◊ | 2.00 | 13 | 64 | 32 | 32 |
| 0226 | 50 | 20.70 ◊ | 20.70 | 25.50 | 2.50 | 13 | 64 | 32 | 32 |

Carbide available on request. (W240) (W240) (W240)

Continued overleaf

## HSS Metal Slitting Saw Blade

Continued

| Order No. | Ø j15 | 2655 KTS Sägetechnik bright | 2656 KTS Sägetechnik bright | 2657 KTS Sägetechnik bright | Width j11 | Bore H7 | Number of teeth shape A | Number of teeth shape B | Number of teeth shape C |
|---|---|---|---|---|---|---|---|---|---|
| | mm | Shape A | Shape B | Shape C | mm | mm | | | |
| 0229 | 50 | 23.90 ◊ | 24.10 ◊ | 26.30 ◊ | 3.00 | 13 | 48 | 24 | 24 |
| 0232 | 50 | 28.00 ◊ | 28.00 ◊ | 40.10 ◊ | 4.00 | 13 | 48 | 24 | 24 |
| 0235 | 50 | 36.80 | 36.80 ◊ | 49.70 ◊ | 5.00 | 13 | 48 | 24 | 24 |
| 0238 | 50 | 41.80 ◊ | 41.90 ◊ | 54.30 ◊ | 6.00 | 13 | 40 | 20 | 20 |
| 0241 | 63 | 21.00 | – | – | 0.25 | 16 | 160 | – | – |
| 0244 | 63 | 19.85 | – | – | 0.30 | 16 | 128 | – | – |
| 0247 | 63 | 19.85 | – | – | 0.40 | 16 | 128 | – | – |
| 0250 | 63 | 19.05 | 19.05 | – | 0.50 | 16 | 128 | 64 | – |
| 0253 | 63 | 19.05 | 19.05 | – | 0.60 | 16 | 100 | 48 | – |
| 0256 | 63 | 19.05 | 19.05 | – | 0.80 | 16 | 100 | 48 | – |
| 0259 | 63 | 19.05 | 19.05 | 23.90 | 1.00 | 16 | 100 | 48 | 48 |
| 0262 | 63 | 18.50 | 18.50 | 23.00 | 1.20 | 16 | 80 | 40 | 40 |
| 0265 | 63 | 20.70 | 20.70 | 26.20 | 1.60 | 16 | 80 | 40 | 40 |
| 0268 | 63 | 22.30 | 22.30 | 27.00 ◊ | 2.00 | 16 | 80 | 40 | 40 |
| 0271 | 63 | 23.60 | 23.60 | 33.90 ◊ | 2.50 | 16 | 64 | 32 | 32 |
| 0274 | 63 | 25.90 | 25.90 | 31.10 | 3.00 | 16 | 64 | 32 | 32 |
| 0277 | 63 | 32.90 | 32.90 ◊ | 47.40 | 4.00 | 16 | 64 | 32 | 32 |
| 0280 | 63 | 41.50 | 41.50 ◊ | 56.80 ◊ | 5.00 | 16 | 48 | 24 | 24 |
| 0283 | 63 | 46.50 ◊ | 46.50 ◊ | 63.30 ◊ | 6.00 | 16 | 48 | 24 | 24 |
| 0286 | 80 | 23.40 | – | – | 0.30 | 22 | 160 | – | – |
| 0289 | 80 | 23.40 | – | – | 0.40 | 22 | 160 | – | – |
| 0292 | 80 | 22.60 | 22.60 ◊ | – | 0.50 | 22 | 128 | 64 | – |
| 0295 | 80 | 22.60 | 22.60 ◊ | – | 0.60 | 22 | 128 | 64 | – |
| 0298 | 80 | 22.60 | 22.60 | – | 0.80 | 22 | 128 | 64 | – |
| 0301 | 80 | 22.60 | 22.60 | 27.80 | 1.00 | 22 | 100 | 48 | 48 |
| 0304 | 80 | 21.90 | 21.90 | 28.50 | 1.20 | 22 | 100 | 48 | 48 |
| 0307 | 80 | 24.50 | 23.30 | 29.00 | 1.60 | 22 | 100 | 48 | 48 |
| 0310 | 80 | 25.60 | 25.60 | 30.00 | 2.00 | 22 | 80 | 40 | 40 |
| 0313 | 80 | 30.60 | 30.60 | 42.50 ◊ | 2.50 | 22 | 80 | 40 | 40 |
| 0316 | 80 | 33.30 | 33.30 | 40.00 ◊ | 3.00 | 22 | 80 | 40 | 40 |
| 0319 | 80 | 40.80 | 40.80 | 48.20 | 4.00 | 22 | 64 | 32 | 32 |
| 0322 | 80 | 50.20 | 50.20 ◊ | 56.60 | 5.00 | 22 | 64 | 32 | 32 |
| 0325 | 80 | 56.30 ◊ | 56.30 ◊ | 74.90 ◊ | 6.00 | 22 | 64 | 32 | 32 |
| 0328 | 100 | 26.50 | 26.50 | – | 0.50 | 22 | 160 | 80 | – |
| 0331 | 100 | 26.50 | 26.50 | – | 0.60 | 22 | 160 | 80 | – |
| 0334 | 100 | 26.50 | 26.50 | – | 0.80 | 22 | 128 | 64 | – |
| 0337 | 100 | 25.60 | 26.50 | 30.60 | 1.00 | 22 | 128 | 64 | 64 |
| 0340 | 100 | 25.60 | 25.60 | 34.70 ◊ | 1.20 | 22 | 128 | 64 | 64 |
| 0343 | 100 | 31.00 | 31.00 | 36.90 ◊ | 1.60 | 22 | 100 | 48 | 48 |
| 0346 | 100 | 34.20 | 34.20 | 38.40 | 2.00 | 22 | 100 | 48 | 48 |
| 0349 | 100 | 38.40 ◊ | 38.40 ◊ | 41.30 ◊ | 2.50 | 22 | 100 | 48 | 48 |
| 0352 | 100 | 41.50 | 41.50 | 45.20 ◊ | 3.00 | 22 | 80 | 40 | 40 |
| 0355 | 100 | 63.00 ◊ | 56.30 | 72.30 ◊ | 4.00 | 22 | 80 | 40 | 40 |
| 0358 | 100 | 73.60 ◊ | 63.00 | 80.80 ◊ | 5.00 | 22 | 80 | 40 | 40 |
| 0361 | 100 | 73.60 | 73.60 ◊ | 92.90 ◊ | 6.00 | 22 | 64 | 32 | 32 |
| 0364 | 125 | 40.40 | 40.40 | – | 0.60 | 22 | 160 | 80 | – |
| 0367 | 125 | 40.40 | 40.40 ◊ | – | 0.80 | 22 | 160 | 80 | – |
| 0370 | 125 | 40.40 | 40.40 | 44.40 | 1.00 | 22 | 160 | 80 | 80 |
| 0373 | 125 | 37.90 | 37.90 ◊ | 45.80 ◊ | 1.20 | 22 | 128 | 64 | 64 |
| 0376 | 125 | 39.40 | 39.40 | 46.50 | 1.60 | 22 | 128 | 64 | 64 |
| 0379 | 125 | 41.50 | 41.50 | 47.00 | 2.00 | 22 | 128 | 64 | 64 |
| 0382 | 125 | 43.80 | 43.80 ◊ | 48.20 ◊ | 2.50 | 22 | 100 | 48 | 48 |
| 0385 | 125 | 48.80 | 48.80 | 53.70 | 3.00 | 22 | 100 | 48 | 48 |
| 0388 | 125 | 73.10 | 73.10 ◊ | 82.20 ◊ | 4.00 | 22 | 100 | 48 | 48 |
| 0391 | 125 | 85.40 | 85.40 ◊ | 90.20 ◊ | 5.00 | 22 | 80 | 40 | 40 |
| 0394 | 125 | 95.30 | 95.30 ◊ | 103.50 ◊ | 6.00 | 22 | 80 | 40 | 40 |
| 0397 | 160 | 55.90 | 55.90 | 55.50 ◊ | 1.00 | 32 | 160 | 80 | 80 |
| 0400 | 160 | 54.00 | 54.00 ◊ | 55.50 | 1.20 | 32 | 160 | 80 | 80 |
| 0403 | 160 | 55.30 | 55.40 | 59.80 ◊ | 1.60 | 32 | 160 | 80 | 80 |
| 0406 | 160 | 56.70 | 56.20 ◊ | 59.90 | 2.00 | 32 | 128 | 64 | 64 |
| 0409 | 160 | 62.00 | 62.00 ◊ | 67.30 | 2.50 | 32 | 128 | 64 | 64 |
| 0412 | 160 | 70.60 | 70.60 ◊ | 76.60 ◊ | 3.00 | 32 | 128 | 64 | 64 |
| 0415 | 160 | 99.20 | 99.20 | 108.00 ◊ | 4.00 | 32 | 100 | 48 | 48 |
| 0418 | 160 | 117.50 ◊ | 117.50 ◊ | 123.00 ◊ | 5.00 | 32 | 100 | 48 | 48 |
| 0421 | 160 | 134.00 | 134.00 ◊ | 144.50 ◊ | 6.00 | 32 | 100 | 48 | 48 |

Carbide available on request. (W240) (W240) (W240)

Continued overleaf

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## HSS Metal Slitting Saw Blade

Continued

| Order No. | Ø j15 mm | 2655 KTS Sägetechnik bright Shape A | 2656 KTS Sägetechnik bright Shape B | 2657 KTS Sägetechnik bright Shape C | Width j11 mm | Bore H7 mm | Number of teeth shape A | Number of teeth shape B | Number of teeth shape C |
|---|---|---|---|---|---|---|---|---|---|
| 0424 | 200 | 77.80 | – | – | 1.00 | 32 | 200 | – | – |
| 0427 | 200 | 74.20 | 74.20 | – | 1.20 | 32 | 200 | 100 | – |
| 0430 | 200 | 78.50 | 78.50 ◊ | 87.20 | 1.60 | 32 | 160 | 80 | 80 |
| 0433 | 200 | 83.50 | 83.50 ◊ | 89.10 ◊ | 2.00 | 32 | 160 | 80 | 80 |
| 0436 | 200 | 94.60 ◊ | 94.60 ◊ | 102.00 ◊ | 2.50 | 32 | 160 | 80 | 80 |
| 0439 | 200 | 106.00 | 106.00 | 115.00 ◊ | 3.00 | 32 | 128 | 64 | 64 |
| 0442 | 200 | 149.50 ◊ | 149.50 ◊ | 162.00 ◊ | 4.00 | 32 | 128 | 64 | 64 |
| 0445 | 200 | 178.00 | 178.00 ◊ | 192.00 ◊ | 5.00 | 32 | 128 | 64 | 64 |
| 0448 | 200 | 205.50 ◊ | 205.50 | 219.50 ◊ | 6.00 | 32 | 100 | 48 | 48 |
| 0451 | 250 | 104.00 ◊ | 104.00 ◊ | 111.50 ◊ | 1.60 | 32 | 200 | 100 | 100 |
| 0454 | 250 | 114.00 | 114.00 ◊ | 122.00 | 2.00 | 32 | 200 | 100 | 100 |
| 0457 | 250 | 130.50 ◊ | 130.50 ◊ | 138.50 ◊ | 2.50 | 32 | 160 | 80 | 80 |
| 0460 | 250 | 143.50 | 143.50 ◊ | 153.00 ◊ | 3.00 | 32 | 160 | 80 | 80 |
| 0463 | 250 | 208.50 ◊ | 208.50 ◊ | 219.00 ◊ | 4.00 | 32 | 160 | 80 | 80 |
| 0466 | 250 | 247.50 ◊ | 247.50 ◊ | 261.00 ◊ | 5.00 | 32 | 128 | 64 | 64 |
| 0469 | 250 | 291.00 ◊ | 291.00 ◊ | 305.00 ◊ | 6.00 | 32 | 128 | 64 | 64 |
| 0472 | 315 | 206.50 | 206.50 | 222.00 ◊ | 2.50 | 40 | 200 | 100 | 100 |
| 0475 | 315 | 211.50 | 232.50 ◊ | 250.00 ◊ | 3.00 | 40 | 200 | 100 | 100 |
| 0478 | 315 | 299.50 ◊ | 299.50 ◊ | 311.50 ◊ | 4.00 | 40 | 160 | 80 | 80 |
| 0481 | 315 | 365.00 ◊ | 365.00 ◊ | 376.50 ◊ | 5.00 | 40 | 160 | 80 | 80 |
| 0484 | 315 | 432.50 ◊ | 432.50 ◊ | 451.50 ◊ | 6.00 | 40 | 160 | 80 | 80 |
| | | (W240) | (W240) | (W240) | | | | | |

Carbide available on request.

## Slitting Saw Blade Holder

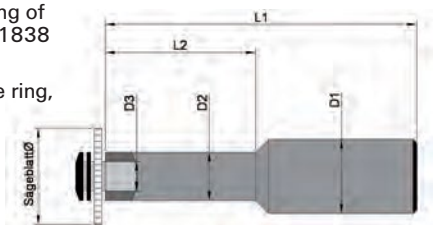
**Design:** Shank in accordance with DIN 1835-B tempered, outer and inner Ø ground.
Concentricity tolerance: 0.01 mm.

**Application:** For the precise securing, clamping and seating of metal circular saw blades in accordance with DIN 1837 / 1838 using Weldon shank with a saw blade Ø of 20–100 mm.

**Scope of delivery:** With clamping screw and intermediate ring, without circular saw blade.

DIN 1835-B

TSCHORN



| Order No. | | 0005 | 0010 | 0015 | 0020 | 0025 | 0030 | 0035 | 0040 |
|---|---|---|---|---|---|---|---|---|---|
| For saw blade Ø | mm | 20 | 25 | 32 | 40 | 50 | 63 | 80 | 100 |
| 2658 TSCHORN | | 77.70 | 77.70 | 77.70 | 77.70 | 77.70 | 77.70 | 111.00 | 111.00 |
| D3 | mm | 5 | 8 | 8 | 10 | 13 | 16 | 22 | 22 |
| D1 | mm | 20 | 20 | 20 | 20 | 25 | 25 | 25 | 25 |
| D2 | mm | 10 | 13 | 16 | 19.5 | 24.5 | 24.5 | 34 | 39.5 |
| L1 | mm | 94 | 104 | 110 | 114 | 141 | 141 | 160 | 160 |
| L2 | mm | 30 | 42 | 53 | 60 | 77 | 77 | 92 | 92 |

(W396)

## Set of Slitting Saw Blade Holders

**Design:** Set of saw blade holders with tool carrier.
Shank in accordance with DIN 1835-B quenched and tempered, outer and inner Ø ground.
Concentricity tolerance: 0.01 mm.

**Scope of supply:** With tightening screw, intermediate ring in case, without circular saw blades.

**Application:** For the precise securing, clamping and seating of metal circular saw blades in accordance with DIN 1837 / 1838 using Weldon shank with a saw blade Ø of 20–63 mm.

| Order No. | Set content Ø mm | 2658 TSCHORN |
|---|---|---|
| 0045 | 20; 25; 32; 40; 50; 63 | 486.50 (W396) |

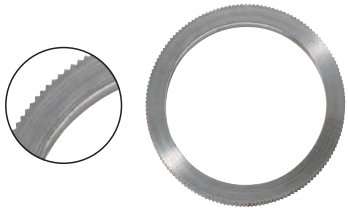
## High Precision – Bore Reduction Ring for Slitting Saw Blades

**Design:** Made of special alloy, ground flat. For a perfect fit, knurled on the outer edge.

**Application:** For reducing the bore of metal circular saw blades from Ø 40 mm to Ø 32 mm.

H7

format professional quality



| Order No. | Dimension mm | 2675 format | Thickness mm |
|---|---|---|---|
| 0005 | 40/32 | 8.60 | 2.0 |
| 0010 | 40/32 | 8.60 | 2.5 |
| 0015 | 40/32 | 8.60 | 3.0 |
| | | (W243) | |

## Solid Carbide Slitting Saw Blade

**Design:** Solid carbide, bright, laterally hollow-ground using mirror finish procedure, without pin holes.

Solid carbide

KTS Sägetechnik

**2678** Bright
Fine tooth pitch, with herringbone tooth.
For processing small cutting depths.

**2679** Bright
Coarse tooth pitch with curved tooth.
For processing large cutting depths and cross-sections.

**2678** bright

**2679** bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2678 | 145 | 115 | 60 | | | | | | 90 | | | 400 | 400 |
| 2679 | 145 | 115 | 60 | | | | | | 90 | | | 400 | 400 |

| Order No. | Ø d1 x thickness x bore d2 mm | 2678 KTS Sägetechnik bright | 2679 KTS Sägetechnik bright | Number of teeth 2678 | Number of teeth 2679 |
|---|---|---|---|---|---|
| 0001 | 20 x 0.5 x 5 | 19.75 | 19.75 | 48 | 20 |
| 0004 | 20 x 1.0 x 5 | 25.80 | – | 40 | – |
| 0007 | 25 x 0.5 x 8 | 31.00 | 31.00 | 64 | 20 |
| 0010 | 25 x 1.0 x 8 | 23.40 | 23.40 | 48 | 20 |
| 0013 | 25 x 2.0 x 8 | 38.40 | 38.40 | 40 | 20 |
| 0016 | 30 x 0.5 x 8 | 25.30 | 25.30 | 80 | 30 |
| 0019 | 30 x 0.8 x 8 | 32.50 | 32.50 | 64 | 24 |
| 0022 | 30 x 1.0 x 8 | 35.40 | 35.40 | 64 | 24 |
| 0025 | 30 x 1.6 x 8 | 41.00 | 41.00 | 48 | 24 |
| 0028 | 30 x 2.0 x 8 | 46.30 | 46.30 | 48 | 24 |
| 0031 | 40 x 0.4 x 10 | 34.20 | 34.20 | 100 | 40 |
| 0034 | 40 x 0.6 x 10 | 35.90 | 35.90 | 80 | 40 |
| 0037 | 40 x 1.0 x 10 | 38.50 | 38.50 | 64 | 32 |
| 0040 | 40 x 1.6 x 10 | 43.80 | 43.80 | 64 | 32 |
| 0043 | 40 x 2.0 x 10 | 49.00 | 49.00 | 48 | 32 |
| 0046 | 40 x 3.0 x 10 | 70.90 | 70.90 | 48 | 32 |
| 0049 | 50 x 0.5 x 13 | 36.80 | 36.80 | 100 | 48 |
| 0052 | 50 x 1.0 x 13 | 42.00 | 42.00 | 80 | 40 |
| 0055 | 50 x 1.2 x 13 | 44.60 | 44.60 | 80 | 40 |
| 0058 | 50 x 1.5 x 13 | 53.40 | 53.40 | 64 | 32 |
| 0061 | 50 x 2.0 x 13 | 61.30 | 61.30 | 64 | 32 |
| 0064 | 63 x 0.5 x 16 | 47.40 | 47.40 | 128 | 64 |
| 0067 | 63 x 1.0 x 16 | 62.30 | 62.30 | 100 | 48 |
| 0070 | 63 x 1.2 x 16 | 66.70 | 66.70 | 80 | 40 |
| 0073 | 63 x 1.6 x 16 | 73.70 | 73.70 | 80 | 40 |
| 0076 | 63 x 2.0 x 16 | 85.10 | 85.10 | 80 | 40 |
| 0079 | 63 x 2.5 x 16 | 99.10 | 99.10 | 64 | 32 |
| 0082 | 63 x 3.0 x 16 | 112.50 | 112.50 | 64 | 32 |
| 0085 | 80 x 0.5 x 22 | 77.20 | 77.20 | 128 | 64 |
| 0088 | 80 x 1.0 x 22 | 86.90 | 86.90 | 100 | 48 |
| 0091 | 80 x 1.6 x 22 | 102.50 | 102.50 | 100 | 48 |
| 0094 | 80 x 2.0 x 22 | 119.50 | 119.50 | 80 | 40 |
| 0097 | 100 x 1.0 x 22 | 111.00 | 111.00 | 128 | 64 |
| 0100 | 100 x 1.6 x 22 | 144.00 | 144.00 | 100 | 48 |
| 0103 | 100 x 2.0 x 22 | 171.00 | 171.00 | 100 | 48 |
| 0106 | 100 x 3.0 x 22 | 225.50 (W241) | 225.50 (W241) | 80 | 40 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Metal circular saw blade

**Design:** Steam-tempered surface, suitable for all common machine types.

**Tooth types:** HZ: suitable for cutting solid materials and thick pipes with wall thickness > 3 mm.
BW: Standard tooth shape for cutting pipes.

**2667**
**Steam tempered**

Made of high-speed steel.

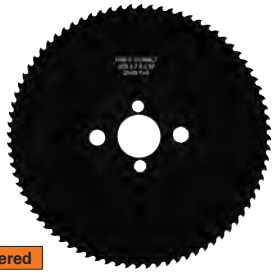
HSS

Steam tempered

**2668**
**Steam tempered**

Made of cobalt-alloyed high-speed steel.
For the cutting of non-corrosive steels or steels with a high tensile strength.

HSS-E



Steam tempered

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2667 | 30–100 | 15–50 | | | | | | | 15–45 | | | | |
| 2668 | 30–100 | 15–50 | | | | | | | 15–45 | | | | |

| Order No. | Ø x thickness x bore mm | 2667 STARK Steam tempered | 2668 STARK Steam tempered | Teeth and tooth shape | Number NL/Ø/circular pitch mm |
|---|---|---|---|---|---|
| 0001 | 225 x 1.9 x 32 | 47.90 | – | 120 HZ | 2/8/45 + 2/9/50 + 2/11/63 |
| 0003 | 225 x 1.9 x 32 | 47.90 | – | 180 BW | 2/8/45 + 2/9/50 + 2/11/63 |
| 0001 | 225 x 2.0 x 32 | – | 63.20 | 120 HZ | 2/8/45 + 2/9/50 + 2/11/63 |
| 0003 | 225 x 2.0 x 32 | – | 63.20 | 180 BW | 2/8/45 + 2/9/50 + 2/11/63 |
| 0005 | 250 x 2.0 x 32 | 48.50 | 66.80 | 128 HZ | 2/8/45 + 2/9/50 + 2/11/63 |
| 0007 | 250 x 2.0 x 32 | 48.50 | 66.80 | 200 BW | 2/8/45 + 2/9/50 + 2/11/63 |
| 0013 | 275 x 2.5 x 40 | 54.70 | 83.20 | 110 HZ | 2/8/55 + 4/12/64 |
| 0015 | 275 x 2.5 x 40 | 54.70 | 83.20 | 140 HZ | 2/8/55 + 4/12/64 |
| 0017 | 275 x 2.5 x 40 | 54.70 | – | 180 BW | 2/8/55 + 4/12/64 |
| 0017 | 275 x 2.5 x 40 | – | 83.20 | 180 HZ | 2/8/55 + 4/12/64 |
| 0019 | 275 x 2.5 x 40 | 54.70 | 83.20 | 220 BW | 2/8/55 + 4/12/64 |
| 0023 | 300 x 2.5 x 32 | 72.20 | 103.00 | 160 HZ | 2/8/45 + 2/9/50 + 2/11/63 |
| 0025 | 300 x 2.5 x 32 | 72.20 | 103.00 | 220 BW | 2/8/45 + 2/9/50 + 2/11/63 |
| 0035 | 315 x 2.5 x 32 | – | 114.50 | 160 BW | 2/8/45 + 2/9/50 + 2/11/63 |
| 0035 | 315 x 2.5 x 32 | 86.70 | – | 160 HZ | 2/8/45 + 2/9/50 + 2/11/63 |
| 0037 | 315 x 2.5 x 32 | 86.70 | 114.50 | 240 BW | 2/8/45 + 2/9/50 + 2/11/63 |
| 0041 | 315 x 3.0 x 40 | 99.50 | 132.50 | 160 HZ | 2/8/55 + 4/12/64 |
| 0043 | 315 x 3.0 x 40 | 99.50 | 132.50 | 240 BW | 2/8/55 + 4/12/64 |
| 0047 | 350 x 3.0 x 40 | 119.00 | 161.00 | 140 HZ | 2/8/55 + 4/12/64 |
| 0049 | 350 x 3.0 x 40 | 119.00 (W243) | 161.00 (W243) | 180 HZ | 2/8/55 + 4/12/64 |

## HSS Metal Slitting Saw Blade

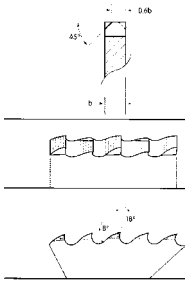
**Design:** Material no. 1.3343 (HSS-DMo5), bore H7, in accordance with DIN 1840, hollow-ground. The base material is laser-cut with a bright surface finish. Hardened and multiple times tempered to **63–65 HRC.**

HSS DMo5

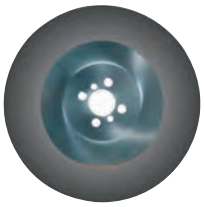
format professional quality

**2671** High-performance "Base Cut", wear-resistant coating according to the PVD process as protection against material pick-up, to improve tool life and use of coolant.

**Application:** Can be used on manual, semi-automatic and fully automatic sawing machines. For cutting construction steels, non-alloyed tool steel, tough and hard and tough materials (V 2A, V 4A) with material strengths up to **850 N/mm².** Universal use for steel **and** stainless steel.

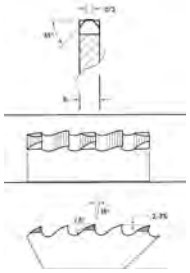


**Tooth shapes BW = curved tooth alternately bevelled up to 4 mm tooth pitch.**

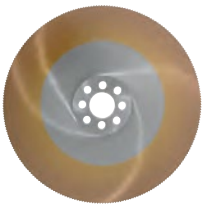


**2673** Very powerful "Eco", highly wear-resistant coating according to the PVD process as protection against material pick-up, to improve tool life and use of coolant.

**Application:** Can be used on manual, semi-automatic and fully automatic sawing machines. For cutting construction steels, non-alloyed tool steel, tough and hard and tough materials (V 2A, V 4A) with material strengths up to **1000 N/mm².** Universal use for steel **and** stainless steel.



**HZ = curved tooth with roughing and finishing teeth for all tooth pitches over 4 mm**



**2674** TiN Highly durable **TiN-coating.** With significantly reduced friction coefficient and greater temperature resistance.

**Application:** Outstandingly for automatic sawing machines and for the use of minimum quantity lubrication / minimum quantity cooling. The highly wear-resistant coating and improved gliding properties make it the preferred choice for permanent use / serial cutting. Permits higher cutting speeds and feeds while increasing tool life.

TiN

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2671 | 85 | | | | | | | | 20 | | | | |
| 2673 | 85 | 20 | | | | | | | 20 | | | | |
| 2674 | 120 | 40 | | | | | | | 40 | | | | |

| Order No. | Ø x width x bore mm | 2671 format | 2673 format | 2674 format TiN | Teeth and tooth shape | Number NL/Ø/circular pitch mm | Tooth pitch T mm |
|---|---|---|---|---|---|---|---|
| 0001 | 225 x 2.0 x 32 | 60.90 | 86.90 | – | 120 HZ | 2/8/45+4/9/50+2/12/64 | 6 |
| 0003 | 225 x 2.0 x 32 | 60.90 | 86.90 | – | 180 BW | 2/8/45+4/9/50+2/12/64 | 4 |
| 0005 | 250 x 2.0 x 32 | 64.20 | 92.00 | 128.50 | 128 HZ | 2/8/45+4/9/50+2/12/64 | 6 |
| 0007 | 250 x 2.0 x 32 | 64.20 | 92.00 | 128.50 | 200 BW | 2/8/45+4/9/50+2/12/64 | 4 |
| 0009 | 275 x 2.0 x 32 | 75.60 | 114.50 | 134.00 | 144 HZ | 2/8/45+4/9/50+2/12/64 | 6 |
| 0011 | 275 x 2.0 x 32 | 75.60 | 114.50 | 134.00 | 220 BW | 2/8/45+4/9/50+2/12/64 | 4 |
| 0013 | 275 x 2.5 x 40 | 75.20 | 116.50 | 133.50 | 110 HZ | 2/8/55+4/12/64 | 8 |
| 0015 | 275 x 2.5 x 40 | 75.20 | 116.50 | 133.50 | 144 HZ | 2/8/55+4/12/64 | 6 |
| 0017 | 275 x 2.5 x 40 | 75.20 | 116.50 | 133.50 | 180 HZ | 2/8/55+4/12/64 | 5 |
| 0019 | 275 x 2.5 x 40 | 75.20 | 116.50 | 133.50 | 220 BW | 2/8/55+4/12/64 | 4 |
| 0021 | 300 x 2.5 x 32 | 102.50 | 139.00 | 171.50 | 120 HZ | 2/8/45+4/9/50+2/12/64 | 8 |
| 0023 | 300 x 2.5 x 32 | 102.50 | 139.00 | 171.50 | 160 HZ | 2/8/45+4/9/50+2/12/64 | 6 |
| 0025 | 300 x 2.5 x 32 | 102.50 | 139.00 | 171.50 | 240 BW | 2/8/45+4/9/50+2/12/64 | 4 |
| 0027 | 300 x 2.5 x 40 | 102.50 | 139.00 | 171.50 | 120 HZ | 2/8/55+4/12/64 | 8 |
| 0029 | 300 x 2.5 x 40 | 102.50 | 139.00 | 171.50 | 160 HZ | 2/8/55+4/12/64 | 6 |
| 0031 | 300 x 2.5 x 40 | 102.50 | 139.00 | 171.50 | 240 BW | 2/8/55+4/12/64 | 4 |
| 0033 | 315 x 2.5 x 32 | 121.00 | 155.00 | 205.00 | 120 HZ | 2/8/45+4/9/50+2/12/64 | 8 |
| 0035 | 315 x 2.5 x 32 | 121.00 | 155.00 | 205.00 | 160 BW | 2/8/45+4/9/50+2/12/64 | 6 |
| 0037 | 315 x 2.5 x 32 | 121.00 | 155.00 | 205.00 | 250 BW | 2/8/45+4/9/50+2/12/64 | 4 |
| 0039 | 315 x 3.0 x 40 | 130.50 | 175.00 | 219.00 | 120 HZ | 2/8/55+4/12/64 | 8 |
| 0041 | 315 x 3.0 x 40 | 130.50 | 175.00 | 219.00 | 160 HZ | 2/8/55+4/12/64 | 6 |
| 0043 | 315 x 3.0 x 40 | 130.50 | 175.00 | 219.00 | 250 BW | 2/8/55+4/12/64 | 4 |
| 0045 | 350 x 3.0 x 40 | 159.00 | 207.00 | – | 110 HZ | 2/8/55+4/12/64 | 10 |
| 0047 | 350 x 3.0 x 40 | 159.00 | 207.00 | – | 140 HZ | 2/8/55+4/12/64 | 8 |
| 0049 | 350 x 3.0 x 40 | 159.00 | 207.00 | – | 180 HZ | 2/8/55+4/12/64 | 6 |
| 0051 | 400 x 3.5 x 50 | 256.50 | 308.00 | – | 100 HZ | 4/15/80+4/15/85 | 12 |
| 0053 | 400 x 3.5 x 50 | 256.50 | 308.00 | – | 140 HZ | 4/15/80+4/15/85 | 9 |
| 0055 | 400 x 3.5 x 50 | 256.50 | 308.00 | – | 180 HZ | 4/15/80+4/15/85 | 7 |
| 0057 | 450 x 4.0 x 50 | 462.00 (W243) | 595.50 (W243) | – (W243) | 100 HZ | 4/15/80+4/15/85 | 14 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Segmental Circular Saw Blade

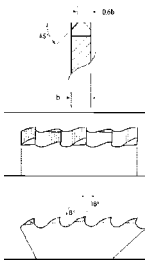
**Design:** Segments made of HSS-DMo5, bright, hardened and repeatedly annealed to **63–65 HRC.** Body made of hardened and tempered special steel with a strength of approx. 1400 N/mm². The extremely tapered relief grinding of the segments in conjunction with the ground cooling channels ensures optimum coolant feed to the cutting area and thus guarantees optimum stock removal.
**Tooth shape HZ =** Curved tooth with roughing and finishing teeth.

**Application:** For cutting construction steel and non-alloyed tool steel with material strengths up to 850 N/mm². Particularly suitable for machines with powerful drive capacities and changing material cross-sections.

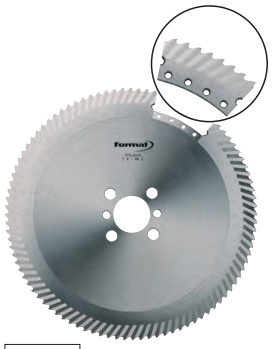
**Note:** Always use sufficient coolant.

HSS DMo5

format professional quality



Tooth shape HZ



bright

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2677 | 50 | | | | | | | | | | | | |

| Order No. | Ø x thickness x bore mm | 2677 format bright | Number of teeth HZ | Number NL/Ø/circular pitch mm | Tooth pitch T mm |
|---|---|---|---|---|---|
| 0001 | 275 x 3.0 x 40 | 201.00 | 96 | 2/ 8/55 + 4/12/64 | 9 |
| 0004 | 275 x 3.0 x 40 | 201.00 | 120 | 2/ 8/55 + 4/12/64 | 7 |
| 0007 | 275 x 3.0 x 40 | 201.00 | 144 | 2/ 8/55 + 4/12/64 | 6 |
| 0010 | 315 x 3.6 x 40 | 248.50 | 70 | 2/ 8/55 + 4/12/64 | 14 |
| 0013 | 315 x 3.6 x 40 | 248.50 | 84 | 2/ 8/55 + 4/12/64 | 12 |
| 0016 | 315 x 3.6 x 40 | 248.50 | 112 | 2/ 8/55 + 4/12/64 | 9 |
| 0019 | 315 x 3.6 x 40 | 248.50 | 140 | 2/ 8/55 + 4/12/64 | 7 |
| 0031 | 360 x 3.6 x 50 | 267.50 | 96 | 4/15/80 + 4/15/85 | 12 |
| 0034 | 360 x 3.6 x 50 | 267.50 | 128 | 4/15/80 + 4/15/85 | 9 |
| 0037 | 360 x 3.6 x 50 | 267.50 | 160 | 4/15/80 + 4/15/85 | 7 |
| 0040 | 400 x 4.0 x 50 | 298.50 | 80 | 4/15/80 + 4/15/85 | 16 |
| 0043 | 400 x 4.0 x 50 | 298.50 | 96 | 4/15/80 + 4/15/85 | 13 |
| 0046 | 400 x 4.0 x 50 | 298.50 | 128 | 4/15/80 + 4/15/85 | 10 |
| 0049 | 450 x 4.0 x 50 | 417.50 | 90 | 4/15/80 + 4/15/85 | 16 |
| 0052 | 450 x 4.0 x 50 | 417.50 | 108 | 4/15/80 + 4/15/85 | 13 |
| 0055 | 450 x 4.0 x 50 | 417.50 | 144 | 4/15/80 + 4/15/85 | 10 |

(W242)

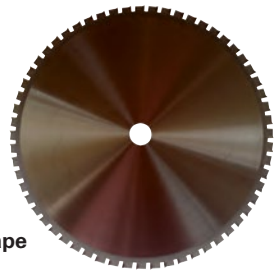
## Carbide Tipped Circular Saw Blade for Jepson Circular Saw

**Design:** High quality hard-metal equipped saw blades (Dry Cutter) for JEPSON-cold circular saws, also for universal use. Without pin holes. Special tooth shape

**Application:** Saw blades particularly suited for dry cut in metal. Saw fast, with little burr and without cooling. Steel, non-ferrous metals, composites and plastic, cable channels. Achieve high cutting quality and long tool lives. (Heed speeds, see table.)

Carbide

format professional quality



Tooth shape HZ

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2685 | ● | ● | | | | | | | ● | | | ● | ● |

| Order No. | Ø x thickness x bore mm | 2685 format | RPM U/min | Cutting speed m/min | Number of teeth |
|---|---|---|---|---|---|
| 0006 | 305 x 2.2/1.8 x 25.4 | 154.00 | 1300 | 1200 | 60 |
| 0011 | 305 x 2.2/1.8 x 25.4 | 176.00 | 1300 | 1200 | 80 |
| 0016 | 355 x 2.2/1.8 x 25.4 | 193.00 | 1300 | 1400 | 80 |
| 0021 | 355 x 2.2/1.8 x 25.4 | 219.50 | 1300 | 1400 | 90 |

(W241)

## Carbide Tipped Circular Saw Blade

Carbide

format professional quality

**2680** **Design: Trapeze flat tooth, positive**
The cutting speed should not be below 50 m/s for aluminium and 30-40 m/s for solid material.

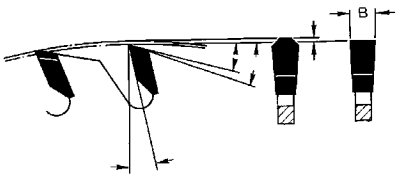
**Application:** Mainly for use on circular saw benches which cut against the direction of feed. For profiles and solid material, format, mitre and longitudinal cuts in aluminium and other non-ferrous metals as well as for cutting synthetic resins, mainly thicker cross-sections.

**2683** **Design: Trapeze flat tooth, negative**
The cutting speed should not be below 50 m/s for aluminium and 30-40 m/s for solid material.

**Application:** Mainly for use on mitre saws with oscillating saw blades or other circular saw benches which cut against the direction of feed. For thin-walled profile made of aluminium and plastic, particularly anodised profiles.

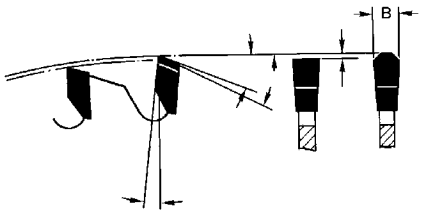
| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2680 | | | | | | | | | | | | 40 | |
| 2683 | | | | | | | | | | | | 40 | |

| Order No. | Ø x Stärke x Bohrung mm | 2680 format professional quality | Number of teeth | Number NL/Ø/circular pitch mm | Tooth pitch T |
|---|---|---|---|---|---|
| 0001 | 250 x 3.2 x 30 | 95.80 | 60 | 2/10/60 | 13.08 |
| 0004 | 250 x 3.2 x 30 | 113.50 | 80 | 2/10/60 | 9.81 |
| 0007 | 250 x 3.2 x 32 | 97.10 | 60 | 2/8/45 + 4/12/64 | 13.08 |
| 0010 | 250 x 3.2 x 32 | 112.50 | 80 | 2/8/45 + 4/12/64 | 9.81 |
| 0016 | 275 x 3.4 x 40 | 107.00 | 72 | 2/8/55 + 4/12/64 | 11.99 |
| 0019 | 300 x 3.2 x 30 | 119.00 | 72 | 2/10/60 | 13.08 |
| 0031 | 300 x 3.2 x 40 | 137.00 | 96 | 2/8/55 + 4/12/64 | 9.81 |
| 0034 | 350 x 3.6 x 30 | 148.50 | 84 | 2/10/60 | 13.08 |
| 0037 | 350 x 3.6 x 32 | 147.00 | 84 | 2/8/45 + 4/12/64 | 13.08 |
| 0040 | 350 x 3.4 x 32 | 163.50 | 108 | 2/8/45 + 4/12/64 | 10.18 |
| 0043 | 350 x 3.6 x 40 | 148.50 | 84 | 2/8/55 + 4/12/64 | 13.08 |
| 0046 | 350 x 3.6 x 40 | 162.00 | 108 | 2/8/55 + 4/12/64 | 10.18 |
| 0055 | 400 x 3.6 x 40 | 151.00 | 96 | 2/8/55 + 4/12/64 + 2/12/80 | 13.08 |
| 0061 | 420 x 4.0 x 40 | 208.50 | 96 | 2/8/55 + 4/12/64 + 2/12/80 | 13.74 |
| 0064 | 500 x 4.0 x 30 | 258.00 (W242) | 120 | – | 13.08 |




**Tooth shape = trapeze-flat-positive 5°**

| Order No. | Ø x Stärke x Bohrung mm | 2683 format professional quality | Number of teeth | Number NL/Ø/circular pitch mm | Tooth pitch T |
|---|---|---|---|---|---|
| 0001 | 250 x 3.4 x 30 | 86.40 | 60 | 2/7/42 + 2/10/60 | 13.08 |
| 0004 | 250 x 3.4 x 30 | 99.00 | 80 | 2/7/42 + 2/10/60 | 9.81 |
| 0007 | 250 x 3.4 x 32 | 87.20 | 60 | 2/8/45 + 4/12/64 | 13.08 |
| 0010 | 250 x 3.2 x 40 | 97.80 | 80 | 2/8/45 + 4/12/64 | 9.81 |
| 0016 | 275 x 3.2 x 40 | 103.50 | 72 | 2/8/55 + 4/12/64 | 11.99 |
| 0019 | 300 x 3.4 x 30 | 108.50 | 72 | – | 13.08 |
| 0022 | 300 x 3.2 x 30 | 124.00 | 96 | – | 9.81 |
| 0028 | 300 x 3.2 x 32 | 121.50 | 96 | 2/8/45 + 4/12/64 | 9.81 |
| 0031 | 300 x 3.2 x 40 | 121.50 | 96 | 2/8/55 + 4/12/64 | 9.81 |
| 0034 | 330 x 3.4 x 32 | 161.00 | 100 | 2/8/45 + 4/12/64 | 10.36 |
| 0037 | 350 x 3.4 x 30 | 137.00 | 84 | – | 13.08 |
| 0040 | 350 x 3.8 x 32 | 140.00 | 84 | 2/8/45 + 4/12/64 | 13.08 |
| 0043 | 350 x 3.4 x 32 | 144.50 | 108 | 2/8/45 + 4/12/64 | 10.18 |
| 0046 | 350 x 3.4 x 40 | 140.00 | 84 | 2/8/55 + 4/12/64 | 13.08 |
| 0049 | 350 x 3.4 x 40 | 143.50 | 108 | 2/8/55 + 4/12/64 | 10.18 |
| 0052 | 350 x 3.4 x 50 | 137.00 | 84 | 4/15/80 | 13.08 |
| 0055 | 400 x 3.4 x 30 | 226.00 | 120 | – | 10.47 |
| 0058 | 400 x 3.4 x 40 | 213.50 | 96 | 2/8/55 + 4/12/64 + 2/12/80 | 13.08 |
| 0067 | 500 x 4.4 x 30 | 279.00 (W242) | 120 | – | 13.08 |




**Tooth shape = trapeze-flat-negative 4°**

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Keyhole Saw HSS/HSCo Bi-metal

**Design:** made of HSS bimetal for extreme cutting performance The bimetal design provides maximum safety and combines wear-resistance with long tool life and precision. No breaking even under increased load. With a solid base plate for more threads, thus increasing concentricity and axial run-out precision. The slots at the side make core removal easier. Cutting depth: 38 mm.
Supplied without mandrel and without drills.
With combination toothing 4/6 TPI for low vibration run in high-alloyed steel and stainless steel from 2 mm.

**2700** HSS, for steel

**2708** HSS Co5, for stainless steel.

**Application:** Can be used in connection with drills or cordless drill, allows large-calibre, exact drilling e.g. for pipe conduits in airconditioning, automobile or systems engineering.
Suitable for non-alloyed steels up to 700 N/mm², non-ferrous and light metals, plastic and wood processing.

Great price thanks to set combination.

format professional quality

HSS

2700

HSS Co5

2708

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2700 | ● | | | | | | | | | | ○ | ○ | ○ |
| 2708 | ● | ● | | | | | | | ● | | ○ | ○ | ○ |

| Order No. | Saw Ø mm | 2700 format professional quality | 2708 format professional quality | Recommended speed (rpm) Construction steel | Recommended speed (rpm) Cast iron | Recommended speed (rpm) Tool steel and stainless steel | Recommended speed (rpm) Brass | Recommended speed (rpm) Aluminium | Recommended speed (rpm) Wood/PVC |
|---|---|---|---|---|---|---|---|---|---|
| 0140 | 14 | 3.70 | 4.35 | 580 | 400 | 300 | 790 | 900 | 3000 |
| 0160 | 16 | 3.85 | 4.60 | 550 | 365 | 275 | 730 | 825 | 3000 |
| 0170 | 17 | 4.10 | 4.90 | 500 | 330 | 250 | 665 | 750 | 3000 |
| 0190 | 19 | 4.35 | 5.45 | 460 | 300 | 230 | 600 | 690 | 3000 |
| 0200 | 20 | 4.55 | 5.35 | 440 | 390 | 220 | 580 | 660 | 3000 |
| 0210 | 21 | 4.85 | 5.70 | 425 | 280 | 210 | 560 | 630 | 3000 |
| 0220 | 22 | 4.95 | 6.25 | 390 | 260 | 195 | 520 | 585 | 3000 |
| 0240 | 24 | 5.20 | 6.05 | 370 | 245 | 185 | 495 | 555 | 3000 |
| 0250 | 25 | 5.35 | 6.25 | 350 | 235 | 175 | 470 | 525 | 2700 |
| 0270 | 27 | 5.85 | 7.40 | 325 | 215 | 160 | 435 | 480 | 2700 |
| 0290 | 29 | 6.20 | 7.30 | 300 | 200 | 150 | 400 | 450 | 2700 |
| 0300 | 30 | 6.35 | 7.40 | 285 | 190 | 145 | 380 | 425 | 2400 |
| 0320 | 32 | 6.90 | 8.20 | 275 | 180 | 140 | 360 | 410 | 2400 |
| 0330 | 33 | 7.40 | 8.80 | 260 | 175 | 135 | 345 | 390 | 2400 |
| 0350 | 35 | 7.40 | 9.30 | 250 | 165 | 125 | 330 | 375 | 2400 |
| 0370 | 37 | 7.80 | 9.10 | 240 | 160 | 120 | 315 | 360 | 2400 |
| 0380 | 38 | 8.05 | 9.95 | 230 | 150 | 115 | 300 | 345 | 2400 |
| 0400 | 40 | 8.15 | 9.65 | 220 | 145 | 110 | 290 | 330 | 2100 |
| 0410 | 41 | 8.45 | 9.90 | 210 | 140 | 105 | 280 | 315 | 2100 |
| 0430 | 43 | 8.85 | 10.35 | 205 | 135 | 100 | 270 | 305 | 2100 |
| 0440 | 44 | 8.95 | 10.50 | 195 | 130 | 95 | 250 | 295 | 2100 |
| 0460 | 46 | 9.50 | 11.15 | 190 | 125 | 95 | 250 | 285 | 2100 |
| 0480 | 48 | 9.95 | 11.75 | 180 | 120 | 90 | 240 | 270 | 2100 |
| 0510 | 51 | 10.20 | 12.65 | 170 | 115 | 85 | 230 | 255 | 2000 |
| 0520 | 52 | 10.40 | 12.25 | 165 | 110 | 80 | 220 | 245 | 2000 |
| 0540 | 54 | 10.85 | 12.80 | 160 | 105 | 80 | 210 | 240 | 2000 |
| 0570 | 57 | 11.20 | 13.25 | 150 | 100 | 75 | 200 | 225 | 2000 |
| 0590 | 59 | 11.50 | 13.90 | 140 | 95 | 70 | 190 | 220 | 2000 |
| 0600 | 60 | 11.85 | 14.95 | 140 | 95 | 70 | 190 | 220 | 2000 |
| 0640 | 64 | 12.50 | 14.70 | 135 | 90 | 65 | 180 | 205 | 1800 |
| 0650 | 65 | 12.65 | 15.05 | 130 | 85 | 65 | 175 | 200 | 1800 |
| 0670 | 67 | 13.00 | 15.40 | 130 | 85 | 65 | 170 | 195 | 1800 |
| 0680 | 68 | 13.15 | 16.10 | 130 | 85 | 65 | 170 | 195 | 1800 |
| 0700 | 70 | 13.65 | 16.85 | 125 | 80 | 60 | 160 | 185 | 1800 |
| 0730 | 73 | 14.30 | 16.85 | 120 | 80 | 60 | 160 | 180 | 1800 |
| 0760 | 76 | 14.65 | 17.25 | 115 | 75 | 55 | 150 | 170 | 1500 |
| 0790 | 79 | 15.10 | 17.90 | 110 | 70 | 55 | 140 | 165 | 1500 |
| 0830 | 83 | 15.70 | 18.45 | 105 | 70 | 50 | 140 | 155 | 1500 |
| 0860 | 86 | 15.95 | 18.75 | 100 | 65 | 50 | 130 | 150 | 1200 |
| 0890 | 89 | 17.15 | 20.00 | 95 | 65 | 45 | 130 | 145 | 1200 |
| 0920 | 92 | 17.70 | 16.60 | 95 | 60 | 45 | 120 | 140 | 1200 |
| 0950 | 95 | 18.35 | 21.60 | 90 | 60 | 45 | 120 | 135 | 1200 |
| 0980 | 98 | 18.80 | 22.20 | 85 | 55 | 40 | 110 | 130 | 1200 |
| 1020 | 102 | 19.40 | 22.80 | 85 | 55 | 40 | 110 | 130 | 1000 |
| 1050 | 105 | 20.00 | 23.80 | 80 | 55 | 40 | 110 | 120 | 1000 |
| 1140 | 114 | 22.60 | 26.40 | 75 | 50 | 35 | 100 | 105 | 900 |
| 1270 | 127 | 25.40 | 29.80 | 65 | 40 | 30 | 85 | 90 | 800 |
| 1400 | 140 | 28.00 | 32.80 | 60 | 35 | 25 | 80 | 85 | 800 |
| 1520 | 152 | 31.40 (W244) | 36.80 (W244) | 55 | 35 | 25 | 75 | 75 | 800 |

## Keyhole Saw Set HSS/HSCo Bi-metal

**Design:** Supplied in plastic case.

**Application:** Format hole saws have a welded-on tooth edge of HSS or HSS Co5, which provides you with an extremely high cutting performance. The bimetal design provides maximum safety and combines wear-resistance with long tool life and precision. No breaking under increased load. Welded seams make format hole saws run more precisely and make them easier to handle particularly when used with portable drills. The slots at the side make core removal easier.
In addition the hole saws posses a **Combi-toothing of 4/6 TPI** for low-vibration run in material from 2 mm. With solid base plate, this provides more threads and greater stability as well as true running and side stroke precision.
Suitable for non-alloyed steels up to 700 N/mm², non-ferrous and light metals, plastic and wood processing.

HSS

2713

HSS Co5

2716

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2713 | ● | | | | | | | | | | ○ | ○ | ○ |
| 2716 | ● | ● | | | | | | | ● | | ○ | ○ | ○ |

| Order No. | Set contents | 2713 format professional quality | 2716 format professional quality |
|---|---|---|---|
| 0007 | 7 keyhole saws, ∅ 22; 29; 35; 44; 51; 64; 68 mm<br>2 mounting shafts (order no. 2703 0005 and 2703 0010)<br>2 centre drills (Order No. 2709) | 79.90 | 93.60 |
| 0008 | 8 keyhole saws, ∅ 16; 19; 24; 29; 38; 44; 57; 67 mm<br>2 mounting shafts (order no. 2703 0005 and 2703 0010)<br>2 centre drills (Order No. 2709) | 77.40 | 91.50 |
| 0009 | 9 keyhole saws, ∅ 16; 19; 22; 29; 35; 44; 52; 57; 67 mm<br>2 mounting shafts (order no. 2703 0005 and 2703 0010)<br>2 centre drills (Order No. 2709) | 85.00 | 91.50 |
| 0012 | 12 keyhole saws, ∅ 16; 19; 22; 25; 29; 32; 35; 38; 44; 51; 64; 76 mm<br>2 mounting shafts (order no. 2703 0005 and 2703 0010)<br>2 centre drills (Order No. 2709) | 102.50 | 126.00 |
| | | (W244) | (W244) |

Workshop files can be found on 📖 6/178.

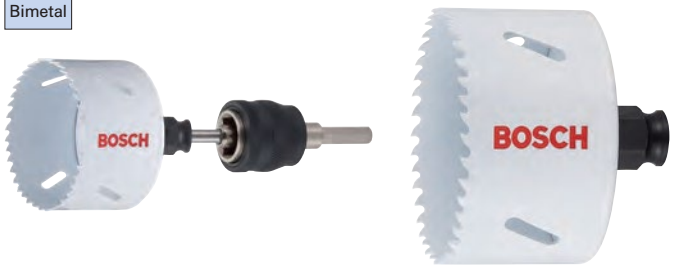
## Keyhole Saw HSS Bimetal with Power Change Adaptor

**Design:** The bimetal Progressor keyhole saw with robust teeth made of high-quality HSS Matrix II steel with 8% cobalt alloy is extremely resistant and durable. Does not stop at stainless steel. With the **Power-Change-Adapter** it is possible to quickly and safely mount as well as release the keyhole saw and center drill without tools. Easy core removal thanks to side slots or by removing the hole saw with centre drill.
The top cutting performance is achieved thanks to the innovative reinforced **4/5 Tpi progressive tooth system** with the 10° cutting angle.

**Cutting depth: 40 mm.**

**Application:** Ideal for sawing stainless steel, steel, non-ferrous metal, hard wood, chipboard, plastic, acrylic, fibre composites etc.

HSS Bimetal




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2702 | ● | | | | | | | | ● | | | | |

| Order No. | Saw Ø mm | 2702 BOSCH | Recommended speed (rpm) Steel | Recommended speed (rpm) Aluminium | Recommended speed (rpm) Wood/PVC |
|---|---|---|---|---|---|
| 0014 | 14 | 14.45 | 550 | 900 | 3000 |
| 0016 | 16 | 11.30 | 530 | 825 | 3000 |
| 0017 | 17 | 11.30 | 500 | 750 | 3000 |
| 0019 | 19 | 11.30 | 460 | 690 | 3000 |
| 0020 | 20 | 11.30 | 440 | 675 | 3000 |
| 0021 | 21 | 10.80 | 425 | 660 | 3000 |
| 0022 | 22 | 10.80 | 390 | 580 | 3000 |
| 0024 | 24 | 10.80 | 370 | 555 | 2700 |
| 0025 | 25 | 11.30 | 350 | 525 | 2700 |
| 0027 | 27 | 11.30 | 325 | 480 | 2700 |
| 0029 | 29 | 11.30 | 300 | 450 | 2700 |
| 0030 | 30 | 11.60 | 285 | 425 | 2400 |
| 0032 | 32 | 11.60 | 275 | 410 | 2400 |
| 0033 | 33 | 11.60 | 260 | 390 | 2400 |
| 0035 | 35 | 12.20 | 250 | 375 | 2400 |
| 0037 | 37 | 12.20 | 240 | 360 | 2400 |
| 0038 | 38 | 12.20 | 230 | 345 | 2400 |
| 0040 | 40 | 12.20 | 220 | 330 | 2100 |
| 0041 | 41 | 12.20 | 210 | 315 | 2100 |
| 0043 | 43 | 12.20 | 205 | 305 | 2100 |
| 0044 | 44 | 14.90 | 195 | 295 | 2100 |
| 0046 | 46 | 14.90 | 190 | 285 | 2100 |
| 0048 | 48 | 14.90 | 180 | 270 | 2100 |
| 0051 | 51 | 14.90 | 170 | 255 | 2000 |
| 0052 | 52 | 19.15 | 165 | 240 | 2000 |
| 0054 | 54 | 19.15 | 160 | 240 | 2000 |
| 0056 | 56 | 19.15 | 155 | 240 | 2000 |
| 0057 | 57 | 19.15 | 150 | 225 | 2000 |
| 0059 | 59 | 19.15 | 145 | 225 | 2000 |
| 0060 | 60 | 19.10 | 140 | 220 | 2000 |
| 0064 | 64 | 20.60 | 135 | 205 | 1850 |
| | | (W249) | | | |

| Order No. | Saw Ø mm | 2702 BOSCH | Recommended speed (rpm) Steel | Recommended speed (rpm) Aluminium | Recommended speed (rpm) Wood/PVC |
|---|---|---|---|---|---|
| 0065 | 65 | 20.60 | 130 | 200 | 1850 |
| 0067 | 67 | 20.60 | 130 | 195 | 1800 |
| 0068 | 68 | 20.60 | 130 | 190 | 1800 |
| 0070 | 70 | 20.60 | 125 | 185 | 1800 |
| 0073 | 73 | 20.60 | 120 | 180 | 1800 |
| 0076 | 76 | 22.10 | 115 | 170 | 1800 |
| 0079 | 79 | 22.10 | 110 | 165 | 1500 |
| 0083 | 83 | 22.10 | 105 | 155 | 1500 |
| 0086 | 86 | 22.10 | 100 | 150 | 1500 |
| 0089 | 89 | 22.10 | 95 | 145 | 1200 |
| 0092 | 92 | 24.80 | 90 | 140 | 1200 |
| 0095 | 95 | 29.00 | 90 | 135 | 1200 |
| 0098 | 98 | 30.20 | 90 | 135 | 1200 |
| 0102 | 102 | 32.10 | 85 | 130 | 1000 |
| 0105 | 105 | 34.80 | 80 | 120 | 1000 |
| 0108 | 108 | 44.70 | 80 | 120 | 900 |
| 0111 | 111 | 53.10 | 80 | 120 | 900 |
| 0114 | 114 | 61.00 | 75 | 105 | 900 |
| 0121 | 121 | 68.70 | 75 | 95 | 900 |
| 0127 | 127 | 75.20 | 65 | 90 | 800 |
| 0140 | 140 | 79.00 | 60 | 85 | 800 |
| 0152 | 152 | 82.90 | 55 | 75 | 800 |
| | | (W249) | | | |

## Keyhole Saw Set HSS Bimetal with Power Change Adaptor

NEW

| Order No. | Set contents | 2702 BOSCH |
|---|---|---|
| 1004 | 6 keyKeyhole saws 19; 25; 38; 44; 68; 83 mm<br>1 Power Change adapter<br>2 HSS centre drills | 107.50 |
| 1003 | 6 keyKeyhole saws 19; 25; 30; 35; 40; 68 mm<br>1 Power Change adapter<br>2 HSS centre drills | 95.90 |
| 1006 | 6 keyKeyhole saws 22; 29; 35; 44; 51; 64 mm<br>1 Power Change adapter<br>2 HSS centre drills | 100.50 |
| | | (W249) |

## Power Change adapter technology

Innovative Power Change adapter technology puts an end to tiresome screwing on and off. The innovative adapter system allows hole saw and centre drill to be fixed and removed again quickly and safely without tools being required. The safety screw for the centre drill is also a thing of the past.

## Keyhole Saw HSS Bimetal with Power Change Adaptor for use on Sheet Metal

BOSCH

The SheetMetal hole saw is especially suitable for thin metal sheets (aluminium, copper, brass, bronze, steel or stainless steel). With vario-toothing, safety stop and ejection spring from 25 mm diameter.

**4/6 TPI Variable-pattern teeth:** for a fast and precise cut.
**Safety stopper:** prevents penetration and protects the working surface.
**HSS-bimetal:** with 8% cobalt allow for extreme resilience and a long service life.
**Ejection spring:** guarantees automatic washer ejection.
**Power-Change adapter:** it is possible to quickly and safely mount as well as release the keyhole saw and center drill without tools.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2705 | ● | | | | | | | | ● | | | ● | ● |

| Order No. | Saw Ø mm | 2705 BOSCH | rec. Speed (rpm) Stainless steel | rec. Speed (rpm) steel | rec. Speed (rpm) Aluminium | rec. Speed rpm) wood/PVC |
|---|---|---|---|---|---|---|
| 0016 | 16 | 10.85 | 275 | 530 | 825 | 3000 |
| 0017 | 17 | 10.85 | 250 | 500 | 750 | 3000 |
| 0019 | 19 | 10.85 | 230 | 460 | 690 | 3000 |
| 0020 | 20 | 10.85 | 220 | 440 | 675 | 3000 |
| 0021 | 21 | 10.50 | 210 | 425 | 660 | 3000 |
| 0022 | 22 | 10.50 | 195 | 390 | 580 | 3000 |
| 0025 | 25 | 10.85 | 175 | 350 | 525 | 2700 |
| 0027 | 27 | 10.85 | 160 | 325 | 480 | 2700 |
| 0029 | 29 | 10.85 | 150 | 300 | 450 | 2700 |
| 0030 | 30 | 11.30 | 145 | 285 | 425 | 2400 |
| 0032 | 32 | 11.30 | 140 | 275 | 410 | 2400 |
| 0033 | 33 | 11.30 | 135 | 260 | 390 | 2400 |
| 0035 | 35 | 11.60 | 125 | 250 | 375 | 2400 |
| 0038 | 38 | 11.60 | 115 | 230 | 345 | 2400 |
| 0040 | 40 | 11.60 | 110 | 220 | 330 | 2100 |
| 0041 | 41 | 11.60 | 105 | 210 | 315 | 2100 |
| 0044 | 44 | 14.45 | 95 | 195 | 295 | 2100 |
| 0048 | 48 | 14.45 | 90 | 180 | 270 | 2100 |
| 0051 | 51 | 14.45 | 85 | 170 | 255 | 2000 |
| 0054 | 54 | 18.35 | 80 | 160 | 240 | 2000 |
| 0057 | 57 | 18.35 (W249) | 75 | 150 | 225 | 2000 |

| Order No. | Saw Ø mm | 2705 BOSCH | rec. Speed (rpm) Stainless steel | rec. Speed (rpm) steel | rec. Speed (rpm) Aluminium | rec. Speed rpm) wood/PVC |
|---|---|---|---|---|---|---|
| 0060 | 60 | 18.35 | 70 | 140 | 220 | 2000 |
| 0064 | 64 | 19.50 | 65 | 135 | 205 | 1850 |
| 0065 | 65 | 19.50 | 65 | 130 | 200 | 1850 |
| 0067 | 67 | 19.50 | 65 | 130 | 195 | 1800 |
| 0068 | 68 | 19.50 | 65 | 130 | 190 | 1800 |
| 0070 | 70 | 19.50 | 60 | 125 | 185 | 1800 |
| 0073 | 73 | 19.50 | 60 | 120 | 180 | 1800 |
| 0076 | 76 | 20.60 | 55 | 115 | 170 | 1800 |
| 0079 | 79 | 20.60 | 55 | 110 | 165 | 1500 |
| 0083 | 83 | 20.60 | 50 | 105 | 155 | 1500 |
| 0086 | 86 | 20.60 | 50 | 100 | 150 | 1500 |
| 0089 | 89 | 20.60 | 45 | 95 | 145 | 1200 |
| 0102 | 102 | 31.00 (W249) | 40 | 85 | 130 | 1000 |

## Keyhole Saw Set HSS Bimetal with Power Change Adaptor for use on Sheet Metal

NEW

Great price thanks to set combination.

| Order No. | Set contents | 2705 |
|---|---|---|
| 0008 | 6 keyKeyhole saws 22; 29; 35; 44; 51; 64 mm<br>1 Power Change adapter<br>2 HSS centre drills | 99.50 (W249) |

## Keyhole Saw Arbor

**Design:** With hexagon mandrel.
Scope of delivery: Mounting shank with center drill (order no. 2709 0635).

format professional quality

| Order No. | Suitable for hole saw Ø mm | 2703 format | Hexagon shank Ø mm | Fits drill chuck Ø mm |
|---|---|---|---|---|
| 0005 | 14– 30 | 7.50 | 9.5 | 10 |
| 0010 | 32–152 | 11.55 | 9.5 | 10 |
| 0015 | 32–152 | 15.90 (W244) | 11.1 | 13 |

## SDS Arbors

**Design:** With SDS-plus mandrel.
Scope of delivery: Mounting shank with center drill (order no. 2709 0635).

SDS plus Bosch licence

format professional quality

| Order No. | Suitable for hole saw Ø mm | 2706 format | Shank |
|---|---|---|---|
| 0005 | 14– 30 | 13.85 | SDS-plus |
| 0010 | 32–152 | 18.90 (W244) | SDS-plus |

## Power Change adapter for BOSCH hole saw, without centre drill

BOSCH

| Order No. | Suitable for hole saw Ø mm | 2702 BOSCH | 2705 BOSCH | Mount shank |
|---|---|---|---|---|
| 0001 | 14–210 | 15.25 | – | 8.0 mm hexagon |
| 0001 | 14–210 | – | 18.55 | 11.0 mm hexagon |
| 0003 | 14–210 | – | 21.50 NEW | 6.0 mm hexagonal, with center drill |
| 0005 | 14–210 | 25.50 (W249) | – (W249) | SDS-plus |

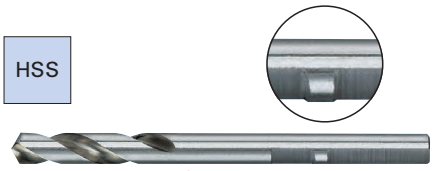
## HSS/HSCo Pilot Drill for Keyhole Saws

**2709** Center drill HSS.

**2702** Centre drill HSS Co with 1/4" hex-shank, 135° acute angle and cross-grinding for Power-Change-Adapter.

| Order No. | Suitable for mandrel | 2709 format | 2702 BOSCH | Ø mm | Total length mm |
|---|---|---|---|---|---|
| 0635 | 2703/2706 | 3.33 | – | 6.35 | 80 |
| 0010 | 2702 0001/0005 | – | 6.70 | 6.35 | 80 |
| 0011 | 2702 0001/0005 | – | 12.90 | 6.35 | 120 |
| 0012 | 2705 | – (W244) | 6.90 (W249) | 6.35 | 65 |

HSS



2709 format professional quality

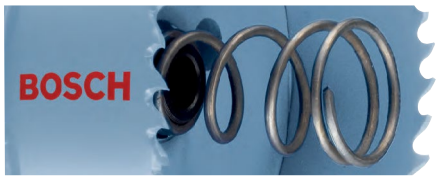
HSS Co

2702 BOSCH

## Ejection spring for keyhole saw SheetMetal

BOSCH

| Order No. | 2705 BOSCH | PU |
|---|---|---|
| 0011 | 3.57 (W249) | 2 |




## Extension Shanks

| Order No. | Suitable for mandrel | 2712 format | 2702 BOSCH | Ø mm | Length mm | Mount shank |
|---|---|---|---|---|---|---|
| 0005 | 2703 | 14.55 | – | 10 | 300 | 11.1 mm hexagon |
| 0015 | 2702 | – (W244) | 14.90 (W249) | 10 | 305 | 9.5 mm hexagon |

2712 format professional quality

2702 BOSCH

## Carbide Tipped Keyhole Saw

**Design:** with axial and radial special cut, which ensures optimal cutting results. Carbide hole saws achieve long tool lives and can be **reground several times.** No breakage with increased load. The tapered centre drill ensures smooth spot drilling (spot marking is not required) and is fixed using a tightening screw. **Scope of supply: Hole saw incl. drill.**

**Application:** Can be used on portable and pillar drilling machines.

**Note: With pillar drilling machines always choose manual feed.**

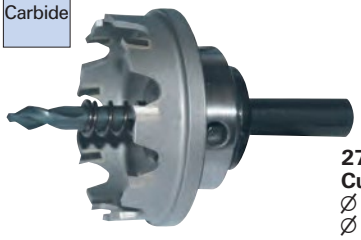
**2715** **Flat cut:** with ejection spring This ejects the drilled part and protects the carbide teeth during spot drilling. For material thicknesses up to 4 mm, stainless steel up to 2 mm. From 16–30 mm the hole saw is made in one piece. From 31 mm with specially hardened bit holders to compensate the torsion forces. We recommend MK 2/MK 3 from 31 mm. The sturdy design results in high concentricity. The CAD-optimised rake angles with special cut ensure high cutting performance and tool life. For flat material

**2722** **MBS:** With ejection spring. This ejects the drilled part and protects the carbide teeth during spot drilling. For material thicknesses up to max. 10 mm. (With material thicknesses over 6 mm the tool needs to be set down for chips to be emptied several times.) From 37 mm with specially hardened bit holders to compensate the torsion forces. We recommend MK 2/MK 3 from 37 mm. The solid construction and further developed cutting geometry produces significantly better cutting behaviour associated with a high cutting performance and with a high cutting performance and service life. For flat material, but also suitable on raw material and concaved surfaces.

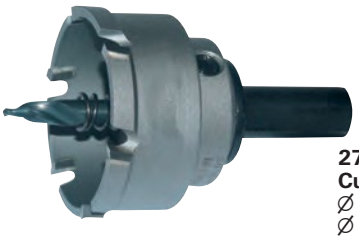
**2728** **Deep cut:** Without ejection spring. For material thickness up to 4 mm, stainless steel up to 2 mm. Especially suited for pipe material and curved surfaces.

Carbide

format professional quality



**2715**
**Cup height:** 12 mm
Ø 16–50 mm ≙ 10 mm Schaft
Ø 51–120 mm ≙ 13 mm Schaft



**2722**
**Cup height:** 22 mm
Ø 18–36 mm ≙ 10 mm shaft
Ø 37–100 mm ≙ 13 mm Schaft

**2728**
**Cup height**
35 mm (Ø 20–55 mm)
60 mm (Ø 60 mm)
Ø 20–50 mm ≙ 10 mm shaft
Ø 51–60 mm ≙ 13 mm shaft

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2715 | 50 | 40 | 28 | 22 | 20 | 18 | 15 | 10 | 30 | | 40 | 65 | 70 |
| 2722 | 50 | 40 | 28 | 22 | 20 | 18 | 15 | 10 | 30 | | 40 | 65 | 70 |
| 2728 | 50 | 40 | 28 | 22 | 20 | 18 | 15 | 10 | 30 | | 40 | 65 | 70 |

| Order No. | Saw Ø mm | 2715 format Flat cut | 2722 format MBS | 2728 format Deep cut | PG/ metric |
|---|---|---|---|---|---|
| 0160 | 16 | 28.10 | – | – | M16 |
| 0170 | 17 | 28.10 | – | – | – |
| 0180 | 18 | 28.10 | 48.20 | – | – |
| 0190 | 19 | – | 48.20 | – | – |
| 0200 | 20 | 29.10 | 48.20 | 46.80 | M20 |
| 0210 | 21 | 29.10 | 48.20 | 45.70 | – |
| 0220 | 22 | 29.10 | 48.20 | 45.70 | – |
| 0230 | 23 | 30.00 | 48.20 | 45.70 | – |
| 0240 | 24 | 30.40 | 48.20 | 45.70 | – |
| 0250 | 25 | 30.40 | 48.20 | 45.70 | M25 |
| 0260 | 26 | 31.80 | 54.50 | 60.30 | – |
| 0270 | 27 | 31.80 | 54.50 | – | – |
| 0280 | 28 | 34.70 | 54.50 | 60.30 | – |
| 0290 | 29 | 34.70 | 56.20 | – | – |
| 0300 | 30 | 34.70 | 56.20 | 60.30 | – |
| 0310 | 31 | 42.20 | 63.40 | – | – |
| 0320 | 32 | 42.20 | 63.40 | 69.70 | M32 |
| 0330 | 33 | 42.70 | 63.40 | – | – |
| 0340 | 34 | 42.70 | 63.40 | 69.70 | – |
| 0350 | 35 | 42.70 | 67.50 | 69.70 | – |
| 0360 | 36 | 43.10 | 67.50 | – | – |
| 0370 | 37 | 45.90 | 69.60 | 77.10 | PG 29 |
| 0380 | 38 | 45.90 | 69.60 | – | – |
| 0390 | 39 | 45.90 | 69.60 | 77.10 | – |
| 0400 | 40 | 45.90 | 69.60 | 77.10 | M40 |
| 0410 | 41 | 45.80 | 73.80 | – | – |
| 0420 | 42 | 47.70 | 73.80 | 89.00 | – |
| 0430 | 43 | 47.90 | 73.80 | – | – |
| 0440 | 44 | 47.90 | 73.80 | – | – |
| 0450 | 45 | 47.90 | 73.80 | 89.00 | – |
| | | (W246) | (W246) | (W246) | |

| Order No. | Saw Ø mm | 2715 format Flat cut | 2722 format MBS | 2728 format Deep cut | PG/ metric |
|---|---|---|---|---|---|
| 0460 | 46 | 51.00 | 76.70 | 100.50 | – |
| 0470 | 47 | 52.50 | 79.00 | 100.50 | PG 36 |
| 0480 | 48 | 52.50 | 79.00 | – | – |
| 0490 | 49 | 52.50 | 82.70 | – | – |
| 0500 | 50 | 55.20 | 82.70 | 100.50 | M50 |
| 0510 | 51 | 55.20 | 82.70 | – | – |
| 0520 | 52 | 56.90 | 84.90 | – | – |
| 0530 | 53 | 57.30 | 87.20 | – | – |
| 0540 | 54 | 57.90 | 87.20 | – | PG 42 |
| 0550 | 55 | 57.90 | 87.20 | 113.00 | – |
| 0560 | 56 | 62.30 | 95.80 | – | – |
| 0570 | 57 | 63.60 | 95.80 | – | – |
| 0580 | 58 | 63.60 | 95.80 | – | – |
| 0590 | 59 | 64.10 | 98.70 | – | – |
| 0600 | 60 | 64.10 | 107.00 | 153.00 | PG 48 |
| 0610 | 61 | – | 110.50 | – | – |
| 0620 | 62 | – | 110.50 | – | – |
| 0630 | 63 | – | 110.50 | – | M63 |
| 0640 | 64 | – | 119.50 | – | – |
| 0650 | 65 | 69.50 | 119.50 | – | – |
| 0660 | 66 | – | 119.50 | – | – |
| 0670 | 67 | – | 119.50 | – | – |
| 0680 | 68 | 72.80 | 119.50 | – | – |
| 0690 | 69 | – | 127.00 | – | – |
| 0700 | 70 | 72.80 | 127.00 | – | – |
| 0710 | 71 | – | 140.50 | – | – |
| 0720 | 72 | – | 140.50 | – | – |
| 0730 | 73 | – | 140.50 | – | – |
| 0740 | 74 | – | 149.00 | – | – |
| 0750 | 75 | 91.10 | 149.00 | – | – |
| | | (W246) | (W246) | (W246) | |

Continued overleaf

## Carbide Tipped Keyhole Saw

Continued

| Order No. | Saw Ø mm | 2715 format Flat cut | 2722 format MBS | 2728 format Deep cut | PG/ metric |
|---|---|---|---|---|---|
| 0760 | 76 | – | 149.00 | – | – |
| 0770 | 77 | – | 149.00 | – | – |
| 0780 | 78 | – | 149.00 | – | – |
| 0790 | 79 | – | 155.00 | – | – |
| 0800 | 80 | 96.80 | 155.00 | – | – |
| 0810 | 81 | – | 156.50 | – | – |
| 0820 | 82 | – | 156.50 | – | – |
| 0830 | 83 | – | 156.50 | – | – |
| 0840 | 84 | – | 156.50 | – | – |
| 0850 | 85 | 104.00 | 156.50 | – | – |
| 0860 | 86 | – | 168.50 | – | – |
| 0870 | 87 | – | 168.50 | – | – |
| 0880 | 88 | – | 168.50 | – | – |
| 0890 | 89 | – | 175.00 | – | – |
| | | (W246) | (W246) | (W246) | |

| Order No. | Saw Ø mm | 2715 format Flat cut | 2722 format MBS | 2728 format Deep cut | PG/ metric |
|---|---|---|---|---|---|
| 0900 | 90 | 110.50 | 175.00 | – | – |
| 0910 | 91 | – | 175.00 | – | – |
| 0920 | 92 | – | 175.00 | – | – |
| 0930 | 93 | – | 175.00 | – | – |
| 0940 | 94 | – | 181.50 | – | – |
| 0950 | 95 | 119.00 | 181.50 | – | – |
| 0960 | 96 | – | 181.50 | – | – |
| 0970 | 97 | – | 189.00 | – | – |
| 0980 | 98 | – | 189.00 | – | – |
| 0990 | 99 | – | 195.50 | – | – |
| 1000 | 100 | 122.50 | 195.50 | – | – |
| 1100 | 110 | 240.50 | – | – | – |
| 1150 | 115 | 240.50 | – | – | – |
| 1200 | 120 | 240.50 | – | – | – |
| | | (W246) | (W246) | (W246) | |

## Spare HSS Hole Saw Centre Drill

**2717** **For flat cut.**

**2724** **MBS.**

**2730** **For deep cut.**

HSS

| Order No. | Drill Ø mm | 2717 format | 2724 format | 2730 format | Length mm 2717 | Length mm 2724/2730 | For hole saw Ø mm 2717 | For hole saw Ø mm 2724 | For hole saw Ø mm 2730 |
|---|---|---|---|---|---|---|---|---|---|
| 0600 | 6 | 3.36 | 3.44 | 4.22 | 50 | 80 | 16–100 | 18– 60 | 20–23 |
| 0800 | 8 | 4.37 | 5.05 | 5.95 | 50 | 80 | 110–120 | 61–100 | 24–55 |
| 1000 | 8 | – | – | 5.95 | – | 100 | – | – | 60 |
| | | (W246) | (W246) | (W246) | | | | | |

## Morse Taper Adaptor

**Design:** Bit holder with HSS center drill Ø 8 x 80 mm.

| Order No. | Shank | 2726 format | For hole saw Ø mm |
|---|---|---|---|
| 0002 | MK 2 | 72.00 | Up to 100 |
| 0003 | MK 3 | 76.20 | Up to 150 |
| | | (W246) | |

## SDS Adaptor

**Design:** With SDS shank mandrel.

**Note:** Use only without stroke.

| Order No. | Shank design | 2726 format | For hole saws Ø mm |
|---|---|---|---|
| 0001 | SDS | 15.60 | 31–59 |
| | | (W246) | |

## Weldon adapter

**Design:** Adapter with Weldon bit holder.
For carbide hole saws type MBS.
Scope of supply: Adapter incl. ejector pin and Allen key 2.5 mm.

| Order No. | Shank design | 2726 format | For hole saw Ø mm |
|---|---|---|---|
| 0005 | Weldon | 50.60 | 18–100 |
| | | (W246) | |

## Pilot pin for adapter

| Order No. | Design mm | 1326 format |
|---|---|---|
| 1002 | Ø 6.35 x 102 | 7.35 |
| | | (W129) |

## Saw blade quality

**Soft wood:** High carbon steel for use in softer materials such as wood, wood fibre boards and plastics.
**HSS:** Fully hardened high-speed steel for use in harder materials such as metal, aluminium and non-ferrous metals.
**Bimetal:** Highly flexible, almost non-breakable combination of HCS and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Tooth design:**
**Teeth milled, side clearance side set:**
Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.
**Teeth milled, side clearance wavy set:**
Blade with fine result for straight cuts in plywood, soft steel, aluminium, non-ferrous metals and plastics.

**Teeth ground, side clearance side set:** Blade for clean, fast cuts in wood.
**Teeth ground, side clearance lead angle ground:** Blade with taper ground back for side clearance; for precise, fine and clean cuts in wood and plastic.

**Tooth pitch:**
Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**Application:**
Saw blades are subject to high mechanical and thermal loads.
For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

## Jigsaw blades for wood

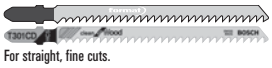
**Saw blade quality:**
**HCS:** High carbon steel for use in softer materials such as wood, wood fibre boards and plastics.

**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.

**Tooth design:**
**Teeth milled, side clearance side set:** Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.
**Teeth milled, clearance wavy set:** Blade with fine result for straight cuts in plywood, soft steel, aluminium, non-ferrous metals and plastics.

**Teeth ground, side clearance side set:** Blade for clean, fast cuts in wood.
**Teeth ground, side clearance lead angle ground:** Blade with taper ground back for side clearance; for precise, fine and clean cuts in wood and plastic.

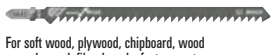
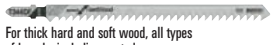
**Design: 5 pieces on card.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

| Order No. | Bosch No. | 2735 format | 2736 BOSCH | Cutting length mm | Material | Wood mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | T 101 B | 5.95 | 6.85 | 74 | HCS | 3– 30 | 2.7 | teeth ground; side clearance lead angle ground | For straight, fine cuts, fibre boards, plastic/epoxy, with plunge tip. |
| 0010 | T 301 CD | 6.45 | 7.45 | 91 | HCS | 10– 65 | 3 | teeth ground; side clearance lead angle ground |  For straight, fine cuts. |
| 0015 | T 101 D | 5.95 | 6.85 | 74 | HCS | 10– 45 | progressive 4–5.2 | teeth ground; side clearance lead angle ground | For straight, clean cuts, with plunge tip. |
| 0020 | T 101 BR | 7.00 | 8.10 | 74 | HCS | 3– 30 | 2.5 | teeth ground; side clearance lead angle ground | For straight, fine cuts, splinter-free sawing thanks to reverse tooth pattern. |
| 0026 | T 144 DP | – | 7.45 | 74 | HCS | 5– 50 | 4 | ground; side set | For straight, exactly angled cuts, with plunge tip. |
| 0027 | T 119 B | – | 3.64 | 67 | HCS | 2– 15 | progressive 1.9–2.3 | Milled, wavy set | For soft wood, plywood, chipboard, wood core plywood, fibre boards. |
| 0028 | T 119 BO | – | 5.00 | 56 | HCS | 2– 15 | 2 | Milled, wavy set | For soft wood, plywood, chipboard, wood core plywood, fibre boards, specially designed for curved cuts. |
| 0030 | T 344 DP | 12.15 | 14.05 | 126 | HCS | 5–100 | 4 | ground; side set | For thick timber, soft wood, chipboard, wood core plywood, fibre boards, exactly angled cut. |
| 0035 | T 111 C | 3.15 | 3.64 | 74 | HCS | 4– 50 | 3 | milled; side set | For soft wood, plywood, chipboard, wood core plywood, fibre boards, fast cut. |
| 0040 | T 144 D | 4.18 | 4.82 | 74 | HCS | 5– 50 | progressive 4–5.2 | ground; side set | For soft wood, plywood, chipboard, wood core plywood, fibre boards, fast cut with plunge tip. |
| 0041 | T 234 X | – | 10.40 | 91 | HCS | 3– 65 | progressive 2–3 | teeth ground; side clearance lead angle ground | For soft wood, plywood, chipboard, wood core plywood, fibre boards, fast cut with plunge tip. |
| | | (W248) | (W247) | | | | | | |

Continued overleaf

## Jigsaw blades for wood

Continued

| Order No. | Bosch No. | 2735 format | 2736 BOSCH | Cutting length mm | Material | Wood mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|---|
| 0046 | T 344 D | – | 10.40 | 126 | HCS | 5 –100 | 4 | ground; side set |  For soft wood, plywood, chipboard, wood core plywood, fibre boards, fast pre-cut. |
| 0047 | T 101 AO | – | 5.10 | 56 | HCS | 1.5– 15 | 1.4 | teeth ground; side clearance lead angle ground; pointed teeth | For soft wood, plywood, chipboard, wood core plywood, fibre boards, specially designed for curved cuts, clean cut. |
| 0048 | T 344 DF | – | 16.15 | 126 | Bimetal | 5 –100 | 4 | ground; side set |  For thick hard and soft wood, all types of boards, including coated ones. |
| 0050 | T 244 D | 5.05 | 5.80 | 74 | HCS | 5 – 50 | progressive 4–5.2 | ground; side set | For soft wood, plywood, chipboard, wood core plywood, fibre boards, fast pre-cut, curved cuts, with plunge tip. |
| 0120 | T 308 B | – | 9.05 | 91 | HCS | 5 – 50 | 2.2 XC | teeth ground; side clearance lead angle ground | For splinter-free cuts on both sides in wood, straight cuts in soft and hard materials. |
| 0125 | T 308 BO | – | 10.70 | 91 | HCS | 5 – 50 | 2.2 XC | teeth ground; side clearance lead angle ground | For splinter-free cuts on both sides in wood, straight cuts in soft and hard materials. Specially designed for curved cuts. |
| 0130 | T 308 BF | – | 15.70 | 91 | Bimetal | 5 – 50 | 2.2 XC | teeth ground; side clearance lead angle ground | For splinter-free cuts on both sides in wood, straight cuts in soft and hard materials. |
| | | (W248) | (W247) | | | | | | |

## Jigsaw blades for wood in storage box

**Design: 25 pieces in plastic box.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

| Order No. | Bosch No. | 2738 format | 2739 BOSCH | Cutting length mm | Material | Wood mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | T 101 B | 26.90 | 31.00 | 74 | HCS | 3–30 | 2.7 | teeth ground; side clearance lead angle ground | For straight, fine cuts, fibre boards (3–30 mm), plastic/epoxy (Ø < 30 mm), with plunge tip. |
| 0010 | T 101 D | 26.90 | 31.00 | 74 | HCS | 10–45 | progressive 4–5.2 | teeth ground; side clearance lead angle ground | For straight, clean cuts, with plunge tip. |
| 0020 | T 144 D | 19.45 | 22.30 | 74 | HCS | 5–50 | progressive 4–5.2 | milled; side set | For soft wood, plywood, chipboard, wood core plywood, fibre boards, fast cut with plunge tip. |
| 0040 | T 101 BR | – | 35.50 | 74 | HCS | 3–30 | 2.5 | Lead angle ground, teeth ground | For soft wood, chipboard, wood core plywood, fibre boards, coated boards, clean surface, clean cut. |
| 0050 | T 244 D | – | 27.20 | 74 | HCS | 5–50 | progressive 4–5.2 | side set; ground | For soft wood, chipboard, wood core plywood, fibre boards, specially designed for curved cuts. |
| | | (W248) | (W247) | | | | | | |

## Jigsaw blades for hard wood

BOSCH

**Saw blade quality:**
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.

**Tooth design:**
**Teeth milled, side clearance side set:** Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.
**Teeth milled, clearance wavy set:** Blade with fine result for straight cuts in plywood, soft steel, aluminium, non-ferrous metals and plastics.
**Teeth ground, side clearance side set:** Blade for clean, fast cuts in wood.
**Teeth ground, side clearance lead angle ground:** Blade with taper ground back for side clearance; for precise, fine and clean cuts in wood and plastic.

**Tooth pitch:**
Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**Design: 5 pieces on card.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

| Order No. | Bosch No. | 2736 BOSCH | Cutting length mm | Material | Wood mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|
| 0006 | T 101 BF | 12.95 | 74 | Bimetal | 3–30 | 2.7 | teeth ground; side clearance lead angle ground | For straight, fine and clean cuts in coated boards/HPL, plastic/epoxy, hard wood, laminates, with plunge tip. |
| 0051 | T 101 AIF | 13.20 | 77 | Bimetal | 2–30 | 1.7 | teeth ground; side clearance lead angle ground; pointed teeth | For straight, fine and clean cuts in coated boards/ HPL (2–30 mm), plastic/epoxy (∅ < 30 mm), hard wood, laminates, with plunge tip. |
| 0052 | T 301 CDF | 15.85 | 91 | Bimetal | 4–65 | 3 | Lead angle ground, teeth ground | For hard and soft wood, coated, panels/HPL, clean cuts. |
| 0105 | T 144 DF | 11.40 | 74 | Bimetal | 5–50 | progressive 4–5.2 | ground; side set | For hard and soft wood, all types of boards, including coated ones, straight, fast cuts, with plunge tip. |

(W247)

## Jigsaw blade for wood with metal

BOSCH

**Saw blade quality:**
**Bimetal:** Highly flexible, almost unbreakable combination of HCS and HSS. The area of application covers hard wood, abrasive wooden materials, hard plastics, non-ferrous metals and metals.

**Tooth design:**
**Teeth milled, side clearance side set:** Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.
**Design: 5 pieces on card.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

| Order No. | Bosch No. | 2736 BOSCH | Cutting length mm | Material | Metal mm | Wood mm | Plastic mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|---|---|
| 0106 | T 345 XF | 12.95 | 106 | Bimetal | 3–10 | < 65 | 3–10 | progressive 2.4–5 | milled; side set | For construction wood with nails (< 65 mm), Alu/plastic pipes + profiles (∅ 3–10 mm), quick cuts with plunge tip. |

(W247)

## Jigsaw blades for special applications

**2735**

**Saw blade quality:**
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Tooth pitch:** Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**2736**

**Saw blade quality:**
**HSS:** Fully hardened high-speed steel for use in harder materials such as metal, aluminium and non-ferrous metals.
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life.
Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Tooth design:** Teeth milled, side clearance side set. Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.

**Tooth pitch:** Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.
**Design: 5 pieces on card, T 341 HM, 3 pieces on card.**
**T 141 carbide, 1 blade on card .**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

| Order No. | Bosch No. | 2735 format | 2736 BOSCH | Cutting length mm | Material | Wood mm | Plastic mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|---|---|
| 0008 | T 101 BIF | – | 13.10 | 59 | Bimetal | 1.5–15 | – | 1.7 | Lead angle ground, teeth ground | Specially designed for laminate, plastic-coated boards and multiplex boards. |
| 0071 | T 101 A | – | 11.30 | 74 | HSS | – | 2–20 | 2 | Lead angle ground, teeth ground | For fine, straight cuts, ideal for Perspex and polycarbonate. |
| 0107 | T 341 HM | – | 32.00 | 106 | Carbide | – | 5–80 | 4.3 | Carbide-tipped; side set | For quick, straight cuts, ideal for glass fibre reinforced plastic, cement fibre boards, plasterboard. |
| 0110 | T 141 HM | 10.40 | 12.00 | 74 | Carbide | – | 5–50 | 4.3 | Carbide-tipped; side set | Specially designed for GRP, plasterboard, cement fibre boards. |
| | | (W248) | (W247) | | | | | | | |

## Jigsaw blades for plastics

**Saw blade quality:**

**HSS:** Fully hardened high-speed steel for use in harder materials such as metal, aluminium and non-ferrous metals.
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Tooth design:** Teeth milled, side clearance side set. Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.

**Tooth pitch:** Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**Application:**
Saw blades for clean cutting results in typically commercial plastics and shapes.
**Design: 5 pieces on card, T 108 BHM and T 301 CHM, 3 pieces on card.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

| Order No. | Bosch No. | 2736 BOSCH | Cutting length mm | Material | Plastic mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|
| 0150 | T 102 D | 8.60 | 100 | HCS | 5–30 | 4.0 | Lead angle ground, teeth ground | For the problem-free, clean sawing of polypropylene (PP) and similar soft thermoplastic materials. |
| 0155 | T 102 H | 8.60 | 100 | HCS | 3–30 | 2.3 | Lead angle ground, teeth ground | For the problem-free, clean sawing of PVC and similar soft thermoplastic materials. |
| 0160 | T 302 H | 12.65 | 132 | HCS | 3–65 | 2.3 | Lead angle ground, teeth ground | For PVC (polyvinyl chloride), is often used for windows and structural elements. |
| 0165 | T 102 BF | 11.30 | 92 | BiM | 2–20 | 1.8 | ground, side set | For the clean, splinter-free sawing of PMMA (polymethyl methacrylate), is used e.g. for balcony panelling and shower doors. |
| 0170 | T 108 BHM | 22.60 | 92 | Carbide | 0–20 | 2.2 | Carbide-tipped, ground | Use: For easy, clean sawing of CFK and similar plastics such as carbon fibre. |
| 0175 | T 301 CHM | 31.70 | 117 | Carbide | 0–65 | 3.3 | Carbide-tipped, ground | For easy cutting of Corian® and similar solid surface materials such as Varicor®. |
| | | (W247) | | | | | | |

## Jigsaw blades for metal

**Saw blade quality:**
**HSS:** Fully hardened high-speed steel for use in harder materials such as metal, aluminium and non-ferrous metals.
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.

**Tooth design:**
Side clearance wavy set. Blade with fine result for straight cuts in soft steel, aluminium, non-ferrous metals and plastics.

**Tooth pitch:**
Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals), is recommended in order to extend the wear-resistance of the saw blade.

**Design: 5 pieces on card.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

| Order No. | Bosch No. | 2735 format | 2736 BOSCH | Cutting length mm | Material | Metal mm | Aluminium mm | Plastic mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0055 | T 118 G | 5.95 | 6.85 | 67 | HSS | 0.5– 1.5 | – | – | 0.7 | Milled, wavy set | For very thin material, straight cuts. |
| 0060 | T 118 A | 5.95 | 6.85 | 67 | HSS | 1 – 3 | – | – | progressive 1.1–1.5 | Milled, wavy set | For thin material, straight cuts, with plunge tip. |
| 0065 | T 218 A | 7.60 | 8.80 | 67 | HSS | 1 – 3 | – | – | progressive 1.1–1.5 | Milled, wavy set | For thin metal sheets, especially for curved cuts, with plunge tip. |
| 0066 | T 118 EOF | – | 11.40 | 57 | Bimetal | 1.5– 4 | – | – | 1.5 | Milled, wavy set | For curved cuts, thin materials. |
| 0077 | T 121 GF | – | 11.30 | 67 | Bimetal | 0.5– 1.5 | – | – | 0.8 | Milled, wavy set | For very thin metal sheets, perforated sheets (0.5–1.5 mm). |
| 0079 | T 121 AF | – | 11.30 | 67 | Bimetal | 1 – 3 | – | – | 1.2 | Milled, wavy set | For thin metal sheets, perforated sheets (1–3 mm). |
| 0081 | T 121 BF | – | 10.85 | 67 | Bimetal | 2.5– 6 | – | – | 2.0 | Milled, wavy set | For medium metal sheets, perforated sheets (2.5–6 mm). |
| 0067 | T 227 D | – | 10.10 | 74 | HSS | 3 –15 | < 30 | < 30 | 3.0 | milled; side set | For thin to thick metal sheets, pipes and profiles (Ø < 30 mm), specially designed for curved cuts. |
| 0070 | T 118 B | 5.95 | 6.85 | 67 | HSS | 2.5– 6 | – | – | progressive 1.9–2.3 | Milled, wavy set | For medium metal sheets, with plunge tip. |
| 0075 | T 127 D | 6.45 | 7.45 | 74 | HSS | 3 –15 | < 30 | < 30 | 3.0 | milled; side set | For thin to thick aluminium sheets, aluminium pipes + profiles (Ø < 30 mm). |
| 0085 | T 118 AF | 8.40 | 9.70 | 67 | Bimetal | 1 – 3 | – | – | progressive 1.1–1.5 | Milled, wavy set | For thin metal sheets. |
| 0086 | T 318 A | – | 12.30 | 106 | HSS | 1 – 3 | < 65 | – | 1.2 | Milled, wavy set | For thin metal sheets, aluminium, pipes + profiles (Ø < 65 mm). |
| 0090 | T 318 AF | 13.35 | 15.45 | 106 | Bimetal | 1 – 3 | < 65 | – | 1.1 | Milled, wavy set | For thin metal sheets, sandwich material (< 65 mm), pipes and open profiles incl. aluminium (Ø < 65 mm). |
| 0095 | T 318 BF | 13.35 | 15.45 | 106 | Bimetal | 2.5– 6 | < 65 | < 65 | 1.8 | milled; side set | For medium metal sheets, sandwich material (< 65 mm), pipes and open profiles incl. aluminium/epoxy (Ø < 65 mm). |
| 0091 | T 318 B | – | 12.30 | 106 | HSS | 2.5– 6 | < 65 | – | 2.0 | Milled, wavy set | For medium metal sheets, pipes and profiles incl. aluminium (Ø < 65 mm), precise angled cut. |
| 0097 | T 321 AF | – | 17.15 | 106 | Bimetal | 1 – 3 | < 65 | – | 1.2 | Milled, wavy set | For thin sheet metal, perforated metal (1–3 mm), sandwich materials (< 65 mm), thin-walled pipes, closed + open profiles incl. aluminium (< 65 mm), GFK/Epoxy (< 65 mm). |
| 0099 | T 321 BF | – | 17.15 | 106 | Bimetal | 2.5– 6 | < 65 | < 65 | 2.0 | Milled, wavy set | For medium thin sheet metal, perforated metal (2.5–6 mm), sandwich materials (< 65 mm), thick-walled pipes, closed + open profiles incl. aluminium (< 65 mm), GFK/Epoxy (< 65 mm). |
| 0100 | T 118 BF | – | 9.70 | 67 | Bimetal | 2.5– 6 | – | – | progressive 1.9–2.3 | Milled, wavy set | For medium metal sheets, with plunge tip. |
| 0101 | T 123 X | – | 9.30 | 74 | HSS | 1.5–10 | < 30 | – | progressive 1.2–2.6 | milled; side set | For quick straight cuts, thin to thick materials, aluminium pipes + profiles (Ø < 30 mm), with plunge tip. |
| 0140 | T 718 BF | – | 17.90 | 154 | Bimetal | < 120 | – | – | 2.0 | Milled, wavy set | For sandwich materials (< 120 mm). |
| | | (W248) | (W247) | | | | | | | | |

## Jigsaw blades for metal in storage box

**Saw blade quality:**

**HSS:** Fully hardened high-speed steel for use in harder materials such as metal, aluminium and non-ferrous metals.
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.

**Tooth design:**
**Teeth milled, clearance wavy set:** Blade with fine result for straight cuts in plywood, soft steel, aluminium, non-ferrous metals and plastics.

**Design: 25 pieces in box.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

format professional quality
BOSCH

| Order No. | Bosch No. | 2738 format | 2739 BOSCH | Cutting length mm | Material | Metal mm | Tooth pitch | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|---|
| 0025 | T 118 A | 26.90 | 31.00 | 67 | HSS | 1–3 | progressive 1.1–1.5 | Milled, wavy set | For thin metal sheets, with plunge tip. |
| 0045 | T 118 AF | – | 41.00 | 67 | Bimetal | 1–3 | progressive 1.1–1.5 | Milled, wavy set | For thin metal sheets. |
| | | (W248) | (W247) | | | | | | |

## Jigsaw blades for stainless steel

**Saw blade quality:**
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Tooth design:**
Teeth milled, side clearance wavy set. **Blade with fine result for straight cuts in soft steel, aluminium, non-ferrous metals and plastics.**

Tooth pitch:
**Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.**

BOSCH

Application:
**Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals), is recommended in order to extend the wear-resistance of the saw blade.**

Design: 5 pieces on card (exception: 2736 0108 and 2736 0109, 3 pieces on card).
Suitable for: **Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.**

| Order No. | Bosch No. | 2736 BOSCH | Cutting length mm | Material | Metal mm | Tooth pitch mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|---|
| 0057 | T 118 GFS | 11.60 | 57 | Bimetal | 0.5–1.5 | 0.8 | Wavy set; milled | For INOX materials. |
| 0068 | T 118 EFS | 11.60 | 57 | Bimetal | 1.5–4 | 1.4 | Wavy set; milled | For INOX materials. |
| 0108 | T 118 AHM | 21.60 | 59 | Carbide | 1.5–3 | 1.1 | carbide tipped; ground | For working thin stainless steel sheets, with reduced stroke rate, cooling, without orbital action. |
| 0109 | T 118 EHM | 21.60 | 59 | Carbide | 2 –5 | 1.4 | carbide tipped; ground | For semi-thick stainless steel sheets (INOX), with metal reduced stroke rate, with cooling working without orbital action. |
| | | (W247) | | | | | | |

## Jigsaw blade for ceramic products

**Saw blade quality:**
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

**Design: 3 pieces on card.**
**Suitable for:** Bosch, AEG, Milwaukee, DeWalt, ELU, Festool, Hitachi, Mafell, Makita, Metabo, Protool.

BOSCH

| Order No. | Bosch No. | 2736 BOSCH | Cutting length mm | Material | Ceramic materials mm | Type of tooth | Use |
|---|---|---|---|---|---|---|---|
| 0111 | T 130 Riff | 12.40 | 59 | Carbide | 5–15 | Carbide-tipped | For soft ceramic wall tiles, GRP, cast iron, coarse cut. |
| | | (W247) | | | | | |

## Saw blade quality:

**HCS:** High carbon steel for use in softer materials such as wood, wood fibre boards and plastics.

**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Tooth design:**
**Teeth milled, side clearance side set:** Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.
**Teeth milled, clearance wavy set:** Blade with fine result for straight cuts in plywood, soft steel, aluminium, non-ferrous metals and plastics.

**Teeth ground, side clearance side set:** Blade for clean, fast cuts in wood.
**Teeth ground, side clearance lead angle ground:** Blade with taper ground back for side clearance; for precise, fine and clean cuts in wood and plastic.

**Tooth pitch:**
Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**Application:**
Saw blades are subject to high mechanical and thermal loads.
For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

## Sabre saw blades for wood

**Saw blade quality:**
**HCS:** High carbon steel for use in softer materials such as wood, wood fibre boards and plastics.

**Tooth design:**
**Teeth ground, side clearance side set.** Blade for clean, fast cuts in wood and plastic.

**Tooth pitch:**
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

**Design: 5 pieces in PVC pouch, (exception: 2748, 25 piece)**
**Suitable for:** All saber, reciprocal and tiger saws with standard shank.

**2746 0007**
For timber (< 150 mm), boards: chipboard, MDF (6–60 mm), plywood, plastic (< 150 mm), wooden wall (< 150 mm). Effortless fine cut.

**2744/46/48 0010**
For timber, wooden walls, boards: chipboard, MDF, plywood, plastic, specially designed for plunge cuts.

**2744/46/48 0020**
For rough wood, nail-free, green wood, pruning, firewood.

| Order No. | Bosch No. | 2744 format | 2746 BOSCH | 2748 BOSCH | Total length mm | Material | Rough wood, nail-free mm | Construction timber mm | Boards mm | Wooden panel cutout mm | Green wood, pruning mm | Plastics, epoxy mm | Tooth pitch mm | Type of tooth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0007 | S 2345 X | – | 20.20 | – | 200 | HCS | – | < 150 | 6–60 | < 150 | – | < 150 | 2.5–4.3/ 6–10 | side set; ground |
| 0010 | S 644 D | 11.25 | 12.90 | 58.20 * | 150 | HCS | – | < 100 | 6–60 | < 100 | – | < 100 | 4.3 | side set; ground |
| 0020 | S 1531 L | 17.60 | 20.30 | 90.90 * | 240 | HCS | < 190 | – | – | – | < 190 | – | 5.0 | side set; ground |
| | | (W248) | (W247) | (W247) | | | | | | | | | | |

*** 25 pieces.**

## Sabre saw blades for special applications

**Saw blade quality:**
**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

**Tooth design:**
**Teeth ground, side clearance side set.** Blade for clean, fast cuts in wood and plastic.

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

**Design: 2 pieces in PVC pouch.**
**Suitable for:** All saber, reciprocal and tiger saws with standard shank.

**2746 0140**
For cast steel pipes, brick (red), GRP/epoxy.

**2746 0130**
For aerated concrete, brick (red), fibre cement, GRP/epoxy, for abrasive materials.

| Order No. | Bosch No. | 2746 BOSCH | Total length mm | Material | Fiber cement mm | Porous concrete (aerated concrete) PB2, PP2 mm | Red brick mm | GRP, Epoxy mm | INOX steel sheets mm | Stainless steel profiles mm | Type of tooth |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0140 | S 1130 RIFF | 16.60 | 225 | Carbide | – | – | < 175 | < 175 | – | – | coated |
| 0130 | S 1141 HM | 33.90 | 225 | Carbide | < 175 | < 175 | < 175 | < 150 | – | – | side set; ground |
| | | (W247) | | | | | | | | | |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Sabre saw blades for wood with metal

**Saw blade quality:**
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.

**Tooth design:**
**Teeth milled, side clearance side set:** Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.

**Tooth pitch:**
Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

format professional quality
BOSCH

**Design: 5 pieces in PVC pouch, (exception: 2748, 25 piece)**
**Suitable for:** All saber, reciprocal and tiger saws with standard shank.

**2744 0050**
For pallet repairs, wood with nails/metal, metal sheets, pipes, aluminium profiles. For wood with nails/metal.

**2746 0052**
For wood with nails/metal, chipboard, porous concrete, plastic/GRP, profiles.

**2748 0055**
For pallet repairs, wood with nails/metal, metal sheets, pipes, aluminium profiles.

**2744 0056**
For wood with nails/metal. Plastic profiles (Ø 3–250 mm).

**2746/48 0060**
For wood with nails/metal, chipboard, metal sheets, pipes, aluminium profiles, plastics/GRP, solid window frames: wood plus metal, specially designed for plunge cuts.

**2746 0066**
For wood with nails/metal, chipboard, metal sheets, aluminium, plastic/GRP, profiles.

**2746/48 0075**
For wood with nails/metal, metal sheets, pipes, aluminium profiles, plastic profiles.

**2744/46/48 0080**
For wood with nails/metal, metal sheets, pipes, aluminium profiles, flexible flush cut. For wood with nails/metal. Plastic profiles (Ø 3–175 mm).



**2746 0240**
For wood with nails/metal (< 250 mm), metal sheets, aluminium profiles (3–10 mm), GRP/epoxy (Ø < 250 mm), flexible flush cut.

**2746 0080**
For wood with nails/metal, metal sheets, pipes, aluminium profiles, flexible flush cut. For wood with nails/metal. Plastic profiles (Ø 3–175 mm).

**2748 0035**
For thin sheet metal, pipes, profiles

| Order No. | Bosch No. | 2744 format | 2746 BOSCH | 2748 BOSCH | Total length | Material | Wood with nails/ metal | Pallets | Wood, chip-board | Sheet metal, pipes, profiles | Plastics: pipes, profiles | Plastics, epoxy | Tooth pitch | Type of tooth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mm | | mm | mm | mm | mm | mm | mm | mm | |
| 0035 | S 922 EF | – | – | 62.60 * | 150 | Bimetal | < 100 | – | – | – | – | – | 1.4/18 | side set; milled |
| 0050 | S 922 HF | 12.05 | – | – | 150 | Bimetal | < 100 | < 100 | – | 3–12 | – | – | 2.5 | side set; milled |
| 0052 | S 1411 DF | – | 23.10 | – | 300 | Bimetal | < 250 | – | < 250 | – | < 250 | < 60 | 4.3/6 | side set; milled |
| 0055 | S 1122 HF | – | – | 95.70 * | 225 | Bimetal | < 175 | < 175 | – | 3–12 | – | – | 2.5/10 | side set; milled |
| 0056 | S 1222 VF | 20.10 | – | – | 300 | Bimetal | < 250 | – | – | 3–10 | – | < 250 | 1.8–2.6 | side set; milled |
| 0060 | S 611 DF | – | – | 68.30 * | 150 | Bimetal | < 100 | – | < 100 | – | < 100 | < 50 | 4.3/6 | side set; milled |
| 0060 | S 611 DF | – | 15.15 | – | 150 | Bimetal | < 100 | – | < 100 | – | < 100 | < 50 | 4.3 | side set; milled |
| 0066 | S 3456 XF | – | 22.40 | – | 200 | Bimetal | < 150 | – | < 150 | 3–18 | < 150 | < 150 | 2.1–4.3/ 6–12 | side set; milled |
| 0075 | S 922 VF | – | 13.90 | – | 150 | Bimetal | < 100 | – | – | 3–10 | – | < 100 | 1.8–2.6/ 10-14 | side set; milled |
| 0075 | S 922 VF | – | – | 62.60 * | 150 | Bimetal | < 100 | – | – | 3–10 | – | < 100 | 1.8–2.6 | side set; milled |
| 0080 | S 1122 VF | 18.50 | 21.40 | 95.70 * | 225 | Bimetal | < 175 | – | – | 3–10 | – | < 175 | 1.8–2.6 | side set; milled |
| 0240 | S 1222 VF | – | 23.10 | – | 300 | Bimetal | < 250 | – | – | 3–10 | – | < 250 | 1.8–2.6/ 10–14 | side set; milled |
| | | (W248) | (W247) | (W247) | | | | | | | | | | * 25 pieces. |

## Sabre saw blades for metal

**Saw blade quality:**
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.

**Tooth design:**
**Teeth milled, side clearance side set.** Blade with relatively coarse cut and fast work progress in hard and soft wood, aluminium, plastics and non-ferrous metals.
Teeth milled, side clearance wavy set. Blade with fine result for straight cuts in plywood, soft steel, aluminium, non-ferrous metals and plastics.

**Tooth pitch:**
Small tooth pitch for fine cuts with slower work progress, in hard and/or thin material such as metals and non-ferrous metals.
Large tooth pitch for coarser cuts coupled with fast work progress in soft and/or thick material such as wood and plastic.

2x2 Tooth: Aggressive tooth: Large tooth pitch, large gullet for high cutting speed and fast chip discharge. Sturdy tooth: Small tooth pitch, small gullet, reinforced tooth back for long service life.

format professional quality
BOSCH

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

**Design:** 5 pieces in PVC pouch, (exception: 2748, 25 piece).
Suitable for: All saber, reciprocal and tiger saws with standard shank.

**2746 0024**
For thick metal sheets, closed pipes/profiles.

**2744/46/48 0025**
For thick metal sheets. Pipes + profiles (Ø 10–100 mm).

**2746 0027**
For thick metal sheets, fast cut.

**2744/46 0035**
For thin metal sheets. Pipes + profiles (Ø 5–100 mm).

**2746 0036**
For thin metal sheets, effortless fine cut.

**2744/46/48 0040**
For thin metal sheets (0.7–3 mm), fine pipes/profiles (Ø <175 mm), effortless fine cut, flexible flush cut.

**2744/46 0042**
For thick metal sheets, solid pipes/profiles, flexible flush cut, fast cut.

**2746 0045**
For thin metal sheets, fine pipes/profiles, effortless fine cut.

**2746 0061**
For thick metal sheets, fine pipes/profiles, effortless fine cut.

**2746 0230**
For thick metal sheets (4–12 mm), thick-walled, solid pipes and profiles (<100 mm). Ideal for pipe-cutting devices, for rescue and demolition work. Powerful coarse cut.

**2746 0235**
For thin metal sheets (0.7–3 mm), fine pipes/profiles (Ø <175 mm), effortless fine cut, flexible flush cut.

**2746 0245**
For thick metal sheets (4–12 mm), thick-walled closed and open profiles and pipes (<250 mm). Fast, precise cuts at accurate angles.

**2746 0220**
Demolition work in metal.

**2746 0210**
For thick-walled pipes and profiles, fast cuts at accurate angles.

**2746 0215**
For thick-walled pipes and profiles, fast cuts at accurate angles.

**2746 0205**
For thin-walled pipes and profiles, fast cuts at accurate angles.

| Order No. | Bosch No. | 2744 format | 2746 BOSCH | 2748 BOSCH | Total length mm | Material | Metal sheets mm | Profiles, pipes mm | Type of tooth |
|---|---|---|---|---|---|---|---|---|---|
| 0024 | S 918 BF | – | 12.40 | – | 150 | Bimetal | 2 – 8 | < 100 | side set; milled |
| 0025 | S 922 BF | 12.05 | 13.90 | 62.60 * | 150 | Bimetal | 3 – 8 | < 100 | side set; milled |
| 0027 | S 522 BF | – | 11.65 | – | 100 | Bimetal | 3 – 8 | – | side set; milled |
| 0035 | S 922 EF | – | – | 62.60 * | 150 | Bimetal | 1.5– 4 | < 100 | side set, milled |
| 0035 | S 922 EF | 12.05 | 13.90 | – | 150 | Bimetal | 1.5– 4 | < 100 | side set; milled |
| 0036 | S 522 EF | – | 12.00 | – | 100 | Bimetal | 1.5– 4 | – | side set; milled |
| 0040 | S 1122 EF | 18.50 | 21.40 | 95.70 * | 225 | Bimetal | 1.5– 4 | < 175 | side set; milled |
| 0042 | S 1122 BF | 18.50 | 21.40 | 95.70 * | 225 | Bimetal | 3 – 8 | < 175 | side set; milled |
| 0045 | S 922 AF | – | 13.90 | – | 150 | Bimetal | 0.7– 3 | < 100 | Wavy set; milled |
| 0061 | S 123 XF | – | 16.25 | – | 150 | Bimetal | 1 – 8 | < 100 | side set; milled |
| 0230 | S 920 CF | – | 27.30 | – | 150 | Bimetal | 4 –12 | < 100 | Patented 2x2 tooth geometry |
| 0235 | S 1122 AF | – | 21.40 | – | 225 | Bimetal | 0.7– 3 | < 175 | Wavy set; milled |
| 0245 | S 1226 CHF | – | 26.70 | – | 300 | Bimetal | 4 –12 | < 250 | Patented 2x2 tooth geometry |
| 0220 | S 930 CF | – | 26.30 | – | 150 | Bimetal | 4 –12 | < 100 | Patented 2x2 tooth geometry |
| 0210 | S 936 CHF | – | 24.40 | – | 150 | Bimetal | 4 –12 | < 100 | Patented 2x2 tooth geometry |
| 0215 | S 1136 CHF | – | 29.70 | – | 225 | Bimetal | 4 –12 | < 175 | Patented 2x2 tooth geometry |
| 0205 | S 1127 BEF | – | 27.80 | – | 225 | Bimetal | 3 – 8 | < 175 | Patented 2x2 tooth geometry |
| | | (W248) | (W247) | (W247) | | | | | * 25 pieces. |

## Sabre saw blades for fibrous insulation

**Saw blade quality:**
**HCS:** High carbon steel for use in softer materials such as wood, wood fibre boards and plastics.

**Suitable for:** All saber, reciprocal and tiger saws with standard shank.

BOSCH

| Order No. | Bosch No. | 2748 BOSCH | PU | Total length mm | Material | Fibrous insulation mm | Type of tooth |
|---|---|---|---|---|---|---|---|
| 0085 | S 713 AW | 17.55 | 2 | 150 | HCS | < 100 | Serrated blade |
| 0090 | S 1113 AWP | 20.00 | 2 | 225 | HCS | < 175 | Serrated blade |
| 0095 | S 1213 AWP | 28.20 | 2 | 300 | HCS | < 250 | Serrated blade |
| 0100 | S 2013 AWP | 20.00 (W247) | 1 | 400 | HCS | < 350 | Serrated blade |

## Hand Sabre Saw Handle

**Design:** Pocket saw for saber saw blades.

**Includes** saber saw blade S 922 EF and S 922 VF.

BOSCH

| Order No. | Dimension mm | 2748 BOSCH |
|---|---|---|
| 0105 | 147 x 277 x 25 | 13.80 (W247) |

## Sabre saw blade for pallet repairs

**Saw blade quality:**
**Bimetal:** Highly flexible, almost non-breakable combination of HSC and HSS, long service life. Can be used for hard woods, abrasive wooden materials, hard plastic, non-ferrous metals and metals.

**Application:**
Saw blades are subject to high mechanical and thermal loads. For this reason, the use of specific coolants, e.g. cutting oil (for steel, metals) or water (for aluminium, INOX, thin sheets), is recommended in order to extend the wear-resistance of the saw blade.

**Suitable for:** All saber, reciprocal and tiger saws with standard shank.

BOSCH

| Order No. | Bosch No. | 2748 BOSCH | PU | Total length mm | Material | Pallets mm | Type of tooth | Tooth pitch mm |
|---|---|---|---|---|---|---|---|---|
| 0110 | S 722 VFR | 16.10 | 5 | 190 | BiM | < 120 | Variable tooth pitch | 1.8/2.6 |
| 0115 | S 722 VFR | 241.50 | 100 | 190 | BiM | < 120 | Variable tooth pitch | 1.8/2.6 |
| 0120 | S 1122 VFR | 19.10 | 5 | 225 | BiM | < 175 | Variable tooth pitch | 1.8/2.6 |
| 0125 | S 1122 VFR | 287.00 | 100 | 225 | BiM | < 175 | Variable tooth pitch | 1.8/2.6 |
| 0130 | S 725 VFR | 18.10 | 5 | 190 | BiM | < 125 | Side set, milled, various tooth pitch | 1.8/2.6 |
| 0135 | S 725 VFR | 272.00 | 100 | 190 | BiM | < 125 | Side set, milled, various tooth pitch | 1.8/2.6 |
| 0140 | S 1125 VFR | 21.10 | 5 | 225 | BiM | < 165 | Side set, milled, various tooth pitch | 1.8/2.6 |
| 0145 | S 1125 VFR | 317.00 (W247) | 100 | 225 | BiM | < 165 | Side set, milled, various tooth pitch | 1.8/2.6 |

## Saw blade for Bosch tandem all-purpose saw GFZ 14-35 A, 16-35 AC

**Saw blade quality:**
**HCS:** High carbon steel for use in softer materials such as wood, wood fibre boards and plastics.

**Carbide-tipped:** The HSC blade is equipped with carbide teeth and is thus suitable for abrasive materials such as glass-fibre-reinforced plastics, asbestos cement, hard woods and aerated concrete.

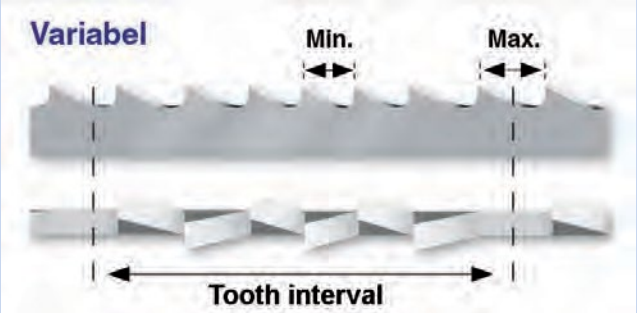
**Design: 2 pieces on card.**
**Suitable for:** Bosch tandem all-purpose saw GFZ 14-35 A; 16-35 AC.

BOSCH

| Order No. | Bosch No. | 2746 BOSCH | Material | Total length mm | Use |
|---|---|---|---|---|---|
| 0005 | TF 350 M | 16.80 | HCS | 408 | Saw blade set for wood |
| 0000 | TF 350 NHM | 41.60 (W247) | Carbide-tipped | 408 | Set of saw blades for various materials e.g. porous concrete, railway sleepers |

## TOOTH PITCH

Tooth pitch describes the number of teeth per inch (Tpl).
1 inch is equivalent to 25.4 mm.




Variable tooth distributions are identified by two measuring figures, e.g. 2-3 TPI. Here, 2 TPI marks the maximum tooth gap and 3 TPI the minimum tooth gap.

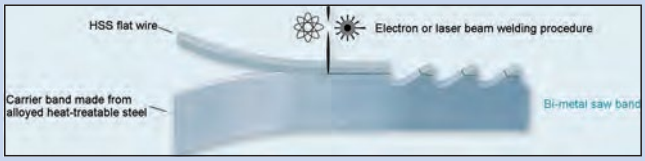
The standard offset can be used universally for cutting thicknesses as of 5 mm for steel, cast iron and hard non-ferrous metals. With a constant tooth distribution, the offset sequence is left/right/straight. With a variable tooth distribution, one tooth per interval not offset. The remaining teeth in the interval are repeated and offset left/right.

WIKUS
Präzision an der Schnittstelle

The decisive factor for the tooth pitch is the working length of the band saw blade in the workpiece. The table shows the respective upper and lower limits.

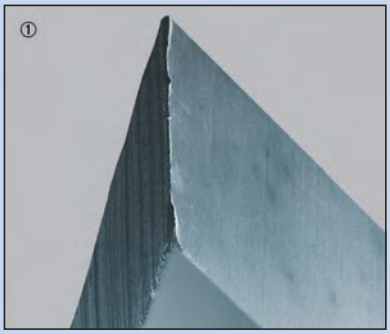
| Variable Tooth pitch TPI | Working length (mm) from | to |
|---|---|---|
| 10 –14 | – | 20 |
| 08 –12 | 10 | 30 |
| 06 –10 | 20 | 50 |
| 5 – 8 | 30 | 60 |
| 4 – 6 | 50 | 90 |
| 3 – 4 | 80 | 150 |
| 2 – 3 | 120 | 300 |
| 1.4 – 2 | 250 | 600 |
| 1.0 – 1.4 | 400 | 1000 |
| 0.85– 1.15 | 600 | 2000 |
| 0.75– 1.25 | 600 | 2000 |
| 0.7 – 1.0 | 1000 | 3000 |

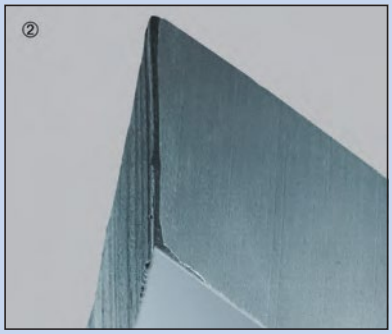
## Structure of a bimetal band saw blade

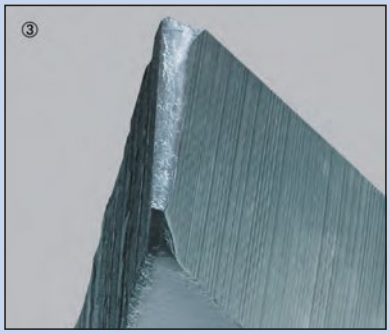



## BREAKING IN OF SAW BLADES

Correct breaking in guarantees longevity, see illustration above:
1. New cutting edge with very small edge radius
2. Optimally rounded cutting edge due to correct breaking in of saw band
3. Excessive load due to inappropriate breaking in leads to micro-chipping at the cutting edge.




**Bimetal saw bands**

Sharp cutting edges with extremely small edge radii are the prerequisite for high cutting performance.
WIKUS blades are predestined for this.
In order to maintain optimum service life, we recommend to break in the blade accordingly. Depending on the material and dimensions of the cutting object, determine the correct cutting and advancing speed (e.g. with the WIKUS bimetal cutting data slide rule). It is important that the new saw blade is only used with approx. 50% of the feed rate determined. Micro-chipping due to excessive chip thickness is thus avoided.
New saw blades can tend to vibrate and generate vibration sounds. Here, it is helpful to slightly reduce the cutting speed.
Where small workpiece dimensions are involved, approx. 300 $cm^2$ of the material should be cut to break in the blade.
If large workpiece dimensions have to be processed, we recommend to break in the blade for approx. 15 minutes.
After the breaking in period, you can slowly increase the advance to the previously determined speed rate.

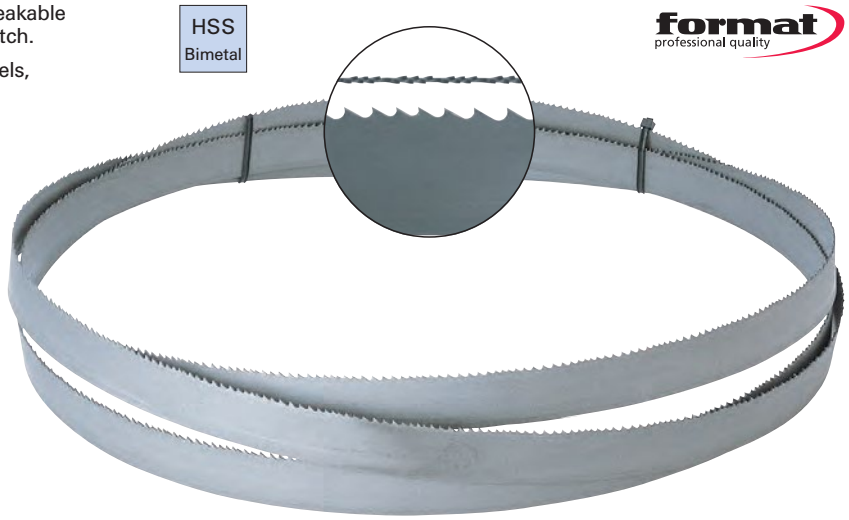
**Carbide saw blades**

After selection of the optimum parameters for the application case on hand (e.g. using the WIKUS carbide cutting data slide rule) you should break in the carbide saw blade at about 75% of the cutting speed and 50% of the feed rate. It is very important to avoid vibrations. In this case, a change of cutting speed should help. After the breaking in time of approx. 15 min or 300 $cm^2$, you should slowly increase first the cutting speed and then the feed rate to the previously determined data. Before you use the blade for the first time check both the blade tension, which should be about 300 $N/mm^2$, and the oil content of the cooling lubricant. Hand refractometers can be found on page 📖 9/107 and belt tension measuring devices are available upon enquiry.

## Band saw blade HSS bimetal

**Design:** HSS bimetal, metal band saw blade with unbreakable and flexible backing material with combination tooth pitch.

**Application:** For sawing construction and low-alloy steels, as well as aluminium and non-ferrous metals.




| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2760 | 40–90 | 35–65 | | | | | | | | | 35–45 | 120 | 110 |

| Order No. | Length mm | 2760 format | PU | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0001 | 1138 | 10.60 | 5 | 13 | 0.65 | 8–12 |
| 0004 | 1138 | 10.60 | 5 | 13 | 0.65 | 10–14 |
| 0007 | 1325 | 11.80 | 5 | 13 | 0.65 | 8–12 |
| 0010 | 1325 | 11.80 | 5 | 13 | 0.65 | 10–14 |
| 0011 | 1330 | 11.85 | 5 | 13 | 0.65 | 8–12 |
| 0012 | 1330 | 11.85 | 5 | 13 | 0.65 | 10–14 |
| 0002 | 1440 | 12.55 | 5 | 13 | 0.65 | 8–12 |
| 0003 | 1440 | 12.55 | 5 | 13 | 0.65 | 10–14 |
| 0009 | 1638 | 13.80 | 5 | 13 | 0.65 | 6–10 |
| 0017 | 1638 | 13.80 | 5 | 13 | 0.65 | 8–12 |
| 0018 | 1638 | 13.80 | 5 | 13 | 0.65 | 10–14 |
| 0019 | 2140 | 19.10 | 5 | 20 | 0.90 | 5– 8 |
| 0022 | 2140 | 19.10 | 5 | 20 | 0.90 | 8–12 |
| 0020 | 2360 | 20.70 | 5 | 20 | 0.90 | 6–10 |
| 0021 | 2360 | 20.70 | 5 | 20 | 0.90 | 8–12 |
| 0023 | 2360 | 20.70 | 5 | 20 | 0.90 | 10–14 |
| 0164 | 2450 | 22.50 | 5 | 27 | 0.90 | 3– 4 |
| 0167 | 2450 | 22.50 | 5 | 27 | 0.90 | 4– 6 |
| 0170 | 2450 | 22.50 | 5 | 27 | 0.90 | 5– 8 |
| 0173 | 2450 | 22.50 | 5 | 27 | 0.90 | 6–10 |
| 0174 | 2450 | 22.50 | 5 | 27 | 0.90 | 8–12 |
| 0161 | 2450 | 22.50 | 5 | 27 | 0.90 | 10–14 |
| 0029 | 2465 | 22.60 | 5 | 19 | 0.90 | 5– 8 |
| 0030 | 2465 | 22.60 | 5 | 19 | 0.90 | 8–12 |
| 0024 | 2700 | 24.50 | 5 | 27 | 0.90 | 4– 6 |
| 0026 | 2700 | 24.50 | 5 | 27 | 0.90 | 5– 8 |
| 0027 | 2700 | 24.50 | 5 | 27 | 0.90 | 6–10 |
| 0032 | 2700 | 24.50 | 5 | 27 | 0.90 | 8–12 |
| 0031 | 2750 | 24.80 | 5 | 27 | 0.90 | 4– 6 |
| 0034 | 2750 | 24.80 | 5 | 27 | 0.90 | 5– 8 |
| 0037 | 2750 | 24.80 | 5 | 27 | 0.90 | 6–10 |
| 0040 | 2750 | 24.80 | 5 | 27 | 0.90 | 8–12 |
| 0043 | 2750 | 24.80 (W260) | 5 | 27 | 0.90 | 10–14 |

| Order No. | Length mm | 2760 format | PU | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0046 | 2835 | 25.50 | 5 | 27 | 0.90 | 4– 6 |
| 0049 | 2835 | 25.50 | 5 | 27 | 0.90 | 5– 8 |
| 0052 | 2835 | 25.50 | 5 | 27 | 0.90 | 6–10 |
| 0055 | 2835 | 25.50 | 5 | 27 | 0.90 | 8–12 |
| 0058 | 2835 | 25.50 | 5 | 27 | 0.90 | 10–14 |
| 0061 | 2950 | 26.40 | 5 | 27 | 0.90 | 3– 4 |
| 0064 | 2950 | 26.40 | 5 | 27 | 0.90 | 4– 6 |
| 0067 | 2950 | 26.40 | 5 | 27 | 0.90 | 5– 8 |
| 0070 | 2950 | 26.40 | 5 | 27 | 0.90 | 6–10 |
| 0073 | 2950 | 26.40 | 5 | 27 | 0.90 | 8–12 |
| 0076 | 2950 | 26.40 | 5 | 27 | 0.90 | 10–14 |
| 0082 | 3150 | 28.00 | 5 | 27 | 0.90 | 4– 6 |
| 0085 | 3150 | 28.00 | 5 | 27 | 0.90 | 5– 8 |
| 0088 | 3150 | 28.00 | 5 | 27 | 0.90 | 6–10 |
| 0091 | 3150 | 28.00 | 5 | 27 | 0.90 | 8–12 |
| 0094 | 3150 | 28.00 | 5 | 27 | 0.90 | 10–14 |
| 0095 | 3320 | 29.30 | 5 | 27 | 0.90 | 4– 6 |
| 0096 | 3320 | 29.30 | 5 | 27 | 0.90 | 5– 8 |
| 0098 | 3320 | 29.30 | 5 | 27 | 0.90 | 6–10 |
| 0099 | 3320 | 29.30 | 5 | 27 | 0.90 | 8–12 |
| 0097 | 3660 | 31.90 | 5 | 27 | 0.90 | 3– 4 |
| 0100 | 3660 | 31.90 | 5 | 27 | 0.90 | 4– 6 |
| 0103 | 3660 | 31.90 | 5 | 27 | 0.90 | 5– 8 |
| 0106 | 3660 | 31.90 | 5 | 27 | 0.90 | 6–10 |
| 0109 | 3660 | 31.90 | 5 | 27 | 0.90 | 8–12 |
| 0112 | 3660 | 31.90 | 5 | 27 | 0.90 | 10–14 |
| 0115 | 3830 | 33.30 | 5 | 27 | 0.90 | 3– 4 |
| 0118 | 3830 | 33.30 | 5 | 27 | 0.90 | 4– 6 |
| 0121 | 3830 | 33.30 | 5 | 27 | 0.90 | 5– 8 |
| 0124 | 3830 | 33.30 | 5 | 27 | 0.90 | 6–10 |
| 0141 | 4400 | 44.40 | 5 | 34 | 1.10 | 3– 4 |
| 0143 | 4400 | 44.40 (W260) | 5 | 34 | 1.10 | 4– 6 |

## Band saw blade HSS bimetal

**Design:** Wear-proof tooth blades made of HSS in M42 quality combined with extremely durable tooth tips.

**WIKUS MARATHON® M42:** Tooth pitch to **5–8 teeth** per inch, cutting angle positive.

**Application:**
For sawing all steels up to 40 HRC, for layer and bundle cuts of larger workpiece dimensions, for large profiles and full materials as well as non-ferrous metals.

**WIKUS VARIO® M42:** Tooth pitch from **6–10 teeth** per inch, cutting angle 0°.

**Application:**
For sawing all steels up to 40 HRC, for profile and bundle cuts, for small and medium workpieces.

HSS Bimetal

WIKUS Präzision an der Schnittstelle

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2761 | 50–100 | 30–70 | | | | | | | 35–45 | 25 | 45 | 120 | 110 |

| Order No. | Length mm | 2761 WIKUS | PU | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0001 | 1138 | 11.85 | 5 | 13 | 0.65 | 8–12 |
| 0004 | 1138 | 11.85 | 5 | 13 | 0.65 | 10–14 |
| 0007 | 1325 | 13.20 | 5 | 13 | 0.65 | 8–12 |
| 0010 | 1325 | 13.20 | 5 | 13 | 0.65 | 10–14 |
| 0013 | 1330 | 13.25 | 5 | 13 | 0.65 | 8–12 |
| 0016 | 1330 | 13.25 | 5 | 13 | 0.65 | 10–14 |
| 0014 | 1335 | 13.30 NEW | 5 | 13 | 0.65 | 8–12 |
| 0015 | 1335 | 13.30 NEW | 5 | 13 | 0.65 | 10–14 |
| 0018 | 1440 | 14.05 NEW | 5 | 13 | 0.65 | 6–10 |
| 0019 | 1440 | 14.05 | 5 | 13 | 0.65 | 8–12 |
| 0022 | 1440 | 14.05 | 5 | 13 | 0.65 | 10–14 |
| 0031 | 1470 | 14.30 | 5 | 13 | 0.65 | 10–14 |
| 0034 | 1638 | 15.55 | 5 | 13 | 0.65 | 6–10 |
| 0037 | 1638 | 15.55 | 5 | 13 | 0.65 | 8–12 |
| 0040 | 1638 | 15.55 | 5 | 13 | 0.65 | 10–14 |
| 0041 | 1735 | 16.25 NEW | 5 | 13 | 0.65 | 6–10 |
| 0042 | 1735 | 16.25 NEW | 5 | 13 | 0.65 | 8–12 |
| 0044 | 1735 | 16.25 NEW | 5 | 13 | 0.65 | 10–14 |
| 0049 | 2000 | 20.10 | 5 | 20 | 0.90 | 5– 8 |
| 0052 | 2000 | 20.10 | 5 | 20 | 0.90 | 8–12 |
| 0047 | 2035 | 20.40 NEW | 5 | 20 | 0.90 | 6–10 |
| 0048 | 2035 | 20.40 NEW | 5 | 20 | 0.90 | 8–12 |
| 0059 | 2035 | 20.40 NEW | 5 | 20 | 0.90 | 10–14 |
| 0060 | 2085 | 20.80 NEW | 5 | 20 | 0.90 | 5– 8 |
| 0062 | 2085 | 20.80 NEW | 5 | 20 | 0.90 | 6–10 |
| 0063 | 2085 | 20.80 NEW | 5 | 20 | 0.90 | 10–14 |
| 0055 | 2140 | 21.20 | 5 | 20 | 0.90 | 5– 8 |
| 0057 | 2140 | 21.20 NEW | 5 | 20 | 0.90 | 6–10 |
| 0058 | 2140 | 21.20 | 5 | 20 | 0.90 | 8–12 |
| 0061 | 2360 | 23.10 | 5 | 20 | 0.90 | 6–10 |
| 0064 | 2360 | 23.10 | 5 | 20 | 0.90 | 8–12 |
| 0067 | 2360 | 23.10 | 5 | 20 | 0.90 | 10–14 |
| 0070 | 2375 | 23.20 | 5 | 20 | 0.90 | 5– 8 |
| 0073 | 2375 | 23.20 | 5 | 20 | 0.90 | 8–12 |
| 0270 | 2450 | 27.10 | 5 | 27 | 0.90 | 4– 6 |
| 0275 | 2450 | 27.10 | 5 | 27 | 0.90 | 5– 8 |
| 0074 | 2450 | 27.10 | 5 | 27 | 0.90 | 6–10 |
| 0075 | 2450 | 27.10 | 5 | 27 | 0.90 | 8–12 |
| 0077 | 2455 | 27.10 NEW | 5 | 20 | 0.90 | 5– 8 |
| 0078 | 2455 | 27.10 NEW | 5 | 20 | 0.90 | 6–10 |
| 0092 | 2530 | 24.50 NEW | 5 | 20 | 0.90 | 5– 8 |
| 0093 | 2530 | 24.50 NEW | 5 | 20 | 0.90 | 6–10 |
| 0082 | 2700 | 29.50 | 5 | 27 | 0.90 | 4– 6 |
| 0085 | 2700 | 29.50 | 5 | 27 | 0.90 | 5– 8 |
| 0088 | 2700 | 29.50 (W261) | 5 | 27 | 0.90 | 6–10 |

| Order No. | Length mm | 2761 WIKUS | PU | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0091 | 2700 | 29.50 | 5 | 27 | 0.90 | 8–12 |
| 0094 | 2700 | 29.50 | 5 | 27 | 0.90 | 10–14 |
| 0097 | 2750 | 30.00 | 5 | 27 | 0.90 | 4– 6 |
| 0100 | 2750 | 30.00 | 5 | 27 | 0.90 | 5– 8 |
| 0103 | 2750 | 30.00 | 5 | 27 | 0.90 | 6–10 |
| 0106 | 2750 | 30.00 | 5 | 27 | 0.90 | 8–12 |
| 0109 | 2750 | 30.00 | 5 | 27 | 0.90 | 10–14 |
| 0095 | 2760 | 30.10 NEW | 5 | 27 | 0.90 | 4– 6 |
| 0096 | 2760 | 30.10 NEW | 5 | 27 | 0.90 | 5– 8 |
| 0098 | 2760 | 30.10 NEW | 5 | 27 | 0.90 | 6–10 |
| 0099 | 2760 | 30.10 NEW | 5 | 27 | 0.90 | 8–12 |
| 0101 | 2765 | 30.10 NEW | 5 | 27 | 0.90 | 4– 6 |
| 0102 | 2765 | 30.10 NEW | 5 | 27 | 0.90 | 5– 8 |
| 0104 | 2765 | 30.10 NEW | 5 | 27 | 0.90 | 6–10 |
| 0105 | 2765 | 30.10 NEW | 5 | 27 | 0.90 | 8–12 |
| 0112 | 2835 | 30.80 | 5 | 27 | 0.90 | 4– 6 |
| 0115 | 2835 | 30.80 | 5 | 27 | 0.90 | 5– 8 |
| 0118 | 2835 | 30.80 | 5 | 27 | 0.90 | 6–10 |
| 0121 | 2835 | 30.80 | 5 | 27 | 0.90 | 8–12 |
| 0119 | 2910 | 31.50 NEW | 5 | 27 | 0.90 | 4– 6 |
| 0122 | 2910 | 31.50 NEW | 5 | 27 | 0.90 | 5– 8 |
| 0123 | 2920 | 31.60 NEW | 5 | 27 | 0.90 | 5– 8 |
| 0127 | 2950 | 31.90 | 5 | 27 | 0.90 | 3– 4 |
| 0130 | 2950 | 31.90 | 5 | 27 | 0.90 | 4– 6 |
| 0133 | 2950 | 31.90 | 5 | 27 | 0.90 | 5– 8 |
| 0136 | 2950 | 31.90 | 5 | 27 | 0.90 | 6–10 |
| 0139 | 2950 | 31.90 | 5 | 27 | 0.90 | 8–12 |
| 0142 | 2950 | 31.90 | 5 | 27 | 0.90 | 10–14 |
| 0140 | 3100 | 33.30 NEW | 5 | 27 | 0.90 | 4– 6 |
| 0145 | 3150 | 33.80 | 5 | 27 | 0.90 | 3– 4 |
| 0148 | 3150 | 33.80 | 5 | 27 | 0.90 | 4– 6 |
| 0151 | 3150 | 33.80 | 5 | 27 | 0.90 | 5– 8 |
| 0154 | 3150 | 33.80 | 5 | 27 | 0.90 | 6–10 |
| 0157 | 3150 | 33.80 | 5 | 27 | 0.90 | 8–12 |
| 0160 | 3150 | 33.80 | 5 | 27 | 0.90 | 10–14 |
| 0162 | 3320 | 35.50 NEW | 5 | 27 | 0.90 | 3– 4 |
| 0163 | 3320 | 35.50 | 5 | 27 | 0.90 | 4– 6 |
| 0166 | 3320 | 35.50 | 5 | 27 | 0.90 | 5– 8 |
| 0169 | 3320 | 35.50 | 5 | 27 | 0.90 | 6–10 |
| 0172 | 3320 | 35.50 | 5 | 27 | 0.90 | 8–12 |
| 0173 | 3375 | 36.00 NEW | 5 | 27 | 0.90 | 3– 4 |
| 0174 | 3375 | 36.00 NEW | 5 | 27 | 0.90 | 4– 6 |
| 0176 | 3375 | 36.00 NEW | 5 | 27 | 0.90 | 5– 8 |
| 0177 | 3375 | 36.00 NEW | 5 | 27 | 0.90 | 8–12 |
| 0175 | 3660 | 38.80 (W261) | 5 | 27 | 0.90 | 3– 4 |

Continued overleaf

## Band saw blade HSS bimetal

Continued

| Order No. | Length mm | 2761 WIKUS | PU | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0178 | 3660 | 38.80 | 5 | 27 | 0.90 | 4– 6 |
| 0181 | 3660 | 38.80 | 5 | 27 | 0.90 | 5– 8 |
| 0184 | 3660 | 38.80 | 5 | 27 | 0.90 | 6–10 |
| 0187 | 3660 | 38.80 | 5 | 27 | 0.90 | 8–12 |
| 0190 | 3660 | 38.80 | 5 | 27 | 0.90 | 10–14 |
| 0193 | 3830 | 40.40 | 5 | 27 | 0.90 | 3– 4 |
| 0196 | 3830 | 40.40 | 5 | 27 | 0.90 | 4– 6 |
| 0199 | 3830 | 40.40 | 5 | 27 | 0.90 | 5– 8 |
| 0202 | 3830 | 40.40 | 5 | 27 | 0.90 | 6–10 |
| 0205 | 3830 | 40.40 | 5 | 27 | 0.90 | 8–12 |
| 0207 | 4020 | 49.10 NEW | 5 | 34 | 1.10 | 3– 4 |
| 0214 | 4200 | 51.10 | 5 | 34 | 1.10 | 3– 4 |
| 0217 | 4200 | 51.10 | 5 | 34 | 1.10 | 4– 6 |
| 0218 | 4250 | 51.70 NEW | 5 | 34 | 1.10 | 4– 6 |
| 0220 | 4400 | 53.40 (W261) | 5 | 34 | 1.10 | 2– 3 |

| Order No. | Length mm | 2761 WIKUS | PU | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0223 | 4400 | 53.40 | 5 | 34 | 1.10 | 3–4 |
| 0226 | 4400 | 53.40 | 5 | 34 | 1.10 | 4–6 |
| 0224 | 4500 | 46.90 NEW | 5 | 27 | 0.90 | 3–4 |
| 0225 | 4500 | 46.90 NEW | 5 | 27 | 0.90 | 4–6 |
| 0285 | 4570 | 55.30 | 5 | 34 | 1.10 | 3–4 |
| 0290 | 4570 | 55.30 | 5 | 34 | 1.10 | 4–6 |
| 0232 | 4640 | 56.10 | 5 | 34 | 1.10 | 3–4 |
| 0238 | 4115 | 70.80 | 5 | 41 | 1.30 | 2–3 |
| 0241 | 4115 | 70.80 | 5 | 41 | 1.30 | 3–4 |
| 0244 | 4115 | 70.80 | 5 | 41 | 1.30 | 4–6 |
| 0247 | 4640 | 79.30 | 5 | 41 | 1.30 | 2–3 |
| 0250 | 4640 | 79.30 | 5 | 41 | 1.30 | 3–4 |
| 0253 | 4640 | 79.30 | 5 | 41 | 1.30 | 4–6 |
| 0251 | 5320 | 63.70 NEW | 5 | 34 | 1.10 | 4–6 |
| 0259 | 5334 | 90.40 (W261) | 5 | 41 | 1.30 | 3–4 |

## Band saw blade HSS bimetal

**Design:** Wear-proof tooth blades made of HSS in M42 quality combined with extremely durable tooth tips.

**WIKUS PROFLEX® M42 (68-69 HRC):** Tooth pitch up to **8–11 teeth** per inch, rake angle positive, with special tooth geometry.

**Application:** For the sawing of profiles and beams of various dimensions and for sawing work susceptible to vibrations. For single and bundle cutting.

HSS Bimetal

WIKUS Präzision an der Schnittstelle

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2766 | ◐ | ◐ | | | | | | | ◐ | | ◐ | | |

| Order No. | Length mm | 2766 WIKUS | PU | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0001 | 2450 | 25.70 | 5 | 27 | 0.9 | 3– 4 |
| 0004 | 2450 | 25.70 | 5 | 27 | 0.9 | 5– 7 |
| 0007 | 2450 | 25.70 | 5 | 27 | 0.9 | 8–11 |
| 0010 | 2750 | 28.40 | 5 | 27 | 0.9 | 3– 4 |
| 0013 | 2750 | 28.40 | 5 | 27 | 0.9 | 5– 7 |
| 0016 | 2750 | 28.40 | 5 | 27 | 0.9 | 8–11 |
| 0019 | 3150 | 32.10 | 5 | 27 | 0.9 | 3– 4 |
| 0022 | 3150 | 32.10 | 5 | 27 | 0.9 | 5– 7 |
| 0025 | 3150 | 32.10 | 5 | 27 | 0.9 | 8–11 |
| 0028 | 3320 | 33.60 | 5 | 27 | 0.9 | 3– 4 |
| 0031 | 3320 | 33.60 | 5 | 27 | 0.9 | 5– 7 |
| 0034 | 3320 | 33.60 | 5 | 27 | 0.9 | 8–11 |
| 0037 | 3660 | 36.70 | 5 | 27 | 0.9 | 3– 4 |
| 0040 | 3660 | 36.70 | 5 | 27 | 0.9 | 5– 7 |
| 0043 | 3660 | 36.70 (W261) | 5 | 27 | 0.9 | 8–11 |

## Carbide-Band saw blade DUROSET

**Design:** Set carbide band saw blade for the performance-related machining of steels.

**Application:** For universal use on all band saw machines, including swing frames and band saw machines not suitable for carbide. Increased performance and tool life compared with bimetal saw blades.

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2763 | 50–120 | 50–100 | 20–65 | 20–65 | 20–55 | | | | 55–70 | 70 | 70 | 120 | 120 |

| Order No. | Length mm | 2763 | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|
| 3601 | 3660 | 202.50 | 27 | 0.9 | 3–4 |
| 3801 | 3830 | 211.50 | 27 | 0.9 | 3–4 |
| 4401 | 4400 | 264.50 | 34 | 1.1 | 3–4 |
| 4501 | 4570 | 274.00 | 34 | 1.1 | 3–4 |
| 4101 | 4115 | 228.50 (W263) | 41 | 1.3 | 2–3 |

| Order No. | Length mm | 2763 | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|
| 4601 | 4640 | 256.50 | 41 | 1.3 | 2–3 |
| 5301 | 5334 | 293.50 | 41 | 1.3 | 2–3 |
| 4102 | 4115 | 264.00 | 41 | 1.3 | 3–4 |
| 4602 | 4640 | 296.50 | 41 | 1.3 | 3–4 |
| 5302 | 5334 | 339.50 (W263) | 41 | 1.3 | 3–4 |

## Band saw coil Wikus DIAMANT

**Design:** Made of alloyed tool steel for good wear resistance at tooth tips as well as the mount. In addition, the saw blade possesses an especially hardened blade backing, providing increased sturdiness and minimum wear, which allows for greater cutting parameters. **Supplied in 30.5 m coils.**

**Application:** For general sawing work with plain and low-alloy steels and non-ferrous metals.
Preferably for smaller and medium size cross cuts up to max. 70 mm length of path of contact.

**N =** Normal tooth, **cutting angle 0°.**
**H =** Claw tooth, **cutting angle positive.**

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2765 | ● | | | | | | | | | | ◐ | ○ | |

| Order No. | Width mm | 2765 | PU | Thickness mm | Number of teeth per inch |
|---|---|---|---|---|---|
| 0001 | 6 | 60.70 | 5 | 0.65 | 6 N |
| 0004 | 6 | 60.70 | 5 | 0.65 | 8 N |
| 0007 | 6 | 60.70 | 5 | 0.65 | 10 N |
| 0010 | 6 | 60.70 | 5 | 0.65 | 14 N |
| 0013 | 6 | 60.70 | 5 | 0.65 | 18 N |
| 0016 | 6 | 60.70 | 5 | 0.65 | 24 N |
| 0019 | 8 | 60.70 | 5 | 0.65 | 8 N |
| 0022 | 8 | 60.70 | 5 | 0.65 | 10 N |
| 0025 | 8 | 60.70 | 5 | 0.65 | 14 N |
| 0028 | 8 | 60.70 | 5 | 0.65 | 18 N |
| 0034 | 10 | 60.70 (W262) | 5 | 0.65 | 4 H |

| Order No. | Width mm | 2765 | PU | Thickness mm | Number of teeth per inch |
|---|---|---|---|---|---|
| 0037 | 10 | 60.70 | 5 | 0.65 | 6 H |
| 0040 | 10 | 60.70 | 5 | 0.65 | 8 N |
| 0043 | 10 | 60.70 | 5 | 0.65 | 10 N |
| 0046 | 10 | 60.70 | 5 | 0.65 | 14 N |
| 0049 | 10 | 60.70 | 5 | 0.65 | 18 N |
| 0055 | 13 | 70.40 | 5 | 0.65 | 4 H |
| 0058 | 13 | 70.40 | 5 | 0.65 | 6 H |
| 0061 | 13 | 70.40 | 5 | 0.65 | 8 N |
| 0064 | 13 | 70.40 | 5 | 0.65 | 10 N |
| 0067 | 13 | 70.40 (W262) | 5 | 0.65 | 14 N |

Further dimensions available on request.

## HSCo/HSS Machine Saw Blades

**2752** **Design:** HSS-machne saw blade made from HSS 1.3343 (DMo5) hardened in vacuum, 0° and 7° saw blade with positive cutting angle.

**Application:** Universal saw blade for most cutting applications, straightforward, sturdy and reliable. 7° saw blade particularly suitable for long-chipping and tough materials such as stainless steels.

HSS DMo5

2752 format professional quality

**2753** **Design:** Komet SB-5 brand product, made of highly sturdy HSS steel according to state of the art production methods, approved for highest tool life and universal range of application. Komet VP-7 saw blade with additional variable tooth pitch and positive teeth.

**Application:** For quality cuts with utmost performance in long-chipping and tough workpieces as well as rust and acid resistant steels. The tooth geometry reduces the vibrations when sawing. Areas of application are increased thanks to the variable tooth pitches.

HSS DMo5

2753 KOMET

**2754** **Design:** Komet Ko-Bi high-performance saw blade which is practically unbreakable under normal circumstances.

**Application:** For universal use thanks to high fracture resistance.

HSS Bimetal

2754 KOMET

| Order No. | Steels up to 850 N/mm² | Steels up to 1000 N/mm² | Steels up to 1400 N/mm² | Steels up to 42 HRC | Steels up to 52 HRC | Steels up to 56 HRC | Steels up to 60 HRC | Hard machining over 60 HRC | Stainless and acid-resistant steels (INOX) | Ti steels, Ti alloys, special steels | Cast iron materials | Al, Al and Mg alloys | Copper, brass, bronze |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2752 | ● | | | | | | | | ◐ | ◐ | ◐ | ◐ | ◐ |
| 2753 | ● | | | | | | | | ◐ | ◐ | ◐ | ◐ | ◐ |
| 2754 | ● | ● | | | | | | | ◐ | ◐ | ◐ | ◐ | |

| Order No. | Length mm | 2752 format | 2753 KOMET | 2754 KOMET | Width mm 2752 | Width mm 2753 | Width mm 2754 | Thick-ness mm | Teeth per inch 2752 | Teeth per inch 2753 | Teeth per inch 2754 | Rake angle | Clamp hole Ø mm, centre type 2752 | Clamp hole Ø mm, centre type 2753 | Clamp hole Ø mm, centre type 2754 | Clamp hole Ø mm, offset type/Kasto 2752 | Clamp hole Ø mm, offset type/Kasto 2753 | Clamp hole Ø mm, offset type/Kasto 2754 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0109 | 300 | – | 8.25 | – | – | 25 | – | 1.25 | – | 10 | – | 0° | – | 8.5 | – | – | – | – |
| 0112 | 300 | – | 8.25 | – | – | 25 | – | 1.25 | – | 14 | – | 0° | – | 8.5 | – | – | – | – |
| 0115 | 300 | – | 9.60 | – | – | 25 | – | 1.50 | – | 14 | – | 0° | – | 8.5 | – | – | – | – |
| 0118 | 350 | – | 10.70 | – | – | 25 | – | 1.50 | – | 10 | – | 0° | – | 8.5 | – | – | – | – |
| 0121 | 350 | – | 12.10 | – | – | 30 | – | 1.50 | – | 10 | – | 0° | – | 8.5 | – | – | – | – |
| 0001 | 350 | 8.95 | 13.35 | – | 30 | 30 | – | 2.00 | 4 | 4 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0004 | 350 | 8.95 | 13.35 | – | 30 | 30 | – | 2.00 | 6 | 6 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0007 | 350 | 8.95 | 13.35 | – | 30 | 30 | – | 2.00 | 8 | 8 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0010 | 350 | 8.95 | 13.35 | – | 30 | 30 | – | 2.00 | 10 | 10 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0011 | 350 | – | – | 11.95 | – | – | 40 | 2.00 | – | – | 4–7 | 7° | – | – | – | – | – | 8.5 |
| 0013 | 350 | 9.80 | 15.35 | – | 36 | 36 | – | 2.00 | 4 | 4 | – | 0° | 8.5 | 8.5 | – | 8.5 | – | – |
| 0016 | 350 | 9.80 | 15.35 | – | 36 | 36 | – | 2.00 | 6 | 6 | – | 0° | 8.5 | 8.5 | – | 8.5 | – | – |
| 0019 | 350 | 9.80 | 15.35 | – | 36 | 36 | – | 2.00 | 8 | 8 | – | 0° | 8.5 | 8.5 | – | 8.5 | – | – |
| 0022 | 350 | 9.80 | 15.35 | – | 36 | 36 | – | 2.00 | 10 | 10 | – | 0° | 8.5 | 8.5 | – | 8.5 | – | – |
| 0124 | 400 | – | 10.05 | – | – | 25 | – | 1.25 | – | 10 | – | 0° | – | 8.5 | – | – | – | – |
| 0127 | 400 | – | 10.05 | – | – | 25 | – | 1.25 | – | 14 | – | 0° | – | 8.5 | – | – | – | – |
| 0130 | 400 | – | 12.50 | – | – | 25 | – | 1.50 | – | 14 | – | 0° | – | 8.5 | – | – | – | – |
| 0025 | 400 | 7.90 | 12.85 | 12.85 | 30 | 30 | 30 | 1.50 | 6 | 6 | 6 | 0° | 8.5 | 8.5 | 8.5 | – | – | – |
| 0028 | 400 | 7.90 | 12.85 | – | 30 | 30 | – | 1.50 | 8 | 8 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0031 | 400 | 7.90 | 12.85 | 12.85 | 30 | 32 | 32 | 1.50 | 10 | 10 | 10 | 0° | 8.5 | 8.5 | 8.5 | – | – | – |
| 0034 | 400 | 7.90 | 12.85 | – | 30 | 30 | – | 1.50 | 14 | 14 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0037 | 400 | 7.90 | 12.85 | – | 30 | 30 | – | 1.50 | 18 | 18 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0040 | 400 | 9.80 | 16.10 | – | 30 | 30 | – | 2.00 | 4 | 4 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0043 | 400 | 9.80 | 16.10 | – | 30 | 30 | – | 2.00 | 6 | 6 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0046 | 400 | 9.80 | 16.10 | – | 30 | 30 | – | 2.00 | 8 | 8 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0049 | 400 | 9.80 | 16.10 | – | 30 | 30 | – | 2.00 | 10 | 10 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0052 | 400 | 9.80 | 16.10 | – | 30 | 30 | – | 2.00 | 14 | 14 | – | 0° | 8.5 | 8.5 | – | – | – | – |
| 0053 | 400 | 12.05 | – | – | 35 | – | – | 2.00 | 4 | – | – | 7° | 10.5 | – | – | – | – | – |
| 0131 | 400 | – | 18.70 | – | – | 35 | – | 2.00 | – | 6 | – | 7° | – | 10.5 | – | – | – | – |
| 0054 | 400 | – | 19.55 | – | – | 35 | – | 2.00 | – | 4–7 | – | 7° | – | 10.5 | – | – | – | – |
| 0133 | 450 | – | 14.70 | – | – | 30 | – | 1.50 | – | 10 | – | 0° | – | 8.5 | – | – | – | – |
| 0055 | 450 | 12.50 | 18.00 | – | 35 | 35 | – | 2.00 | 4 | 4 | – | 0° | 10.5 | 10.5 | – | – | – | – |
| 0058 | 450 | 12.50 | 18.00 | – | 35 | 35 | – | 2.00 | 6 | 6 | – | 0° | 10.5 | 10.5 | – | – | – | – |
| 0061 | 450 | 12.50 | 18.00 | – | 35 | 35 | – | 2.00 | 8 | 8 | – | 0° | 10.5 | 10.5 | – | – | – | – |
| 0064 | 450 | 12.50 | 18.00 | – | 35 | 35 | – | 2.00 | 10 | 10 | – | 0° | 10.5 | 10.5 | – | – | – | – |
| 0063 | 450 | 16.40 | – | – | 40 | – | – | 2.00 | 4 | – | – | 7° | – | – | – | 8.5 | – | – |
| 0136 | 450 | – | 22.40 | – | – | 40 | – | 2.00 | – | 4 | – | 0° | – | – | – | – | 8.5 | – |
| 0139 | 450 | – | 22.40 | – | – | 40 | – | 2.00 | – | 4 | – | 0° | – | 10.5 | – | – | – | – |
| 0065 | 450 | 16.40 | – | 22.10 | 40 | – | 40 | 2.00 | 4 | – | 4 | 7° | 10.5 | – | 10.5 | – | – | – |
| 0062 | 450 | – (W250) | 27.10 (W251) | 22.10 (W251) | – | 40 | 38 | 2.00 | – | 4–7 | 6 | 0° | – | 10.5 | 8.5 | – | – | – |

Machine saw blades in HSS-Co and special dimensions up to 1500 mm available on request.

Continued overleaf

## HSCo/HSS Machine Saw Blades

Continued

| Order No. | Length mm | 2752 format | 2753 KOMET | 2754 KOMET | Width mm 2752 | Width mm 2753 | Width mm 2754 | Thickness mm | Teeth per inch 2752 | Teeth per inch 2753 | Teeth per inch 2754 | Rake angle | Clamp hole Ø mm, centre type 2752 | Clamp hole Ø mm, centre type 2753 | Clamp hole Ø mm, centre type 2754 | Clamp hole Ø mm, offset type/Kasto 2752 | Clamp hole Ø mm, offset type/Kasto 2753 | Clamp hole Ø mm, offset type/Kasto 2754 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0066 | 450 | – | 27.10 | 22.10 | – | 40 | 40 | 2.00 | – | 4–7 | 6 | 7° | – | 10.5 | 10.5 | – | – | 8.5 |
| 0142 | 450 | – | 22.40 | – | – | 40 | – | 2.00 | – | 6 | – | 0° | – | – | – | – | 8.5 | – |
| 0145 | 450 | – | 22.40 | – | – | 40 | – | 2.00 | – | 6 | – | 0° | – | 10.5 | – | – | – | – |
| 0148 | 450 | – | 22.40 | – | – | 40 | – | 2.00 | – | 10 | – | 0° | – | 10.5 | – | – | – | – |
| 0151 | 500 | – | 24.90 | – | – | 40 | – | 2.00 | – | 4 | – | 0° | – | 10.5 | – | – | – | – |
| 0154 | 500 | – | 24.90 | – | – | 40 | – | 2.00 | – | 6 | – | 0° | – | 10.5 | – | – | – | – |
| 0067 | 500 | 22.60 | 31.80 | – | 48 | 48 | – | 2.50 | 4 | 4 | – | 0° | 10.5 | – | – | 10.5 | 10.5 | – |
| 0070 | 500 | 22.60 | 31.80 | – | 48 | 48 | – | 2.50 | 6 | 6 | – | 0° | – | – | – | 10.5 | 10.5 | – |
| 0073 | 500 | 23.50 | 39.10 | 39.10 | 50 | 50 | 50 | 2.50 | 4 | 4 | 4 | 0° | 13.0 | 13.0 | 13.0 | – | – | – |
| 0076 | 500 | 23.50 | 39.10 | 39.10 | 50 | 50 | 50 | 2.50 | 6 | 6 | 6 | 0° | 13.0 | 13.0 | 13.0 | – | – | – |
| 0079 | 550 | 19.40 | 29.70 | – | 45 | 45 | – | 2.00 | 4 | 4 | – | 0° | – | 13.0 | – | 10.5 | – | – |
| 0082 | 550 | 19.40 | 29.70 | – | 45 | 45 | – | 2.00 | 6 | 6 | – | 0° | – | – | – | 10.5 | 10.5 | – |
| 0085 | 550 | 19.40 | 29.70 | – | 45 | 45 | – | 2.00 | 10 | 10 | – | 0° | – | – | – | 10.5 | 10.5 | – |
| 0087 | 550 | – | 41.30 | – | – | 50 | – | 2.50 | – | 6 | – | 0° | – | – | – | – | 10.5 | – |
| 0088 | 575 | 25.80 | 37.20 | 37.20 | 50 | 50 | 50 | 2.50 | 4 | 4 | 4 | 0° | – | – | – | 10.5 | 10.5 | 10.5 |
| 0091 | 575 | 25.80 | 37.20 | – | 50 | 50 | – | 2.50 | 6 | 6 | – | 0° | – | – | – | 10.5 | 10.5 | – |
| 0094 | 600 | 28.90 | 39.40 | 39.40 | 50 | 50 | 50 | 2.50 | 4 | 4 | 4 | 0° | 13.0 | 13.0 | 13.0 | – | – | – |
| 0097 | 600 | 28.90 | 39.40 | – | 50 | 50 | – | 2.50 | 6 | 6 | – | 0° | 13.0 | 13.0 | – | – | – | – |
| 0100 | 650 | 29.60 | 50.80 | 50.80 | 50 | 50 | 50 | 2.50 | 4 | 4 | 4 | 0° | 13.0 | 13.0 | 13.0 | – | – | – |
| 0103 | 650 | 29.60 | 50.80 | – | 50 | 50 | – | 2.50 | 6 | 6 | – | 0° | 13.0 | 13.0 | – | – | – | – |
| 0106 | 650 | – (W250) | 52.70 (W251) | – (W251) | – | 55 | – | 2.50 | – | 4 | – | 0° | – | – | – | – | 10.5 | – |

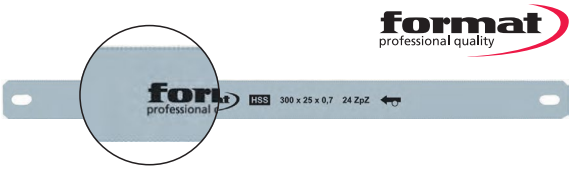
Machine saw blades in HSS-Co and special dimensions up to 1500 mm available on request.

## Hand saw blade, HSS

**Design:** Entirely hardened, with teeth edge made of high-speed steel.

**Application:** Is used preferably because of its edge retention.

HSS



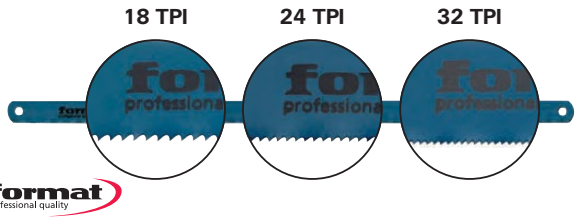

| Order No. | Length mm | 2749 format | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|
| 0020 | 300 | 2.18 (W250) | 25 | 0.70 | 24 |

## Hand saw blade, HSS/bimetal

**Design:** Shatterproof bimetal hand saw blade with precision ground teeth edge made of high-speed steel. The teeth area is electronically welded to the spring steel backing material in a vacuum. Reduced vibration for thin materials in the first cut.

**Application:** These blades combine high performance with safety against breakage and are universally applicable.

HSS Bimetal




2750 format

| Order No. | Length mm | 2750 format | 2747 BAHCO | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0005 | 300 | 1.08 (W250) | 1.76 (W556) | 13 | 0.65 | 18 |
| 0010 | 300 | 1.08 (W250) | 1.76 (W556) | 13 | 0.65 | 24 |
| 0015 | 300 | 1.08 (W250) | 1.76 (W556) | 13 | 0.65 | 32 |

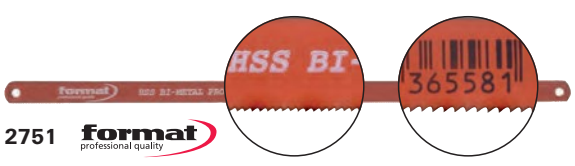
2747 BAHCO

## Hand saw blade, HSS/bimetal, progressive

**Design:** Shatterproof bimetal hand saw blade with precision ground teeth edge made of high-speed steel and with **progressively extending tooth pitch,** descending from 32 to 18 teeth per inch. The teeth area is electronically welded to the spring steel backing material in a vacuum. Reduced vibration for thin materials in the first cut.

**Application:** Especially efficient in all areas of application. Has a high cutting performance, even in coarse materials.

HSS Bimetal




2751 format

2747 BAHCO

| Order No. | Length mm | 2751 format | 2747 BAHCO | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0001 | 300 | 1.12 (W250) | 1.76 (W556) | 13 | 0.65 | 32–18 |

## Tool bit form A, round

**Design:** HSS Co10, DIN 4964 or ISO 5421, hardened, annealed, true to size and dressed to size. The ends are perpendicular, straight and non-machined.
**Hardness approx. 63–68 HRC.**
Tolerance for form A: length: ± 2 mm
Ø: h8

**Application:** Ground to be suitable for use as a form tool for hollowing, boring, engraving and copying in tool- and mould-making.

HSS Co10 | DIN 4964

| Order No. | Ø h8 mm | 2780 | Total length mm |
|---|---|---|---|
| 0001 | 3 | 3.40 | 63 |
| 0004 | 4 | 3.72 | 63 |
| 0007 | 4 | 4.14 | 80 |
| 0010 | 4 | 4.86 | 100 |
| 0013 | 5 | 4.70 | 80 |
| 0016 | 5 | 5.35 | 100 |
| 0019 | 6 | 5.35 | 80 |
| 0022 | 6 | 6.15 | 100 |
| | | (W266) | |

| Order No. | Ø h8 mm | 2780 | Total length mm |
|---|---|---|---|
| 0025 | 8 | 6.95 | 80 |
| 0028 | 8 | 7.95 | 100 |
| 0031 | 8 | 10.05 | 125 |
| 0034 | 8 | 12.80 | 160 |
| 0037 | 10 | 10.30 | 100 |
| 0040 | 10 | 12.50 | 125 |
| 0043 | 10 | 15.05 | 160 |
| 0046 | 10 | 19.10 | 200 |
| | | (W266) | |

| Order No. | Ø h8 mm | 2780 | Total length mm |
|---|---|---|---|
| 0049 | 12 | 17.20 | 125 |
| 0052 | 12 | 20.90 | 160 |
| 0055 | 12 | 25.10 | 200 |
| 0058 | 16 | 34.80 | 160 |
| 0061 | 16 | 42.40 | 200 |
| 0064 | 20 | 47.80 | 160 |
| 0067 | 20 | 59.90 | 200 |
| | | (W266) | |

## Tool bit form B, square

**Design:** HSS Co10, DIN 4964 or ISO 5421, hardened, annealed, true to size and dressed to size. The ends are perpendicular, straight and non-machined.
**Hardness approx. 63–68 HRC.**
Tolerance for form B: length: ± 2 mm
Cross-section: h13/h14

**Application:** Ground to be suitable for use as a form tool for hollowing, boring, engraving and copying in tool- and mould-making.

HSS Co10 | DIN 4964

| Order No. | h13/ h14 mm | 2782 | Total length mm |
|---|---|---|---|
| 0001 | 4 x 4 | 5.60 | 80 |
| 0004 | 5 x 5 | 5.60 | 80 |
| 0007 | 6 x 6 | 4.94 | 80 |
| 0010 | 6 x 6 | 5.60 | 100 |
| 0013 | 8 x 8 | 7.30 | 63 |
| 0016 | 8 x 8 | 8.10 | 80 |
| 0019 | 8 x 8 | 9.50 | 100 |
| 0022 | 8 x 8 | 10.70 | 125 |
| 0025 | 8 x 8 | 12.95 | 160 |
| 0028 | 8 x 8 | 15.05 | 200 |
| 0031 | 10 x 10 | 9.40 | 63 |
| | | (W266) | |

| Order No. | h13/ h14 mm | 2782 | Total length mm |
|---|---|---|---|
| 0034 | 10 x 10 | 10.35 | 80 |
| 0037 | 10 x 10 | 12.95 | 100 |
| 0040 | 10 x 10 | 14.40 | 125 |
| 0043 | 10 x 10 | 18.45 | 160 |
| 0046 | 10 x 10 | 22.70 | 200 |
| 0049 | 12 x 12 | 12.30 | 63 |
| 0052 | 12 x 12 | 13.80 | 80 |
| 0055 | 12 x 12 | 16.20 | 100 |
| 0058 | 12 x 12 | 19.60 | 125 |
| 0061 | 12 x 12 | 24.90 | 160 |
| 0064 | 12 x 12 | 30.00 | 200 |
| | | (W266) | |

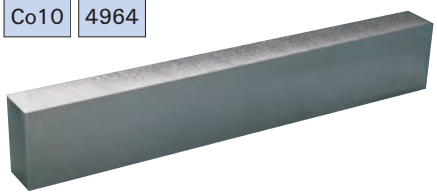
| Order No. | h13/ h14 mm | 2782 | Total length mm |
|---|---|---|---|
| 0067 | 16 x 16 | 24.30 | 100 |
| 0070 | 16 x 16 | 29.30 | 125 |
| 0073 | 16 x 16 | 36.00 | 160 |
| 0076 | 16 x 16 | 42.60 | 200 |
| 0079 | 18 x 18 | 67.40 | 200 |
| 0082 | 20 x 20 | 55.10 | 160 |
| 0085 | 20 x 20 | 68.00 | 200 |
| 0088 | 25 x 25 | 89.10 | 160 |
| 0091 | 25 x 25 | 108.50 | 200 |
| | | (W266) | |

## Tool bit form D, flat

**Design:** HSS Co10, DIN 4964 or ISO 5421, hardened, annealed, true to size and dressed to size. The ends are perpendicular, straight and non-machined.
**Hardness approx. 63–68 HRC.**
Tolerance for form D: length: ± 2 mm
Cross-section: h13/h14

**Application:** Ground to be suitable for use as a form tool for hollowing, boring, engraving and copying in tool- and mould-making.

HSS Co10 | DIN 4964



| Order No. | h13/ h14 mm | 2784 | Total length mm |
|---|---|---|---|
| 0001 | 8 x 4 | 7.95 | 100 |
| 0004 | 16 x 4 | 11.80 | 80 |
| 0007 | 16 x 4 | 13.45 | 100 |
| 0010 | 16 x 4 | 19.10 | 160 |
| 0013 | 16 x 4 | 23.80 | 200 |
| 0016 | 10 x 5 | 9.40 | 100 |
| 0019 | 10 x 5 | 15.20 | 160 |
| 0022 | 10 x 6 | 10.05 | 100 |
| | | (W266) | |

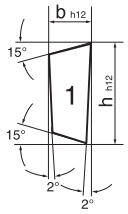
| Order No. | h13/ h14 mm | 2784 | Total length mm |
|---|---|---|---|
| 0025 | 10 x 6 | 15.55 | 160 |
| 0028 | 12 x 6 | 15.40 | 160 |
| 0031 | 12 x 6 | 19.10 | 200 |
| 0034 | 25 x 6 | 32.60 | 160 |
| 0037 | 25 x 6 | 40.50 | 200 |
| 0040 | 12 x 8 | 17.80 | 160 |
| 0043 | 12 x 8 | 22.20 | 200 |
| | | (W266) | |

| Order No. | h13/ h14 mm | 2784 | Total length mm |
|---|---|---|---|
| 0046 | 16 x 10 | 17.80 | 100 |
| 0049 | 16 x 10 | 29.20 | 160 |
| 0052 | 16 x 10 | 35.60 | 200 |
| 0055 | 20 x 5 | 29.20 | 200 |
| 0058 | 20 x 12 | 46.70 | 160 |
| 0061 | 20 x 12 | 58.30 | 200 |
| 0064 | 25 x 12 | 58.30 | 200 |
| | | (W266) | |

## Tool bit, form L 1, dual trapezoidal

**Design:** HSS Co10, according to factory standard, hardened, annealed, true to size and dressed to size. The ends are straight and non-machined.
**Hardness approx. 63–68 HRC.**
Tolerance for form L1: length: ± 2 mm
Cross-section: h12/h12

**Application:** Due to respective grinding, also suitable as a parting tool for parting and grooving in tool- and mould-making.




HSS Co10 | Factory standard

| Order No. | h x b mm | 2786 | Total length mm |
|---|---|---|---|
| 0001 | 12 x 3 | 14.60 | 85 |
| 0004 | 12 x 3 | 19.90 | 120 |
| 0007 | 12 x 3 | 26.60 | 160 |
| 0010 | 12 x 5 | 27.50 | 120 |
| 0013 | 12 x 5 | 36.50 (W266) | 160 |

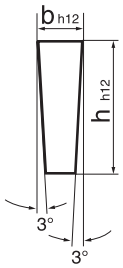
| Order No. | h x b mm | 2786 | Total length mm |
|---|---|---|---|
| 0016 | 16 x 4 | 26.40 | 120 |
| 0019 | 16 x 4 | 35.00 | 160 |
| 0022 | 16 x 4 | 43.70 | 200 |
| 0025 | 18 x 4 | 38.10 | 160 |
| 0028 | 18 x 4 | 47.00 (W266) | 200 |

| Order No. | h x b mm | 2786 | Total length mm |
|---|---|---|---|
| 0031 | 20 x 3 | 26.70 | 140 |
| 0034 | 20 x 3 | 37.30 | 200 |
| 0037 | 25 x 6 | 57.50 | 160 |
| 0040 | 25 x 6 | 71.30 (W266) | 200 |

## Tool bit form E, trapezoidal

**Design:** HSS Co10, DIN 4964 or ISO 5421, hardened, annealed, true to size and dressed to size. The ends are straight and non-machined.
**Hardness approx. 63–68 HRC.**
Tolerance for form E: length: ± 2 mm
Cross-section: h12/h12

**Application:** Due to respective grinding, also suitable as a parting tool for parting and grooving in tool- and mould-making.




HSS Co10 | DIN 4964

| Order No. | h x b mm | 2788 | Total length mm |
|---|---|---|---|
| 0001 | 12 x 3 | 6.65 | 80 |
| 0004 | 12 x 3 | 8.40 | 100 |
| 0007 | 12 x 3 | 10.55 (W266) | 125 |

| Order No. | h x b mm | 2788 | Total length mm |
|---|---|---|---|
| 0010 | 16 x 4 | 14.60 | 100 |
| 0013 | 16 x 4 | 24.30 | 160 |
| 0016 | 16 x 4 | 29.20 (W266) | 200 |

| Order No. | h x b mm | 2788 | Total length mm |
|---|---|---|---|
| 0019 | 20 x 5 | 34.00 | 160 |
| 0022 | 25 x 6 | 71.30 (W266) | 200 |

## Engraving bright form A, round

**Design:** HSS Co10, according to factory standard, hardened, annealed, true to size and dressed to size. Pre-profiled on one side (bisection with 0.1 mm measurement), with straight cutting edge (length of cutting edge 1.5 x D). One end not machined.
**Hardness approx. 63–68 HRC.**
Tolerance for form A: length: ± 2 mm
Ø: h8

**Application:** Due to respective grinding, also suitable for engraving lettering and contours as well as for contour turning and copy milling in dip working and mould-making. The pre-profiled bisection is quickly adapted to the required purpose of application by finish-grinding.

HSS Co10 | Factory standard

| Order No. | Ø h8 mm | 2790 | Cutting edge length mm | Total length mm |
|---|---|---|---|---|
| 0001 | 2.0 | 5.70 | 3.5 | 40 |
| 0004 | 2.5 | 6.00 | 3.7 | 40 |
| 0007 | 3.0 | 5.35 | 4.5 | 63 |
| 0010 | 4.0 | 5.35 | 6.0 | 63 |
| 0013 | 4.0 | 6.50 | 6.0 | 100 |
| 0016 | 5.0 | 8.25 (W266) | 7.5 | 80 |

| Order No. | Ø h8 mm | 2790 | Cutting edge length mm | Total length mm |
|---|---|---|---|---|
| 0019 | 6.0 | 9.40 | 9.0 | 80 |
| 0022 | 6.0 | 10.35 | 9.0 | 100 |
| 0025 | 8.0 | 11.35 | 12.0 | 90 |
| 0028 | 8.0 | 14.60 | 12.0 | 125 |
| 0031 | 10.0 | 14.25 | 15.0 | 100 |
| 0034 | 10.0 | 16.20 (W266) | 15.0 | 125 |

| Order No. | Ø h8 mm | 2790 | Cutting edge length mm | Total length mm |
|---|---|---|---|---|
| 0037 | 12.0 | 22.80 | 18.0 | 125 |
| 0040 | 12.0 | 32.70 | 18.0 | 160 |
| 0043 | 16.0 | 53.50 | 24.0 | 160 |
| 0046 | 20.0 | 84.20 | 30.0 | 160 |
| 0049 | 20.0 | 105.50 (W266) | 30.0 | 200 |

## Solid carbide precision round bars/engraving tools

**Design:** Solid carbide (K10/K20), according to factory standard, choice of round or straight cutting edge. High-precision round grinding (bisection with 0.02–0.05 mm measurement).
Tolerance for form A: length: ± 2 mm
Ø: h6

Solid carbide | Factory standard

**2792** **Solid carbide rod.**

**Application:** Ground to be suitable for use as a form tool for hollowing, boring, engraving and copying in tool- and mould-making.

2792

**2794** **Solid carbide engraving bright, pre-profiled at one side.**

**Application:** Due to respective grinding, also suitable for engraving lettering and contours as well as for contour turning and copy milling in dip working and mould-making. The pre-profiled bisection is quickly adapted to the required purpose of application by finish-grinding.

2794

| Order No. | Size = Ø h6 mm | 2792 | 2794 | Cutting edge length mm | Total length mm |
|---|---|---|---|---|---|
| 0001 | 2.0 | 3.20 | 7.60 | 3.5 | 50 |
| 0004 | 2.5 | 3.80 | 8.30 | 3.7 | 50 |
| 0007 | 3.0 | 4.52 | 9.20 | 4.5 | 50 |
| 0010 | 3.0 | 5.25 | 12.10 | 4.5 | 75 |
| 0013 | 4.0 | 5.40 | 10.95 | 6.0 | 50 |
| 0016 | 4.0 | 6.55 | 14.15 | 6.0 | 75 |
| 0019 | 5.0 | 8.30 | 24.20 | 7.5 | 75 |
| 0025 | 6.0 | 15.90 (W267) | 32.10 (W267) | 9.0 | 100 |

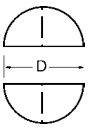
| Order No. | Size = Ø h6 mm | 2792 | 2794 | Cutting edge length mm | Total length mm |
|---|---|---|---|---|---|
| 0022 | 6.0 | 11.65 | 25.10 | 9.0 | 75 |
| 0031 | 8.0 | 22.90 | 42.30 | 12.0 | 100 |
| 0028 | 8.0 | 17.05 | 32.10 | 12.0 | 75 |
| 0037 | 10.0 | 33.00 | 53.90 | 15.0 | 100 |
| 0034 | 10.0 | 24.40 | 40.80 | 15.0 | 75 |
| 0043 | 12.0 | 46.70 | 73.80 | 18.0 | 100 |
| 0040 | 12.0 | 34.60 | 55.40 | 18.0 | 75 |
| 0046 | 16.0 | 76.00 (W267) | 151.50 (W267) | 24.0 | 100 |

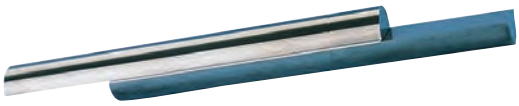
## Solid carbide half-round engraving bright (2-half engraving bright)

**Design:** Solid carbide, according to factory standard.
Tolerance: length: ± 2 mm
Ø: h7
**Application:** For engraving and copying in tool- and mould-making. For universal use.

Solid carbide | Factory standard

- WILKE



| Order No. | Size = Ø h7 mm | 2796 - WILKE | Total length mm |
|---|---|---|---|
| 0001 | 3 | 24.90 | 50 |
| 0004 | 4 | 30.60 | 50 |
| 0007 | 5 | 42.00 | 50 |
| 0010 | 6 | 49.60 | 50 |
| 0013 | 8 | 89.80 | 75 |
| 0016 | 10 | 128.00 | 75 |
| 0019 | 12 | 173.50 (W267) | 75 |

## Solid carbide engraving bright/ HSS-E engraving bright

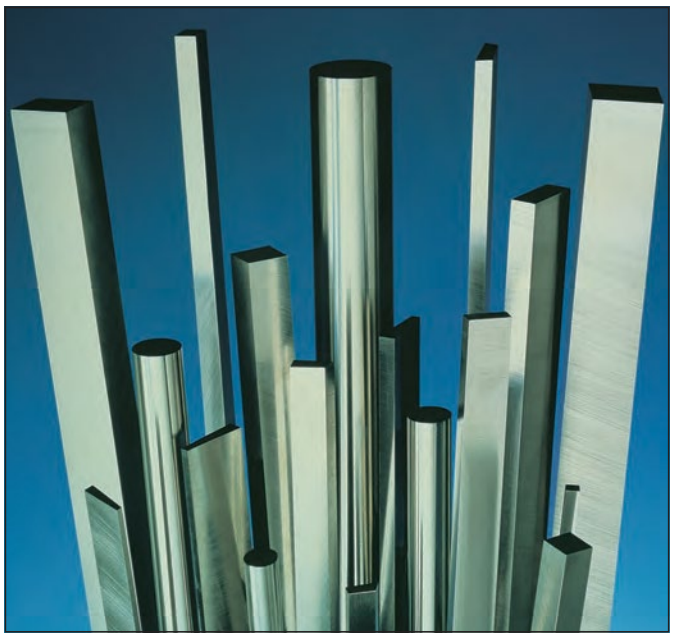
Form B 100°

Shape C

Form E 15°

Form D 60°

**– On request –**



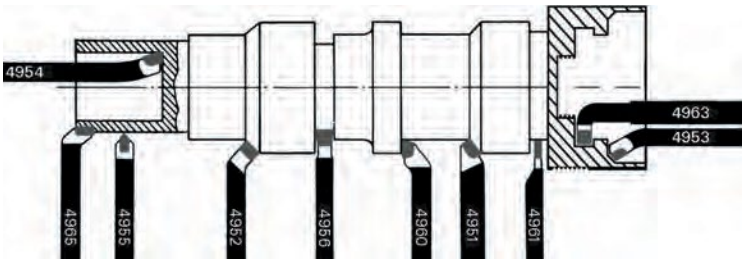
## HSS-E lathe tool 1.3207 (EW 9Co10)

**Design:** Shank 6 and 8 mm HSS-E solid steel design; from shank 10 mm with HSS-E head, blunt, welded, cutting edge ground ready to use. Break-resistant with large depths of cut and interrupted cut, even in materials with a high tensile strength.

**Application:** For high cutting performance in individual and serial production.

**Note:** You can find carbide lathe tools from 2/140.

**Shape overview**




## Straight lathe tool

**Design:** HSS-E, DIN 4951.

**2826** Right.

**2828** Left.

HSS-E | DIN 4951

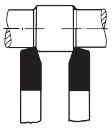


**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **8 x 8** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** |
| **2826** | | **19.10** | **21.30** | **23.20** | **26.00** | **34.40** | **43.50** |
| **2828** | | **19.10** | **21.30** | **23.20** | **26.00** | **34.40** | **43.50** |
| Total length | mm | 100 | 100 | 110 | 140 | 160 | 200 |

(W266)

## Bent lathe tool

**Design:** HSS-E, DIN 4952.

**2830** Right.

**2832** Left.

HSS-E | DIN 4952

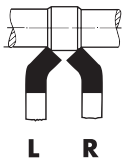


**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **8 x 8** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** |
| **2830** | | **20.40** | **22.10** | **24.30** | **34.20** | **39.10** | **48.60** |
| **2832** | | **20.40** | **22.10** | **24.30** | **34.20** | **39.10** | **48.60** |
| Total length | mm | 100 | 100 | 110 | 140 | 160 | 200 |

(W266)

Quick-change turning tool holders can be found on 3/16.

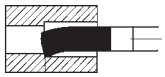
## Inner lathe tool

**Design:** HSS-E, DIN 4953, right.

**2838** Shank-■

**2840** Shank-●

HSS-E | DIN 4953



**2838**

**2840**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 | 0013 |
|---|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **8 x 8** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **–** |
| Shank-● | **mm** | **6** | **8** | **10** | **12** | **16** | **20** | **25** |
| **2838** | | **18.70** | **22.90** | **27.00** | **32.00** | **45.70** | **65.80** | **–** |
| **2840** | | **15.30** | **17.00** | **20.40** | **23.80** | **28.10** | **39.10** | **57.00** |
| Total length ■ | mm | 140 | 160 | 180 | 180 | 220 | 250 | – |
| Total length● | mm | 125 | 140 | 160 | 180 | 220 | 250 | 315 |
| Smallest bore Ø ■ | mm | 14 | 18 | 21 | 27 | 34 | 43 | – |
| Smallest bore Ø● | mm | 16 | 18 | 20 | 22 | 30 | 36 | 44 |

(W266)

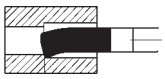
## Inner corner lathe tool

**Design:** HSS-E, DIN 4954, right.

**2846** Shank-■

**2848** Shank-●

HSS-E | DIN 4954



**2846**

**2848**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 | 0013 |
|---|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **8 x 8** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **–** |
| Shank-● | **mm** | **6** | **8** | **10** | **12** | **16** | **20** | **25** |
| **2846** | | **18.70** | **22.90** | **27.00** | **32.00** | **45.70** | **65.80** | **–** |
| **2848** | | **15.30** | **17.00** | **20.40** | **23.80** | **28.10** | **39.10** | **57.00** |
| Total length ■ | mm | 140 | 160 | 180 | 180 | 220 | 250 | – |
| Total length● | mm | 125 | 140 | 160 | 180 | 220 | 250 | 315 |
| Smallest bore Ø ■ | mm | 14 | 18 | 21 | 27 | 34 | 43 | – |
| Smallest bore Ø● | mm | 16 | 18 | 20 | 22 | 30 | 36 | 44 |

(W266)

## Pointed lathe tool

**Design:** HSS-E, DIN 4955, straight.

HSS-E | DIN 4955

straight

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 |
|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** |
| **2854** | | **22.10** | **23.80** | **32.30** | **40.80** | **59.50** |
| Total length | mm | 100 | 110 | 140 | 160 | 200 |

(W266)

## Wide face square nose lathe tool

**Design:** HSS-E, DIN 4956, straight.

HSS-E | DIN 4956

straight

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 |
|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** |
| **2860** | | **23.50** | **25.20** | **34.00** | **43.40** | **62.90** |
| Total length | mm | 100 | 110 | 140 | 160 | 200 |

(W266)

## Offset face lathe tool

**Design:** HSS-E, DIN 4965.

HSS-E | DIN 4965

**2870** Right.

**2872** Left.

**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 |
|---|---|---|---|---|---|
| **Shank-■** | **mm** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** |
| **2870** | | **23.00** | **28.90** | **36.10** | **50.20** |
| **2872** | | **23.00** | **28.90** | **36.10** | **50.20** |
| Total length | mm | 110 | 140 | 160 | 200 |

(W266)

## Offset cranked knife lathe tool

**Design:** HSS-E, DIN 4960.

HSS-E | DIN 4960

**2890** Right.

**2892** Left.

**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 |
|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** |
| **2890** | | **22.10** | **24.10** | **30.80** | **38.10** | **48.10** |
| **2892** | | **22.10** | **24.10** | **30.80** | **38.10** | **48.10** |
| Total length | mm | 100 | 110 | 140 | 160 | 200 |

(W266)

## Parting tool

**Design:** HSS-E, DIN 4961.

HSS-E | DIN 4961

**2902** Right.

**2904** Left.

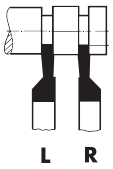


**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 |
|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **12 x 8** | **16 x 10** | **20 x 12** | **25 x 16** | **32 x 20** |
| **2902** | | **25.80** | **29.80** | **32.60** | **48.80** | **72.30** |
| **2904** | | **25.80** | **29.80** | **32.60** | **48.80** | **72.30** |
| Total length | mm | 100 | 125 | 140 | 180 | 220 |
| Parting width | mm | 2.5 | 3 | 4 | 5 | 6 |

(W266)

## Internal Grooving Tool

**Design:** HSS-E, DIN 4963, right.

HSS-E | DIN 4963

**2910** Shank-■

**2912** Shank-●

**2910**

**2912**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 | 0013 |
|---|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **–** | **–** |
| Shank-● | **mm** | **6** | **8** | **10** | **12** | **16** | **20** | **25** |
| **2910** | | **34.00** | **40.80** | **44.20** | **57.80** | **65.50** | **–** | **–** |
| **2912** | | **25.00** | **28.40** | **31.10** | **36.70** | **39.80** | **54.30** | **62.90** |
| Total length ■ | mm | 160 | 180 | 210 | 250 | 300 | – | – |
| Total length● | mm | 125 | 140 | 160 | 180 | 220 | 250 | 315 |
| Smallest bore ∅■ | mm | 20 | 22 | 25 | 32 | 40 | – | – |
| Smallest bore ∅● | mm | 13 | 16 | 20 | 25 | 32 | 40 | 50 |
| Parting width■ | mm | 3 | 3 | 3 | 4 | 5 | – | – |
| Parting width● | mm | 2 | 2 | 3 | 3 | 4 | 5 | 6 |

(W266)

## Brazed Carbide Tipped Lathe Tools

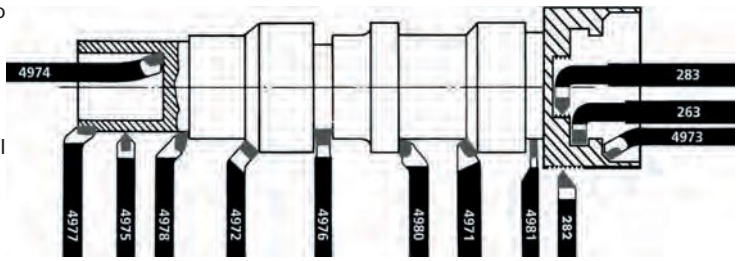
**Design:** DIN 4971-DIN 4981 or according to factory standards DIN 263/282 and 283. All steel shanks with approx. 750 N/mm² strength and flat-milled contact surface.
All lathe tools have a sharp-ground carbide cutting plate soldered o
Tolerance overall length: max. ± 5 %.
Material/cutting plates:
Carbide-type ISO-range P25/P30.

**Application:** For general turning work.

**P25/P30** is suitable for steel, cast steel, long-chipping iron material and malleable iron.

**All lathe tools are also available in the carbide types P10, P20, P40, M10/20, K10/20 on request.**

**Shape overview**




## Straight Lathe Tool ISO 1

**Design:** Carbide, P25/30, DIN 4971/ISO 1.

**2814** Right.

**2816** Left.

Carbide | DIN 4971

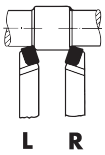


**Fig.: Right-hand version**

| Order No. | | 0003 | 0005 | 0007 | 0009 | 0011 | 0013 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2814** | | **4.32** | **5.05** | **5.85** | **7.50** | **12.15** | **18.20** |
| **2816** | | **4.32** | **5.05** | **5.85** | **7.50** | **12.15** | **18.20** |
| Total length | mm | 90 | 100 | 110 | 125 | 140 | 170 |

(W266)

## Cranked lathe Tool ISO 2

**Design:** Carbide, P25/30, DIN 4972/ISO 2.

**2822** Right.

**2824** Left.

Carbide | DIN 4972

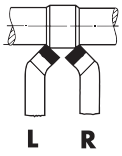


**Fig.: Right-hand version**

| Order No. | | 0003 | 0005 | 0007 | 0009 | 0011 | 0013 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2822** | | **4.56** | **5.30** | **6.10** | **7.75** | **12.20** | **18.30** |
| **2824** | | **4.56** | **5.30** | **6.10** | **7.75** | **12.20** | **18.30** |
| Total length | mm | 90 | 100 | 110 | 125 | 140 | 170 |

(W266)

## Boring Bar ISO 8

**Design**: Carbide, P25/P30, DIN 4973/ISO 8, right.

Carbide | DIN 4973

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 | 0013 |
|---|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **8 x 8** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2836** | | **4.48** | **4.96** | **6.15** | **7.50** | **9.10** | **14.05** | **21.10** |
| Total length | mm | 125 | 150 | 180 | 210 | 250 | 300 | 355 |
| Smallest bore Ø | mm | 14 | 18 | 21 | 27 | 34 | 43 | 52 |

(W266)

## Boring Bar ISO 9

**Design**: Carbide, P25/P30, DIN 4974/ISO 9, right.

Carbide | DIN 4974

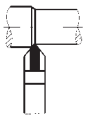
| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 | 0013 |
|---|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **8 x 8** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2844** | | **4.48** | **4.72** | **6.15** | **7.50** | **9.10** | **14.05** | **21.10** |
| Total length | mm | 125 | 150 | 180 | 210 | 250 | 300 | 355 |
| Smallest bore Ø | mm | 14 | 18 | 21 | 27 | 34 | 43 | 52 |

(W266)

## Pointed Lathe Tool ISO 10

**Design:** Carbide, P25/P30, DIN 4975/ISO 10, straight.

Carbide | DIN 4975



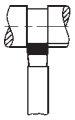
| Order No. | | 0001 | 0003 | 0005 | 0007 |
|---|---|---|---|---|---|
| **Shank-■** | **mm** | **16 x 10** | **20 x 12** | **25 x 16** | **32 x 20** |
| **2852** | | **5.20** | **5.70** | **7.70** | **10.05** |
| Total length | mm | 110 | 125 | 140 | 170 |

(W266)

## Wide Face Lathe Tool ISO 4

**Design:** Carbide, P25/P30, DIN 4976/ISO 4, straight.

Carbide | DIN 4976



| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2858** | | **4.80** | **6.25** | **7.45** | **10.05** | **17.50** | **30.00** |
| Total length | mm | 90 | 100 | 110 | 125 | 140 | 170 |

(W266)

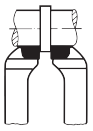
## Offset Lathe Tool ISO 5

**Design:** Carbide, P25/30, DIN 4977/ISO 5.

**2866** Right.

**2868** Left.

Carbide | DIN 4977



L R

**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 |
|---|---|---|---|---|---|
| **Shank-■** | **mm** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2866** | | **6.25** | **8.00** | **12.30** | **18.80** |
| **2868** | | **6.25** | **8.00** | **12.30** | **18.80** |
| Total length | mm | 110 | 125 | 140 | 170 |

(W266)

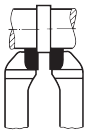
## Offset Corner Lathe Tool ISO 3

**Design:** Carbide, P25/30, DIN 4978/ISO 3.

**2878** Right.

**2880** Left.

Carbide | DIN 4978



L R

**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 |
|---|---|---|---|---|---|
| **Shank-■** | **mm** | **16 x 10** | **20 x 12** | **25 x 16** | **32 x 20** |
| **2878** | | **5.50** | **6.25** | **7.70** | **10.55** |
| **2880** | | **5.50** | **6.25** | **7.70** | **10.55** |
| Total length | mm | 110 | 125 | 140 | 170 |

(W266)

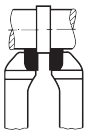
## Offset Cranked Knife Lathe Tool ISO 6

**Design:** Carbide, P25/30, DIN 4980/ISO 6.

**2886** Right.

**2888** Left.

Carbide | DIN 4980



L R

**Fig.: Right-hand version**

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2886** | | **4.40** | **5.05** | **6.15** | **7.70** | **11.65** | **17.75** |
| **2888** | | **4.40** | **5.05** | **6.15** | **7.70** | **11.65** | **17.75** |
| Total length | mm | 90 | 100 | 110 | 125 | 140 | 170 |

(W266)

## Parting Tool ISO 7

**Design:** Carbide, P25/30, DIN 4981/ISO 7.

**2898** Right.

**2900** Left.

Carbide | DIN 4981

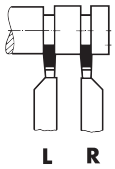


Fig.: Right-hand version

| Order No. | | 0001 | 0001 | 0003 | 0005 | 0007 | 0009 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **12 x 8** | **12 x 8** | **16 x 10** | **20 x 12** | **25 x 16** | **32 x 20** |
| **2898** | | **4.56** | – | **4.96** | **6.00** | **8.55** | **11.90** |
| **2900** | | – | **4.56** | **4.96** | **6.00** | **8.55** | **11.90** |
| Total length | mm | 100 | 100 | 110 | 125 | 140 | 170 |
| Parting width | mm | 3 | 3 | 4 | 5 | 6 | 8 |

(W266)

## Internal Grooving Tool

**Design:** Carbide P25/P30, according to factory standard, right.

Carbide | Factory standard

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2908** | | **11.80** | **13.00** | **15.35** | **17.10** | **21.70** | **30.40** |
| Total length | mm | 140 | 160 | 180 | 210 | 250 | 300 |
| Smallest bore ∅ | mm | 20 | 22 | 25 | 32 | 40 | – |
| Parting width | mm | 3 | 4 | 5 | 6 | 8 | 10 |

(W266)

## Lathe tool with internal thread

**Design:** Carbide P25/P30, according to factory standard, right, 60°.

Carbide | Factory standard

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2914** | | **11.90** | **13.00** | **15.35** | **17.10** | **21.70** | **27.80** |
| Total length | mm | 140 | 160 | 180 | 210 | 250 | 300 |
| Smallest bore ∅ | mm | 24 | 30 | 36 | 45 | 55 | 70 |

(W266)

## Lathe tool with external thread

**Design:** Carbide P25/P30, according to factory standard, right, 60°.

Carbide | Factory standard

| Order No. | | 0001 | 0003 | 0005 | 0007 | 0009 | 0011 |
|---|---|---|---|---|---|---|---|
| **Shank-■** | **mm** | **10 x 10** | **12 x 12** | **16 x 16** | **20 x 20** | **25 x 25** | **32 x 32** |
| **2916** | | **8.90** | **9.60** | **11.65** | **13.25** | **16.05** | **20.10** |
| Total length | mm | 100 | 110 | 125 | 140 | 160 | 180 |

(W266)

## Lathe Tool Holder for Round Shanks

**Design:** The holder is slotted in opposite directions so that round shanks are clamped firmly and safely even when only a little pressure is exerted.

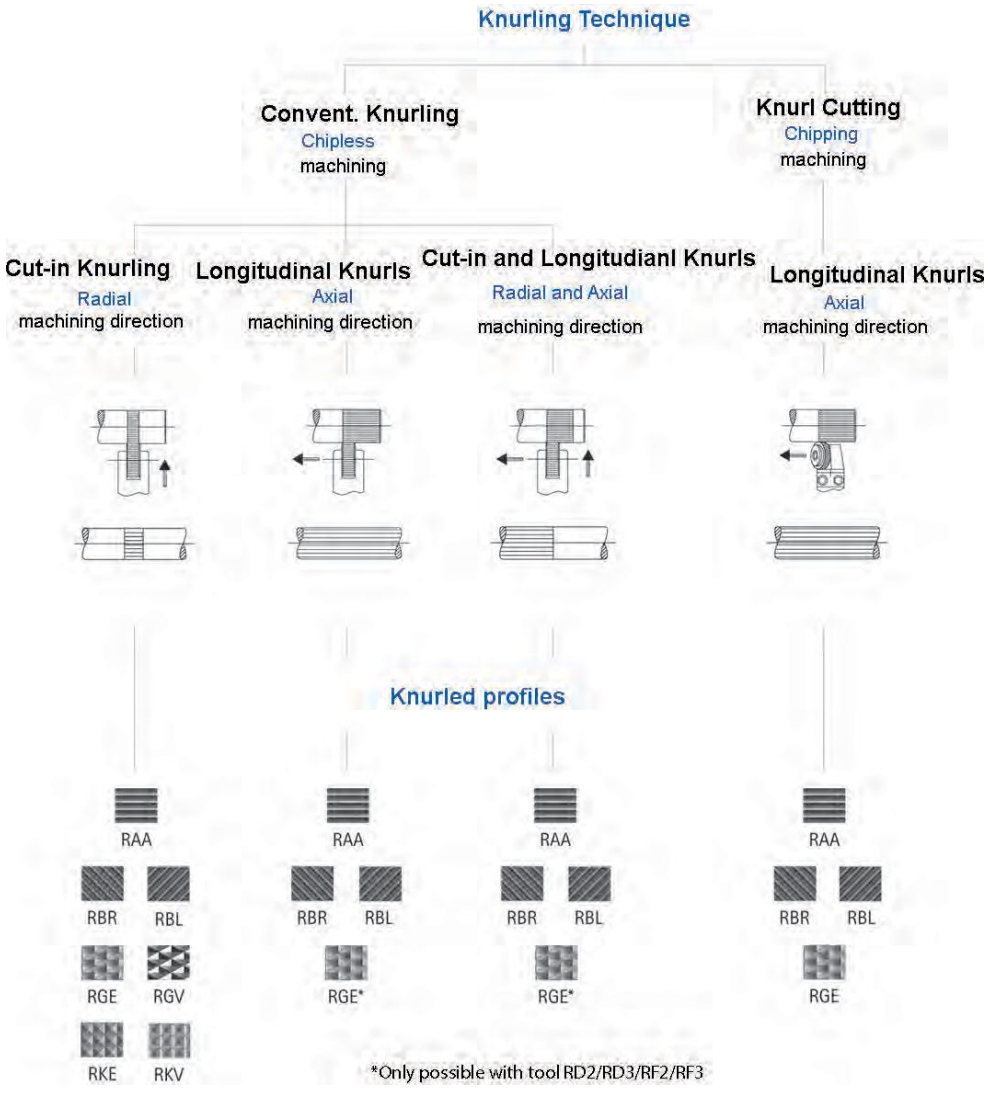
**Application:** For holding lathe tools with round shank and round tool bits. Bore depths can be precisely altered using the steel holder.

| Order No. | For shank ∅ mm | 2920 | Height/width x length mm |
|---|---|---|---|
| 0006 | 6 | 32.50 | 10 x 70 |
| 0008 | 8 | 34.80 | 12 x 80 |
| 0010 | 10 | 38.30 | 14 x 85 |
| 0012 | 12 | 42.80 | 16 x 90 |
| 0016 | 16 | 50.60 | 20 x 100 |
| 0020 | 20 | 62.80 | 25 x 110 |

(W268)

## Features of the knurling process

| | Knurling tools | Knurling cutters |
|---|---|---|
| Application | • Processing cold-formable materials<br>• Knurling on thin-walled workpieces is problematic<br>• Wider application scope<br>  • All knurled forms and profiles can be produced<br>  • Suitable for face and inner knurling<br>  • Knurling up to the collar possible<br>  • Tool can be applied to any part of the workpiece | • Processing of almost all materials possible<br>• Thin-walled workpieces can be processed<br>• Suitable for visible knurls – highest knurl quality<br>• Restricted application areas<br>  • Only RAA and RGE knurl profiles are achievable<br>  • Cylindrical workpieces can only be processed in the axial direction of machining<br>• To prepare the tool in the central area of the workpiece a punch is required |
| Characteristics | • The outer diameter of the workpiece is increased by material displacement<br>• The surface is compressed<br>• Higher machine load than with knurling | • No signficiant change in the outer diameter of the workpiece<br>• Low surface compression<br>• Higher precision and surface quality of the knurl<br>• Lower machine load |
| Handling | • Workpiece preparation generally unnecessary<br>• Tool very easy to handle | • Precise tool setting and fine adjustment required<br>• Precise preparation of the workpiece required |



## Pressure Knurling Tool (Tool Only)

**Design:** Holder made of tempered steel. Supplied without knurling wheel.

**Application:** For form knurling (non-cutting forming).
Plunge knurling can be used to produce all knurling patterns/profiles and markings.
Feed knurling can be used to produce the profiles RAA, RBL and RBR.

**Knurling wheels:** All knurling forms can be used.
**Machine type:** Lathes/automatic lathes – conventional – centre height must be set.

| Order No. | Model | 2935 | Working area Ø mm | Shank mm | Shank length mm | Head width mm | Knurl required mm |
|---|---|---|---|---|---|---|---|
| 0100 | 830-16 U 250 806 | 21.60 (W270) | 15–200 | 16 x 16 | 130.5 | 18 | 20 x 8 x 6 |

## Pressure Knurling Tool (Tool Only)

**Design:** Holder made of tempered steel. Supplied without knurling wheel.

**Application:** For form knurling (non-cutting forming).
Can be used for plunge and feed knurling. The tool can also be used for knurling on the workpiece according to DIN 82: RAA, RBL, RBR, RGE 30°, RGE 45°.

**Knurling wheels:** RAA – 2 x AA
RGE 30° – 1 piece BL 30°/1 piece BR 30°
RGE 45° – 1 piece BL 45°/1 piece BR 45°
**Machine type:** Lathes/automatic lathes – conventional – centre height must be set.

| Order No. | Model | 2936 | Working area Ø mm | Shank mm | Shank length mm | Head height mm | Head length mm | Knurl required mm |
|---|---|---|---|---|---|---|---|---|
| 0105 | 841-20 M 200 806 | 87.80 (W270) | 10–80 | 20 x 20 | 130 | 42 | 50 | 20 x 8 x 6 |

## Pressure Knurling Tool (Tool Only)

CNC

**Design:** Body made of tempered steel. The special surface hardening ensures increased resistance to wear. The carbide runner pins ensure greater torque, faster processing and improved tool life. In addition there are set screws integrated in the shank for clearance angle adjustment. Supplied without knurling wheel.

**Application:** For form knurling (non-cutting forming).
Plunge knurling can be used to produce all knurling patterns/profiles and markings.
Feed knurling can be used to produce the profiles RAA, RBL and RBR.

**Note:** With **ClickPin**® for a quick exchange of the thumb wheel via spring pressure piece.

**Knurling wheels:** All knurling forms can be used.
**Machine type:** Lathes/automatic lathes – CNC and conventional – upper shank edge = centre height.

| Order No. | Model | 2938 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0205 | 131-12 R 150404-VS-A* | 108.50 | 3– 50 | 8 x 8 | 99.0 | 15 x 4 x 4 |
| 0215 | 131-20 U 250806-A-Z | 145.00 (W270) | 8–200 | 20 x 20 | 109.5 | 20 x 8 x 6 |

* With adapter 12 x 12.

## Pressure Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. The special surface hardening ensures increased resistance to wear. The carbide runner pins ensure greater torque, faster processing and improved tool life. The tool can also be used as both a right and left version. Change-over occurs through simple turn of the knurled head. In addition there are set screws integrated in the shank for clearance angle adjustment. Supplied without knurling wheel.

**Application:** For form knurling (non-cutting forming).
Can be used for plunge and feed knurling. The tool can also be used for all knurling on the workpiece according to DIN 82: RAA, RBL, RBR, RGE 30°, RGE 45°.

**Note:** With **ClickPin**® for a quick exchange of the thumb wheel via spring pressure piece.

**Knurling wheels:** RAA – 2 x AA
RBL – 2 pc. RBR
RBR – 2 pc. RBL
RGE 30° – 1 piece BL 30°/1 piece BR 30°
RGE 45° – 1 piece BL 45°/1 piece BR 45°
**Machine type:** Lathes/automatic lathes – CNC and conventional – upper shank edge = centre height.

| Order No. | Model | 2940 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0205 | 141-20 M 200806-B | 222.00 (W270) | 10–110 | 20 x 20 | 130 | 20 x 8 x 6 |

## Pressure Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. Supplied without knurling wheel.

**Application:** For form knurling (non-cutting forming).
Can be used for plunge and feed knurling. The tool can also be used for all knurling on the workpiece according to DIN 82: RAA, RBL, RBR. RGE 30°, RGE 45°.

**Knurling wheels:**
RAA – 2 x AA
RBL – 2 pc. RBR
RBR – 2 pc. RBL
RGE 30° – 1 piece BL 30°/1 piece BR 30°
RGE 45° – 1 piece BL 45°/1 piece BR 45°

**Machine type:** Lathes/automatic lathes – CNC and conventional – upper shank edge = centre height.

| Order No. | Model | 2941 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0100 | 851-12 R 150404 | 150.00 (W270) | 6–20 | 12 x 12 | 101 | 15 x 4 x 4 |

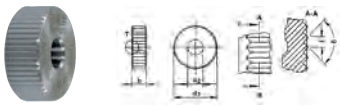
## Knurling Wheels - Form - AA/BL/BR/GE/GV

PM | DIN 403

**Design:** Powder metal, DIN 403 and with chamfer Face and bore are ground, teeth milled.

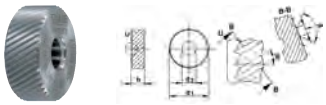
**Application: For form knurling (non-cutting forming).**

**2945** **Form AA** axially parallel (straight).



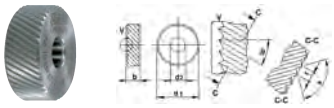
AA thumb wheel with axially parallel nutes

**2946** **Form BL** spiral left (30°).



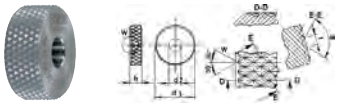
BL 30° Left thumb wheel

**2947** **Form BR** spiral right (30°).



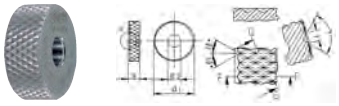
BR 30° right thumb wheel

**2948** **Form GE** points raised (30°).



GE 30° points raised

**2949** **Form GV** points deepened (30°).



GV 30° points down

| Order No. | Knurl $d_1$ x width b x bore $d_2$ mm | 2945 AA | 2946 BL 30° | 2947 BR 30° | 2948 GE 30° | 2949 GV 30° | Graduation mm |
|---|---|---|---|---|---|---|---|
| 0100 | 15 x 4 x 4 | 25.20 | 25.20 | 25.20 | 37.80 | – | 0.6 |
| 0103 | 15 x 4 x 4 | 25.20 | 25.20 | 25.20 | 37.80 | 32.40 | 0.8 |
| 0106 | 15 x 4 x 4 | 25.20 | 25.20 | 25.20 | 37.80 | 32.40 | 1.0 |
| 0109 | 15 x 4 x 4 | 25.20 | 25.20 | 25.20 | 37.80 | – | 1.2 |
| 0200 | 20 x 8 x 6 | 27.90 | 27.90 | 27.90 | 43.80 | – | 0.6 |
| 0203 | 20 x 8 x 6 | 27.90 | 27.90 | 27.90 | 43.80 | 44.20 | 0.8 |
| 0206 | 20 x 8 x 6 | 27.90 | 27.90 | 27.90 | 43.80 | 44.20 | 1.0 |
| 0209 | 20 x 8 x 6 | 27.90 | 27.90 | 27.90 | 43.80 | – | 1.2 |
| 0212 | 20 x 8 x 6 | 27.90 (W270) | 27.90 (W270) | 27.90 (W270) | 43.80 (W270) | – (W270) | 1.5 |

## Cut Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. The special surface hardening ensures increased resistance to wear Thanks to the carbide bushings higher speeds, faster machining and an improved tool life are achieved. The tool furthermore possesses a modular design which allows the tool to be applied **universally as a left and right version.** Conversion is simply by turning the knurling head. The clearance angle is set using the set screws on the shank, fine adjustment for straight knurling using the adjustable knurling head. The change-over time is significantly reduced with the precise positioning of the knurled cutting head via an adjustment scale, the easy preset and reproducible setting parameters. Supplied without knurled cutter

**Application:** For cut knurling (chip removal).
Can be used for feed knurling. The tool can be used for knurling on the workpiece according to DIN 82: RAA, RBL, RBR.

**Knurling wheels:** RAA – 1 piece BL 30° (for use on the left)/1 piece BR 30° (for use on the right)
RBR 30° – 1 x AA (for right application)
RBL 30° – 1 x AA (for left application)

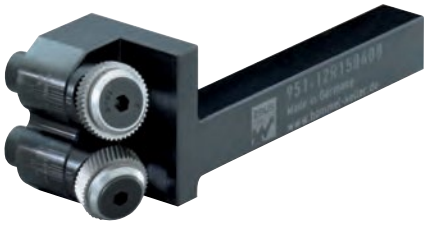
**Machine type:** automatic lathes – CNC and conventional – upper shank edge = centre height.

| Order No. | Model | 2952 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0130 | 231-10 M 150408-VS-A | 390.50 | 3–50 | 10 x 10 | 103.9 | 15 x 4 x 8 |
| 0135 | 231-12 M 150408-VS-A | 390.50 | 3–50 | 12 x 12 | 103.9 | 15 x 4 x 8 |
| 0140 | 231-16 M 150408-VS-A | 390.50 (W270) | 3–50 | 16 x 16 | 103.9 | 15 x 4 x 8 |

## Cut Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. Supplied without cut knurling wheel.



**Application:** For cut knurling (chip removal).
Can be used for feed knurling. The tool can also be used for knurling on the workpiece according to DIN 82: RGE 30° and RGE 45°.

**Knurling wheels:** RGE 30°: 2 x AA
RGE 45°: 1 x BL 15°/1x BR 15°

**Machine type:** Lathes/automatic lathes and small lathes– CNC and conventional – centre height is integrated in the tool holder.

| Order No. | Model | 2952 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0151 | 951-12 R 100306 | 350.00 (W270) | 2–15 | 12 x 12 | 98.5 | 10 x 3 x 6 |

## Cut Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. Thanks to the carbide bushings higher speeds, faster machining and an improved tool life are achieved. The tool also possesses a modular design which allows the tool to be applied **universally as a left and right version.** Conversion is simply by turning the knurling head. The change-over time is significantly reduced with easy preset and reproducible setting parameters. The tool also has a fine adjustment feature to position the knurled cutting head for an even knurling depth, a setting spindle and a setting scale. Synchronous setting of the knurl holding unit to the workpiece diameter is done using the central setting screw. Supplied without knurled cutter Modular construction: adaptation of shank sizes via adapter angle.

**Application:** For cut knurling (chip removal).
Can be used for feed knurling. The tool can be used for knurling on the workpiece according to DIN 82: RGE 30°, RGE 45°.

Knurling wheels: RGE 30° – 2 x AA
RGE 45° – 1 piece BL 15°/1 piece BR 15°

**Machine type:** Lathes and automatic lathes – CNC and conventional – centre height is integrated in the tool holder.

| Order No. | Model | 2952 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0155 | 241-12 M 150408-VS-A | 645.50 (W270) | 3–50 | 12 x 12 | 116 | 15 x 4 x 8 |

## Cut Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. Supplied without cut knurling wheel.

**Application:** For cut knurling (chip removal).
Can be used for feed knurling. The tool can be used for knurling on the workpiece according to DIN 82: RAA, RBL, RBR. The clearance angle is set using the set screws in the shank.

**Knurling wheels:** RAA – 1 x BR 30° (right application)
– 1 x BL 30° (left application)
RBL – 1 x AA (left application)
RBR – 1 x AA (right application)

**Machine type:** Lathes and automatic lathes – CNC and conventional – centre height is integrated in the tool holder.

| Order No. | Model | 2952 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0200 | 931-20 R 250608 A1 | 272.50 (W270) | 10–300 | 20 x 25 | 129 | 25 x 6 x 8 |

## Cut Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. The tool also possesses a modular design which allows the tool to be applied **universally as a left and right version.** Conversion is simply by turning the knurling head. Quick setting of the production diameter is ensured with the adjustment scale and setting spindle. In addition, the tool has a radial and axial anti-rotation device for optimum tool guidance on the workpiece and improved surface quality. It is also possible to achieve an optimum starting position with the position raster. Supplied without knurled cutter

**Application:** For cut knurling (chip removal).
Can be used for feed knurling. The tool can be used for knurling on the workpiece according to DIN 82: RAA; RBL; RBR.

**Knurling wheels:** RAA – 1 piece BL 30° (for use on the left)/
1 piece BR 30° (for use on the right)
RBL 30°/RBR 30° – 1 x AA (left/right application)

**Machine type:** Lathes/automatic lathes – CNC and conventional – upper shank edge = centre height.

| Order No. | Model | 2952 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0205 | 231-20 M 250608-B | 421.50 (W270) | 10–300 | 20 x 20 | 130.8 | 25 x 6 x 8 |

## Cut Knurling Tool (Tool Only)

CNC

**Design:** Holder made of tempered steel. The tool also possesses a modular design which allows the tool to be applied **universally as a left and right version.** Conversion is simply by turning the knurling head. Vertical height adjustment makes use on shank sizes 20 and 25 possible. The setting scale and setting spindle guarantee fast setting of the manufacturing diameter. The fine adjustment of the centre height is achieved with the height adjustment of the milling head spindle. Supplied without knurled cutter

**Application:** For cut knurling (chip removal).
Can be used for feed knurling. The tool can be used for knurling on the workpiece according to DIN 82: RGE 30°, RGE 45°.

**Suitable knurled wheels (not included):**
RGE 30° - 2 x AA
RGE 45° – 1 piece BL 15°/1 piece BR 15°

**Machine type:** Lathes/automatic lathes – CNC and conventional

| Order No. | Model | 2955 | Working area Ø mm | Shank mm | Shank length mm | Knurl required mm |
|---|---|---|---|---|---|---|
| 0120 | 241-20/25 M 250608 A1 | 1014.00 (W270) | 10–250 | 20 x 20/25 x 20 | 134 | 25 x 6 x 8 |

## Cut Knurling Wheels Form - BR30/BL30/BR15/BL15/AA

**Design:** Powder metal, DIN 403. Face and bore are ground.

**Application: For cut knurling (chip removal).**

PM | DIN 403

**2960** **Form BR** spiral right (30°).

**2961** **Form BL** spiral left (30°).

**2965** **Form BR** spiral right (15°).

**2967** **Form BL** spiral left (15°).

**2964** **Form AA** axially parallel (straight).

| Order No. | Knurl Ø x width x bore mm | 2960 BR 30° | 2961 BL 30° | 2965 BR 15° | 2967 BL 15° | 2964 AA | Graduation mm |
|---|---|---|---|---|---|---|---|
| 0089 | 10.0 x 3 x 6 | – | – | 22.40 | 22.40 | 22.40 | 0.6 |
| 0092 | 10.0 x 3 x 6 | – | – | 22.40 | 22.40 | 22.40 | 0.8 |
| 0095 | 10.0 x 3 x 6 | – | – | 22.40 | 22.40 | 22.40 | 1.0 |
| 0098 | 10.0 x 3 x 6 | – | – | 22.40 | 22.40 | 22.40 | 1.2 |
| 0101 | 14.5 x 3 x 5 | 24.10 | 24.10 | 24.10 | 24.10 | 24.10 | 0.6 |
| 0104 | 14.5 x 3 x 5 | 24.10 | 24.10 | – | – | 24.10 | 0.8 |
| 0107 | 14.5 x 3 x 5 | 24.10 | 24.10 | 24.10 | 24.10 | 24.10 | 1.0 |
| 0110 | 14.5 x 3 x 5 | 24.10 | 24.10 | – | – | 24.10 | 1.2 |
| 0120 | 15.0 x 4 x 8 | 25.20 | 25.20 | 25.20 | 25.20 | 25.20 | 0.6 |
| 0124 | 15.0 x 4 x 8 | 25.20 | 25.20 | – | – | 25.20 | 0.8 |
| 0127 | 15.0 x 4 x 8 | 25.20 | 25.20 | 25.20 | 25.20 | 25.20 | 1.0 |
| 0130 | 15.0 x 4 x 8 | 25.20 | 25.20 | – | – | 25.20 | 1.2 |
| 0131 | 21.5 x 5 x 8 | 27.90 | 27.90 | 27.90 | 27.90 | 27.90 | 0.6 |
| 0134 | 21.5 x 5 x 8 | 27.90 | 27.90 | – | – | 27.90 | 0.8 |
| 0137 | 21.5 x 5 x 8 | 27.90 | 27.90 | 27.90 | 27.90 | 27.90 | 1.0 |
| 0140 | 21.5 x 5 x 8 | 27.90 | 27.90 | 27.90 | 27.90 | 27.90 | 1.2 |
| 0143 | 21.5 x 5 x 8 | 27.90 | 27.90 | – | – | – | 1.5 |
| 0143 | 21.5 x 5 x 8 | – | – | – | – | 27.90 | 1.6 |
| 0151 | 25.0 x 6 x 8 | 34.50 | 34.50 | 34.50 | 34.50 | 34.50 | 0.6 |
| 0154 | 25.0 x 6 x 8 | 34.50 | 34.50 | – | – | 34.50 | 0.8 |
| 0157 | 25.0 x 6 x 8 | 34.50 | 34.50 | 34.50 | 34.50 | 34.50 | 1.0 |
| 0160 | 25.0 x 6 x 8 | 34.50 | 34.50 | 34.50 | 34.50 | 34.50 | 1.2 |
| 0163 | 25.0 x 6 x 8 | 34.50 (W270) | 34.50 (W270) | – (W270) | – (W270) | 34.50 (W270) | 1.5 |

## Pressure Knurling Tool Set

Design: **Supplied in sturdy plastic box.**

| Order No. | Set contents | 2959 | Model |
|---|---|---|---|
| 0082 | 1 Knurling tool (Order No. 2935 0100)<br>1 Knurling tool (Order No. 2936 0105)<br>Knurling wheels 20 x 8 x 6, 2 each form AA, pitch 0.8/1.0 mm<br>Knurling wheels 20 x 8 x 6, 1 each form BL 30°, pitch 0.8/1.0/1.2 mm<br>Knurling wheels 20 x 8 x 6, 1 each form BR 30°, pitch 0.8/1.0/1.2 mm<br>3 replacement pins<br>1 knurling manual | 283.50 (W270) | 800–20 |

Spare parts and accessories are available on request.

## Keyway push-type broach

**Design:** HSS, with relief angle. Guide bushings marked I, II and III have a contact collar, shims are included in the price.

**Application:** For the production of machine elements, templates, welding, drilling and clamping devices; the cutting angle is set for steel, but can also be applied for cast iron, bronze and aluminium.

For the quick and rational establishment of accurate, precisely centric keyways according to DIN 6885 for fit JS9. The required chip removal is achieved by several passes. Tooth shape and relief angle guarantee a clean surface finish. Can be used on manual and hydraulic presses.

**The shims are included in the scope of supply of the broaches.**

Hassay Savage

HSS

## Keyway push-type broach I

**Design:** HSS, 2–3 mm.

| Order No. | Keyway width mm | 2973 Hassay Savage | Tolerance JS9 mm | For key size mm | Back width x length mm | Passes | Shims Piece | Length of cut mm | Force required kN |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 2 I | 111.00 | + 0 + 0.011 | 2 x 2 | 3.18 x 133 | 1 | 0 | 6–30 | 2.3 |
| 0010 | 3 I | 111.00 (W274) | + 0 + 0.012 | 3 x 3 | 3.18 x 133 | 2 | 1 | 6–30 | 3.3 |

### Guide bushing

**Design:** HSS, with collar. For broach 2–3 mm.

| Order No. | Ø H 7 mm | 2974 Hassay Savage | Length mm |
|---|---|---|---|
| 0005 | 6 I | 23.50 | 32 |
| 0010 | 7 I | 23.50 | 32 |
| 0015 | 8 I | 23.50 (W274) | 32 |

| Order No. | Ø H 7 mm | 2974 Hassay Savage | Length mm |
|---|---|---|---|
| 0020 | 9 I | 23.50 | 32 |
| 0025 | 10 I | 23.50 (W274) | 32 |

### Spare shim

| Order No. | Size | 2975 Hassay Savage | Thickness mm |
|---|---|---|---|
| 0005 | 3 I | 7.15 (W274) | 0.787 |

## Keyway push-type broach II

**Design:** HSS, 4–5 mm.

| Order No. | Keyway width mm | 2976 Hassay Savage | Tolerance JS9 mm | For key size mm | Back width x length mm | Passes | Shims Piece | Length of cut mm | Force required kN |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 4 II | 130.00 | + 0 + 0.015 | 4 x 4 | 6.35 x 178 | 2 | 1 | 8–43 | 5.2 |
| 0010 | 5 II | 130.00 (W274) | + 0 + 0.015 | 5 x 5 | 6.35 x 178 | 2 | 1 | 8–43 | 9.3 |

### Guide bushing

**Design:** HSS, with collar. For broach 4–5 mm.

| Order No. | Ø H 7 mm | 2977 Hassay Savage | Length mm |
|---|---|---|---|
| 0005 | 11 II | 25.50 | 46 |
| 0010 | 12 II | 25.50 | 46 |
| 0015 | 13 II | 25.50 | 46 |
| 0020 | 14 II | 25.50 | 46 |
| 0025 | 15 II | 25.50 (W274) | 46 |

| Order No. | Ø H 7 mm | 2977 Hassay Savage | Length mm |
|---|---|---|---|
| 0030 | 16 II | 25.50 | 46 |
| 0035 | 17 II | 25.50 | 46 |
| 0040 | 18 II | 25.50 | 46 |
| 0045 | 19 II | 25.50 (W274) | 46 |

### Spare shim

| Order No. | Size | 2978 Hassay Savage | Thickness mm |
|---|---|---|---|
| 0005 | 4 II | 7.15 | 0.965 |
| 0010 | 5 II | 7.15 (W274) | 1.270 |

## Keyway push-type broach III

**Design:** HSS, 5–8 mm.

| Order No. | Keyway width mm | 2980 Hassay Savage | Tolerance JS9 mm | For key size mm | Back width x length mm | Passes | Shims Piece | Length of cut mm | Force required kN |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 5 III | 158.50 | ± 0.015 | 5 x 5 | 9.53 x 302 | 2 | 1 | 10–64 | 7.60 |
| 0010 | 6 III | 158.50 | ± 0.015 | 6 x 6 | 9.53 x 302 | 2 | 1 | 10–64 | 8.60 |
| 0015 | 8 III | 158.50 (W274) | ± 0.018 | 8 x 7 | 9.53 x 302 | 2 | 1 | 10–64 | 18.00 |

### Guide bushing

**Design:** HSS, with collar. For broach 5–8 mm.

| Order No. | Ø H 7 mm | 2981 Hassay Savage | Length mm |
|---|---|---|---|
| 0005 | 18 III | 28.00 | 65 |
| 0010 | 20 III | 28.00 | 65 |
| 0015 | 22 III | 28.00 | 65 |
| 0020 | 24 III | 28.00 | 65 |
| 0025 | 25 III | 28.00 | 65 |
| 0030 | 26 III | 28.00 (W274) | 65 |

| Order No. | Ø H 7 mm | 2981 Hassay Savage | Length mm |
|---|---|---|---|
| 0035 | 28 III | 33.40 | 65 |
| 0040 | 30 III | 33.40 | 65 |
| 0045 | 32 III | 33.40 | 65 |
| 0050 | 34 III | 33.40 | 65 |
| 0055 | 36 III | 33.40 (W274) | 65 |

### Spare shim

| Order No. | Size | 2982 Hassay Savage | Thickness mm |
|---|---|---|---|
| 0005 | 5 III | 7.15 | 1.194 |
| 0010 | 6 III | 7.15 | 1.575 |
| 0015 | 8 III | 7.15 (W274) | 1.981 |

## Keyway push-type broach IV

**Design:** HSS, 10–14 mm.

| Order No. | Keyway width mm | 2983 Hassay Savage | Tolerance JS9 mm | For key size mm | Back width x length mm | Passes | Shims Piece | Length of cut mm | Force required kN |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 10 IV | 225.00 | ± 0.018 | 10 x 8 | 14.29 x 352 | 3 | 2 | 20–150 | 36.0 |
| 0010 | 12 IV | 225.00 | ± 0.021 | 12 x 8 | 14.29 x 352 | 3 | 2 | 20–150 | 48.0 |
| 0015 | 14 IV | 225.00 (W274) | ± 0.021 | 14 x 9 | 14.29 x 352 | 3 | 2 | 20–150 | 50.0 |

## Guide bushing

**Design:** HSS. For broach 10–14 mm.

| Order No. | Ø H 7 mm | 2984 Hassay Savage | Length mm |
|---|---|---|---|
| 0005 | 32 IV | 43.80 | 102 |
| 0010 | 34 IV | 43.80 | 102 |
| 0015 | 35 IV | 43.80 | 102 |
| 0020 | 36 IV | 43.80 | 102 |
| 0025 | 38 IV | 43.80 | 102 |
| 0030 | 40 IV | 51.70 | 102 |
| 0035 | 42 IV | 51.70 | 102 |
| 0040 | 44 IV | 51.70 (W274) | 102 |

| Order No. | Ø H 7 mm | 2984 Hassay Savage | Length mm |
|---|---|---|---|
| 0045 | 45 IV | 51.70 | 127 |
| 0050 | 46 IV | 51.70 | 127 |
| 0055 | 48 IV | 51.70 | 127 |
| 0060 | 50 IV | 51.70 | 127 |
| 0065 | 52 IV | 51.70 | 127 |
| 0070 | 54 IV | 51.70 | 127 |
| 0075 | 55 IV | 51.70 | 127 |
| 0080 | 56 IV | 51.70 (W274) | 127 |

## Spare shim

| Order No. | Size | 2985 Hassay Savage | Thickness mm |
|---|---|---|---|
| 0005 | 10 IV | 7.95 | 1.422 |
| 0010 | 12 IV | 7.95 | 1.422 |
| 0015 | 14 IV | 7.95 (W274) | 1.575 |

## Keyway push-type broach V

**Design:** HSS, 16–18 mm.

| Order No. | Keyway width mm | 2986 Hassay Savage | Tolerance JS9 mm | For key size mm | Back width x length mm | Passes | Shims Piece | Length of cut mm | Force required kN |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 16 V | 395.50 | ± 0.021 | 16 x 10 | 19.05 x 387 | 4 | 3 | 20–150 | 52.0 |
| 0010 | 18 V | 395.50 (W274) | ± 0.021 | 18 x 11 | 19.05 x 387 | 4 | 3 | 20–150 | 55.0 |

## Guide bushing

**Design:** HSS. For broach 16–18 mm.

| Order No. | Ø H 7 mm | 2987 Hassay Savage | Length mm |
|---|---|---|---|
| 0005 | 52 V | 118.50 | 127 |
| 0010 | 54 V | 118.50 | 127 |
| 0015 | 55 V | 118.50 | 127 |
| 0020 | 56 V | 118.50 | 127 |
| 0025 | 58 V | 121.00 | 127 |
| 0030 | 60 V | 121.00 | 154 |
| 0035 | 62 V | 121.00 (W274) | 154 |

| Order No. | Ø H 7 mm | 2987 Hassay Savage | Length mm |
|---|---|---|---|
| 0040 | 64 V | 121.00 | 154 |
| 0045 | 65 V | 128.00 | 154 |
| 0050 | 66 V | 128.00 | 154 |
| 0055 | 68 V | 128.00 | 154 |
| 0060 | 70 V | 134.50 | 154 |
| 0065 | 72 V | 134.50 (W274) | 154 |

## Spare shim

| Order No. | Size | 2988 Hassay Savage | Thickness mm |
|---|---|---|---|
| 0005 | 16 V | 7.95 | 1.575 |
| 0010 | 18 V | 7.95 (W274) | 1.575 |

## Keyway push-type broach VI

**Design:** HSS, 20–25 mm.

| Order No. | Keyway width mm | 2989 Hassay Savage | Tolerance JS9 mm | For key size mm | Back width x length mm | Passes | Shims Piece | Length of cut mm | Force required kN |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 20 VI | 686.50 | ± 0.026 | 20 x 12 | 25.4 x 489 | 5 | 4 | 20–150 | 50.0 |
| 0010 | 22 VI | 686.50 | ± 0.026 | 22 x 14 | 25.4 x 489 | 5 | 4 | 20–150 | 51.0 |
| 0015 | 24 VI | 686.50 | ± 0.026 | 24 x 14 | 25.4 x 489 | 5 | 4 | 20–150 | 60.0 |
| 0020 | 25 VI | 686.50 (W274) | ± 0.026 | 25 x 14 | 25.4 x 489 | 5 | 4 | 20–150 | 61.0 |

## Guide bushing

**Design:** HSS. For broach 20–25 mm.

| Order No. | Ø H 7 mm | 2990 Hassay Savage | Length mm |
|---|---|---|---|
| 0005 | 70 VI | 437.50 | 154 |
| 0010 | 75 VI | 445.50 | 154 |
| 0015 | 80 VI | 453.50 | 154 |
| 0020 | 85 VI | 461.50 (W274) | 154 |

| Order No. | Ø H 7 mm | 2990 Hassay Savage | Length mm |
|---|---|---|---|
| 0025 | 90 VI | 474.00 | 154 |
| 0030 | 95 VI | 522.00 | 154 |
| 0035 | 100 VI | 485.50 (W274) | 154 |

## Spare shim

| Order No. | Size | 2991 Hassay Savage | Thickness mm |
|---|---|---|---|
| 0005 | 20 VI | 9.55 | 1.575 |
| 0010 | 22 VI | 9.55 | 1.575 |
| 0015 | 24 VI | 9.55 | 1.575 |
| 0020 | 25 VI | 9.55 (W274) | 1.575 |

## Keyway broach set

**2970** **Design:** Supplied in a durable case made of sturdy plastic.

**2971** **Design:** Supplied in a wooden case.

HSS

Hassay Savage

2970

2971

| Order No. | Design | 2970 Hassay Savage | Set contents |
|---|---|---|---|
| 0005 | 7-part | 304.00 | **2 broaches** 2I; 3I **5 guide bushes** Ø 6; 7; 8; 9; 10 mm |
| 0010 | 13-part | 797.00 | **4 broaches** 4II; 5II; 6III; 8III **9 guide bushes** Ø 12; 14; 15; 16; 18; 20; 22; 24; 25 mm |
| 0015 | 19-part | 1230.00 | **6 broaches** 2I; 3I; 4II; 5II; 6III; 8III **13 guide bushes** Ø 8; 10; 12; 14; 15; 16; 18; 20; 22; 24; 25; 28; 30 mm |
| | | (W274) | |

| Order No. | Design | 2971 Hassay Savage | Set contents |
|---|---|---|---|
| 0020 | 13-part | 830.00 | **4 broaches** 4II; 5II; 6III; 8III **9 guide bushes** Ø 12; 14; 15; 16; 18; 20; 22; 24; 25 mm |
| 0025 | 19-part | 1228.00 | **6 broaches** 2I; 3I; 4II; 5II; 6III; 8III **13 guide bushes** Ø 8; 10; 12; 14; 15; 16; 18; 20; 22; 24; 25; 28; 30 mm |
| 0030 | 10-part | 1148.00 | **3 broaches** 10IV; 12IV; 14IV **7 guide bushes** Ø 32; 35; 38; 40; 42; 45; 50 mm |
| | | (W274) | |

## Square broach

**Design:** HSS, with pilot pin. This is set into the pre-bored hole in the workpiece and guarantees the perpendicular alignment of the internal square profile. The pre-bored hole (tolerance H8) is selected somewhat larger to make sure only one pass is necessary with short overall length. The cutting edges are finely ground on all sides and ensure a clean surface finish.

**Application:** For manufacturing internal square profiles with high angle precision. No special machines or set-up times necessary. For manufacturing machine elements, templates, welding, drilling and clamping devices. The rake angle has been designed for steel but can also be used for cast iron, bronze and aluminium.

HSS

Hassay Savage

| Order No. | A/F mm | 2992 | Tolerance JS9 mm | Dimension across corners mm | Drill size Ø mm | Total length mm | Length of cut min. mm | Length of cut max. mm | Force required max. kN |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 4 | 318.50 ◊ | 4.01– 4.02 | 5.28– 5.31 | 4.20 | 141 | 8.0 | 16.0 | 3.4 |
| 0010 | 5 | 365.50 ◊ | 5.01– 5.03 | 6.72– 6.74 | 5.20 | 174 | 9.5 | 19.0 | 5.0 |
| 0015 | 6 | 381.50 ◊ | 6.01– 6.04 | 8.37– 8.38 | 6.40 | 178 | 9.5 | 19.0 | 6.6 |
| 0020 | 8 | 398.00 ◊ | 8.01– 8.04 | 11.19–11.20 | 8.30 | 208 | 11.0 | 22.0 | 12.0 |
| 0025 | 10 | 466.00 ◊ | 10.01–10.04 | 13.80–13.83 | 10.30 | 276 | 13.0 | 22.5 | 20.0 |
| 0030 | 12 | 674.00 ◊ | 12.01–12.04 | 16.61–16.64 | 12.50 | 317 | 16.0 | 32.0 | 22.0 |
| 0035 | 14 | 799.00 ◊ | 14.01–14.04 | 19.56–19.58 | 15.00 | 378 | 19.0 | 38.0 | 24.0 |
| 0040 | 16 | 920.50 ◊ | 16.02–16.05 | 22.30–22.32 | 17.00 | 427 | 22.0 | 44.0 | 28.0 |
| 0045 | 18 | 1197.00 ◊ | 18.01–18.04 | 25.09–25.12 | 20.00 | 470 | 22.0 | 44.0 | 29.0 |
| 0050 | 20 | 1533.00 ◊ | 20.01–20.04 | 27.91–27.94 | 22.00 | 479 | 22.0 | 44.0 | 30.0 |
| 0055 | 22 | 1599.00 ◊ | 22.01–22.04 | 30.76–30.78 | 24.00 | 590 | 22.0 | 44.0 | 42.0 |
| 0060 | 24 | 1822.00 ◊ | 24.01–24.04 | 33.45–33.47 | 26.00 | 625 | 22.0 | 44.0 | 45.0 |
| 0065 | 25 | 1822.00 ◊ | 25.01–25.04 | 34.87–34.89 | 27.00 | 624 | 22.0 | 44.0 | 50.0 |
| | | (W274) | | | | | | | |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

# Carrier systems for indexable inserts

## For rotating, milling, piercing, drilling and thread cutting

Our range has been consistently developed and extended to include new products.

Numerous milling cutters and ISO-clamp holders feature a HARD NICKEL LAYER to improve their features and for the greatest possible lifespan.

All carrier tools are manufactured from quenched and tempered steel.
The insert seats are not manufactured until after tempering, to guarantee maximum precision for professional use.
Thus, we can provide stable carrier tools for the best productivity.

## End mills and face milling cutters 45°

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0200 – 2999 0210 | Ø 20–32 mm | SEMT 09T3 | 2/163 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0225 – 2999 0240 | Ø 50–100 mm | SEMT 09T3 | 2/163 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 2050 – 2999 2090 | Ø 40–250 mm | SEET/SEKT 1204... | 2/164 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0300 – 2999 0325 | Ø 50–160 mm | SEKR/N 1203... | 2/165 | ● |

## End mills, angular milling cutters and screw-in milling cutters 90°

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0430 – 2999 0465 | Ø 10–32 mm | APKT/APMT 10... | 2/167 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0665 – 2999 0680 | Ø 16–32 mm | APKT/APMT 10... | 2/167 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0330 – 2999 0340 | Ø 20–32 mm | SOMT 09T3... | 2/166 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0500 – 2999 0505 | Ø 25–32 mm | APKT/APET/APMT 16... | 2/169 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0345 – 2999 0355 | Ø 40–63 mm | SOMT 09T3... | 2/166 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0470 – 2999 0480 | Ø 40–63 mm | APKT/APMT 10... | 2/167 | ● |

## End mills, angular milling cutters and screw-in milling cutters 90°

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0520 – 2999 0560 | Ø 40–160 mm | APKT/APET/APMT 16.. | 2/169 | |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0400 – 2999 0420 | Ø 50–125 mm | SDMT 1205 | 2/171 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0630 – 2999 0660 | Ø 16–32 mm | APKT/APMT 10.. | 2/167 | ● |

## Shell end mills 90°

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0490 – 2999 0495 | Ø 25–32 mm | APKT/APMT 10.. | 2/168 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0600 – 2999 0605 | Ø 32–40 mm | APKT/APET/APMT 16.. | 2/169 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0610 – 2999 0620 | Ø 50–80 mm | APKT/APET/APMT 16.. | 2/170 | ● |

## Copy mills

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0800 – 2999 0815 | Ø 15 mm | RDHX/RDGT/RDHT...07.. | 2/172 | ● |
| 2999 0825 – 2999 0840 | Ø 20 mm | RDHX/RDGT/RDHT...10.. | 2/172 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0900 – 2999 0910 | Ø 52– 80 mm | RDHX/RDGT/RDHT...12T3.. | 2/172 | ● |
| 2999 0915 – 2999 0930 | Ø 52–100 mm | RDHX/RDGT/RDHT...1604.. | 2/172 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1010 – 2999 1025 | Ø 15–25 mm | RDHX/RDGT/RDHT...07.. | 2/173 | ● |
| 2999 1030 – 2999 1045 | Ø 20–35 mm | RDHX/RDGT/RDHT...10.. | 2/173 | ● |
| 2999 1050 – 2999 1070 | Ø 24–42 mm | RDHX/RDGT/RDHT...12... | 2/173 | ● |
| 2999 1075 | Ø 32 mm | RDHX/RDGT/RDHT...16... | 2/173 | ● |

## Shell-type milling cutters 90°

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1310 – 2999 1320 | Ø 50–80 mm | VCGT 2205 | 2/176 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1325 – 2999 1330 | Ø 32–40 mm | VCGT 2205 | 2/176 | ● |

## Disk mills

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1400 – 2999 1495 | Ø 80–200 mm | SNHQ 11/12... | 2/177 | |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1600 – 2999 1635 | Ø 63–160 mm | SNHQ 11/12... | 2/177 | |

## Centre and chamfer cutters 45°

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1750 | Ø 12 mm | SDET 08 | 2/180 | |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0380 – 2999 0390 | Ø 8–25 mm | SOMT 09T3... | 2/184 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1800 – 2999 1825 | Ø 7–34 mm | TCGT/TCMT 1102../16T3... | 2/182 | |

## Chamfer cutters adjustable

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1840 | Ø 25 mm | TCGT/TCMT 16T3 | 2/181 | |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 0723 – 2999 0735 | Ø 35 mm | XPHT 16... | 2/185 | ● |

## Countersink for cylinder head screws

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1900 – 2999 1910 | Ø 10–15 mm | CCGT/CCMT 0602 | 2/182 | ● |
| 2999 1915 – 2999 1940 | Ø 18–33 mm | CCGT/CCMT 09T3 | 2/182 | ● |

| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 2000 – 2999 2045 | Ø 12–30 mm | CC../TC..0602/1102/16T3... | 2/182 | |

## T-slot cutter with inner cooling

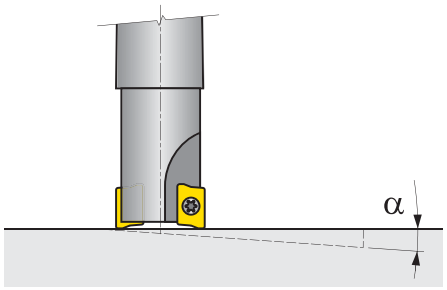
| Order No. | Dimensions | Milling insert | Catalogue page | |
|---|---|---|---|---|
| 2999 1700 – 2999 1710 | Ø 25–40 mm | CCMX 0603/08T3/09T3... | 2/179 | ● |

## Application Areas

The clearance angle between the lower jaw and the cutter body is critical in the use of tools with tilt-immersion.

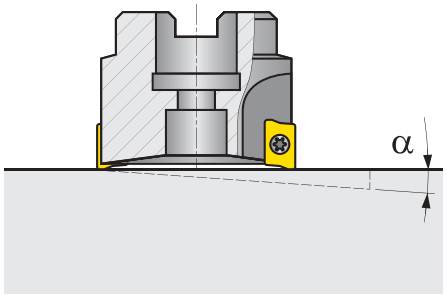
For recommendations of the max. tilt angle and depth of cut please refer to the attached table and names and formulas.

## Ramping Angles – Endmills



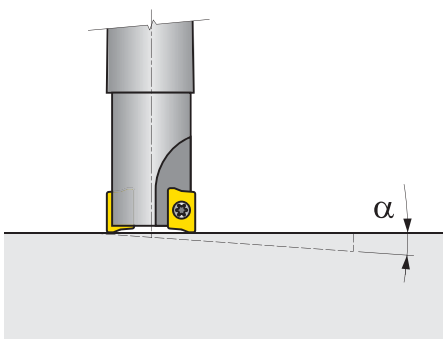
| Application | Tool | Order No. | Milling cutter Ø mm | Milling insert | $\alpha_{max.}$ (°) | Catalogue page |
|---|---|---|---|---|---|---|
| | | 2999 0430 – 2999 0465 | 10–14 | APKT 10... | – | 2/167 |
| | | | 16 | APKT 10... | 5.0 | 2/167 |
| | | | 18 | APKT 10... | – | 2/167 |
| | | | 20 | APKT 10... | 4.5 | 2/167 |
| | | | 25 | APKT 10... | 4.0 | 2/167 |
| | | | 32 | APKT 10... | 0.5 | 2/167 |

## Ramping Angles – Shellmills



| Application | Tool | Order No. | Milling cutter Ø mm | Milling insert | $\alpha_{max.}$ (°) | Catalogue page |
|---|---|---|---|---|---|---|
| | | 2999 0470 – 2999 0480 | 40 | APKT 10... | – | 2/167 |
| | | | 50 | APKT 10... | 1.5 | 2/167 |
| | | | 63 | APKT 10... | 1.0 | 2/167 |
| | | 2999 1310 – 2999 1320 | 50 | VCGT 22... | 19.0 | 2/176 |
| | | | 63 | VCGT 22... | 17.0 | 2/176 |
| | | | 80 | VCGT 22... | 10.0 | 2/176 |
| | | 2999 0900 – 2999 0910 | 52 | RD 12... | 4.0 | 2/172 |
| | | | 66 | RD 12... | 3.0 | 2/172 |
| | | | 80 | RD 12... | 2.2 | 2/172 |
| | | 2999 0915 – 2999 0930 | 52 | RD 16... | 8.0 | 2/172 |
| | | | 66 | RD 16... | 6.0 | 2/172 |
| | | | 80 | RD 16... | 4.0 | 2/172 |

## Ramping Angles – Screw In Cutters

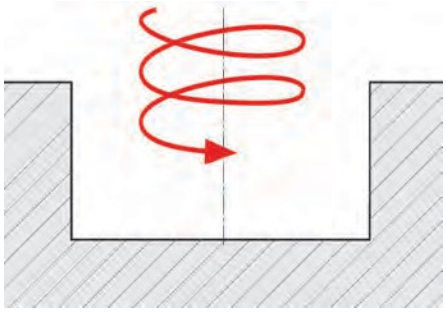


| Application | Tool | Order No. | Milling cutter Ø mm | Milling insert | $\alpha_{max.}$ (°) | Catalogue page |
|---|---|---|---|---|---|---|
| | | 2999 0630 – 2999 0660 | 16–32 | APKT 10... | – | 2/176 |
| | | 2999 1010 – 2999 1025 | 15 | RD 07... | 11.0 | 2/173 |
| | | | 20 | RD 07... | 7.0 | 2/173 |
| | | | 25 | RD 07... | 6.0 | 2/173 |
| | | 2999 1030 – 2999 1045 | 20 | RD 10... | 20.0 | 2/173 |
| | | | 25 | RD 10... | 12.0 | 2/173 |
| | | | 30 | RD 10... | 8.0 | 2/173 |
| | | | 35 | RD 10... | 7.0 | 2/173 |
| | | 2999 1050 – 2999 1075 | 24 | RD 12T... | 25.0 | 2/173 |
| | | | 35 | RD 12T... | 9.0 | 2/173 |
| | | | 42 | RD 12T... | 8.0 | 2/173 |
| | | 2999 1325 – 2999 1330 | 32 | VCGT 22... | 31.0 | 2/176 |
| | | | 40 | VCGT 22... | 21.0 | 2/176 |

## Application Areas

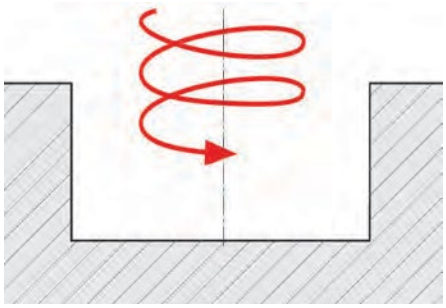
The design of the mill and the clearance angle of the lower jaw is crucial in deciding whether or not a tool can be used for internal bore milling without a pilot hole. For recommendations of the max. and min. bore diameters (for smooth slot bases) and the max. cut depth per revolution please refer to the following table and names and formulas.

## Helical Interpolation Ramping – Endmills

| Application | Tool | Order No. | Cutter Ø mm | Milling insert | $d_{min.}$ mm | $d_{max.}$ mm | $s_{max.}$ mm | Catalogue page |
|---|---|---|---|---|---|---|---|---|
|  | | 2999 0430 – 2999 0465 | 10–14 | APKT 10... | – | – | – | 2/167 |
| | | | 16 | APKT 10... | 24 | 30 | 1.5 | 2/167 |
| | | | 18 | APKT 10... | – | – | – | 2/167 |
| | | | 20 | APKT 10... | 32 | 38 | 1.6 | 2/167 |
| | | | 25 | APKT 10... | 42 | 48 | 1.8 | 2/167 |
| | | | 32 | APKT 10... | 54 | 62 | 2.0 | 2/167 |
| | | 2999 0800 – 2999 0815 | 15 | RD 07... | 17 | 30 | 1.4 | 2/172 |
| | | 2999 0825 – 2999 0840 | 20 | RD 10... | 28 | 40 | 1.4 | 2/172 |

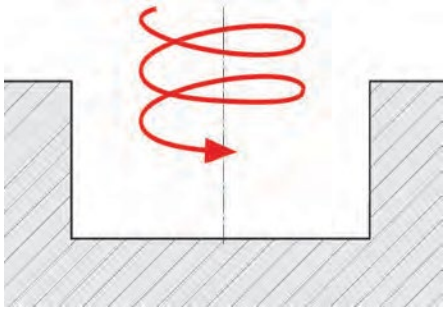
$S_{max.}$ = Depth infeed mm per orbit

## Helical Interpolation Ramping – Shellmills

| Application | Tool | Order No. | Cutter Ø mm | Milling insert | $d_{min.}$ mm | $d_{max.}$ mm | $s_{max.}$ mm | Catalogue page |
|---|---|---|---|---|---|---|---|---|
|  | | 2999 0470 – 2999 0480 | 40 | APKT 10... | – | – | – | 2/167 |
| | | | 50 | APKT 10... | 84 | 98 | 0.5 | 2/167 |
| | | | 63 | APKT 10... | 105 | 124 | 0.5 | 2/167 |
| | | 2999 0900 – 2999 0910 | 52 | RD 12... | 82 | 102 | 2.8 | 2/172 |
| | | | 66 | RD 12... | 110 | 132 | 2.8 | 2/172 |
| | | | 80 | RD 12... | 136 | 160 | 2.8 | 2/172 |
| | | 2999 0915 – 2999 0930 | 52 | RD 16... | 74 | 104 | 4.0 | 2/172 |
| | | | 66 | RD 16... | 102 | 132 | 4.0 | 2/172 |
| | | | 80 | RD 16... | 130 | 160 | 4.0 | 2/172 |

$S_{max.}$ = Depth infeed mm per orbit

## Helical Interpolation Ramping – Screw In Cutters

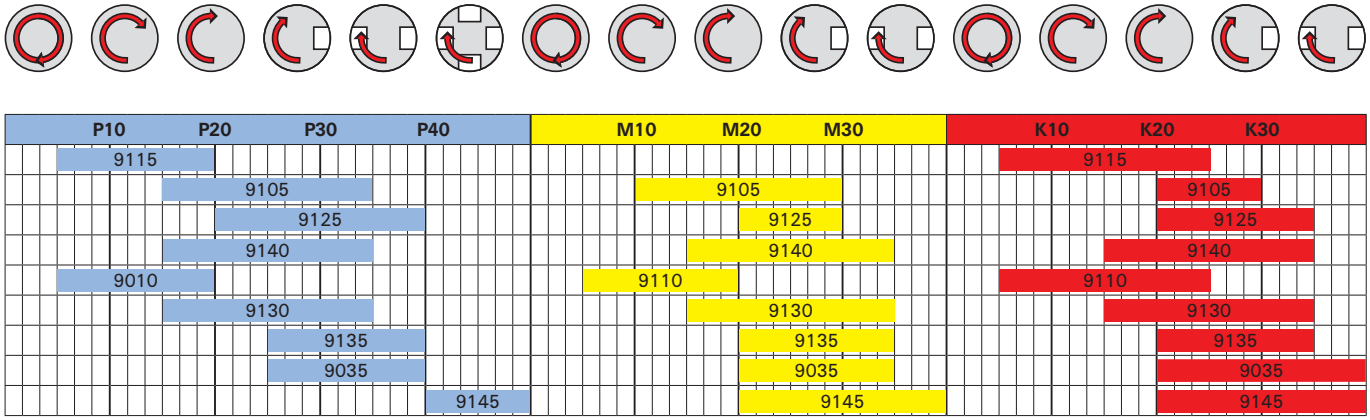
| Application | Tool | Order No. | Cutter Ø mm | Milling insert | $d_{min.}$ mm | $d_{max.}$ mm | $s_{max.}$ mm | Catalogue page |
|---|---|---|---|---|---|---|---|---|
|  | | 2999 0630 – 2999 0660 | 16–32 | APKT 10... | – | – | – | 2/167 |
| | | 2999 1010 – 2999 1025 | 15 | RD 07... | 17 | 30 | 1.4 | 2/173 |
| | | | 20 | RD 07... | 28 | 40 | 1.4 | 2/173 |
| | | | 25 | RD 07... | 38 | 50 | 1.5 | 2/173 |
| | | 2999 1030 – 2999 1045 | 20 | RD 10... | 22 | 40 | 2.5 | 2/173 |
| | | | 25 | RD 10... | 32 | 50 | 2.5 | 2/173 |
| | | | 30 | RD 10... | 42 | 60 | 2.3 | 2/173 |
| | | | 35 | RD 10... | 52 | 70 | 2.5 | 2/173 |
| | | 2999 1050 – 2999 1075 | 24 | RD 12T... | 24 | 48 | 3.0 | 2/173 |
| | | | 35 | RD 12T... | 46 | 70 | 3.0 | 2/173 |
| | | | 42 | RD 12T... | 62 | 82 | 3.5 | 2/173 |

$S_{max.}$ = Depth infeed mm per orbit

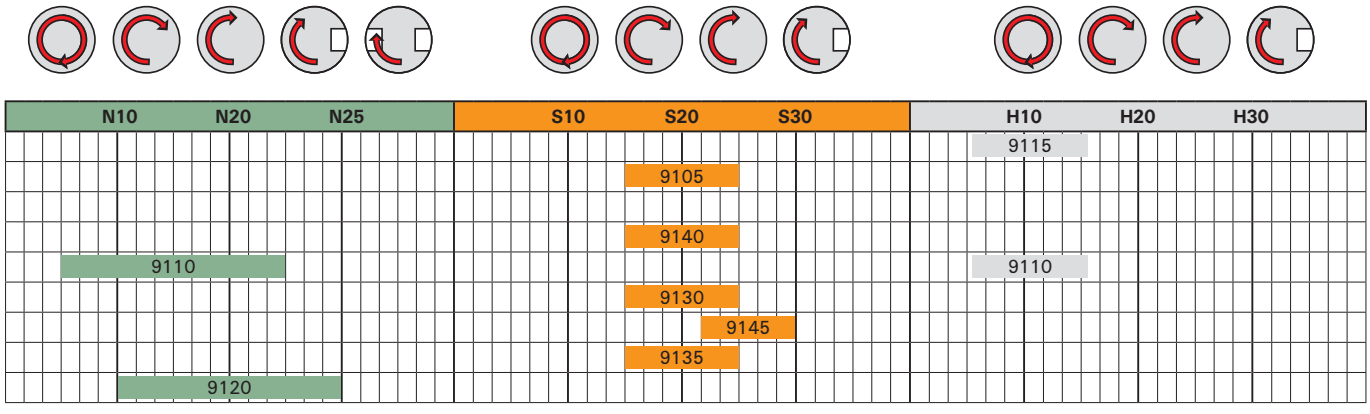
| | Order No. | ISO designation | Cutting materials | €/piece (PU 10 pieces) | Page | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2999 5127 | APET 160408 FR | AL N 9120 | 12.50 | 2/170 | | | | ● | | |
| | 2999 5070 | APKT 1003PDER | M KNH 9110 | 6.35 | 2/168 | ◐ | ◐ | ● | | | |
| | 2999 5073 | APKT 1003PDER | M PMK 9130 | 6.35 | 2/168 | ● | ◐ | ● | | ○ | |
| | 2999 5076 | APKT 1003PDER | M U 9145 | 6.35 | 2/168 | ● | ● | ◐ | | ◐ | |
| | 2999 5082 | APKT 1003PDFR | AL N 9020 | 15.75 | 2/168 | | | | ● | | |
| | 2999 5130 | APKT 1604PDER | ALU | 7.95 | 2/170 | | | | ● | | |
| | 2999 5112 | APKT 1604PDR | M PMK 9130 | 8.30 | 2/170 | ● | ◐ | ● | | ○ | |
| | 2999 5115 | APKT 1604PDR | M U 9145 | 8.30 | 2/170 | ● | ● | ◐ | | ◐ | |
| | 2999 5100 | APKT 1604PDR | R PMK 9130 | 8.30 | 2/170 | ● | ◐ | ● | | ○ | |
| | 2999 5103 | APKT 1604PDR | R U 9145 | 8.30 | 2/170 | ● | ● | ◐ | | ◐ | |
| | 2999 5133 | APMT 1604UNI | UNI | 7.05 | 2/170 | ● | ● | ● | | | |
| | 2999 5140 | APMT 1003 | AL | 7.35 | 2/168 | | | | ● | | |
| | 2999 5146 | APMT 1003 | INOX | 5.15 | 2/168 | ● | ● | | | | |
| | 2999 5143 | APMT 1003 | UNI | 5.15 | 2/168 | ● | ● | ● | | | |
| | 2999 5560 | CCMX 060304S | M PMK 9130 | 8.20 | 2/179 | ● | ◐ | ● | | ◐ | |
| | 2999 5563 | CCMX 08T308S | M PMK 9130 | 9.15 | 2/179 | ● | ◐ | ● | | ◐ | |
| | 2999 5566 | CCMX 09T308S | PMK 9130 | 9.35 | 2/179 | ● | ◐ | ● | | ◐ | |
| | 2999 5263 | RDGT 1003MOT | PK 9125 | 5.55 | 2/173 | ● | ○ | ◐ | | | |
| | 2999 5266 | RDGT 1003MOT | PM 9140 | 5.55 | 2/173 | ● | ● | ○ | | ◐ | |
| | 2999 5272 | RDGT 12T3MOT | PK 9125 | 6.20 | 2/173 | ● | ● | ○ | | ◐ | |
| | 2999 5275 | RDGT 12T3MOT | PM 9140 | 6.20 | 2/173 | ● | ● | ○ | | ◐ | |
| | 2999 5281 | RDGT 1604MOT | PK 9125 | 8.00 | 2/173 | ● | ◐ | ◐ | | | |
| | 2999 5284 | RDGT 1604MOT | PM 9140 | 8.00 | 2/173 | ● | ● | ○ | | ◐ | |
| | 2999 5203 | RDHT 0702MO | AL N 9120 | 5.85 | 2/173 | | | | ● | | |
| | 2999 5206 | RDHT 1003MO | AL N 9120 | 6.30 | 2/173 | | | | ● | | |
| | 2999 5209 | RDHT 12T3MO | AL N 9120 | 7.15 | 2/173 | | | | ● | | |
| | 2999 5212 | RDHT 1604MO | AL N 9120 | 9.30 | 2/173 | | | | ● | | |
| | 2999 5215 | RDHX 0702MOT | KH 9105 | 5.20 | 2/173 | ◐ | ○ | ● | | | ● |
| | 2999 5218 | RDHX 0702MOT | PK 9125 | 5.20 | 2/173 | ● | ○ | ● | | | ○ |
| | 2999 5221 | RDHX 1003MOT | KH 9105 | 5.65 | 2/173 | ◐ | ○ | ● | | | ● |
| | 2999 5224 | RDHX 1003MOT | PK 9125 | 5.65 | 2/173 | ● | ○ | ● | | | ○ |
| | 2999 5227 | RDHX 1003MOT | PK 9140 | 5.65 | 2/173 | ● | ◐ | ● | | | |
| | 2999 5245 | RDHX 12T3MOT | KH 9105 | 6.35 | 2/173 | ◐ | ○ | ● | | | ● |
| | 2999 5230 | RDHX 12T3MOT | PK 9125 | 6.35 | 2/173 | ● | ○ | ● | | | ○ |
| | 2999 5233 | RDHX 12T3MOT | PK 9140 | 6.35 | 2/173 | ● | ◐ | ● | | | |
| | 2999 5242 | RDHX 1604MOT | KH 9105 | 8.20 | 2/173 | ◐ | ○ | ● | | | ● |
| | 2999 5236 | RDHX 1604MOT | PK 9125 | 8.20 | 2/173 | ● | ○ | ● | | | ○ |
| | 2999 5239 | RDHX 1604MOT | PK 9140 | 8.20 | 2/173 | ● | ◐ | ● | | | |
| | 2999 5178 | RDMX 1003MOT | KH 9105 | 5.05 NEW | 2/173 | ● | ● | ◐ | | | |
| | 2999 5180 | RDMX 1003MOT | PK 9125 | 5.05 NEW | 2/173 | ◐ | ● | ◐ | | | |
| | 2999 5182 | RDMX 1003MOT | PK 9140 | 5.05 NEW | 2/173 | ◐ | ● | | | | |
| | 2999 5184 | RDMX 12T3MOT | KH 9105 | 5.90 NEW | 2/173 | ◐ | ● | ◐ | | | |
| | 2999 5186 | RDMX 12T3MOT | PK 9125 | 5.90 NEW | 2/173 | ◐ | ● | ◐ | | | |
| | 2999 5188 | RDMX 12T3MOT | PK 9140 | 5.90 NEW | 2/173 | ◐ | ● | | | | |
| | 2999 5190 | RDMX 1604MOT | KH 9105 | 7.25 NEW | 2/173 | ◐ | ● | ◐ | | | |
| | 2999 5192 | RDMX 1604MOT | PK 9125 | 7.25 NEW | 2/173 | ◐ | ● | | | | |
| | 2999 5194 | RDMX 1604MOT | PK 9140 | 7.25 NEW | 2/173 | ◐ | ● | | | | |
| | 2999 5818 | SCET 050204 | UD 9035 | 9.05 | 2/188 | ● | ◐ | ◐ | | | |
| | 2999 5821 | SCET 060204 | UD 9035 | 9.60 | 2/188 | ● | ◐ | ◐ | | | |
| | 2999 5824 | SCET 070308 | UD 9035 | 10.15 | 2/188 | ● | ◐ | ◐ | | | |
| | 2999 5827 | SCET 09T308 | UD 9035 | 10.85 | 2/188 | ● | ◐ | ◐ | | | |
| | 2999 5830 | SCET 120408 | UD 9035 | 13.25 | 2/188 | ● | ◐ | ◐ | | | |
| | 2999 5570 | SDET 082508 | U 9135 | 17.45 | 2/180 | ● | | ● | | | |
| | 2999 5061 | SDMT 120508SR | F PMK 9130 | 9.35 | 2/171 | ● | ◐ | ● | ○ | ○ | |
| | 2999 5062 | SDMT 120508SR | F U 9145 | 9.35 | 2/171 | ● | ● | ○ | ○ | ◐ | |
| | 2999 5063 | SDMT 120508SR | M KNH 9110 | 9.35 | 2/171 | ● | | ◐ | ○ | | |
| | 2999 5066 | SDMT 120508SR | M PMK 9130 | 9.35 | 2/171 | ● | ◐ | ● | ○ | ○ | |
| | 2999 5069 | SDMT 120508SR | M U 9145 | 9.35 | 2/171 | ● | ● | ◐ | | ◐ | |
| | 2999 5067 | SDMT 120508SR | R PMK 9130 | 9.35 | 2/171 | ● | ◐ | ● | ○ | ○ | |
| | 2999 5068 | SDMT 120508SR | R U 91445 | 9.35 | 2/171 | ● | ● | ◐ | | ◐ | |

| | Order No. | ISO designation | Cutting materials | €/piece (PU 10 pieces) | Page | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2999 5173 | SEET 1204AFSN | INOX | 14.10 | 2/164 | ● | ● | | | | |
| | 2999 5170 | SEET 1204AFSN | UNI | 14.10 | 2/164 | ● | ◐ | ● | | | |
| | 2999 5027 | SEKN 1203AFSN | M PMK 9130 | 8.00 | 2/165 | ◐ | | ● | | | ◐ |
| | 2999 5036 | SEKN 1203AFSN | M U 9145 | 8.00 | 2/165 | ◐ | ○ | ● | | | |
| | 2999 5030 | SEKR 1203AFSN | M PMK 9130 | 8.20 | 2/165 | ● | ◐ | ◐ | | ○ | |
| | 2999 5033 | SEKR 1203AFSN | M U 9145 | 8.20 | 2/165 | ● | ● | ◐ | | ○ | |
| | 2999 5176 | SEKT 1204 | ALU | 13.40 | 2/164 | | | | ● | | |
| | 2999 5000 | SEMT 09T3AFSN | F PMK 9130 | 7.20 | 2/163 | ● | ○ | ◐ | ○ | ○ | |
| | 2999 5003 | SEMT 09T3AFSN | F U 9145 | 7.20 | 2/163 | ● | ● | ○ | ○ | ◐ | |
| | 2999 5500 | SNHQ 1102AZTN | M PMK 9130 | 14.90 | 2/178 | | ● | ● | | | |
| | 2999 5503 | SNHQ 1102AZTN | M U 9145 | 14.90 | 2/178 | ● | ● | | | ● | |
| | 2999 5506 | SNHQ 1103AZTN | M PMK 9130 | 14.90 | 2/178 | | ● | ● | | | |
| | 2999 5509 | SNHQ 1103AZTN | M U 9145 | 14.90 | 2/178 | ● | ● | | | ● | |
| | 2999 5515 | SNHQ 1203AZTN | M U 9145 | 15.40 | 2/178 | ● | ● | ◐ | | ◐ | |
| | 2999 5512 | SNHQ 1203AZTN | PMK 9130 | 15.40 | 2/178 | ● | ○ | ● | | | ○ |
| | 2999 5521 | SNHQ 1204AZTN | M U 9145 | 16.65 | 2/178 | ● | ● | ◐ | | ◐ | |
| | 2999 5518 | SNHQ 1204AZTN | PMK 9130 | 16.65 | 2/178 | ● | ○ | ● | | | ○ |
| | 2999 5527 | SNHQ 1205AZTN | M U 9145 | 17.60 | 2/178 | ● | ● | ◐ | | ◐ | |
| | 2999 5524 | SNHQ 1205AZTN | PMK 9130 | 17.60 | 2/178 | ● | ○ | ● | | | ○ |
| | 2999 5533 | SNHQ 1207AZTN | M U 9145 | 19.00 | 2/178 | ● | ● | ◐ | | ◐ | |
| | 2999 5530 | SNHQ 1207AZTN | PMK 9130 | 19.00 | 2/178 | ● | ○ | ● | | | ○ |
| | 2999 5042 | SOMT 09T304 | F KH 9105 | 8.20 | 2/166 | ◐ | | ● | ○ | | |
| | 2999 5045 | SOMT 09T304 | F PMK 9130 | 8.20 | 2/166 | ● | ◐ | ● | | ◐ | |
| | 2999 5060 | SOMT 09T304 | F U 9145 | 8.20 | 2/166 | ● | ● | | | ● | |
| | 2999 5051 | SOMT 09T304 | M PMK 9130 | 8.20 | 2/166 | ● | | ◐ | | ○ | |
| | 2999 5054 | SOMT 09T304 | M U 9145 | 8.20 | 2/166 | ● | ● | | | ● | |
| | 2999 0395 | TCGT 110202 | L-EC U 9035 | 9.00 | 2/183, 2/184 | ● | ● | | ◐ | ● | |
| | 2999 0392 | TCGT 110202 | R-EC U 9035 | 9.00 | 2/183, 2/184 | ● | ● | | ◐ | ● | |
| | 2999 0361 | TCGT 110204 | ALU | 4.96 | 2/183 | | | | ● | | |
| | 2999 0364 | TCGT 16T304 | ALU | 7.60 | 2/181 | | | | ● | | |
| | 2999 0374 | TCMT 110204 | M PMK 9030 | 5.05 | 2/183, 2/184 | ● | ● | ● | | | |
| | 2999 0389 | TCMT 16T308 | M U 9035 | 7.45 | 2/181 | | ● | | | | |
| | 2999 2339 | TCMT 16T308 | UNI | 5.40 | 2/181 | ● | ● | ● | | | |
| | 2999 5483 | VCGT 220530 | ALU30 R3 | 12.85 | 2/176 | | | | ● | | |
| | 2999 5800 | XPET 0502AP | 9145 | 9.05 | 2/188 | ● | ● | ● | | | |
| | 2999 5803 | XPET 0602AP | 9145 | 9.60 | 2/188 | ● | ● | ● | | | |
| | 2999 5806 | XPET 0703AP | 9145 | 10.15 | 2/188 | ● | ● | ● | | | |
| | 2999 5809 | XPET 0903AP | 9145 | 10.85 | 2/188 | ● | ● | ● | | | |
| | 2999 5812 | XPET 11T3AP | 9145 | 11.90 | 2/188 | ● | ● | ● | | | |
| | 2999 5815 | XPET 12T3AP | 9145 | 13.25 | 2/188 | ● | ● | ● | | | |
| | 2999 5554 | XPHT 160408 | AL N 9120 | 14.70 | 2/185 | | | | ● | | |
| | 2999 5551 | XPHT 160412S | PMK 9125 | 15.20 | 2/185 | ● | ● | ● | | | |
| | 2999 5548 | XPHT 160412S | PMK 9140 | 15.20 | 2/185 | ● | ● | ● | | ◐ | |

| P Steel | M Stainless | K Cast iron |
|---|---|---|
| St37; 52<br>Unalloyed carbon dioxide<br>Tool steel 1.2379<br>(St37.1; 10S20; C45)<br>High carbon steel casts<br>(GS 52)<br>High carbon tool steels<br>(C105W1)<br>Low-alloy steels<br>(StE360.7)<br>Medium-alloy steels<br>(60Si7; GS20Mn5)<br>Alloyed tool steels<br>(X38CrMoNi17) | Austenitic and<br>ferritic stainless steels<br>1.4301; 4305<br><br>Heat and<br>creep-resistant steels<br>1.4541; 4571<br><br>Non-magnetic and<br>wear-resistant<br>steels (X12CrNi188) | Alloyed and unalloyed<br><br>Grey cast iron (GG25)<br><br>Ductile cast iron (GGG60)<br><br>Malleable cast iron (GTS55) |




| N Alu | S Super alloy | H Hard materials |
|---|---|---|
| Non-ferrous metals<br>Al-alloys<br>Cu-alloys | Special heat-resistant Ni-, Co-,<br>Fe- and Ti-alloys<br>NIMONIC 80A;<br>NiCr20TiAl;<br>INCOLOY 800H;<br>INCONEL 617;<br>X8NiCrAlTi3221 | Hardened (tempered) steels<br>HRC 48–61<br><br>Hardened die cast iron<br>Chill cast iron |



Wear resistance

| | | P | M | K | N | S | H |
|---|---|---|---|---|---|---|---|
| 01 | | Finishing at high cutting speeds, best machining results, no vibrations | | | | | |
| 10 | | Copying and milling at high cutting speeds, good machining results, with small to medium chip cross-cutting | | | | | |
| 20 | | Copying and milling at medium cutting speeds, for medium to slightly adverse chipping conditions | | | | | |
| 30 | | Copying and milling at medium cutting speeds, and adverse chip conditions (break in cutting) | | | | | |
| 40 | | Copying and milling at low to medium cutting speeds, and extremely adverse working conditions (break in cutting) | | | | | |
| 50 | | Milling at very low cutting speeds, extremely adverse working conditions (severe breaks in cutting) | | | | | |

Toughness

**Carbide, coated**

| | | | |
|---|---|---|---|
| PK | 9115 | $Al_2O_3$ | CVD coating, main application area is in groups P and K, only dry processing, high cutting speeds |
| KH | 9105 | $Al_2O_3$ | PVD coating, main application area is in groups K and H, wet and dry processing, high cutting speeds |
| PK | 9125 | $Al_2O_3$ | PVD coating, main application area is in groups P and K, wet and dry processing, medium to high cutting speeds and feed rate |
| PK | 9140 | $Al_2O_3$ | PVD coating, main application area is in groups P and K, wet and dry processing, medium to high cutting speeds and feed rate |
| KNH | 9110 | $Al_2O_3$ | PVD coating, universally applicable, wet and dry processing, high cutting speeds, with good machining conditions for operations with high thermal loads |
| PMK | 9130 | TiCN | PVD coating, main application area is groups P and K, sometimes also M, wet and dry processing, medium cutting speed combined with good wear resistance and toughness |
| U | 9135 | $Al_2O_3$ | Gradient PVD coating with increased resistance to oxidation, universal use, dry and wet processing, very good gliding properties, medium cutting speeds with low to medium chip cross-cutting, used in poor machining conditions |
| U | 9035 | $Al_203$ | PVD coating, universal use, dry and wet processing, good wear resistance with good operational reliability, medium cutting speeds, also for poor operating conditions |
| U | 9145 | TiCN | PVD coating, very tough grade, universal use, 1. Optional for processing in group M and P with heavily interrupted cut. Wet and dry processing, low to medium cutting speeds, combined with good wear resistance and toughness, for operations with higher mechanical load on the cutting edge |

**Carbide, uncoated**

| | | | |
|---|---|---|---|
| N | 9120 | Ultra-fine grain | uncoated, main application area is in group N, highly polished to prevent edge build-up |

**Geometries**

| | | |
|---|---|---|
| F | = | Clamping stage for finishing - easy cutting |
| M | = | Chip breaker for medium machining - universal application |
| R | = | Chip breaker for roughing |
| AL | = | Chip breaker for machining non-ferrous metals, brass, copper alloys and plastics |
| VA | = | Chip breaker for machining stainless materials and super alloys |

## Through Coolant 45deg Approach Face Mills – SEMT 09T3...

**Design:** Double positive shank milling tool, low vibration action due to strong positive cutting geometry, tool holder nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For universal use in almost all materials, for easy to medium machining, workpiece surfaces up to Ra 0.8. Problem-solver for materials of the M stainless and S super alloy, machines with low power and workpieces which tend to vibrate.

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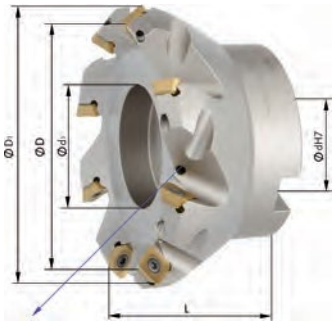
| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d g7 mm | Dimensions L mm | Dimensions l mm | Dimensions Ø D1 mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 0200 | 20 | 172.00 | 2 | 20 | 82 | 32 | 29.8 | 4.5 | yes | SEMT 09T3AFSN |
| 0205 | 25 | 188.50 | 3 | 25 | 98 | 42 | 34.8 | 4.5 | yes | SEMT 09T3AFSN |
| 0210 | 32 | 249.00 (W280) | 4 | 32 | 102 | 42 | 42.0 | 4.5 | yes | SEMT 09T3AFSN |

## Through Coolant 45deg Approach Face Mills – SEMT 09T3...

**Design:** Doubly positive milling cutter, low-vibration operation thanks to very positive cutting edge geometry, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For universal use in almost all materials, for easy to medium machining, workpiece surfaces up to Ra 0.8. Problem-solver for materials of the M stainless and S super alloy, machines with low power and workpieces which tend to vibrate.




| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions Ø d1 mm | Dimensions L mm | Dimensions Ø D1 mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 0225 | 50 | 278.50 | 5 | 22 | 18 | 40 | 59.6 | 4.5 | yes | SEMT 09T3AFSN |
| 0230 | 63 | 278.50 | 6 | 22 | 18 | 40 | 75.8 | 4.5 | yes | SEMT 09T3AFSN |
| 0235 | 80 | 339.50 | 8 | 27 | 38 | 50 | 89.6 | 4.5 | yes | SEMT 09T3AFSN |
| 0240 | 100 | 439.00 (W280) | 10 | 32 | 45 | 50 | 110.0 | 4.5 | yes | SEMT 09T3AFSN |

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0005 | TORX® screw for insert | 3.06 | – | 10 Δ |
| 0035 | Screwdriver for TORX® T 9 x 60 mm | – | 4.52 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert 20° positive

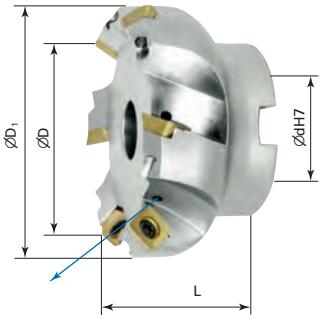
| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5000 | SEMT 09T3AFSN | F PMK 9130 | 7.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 190–325<br>0.12–0.35<br>0.5–4.5 | 110–195<br>0.12–0.26<br>0.5–3.4 | 180–305<br>0.12–0.35<br>0.5–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5003 | SEMT 09T3AFSN | F U 9145 | 7.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–240<br>0.12–0.35<br>0.5–4.5 | 90–140<br>0.12–0.26<br>0.5–3.4 | 140–225<br>0.12–0.35<br>0.5–4.5 | –<br>–<br>– | 30–70<br>0.12–0.21<br>0.5–2.7 | –<br>–<br>– |
| | | | (W282) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## Face Mills – SEET/SEKT 1204...

**Design:** Universal standard face milling cutter with soft cut thanks to very positive cutting edge geometry, tool carrier nickel-plated. **Supplied without indexable inserts and screwdriver.**

**Application:** For universal use in all materials for universal machining.




| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø dH7 mm | Dimensions L mm | Dimensions Ø D1 mm | Indexable insert |
|---|---|---|---|---|---|---|---|
| 2050 | 40 | 143.50 | 3 | 16 | 40 | 53 | SEET/SEKT 1204... |
| 2055 | 50 | 159.00 | 4 | 22 | 48 | 65 | SEET/SEKT 1204... |
| 2060 | 63 | 180.00 | 5 | 22 | 48 | 78 | SEET/SEKT 1204... |
| 2065 | 80 | 198.50 | 6 | 27 | 50 | 95 | SEET/SEKT 1204... |
| 2070 | 100 | 233.00 | 6 | 32 | 50 | 115 | SEET/SEKT 1204... |
| 2075 | 125 | 285.50 | 7 | 40 | 63 | 140 | SEET/SEKT 1204... |
| 2080 | 160 | 559.00 | 8 | 40 | 63 | 173 | SEET/SEKT 1204... |
| 2085 | 200 | 714.50 | 12 | 60 | 63 | 213 | SEET/SEKT 1204... |
| 2090 | 250 | 932.00 | 16 | 60 | 63 | 263 | SEET/SEKT 1204... |

(W280)

## Spare part for face milling cutter

| Order No. | Design | 2999 | PU |
|---|---|---|---|
| 0193 | TORX® screw for SEET/SEKT 1204 | 4.10 | 5 Δ |

(W281)

Δ Can only be supplied as a whole packaging unit.

TORX® screw

## ISO milling insert

SEKT ALU

SEET AFSN

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5176 | SEKT 1204 | ALU | 13.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 250–1000<br>0.05–0.4<br>0.2–4.5 | –<br>–<br>– | –<br>–<br>– |
| 5170 | SEET 1204AFSN | UNI | 14.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 255–370<br>0.20–0.40<br>1.0–6.5 | 150–220<br>0.20–0.30<br>1.0–4.9 | –<br>–<br>– | –<br>–<br>– | 50–110<br>0.20–0.24<br>1.0–3.9 | –<br>–<br>– |
| 5173 | SEET 1204AFSN | INOX | 14.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–265<br>0.20–0.30<br>1.0–6.5 | 95–155<br>0.20–0.23<br>1.0–4.9 | 190–280<br>0.2–0.4<br>0.5–6.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

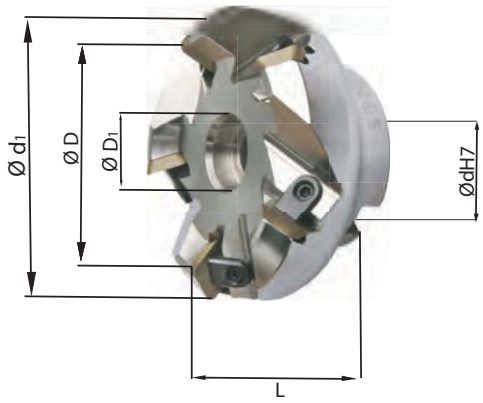
(W282)

Δ Can only be supplied as a whole packaging unit.

## Face milling cutter 45° with inner cooling (screw clamping)

**Design:** Easy cutting face milling cutter, low-vibration operation thanks to uneven pitch, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Can be used for roughing and finishing in all materials. Compatible also with SEKN/SEKR.




| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions Ø d1 mm | Dimensions L mm | Dimensions Ø D1 mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 0300 | 50 | 270.50 | 4 | 22 | 63 | 50 | 18.0 | 6.5 | yes | SEKR/N1203... |
| 0305 | 63 | 317.00 | 5 | 22 | 76 | 50 | 18.0 | 6.5 | yes | SEKR/N1203... |
| 0310 | 80 | 340.50 | 6 | 27 | 93 | 50 | 38.0 | 6.5 | yes | SEKR/N1203... |
| 0315 | 100 | 376.00 | 6 | 32 | 113 | 50 | 45.0 | 6.5 | yes | SEKR/N1203... |
| 0320 | 125 | 468.50 | 7 | 40 | 138 | 63 | 56.0 | 6.5 | yes | SEKR/N1203... |
| 0325 | 160 | 552.00 (W280) | 7 | 40 | 173 | 63 | 66.7 | 6.5 | no | SEKR/N1203... |

## Spare part for end mill 45° with inner cooling

| Order No. | Design | 5840 | 5886 |
|---|---|---|---|
| 0040 | Allen key 4 mm | 0.28 | – |
| 0035 | Screwdriver for TORX® T 9 x 60 mm | – | 4.52 |
| 0050 | Screwdriver for TORX® T 15 x 80 mm | – (W528) | 4.66 (W543) |

Angled screwdriver

TORX® screwdriver

## ISO milling insert 20° positive

SEKN AFSN

SEKR AFSN

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5027 | SEKN 1203AFSN | M PMK 9130 | 8.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–220<br>0.15–0.3<br>1–6.5 | –<br>–<br>– | 140–205<br>0.15–0.3<br>1–6.5 | –<br>–<br>– | –<br>–<br>– | 30–40<br>0.1–0.2<br>0.3–1.5 |
| 5036 | SEKN 1203AFSN | M U 9145 | 8.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–215<br>0.15–0.3<br>1–6.5 | 90–125<br>0.15–0.23<br>1–4.9 | 140–200<br>0.15–0.3<br>1–63 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5030 | SEKR 1203AFSN | M PMK 9130 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 170–225<br>0.2–0.3<br>1–6.5 | 100–135<br>0.2–0.23<br>1–4.9 | 160–210<br>0.2–0.3<br>1–6.5 | –<br>–<br>– | 30–65<br>0.2–0.23<br>1–3.9 | –<br>–<br>– |
| 5033 | SEKR 1203AFSN | M U 9145 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 170–225<br>0.2–0.3<br>1–6.5 | 100–135<br>0.2–0.23<br>1–4.9 | 160–210<br>0.2–0.3<br>1–6.5 | –<br>–<br>– | 30–65<br>0.2–0.23<br>1–3.9 | –<br>–<br>– |

(W282)

Δ Can only be supplied as a whole packaging unit.

## End mill 90° with inner cooling

**Design:** End mill cylindrical 90°, double positive, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Slot cutters and square shoulder milling cutters, universal application options, for easy to medium processing at high feeding speeds

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| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d g7 mm | Dimensions L mm | Dimensions l mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0330 | 20 | 172.00 | 2 | 20 | 82 | 32 | 8 | yes | SOMT 09T3... |
| 0335 | 25 | 188.50 | 3 | 25 | 98 | 38 | 8 | yes | SOMT 09T3... |
| 0340 | 32 | 249.00 | 4 | 32 | 104 | 42 | 8 | yes | SOMT 09T3... |
| | | (W280) | | | | | | | |

## Angular milling head 90° with inner cooling

**Design:** Angular milling head 90°, Doubly positive milling cutter, low-vibration operation thanks to very positive cutting edge geometry, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Square shoulder milling cutters, universal application options, for easy to medium processing at high feed speed rates (due to increased number of teeth). Best results with stainless steel, good surface finish.

| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions Ø $d_1$ mm | Dimensions L mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0345 | 40 | 223.50 | 5 | 16 | 14 | 40 | 8 | yes | SOMT 09T3... |
| 0350 | 50 | 240.50 | 6 | 22 | 18 | 40 | 8 | yes | SOMT 09T3... |
| 0355 | 63 | 279.50 | 7 | 22 | 18 | 40 | 8 | yes | SOMT 09T3... |
| | | (W280) | | | | | | | |

## Spare part for end and angular milling head 90° with inner cooling

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0032 | TORX® screw for insert | 4.10 | – | 10 Δ |
| 0035 | Screwdriver for TORX® T 9 x 60 mm | – | 4.52 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert 18° positive

M F FKH

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5042 | SOMT 09T304 | F KH 9105 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–220<br>0.08–0.35<br>0.5–8 | 65–130<br>0.08–0.26<br>0.5–6 | 105–205<br>0.08–0.35<br>0.5–8 | 170–770<br>0.08–0.35<br>0.5–8 | 20–65<br>0.08–0.21<br>0.5–4.8 | –<br>–<br>– |
| 5045 | SOMT 09T304 | F PMK 9130 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–215<br>0.08–0.35<br>0.5–8 | 65–125<br>0.08–0.26<br>0.5–6 | 105–200<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5060 | SOMT 09T304 | F U 9145 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–200<br>0.08–0.35<br>0.5–8 | 65–120<br>0.08–0.26<br>0.5–6 | 100–190<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | 20–60<br>0.08–0.21<br>0.5–4.8 | –<br>–<br>– |
| 5051 | SOMT 09T304 | M PMK 9130 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–215<br>0.08–0.35<br>0.5–8 | 65–125<br>0.08–0.26<br>0.5–6 | 105–200<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5054 | SOMT 09T304 | M U 9145 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–200<br>0.08–0.35<br>0.5–8 | 65–120<br>0.08–0.26<br>0.5–6 | 100–190<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | 20–60<br>0.08–0.21<br>0.5–4.8 | –<br>–<br>– |
| | | | (W282) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## End mill 90° cylindrical with inner cooling

**Design:** End mill cylindrical 90°, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and slot cutting, inward copying, circular and peripheral milling as well as bore circular milling, universal application.

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| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d g7 mm | Dimensions L mm | Dimensions $l_2$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0430 | 10 | 99.60 | 1 | 16 | 78 | 24 | 9 | yes | APKT/APMT 10... |
| 0435 | 12 | 99.60 | 1 | 16 | 78 | 24 | 9 | yes | APKT/APMT 10... |
| 0440 | 14 | 134.00 | 1 | 16 | 78 | 24 | 9 | yes | APKT/APMT 10... |
| 0445 | 16 | 134.00 | 2 | 16 | 85 | 25 | 9 | yes | APKT/APMT 10... |
| 0450 | 18 | 134.00 | 2 | 20 | 85 | 25 | 9 | yes | APKT/APMT 10... |
| 0455 | 20 | 154.00 | 3 | 20 | 90 | 25 | 9 | yes | APKT/APMT 10... |
| 0460 | 25 | 199.00 | 4 | 25 | 95 | 25 | 9 | yes | APKT/APMT 10... |
| 0465 | 32 | 229.50 (W280) | 5 | 25 | 95 | 26 | 9 | yes | APKT/APMT 10... |

## End mill 90°, extra long, cylindrical with inner cooling

**Design:** End mill cylindrical 90°, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and slot cutting, inward copying, circular and peripheral milling as well as bore circular milling, universal application.

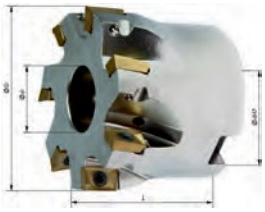
DIN 1835 B

| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d h6 mm | Dimensions L mm | Dimensions $l_1$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0665 | 16 | 163.00 | 2 | 16 | 150 | 100 | 9 | yes | APKT/APMT 10... |
| 0670 | 20 | 194.50 | 3 | 20 | 150 | 98 | 9 | yes | APKT/APMT 10... |
| 0675 | 25 | 239.00 | 4 | 25 | 150 | 95 | 9 | yes | APKT/APMT 10... |
| 0680 | 32 | 286.00 (W280) | 5 | 32 | 150 | 89 | 9 | yes | APKT/APMT 10... |

## Angular milling head 90°

**Design:** Square shoulder milling cutter 90°, tool carrier nickel-plated
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and slot cutting, inward copying, circular and peripheral milling as well as bore circular milling, universal application.



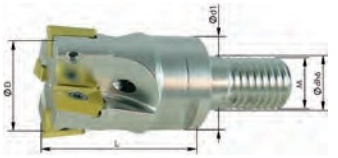
| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions Ø d1 mm | Dimensions L mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0470 | 40 | 203.00 | 6 | 16 | 14 | 40 | 9 | no | APKT/APMT 10... |
| 0475 | 50 | 213.50 | 7 | 22 | 18 | 40 | 9 | no | APKT/APMT 10... |
| 0480 | 63 | 272.00 (W280) | 8 | 22 | 18 | 40 | 9 | no | APKT/APMT 10... |

## Screw-in cutter 90° with inner cooling

**Design:** Screw-in cutter 90°, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and slot cutting, inward copying, circular and peripheral milling as well as bore circular milling, universal application.

**Note:** Extension for screw-in cutter see 3/40, 3/57, 3/66.



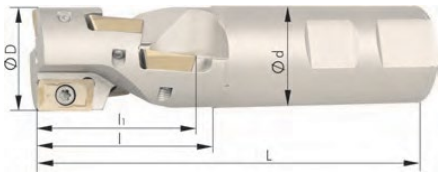
| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d h6 mm | Dimensions Ø d1 mm | Dimensions L mm | Dimensions M | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 0630 | 16 | 116.50 | 2 | 8.5 | 13.5 | 25 | M8 | 9 | yes | APKT/APMT 10... |
| 0640 | 20 | 164.00 | 3 | 10.5 | 18.0 | 30 | M10 | 9 | yes | APKT/APMT 10... |
| 0650 | 25 | 185.50 | 4 | 12.5 | 21.0 | 35 | M12 | 9 | yes | APKT/APMT 10... |
| 0660 | 32 | 203.00 (W280) | 5 | 17.0 | 29.0 | 43 | M16 | 9 | yes | APKT/APMT 10... |

## Long Edge Through Coolant Endmill – APKT 10...

**Design:** High-performance shell end mill, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For universal use in corner milling, peripheral milling and trimming.

DIN 1835 B




| Order No. | Ø D mm | 2999 | Number of inserts | Dimensions Ø d g7 mm | Dimensions L mm | Dimensions l mm | Dimensions $l_1$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 0490 | 25 | 384.00 | 8 | 25 | 105 | 47 | 37 | 37 | yes | APET/APMT/APKT 16... |
| 0495 | 32 | 461.50 (W280) | 15 | 32 | 115 | 52 | 45 | 45 | yes | APET/APMT/APKT 16... |

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0051 | TORX® screw for insert | 4.10 | – | 10 Δ |
| 0052 | TORX® screw for insert (shell end mill) | 4.10 | – | 10 Δ |
| 0020 | Screwdriver for TORX® T 7 x 60 mm | – (W281) | 4.52 (W543) | 1 |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert

format professional quality

ALU

UNI

INOX

| Order No. | ISO designation | Cutting materials | 2999 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5140 | APMT 1003 | ALU | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–560<br>0.05–0.30<br>0.8–9 | –<br>–<br>– | –<br>–<br>– |
| 5143 | APMT 1003 | UNI | 5.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–255<br>0.10–0.25<br>1.0–9 | 110–150<br>0.10–0.19<br>1.0–6.8 | 175–240<br>0.10–0.25<br>1.0–9.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5146 | APMT 1003 | INOX | 5.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–255<br>0.10–0.25<br>1.0–9 | 110–150<br>0.10–0.19<br>1.0–6.8 | –<br>–<br>– | –<br>–<br>– | 35–75<br>0.1–0.15<br>1.0–5.4 | –<br>–<br>– |

(W290)

Δ Can only be supplied as a whole packaging unit.

## ISO milling insert

AL

M KNH

M PMK, M U

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5082 | APKT 1003PDFR | AL N 9020 | 15.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–560<br>0.05–0.3<br>0.8–9 | –<br>–<br>– | –<br>–<br>– |
| 5070 | APKT 1003PDER | M KNH 9110 | 6.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 170–265<br>0.1–0.25<br>1–9 | 100–155<br>0.1–0.19<br>1–6.8 | 160–250<br>0.1–0.25<br>1–9 | –<br>–<br>– | 30–75<br>0.1–0.15<br>1–5.4 | –<br>–<br>– |
| 5073 | APKT 1003PDER | M PMK 9130 | 6.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–255<br>0.1–0.25<br>1–9 | 95–150<br>0.1–0.19<br>1–6.8 | 155–240<br>0.1–0.25<br>1–9 | –<br>–<br>– | 30–75<br>0.1–0.15<br>1–5.4 | –<br>–<br>– |
| 5076 | APKT 1003PDER | M U 9145 | 6.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–255<br>0.1–0.25<br>1–9 | 95–150<br>0.1–0.19<br>1–6.8 | 155–240<br>0.1–0.25<br>1–9 | –<br>–<br>– | 30–75<br>0.1–0.15<br>1–5.4 | –<br>–<br>– |

(W282)

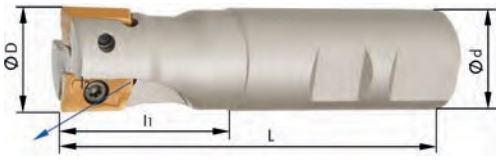
Δ Can only be supplied as a whole packaging unit.

## Through Coolant 90deg Approach End Mill – APKT 16...

**Design:** End mill cylindrical 90°, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and slot cutting, inward copying, circular and peripheral milling as well as bore circular milling, universal application.

DIN 1835 B

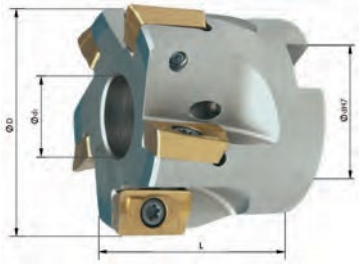



| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d g7 mm | Dimensions L mm | Dimensions $l_1$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0500 | 25 | 145.00 | 2 | 25 | 100 | 44 | 14 | yes | APET/APMT/APKT 16... |
| 0505 | 32 | 198.00 (W280) | 3 | 32 | 110 | 50 | 14 | yes | APET/APMT/APKT 16... |

## 90deg Approach Face Mill - APKT 16....

**Design:** Square shoulder milling cutter 90°, tool carrier nickel-plated
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and slot cutting, peripheral milling and trimming as well as bore circular milling, universal application.



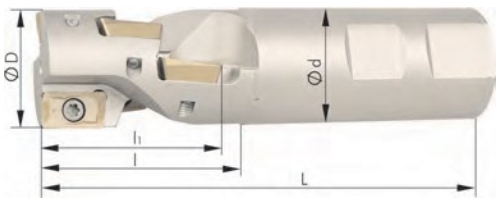

| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions Ø $d_1$ mm | Dimensions L mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0520 | 40 | 199.00 | 4 | 16 | 14 | 40 | 14 | no | APET/APMT/APKT 16... |
| 0525 | 50 | 211.50 | 5 | 22 | 18 | 40 | 14 | no | APET/APMT/APKT 16... |
| 0530 | 63 | 245.00 | 6 | 22 | 18 | 40 | 14 | no | APET/APMT/APKT 16... |
| 0540 | 80 | 326.50 | 7 | 27 | 38 | 50 | 14 | no | APET/APMT/APKT 16... |
| 0550 | 100 | 392.00 | 8 | 32 | 45 | 50 | 14 | no | APET/APMT/APKT 16... |
| 0555 | 125 | 472.00 | 9 | 40 | 56 | 63 | 14 | no | APET/APMT/APKT 16... |
| 0560 | 160 | 618.00 (W280) | 10 | 40 | 63 | 100 | 14 | no | APET/APMT/APKT 16... |

## Long Edge Through Coolant Endmill - APKT 16....

**Design:** Shell end mill, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and slot cutting, inward copying, circular and peripheral milling as well as bore circular milling, universal application.

DIN 1835 B




| Order No. | Ø D mm | 2999 | Number of inserts | Dimensions Ø d g7 mm | Dimensions L mm | Dimensions l mm | Dimensions $l_1$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 0600 | 32 | 407.00 | 6 | 32 | 115 | 64 | 44 | 44 | yes | APET/APMT/APKT 16... |
| 0605 | 40 | 448.00 (W280) | 8 | 32 | 130 | 62 | 58 | 58 | yes | APET/APMT/APKT 16... |

## Long Edge Through Coolant Shellmill – APKT 16...

**Design:** High-performance shell end mill, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For corner and peripheral milling, universal application.

| Order No. | Ø D mm | 2999 | Number of inserts | Number of zc* | Dimensions Ø d H7 mm | Dimensions Ø $d_1$ mm | Dimensions L mm | Dimensions $l_1$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0610 | 50 | 488.50 | 6 | 3 | 27 | 17 | 50 | 30 | 30 | yes | APET/APMT/APKT 16... |
| 0615 | 63 | 651.00 | 12 | 4 | 27 | 19 | 60 | 44 | 44 | yes | APET/APMT/APKT 16... |
| 0620 | 80 | 732.50 | 15 | 5 | 32 | 25 | 60 | 44 | 44 | yes | APET/APMT/APKT 16... |
| | | (W280) | | | | | | | | | |

* Effective number of teeth for calculating feed.

## Spare part for end mill, shoulder milling cutter and shell end mill 90° with inner cooling

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0060 | TORX® screw for insert | 3.77 | – | 10 Δ |
| 0062 | TORX® screw for insert (shell end mill) | 4.10 | – | 10 Δ |
| 0050 | Screwdriver for TORX® T 15 x 80 mm | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert

ALU

UNI

| Order No. | ISO designation | Cutting materials | 2999 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5130 | APKT 1604PDER | ALU | 7.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 105–525<br>0.05–0.40<br>0.8–15 | –<br>–<br>– | –<br>–<br>– |
| 5133 | APMT 1604UNI | UNI | 7.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–195<br>0.2–0.35<br>1–13 | 80–115<br>0.2–0.26<br>1.0–9.8 | 130–85<br>0.2–0.35<br>1–13 | –<br>–<br>– | 25–55<br>0.2–0.21<br>1.0–7.8 | –<br>–<br>– |
| | | | (W290) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## ISO milling insert

AL

M

R

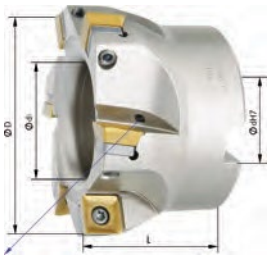
| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5127 | APET 160408 FR | AL N 9120 | 12.50 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 105–525<br>0.05–0.4<br>0.8–15 | –<br>–<br>– | –<br>–<br>– |
| 5112 | APKT 1604PDR | M PMK 9130 | 8.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–235<br>0.15–0.3<br>1–13 | 90–140<br>0.15–0.23<br>1–9.8 | 140–220<br>0.15–0.3<br>1–13 | –<br>–<br>– | 30–70<br>0.15–0.18<br>1–7.8 | –<br>–<br>– |
| 5115 | APKT 1604PDR | M U 9145 | 8.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–230<br>0.15–0.3<br>1–13 | 90–135<br>0.15–0.23<br>1–9.8 | 140–215<br>0.15–0.23<br>1–13 | –<br>–<br>– | 30–65<br>0.15–0.18<br>1–7.8 | –<br>–<br>– |
| 5100 | APKT 1604PDR | R PMK 9130 | 8.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 145–215<br>0.2–0.35<br>1–13 | 85–125<br>0.2–0.26<br>1–9.8 | 135–200<br>0.2–0.35<br>1–13 | –<br>–<br>– | 25–60<br>0.2–0.21<br>1–7.8 | –<br>–<br>– |
| 5103 | APKT 1604PDR | R U 9145 | 8.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 145–215<br>0.2–0.35<br>1–13 | 85–125<br>0.2–0.26<br>1–9.8 | 135–200<br>0.2–0.35<br>1–13 | –<br>–<br>– | 25–60<br>0.2–0.21<br>1–7.8 | –<br>–<br>– |
| | | | (W282) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## 90deg Approach Through Coolant Face Mill – SDMT 1205...

**Design:** Shoulder milling cutter 90°, extremely precise right angles, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For groove and corner milling, suitable for universal use, very soft cut. High surface quality



| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions Ø d1 mm | Dimensions L mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0400 | 50 | 254.50 | 5 | 22 | 18 | 40 | 10 | yes | SDMT 120508 |
| 0405 | 63 | 290.50 | 6 | 22 | 18 | 40 | 10 | yes | SDMT 120508 |
| 0410 | 80 | 318.00 | 6 | 27 | 38 | 50 | 10 | yes | SDMT 120508 |
| 0415 | 100 | 384.00 | 8 | 32 | 45 | 50 | 10 | yes | SDMT 120508 |
| 0420 | 125 | 538.00 (W280) | 9 | 40 | 56 | 63 | 10 | yes | SDMT 120508 |

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0045 | TORX® screw for insert | 4.10 | – | 10 Δ |
| 0050 | Screwdriver for TORX® T 15 x 80 mm | – (W281) | 4.66 (W543) | 1 |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert 15° positive with radius 0.8 mm

F M R

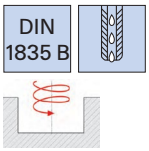
| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5061 | SDMT 120508SR | F PMK 9130 | 9.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 180–275<br>0.1–0.25<br>1–10 | 105–165<br>0.1–0.19<br>1–7.5 | 170–260<br>0.1–0.25<br>1–10 | 270–960<br>0.1–0.25<br>1–10 | 35–80<br>0.1–0.15<br>1–6 | –<br>–<br>– |
| 5062 | SDMT 120508SR | F U 9145 | 9.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–225<br>0.1–0.25<br>1–10 | 95–135<br>0.1–0.19<br>1.0–7.5 | 155–210<br>0.1–0.25<br>1–10 | –<br>–<br>– | 30–65<br>0.1–0.15<br>1–6 | –<br>–<br>– |
| 5063 | SDMT 120508SR | M KNH 9110 | 9.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 155–240<br>0.1–0.25<br>1–10 | 90–140<br>0.1–0.19<br>1–7.5 | 145–225<br>0.1–0.25<br>1–10 | –<br>–<br>– | 30–70<br>0.1–0.15<br>1–6 | 30–45<br>0.1–0.2<br>0.3–1.5 |
| 5066 | SDMT 120508SR | M PMK 9130 | 9.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 145–230<br>0.1–0.25<br>1–10 | 85–135<br>0.1–0.19<br>1–7.5 | 135–215<br>0.1–0.25<br>1–10 | –<br>–<br>– | 25–65<br>0.1–0.15<br>1–6 | 25–45<br>0.1–0.2<br>0.3–1.5 |
| 5069 | SDMT 120508SR | M U 9145 | 9.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 145–225<br>0.1–0.25<br>1–10 | 85–135<br>0.1–0.19<br>1–7.5 | 135–210<br>0.1–0.25<br>1–10 | –<br>–<br>– | 25–65<br>0.1–0.15<br>1–6 | –<br>–<br>– |
| 5067 | SDMT 120508SR | R PMK 9130 | 9.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 190–285<br>0.2–0.45<br>1–10 | 110–170<br>0.2–0.34<br>1–7.5 | 180–270<br>0.2–0.45<br>1–10 | –<br>–<br>– | 35–85<br>0.2–0.27<br>1–6 | –<br>–<br>– |
| 5068 | SDMT 120508SR | R U 91445 | 9.35 (W282) | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–225<br>0.1–0.25<br>1–10 | 95–135<br>0.1–0.19<br>1–7.5 | 155–210<br>0.1–0.25<br>1–10 | –<br>–<br>– | 30–65<br>0.1–0.15<br>1–6 | –<br>–<br>– |

Δ Can only be supplied as a whole packaging unit.

## Copy Endmill with Trough Coolant – RDHX/RDGT/RDHT...

**Design:** Face milling cutter and copy mill, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Universal use for plan and copy milling, circular and peripheral milling as well as bore circular milling, high feeds, suitable for tool and mould construction.

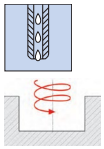


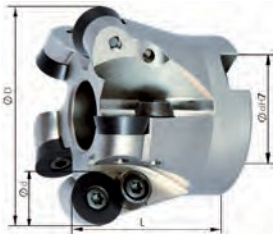
| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d g7 mm | Dimensions Ø d mm | Dimensions L mm | Dimensions $l_1$ mm | Dimensions $l_2$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0800 | 15 | 130.00 | 2 | 16 | 7 | 90 | 40 | 20 | 2.0 | yes | RDHX/RDGT/RDHT..07 |
| 0805 | 15 | 134.50 | 2 | 16 | 7 | 110 | 60 | 20 | 2.0 | yes | RDHX/RDGT/RDHT..07 |
| 0815 | 15 | 130.00 | 2 | 20 | 7 | 160 | 110 | 22 | 2.0 | yes | RDHX/RDGT/RDHT..07 |
| 0825 | 20 | 134.50 | 2 | 20 | 10 | 90 | 40 | 20 | 2.5 | yes | RDHX/RDGT/RDHT..10 |
| 0830 | 20 | 136.00 | 2 | 25 | 10 | 110 | 55 | 22 | 2.5 | yes | RDHX/RDGT/RDHT..10 |
| 0840 | 20 | 141.50 (W280) | 2 | 25 | 10 | 160 | 100 | 25 | 2.5 | yes | RDHX/RDGT/RDHT..10 |

## Copy Shellmill with Through Coolant – RDHX/RDGT/RDHT 12T3.../1604...

**Design:** Face milling cutter and copy mill, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Universal use for plan and copy milling, circular and peripheral milling as well as bore circular milling, high feeds, suitable for tool and mould construction.





| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d mm | Dimensions Ø d H7 mm | Dimensions L mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0900 | 52 | 177.50 | 5 | 12 | 22 | 50 | 3; 4 | yes | RDHX/RDGT/RDHT..12T3 |
| 0905 | 66 | 183.50 | 6 | 12 | 27 | 52 | 3; 4 | yes | RDHX/RDGT/RDHT..12T3 |
| 0910 | 80 | 204.00 | 7 | 12 | 27 | 52 | 3; 4 | yes | RDHX/RDGT/RDHT..12T3 |
| 0915 | 52 | 208.50 | 4 | 16 | 22 | 50 | 3; 4 | yes | RDHX/RDGT/RDHT..1604 |
| 0920 | 66 | 260.50 | 5 | 16 | 27 | 52 | 3; 4 | yes | RDHX/RDGT/RDHT..1604 |
| 0925 | 80 | 269.50 | 6 | 16 | 27 | 52 | 3; 4 | yes | RDHX/RDGT/RDHT..1604 |
| 0930 | 100 | 279.50 (W280) | 7 | 16 | 32 | 52 | 3; 4 | yes | RDHX/RDGT/RDHT..1604 |

## Spare part for copy mill with inner cooling

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0150 | TORX® screw for insert 07 | 4.40 | – | 10 Δ |
| 0140 | TORX® screw for insert 10 + 12 | 4.80 | – | 10 Δ |
| 0162 | TORX® screw for insert 16 | 5.05 | – | 10 Δ |
| 0160 | Tightening screw for insert 12 | 4.40 | – | 10 Δ |
| 0165 | Clamping shoe for insert 16 | 3.44 | – | 10 Δ |
| 0020 | Screwdriver for TORX® T 7 x 60 mm | – | 4.52 | – |
| 0050 | Screwdriver for TORX® insert 10 + 12 T 15 x 80 mm | – | 4.66 | – |
| 0060 | Screwdriver for TORX® screw insert 16 T 20 x 100 mm | – | 4.79 | – |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

Clamping shoe for RD

Tightening screw

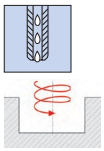
TORX® screwdriver

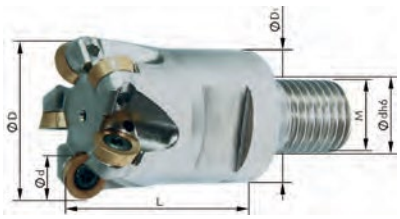
## Screw In Copy Mill – RD...

**Design:** Face milling cutter and copy mill (screw-in cutter), tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Universal use for plan and copy milling, suitable for tool and mould construction, for diagonal and axial insertion as well as bore circular milling.

**Note:** Extension for screw-in cutter see 📖 3/40, 3/57, 3/66.






| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d h6 mm | Dimensions Ø d mm | Dimensions L mm | Dimensions Ø $D_1$ mm | M | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1010 | 15 | 106.50 | 2 | 8.5 | 7 | 28 | 12.8 | M8 | 2.0 | yes | RDHX/RDGT/RDHT..07 |
| 1015 | 16 | 112.00 | 3 | 8.5 | 7 | 28 | 12.8 | M8 | 2.0 | yes | RDHX/RDGT/RDHT..07 |
| 1020 | 20 | 143.50 | 4 | 10.5 | 7 | 28 | 17.8 | M10 | 2.0 | yes | RDHX/RDGT/RDHT..07 |
| 1025 | 25 | 158.00 | 5 | 12.5 | 7 | 28 | 12.8 | M12 | 2.0 | yes | RDHX/RDGT/RDHT..07 |
| 1030 | 20 | 143.50 | 2 | 10.5 | 10 | 28 | 17.8 | M10 | 2.5 | yes | RDHX/RDGT/RDHT..10 |
| 1035 | 25 | 160.00 | 3 | 12.5 | 10 | 32 | 20.8 | M12 | 2.5 | yes | RDHX/RDGT/RDHT..10 |
| 1040 | 30 | 154.00 | 4 | 17.0 | 10 | 42 | 28.8 | M16 | 2.5 | yes | RDHX/RDGT/RDHT..10 |
| 1045 | 35 | 178.00 | 5 | 17.0 | 10 | 42 | 28.8 | M16 | 2.5 | yes | RDHX/RDGT/RDHT..10 |
| 1050 | 24 | 175.00 | 2 | 12.5 | 12 | 32 | 20.8 | M12 | 3.0 | yes | RDHX/RDGT/RDHT..12T3 |
| 1055 | 35 | 178.50 | 3 | 17.0 | 12 | 42 | 28.8 | M16 | 3.0 | yes | RDHX/RDGT/RDHT..12T3 |
| 1070 | 42 | 181.50 | 4 | 17.0 | 12 | 42 | 28.8 | M16 | 3.0 | yes | RDHX/RDGT/RDHT..12T3 |
| 1075 | 32 | 154.00 | 2 | 17.0 | 16 | 43 | 28.8 | M16 | 4.0 | yes | RDHX/RDGT/RDHT..1604 |
| | | (W280) | | | | | | | | | |

## Spare part for copy mill (screw-in cutter) with inner cooling

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0150 | TORX® screw for insert 07 | 4.40 | – | 10 Δ |
| 0140 | TORX® screw for insert 10 + 12 | 4.80 | – | 10 Δ |
| 0160 | Tightening screw for insert 12 | 4.40 | – | 10 Δ |
| 0162 | TORX® screw for insert 16 | 5.05 | – | 10 Δ |
| 0010 | Screwdriver for TORX® insert 05 T 6 x 60 mm | – | 4.55 | – |
| 0020 | Screwdriver for TORX® insert 07 T 7 x 60 mm | – | 4.52 | – |
| 0050 | Screwdriver for TORX® insert 10 - 12 T 15 x 80 mm | – | 4.66 | – |
| 0060 | Screwdriver for TORX® insert 16 T 20 x 100 mm | – | 4.79 | – |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

Tightening screw

TORX® screwdriver

## ISO milling insert

**Design:** Round, 15° positive.

RDHT-AL

RDMX

RDHX

RDGT

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5203 | RDHT 0702MO | AL N 9120 | 5.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 180–610<br>0.1–0.2<br>0.3–2 | –<br>–<br>– | –<br>–<br>– |
| 5206 | RDHT 1003MO | AL N 9120 | 6.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 155–610<br>0.1–0.3<br>0.3–2.5 | –<br>–<br>– | –<br>–<br>– |
| | | | (W282) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.
Continued overleaf

## ISO milling insert

Continued

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed<br>Feed<br>Cutting depth | P<br>Steel | M<br>Stainless | K<br>Cast iron | N<br>Aluminium | S<br>Super-alloy | H<br>Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5209 | RDHT 12T3MO | AL N 9120 | 7.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 155–610<br>0.1–0.3<br>0.3–3 | –<br>–<br>– | –<br>–<br>– |
| 5212 | RDHT 1604MO | AL N 9120 | 9.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 140–610<br>0.1–0.4<br>0.3–4 | –<br>–<br>– | –<br>–<br>– |
| 5178 | RDMX 1003MOT | KH 9105 | 5.05 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 220–315<br>0.1–0.3<br>0.5–2.5 | 130–185<br>0.1–0.3<br>0.5–2.5 | 205–295<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | –<br>–<br>– | 40–60<br>0.05–0.3<br>0.1–1.5 |
| 5180 | RDMX 1003MOT | PK 9125 | 5.05 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 200–300<br>0.1–0.3<br>0.5–2.5 | 120–180<br>0.1–0.3<br>0.5–2.5 | 190–285<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5182 | RDMX 1003MOT | PK 9140 | 5.05 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 170–225<br>0.1–0.3<br>0.5–2.5 | 100–135<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5184 | RDMX 12T3MOT | KH 9105 | 5.90 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 210–305<br>0.1–0.35<br>1–3 | 125–180<br>0.1–0.35<br>1–3 | 195–285<br>0.1–0.35<br>1–3 | –<br>–<br>– | –<br>–<br>– | 40–60<br>0.05–0.3<br>0.1–1.5 |
| 5186 | RDMX 12T3MOT | PK 9125 | 5.90 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–295<br>0.1–0.35<br>1–3 | 110–175<br>0.1–0.35<br>1–3 | 175–280<br>0.1–0.35<br>1–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5188 | RDMX 12T3MOT | PK 9140 | 5.90 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–215<br>0.1–0.35<br>1–3 | 95–125<br>0.1–0.35<br>1–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5190 | RDMX 1604MOT | KH 9105 | 7.25 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–260<br>0.2–0.4<br>1–4 | 115–155<br>0.2–0.4<br>1–4 | 185–245<br>0.2–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | 35–50<br>0.05–0.3<br>0.1–1.5 |
| 5192 | RDMX 1604MOT | PK 9125 | 7.25 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–260<br>0.2–0.4<br>1–4 | 115–155<br>0.2–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5194 | RDMX 1604MOT | PK 9140 | 7.25 NEW | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–260<br>0.2–0.4<br>1–4 | 115–155<br>0.2–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5215 | RDHX 0702MOT | KH 9105 | 5.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 220–295<br>0.1–0.2<br>0.5–2 | 130–175<br>0.1–0.15<br>0.5–1.5 | 205–280<br>0.1–0.2<br>0.5–2 | –<br>–<br>– | –<br>–<br>– | 40–55<br>0.1–0.2<br>0.3–1.5 |
| 5218 | RDHX 0702MOT | PK 9125 | 5.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 210–295<br>0.1–0.2<br>0.5–2 | 125–175<br>0.1–0.15<br>0.5–1.5 | 195–280<br>0.1–0.2<br>0.5–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5221 | RDHX 1003MOT | KH 9105 | 5.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–295<br>0.1–0.3<br>0.5–2.5 | 115–175<br>0.1–0.23<br>0.5–1.9 | 185–280<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | –<br>–<br>– | 35–55<br>0.1–0.2<br>0.3–1.5 |
| 5224 | RDHX 1003MOT | PK 9125 | 5.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–295<br>0.1–0.3<br>0.5–2.5 | 110–175<br>0.1–0.23<br>0.5–1.9 | 175–280<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5227 | RDHX 1003MOT | PK 9140 | 5.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 180–275<br>0.1–0.3<br>0.5–2.5 | 105–165<br>0.1–0.23<br>0.5–1.9 | 170–260<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | –<br>–<br>– | 35–55<br>0.1–0.2<br>0.3–1.5 |
| 5245 | RDHX 12T3MOT | KH 9105 | 6.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–280<br>0.1–0.35<br>1–3 | 110–165<br>0.1–0.26<br>1–2.3 | 175–265<br>0.1–0.35<br>1–3 | –<br>–<br>– | –<br>–<br>– | 35–55<br>0.1–0.2<br>0.3–1.5 |
| 5230 | RDHX 12T3MOT | PK 9125 | 6.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 175–275<br>0.1–0.35<br>1–3 | 105–165<br>0.1–0.26<br>1–2.3 | 165–260<br>0.1–0.35<br>1–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5233 | RDHX 12T3MOT | PK 9140 | 6.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 170–255<br>0.1–0.35<br>1–3 | 100–150<br>0.1–0.26<br>1–2.3 | 160–240<br>0.1–0.35<br>1–3 | –<br>–<br>– | –<br>–<br>– | 30–50<br>0.1–0.2<br>0.3–1.5 |
| 5242 | RDHX 1604MOT | KH 9105 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 175–240<br>0.2–0.4<br>1–4 | 105–140<br>0.2–0.3<br>1–3 | 165–225<br>0.2–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | 35–45<br>0.1–0.2<br>0.3–1.5 |
| 5236 | RDHX 1604MOT | PK 9125 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–230<br>0.2–0.4<br>1–4 | 95–135<br>0.2–0.3<br>1–3 | 155–215<br>0.2–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5239 | RDHX 1604MOT | PK 9140 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–215<br>0.2–0.4<br>1–4 | 95–125<br>0.2–0.3<br>1–3 | 150–200<br>0.2–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | 30–40<br>0.1–0.2<br>0.3–1.5 |
| 5263 | RDGT 1003MOT | PK 9125 | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–325<br>0.1–0.3<br>0.5–2.5 | 120–195<br>0.1–0.23<br>0.5–1.9 | 190–305<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5266 | RDGT 1003MOT | PM 9140 | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 200–305<br>0.1–0.3<br>0.5–2.5 | 120–180<br>0.1–0.23<br>0.5–1.9 | 190–285<br>0.1–0.3<br>0.5–2.5 | –<br>–<br>– | 40–90<br>0.1–0.18<br>0.5–1.5 | 40–60<br>0.1–0.2<br>0.3–1.5 |
| 5272 | RDGT 12T3MOT | PK 9125 | 6.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–305<br>0.1–0.35<br>1–3 | 115–180<br>0.1–0.26<br>1–2.3 | 185–285<br>0.1–0.35<br>1–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5275 | RDGT 12T3MOT | PM 9140 | 6.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 190–280<br>0.1–0.35<br>1–3 | 110–165<br>0.1–0.26<br>1–2.3 | 180–265<br>0.1–0.35<br>1–3 | –<br>–<br>– | 35–80<br>0.1–0.21<br>1–1.18 | 35–55<br>0.1–0.2<br>0.3–1.5 |

(W282)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## ISO milling insert

Continued

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5281 | RDGT 1604MOT | PK 9125 | 8.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–305<br>0.1–0.4<br>1–4 | 110–180<br>0.1–0.3<br>1–3 | 175–285<br>0.1–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5284 | RDGT 1604MOT | PM 9140 | 8.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 180–280<br>0.1–0.4<br>1–4 | 105–165<br>0.1–0.3<br>1–3 | 170–265<br>0.1–0.4<br>1–4 | –<br>–<br>– | 35–80<br>0.1–0.24<br>1–2.4 | 35–55<br>0.1–0.2<br>0.3–1.5 |

(W282)

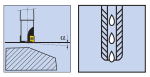
Δ Can only be supplied as a whole packaging unit.

## 90deg Approach Aluminium Facemill with Through Coolant – VCGT 2205...

**Design:** Shell-type milling cutter 90°, tool carrier nickel-plated.

**Supplied without indexable inserts, without screwdriver.**

**Application:** Suitable for corner, face and slot cutting as well as for angled plunge cutting. For universal use in tool- and mould-making.



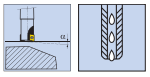
| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions L mm | Dimensions Ø $d_1$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 1310 | 50 | 242.50 | 3 | 22 | 56 | 40 | 16 | yes | VCGT 220530 |
| 1315 | 63 | 270.00 | 4 | 22 | 56 | 50 | 16 | yes | VCGT 220530 |
| 1320 | 80 | 324.50 (W280) | 5 | 27 | 56 | 63 | 16 | yes | VCGT 220530 |

## 90deg Approach Aluminium Screw In Cutter with Through Coolant – VCGT 2205...

**Design:** Copy mill 90° (screw-in cutter), tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Suitable for corner, face and slot cutting as well as for angled plunge cutting. For universal use in tool- and mould-making.

**Note:** Extension for screw-in cutter see 3/40, 3/57, 3/66.



| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d h7 mm | Dimensions L mm | Dimensions M | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 1325 | 32 | 162.50 | 2 | 17 | 48 | M16 | 16 | yes | VCGT 220530 |
| 1330 | 40 | 231.00 (W280) | 3 | 17 | 48 | M16 | 16 | yes | VCGT 220530 |

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0190 | TORX® screw Ø 32–80 mm | 4.10 | – | 10 Δ |
| 0060 | Screwdriver for TORX® 20 x 100 mm | – (W281) | 4.79 (W543) | 1 |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert for aluminium work

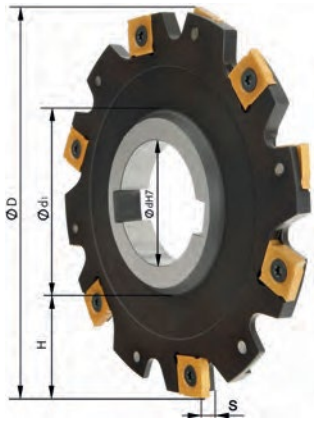
| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5483 | VCGT 220530 | ALU30 R3 | 12.85 (W282) | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 180–350<br>0.05–2.5<br>0.5–16 | –<br>–<br>– | –<br>–<br>– |

Δ Can only be supplied as a whole packaging unit.

## Disc Mill – SNHQ 11...

**Design:** Disc mill with screwed inserts, axial angle = 2°30' - radial angle 15°.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For slotting and cutting off.

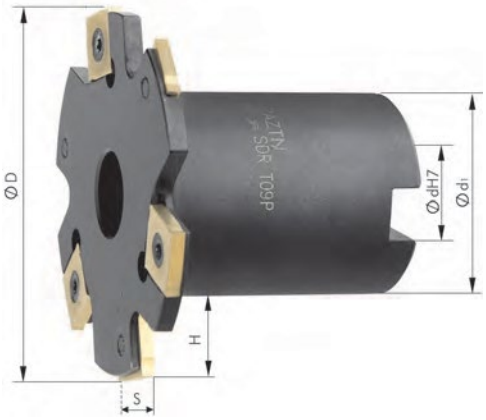



| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions H mm | Dimensions s mm | Dimensions Ø $d_1$ mm | Cutting depth ap/max. mm | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 1400 | 80 | 463.50 | 8 | 27 | 18 | 4 | 42 | 18 | SNHQ 1102 |
| 1405 | 80 | 463.50 | 8 | 27 | 18 | 5 | 42 | 18 | SNHQ 1103 |
| 1410 | 80 | 463.50 | 8 | 27 | 18 | 6 | 42 | 18 | SNHQ 1203 |
| 1415 | 80 | 463.50 | 8 | 27 | 18 | 8 | 42 | 18 | SNHQ 1204 |
| 1420 | 100 | 577.00 | 10 | 32 | 25 | 6 | 48 | 25 | SNHQ 1203 |
| 1425 | 100 | 553.00 | 10 | 32 | 25 | 8 | 48 | 25 | SNHQ 1204 |
| 1430 | 100 | 581.50 | 10 | 32 | 25 | 10 | 48 | 25 | SNHQ 1205 |
| 1435 | 100 | 577.00 | 10 | 32 | 25 | 12 | 48 | 25 | SNHQ 1207 |
| 1440 | 125 | 632.00 | 12 | 40 | 31 | 6 | 58 | 31 | SNHQ 1203 |
| 1445 | 125 | 652.00 | 12 | 40 | 31 | 8 | 58 | 31 | SNHQ 1204 |
| 1450 | 125 | 667.00 | 12 | 40 | 31 | 10 | 58 | 31 | SNHQ 1205 |
| 1455 | 125 | 667.00 | 12 | 40 | 31 | 12 | 58 | 31 | SNHQ 1207 |
| 1460 | 160 | 737.50 | 16 | 40 | 44 | 6 | 58 | 44 | SNHQ 1203 |
| 1465 | 160 | 737.50 | 16 | 40 | 44 | 8 | 58 | 44 | SNHQ 1204 |
| 1470 | 160 | 791.00 | 16 | 40 | 44 | 10 | 58 | 44 | SNHQ 1205 |
| 1475 | 160 | 791.00 | 16 | 40 | 44 | 12 | 58 | 44 | SNHQ 1207 |
| 1480 | 160 | 791.00 | 15 | 40 | 44 | 14 | 58 | 44 | SNHQ 1207 |
| 1485 | 200 | 917.50 | 18 | 50 | 62 | 6 | 72 | 62 | SNHQ 1203 |
| 1490 | 200 | 940.50 | 18 | 50 | 62 | 10 | 72 | 62 | SNHQ 1205 |
| 1495 | 200 | 977.00 (W280) | 18 | 50 | 62 | 14 | 72 | 62 | SNHQ 1207 |

## Disc Mill – SNHQ 12...

**Design:** Disc mill with screwed inserts, axial angle 2°30' - radial angle 15°.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For slotting and cutting off.




| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d H7 mm | Dimensions H mm | Dimensions s mm | Dimensions Ø $d_1$ mm | Cutting depth ap/max. mm | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 1600 | 63 | 448.00 | 6 | 16 | 10.5 | 4 | 34 | 10.5 | SNHQ 1102... |
| 1610 | 63 | 448.00 | 6 | 16 | 10.5 | 6 | 34 | 10.5 | SNHQ 1203... |
| 1615 | 80 | 498.50 | 8 | 22 | 17.5 | 5 | 40 | 17.5 | SNHQ 1103... |
| 1620 | 80 | 498.50 | 8 | 22 | 17.5 | 6 | 40 | 17.5 | SNHQ 1203... |
| 1625 | 100 | 563.00 | 10 | 27 | 23.5 | 6 | 48 | 23.5 | SNHQ 1203... |
| 1630 | 125 | 625.50 | 12 | 40 | 24.0 | 6 | 70 | 24.0 | SNHQ 1203... |
| 1635 | 160 | 759.00 (W280) | 16 | 40 | 41.0 | 10 | 70 | 41.0 | SNHQ 1205 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Spare part for disc mill with and without collar

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0100 | TORX® screw for insert SNHQ 1102 | 3.32 | – | 10 Δ |
| 0105 | TORX® screw for insert SNHQ 1103 | 3.32 | – | 10 Δ |
| 0110 | TORX® screw for insert SNHQ 1203 | 3.55 | – | 10 Δ |
| 0115 | TORX® screw for insert SNHQ 1204 | 3.55 | – | 10 Δ |
| 0120 | TORX® screw for insert SNHQ 1205 | 3.55 | – | 10 Δ |
| 0125 | TORX® screw for insert SNHQ 1207 | 3.55 | – | 10 Δ |
| 0035 | Screwdriver for TORX® T 9 x 60 mm for insert SNHQ 11 | – | 4.52 | 1 |
| 0050 | Screwdriver for TORX® T 15 x 80 mm for insert SNHQ 12 | – | 4.66 | 1 |

(W281) (W543)

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## Milling insert negative for disc mill

M

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5500 | SNHQ 1102AZTN | M PMK 9130 | 14.90 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 220–255<br>0.2–0.4<br>– | 100–125<br>0.2–0.35<br>– | 230–270<br>0.2–0.5<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5503 | SNHQ 1102AZTN | M U 9145 | 14.90 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 165–210<br>0.2–0.4<br>– | 75–100<br>0.2–0.5<br>– | 100–150<br>0.2–0.5<br>– | –<br>–<br>– | 30–70<br>0.1–0.2<br>– | –<br>–<br>– |
| 5506 | SNHQ 1103AZTN | M PMK 9130 | 14.90 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 220–255<br>0.2–0.4<br>– | 230–270<br>0.2–0.35<br>– | 230–270<br>0.2–0.5<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5509 | SNHQ 1103AZTN | M U 9145 | 14.90 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 165–210<br>0.2–0.4<br>– | 75–100<br>0.2–0.35<br>– | 100–150<br>0.2–0.5<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5512 | SNHQ 1203AZTN | PMK 9130 | 15.40 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 230–270<br>0.2–0.4<br>– | 135–160<br>0.2–0.3<br>– | 215–255<br>0.2–0.4<br>– | 345–945<br>0.2–0.4<br>– | –<br>–<br>– | –<br>–<br>– |
| 5515 | SNHQ 1203AZTN | M U 9145 | 15.40 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 230–270<br>0.2–0.4<br>– | 135–160<br>0.2–0.3<br>– | 215–255<br>0.2–0.4<br>– | –<br>–<br>– | 30–70<br>0.1–0.2<br>– | –<br>–<br>– |
| 5518 | SNHQ 1204AZTN | PMK 9130 | 16.65 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 215–265<br>0.2–0.4<br>– | 125–155<br>0.2–0.3<br>– | 200–250<br>0.2–0.4<br>– | 320–925<br>0.2–0.4<br>– | –<br>–<br>– | –<br>–<br>– |
| 5521 | SNHQ 1204AZTN | M U 9145 | 16.65 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 225–255<br>0.2–0.4<br>– | 135–150<br>0.2–0.3<br>– | 210–240<br>0.2–0.4<br>– | –<br>–<br>– | 30–70<br>0.1–0.2<br>– | –<br>–<br>– |
| 5524 | SNHQ 1205AZTN | PMK 9130 | 17.60 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 205–255<br>0.2–0.5<br>– | 120–150<br>0.2–0.38<br>– | 190–240<br>0.2–0.5<br>– | 305–890<br>0.2–0.5<br>– | –<br>–<br>– | –<br>–<br>– |
| 5527 | SNHQ 1205AZTN | M U 9145 | 17.60 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 210–255<br>0.2–0.5<br>– | 125–150<br>0.2–0.38<br>– | 195–240<br>0.2–0.5<br>– | –<br>–<br>– | 30–70<br>0.1–0.2<br>– | –<br>–<br>– |
| 5530 | SNHQ 1207AZTN | PMK 9130 | 19.00 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 195–250<br>0.2–0.5<br>– | 115–150<br>0.2–0.38<br>– | 185–235<br>0.2–0.5<br>– | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5533 | SNHQ 1207AZTN | M U 9145 | 19.00 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 205–250<br>0.2–0.5<br>– | 120–150<br>0.2–0.38<br>– | 190–235<br>0.2–0.5<br>– | –<br>–<br>– | 30–70<br>0.1–0.2<br>– | –<br>–<br>– |

(W282)

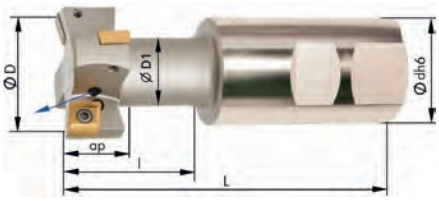
Δ Can only be supplied as a whole packaging unit.

## T-Slot Cutter with Through Coolant – CCMX 0603/08T3/09T3...

**Design:** T-slot end mill cylindrical 90°, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For cutting T-slots.

DIN 1835 B




| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d h6 mm | Dimensions L mm | Dimensions l mm | Dimensions Ø D1 mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 1700 | 25 | 321.50 | 2 | 25 | 86 | 25 | 12 | 11 | yes | CCMX 0603 |
| 1705 | 32 | 350.50 | 2 | 32 | 98 | 33 | 16 | 14 | yes | CCMX 08T3 |
| 1710 | 40 | 412.50 (W280) | 4 | 32 | 105 | 41 | 20 | 18 | yes | CCMX 09T3 |

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0050 | TORX® screw Ø D 25 mm | 2.96 | – | 10 Δ |
| 0005 | TORX® screw Ø D 32 + 40 mm | 3.06 | – | 10 Δ |
| 0020 | Screwdriver for TORX® insert 06 T 7 x 60 mm | – | 4.52 | 1 |
| 0035 | Screwdriver for TORX® insert 08+09 T 9 x 60 mm | – | 4.52 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## Insert 7° positive

M

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5560 | CCMX 060304S | M PMK 9130 | 8.20 | 10 Δ | Vc m/min.<br>f/t mm/tooth | 200–280<br>0.08–0.14 | 80–120<br>0.08–0.14 | 140–220<br>0.08–0.14 | 300–650<br>0.08–0.14 | 35–60<br>0.05–0.08 | –<br>– |
| 5563 | CCMX 08T308S | M PMK 9130 | 9.15 | 10 Δ | Vc m/min.<br>f/t mm/tooth | 200–280<br>0.10–0.16 | 80–120<br>0.10–0.16 | 140–220<br>0.10–0.16 | 300–650<br>0.10–0.16 | 35–60<br>0.06–0.10 | –<br>– |
| 5566 | CCMX 09T308S | M PMK 9130 | 9.35 | 10 Δ | Vc m/min.<br>f/t mm/tooth | 200–280<br>0.10–0.18 | 80–120<br>0.10–0.18 | 140–220<br>0.10–0.18 | 300–650<br>0.10–0.18 | 35–60<br>0.08–0.12 | –<br>– |
| | | | (W282) | | | | | | | | |

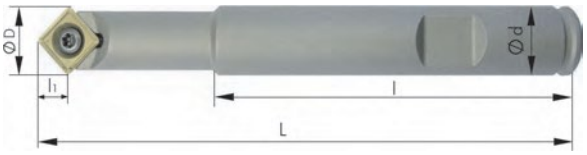
Δ Can only be supplied as a whole packaging unit.

## Chamfer and Centering Cutter 45deg – SDET 08....

**Design:** Cutter and centre bit 45° with cylindrical shank, pointed angle 90°.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For centring, chamfering, edge-milling and V-groove cutting.

DIN 1835 B




| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d g7 mm | Dimensions L mm | Dimensions l mm | Dimensions $l_1$ mm | Cutting depth ap/max. mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 1750 | 12 | 88.00 (W280) | 1 | 12 | 90 | 60 | 6.5 | 6.0 | no | SDET 082508 |

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0030 | TORX® screw for insert | 4.10 | – | 10 Δ |
| 0035 | Screwdriver for TORX® T 9 x 60 mm | – (W281) | 4.52 (W543) | 1 |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## Centring insert

U

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5570 | SDET 082508 | U 9135 | 17.45 (W282) | 10 Δ | Vc m/min. f/t mm/tooth ap/mm | 35–70 0.08–0.20 | 35–50 0.08–0.13 | 35–70 0.15–0.60 | – – | – – | – – |

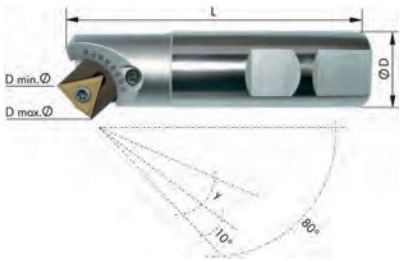
Δ Can only be supplied as a whole packaging unit.

## Adjustable Angle Cutter 10–80deg – TCGT/TCMT 16T3...

**Design:** Adjustable chamfer cutter with cylinder shank, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For deburring and chamfering.

DIN 1835 B




| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø D min. mm | Dimensions Ø D max. mm | Dimensions Y | Dimensions L mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 1840 | 25 | 215.00 | 1 | 5.0 | 32.0 | 10° | 100 | no | TCGT/TCMT16T3 |
| | | | | 5.5 | 31.0 | 15° | | | |
| | | | | 7.0 | 34.5 | 30° | | | |
| | | | | 11.0 | 33.5 | 45° | | | |
| | | | | 16.0 | 31.5 | 60° | | | |
| | | | | 21.0 | 26.5 | 75° | | | |
| | | | | 23.0 | 27.0 | 80° | | | |

(W280)

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5840 | 5886 | PU |
|---|---|---|---|---|---|
| 0128 | TORX® screw for insert TC.. 16T3 | 4.10 | – | – | 10 Δ |
| 0196 | TORX® screw for insert SC. 1204.. | 4.10 | – | – | 10 Δ |
| 0130 | Hexagon socket tightening screw | 4.10 | – | – | 10 Δ |
| 0135 | Box for inserts 16 TC | 34.30 | – | – | 1 |
| 0040 | Allen key 4 mm | – | 0.28 | – | 1 |
| 0050 | Screwdriver for TORX® T 15 x 80 mm | – | – | 4.66 | 1 |
| | | (W281) | (W528) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

Tightening screw

Cassette

Angled screwdriver

TORX® screwdriver

## ISO milling insert

format professional quality

TCGT

TCMT

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0364 | TCGT 16T304 | ALU | 7.60 | 10 Δ | VC m/min | – | – | – | 120–525 | – | – |
| | | | | | f/t mm/tooth | – | – | – | 0.10–0.24 | – | – |
| | | | | | ap/mm | – | – | – | 0.4–5.3 | – | – |
| 2339 | TCMT 16T308 | UNI | 5.40 | 10 Δ | VC m/min | 100–250 | 105–150 | 175–250 | – | 35–80 | – |
| | | | | | f/t mm/tooth | 0.1–0.35 | 0.15–0.26 | 0.15–0.35 | – | 0.15–0.21 | – |
| | | | | | ap/mm | 0.8–3 | 0.8–2.3 | 0.8–3 | – | 0.8–1.8 | – |
| | | | (W291) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## ISO milling insert

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0389 | TCMT 16T308 | M U 9035 | 7.45 | 10 Δ | VC m/min | 80–175 | 45–105 | 75–165 | 120–610 | 25–55 | – |
| | | | | | f/t mm/tooth | 0.08–0.48 | 0.08–0.36 | 0.08–0.48 | 0.08–0.48 | 0.08–0.35 | – |
| | | | | | ap/mm | 0.8–3 | 0.8–2.3 | 0.8–3 | 0.8–3 | 0.8–2.3 | – |
| | | | (W286) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## 45deg Chamfer Cutter TCGT/TCMT 1102.../16T3...

**Design:** Cylindrical countersink, for countersink screws, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For core drilling and countersinking.

DIN 1835 B

| Order No. | Ø D min. Ø $D_1$/ Ø D max. Ø $D_2$ mm | 2999 | Number of cutting edges | Kr | Dimensions Ø d h6 mm | Dimensions L mm | Dimensions $l_1$ mm | Dimensions M | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 1800 | 7/17 | 196.50 | 1 | 45° | 16 | 100 | 30 | M10 | no | TCGT/TCMT 1102 |
| 1805 | 11/21 | 199.00 | 2 | 45° | 16 | 100 | 30 | M12 | no | TCGT/TCMT 1102 |
| 1810 | 11/26 | 201.00 | 2 | 45° | 16 | 100 | 30 | M14 | no | TCGT/TCMT 16T3 |
| 1815 | 12/27 | 208.50 | 2 | 45° | 20 | 100 | 30 | M16 | no | TCGT/TCMT 16T3 |
| 1820 | 16/31 | 213.50 | 2 | 45° | 20 | 100 | 30 | M18 | no | TCGT/TCMT 16T3 |
| 1825 | 19/34 | 213.50 (W280) | 2 | 45° | 20 | 100 | 30 | M20 | no | TCGT/TCMT 16T3 |

## Counterbore Tool – CCGT/CCMT 0602.../09T3...

**Design:** Countersink cylindrical, for cylinder head screws, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For core drilling and countersinking.

DIN 1835A

| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d h6 mm | Dimensions L mm | Dimensions $l_1$ mm | For | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 1900 | 10 | 115.50 | 1 | 12 | 85 | 15 | M5 | yes | CCGT/CCMT0602 |
| 1905 | 11 | 115.50 | 1 | 12 | 85 | 15 | M6 | yes | CCGT/CCMT0602 |
| 1910 | 15 | 115.50 | 1 | 12 | 85 | 19 | M8 | yes | CCGT/CCMT0602 |
| 1915 | 18 | 120.50 | 1 | 16 | 95 | 30 | M10 | yes | CCGT/CCMT09T3 |
| 1920 | 20 | 133.00 | 1 | 16 | 95 | 32 | M12 | yes | CCGT/CCMT09T3 |
| 1925 | 24 | 186.00 | 1 | 16 | 95 | 32 | M14 | yes | CCGT/CCMT09T3 |
| 1930 | 26 | 186.00 | 1 | 16 | 95 | 32 | M16 | yes | CCGT/CCMT09T3 |
| 1935 | 30 | 190.50 | 2 | 25 | 110 | 45 | M18 | yes | CCGT/CCMT09T3 |
| 1940 | 33 | 191.50 (W280) | 2 | 25 | 110 | 45 | M20 | yes | CCGT/CCMT09T3 |

## Adjustable Core Drill Cutter – CC.../TC...0602/1102/16T3...

**Design:** Cutter for core drilling with cylinder shank, adjustable.
Shank ISO 9766 (Weldon), tool carrier nickel-plated
**Supplied without indexable inserts, without screwdriver.**

**Application:** For core drilling.

**CCGT/CCMT**

**TCGT/TCMT**

| Order No. | Ø D min./max. mm | 2999 | Number of cutting edges | Dimensions Ø d h6 mm | Dimensions L mm | Dimensions $l_1$ mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 2000 | 12/15 | 130.50 | 1 | 12 | 105 | 30 | no | CCGT/CCMT 0602... |
| 2025 | 12/15 | 159.50 | 1 | 12 | 175 | 30 | no | CCGT/CCMT 0602... |
| 2005 | 15/20 | 138.50 | 1 | 16 | 110 | 50 | no | CCGT/CCMT 0602... |
| 2030 | 15/20 | 170.50 | 1 | 16 | 175 | 50 | no | CCGT/CCMT 0602... |
| 2010 | 20/25 | 142.00 | 1 | 20 | 120 | 60 | no | TCGT/TCMT 1102... |
| 2035 | 20/25 | 175.00 | 1 | 20 | 200 | 60 | no | TCGT/TCMT 1102... |
| 2015 | 25/30 | 147.00 | 1 | 25 | 140 | 70 | no | TCGT/TCMT 16T3... |
| 2040 | 25/30 | 181.00 | 1 | 25 | 200 | 70 | no | TCGT/TCMT 16T3... |
| 2020 | 30/35 | 155.00 | 1 | 25 | 160 | 90 | no | TCGT/TCMT 16T3... |
| 2045 | 30/35 | 191.50 (W280) | 1 | 25 | 200 | 90 | no | TCGT/TCMT 16T3... |

## Spares for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0050 | TORX® screw for insert TC... 1102... | 2.96 | – | 10 Δ |
| 0060 | TORX® screw for insert TC... 16T3... | 3.77 | – | 10 Δ |
| 0030 | Screwdriver for TORX® insert 1102.. T 8 x 60 mm | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX® insert 16T3.. T 15 x 80 mm | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert 7° positive

ALU

UNI

CCGT ALU

CCMT UNI

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0361 | TCGT 110204 | ALU | 4.96 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–525<br>0.10–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0364 | TCGT 16T304 | ALU | 7.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–525<br>0.10–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| 2333 | TCMT 110208 | UNI | 3.93 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.8–3.0 | 50–85<br>0.08–0.18<br>0.8–2.3 | 80–135<br>0.08–0.24<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2339 | TCMT 16T308 | UNI | 5.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–175<br>0.08–0.30<br>0.8–3.0 | 55–105<br>0.08–0.23<br>0.8–2.3 | 90–165<br>0.08–0.30<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1138 | CCGT 060204 | ALU | 4.74 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–610<br>0.1–0.3<br>0.4–3.5 | –<br>–<br>– | –<br>–<br>– |
| 0128 | CCGT 09T304 | ALU | 6.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–610<br>0.1–0.3<br>0.4–3.5 | –<br>–<br>– | –<br>–<br>– |
| 2294 | CCMT 060204 | UNI | 3.82 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 105–160<br>0.08–0.24<br>0.5–3.0 | 60–95<br>0.08–0.11<br>0.5–2.3 | 95–150<br>0.08–0.15<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2297 | CCMT 060208 | UNI | 3.82 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3.0 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2303 | CCMT 09T308 | UNI | 4.79 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3.0 | 65–115<br>0.08–0.19<br>0.8–2.3 | 105–185<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## ISO milling insert 7° positive

M

R-EC

L-EC

CC.-M

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0392 | TCGT 110202 | R-EC U 9035 | 9.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–195<br>0.08–0.12<br>0.4–1.6 | 90–115<br>0.08–0.09<br>0.4–1.2 | 140–185<br>0.08–0.12<br>0.4–1.6 | 225–680<br>0.08–0.12<br>0.4–1.6 | 30–55<br>0.08–0.09<br>0.4–1.0 | –<br>–<br>– |
| 0395 | TCGT 110202 | L-EC U 9035 | 9.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–195<br>0.08–0.12<br>0.4–1.6 | 90–115<br>0.08–0.09<br>0.4–1.2 | 140–185<br>0.08–0.12<br>0.4–1.6 | 225–680<br>0.08–0.12<br>0.4–1.6 | 30–55<br>0.08–0.09<br>0.4–1.0 | –<br>–<br>– |
| 0374 | TCMT 110204 | M PMK 9030 | 5.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–195<br>0.15–0.24<br>0.4–2 | 80–115<br>0.15–0.18<br>0.4–1.5 | 125–185<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0389 | TCMT 16T308 | M U 9035 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–175<br>0.08–0.48<br>0.8–3 | 45–105<br>0.08–0.36<br>0.8–2.3 | 75–165<br>0.08–0.48<br>0.8–3 | 120–610<br>0.08–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– |
| 1118 | CCMT 060204 | M U 9035 | 4.62 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–160<br>0.1–0.3<br>1–4 | 55–95<br>0.1–0.23<br>1–3 | 90–150<br>0.1–0.3<br>1–4 | 140–560<br>0.1–0.3<br>1–4 | –<br>–<br>– | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## ISO milling insert 7° positive

Continued

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1124 | CCMT 060208 | M U 9035 | 4.62 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 100–190<br>0.1–0.4<br>1–4 | 60–110<br>0.1–0.3<br>1–3 | 95–180<br>0.1–0.4<br>1–4 | 150–665<br>0.1–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– |
| 0115 | CCMT 09T304 | M U 9035 | 5.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–160<br>0.1–0.3<br>1–4 | 55–95<br>0.1–0.23<br>1–3 | 90–150<br>0.1–0.3<br>1–4 | 140–560<br>0.1–0.3<br>1–4 | –<br>–<br>– | –<br>–<br>– |
| 0121 | CCMT 09T308 | M U 9035 | 5.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 100–190<br>0.1–0.4<br>1–4 | 60–110<br>0.1–0.3<br>1–3 | 95–180<br>0.1–0.4<br>1–4 | 150–665<br>0.1–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

## Front and Back Chamfer Cutter 45deg with Through Coolant – SOMT 09T3...

**Design:** Chamfer and milling countersink with cylindrical shank, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For universal use in milling chamfers, indentations and deburring at a 45 ° angle **as well as for forward and backward deburring.**

DIN 1835 B

| Order No. | Ø D mm | 2999 | Number of cutting edges | Dimensions Ø d h6 mm | Dimensions L mm | Cutting depth ap/max. mm | Dimensions l mm | Dimensions Ø $D_1$ mm | IC | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|
| 0380 | 8 | 121.50 | 1 | 16 | 90 | 4.5 | 27 | 20 | yes | SOMT 09T304... |
| 0385 | 16 | 177.00 | 2 | 16 | 110 | 4.5 | 27 | 28 | yes | SOMT 09T304... |
| 0390 | 25 | 192.50 | 3 | 25 | 125 | 4.5 | 42 | 38 | yes | SOMT 09T304... |

(W280)

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0030 | TORX® screw for insert | 4.10 | – | 10 Δ |
| 0035 | Screwdriver for TORX® T 9 x 60 mm | – | 4.52 | 1 |

(W281) (W543)

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert 18° positive

M

F

F-KH

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5042 | SOMT 09T304 | F KH 9105 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–220<br>0.08–0.35<br>0.5–8 | 65–130<br>0.08–0.26<br>0.5–6 | 105–205<br>0.08–0.35<br>0.5–8 | 170–770<br>0.08–0.35<br>0.5–8 | 20–65<br>0.08–0.21<br>0.5–4.8 | –<br>–<br>– |
| 5045 | SOMT 09T304 | F PMK 9130 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–215<br>0.08–0.35<br>0.5–8 | 65–125<br>0.08–0.26<br>0.5–6 | 105–200<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5060 | SOMT 09T304 | F U 9145 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–200<br>0.08–0.35<br>0.5–8 | 65–120<br>0.08–0.26<br>0.5–6 | 100–190<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | 20–60<br>0.08–0.21<br>0.5–4.8 | –<br>–<br>– |
| 5051 | SOMT 09T304 | M PMK 9130 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–215<br>0.08–0.35<br>0.5–8 | 65–125<br>0.08–0.26<br>0.5–6 | 105–200<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 5054 | SOMT 09T304 | M U 9145 | 8.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–200<br>0.08–0.35<br>0.5–8 | 65–120<br>0.08–0.26<br>0.5–6 | 100–190<br>0.08–0.35<br>0.5–8 | –<br>–<br>– | 20–60<br>0.08–0.21<br>0.5–4.8 | –<br>–<br>– |

(W282)

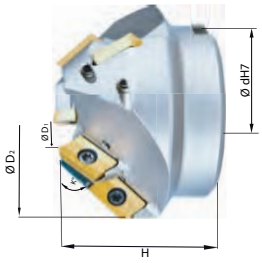
Δ Can only be supplied as a whole packaging unit.

## Long Edge Chamfer Cutter – 15/30/45/60/75deg – XPHT 16...

**Design:** Solid chamfer cutter, ensures quiet run and low-vibration machining due to very positive cutting geometry, tool carrier nickel-plated.
For universal rough milling.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For chamfering and edge-milling.

**Note:** Sturdy chamfer cutter for smooth running and low-vibration stock removal. This creates a good to excellent surface quality.




| Order No. | Dimensions K° | 2999 | Ø D min. Ø $D_1$/ Ø D max. Ø $D_2$ mm | Dimensions Ø d h7 mm | Dimensions H mm | zc* | Number of inserts | Cutting depth ap/max. mm | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0723 | 15 | 436.50 | 35/94.0 | 27 | 50 | 3 | 6 | 8.0 | XPHT 16.. |
| 0726 | 30 | 436.50 | 35/88.0 | 27 | 50 | 3 | 6 | 15.0 | XPHT 16.. |
| 0729 | 45 | 436.50 | 35/77.8 | 27 | 50 | 3 | 6 | 21.5 | XPHT 16.. |
| 0732 | 60 | 436.50 | 35/65.0 | 27 | 50 | 3 | 6 | 26.5 | XPHT 16.. |
| 0735 | 75 | 436.50 | 35/50.7 | 22 | 60 | 3 | 6 | 29.5 | XPHT 16.. |
| | | (W280) | | | | | | | |

* Effective number of teeth for feed calculation.

## Spare Parts for 2999 Style Cutters

| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0744 | TORX® screw for insert | 4.40 | – | 10 Δ |
| 0050 | Screwdriver for TORX® T 15 x 80 mm | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## ISO milling insert

AL N

PMK

| Order No. | ISO designation | Cutting materials | 2999 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5554 | XPHT 160408 | AL N 9120 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 105–505<br>0.05–0.3<br>0.8–15 | –<br>–<br>– | –<br>–<br>– |
| 5551 | XPHT 160412S | PM 9125 | 15.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–215<br>0.1–0.3<br>1.2–15 | 90–130<br>0.1–0.23<br>1.2–11.3 | 140–200<br>0.1–0.3<br>1.2–15 | –<br>–<br>– | 30–75<br>0.1–0.18<br>1.2–9 | –<br>–<br>– |
| 5548 | XPHT 160412S | PMK 9130 | 15.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–255<br>0.1–0.3<br>1.2–15 | 95–150<br>0.1–0.23<br>1.2–11.3 | 150–240<br>0.1–0.3<br>1.2–15 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| | | | (W282) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## Indexable Insert Through Coolant Drill x 3D

| Order No. | Dimensions | Milling inserts | Catalogue page | |
|---|---|---|---|---|
| 2999 5600 – 2999 5785 | Ø 15–40 mm | XPET 05/06/07/09/11/12...<br>SCET 05/06/07/09/12 | 2/187 | ● |

## Notes on using Indexable Insert Drills

Using indexing insert drills (short bore) achieves a multiplicity of productivity and cost savings with HSS drills. The optimum choice of carbide together with the right geometry and feed rate guarantees controlled chip formation.

**Requirements for good bore results as follows:**

- **Stable clamping**
- **Short overhangs, compact drill chuck**
- **Correct tool positioning for machine spindle**
- **Use of cooling oil or compressed air at sufficient pressure (chip removal)**

- **Warning**
  **With drill withdrawal a disc drops.**
  **Risk of accident with rotating workpieces.**
  **Please take precautions!**

**Application**

- **Universally applicable WP drill for use on lathes, drills and milling centres.**
- **Can be used as a stationary and rotating tool, both horizontally and vertically**
- **Cylindrical shank with face according to ISO 9766**
- **Bore depths up to 3 x D should not be exceeded**
- **With concave/oblique surfaces the feed rate should be reduced by ca. 30–50 %.**

**Advantages**

- **Drilling with indexable inserts - economic production of bores or through-holes and blind holes**
- **Very good machining performance with high cutting speeds and feed rates**
- **No running off of the bore axle**
- **Direction precise drilling**

## Recommended cutting data for indexable drills

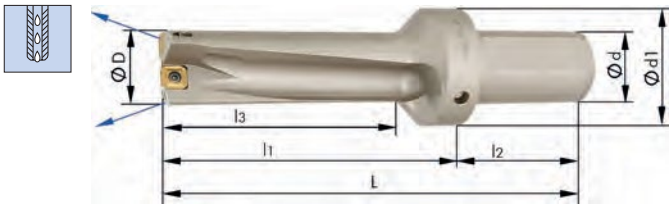
| Carbide<br>Varieties | Tensile strength<br>Rm N/mm² | Cutting speed<br>feed | Ø D mm<br>15–18.5 | Ø D mm<br>19–22 | Ø D mm<br>22.5–27 | Ø D mm<br>28–34 | Ø D mm<br>35–40 |
|---|---|---|---|---|---|---|---|
| P<br>Steel | < 450 | Vc m/min.<br>f mm/rev. | 250–300<br>0.05 | 250–300<br>0.06 | 250–300<br>0.07 | 250–300<br>0.08 | 250–300<br>0.09 |
| | 400– 700 | Vc m/min.<br>f mm/rev. | 230–270<br>0.10 | 231–270<br>0.12 | 232–270<br>0.14 | 233–270<br>0.16 | 234–270<br>0.18 |
| | 550– 900 | Vc m/min.<br>f mm/rev. | 180–230<br>0.11 | 180–230<br>0.15 | 180–230<br>0.18 | 180–230<br>0.20 | 180–230<br>0.22 |
| | 900–1200 | Vc m/min.<br>f mm/rev. | 100–180<br>0.10 | 100–180<br>0.15 | 100–180<br>0.18 | 100–180<br>0.20 | 100–180<br>0.22 |
| M<br>Stainless | | Vc m/min.<br>f mm/rev. | 120–200<br>0.07 | 120–200<br>0.09 | 120–200<br>0.11 | 120–200<br>0.12 | 120–200<br>0.13 |
| K<br>Cast | | Vc m/min.<br>f mm/rev. | 150–240<br>0.15 | 150–240<br>0.16 | 150–240<br>0.18 | 150–240<br>0.20 | 150–240<br>0.23 |
| N<br>Non-ferrous metals | | Vc m/min.<br>f mm/rev. | –<br>– | –<br>– | –<br>– | –<br>– | –<br>– |
| S<br>Super alloy | | Vc m/min.<br>f mm/rev. | 80–120<br>0.07 | 80–120<br>0.09 | 80–120<br>0.10 | 80–120<br>0.11 | 80–120<br>0.12 |
| H<br>Hard | | Vc m/min.<br>f mm/rev. | –<br>– | –<br>– | –<br>– | –<br>– | –<br>– |

## Indexable Insert Through Coolant Drill 3 x D

**Design:** Solid drill 3 x D with inserts. Cylindrical shank with straight clamping surface ISO 9766, tool carrier nickel-plated.

**Supplied without indexable inserts, without screwdriver.**

**Application:** Solid drill can be used horizontally and vertically, upright or rotating.

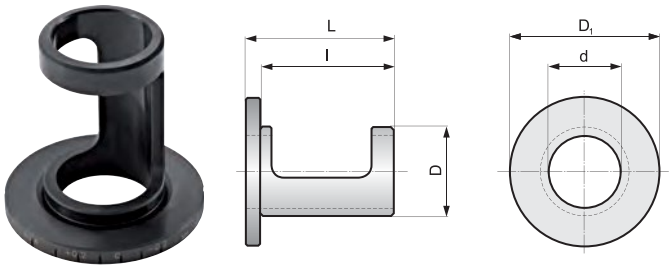



| Order No. | Ø D mm | 2999 | Dimensions L mm | Dimensions $l_1$ mm | Dimensions $l_2$ mm | Dimensions $l_3$ mm | Dimensions Ø d mm | Dimensions Ø $d_1$ mm | Cutting depth 3 x D max. mm | Radial adjustment (center offset) - mm | Radial adjustment (center offset) + mm | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5600 | 15.0 | 271.50 | 126.0 | 70.0 | 56 | 49.0 | 25 | 45 | 45.0 | 0.25 | 0.35 | XPET/SCET 0502... |
| 5605 | 15.5 | 271.50 | 127.5 | 71.5 | 56 | 50.8 | 25 | 45 | 45.5 | 0.30 | 0.35 | XPET/SCET 0502... |
| 5610 | 16.0 | 271.50 | 129.0 | 73.0 | 56 | 52.5 | 25 | 45 | 48.0 | 0.15 | 0.45 | XPET/SCET 0502... |
| 5615 | 16.5 | 271.50 | 130.5 | 74.5 | 56 | 54.2 | 25 | 45 | 49.5 | 0.15 | 0.40 | XPET/SCET 0502... |
| 5620 | 17.0 | 271.50 | 132.0 | 76.0 | 56 | 56.0 | 25 | 45 | 51.0 | 0.10 | 0.50 | XPET/SCET 0502... |
| 5625 | 17.5 | 271.50 | 133.5 | 77.5 | 56 | 57.2 | 25 | 45 | 52.5 | 0.50 | 0.50 | XPET 0602.../SCET 0502... |
| 5630 | 18.0 | 277.00 | 136.5 | 79.0 | 56 | 59.0 | 25 | 45 | 54.0 | 0.35 | 0.25 | XPET 0602.../SCET 0502... |
| 5635 | 18.5 | 289.50 | 138.0 | 80.5 | 56 | 60.7 | 25 | 45 | 55.5 | 0.35 | 0.25 | XPET 0602.../SCET 0502... |
| 5640 | 19.0 | 289.50 | 138.0 | 82.0 | 56 | 62.5 | 25 | 45 | 57.0 | 0.15 | 0.45 | XPET 0602.../SECT 0502... |
| 5645 | 19.5 | 289.50 | 139.5 | 83.5 | 56 | 63.2 | 25 | 45 | 58.5 | 0.25 | 0.40 | XPET/SCET 0602... |
| 5650 | 20.0 | 289.50 | 141.0 | 85.0 | 56 | 65.0 | 25 | 45 | 60.0 | 0.10 | 0.45 | XPET/SCET 0602... |
| 5655 | 20.5 | 289.50 | 142.5 | 86.5 | 56 | 66.7 | 25 | 45 | 61.5 | 0.10 | 0.50 | XPET/SCET 0602... |
| 5660 | 21.0 | 289.50 | 144.0 | 88.0 | 56 | 68.5 | 25 | 45 | 63.0 | 0.10 | 0.50 | XPET/SCET 0602... |
| 5665 | 21.5 | 289.50 | 145.5 | 89.5 | 56 | 70.2 | 25 | 45 | 64.5 | 0.35 | 0.50 | XPET 07.../SCET 0602... |
| 5670 | 22.0 | 292.50 | 147.0 | 91.0 | 56 | 72.0 | 25 | 45 | 66.0 | 0.45 | 0.50 | XPET 07.../SCET 0602... |
| 5675 | 22.5 | 292.50 | 148.5 | 92.5 | 56 | 73.8 | 25 | 45 | 67.5 | 0.35 | 0.50 | XPET/SCET 0703... |
| 5680 | 23.0 | 303.50 | 150.0 | 94.0 | 56 | 75.5 | 25 | 45 | 69.0 | 0.35 | 0.50 | XPET/SCET 0703... |
| 5685 | 23.5 | 303.50 | 151.5 | 95.5 | 56 | 77.2 | 25 | 45 | 70.5 | 0.10 | 0.50 | XPET/SCET 0703... |
| 5690 | 24.0 | 303.50 | 153.0 | 97.0 | 56 | 79.0 | 25 | 45 | 72.0 | 0.15 | 0.50 | XPET/SCET 0703... |
| 5695 | 24.5 | 303.50 | 154.5 | 98.5 | 56 | 80.8 | 25 | 50 | 73.5 | 0.10 | 0.50 | XPET/SCET 0703... |
| 5700 | 25.0 | 303.50 | 160.0 | 100.0 | 60 | 80.0 | 32 | 50 | 75.0 | 0.15 | 0.50 | XPET/SCET 0703... |
| 5705 | 25.5 | 303.50 | 161.5 | 101.5 | 60 | 81.8 | 32 | 50 | 76.5 | 0.50 | 0.10 | XPET/SCET 0703... |
| 5710 | 26.0 | 303.50 | 163.0 | 103.0 | 60 | 83.5 | 32 | 50 | 78.0 | 0.50 | 0.15 | XPET/SCET 0703... |
| 5715 | 26.5 | 303.50 | 164.5 | 104.5 | 60 | 85.2 | 32 | 50 | 79.5 | 0.50 | 0.10 | XPET 0903.../SCET 0703... |
| 5720 | 27.0 | 324.50 | 166.0 | 106.0 | 60 | 87.0 | 32 | 50 | 81.0 | 0.50 | 0.30 | XPET 0903.../SCET 0703... |
| 5725 | 28.0 | 347.50 | 169.0 | 109.0 | 60 | 90.5 | 32 | 50 | 84.0 | 0.30 | 0.50 | XPET 0903.../SCET 09T3... |
| 5730 | 29.0 | 347.50 | 172.0 | 112.0 | 60 | 94.0 | 32 | 50 | 87.0 | 0.20 | 0.50 | XPET 0903.../SCET 09T3... |
| 5735 | 30.0 | 347.50 | 175.0 | 115.0 | 60 | 97.5 | 32 | 50 | 90.0 | 0.15 | 0.50 | XPET 0903.../SCET 09T3... |
| 5740 | 31.0 | 347.50 | 178.0 | 118.0 | 60 | 101.0 | 32 | 50 | 93.0 | 0.15 | 0.50 | XPET 0903.../SCET 09T3... |
| 5745 | 32.0 | 370.00 | 191.0 | 121.0 | 68 | 100.5 | 40 | 59 | 96.0 | 0.50 | 0.35 | XPET 11T3.../SCET 09T3... |
| 5750 | 33.0 | 370.00 | 194.0 | 124.0 | 68 | 104.0 | 40 | 59 | 99.0 | 0.50 | 0.50 | XPET 11T3.../SCET 09T3... |
| 5755 | 34.0 | 370.00 | 197.0 | 127.0 | 68 | 107.5 | 40 | 59 | 102.0 | 0.25 | 0.50 | XPET 11T3.../SCET 09T3... |
| 5760 | 35.0 | 383.50 | 200.0 | 130.0 | 68 | 110.0 | 40 | 59 | 105.0 | 0.25 | 0.50 | XPET 11T3.../SCET 1204... |
| 5765 | 36.0 | 383.50 | 203.0 | 133.0 | 68 | 113.5 | 40 | 59 | 108.0 | 0.10 | 0.50 | XPET 11T3.../SCET 1204... |
| 5770 | 37.0 | 383.50 | 206.0 | 136.0 | 68 | 117.0 | 40 | 59 | 111.0 | 0.10 | 0.50 | XPET 11T3.../SCET 1204... |
| 5775 | 38.0 | 383.50 | 209.0 | 139.0 | 68 | 120.5 | 40 | 59 | 114.0 | 0.10 | 0.50 | XPET 11T3.../SCET 1204... |
| 5780 | 39.0 | 394.00 | 212.0 | 142.0 | 68 | 124.0 | 40 | 59 | 117.0 | 0.40 | 0.50 | XPET 12T3.../SCET 1204... |
| 5785 | 40.0 | 394.00 (W283) | 215.0 | 145.0 | 68 | 127.5 | 40 | 59 | 120.0 | 0.20 | 0.50 | XPET 12T3.../SCET 1204... |

## Eccentric Sleeve

**Design:** Adjusting sleeve for fine bore drilling, suitable for machining centres and lathes.

**Application:** For diameter adjustment in indexable inserts for solid drill




| Order No. | For shank Ø d mm | 2999 | Sizes d mm | Sizes $d_1$ mm | Dimensions L mm | Dimensions l mm | Ø adjustment range mm | Height adjustment mm |
|---|---|---|---|---|---|---|---|---|
| 5790 | 25 | 245.50 | 32 | 53 | 53 | 48 | +0.4; –0.2 | +0.2; –0.15 |
| 5795 | 32 | 292.00 (W281) | 40 | 58 | 58 | 53 | +0.4; –0.2 | +0.2; –0.15 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Inserts for Through Coolant 3 x D drills

XPET – inner

SCET – outer

| Order No. | ISO designation | 2999 | PU | Cutting materials | Cutting speed Feed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Solid drill Ø 15–17 mm** | | | | | | | | | | | |
| 5800 | XPET 0502AP | 9.05 | 10 Δ | U 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.05–0.11 | 80–140<br>0.05–0.08 | 130–225<br>0.05–0.11 | –<br>– | –<br>– | –<br>– |
| 5818 | SCET 050204 | 9.05 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.05–0.11 | 80–140<br>0.05–0.08 | 130–225<br>0.05–0.11 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 17.5–19.0 mm** | | | | | | | | | | | |
| 5803 | XPET 0602AP | 9.60 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.04–0.15 | 80–140<br>0.06–0.11 | 130–225<br>0.06–0.15 | –<br>– | –<br>– | –<br>– |
| 5818 | SCET 050204 | 9.05 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.05–0.11 | 80–140<br>0.05–0.08 | 130–225<br>0.05–0.11 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 19.5–21 mm** | | | | | | | | | | | |
| 5803 | XPET 0602AP | 9.60 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.04–0.15 | 80–140<br>0.06–0.11 | 130–225<br>0.06–0.15 | –<br>– | –<br>– | –<br>– |
| 5821 | SCET 060204 | 9.60 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.06–0.15 | 80–140<br>0.06–0.11 | 130–225<br>0.06–0.15 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 21.5–22 mm** | | | | | | | | | | | |
| 5806 | XPET 0703AP | 10.15 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.07–0.18 | 80–140<br>0.07–0.14 | 130–225<br>0.07–0.18 | –<br>– | –<br>– | –<br>– |
| 5821 | SCET 060204 | 9.60 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.06–0.15 | 80–140<br>0.06–0.11 | 130–225<br>0.06–0.15 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 22.5–26 mm** | | | | | | | | | | | |
| 5806 | XPET 0703AP | 10.15 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.07–0.18 | 80–140<br>0.07–0.14 | 130–225<br>0.07–0.18 | –<br>– | –<br>– | –<br>– |
| 5824 | SCET 070308 | 10.15 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.07–0.18 | 80–140<br>0.07–0.14 | 130–225<br>0.07–0.18 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 26.5–27 mm** | | | | | | | | | | | |
| 5809 | XPET 0903AP | 10.85 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.08–0.2 | 80–140<br>0.08–0.15 | 130–225<br>0.08–0.2 | –<br>– | –<br>– | –<br>– |
| 5824 | SCET 070308 | 10.15 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.07–0.18 | 80–140<br>0.07–0.14 | 130–225<br>0.07–0.18 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 28–31 mm** | | | | | | | | | | | |
| 5809 | XPET 0903AP | 10.85 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.08–0.2 | 80–140<br>0.08–0.15 | 130–225<br>0.08–0.2 | –<br>– | –<br>– | –<br>– |
| 5827 | SCET 09T308 | 10.85 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.08–0.2 | 80–140<br>0.08–0.15 | 130–225<br>0.08–0.2 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 32–34 mm** | | | | | | | | | | | |
| 5812 | XPET 11T3AP | 11.90 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.09–0.22 | 80–140<br>0.09–0.17 | 130–225<br>0.09–0.22 | –<br>– | –<br>– | –<br>– |
| 5827 | SCET 09T308 | 10.85 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.08–0.2 | 80–140<br>0.08–0.15 | 130–225<br>0.08–0.2 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 35–38 mm** | | | | | | | | | | | |
| 5812 | XPET 11T3AP | 11.90 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.09–0.22 | 80–140<br>0.09–0.17 | 130–225<br>0.09–0.22 | –<br>– | –<br>– | –<br>– |
| 5830 | SCET 120408 | 13.25 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.09–0.22 | 80–140<br>0.09–0.17 | 130–225<br>0.09–0.22 | –<br>– | –<br>– | –<br>– |
| **Solid drill Ø 39–40 mm** | | | | | | | | | | | |
| 5815 | XPET 12T3AP | 13.25 | 10 Δ | 9145 | Vc m/min.<br>f mm/rev | 140–240<br>0.09–0.22 | 80–140<br>0.09–0.17 | 130–225<br>0.09–0.22 | –<br>– | –<br>– | –<br>– |
| 5830 | SCET 120408 | 13.25 | 10 Δ | UD 9035 | Vc m/min.<br>f mm/rev | 140–240<br>0.09–0.22 | 80–140<br>0.09–0.17 | 130–225<br>0.09–0.22 | –<br>– | –<br>– | –<br>– |

(999)

Δ Can only be supplied as a whole packaging unit.

## Spare Parts for Indexable Drills

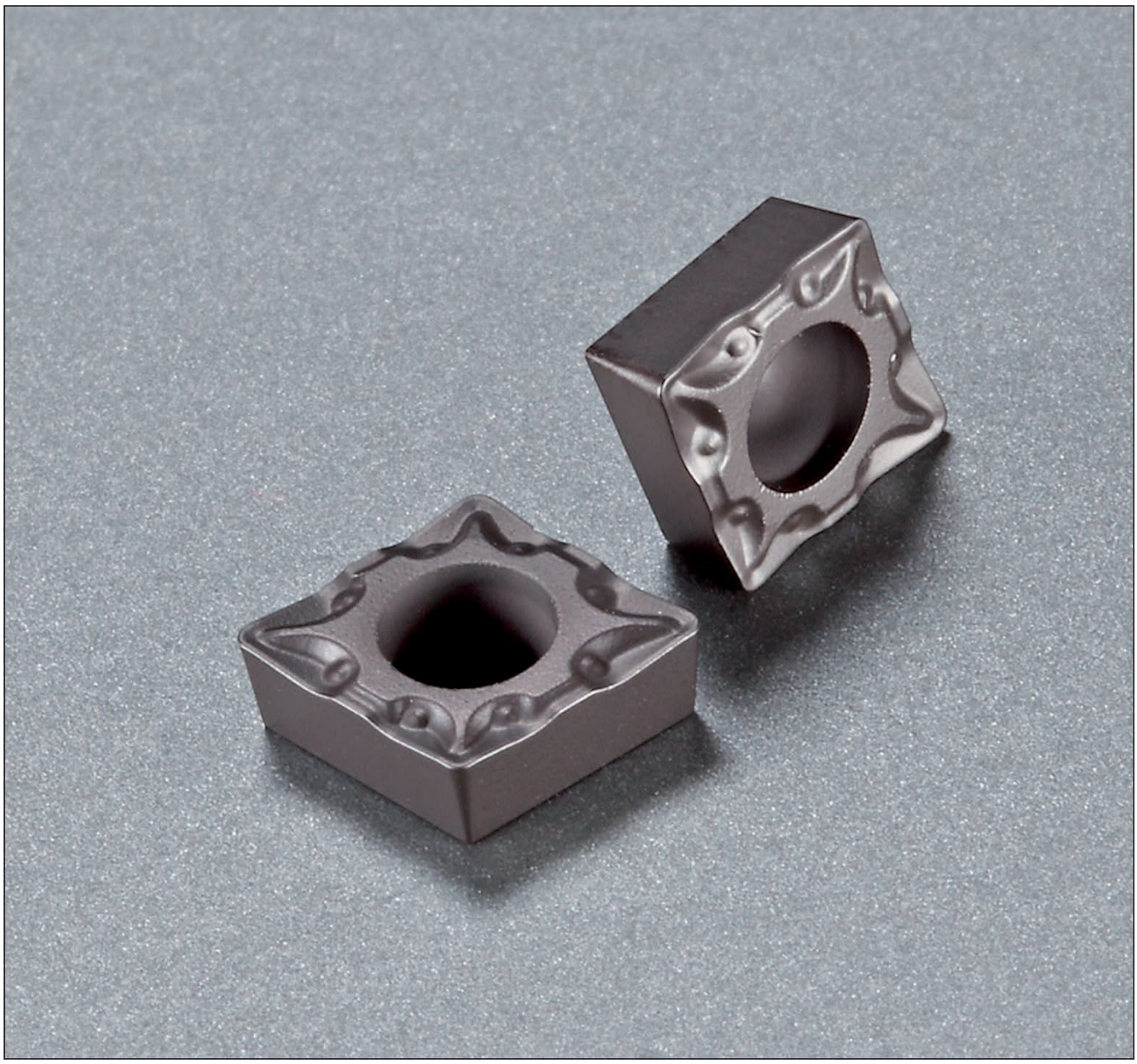
| Order No. | Design | 2999 | 5886 | PU |
|---|---|---|---|---|
| 0172 | Inner/outer TORX® screw for Ø 15–17 mm | 2.83 | – | 10 Δ |
| 0174 | Inner/outer TORX® screw for Ø 17.5–19 mm | 2.96 | – | 10 Δ |
| 0172 | Outer TORX® screw for Ø 17.5–19.0 mm | 2.83 | – | 10 Δ |
| 0174 | Inner/outer TORX® screw for Ø 19.5–21 mm | 2.96 | – | 10 Δ |
| 0050 | Inner/outer TORX® screw for Ø 21.5–22 mm | 2.96 | – | 10 Δ |
| 0180 | Inner TORX® screw for Ø 22.5–26 mm | 2.96 | – | 10 Δ |
| 0183 | Outer TORX® screw for Ø 22.5–26 mm | 2.84 | – | 10 Δ |
| 0005 | Inner/outer TORX® screw Ø 26.5–27 mm | 3.06 | – | 10 Δ |
| 0005 | Inner/outer TORX® screw Ø 28–31 mm | 3.06 | – | 10 Δ |
| 0182 | Outer TORX® screw for Ø 28–31 mm | 3.06 | – | 10 Δ |
| 0184 | Inner/outer TORX® screw for Ø 32–34 mm | 3.06 | – | 10 Δ |
| 0184 | Inner/outer TORX® screw for Ø 35–40 mm | 3.06 | – | 10 Δ |
| 0188 | Outer TORX® screw for Ø 35–40 mm | 3.91 | – | 10 Δ |
| 0020 | Screwdriver TORX® for Ø 15–22 mm T 7 x 60 mm | – | 4.52 | 1 |
| 0030 | Screwdriver TORX® for Ø 23–26 mm T 8 x 60 mm | – | 4.54 | 1 |
| 0035 | Screwdriver TORX® for Ø 27–32 mm T 9 x 60 mm | – | 4.52 | 1 |
| 0050 | Screwdriver TORX® for Ø 33–40 mm T 15 x 80 mm | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

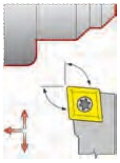
TORX® screwdriver





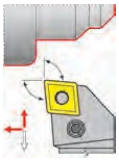
## External Turning

### Toolholders 95deg for Positive Inserts – CCMT/CCGT 09T3.../1204...

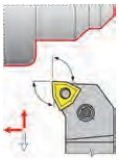


| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5090 – 2969 5135 | SCLCR/L | CCMT/CCGT 09T3/1204 | 2/202 |

### Toolholders 95deg for Negative Inserts – CNMG 1204.../ WNMG 0604.../0804...

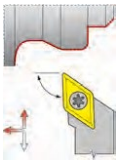


| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5200 – 2969 5215 | PCLNR/L | CNMG 1204 | 2/212 |

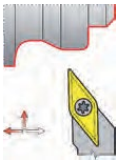


| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5290 – 2969 5335 | PWLNR/L | WNMG 0604/0804 | 2/221 |

### Toolholders 93deg for Positive Inserts – DCMT/DCGT 11T3... VCGT/VCMT/VBMT 1103.../1604...



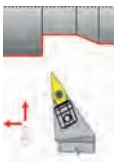
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5390 – 2969 5425 | SDJCR/L | DCMT/DCGT 11T3 | 2/205 |



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5690 – 2969 5845 | SVJCR/L | VCGT/VCMT/VBMT 1103/1604 | 2/209 |

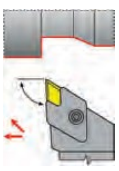
### Toolholders 93deg for Negative Inserts - DNMG 1104.../1506... VNMG 1604...

| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5500 – 2969 5535 | PDJNR/L | DNMG/DNKG 1104/1506... | 2/214 |



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5340 – 2969 5355 | MVJNR/L | VNMG 1604 | 2/224 |

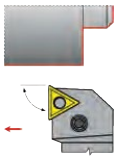
### Toolholders 93deg for KNUX 1604... Inserts



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2968 0850 – 2968 0865 | CKJNR/L | KNUX 1604 | 2/226 |

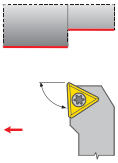
## External turning

### Toolholders 90deg for TNMG 1604... Inserts



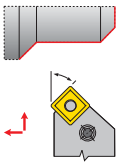
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5600 – 2969 5615 | PTGNR/L | TNMG 1604 | 2/219 |

### Toolholders 90deg for Positive Inserts TCGT/TCMT 1102.../ 16T3...



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5650 – 2969 5655 | STGCR/L | TCGT/TCMT 1102 | 2/207 |
| 2969 5660 – 2969 5685 | STGCR/L | TCGT/TCMT 16T3 | 2/207 |

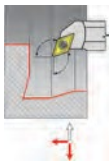
### Toolholders 45deg for SNMG 1204... Inserts



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5700 – 2969 5715 | PSSNR/L | SNMG 1204 | 2/217 |

## Boring Bars

### Through Coolant Boring bars for DCMT/DCGT 0702.../11T3... Inserts



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5750 – 2969 5795 | A...-SDQCR/L | DCMT/DCGT 0702/11T3 | 2/233 |
| 2969 5800 – 2969 5805 | Set-SDQCR/L | DCMT/DCGT 0702 | 2/233 |

### Through Coolant Boring Bars for CCMT/CCGT 0602.../09T3... Inserts

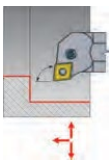
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5850 – 2969 5905 | A...-SCLCR/L | CCMT/CCGT 0602/09T3 | 2/227 |
| 2969 5950 – 2969 5960 | Set-SCLCR/L | CCMT/CCGT 0602 | 2/227 |

### Carbide Through Coolant Boring Bars for CCMT/CCGT 0602... Inserts

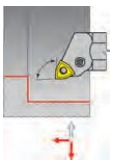
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 5963 – 2969 5990 | E...-SCLCR/L | CCMT/CCGT 0602 | 2/228 |
| 2969 5981 – 2969 5984 | Set-SCLCR/L | CCMT/CCGT 0602 | 2/228 |

## Boring Bars

### Through Coolant Boring Bars for CNMG 1204.../WNMG 0804... Style Inserts



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 6000 – 2969 6015 | A...-PCLNR/L | CNMG 1204 | 2/240 |



| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 6050 – 2969 6065 | A...-PWLNR/L | WNMG 0804... | 2/246 |

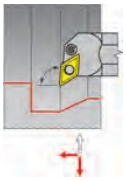
### Through Coolant Boring Bars for DCMT/DCGT 0702.../11T3... Style inserts

| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 6100 – 2969 6145 | A...-SDUCR/L | DCMT/DCGT 0702/11T3 | 2/231 |
| 2969 6200 – 2969 6220 | Set-SDUCR/L | DCMT/DCGT 0702 | 2/231 |

### Carbide Through Coolant Boring Bars for DCMT/DCGT 0702... Style Inserts

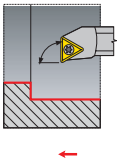
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 6235 – 2969 6270 | E...-SDUCR/L | DCMT/DCGT 07 | 2/232 |
| 2969 6255 – 2969 6260 | Set-SDUCR/L | DCMT/DCGT 07 | 2/232 |

### Through Coolant Boring Bars for DNMG 1506.../1104... Style Inserts



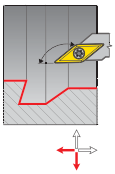
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 6300 – 2969 6305 | A...-PDUNR/L | DNMG/DNKG 1506... | 2/244 |
| 2969 6020 – 2969 6045 | A...-PDUNR/L | DNMG 1104 | 2/242 |

### Boring Bars for TCGT/TCMT 1102.../16T3... Style Inserts



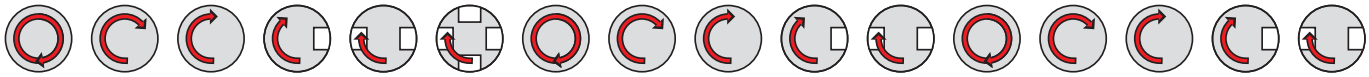
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 6400 – 2969 6405 | A...-STFCR/L | TCGT/TCMT 1102 | 2/236 |
| 2969 6410 – 2969 6425 | A...-STFCR/L | TCGT/TCMT 16T3 | 2/236 |

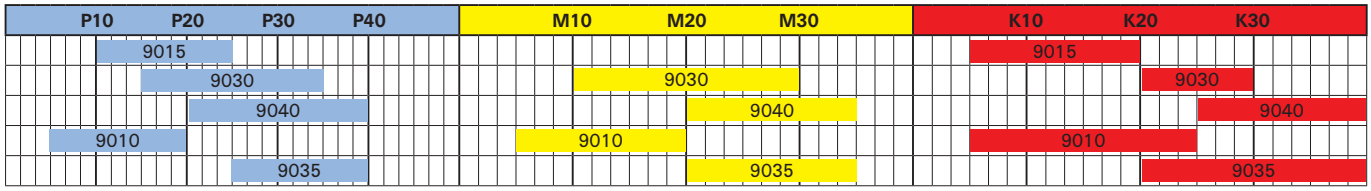
### Through Coolant Boring Bars for VBMT/VCMT/VCGT 110.../1604... Style Inserts



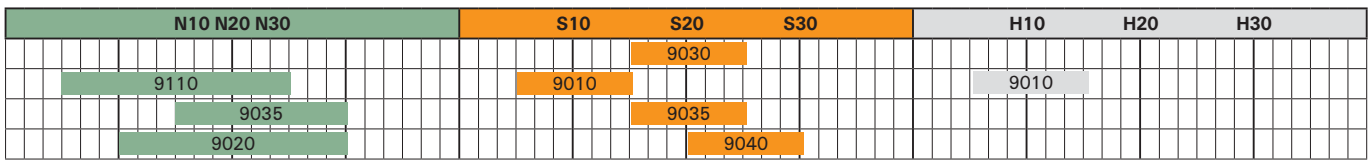
| Order No. | Type | Indexable inserts | Catalogue page |
|---|---|---|---|
| 2969 6500 – 2969 6525 | A...-SVJCR/L | VBMT/VCMT/VCGT 110.../1604 | 2/238 |
| 2969 6600 – 2969 6620 | Set-SVJCR/L | VBMT/VCMT/VCGT 110 | 2/238 |

| P Steel | M Stainless | K Cast iron |
|---|---|---|
| Unalloyed carbon dioxide<br>Tool steels 1.2379<br>(St37.1; 10S20; C45)<br>High carbon cast steel<br>(GS 52)<br>High carbon tool steels<br>(C105W1)<br>Low-alloy steels<br>(StE360.7)<br>Medium-alloy steels<br>(60Si7; GS20Mn5)<br>Alloyed tool steels<br>(X38CrMoNi17)<br>Ferritic and martensite,<br>Stainless steels and cast steel | Austenitic and ferritic stainless steels,<br>heat- and creep-resistant steels<br><br>Non-magnetic and<br>wear-resistant<br>steels (X12CrNi188) | Alloyed and unalloyed<br><br>Gray cast iron (GG25)<br><br>Ductile iron (GGG60)<br><br>Tempered iron (GTS55) |






| N Alu | S Super alloy | H Hard materials |
|---|---|---|
| Non-ferrous metals<br>Al-alloys<br>Cu-alloys | Special heat-resistant Ni-, Co-,<br>Fe- and Ti-alloys<br>NIMONIC 80A;<br>NiCr20TiAl;<br>INCOLOY 800H;<br>INCONEL 617;<br>X8NiCrAlTi3221 | Hardened (tempered) steels<br>HRC 48–61<br><br>Hardened die cast iron<br>Chill cast iron |



Wear resistance

| | | | P | M | K | N | S | H |
|---|---|---|---|---|---|---|---|---|
| 01 | | Finishing and fine-spindles at high cutting speeds, best machining results, no vibrations | | | | | | |
| 10 | | Drilling and copying at high cutting speeds, good machining results, with small to medium chip cross-cutting | | | | | | |
| 20 | | Drilling and copying at medium cutting speeds, for medium to slightly adverse chipping conditions | | | | | | |
| 30 | | Turning and facing at medium cutting speeds, and adverse chip conditions (break in cutting) | | | | | | |
| 40 | | Turning, grooving and parting at low to medium cutting speeds and very adverse working conditions (break in cutting) | | | | | | |
| 50 | | Turning and parting at very low cutting speeds, extremely adverse working conditions (severe breaks in cutting) | | | | | | |

Toughness

**Carbide, coated**

| | | | |
|---|---|---|---|
| PK | 9015 | $AL_2O_3$ | CVD/PVD multi-layer coating, main application area is in groups P and K, also possible in M group, for preparation and roughing work, continuous, slight interrupted cut, high cutting speeds |
| PMK | 9030 | TiCN | CVD coating, main application area is in groups P, M and K, S group also possible, for preparation and roughing work, continuous, and interrupted cut, medium to high cutting speeds |
| PMK | 9040 | TiCN | CVD coating, main application area is in groups P, M and K, S group also possible, for roughing work, adverse conditions, severe interrupted cut, low to medium cutting speeds |
| KNH | 9010 | TiCN | CVD coating, universal use for finishing in all groups, for operations with high thermal load, low to medium depth of cut, high cutting speeds in stable conditions |
| U | 9035 | TiCN | CVD coating, universal use in all groups, high wear resistance, adverse conditions, medium cutting speeds |
| VA | 9040 | TiCN | CVD coating, main application area in groups M and P, S also possible. For finishing in medium processing of VA steels, standard interrupted cut, medium cutting speeds. |
| | | | Medium processing VA geometry for processing stainless steel. lightweight cutting. Cuts easily |
| | | | Also 1. option with very tough steels. |

**Carbide, uncoated**

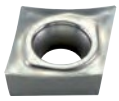
| | | |
|---|---|---|
| N | 9020 | Ultra-fine grain uncoated, main application area group N, fine and finest processing of groups M and S, in stable conditions, low to medium depth of cut, highly polished to prevent edge build-up |

## Turning indexable inserts – Geometry and Applications

| | | | |
|---|---|---|---|
| CCGT, DCGT, TCGT, VCGT | NF Processing | AL | Geometry for positive indexable inserts, specially designed for processing aluminium alloys, synthetics and copper alloys. Chip-angle ground. Indexable inserts are highly polished to prevent edge build-up. |
| CCMT, DCMT, TCMT, VCMT, CNMG, DNMG, SNMG, TNMG, WNMG | Finishing | F | Geometry for finishing steel, cast and rustproof workpieces. |
| CCMT, DCMT, TCMT, VBMT, VCMT, CNMG, DNMG, SNMG, TNMG, WNMG, KNUX | Semi-roughing | M | Geometry for semi roughing, versatile application. The first choice for finishing cast and forged parts with low oversize. |
| CNMG, DNMG, SNMG, TNMG, WNMG | Roughing | R | Geometry for roughing in semi roughing and pipe processing. Suitable for high feed rates and cutting depths. |
| CNMG, DNMG, WNMG, ER-SI/EL-SI | Roughing-finishing | EC | = **Easy-Cut** Geometry for roughing-finishing and semi roughing, particularly for carbon steels, stainless steel and alloys of Ni, Co, Fe and Ti. Particularly suited to long, thin workpieces (axles) with low cutting force (no vibrations and chatter marks). |
| WNMG | Finishing | WF | = **Luffing, fine processing.** Geometry for fine turning and finishing in steel and cast work and rustproof workpieces, with double feed rate as with chip breaker F- and 15–20 % higher cut pressure. |
| CNMG, WNMG | Semi-roughing | WM | = **Luffing, medium.** Geometry for finishing to semi roughing in steel and cast work, with double feed rate as with chip breaker F- and 15–20 % higher cut pressure. |

## Grooving indexable inserts – Geometries and Applications

| | | |
|---|---|---|
| LFMX | N – F | Multi-purpose geometry, light cut, the first choice for P, M and S ranges, also with interrupted cut. |
| LFMX | N – M | Multi-purpose geometry, light cut, for P and K ranges with raised feed rate, with light, interrupted cut. |
| LFMX | SR/SL-SM | Multi-purpose geometry, light cut, the first choice for P, M and S ranges, also with interrupted cut, with 8° face slant - right / left design, reduces chips on the workpiece. |
| LCMF | F | Geometry for grooving and longitudinal turning in P, M and K ranges. |
| LCMF | MP | Geometry for grooving and copy turning in P, M and K ranges. |

| | Order No. | Machining level geometry specification ISO-indexable inserts for solid drill 7° positive | Page | €/item (PU 10 Pieces) | AL | F | M | R | VA | R/ L-EC | WF | WM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2968 1127 | CCGT 060202 AL KNH 9010 | 2/229 | 10.50 | ● | | | | | | | |
| | 2968 1132 | CCGT 060202 ALU | 2/229 | 4.74 | ● | | | | | | | |
| | 2968 1133 | CCGT 060204 AL KNH 9010 | 2/229 | 10.00 | ● | | | | | | | |
| | 2968 1138 | CCGT 060204 ALU | 2/229 | 4.74 | ● | | | | | | | |
| | 2968 1140 | CCGT 060204 R EC U 9035 | 2/229 | 7.80 | | | | | | ● | | |
| | 2968 1143 | CCGT 060204 L EC U 9035 | 2/229 | 7.80 | | | | | | ● | | |
| | 2968 0137 | CCGT 09T302 AL KNH 9010 | 2/203 | 11.20 | ● | | | | | | | |
| | 2968 0140 | CCGT 09T302 ALU | 2/203 | 6.10 | ● | | | | | | | |
| | 2968 0124 | CCGT 09T304 AL KNH 9010 | 2/203 | 10.70 | ● | | | | | | | |
|  | 2968 0128 | CCGT 09T304 ALU | 2/203 | 6.10 | ● | | | | | | | |
| | 2968 0142 | CCGT 09T304 L EC U 9035 | 2/203 | 9.20 | | | | | | ● | | |
| | 2968 0145 | CCGT 09T304 R EC U 9035 | 2/203 | 9.20 | | | | | | ● | | |
| | 2968 0130 | CCGT 09T308 AL KNH 9010 | 2/203 | 10.70 | ● | | | | | | | |
| | 2968 0134 | CCGT 09T308 ALU | 2/203 | 6.10 | ● | | | | | | | |
| | 2968 0150 | CCGT 120404 AL KNH 9010 | 2/203 | 12.80 | ● | | | | | | | |
| | 2968 0154 | CCGT 120404 ALU | 2/203 | 8.30 | ● | | | | | | | |
| | 2968 0156 | CCGT 120408 AL KNH 9010 | 2/203 | 12.80 | ● | | | | | | | |
| | 2968 0158 | CCGT 120408 ALU | 2/203 | 8.30 | ● | | | | | | | |
| | 2968 1100 | CCMT 060202 F U 9035 | 2/229 | 4.93 | | ● | | | | | | |
| | 2968 1131 | CCMT 060202 F KNH 9010 | 2/229 | 4.93 | | ● | | | | | | |
| | 2968 1109 | CCMT 060202 M PMK 9030 | 2/229 | 4.62 | | | ● | | | | | |
| | 2968 1112 | CCMT 060202 M U 9035 | 2/229 | 4.93 | | | ● | | | | | |
| | 2968 1106 | CCMT 060204 F U 9035 | 2/229 | 4.62 | | ● | | | | | | |
| | 2968 1137 | CCMT 060204 F KNH 9010 | 2/229 | 4.62 | | ● | | | | | | |
| | 2968 1115 | CCMT 060204 M PMK 9030 | 2/229 | 4.62 | | | ● | | | | | |

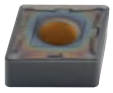
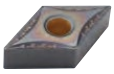
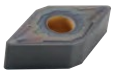
Can only be supplied as a whole packaging unit.

| | Order No. | Machining level geometry specification ISO-indexable inserts for solid drill 7° positive | Page | €/item (PU 10 Pieces) | AL | F | M | R | VA | R/ L-EC | WF | WM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2968 1118 | CCMT 060204 M U 9035 | 2/229 | 4.62 | | | ● | | | | | |
| | 2968 1107 | CCMT 060208 M PK 9015 | 2/229 | 4.93 | | | ● | | | | | |
| | 2968 1121 | CCMT 060208 M PMK 9030 | 2/229 | 4.62 | | | ● | | | | | |
| | 2968 1124 | CCMT 060208 M U 9035 | 2/229 | 4.62 | | | ● | | | | | |
| | 2968 0104 | CCMT 09T304 M PK 9015 | 2/229 | 5.75 | | | ● | | | | | |
| | 2968 0100 | CCMT 09T304 F PMK 9030 | 2/203 | 5.45 | | ● | | | | | | |
| | 2968 0103 | CCMT 09T304 F U 9035 | 2/203 | 5.45 | | ● | | | | | | |
| | 2968 0112 | CCMT 09T304 M PMK 9030 | 2/203 | 5.45 | | | ● | | | | | |
| | 2968 0115 | CCMT 09T304 M U 9035 | 2/203 | 5.60 | | | ● | | | | | |
| | 2968 0106 | CCMT 09T308 F PMK 9030 | 2/203 | 5.45 | | ● | | | | | | |
| | 2968 0109 | CCMT 09T308 F U 9035 | 2/203 | 5.45 | | ● | | | | | | |
| | 2968 0111 | CCMT 09T308 M PK 9015 | 2/203 | 5.75 | | | ● | | | | | |
| | 2968 0118 | CCMT 09T308 M PMK 9030 | 2/203 | 5.45 | | | ● | | | | | |
| | 2968 0121 | CCMT 09T308 M U 9035 | 2/203 | 5.60 | | | ● | | | | | |
| | 2968 0160 | CCMT 120404 F U 9030 | 2/203 | 7.65 | | ● | | | | | | |
| | 2968 0163 | CCMT 120404 F U 9035 | 2/203 | 7.65 | | ● | | | | | | |
| | 2968 0166 | CCMT 120408 F PMK 9030 | 2/203 | 7.65 | | ● | | | | | | |
| | 2968 0169 | CCMT 120408 F U 9035 | 2/203 | 7.65 | | ● | | | | | | |
| | 2968 0172 | CCMT 120408 M PK 9015 | 2/203 | 8.10 | | | ● | | | | | |
| | 2968 0175 | CCMT 120408 M PMK 9030 | 2/203 | 7.65 | | | ● | | | | | |
| | 2968 1424 | DCGT 070202 AL KNH 9010 | 2/234 | 10.35 | ● | | | | | | | |
| | 2968 1430 | DCGT 070202 ALU | 2/234 | 5.80 | ● | | | | | | | |
| | 2968 1418 | DCGT 070204 AL KNH 9010 | 2/234 | 9.85 | ● | | | | | | | |
| | 2968 1433 | DCGT 070204 ALU | 2/234 | 5.80 | ● | | | | | | | |
| | 2968 0327 | DCGT 11T302 AL KNH 9010 | 2/206 | 10.15 | ● | | | | | | | |
| | 2968 0331 | DCGT 11T302 ALU | 2/206 | 6.05 | ● | | | | | | | |
| | 2968 0321 | DCGT 11T304 AL KNH 9010 | 2/206 | 11.10 | ● | | | | | | | |
| | 2968 0325 | DCGT 11T304 ALU | 2/206 | 6.05 | ● | | | | | | | |
| | 2968 0333 | DCGT 11T308 AL KNH 9010 | 2/206 | 11.10 | ● | | | | | | | |
| | 2968 0337 | DCGT 11T308 ALU | 2/206 | 6.05 | ● | | | | | | | |
| | 2968 1400 | DCMT 070202 F PMK 9030 | 2/234 | 4.97 | | ● | | | | | | |
| | 2968 1406 | DCMT 070202 M PMK 9030 | 2/234 | 4.97 | | | ● | | | | | |
| | 2968 1409 | DCMT 070202 M U 9035 | 2/234 | 4.97 | | | ● | | | | | |
| | 2968 1403 | DCMT 070204 F PMK 9030 | 2/234 | 4.97 | | ● | | | | | | |
| | 2968 1412 | DCMT 070204 M PMK 9030 | 2/234 | 4.97 | | | ● | | | | | |
| | 2968 1415 | DCMT 070204 M U 9035 | 2/234 | 4.97 | | | ● | | | | | |
| | 2968 0302 | DCMT 11T302 M U 9035 | 2/206 | 6.40 | | | ● | | | | | |
| | 2968 0300 | DCMT 11T304 F PMK 9030 | 2/206 | 6.40 | | ● | | | | | | |
| | 2968 0304 | DCMT 11T304 M PK 9015 | 2/206 | 6.75 | | | ● | | | | | |
| | 2968 0306 | DCMT 11T304 M PMK 9030 | 2/206 | 6.40 | | | ● | | | | | |
| | 2968 0309 | DCMT 11T304 M U 9035 | 2/206 | 6.40 | | | ● | | | | | |
| | 2968 0303 | DCMT 11T308 F PMK 9030 | 2/206 | 6.40 | | ● | | | | | | |
| | 2968 0308 | DCMT 11T308 M PK 9015 | 2/206 | 6.75 | | | ● | | | | | |
| | 2968 0312 | DCMT 11T308 M PMK 9030 | 2/206 | 6.40 | | | ● | | | | | |
| | 2968 0315 | DCMT 11T308 M U 9035 | 2/206 | 6.40 | | | ● | | | | | |
| | 2968 0318 | DCMT 11T312 M PMK 9030 | 2/206 | 6.40 | | | ● | | | | | |

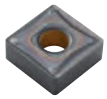
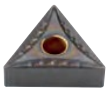
Can only be supplied as a whole packaging unit.

| | Order No. | Machining level geometry specification ISO-indexable inserts for solid drill 7° positive | Page | €/item (PU 10 Pieces) | AL | F | M | R | VA | R/ L-EC | WF | WM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2968 0350 | TCGT 110202 AL KNH 9010 | 2/208 | 11.25 | ● | | | | | | | |
| | 2968 0354 | TCGT 110202 ALU | 2/207 | 4.96 | ● | | | | | | | |
| | 2968 0356 | TCGT 110204 AL KNH 9010 | 2/208 | 10.75 | ● | | | | | | | |
| | 2968 0361 | TCGT 110204 ALU | 2/207 | 4.96 | ● | | | | | | | |
| | 2968 0363 | TCGT 16T302 ALU | 2/207 | 7.60 | ● | | | | | | | |
| | 2968 0364 | TCGT 16T304 ALU | 2/207 | 7.60 | ● | | | | | | | |
| | 2968 0392 | TCGT 110202 R EC U 9035 | 2/208 | 9.00 | | | | | | ● | | |
| | 2968 0395 | TCGT 110202 L EC U 9035 | 2/208 | 9.00 | | | | | | ● | | |
| | 2968 0368 | TCMT 110202 F U 9035 | 2/208 | 5.55 | | ● | | | | | | |
| | 2968 0371 | TCMT 110204 F U 9035 | 2/208 | 5.20 | | ● | | | | | | |
| | 2968 0374 | TCMT 110202 M PMK 9030 | 2/208 | 5.05 | | | ● | | | | | |
| | 2968 0380 | TCMT 16T304 F U 9035 | 2/208 | 6.75 | | ● | | | | | | |
| | 2968 0383 | TCMT 16T308 M PK 9015 | 2/208 | 7.05 | | | ● | | | | | |
| | 2968 1612 | VCGT 110304 AL KNH 9010 | 2/210 | 14.05 | ● | | | | | | | |
| | 2968 1616 | VCGT 110304 ALU | 2/210 | 5.60 | ● | | | | | | | |
| | 2968 1636 | VCGT 160404 AL KNH 9010 | 2/210 | 14.70 | ● | | | | | | | |
| | 2968 1640 | VCGT 160404 ALU | 2/210 | 9.40 | ● | | | | | | | |
| | 2968 1642 | VCGT 160408 AL KNH 9010 | 2/210 | 14.70 | ● | | | | | | | |
| | 2968 1646 | VCGT 160408 ALU | 2/210 | 9.40 | ● | | | | | | | |
| | 2968 1550 | VBMT 110204 MU 9035 | 2/239 | 9.00 | | | ● | | | | | |
| | 2968 1553 | VBMT 160404 MU 9035 | 2/210 | 10.10 | | | ● | | | | | |
| | 2968 1556 | VBMT 160408 MU 9035 | 2/210 | 10.10 | | | ● | | | | | |
| | 2968 1603 | VCMT 110304 F U 9035 | 2/210 | 8.40 | | ● | | | | | | |
| | 2968 1606 | VCMT 110308 F PMK 9030 | 2/210 | 8.50 | | ● | | | | | | |
| | 2968 1609 | VCMT 110308 F U 9035 | 2/210 | 8.50 | | ● | | | | | | |
| | 2968 1618 | VCMT 160404 F PMK 9030 | 2/210 | 9.40 | | ● | | | | | | |
| | 2968 1621 | VCMT 160404 F U 9035 | 2/210 | 9.40 | | ● | | | | | | |
| | 2968 1624 | VCMT 160408 F PMK 9030 | 2/210 | 9.40 | | ● | | | | | | |
| | 2968 1627 | VCMT 160408 F U 9035 | 2/210 | 9.40 | | ● | | | | | | |

Can only be supplied as a whole packaging unit.

| | Order No. | Machining level geometry specification ISO-indexable inserts for solid drill 0° negative | Page | €/item (PU 10 Pieces) | AL | F | M | R | VA | R/ L-EC | WF | WM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2968 0500 | CNMG 120404 F PMK 9030 | 2/213 | 6.95 | | ● | | | | | | |
| | 2968 0519 | CNMG 120404 VA 9040 | 2/213 | 7.25 | | | | | ● | | | |
| | 2968 0530 | CNMG 120404 R EC U 9035 | 2/213 | 6.95 | | | | | | ● | | |
| | 2968 0518 | CNMG 120404 L EC U 9035 | 2/213 | 6.95 | | | | | | ● | | |
| | 2968 0502 | CNMG 120408 F PMK 9030 | 2/213 | 6.95 | | ● | | | | | | |
| | 2968 0540 | CNMG 120408 VA 9040 | 2/213 | 7.25 | | | | | ● | | | |
| | 2968 0505 | CNMG 120408 M PK 9015 | 2/213 | 7.25 | | | ● | | | | | |
|  | 2968 0503 | CNMG 120408 M PMK 9030 | 2/213 | 6.95 | | | ● | | | | | |
| | 2968 0507 | CNMG 120408 R PK 9015 | 2/213 | 7.25 | | | | ● | | | | |
| | 2968 0506 | CNMG 120408 R PMK 9030 | 2/213 | 6.95 | | | | ● | | | | |
| | 2968 0548 | CNMG 120408 R PMK 9040 | 2/213 | 6.25 | | | | ● | | | | |
| | 2968 0536 | CNMG 120408 R EC U 9035 | 2/213 | 6.95 | | | | | | ● | | |
| | 2968 0524 | CNMG 120408 L EC U 9035 | 2/213 | 6.95 | | | | | | ● | | |
| | 2968 0539 | CNMG 120408 WM PMK 9030 | 2/213 | 8.05 | | | | | | | | ● |
| | 2968 0513 | CNMG 120412 VA 9040 | 2/213 | 7.45 | | | | | ● | | | |
| | 2968 0510 | CNMG 120412 R PK 9015 | 2/213 | 7.25 | | | | ● | | | | |
| | 2968 0512 | CNMG 120412 R PMK 9030 | 2/213 | 7.45 | | | | ● | | | | |
| | 2968 0670 | DNMG 110404 F PK 9015 | 2/215 | 8.35 | | ● | | | | | | |
| | 2968 0673 | DNMG 110404 F PMK 9030 | 2/215 | 7.35 | | ● | | | | | | |
| | 2968 0674 | DNMG 110404 VA 9040 | 2/215 | 7.75 | | | | | ● | | | |
| | 2968 0676 | DNMG 110408 M PK 9015 | 2/215 | 7.75 | | | ● | | | | | |
|  | 2968 0679 | DNMG 110408 M PMK 9030 | 2/215 | 7.35 | | | ● | | | | | |
| | 2968 0681 | DNMG 110408 VA 9040 | 2/215 | 7.75 | | | | | ● | | | |
| | 2968 0700 | DNMG 150604 F PMK 9030 | 2/215 | 9.75 | | ● | | | | | | |
| | 2968 0725 | DNMG 150604 VA 9040 | 2/215 | 10.30 | | | | | ● | | | |
| | 2968 0736 | DNMG 150604 R EC U 9035 | 2/215 | 9.75 | | | | | | ● | | |
| | 2968 0724 | DNMG 150604 L EC U 9035 | 2/215 | 9.75 | | | | | | ● | | |
| | 2968 0703 | DNMG 150608 F PMK 9030 | 2/215 | 9.75 | | ● | | | | | | |
| | 2968 0731 | DNMG 150608 VA 9040 | 2/215 | 10.30 | | | | | ● | | | |
|  | 2968 0704 | DNMG 150608 M PK 9015 | 2/215 | 10.30 | | | ● | | | | | |
| | 2968 0706 | DNMG 150608 M PMK 9030 | 2/215 | 9.75 | | | ● | | | | | |
| | 2968 0708 | DNMG 150608 R PK 9015 | 2/215 | 10.30 | | | | ● | | | | |
| | 2968 0712 | DNMG 150608 R PMK 9030 | 2/215 | 9.75 | | | | ● | | | | |
| | 2968 0742 | DNMG 150608 R EC U 9035 | 2/215 | 9.75 | | | | | | ● | | |
| | 2968 0730 | DNMG 150608 L EC U 9035 | 2/215 | 9.75 | | | | | | ● | | |
| | 2968 0716 | DNMG 150612 VA 9040 | 2/215 | 10.30 | | | | | ● | | | |
| | 2968 0709 | DNMG 150612 M PMK 9030 | 2/215 | 9.75 | | | ● | | | | | |
| | 2968 0715 | DNMG 150612 R PMK 9030 | 2/215 | 9.75 | | | | ● | | | | |
| | 2968 0718 | DNMG 150616 R PMK 9030 | 2/215 | 9.75 | | | | ● | | | | |
| | 2968 0953 | KNUX 160405 R M PMK 9040 | 2/226 | 8.95 | | | ● | | | | | |
| | 2968 0959 | KNUX 160410 R M PMK 9040 | 2/226 | 8.95 | | | ● | | | | | |
| | 2968 0983 | KNUX 160415 R M PMK 9040 | 2/226 | 8.95 | | | ● | | | | | |
| | 2968 0965 | KNUX 160405 L M PMK 9040 | 2/226 | 8.95 | | | ● | | | | | |
| | 2968 0971 | KNUX 160410 L M PMK 9040 | 2/226 | 8.95 | | | ● | | | | | |
| | 2968 0980 | KNUX 160415 L M PMK 9040 | 2/226 | 9.40 | | | ● | | | | | |

Can only be supplied as a whole packaging unit.

| | Order No. | Machining level geometry specification ISO-indexable inserts for solid drill 0° negative | Page | €/item (PU 10 Pieces) | AL | F | M | R | VA | R/ L-EC | WF | WM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2968 0553 | SNMG 120404 F PMK 9030 | 2/218 | 7.05 | | ● | | | | | | |
| | 2968 0559 | SNMG 120408 F PMK 9030 | 2/218 | 7.05 | | ● | | | | | | |
| | 2968 0580 | SNMG 120408 VA 9040 | 2/218 | 7.35 | | | | | ● | | | |
| | 2968 0562 | SNMG 120408 M PK 9015 | 2/218 | 7.35 | | | ● | | | | | |
| | 2968 0565 | SNMG 120408 M PMK 9030 | 2/218 | 7.05 | | | ● | | | | | |
| | 2968 0568 | SNMG 120408 R PK 9015 | 2/218 | 7.35 | | | | ● | | | | |
|  | 2968 0571 | SNMG 120408 R PMK 9030 | 2/218 | 7.05 | | | | ● | | | | |
| | 2968 0583 | SNMG 120412 VA 9040 | 2/218 | 7.35 | | | | | ● | | | |
| | 2968 0574 | SNMG 120412 R PK 9015 | 2/218 | 7.35 | | | | ● | | | | |
| | 2968 0577 | SNMG 120412 R PMK 9030 | 2/218 | 7.05 | | | | ● | | | | |
| | 2968 0747 | TNMG 160404 F PK 9015 | 2/220 | 6.40 | | ● | | | | | | |
|  | 2968 0750 | TNMG 160404 F PMK 9030 | 2/220 | 6.20 | | ● | | | | | | |
| | 2968 0751 | TNMG 160404 VA 9040 | 2/220 | 6.40 | | | | | ● | | | |
| | 2968 0752 | TNMG 160408 M PK 9015 | 2/220 | 6.40 | | | ● | | | | | |
| | 2968 0756 | TNMG 160408 M PMK 9030 | 2/220 | 6.20 | | | ● | | | | | |
| | 2968 0760 | TNMG 160408 R PK 9015 | 2/220 | 6.40 | | | | ● | | | | |
| | 2968 0763 | TNMG 160408 VA 9040 | 2/220 | 6.40 | | | | | ● | | | |
| | 2968 0762 | TNMG 160408 R PMK 9030 | 2/220 | 6.20 | | | | ● | | | | |
| | 2968 2200 | VNMG 160404 F U 9015 | 2/225 | 14.70 | | ● | | | | | | |
| | 2968 2205 | VNMG 160404 M U 9035 | 2/225 | 14.70 | | | ● | | | | | |
| | 2968 2210 | VNMG 160404 M PMK 9030 | 2/225 | 14.70 | | | ● | | | | | |
| | 2968 2215 | VNMG 160408 M U 9035 | 2/225 | 14.70 | | | ● | | | | | |
| | 2968 2220 | VNMG 160408 M PMK 9030 | 2/225 | 14.70 | | | ● | | | | | |
| | 2968 0870 | WNMG 060404 F PMK 9030 | 2/222 | 6.25 | | ● | | | | | | |
| | 2968 0874 | WNMG 060404 VA 9040 | 2/222 | 7.15 | | | | | ● | | | |
| | 2968 0879 | WNMG 060408 M PMK 9030 | 2/222 | 6.25 | | | ● | | | | | |
| | 2968 0890 | WNMG 060408 VA 9040 | 2/222 | 7.15 | | | | | ● | | | |
| | 2968 0888 | WNMG 060408 WM PMK 9030 | 2/222 | 7.15 | | | | | | | | ● |
| | 2968 0900 | WNMG 080404 F PMK 9030 | 2/222 | 7.15 | | ● | | | | | | |
| | 2968 0925 | WNMG 080404 VA 9040 | 2/222 | 7.85 | | | | | ● | | | |
| | 2968 0924 | WNMG 080404 WF PMK 9030 | 2/222 | 8.65 | | | | | | | ● | |
| | 2968 0903 | WNMG 080408 F PMK 9030 | 2/222 | 7.45 | | ● | | | | | | |
| | 2968 0917 | WNMG 080408 VA 9040 | 2/222 | 7.85 | | | | | ● | | | |
| | 2968 0928 | WNMG 080408 M PK 9015 | 2/222 | 7.85 | | | ● | | | | | |
| | 2968 0930 | WNMG 080408 M PMK 9030 | 2/222 | 7.45 | | | ● | | | | | |
| | 2968 0932 | WNMG 080408 R PK 9015 | 2/222 | 7.85 | | | | ● | | | | |
| | 2968 0909 | WNMG 080408 R PMK 9030 | 2/222 | 7.45 | | | | ● | | | | |
| | 2968 0942 | WNMG 080408 R EC U 9035 | 2/222 | 7.45 | | | | | ● | | | |
| | 2968 0940 | WNMG 080408 L EC U 9035 | 2/222 | 7.45 | | | | | ● | | | |
| | 2968 0915 | WNMG 080408 WM PMK 9030 | 2/222 | 8.65 | | | | | | | | ● |
| | 2968 0919 | WNMG 080412 VA 9040 | 2/222 | 7.85 | | | | | ● | | | |
| | 2968 0944 | WNMG 080412 M PK 9015 | 2/222 | 7.85 | | | ● | | | | | |
| | 2968 0906 | WNMG 080412 M PMK 9030 | 2/222 | 7.45 | | | ● | | | | | |
| | 2968 0946 | WNMG 080412 R PK 9015 | 2/222 | 7.85 | | | | ● | | | | |
| | 2968 0912 | WNMG 080412 R PMK 9030 | 2/222 | 7.45 | | | | ● | | | | |
| | 2968 0918 | WNMG 080412 WM PMK 9030 | 2/222 | 8.65 | | | | | | | | ● |

Can only be supplied as a whole packaging unit.

| Order No. | Chip guides geometry designation plunge and cut-off indexable inserts | Page | €/item (PU 10 Pieces) | AL | F | M | R | VA | R/ L-EC | WF | WM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2969 3197 | LFMX 2.00–0.16N F U 9035 | 2/257 | 6.80 | | ● | | | | | | |
| 2969 3200 | LFMX 2.00–0.16N M U 9035 | 2/257 | 7.80 | | | ● | | | | | |
| 2969 3203 | LFMX 3.10–0.20N F U 9035 | 2/257 | 6.80 | | ● | | | | | | |
| 2969 3206 | LFMX 3.10–0.20N M U 9035 | 2/257 | 7.80 | | | ● | | | | | |
| 2969 3209 | LFMX 4.10–0.20N F U 9035 | 2/257 | 6.80 | | ● | | | | | | |
| 2969 3212 | LFMX 4.10–0.20N M U 9035 | 2/257 | 7.80 | | | ● | | | | | |
| 2969 3215 | LFMX 5.10–0.20N F U 9035 | 2/257 | 8.30 | | ● | | | | | | |
| 2969 3218 | LFMX 5.10–0.20N M U 9035 | 2/257 | 8.30 | | | ● | | | | | |
| 2969 3221 | LFMX 3.10–0.20S R M U 9035 | 2/257 | 7.10 | | | ● | | | | | |
| 2969 3224 | LFMX 3.10–0.20S L M U 9035 | 2/257 | 7.10 | | | ● | | | | | |
| 2969 3227 | LFMX 4.10–0.20S R M U 9035 | 2/257 | 7.10 | | | ● | | | | | |
| 2969 3230 | LFMX 4.10–0.20S L M U 9035 | 2/257 | 7.80 | | | ● | | | | | |
| 2969 3233 | LFMX 2.00–0.16S R6 M U 9035 | 2/257 | 7.20 | | | ● | | | | | |
| 2969 3236 | LFMX 2.00–0.16S L6 M U 9035 | 2/257 | 7.20 | | | ● | | | | | |
| 2969 3239 | LFMX 2.00–0.16S R12 M U 9035 | 2/257 | 7.20 | | | ● | | | | | |
| 2969 3242 | LFMX 2.00–0.16S L12 M U 9035 | 2/257 | 7.20 | | | ● | | | | | |
| 2969 4300 | LCMF 130304-F U 9035 | 2/260 | 17.25 | | ● | | | | | | |
| 2969 4305 | LCMF 130404-F U 9035 | 2/260 | 17.70 | | ● | | | | | | |
| 2969 4310 | LCMF 1303MO-MP U 9035 | 2/260 | 18.00 | | | ● | | | | | |
| 2969 4315 | LCMF 1304MO-MP U 9035 | 2/260 | 18.00 | | | ● | | | | | |
| 2969 4320 | LCMF 160304-F U 9035 | 2/259 | 17.25 | | ● | | | | | | |
| 2969 4325 | LCMF 160404-F U 9035 | 2/259 | 17.70 | | ● | | | | | | |
| 2969 4330 | LCMF 160408-F U 9035 | 2/259 | 17.70 | | ● | | | | | | |

(W288)

Can only be supplied as a whole packaging unit.

| Order No. | Specification ISO thread turning inserts 60° metric full profile, external processing | Page | €/item (PU 10 Pieces) |
|---|---|---|---|
| 2969 0206 | TN16 EL 100 M U 9035 | 2/250 | 13.80 |
| 2969 0209 | TN16 EL 125 M U 9035 | 2/250 | 13.80 |
| 2969 0212 | TN16 EL 150 M U 9035 | 2/250 | 13.80 |
| 2969 0215 | TN16 EL 175 M U 9035 | 2/250 | 13.80 |
| 2969 0218 | TN16 EL 200 M U 9035 | 2/250 | 13.80 |
| 2969 0221 | TN16 EL 250 M U 9035 | 2/250 | 13.80 |
| 2969 0224 | TN16 EL 300 M U 9035 | 2/250 | 13.80 |
| 2969 0300 | TN16 ER 050 M U 9035 | 2/250 | 13.80 |
| 2969 0303 | TN16 ER 075 M U 9035 | 2/250 | 13.80 |
| 2969 0306 | TN16 ER 100 M U 9035 | 2/250 | 13.80 |
| 2969 0309 | TN16 ER 125 M U 9035 | 2/250 | 13.80 |
| 2969 0312 | TN16 ER 150 M U 9035 | 2/250 | 14.60 |
| 2969 0315 | TN16 ER 175 M U 9035 | 2/250 | 13.80 |
| 2969 0318 | TN16 ER 200 M U 9035 | 2/250 | 14.60 |
| 2969 0321 | TN16 ER 250 M U 9035 | 2/250 | 13.80 |
| 2969 0324 | TN16 ER 300 M U 9035 | 2/250 | 13.80 |

(W288)

| Order No. | Specification 55° WW, solid profile, external profile | Seite | 2969 €/item (PU 10 Pieces) |
|---|---|---|---|
| 0500 | TN16 ER 080 W U 9035 | 2/251 | 14.60 |
| 0503 | TN16 ER 090 W U 9035 | 2/251 | 14.60 |
| 0506 | TN16 ER 100 W U 9035 | 2/251 | 13.50 |
| 0509 | TN16 ER 110 W U 9035 | 2/251 | 13.80 |
| 0512 | TN16 ER 120 W U 9035 | 2/251 | 14.60 |
| 0515 | TN16 ER 140 W U 9035 | 2/251 | 14.60 |
| 0518 | TN16 ER 160 W U 9035 | 2/251 | 14.60 |
| 0521 | TN16 ER 180 W U 9035 | 2/251 | 14.60 |
| 0524 | TN16 ER 190 W U 9035 | 2/251 | 14.60 |
| 0527 | TN16 ER 200 W U 9035 | 2/251 | 14.60 |
| 0530 | TN16 ER 280 W U 9035 | 2/251 | 14.60 |

(W288)

| Order No. | Specification 60° metric, solid profile, internal processing | Seite | 2969 €/item (PU 10 Pieces) |
|---|---|---|---|
| 0900 | TN11 NR 050 M U 9035 | 2/253 | 13.50 |
| 0903 | TN11 NR 075 M U 9035 | 2/253 | 13.50 |
| 0906 | TN11 NR 100 M U 9035 | 2/253 | 13.50 |
| 0908 | TN11 NL 100 M U 9035 | 2/253 | 13.50 |
| 0909 | TN11 NR 125 M U 9035 | 2/253 | 13.50 |
| 0910 | TN11 NL 125 M U 9035 | 2/253 | 13.50 |
| 0912 | TN11 NR 150 M U 9035 | 2/253 | 14.30 |
| 0913 | TN11 NL 150 M U 9035 | 2/253 | 13.50 |
| 0915 | TN16 NR 050 M U 9035 | 2/253 | 13.80 |
| 0918 | TN16 NR 075 M U 9035 | 2/253 | 13.80 |
| 0921 | TN16 NR 100 M U 9035 | 2/253 | 13.80 |
| 0922 | TN16 NL 100 M U 9035 | 2/253 | 13.80 |
| 0924 | TN16 NR 125 M U 9035 | 2/253 | 13.80 |
| 0925 | TN16 NL 125 M U 9035 | 2/253 | 13.80 |
| 0927 | TN16 NR 150 M U 9035 | 2/253 | 13.80 |
| 0928 | TN16 NL 150 M U 9035 | 2/253 | 13.80 |
| 0930 | TN16 NR 175 M U 9035 | 2/253 | 13.80 |
| 0931 | TN16 NL 175 M U 9035 | 2/253 | 13.80 |
| 0933 | TN16 NR 200 M U 9035 | 2/253 | 13.80 |
| 0934 | TN16 NL 200 M U 9035 | 2/253 | 13.80 |
| 0936 | TN16 NR 250 M U 9035 | 2/253 | 13.80 |
| 0939 | TN16 NR 300 M U 9035 | 2/253 | 13.80 |

(W288)

| Order No. | Specification 55° WW, solid profile, internal processing | Seite | 2969 €/item (PU 10 Pieces) |
|---|---|---|---|
| 2000 | TN11NR 140 WU9035 | 2/254 | 14.30 |
| 2003 | TN11NR 190 WU9035 | 2/254 | 14.30 |
| 2006 | TN16NR 080 WU9035 | 2/254 | 14.60 |
| 2012 | TN16NR 100 WU9035 | 2/254 | 14.60 |
| 2015 | TN16NR 110 WU9035 | 2/254 | 13.80 |
| 2021 | TN16NR 140 WU9035 | 2/254 | 14.60 |
| 2024 | TN16NR 160 WU9035 | 2/254 | 14.60 |
| 2027 | TN16NR 190 WU9035 | 2/254 | 14.60 |

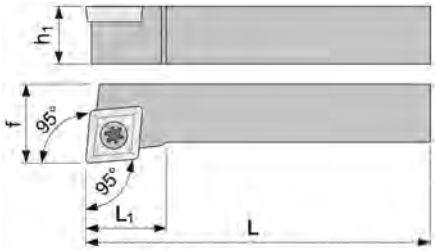
(W288)

Can only be supplied as a whole packaging unit.

## Toolholders 95deg for Positive Inserts – CCMT/CCGT 09T3.../1204...

**Design:** Clamping holder for inserts 7° positive, screw clamping.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight and face turning.



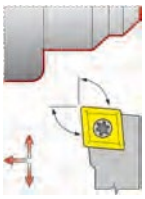



Fig.: Right-hand version

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5090 | SCLCR 1212 F09 | 43.10 | 12 x 12 | 80 | 20 | 16 | 12 | Right | CCMT/CCGT 09T3... |
| 5095 | SCLCL 1212 F09 | 43.10 | 12 x 12 | 80 | 20 | 16 | 12 | Left | CCMT/CCGT 09T3... |
| 5100 | SCLCR 1616 H09 | 53.10 | 16 x 16 | 100 | 20 | 20 | 16 | Right | CCMT/CCGT 09T3... |
| 5105 | SCLCL 1616 H09 | 53.10 | 16 x 16 | 100 | 20 | 20 | 16 | Left | CCMT/CCGT 09T3... |
| 5110 | SCLCR 2020 K09 | 65.50 | 20 x 20 | 125 | 29 | 20 | 20 | Right | CCMT/CCGT 09T3... |
| 5115 | SCLCL 2020 K09 | 65.50 | 20 x 20 | 125 | 29 | 20 | 20 | Left | CCMT/CCGT 09T3... |
| 5120 | SCLCR 2020 K12 | 65.50 | 20 x 20 | 125 | 29 | 25 | 20 | Right | CCMT/CCGT 1204 |
| 5125 | SCLCL 2020 K12 | 65.50 | 20 x 20 | 125 | 29 | 25 | 20 | Left | CCMT/CCGT 1204 |
| 5130 | SCLCR 2525 K12 | 81.40 | 25 x 25 | 150 | 29 | 32 | 25 | Right | CCMT/CCGT 1204 |
| 5135 | SCLCL 2525 K12 | 81.40 | 25 x 25 | 150 | 29 | 32 | 25 | Left | CCMT/CCGT 1204 |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Toolholders

| Order No. | Design | 2969 | 5838 | 5886 | PU |
|---|---|---|---|---|---|
| 5033 | Supporting plate for insert CCGT/CCMT 09T. | 5.80 | – | – | 10 Δ |
| 5012 | Supporting plate for insert CCGT/CCMT 1204.. | 6.70 | – | – | 10 Δ |
| 5057 | Hexagon socket threaded bushing CCGT/CCMT 09T. | 5.80 | – | – | 10 Δ |
| 5015 | Hexagon socket threaded bushing CCGT/CCMT 1204. | 5.80 | – | – | 10 Δ |
| 5054 | Tightening screw for insert CCGT/CCMT 09T3 | 5.45 | – | – | 10 Δ |
| 5018 | Tightening screw for insert CCGT/CCMT 1204 | 4.45 | – | – | 10 Δ |
| 0040 | Allen key 4 mm | – | 0.37 | – | 1 |
| 0050 | Allen key 5 mm | – | 0.49 | – | 1 |
| 0050 | Screwdriver for TORX® insert 09 T 15 x 80 mm | – | – | 4.66 | 1 |
| 0060 | Screwdriver for TORX® insert 12 T 20 x 100 mm | – | – | 4.79 | 1 |
| | | (W281) | (W530) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

Supporting plate

TORX® screw

Threaded bushing

Angled screwdriver

TORX® screwdriver

## Turning Inserts

format professional quality

CCGT

CCMT

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0140 | CCGT 09T302 | ALU | 6.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 165–595<br>0.10–0.15<br>0.3–4.0 | –<br>–<br>– | –<br>–<br>– |
| 0128 | CCGT 09T304 | ALU | 6.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–610<br>0.1–0.3<br>0.4–3.5 | –<br>–<br>– | –<br>–<br>– |
| 0134 | CCGT 09T308 | ALU | 6.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–575<br>0.15–0.60<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 0154 | CCGT 120404 | ALU | 8.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–610<br>0.10–0.30<br>0.4–7.0 | –<br>–<br>– | –<br>–<br>– |
| 0158 | CCGT 120408 | ALU | 8.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.15–0.60<br>0.8–7.0 | –<br>–<br>– | –<br>–<br>– |
| 2300 | CCMT 09T304 | UNI | 4.79 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3.0 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2303 | CCMT 09T308 | UNI | 4.79 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3.0 | 65–115<br>0.08–0.19<br>0.8–2.3 | 105–185<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2306 | CCMT 120404 | UNI | 7.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3.0 | 65–115<br>0.08–0.19<br>0.8–2.3 | 90–160<br>0.08–0.25<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2309 | CCMT 120408 | UNI | 7.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3.0 | 65–115<br>0.08–0.19<br>0.8–2.3 | 90–160<br>0.08–0.25<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

AL N

AL KNH

F

F U

M

R-EC*

L-EC**

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0137 | CCGT 09T302 | AL KNH 9010 | 11.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 195–700<br>0.1–0.15<br>0.3–4 | –<br>–<br>– | –<br>–<br>– |
| 0124 | CCGT 09T304 | AL KNH 9010 | 10.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 155–735<br>0.1–0.3<br>0.4–4.5 | –<br>–<br>– | –<br>–<br>– |
| 0142 | CCGT 09T304 | L-EC U 9035* | 9.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–185<br>0.14–0.3<br>0.8–2.0 | 80–110<br>0.14–0.23<br>0.8–1.5 | 125–175<br>0.14–0.3<br>0.8–2.0 | 200–645<br>0.24–0.3<br>0.8–2.0 | 25–55<br>0.14–0.18<br>0.8–1.2 | –<br>–<br>– |
| 0145 | CCGT 09T304 | R-EC U 9035** | 9.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–185<br>0.14–0.3<br>0.8–2.0 | 80–110<br>0.14–0.23<br>0.8–1.5 | 125–175<br>0.14–0.3<br>0.8–2.0 | 200–645<br>0.24–0.3<br>0.8–2.0 | 25–55<br>0.14–0.18<br>0.8–1.2 | –<br>–<br>– |
| 0130 | CCGT 09T308 | AL KNH 9010 | 10.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 140–700<br>0.15–0.6<br>0.8–5 | –<br>–<br>– | –<br>–<br>– |
| 0150 | CCGT 120404 | AL KNH 9010 | 12.80 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 150–735<br>0.1–0.3<br>0.4–7 | –<br>–<br>– | –<br>–<br>– |
| 0156 | CCGT 120408 | AL KNH 9010 | 12.80 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–700<br>0.15–0.6<br>0.8–7 | –<br>–<br>– | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

(W286)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## Turning Inserts

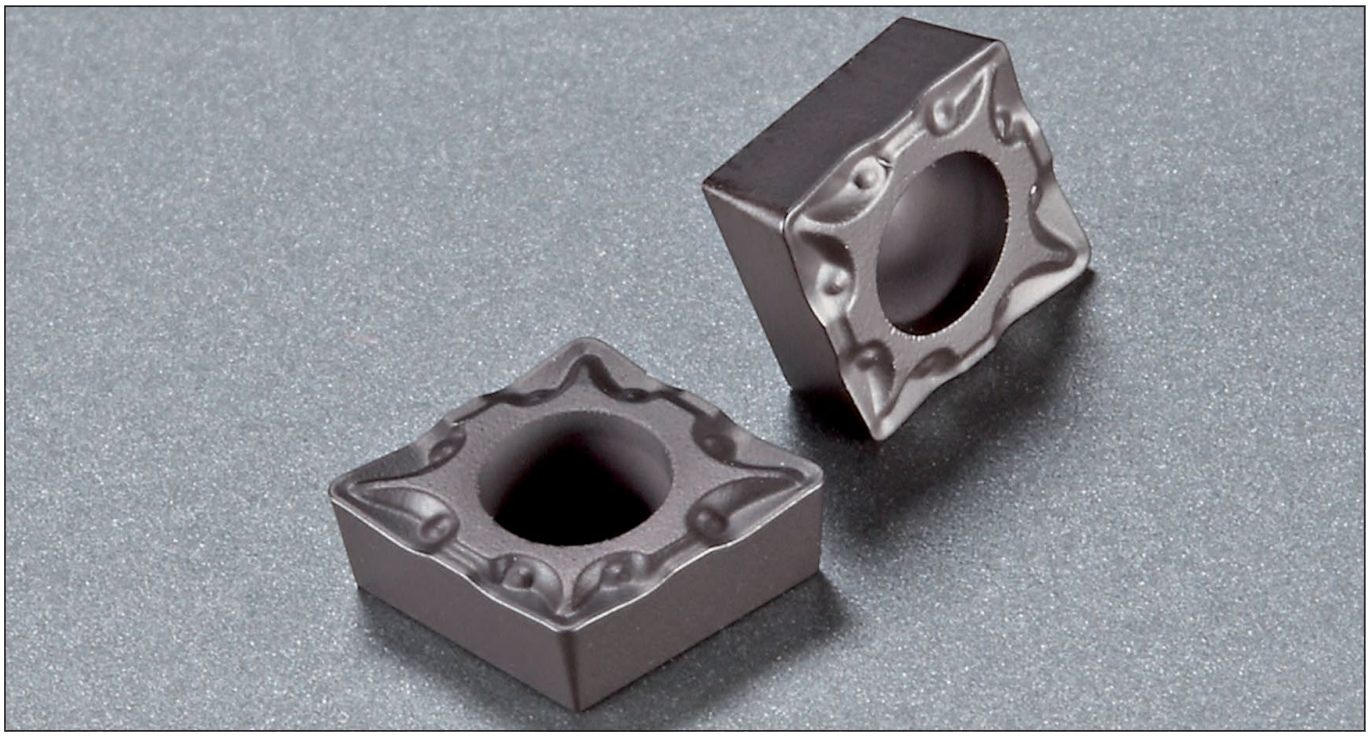
Continued

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed<br>Feed<br>Cutting depth | P<br>Steel | M<br>Stainless | K<br>Cast iron | N<br>Aluminium | S<br>Super-alloy | H<br>Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0100 | CCMT 09T304 | F PMK 9030 | 5.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–210<br>0.15–0.25<br>0.5–3 | 80–125<br>0.15–0.19<br>0.5–2.3 | 130–195<br>0.15–0.25<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0103 | CCMT 09T304 | F U 9035 | 5.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.5–2.3 | –<br>–<br>– |
| 0112 | CCMT 09T304 | M PMK 9030 | 5.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–210<br>0.15–0.3<br>1–4 | 80–125<br>0.15–0.23<br>1–3 | 125–195<br>0.15–0.3<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0115 | CCMT 09T304 | M U 9035 | 5.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–160<br>0.1–0.3<br>1–4 | 55–95<br>0.1–0.23<br>1–3 | 90–150<br>0.1–0.3<br>1–4 | 140–560<br>0.1–0.3<br>1–4 | 25–55<br>0.1–0.23<br>1–3 | –<br>–<br>– |
| 0106 | CCMT 09T308 | F PMK 9030 | 5.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–240<br>0.15–0.25<br>0.8–3 | 95–140<br>0.15–0.19<br>0.8–2.3 | 155–225<br>0.15–0.25<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0109 | CCMT 09T308 | F U 9035 | 5.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3 | 65–115<br>0.08–0.19<br>0.8–2.3 | 105–185<br>0.08–0.25<br>0.8–3 | –<br>–<br>– | 25–55<br>0.08–0.25<br>0.8–3 | –<br>–<br>– |
| 0111 | CCMT 09T308 | M PK 9015 | 5.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–290<br>0.15–0.5<br>0.8–3 | –<br>–<br>– | 185–275<br>0.15–0.5<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0118 | CCMT 09T308 | M PMK 9030 | 5.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–250<br>0.15–0.4<br>1–4 | 80–150<br>0.15–0.3<br>1–3 | 130–235<br>0.15–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0121 | CCMT 09T308 | M U 9035 | 5.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 100–190<br>0.1–0.4<br>1–4 | 60–110<br>0.1–0.3<br>1–3 | 95–180<br>0.1–0.4<br>1–4 | 150–665<br>0.1–0.4<br>1–4 | 25–55<br>0.1–0.30<br>1–3 | –<br>–<br>– |
| 0160 | CCMT 120404 | F PMK 9030 | 7.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–210<br>0.15–0.25<br>0.5–3 | 80–125<br>0.15–0.19<br>0.5–2.3 | 130–195<br>0.15–0.25<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0163 | CCMT 120404 | F U 9035 | 7.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.5–2.3 | –<br>–<br>– |
| 0166 | CCMT 120408 | F PMK 9030 | 7.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–240<br>0.15–0.25<br>0.8–3 | 95–140<br>0.15–0.19<br>0.8–2.3 | 155–225<br>0.15–0.25<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0169 | CCMT 120408 | F U 9035 | 7.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3 | 65–115<br>0.08–0.19<br>0.8–2.3 | 105–185<br>0.08–0.25<br>0.8–3 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.8–2.3 | –<br>–<br>– |
| 0172 | CCMT 120408 | M PK 9015 | 8.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 190–290<br>0.15–0.5<br>0.8–4 | –<br>–<br>– | 180–275<br>0.15–0.5<br>0.8–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0175 | CCMT 120408 | M PMK 9030 | 7.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–250<br>0.15–0.4<br>1–4 | 80–150<br>0.15–0.3<br>1–3 | 130–235<br>0.15–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

(W286)

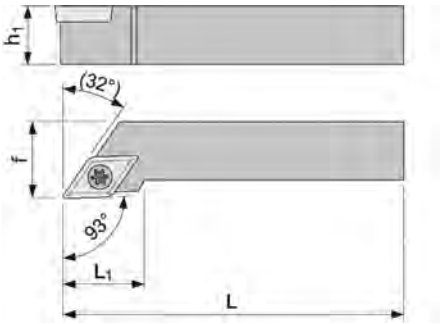
Δ Can only be supplied as a whole packaging unit.



## Toolholders 93deg for Positive Inserts – DCMT/DCGT 11T3...

**Design:** Clamping holder for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight and copy turning.



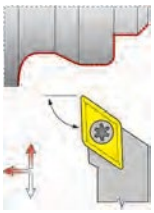



**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5390 | SDJCR 1212 F11 | 45.20 | 12 x 12 | 80 | 14 | 16 | 12 | Right | DCMT/DCGT 11T3 |
| 5395 | SDJCL 1212 F11 | 45.20 | 12 x 12 | 80 | 14 | 16 | 12 | Left | DCMT/DCGT 11T3 |
| 5400 | SDJCR 1616 H11 | 55.30 | 16 x 16 | 100 | 20 | 20 | 16 | Right | DCMT/DCGT 11T3 |
| 5405 | SDJCL 1616 H11 | 55.30 | 16 x 16 | 100 | 20 | 20 | 16 | Left | DCMT/DCGT 11T3 |
| 5410 | SDJCR 2020 K11 | 68.20 | 20 x 20 | 125 | 20 | 25 | 20 | Right | DCMT/DCGT 11T3 |
| 5415 | SDJCL 2020 K11 | 68.20 | 20 x 20 | 125 | 20 | 25 | 20 | Left | DCMT/DCGT 11T3 |
| 5420 | SDJCR 2525 M11 | 85.40 | 25 x 25 | 150 | 20 | 32 | 25 | Right | DCMT/DCGT 11T3 |
| 5425 | SDJCL 2525 M11 | 85.40 (W285) | 25 x 25 | 150 | 20 | 32 | 25 | Left | DCMT/DCGT 11T3 |

## Toolholders 62.5° for Positive Inserts – DCMT/DCGT 11T3...

**Design:** Clamping holder for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

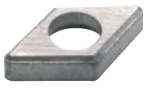
**Application:** For straight and contour turning.

| Order No. | Description | 2969 | Shank-■ mm | Total length mm | Indexable insert |
|---|---|---|---|---|---|
| 5450 | SDNCN 1212 F11 | 45.20 | 12 x 12 | 80 | DCMT/DCGT 11T3... |
| 5455 | SDNCN 1616 H11 | 55.80 | 16 x 16 | 100 | DCMT/DCGT 11T3... |
| 5460 | SDNCN 2020 K11 | 68.70 | 20 x 20 | 125 | DCMT/DCGT 11T3... |
| 5465 | SDNCN 2525 M11 | 85.40 (W285) | 25 x 25 | 150 | DCMT/DCGT 11T3... |

## Spare Parts for 2969 Style Inserts

| Order No. | Design | 2969 | 5838 | 5886 | PU |
|---|---|---|---|---|---|
| 5039 | Supporting plate, insert TC 16T3.. | 6.70 | – | – | 10 Δ |
| 5057 | Hexagon socket threaded bushing | 5.80 | – | – | 10 Δ |
| 5054 | Clamping screw T 15 M 3.5 x 10 | 5.45 | – | – | 10 Δ |
| 0040 | Allen key 4 mm | – | 0.37 | – | 1 |
| 0050 | Screwdriver for TORX®, T 15 x 80 mm | – | – | 4.66 | 1 |
| | | (W281) | (W530) | (W543) | |

Δ Can only be supplied as a whole packaging unit.



**Supporting plate**

**TORX® screw**

**Threaded bushing**

**Angled screwdriver**

**TORX® screwdriver**

## ISO turning cutting insert

format professional quality

ALU

UNI

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0331 | DCGT 11T302 | ALU | 6.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 170–680<br>0.06–0.12<br>0.3–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0325 | DCGT 11T304 | ALU | 6.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 140–595<br>0.10–0.24<br>0.4–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0337 | DCGT 11T308 | ALU | 6.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–560<br>0.15–0.48<br>0.8–3.3 | –<br>–<br>– | –<br>–<br>– |
| 2345 | DCMT 11T304 | UNI | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–150<br>0.08–0.24<br>0.4–2.0 | 50–90<br>0.08–0.18<br>0.4–1.5 | 80–140<br>0.08–0.24<br>0.4–2.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2348 | DCMT 11T308 | UNI | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–165<br>0.08–0.48<br>0.8–2.0 | 45–95<br>0.08–0.36<br>0.8–1.5 | 75–155<br>0.08–0.48<br>0.8–2.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## ISO turning cutting insert

AL KNH

F

M U

M

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0327 | DCGT 11T302 | AL KNH 9010 | 10.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 170–680<br>0.06–0.12<br>0.3–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0321 | DCGT 11T304 | AL KNH 9010 | 11.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 140–595<br>0.1–0.24<br>0.4–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0333 | DCGT 11T308 | AL KNH 9010 | 11.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–560<br>0.15–0.48<br>0.8–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0302 | DCMT 11T302 | M U 9035 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 105–175<br>0.05–0.12<br>0.2–2 | 60–105<br>0.05–0.09<br>0.2–1.5 | 95–165<br>0.05–0.12<br>0.2–2 | 155–610<br>0.05–0.12<br>0.2–2 | 25–55<br>0.05–0.09<br>0.2–1.5 | –<br>–<br>– |
| 0300 | DCMT 11T304 | F PMK 9030 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–170<br>0.15–0.24<br>0.5–3 | 65–100<br>0.15–0.18<br>0.5–2.3 | 105–160<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0304 | DCMT 11T304 | M PK 9015 | 6.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–210<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | 150–195<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0306 | DCMT 11T304 | M PMK 9030 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 125–185<br>0.15–0.24<br>0.4–2 | 75–110<br>0.15–0.18<br>0.4–1.5 | 115–175<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0309 | DCMT 11T304 | M U 9035 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–150<br>0.08–0.24<br>0.4–2 | 50–90<br>0.08–0.18<br>0.4–1.5 | 80–140<br>0.08–0.24<br>0.4–2 | 125–525<br>0.08–0.24<br>0.4–2 | 25–55<br>0.08–0.18<br>0.4–1.5 | –<br>–<br>– |
| 0303 | DCMT 11T308 | F PMK 9030 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–190<br>0.15–0.25<br>0.8–3 | 80–110<br>0.15–0.19<br>0.8–2.3 | 125–180<br>0.15–0.25<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0308 | DCMT 11T308 | M PK 9015 | 6.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–230<br>0.15–0.48<br>0.8–2 | –<br>–<br>– | 155–215<br>0.15–0.48<br>0.8–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0312 | DCMT 11T308 | M PMK 9030 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–200<br>0.15–0.48<br>0.8–2 | 65–120<br>0.15–0.36<br>0.8–1.5 | 100–190<br>0.15–0.48<br>0.8–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0315 | DCMT 11T308 | M U 9035 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–165<br>0.08–0.48<br>0.8–2 | 45–95<br>0.08–0.36<br>0.8–1.5 | 75–155<br>0.08–0.48<br>0.8–2 | 120–575<br>0.08–0.48<br>0.8–2 | 25–55<br>0.08–0.3<br>0.8–1.5 | –<br>–<br>– |
| 0318 | DCMT 11T312 | M PMK 9030 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–205<br>0.15–0.7<br>1.2–2 | 55–120<br>0.15–0.53<br>1.2–1.5 | 90–190<br>0.15–0.7<br>1.2–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

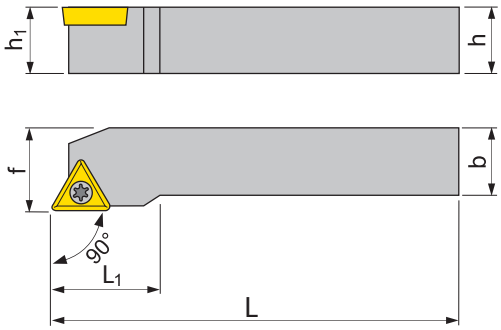
(W286)

Δ Can only be supplied as a whole packaging unit.

## Toolholders 90deg for Positive Inserts TCGT/TCMT 1102.../16T3...

**Design:** Clamping holder for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight turning.



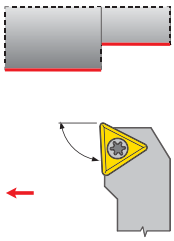



Fig.: Right-hand version

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5650 | STGCR 1616 H11 | 55.30 | 16 x 16 | 100 | 20 | 20 | 16 | Right | TCGT/TCMT 1102.. |
| 5655 | STGCL 1616 H11 | 55.30 | 16 x 16 | 100 | 20 | 20 | 16 | Left | TCGT/TCMT 1102.. |
| 5660 | STGCR 1616 H16 | 55.30 | 16 x 16 | 100 | 20 | 20 | 16 | Right | TCGT/TCMT 16T3.. |
| 5665 | STGCL 1616 H16 | 55.30 | 16 x 16 | 100 | 20 | 20 | 16 | Left | TCGT/TCMT 16T3.. |
| 5670 | STGCR 2020 K16 | 68.20 | 20 x 20 | 125 | 20 | 25 | 20 | Right | TCGT/TCMT 16T3.. |
| 5675 | STGCL 2020 K16 | 68.20 | 20 x 20 | 125 | 20 | 25 | 20 | Left | TCGT/TCMT 16T3.. |
| 5680 | STGCR 2525 M16 | 85.40 | 25 x 25 | 150 | 20 | 32 | 25 | Right | TCGT/TCMT 16T3.. |
| 5685 | STGCL 2525 M16 | 85.40 | 25 x 25 | 150 | 20 | 32 | 25 | Left | TCGT/TCMT 16T3.. |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5838 | 5886 | PU |
|---|---|---|---|---|---|
| 5009 | Supporting plate for insert TC..16T3.. | 6.50 | – | – | 10 Δ |
| 5057 | Hexagon socket threaded bushing | 5.80 | – | – | 10 Δ |
| 5027 | Tightening screw for insert TC.1102. | 2.39 | – | – | 10 Δ |
| 5030 | Tightening screw for insert TC..16T3.. | 2.51 | – | – | 10 Δ |
| 0035 | Allen key 4 mm | – | 0.42 | – | 1 |
| 0030 | Screwdriver for TORX® insert 11 T 8 x 60 mm | – | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX® insert 16 T 15 x 80 mm | – | – | 4.66 | 1 |
| | | (W281) | (W530) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

Supporting plate

Threaded bushing

Angled screwdriver

TORX® screw

TORX® screwdriver

## Turning Inserts

format professional quality

ALU

UNI

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed / Feed / Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0354 | TCGT 110202 | ALU | 4.96 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 155–610<br>0.06–0.12<br>0.3–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0361 | TCGT 110204 | ALU | 4.96 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–525<br>0.10–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| | | | (W291) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## Turning Inserts

Continued

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed / Feed / Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0363 | TCGT 16T302 | ALU | 7.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–525<br>0.10–0.24<br>0.4–5.3 | –<br>–<br>– | –<br>–<br>– |
| 0364 | TCGT 16T304 | ALU | 7.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–525<br>0.10–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| 2330 | TCMT 110204 | UNI | 3.93 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–135<br>0.08–0.24<br>0.5–3.0 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2333 | TCMT 110208 | UNI | 3.93 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.8–3.0 | 50–85<br>0.08–0.18<br>0.8–2.3 | 80–135<br>0.08–0.24<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2336 | TCMT 16T304 | UNI | 5.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.5–3.0 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2339 | TCMT 16T308 | UNI | 5.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–175<br>0.08–0.30<br>0.8–3.0 | 55–105<br>0.08–0.23<br>0.8–2.3 | 90–165<br>0.08–0.30<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

AL N | AL KNH | F | M | R-EC* | L-EC**

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed / Feed / Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0350 | TCGT 110202 | AL KNH 9010 | 11.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 185–735<br>0.06–0.12<br>0.3–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0392 | TCGT 110202 | R-EC U 9035* | 9.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–195<br>0.08–0.12<br>0.4–1.6 | 90–115<br>0.08–0.09<br>0.4–1.2 | 140–185<br>0.08–0.12<br>0.4–1.6 | 225–680<br>0.08–0.12<br>0.4–1.6 | 30–55<br>0.08–0.09<br>0.4–1.0 | –<br>–<br>– |
| 0395 | TCGT 110202 | L-EC U 9035** | 9.00 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–195<br>0.08–0.12<br>0.4–1.6 | 90–115<br>0.08–0.09<br>0.4–1.2 | 140–185<br>0.08–0.12<br>0.4–1.6 | 225–680<br>0.08–0.12<br>0.4–1.6 | 30–55<br>0.08–0.09<br>0.4–1.0 | –<br>–<br>– |
| 0356 | TCGT 110204 | AL KNH 9010 | 10.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 150–630<br>0.1–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0368 | TCMT 110202 | F U 9035 | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 100–135<br>0.08–0.12<br>0.5–3 | 60–80<br>0.08–0.09<br>0.5–2.3 | 95–125<br>0.08–0.12<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.09<br>0.5–1.9 | –<br>–<br>– |
| 0371 | TCMT 110204 | F U 9035 | 5.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.5–3 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.18<br>0.5–2.3 | –<br>–<br>– |
| 0374 | TCMT 110204 | M PMK 9030 | 5.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–195<br>0.15–0.24<br>0.4–2 | 80–115<br>0.15–0.18<br>0.4–1.5 | 125–185<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0380 | TCMT 16T304 | F U 9035 | 6.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.5–3 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.18<br>0.5–2.3 | –<br>–<br>– |
| 0383 | TCMT 16T308 | M PK 9015 | 7.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 165–245<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | 155–230<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0386 | TCMT 16T308 | M PMK 9030 | 6.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–215<br>0.15–0.48<br>0.8–3 | 65–125<br>0.15–0.36<br>0.8–2.3 | 100–200<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0389 | TCMT 16T308 | M U 9035 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–175<br>0.08–0.48<br>0.8–3 | 45–105<br>0.08–0.36<br>0.8–2.3 | 75–165<br>0.08–0.48<br>0.8–3 | 120–610<br>0.08–0.48<br>0.8–3 | 25–55<br>0.08–0.35<br>0.8–2.3 | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

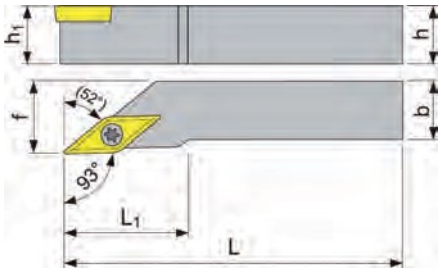
(W286)

Δ Can only be supplied as a whole packaging unit.

## Toolholders 93deg for Positive Inserts – VCGT/VCMT/VBMT 1103.../1604...

**Design: Clamping holder** inserts VC 7°, VB 5° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For outer and copy turning.



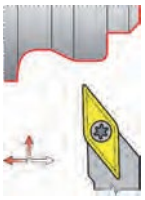



**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5690 | SVJCR 1212 F11 | 45.20 | 12 x 12 | 80 | 20 | 16 | 12 | Right | VCGT/VCMT 1103... |
| 5695 | SVJCL 1212 F11 | 45.20 | 12 x 12 | 80 | 20 | 16 | 12 | Left | VCGT/VCMT 1103... |
| 5720 | SVJCR 1616 H11 | 56.10 | 16 x 16 | 100 | 20 | 20 | 16 | Right | VCGT/VCMT 1103... |
| 5725 | SVJCL 1616 H11 | 56.10 | 16 x 16 | 100 | 20 | 20 | 16 | Left | VCGT/VCMT 1103... |
| 5730 | SVJCR 2020 K11 | 69.20 | 20 x 20 | 125 | 28 | 25 | 20 | Right | VCGT/VCMT 1103... |
| 5735 | SVJCL 2020 K11 | 69.20 | 20 x 20 | 125 | 28 | 25 | 20 | Left | VCGT/VCMT 1103... |
| 5740 | SVJCR 1616 H16 | 56.10 | 16 x 16 | 100 | 20 | 20 | 16 | Right | VCGT/VCMT 1604... |
| 5745 | SVJCL 1616 H16 | 56.10 | 16 x 16 | 100 | 20 | 20 | 16 | Left | VCGT/VCMT 1604... |
| 5810 | SVJCR 2020 K16 | 69.20 | 20 x 20 | 125 | 28 | 25 | 20 | Right | VCGT/VCMT 1604... |
| 5815 | SVJCL 2020 K16 | 69.20 | 20 x 20 | 125 | 28 | 25 | 20 | Left | VCGT/VCMT 1604... |
| 5820 | SVJCR 2525 M16 | 86.60 | 25 x 25 | 150 | 32 | 32 | 25 | Right | VCGT/VCMT 1604... |
| 5825 | SVJCL 2525 M16 | 86.60 | 25 x 25 | 150 | 32 | 32 | 25 | Left | VCGT/VCMT 1604... |
| 6700 | SVJBR 1616 H16 | 56.10 | 16 x 16 | 100 | 20 | 20 | 16 | Right | VBMT 1604... |
| 6705 | SVJBL 1616 H16 | 56.10 | 16 x 16 | 100 | 20 | 20 | 16 | Left | VBMT 1604... |
| 5830 | SVJBR 2020 K16 | 69.20 | 20 x 20 | 125 | 36 | 25 | 20 | Right | VBMT 1604... |
| 5835 | SVJBL 2020 K16 | 69.20 | 20 x 20 | 125 | 36 | 25 | 20 | Left | VBMT 1604... |
| 5840 | SVJBR 2525 M16 | 86.60 | 25 x 25 | 150 | 36 | 32 | 25 | Right | VBMT 1604... |
| 5845 | SVJBL 2525 M16 | 86.60 | 25 x 25 | 150 | 36 | 32 | 25 | Left | VBMT 1604... |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Inserts

| Order No. | Design | 2969 | 5838 | 5886 | PU |
|---|---|---|---|---|---|
| 5910 | Supporting plate for insert V 1604... | 6.80 | – | – | 10 Δ |
| 5915 | Hexagon socket threaded bushing | 5.90 | – | – | 10 Δ |
| 5027 | Tightening screw for insert V 1103... | 2.39 | – | – | 10 Δ |
| 5054 | Tightening screw for insert V 1604... | 5.45 | – | – | 10 Δ |
| 0035 | Allen key for bushing 3.5 mm | – | 0.42 | – | 1 |
| 0030 | Screwdriver for TORX® insert 11 T 8 x 60 mm | – | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX® insert 16 T 15 x 80 mm | – | – | 4.66 | 1 |
| | | (W281) | (W530) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

**Supporting plate**

**TORX® screw**

**Threaded bushing**

**Angled screwdriver**

**TORX® screwdriver**

## Turning Inserts

format professional quality

ALU

UNI

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1616 | VCGT 110304 | ALU | 5.60 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–2.8 | –<br>–<br>– | –<br>–<br>– |
| 1640 | VCGT 160404 | ALU | 9.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–4.0 | –<br>–<br>– | –<br>–<br>– |
| 1646 | VCGT 160408 | ALU | 9.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–490<br>0.15–0.4<br>0.8–4.0 | –<br>–<br>– | –<br>–<br>– |
| 2312 | VCMT 110304 | UNI | 6.90 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 70–120<br>0.08–0.20<br>0.5–2.8 | 40–70<br>0.08–0.15<br>0.5–2.1 | 65–110<br>0.08–0.20<br>0.5–2.8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2318 | VCMT 160404 | UNI | 8.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 70–120<br>0.08–0.20<br>0.5–3.0 | 40–70<br>0.08–0.15<br>0.5–2.3 | 65–110<br>0.08–0.20<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2321 | VCMT 160408 | UNI | 8.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–3.0 | 45–80<br>0.08–0.19<br>0.8–2.3 | 75–125<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2324 | VBMT 160404 | UNI | 8.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 70–120<br>0.08–0.20<br>0.5–3.0 | 40–70<br>0.08–0.15<br>0.5–2.3 | 65–110<br>0.08–0.20<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2327 | VBMT 160408 | UNI | 8.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–3.0 | 45–80<br>0.08–0.19<br>0.8–2.3 | 75–125<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

AL KNH

F PMK

F

M

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1612 | VCGT 110304 | AL KNH 9010 | 14.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–2.8 | –<br>–<br>– | –<br>–<br>– |
| 1636 | VCGT 160404 | AL KNH 9010 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–4 | –<br>–<br>– | –<br>–<br>– |
| 1642 | VCGT 160408 | AL KNH 9010 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–490<br>0.15–0.4<br>0.8–4 | –<br>–<br>– | –<br>–<br>– |
| 1603 | VCMT 110304 | F U 9035 | 8.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 70–120<br>0.08–0.2<br>0.5–2.8 | 40–70<br>0.08–0.15<br>0.5–2.1 | 65–110<br>0.08–0.2<br>0.5–2.8 | –<br>–<br>– | 25–55<br>0.08–0.15<br>0.5–2.1 | –<br>–<br>– |
| 1606 | VCMT 110308 | F PMK 9030 | 8.50 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 120–165<br>0.15–0.25<br>0.8–2.8 | 70–95<br>0.15–0.19<br>0.8–2.1 | 110–155<br>0.15–0.25<br>0.8–2.8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1609 | VCMT 110308 | F U 9035 | 8.50 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–2.8 | 45–80<br>0.08–0.19<br>0.8–0.21 | 75–125<br>0.08–0.25<br>0.8–2.8 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.8–2.1 | –<br>–<br>– |
| 1618 | VCMT 160404 | F PMK 9030 | 9.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–185<br>0.09–0.2<br>0.5–3 | 65–110<br>0.09–0.15<br>0.5–2.3 | 100–175<br>0.09–0.2<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1621 | VCMT 160404 | F U 9035 | 9.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 70–120<br>0.08–0.2<br>0.5–3 | 40–70<br>0.08–0.15<br>0.5–2.3 | 65–110<br>0.08–0.2<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.15<br>0.5–2.3 | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

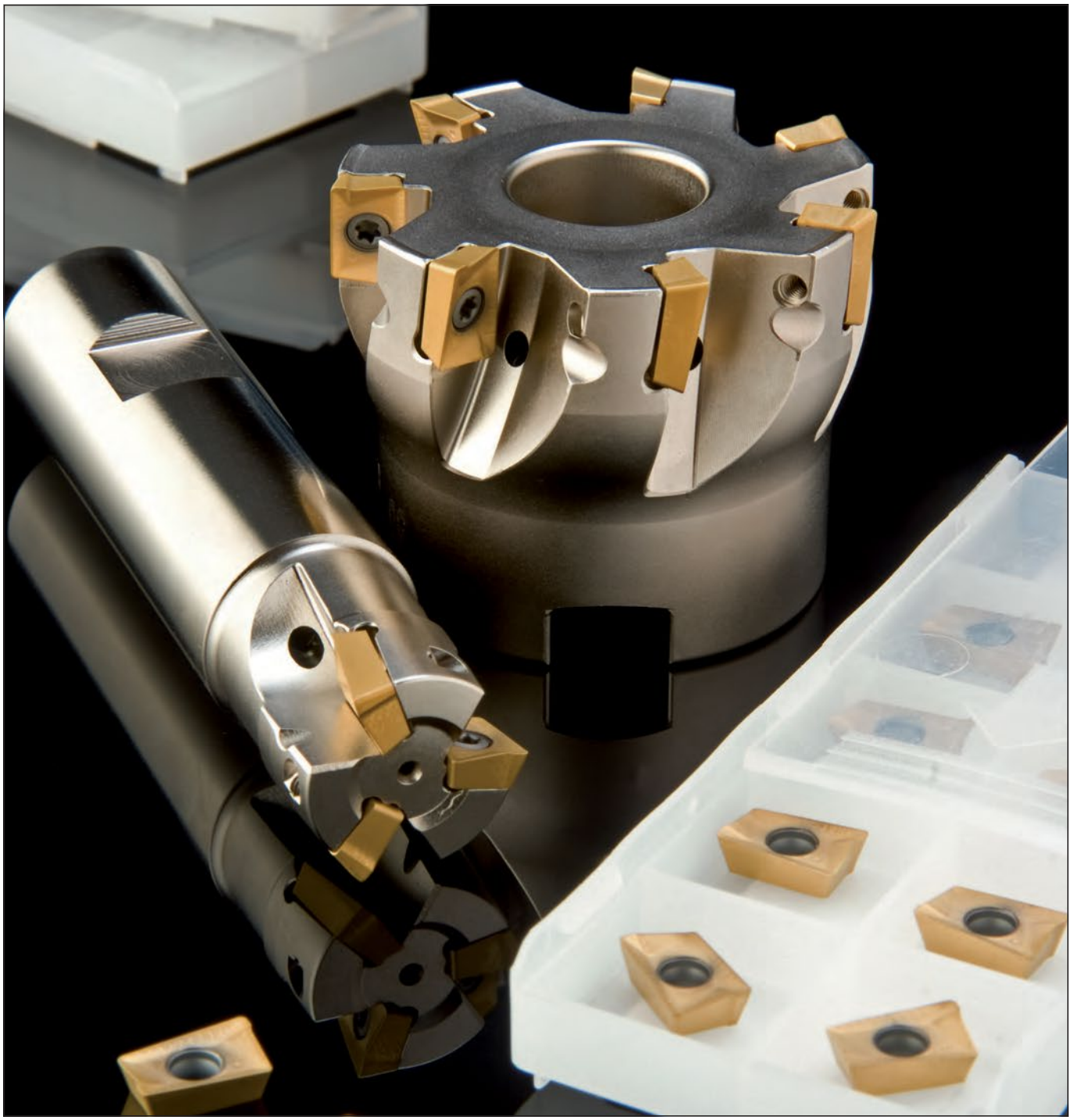
## Turning Inserts

Continued

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed<br>Feed<br>Cutting depth | P<br>Steel | M<br>Stainless | K<br>Cast iron | N<br>Aluminium | S<br>Super-alloy | H<br>Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1624 | VCMT 160408 | F PMK 9030 | 9.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–165<br>0.15–0.25<br>0.8–3 | 65–95<br>0.15–0.19<br>0.8–2.3 | 105–155<br>0.15–0.25<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1627 | VCMT 160408 | F U 9035 | 9.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–3 | 45–80<br>0.08–0.19<br>0.8–2.3 | 75–125<br>0.08–0.25<br>0.8–3 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.8–2.3 | –<br>–<br>– |
| 1553 | VBMT 160404 | M U 9035 | 10.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 85–135<br>0.08–0.2<br>0.4–2 | 50–80<br>0.08–0.15<br>0.4–1.5 | 80–125<br>0.08–0.2<br>0.4–2 | 125–470<br>0.08–0.2<br>0.4–2 | –<br>–<br>– | –<br>–<br>– |
| 1556 | VBMT 160408 | M U 9035 | 10.10 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 75–150<br>0.08–0.4<br>0.8–3 | 45–90<br>0.08–0.3<br>0.8–2.3 | 70–140<br>0.08–0.4<br>0.8–3 | 110–525<br>0.08–0.4<br>0.8–3 | –<br>–<br>– | –<br>–<br>– |

(W286)

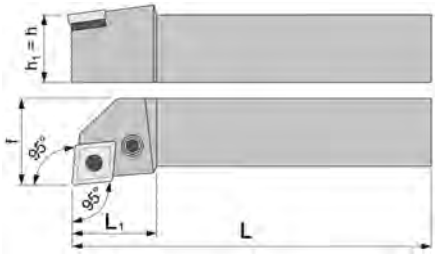
Δ Can only be supplied as a whole packaging unit.



## Toolholders 95deg for Negative Inserts – CNMG/CNKG 1204...

**Design:** Clamping holder for inserts 0° negative, toggle lever tension, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight and face turning.



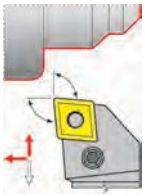



**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5200 | PCLNR 2020 K12 | 57.50 | 20 x 20 | 125 | 32 | 25 | 20 | Right | CNMG/CNKG 1204... |
| 5205 | PCLNL 2020 K12 | 57.50 | 20 x 20 | 125 | 32 | 25 | 20 | Left | CNMG/CNKG 1204... |
| 5210 | PCLNR 2525 M12 | 70.10 | 25 x 25 | 150 | 32 | 32 | 25 | Right | CNMG/CNKG 1204... |
| 5215 | PCLNL 2525 M12 | 70.10 | 25 x 25 | 150 | 32 | 32 | 25 | Left | CNMG/CNKG 1204... |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5036 | Supporting plate | 6.70 | – | 10 Δ |
| 5051 | Pipe pin | 3.39 | – | 10 Δ |
| 5075 | Toggle lever | 12.05 | – | 1 |
| 5063 | Tightening screw | 5.00 | – | 10 Δ |
| 0030 | Hexagon key 4 x 100 mm | – | 1.96 | 1 |
| | | (W281) | (W528) | |

Δ Can only be supplied as a whole packaging unit.

**Supporting plate**

**Pipe pin**

**Toggle lever**

**Tightening screw**

**Hexagon key**

## Turning Inserts

**ALU**

**UNI**

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0446 | CNKG 120404 | ALU | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.1–0.4<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– |
| 0449 | CNKG 120408 | ALU | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.1–0.4<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– |
| 0440 | CNMG 120404 | UNI | 5.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 120–220<br>0.1–0.3<br>0.5–3.0 | 70–130<br>0.1–0.23<br>0.5–2.3 | 110–205<br>0.1–0.3<br>0.8–2.3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0443 | CNMG 120408 | UNI | 5.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 130–210<br>0.15–0.45<br>0.8–3.0 | 75–125<br>0.15–0.34<br>0.8–2.3 | 120–195<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| | | | (W291) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

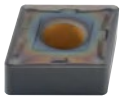
## Turning Inserts

F

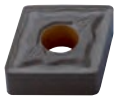
VA

R-EC*

L-EC**


M

R


WM

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0500 | CNMG 120404 | F PMK 9030 | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–260<br>0.15–0.3<br>0.5–3 | 95–155<br>0.15–0.23<br>0.5–2.3 | 150–245<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 30–75<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0519 | CNMG 120404 | VA 9040 | 7.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–285<br>0.15–0.3<br>0.5–3 | 120–170<br>0.15–0.23<br>0.5–2.3 | 140–270<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 40–85<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0530 | CNMG 120404 | R-EC U 9035* | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–185<br>0.2–0.3<br>0.8–5 | 80–110<br>0.2–0.23<br>0.8–3.8 | 125–175<br>0.2–0.3<br>0.8–5 | 200–645<br>0.2–0.3<br>0.8–5 | 25–55<br>0.2–0.23<br>0.8–3 | –<br>–<br>– |
| 0518 | CNMG 120404 | L-EC U 9035** | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–185<br>0.2–0.3<br>0.8–5 | 80–110<br>0.2–0.23<br>0.8–3.8 | 125–175<br>0.2–0.3<br>0.8–5 | 200–645<br>0.2–0.3<br>0.8–5 | 25–55<br>0.2–0.23<br>0.8–3 | –<br>–<br>– |
| 0502 | CNMG 120408 | F PMK 9030 | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 180–295<br>0.15–0.35<br>0.8–3 | 105–175<br>0.15–0.26<br>0.8–2.3 | 170–280<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | 35–85<br>0.15–0.21<br>0.8–1.8 | –<br>–<br>– |
| 0505 | CNMG 120408 | M PK 9015 | 7.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–330<br>0.15–0.6<br>1–6 | –<br>–<br>– | 190–310<br>0.15–0.6<br>1–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0503 | CNMG 120408 | M PMK 9030 | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 130–295<br>0.15–0.6<br>0.8–6 | 75–175<br>0.15–0.45<br>0.8–4.5 | 120–280<br>0.15–0.6<br>0.8–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0507 | CNMG 120408 | R PK 9015 | 7.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 225–305<br>0.25–0.6<br>2–6 | –<br>–<br>– | 210–285<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0506 | CNMG 120408 | R PMK 9030 | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 145–240<br>0.25–0.6<br>2–6 | 85–140<br>0.25–0.45<br>2–4.5 | 135–225<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0548 | CNMG 120408 | R PMK 9040 | 6.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 125–200<br>0.25–0.6<br>2–6 | 75–120<br>0.25–0.45<br>2–4.5 | 115–190<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0540 | CNMG 120408 | VA 9040 | 7.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 235–305<br>0.2–0.4<br>0.8–3 | 140–180<br>0.2–0.3<br>0.8–2.3 | 220–285<br>0.2–0.4<br>0.8–3 | –<br>–<br>– | 45–90<br>0.2–0.24<br>0.8–1.8 | –<br>–<br>– |
| 0536 | CNMG 120408 | R-EC U 9035* | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0524 | CNMG 120408 | L-EC U 9035** | 6.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0539 | CNMG 120408 | WM PMK 9030 | 8.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–295<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | 125–280<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0510 | CNMG 120412 | R PK 9015 | 7.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 230–320<br>0.25–0.7<br>2–6 | –<br>–<br>– | 215–300<br>0.25–0.7<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0512 | CNMG 120412 | R PMK 9030 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–250<br>0.25–0.7<br>2–6 | 80–150<br>0.25–0.53<br>2–4.5 | 130–235<br>0.25–0.7<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0513 | CNMG 120412 | VA 9040 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 240–305<br>0.2–0.4<br>1.2–3.5 | 140–180<br>0.2–0.3<br>1.2–2.6 | 225–285<br>0.2–0.4<br>1.2–3.5 | –<br>–<br>– | 45–90<br>0.2–0.24<br>1.2–2.1 | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

(W286)

Δ Can only be supplied as a whole packaging unit.

## Toolholders 93deg for Negative Inserts – DNMG 1104.../1506...

**Design:** Clamping holder for inserts 0° negative, toggle lever tension, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight and copy turning.

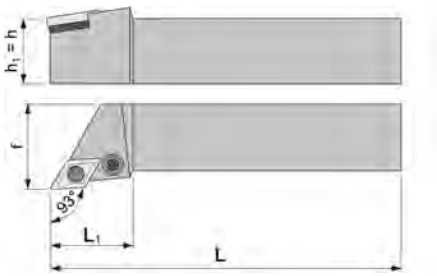


**Fig.: Right-hand version**

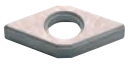
| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5500 | PDJNR 1616 H11 | 60.60 | 16 x 16 | 100 | 29 | 20 | 16 | Right | DNMG 1104... |
| 5505 | PDJNL 1616 H11 | 60.60 | 16 x 16 | 100 | 29 | 20 | 16 | Left | DNMG 1104... |
| 5510 | PDJNR 2020 K11 | 66.90 | 20 x 20 | 125 | 29 | 25 | 20 | Right | DNMG 1104... |
| 5515 | PDJNL 2020 K11 | 66.90 | 20 x 20 | 125 | 29 | 25 | 20 | Left | DNMG 1104... |
| 5520 | PDJNR 2020 K15 | 66.90 | 20 x 20 | 125 | 35 | 25 | 20 | Right | DNMG 1506... |
| 5525 | PDJNL 2020 K15 | 66.90 | 20 x 20 | 125 | 35 | 25 | 20 | Left | DNMG 1506... |
| 5530 | PDJNR 2525 M15 | 81.00 | 25 x 25 | 150 | 39 | 32 | 25 | Right | DNMG 1506... |
| 5535 | PDJNL 2525 M15 | 81.00 | 25 x 25 | 150 | 39 | 32 | 25 | Left | DNMG 1506... |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Inserts

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5003 | Supporting plate for insert 1104.. | 6.70 | – | 10 Δ |
| 5042 | Supporting plate for insert 1506.. | 7.40 | – | 10 Δ |
| 5024 | Pipe pin for insert 1104 | 3.35 | – | 10 Δ |
| 5051 | Pipe pin for insert 1506 | 3.39 | – | 10 Δ |
| 5072 | Toggle lever for insert 1104 | 7.15 | – | 10 Δ |
| 5078 | Toggle lever for insert 1506 | 11.95 | – | 1 |
| 5060 | Tightening screw for insert 1104 | 4.45 | – | 10 Δ |
| 5063 | Tightening screw for insert 1506 | 5.00 | – | 10 Δ |
| 0015 | Hexagon key 3 x 100 mm for insert 11 | – | 1.74 | 1 |
| 0030 | Hexagon key 4 x 100 mm for insert 15 | – | 1.96 | 1 |
| | | (W281) | (W528) | |

Δ Can only be supplied as a whole packaging unit.

**Support plate insert 11**



**Support plate insert 15**

**Tightening screw**

**Hexagon key**

**Pipe pin**

**Toggle lever**

## Turning Inserts

format professional quality

**ALU**

**UNI**

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0794 | DNKG 150604 | ALU (N) | 6.80 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.10–0.40<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 0797 | DNKG 150608 | ALU (N) | 6.80 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.10–0.40<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 0786 | DNMG 110404 | UNI (P) (M) | 5.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 105–175<br>0.10–0.24<br>0.4–3.0 | 60–105<br>0.10–0.18<br>0.4–2.3 | 95–165<br>0.10–0.24<br>0.4–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| | | | (W291) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## Turning Inserts

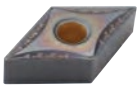
Continued

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0787 | DNMG 110408 | UNI | 5.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 110–200<br>0.10–0.35<br>0.8–3.0 | 65–120<br>0.10–0.26<br>0.8–2.3 | 100–190<br>0.10–0.35<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0788 | DNMG 150604 | UNI | 9.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 105–175<br>0.10–0.24<br>0.5–3.0 | 60–105<br>0.10–0.18<br>0.5–2.3 | 95–165<br>0.10–0.24<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0791 | DNMG 150608 | UNI | 9.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 100–170<br>0.15–0.45<br>0.8–3.0 | 60–100<br>0.15–0.34<br>0.8–2.3 | 95–160<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

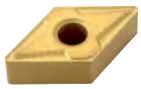
Δ Can only be supplied as a whole packaging unit.

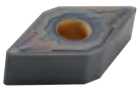
## Turning Inserts

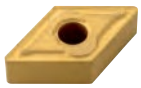

F PK

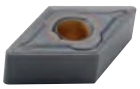
F

VA

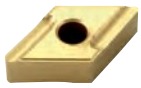

M


M PK


R


R PK

R-EC*


L-EC**

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0670 | DNMG 110404 | F PK 9015 | 8.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 180–240<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 170–225<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0673 | DNMG 110404 | F PMK 9030 | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–210<br>0.15–0.24<br>0.5–3 | 80–125<br>0.15–0.18<br>0.5–2.3 | 130–195<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 25–60<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0674 | DNMG 110404 | VA 9040 | 7.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 170–225<br>0.15–0.24<br>0.5–3 | 100–135<br>0.15–0.18<br>0.5–2.3 | 160–210<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 30–65<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0676 | DNMG 110408 | M PK 9015 | 7.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–270<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | 175–255<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0679 | DNMG 110408 | M PMK 9030 | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 125–235<br>0.15–0.48<br>0.8–0.3 | 75–140<br>0.15–0.36<br>0.8–2.3 | 115–220<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0681 | DNMG 110408 | VA 9040 | 7.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–245<br>0.2–0.4<br>0.8–3 | 110–145<br>0.2–0.3<br>0.8–2.3 | 175–230<br>0.2–0.4<br>0.8–3 | –<br>–<br>– | 35–70<br>0.2–0.24<br>0.8–1.8 | –<br>–<br>– |
| 0700 | DNMG 150604 | F PMK 9030 | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–210<br>0.15–0.24<br>0.5–3 | 80–125<br>0.15–0.18<br>0.5–2.3 | 130–195<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 25–60<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0736 | DNMG 150604 | R-EC U 9035* | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 120–145<br>0.2–0.24<br>0.8–4.5 | 70–85<br>0.2–0.24<br>0.8–3.4 | 110–135<br>0.2–0.24<br>0.8–4.5 | 180–505<br>0.2–0.24<br>0.8–4.5 | 20–40<br>0.2–0.24<br>0.8–2.7 | –<br>–<br>– |
| 0724 | DNMG 150604 | L-EC U 9035** | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 120–145<br>0.2–0.24<br>0.8–4.5 | 70–85<br>0.2–0.24<br>0.8–3.4 | 110–135<br>0.2–0.24<br>0.8–4.5 | 180–505<br>0.2–0.24<br>0.8–4.5 | 20–40<br>0.2–0.24<br>0.8–2.7 | –<br>–<br>– |
| 0725 | DNMG 150604 | VA 9040 | 10.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 170–225<br>0.15–0.24<br>0.5–3 | 100–135<br>0.15–0.18<br>0.5–2.3 | 160–210<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 30–65<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0703 | DNMG 150608 | F PMK 9030 | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–235<br>0.15–0.35<br>0.8–3 | 80–140<br>0.15–0.26<br>0.8–2.3 | 130–220<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | 25–70<br>0.15–0.21<br>0.8–1.8 | –<br>–<br>– |
| 0704 | DNMG 150608 | M PK 9015 | 10.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 175–270<br>0.15–0.48<br>0.8–4.5 | –<br>–<br>– | 165–255<br>0.15–0.48<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0706 | DNMG 150608 | M PMK 9030 | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 120–235<br>0.15–0.48<br>0.8–4.5 | 70–140<br>0.15–0.36<br>0.8–3.4 | 110–220<br>0.15–0.48<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0708 | DNMG 150608 | R PK 9015 | 10.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–245<br>0.25–0.48<br>2–4.5 | –<br>–<br>– | 185–230<br>0.25–0.48<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0712 | DNMG 150608 | R PMK 9030 | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 130–190<br>0.25–0.48<br>2–4.5 | 75–110<br>0.25–0.36<br>2–3.4 | 120–180<br>0.25–0.48<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0742 | DNMG 150608 | R EC U 9035* | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 105–175<br>0.2–0.48<br>0.8–4.5 | 60–105<br>0.2–0.36<br>0.8–3.4 | 95–165<br>0.2–0.48<br>0.8–4.5 | 155–610<br>0.2–0.48<br>0.8–4.5 | 20–50<br>0.2–0.29<br>0.8–2.7 | –<br>–<br>– |
| 0730 | DNMG 150608 | L EC U 9035** | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 105–175<br>0.2–0.48<br>0.8–4.5 | 60–105<br>0.2–0.36<br>0.8–3.4 | 95–165<br>0.2–0.48<br>0.8–4.5 | 155–610<br>0.2–0.48<br>0.8–4.5 | 20–50<br>0.2–0.29<br>0.8–2.7 | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

(W286)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## Turning Inserts

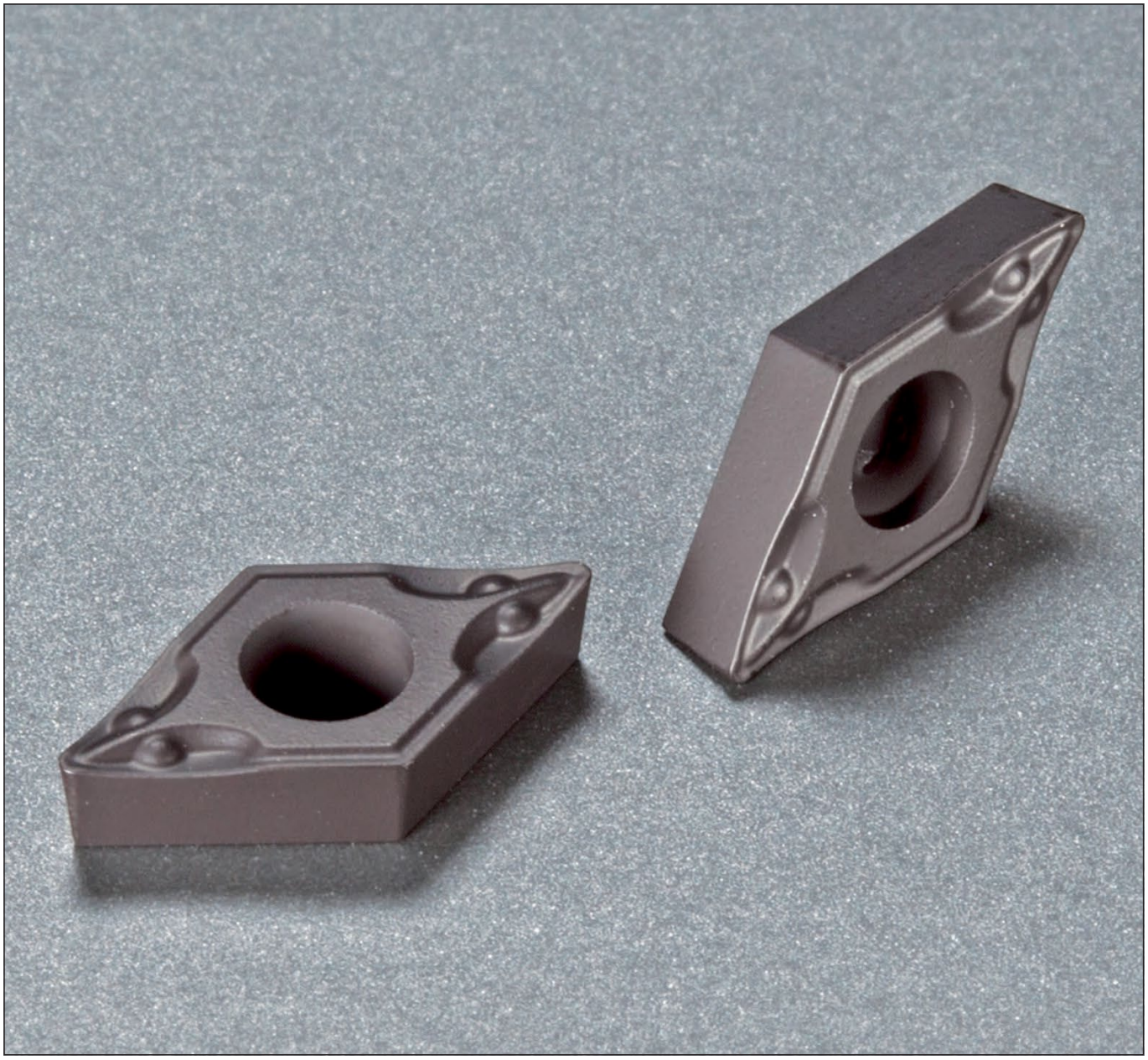
Continued

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed<br>Feed<br>Cutting depth | P<br>Steel | M<br>Stainless | K<br>Cast iron | N<br>Aluminium | S<br>Super-alloy | H<br>Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0731 | DNMG 150608 | VA 9040 | 10.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–240<br>0.2–0.4<br>0.8–3 | 110–145<br>0.2–0.3<br>0.8–2.3 | 175–230<br>0.2–0.4<br>0.8–3 | –<br>–<br>– | 35–70<br>0.2–0.24<br>0.8–1.8 | –<br>–<br>– |
| 0709 | DNMG 150612 | M PMK 9030 | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 105–225<br>0.17–0.72<br>1.2–4.5 | 60–135<br>0.17–0.54<br>1.2–3.4 | 95–210<br>0.17–0.72<br>1.2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0715 | DNMG 150612 | R PMK 9030 | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–200<br>0.25–0.7<br>2–4.5 | 65–120<br>0.25–0.53<br>2–3.4 | 105–190<br>0.25–0.7<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0718 | DNMG 150616 | R PMK 9030 | 9.75 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 115–190<br>0.3–0.8<br>2–4.5 | 65–110<br>0.3–0.6<br>2–3.4 | 105–180<br>0.3–0.8<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0716 | DNMG 150612 | VA 9040 | 10.30 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 190–245<br>0.2–0.4<br>1.2–3.5 | 110–145<br>0.2–0.3<br>1.2–2.6 | 180–230<br>0.2–0.4<br>1.2–3.5 | –<br>–<br>– | 35–70<br>0.2–0.24<br>1.2–2.1 | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

(W286)

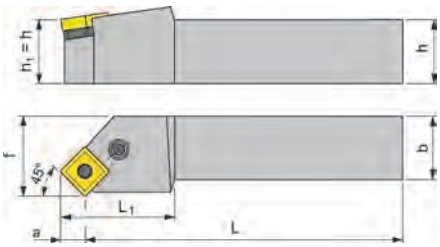
Δ Can only be supplied as a whole packaging unit.



## Toolholders 45deg for SNMG 1204... Inserts

**Design:** Clamping holder for inserts 0° negative, toggle lever tension, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For face turning.



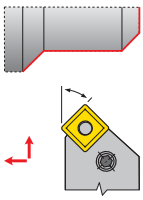



Fig.: Right-hand version

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5700 | PSSNR 2020 K12 | 57.50 | 20 x 20 | 125 | 29 | 25 | 20 | Right | SNMG 1204.. |
| 5705 | PSSNL 2020 K12 | 57.50 | 20 x 20 | 125 | 29 | 25 | 20 | Left | SNMG 1204.. |
| 5710 | PSSNR 2525 M12 | 70.10 | 25 x 25 | 150 | 29 | 32 | 25 | Right | SNMG 1204.. |
| 5715 | PSSNL 2525 M12 | 70.10 (W285) | 25 x 25 | 150 | 29 | 32 | 25 | Left | SNMG 1204.. |

## Spare parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5000 | Supporting plate | 6.70 | – | 10 Δ |
| 5051 | Pipe pin | 3.39 | – | 10 Δ |
| 5075 | Toggle lever | 12.05 | – | 1 |
| 5063 | Tightening screw | 5.00 | – | 10 Δ |
| 0030 | Hexagon key 4 x 100 mm | – (W281) | 1.96 (W528) | 1 |

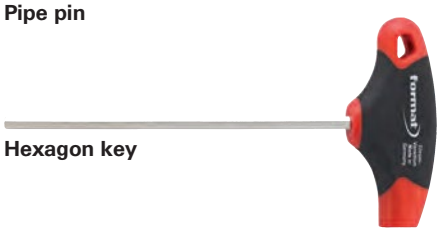
Δ Can only be supplied as a whole packaging unit.

Supporting plate

Toggle lever

Pipe pin

Tightening screw



Hexagon key

## Turning Inserts

format professional quality

UNI

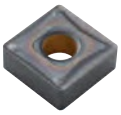
| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0554 | SNMG 120404 | UNI | 5.95 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 125–230<br>0.10–0.30<br>0.5–3.0 | 75–135<br>0.10–0.23<br>0.5–2.3 | 115–215<br>0.10–0.30<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0572 | SNMG 120408 | UNI | 5.95 (W291) | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–220<br>0.15–0.45<br>0.8–3.0 | 80–130<br>0.15–0.34<br>0.8–2.3 | 125–205<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

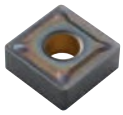
Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

F

M


M PK


R PK

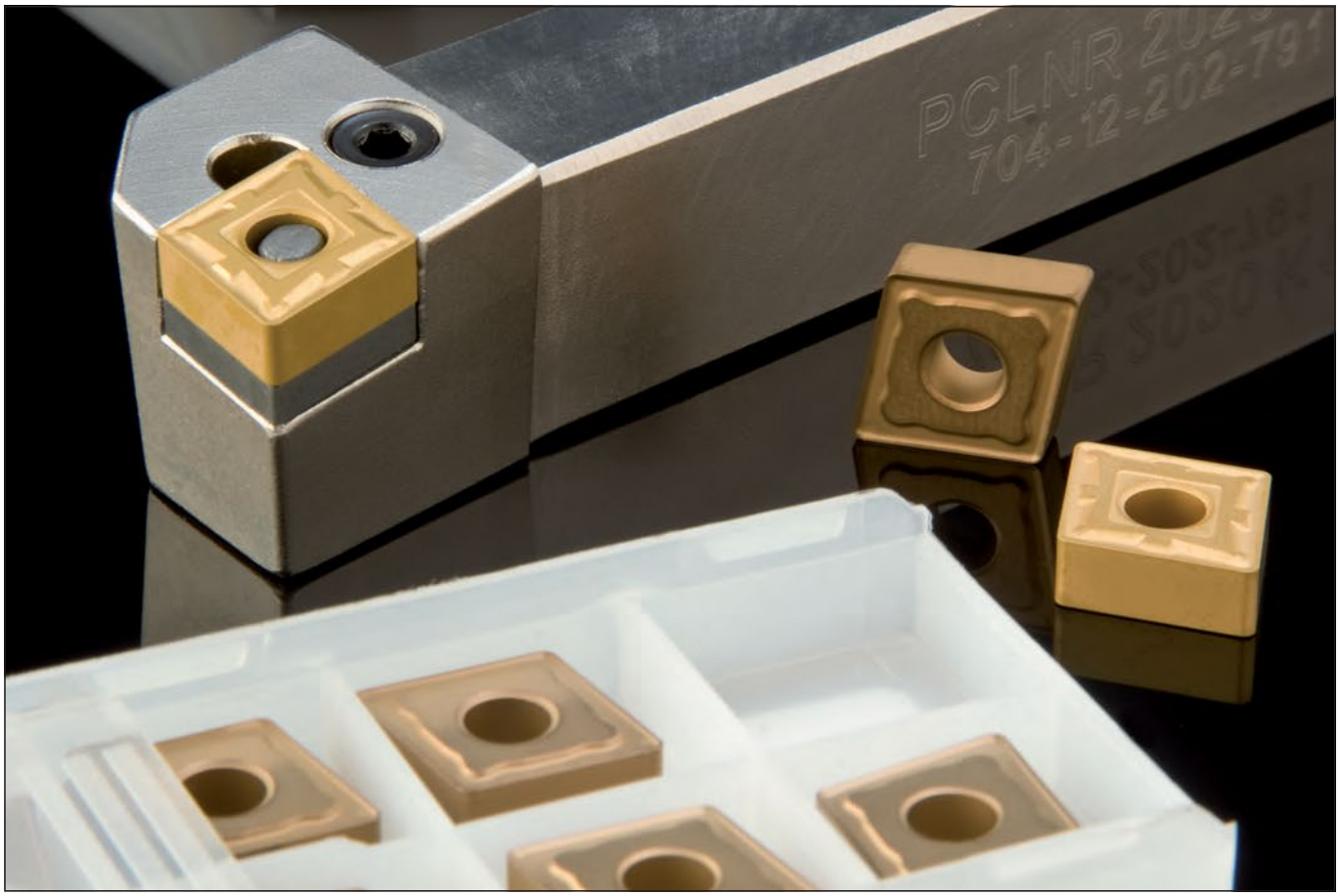
R

VA

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed<br>Feed<br>Cutting depth | P<br>Steel | M<br>Stainless | K<br>Cast iron | N<br>Aluminium | S<br>Super-alloy | H<br>Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0553 | SNMG 120404 | F PMK 9030 | 7.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–275<br>0.15–0.34<br>0.5–3 | 95–165<br>0.15–0.26<br>0.5–2.3 | 150–260<br>0.15–0.34<br>0.5–3 | –<br>–<br>– | 30–80<br>0.15–0.2<br>0.5–1.8 | –<br>–<br>– |
| 0559 | SNMG 120408 | F PMK 9030 | 7.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–310<br>0.15–0.35<br>0.8–3 | 110–185<br>0.15–0.26<br>0.8–2.3 | 175–290<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | 35–90<br>0.15–0.21<br>0.8–1.8 | –<br>–<br>– |
| 0562 | SNMG 120408 | M PK 9015 | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 215–355<br>0.15–0.6<br>0.8–6 | –<br>–<br>– | 200–335<br>0.15–0.6<br>0.8–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0565 | SNMG 120408 | M PMK 9030 | 7.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–310<br>0.15–0.6<br>0.8–6 | 80–185<br>0.15–0.45<br>0.8–4.5 | 125–290<br>0.15–0.6<br>0.8–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0568 | SNMG 120408 | R PK 9015 | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 240–320<br>0.25–0.6<br>2–6 | –<br>–<br>– | 225–300<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0571 | SNMG 120408 | R PMK 9030 | 7.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–250<br>0.25–0.6<br>2–6 | 90–150<br>0.25–0.45<br>2–4.5 | 140–235<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0580 | SNMG 120408 | VA 9040 | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 235–320<br>0.2–0.5<br>0.8–3 | 140–190<br>0.2–0.38<br>0.8–2.3 | 220–300<br>0.2–0.5<br>0.8–3 | –<br>–<br>– | 45–95<br>0.2–0.3<br>0.8–1.8 | –<br>–<br>– |
| 0583 | SNMG 120412 | VA 9040 | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 240–320<br>0.2–0.5<br>1.2–3.5 | 140–190<br>0.2–0.38<br>1.2–2.6 | 225–300<br>0.2–0.5<br>1.2–3.5 | –<br>–<br>– | 45–95<br>0.2–0.3<br>1.2–2.1 | –<br>–<br>– |
| 0574 | SNMG 120412 | R PK 9015 | 7.35 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 240–340<br>0.25–0.7<br>2–6 | –<br>–<br>– | 225–320<br>0.25–0.7<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0577 | SNMG 120412 | R PMK 9030 | 7.05 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–265<br>0.25–0.7<br>2–6 | 90–155<br>0.25–0.53<br>2–4.5 | 140–250<br>0.25–0.7<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W286)

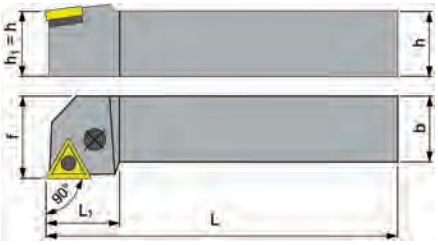
Δ Can only be supplied as a whole packaging unit.



## Toolholders 90deg for TNMG 1604... Inserts

**Design:** Clamping holder for inserts 0° negative, toggle lever tension, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight turning.



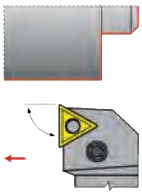



Fig.: Right-hand version

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5600 | PTGNR 2020 K16 | 65.80 | 20 x 20 | 125 | 38 | 25 | 20 | Right | TNMG 1604 |
| 5605 | PTGNL 2020 K16 | 65.80 | 20 x 20 | 125 | 38 | 25 | 20 | Left | TNMG 1604 |
| 5610 | PTGNR 2525 M16 | 80.20 | 25 x 25 | 150 | 38 | 32 | 25 | Right | TNMG 1604 |
| 5615 | PTGNL 2525 M16 | 80.20 (W285) | 25 x 25 | 150 | 38 | 32 | 25 | Left | TNMG 1604 |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5045 | Supporting plate | 7.40 | – | 10 Δ |
| 5024 | Pipe pin | 3.35 | – | 10 Δ |
| 5072 | Toggle lever | 7.15 | – | 10 Δ |
| 5060 | Tightening screw | 4.45 | – | 10 Δ |
| 0015 | Hexagon key for insert 06 3 x 100 mm | – (W281) | 1.74 (W528) | 1 |

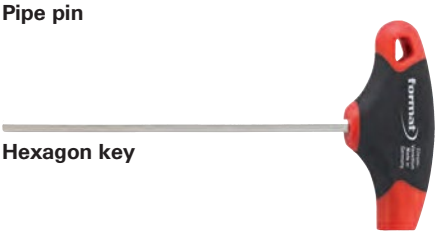
Δ Can only be supplied as a whole packaging unit.

Supporting plate

Toggle lever

Pipe pin

Tightening screw



Hexagon key

## Turning Inserts

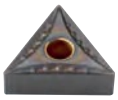
format professional quality

UNI

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0741 | TNMG 160404 | UNI | 5.55 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 130–200<br>0.10–0.24<br>0.5–3.0 | 75–120<br>0.10–0.18<br>0.5–2.3 | 120–190<br>0.10–0.24<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0744 | TNMG 160408 | UNI | 5.55 (W291) | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 130–200<br>0.10–0.24<br>0.5–3.0 | 75–120<br>0.15–0.34<br>0.8–2.3 | 120–190<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts


F

M

R

VA

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0747 | TNMG 160404 | F PK 9015 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 190–255<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 180–240<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0750 | TNMG 160404 | F PMK 9030 | 6.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–220<br>0.15–0.24<br>0.5–3 | 90–130<br>0.15–0.18<br>0.5–2.3 | 140–205<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 30–65<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0751 | TNMG 160404 | VA 9040 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 180–240<br>0.15–0.24<br>0.5–3 | 105–140<br>0.15–0.18<br>0.5–2.3 | 170–225<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 35–70<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0752 | TNMG 160408 | M PK 9015 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 185–290<br>0.15–0.48<br>0.8–5 | –<br>–<br>– | 175–275<br>0.15–0.48<br>0.8–5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0756 | TNMG 160408 | M PMK 9030 | 6.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 125–250<br>0.15–0.48<br>0.8–5 | 75–150<br>0.15–0.36<br>0.8–3.8 | 115–235<br>0.15–0.48<br>0.8–5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0760 | TNMG 160408 | R PK 9015 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–260<br>0.25–0.48<br>2–5 | –<br>–<br>– | 190–245<br>0.25–0.48<br>2–5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0762 | TNMG 160408 | R PMK 9030 | 6.20 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–200<br>0.25–0.48<br>2–5 | 80–120<br>0.25–0.36<br>2–3.8 | 130–190<br>0.25–0.48<br>2–5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0763 | TNMG 160408 | VA 9040 | 6.40 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 195–250<br>0.2–0.4<br>1–3 | 115–150<br>0.2–0.3<br>1–2.3 | 185–235<br>0.2–0.4<br>1–3 | –<br>–<br>– | 35–75<br>0.2–0.24<br>1–1.8 | –<br>–<br>– |

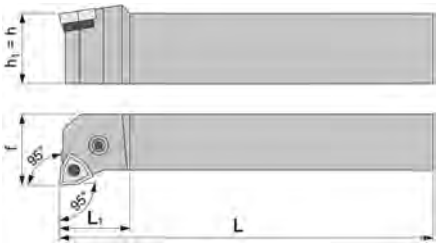
(W286)

Δ Can only be supplied as a whole packaging unit.

## Toolholders 95deg for Negative Inserts – WNMG 0604.../0804...

**Design:** Clamping holder for inserts 0° negative, toggle lever tension, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight and face turning.



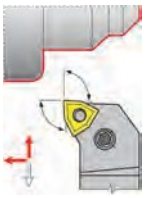



Fig.: Right-hand version

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5290 | PWLNR 1616 H06 | 56.30 | 16 x 16 | 100 | 19 | 20 | 16 | Right | WNMG 0604... |
| 5295 | PWLNR 1616 H06 | 56.30 | 16 x 16 | 100 | 19 | 20 | 16 | Left | WNMG 0604... |
| 5300 | PWLNR 2020 K06 | 61.00 | 20 x 20 | 125 | 19 | 25 | 20 | Right | WNMG 0604... |
| 5305 | PWLNL 2020 K06 | 61.00 | 20 x 20 | 125 | 19 | 25 | 20 | Left | WNMG 0604... |
| 5310 | PWLNR 2525 M06 | 75.70 | 25 x 25 | 150 | 19 | 32 | 25 | Right | WNMG 0604... |
| 5315 | PWLNL 2525 M06 | 75.70 | 25 x 25 | 150 | 19 | 32 | 25 | Left | WNMG 0604... |
| 5320 | PWLNR 2020 K08 | 61.00 | 20 x 20 | 150 | 29 | 25 | 20 | Right | WNMG 0804... |
| 5325 | PWLNL 2020 K08 | 61.00 | 20 x 20 | 150 | 29 | 25 | 20 | Left | WNMG 0804 |
| 5330 | PWLNR 2525 M08 | 75.70 | 25 x 25 | 170 | 33 | 32 | 25 | Right | WNMG 0804... |
| 5335 | PWLNL 2525 M08 | 75.70 | 25 x 25 | 170 | 33 | 32 | 25 | Left | WNMG 0804... |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5021 | Supporting plate for insert 0604.. | 7.40 | – | 10 Δ |
| 5048 | Supporting plate for insert 0804.. | 8.10 | – | 10 Δ |
| 5024 | Pipe pin for insert 0604 | 3.35 | – | 10 Δ |
| 5051 | Pipe pin for insert 0804 | 3.39 | – | 10 Δ |
| 5072 | Toggle lever for insert 0604 | 7.15 | – | 10 Δ |
| 5075 | Toggle lever for insert 0804 | 12.05 | – | 1 |
| 5060 | Tightening screw for insert 0604 | 4.45 | – | 10 Δ |
| 5063 | Tightening screw for insert 0804 | 5.00 | – | 10 Δ |
| 0015 | Hexagon key 3 x 100 mm for insert 06 | – | 1.74 | 1 |
| 0030 | Hexagon key 4 x 100 mm for insert 08 | – | 1.96 | 1 |
| | | (W281) | (W528) | |

Δ Can only be supplied as a whole packaging unit.

Supporting plate

Pipe pin

Toggle lever

Tightening screw

Hexagon key

## Turning Inserts

UNI

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0892 | WNMG 060404 | UNI | 4.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 120–220<br>0.10–0.30<br>0.5–3.0 | 70–130<br>0.10–0.23<br>0.5–2.3 | 110–205<br>0.10–0.30<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0893 | WNMG 060408 | UNI | 4.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–250<br>0.10–0.35<br>0.8–3.0 | 80–150<br>0.10–0.26<br>0.8–2.3 | 130–235<br>0.10–0.35<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0894 | WNMG 080404 | UNI | 6.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 120–220<br>0.10–0.30<br>0.5–3.0 | 70–130<br>0.10–0.23<br>0.5–2.3 | 110–205<br>0.10–0.30<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0897 | WNMG 080408 | UNI | 6.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 130–210<br>0.15–0.45<br>0.8–3.0 | 75–125<br>0.15–0.34<br>0.8–2.3 | 120–195<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| | | | (W291) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

F M R R PK WF R-EC* L-EC** VA WM WM PK

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0870 | WNMG 060404 | F PMK 9030 | 6.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–260<br>0.15–0.3<br>0.5–3 | 95–155<br>0.15–0.23<br>0.5–2.3 | 150–245<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 30–75<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0874 | WNMG 060404 | VA 9040 | 7.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–285<br>0.15–0.3<br>0.5–3 | 120–170<br>0.15–0.23<br>0.5–2.3 | 190–270<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 40–85<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0879 | WNMG 060408 | M PMK 9030 | 6.25 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–295<br>0.15–0.6<br>0.8–4 | 80–175<br>0.15–0.45<br>0.8–3 | 125–280<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0890 | WNMG 060408 | VA 9040 | 7.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 235–305<br>0.2–0.4<br>0.8–3 | 140–180<br>0.2–0.3<br>0.8–2.3 | 220–285<br>0.2–0.4<br>0.8–3 | –<br>–<br>– | 45–90<br>0.2–0.24<br>0.8–1.8 | –<br>–<br>– |
| 0888 | WNMG 060408 | WM PMK 9030 | 7.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–295<br>0.15–0.6<br>0.8–3 | –<br>–<br>– | 130–280<br>0.15–0.6<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0900 | WNMG 080404 | F PMK 9030 | 7.15 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 160–260<br>0.15–0.3<br>0.5–3 | 95–155<br>0.15–0.23<br>0.5–2.3 | 150–245<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 30–75<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0925 | WNMG 080404 | VA 9040 | 7.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–285<br>0.15–0.3<br>0.5–3 | 120–170<br>0.15–0.23<br>0.5–2.3 | 190–270<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 40–85<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0924 | WNMG 080404 | WF PMK 9030 | 8.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 155–270<br>0.15–0.3<br>0.4–4.4 | –<br>–<br>– | 145–255<br>0.15–0.3<br>0.4–4.4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0903 | WNMG 080408 | F PMK 9030 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 180–295<br>0.15–0.35<br>0.8–3 | 105–175<br>0.15–0.26<br>0.8–2.3 | 170–280<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | 35–85<br>0.15–0.21<br>0.8–1.8 | –<br>–<br>– |
| 0928 | WNMG 080408 | M PK 9015 | 7.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–340<br>0.15–0.6<br>0.8–5.6 | –<br>–<br>– | 190–320<br>0.15–0.6<br>0.8–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0930 | WNMG 080408 | M PMK 9030 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 130–295<br>0.15–0.6<br>0.8–5.6 | 75–175<br>0.15–0.45<br>0.8–4.2 | 120–280<br>0.15–0.6<br>0.8–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0932 | WNMG 080408 | R PK 9015 | 7.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 225–305<br>0.25–0.6<br>2–5.6 | –<br>–<br>– | 210–285<br>0.25–0.6<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0909 | WNMG 080408 | R PMK 9030 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 145–240<br>0.25–0.6<br>2–5.6 | 85–140<br>0.25–0.45<br>2–4.2 | 135–225<br>0.25–0.6<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0917 | WNMG 080408 | VA 9040 | 7.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 220–305<br>0.2–0.5<br>0.8–3 | 130–180<br>0.2–0.38<br>0.8–2.3 | 205–285<br>0.2–0.5<br>0.8–3 | –<br>–<br>– | 40–90<br>0.2–0.3<br>0.8–1.8 | –<br>–<br>– |
| 0942 | WNMG 080408 | R-EC U 9035* | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0940 | WNMG 080408 | L-EC U 9035** | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0915 | WNMG 080408 | WM PMK 9030 | 8.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 135–295<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | 125–280<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0944 | WNMG 080412 | M PK 9015 | 7.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 205–335<br>0.17–0.8<br>1.2–5.6 | –<br>–<br>– | 190–315<br>0.17–0.8<br>1.2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0906 | WNMG 080412 | M PMK 9030 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 125–285<br>0.17–0.8<br>1.2–5.6 | 75–170<br>0.17–0.6<br>1.2–4.2 | 115–270<br>0.17–0.8<br>1.2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0946 | WNMG 080412 | R PK 9015 | 7.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 235–320<br>0.25–0.7<br>2–5.6 | –<br>–<br>– | 220–300<br>0.25–0.7<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0912 | WNMG 080412 | R PMK 9030 | 7.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 140–250<br>0.25–0.7<br>2–5.6 | 80–150<br>0.25–0.53<br>3.2–4.2 | 130–235<br>0.25–0.7<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

(W286)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## Turning Inserts

Continued

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0919 | WNMG 080412 | VA 9040 | 7.85 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 230–305<br>0.2–0.5<br>1.2–3.5 | 135–180<br>0.2–0.38<br>1.2–2.6 | 215–285<br>0.2–0.5<br>1.2–3.5 | –<br>–<br>– | 45–90<br>0.2–0.3<br>1.2–2.1 | –<br>–<br>– |
| 0918 | WNMG 080412 | WM PMK 9030 | 8.65 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 125–265<br>0.2–0.9<br>1.2–4 | –<br>–<br>– | 115–250<br>0.2–0.9<br>1.2–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

* R-EC for clamping holder = right-hand version
** L-EC for clamping holder = left-hand version

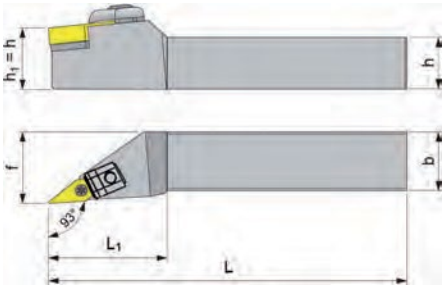
(W286)

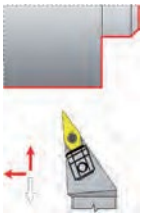
Δ Can only be supplied as a whole packaging unit.

## Toolholders 93deg for Negative Inserts – VNMG 1604...

**Design:** Clamping holder for inserts 0° negative, claw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** For straight and face turning, copy turning.



| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5340 | MVJNR 2020 K16 | 72.20 | 20 x 20 | 125 | 32 | 25 | 20 | Right | VNMG 1604 |
| 5345 | MVJNL 2020 K16 | 72.20 | 20 x 20 | 125 | 32 | 25 | 20 | Left | VNMG 1604 |
| 5350 | MVJNR 2525 M16 | 89.60 | 25 x 25 | 150 | 32 | 32 | 25 | Right | VNMG 1604 |
| 5355 | MVJNL 2525 M16 | 89.60 (W285) | 25 x 25 | 150 | 32 | 32 | 25 | Left | VNMG 1604 |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5886 | PU |
|---|---|---|---|---|
| 5360 | Supporting plate | 6.85 | – | 10 Δ |
| 5365 | Pin | 5.35 | – | 10 Δ |
| 5370 | Clamping claw incl. screw | 20.70 | – | 10 Δ |
| 0005 | Screwdriver for TORX® T 5 x 60 mm | – (W281) | 4.55 (W543) | 1 |

Δ Can only be supplied as a whole packaging unit.

Supporting plate

Pin

Clamping claw

TORX® screwdriver

## Turning Inserts

format professional quality

ALU

UNI

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2190 | VNKG 160404 | ALU N | 6.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.10–0.40<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 2195 | VNKG 160408 | ALU N | 6.45 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.10–0.40<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 2180 | VNMG 160404 | UNI P K | 9.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 100–150<br>0.10–0.20<br>0.5–3.0 | 60–90<br>0.10–0.15<br>0.5–2.3 | 95–140<br>0.10–0.20<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2185 | VNMG 160408 | UNI P K | 9.70 (W291) | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–145<br>0.15–0.35<br>0.8–3.0 | 55–85<br>0.15–0.26<br>0.8–2.3 | 90–135<br>0.15–0.35<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

F

M

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2200 | VNMG 160404 | F U 9015 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 150–255<br>0.06–0.2<br>0.4–1.5 | 90–150<br>0.06–0.15<br>0.4–1.1 | 140–240<br>0.06–0.2<br>0.4–1.5 | 225–890<br>0.06–0.2<br>0.4–1.5 | 30–75<br>0.06–0.12<br>0.4–0.9 | –<br>–<br>– |
| 2205 | VNMG 160404 | M U 9035 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 175–235<br>0.15–0.2<br>0.5–3 | 105–140<br>0.15–0.2<br>0.5–2.3 | 165–220<br>0.15–0.2<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2210 | VNMG 160404 | M PK 9030 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 100–150<br>0.1–0.2<br>0.5–3 | 60–90<br>0.1–0.15<br>0.5–2.3 | 95–140<br>0.1–0.2<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2215 | VNMG 160404 | M U 9035 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 175–265<br>0.15–0.35<br>0.8–3 | 105–155<br>0.15–0.26<br>0.8–2.3 | 165–250<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2220 | VNMG 160408 | M PMK 9030 | 14.70 | 10 Δ | VC m/min<br>f/t mm/tooth<br>ap/mm | 95–145<br>0.15–0.35<br>0.8–3 | 55–85<br>0.15–0.26<br>0.8–2.3 | 90–135<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

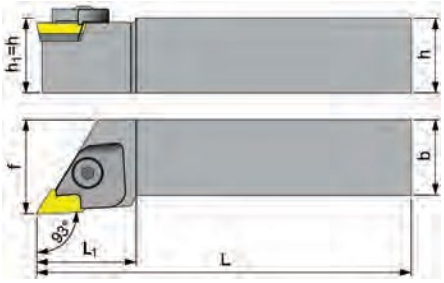
(W286)

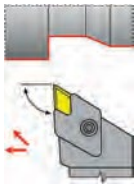
Δ Can only be supplied as a whole packaging unit.

## Toolholders 93deg for KNUX 1604... Inserts

**Design:** Clamping holder for inserts 0° negative, toe dog clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Copy turning.



| Order No. | Description | 2968 | Shank-■ mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0850 | CKJNR 2525 M16 | 94.90 | 25 x 25 | 150 | 34 | 25 | 25 | Right | KNUX 1604 |
| 0855 | CKJNL 2525 M16 | 94.90 | 25 x 25 | 150 | 34 | 25 | 25 | Left | KNUX 1604 |
| 0860 | CKJNR 3225 P16 | 102.50 | 32 x 25 | 170 | 34 | 32 | 32 | Right | KNUX 1604 |
| 0865 | CKJNL 3225 P16 | 102.50 | 32 x 25 | 170 | 34 | 32 | 32 | Left | KNUX 1604 |
| | | (W285) | | | | | | | |

## Spare Parts for 2968 Style Holders

| Order No. | Design | 2968 | 5850 | PU |
|---|---|---|---|---|
| 0052 | Supporting plate, right | 8.60 | – | 10 Δ |
| 0053 | Supporting plate, left | 8.60 | – | 10 Δ |
| 0054 | Pipe pin | 1.79 | – | 10 Δ |
| 0055 | Spring | 0.56 | – | 10 Δ |
| 0057 | Toe dog, right | 23.60 | – | 1 |
| 0058 | Clamping finger, left | 23.60 | – | 1 |
| 0059 | Tightening screw | 6.45 | – | 10 Δ |
| 0030 | Hexagon key 4 x 100 mm | – | 1.96 | 1 |
| | | (W281) | (W528) | |

Δ Can only be supplied as a whole packaging unit.

Supporting plate, right

Toe dog, right

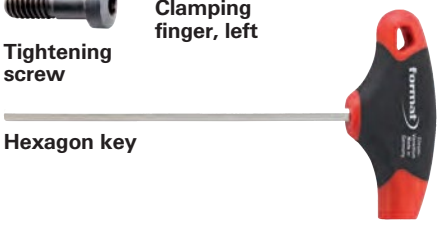
Pipe pin

Supporting plate, left

Spring

Clamping finger, left

Tightening screw


Hexagon key

## Turning Inserts

M-R

M-L

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0953 | KNUX 160405 | R M PMK 9040 | 8.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–200<br>0.2–0.3<br>0.5–4.8 | 75–120<br>0.2–0.23<br>0.5–3.6 | 120–190<br>0.2–0.3<br>0.5–4.8 | –<br>–<br>– | 25–60<br>0.2–0.23<br>0.5–2.9 | –<br>–<br>– |
| 0959 | KNUX 160410 | R M PMK 9040 | 8.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–230<br>0.2–0.6<br>1–4.8 | 75–135<br>0.2–0.45<br>1–3.6 | 115–215<br>0.2–0.6<br>1–4.8 | –<br>–<br>– | 25–65<br>0.2–0.36<br>1–2.9 | –<br>–<br>– |
| 0983 | KNUX 160415 | R M PMK 9040 | 8.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–195<br>0.3–0.7<br>1.5–4.8 | 70–115<br>0.3–0.53<br>1.5–3.6 | 110–185<br>0.3–0.7<br>1.5–4.8 | –<br>–<br>– | 20–55<br>0.3–0.42<br>1.5–2.9 | –<br>–<br>– |
| 0965 | KNUX 160405 | L M PMK 9040 | 8.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–200<br>0.2–0.3<br>0.5–4.8 | 75–120<br>0.2–0.23<br>0.5–3.6 | 120–190<br>0.2–0.3<br>0.5–4.8 | –<br>–<br>– | 25–60<br>0.2–0.23<br>0.5–2.9 | –<br>–<br>– |
| 0971 | KNUX 160410 | L M PMK 9040 | 8.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–230<br>0.2–0.6<br>1–4.8 | 75–135<br>0.2–0.45<br>1–3.6 | 115–215<br>0.2–0.6<br>1–4.8 | –<br>–<br>– | 25–65<br>0.2–0.36<br>1–2.9 | –<br>–<br>– |
| 0980 | KNUX 160415 | L M PMK 9040 | 9.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–200<br>0.2–0.3<br>0.5–5.7 | 75–120<br>0.2–0.23<br>0.5–4.3 | 120–190<br>0.2–0.3<br>0.5–5.7 | –<br>–<br>– | 25–60<br>0.2–0.23<br>0.5–3.4 | –<br>–<br>– |
| | | | (W286) | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## Through Coolant Boring Bars for CCMT/CCGT 0602.../09T3... Inserts

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring.

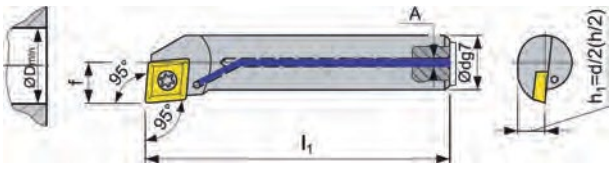


**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions $l_1$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 5850 | A08F SCLCR 06 | 67.40 | 8 | 12 | 80 | 6 | Right | CCMT/CCGT 0602... |
| 5855 | A08F SCLCL 06 | 67.40 | 8 | 12 | 80 | 6 | Left | CCMT/CCGT 0602... |
| 5860 | A10H SCLCR 06 | 68.10 | 10 | 14 | 100 | 7 | Right | CCMT/CCGT 0602... |
| 5865 | A10H SCLCL 06 | 68.10 | 10 | 14 | 100 | 7 | Left | CCMT/CCGT 0602... |
| 5870 | A12K SCLCR 06 | 69.90 | 12 | 18 | 125 | 9 | Right | CCMT/CCGT 0602... |
| 5875 | A12K SCLCL 06 | 69.90 | 12 | 18 | 125 | 9 | Left | CCMT/CCGT 0602... |
| 5880 | A16M SCLCR 09 | 79.10 | 16 | 22 | 150 | 11 | Right | CCMT/CCGT 09T3... |
| 5885 | A16M SCLCL 09 | 79.10 | 16 | 22 | 150 | 11 | Left | CCMT/CCGT 09T3... |
| 5890 | A20Q SCLCR 09 | 93.00 | 20 | 26 | 180 | 13 | Right | CCMT/CCGT 09T3... |
| 5895 | A20Q SCLCL 09 | 93.00 | 20 | 26 | 180 | 13 | Left | CCMT/CCGT 09T3... |
| 5900 | A25Q SCLCR 09 | 113.50 | 25 | 34 | 180 | 17 | Right | CCMT/CCGT 09T3... |
| 5905 | A25Q SCLCL 09 | 113.50 | 25 | 34 | 180 | 17 | Left | CCMT/CCGT 09T3... |

(W285)

## Through Coolant Boring Bar Sets for CCMT/CCGT 0602.../09T3...

**Design:** Boring bar for insert 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied in sets of 4, without inserts, without screwdriver.**

**Application:** Boring.

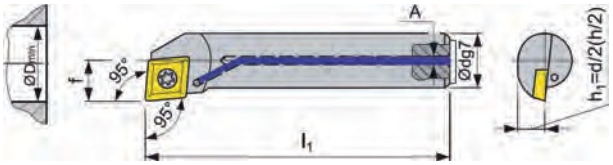


**Fig.: Right-hand version**

| Order No. | Set contents | 2969 | Shank-● dg7 mm | Dimensions Ø D min. mm | Dimensions $l_1$ mm | Dimensions $l_2$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5950 | A0608H SCLCR 06 | 176.50 | 8 | 8 | 100 | 25 | 4 | Right | CCMT/CCGT 0602 |
| | A0810J SCLCR 06 | | 10 | 12 | 110 | 32 | 6 | | |
| | A1012K SCLCR 06 | | 12 | 14 | 125 | 38 | 7 | | |
| | A1216M SCLCR 06 | | 16 | 18 | 150 | 50 | 9 | | |
| 5960 | A0608H SCLCL 06 | 176.50 | 8 | 8 | 100 | 25 | 4 | Left | CCMT/CCGT 0602 |
| | A0810J SCLCL 06 | | 10 | 12 | 110 | 32 | 6 | | |
| | A1012K SCLCL 06 | | 12 | 14 | 125 | 38 | 7 | | |
| | A1216M SCLCL 06 | | 16 | 18 | 150 | 50 | 9 | | |

(W285)

## Carbide Through Coolant Boring Bars for CCMT/CCGT 0602... Inserts

**Design:** Solid carbide boring bar for inserts 7° positive, screw clamping, tool head nickel-plated.

Low vibration thanks to solid carbide design.

**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring and outer turning.

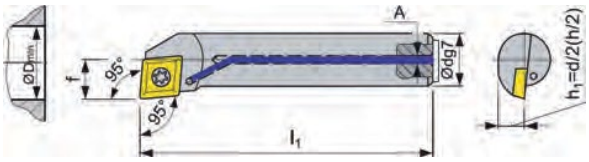


Fig.: Right-hand version

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions $l_1$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 5963 | E08K SCLCR 06 | 168.00 | 8 | 12 | 80 | 6.0 | Right | CCGT/CCMT 0602... |
| 5966 | E08K SCLCL 06 | 168.00 | 8 | 12 | 80 | 6.0 | Left | CCGT/CCMT 0602... |
| 5969 | E10K SCLCR 06 | 182.50 | 10 | 14 | 100 | 7.0 | Right | CCGT/CCMT 0602... |
| 5972 | E10K SCLCL 06 | 182.50 | 10 | 14 | 100 | 7.0 | Left | CCGT/CCMT 0602... |
| 5975 | E12M SCLCR 06 | 204.50 | 12 | 18 | 125 | 9.0 | Right | CCGT/CCMT 0602... |
| 5978 | E12M SCLCL 06 | 204.50 | 12 | 18 | 125 | 9.0 | Left | CCGT/CCMT 0602... |
| 5987 | E16M SCLCR 09 | 367.50 | 16 | 22 | 150 | 11.0 | Right | CCGT/CCMT 09T3... |
| 5990 | E16M SCLCL 09 | 367.50 | 16 | 22 | 150 | 11.0 | Left | CCGT/CCMT 09T3... |
| | | (W285) | | | | | | |

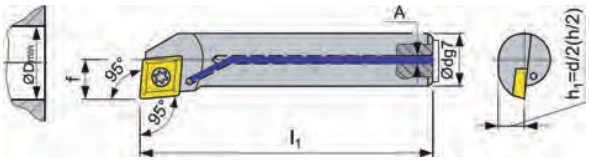
## Carbide Through Coolant Boring Bar Sets for CCMT/CCGT 0602..

**Design:** Solid carbide boring bar for inserts 7° positive, screw clamping, tool head nickel-plated.

Low vibration thanks to solid carbide design.

**Supplied in sets of 3 without inserts, without screwdriver.**

**Application:** Boring and outer turning.



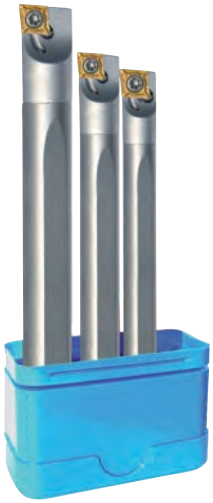



Fig.: Right-hand version

| Order No. | Set contents | 2969 | Shank-● dg7 mm | Dimensions Ø D min. mm | Dimensions $l_1$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 5981 | E08K SCLCR 06 | 426.00 | 8 | 12 | 80 | 6.0 | Right | CCGT/CCMT 0602... |
| | E10K SCLCR 06 | | 10 | 14 | 100 | 7.0 | | |
| | E12M SCLCR 06 | | 12 | 18 | 125 | 9.0 | | |
| 5984 | E08K SCLCL 06 | 426.00 | 8 | 12 | 80 | 6.0 | Left | CCGT/CCMT 0602... |
| | E10K SCLCL 06 | | 10 | 14 | 100 | 7.0 | | |
| | E12M SCLCL 06 | | 12 | 18 | 125 | 9.0 | | |
| | | (W285) | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5886 | PU |
|---|---|---|---|---|
| 5084 | TORX® screw for insert, CCMT/CCGT 0602... | 2.39 | – | 10 Δ |
| 5087 | TORX® screw for insert, CCMT/CCGT 09T3... | 2.51 | – | 10 Δ |
| 0030 | Screwdriver for TORX® CCMT/CCGT 0602 T8 x 60 mm | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX® CCMT/CCGT 09T3 T 15 x 80 mm | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## Turning Inserts

ALU

UNI

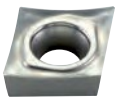
format professional quality

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1132 | CCGT 060202 | ALU | 4.74 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 200–855<br>0.06–0.15<br>0.3–3.0 | –<br>–<br>– | –<br>–<br>– |
| 1138 | CCGT 060204 | ALU | 4.74 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–610<br>0.10–0.30<br>0.4–3.5 | –<br>–<br>– | –<br>–<br>– |
| 0140 | CCGT 09T302 | ALU | 6.10 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 165–595<br>0.10–0.15<br>0.3–4.0 | –<br>–<br>– | –<br>–<br>– |
| 0128 | CCGT 09T304 | ALU | 6.10 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–610<br>0.10–0.30<br>0.4–4.5 | –<br>–<br>– | –<br>–<br>– |
| 0134 | CCGT 09T308 | ALU | 6.10 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–575<br>0.15–0.60<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 2294 | CCMT 060204 | UNI | 3.82 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–160<br>0.08–0.15<br>0.5–3.0 | 60–95<br>0.08–0.11<br>0.5–2.3 | 95–150<br>0.08–0.15<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2297 | CCMT 060208 | UNI | 3.82 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3.0 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2300 | CCMT 09T304 | UNI | 4.79 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3.0 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2303 | CCMT 09T308 | UNI | 4.79 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3.0 | 65–115<br>0.08–0.19<br>0.8–2.3 | 105–185<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2306 | CCMT 120404 | UNI | 7.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3.0 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2309 | CCMT 120408 | UNI | 7.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3.0 | 65–115<br>0.08–0.19<br>0.8–2.3 | 105–185<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts


AL N

AL KNH

F KNH

F

M

M PK

ER-EC

EL-EC

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1127 | CCGT 060202 | AL KNH 9010 | 10.50 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 200–855<br>0.06–0.15<br>0.3–3 | –<br>–<br>– | –<br>–<br>– |
| 1133 | CCGT 060204 | AL KNH 9010 | 10.00 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 165–735<br>0.1–0.3<br>0.4–3.5 | –<br>–<br>– | –<br>–<br>– |
| 1140 | CCGT 060204 | R EC U 9035 | 7.80 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 145–240<br>0.08–0.25<br>0.5–1.5 | 85–140<br>0.08–0.19<br>0.5–1.1 | 135–225<br>0.08–0.25<br>0.5–1.5 | 215–840<br>0.08–0.25<br>0.5–1.5 | 25–70<br>0.08–0.15<br>0.5–0.9 | –<br>–<br>– |
| 1143 | CCGT 060204 | L EC U 9035 | 7.80 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 145–240<br>0.08–0.25<br>0.5–1.5 | 85–140<br>0.08–0.19<br>0.5–1.1 | 135–225<br>0.08–0.25<br>0.5–1.5 | 215–840<br>0.08–0.25<br>0.5–1.5 | 25–70<br>0.08–0.15<br>0.5–0.9 | –<br>–<br>– |
| 0137 | CCGT 09T302 | AL KNH 9010 | 11.20 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 195–700<br>0.1–0.15<br>0.3–4 | –<br>–<br>– | –<br>–<br>– |
| 0124 | CCGT 09T304 | AL KNH 9010 | 10.70 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 155–735<br>0.1–0.3<br>0.4–4.5 | –<br>–<br>– | –<br>–<br>– |
| 0142 | CCGT 09T304 | L-EC U 9035 | 9.20 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–185<br>0.14–0.3<br>0.8–2.0 | 80–110<br>0.14–0.23<br>0.8–1.5 | 125–175<br>0.14–0.3<br>0.8–2.0 | 200–645<br>0.14–0.3<br>0.8–2.0 | 25–55<br>0.14–0.18<br>0.8–1.2 | –<br>–<br>– |
| 0145 | CCGT 09T304 | R-EC U 9035 | 9.20 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–185<br>0.14–0.3<br>0.8–2.0 | 80–110<br>0.14–0.23<br>0.8–1.5 | 125–175<br>0.14–0.3<br>0.8–2.0 | 200–645<br>0.24–0.3<br>0.8–2.0 | 25–55<br>0.14–0.18<br>0.8–1.2 | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## Turning Inserts

Continued

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0130 | CCGT 09T308 | AL KNH 9010 | 10.70 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 140–700<br>0.15–0.6<br>0.8–5 | –<br>–<br>– | –<br>–<br>– |
| 1131 | CCMT 060202 | F KNH 9010 | 4.93 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–210<br>0.08–0.15<br>0.5–3 | 80–125<br>0.08–0.11<br>0.5–2.3 | 125–195<br>0.08–0.15<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1100 | CCMT 060202 | F U 9035 | 4.93 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–160<br>0.08–0.15<br>0.5–3 | 60–95<br>0.08–0.11<br>0.5–2.3 | 95–150<br>0.08–0.15<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.11<br>0.5–2.3 | –<br>–<br>– |
| 1109 | CCMT 060202 | M PMK 9030 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–210<br>0.15–0.3<br>1–4 | 80–125<br>0.15–0.23<br>1–3 | 125–195<br>0.15–0.3<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1112 | CCMT 060202 | M U 9035 | 4.93 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 110–150<br>0.1–0.15<br>1–4 | 65–90<br>0.1–0.11<br>1–3 | 100–140<br>0.1–0.15<br>1–4 | 165–525<br>0.1–0.15<br>1–4 | 25–55<br>0.1–0.11<br>1–2.5 | –<br>–<br>– |
| 1103 | CCMT 060204 | F PMK 9030 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–210<br>0.15–0.25<br>0.5–3 | 80–125<br>0.15–0.19<br>0.5–2.3 | 130–195<br>0.15–0.25<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1106 | CCMT 060204 | F U 9035 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.5–2.3 | –<br>–<br>– |
| 1137 | CCMT 060204 | F KNH 9010 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–225<br>0.08–0.25<br>0.5–3 | 65–135<br>0.08–0.19<br>0.5–2.3 | 105–210<br>0.08–0.25<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1115 | CCMT 060204 | M PMK 9030 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–250<br>0.15–0.4<br>1–4 | 80–150<br>0.15–0.3<br>1–3 | 130–235<br>0.15–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1118 | CCMT 060204 | M U 9035 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–160<br>0.1–0.3<br>1–4 | 55–95<br>0.1–0.23<br>1–3 | 90–150<br>0.1–0.3<br>1–4 | 140–560<br>0.1–0.3<br>1–4 | 25–55<br>0.1–0.23<br>1–3 | –<br>–<br>– |
| 1107 | CCMT 060208 | M PK 9015 | 4.93 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 205–290<br>0.15–0.5<br>0.8–2 | –<br>–<br>– | 190–275<br>0.15–0.5<br>0.8–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1121 | CCMT 060208 | M PMK 9030 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–250<br>0.15–0.4<br>1–4 | 80–150<br>0.15–0.3<br>1–3 | 130–235<br>0.15–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1124 | CCMT 060208 | M U 9035 | 4.62 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 100–190<br>0.1–0.4<br>1–4 | 60–110<br>0.1–0.3<br>1–3 | 95–180<br>0.1–0.4<br>1–4 | 150–665<br>0.1–0.4<br>1–4 | 25–55<br>0.1–0.3<br>1–3 | –<br>–<br>– |
| 0100 | CCMT 09T304 | F PMK 9030 | 5.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–210<br>0.15–0.25<br>0.5–3 | 80–125<br>0.15–0.19<br>0.5–2.3 | 130–195<br>0.15–0.25<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0103 | CCMT 09T304 | F U 9035 | 5.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–170<br>0.08–0.25<br>0.5–3 | 55–100<br>0.08–0.19<br>0.5–2.3 | 90–160<br>0.08–0.25<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.5–2.3 | –<br>–<br>– |
| 0104 | CCMT 09T304 | M PK 9015 | 5.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 190–260<br>0.15–0.3<br>0.4–2 | –<br>–<br>– | 180–245<br>0.15–0.3<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0112 | CCMT 09T304 | M PMK 9030 | 5.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–210<br>0.15–0.3<br>1–4 | 80–125<br>0.15–0.23<br>1–3 | 125–195<br>0.15–0.3<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0115 | CCMT 09T304 | M U 9035 | 5.60 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–160<br>0.1–0.3<br>1–4 | 55–95<br>0.1–0.23<br>1–3 | 90–150<br>0.1–0.3<br>1–4 | 140–560<br>0.1–0.3<br>1–4 | 25–55<br>0.1–0.23<br>1–3 | –<br>–<br>– |
| 0106 | CCMT 09T308 | F PMK 9030 | 5.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 165–240<br>0.15–0.25<br>0.8–3 | 95–140<br>0.15–0.19<br>0.8–2.3 | 155–225<br>0.15–0.25<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0109 | CCMT 09T308 | F U 9035 | 5.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–195<br>0.08–0.25<br>0.8–3 | 65–115<br>0.08–0.19<br>0.8–2.3 | 105–185<br>0.08–0.25<br>0.8–3 | –<br>–<br>– | 25–55<br>0.08–0.25<br>0.8–3 | –<br>–<br>– |
| 0111 | CCMT 09T308 | M PK 9015 | 5.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 195–290<br>0.15–0.5<br>0.8–3 | –<br>–<br>– | 185–275<br>0.15–0.5<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0118 | CCMT 09T308 | M PMK 9030 | 5.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–250<br>0.15–0.4<br>1–4 | 80–150<br>0.15–0.3<br>1–3 | 130–235<br>0.15–0.4<br>1–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0121 | CCMT 09T308 | M U 9035 | 5.60 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 100–190<br>0.1–0.4<br>1–4 | 60–110<br>0.1–0.3<br>1–3 | 95–180<br>0.1–0.4<br>1–4 | 150–665<br>0.1–0.4<br>1–4 | 25–55<br>0.1–0.30<br>0.8–3 | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

## Through Coolant Boring bars for DCMT/DCGT 0702.../11T3... Inserts

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring.

**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 6100 | A10H SDUCR 07 | 69.80 | 10 | 13 | 100 | 8 | Right | DCMT/DCGT 0702... |
| 6105 | A10H SDUCL 07 | 69.80 | 10 | 13 | 100 | 8 | Left | DCMT/DCGT 0702... |
| 6110 | A12K SDUCR 07 | 80.50 | 12 | 18 | 125 | 9 | Right | DCMT/DCGT 0702... |
| 6115 | A12K SDUCL 07 | 80.50 | 12 | 18 | 125 | 9 | Left | DCMT/DCGT 0702... |
| 6120 | A16M SDUCR 07 | 85.80 | 16 | 22 | 150 | 11 | Right | DCMT/DCGT 0702... |
| 6125 | A16M SDUCL 07 | 85.80 | 16 | 22 | 150 | 11 | Left | DCMT/DCGT 0702... |
| 6130 | A20Q SDUCR 11 | 92.10 | 20 | 26 | 180 | 13 | Right | DCMT/DCGT 11T3... |
| 6135 | A20Q SDUCL 11 | 92.10 | 20 | 26 | 180 | 13 | Left | DCMT/DCGT 11T3... |
| 6140 | A25Q SDUCR 11 | 111.50 | 25 | 34 | 180 | 17 | Right | DCMT/DCGT 11T3... |
| 6145 | A25Q SDUCL 11 | 111.50 | 25 | 34 | 180 | 17 | Left | DCMT/DCGT 11T3... |

(W285)

## Through Coolant Boring bar sets for DCMT/DCGT 0702.../11T3... style

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied in sets of 3 without inserts, without screwdriver.**

**Application:** Boring.

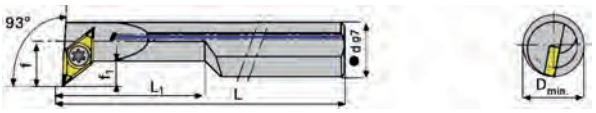


**Fig.: Right-hand version**

| Order No. | Set contents | 2969 | Shank-● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 6200 | A0810H SDUCR 07 | 184.50 | 10 | 12.5 | 100 | 22 | 7 | Right | DCMT/DCGT 0702.. |
| | A1012K SDUCR 07 | | 12 | 15.5 | 125 | 28 | 9 | | |
| | A1216M SDUCR 07 | | 16 | 19.5 | 150 | 36 | 11 | | |
| 6220 | A0810H SDUCL 07 | 184.50 | 10 | 12.5 | 100 | 22 | 7 | Left | DCMT/DCGT 0702... |
| | A1012K SDUCL 07 | | 12 | 15.5 | 125 | 28 | 9 | | |
| | A1216M SDUCL 07 | | 16 | 19.5 | 150 | 36 | 11 | | |

(W285)

## Through Coolant Boring Bars for DCMT/DCGT 0702.../11T3... Style inserts

**Design:** Boring bar for inserts 7° positive, screw clamping, tool head nickel-plated.

Low vibration thanks to solid carbide design.

**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring and outer turning.

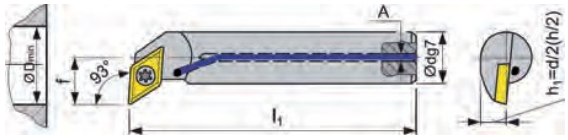


**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions $l_1$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 6235 | E10K SDUCR 07 | 197.00 | 10 | 13 | 110 | 7 | Right | DCMT/DCGT 0702... |
| 6240 | E10K SDUCL 07 | 197.00 | 10 | 13 | 110 | 7 | Left | DCMT/DCGT 0702... |
| 6245 | E12M SDUCR 07 | 209.50 | 12 | 16 | 125 | 9 | Right | DCMT/DCGT 0702... |
| 6250 | E12M SDUCL 07 | 209.50 | 12 | 16 | 125 | 9 | Left | DCMT/DCGT 0702... |
| 6265 | E16M SDUCR 07 | 367.50 | 16 | 20 | 150 | 11 | Right | DCMT/DCGT 0702... |
| 6270 | E16M SDUCL 07 | 367.50 | 16 | 20 | 150 | 11 | Left | DCMT/DCGT 0702... |
| | | (W285) | | | | | | |

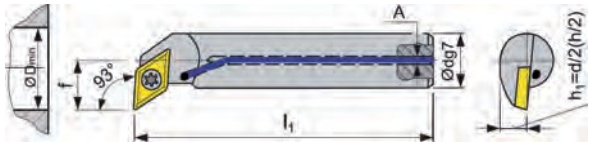
## Through Coolant Boring Bar Sets for DCMT / DCGT 0702.../11T3...

**Design:** Boring bar for inserts 7° positive, screw clamping, tool head nickel-plated.

Low vibration thanks to solid carbide design.

**Supplied in sets of 2 without inserts, without screwdriver.**

**Application:** Boring and outer turning.



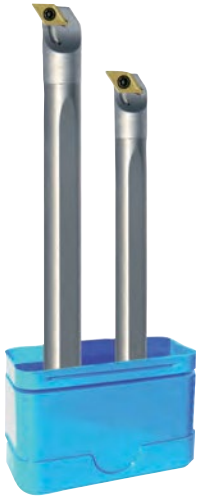



**Fig.: Right-hand version**

| Order No. | Set contents | 2969 | Shank-● dg7 mm | Dimensions Ø D min. mm | Dimensions $l_1$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 6255 | E10K SDUCR 07<br>E12M SDUCR 07 | 375.50 | 10<br>12 | 13<br>16 | 110<br>125 | 7<br>9 | Right | DCMT/DCGT 0702... |
| 6260 | E10K SDUCL 07<br>E12M SDUCL 07 | 375.50 | 10<br>12 | 13<br>16 | 110<br>125 | 7<br>9 | Left | DCMT/DCGT 0702... |
| | | (W285) | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5886 | PU |
|---|---|---|---|---|
| 5084 | TORX® screw for insert, DCMT/DCGT 0702... | 2.39 | – | 10 Δ |
| 5087 | TORX® screw for insert DCMT/DCGT 11T3 | 2.51 | – | 10 Δ |
| 0030 | Screwdriver for TORX®, T 8 x 60 mm, DCMT/DCGT 0702... | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX®, T 15 x 80 mm, DCMT/DCGT 11T3 | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

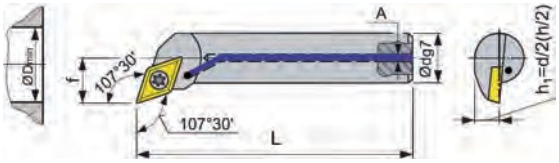
**TORX® screw**

TORX® screwdriver

## Through Coolant Boring bars for DCMT/DCGT 0702.../11T3... Inserts

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring.



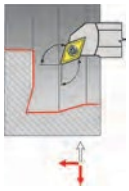



**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 5750 | A12K SDQCR 07 | 71.30 | 12 | 18 | 125 | 9 | Right | DCMT/DCGT 0702... |
| 5755 | A12K SDQCL 07 | 71.30 | 12 | 18 | 125 | 9 | Left | DCMT/DCGT 0702... |
| 5760 | A16M SDQCR 07 | 72.90 | 16 | 22 | 150 | 11 | Right | DCMT/DCGT 0702... |
| 5765 | A16M SDQCL 07 | 72.90 | 16 | 22 | 150 | 11 | Left | DCMT/DCGT 0702... |
| 5770 | A20Q SDQCR 07 | 82.70 | 20 | 26 | 180 | 13 | Right | DCMT/DCGT 0702... |
| 5775 | A20Q SDQCL 07 | 82.70 | 20 | 26 | 180 | 13 | Left | DCMT/DCGT 0702... |
| 5780 | A20Q SDQCR 11 | 96.10 | 20 | 26 | 180 | 13 | Right | DCMT/DCGT 11T3... |
| 5785 | A20Q SDQCL 11 | 96.10 | 20 | 26 | 180 | 13 | Left | DCMT/DCGT 11T3... |
| 5790 | A25Q SDQCR 11 | 116.50 | 25 | 34 | 180 | 17 | Right | DCMT/DCGT 11T3... |
| 5795 | A25Q SDQCL 11 | 116.50 | 25 | 34 | 180 | 17 | Left | DCMT/DCGT 11T3... |
| | | (W285) | | | | | | |

## Through Coolant Boring bar set for DCMT/DCGT 0702.../11T3...

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Delivery: Set á 3 pieces without indexable inserts, without screwdriver**

**Application:** Boring.

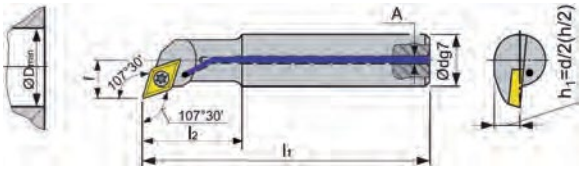


**Fig.: Right-hand version**

| Order No. | Set contents | 2969 | Shank-● dg7 mm | Dimensions Ø D min. mm | Dimensions $l_1$ mm | Dimensions $l_2$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 5800 | A0810H SDQCR 07 | 197.00 | 10 | 12.5 | 100 | 22 | 7 | Right | DCMT/DCGT 0702... |
| | A1012K SDQCR 07 | | 12 | 15.5 | 125 | 28 | 9 | | |
| | A1216M SDQCR 07 | | 16 | 19.5 | 150 | 36 | 11 | | |
| 5805 | A0810H SDQCL 07 | 197.00 | 10 | 12.5 | 100 | 22 | 7 | Left | DCMT/DCGT 0702... |
| | A1012K SDQCL 07 | | 12 | 15.5 | 125 | 28 | 9 | | |
| | A1216M SDQCL 07 | | 16 | 19.5 | 150 | 36 | 11 | | |
| | | (W285) | | | | | | | |

## Spare part for ISO boring bar 107.5° A..-SDQCR/L with inner cooling.

| Order No. | Design | 2969 | 5886 | PU |
|---|---|---|---|---|
| 5084 | TORX® screw for insert, DCMT/DCGT 0702... | 2.39 | – | 10 Δ |
| 5087 | TORX® screw for insert DCMT/DCGT 11T3 | 2.51 | – | 10 Δ |
| 0030 | Screwdriver for TORX®, T 8 x 60 mm, DCMT/DCGT 0702... | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX®, T 15 x 80 mm, DCMT/DCGT 11T3 | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## Turning Inserts

ALU

UNI

format professional quality

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1430 | DCGT 070202 | ALU | 5.80 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 150–575<br>0.06–0.12<br>0.3–2.1 | –<br>–<br>– | –<br>–<br>– |
| 1433 | DCGT 070204 | ALU | 5.80 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–490<br>0.10–0.24<br>0.4–2.1 | –<br>–<br>– | –<br>–<br>– |
| 0331 | DCGT 11T302 | ALU | 6.05 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 170–680<br>0.06–0.12<br>0.3–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0325 | DCGT 11T304 | ALU | 6.05 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 140–595<br>0.10–0.24<br>0.4–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0337 | DCGT 11T308 | ALU | 6.05 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–560<br>0.15–0.48<br>0.8–3.3 | –<br>–<br>– | –<br>–<br>– |
| 2342 | DCMT 070204 | UNI | 4.07 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 85–150<br>0.08–0.24<br>0.4–2.0 | 50–90<br>0.08–0.18<br>0.4–1.5 | 80–140<br>0.08–0.24<br>0.4–2.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2345 | DCMT 11T304 | UNI | 5.55 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 85–150<br>0.08–0.24<br>0.4–2.0 | 50–90<br>0.08–0.18<br>0.4–1.5 | 80–140<br>0.08–0.24<br>0.4–2.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2348 | DCMT 11T308 | UNI | 5.55 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 80–165<br>0.08–0.48<br>0.8–2.0 | 45–95<br>0.08–0.36<br>0.8–1.5 | 75–155<br>0.08–0.48<br>0.8–2.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

AL N

AL KNH

F

M U

M

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1424 | DCGT 070202 | AL KNH 9010 | 10.35 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 185–680<br>0.06–0.12<br>0.3–2.1 | –<br>–<br>– | –<br>–<br>– |
| 1418 | DCGT 070204 | AL KNH 9010 | 9.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 150–595<br>0.1–0.24<br>0.4–2.1 | –<br>–<br>– | –<br>–<br>– |
| 0327 | DCGT 11T302 | AL KNH 9010 | 10.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 170–680<br>0.06–0.12<br>0.3–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0321 | DCGT 11T304 | AL KNH 9010 | 11.10 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 140–595<br>0.1–0.24<br>0.4–3.3 | –<br>–<br>– | –<br>–<br>– |
| 0333 | DCGT 11T308 | AL KNH 9010 | 11.10 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–560<br>0.15–0.48<br>0.8–3.3 | –<br>–<br>– | –<br>–<br>– |
| 1400 | DCMT 070202 | F PMK 9030 | 4.97 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 150–195<br>0.09–0.12<br>0.5–2.1 | 90–115<br>0.09–0.12<br>0.5–1.6 | 140–185<br>0.09–0.12<br>0.5–2.1 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1406 | DCMT 070202 | M PMK 9030 | 4.97 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 170–230<br>0.09–0.12<br>0.2–1 | 100–135<br>0.09–0.12<br>0.2–0.8 | 160–215<br>0.09–0.12<br>0.2–1 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1409 | DCMT 070202 | M U 9035 | 4.97 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 110–175<br>0.05–0.12<br>0.2–1 | 65–105<br>0.05–0.09<br>0.2–0.8 | 100–165<br>0.05–0.12<br>0.2–1 | 165–610<br>0.05–0.12<br>0.2–1 | 25–55<br>0.05–0.09<br>0.2–0.8 | –<br>–<br>– |
| 1403 | DCMT 070204 | F PMK 9030 | 4.97 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–170<br>0.15–0.24<br>0.5–2.1 | 70–100<br>0.15–0.18<br>0.5–1.6 | 110–160<br>0.15–0.24<br>0.5–2.1 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1412 | DCMT 070204 | M PMK 9030 | 4.97 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–185<br>0.15–0.24<br>0.4–2 | 75–110<br>0.15–0.18<br>0.4–1.5 | 115–175<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1415 | DCMT 070204 | M U 9035 | 4.97 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 85–150<br>0.08–0.24<br>0.4–2 | 50–90<br>0.08–0.18<br>0.4–1.5 | 80–140<br>0.08–0.24<br>0.4–2 | 125–525<br>0.08–0.24<br>0.4–2 | 25–55<br>0.08–0.18<br>0.4–0.15 | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

Continued overleaf

## Turning Inserts

Continued

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed<br>Feed<br>Cutting depth | P<br>Steel | M<br>Stainless | K<br>Cast iron | N<br>Aluminium | S<br>Super-alloy | H<br>Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0302 | DCMT 11T302 | M U 9035 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–175<br>0.05–0.12<br>0.2–2 | 60–105<br>0.05–0.09<br>0.2–1.5 | 95–165<br>0.05–0.12<br>0.2–2 | 155–610<br>0.05–0.12<br>0.2–2 | 25–55<br>0.05–0.09<br>0.2–1.5 | –<br>–<br>– |
| 0300 | DCMT 11T304 | F PMK 9030 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–170<br>0.15–0.24<br>0.5–3 | 65–100<br>0.15–0.18<br>0.5–2.3 | 105–160<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0304 | DCMT 11T304 | M PK 9015 | 6.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 160–210<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | 150–195<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0306 | DCMT 11T304 | M PMK 9030 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–185<br>0.15–0.24<br>0.4–2 | 75–110<br>0.15–0.18<br>0.4–1.5 | 115–175<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0309 | DCMT 11T304 | M U 9035 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 85–150<br>0.08–0.24<br>0.4–2 | 50–90<br>0.08–0.18<br>0.4–1.5 | 80–140<br>0.08–0.24<br>0.4–2 | 125–525<br>0.08–0.24<br>0.4–2 | 25–55<br>0.08–0.18<br>0.4–1.5 | –<br>–<br>– |
| 0303 | DCMT 11T308 | F PMK 9030 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–190<br>0.15–0.25<br>0.8–3 | 80–110<br>0.15–0.19<br>0.8–2.3 | 125–180<br>0.15–0.25<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0308 | DCMT 11T308 | M PK 9015 | 6.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 165–230<br>0.15–0.48<br>0.8–2 | –<br>–<br>– | 155–215<br>0.15–0.48<br>0.8–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0312 | DCMT 11T308 | M PMK 9030 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 110–200<br>0.15–0.48<br>0.8–2 | 65–120<br>0.15–0.36<br>0.8–1.5 | 100–190<br>0.15–0.48<br>0.8–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0315 | DCMT 11T308 | M U 9035 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 80–165<br>0.08–0.48<br>0.8–2 | 45–95<br>0.08–0.36<br>0.8–1.5 | 75–155<br>0.08–0.48<br>0.8–2 | 120–575<br>0.08–0.48<br>0.8–2 | 25–55<br>0.08–0.3<br>0.8–1.5 | –<br>–<br>– |
| 0318 | DCMT 11T312 | M PMK 9030 | 6.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 95–205<br>0.15–0.7<br>1.2–2 | 55–120<br>0.15–0.53<br>1.2–1.5 | 90–190<br>0.15–0.7<br>1.2–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

## Boring Bars for TCGT/TCMT 1102.../16T3... Style Inserts

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring.

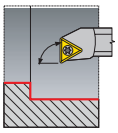


**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions h mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 6400 | A16M STFCR 11 | 70.10 | 16 | 22 | 150 | 14 | 11 | Right | TCGT/TCMT 1102... |
| 6405 | A16M STFCL 11 | 70.10 | 16 | 22 | 150 | 14 | 11 | Left | TCGT/TCMT 1102... |
| 6410 | A20R STFCR 16 | 82.10 | 20 | 26 | 200 | 18 | 13 | Right | TCGT/TCMT 16T3.. |
| 6415 | A20R STFCL 16 | 82.10 | 20 | 26 | 200 | 18 | 13 | Left | TCGT/TCMT 16T3.. |
| 6420 | A25S STFCR 16 | 110.00 | 25 | 34 | 250 | 23 | 17 | Right | TCGT/TCMT 16T3.. |
| 6425 | A25S STFCL 16 | 110.00 | 25 | 34 | 250 | 23 | 17 | Left | TCGT/TCMT 16T3.. |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5886 | PU |
|---|---|---|---|---|
| 5027 | Tightening screw for insert TC.1102. | 2.39 | – | 10 Δ |
| 5087 | Tightening screw for insert TC..16T3.. | 2.51 | – | 10 Δ |
| 0030 | Screwdriver for TORX® insert 11 T 8 x 60 mm | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX® insert 16 T 15 x 80 mm | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

**TORX® screw**

TORX® screwdriver

## Turning Inserts

format professional quality

**ALU**

**UNI**

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0354 | TCGT 110202 | ALU N | 4.96 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 155–610<br>0.06–0.12<br>0.3–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0361 | TCGT 110204 | ALU N | 4.96 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 125–525<br>0.10–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0363 | TCGT 16T302 | ALU N | 7.60 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–525<br>0.10–0.24<br>0.4–5.3 | –<br>–<br>– | –<br>–<br>– |
| 0364 | TCGT 16T304 | ALU N | 7.60 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–525<br>0.10–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| 2330 | TCMT 110204 | UNI P M | 3.93 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 85–135<br>0.08–0.24<br>0.5–3.0 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2333 | TCMT 110208 | UNI P M | 3.93 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.8–3.0 | 50–85<br>0.08–0.18<br>0.8–2.3 | 80–135<br>0.08–0.24<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2336 | TCMT 16T304 | UNI P M | 5.40 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.5–3.0 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2339 | TCMT 16T308 | UNI P M | 5.40 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 95–175<br>0.08–0.30<br>0.8–3.0 | 55–105<br>0.08–0.23<br>0.8–2.3 | 90–165<br>0.08–0.30<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| | | | (W291) | | | | | | | | |

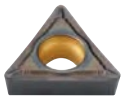
Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

AL N

AL KNH

F


M

R-EC*

L-EC**

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0350 | TCGT 110202 | AL KNH 9010 | 11.25 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 185–735<br>0.06–0.12<br>0.3–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0356 | TCGT 110204 | AL KNH 9010 | 10.75 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 150–630<br>0.1–0.24<br>0.4–3.6 | –<br>–<br>– | –<br>–<br>– |
| 0392 | TCGT 110202 | R-EC U 9035* | 9.00 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 150–195<br>0.08–0.12<br>0.4–1.6 | 90–115<br>0.08–0.09<br>0.4–1.2 | 140–185<br>0.08–0.12<br>0.4–1.6 | 225–680<br>0.08–0.12<br>0.4–1.6 | 30–55<br>0.08–0.09<br>0.4–1.0 | –<br>–<br>– |
| 0395 | TCGT 110202 | L-EC U 9035** | 9.00 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 150–195<br>0.08–0.12<br>0.4–1.6 | 90–115<br>0.08–0.09<br>0.4–1.2 | 140–185<br>0.08–0.12<br>0.4–1.6 | 225–680<br>0.08–0.12<br>0.4–1.6 | 30–55<br>0.08–0.09<br>0.4–1.0 | –<br>–<br>– |
| 0368 | TCMT 110202 | F U 9035 | 5.55 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 100–135<br>0.08–0.12<br>0.5–3 | 60–80<br>0.08–0.09<br>0.5–2.3 | 95–125<br>0.08–0.12<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.09<br>0.5–1.9 | –<br>–<br>– |
| 0371 | TCMT 110204 | F U 9035 | 5.20 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.5–3 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.18<br>0.5–2.3 | –<br>–<br>– |
| 0374 | TCMT 110204 | M PMK 9030 | 5.05 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 135–195<br>0.15–0.24<br>0.4–2 | 80–115<br>0.15–0.18<br>0.4–1.5 | 125–185<br>0.15–0.24<br>0.4–2 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0380 | TCMT 16T304 | F U 9035 | 6.75 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 85–145<br>0.08–0.24<br>0.5–3 | 50–85<br>0.08–0.18<br>0.5–2.3 | 80–135<br>0.08–0.24<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.18<br>0.5–2.3 | –<br>–<br>– |
| 0383 | TCMT 16T308 | M PK 9015 | 7.05 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 165–245<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | 155–230<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0386 | TCMT 16T308 | M PMK 9030 | 6.75 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 110–215<br>0.15–0.48<br>0.8–3 | 65–125<br>0.15–0.36<br>0.8–2.3 | 100–200<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0389 | TCMT 16T308 | M U 9035 | 7.45 | 10 Δ | Vc m/min.<br>f/t mm/tooth<br>ap/mm | 80–175<br>0.08–0.48<br>0.8–3 | 45–105<br>0.08–0.36<br>0.8–2.3 | 75–165<br>0.08–0.48<br>0.8–3 | 120–610<br>0.08–0.48<br>0.8–3 | 25–55<br>0.08–0.35<br>0.8–2.3 | –<br>–<br>– |

*R-EC Boring bar for = right-hand version
**L-EC Boring bar for = left-hand version

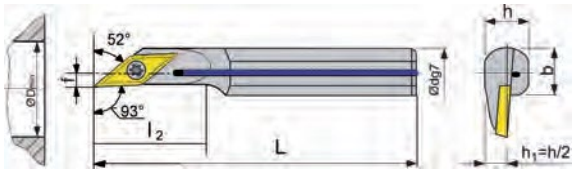
(W286)

Δ Can only be supplied as a whole packaging unit.

## Through Coolant Boring Bars for VBMT/VCMT/VCGT 110.../1604... Style Inserts

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring and outer turning.



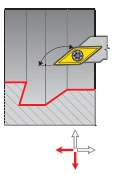



Fig.: Right-hand version

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions $l_2$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 6500 | A16M SVJCR 11 | 108.50 | 16 | 22 | 150 | 30 | 2 | Right | VBMT/VCMT/VCGT 110... |
| 6505 | A16M SVJCL 11 | 108.50 | 16 | 22 | 150 | 30 | 2 | Left | VBMT/VCMT/VCGT 110... |
| 6510 | A20M SVJCR 11 | 124.00 | 20 | 25 | 150 | 38 | 2 | Right | VBMT/VCMT/VCGT 110... |
| 6515 | A20M SVJCL 11 | 124.00 | 20 | 25 | 150 | 38 | 2 | Left | VBMT/VCMT/VCGT 110... |
| 6520 | A25M SVJCR 16 | 147.00 | 25 | 28 | 150 | 44 | 2 | Right | VBMT/VCMT/VCGT 1604... |
| 6525 | A25M SVJCL 16 | 147.00 | 25 | 28 | 150 | 44 | 2 | Left | VBMT/VCMT/VCGT 1604... |
| | | (W285) | | | | | | | |

## Through Coolant Boring Bar Sets for VBMT/VCMT/VCGT 110...

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied in sets of 2 without inserts, without screwdriver.**

**Application:** Boring and outer turning.

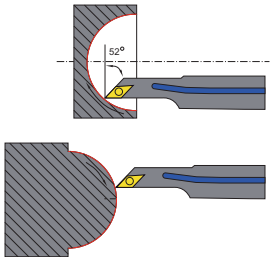


Fig.: Right-hand version

| Order No. | Set contents | 2969 | Shank-● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions $l_2$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 6600 | A16M SVJCR 11 | 205.50 | 16 | 22 | 150 | 30 | 2 | Right | VCMT/VCGT 1103 |
| | A20M SVJCR 11 | | 20 | 55 | 150 | 38 | 2 | | VBMT 1102... |
| 6620 | A16M SVJCL 11 | 205.50 | 16 | 22 | 150 | 30 | 2 | Left | VCMT/VCGT 1103 |
| | A20M SVJCL 11 | | 20 | 55 | 150 | 38 | 2 | | VBMT 1102... |
| | | (W285) | | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5886 | PU |
|---|---|---|---|---|
| 5027 | TORX® screw for insert, VBMT/ VCMT/VCGT 110 | 2.39 | – | 10 Δ |
| 5087 | TORX® screw for insert, VBMT/ VCMT/VCGT 1604 | 2.51 | – | 10 Δ |
| 0030 | Screwdriver for TORX®, T 8 x 60 mm, VBMT/VCMT/VCGT 110 | – | 4.54 | 1 |
| 0050 | Screwdriver for TORX®, T 15 x 80 mm, VBMT/VCMT/VCGT 1604 | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

TORX® screw

TORX® screwdriver

## Turning Inserts

ALU

UNI

format professional quality

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1616 | VCGT 110304 | ALU | 5.60 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–2.8 | –<br>–<br>– | –<br>–<br>– |
| 1640 | VCGT 160404 | ALU | 9.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–4.0 | –<br>–<br>– | –<br>–<br>– |
| 1646 | VCGT 160408 | ALU | 9.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–490<br>0.15–0.4<br>0.8–4.0 | –<br>–<br>– | –<br>–<br>– |
| 2312 | VCMT 110304 | UNI | 6.90 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 70–120<br>0.08–0.20<br>0.5–2.8 | 40–70<br>0.08–0.15<br>0.5–2.1 | 65–110<br>0.08–0.20<br>0.5–2.8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2318 | VCMT 160404 | UNI | 8.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 70–120<br>0.08–0.20<br>0.5–3.0 | 40–70<br>0.08–0.15<br>0.5–2.3 | 65–110<br>0.08–0.20<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2321 | VCMT 160408 | UNI | 8.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–3.0 | 45–80<br>0.08–0.19<br>0.8–2.3 | 75–125<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2324 | VBMT 160404 | UNI | 8.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 70–120<br>0.08–0.20<br>0.5–3.0 | 40–70<br>0.08–0.15<br>0.5–2.3 | 65–110<br>0.08–0.20<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 2327 | VBMT 160408 | UNI | 8.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–3.0 | 45–80<br>0.08–0.19<br>0.8–2.3 | 75–125<br>0.08–0.25<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

AL-KNH

F PMK

F

M

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1612 | VCGT 110304 | AL KNH 9010 | 14.05 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–2.8 | –<br>–<br>– | –<br>–<br>– |
| 1636 | VCGT 160404 | AL KNH 9010 | 14.70 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 135–505<br>0.1–0.2<br>0.4–4 | –<br>–<br>– | –<br>–<br>– |
| 1642 | VCGT 160408 | AL KNH 9010 | 14.70 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 120–490<br>0.15–0.4<br>0.8–4 | –<br>–<br>– | –<br>–<br>– |
| 1603 | VCMT 110304 | F U 9035 | 8.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 70–120<br>0.08–0.2<br>0.5–2.8 | 40–70<br>0.08–0.15<br>0.5–2.1 | 65–110<br>0.08–0.2<br>0.5–2.8 | –<br>–<br>– | 25–55<br>0.08–0.15<br>0.5–2.1 | –<br>–<br>– |
| 1606 | VCMT 110308 | F PMK 9030 | 8.50 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–165<br>0.15–0.25<br>0.8–2.8 | 70–95<br>0.15–0.19<br>0.8–2.1 | 110–155<br>0.15–0.25<br>0.8–2.8 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1609 | VCMT 110308 | F U 9035 | 8.50 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–2.8 | 45–80<br>0.08–0.19<br>0.8–0.21 | 75–125<br>0.08–0.25<br>0.8–2.8 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.8–2.1 | –<br>–<br>– |
| 1618 | VCMT 160404 | F PMK 9030 | 9.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 110–185<br>0.09–0.2<br>0.5–3 | 65–110<br>0.09–0.15<br>0.5–2.3 | 100–175<br>0.09–0.2<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1621 | VCMT 160404 | F U 9035 | 9.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 70–120<br>0.08–0.2<br>0.5–3 | 40–70<br>0.08–0.15<br>0.5–2.3 | 65–110<br>0.08–0.2<br>0.5–3 | –<br>–<br>– | 25–55<br>0.08–0.15<br>0.5–2.3 | –<br>–<br>– |
| 1624 | VCMT 160408 | F PMK 9030 | 9.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–165<br>0.15–0.25<br>0.8–3 | 65–95<br>0.15–0.19<br>0.8–2.3 | 105–155<br>0.15–0.25<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 1627 | VCMT 160408 | F U 9035 | 9.40 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 80–135<br>0.08–0.25<br>0.8–3 | 45–80<br>0.08–0.19<br>0.8–2.3 | 75–125<br>0.08–0.25<br>0.8–3 | –<br>–<br>– | 25–55<br>0.08–0.19<br>0.8–2.3 | –<br>–<br>– |
| 1553 | VBMT 160404 | M U 9035 | 10.10 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 85–135<br>0.08–0.2<br>0.4–2 | 50–80<br>0.08–0.15<br>0.4–1.5 | 80–125<br>0.08–0.2<br>0.4–2 | 125–470<br>0.08–0.2<br>0.4–2 | –<br>–<br>– | –<br>–<br>– |
| 1556 | VBMT 160408 | M U 9035 | 10.10 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 75–150<br>0.08–0.4<br>0.8–3 | 45–90<br>0.08–0.3<br>0.8–2.3 | 70–140<br>0.08–0.4<br>0.8–3 | 110–525<br>0.08–0.4<br>0.8–3 | –<br>–<br>– | –<br>–<br>– |
| 1550 | VBMT 110204 | M U 9035 | 9.00 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 85–135<br>0.08–0.2<br>0.4–2 | 50–80<br>0.08–0.15<br>0.4–1.5 | 80–125<br>0.08–0.2<br>0.4–2 | 125–470<br>0.08–0.2<br>0.4–2 | –<br>–<br>– | –<br>–<br>– |

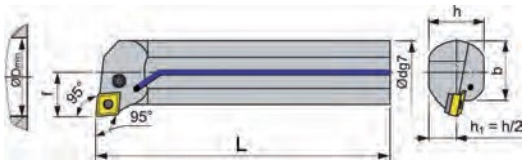
(W286)

Δ Can only be supplied as a whole packaging unit.

## Through Coolant Boring Bars for CNMG 1204.../WNMG 0804... Style Inserts

**Design:** Boring bar for inserts 0° negative, toggle lever tension, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring.



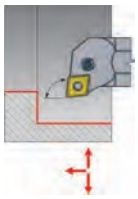



Fig.: Right-hand version

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 6000 | A25S PCLNR 12 | 119.00 | 25 | 32 | 250 | 17 | Right | CNMG 1204... |
| 6005 | A25S PCLNL 12 | 119.00 | 25 | 32 | 250 | 17 | Left | CNMG 1204... |
| 6010 | A32S PCLNR 12 | 162.50 | 32 | 40 | 250 | 22 | Right | CNMG 1204... |
| 6015 | A32S PCLNL 12 | 162.50 (W285) | 32 | 40 | 250 | 22 | Left | CNMG 1204... |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5036 | Supporting plate | 6.70 | – | 10 Δ |
| 5051 | Pipe pin | 3.39 | – | 10 Δ |
| 5075 | Toggle lever | 12.05 | – | 1 |
| 5063 | Tightening screw for shaft Ø 32 mm | 5.00 | – | 10 Δ |
| 0030 | Hexagon key, 4 x 100 mm | – (W281) | 1.96 (W528) | 1 |

Δ Can only be supplied as a whole packaging unit.

Supporting plate

Toggle lever

Pipe pin

Tightening screw

Hexagon key

## Turning Inserts

format professional quality

ALU

UNI

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0446 | CNKG 120404 | ALU N | 5.55 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.1–0.4<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– |
| 0449 | CNKG 120408 | ALU N | 5.55 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.1–0.4<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– |
| 0440 | CNMG 120404 | UNI P M | 5.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–220<br>0.1–0.3<br>0.5–3.0 | 70–130<br>0.1–0.23<br>0.5–2.3 | 110–205<br>0.1–0.3<br>0.8–2.3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0443 | CNMG 120408 | UNI P M | 5.95 (W291) | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–210<br>0.15–0.45<br>0.8–3.0 | 75–125<br>0.15–0.34<br>0.8–2.3 | 120–195<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts

F VA R-EC* L-EC** M R WM

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0500 | CNMG 120404 | F PMK 9030 | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 160–260<br>0.15–0.3<br>0.5–3 | 95–155<br>0.15–0.23<br>0.5–2.3 | 150–245<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 30–75<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0519 | CNMG 120404 | VA 9040 | 7.25 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 205–285<br>0.15–0.3<br>0.5–3 | 120–170<br>0.15–0.23<br>0.5–2.3 | 140–270<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 40–85<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0530 | CNMG 120404 | R-EC U 9035* | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–185<br>0.2–0.3<br>0.8–5 | 80–110<br>0.2–0.23<br>0.8–3.8 | 125–175<br>0.2–0.3<br>0.8–5 | 200–645<br>0.2–0.3<br>0.8–5 | 25–55<br>0.2–0.23<br>0.8–3 | –<br>–<br>– |
| 0518 | CNMG 120404 | L-EC U 9035** | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–185<br>0.2–0.3<br>0.8–5 | 80–110<br>0.2–0.23<br>0.8–3.8 | 125–175<br>0.2–0.3<br>0.8–5 | 200–645<br>0.2–0.3<br>0.8–5 | 25–55<br>0.2–0.23<br>0.8–3 | –<br>–<br>– |
| 0502 | CNMG 120408 | F PMK 9030 | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 180–295<br>0.15–0.35<br>0.8–3 | 105–175<br>0.15–0.26<br>0.8–2.3 | 170–280<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | 35–85<br>0.15–0.21<br>0.8–1.8 | –<br>–<br>– |
| 0505 | CNMG 120408 | M PK 9015 | 7.25 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 205–330<br>0.15–0.6<br>1–6 | –<br>–<br>– | 190–310<br>0.15–0.6<br>1–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0503 | CNMG 120408 | M PMK 9030 | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–295<br>0.15–0.6<br>0.8–6 | 75–175<br>0.15–0.45<br>0.8–4.5 | 120–280<br>0.15–0.6<br>0.8–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0507 | CNMG 120408 | R PK 9015 | 7.25 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 225–305<br>0.25–0.6<br>2–6 | –<br>–<br>– | 210–285<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0506 | CNMG 120408 | R PMK 9030 | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 145–240<br>0.25–0.6<br>2–6 | 85–140<br>0.25–0.45<br>2–4.5 | 135–225<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0548 | CNMG 120408 | R PMK 9040 | 6.25 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–200<br>0.25–0.6<br>2–6 | 75–120<br>0.25–0.45<br>2–4.5 | 115–190<br>0.25–0.6<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0540 | CNMG 120408 | VA 9040 | 7.25 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 235–305<br>0.2–0.4<br>0.8–3 | 140–180<br>0.2–0.3<br>0.8–2.3 | 220–285<br>0.2–0.4<br>0.8–3 | –<br>–<br>– | 45–90<br>0.2–0.24<br>0.8–1.8 | –<br>–<br>– |
| 0536 | CNMG 120408 | R-EC U 9035* | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0524 | CNMG 120408 | L-EC U 9035** | 6.95 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0539 | CNMG 120408 | WM PMK 9030 | 8.05 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–295<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | 125–280<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0510 | CNMG 120412 | R PK 9015 | 7.25 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 230–320<br>0.25–0.7<br>2–6 | –<br>–<br>– | 215–300<br>0.25–0.7<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0512 | CNMG 120412 | R PMK 9030 | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–250<br>0.25–0.7<br>2–6 | 80–150<br>0.25–0.53<br>2–4.5 | 130–235<br>0.25–0.7<br>2–6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0513 | CNMG 120412 | VA 9040 | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 240–305<br>0.2–0.4<br>1.2–3.5 | 140–180<br>0.2–0.3<br>1.2–2.6 | 225–285<br>0.2–0.4<br>1.2–3.5 | –<br>–<br>– | 45–90<br>0.2–0.24<br>1.2–2.1 | –<br>–<br>– |

*R-EC Boring bar for = right-hand version
**L-EC Boring bar for = left-hand version

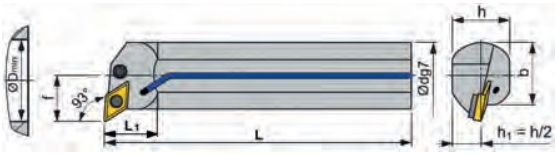
(W286)

Δ Can only be supplied as a whole packaging unit.

## Through Coolant Boring Bars for DNMG 1104... Style Inserts

**Design:** Boring bar for inserts 7° positive, screw clamping, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring and outer turning.



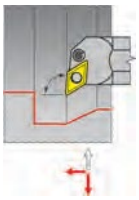



**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 6020 | A20Q PDUNR 11 | 98.50 | 20 | 30 | 180 | 14 | Right | DNMG 11... |
| 6025 | A20Q PDUNL 11 | 98.50 | 20 | 30 | 180 | 14 | Left | DNMG 11... |
| 6030 | A25R PDUNR 11 | 125.00 | 25 | 32 | 200 | 17 | Right | DNMG 11... |
| 6035 | A25R PDUNL 11 | 125.00 | 25 | 32 | 200 | 17 | Left | DNMG 11... |
| 6040 | A32S PDUNR 11 | 168.50 | 32 | 40 | 250 | 22 | Right | DNMG 11... |
| 6045 | A32S PDUNL 11 | 168.50 | 32 | 40 | 250 | 22 | Left | DNMG 11... |
| | | (W285) | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5003 | Supporting plate | 6.70 | – | 10 Δ |
| 5024 | Pipe pin | 3.35 | – | 10 Δ |
| 5072 | Toggle lever | 7.15 | – | 10 Δ |
| 5060 | Tightening screw for shaft Ø 32 mm | 4.45 | – | 10 Δ |
| 0030 | Hexagon key, 4 x 100 mm | – | 1.96 | 1 |
| | | (W281) | (W528) | |

Δ Can only be supplied as a whole packaging unit.

**Supporting plate**

**Toggle lever**

**Pipe pin**

**Tightening screw**

**Hexagon key**

## Turning Inserts

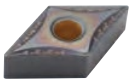
format professional quality

**UNI**

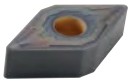
| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0786 | DNMG 110404 | UNI | 5.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–175<br>0.10–0.24<br>0.4–3.0 | 60–105<br>0.10–0.18<br>0.4–2.3 | 95–165<br>0.10–0.24<br>0.4–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0787 | DNMG 110408 | UNI | 5.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 110–200<br>0.10–0.35<br>0.8–3.0 | 65–120<br>0.10–0.26<br>0.8–2.3 | 100–190<br>0.10–0.35<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| | | | (W291) | | | | | | | | |

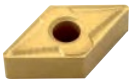
Δ Can only be supplied as a whole packaging unit.

## Turning Inserts


F PK

F


M PK


M

VA

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0670 | DNMG 110404 | F PK 9015 | 8.35 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 180–240<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 170–225<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0673 | DNMG 110404 | F PMK 9030 | 7.35 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–210<br>0.15–0.24<br>0.5–3 | 80–125<br>0.15–0.18<br>0.5–2.3 | 130–195<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 25–60<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0674 | DNMG 110404 | VA 9040 | 7.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 170–225<br>0.15–0.24<br>0.5–3 | 100–135<br>0.15–0.18<br>0.5–2.3 | 160–210<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 30–65<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0676 | DNMG 110408 | M PK 9015 | 7.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 185–270<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | 175–255<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0679 | DNMG 110408 | M PMK 9030 | 7.35 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–235<br>0.15–0.48<br>0.8–0.3 | 75–140<br>0.15–0.36<br>0.8–2.3 | 115–220<br>0.15–0.48<br>0.8–3 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0681 | DNMG 110408 | VA 9040 | 7.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 185–245<br>0.2–0.4<br>0.8–3 | 110–145<br>0.2–0.3<br>0.8–2.3 | 175–230<br>0.2–0.4<br>0.8–3 | –<br>–<br>– | 35–70<br>0.2–0.24<br>0.8–1.8 | –<br>–<br>– |

(W286)

Δ Can only be supplied as a whole packaging unit.

## Through Coolant Boring Bars for DNMG 1506... Style Inserts

**Design:** Boring bar for inserts 0° negative, toggle lever tension, tool carrier nickel-plated. **Supplied without indexable inserts, without screwdriver.**

**Application:** Boring.

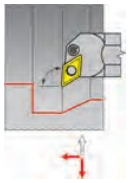


**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|
| 6300 | **A32S PDUNR 15** | **162.50** | 32 | 40 | 250 | 22 | Right | DNMG/DNKG 1506... |
| 6305 | **A32S PDUNL 15** | **162.50** (W285) | 32 | 40 | 250 | 22 | Left | DNMG/DNKG 1506... |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5042 | **Supporting plate** | **7.40** | – | 10 Δ |
| 5051 | **Pipe pin** | **3.39** | – | 10 Δ |
| 5078 | **Toggle lever** | **11.95** | – | 1 |
| 5063 | **Tightening screw** | **5.00** | – | 10 Δ |
| 0030 | **Hexagon key 4 x 100 mm** | – (W281) | **1.96** (W528) | 1 |

Δ Can only be supplied as a whole packaging unit.

**Supporting plate**

**Toggle lever**

**Pipe pin**

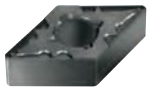
**Tightening screw**

**Hexagon key**

## ISO turning cutting insert

format professional quality

**ALU**

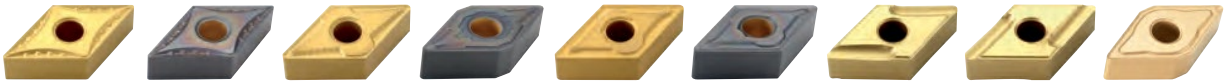


**UNI**

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0794 | **DNKG 150604** | **ALU** | **6.80** | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.10–0.40<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 0797 | **DNKG 150608** | **ALU** | **6.80** | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– | 110–575<br>0.10–0.40<br>0.8–5.0 | –<br>–<br>– | –<br>–<br>– |
| 0788 | **DNMG 150604** | **UNI** | **9.05** | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–175<br>0.10–0.24<br>0.5–3.0 | 60–105<br>0.10–0.18<br>0.5–2.3 | 95–165<br>0.10–0.24<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0791 | **DNMG 150608** | **UNI** | **9.05** (W291) | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 100–170<br>0.15–0.45<br>0.8–3.0 | 60–100<br>0.15–0.34<br>0.8–2.3 | 95–160<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts



F | F PK | M | M PK | R | R PK | R-EC* | L-EC** | VA

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0700 | DNMG 150604 | F PMK 9030 | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–210<br>0.15–0.24<br>0.5–3 | 80–125<br>0.15–0.18<br>0.5–2.3 | 130–195<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 25–60<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0736 | DNMG 150604 | R-EC U 9035* | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–145<br>0.2–0.24<br>0.8–4.5 | 70–85<br>0.2–0.24<br>0.8–3.4 | 110–135<br>0.2–0.24<br>0.8–4.5 | 180–505<br>0.2–0.24<br>0.8–4.5 | 20–40<br>0.2–0.24<br>0.8–2.7 | –<br>–<br>– |
| 0724 | DNMG 150604 | L-EC U 9035** | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–145<br>0.2–0.24<br>0.8–4.5 | 70–85<br>0.2–0.24<br>0.8–3.4 | 110–135<br>0.2–0.24<br>0.8–4.5 | 180–505<br>0.2–0.24<br>0.8–4.5 | 20–40<br>0.2–0.24<br>0.8–2.7 | –<br>–<br>– |
| 0725 | DNMG 150604 | VA 9040 | 10.30 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 170–225<br>0.15–0.24<br>0.5–3 | 100–135<br>0.15–0.18<br>0.5–2.3 | 160–210<br>0.15–0.24<br>0.5–3 | –<br>–<br>– | 30–65<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0703 | DNMG 150608 | F PMK 9030 | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–235<br>0.15–0.35<br>0.8–3 | 80–140<br>0.15–0.26<br>0.8–2.3 | 130–220<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | 25–70<br>0.15–0.21<br>0.8–1.8 | –<br>–<br>– |
| 0704 | DNMG 150608 | M PK 9015 | 10.30 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 175–270<br>0.15–0.48<br>0.8–4.5 | –<br>–<br>– | 165–255<br>0.15–0.48<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0706 | DNMG 150608 | M PMK 9030 | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–235<br>0.15–0.48<br>0.8–4.5 | 70–140<br>0.15–0.36<br>0.8–3.4 | 110–220<br>0.15–0.48<br>0.8–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0708 | DNMG 150608 | R PK 9015 | 10.30 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 195–245<br>0.25–0.48<br>2–4.5 | –<br>–<br>– | 185–230<br>0.25–0.48<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0712 | DNMG 150608 | R PMK 9030 | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–190<br>0.25–0.48<br>2–4.5 | 75–110<br>0.25–0.36<br>2–3.4 | 120–180<br>0.25–0.48<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0742 | DNMG 150608 | R EC U 9035* | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–175<br>0.2–0.48<br>0.8–4.5 | 60–105<br>0.2–0.36<br>0.8–3.4 | 95–165<br>0.2–0.48<br>0.8–4.5 | 155–610<br>0.2–0.48<br>0.8–4.5 | 20–50<br>0.2–0.29<br>0.8–2.7 | –<br>–<br>– |
| 0730 | DNMG 150608 | L EC U 9035** | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–175<br>0.2–0.48<br>0.8–4.5 | 60–105<br>0.2–0.36<br>0.8–3.4 | 95–165<br>0.2–0.48<br>0.8–4.5 | 155–610<br>0.2–0.48<br>0.8–4.5 | 20–50<br>0.2–0.29<br>0.8–2.7 | –<br>–<br>– |
| 0731 | DNMG 150608 | VA 9040 | 10.30 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 185–240<br>0.2–0.4<br>0.8–3 | 110–145<br>0.2–0.3<br>0.8–2.3 | 175–230<br>0.2–0.4<br>0.8–3 | –<br>–<br>– | 35–70<br>0.2–0.24<br>0.8–1.8 | –<br>–<br>– |
| 0709 | DNMG 150612 | M PMK 9030 | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 105–225<br>0.17–0.72<br>1.2–4.5 | 60–135<br>0.17–0.54<br>1.2–3.4 | 95–210<br>0.17–0.72<br>1.2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0715 | DNMG 150612 | R PMK 9030 | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–200<br>0.25–0.7<br>2–4.5 | 65–120<br>0.25–0.53<br>2–3.4 | 105–190<br>0.25–0.7<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0716 | DNMG 150612 | VA 9040 | 10.30 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 190–245<br>0.2–0.4<br>1.2–3.5 | 110–145<br>0.2–0.3<br>1.2–2.6 | 180–230<br>0.2–0.4<br>1.2–3.5 | –<br>–<br>– | 35–70<br>0.2–0.24<br>1.2–2.1 | –<br>–<br>– |
| 0718 | DNMG 150616 | R PMK 9030 | 9.75 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 115–190<br>0.3–0.8<br>2–4.5 | 65–110<br>0.3–0.6<br>2–3.4 | 105–180<br>0.3–0.8<br>2–4.5 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

*R-EC... for boring bar = right-hand version
**L-EC for boring bar = left-hand version

(W286)

Δ Can only be supplied as a whole packaging unit.

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Through Coolant Boring Bars for WNMG 0804... Style Inserts

**Design:** Boring bar for inserts 0° negative, toggle lever tension, tool carrier nickel-plated.
**Supplied without indexable inserts, without screwdriver.**

**Application:** Boring.

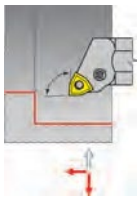


**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank ● dg7 mm | Dimensions Ø D min. mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions f mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 6050 | A25S PWLNR 08 | 135.50 | 25 | 32 | 250 | 45 | 17 | Right | WNMG 0804... |
| 6055 | A25S PWLNL 08 | 135.50 | 25 | 32 | 250 | 45 | 17 | Left | WNMG 0804... |
| 6060 | A32S PWLNR 08 | 183.00 | 32 | 40 | 250 | 60 | 22 | Right | WNMG 0804... |
| 6065 | A32S PWLNL 08 | 183.00 (W285) | 32 | 40 | 250 | 60 | 22 | Left | WNMG 0804... |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5850 | PU |
|---|---|---|---|---|
| 5048 | Supporting plate | 8.10 | – | 10 Δ |
| 5051 | Pipe pin | 3.39 | – | 10 Δ |
| 5075 | Toggle lever | 12.05 | – | 1 |
| 5063 | Tightening screw | 5.00 | – | 10 Δ |
| 0030 | Hexagon key 4 x 100 mm | – (W281) | 1.96 (W528) | 1 |

Δ Can only be supplied as a whole packaging unit.

**Supporting plate**

**Toggle lever**

**Pipe pin**

**Tightening screw**

**Hexagon key**

## Turning Inserts

format professional quality

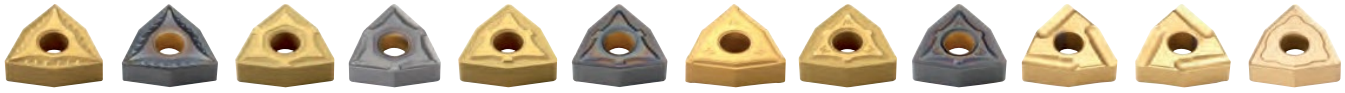
**UNI**

| Order No. | ISO designation | Cutting materials | 2968 format | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0894 | WNMG 080404 | UNI | 6.65 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 120–220<br>0.10–0.30<br>0.5–3.0 | 70–130<br>0.10–0.23<br>0.5–2.3 | 110–205<br>0.10–0.30<br>0.5–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0897 | WNMG 080408 | UNI | 6.65 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–210<br>0.15–0.45<br>0.8–3.0 | 75–125<br>0.15–0.34<br>0.8–2.3 | 120–195<br>0.15–0.45<br>0.8–3.0 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |

(W291)

Δ Can only be supplied as a whole packaging unit.

## Turning Inserts



F | F PK | M | M PK | R | R PK | WF | WM | WM PK | R-EC* | L-EC** | VA

| Order No. | ISO designation | Cutting materials | 2968 | PU | Cutting speed Feed Cutting depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0900 | WNMG 080404 | F PMK 9030 | 7.15 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 160–260<br>0.15–0.3<br>0.5–3 | 95–155<br>0.15–0.23<br>0.5–2.3 | 150–245<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 30–75<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0925 | WNMG 080404 | VA 9040 | 7.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 205–285<br>0.15–0.3<br>0.5–3 | 120–170<br>0.15–0.23<br>0.5–2.3 | 190–270<br>0.15–0.3<br>0.5–3 | –<br>–<br>– | 40–85<br>0.15–0.18<br>0.5–1.8 | –<br>–<br>– |
| 0924 | WNMG 080404 | WF PMK 9030 | 8.65 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 155–270<br>0.15–0.3<br>0.4–4.4 | –<br>–<br>– | 145–255<br>0.15–0.3<br>0.4–4.4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0903 | WNMG 080408 | F PMK 9030 | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 180–295<br>0.15–0.35<br>0.8–3 | 105–175<br>0.15–0.26<br>0.8–2.3 | 170–280<br>0.15–0.35<br>0.8–3 | –<br>–<br>– | 35–85<br>0.15–0.21<br>0.8–1.8 | –<br>–<br>– |
| 0928 | WNMG 080408 | M PK 9015 | 7.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 205–340<br>0.15–0.6<br>0.8–5.6 | –<br>–<br>– | 190–320<br>0.15–0.6<br>0.8–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0930 | WNMG 080408 | M PMK 9030 | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 130–295<br>0.15–0.6<br>0.8–5.6 | 75–175<br>0.15–0.45<br>0.8–4.2 | 120–280<br>0.15–0.6<br>0.8–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0932 | WNMG 080408 | R PK 9015 | 7.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 225–305<br>0.25–0.6<br>2–5.6 | –<br>–<br>– | 210–285<br>0.25–0.6<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0909 | WNMG 080408 | R PMK 9030 | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 145–240<br>0.25–0.6<br>2–5.6 | 85–140<br>0.25–0.45<br>2–4.2 | 135–225<br>0.25–0.6<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0942 | WNMG 080408 | R-EC U 9035* | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0940 | WNMG 080408 | L-EC U 9035** | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–215<br>0.2–0.5<br>0.8–5 | 80–125<br>0.2–0.38<br>0.8–3.8 | 125–200<br>0.2–0.5<br>0.8–5 | 200–750<br>0.2–0.5<br>0.8–5 | 25–60<br>0.2–0.3<br>0.8–3 | –<br>–<br>– |
| 0917 | WNMG 080408 | VA 9040 | 7.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 220–305<br>0.2–0.5<br>0.8–3 | 130–180<br>0.2–0.38<br>0.8–2.3 | 205–285<br>0.2–0.5<br>0.8–3 | –<br>–<br>– | 40–90<br>0.2–0.3<br>0.8–1.8 | –<br>–<br>– |
| 0915 | WNMG 080408 | WM PMK 9030 | 8.65 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 135–295<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | 125–280<br>0.15–0.6<br>0.8–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0944 | WNMG 080412 | M PK 9015 | 7.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 205–335<br>0.17–0.8<br>1.2–5.6 | –<br>–<br>– | 190–315<br>0.17–0.8<br>1.2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0906 | WNMG 080412 | M PMK 9030 | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–285<br>0.17–0.8<br>1.2–5.6 | 75–170<br>0.17–0.6<br>1.2–4.2 | 115–270<br>0.17–0.8<br>1.2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0946 | WNMG 080412 | R PK 9015 | 7.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 235–320<br>0.25–0.7<br>2–5.6 | –<br>–<br>– | 220–300<br>0.25–0.7<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0912 | WNMG 080412 | R PMK 9030 | 7.45 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 140–250<br>0.25–0.7<br>2–5.6 | 80–150<br>0.25–0.53<br>3.2–4.2 | 130–235<br>0.25–0.7<br>2–5.6 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0918 | WNMG 080412 | WM PMK 9030 | 8.65 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 125–265<br>0.2–0.9<br>1.2–4 | –<br>–<br>– | 115–250<br>0.2–0.9<br>1.2–4 | –<br>–<br>– | –<br>–<br>– | –<br>–<br>– |
| 0919 | WNMG 080412 | VA 9040 | 7.85 | 10 Δ | Vc m/min.<br>f mm/rev<br>ap/mm | 230–305<br>0.2–0.5<br>1.2–3.5 | 135–180<br>0.2–0.38<br>1.2–2.6 | 215–285<br>0.2–0.5<br>1.2–3.5 | –<br>–<br>– | 45–90<br>0.2–0.3<br>1.2–2.1 | –<br>–<br>– |

*R-EC... for boring bar = right-hand version
**L-EC for boring bar = left-hand version

(W286)

Δ Can only be supplied as a whole packaging unit.

## External Threading Toolholders

| Order No. | Type | Description | Catalogue page |
|---|---|---|---|
| 2969 0115 – 2969 00005 | SER/SEL | Clamping holder | 2/250 |
| 2969 0206 – 2969 0324 | TN 16 ER/EL | 60° metric, solid profile | 2/250 |
| 2969 0500 – 2969 0530 | TN 16 ER | 55° WW, solid profile | 2/251 |

## Internal Threading Bars

| Order No. | Type | Description | Catalogue page |
|---|---|---|---|
| 2969 0730 – 2969 0858 | SIR/SIL | Boring bar | 2/252 |
| 2969 0900 – 2969 0939 | TN 11–16 NR/L | 60° metric, solid profile | 2/253 |
| 2969 2000 – 2969 2027 | TN 11–16 NR/L | 55° WW, solid profile | 2/254 |

## Threading – Technical Information

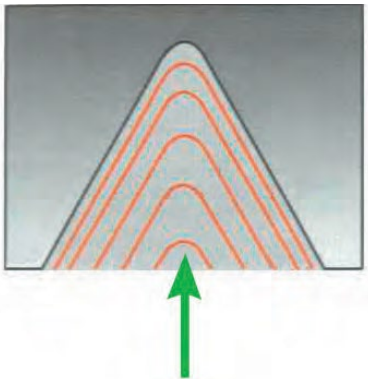
**60° ISO metric** **solid profile for inner and outer processing**
**55° Whitworth** **solid profile for inner and outer processing**

With solid profile turning plates the inner and outer diameters turn together, so that all parts are concentric. Burr-free profiles are achieved, exactly to standard, in one operation.

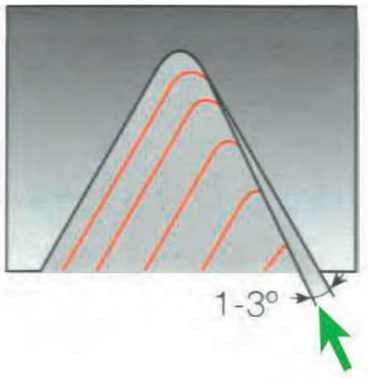
**Number of cuts (passes) and delivery methods**

| Gradient mm | 0.50 | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.50 | 3.00 |
|---|---|---|---|---|---|---|---|---|---|
| Threads/Inch | 48 | 32 | 24 | 20 | 16 | 14 | 12 | 10 | 8 |
| Number/passes | 4–6 | 4–7 | 4–8 | 5–9 | 6–10 | 7–12 | 7–12 | 8–14 | 9–16 |

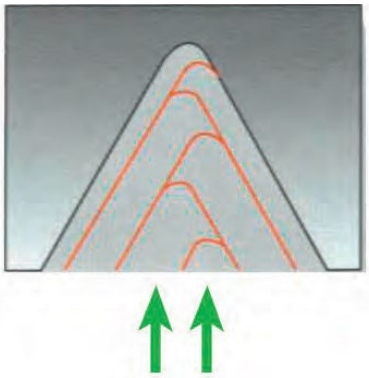
**Radial feed**



**Along the edge**




**Reciprocal feed**



## Name and formulas

**RPM**

$$n = \frac{Vc \cdot 1000}{\pi \cdot D} \quad (min^{-1})$$

**Gradient**

$P_h = P \cdot$ number of turns (min)

**Cutting speed**

$$Vc = \frac{\pi \cdot D \cdot n}{1000} \quad (m/min)$$

**Tilt angle**

$$\lambda = \arctan \frac{P_h}{D_2 \cdot \pi} \quad (°)$$

**Path speed**

$$V_f = \frac{n \cdot P_h}{1000} \quad (m/min)$$

**Conversion inches to metric**

$$TPI = \frac{25.4}{P}$$

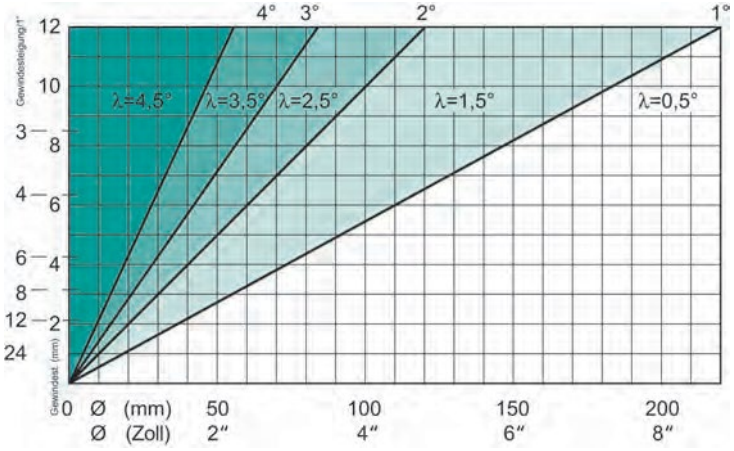
| | | |
|---|---|---|
| D | = workpiece diameter | (mm) |
| $D_2$ | = edge diameter (nominal diameter) | (mm) |
| n | = speed | ($min^{-1}$) |
| P | = pitch | (mm) |
| $P_h$ | = gradient | (mm) |
| $V_f$ | = path speed | (m/min) |
| TPI | = turn per inch | |
| Vc | = cutting speed | (m/min) |
| λ | = tilt angle | (°) |

## Shim Selection Table

| Tilt angle λ | | Positive | | | | | Negative | | for Milling insert |
|---|---|---|---|---|---|---|---|---|---|
| | | 4.5° | 3.5° | 2.5° | 1.5° | 0.5° | –0.5° | –1.5° | TN16.. ... ZZ |
| Clamp holder | | | | | Support plate | | | | |
| SER .... .16 | SIL .... .16 | PE16+4.5 | PE16+3.5 | PE16+2.5 | PE16+1.5* | PE16+0.5 | PE16–0.5 | PE16–1.5 | PE16ZZ |
| SEL .... .16 | SIR .16 | PI16+4.5 | PI16+3.5 | PI16+2.5 | PI16+1.5* | PI16+0.5 | PI16–0.5 | PI16–1.5 | PI16ZZ |
| SER .... .22 | SIL .... .22 | PE22+4.5 | PE22+3.5 | PE22+2.5 | PE22+1.5* | PE22+0.5 | PE22–0.5 | PE22–1.5 | – |
| SEL .... .22 | SIR .22 | PI22+4.5 | PI22+3.5 | PI22+2.5 | PI22+1.5* | PI22+0.5 | PI22–0.5 | PI22–1.5 | – |

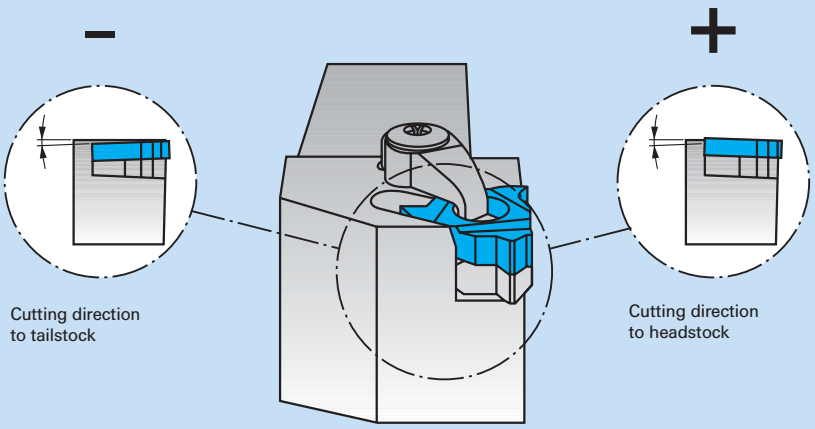
**Remarks:** **All tool holders are firmly equipped with a tilt angle λ = 1.5°.**
**The helix angle can be changed on the support plate - see table and diagram.**

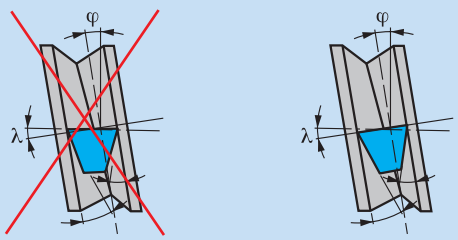
## Shim Selection Chart




## Production method

**Attention:**
If the cutting direction shows to the tailstock, the base plate must be changed.



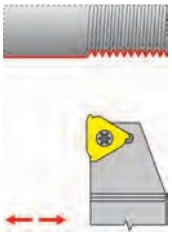




To achieve highest profile precision and even wear, the slope angle (λ) of the indexable insert must correspond exactly with the lead angle (φ) of the thread.

## External Threading Toolholders

**Design:** Thread turning clamping holder, incl. supporting plate, helix angle 1.5°, screw clamping.
**Supplied without indexable inserts, without screwdriver.**

**Application:** External thread – right/left.



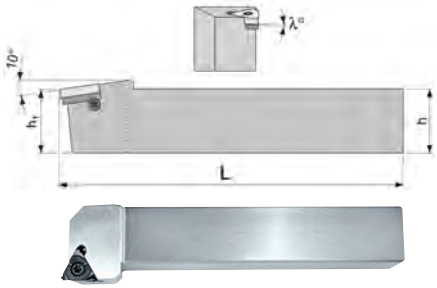



**Fig.: Right-hand version**

| Order No. | Description | 2969 | Shank-■ mm | Dimensions L mm | Dimensions $h_1$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|
| 0115 | SER 1212 F16 | 61.00 | 12 x 12 | 80 | 12 | Right | 16ER... |
| 0015 | SEL 1212 F16 | 61.00 | 12 x 12 | 80 | 12 | Left | 16EL... |
| 0117 | SER 1616 H16 | 70.50 | 16 x 16 | 100 | 16 | Right | 16ER... |
| 0017 | SEL 1616 H16 | 70.50 | 16 x 16 | 100 | 16 | Left | 16EL... |
| 0100 | SER 2020 K16 | 118.00 | 20 x 20 | 125 | 20 | Right | 16ER... |
| 0000 | SEL 2020 K16 | 115.00 | 20 x 20 | 125 | 20 | Left | 16EL... |
| 0105 | SER 2525 M16 | 120.50 | 25 x 25 | 150 | 25 | Right | 16ER... |
| 0005 | SEL 2525 M16 | 120.50 | 25 x 25 | 150 | 25 | Left | 16EL... |
| | | (W287) | | | | | |

## Spare Parts for 2969 Style Holders

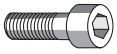
| Order No. | Design | 2969 | 5850 | 5886 | PU |
|---|---|---|---|---|---|
| 0121 | Supporting plate for SER PE 16 + 1.5° | 14.00 | – | – | 1 |
| 0123 | Supporting plate for SEL PI 16 + 1.5° | 14.00 | – | – | 1 |
| 0122 | Tightening screw for insert | 4.11 | – | – | 10 Δ |
| 0124 | Hexagon socket tightening screw for supporting plate | 4.11 | – | – | 10 Δ |
| 0010 | Hexagon key 2.5 x 100 mm | – | 2.05 | – | 1 |
| 0050 | Screwdriver for TORX® T 15 x 80 mm | – | – | 4.66 | 1 |
| | | (W281) | (W528) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

**Supporting plate for SER**

**Supporting plate for SEL**

**Tightening screw for insert**



**Tightening screw for supporting plate**

**Hexagon key**

**TORX® screwdriver**

## External Threading Inserts ISO 60deg – Full Profile

**ER-M U 9035**

**EL-M U 9035**

**M35 Stainless**

**PK25 Steel + cast**

| Order No. | ISO designation | Cutting materials | 2969 | PU | Gradient mm | Cutting speed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0300 | 16 ER 050 | M U 9035 | 13.80 | 10 Δ | 0.50 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0355 | 16 ER 075 | M PK25 | 9.70 | 2 Δ | 0.75 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0303 | 16 ER 075 | M U 9035 | 13.80 | 10 Δ | 0.75 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0357 | 16 ER 075 | M M35 | 9.70 | 2 Δ | 0.75 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0359 | 16 ER 100 | M PK25 | 9.70 | 2 Δ | 1.00 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0306 | 16 ER 100 | M U 9035 | 13.80 | 10 Δ | 1.00 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0361 | 16 ER 100 | M M35 | 9.70 | 2 Δ | 1.00 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0363 | 16 ER 125 | M PK25 | 9.70 | 2 Δ | 1.25 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0309 | 16 ER 125 | M U 9035 | 13.80 | 10 Δ | 1.25 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0365 | 16 ER 125 | M M35 | 9.70 | 2 Δ | 1.25 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0367 | 16 ER 150 | M PK25 | 9.70 | 2 Δ | 1.50 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0312 | 16 ER 150 | M U 9035 | 14.60 | 10 Δ | 1.50 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0369 | 16 ER 150 | M M35 | 9.70 | 2 Δ | 1.50 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0371 | 16 ER 175 | M PK25 | 9.70 | 2 Δ | 1.75 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| | | | (W288) | | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.
Continued overleaf

## External Threading Inserts ISO 60deg – Full Profile

Continued

| Order No. | ISO designation | Cutting materials | 2969 | PU | Gradient mm | Cutting speed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0315 | 16 ER 175 | M U 9035 | 13.80 | 10 Δ | 1.75 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0373 | 16 ER 175 | M M35 | 9.70 | 2 Δ | 1.75 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0375 | 16 ER 200 | M PK25 | 9.70 | 2 Δ | 2.00 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0318 | 16 ER 200 | M U 9035 | 14.60 | 10 Δ | 2.00 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0377 | 16 ER 200 | M M35 | 9.70 | 2 Δ | 2.00 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0379 | 16 ER 250 | M PK25 | 9.70 | 2 Δ | 2.50 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0321 | 16 ER 250 | M U 9035 | 13.80 | 10 Δ | 2.50 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0381 | 16 ER 250 | M M35 | 9.70 | 2 Δ | 2.50 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0383 | 16 ER 300 | M PK25 | 9.70 | 2 Δ | 3.00 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0324 | 16 ER 300 | M U 9035 | 13.80 | 10 Δ | 3.00 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0385 | 16 ER 300 | M M35 | 9.70 | 2 Δ | 3.00 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0327 | 16 EL 100 | M PK25 | 9.70 | 2 Δ | 1.00 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0206 | 16 EL 100 | M U 9035 | 13.80 | 10 Δ | 1.00 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0329 | 16 EL 100 | M M35 | 9.70 | 2 Δ | 1.00 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0331 | 16 EL 125 | M PK25 | 9.70 | 2 Δ | 1.25 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0209 | 16 EL 125 | M U 9035 | 13.80 | 10 Δ | 1.25 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0333 | 16 EL 125 | M M35 | 9.70 | 2 Δ | 1.25 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0335 | 16 EL 150 | M PK25 | 9.70 | 2 Δ | 1.50 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0212 | 16 EL 150 | M U 9035 | 13.80 | 10 Δ | 1.50 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0337 | 16 EL 150 | M M35 | 9.70 | 2 Δ | 1.50 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0339 | 16 EL 175 | M PK25 | 9.70 | 2 Δ | 1.75 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0215 | 16 EL 175 | M U 9035 | 13.80 | 10 Δ | 1.75 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0341 | 16 EL 175 | M M35 | 9.70 | 2 Δ | 1.75 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0343 | 16 EL 200 | M PK25 | 9.70 | 2 Δ | 2.00 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0218 | 16 EL 200 | M U 9035 | 13.80 | 10 Δ | 2.00 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0345 | 16 EL 200 | M M35 | 9.70 | 2 Δ | 2.00 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0347 | 16 EL 250 | M PK25 | 9.70 | 2 Δ | 2.50 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0221 | 16 EL 250 | M U 9035 | 13.80 | 10 Δ | 2.50 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0349 | 16 EL 250 | M M35 | 9.70 | 2 Δ | 2.50 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |
| 0351 | 16 EL 300 | M PK25 | 9.70 | 2 Δ | 3.00 | Vc m/min. | 100–150 | 60– 90 | 90–125 | – | – | – |
| 0224 | 16 EL 300 | M U 9035 | 13.80 | 10 Δ | 3.00 | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0353 | 16 EL 300 | M M35 | 9.70 | 2 Δ | 3.00 | Vc m/min. | 85–135 | 80–120 | – | 200–450 | 25–40 | – |

(W288)

Δ Can only be supplied as a whole packaging unit.

## External Set of Threading Inserts ISO 60deg – Full Profile

**Design:** Set consisting of: (order no. 2969).

| Order No. | ISO designation | Cutting speed | 2969 | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel | Piece x gradient mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0390 | 16 ER PK25 | Vc m/min. | 88.00 | 100–150 | 80–120 | 90–125 | – | – | – | 2 x 1.0; 2 x 1.25; 2 x 1.5; 2 x 1.75; 2 x 2.0; 2 x 2.5 |
| 0395 | 16 EL PK25 | Vc m/min. | 88.00 | 100–150 | 80–120 | 90–125 | – | – | – | 2 x 1.0; 2 x 1.25; 2 x 1.5; 2 x 1.75; 2 x 2.0; 2 x 2.5 |

(W288)

## External Threading Inserts ISO 55deg – Full Profile

ER-W

| Order No. | ISO designation | Cutting materials | 2969 | PU | Cutting speed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0500 | 16 ER 080 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0503 | 16 ER 090 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0506 | 16 ER 100 | W U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0509 | 16 ER 110 | W U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0512 | 16 ER 120 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0515 | 16 ER 140 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0518 | 16 ER 160 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0521 | 16 ER 180 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0524 | 16 ER 190 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0527 | 16 ER 200 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0530 | 16 ER 280 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |

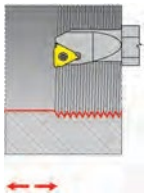
(W288)

Δ Can only be supplied as a whole packaging unit.

## Internal Threading Bars

**Design:** Thread turning bar, incl. support plate, gradient angle 1.5°, screw clamping. **Supplied without insert, without screwdriver.**

**Application:** Internal thread – right/left



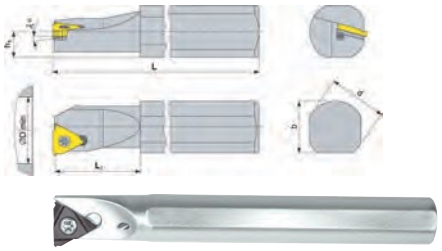


**Fig.: Right-hand version**

| Order No. | Description | 2969 | Dimensions Ø mm | Dimensions D min. mm | Dimensions L mm | Dimensions $L_1$ mm | Dimensions $h_1$ mm | Design/size | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|
| 0860 | A1016 SIR K11 | 76.00 | 10–16 | 12 | 125 | 31 | 7.0 | Right[1] | 11 NR. |
| 0760 | A1016 SIL K11 | 76.00 | 10–16 | 12 | 125 | 31 | 7.0 | Left[1] | 11 NL. |
| 0865 | A1216 SIR K11 | 80.90 | 12–16 | 15 | 125 | 36 | 7.0 | Right[1] | 11 NR. |
| 0765 | A1216 SIL K11 | 80.90 | 12–16 | 15 | 125 | 36 | 7.0 | Left[1] | 11 NL. |
| 0870 | A1216 SIR M16 | 80.90 | 12–16 | 16 | 150 | 36 | 7.0 | Right[1] | 16 NR. |
| 0770 | A1216 SIL M16 | 80.90 | 12–16 | 16 | 150 | 36 | 7.0 | Left[1] | 16 NL. |
| 0815 | SIR 1416 N 16-1 | 135.00 | 16 | 22 | 160 | – | 7.5 | Right[2] | 16 NR. |
| 0875 | A16 SIR P16 | 90.80 | 16 | 19 | 170 | 34 | 7.5 | Right[2] | 16 NR. |
| 0775 | A16 SIL P16 | 90.80 | 16 | 19 | 170 | 34 | 7.5 | Left[2] | 16 NL. |
| 0880 | A20 SIR P16 | 99.40 | 20 | 24 | 170 | 34 | 9.0 | Right[3] | 16 NR. |
| 0780 | A20 SIL P16 | 99.40 | 20 | 24 | 170 | 34 | 9.0 | Left[3] | 16 NL. |
| 0885 | A25 SIR R16 | 124.50 | 25 | 29 | 180 | 34 | 11.5 | Right[3] | 16 NR. |
| 0785 | A25 SIL R16 | 124.50 | 25 | 29 | 180 | 34 | 11.5 | Left[3] | 16 NL. |
| 0830 | SIR 2532 S 16 | 195.50 | 25–32 | 36 | 250 | – | 12.5 | Right[3] | 16 NR. |
| 0730 | SIL 2532 S 16 | 195.50 | 25–32 | 36 | 250 | – | 12.5 | Left[3] | 16 NL. |
| | | (W287) | | | | | [1] Holder size 1 | [2] Holder size 2 | [3] Holder size 3 |

## Spare Parts for 2969 Style Tool Holders

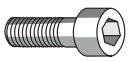
| Order No. | Design | 2969 | 2999 | 5850 | 5886 | PU |
|---|---|---|---|---|---|---|
| 0123 | Supporting plate for SIR PI 16 + 1.5° | 14.00 | – | – | – | 1 |
| 0121 | Supporting plate for SIL PE 16 + 1.5° | 14.00 | – | – | – | 1 |
| 0050 | Tightening screw for holder size 1 | – | 2.96 | – | – | 10 Δ |
| 0850 | Tightening screw for holder size 2 | 2.98 | – | – | – | 10 Δ |
| 0122 | Tightening screw for holder size 3 | 4.11 | – | – | – | 10 Δ |
| 0124 | Tightening screw for support size 3 | 4.11 | – | – | – | 10 Δ |
| 0010 | Hexagon key + for support size 3 | – | – | 2.05 | – | 1 |
| 0020 | Screwdriver for TORX® T 7 size 1 | – | – | – | 4.52 | 1 |
| 0050 | Screwdriver for TORX® T 15 size 2 + 3 | – | – | – | 4.66 | 1 |
| | | (W281) | (W281) | (W528) | (W543) | |

Δ Can only be supplied as a whole packaging unit.
Note: Further supporting plates with other gradient angle upon enquiry.

**Supporting plate for SIR**

**Tightening screw for holder**

**Supporting plate for SIL**



**Tightening screw for support**

**Hexagon key**

**TORX® screwdriver**

## ISO thread turning insert, internal, 60° metric, solid profile

NR-M U 9035
NL-M U 9035
M35 Stainless
PK25 Steel + cast

| Order No. | ISO designation | Cutting materials | 2969 | PU | Cutting speed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1112 | 11 NR 050 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0900 | 11 NR 050 | M U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1115 | 11 NR 050 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1118 | 11 NR 075 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0903 | 11 NR 075 | M U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1121 | 11 NR 075 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1124 | 11 NR 100 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0906 | 11 NR 100 | M U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1127 | 11 NR 100 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1130 | 11 NL 100 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0908 | 11 NL 100 | M U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1133 | 11 NL 100 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1136 | 11 NR 125 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0909 | 11 NR 125 | M U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1139 | 11 NR 125 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1142 | 11 NL 125 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0910 | 11 NL 125 | M U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1145 | 11 NL 125 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1148 | 11 NR 150 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0912 | 11 NR 150 | M U 9035 | 14.30 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1151 | 11 NR 150 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1154 | 11 NL 150 | M PK30 | 9.70 | 2 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 0913 | 11 NL 150 | M U 9035 | 13.50 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1157 | 11 NL 150 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 0915 | 16 NR 050 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1160 | 16 NR 075 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0918 | 16 NR 075 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1163 | 16 NR 075 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1166 | 16 NR 100 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0921 | 16 NR 100 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1169 | 16 NR 100 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1172 | 16 NL 100 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0922 | 16 NL 100 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1175 | 16 NL 100 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1178 | 16 NR 125 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0924 | 16 NR 125 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1181 | 16 NR 125 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1184 | 16 NL 125 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0925 | 16 NL 125 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1187 | 16 NL 125 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1190 | 16 NR 150 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0927 | 16 NR 150 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1193 | 16 NR 150 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1196 | 16 NL 150 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0928 | 16 NL 150 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1199 | 16 NL 150 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1202 | 16 NR 175 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0930 | 16 NR 175 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1205 | 16 NR 175 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1208 | 16 NL 175 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0931 | 16 NL 175 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1211 | 16 NL 175 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1214 | 16 NR 200 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0933 | 16 NR 200 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1217 | 16 NR 200 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1220 | 16 NL 200 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0934 | 16 NL 200 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1223 | 16 NL 200 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1226 | 16 NR 250 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0936 | 16 NR 250 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1229 | 16 NR 250 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |
| 1232 | 16 NR 300 | M PK25 | 9.70 | 2 Δ | Vc m/min. | 100–150 | – | 90–125 | – | – | – |
| 0939 | 16 NR 300 | M U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80– 95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 1235 | 16 NR 300 | M M35 | 9.70 | 2 Δ | Vc m/min. | – | 80–120 | – | 200–450 | 25–40 | – |

(W288)

Δ Can only be supplied as a whole packaging unit.

## Internal Set of Threading Inserts ISO 60deg – Full Profile

**Design:** Set consisting of: (order no. 2969).

| Order No. | ISO designation | Cutting speed | 2969 | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel | Piece x gradient mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | 11 IR - M PK25 | Vc m/min. | 89.00 | 100–150 | – | 90–125 | – | – | – | 2 x 0.5; 2 x 0.75; 2 x 1.0; 2 x 1.25; 2 x 1.5 |
| 1305 | 11 IL - M PK25 | Vc m/min. | 89.00 | 100–150 | – | 90–125 | – | – | – | 2 x 0.5; 2 x 0.75; 2 x 1.0; 2 x 1.25; 2 x 1.5 |
| 1310 | 16 IR - M PK25 | Vc m/min. | 89.00 | 100–150 | – | 90–125 | – | – | – | 2 x 0.75; 2 x 1.0; 2 x 1.25; 2 x 1.5; 2 x 1.75 |
| 1315 | 16 IL - M PK25 | Vc m/min. | 89.00 | 100–150 | – | 90–125 | – | – | – | 2 x 0.75; 2 x 1.0; 2 x 1.25; 2 x 1.5; 2 x 1.75 |

(W288)

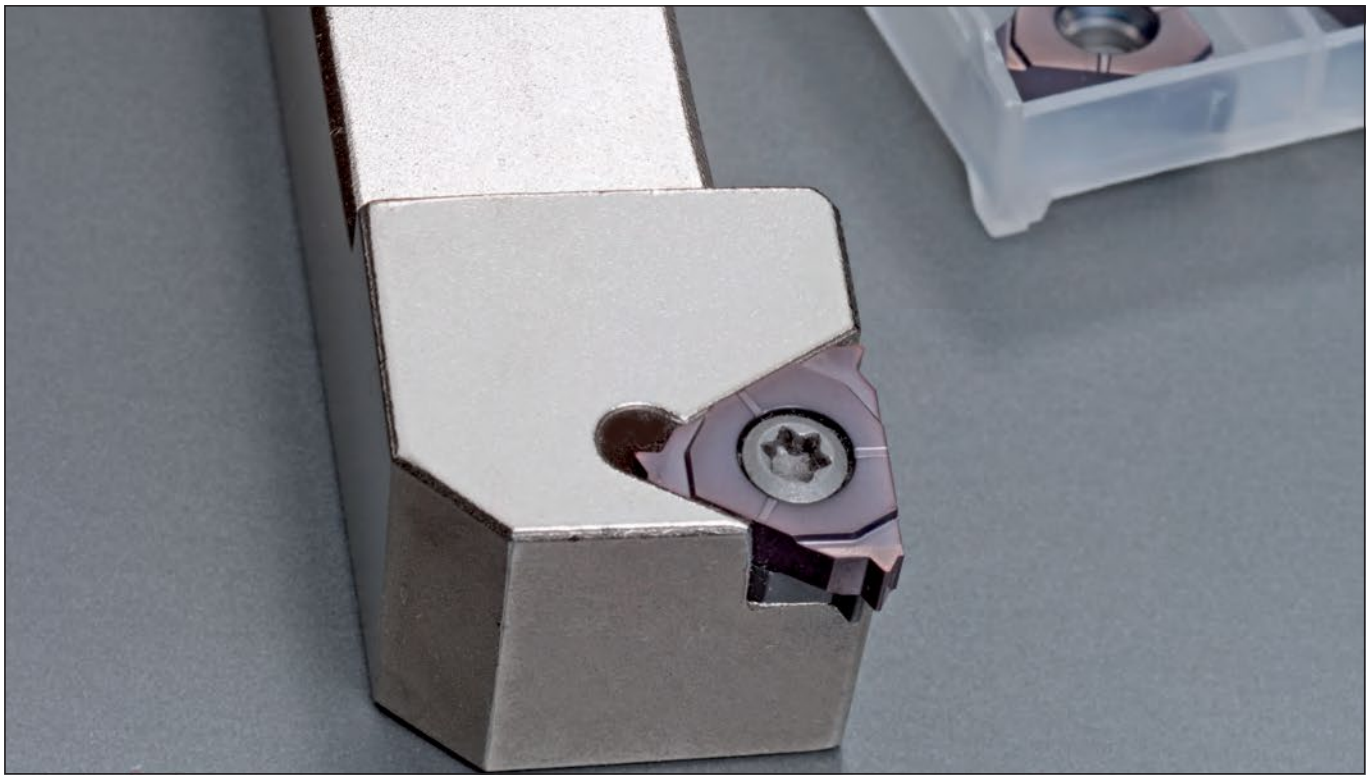
## ISO thread turning insert, internal, 55°, WW, solid profile

**NR-W UNI**

| Order No. | ISO designation | Cutting materials | 2969 | PU | Cutting speed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2000 | 11 NR 140 | W U 9035 | 14.30 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 2003 | 11 NR 190 | W U 9035 | 14.30 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 2006 | 16 NR 080 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 2012 | 16 NR 100 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 2015 | 16 NR 110 | W U 9035 | 13.80 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 2021 | 16 NR 140 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 2024 | 16 NR 160 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |
| 2027 | 16 NR 190 | W U 9035 | 14.60 | 10 Δ | Vc m/min. | 135–165 | 80–95 | 125–155 | 200–575 | 25–45 | 25–30 |

(W288)

Δ Can only be supplied as a whole packaging unit.



## Parting tool holder and slot blade

| Order No. | Type | Description | Catalogue page |
|---|---|---|---|
| 2972 9050 – 2972 9065 | GH20/25... | Tool blocks | 2/256 |
| 2972 9025 – 2972 9085 | GFN-S26/32... | Cutting ruler/blade | 2/256 |

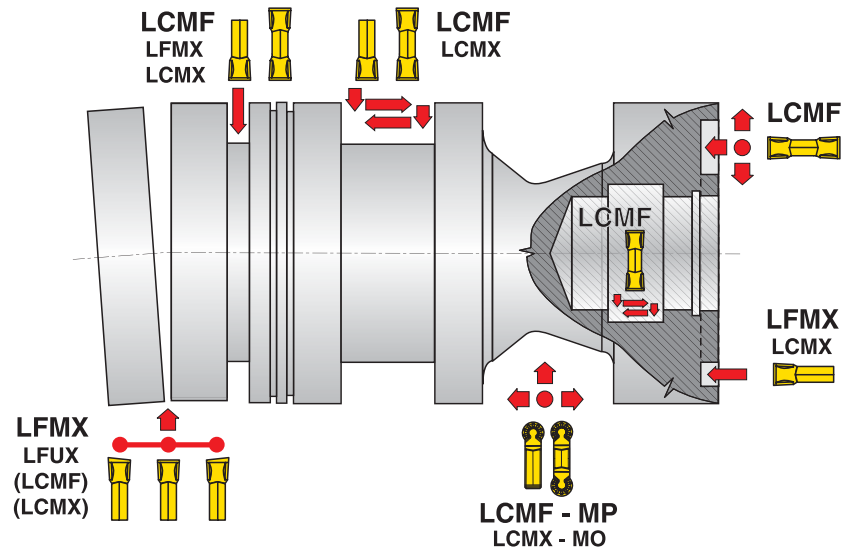
## Clamp for external and internal grooves

| Order No. | Type | Description | Catalogue page |
|---|---|---|---|
| 2969 3970 – 2969 3995 | GFKR/L... | Clamp holder | 2/258 |
| 2969 4000 – 2969 4200 | GFIR/L... | Clamp holder | 2/258 |
| 2969 4205 – 2969 4260 | GFIR/L... | Clamp holder | 2/258 |
| 2969 4130 – 2969 4145 | GGFR/L... | Clamp holder | 2/258 |

## Parting-off insert

| Order No. | Type | Description | Catalogue page |
|---|---|---|---|
| 2972 9005 – 2972 9110 | GFN...<br>Groove width 2.2–4.1 mm | Parting insert | 2/257 |
| 2969 3197 – 2969 3242 | LFMX...<br>Groove width 1.60–5.1 mm | Parting insert | 2/257 |
| 2969 4300 – 2969 4315 | LCMF 13.../13 MO<br>Groove width 3–4 mm | Parting-off insert | 2/260 |
| 2969 4320 – 2969 4330 | LCMF 16.../16 MO<br>Groove width 3–4 mm | Parting-off insert | 2/259 |

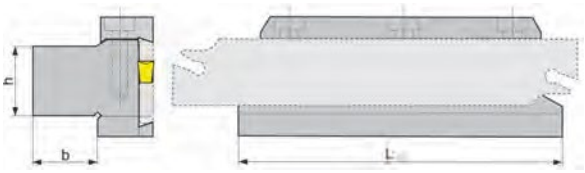
## Examples of applications



## Tool Block

**Design:** Holder system for part-off blade – adjustable.

**Application:** Parting and grooving.

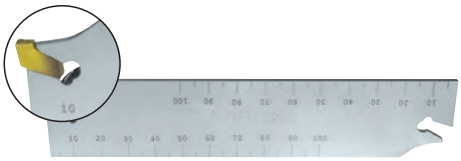


| Order No. | Description | 2972 format | Dimensions h mm | Dimensions b mm | Dimensions L mm | For part-off blade |
|---|---|---|---|---|---|---|
| 9050 | GH20-26 | 141.00 | 20 | 20 | 86 | GFN-S 26... |
| 9055 | GH25-26 | 141.00 | 25 | 25 | 100 | GFN-S 26... |
| 9060 | GH20-32 | 156.00 | 20 | 20 | 110 | GFN-S 32... |
| 9065 | GH25-32 | 156.00 | 25 | 25 | 110 | GFN-S 32... |
| | | (W287) | | | | |

## Parting Off Blades

**Design:** Made of tool steel, nickel plated.

| Order No. | Description | 2972 format | Blade height mm | Blade width mm | Indexable insert |
|---|---|---|---|---|---|
| 9025 | GFN-S 2602 J2.2 | 79.20 | 26 | 2.0 | GFN 2... |
| 9000 | GFN-S 2603 J3.1 | 79.20 | 26 | 3.0 | GFN/LFMX 3... |
| 9070 | GFN-S 2604 J4.1 | 79.20 | 26 | 4.0 | GFN/LFMX 4... |
| 9075 | GFN-S 3202 J2.2 | 79.20 | 32 | 2.0 | GFN/LFMX 2... |
| 9080 | GFN-S 3203 J3.1 | 79.20 | 32 | 3.0 | GFN/LFMX 3... |
| 9085 | GFN-S 3204 J4.1 | 79.20 | 32 | 4.0 | GFN/LFMX 4... |
| | | (W287) | | | |



## Cutting set

NEW

**Design:** Set with holder, blade and plate

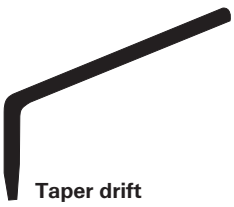
| Order No. | Size mm | 2972 format | Set contents |
|---|---|---|---|
| 9126 | 26 | 189.00 | 1 x Tool block GH20-26<br>1 x Part-off blade GFN-S 2603 J3.1<br>10 x Parting inserts GFN3.1 PK30 |
| 9132 | 32 | 199.00 | 1 x Tool block GH25-32<br>1 x Part-off blade GFN-S 3203 J3.1<br>10 x Parting inserts GFN3.1 PK30 |
| | | (W287) | |

2972 9132

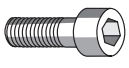
## Spare Parts for 2972 Style Holders

| Order No. | Design | 2972 | 5850 | PU |
|---|---|---|---|---|
| 9090 | Tightening screw for support size 3 | 4.37 | – | 10 Δ |
| 0045 | Hexagon key for tightening screw 5 x 100 mm | – | 2.24 | 1 |
| 9015 | Taper drift for part-off blade | 1.26 | – | 1 |
| | | (W281) | (W528) | |

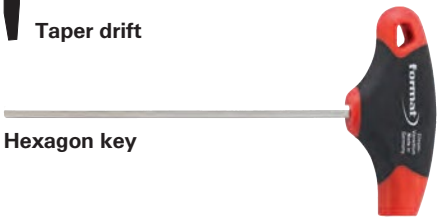
Δ Can only be supplied as a whole packaging unit.



Taper drift



Tightening screw



Hexagon key

## Parting Off Inserts

**Design:** ISO inserts for parting and grooving in steel.

| Order No. | ISO designation | 2972 format | PU | Width ± 0.06 mm | R mm | Face angle K |
|---|---|---|---|---|---|---|
| 9095 | GFN 2.2 ALU | 10.40 | 10 Δ | 2.20 | 0.16 | 6° |
| 9030 | GFN 2.2 PK30 | 6.50 | 10 Δ | 2.20 | 0.16 | 6° |
| 9035 | GFN 2.2 MS35 | 6.50 | 10 Δ | 2.20 | 0.16 | 12° |
| 9100 | GFN 3.1 ALU | 10.85 | 10 Δ | 3.10 | 0.16 | 12° |
| 9005 | GFN 3.1 PK30 | 6.80 | 10 Δ | 3.10 | 0.20 | 8° |
| 9010 | GFN 3.1 MS35 | 6.80 | 10 Δ | 3.10 | 0.20 | 8° |
| 9105 | GFN 4.1 PK30 | 7.30 | 10 Δ | 4.10 | 0.20 | 8° |
| 9110 | GFN 4.1 MS35 | 7.30 | 10 Δ | 4.10 | 0.20 | 8° |

(W288)

Δ Can only be supplied as a whole packaging unit.

format professional quality

MS

ALU

PK

| Order No. | ISO designation | Cutting speed Feed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|
| 2972 9095 | GFN 2.2 ALU | Vc m/min. | – | – | – | 140–630 | – | – |
| | | f mm/rev | – | – | – | 0.08–0.17 | – | – |
| 2972 9030 | GFN 2.2 PK30 | Vc m/min. | 95–280 | – | 90–210 | – | – | – |
| | | f mm/rev | 0.05–0.15 | – | 0.05–0.15 | – | – | – |
| 2972 9035 | GFN 2.2 MS35 | Vc m/min. | 90–180 | 55–105 | – | – | 15–55 | – |
| | | f mm/rev | 0.05–0.15 | 0.05–0.11 | – | – | 0.05–0.09 | – |
| 2972 9100 | GFN 3.1 ALU | Vc m/min. | – | – | – | 140–630 | – | – |
| | | f mm/rev | – | – | – | 0.08–0.17 | – | – |
| 2972 9005 | GFN 3.1 PK30 | Vc m/min. | 95–280 | – | 90–210 | – | – | – |
| | | f mm/rev | 0.05–0.15 | – | 0.05–0.15 | – | – | – |
| 2972 9010 | GFN 3.1 MS35 | Vc m/min. | 90–180 | 55–105 | – | – | 15–55 | – |
| | | f mm/rev | 0.05–0.15 | 0.05–0.11 | – | – | 0.05–0.09 | – |
| 2972 9105 | GFN 4.1 PK30 | Vc m/min. | 95–280 | – | 90–210 | – | – | – |
| | | f mm/rev | 0.05–0.15 | – | 0.05–0.15 | – | – | – |
| 2972 9110 | GFN 4.1 MS35 | Vc m/min. | 90–180 | 55–105 | – | – | 15–55 | – |
| | | f mm/rev | 0.05–0.15 | 0.05–0.11 | – | – | 0.05–0.09 | – |

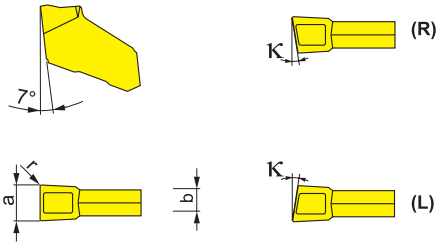
## Parting insert

**Design:** ISO inserts for parting and grooving in steel, aluminium and VA.
Aluminium and VA self-gripping with stopper.

| Order No. | Description | 2969 | PU | Width ± 0.06 mm | b mm | R mm | Clearance angle | Face angle K |
|---|---|---|---|---|---|---|---|---|
| 3197 | LFMX 2.00-0.16N F U 9035 | 6.80 | 10 Δ | 2.00 | 1.60 | 0.16 | 7° | – |
| 3200 | LFMX 2.00-0.16SN M U 9035 | 7.80 | 10 Δ | 2.00 | 1.60 | 0.16 | 7° | – |
| 3203 | LFMX 3.10-0.20SN F U 9035 | 6.80 | 10 Δ | 3.10 | 2.60 | 0.20 | 7° | – |
| 3206 | LFMX 3.10-0.20SN M U 9035 | 7.80 | 10 Δ | 3.10 | 2.60 | 0.20 | 7° | – |
| 3209 | LFMX 4.10-0.20SN F U 9035 | 6.80 | 10 Δ | 4.10 | 3.60 | 0.20 | 7° | – |
| 3212 | LFMX 4.10-0.20SN M U 9035 | 7.80 | 10 Δ | 4.10 | 3.60 | 0.20 | 7° | – |
| 3215 | LFMX 5.10-0.20SN F U 9035 | 8.30 | 10 Δ | 5.10 | 4.60 | 0.20 | 7° | – |
| 3218 | LFMX 5.10-0.20N M U 9035 | 8.30 | 10 Δ | 5.10 | 4.60 | 0.20 | 7° | – |
| 3233 | LFMX 2.00-0.16SR6 M U 9035 | 7.20 | 10 Δ | 2.00 | 1.60 | 0.16 | – | 6° |
| 3236 | LFMX 2.00-0.16SL6 M U 9035 | 7.20 | 10 Δ | 2.00 | 1.60 | 0.16 | – | 6° |
| 3239 | LFMX 2.00-0.16SR12 M U 9035 | 7.20 | 10 Δ | 2.00 | 1.60 | 0.16 | – | 12° |
| 3242 | LFMX 2.00-0.16SL12 M U 9035 | 7.20 | 10 Δ | 2.00 | 1.60 | 0.16 | – | 12° |
| 3221 | LFMX 3.10-0.20SR8 M U 9035 | 7.10 | 10 Δ | 3.10 | 2.60 | 0.20 | – | 8° |
| 3224 | LFMX 3.10-0.20SL8 M U 9035 | 7.10 | 10 Δ | 3.10 | 2.60 | 0.20 | – | 8° |
| 3227 | LFMX 4.10-0.20SR8 M U 9035 | 7.10 | 10 Δ | 4.10 | 3.60 | 0.20 | – | 8° |
| 3230 | LFMX 4.10-0.20SL8 M U 9035 | 7.80 | 10 Δ | 4.10 | 3.60 | 0.20 | – | 8° |

(W288)

Δ Can only be supplied as a whole packaging unit.



N-F

N-M

SR-MU

SL-MU

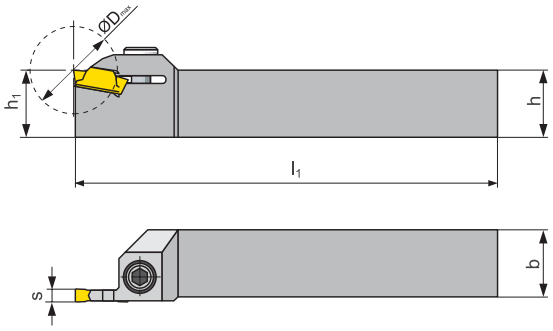
| Order No. | ISO designation | Cutting materials | Cutting speed Feed | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|
| 2969 3197 | LFMX 2.00-0.16N | F U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.05–0.15 | 55–105<br>0.05–0.11 | 90–170<br>0.05–0.15 | –<br>– | 15–50<br>0.05–0.09 | 15–35<br>0.1–0.2 |
| 2969 3200 | LFMX 2.00-0.16N | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.05–0.17 | 55–105<br>0.05–0.13 | 90–170<br>0.05–0.17 | 140–630<br>0.05–0.17 | 15–50<br>0.05–0.1 | 15–35<br>0.1–0.2 |
| 2969 3203 | LFMX 3.10-0.20N | F U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.17 | 55–105<br>0.07–0.13 | 90–170<br>0.07–0.17 | –<br>– | 15–50<br>0.07–0.1 | 15–35<br>0.1–0.2 |
| 2969 3206 | LFMX 3.10-0.20N | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.2 | 55–105<br>0.07–0.15 | 90–170<br>0.07–0.2 | 140–630<br>0.07–0.2 | 15–50<br>0.07–0.12 | 15–35<br>0.1–0.2 |
| 2969 3209 | LFMX 4.10-0.20N | F U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.22 | 55–105<br>0.07–0.17 | 90–170<br>0.07–0.22 | –<br>– | 15–50<br>0.07–0.13 | 15–35<br>0.1–0.2 |
| 2969 3212 | LFMX 4.10-0.20N | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.25 | 55–105<br>0.07–0.19 | 90–170<br>0.07–0.25 | 140–630<br>0.07–0.25 | 15–50<br>0.07–0.15 | 15–35<br>0.1–0.2 |
| 2969 3215 | LFMX 5.10-0.20N | F U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.25 | 55–105<br>0.07–0.19 | 90–170<br>0.07–0.25 | –<br>– | 15–50<br>0.07–0.15 | 15–35<br>0.1–0.2 |
| 2969 3218 | LFMX 5.10-0.20N | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.3 | 55–105<br>0.07–0.23 | 90–170<br>0.07–0.3 | 140–630<br>0.07–0.3 | 15–50<br>0.07–0.18 | 15–35<br>0.1–0.2 |
| 2969 3233 | LFMX 2.00-0.16SR6 | M U 9035 | Vc m/min.<br>f mm/rev | –<br>0.05–0.14 | –<br>0.05–0.14 | –<br>0.05–0.14 | –<br>– | –<br>– | –<br>– |
| 2969 3236 | LFMX 2.00-0.16SL6 | M U 9035 | Vc m/min.<br>f mm/rev | –<br>0.05–0.14 | –<br>0.05–0.14 | –<br>0.05–0.14 | –<br>– | –<br>– | –<br>– |
| 2969 3239 | LFMX 2.00-0.16SR12 | M U 9035 | Vc m/min.<br>f mm/rev | –<br>0.05–0.12 | –<br>0.05–0.12 | –<br>0.05–0.12 | –<br>– | –<br>– | –<br>– |
| 2969 3242 | LFMX 2.00-0.16SL12 | M U 9035 | Vc m/min.<br>f mm/rev | –<br>0.05–0.12 | –<br>0.05–0.12 | –<br>0.05–0.12 | –<br>– | –<br>– | –<br>– |
| 2969 3221 | LFMX 3.10-0.20SR8 | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.2 | 55–105<br>0.07–0.15 | 90–170<br>0.07–0.2 | 140–630<br>0.07–0.2 | 15–50<br>0.07–0.12 | 15–35<br>0.1–0.2 |
| 2969 3224 | LFMX 3.10-0.20SL8 | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.2 | 55–105<br>0.07–0.15 | 90–170<br>0.07–0.2 | 140–630<br>0.07–0.2 | 15–50<br>0.07–0.12 | 15–35<br>0.1–0.2 |
| 2969 3227 | LFMX 4.10-0.20SR8 | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.25 | 55–105<br>0.07–0.19 | 90–170<br>0.07–0.25 | 140–630<br>0.07–0.25 | 15–50<br>0.07–0.15 | 15–35<br>0.1–0.2 |
| 2969 3230 | LFMX 4.10-0.20SL8 | M U 9035 | Vc m/min.<br>f mm/rev | 95–180<br>0.07–0.25 | 55–105<br>0.07–0.19 | 90–170<br>0.07–0.25 | 140–630<br>0.07–0.25 | 15–50<br>0.07–0.15 | 15–35<br>0.1–0.2 |

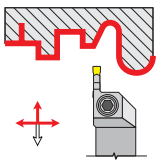
## Clamping holder for external parting

**Design:** Prism clamping gives high-precision positioning. Optimised plate fitting counters high axial forces from both directions.

**Supplied without indexable inserts, without screwdriver.**

**Application:** grooving and cut-off, form and free cutting.



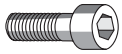
| Order No. | Description | 2969 | Parting insert Ø D max. mm | Shank h x w mm | Dimensions $l_1$ mm | Dimensions s mm | Design | Cutter insert |
|---|---|---|---|---|---|---|---|---|
| 3970 | GFKR 1616 H02 | 108.50 NEW | 32 | 16 x 16 | 100 | 2 | Right | LCMF1602../MO |
| 3975 | GFKL 1616 H 02 | 108.50 NEW | 32 | 16 x 16 | 100 | 2 | Left | LCMF1602../MO |
| 3980 | GFKR 2020 K 02 | 126.00 NEW | 32 | 20 x 20 | 125 | 2 | Right | LCMF1602../MO |
| 3985 | GFKL 2020 K 02 | 126.00 NEW | 32 | 20 x 20 | 125 | 2 | Left | LCMF1602../MO |
| 3990 | GFKR 2525 M 02 | 133.50 NEW | 32 | 25 x 25 | 150 | 2 | Right | LCMF1602../MO |
| 3995 | GFKL 2525 M 02 | 133.50 NEW | 32 | 25 x 25 | 150 | 2 | Left | LCMF1602../MO |
| 4000 | GFIR 1616 H03 | 108.00 | 18 | 16 x 16 | 100 | 3 | Right | LCMF1603../MO |
| 4005 | GFIL 1616 H03 | 108.00 | 18 | 16 x 16 | 100 | 3 | Left | LCMF1603../MO |
| 4030 | GFIR 1616 H04 | 108.00 | 24 | 16 x 16 | 100 | 4 | Right | LCMF1604../MO |
| 4035 | GFIL 1616 H04 | 108.00 | 24 | 16 x 16 | 100 | 4 | Left | LCMF1604../MO |
| 4040 | GFIR 2020 K04 | 125.00 | 24 | 20 x 20 | 125 | 4 | Right | LCMF1604../MO |
| 4045 | GFIL 2020 K04 | 125.00 | 24 | 20 x 20 | 125 | 4 | Left | LCMF1604../MO |
| 4050 | GIFR 2525 M04 | 132.50 | 24 | 25 x 25 | 150 | 4 | Right | LCMF1604../MO |
| 4055 | GIFL 2525 M04 | 132.50 | 24 | 25 x 25 | 150 | 4 | Left | LCMF1604../MO |
| 4175 | GFIR 1616 H03 | 89.40 | 40 | 16 x 16 | 100 | 3 | Right | LCMF1603../MO |
| 4180 | GFIL 1616 H03 | 89.40 | 40 | 16 x 16 | 100 | 3 | Left | LCMF1603../MO |
| 4185 | GFIR 2020 K03 | 108.00 | 40 | 20 x 20 | 125 | 3 | Right | LCMF1603../MO |
| 4190 | GFIL 2020 K03 | 108.00 | 40 | 20 x 20 | 125 | 3 | Left | LCMF1603../MO |
| 4195 | GIFR 2525 M03 | 131.50 | 40 | 25 x 25 | 150 | 3 | Right | LCMF1603../MO |
| 4200 | GIFL 2525 M03 | 131.50 | 40 | 25 x 25 | 150 | 3 | Left | LCMF1603../MO |

(W287)

## Spare Parts for 2969 Style Tool Holders

| Order No. | Design | 2969 | 5838 | PU |
|---|---|---|---|---|
| 4070 | Hexagon socket tightening screw s = 3 mm | 1.54 | – | 10 Δ |
| 4075 | Hexagon socket tightening screw s = 4 mm | 1.54 | – | 10 Δ |
| 0050 | Allen key 5 mm | – | 0.49 | 1 |
| | | (W281) | (W530) | |

Δ Can only be supplied as a whole packaging unit.



Tightening screw

Allen key

## Grooving Inserts

LCMF-16F

LCMF-16MO

| Order No. | ISO designation | Cutting materials | 2969 | PU | a ± 0.05 mm | Cutting speed Feed Penetration depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4320 | LCMF 160308 | F U 9035 | 17.25 | 10 Δ | 3.00 | Vc m/min. | 130–250 | 75–150 | 120–235 | – | – | – |
| | | | | | | f mm/rev | 0.05–0.17 | 0.05–0.13 | 0.05–0.17 | – | – | – |
| | | | | | | ap/mm | 0.3–3 | 0.3–2.3 | 0.3–3 | – | – | – |
| 4323 | LCMF 1603MO | MP U 9035 | 17.25 | 10 Δ | 3.00 | Vc m/min. | 130–250 | 75–150 | 120–235 | – | – | – |
| | | | | | | f mm/rev | 0.05–0.17 | 0.05–0.13 | 0.05–0.17 | – | – | – |
| | | | | | | ap/mm | 0.3–3 | 0.3–2.3 | 0.3–3 | – | – | – |
| 4325 | LCMF 160404 | F U 9035 | 17.70 | 10 Δ | 4.00 | Vc m/min. | 110–220 | 65–120 | 100–190 | – | – | – |
| | | | | | | f mm/rev | 0.08–0.25 | 0.08–0.19 | 0.08–0.25 | – | – | – |
| | | | | | | ap/mm | 0.5–3 | 0.5–2.3 | 0.5–3 | – | – | – |
| 4330 | LCMF 160408MO | MP U 9035 | 17.70 | 10 Δ | 4.00 | Vc m/min. | 130–240 | 75–140 | 120–225 | – | – | – |
| | | | | | | f mm/rev | 0.08–0.25 | 0.08–0.19 | 0.08–0.25 | – | – | – |
| | | | | | | ap/mm | 0.5–3 | 0.5–2.3 | 0.5–3 | – | – | – |

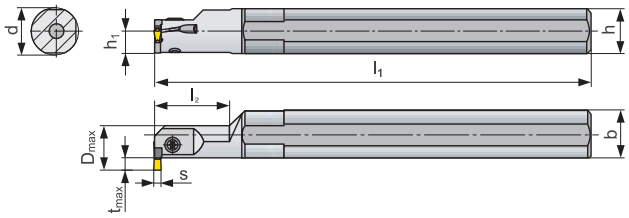
(W288)

Δ Can only be supplied as a whole packaging unit.

## Internal Grooving Tool Holders

**Design:** Prism clamping gives high-precision positioning.
Optimised plate fitting counters high axial forces from both directions.
**Supplied without indexable inserts, without screwdriver.**

**Application:** grooving and cut-off, form and free cutting.



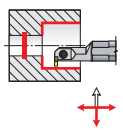



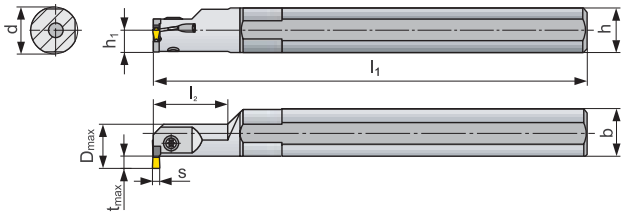
Abb.: Rechtsausführung

| Order No. | Description | 2969 | Shank-■ mm | Dimensions b mm | Dimensions $l_1$ mm | Dimensions s mm | Parting insert ∅ D max. mm | Design | Cutter insert |
|---|---|---|---|---|---|---|---|---|---|
| 4235 | A20 N GFI | 135.50 | 20 x 20 | 20 | 100 | 3 | 24 | Right | LCMF 1303../MO |
| 4240 | A20 N GFI | 135.50 | 20 x 20 | 20 | 100 | 3 | 24 | Left | LCMF 1303../MO |
| 4245 | A25 N GFI | 141.00 | 25 x 25 | 25 | 125 | 3 | 24 | Right | LCMF 1303../MO |
| 4250 | A25 N GFI | 141.00 | 25 x 25 | 25 | 125 | 3 | 24 | Left | LCMF 1303../MO |
| 4255 | A32 R GFI | 194.00 | 32 x 32 | 32 | 150 | 3 | 24 | Right | LCMF 1303../MO |
| 4260 | A32 R GFI | 194.00 | 32 x 32 | 32 | 150 | 3 | 24 | Left | LCMF 1303../MO |
| | | (W287) | | | | | | | |

## Internal Grooving Tool Holders

**Design:** Prism clamping gives high-precision positioning.
Optimised plate fitting counters high axial forces from both directions.
**Supplied without indexable inserts, without screwdriver.**

**Application:** grooving and cut-off, form and free cutting.



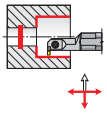



**Fig.: Right-hand version**

| Order No. | Description | 2969 | Sizes d mm | Dimensions h mm | Dimensions $h_1$ mm | Dimensions b mm | Dimensions $l_1$ mm | Dimensions $l_2$ mm | Dimensions s mm | Dimensions $t_{max}$ mm | Dimensions Ø $D_{min.}$ mm | Design | Indexable insert |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4130 | A25S-GGFR 0413 | 225.50 | 25 | 23 | 11.5 | 24.0 | 250 | 40 | 4 | 7.5 | 25 | Right | LCMF 1304 |
| 4135 | A25S-GGFL 0413 | 225.50 | 25 | 23 | 11.5 | 24.0 | 250 | 40 | 4 | 7.5 | 25 | Left | LCMF 1304 |
| 4140 | A32T-GGHR 0413 | 276.50 | 32 | 30 | 15.0 | 31.0 | 300 | 50 | 4 | 10.5 | 32 | Right | LCMF 1304 |
| 4145 | A32T-GGHL 0413 | 276.50 | 32 | 30 | 15.0 | 31.0 | 300 | 50 | 4 | 10.5 | 32 | Left | LCMF 1304 |
| | | (W287) | | | | | | | | | | | |

## Spare Parts for 2969 Style Holders

| Order No. | Design | 2969 | 5886 | PU |
|---|---|---|---|---|
| 4170 | TORX® screw Ø D 16–32 mm | 4.97 | – | 10 Δ |
| 0050 | Screwdriver for TORX® T 15 x 80 mm | – | 4.66 | 1 |
| | | (W281) | (W543) | |

Δ Can only be supplied as a whole packaging unit.

**TORX® screw**

**TORX® screwdriver**

## Grooving Inserts

**LCMF-13F**

**LCMF-13MO**

| Order No. | ISO designation | Cutting materials | 2969 | PU | a ± 0.05 mm | Cutting speed Feed Penetration depth | P Steel | M Stainless | K Cast iron | N Aluminium | S Super-alloy | H Hardened steel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4300 | LCMF 130304 | F U 9035 | 17.25 | 10 Δ | 3.00 | VC m/min | 110–250 | 65–150 | 100–235 | – | – | – |
| | | | | | | f mm/rev | 0.05–0.25 | 0.05–0.19 | 0.05–0.25 | – | – | – |
| | | | | | | ap/mm | 0.3–3 | 0.3–2.3 | 0.3–3 | – | – | – |
| 4310 | LCMF 1303MO | MP U 9035 | 18.00 | 10 Δ | 3.00 | VC m/min | 160–325 | 95–195 | 150–305 | – | – | – |
| | | | | | | f mm/rev | 0.05–0.3 | 0.0500,23 | 0.05–0.3 | – | – | – |
| | | | | | | ap/mm | 0.5–1.5 | 0.5–1.1 | 0.5–1.5 | – | – | – |
| 4305 | LCMF 130404 | F U 9035 | 17.70 | 10 Δ | 4.00 | VC m/min | 110–235 | 65–140 | 100–220 | – | – | – |
| | | | | | | f mm/rev | 0.05–0.25 | 0.05–0.19 | 0.05–0.25 | – | – | – |
| | | | | | | ap/mm | 0.5–3 | 0.5–2.3 | 0.5–3 | – | – | – |
| 4315 | LCMF 1304MO | MP U 9035 | 18.00 | 10 Δ | 4.00 | VC m/min | 145–325 | 85–195 | 135–305 | – | – | – |
| | | | | | | f mm/rev | 0.05–0.35 | 0.05–0.26 | 0.05–0.35 | – | – | – |
| | | | | | | ap/mm | 0.5–2 | 0.5–1.5 | 0.5–2 | – | – | – |
| | | | (W288) | | | | | | | | | |

Δ Can only be supplied as a whole packaging unit.

## Turning - cutting data

### Name and formulas

**RPM**

$$n = \frac{Vc \cdot 1000}{\pi \cdot D} \quad (U/min)$$

**Cutting speed**

$$Vc = \frac{n \cdot \pi \cdot D}{1000} \quad (m/min)$$

| | | |
|---|---|---|
| ap = | depth of cut | (mm) |
| D = | workpiece diameter | (mm) |
| f = | feed | (mm/rev.) |
| n = | speed | (rev/min) |
| Vc = | cutting speed | (m/min) |
| κ = | setting angle | (°) |

## Milling – cutting data

### Name and formulas

**RPM**

$$n = \frac{Vc \cdot 1000}{\pi \cdot D_c} \quad (U/min)$$

**Cutting speed**

$$Vc = \frac{n \cdot \pi \cdot D_c}{1000} \quad (m/min)$$

**Feed rate**

$$V_f = n \cdot z_n \cdot f_z \quad (mm/min)$$
$$V_f = n \cdot z_c \cdot f_z \quad (mm/min)$$

**Feed/revolution**

$$f = z_n \cdot f_z \quad (mm/U)$$
$$f = z_c \cdot f_z \quad (mm/U)$$

**Cutting speed and revolutions copy milling**

$$Vc = \frac{n \cdot \pi \cdot D_w}{1000} \quad (m/min)$$

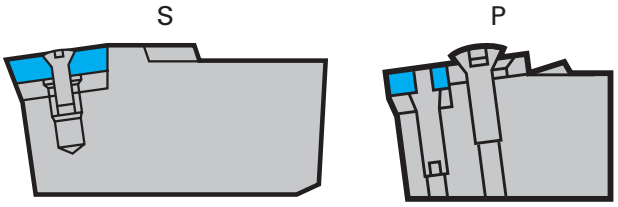
$$n = \frac{Vc \cdot 1000}{\pi \cdot D_w} \quad (U/min)$$

$$D_w = 2 \cdot \sqrt{ap\,(D_c - ap)} \quad (mm)$$

| | | |
|---|---|---|
| $a_e$ = | radial cut depth (contact width) | (mm) |
| ap = | axial cut depth | (mm) |
| $D_c$ = | milling diameter | (mm) |
| f = | feed/rev | (mm/rev) |
| $f_z$ = | feed/tooth | (mm/tooth) |
| $z_c$ = | effective number of teeth for calculating feed. | |
| n = | speed | (rev/min) |
| Vc = | cutting speed | (m/min) |
| $V_f$ = | feed rate | (mm/min) |

| P | C | L | N | R | 25 | 25 | M | 12 | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

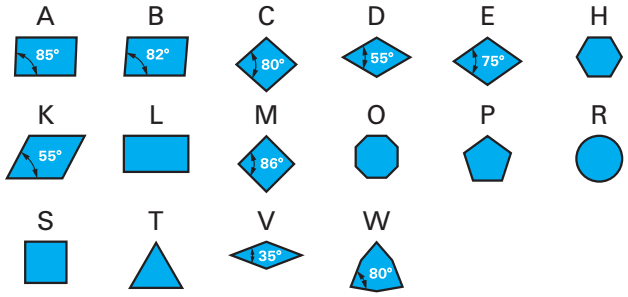
## 1. Clamp system



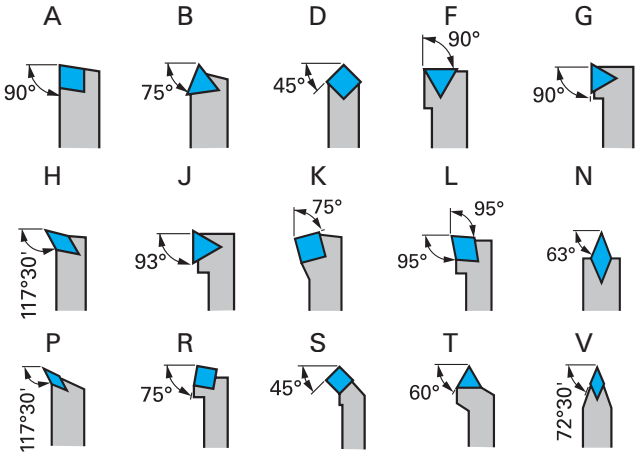

S: Screw

P: Pin/clamp or knee lever

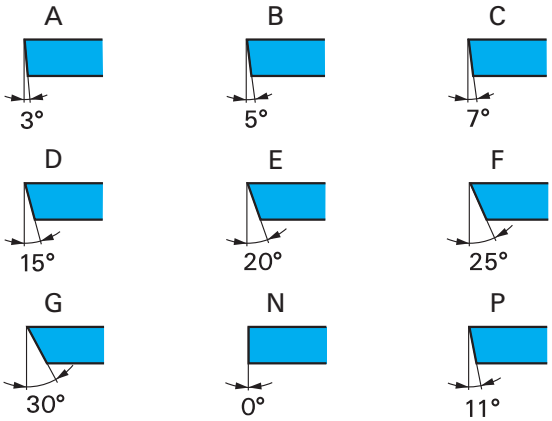
## 2. Indexable Insert Shape




## 3. Tool type



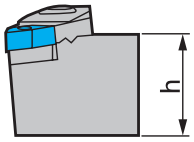

## 4. Clearance angle of the insert




O = special

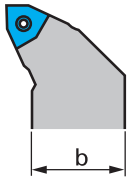
## 5. Cut direction

## 6. Shank height



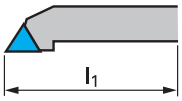

12 = 12 mm
25 = 25 mm
32 = 32 mm
etc.

## 7. Shank width




12 = 12 mm
25 = 25 mm
32 = 32 mm
etc.

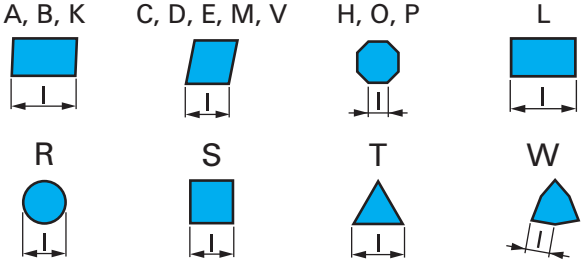
## 8. Tool length




| | | | |
|---|---|---|---|
| A = 32 mm | | M = 150 mm (2525, 4032*) | |
| C = 50 mm | | P = 170 mm (3225, 3232) | |
| D = 60 mm (0808) | | R = 200 mm (4032**, 4040) | |
| E = 70 mm (1010) | | S = 250 mm (5050) | |
| F = 80 mm (1212) | | T = 300 mm | |
| H = 100 mm (1616) | | V = 400 mm | |
| K = 125 mm (2020) | | | |

* tool type N
** tool type J

## 9. Cutting edge length




l = cutting edge length in mm

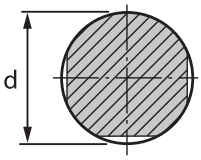
## 10. Inner description

| A | 25 | S | - | P | C | L | N | R | 12 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

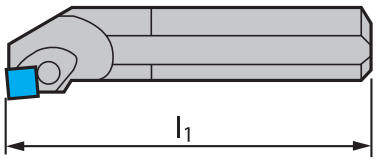
## 1. Shank design

A = steel with cool channel
S = solid steel

## 2. Shank diameter

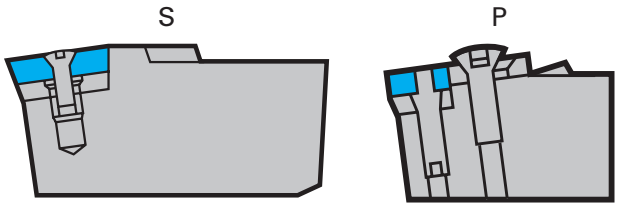



## 3. Tool length




| | | | |
|---|---|---|---|
| K | = 125 mm | R | = 200 mm |
| L | = 140 mm | S | = 250 mm |
| M | = 150 mm | T | = 300 mm |
| N | = 160 mm | U | = 350 mm |
| P | = 170 mm | V | = 400 mm |
| Q | = 180 mm | | |

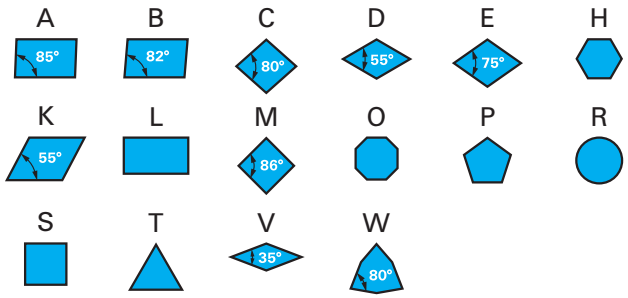
## 4. Clamping System



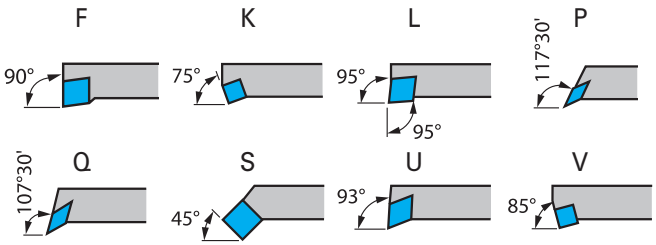

Screw

Pin/clamp or knee lever

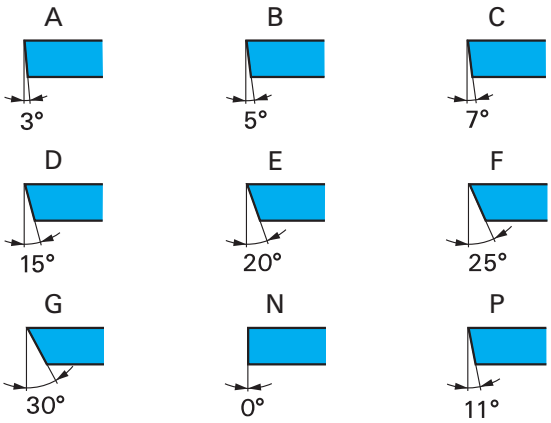
## 5. Indexable Insert Shape




## 6. Tool type



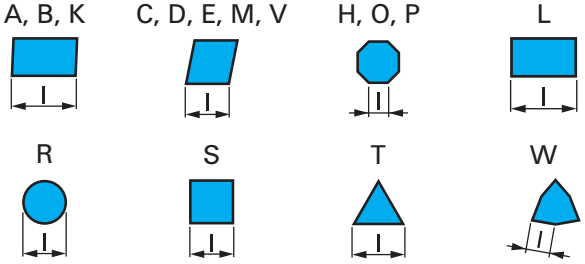

## 7. Clearance angle of the insert




O = special

## 8. Cut direction

## 9. Cutting edge length

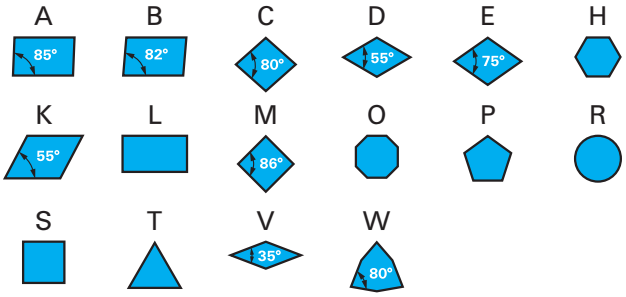



O = special

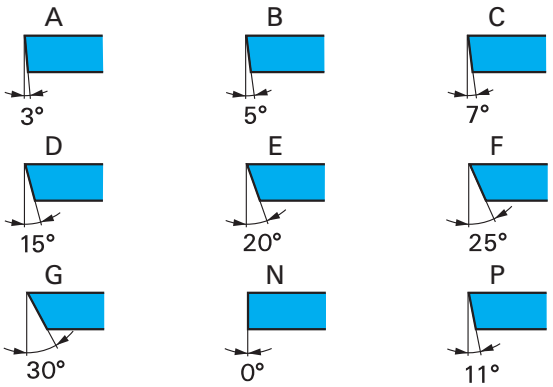
## 10. Inner description

| C | N | M | G | 12 | 04 | 08 | | | - | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | 10 |

## 1. Form




## 2. Clearance angle



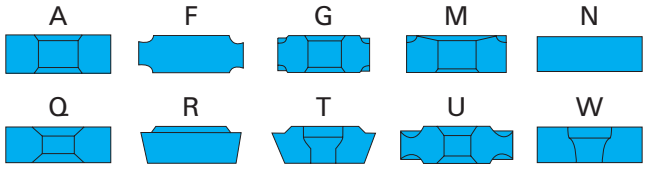

O = special

## 3. Tolerances

* not ISO

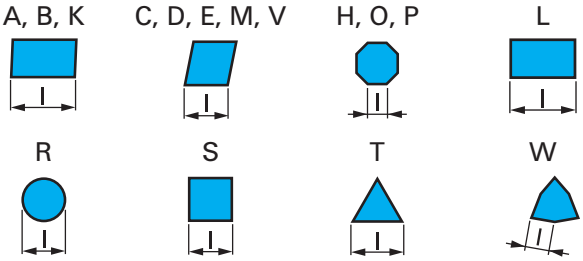
| Tol.-Class | Tolerance ± mm | | | For d, dimension mm | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | m | s | d | 3.175* | 4.76 | 6.35 | 9.525 | 12.7 | 15.875 | 19.05 | 25.4 | 31.75 | 38.1 |
| A | 0.005 | 0.025 | 0.025 | • | • | • | • | • | • | • | • | • | • |
| E | 0.025 | 0.025 | 0.025 | • | • | • | • | • | • | • | • | • | • |
| F | 0.005 | 0.025 | 0.013 | • | • | • | • | • | • | • | • | • | • |
| G | 0.025 | 0.13 | 0.025 | • | • | • | • | • | • | • | • | • | • |
| H | 0.013 | 0.025 | 0.013 | • | • | • | • | • | • | • | • | • | • |
| J | 0.005 | 0.025 | 0.05 | • | • | • | • | | | | | | |
| | 0.005 | 0.025 | 0.08 | | | | | • | | | | | |
| | 0.005 | 0.025 | 0.10 | | | | | | • | • | | | |
| | 0.005 | 0.025 | 0.13 | | | | | | | | • | | |
| | 0.005 | 0.025 | 0.15 | | | | | | | | | • | • |
| K | 0.013 | 0.025 | 0.05 | • | • | • | • | | | | | | |
| | 0.013 | 0.025 | 0.08 | | | | | • | | | | | |
| | 0.013 | 0.025 | 0.10 | | | | | | • | • | | | |
| | 0.013 | 0.025 | 0.13 | | | | | | | | • | | |
| | 0.013 | 0.025 | 0.15 | | | | | | | | | • | • |
| M | 0.08 | 0.13 | 0.05 | • | • | • | • | | | | | | |
| | 0.13 | 0.13 | 0.08 | | | | | • | | | | | |
| | 0.15 | 0.13 | 0.10 | | | | | | • | • | | | |
| | 0.18 | 0.13 | 0.13 | | | | | | | | • | | |
| | 0.20 | 0.13 | 0.15 | | | | | | | | | • | • |
| U | 0.13 | 0.13 | 0.08 | • | • | • | • | | | | | | |
| | 0.20 | 0.13 | 0.13 | | | | | • | | | | | |
| | 0.27 | 0.13 | 0.18 | | | | | | • | • | | | |
| | 0.38 | 0.13 | 0.25 | | | | | | | | • | • | • |

## 4. Indexable Insert Type



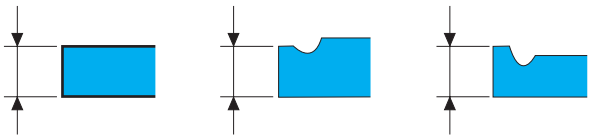

X = special

## 5. Cutting edge length




l = cutting edge length in mm

## 6. Insert Thickness

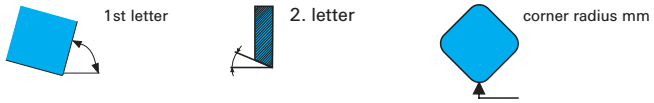


01 = 1.59 mm
T1 = 1.98 mm
02 = 2.38 mm
03 = 3.18 mm

T3 = 3.97 mm
04 = 4.76 mm
05 = 5.56 mm
06 = 6.35 mm

07 = 7.94 mm
08 = 8.00 mm
09 = 9.52 mm

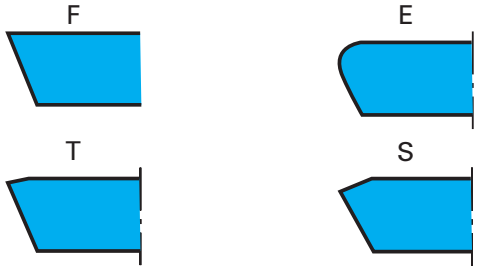
## 7. Indexable Inserts with Face Cutting/Right Angle Corner




| 1st letter | | 2. letter | | corner radius mm | |
|---|---|---|---|---|---|
| A = 45° | F = 85° | A = 3° | F = 25° | M0* | = circular cutting edge |
| D = 60° | P = 90° | B = 5° | G = 30° | 00 | = sharp corners |
| E = 75° | | C = 7° | N = 0° | 01 | = 0.1 |
| | | D = 15° | P = 11° | 02 | = 0.2 |
| | | E = 20° | | 04 | = 0.4 |
| | | | | 08 | = 0.8 |
| Z = Special | | Z = Special | | 12 | = 1.2 etc. |

* Millimetre version

## 8. Cutting edge design




Information not obligatory

## 9. Cut direction

Information not obligatory

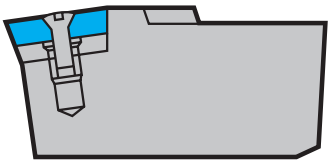
## 10. Inner description

| S | E | R | 25 | 25 | M | 16 | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |



## 1. Clamp system

S



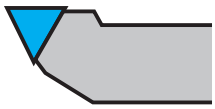
Screw

## 2. Outer/inner

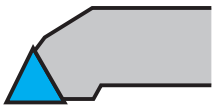
E = outer
I = inner

## 3. Cut direction

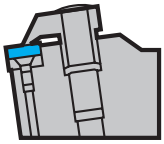
L



R

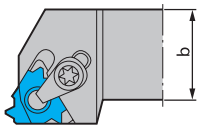


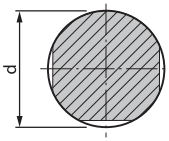
## 4. Shank height



25 = 25 mm
32 = 32 mm

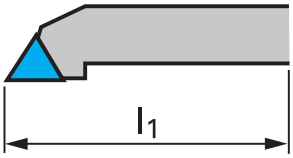
## 5. Shank width/diameter



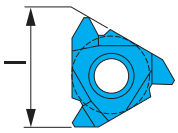

12 = 12 mm
20 = 20 mm
25 = 25 mm

## 6. Tool length




H = 100 mm
K = 125 mm
L = 140 mm
M = 150 mm
P = 170 mm
Q = 180 mm
R = 200 mm
S = 250 mm
T = 300 mm
U = 350 mm
V = 400 mm

## 7. Cutting edge length



Example:
Cutting edge length = 16.5 mm
Symbol = 16

## 8. Additional Information

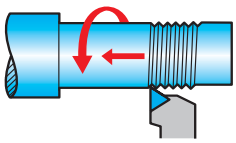
Inclination angle κκ
0 = inclination angle λ 0°
1 = inclination angle λ 1°

## Machining methods

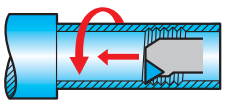
Cut direction option depends on:
- Workpiece (outer or inner thread, right or left thread)
- Machine (right or left tool)

### Cutting direction to the headstock

**Right thread - right tool**

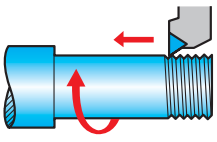


**ER**
**First option**

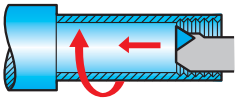


**IR**

**Left thread - left tool**



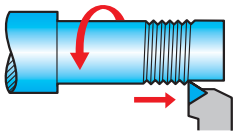
**EL**
**First option**



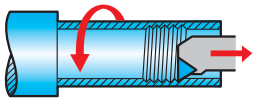
**IL**

### Cutting direction towards tailstock

**Left thread - right tool**

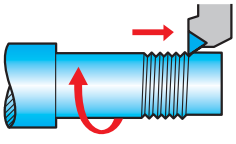


**ER**

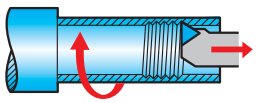


**IR**
**First option**

**Right thread - left tool**



**EL**



**IL**
**First option**

## Thread cutting - cutting data

### Name and formulas

**RPM**

$$n = \frac{Vc \cdot 1000}{\pi \cdot D_c} \quad (min^{-1})$$

**Cutting speed**

$$c = \frac{\pi \cdot D \cdot n}{1000} \quad (m/min)$$

**Path speed**

$$V_f = \frac{n \cdot P_h}{1000} \quad (m/min)$$

**Gradient**

$$P_h = P \cdot \text{Anzahl der Gänge (min)}$$

**Tilt angle**

$$\lambda = \arctan \frac{P_h}{D_2 \cdot \pi} \quad (°)$$

**Conversion inches to metric**

$$TPI = \frac{25{,}4}{P}$$

| | | |
|---|---|---|
| D | = workpiece diameter | (mm) |
| $D_2$ | = edge diameter (nominal diameter) | (mm) |
| n | = speed | ($min^{-1}$) |
| P | = pitch | (mm) |
| $P_h$ | = gradient | (mm) |
| $V_f$ | = path speed | (m/min) |
| TPI | = turn per inch | |
| Vc | = cutting speed | (m/min) |
| λ | = inclination angle | (°) |

format professional quality

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2/197, 2/209, 2/210, 2/221, 2/239, 2/250

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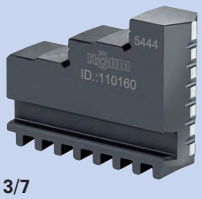

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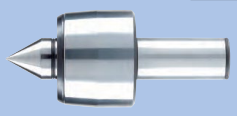
NEW



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NEW

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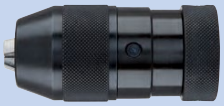

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NEW

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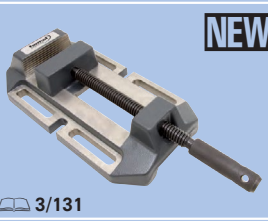
NEW



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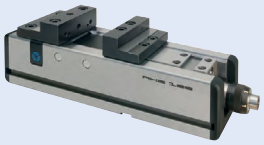

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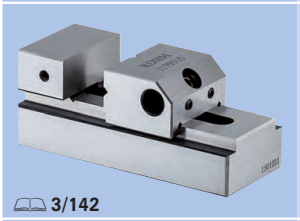

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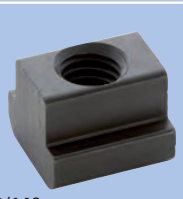

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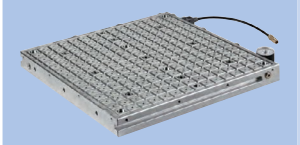

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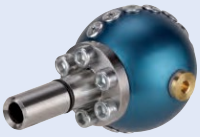
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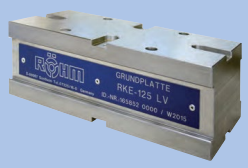

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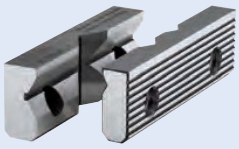
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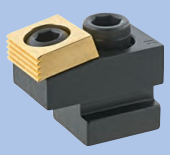
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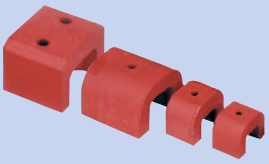
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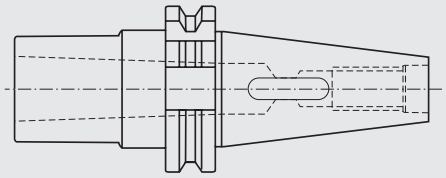
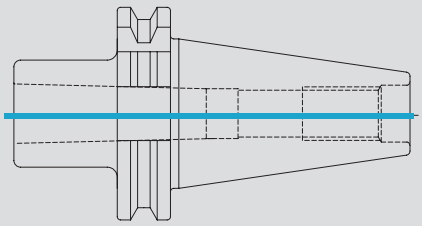
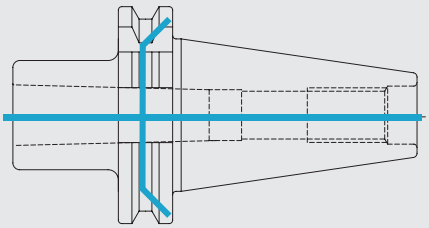
## Pictogram Abstracts

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Tool Holders | DIN 69871 | | DIN 2080 | | JIS B 6339 MAS/BT | | DIN 69893 | | ISO 26623 |
| Shapes / designs | Form A | | Form B | | Form AD | | Form AD/B | | |
| Balancing quality | G 6.3 8.000 | | G 6.3 12.000 | e.g. | G 2.5 20.000 | precision balanced G 2.5 at 22000 min$^{-1}$ | | | |
| Concentricity | ≤ 3 µm | | ≤ 5 µm | | ≤ 30 µm | | | | |
| Shank design | DIN 1835 B+E | e.g. | DIN 1835 B | Shank with catchment surface according to DIN 1835 B | | | | | |
| Protection type | IP 64 | e.g. | IP 67 | Protection against dust and temporary submersion. Please see page 4/11 for an overview. | | | | | |
| Packaging | | e.g. | | Wood or plastic cases | | | | | |
| Material | INOX | e.g. | Carbide | Carbide | | | | | |

## Adapters

| DIN 69871 | DIN 2080 | JIS B 6339 MAS/BT | DIN 69893 | ISO 26623 PSC |
|---|---|---|---|---|
| | | | | |
| SK | SK | BT | HSK | PSC |
| From page 3/38 | From page 3/52 | From page 3/55 | From page 3/64 | From page 3/94 |

## Shaft design according to DIN 69871 and JIS B 6339

| | |
|---|---|
| **Form A:** | **Without through bore - no internal coolant feed.** |
| Form A |  |
| **Form AD:** | With central through bore - internal coolant addition with retention stud bolt. |
| Form AD |  |
| **Form AD/B:** | With central through bore (Form AD) and additional lateral coolant addition via the collar (Form B). |
| Form AD/B |  |

## Tool holders with polygon shaft ISO 26623

The spindle interface ISO 26623 is a tool clamping system with utmost precision and very common, particularly for multitask machines (turning-milling centres).

ISO 26623

PSC

## Three-jaw scroll chuck

**Design: With cylindrical mounting recess DIN 6350, Form A.**
Body made from cast or steel with one-piece jaws and scroll, centric clamping. With cylindrical centring mount for spindle heads.

**Application:** For use on lathes, rotary tables, indexing devices etc., where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** Three-jaw lathe chuck with chuck key and mounting screws.

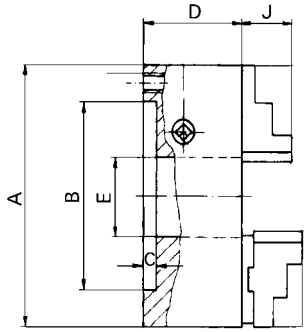
**Note:** Replacement jaws are found on 📖 3/7.

**3000** With a set of one-piece reversible jaws.

**3002** With a set of one-piece reversible jaws.

**3004** With one set of inward and outward stepped jaws.

DIN 6350



3000/3002 format professional quality

3004 RÖHM

| Order No. | Size A mm | 3000 format Cast | 3002 format Steel | 3004 RÖHM Steel ZS | Inch | Through-hole Ø E mm | Centring hole B mm | Height without jaws D mm | Jaw height J mm | Centring depth C mm | Concentricity mm | max. rpm min⁻¹ 3000 | 3002 | 3004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0080 | 80 | – | 308.00 | 343.00 ◊ | 3.1/4 | 19 | 56 | 39.5 | 14 | 3 | 0.04 | – | 7000 | 7000 |
| 0100 | 100 | 372.50 | 308.00 | 373.00 | 4 | 20 | 70 | 50 | 18 | 3 | 0.04 | 4500 | 6300 | 6300 |
| 0125 | 125 | 397.00 | 383.00 | 466.00 | 5 | 32 | 95 | 56 | 22.5 | 4 | 0.04 | 4000 | 5500 | 5500 |
| 0160 | 160 | 438.50 | 491.00 | 596.00 | 6.1/4 | 42 | 125 | 65 | 26 | 4 | 0.04 | 3600 | 4600 | 4600 |
| 0200 | 200 | 519.00 | 644.00 | 782.00 | 8 | 55 | 160 | 73.5 | 32.5 | 4 | 0.06 | 3000 | 4000 | 4000 |
| 0250 | 250 | 696.50 | 844.50 | 1023.00 ◊ | 10 | 76 | 200 | 82 | 40 | 5 | 0.06 | 2500 | 3000 | 3000 |
| 0315 | 315 | 1111.00 | 1257.00 | 1524.00 ◊ | 12.1/2 | 103 | 260 | 95 | 46 | 5 | 0.08 | 2000 | 2300 | 2300 |
| 0400 | 400 | – | – | 2987.00 ◊ | 15.3/4 | 136 | 330 | 105 | 43 | 5 | 0.08 | – | – | 1800 |
| 0500 | 500 | – | – | 4655.00 ◊ | 20 | 190 | 420 | 120 | 54.5 | 5 | 0.1 | – | – | 1300 |
| 0630 | 630 | – (W300) | – (W300) | 7107.00 ◊ (W301) | 25 | 240 | 545 | 135 | 54.5 | 7 | 0.1 | – | – | 850 |

## Wedge bars/chuck

and accessories can be found from 📖 3/11.

## Three-jaw scroll chuck

**Design: With short taper mount DIN 55027.**
Body made from cast iron or steel with one-piece jaws and scroll, centric clamping.

**Application:** For use on lathes, rotary tables, indexing devices etc., where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** Three-jaw lathe chuck with chuck key and mounting screws.

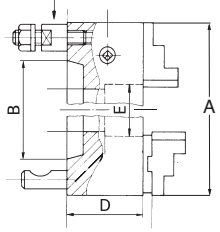
**Note:** Replacement jaws are found on 📖 3/7.

**3010** With a set of one-piece reversible jaws.

**3011** With one set of inward and outward stepped jaws.

**3012** With one set of inward and outward stepped jaws.

DIN 55027



3010 format professional quality

3011/3012 RÖHM

| Order No. | Size A mm | 3010 format Steel | 3011 RÖHM Steel | 3012 RÖHM Steel ZS | Short taper | Through-hole Ø E mm | Taper size B mm | Height D mm | Concentricity mm | Max. rpm min$^{-1}$ 3010 | 3011 | 3012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0001 | 160 | 548.50 | 626.00 ◊ | – | 4 | 42 | 63.5 | 69.7 | 0.04 | 3600 | 4600 | – |
| 0003 | 160 | 548.50 | 626.00 | – | 5 | 42 | 82.5 | 69.7 | 0.04 | 3600 | 4600 | – |
| 0005 | 200 | 721.00 | 821.00 | – | 5 | 55 | 82.5 | 80.2 | 0.06 | 3000 | 4000 | – |
| 0007 | 200 | 721.00 | 821.00 | – | 6 | 55 | 106.4 | 80.2 | 0.06 | 3000 | 4000 | – |
| 0009 | 250 | 943.50 | 1076.00 | – | 5 | 76 | 82.5 | 89.9 | 0.06 | 2500 | 3000 | – |
| 0011 | 250 | 943.50 | 1076.00 | – | 6 | 76 | 106.4 | 89.9 | 0.06 | 2500 | 3000 | – |
| 0013 | 315 | 1405.00 | 1602.00 ◊ | – | 6 | 103 | 106.4 | 100.4 | 0.08 | 2000 | 2300 | – |
| 0015 | 315 | 1405.00 | 1602.00 ◊ | – | 8 | 103 | 139.7 | 100.4 | 0.08 | 2000 | 2300 | – |
| 0001 | 400 | – | – | 3142.00 ◊ | 8 | 136 | 139.7 | 113.4 | 0.08 | – | – | 1800 |
| 0003 | 400 | – | – | 3142.00 ◊ | 11 | 136 | 196.6 | 113.4 | 0.08 | – | – | 1800 |
| | | (W300) | (W301) | (W301) | | | | | | | | |

## Three-jaw scroll chuck ZS

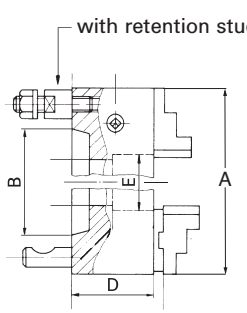
**Design: With short taper mount DIN 55029 with stud bolt for Camlock.** Body made from steel with one-piece jaws and scroll, centric clamping.

**Application:** For use on lathes, rotary tables, indexing devices etc., where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** Three-jaw lathe chuck with chuck key and mounting screws, with one set of outward-stepped jaws (drilling jaws) and one set of inward-stepped jaws (rotary jaws).

**Note:** Replacement jaws are found on 📖 3/7.

DIN 55029




RÖHM

| Order No. | Size A mm | 3014 RÖHM Steel ZS | Short taper | Through-hole Ø E mm | Taper size B mm | Height D mm | Concentricity mm | max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|---|---|
| 0001 | 100 | 410.00 ◊ | 3 | 20 | 53.9 | 75 | 0.04 | 6300 |
| 0003 | 125 | 512.00 ◊ | 4 | 32 | 63.5 | 69 | 0.04 | 5500 |
| 0005 | 160 | 656.00 | 4 | 42 | 63.5 | 66 | 0.04 | 4600 |
| 0007 | 160 | 656.00 ◊ | 5 | 42 | 82.5 | 66 | 0.04 | 4600 |
| 0009 | 200 | 860.00 | 5 | 55 | 82.5 | 74.5 | 0.06 | 4000 |
| 0011 | 200 | 860.00 | 6 | 55 | 106.4 | 74.5 | 0.06 | 4000 |
| 0013 | 250 | 1128.00 | 6 | 76 | 106.4 | 83 | 0.06 | 3000 |
| 0015 | 250 | 1128.00 | 8 | 76 | 139.7 | 83 | 0.06 | 3000 |
| 0017 | 315 | 1679.00 ◊ | 6 | 103 | 106.4 | 96 | 0.08 | 2300 |
| 0019 | 315 | 1679.00 ◊ | 8 | 103 | 139.7 | 96 | 0.08 | 2300 |
| 0021 | 315 | 1679.00 ◊ | 11 | 103 | 196.9 | 104 | 0.08 | 2300 |
| 0023 | 400 | 3286.00 ◊ | 8 | 136 | 139.7 | 106 | 0.08 | 1800 |
| 0025 | 400 | 3286.00 ◊ | 11 | 136 | 196.6 | 106 | 0.08 | 1800 |
| | | (W301) | | | | | | |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Four-jaw scroll chuck ZG-ZS

**Design: With cylindrical mounting recess DIN 6350, Form A.**
Body made from cast or steel with one-piece jaws and scroll, centric clamping.

DIN 6350 | Form A

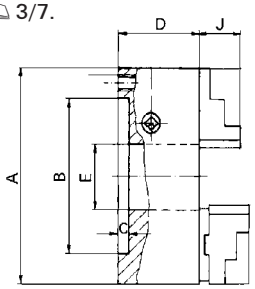
**Application:** For use on lathes, rotary tables, indexing devices etc., where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** Four-jaw lathe chuck with chuck key and mounting screws, with one set of outward-stepped jaws (drilling jaws) and one set of inward-stepped jaws (rotary jaws).

**Note:** Replacement jaws are found on 📖 3/7.

**3018** Cast ZG

**3019** Steel ZS



3018 format professional quality

3019 RÖHM

| Order No. | Size A mm | 3018 format Cast ZG | 3019 RÖHM Steel ZS | Inch | Through-hole Ø E mm | Centring hole B mm | Height without jaws D mm | Jaw height J mm | Centring depth C mm | Concentricity mm | Max. rpm min⁻¹ 3018 | Max. rpm min⁻¹ 3019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0080 | 80 | – | 403.00 ◊ | 3.1/4 | 19 | 56 | 39.5 | 14 | 3 | 0.04 | – | 7000 |
| 0100 | 100 | 433.50 | 438.00 ◊ | 4 | 20 | 70 | 50 | 18 | 3 | 0.04 | 4500 | 6300 |
| 0125 | 125 | 442.00 | 547.00 | 5 | 32 | 95 | 56 | 22.5 | 4 | 0.04 | 4000 | 5500 |
| 0160 | 160 | 484.00 | 699.00 | 6.1/4 | 42 | 125 | 65 | 26 | 4 | 0.04 | 3600 | 4600 |
| 0200 | 200 | 578.00 | 918.00 | 8 | 55 | 160 | 73.5 | 32.5 | 4 | 0.06 | 3000 | 4000 |
| 0250 | 250 | 750.50 | 1205.00 | 10 | 76 | 200 | 82 | 40 | 5 | 0.06 | 2500 | 3000 |
| 0315 | 315 | 1400.00 | 1792.00 ◊ | 12.1/4 | 103 | 260 | 95 | 46 | 5 | 0.08 | 2000 | 2300 |
| 0400 | 400 | – | 3502.00 ◊ | 15.3/4 | 136 | 330 | 105 | 43 | 5 | 0.08 | – | 1800 |
| 0500 | 500 | – (W300) | 5562.00 ◊ (W301) | 20 | 190 | 420 | 120 | 54.5 | 5 | 0.1 | – | 1300 |

## Four-jaw scroll chuck ZS

**Design: With short taper mount DIN 55027.**
Body made from steel with one-piece jaws and scroll, centric clamping.

DIN 55027

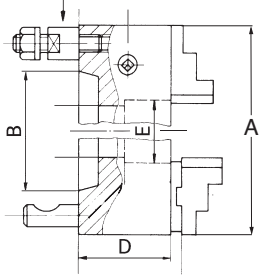
RÖHM

with retention stud and collar nut

**Application:** For use on lathes, rotary tables, indexing devices etc., where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** Four-jaw lathe chuck with chuck key and mounting screws, with one set of outward-stepped jaws (drilling jaws) and one set of inward-stepped jaws (rotary jaws).

**Note:** Replacement jaws are found on 📖 3/7.



| Order No. | Size A mm | 3021 RÖHM Steel ZS | Short taper | Through-hole Ø E mm | Taper size B mm | Height D mm | Concentricity mm | Max. rpm min⁻¹ |
|---|---|---|---|---|---|---|---|---|
| 0001 | 100 | 460.00 ◊ | 3 | 20 | 53.9 | 78.3 | 0.04 | 6300 |
| 0003 | 125 | 575.00 ◊ | 4 | 32 | 63.5 | 73.7 | 0.04 | 5500 |
| 0005 | 160 | 734.00 | 4 | 42 | 63.5 | 70.7 | 0.04 | 4600 |
| 0007 | 160 | 734.00 | 5 | 42 | 82.5 | 70.7 | 0.04 | 4600 |
| 0009 | 200 | 964.00 | 5 | 55 | 82.5 | 81.2 | 0.06 | 4000 |
| 0011 | 200 | 964.00 | 6 | 55 | 106.4 | 81.2 | 0.06 | 4000 |
| 0013 | 250 | 1267.00 | 6 | 76 | 106.4 | 90.9 | 0.06 | 3000 |
| 0015 | 250 | 1267.00 | 8 | 76 | 139.7 | 90.9 | 0.06 | 3000 |
| 0017 | 315 | 1885.00 ◊ | 6 | 103 | 106.4 | 101.4 | 0.08 | 2300 |
| 0019 | 315 | 1885.00 ◊ | 8 | 103 | 139.7 | 101.4 | 0.08 | 2300 |
| 0021 | 315 | 1885.00 ◊ | 11 | 103 | 196.9 | 101.4 | 0.08 | 2300 |
| 0023 | 400 | 3677.00 ◊ | 8 | 136 | 139.7 | 114.4 | 0.08 | 1800 |
| 0025 | 400 | 3677.00 ◊ (W301) | 11 | 136 | 196.6 | 114.4 | 0.08 | 1800 |

## Drilling jaw

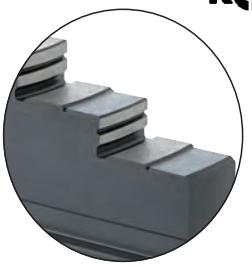
**Design:** Outward stepped, hardened.

**Application:** As replacement drilling jaw for three-/four-jaw lathe chuck.

**3024** 3-piece set.

**3036** 3-piece set.

**3038** 4-piece set.



| Order No. | Size mm | 3024 format 3-piece | 3036 RÖHM 3-piece | 3038 RÖHM 4-piece | Jaw length mm | Jaw width mm | Jaw height mm |
|---|---|---|---|---|---|---|---|
| 0080 | 80 | 97.20 | – | 152.00 | 37 | 12 | 26 |
| 0100 | 100/110 | 97.20 | 114.00 | 152.00 | 48 | 14 | 33.5 |
| 0125 | 125 | 97.20 | 114.00 | 152.00 | 52 | 18 | 41.5 |
| 0160 | 160 | 107.00 | 126.00 | 168.00 | 61 | 18 | 47.5 |
| 0200 | 200 | 126.00 | 148.00 | 198.00 | 69 | 20 | 53.5 |
| 0250 | 250 | 147.00 | 173.00 | 231.00 | 90 | 24 | 67.5 |
| 0315 | 315 | 221.00 | 260.00 | 346.00 | 130 | 34 | 79.5 |
| 0400 | 350/400 | – | 388.00 | 518.00 ◊ | 130 | 34 | 79.5 |
| 5063 | 500/630 | – (W300) | 583.00 ◊ (W301) | 778.00 ◊ (W301) | 190 | 42 | 95 |

Retrospectively covered stepped jaws must be ground in the chuck.

## Rotary jaw

**Design:** Inward stepped, hardened.

**Application:** As replacement rotary jaw for three-/four-jaw lathe chuck.

**3048** 3-piece set.

**3050** 4-piece set.

| Order No. | Size mm | 3048 RÖHM 3-piece | 3050 RÖHM 4-piece | Jaw length mm | Jaw width mm | Jaw height mm |
|---|---|---|---|---|---|---|
| 0080 | 80 | – | 152.00 ◊ | 37 | 12 | 26 |
| 0100 | 100/110 | 114.00 | 152.00 | 48 | 14 | 33.5 |
| 0125 | 125 | 114.00 | 152.00 | 52 | 18 | 41.5 |
| 0160 | 160 | 126.00 | 168.00 | 61 | 18 | 47.5 |
| 0200 | 200 | 148.00 | 198.00 | 69 | 20 | 53.5 |
| 0250 | 250 | 173.00 | 231.00 | 90 | 24 | 67.5 |
| 0315 | 315 | 260.00 | 346.00 | 130 | 34 | 79.5 |
| 0400 | 350/400 | 388.00 ◊ | 518.00 ◊ | 130 | 34 | 79.5 |
| 5063 | 500/630 | 583.00 ◊ (W301) | 778.00 ◊ (W301) | 190 | 42 | 95 |

Retrospectively covered stepped jaws must be ground in the chuck.

## Unstepped jaw

**Design:** Unstepped, made from 16MnCr5, unhardened.

**Application:** Unstepped jaw for three-/four-jaw lathe chuck.

**3028** 3-piece set.

**3040** 3-piece set.

**3042** 4-piece set.

| Order No. | Size mm | 3028 format 3-piece | 3040 RÖHM 3-piece | 3042 RÖHM 4-piece | Jaw length mm | Jaw width mm | Jaw height mm |
|---|---|---|---|---|---|---|---|
| 0080 | 80 | 64.90 | – | 102.00 ◊ | 37 | 12 | 26 |
| 0100 | 100/110 | 64.90 | 76.20 | 102.00 | 48 | 14 | 33.5 |
| 0125 | 125 | 64.90 | 76.20 | 102.00 | 52 | 18 | 41.5 |
| 0160 | 160 | 71.00 | 83.40 | 111.00 | 61 | 18 | 47.5 |
| 0200 | 200 | 84.10 | 98.90 | 132.00 | 69 | 20 | 53.5 |
| 0250 | 250 | 98.10 | 115.00 | 155.00 | 90 | 24 | 67.5 |
| 0315 | 315 | 147.00 | 173.00 | 231.00 | 130 | 34 | 79.5 |
| 0400 | 350/400 | – | 259.00 | 345.00 ◊ | 130 | 34 | 79.5 |
| 5063 | 500/630 | – (W300) | 388.00 ◊ (W301) | 518.00 ◊ (W301) | 190 | 42 | 95 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Base jaw

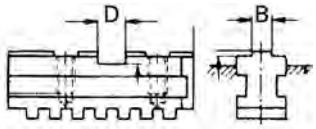
**Design:** Base jaws with mounting screws.

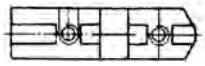
**Application:** For mounting reversible and top jaws.

**3052** 3-piece set.

**3054** 4-piece set.

| Order No. | Size mm | 3052 3-piece | 3054 4-piece | Jaw length mm | Jaw width mm | Web width B – 0.05 mm | Slot width D + 0.01 mm |
|---|---|---|---|---|---|---|---|
| 0100 | 100/110 | 187.00 | 250.00 | 46 | 14 | 7.94 | 9.5 |
| 0125 | 125 | 187.00 | 250.00 | 55 | 18 | 7.94 | 12.68 |
| 0160 | 160 | 187.00 | 250.00 | 65 | 18 | 7.94 | 12.68 |
| 0200 | 200 | 197.00 | 263.00 | 78 | 20 | 7.94 | 12.68 |
| 0250 | 250 | 207.00 | 276.00 | 92 | 24 | 12.7 | 19.03 |
| 0315 | 315 | 311.00 | 415.00 | 108 | 34 | 12.7 | 19.03 |
| 0400 | 350/400 | 491.00 | 655.00 ◊ | 127 | 34 | 12.7 | 19.03 |
| 0500 | 500 | 738.00 ◊ (W301) | 984.00 ◊ (W301) | 165 | 42 | 12.7 | 19.03 |



## Top jaw

**Design:** Unstepped, made from 16MnCr5, unhardened.

**3056** 3-piece set.

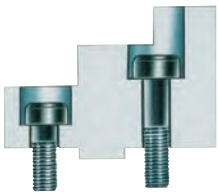
**3058** 4-piece set.

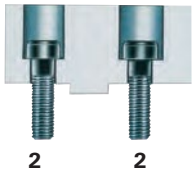
| Order No. | Size mm | 3056 3-piece | 3058 4-piece | Jaw length mm | Jaw width mm | Jaw height mm |
|---|---|---|---|---|---|---|
| 0100 | 100/110 | 57.70 | 77.30 | 53 | 22.5 | 30 |
| 0125 | 125 | 57.70 | 77.30 | 62 | 26.5 | 38 |
| 0160 | 140/160 | 35.50 | 47.40 | 74 | 28.5 | 42 |
| 0200 | 200 | 37.60 | 50.50 | 87 | 30.5 | 43 |
| 0250 | 250 | 57.70 | 77.30 | 103 | 36.5 | 53 |
| 0315 | 315 | 86.50 | 115.00 | 120 | 42.5 | 58 |
| 0400 | 350/400 | 171.00 | 229.00 ◊ | 137 | 42.5 | 65 |
| 5063 | 500/630 | 257.00 ◊ (W301) | 342.00 ◊ (W301) | 140 | 50.5 | 80 |

## Mounting screw for top jaws

| Order No. | Size mm | 3068 Screw 1 | Thread |
|---|---|---|---|
| 0001 | 100/110 | 1.60 | M6 x 20 |
| 0004 | 125 | 2.10 | M8 x 25 |
| 0007 | 140/160/200 | 2.10 | M8 x 30 |
| 0010 | 250 | 3.20 | M12 x 40 |
| 0013 | 315 | 3.20 | M12 x 45 |
| 0016 | 350/400 | 4.20 | M16 x 50 |
| 0019 | 500/630 | 5.80 (W338) | M20 x 80 |

| Order No. | Size mm | 3070 Screw 2 | Thread |
|---|---|---|---|
| 0001 | 100/110 | 1.60 | M6 x 16 |
| 0004 | 125/140/160/200 | 2.10 | M8 x 20 |
| 0007 | 250 | 3.20 | M12 x 25 |
| 0010 | 315 | 3.20 | M12 x 30 |
| 0013 | 350/400 | 4.20 | M16 x 35 |
| 0016 | 500/630 | 5.30 (W338) | M20 x 40 |

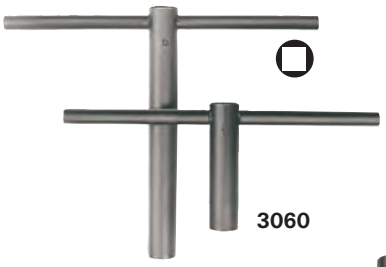


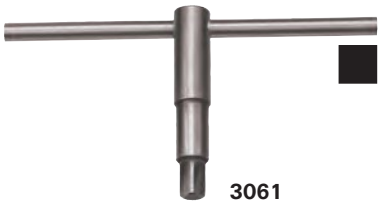



## Female/male square socket key

**Design:** Made from special steel, shank and fulcrum pin hardened and burnished. Fulcrum pin pressed in.

**3060** With female square. **3061** With male square.





3060



3061

| Order No. | Square mm | 3060 AMF | 3061 AMF | Length mm 3060 | Length mm 3061 |
|---|---|---|---|---|---|
| 0080 | 6 | 7.35 | 8.35 | 80 | 80 |
| 0100 | 8 | 10.20 | 10.60 | 80 | 80 |
| 0125 | 9 | 12.35 | 10.60 | 100 | 80 |
| 0160 | 10 | 11.80 | 13.45 | 100 | 100 |
| 0200 | 11 | – | 13.65 | – | 100 |
| 0250 | 12 | 26.70 | 15.75 | 200 | 100 |
| 0315 | 14 | 31.70 | 20.70 | 200 | 120 |
| 0400 | 17 | 43.50 | 31.70 | 250 | 160 |
| 0500 | 19 | 55.00 (W303) | 37.20 (W303) | 320 | 200 |

## Female square safety key with extractor pin

**Design:** Spring bearings, prevent forgetting to pull out.

| Order No. | Square mm | 3062 format | Length mm |
|---|---|---|---|
| 0100 | 8 | 35.20 | 130 |
| 0125 | 9 | 35.20 | 130 |
| 0160 | 10 | 44.30 | 160 |
| 0200 | 11 | 44.30 | 160 |
| 0250 | 12 | 53.40 | 160 |
| 0315 | 14 | 62.30 (W300) | 200 |

## Special grease for lathe chucks

**Application:** Regular lubrication required to maintain high concentricity and clamping force. The special grease will not be thrown off even at high chuck speeds, does not tear off even at high surface pressures and maintains clamping force.

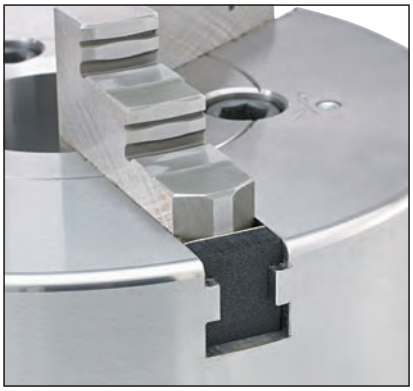
| Order No. | Content kg | 3065 RÖHM |
|---|---|---|
| 0010 | 1 | 60.80 (W338) |

## Chip protection for lathe chucks

**Application:** For inserting into the jaw guide. Prevents chips from penetrating the chuck body.

**3072** For scroll chucks ZG-ZS.

**3114** For wedge bar chuck DURO-T. 3-piece set.



| Order No. | Size mm | 3072 RÖHM |
|---|---|---|
| 0001 | 80 | 2.10 |
| 0004 | 100 | 2.60 |
| 0007 | 125 | 3.40 |
| 0010 | 160 | 4.20 |
| 0013 | 200 | 5.30 |
| 0016 | 250 | 6.60 |
| 0019 | 315/400 | 8.30 |
| 0022 | 500/630 | 13.10 (W301) |

| Order No. | Size mm | 3114 RÖHM |
|---|---|---|
| 0001 | 160 | 8.40 |
| 0004 | 200 | 10.50 |
| 0007 | 250 | 13.10 |
| 0010 | 315 | 16.80 |
| 0013 | 500 | 21.00 (W302) |

## Short taper flange

**Design:** Steel flange, finished on machine side, faced on chuck side.

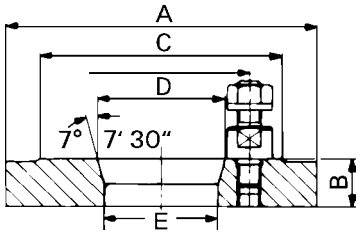
**Scope of delivery:** Flange with set screws, stud bolts or Camlock bolts.

**3080** **DIN 55027 and DIN 55022, with stud bolt and collar nut.**

**3082** **DIN 55029 and ASA B 5.9 D 1, with stud bolt for Camlock.**

DIN 55027

DIN 55029



3080

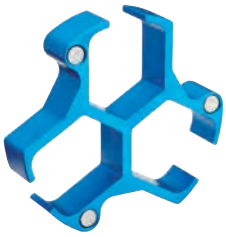
3082

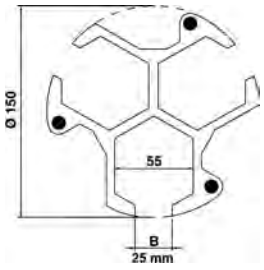
| Order No. | Ø A mm/ taper | 3080 ROHM | 3082 ROHM | Height B mm 3080 | Height B mm 3082 | Taper Ø C mm 3080 | Taper Ø C mm 3082 | Taper Ø D mm | Hole Ø E mm | Set screws/ stud bolts/ Camlock bolts |
|---|---|---|---|---|---|---|---|---|---|---|
| 0001 | 100/3 | 156.00 | 171.00 ◊ | 18 | 25 | 98 | 98 | 53.985 | 51.2 | 3/3/3 |
| 0005 | 125/4 | 156.00 | 171.00 | 19 | 27 | 102 | 112 | 63.513 | 40 | 3/3/3 |
| 0008 | 160/4 | 156.00 | 171.00 | 21 | 28 | 112 | 117.5 | 63.513 | 40 | 3/3/3 |
| 0011 | 160/5 | 156.00 | 171.00 | 21 | 31 | 135 | 146 | 82.563 | 40 | 4/4/6 |
| 0014 | 200/5 | 195.00 | 214.00 | 21 | 31 | 135 | 146 | 82.563 | 50 | 4/4/6 |
| 0017 | 200/6 | 195.00 | 214.00 | 23 | 36 | 170 | 181 | 106.375 | 50 | 4/4/6 |
| 0020 | 250/6 | 243.00 | 268.00 | 23 | 36 | 170 | 181 | 106.375 | 63 | 4/4/6 |
| 0023 | 250/8 | 243.00 | 268.00 | 26 | 39 | 220 | 225.4 | 139.719 | 63 | 4/4/6 |
| 0026 | 315/6 | 306.00 | 337.00 | 26 | 39 | 220 | 225.4 | 139.719 | 63 | 4/4/6 |
| 0029 | 315/8 | 306.00 | 337.00 | 26 | 39 | 220 | 225.4 | 139.719 | 63 | 4/4/6 |
| 0032 | 315/11 | 306.00 | 337.00 | 33 | 45 | 290 | 298.4 | 196.869 | 63 | 6/6/6 |
| 0035 | 400/8 | 518.00 | 570.00 | 31 | 39 | 220 | 225.4 | 139.719 | 63 | 4/4/6 |
| 0038 | 400/11 | 518.00 (W301) | 570.00 (W301) | 31 | 45 | 290 | 298.4 | 196.869 | 63 | 6/6/6 |

## Workpiece stop POSISTOP

**Design:** Made of aluminium, with 3 magnets incorporated in the stop, for easy attachment to the lathe chuck body and ground contact surfaces.
Jaw width: 25-55 mm (extendable by removing the lugs).

**Application:** For clamping short parts with a workpiece diameter of 15-150 mm.






| Order No. | Size/height mm | 3083 skantek | Jaw width mm | Diameter mm |
|---|---|---|---|---|
| 0015 | 15 | 50.20 | 25–55 | 150 |
| 0020 | 20 | 51.80 | 25–55 | 150 |
| 0025 | 25 | 53.50 | 25–55 | 150 |
| 0030 | 30 | 55.10 | 25–55 | 150 |
| 0035 | 35 | 56.70 (W346) | 25–55 | 150 |

## Workpiece stop set POSISTOP

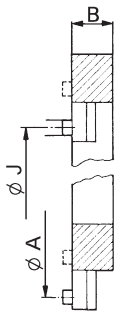
**Scope of delivery:** 5-piece set in wooden box.

| Order No. | Set contents mm | 3083 skantek |
|---|---|---|
| 1000 | 15; 20; 25; 30; 35 | 251.00 (W346) |

## Jaw hollow-out fixture for three-jaw chuck

**Design:** Lightweight construction.

**Application:** For turning unhardened jaws and for grinding hardened base and top jaws. Jaws reversible and infinitely adjustable. The fixture is tensioned in a three-jaw chuck. The adjustment ring on the hollow-out fixture allows the jaws to be moved inwards and outwards as required. The jaws are placed in the bores of the top jaws on the lathe chuck and the chuck is tensioned. The chuck can be set in the position that it will assume when processing workpieces in just a few seconds (pre-tensioning). The cranked clamping surfaces of the chuck jaws are then tensioned form-fit and perfectly concentric.



| Order No. | For chuck size mm | 3120 RÖHM | Outer Ø mm | Inner diameter mm | Nesting area Ø J mm | Nesting area Ø A mm | Thread | B mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | 125 | 819.00 ◊ | 153 | 110 | 50–115 | 150–215 | M5 | 20 |
| 0003 | 200 | 922.00 ◊ | 176 | 110 | 35–125 | 170–260 | M8 | 31 |
| 0005 | 250 | 1025.00 ◊ | 215 | 135 | 70–140 | 215–285 | M8 | 31 |
| 0007 | 250 | 1128.00 ◊ | 244 | 162 | 100–175 | 240–315 | M8 | 31 |
| 0009 | 315 | 1231.00 ◊ | 290 | 208 | 145–215 | 290–360 | M8 | 31 |
| 0011 | 400 | 1643.00 ◊ (W301) | 342 | 260 | 160–270 | 330–440 | M10 | 31 |

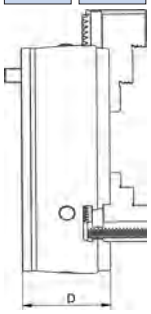
## Key bar three-jaw lathe chuck DURO-T

**Design: With short taper DIN 55027, with stud bolt and collar nut.** Chuck body completely surface-hardened and balanced. Jaws in the chuck ground concentrically Radial and axial run-out tolerances only half of the permitted values prescribed by DIN 69386/I. With quick jaw replacement system, visual marking for quick jaw replacement and jaw locking. High corrosion protection and splash-water edge on the outer contour. Good lubrication options of the highly stressed sliding surfaces.

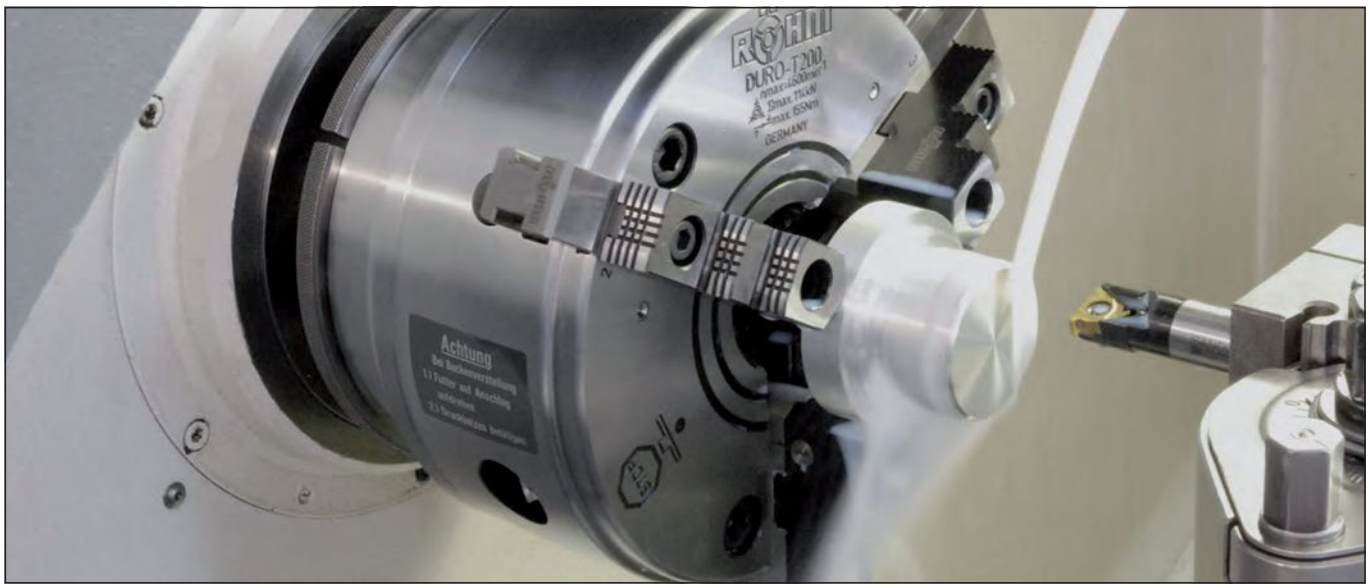
**Application:** For lathe applications, where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** With base jaws and reversible top jaws as well as safety key.

DIN 6350 | Form A



| Order No. | Size mm | 3090 RÖHM | Inch | Through-hole Ø mm | Height without jaws D mm | Max. torque N•m | Max. clamping force kN | Concentricity mm | Max. rpm $min^{-1}$ |
|---|---|---|---|---|---|---|---|---|---|
| 0001 | 160 | 1921.00 | 6.1/4 | 42 | 63 | 120 | 73 | 0.04 | 5400 |
| 0004 | 200 | 2070.00 | 8 | 52 | 81 | 155 | 114 | 0.06 | 4600 |
| 0007 | 250 | 2709.00 | 10 | 62 | 92 | 190 | 185 | 0.06 | 4200 |
| 0010 | 315 | 4408.00 ◊ | 12.1/2 | 87 | 111 | 210 | 240 | 0.08 | 3300 |
| 0013 | 400 | 6798.00 ◊ (W302) | 15.3/4 | 102 | 118 | 260 | 260 | 0.08 | 2200 |






Articles marked ◊ are not held in stock, procurement is effected at short notice.

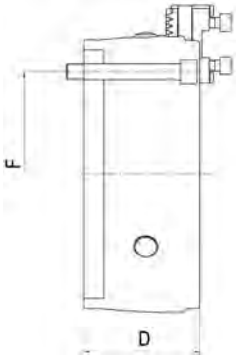
## Key bar three-jaw lathe chuck DURO-T

**Design: With short-taper DIN 55027, with stud bolt and collar nut.** Chuck body completely surface-hardened and balanced. Jaws in the chuck ground concentrically Radial and axial run-out tolerances only half of the permitted values prescribed by DIN 69386/I. With quick jaw replacement system, visual marking for quick jaw replacement and jaw locking. High corrosion protection and splash-water edge on the outer contour. Good lubrication options of the highly stressed sliding surfaces.

**Application:** For lathe applications, where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** With base jaws and reversible top jaws as well as safety key.

DIN 55027 | Form A



| Order No. | Size mm | 3092 RÖHM | Short taper | Through-hole Ø mm | Height without jaws D mm | F mm | Max. torque N•m | Max. clamping force kN | Concentricity mm | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| 0001 | 160 | 2204.00 ◊ | 4 | 42 | 76 | 85 | 120 | 73 | 0.04 | 5400 |
| 0004 | 160 | 2204.00 | 5 | 42 | 78 | 104.8 | 120 | 73 | 0.04 | 5400 |
| 0007 | 160 | 2204.00 ◊ | 6 | 42 | 85 | 133.4 | 120 | 73 | 0.04 | 5400 |
| 0010 | 200 | 2379.00 | 5 | 52 | 96 | 104.8 | 155 | 114 | 0.06 | 4600 |
| 0013 | 200 | 2379.00 | 6 | 52 | 97 | 133.4 | 155 | 114 | 0.06 | 4600 |
| 0016 | 200 | 2379.00 ◊ | 8 | 52 | 108 | 171.4 | 155 | 114 | 0.06 | 4600 |
| 0019 | 250 | 3111.00 | 6 | 62 | 108 | 133.4 | 190 | 185 | 0.06 | 4200 |
| 0022 | 250 | 3111.00 | 8 | 62 | 110 | 171.4 | 190 | 185 | 0.06 | 4200 |
| 0025 | 315 | 4625.00 ◊ | 6 | 87 | 127 | 133.4 | 210 | 240 | 0.08 | 3300 |
| 0028 | 315 | 4625.00 | 8 | 87 | 129 | 171.4 | 210 | 240 | 0.08 | 3300 |
| 0031 | 315 | 4625.00 | 11 | 87 | 131 | 235 | 210 | 240 | 0.08 | 3300 |
| 0034 | 400 | 7107.00 ◊ | 8 | 102 | 138 | 171.4 | 260 | 260 | 0.08 | 2200 |
| 0037 | 400 | 7107.00 ◊ (W302) | 11 | 102 | 138 | 235 | 260 | 260 | 0.08 | 2200 |

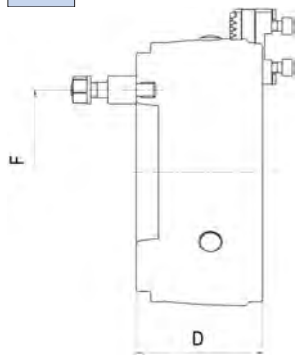
## Key bar three-jaw lathe chuck DURO-T

**Design: With short-taper DIN 55029, with stud bolt for Camlock.** Chuck body completely surface-hardened and balanced. Jaws in the chuck ground concentrically Radial and axial run-out tolerances only half of the permitted values prescribed by DIN 69386/I. With quick jaw replacement system, visual marking for quick jaw replacement and jaw locking. High corrosion protection and splash-water edge on the outer contour. Good lubrication options of the highly stressed sliding surfaces.

**Application:** For lathe applications, where high clamping forces and high concentricity and accurate repetition are required.

**Scope of delivery:** With base jaws and reversible top jaws as well as safety key.

DIN 55029



| Order No. | Size mm | 3094 RÖHM | Short taper | Through-hole Ø mm | Height without jaws D mm | F mm | Max. torque N•m | Max. clamping force kN | Concentricity mm | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| 0001 | 160 | 2310.00 ◊ | 4 | 42 | 83.5 | 82.6 | 120 | 73 | 0.04 | 5400 |
| 0004 | 160 | 2310.00 ◊ | 5 | 42 | 87 | 104.8 | 120 | 73 | 0.04 | 5400 |
| 0007 | 160 | 2310.00 ◊ | 6 | 42 | 104 | 133.4 | 120 | 73 | 0.04 | 5400 |
| 0010 | 200 | 2493.00 ◊ | 5 | 52 | 101 | 104.8 | 155 | 114 | 0.06 | 4600 |
| 0013 | 200 | 2493.00 | 6 | 52 | 106 | 133.4 | 155 | 114 | 0.06 | 4600 |
| 0016 | 200 | 2493.00 ◊ | 8 | 52 | 125 | 171.4 | 155 | 114 | 0.06 | 4600 |
| 0019 | 250 | 3260.00 | 6 | 62 | 117 | 133.4 | 190 | 185 | 0.06 | 4200 |
| 0022 | 250 | 3260.00 | 8 | 62 | 120 | 171.4 | 190 | 185 | 0.06 | 4200 |
| 0025 | 315 | 4847.00 ◊ | 6 | 87 | 145 | 133.4 | 210 | 240 | 0.08 | 3300 |
| 0028 | 315 | 4847.00 | 8 | 87 | 136 | 171.4 | 210 | 240 | 0.08 | 3300 |
| 0031 | 315 | 4847.00 | 11 | 87 | 143 | 235 | 210 | 240 | 0.08 | 3300 |
| 0034 | 400 | 7448.00 ◊ | 8 | 102 | 141 | 171.4 | 260 | 260 | 0.08 | 2200 |
| 0037 | 400 | 7448.00 ◊ (W302) | 11 | 102 | 148 | 235 | 260 | 260 | 0.08 | 2200 |

## Replacement jaw for key bar three-jaw lathe chuck DURO-T

**3100** Reversible top jaw hardened, 3-part set.

**3102** Unstepped adapter jaws unhardened (16MnCr5), 3-piece set.

**3104** Base jaw with mounting screws, 3-part set.

| Order No. | Size mm | 3100 UB set | 3102 AB set | 3104 GB set |
|---|---|---|---|---|
| 0160 | 160 | 157.00 | 35.50 | 187.00 |
| 0200 | 200 | 164.00 | 37.60 | 197.00 |
| 0250 | 250 | 173.00 | 57.70 | 207.00 |
| 0315 | 315 | 260.00 | 86.50 | 311.00 |
| 0400 | 400/500 | 388.00 (W302) | 171.00 (W302) | 491.00 (W302) |

3100

3102

3104

## Mounting screw

| Order No. | Size mm | 3108 | Thread |
|---|---|---|---|
| 0001 | 160/200 | 2.10 | M8 x 1 x 22 |
| 0004 | 250 | 3.20 | M12 x 1.5 x 30 |
| 0007 | 315 | 3.20 | M12 x 1.5 x 35 |
| 0010 | 400/500 | 4.20 (W338) | M16 x 1.5 x 40 |

## Female square socket key

**3110** Key.

**3112** Safety key with extractor pin.

| Order No. | Size mm | 3110 | 3112 | Square mm |
|---|---|---|---|---|
| 0001 | 160 | 61.00 | 81.40 | 10 |
| 0004 | 200 | 71.00 | 91.70 | 12 |
| 0007 | 250 | 92.00 | 123.00 | 14 |
| 0010 | 315 | 123.00 | 164.00 | 17 |
| 0013 | 500 | 154.00 (W302) | 205.00 (W302) | 19 |

3110

3112

## Compatibility to other power chuck manufacturers

The reversible top jaws and top jaws (Order No. 3117) are also compatible with other power chucks made by other manufacturers, see Jaw Navigator.

## Reversible top jaw

**Design:** 3-piece set, hardened, 60° und 90° serration.

**Note:** For power chucks from Röhm and other manufacturers of power chucks.

| Order No. | Size mm | 3117 RÖHM | Tooth design | Jaw length mm | Jaw width mm | Jaw height mm | Slot mm |
|---|---|---|---|---|---|---|---|
| 0110 | 130 | 201.00 | 1/16 x 90° | 54 | 23 | 27.5 | 10 |
| 0115 | 170 | 216.00 | 1/16 x 90° | 56 | 26 | 37.5 | 12 |
| 0120 | 210 | 284.00 | 1/16 x 90° | 75 | 36 | 49 | 17 |
| 0125 | 254/315 | 328.00 | 1/16 x 90° | 103.5 | 50 | 58 | 21 |
| 0130 | 400 | 544.00 | 3/32 x 90° | 135 | 68 | 65 | 25.5 |
| 0210 | 130 | 234.00 | 1.5 x 60° | 54 | 23 | 27.5 | 10 |
| 0215 | 170 | 237.00 | 1.5 x 60° | 66 | 34.7 | 36 | 12 |
| 0220 | 210 | 237.00 | 1.5 x 60° | 81 | 36 | 49 | 14 |
| 0225 | 254 | 273.00 | 1.5 x 60° | 99.5 | 44.5 | 54 | 16 |
| 0230 | 315 | 319.00 (W302) | 1.5 x 60° | 103 | 50 | 55.5 | 21 |

## Top jaw

**Design:** Three-piece set, can be hardened (16MnCr5), 60° und 90° serration.

**Note:** For power chucks from Röhm and other manufacturers of power chucks.

| Order No. | Size mm | 3117 RÖHM | Tooth design | Jaw length mm | Jaw width mm | Jaw height mm | Slot mm |
|---|---|---|---|---|---|---|---|
| 0310 | 130 | 43.30 | 1/16 x 90° | 54 | 23 | 29 | 10 |
| 0315 | 170 | 43.30 | 1/16 x 90° | 55 | 26.5 | 38 | 12 |
| 0320 | 210 | 47.40 | 1/16 x 90° | 75 | 36.5 | 53 | 17 |
| 0325 | 254/315 | 54.60 | 1/16 x 90° | 95 | 45 | 54.5 | 21 |
| 0330 | 400 | 90.60 | 3/32 x 90° | 130 | 50 | 80 | 25.5 |
| 0410 | 130/170 | 67.00 | 1.5 x 60° | 54 | 23 | 29 | 10 |
| 0415 | 170 | 43.30 | 1.5 x 60° | 72 | 30.5 | 40 | 12 |
| 0420 | 210 | 47.40 | 1.5 x 60° | 95 | 35 | 45.5 | 14 |
| 0425 | 254 | 54.60 | 1.5 x 60° | 110 | 50 | 45 | 16 |
| 0430 | 315 | 63.90 (W302) | 1.5 x 60° | 130 | 50 | 55.5 | 21 |

## RÖHM Jaw Navigator

Configure your individual clamping system at www.roehm.biz

**Listings on compatibility of adapter jaws for use with other manufacturers' power clamping chucks**

| Manufacturer / Order No. | Röhm Type | Berg Type | Forkardt Type | Gamet Type | Geiger+Haag Type | Pratt Type | Schunck Type | SMW-Autoblok Type |
|---|---|---|---|---|---|---|---|---|
| 3117 0310 | KFD-HE 130 | | | | | | | |
| 3117 0315 | KFD 130<br>KFD-HS 160/175<br>KFD-HE 170<br>LVE 125/160 | KF 130 | KTH 130-140 | | GHGY 120-130<br>GHGY 160-200 | | HSG 160 | AN-D 125; AL-D 125; HB-D 130<br>130<br>BB-D 165 |
| 3117 0320 | KFD-HS 200<br>SPO/SPD 160<br>KFD 200/250<br>KFD-AF 200 | KF 160-200<br>HES 160-200<br>KHFF 200<br>KFF 160-200<br>HESF 160-200 | 3 KGH 160-175-200; KTG 160-200<br>3 KGFH 160-175-200; KTN 160-200<br>KS 160-200-250; KL 160-200<br>KSPS 160-200; KSF 175-200<br>3 KTGF 200; KSHF 200<br>UVE 160-200-250; KP 200<br>KG 200; 3 NHF 200; 3 NH 200<br>KSH 160-200; AG 160-200-250<br>KLNC 200; KT 160-200; KTF 200<br>KTH 200-250-315 | MAC 200<br>MAC 220<br>DELTA 210<br>GA 210 | GHFA 175<br>GHHFA 200-250<br>GHN 160-200<br>GHSH 160-200<br>GHKS 160-200-250<br>GHL 160-200<br>GHHL 160-200-250<br>GHBF 160-190-210-225<br>GHSP/GHHSP 160-215<br>GHL 250 Mo<br>GHSK 160-200-250 | 1870-11710<br>1870-12110<br>1871-31710<br>1871-42110<br>1770-12110<br>1770-12610<br>1771-42110<br>1771-52610<br>1850-11710<br>1850-12110<br>1850-12610 | HSG 200<br>THF 165<br>HSL 165<br>TH 165 | |
| 3117 0325 | KFD 250<br>KFD-HE 254/315<br>KFD-HS 315<br>KFD-AF 250<br>SPO/SPD 300<br>LVE 250/315 | KF 250-315<br>HES 250-315<br>KHFF 250-315<br>KFF 250-315<br>HESF 250-315 | KS 315-400; KSH 250-315-400<br>KG 250-315; KP 250-315<br>3 KTGF 250-315; KT 250-315<br>UVE 315; KSHF 250-315-400<br>KTG 250-315; KLNC 250-315<br>KTN 250-315; KTF 250-315<br>3 NHF 250-315<br>3 NH 250-315<br>3 NHF 290; 3 NHF 400 (Index)<br>KL 250; KSPS 250-300 | MAC 250<br>MAC 315<br>DELTA 250<br>DELTA 260<br>DELTA 320<br>GA 250<br>GA 315 | GHN 250-315<br>GHSH 250-315<br>GHKS 315<br>GHL 250-280<br>GHHL 280<br>GHSP/GHHSP 300 | 1870-12610<br>1870-13210<br>1871-52610<br>1871-63210<br>1770-13210<br>1770-13810<br>1770-15010<br>1771-63210<br>1771-63810<br>1771-65010<br>1850-13130<br>1850-14030 | | CL-D 200<br>AN-D 250; AL-D 250<br>BH-D 250; BHD-FC 250<br>BB-D 250; PB-D 250<br>PBI-D 250; HB-D 250<br>BB-H (M) 250 |
| 3117 0330 | KFD 400-800<br>KFD-HF 630<br>KFD-HE 400<br>KFD-HS 400/500 | KF 400-500-630<br>HES 400-500-630<br>KHFF 400<br>KFF 400-500-630<br>HESF 400-500<br>HESF 630 | KS 500-630; KSH 500<br>KSL 630; KSHF 630<br>3 KTGF 400-500<br>UVE 400-500-630-800<br>KTG 400-500; KTN 400-500<br>KG 400-500; 3 NHF 400-500-630<br>3 NH 400-500-630; KL 400-500<br>KLNC 400-500; KP 400<br>KT 400-500; KTF 400-500 | | | 1870-14010<br>1871-64010<br>1170-75110<br>1170-76310 | HSG 400<br>HSG 500<br>THF 400; TH 400<br>THF 500; TH<br>500 HSL400<br>HSL 500 | AN-D 400; GH-D 500<br>BHD-FC 500; GH-D 610<br>BHD-FC 630; IN-D 800<br>IL-D 800; GH-D 800<br>HFKN-D 400; HFKN-D 500 |

| Manufacturer / Order No. | Röhm Type | Howa Type | Kitagawa Type | Matsumoto Type | Pratt Type | Schunck Type | SMW-Autoblok Type |
|---|---|---|---|---|---|---|---|
| 3117 0410 | KFD-HE 130<br>KFN 105 | | HJ-4<br>AS 110<br>N-4/N 05<br>B 205<br>B 204<br>HOB-5<br>B-05 | H-4-21 | | | |
| 3117 0415 | KFD-HE 170 | HO 1 MA 6<br>HO 7 MA 6<br>HO 15 M 6<br>HO 22 M 6<br>HO 24 M 6<br>HO 27 M 6<br>HO 37 M 6<br>HO 47 M 6 | HJA 5-6<br>HOS 6<br>AS 165<br>B-160<br>B-06; B-07<br>HOH 160; HOH 106<br>HOH-06; HOH 206<br>N-160<br>N-06<br>HOB-6<br>B-206 A 5; HO-6 | | 9821-21723<br>9821-31723 | HSG 165 | AN-M 165<br>AL-M 165<br>BH-M 165<br>BHM-FC 165<br>PB-M 165<br>PBI-M 165<br>HB-M 165 |
| 3117 0420 | KFD-HE 210 | HO 7 MA 8<br>HO 15 M 8<br>HO 23 M 8 | B-200<br>B-8<br>N-200<br>N 8<br>AS 210<br>HOS-8<br>HJA 6-8<br>HO-8<br>B-208 A 6<br>HOB-8; HOH 200<br>HOH 8; HOH 108 | HA 6-8<br>HX-8<br>H-8<br>HH-8<br>HJ-8<br>HHJ-8<br>STC-8<br>SA-6-8-52 | 9821-32123<br>9821-42123 | HSL 210 | AN-M 210<br>AL-M 210<br>BH-M 210<br>BHM-FC 210<br>BB-M 210<br>PB-M 210<br>PBI-M 210<br>HB-M 210 |
| 3117 0425 | KFD-HE 254 | HO 7 MA 10<br>HO 15 M 10<br>HO 23 M 10<br>HO 23 M 8<br>HO 27 M 8<br>HO 22 M 8<br>HO 24 M 8<br>HO 37 M 8<br>HO 47 M 8 | B-250<br>B-10<br>HOH-250<br>HOH-10; HOH 110<br>B-210 A 6<br>B-210 A 8<br>HOB-10<br>AS 250<br>N-250; HOS-10<br>N-10; HJA 8-10<br>HJA 6-10; HO-10 | HA 6-10<br>HA 8-10<br>HX-10<br>H-10<br>HH-10<br>HHL-10<br>HJ-1 0<br>HHJ-10<br>STC-10<br>HA 8-11<br>SA 6-10-72 B | 9821-42623<br>9821-52623 | HSL 250 | AN-M 250<br>AL-M 250<br>BH-M 250<br>BHM-FC 250<br>BB-M 250<br>PB-M 250<br>PBI-M 250<br>HB-M 210 |
| 31170430 | KFD-HE 315<br>KFN 350 | HO 27 M 12<br>HO 37 M 12<br>HO 47 M 12 | B 212 | | | | AN-M 315<br>AL-M 315<br>BH-M 315<br>BHM-FC 315<br>BB-M 315<br>PB-M 315<br>PBI-M 315<br>HB-M 315<br>HFKN-M 260<br>HFKN-M 315 |

## Quick-change tool posts for lathes

NEW

ORIGINAL MULTI SUISSE

**Design:** The quick-change tool posts offer the advantage of unlimited versatility. They allow for tools to be changed considerably faster than with a four-way tool holder, and guarantee a repetition accuracy of less than 0.01 mm over many years. The ground serration in the central body and in the tool holders allow 40 different clamping positions. The tool holder head can receive any number of tool cartridges containing turning tools and drill steels.

**Application:** The quick-change tool posts are suitable for use on conventional and CNC lathes with manual tool change.

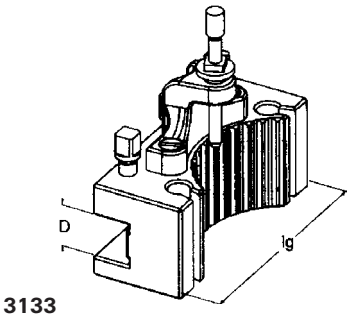
3130

### Quick-change base body NEW

| Order No. | Type | 3130 ORIGINAL MULTI SUISSE | Total height mm | Bore Ø max. mm | Weight approx. kg |
|---|---|---|---|---|---|
| 1010 | A | 270.50 | 56 | 20 | 1.4 |
| 1020 | B | 398.50 | 79 | 32 | 4.5 |
| 1030 | C | 613.00 (W305) | 110 | 40 | 10.7 |

### Quick-change turning tool holder type D NEW

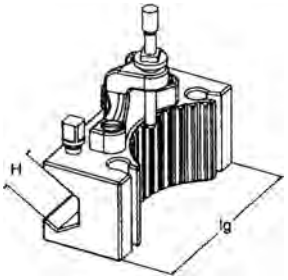
| Order No. | Type | 3133 ORIGINAL MULTI SUISSE | Dimension D mm | Length lg mm | Weight approx. kg |
|---|---|---|---|---|---|
| 1005 | AD 1675 | 71.50 | 16 | 75 | 0.5 |
| 1010 | AD 2090 | 73.00 | 20 | 90 | 0.61 |
| 1015 | BD 25120 | 111.50 | 25 | 120 | 1.57 |
| 1020 | BD 25140 | 111.50 | 25 | 140 | 1.65 |
| 1025 | BD 32120 | 113.50 | 32 | 120 | 1.75 |
| 1030 | CD 32150 | 176.50 | 32 | 150 | 2.95 |
| 1035 | CD 40170 | 191.00 (W305) | 40 | 170 | 3.85 |




3133

### Quick-change drilling steel holder, type H NEW

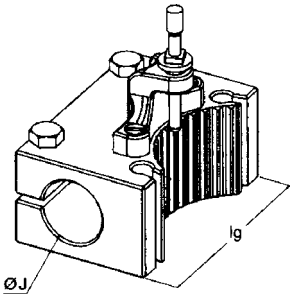
| Order No. | Type | 3136 ORIGINAL MULTI SUISSE | Dimension H mm | Length lg mm | Weight approx. kg |
|---|---|---|---|---|---|
| 1005 | AH 2085 | 77.40 | 20 | 85 | 0.56 |
| 1010 | BH 32130 | 136.00 | 32 | 130 | 1.8 |
| 1015 | CH 40160 | 202.00 (W305) | 40 | 160 | 3.7 |




3136

### Quick-change boring bar holder, type J NEW

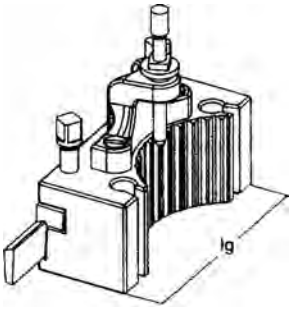
| Order No. | Type | 3139 ORIGINAL MULTI SUISSE | Diameter J mm | Length lg mm | Weight approx. kg |
|---|---|---|---|---|---|
| 1005 | AJ 3080 | 102.50 | 30 | 80 | 0.81 |
| 1010 | BJ 40120 | 159.00 | 40 | 120 | 2.31 |
| 1015 | CJ 40160 | 265.00 | 40 | 160 | 3.87 |
| 1020 | CJ 50160 | 267.50 (W305) | 50 | 160 | 4.49 |




3139

### Quick-change parting tool holder, type T NEW

| Order No. | Type | 3146 ORIGINAL MULTI SUISSE | For parting tool mm | Length lg mm | Weight kg |
|---|---|---|---|---|---|
| 1005 | AT-K | 125.50 | 2.7 x 10 | 75 | 0.55 |
| 1010 | BT-K | 157.00 | 4.2 x 15.9 | 110 | 1.5 |
| 1015 | CT-K | 189.50 (W305) | 5.1 x 18.5 | 150 | 2.4 |



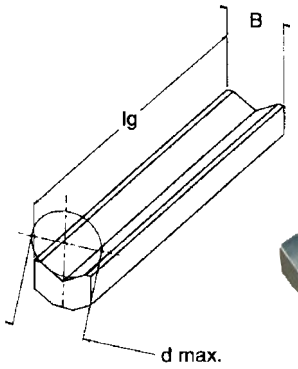

3146

## Insertion prism, type P

NEW

**Application:** For drilling steel holder, type H.

| Order No. | Type | 3145 | Dimension d max. mm | Length lg mm | Dimensions B mm |
|---|---|---|---|---|---|
| 1005 | AP 1485 | 17.35 | 14 | 85 | 16 |
| 1010 | BP 20130 | 18.35 | 20 | 130 | 22 |
| 1015 | CP 25160 | 32.30 | 25 | 160 | 30 |
| 1020 | CP 32160 | 39.00 (W305) | 32 | 160 | 38 |



## Sleeve with morse taper type L

NEW

**Application:** For boring bar holder type J.

| Order No. | Type | 3142 | MK | Outer Ø mm | Weight approx. kg |
|---|---|---|---|---|---|
| 1005 | AL/EL | 38.10 | 1 | 30 | 0.4 |
| 1010 | AL/EL | 39.90 | 2 | 30 | 0.36 |
| 1015 | EL/BL/CL | 49.00 | 3 | 40 | 0.89 |
| 1020 | EL/BL/CL | 54.50 | 4 | 40 | 0.75 |
| 1025 | CL | 62.00 | 3 | 50 | 1.44 |
| 1030 | CL | 65.50 (W305) | 4 | 50 | 1.52 |

## Spare and accessory parts for tool post

NEW

| Order No. | for type | 3148 | Design | Dimensions |
|---|---|---|---|---|
| 1001 | A | 3.76 | No. 1 Square screw | M7 x 1 x 23 |
| 1003 | B | 4.82 | No. 1 Square screw | M11 x 1 x 30 |
| 1005 | C | 5.65 | No. 1 Square screw | M14 x 12.5 x 40 |
| 1007 | A | 24.40 | No. 2 + 3 + 4 Console with screws and nut | Set |
| 1009 | B | 31.20 | No. 2 + 3 + 4 Console with screws and nut | Set |
| 1011 | C | 41.40 | No. 2 + 3 + 4 Console with screws and nut | Set |
| 0035 | A | 1.88 | Mounting screw for console | M5 x 10 |
| 0036 | B | 2.09 | Mounting screw for console | M7 x 15 |
| 0037 | C | 2.54 | Mounting screw for console | M9 x 20 |
| 1013 | A | 20.80 | No. 5 Square box spanner | A/F 8 |
| 1015 | B | 26.40 | No. 5 Square box spanner | A/F 10 |
| 1017 | C | 32.30 | No. 5 Square box spanner | A/F 14 |
| 1019 | A | 3.95 | No. 3 Height adjustment screw | M5 x 35 |
| 1021 | B | 5.00 | No. 3 Height adjustment screw | M7 x 56 |
| 1023 | C | 6.90 | No. 3 Height adjustment screw | M9 x 65 |
| 1027 | A | 2.91 | No. 4 Height-adjustable nut | M5 |
| 1029 | B | 3.57 | No. 4 Height-adjustable nut | M7 |
| 1031 | C | 4.35 (W305) | No. 4 Height-adjustable nut | M9 |

**General note:** VDI tool holders for CNC lathes consist of tempered steel with a strength class of approx. 900 N/mm², hardness of 56 ±2 HRC and a hardness depth of min. 0.5 mm. In addition, all VDI tool holders have a cylinder shank h6 with internal coolant supply and adjustable ball slot nozzles.

Shank and supporting face hardened and ground, with coolant transfer hole.

Other designs on request.

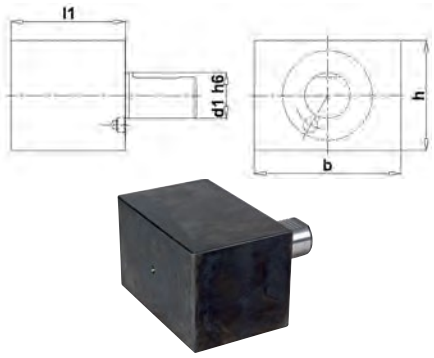
You can also find all illustrations, technical drawings and dimensions online at **www.format-quality.com/en.**

## VDI square blank A1

**Design: DIN 69 880,** finish hardened and ground, coolant transfer hole, remainder soft. Without holding fixture.

**Application:** For production of special designs.

DIN 69880



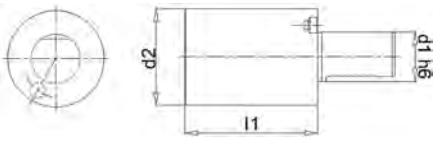

| Order No. | VDI | 3160 A1 | l1 mm | b mm | h mm |
|---|---|---|---|---|---|
| 0116 | 16 | 59.80 ◊ | 44 | 78 | 44 |
| 0120 | 20 | 64.40 ◊ | 65 | 100 | 65 |
| 0125 | 25 | 97.80 ◊ | 75 | 100 | 75 |
| 0130 | 30 | 97.80 | 85 | 130 | 78 |
| 0140 | 40 | 149.50 | 100 | 151 | 96 |
| 0150 | 50 | 201.50 | 125 | 160 | 120 |
| 0160 | 60 | 276.00 (W307) | 160 | 165 | 125 |

## VDI cylinder blank A2

**Design: DIN 69 880,** finish hardened and ground, coolant transfer hole, remainder soft. Without holding fixture.

**Application:** For production of special designs.

DIN 69880



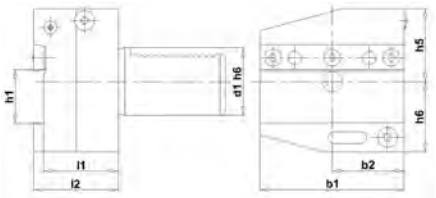
| Order No. | VDI | 3161 A2 | d2 mm | l1 mm |
|---|---|---|---|---|
| 0116 | 16 | 43.70 ◊ | 40 | 60 |
| 0120 | 20 | 41.40 ◊ | 50 | 70 |
| 0125 | 25 | 54.10 ◊ | 58 | 80 |
| 0128 | 25 | 69.00 ◊ | 58 | 200 |
| 0130 | 30 | 54.10 | 68 | 100 |
| 0135 | 30 | 87.40 | 68 | 240 |
| 0140 | 40 | 56.40 | 83 | 120 |
| 0145 | 40 | 117.50 | 83 | 320 |
| 0150 | 50 | 77.10 | 98 | 135 |
| 0155 | 50 | 218.50 | 98 | 400 |
| 0160 | 60 | 138.00 (W307) | 123 | 150 |

## VDI cut-off tool holder AR/AL

**Design: DIN 69 880,** with clamping strip, height-adjustable. With square-longitudinal mount DIN 69 880.

**Application:** To nest parting blades.

DIN 69880



3163

3164

| Order No. | VDI | 3163 AR | 3164 AL | h1 mm | b1 mm | b2 mm | h5 mm | h6 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0125 | 25 | 299.00 ◊ | 299.00 ◊ | 26 | 60 | 30 | 28 | 36 | 44 | 50 |
| 0130 | 30 | 282.00 | 282.00 | 26 | 70 | 35 | 32 | 39 | 44 | 50 |
| 0140 | 40 | 316.50 | 316.50 | 26 | 85 | 42.5 | 43 | 41.5 | 44 | 50 |
| 0145 | 40 | 316.50 | 316.50 | 32 | 85 | 42.5 | 43 | 41.5 | 44 | 50 |
| 0150 | 50 | 333.50 (W307) | 333.50 (W307) | 32 | 100 | 50 | 43 | 45 | 44 | 50 |

## VDI radial tool holder

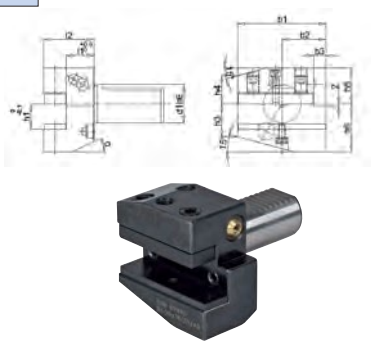
### Form B1 right

DIN 69880

**Design: DIN 69880,** Radial tool holder right, short.

**Application: For external machining.**

| Order No. | VDI | 3166 B1 | h1 mm | b1 mm | b2 mm | b3 mm | h5 mm | h6 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 56.40 ◊ | 12 | 42 | 23 | 5 | 20 | 22 | 13 | 24 |
| 0120 | 20 | 56.40 ◊ | 16/12 | 55 | 30 | 7 | 25 | 30 | 16 | 30 |
| 0125 | 25 | 65.60 ◊ | 16/12 | 55 | 30 | 7 | 25 | 30 | 16 | 30 |
| 0130 | 30 | 57.50 | 20/16 | 70 | 35 | 10 | 28 | 38 | 22 | 40 |
| 0140 | 40 | 71.30 | 25/20 | 85 | 42.5 | 12.5 | 32.5 | 48 | 22 | 44 |
| 0150 | 50 | 95.50 | 32/25 | 100 | 50 | 16 | 35 | 60 | 30 | 55 |
| 0160 | 60 | 149.50 (W307) | 32/25 | 125 | 62.5 | 16 | 42.5 | 62.5 | 30 | 60 |



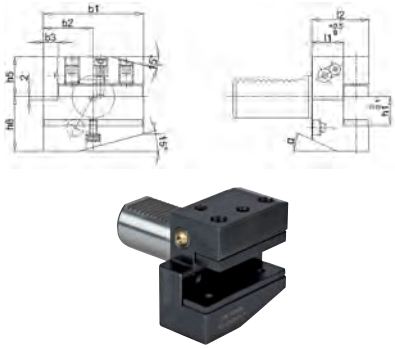
### Form B2 left

DIN 69880

**Design: DIN 69880,** Radial tool holder left, short.

**Application: For external machining.**

| Order No. | VDI | 3167 B2 | h1 mm | b1 mm | b2 mm | b3 mm | h5 mm | h6 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 54.10 ◊ | 12 | 42 | 23 | 5 | 20 | 22 | 24 | 24 |
| 0120 | 20 | 54.10 ◊ | 16/12 | 55 | 30 | 7 | 25 | 30 | 30 | 30 |
| 0125 | 25 | 74.80 ◊ | 16/12 | 55 | 30 | 7 | 25 | 30 | 30 | 30 |
| 0130 | 30 | 61.00 | 20/16 | 70 | 35 | 10 | 28 | 38 | 22 | 40 |
| 0140 | 40 | 71.30 | 25/20 | 85 | 42.5 | 12.5 | 32.5 | 48 | 22 | 44 |
| 0150 | 50 | 103.50 | 32/25 | 100 | 50 | 16 | 35 | 60 | 30 | 55 |
| 0160 | 60 | 147.00 (W307) | 32/25 | 125 | 62.5 | 16 | 42.5 | 62.5 | 30 | 60 |



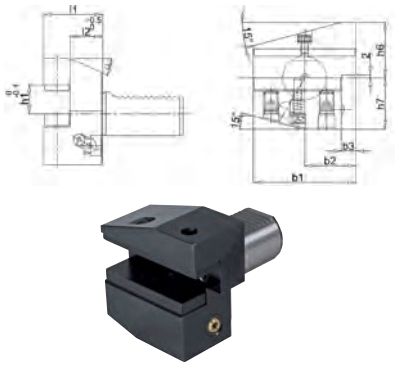
### Form B3 right, overhead

DIN 69880

**Design: DIN 69880,** Radial tool holder right, overhead, short.

**Application: For external machining.**

| Order No. | VDI | 3169 B3 | h1 mm | b1 mm | b2 mm | b3 mm | h7 mm | h6 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 55.20 ◊ | 12 | 42 | 23 | 5 | 20 | 22 | 24 | 13 |
| 0120 | 20 | 55.20 ◊ | 12/16 | 55 | 30 | 7 | 25 | 30 | 30 | 16 |
| 0125 | 25 | 71.30 ◊ | 12/16 | 55 | 30 | 7 | 25 | 30 | 30 | 16 |
| 0130 | 30 | 66.70 | 20/16 | 70 | 35 | 10 | 35 | 38 | 40 | 22 |
| 0140 | 40 | 71.30 | 25/20 | 85 | 42.5 | 12.5 | 42.5 | 48 | 44 | 22 |
| 0150 | 50 | 112.50 | 32/25 | 100 | 50 | 16 | 50 | 60 | 55 | 30 |
| 0160 | 60 | 147.00 (W307) | 32/25 | 125 | 62.5 | 16 | 62.5 | 62.5 | 60 | 30 |



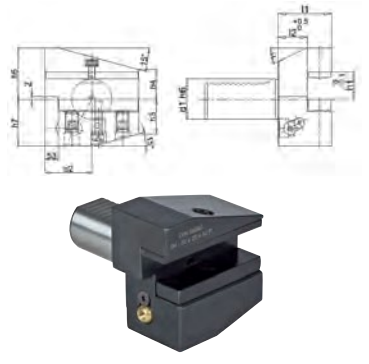
### Form B4 left, overhead

DIN 69880

**Design: DIN 69880,** Radial tool holder left, overhead, short.

**Application: For external machining.**

| Order No. | VDI | 3170 B4 | h1 mm | b1 mm | b2 mm | b3 mm | h5 mm | h6 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 55.20 ◊ | 12 | 42 | 23 | 5 | 20 | 22 | 24 | 13 |
| 0120 | 20 | 55.20 ◊ | 16/12 | 55 | 30 | 7 | 25 | 30 | 30 | 16 |
| 0125 | 25 | 71.30 ◊ | 16/12 | 55 | 30 | 7 | 25 | 30 | 30 | 16 |
| 0130 | 30 | 66.70 | 20/16 | 70 | 35 | 10 | 35 | 38 | 40 | 22 |
| 0140 | 40 | 71.30 | 25/20 | 85 | 42.5 | 12.5 | 42.5 | 48 | 44 | 22 |
| 0150 | 50 | 112.50 | 32/25 | 100 | 50 | 16 | 50 | 60 | 55 | 30 |
| 0160 | 60 | 147.00 (W307) | 32/25 | 125 | 62.5 | 16 | 62.5 | 62.5 | 60 | 30 |





Articles marked ◊ are not held in stock, procurement is effected at short notice.

## VDI axial tool holder

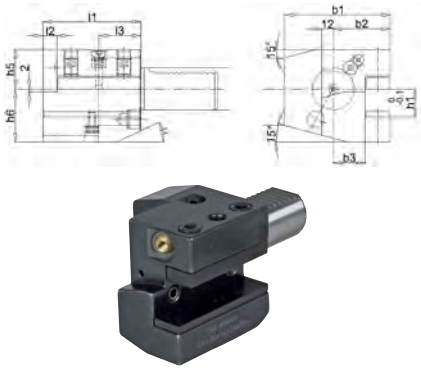
### Form C1 right

DIN 69880

**Design: DIN 69880,** axial tool holder right.

**Application: For external machining.**

| Order No. | VDI | 3172 C1 | h1 mm | b1 mm | b2 mm | b3 mm | h5 mm | h6 mm | l1 mm | l2 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 66.70 ◊ | 12 | 43 | 24 | 13 | 20 | 22 | 44 | 5 | 20 |
| 0120 | 20 | 66.70 ◊ | 16/12 | 65 | 40 | 26 | 25 | 30 | 50 | – | 30 |
| 0125 | 25 | 75.90 ◊ | 16/12 | 58 | 33 | 19 | 25 | 30 | 55 | 7 | 20 |
| 0130 | 30 | 77.10 | 20/16 | 70 | 35 | 17 | 28 | 38 | 70 | 10 | 30 |
| 0140 | 40 | 87.40 | 25/20 | 85 | 42.5 | 21 | 32.5 | 48 | 85 | 12.5 | 30 |
| 0150 | 50 | 126.50 | 32/25 | 100 | 50 | 26 | 35 | 60 | 100 | 16 | 40 |
| 0160 | 60 | 190.00 (W307) | 32/25 | 125 | 62.5 | 33 | 42.5 | 62.5 | 125 | 16 | 40 |



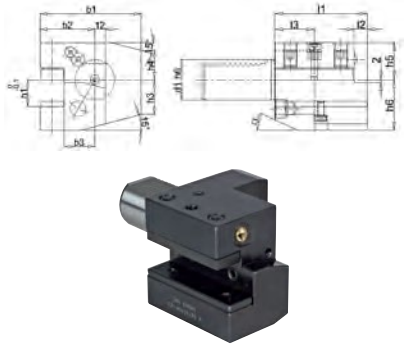
### Form C2 left

DIN 69880

**Design: DIN 69880,** axial tool holder, left.

**Application: For external machining.**

| Order No. | VDI | 3173 C2 | h1 mm | b1 mm | b2 mm | b3 mm | h5 mm | h6 mm | l1 mm | l2 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 66.70 ◊ | 12 | 43 | 24 | 13 | 20 | 22 | 44 | 5 | 20 |
| 0120 | 20 | 75.90 ◊ | 16/12 | 65 | 40 | 26 | 25 | 30 | 50 | – | 30 |
| 0125 | 25 | 75.90 ◊ | 16/12 | 58 | 33 | 19 | 25 | 30 | 55 | 7 | 20 |
| 0130 | 30 | 77.10 | 20/16 | 76 | 41 | 23 | 28 | 38 | 70 | 10 | 30 |
| 0140 | 40 | 94.30 | 25/20 | 90 | 47.5 | 25.5 | 32.5 | 48 | 85 | 12.5 | 30 |
| 0150 | 50 | 121.00 | 32/25 | 105 | 55 | 30.5 | 35 | 60 | 100 | 16 | 40 |
| 0160 | 60 | 190.00 (W307) | 32/25 | 125 | 62.5 | 33 | 42.5 | 62.5 | 125 | 16 | 40 |



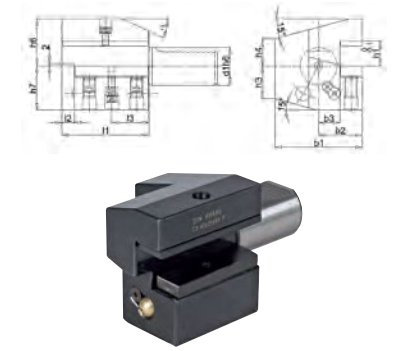
### Form C3 right, overhead

DIN 69880

**Design: DIN 69880,** axial tool holder right, overhead.

**Application: For external machining.**

| Order No. | VDI | 3175 C3 | h1 mm | b1 mm | b2 mm | b3 mm | h7 mm | h6 mm | l1 mm | l2 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 66.70 ◊ | 12 | 43 | 24 | 13 | 20 | 22 | 44 | 5 | 20 |
| 0120 | 20 | 71.30 ◊ | 16/12 | 65 | 40 | 26 | 25 | 30 | 50 | – | 30 |
| 0125 | 25 | 74.80 ◊ | 16/12 | 58 | 33 | 19 | 25 | 30 | 55 | 7 | 20 |
| 0130 | 30 | 74.80 | 20/16 | 70 | 35 | 17 | 35 | 38 | 70 | 10 | 30 |
| 0140 | 40 | 94.30 | 25/20 | 85 | 42.5 | 21 | 42.5 | 48 | 85 | 12.5 | 30 |
| 0150 | 50 | 138.00 | 32/25 | 100 | 50 | 26 | 50 | 60 | 100 | 16 | 40 |
| 0160 | 60 | 190.00 (W307) | 32/25 | 125 | 62.5 | 33 | 62.5 | 62.5 | 125 | 16 | 40 |



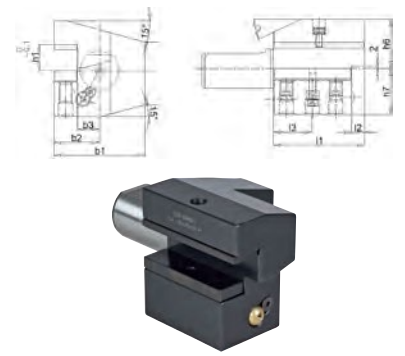
### Form C4 left, overhead

DIN 69880

**Design: DIN 69880,** axial tool holder left, overhead.

**Application: For external machining.**

| Order No. | VDI | 3176 C4 | h1 mm | b1 mm | b2 mm | b3 mm | h7 mm | h6 mm | l1 mm | l2 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0116 | 16 | 66.70 ◊ | 12 | 43 | 24 | 13 | 20 | 22 | 44 | 5 | 20 |
| 0120 | 20 | 71.30 ◊ | 16/12 | 65 | 40 | 26 | 25 | 30 | 50 | – | 30 |
| 0125 | 25 | 75.90 ◊ | 16/12 | 58 | 33 | 19 | 25 | 30 | 55 | 7 | 20 |
| 0130 | 30 | 75.90 | 20/16 | 76 | 41 | 23 | 35 | 38 | 70 | 10 | 30 |
| 0140 | 40 | 97.80 | 25/20 | 90 | 47.5 | 25.5 | 42.5 | 48 | 85 | 12.5 | 30 |
| 0150 | 50 | 138.00 | 32/25 | 105 | 55 | 30.5 | 50 | 60 | 100 | 16 | 40 |
| 0160 | 60 | 190.00 (W307) | 32/25 | 125 | 62.5 | 33 | 62.5 | 62.5 | 125 | 16 | 40 |



## Form D1/D2

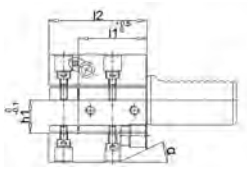
**Design: DIN 69880,** tool holder with more than one rectangular seat.

**Application:** For external machining, radial and axial.

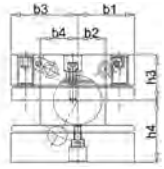
DIN 69880

**3177** **Form D1.**

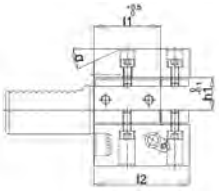
**3178** **Form D2 overhead.**



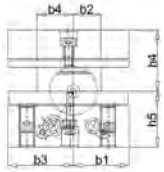
3177



3177



3178



3178

| Order No. | VDI | 3177 D1 | 3178 D2 | h1 mm | b1 mm | b2 mm | b4 mm | h3 mm 3177 | h3 mm 3178 | h4 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0125 | 25 | 164.50 ◊ | 164.50 ◊ | 16/12 | 33 | 19 | 19 | 25 | 25 | 30 | 34 | 48 |
| 0130 | 30 | 147.00 | 147.00 | 20/16 | 35 | 17 | 23 | 28 | 35 | 38 | 42 | 60 |
| 0140 | 40 | 167.00 | 167.00 | 25/20 | 42.5 | 21 | 25.5 | 32.5 | 42.5 | 48 | 50 | 72 |
| 0150 | 50 | 207.00 | 207.00 | 32/25 | 50 | 26 | 30.5 | 35 | 50 | 60 | 60 | 85 |
| 0160 | 60 | 276.00 (W307) | 276.00 (W307) | 32/25 | 57.5 | 33 | 33 | 42.5 | 62.5 | 62.5 | 85 | 110 |

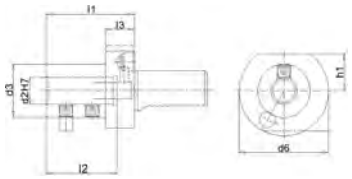
(Form D2, overhead, without figure.)

## Form E1 for indexable insert drills

**Design: DIN 69880,** with flange face.

**Application:** For indexable drill inserts.

DIN 69880



| Order No. | VDI | 3180 E1 | d2 mm | h1 mm | d6 mm | d3 mm | l1 mm | l3 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|
| 2016 | 20 | 66.70 ◊ | 16 | 20 | 50 | 36 | 67 | 18 | 54 |
| 2020 | 20 | 66.70 ◊ | 20 | 20 | 50 | 40 | 67 | 18 | 54 |
| 2025 | 20 | 66.70 ◊ | 25 | 20 | 50 | 45 | 71 | 18 | 58 |
| 2516 | 25 | 66.70 ◊ | 16 | 25 | 58 | 36 | 67 | 18 | 54 |
| 2520 | 25 | 66.70 ◊ | 20 | 25 | 58 | 40 | 67 | 18 | 54 |
| 2525 | 25 | 66.70 ◊ | 25 | 25 | 58 | 45 | 71 | 18 | 59 |
| 3008 | 30 | 62.10 * | 8 | 28 | 68 | 28 | 50 | 22 | 36 |
| 3010 | 30 | 62.10 * | 10 | 28 | 68 | 35 | 54 | 22 | 40 |
| 3012 | 30 | 62.10 * | 12 | 28 | 68 | 42 | 59 | 22 | 45 |
| 3016 | 30 | 56.40 | 16 | 28 | 68 | 36 | 67 | 22 | 54 |
| 3020 | 30 | 56.40 | 20 | 28 | 68 | 40 | 67 | 22 | 54 |
| 3025 | 30 | 56.40 | 25 | 28 | 68 | 45 | 71 | 22 | 58 |
| 3032 | 30 | 56.40 | 32 | 28 | 68 | 52 | 75 | 22 | 61 |
| 3040 | 30 | 57.50 | 40 | 28 | 68 | 65 | 90 | 22 | 72 |
| 4008 | 40 | 67.90 * | 8 | 32.5 | 83 | 28 | 50 | 22 | 36 |
| 4010 | 40 | 72.50 * | 10 | 32.5 | 83 | 35 | 54 | 22 | 40 |
| 4012 | 40 | 72.50 * | 12 | 32.5 | 83 | 42 | 58 | 22 | 45 |
| 4016 | 40 | 73.60 (W307) | 16 | 32.5 | 83 | 36 | 67 | 22 | 54 |

| Order No. | VDI | 3180 E1 | d2 mm | h1 mm | d6 mm | d3 mm | l1 mm | l3 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|
| 4020 | 40 | 73.60 | 20 | 32.5 | 83 | 40 | 67 | 22 | 54 |
| 4025 | 40 | 73.60 | 25 | 32.5 | 83 | 45 | 75 | 22 | 59 |
| 4032 | 40 | 73.60 | 32 | 32.5 | 83 | 52 | 75 | 22 | 61 |
| 4040 | 40 | 73.60 | 40 | 32.5 | 83 | 65 | 90 | 22 | 73 |
| 4050 | 40 | 73.60 | 50 | 32.5 | 83 | 70 | 100 | 22 | 83 |
| 5016 | 50 | 82.80 | 16 | 35 | 98 | 36 | 80 | 30 | 54 |
| 5020 | 50 | 82.80 | 20 | 35 | 98 | 40 | 80 | 30 | 54 |
| 5025 | 50 | 82.80 | 25 | 35 | 98 | 45 | 80 | 30 | 59 |
| 5032 | 50 | 82.80 | 32 | 35 | 98 | 52 | 80 | 30 | 63 |
| 5040 | 50 | 82.80 | 40 | 35 | 98 | 65 | 90 | 30 | 73 |
| 5050 | 50 | 82.80 | 50 | 35 | 98 | 75 | 100 | 30 | 83 |
| 6016 | 60 | 126.50 | 16 | 42.5 | 123 | 36 | 80 | 30 | 54 |
| 6020 | 60 | 126.50 | 20 | 42.5 | 123 | 40 | 80 | 30 | 54 |
| 6025 | 60 | 121.00 | 25 | 42.5 | 123 | 45 | 80 | 30 | 59 |
| 6032 | 60 | 121.00 | 32 | 42.5 | 123 | 52 | 80 | 30 | 63 |
| 6040 | 60 | 121.00 | 40 | 42.5 | 123 | 65 | 90 | 30 | 73 |
| 6050 | 60 | 121.00 (W307) | 50 | 42.5 | 123 | 75 | 100 | 30 | 83 |

* Whistle Notch

Thread-cutting quick-change chuck with VDI shank find on 3/118

## Form E2 for boring bars

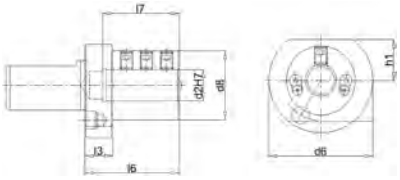
**Design: DIN 69880,** Tool holder for boring bars also with internal cooling.

**Clamping** direct.

Type A: bored shank.
Type B: full shank*.

**Application:** For boring bars.

DIN 69880




| Order No. | VDI | 3181 E2 | h1 mm | d2 mm | d6 mm | d8 mm | l7 mm | l3 mm | l6 mm |
|---|---|---|---|---|---|---|---|---|---|
| 1606 | 16 | 64.40 ◊ | 18 | 6 | 40 | 32 | 44 | 13 | 34 |
| 1608 | 16 | 64.40 ◊ | 18 | 8 | 40 | 32 | 44 | 13 | 34 |
| 1610 | 16 | 64.40 ◊ | 18 | 10 | 40 | 32 | 44 | 13 | 34 |
| 1612 | 16 | 64.40 ◊ | 18 | 12 | 40 | 40 | 44 | 13 | 34 |
| 1616 | 16 | 64.40 ◊ | 18 | 16 | 40 | 40 | 44 | 13 | 34 |
| 2008 | 20 | 64.40 ◊ | 23 | 8 | 50 | 40 | 50 | 18 | 42 |
| 2010 | 20 | 64.40 ◊ | 23 | 10 | 50 | 40 | 50 | 18 | 42 |
| 2012 | 20 | 64.40 ◊ | 23 | 12 | 50 | 40 | 50 | 18 | 42 |
| 2016 | 20 | 64.40 ◊ | 23 | 16 | 50 | 42 | 50 | 18 | 42 |
| 2020 | 20 | 64.40 ◊ | 23 | 20 | 50 | 49 | 50 | 18 | 42 |
| 2025 | 20 | 64.40 ◊ | 23 | 25 | 50 | 49 | 60 | 18 | 52 |
| 2508 | 25 | 64.40 ◊ | 25 | 8 | 58 | 40 | 50 | 18 | 41 |
| 2510 | 25 | 64.40 ◊ | 25 | 10 | 58 | 40 | 50 | 18 | 41 |
| 2512 | 25 | 64.40 ◊ | 25 | 12 | 58 | 40 | 50 | 18 | 41 |
| 2516 | 25 | 64.40 ◊ | 25 | 16 | 58 | 40 | 50 | 18 | 41 |
| 2520 | 25 | 64.40 ◊ | 25 | 20 | 58 | 58 | 50 | 18 | 41 |
| 2525 | 25 | 64.40 ◊ | 25 | 25 | 58 | 58 | 50 | 18 | 41 |
| 3006 | 30 | 59.80 | 28 | 6 | 68 | 55 | 60 | 22 | 43 |
| 3008 | 30 | 59.80 | 28 | 8 | 68 | 55 | 60 | 22 | 43 |
| 3010 | 30 | 59.80 | 28 | 10 | 68 | 55 | 60 | 22 | 43 |
| 3012 | 30 | 59.80 | 28 | 12 | 68 | 55 | 60 | 22 | 43 |
| 3016 | 30 | 59.80 | 28 | 16 | 68 | 55 | 60 | 22 | 55 |
| 3020 | 30 | 59.80 * | 28 | 20 | 68 | 55 | 60 | 22 | 54 |
| 3025 | 30 | 59.80 * | 28 | 25 | 68 | 55 | 60 | 22 | 54 |

(W307)

| Order No. | VDI | 3181 E2 | h1 mm | d2 mm | d6 mm | d8 mm | l7 mm | l3 mm | l6 mm |
|---|---|---|---|---|---|---|---|---|---|
| 3032 | 30 | 59.80 * | 28 | 32 | 68 | 67 | 75 | 22 | 61 |
| 3040 | 30 | 59.80 * | 28 | 40 | 68 | 67 | 75 | 22 | 66 |
| 4008 | 40 | 66.70 | 32.5 | 8 | 83 | 55 | 75 | 22 | 43 |
| 4010 | 40 | 66.70 | 32.5 | 10 | 83 | 55 | 75 | 22 | 43 |
| 4012 | 40 | 66.70 | 32.5 | 12 | 83 | 55 | 75 | 22 | 58 |
| 4016 | 40 | 66.70 | 32.5 | 16 | 83 | 55 | 75 | 22 | 61 |
| 4020 | 40 | 66.70 | 32.5 | 20 | 83 | 55 | 75 | 22 | 61 |
| 4025 | 40 | 66.70 * | 32.5 | 25 | 83 | 55 | 75 | 22 | 61 |
| 4032 | 40 | 67.90 * | 32.5 | 32 | 83 | 82 | 75 | 22 | 61 |
| 4040 | 40 | 74.80 * | 32.5 | 40 | 83 | 82 | 90 | 22 | 76 |
| 4050 | 40 | 74.80 * | 35 | 50 | 98 | 98 | 100 | 22 | 86 |
| 5012 | 50 | 85.10 | 35 | 12 | 98 | 68 | 90 | 30 | 71 |
| 5016 | 50 | 85.10 | 35 | 16 | 98 | 68 | 90 | 30 | 76 |
| 5020 | 50 | 85.10 | 35 | 20 | 98 | 68 | 90 | 30 | 76 |
| 5025 | 50 | 85.10 | 35 | 25 | 98 | 68 | 90 | 30 | 76 |
| 5032 | 50 | 85.10 * | 35 | 32 | 98 | 69 | 90 | 30 | 76 |
| 5040 | 50 | 85.10 * | 35 | 40 | 98 | 98 | 90 | 30 | 76 |
| 5050 | 50 | 89.70 * | 35 | 50 | 98 | 98 | 100 | 30 | 86 |
| 6016 | 60 | 121.00 | 42.5 | 16 | 123 | 68 | 90 | 30 | 76 |
| 6020 | 60 | 121.00 | 42.5 | 20 | 123 | 68 | 90 | 30 | 76 |
| 6025 | 60 | 121.00 | 42.5 | 25 | 123 | 68 | 90 | 30 | 76 |
| 6032 | 60 | 121.00 | 42.5 | 32 | 123 | 68 | 90 | 30 | 76 |
| 6040 | 60 | 126.50 * | 42.5 | 40 | 123 | 98 | 90 | 30 | 76 |
| 6050 | 60 | 131.00 * | 42.5 | 50 | 123 | 98 | 100 | 30 | 86 |

(W307)

* Type B

## Form E2S for boring bars - slotted

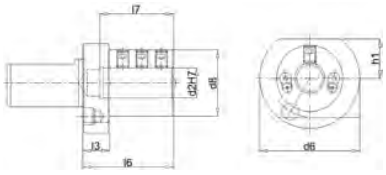
**Design:** Tool holder for drill bars also with internal cooling.

**Clamping** indirect.

Type A: bored shank.
Type B: full shank*.

**Application:** For boring bars.

DIN 69880




| Order No. | VDI | 3194 E2S | d2 mm | h1 mm | d6 mm | d8 mm | l6 mm | l7 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|
| 3010 | 30 | 116.00 ◊ | 10 | 28 | 68 | 46 | 88 | 65 | 22 |
| 3012 | 30 | 116.00 ◊ | 12 | 28 | 68 | 46 | 88 | 70 | 22 |
| 3016 | 30 | 116.00 ◊* | 16 | 28 | 68 | 50 | 88 | 70 | 22 |
| 3020 | 30 | 116.00 ◊* | 20 | 28 | 68 | 54 | 96 | 80 | 22 |
| 3025 | 30 | 129.00 ◊* | 25 | 28 | 68 | 58 | 112 | 100 | 22 |
| 3032 | 30 | 147.00 ◊* | 32 | 28 | 68 | 63 | 142 | 128 | 22 |
| 3040 | 30 | 157.50 ◊ | 40 | 28 | 68 | 73 | 174 | 150 | 22 |
| 4010 | 40 | 129.00 ◊ | 10 | 32.5 | 83 | 46 | 88 | 65 | 22 |
| 4012 | 40 | 129.00 ◊ | 12 | 32.5 | 83 | 46 | 95 | 85 | 22 |
| 4016 | 40 | 129.00 ◊ | 16 | 32.5 | 83 | 50 | 88 | 70 | 22 |
| 4020 | 40 | 137.00 ◊ | 20 | 32.5 | 83 | 54 | 96 | 80 | 22 |
| 4025 | 40 | 155.50 ◊* | 25 | 32.5 | 83 | 58 | 112 | 100 | 22 |

(W307)

| Order No. | VDI | 3194 E2S | d2 mm | h1 mm | d6 mm | d8 mm | l6 mm | l7 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|
| 4032 | 40 | 169.00 ◊* | 32 | 32.5 | 83 | 63 | 142 | 128 | 22 |
| 4040 | 40 | 185.00 ◊* | 40 | 32.5 | 83 | 73 | 174 | 150 | 22 |
| 5016 | 50 | 171.50 ◊ | 16 | 35 | 98 | 50 | 103 | 85 | 30 |
| 5020 | 50 | 173.50 ◊ | 20 | 35 | 98 | 54 | 103 | 89 | 30 |
| 5025 | 50 | 195.50 ◊ | 25 | 35 | 98 | 59 | 120 | 106 | 30 |
| 5032 | 50 | 216.00 ◊* | 32 | 35 | 98 | 65 | 150 | 128 | 30 |
| 5040 | 50 | 236.00 ◊* | 40 | 35 | 98 | 73 | 182 | 160 | 30 |
| 5050 | 50 | 240.50 ◊* | 50 | 35 | 98 | 83 | 182 | 160 | 30 |
| 6025 | 60 | 253.00 ◊ | 25 | 42.5 | 123 | 59 | 120 | 106 | 30 |
| 6032 | 60 | 264.50 ◊ | 32 | 42.5 | 123 | 65 | 150 | 128 | 30 |
| 6040 | 60 | 291.00 ◊* | 40 | 42.5 | 123 | 73 | 182 | 160 | 30 |
| 6050 | 60 | 317.50 ◊* | 50 | 42.5 | 123 | 83 | 202 | 180 | 30 |

(W307)

* Type B

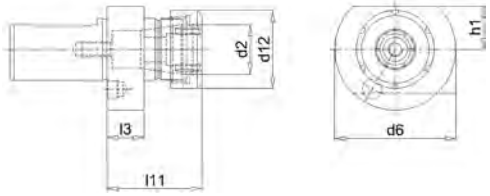
**Note: Reducing sleeves are found on 3/25.**

## Form E4

**Design: DIN 69880,** collet chuck adaptor ER DIN 6499.

**Application:** For mounting tools in collet chucks.

DIN 69880



| Order No. | VDI | 3188 E4 | Size | d2 mm | h1 mm | d6 mm | d12 mm | l11 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|
| 1616 | 16 | 88.60 ◊ | ER16 | 1–10 | 18 | 40 | 32 | 44 | 13 |
| 2016 | 20 | 86.30 ◊ | ER16 | 1–10 | – | 50 | 32 | 44 | 18 |
| 2020 | 20 | 86.30 ◊ | ER20 | 1–13 | – | 50 | 35 | 59 | 18 |
| 2025 | 20 | 86.30 ◊ | ER25 | 2–16 | – | 50 | 42 | 65 | 18 |
| 2032 | 20 | 86.30 ◊ | ER32 | 2–20 | – | 50 | 50 | 67 | 18 |
| 2525 | 25 | 94.30 ◊ | ER25 | 2–16 | 25 | 58 | 42 | 58 | 18 |
| 3010 | 30 | 96.60 | ER16 | 1–10 | 28 | 68 | 32 | 48 | 22 |
| 3016 | 30 | 96.60 (W307) | ER25 | 2–16 | 28 | 68 | 42 | 57 | 22 |

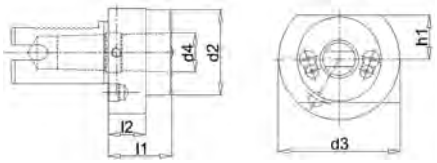
| Order No. | VDI | 3188 E4 | Size | d2 mm | h1 mm | d6 mm | d12 mm | l11 mm | l3 mm |
|---|---|---|---|---|---|---|---|---|---|
| 3020 | 30 | 96.60 | ER32 | 2–20 | 28 | 68 | 50 | 78 | 22 |
| 3030 | 30 | 96.60 | ER40 | 3–30 | 28 | 68 | 63 | 80 | 22 |
| 4016 | 40 | 96.60 | ER25 | 2–16 | 32.5 | 83 | 42 | 57 | 22 |
| 4020 | 40 | 96.60 | ER32 | 2–20 | 32.5 | 83 | 50 | 78 | 22 |
| 4030 | 40 | 96.60 | ER40 | 3–30 | 32.5 | 83 | 63 | 80 | 22 |
| 5020 | 50 | 123.00 | ER32 | 2–20 | 35 | 98 | 50 | 92 | 30 |
| 5030 | 50 | 123.00 | ER40 | 3–30 | 35 | 98 | 63 | 80 | 30 |
| 6030 | 60 | 153.00 (W307) | ER40 | 3–30 | 42.5 | 123 | 63 | 80 | 30 |

## Form F

**Design: DIN 69880,** with Morse taper adapter.

**Application:** For mounting tools with Morse taper shank with tang to DIN 228-B.

DIN 69880



| Order No. | VDI | 3189 F | MK | h1 mm | d3 mm | d2 mm | d4 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|
| 1601 | 16 | 74.80 ◊ | 1 | – | 42 | – | 12.065 | 31.5 | – |
| 2001 | 20 | 74.80 ◊ | 1 | – | 50 | – | 12.065 | 23 | – |
| 2002 | 20 | 74.80 ◊ | 2 | – | 50 | 45 | 17.78 | 41 | 22 |
| 2501 | 25 | 74.80 ◊ | 1 | 25 | 58 | 45 | 12.065 | 23 | 18 |
| 2502 | 25 | 102.50 ◊ | 2 | 25 | 58 | 45 | 17.78 | 34 | 18 |
| 3001 | 30 | 66.70 | 1 | 28 | 68 | – | 12.065 | 27 | – |
| 3002 | 30 | 66.70 | 2 | 28 | 68 | 55 | 17.78 | 36 | 27 |
| 3003 | 30 | 66.70 | 3 | 28 | 68 | 55 | 23.825 | 66 | 41 |
| 4001 | 40 | 72.50 | 1 | 32.5 | 83 | 55 | 12.065 | 23 | 22 |
| 4002 | 40 | 72.50 (W307) | 2 | 32.5 | 83 | 55 | 17.78 | 36 | 22 |

| Order No. | VDI | 3189 F | MK | h1 mm | d3 mm | d2 mm | d4 mm | l1 mm | l2 mm |
|---|---|---|---|---|---|---|---|---|---|
| 4003 | 40 | 72.50 | 3 | 32.5 | 83 | 58 | 23.825 | 36 | 22 |
| 4004 | 40 | 80.50 | 4 | 32.5 | 83 | 68 | 31.267 | 80 | 22 |
| 5002 | 50 | 93.20 | 2 | 35 | 98 | 55 | 17.78 | 36 | 30 |
| 5003 | 50 | 90.90 | 3 | 35 | 98 | 58 | 23.825 | 45 | 30 |
| 5004 | 50 | 93.20 | 4 | 35 | 98 | 68 | 31.267 | 55 | 30 |
| 5005 | 50 | 126.50 * | 5 | 35 | 98 | 75 | 44.399 | 72 | 30 |
| 6002 | 60 | 121.00 | 2 | 42.5 | 123 | 55 | 17.78 | 35 | 30 |
| 6003 | 60 | 121.00 | 3 | 42.5 | 123 | 58 | 23.825 | 45 | 30 |
| 6004 | 60 | 123.00 | 4 | 42.5 | 123 | 68 | 31.267 | 55 | 30 |
| 6005 | 60 | 132.50 (W307) | 5 | 42.5 | 123 | 98 | 44.399 | 64 | 30 |

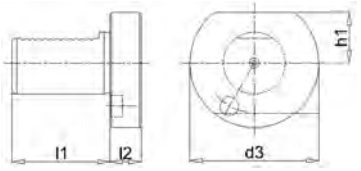
* Without serration.

## Sealing plug Form Z2

**Design: DIN 69880,** with cylindrical shank.

**Application:** Closing of VDI places on the revolver against dirt and coolant.

DIN 69880



| Order No. | VDI | 3191 Z2 | h1 mm | d3 mm | l1 mm | l2 mm | Design |
|---|---|---|---|---|---|---|---|
| 0070 | 16 | 27.60 ◊ | 18 | 40 | 45 | 13 | Steel |
| 0080 | 20 | 27.60 ◊ | 23 | 50 | 56 | 16 | Steel |
| 0090 | 25 | 27.60 ◊ | 25 | 58 | 64 | 16 | Steel |
| 0100 | 30 | 24.20 | 28 | 68 | 71 | 16 | Steel |
| 0110 | 40 | 28.80 | 32.5 | 83 | 83 | 20 | Steel |
| 0120 | 50 | 35.70 | 35 | 98 | 98 | 20 | Steel |
| 0130 | 60 | 47.20 (W307) | 42.5 | 123 | 114 | 20 | Steel |

| Order No. | VDI | 3191 Z2 | h1 mm | d3 mm | l1 mm | l2 mm | Design |
|---|---|---|---|---|---|---|---|
| 0170 | 16 | 17.25 ◊ | 18 | 40 | 45 | 13 | Plastic |
| 0180 | 20 | 12.65 ◊ | 23 | 50 | 56 | 16 | Plastic |
| 0190 | 25 | 12.65 ◊ | 25 | 58 | 64 | 16 | Plastic |
| 0200 | 30 | 9.20 | 28 | 68 | 71 | 16 | Plastic |
| 0210 | 40 | 10.35 | 32.5 | 83 | 83 | 20 | Plastic |
| 0220 | 50 | 17.25 | 35 | 98 | 98 | 20 | Plastic |
| 0230 | 60 | 20.70 (W307) | 42.5 | 123 | 114 | 20 | Plastic |

## VDI CNC chuck

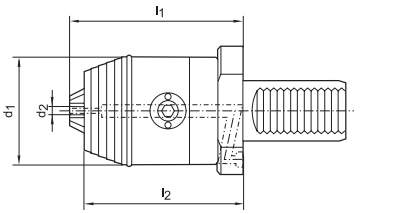
**Design: DIN 69880,** with cylindrical shank and central coolant supply. Chuck and shank in one piece. Clamping using a hex spanner essentially increases clamping force in comparison to conventional chucks. Concentricity 0.02 mm.

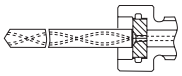
**Scope of delivery:** CNC chuck incl. sealing disc for inner coolant drills with 3-6 mm Ø.

DIN 69880 | ≤ 20 µm

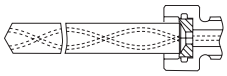
WTE MAPAL GROUP

| Order No. | Clamping range mm | 3206 WTE | VDI | $d_1$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0015 | 0.3– 8 | 462.50 | 30 | 36 | 68 | 71 |
| 0020 | 0.5–13 | 319.50 | 30 | 50 | 90 | 96 |
| 0025 | 2.5–16 | 330.50 | 30 | 57 | 95 | 101 |
| 0028 | 0.3– 8 | 468.50 | 40 | 36 | 68 | 71 |
| 0030 | 0.5–13 | 330.50 | 40 | 60 | 90 | 96 |
| 0035 | 2.5–16 | 343.00 | 40 | 57 | 95 | 101 |
| 0040 | 0.5–13 | 422.00 ◊ | 50 | 50 | 90 | 96 |
| 0045 | 2.5–16 | 440.00 ◊ | 50 | 57 | 95 | 101 |
| 0050 | 2.5–16 | 482.50 ◊ (W325) | 50 | 57 | 95 | 101 |



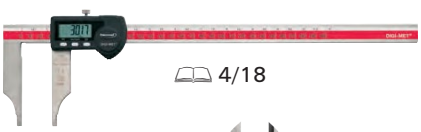



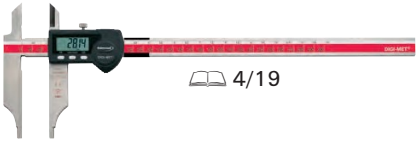
Sealing disc WTE 13 Ø 2.05 mm included, for coolant drill bits Ø 3-6 mm with smooth shank in line with DIN 6535 Form HA.



Sealing disc WTE 13 Ø 4.2 mm built into drill chuck head, for coolant drill bits Ø 6-13 mm with smooth shank in line with DIN 6535 Form HA.

format professional quality



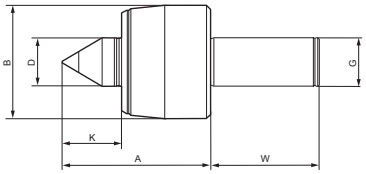

**Guaranteed exceedingly well**

Highest precision with FORMAT measuring technology.
Whether mechanical or digital, FORMAT pocket calipers measure precisely.
All FORMAT calipers meet the highest quality requirements and are characterized by special accuracy.

## Revolving centre punch

NEW

**Design:** Body hardened and ground, with **tip angle 60°.**
Triple bearing for high axial and radial strength.
Sealed for life.

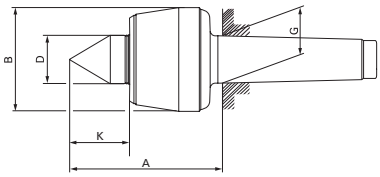


| Order No. | | 4200 | 4250 | 4320 |
|---|---|---|---|---|
| **Mount Ø G** | **mm** | **20** | **25** | **32** |
| **3183** | | **246.00** | **301.00** | **343.00** |
| Size | | 102 | 106 | 108 |
| Dimension A | mm | 58 | 76.8 | 93.1 |
| Dimension B | mm | 43 | 48.5 | 68.5 |
| Dimension D | mm | 20 | 25 | 32 |
| Dimension K | mm | 24 | 30.5 | 40 |
| Max. concentricity | mm | 0.005 | 0.005 | 0.005 |
| Max. workpiece weight | kg | 130 | 200 | 400 |
| Speed max. | $min^{-1}$ | 7000 | 5000 | 3800 |

(W309)

## Revolving centre punch

**Design:** Moving point hardened and ground, with **tip angle 60°.**



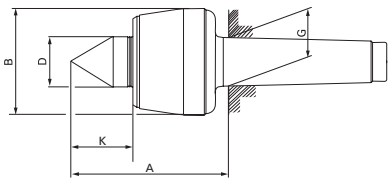
| Order No. | | 0005 | 0010 | 0015 | 0020 | 0025 |
|---|---|---|---|---|---|---|
| **Morse taper** | | **1** | **2** | **3** | **4** | **5** |
| **3303** | | **95.60** | **115.50** | **137.50** | **169.00** | **260.00** |
| Size | | 101 | 102 | 104 | 108 | 110 |
| Dimension A | mm | 60.5 | 65 | 70.5 | 102.5 | 129 |
| Dimension B | mm | 34.5 | 43 | 48.5 | 63.5 | 88.5 |
| Dimension D | mm | 15 | 20 | 22 | 32 | 40 |
| Dimension G | mm | 12.065 | 17.78 | 23.825 | 31.267 | 44.399 |
| Dimension K | mm | 17 | 24 | 27 | 40 | 49.5 |
| Max. concentricity | mm | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| Max. workpiece weight | kg | 100 | 200 | 400 | 800 | 2000 |
| Speed max. | $min^{-1}$ | 7000 | 7000 | 6300 | 3800 | 3800 |

(W310)

## Revolving centre punch Orange Line

**Design:** High concentricity and three-fold supported Moving tip hardened and thus optionally re-sharpened. Splash groove for protection. Low interfering contour thanks to slim casing.

**Application:** For lightweight workpieces and high speeds.



| Order No. | | 0015 | 0020 | 0025 |
|---|---|---|---|---|
| **Morse taper** | | **3** | **4** | **5** |
| **3304** | | **161.00** | **207.00** | **311.00** |
| Size | | K33 | K34 | K35 |
| Dimension A | mm | 82.5 | 101.5 | 128 |
| Dimension B | mm | 55 | 68.5 | 88.5 |
| Dimension D | mm | 25 | 32 | 40 |
| Dimension G | mm | 23.825 | 32.267 | 44.399 |
| Dimension K | mm | 30.3 | 39.8 | 49.3 |
| Max. concentricity | mm | 0.005 | 0.005 | 0.005 |
| Max. workpiece weight | kg | 300 | 500 | 630 |
| Speed max. | $min^{-1}$ | 8500 | 6000 | 4500 |

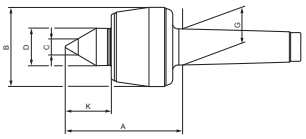
(W310)

## Revolving centre punch - PRO HM

NEW

**Design:** Body hardened and ground, with **tip angle 60°.** Moving point with non-wearing carbide insert. Triple bearing for high axial and radial strength. Sealed for life.

Carbide

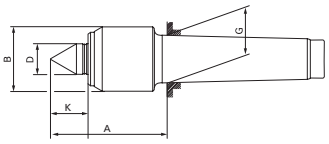


| Order No. | | 0102 | 0104 | 0106 | 0108 | 0110 | 0114 |
|---|---|---|---|---|---|---|---|
| **Morse taper** | | **2** | **3** | **3** | **4** | **5** | **6** |
| **3305** | | **394.00** | **410.00** | **480.00** | **548.00** | **793.00** | **1586.00** |
| Size | | 102 | 104 | 106 | 108 | 110 | 114 |
| Dimension A | mm | 65 | 70.5 | 79.5 | 102.5 | 129 | 152 |
| Dimension B | mm | 43 | 48.5 | 58.5 | 68.5 | 88.5 | 102.5 |
| Dimension C | mm | 11 | 11 | 14 | 14 | 18 | 18 |
| Dimension D | mm | 20 | 22 | 25 | 32 | 40 | 50 |
| Dimension G | mm | 17.78 | 23.825 | 23.825 | 31.267 | 44.399 | 63.348 |
| Dimension K | mm | 24 | 27 | 30.5 | 40 | 49.5 | 57 |
| Max. concentricity | mm | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 |
| Max. workpiece weight | kg | 120 | 240 | 360 | 500 | 1000 | 1800 |
| Speed max. | $min^{-1}$ | 7000 | 6300 | 5000 | 3800 | 3000 | 2600 |

(W309)

## Revolving centre punch - SLIM normal

**Design:** Body and tip drop forged, hardened and ground. Moving point is regrindable for several times and shank-mounted, with **tip angle 60°.** The precision bearing is protected from dirt and coolant by the special lip seal. The shank is ground, with hole for easy dismantling. The small housing diameter avoids obstructions for slide rests, tool posts and turning tools. The radial load carrying capacity is regarded as equal to the other constructions. The axial load carrying capacity is less due to its constructional characteristics.



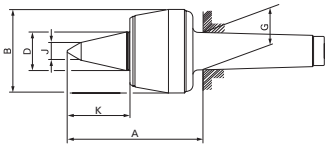
**Application:** For all turning operations, especially machining workpieces needing a small head diameter size.

| Order No. | | 0005 | 0010 | 0015 | 0020 |
|---|---|---|---|---|---|
| **Morse taper** | | **2** | **3** | **4** | **5** |
| **3300** | | **158.00** | **165.00** | **219.00** | **317.00** |
| Size | | 02 | 04 | 08 | 10 |
| Dimension A | mm | 62 | 62 | 75.5 | 106 |
| Dimension B | mm | 32 | 34 | 42 | 58 |
| Dimension D | mm | 15 | 15 | 20 | 30 |
| Dimension G | mm | 17.78 | 23.825 | 31.267 | 44.399 |
| Dimension K | mm | 19.5 | 19.5 | 24.5 | 37 |
| Max. concentricity | mm | 0.005 | 0.005 | 0.005 | 0.01 |
| Max. workpiece weight | kg | 200 | 400 | 800 | 1600 |
| Speed max. | $min^{-1}$ | 7000 | 7000 | 6300 | 4300 |

(W309)

## Revolving centre punch - HVL PRO extended

**Design:** Body and tip drop forged, hardened and ground. Moving point is regrindable for several times and shank-mounted, with **tip angle 60°.** The precision bearing is protected from dirt and coolant by the special lip seal. The shank is ground, with hole for easy dismantling. The permissible load is reduced by the extended moving point. With short projection length and low-vibration running.



**Application:** For precision turning and roughing, can be universally used on all types of lathes. **Particularly suitable for copy turning.** The extended tip enables unobstructed movement of the sliding rests.

| Order No. | | 0005 | 0010 | 0015 | 0020 | 0025 |
|---|---|---|---|---|---|---|
| **Morse taper** | | **1** | **2** | **3** | **4** | **5** |
| **3306** | | **237.00** | **237.00** | **288.00** | **330.00** | **476.00** |
| Size | | 101 | 102 | 106 | 108 | 110 |
| Dimension A | mm | 70.5 | 75 | 95.5 | 114.5 | 143.5 |
| Dimension B | mm | 34.5 | 43 | 58.5 | 68.5 | 88.5 |
| Dimension D | mm | 15 | 20 | 25 | 32 | 40 |
| Dimension G | mm | 12.065 | 17.78 | 23.825 | 31.267 | 44.399 |
| Dimension J | mm | 9 | 10 | 12 | 14 | 16 |
| Dimension K | mm | 27 | 34 | 47 | 53 | 65 |
| Max. concentricity | mm | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 |
| Max. workpiece weight | kg | 80 | 140 | 400 | 500 | 1200 |
| Speed max. | $min^{-1}$ | 7000 | 7000 | 5000 | 3800 | 3000 |

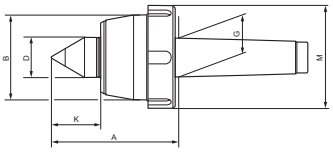
(W309)

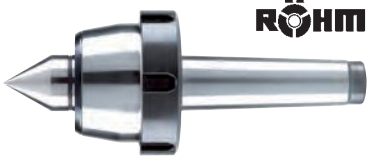
## Revolving tailstock centre - PRO

NEW

**Design:** Body hardened and ground, with tip angle 60°. Triple bearing for high axial and radial strength. Sealed for life. With jacknut.

**Application:** For counter-clamping on rotary and grinding machines.



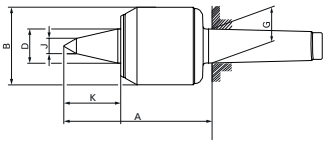
| Order No. | | 0020 | 0030 | 0040 | 0050 | 0060 |
|---|---|---|---|---|---|---|
| **Morse taper** | | **2** | **3** | **4** | **5** | **6** |
| **3308** | | **351.00** | **395.00** | **429.00** | **706.00 ◊** | **1102.00 ◊** |
| Size | | 102 | 106 | 108 | 110 | 114 |
| Dimension A | mm | 65 | 79.5 | 102.5 | 129 | 152 |
| Dimension B | mm | 45 | 60 | 70 | 90 | 105 |
| Dimension D | mm | 20 | 25 | 32 | 40 | 50 |
| Dimension G | mm | 17.78 | 23.825 | 31.267 | 44.399 | 63.348 |
| Dimension K | mm | 24 | 30.5 | 40 | 49.5 | 57 |
| Dimension M | mm | 56 | 74 | 82 | 105 | 120 |
| Max. concentricity | mm | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 |
| Max. workpiece weight | kg | 120 | 360 | 500 | 1000 | 1800 |
| Speed max. | $min^{-1}$ | 7000 | 5000 | 3800 | 3000 | 2600 |

(W309)

## Revolving tailstock centre - AC-VL CONTROL extended

**Design:** Body and tip drop forged, hardened and ground. Moving point is regrindable for several times and shank-mounted, **with low 60° VL tip angle deflection.** The precision bearing is protected from dirt and coolant by the special lip seal. The shank is ground, with hole for easy dismantling.
Clamping force can be directly read in daN from the manometer. Pressure equalisation is done via disc springs.

**Application:** Particularly suitable as tail centre to face drivers, to determine and maintain the clamping force as well as to clamp long, slim workpieces to prevent deflections.



| Order No. | | 0005 | 0010 | 0015 | 0020 |
|---|---|---|---|---|---|
| **Morse taper** | | **3** | **4** | **5** | **6** |
| **3312** | | **801.00** | **967.00** | **1262.00** | **2215.00** |
| Size | | 503 | 504 | 505 | 506 |
| Dimension A | mm | 120 | 137.5 | 177.5 | 223 |
| Dimension B | mm | 64 | 72 | 95 | 120 |
| Dimension D | mm | 25 | 32 | 40 | 52 |
| Dimension G | mm | 23.825 | 31.267 | 44.399 | 63.348 |
| Dimension K | mm | 46.5 | 53 | 66 | 80 |
| Dimension J | mm | 11 | 14 | 15 | 24 |
| Max. concentricity | mm | 0.01 | 0.01 | 0.01 | 0.015 |
| Max. axial clamping force | daN | 550 | 900 | 1500 | 2000 |
| Max. workpiece weight | kg | 260 | 550 | 1100 | 2500 |
| Speed max. | $min^{-1}$ | 4000 | 3500 | 2500 | 1800 |

(W309)

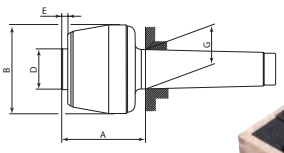
## Revolving tailstock centres with interchangeable inserts - FLEX

**Design:** Fully hardened and ground. Supplied in wooden case.

**Application:** Versatile by simple and fast replacement of the centring inserts using the lifter.

**Scope of delivery:** Revolving lathe centre with 3 inserts (60°, 90° and 60° VL), 1 hollow body 60°, 2 hollow bodies for non-centred workpieces (Form A and B) and 1 lifter.

**Note:** Individual inserts and hollow bodies upon request.



| Order No. | | 0005 | 0010 | 0015 | 0020 | 0025 |
|---|---|---|---|---|---|---|
| **Morse taper** | | **2** | **3** | **3** | **4** | **5** |
| **3315** | | **491.00** | **558.00** | **630.00** | **737.00** | **974.00** |
| Size | | 102 | 104 | 106 | 108 | 110 |
| Dimension A | mm | 45 | 48 | 55 | 67 | 85 |
| Dimension B | mm | 43 | 48.5 | 58.5 | 68.5 | 88.5 |
| Dimension D | mm | 20 | 22 | 25 | 32 | 40 |
| Dimension E | mm | 4 | 4 | 5.5 | 5 | 6 |
| Max. concentricity | mm | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Max. workpiece weight | kg | 40 | 130 | 150 | 250 | 650 |

(W309)

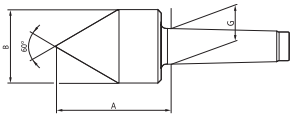


Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Revolving centring taper

**Design:** Mounting shank, body and taper hardened. **Taper is pointed, 60°,** stable bearing.

**Application:** As self-centring taper for hollow bodies and as centring point for machining standard workpieces.



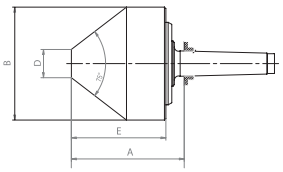
| Order No. | | 0005 | 0010 | 0015 | 0020 |
|---|---|---|---|---|---|
| **Morse taper** | | **2** | **3** | **4** | **5** |
| **3320** ROHM | | **309.00** | **323.00** | **340.00** | **510.00** |
| Size | | 272 | 273 | 274 | 275 |
| Dimension A | mm | 61 | 79 | 100 | 115.5 |
| Dimension B | mm | 42 | 56 | 64 | 78 |
| Dimension G | mm | 17.78 | 23.825 | 31.267 | 44.399 |
| Concentricity | mm | 0.01 | 0.008 | 0.008 | 0.008 |
| Max. workpiece weight | kg | 200 | 400 | 800 | 1600 |

(W309)

## Revolving self-centring taper, blunt

**Design:** Mounting shank, body and taper hardened. **Taper is blunt, 75°,** stable bearing.

**Application:** For machining tubes and other hollow bodies.



| Order No. | | 0040 | 0045 | 0050 | 0055 | 0060 | 0065 | 0070 | 0075 | 0080 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Morse taper** | | **2** | **3** | **4** | **3** | **4** | **5** | **4** | **5** | **5** |
| **3325** ROHM | | **309.00** | **323.00** | **340.00** | **405.00** | **425.00** | **510.00** | **851.00** | **1020.00** | **2039.00** |
| Size | | 172 | 172a | 172b | 173 | 173a | 173b | 174 | 174a | 175 |
| Dimension A | mm | 80 | 80 | 81.5 | 85.5 | 87 | 88 | 107 | 106 | 146.5 |
| Dimension B | mm | 80 | 80 | 80 | 120 | 120 | 120 | 170 | 170 | 250 |
| Dimension D | mm | 20 | 20 | 20 | 30 | 30 | 30 | 50 | 50 | 75 |
| Dimension E | mm | 67 | 67 | 67 | 72 | 72 | 72 | 90 | 90 | 130 |
| Dimension G | mm | 17.78 | 23.825 | 31.267 | 23.825 | 31.267 | 44.399 | 31.267 | 44.399 | 44.399 |
| Max. concentricity | mm | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 | 0.01 | 0.01 | 0.01 |
| Max. workpiece weight | kg | 300 | 400 | 400 | 600 | 800 | 800 | 1200 | 1600 | 2000 |

(W309)

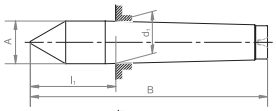
## Fixed centring point

**Design: DIN 806,** tip angle 60°, made of tool steel, fully hardened and ground.

**Application:** For grinding at low speed and for measuring.

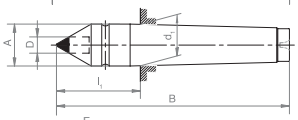
format professional quality

**3330** **Full point.** DIN 806



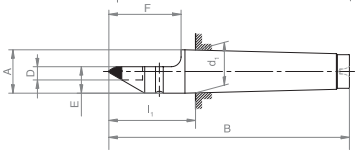
3330

**3333** **Full point with carbide insert.** Carbide



3333

**3336** **Half point with carbide insert.**
Particularly suitable for smaller workpieces where a full point would be obstructive in the workplace. Carbide



3336

| Order No. | | 0005 | 0010 | 0015 | 0020 |
|---|---|---|---|---|---|
| **Morse taper** | | **2** | **3** | **4** | **5** |
| **3330** format | | **20.60** | **27.50** | **37.80** | **69.10** |
| **3333** format | | **51.70** | **69.10** | **96.50** | **173.00** |
| **3336** format | | **77.80** | **103.50** | **145.50** | – |
| Dimension A | mm | 18 | 24.1 | 31.6 | 44.7 |
| Dimension B | mm | 100 | 125 | 160 | 200 |
| Dimension D | mm | 7 | 11 | 14 | 18 |
| Dimension E | mm | 11 | 15 | 21 | – |
| Dimension F | mm | 30 | 38 | 50 | – |
| Dimension $d_1$ | mm | 17.78 | 23.825 | 31.267 | 44.399 |
| Dimension $l_1$ | mm | 36 | 44 | 57.5 | 70.5 |

(W310)

## Cartridge mandrel range of products

**Application:** For axial and radial runout control. Turning, grinding, etc. Mounting between centres. Supplied in wooden case.

| Order No. | Size | 3350 RÖHM | Clamping range mm | Set contents |
|---|---|---|---|---|
| 0005 | 1 | 1422.00 ◊ | 12–26 | 5 clamping mandrels size 02–06<br>7 clamping sleeves<br>12; 14; 16; 18; 20; 22; 24 mm |
| 0010 | 2 | 1572.00 ◊ | 25–55 | 3 clamping mandrels size 07–09<br>6 clamping sleeves 25; 30; 35; 40; 45; 50 mm |
| | | (W001) | | |

## Constant face driver range of products CoA

**Design:** CoA small range of products, clamping diameter 12–50 mm, turning range 13–100 mm, hydraulic. Supplied in wooden case.

**Application:** For efficient turning of workpieces over their entire length in one setup with high accuracy. Designed based on the modular principle, therefore universal exchange of driving plates and centring points possible. Hydraulic or mechanic pressure equalisation results in uniform clamping force also in case of uneven workpiece faces. Workpiece face longitudinal stop by spring-loaded centring point.

**Scope of delivery:** Constant face driver range of products with 1 base body, 4 driving cutters, clamping diameters 12 – 20 – 32 – 50 mm and 2 centring points, diameter A = 6 + 12 mm.

| Order No. | MK | 3340 RÖHM | Running direction |
|---|---|---|---|
| 0005 | 3 | 927.00 | Right |
| 0010 | 3 | 927.00 ◊ | Left |
| 0015 | 4 | 949.00 | Right |
| 0020 | 4 | 949.00 ◊ | Left |
| 0025 | 5 | 1004.00 ◊ | Right |
| 0030 | 5 | 1004.00 ◊ | Left |
| 0035 | 6 | 1148.00 ◊ | Right |
| 0040 | 6 | 1148.00 ◊ | Left |
| | | (W311) | |

## Constant face driver range of products CoE

**Design:** CoE range of products, clamping diameter 12–50 mm, turning range 13–100 mm. Supplied in wooden case.

**Application:** Ideally suitable for efficient turning of workpieces over their entire length in one setup with high accuracy. At the same time, a groove or serration can be milled. This can e.g. save changeover to a vice which translates into savings in time and costs. Designed based on the modular principle, therefore universal exchange of driving plates and centring points possible. Mechanic pressure equalisation results in uniform clamping force also in case of uneven workpiece faces. Workpiece face longitudinal stop by spring-loaded centring point.

**Scope of delivery:** Constant face driver range of products with 1 base body, 4 driving plates, clamping diameters 12 – 20, 32 and 50 mm as well as 3 centring points, diameter 12, 20 and 32-50 mm.

| Order No. | MK | 3341 RÖHM | Running direction |
|---|---|---|---|
| 0005 | 3 | 1082.00 ◊ | Right or left |
| 0010 | 4 | 1112.00 ◊ | Right or left |
| 0015 | 5 | 1164.00 ◊ | Right or left |
| | | (W311) | |

## Key-type chuck, impact resistant

**Design:** With thread or taper mounting, clockwise rotating, impact resistant.

**Application:** For universal drilling on electric hand, impact and column drilling machines.

**Scope of delivery:** Key-type chuck with key.

| Order No. | Clamping range mm | 3400 format | 3403 RÖHM | Morse taper | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|---|
| 0004 | 1 –10 | 25.70 | – | 3/8" x 24 | 34 | 50 | 60 |
| 0007 | 1 –10 | 25.70 | – | 1/2" x 20 | 34.5 | 49.5 | 61 |
| 0010 | 1.5–13 | 34.40 | – | 1/2" x 20 | 42.4 | 59 | 74 |
| 0019 | 1 –10 | 25.70 | – | B 12 | 37 | 50 | 60.5 |
| 0022 | 1 –10 | 25.70 | – | B 16 | 42.8 | 63 | 77 |
| 0025 | 1.5–13 | 34.40 | – | B 16 | 42.8 | 63 | 77 |
| 0028 | 3 –16 | 60.70 | – | B 16 | 50 | 67.5 | 86.5 |
| 0001 | 0.5– 8 | – | 27.30 | 3/8" x 24 | 29.5 | 42.5 | 53 |
| 0013 | 0.5– 6.5 | – | 27.30 | B 10 | 29.5 | 43 | 53 |
| 0016 | 0.5– 8 | – | 27.30 | B 12 | 29.5 | 47.5 | 57.5 |
| 0031 | 1 –16 | – | 71.60 | B 18 | 56.5 | 79 | 98 |
| 0034 | 5 –20 | – | 143.00 | B 22 | 65 | 92.5 | 113.5 |
| | | (W314) | (W316) | | | | |

3400 format professional quality

3403 RÖHM

## Key-type chuck, impact resistant

**Design:** With threaded hub, hole Ø 6.5 mm, impact resistant.

**Application: For anti-clockwise and clockwise rotating** hand drills, hammer drills and drill presses.

**Scope of delivery:** Key-type chuck with key.

format professional quality

| Order No. | Clamping range mm | 3404 format | Morse taper | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|
| 0001 | 1.5–13 | 34.40 (W314) | 1/2" x 20 | 42.4 | 59 | 74 |

## Key-type chuck PRIMA 6L

**Design:** Suitable for clockwise and anti-clockwise rotation, 1/4" hex mount.

**Application:** For stationary and hand-operated drills, particularly for percussion drills with 1/4" hexagonal take-up. Use only without impact function.

RÖHM

| Order No. | Clamping range mm | 3404 RÖHM | Morse taper | Size mm | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|---|
| 0005 | 0.5–6.5 | 30.40 (W316) | 1/4" hex | 6L | 29.3 | 42.5 | 53 |

## Key-type hammer drill chuck PRIMA HBF

NEW

**Design:** Suitable for **clockwise and anti-clockwise rotation**, SDS-plus mount. Carbide inserts in the clamping jaws.

**Application:** For stationary and hand-operated drills, particularly for percussion drills with SDS-plus take-up.

RÖHM

| Order No. | Clamping range mm | 3404 RÖHM | Morse taper | Size | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|---|
| 0010 | 2.5–13 | 61.30 (W316) | SDS plus | 13 | 42.9 | 68 | 81.5 |

## SDS plus mounting shank

**Design:** SDS plus mounting shank für chucks.

**Scope of delivery:** Mounting shank with screw.

BOSCH

| Order No. | Morse taper | 3405 BOSCH |
|---|---|---|
| 0001 | 1/2" x 20 | 17.75 (W314) |

## Replacement key for key-type chuck

| Order No. | Size | 3406 format | Suitable for chuck with chucking capacity | Pin Ø mm |
|---|---|---|---|---|
| 0005 | S 1 | 2.77 | from 0.5 to 8 | 4 |
| 0010 | S 2 | 2.77 | from 0.8 to 10/1.5 to 13 | 6 |
| 0015 | S 3 | 3.89 | from 3 to 16 | 8 |
| 0020 | S 4 | 5.00 | from 5 to 20 | 9 |
| | | (W314) | | |

## Quick-clamping standard chuck

**Design: Lightweight design,** with thread or taper mounting, keyless and rapid clamping.

**Application:** Mainly for hand-operated drills.

| Order No. | Clamping range mm | 3412 format | 3415 RÖHM | Morse taper | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|---|
| 0001 | 0.5–10 | 59.20 | – | 3/8" x 24 | 35.8 | 66 | 73.7 |
| 0004 | 0.5–10 | 53.40 | – | 1/2" x 20 | 35.8 | 66 | 73.7 |
| 0007 | 1 –13 | 64.00 | 71.60 | 1/2" x 20 | 40.2 | 76.3 | 83.6 |
| 0010 | 3 –16 | 69.10 | – | 1/2" x 20 | 46 | 87.5 | 97.5 |
| 0013 | 0 – 6.5 | – | 77.80 | B 10 | 32 | 59.5 | 65.6 |
| 0017 | 0 – 8 | – | 77.80 NEW | B 10 | 35 | 67 | 73.5 |
| 0019 | 0 – 6.5 | – | 77.80 | B 12 | 32 | 59.5 | 65.6 |
| 0022 | 0 – 8 | – | 80.10 | B 12 | 35.8 | 67 | 73.4 |
| 0025 | 0.5–10 | 53.40 | – | B 12 | 35.8 | 68 | 75.7 |
| 0028 | 1 –13 | 57.60 | 71.60 | B 12 | 40.2 | 78.8 | 86.1 |
| 0031 | 0.5–10 | 53.40 | – | B 16* | 38 | 74.5 | 80.9 |
| 0034 | 1 –13 | 57.60 | 71.60 | B 16* | 40.2 | 82.3 | 89.6 |
| 0037 | 3 –16 | 62.20 | 77.80 | B 16* | 46 | 88.5 | 98.5 |
| 0040 | 3 –16 | 62.20 | 77.80 | B 18* | 46 | 92 | 102 |
| | | (W314) | (W316) | | | | |

* B 16 shortened by 2.5 mm – B 18 shortened by 7.0 mm.

3412

3415

## Keyless drill chuck, impact-resistant

**Application:** For clockwise and anti-clockwise rotation, **lightweight design**, with thread mounting. Impact-resistant and self-clamping flat jaw drill chuck with metal sleeve. Hardened and ground.

**Application:** For high quality hand-held drills and impact drills, and powerful cordless hand drills up to 70 Nm torque.

| Order No. | Clamping range mm | 3415 RÖHM | Morse taper | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|
| 0050 | 1.5–13 | 71.60 | 1/2" x 20 | 42.5 | 72 | 79.3 |
| | | (W316) | | | | |

## Quick-clamping standard chuck

**Design:** Heavy-duty industrial design, with taper mounting, keyless and self-clamping.

**Application:** For stationary drills.

| Order No. | Clamping range mm | 3418 format | Morse taper | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|
| 0001 | 0–10 | 57.10 | B 16 | 40.2 | 82.5 | 89.1 |
| 0004 | 1–13 | 61.30 | B 16 | 46 | 93 | 101.5 |
| 0007 | 3–16 | 65.70 | B 16 | 51 | 96.5 | 106.8 |
| 0010 | 3–16 | 65.70 | B 18* | 51 | 96.5 | 106.8 |
| | | (W314) | | | | |

* B 18 shortened by 7.0 mm.

## Rapid clamping precision chuck

**Design:** With taper mounting, keyless and self-clamping. **With pointed sleeve for high concentricity (0.05 mm).** All wear parts are hardened.

**Application:** Specially **suitable for automatic** reclamping for high speeds on CNC controlled drilling machines, special drilling machines and production drilling machines.

| Order No. | Clamping range mm | 3421 format | 3422 RÖHM | Morse taper | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|---|
| 0010 | 0–10 | 91.60 | 142.00 | B 12 | 43 | 82.5 | 90.1 |
| 0013 | 0–10 | 91.60 | 142.00 | B 16 | 43 | 82.5 | 90.1 |
| 0016 | 1–13 | 98.30 | 152.00 | B 16 | 50 | 94 | 102.5 |
| 0019 | 3–16 | 105.00 | 163.00 | B 16 | 55 | 96.5 | 106.8 |
| 0022 | 3–16 | 105.00 | 163.00 | B 18* | 55 | 96.5 | 106.8 |
| | | (W314) | (W316) | | | | |

* B 18 shortened by 7 mm.

3421 format professional quality

3422 RÖHM

## Keyless drill chuck, impact-resistant

**Design:** With thread or taper mounting, Keyless and self-clamping, with **clamping force safety device.**

**Application:** Specially for percussion drilling machines.

format professional quality

| Order No. | Clamping range mm | 3427 format | Morse taper | Outer Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|
| 0001 | 0.5–10 | 59.40 | 3/8" x 24 | 40 | 66 | 73.7 |
| 0004 | 0.5–10 | 59.40 | 1/2" x 20 | 30 | 66 | 73.7 |
| 0007 | 1 –13 | 64.50 | 1/2" x 20 | 42.8 | 74.2 | 83.3 |
| 0010 | 0.5–10 | 59.40 | B 12 | 40 | 68 | 75.7 |
| 0013 | 1 –13 | 64.50 | B 12 | 40.8 | 77 | 86.1 |
| 0016 | 1 –13 | 64.50 | B 16* | 42.8 | 80.2 | 89.3 |
| | | (W314) | | | | |

* B 16 shortened by 2.5 mm.

## Chuck, with radial locking

**Design: Through-hole for clockwise and anti-clockwise rotation,** with retaining ring. Plastic design, with hexagon for assembling and disassembling. Keyless, impact resistant quick-action chuck, self reclamping during drilling work, no additional locking required, very ergonomic and user-friendly, equipped with impact guard. Size 13 with carbide inserts in the clamping jaws.

**Application:** For screwing, drilling and especially impact drilling using cordless and corded drills.

RÖHM

| Order No. | Clamping range mm | 3430 RÖHM | Morse taper | Outer Ø mm | Open length mm | Closed length mm | Max. machine performance W |
|---|---|---|---|---|---|---|---|
| 0001 | 1 –10 | 30.40 | 3/8" x 24 | 42.7 | 55 | 60.9 | 550 |
| 0004 | 1 –10 | 30.40 | 1/2" x 20 | 42.7 | 55 | 60.9 | 550 |
| 0007 | 1.5–13 | 35.50 | 3/8" x 24 | 42.7 | 64.5 | 72.4 | 1000 |
| 0010 | 1.5–13 | 35.50 | 1/2" x 20 | 42.7 | 64.5 | 72.4 | 1000 |
| | | (W316) | | | | | |

## Chuck, with radial locking and SDS plus mounting shank

NEW

**Design: For clockwise and anti-clockwise rotation,** Drilled through, with radial locking and metal sleeve.

**Application:** For powerful drills and impact drills, and powerful cordless hand drills up to 100 Nm torque. Use solely with hammer function switched off.

SDS plus

RÖHM

| Order No. | Clamping range mm | 3430 RÖHM | Morse taper | Outer Ø mm | Open length mm | Closed length mm | Max. machine performance W |
|---|---|---|---|---|---|---|---|
| 0015 | 1.5–13 | 50.00 | 1/2" x 20/ SDS plus | 42.5 | 64.5 | 72.4 | 1500 |
| | | (W316) | | | | | |

## Chuck, with radial locking and 1/4" hex mount

NEW

ROHM

**Design: For clockwise and anti-clockwise rotation,** Drilled through, with radial locking and plastic sleeve.

**Application:** For powerful drills and impact drills, and powerful cordless hand drills up to 100 Nm torque. Use solely with hammer function switched off.

| Order No. | Clamping range mm | 3430 ROHM | Morse taper | Outer Ø mm | Open length mm | Closed length mm | Max. machine performance W |
|---|---|---|---|---|---|---|---|
| 0020 | 1–10 | 35.60 (W316) | 1/4" hex | 42.5 | 55 | 63.1 | 1500 |

## High-performance quick-action chuck

ALBRECHT Precision Chucks

**3435** **Design:** Keyless and self-clamping in precision design for clockwise rotation.
**High concentricity** (based on DIN ISO 10888) for more precise bores and a longer tool service life.
All wear parts are case-hardened, ground and manufactured compatibly to each other as well as interchangeable.

**Application:** For high endurance stress as well as precision work on drills, drilling machines and special drilling units.

**Note:** All component parts of the chucks are available as spare parts.

**3438** **Design:** Keyless and self-clamping in precision design **with diamond-coated chuck jaws** for clockwise rotation.
**High concentricity** (based on DIN ISO 10888) for more precise bores and a longer tool service life.
All wear parts are case-hardened, ground and manufactured compatibly to each other as well as interchangeable.

**Application:** For easy and force-fit clamping of solid carbide drill bits and HSS-drill bits with fully hardened shank.

**Note:** Further sizes available upon request.

3435

| Order No. | Clamping range mm | 3435 ALBRECHT SBF | Morse taper | Chuck Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|
| 0001 | 0.2– 1.5 | 201.10 | B 6 | 19 | 35 | 37 |
| 0004 | 0.2– 3 | 167.30 | B 10 | 24 | 44 | 48 |
| 0013 | 0.5– 6.5 | 163.00 | B 10 | 34 | 62 | 68 |
| 0016 | 0.5– 6.5 | 163.00 | B 12 | 34 | 62 | 68 |
| 0025 | 0.5–10 | 163.20 | B 12 | 43 | 80 | 92 |
| 0028 | 0.5–10 | 163.20 | B 16 | 43 | 80 | 92 |
| 0031 | 1 –13 | 164.70 | B 16 | 50 | 91 | 103 |
| 0034 | 3 –16 | 187.60 | B 16 | 56 | 96 | 109 |
| 0037 | 3 –16 | 187.60 (W318) | B 18* | 56 | 96 | 109 |

* B 18 s (shortened by 7.0 mm).

3438

| Order No. | Clamping range mm | 3438 ALBRECHT SBFD | Morse taper | Chuck Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|
| 0007 | 1–13 | 194.80 (W318) | B 16 | 50 | 91 | 103 |

Balanced chucks for high speeds upon request.

## High-performance quick-action chuck with clamping force safety device

ALBRECHT Precision Chucks

**Design:** Key-less and self-tightening precision design **with safety guard.**
**High concentricity** (based on DIN ISO 10888) for more precise bores and a longer tool service life.
All wear parts are case-hardened, ground and manufactured compatibly to each other as well as interchangeable.

**Application:** For use on CNC machines and machining centres.

**Note:** Due to the keyless lock on the set collar, the chuck's clamping force safety device prevents slacking of tension on the chuck when there is abrupt machine speed reduction. The function of the self-tightening stepless action nevertheless remains effective. That way this Albrecht system maintains the maximum clamping force in each case.

| Order No. | Clamping range mm | 3441 ALBRECHT | Morse taper | Chuck Ø mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|
| 0004 | 1–13 | 246.50 | B 16 | 50 | 91 | 103 |
| 0007 | 3–16 | 252.30 | B 16 | 56 | 96 | 109 |
| 0010 | 3–16 | 252.30 * (W318) | B 18 | 56 | 96 | 109 |

* B 18 s (shortened by 7.0 mm).

## High-performance quick-action chuck with mounting shank

**Design:** Keyless and self-clamping **with mounting shank (one-piece).**
Chuck and mounting shank form **one unit.**
Optimal stability and higher concentricity is achieved by compact design (based on DIN ISO 10888).

**Application:** For high endurance stress as well as precision work on drills, drilling machines and special drilling units.

**Note:** The advantage over a two-part system is the length shorter by a total of 21 mm and thus is advantageous for machines with a small working area. Available with diamond-coated jaws on request.

3437 format professional quality

3444 ALBRECHT Precision Chucks

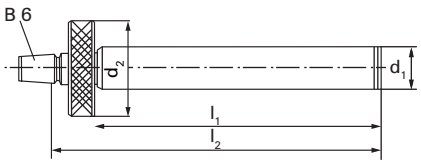
| Order No. | Clamping range mm | 3437 format | 3444 ALBRECHT | Morse taper | Chuck ∅ mm | Open length mm | Closed length mm |
|---|---|---|---|---|---|---|---|
| 0000 | 0.5– 6.5 | – | 174.80 | MK 2 | 34 | 62 | 68 |
| 0001 | 1 –13 | 147.50 | 181.00 | MK 2 | 50 | 85 | 97 |
| 0004 | 1 –13 | 150.00 | 184.30 | MK 3 | 50 | 85 | 97 |
| 0007 | 1 –13 | 156.00 | 191.50 | MK 4 | 50 | 87 | 99 |
| 0010 | 1 –13 | – | 180.40 | ∅ 16 | 50 | 79 | 91 |
| 0011 | 3 –16 | – | 203.30 | MK 2 | 56 | 89 | 103 |
| 0014 | 3 –16 | – | 206.50 | MK 3 | 56 | 89 | 103 |
| 0017 | 3 –16 | – | 214.30 | MK 4 | 56 | 90 | 104 |
| | | (W324) | (W318) | | | | |

## Fine drilling aid

**Design:** Small drilling jig with spring balancer.

**Application:** For "Albrecht" high-performance chuck take-up; 0–1.5 mm (Order No. 3435 0001), for fine boring in the tool and jig construction. Feed is manually performed by pulling the guide ring in order to process extremely small bores with utmost sensitivity. A spring balancer moves the chuck automatically back into the home position.

ALBRECHT Precision Chucks




| Order No. | Shaft design | 3450 ALBRECHT | Chuck arbour | Drilling stroke mm | $l_1$ mm | $l_2$ mm | $d_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | MK 1 | 168.70 | B 6 | 20 | 96 | 82 | 12 | 30 |
| 0004 | 13 mm cyl. | 157.00 | B 6 | 20 | 80 | 66 | 13 | 30 |
| | | (W318) | | | | | | |

## Release fork for chucks

**Design:** Release fork for chucks.

**Application:** For pressing off chucks from the chuck mounting. They prevent chucks as well as machine spindles and shank arbors from being damaged.

| Order No. | Size | 3452 ALBRECHT | For chuck tapers | Length mm | Width mm | Thickness mm |
|---|---|---|---|---|---|---|
| 0001 | 1 | 24.40 | B 6 | 120 | 20 | 10 |
| 0004 | 2 | 34.40 | B 10/12 | 170 | 30 | 10 |
| 0007 | 3 | 36.30 | B 16/18 | 210 | 40 | 12 |
| | | (W318) | | | | |

## Replacement jaw for quick-action chuck

**Design: 3-piece set.** For Order No. 3441, 3435, 3444.

**Note:** Also available with diamond-coated jaws on request.

ALBRECHT Precision Chucks

| Order No. | For clamping range mm | 3453 ALBRECHT | Size |
|---|---|---|---|
| 0001 | 0–10 | 45.20 | 100 |
| 0003 | 1–13 | 37.50 | 130 |
| 0005 | 3–16 | 42.60 (W318) | 160 |

## Taper mandrel with cylindrical shank for chuck

**Design:** Hardened and ground, for chuck taper DIN 238.
Highest concentricity ≤ 2 µm.

**Application:** Specially for mounting chucks from the Super product line (Order No. 3441, 3435).

ALBRECHT Precision Chucks

| Order No. | Chuck taper | 3460 ALBRECHT | D x L mm |
|---|---|---|---|
| 0001 | B 6 | 16.10 | 6 x 35 |
| 0004 | B 10 | 16.10 (W318) | 8 x 35 |

| Order No. | Chuck taper | 3460 ALBRECHT | D x L mm |
|---|---|---|---|
| 0007 | B 12 | 20.10 | 10 x 50 |
| 0010 | B 16 | 27.10 (W318) | 16 x 50 |

## MK taper mandrel

**Design: DIN 238,** ground.

**Application:** For mounting chucks on machines with Morse taper.

DIN 238

format professional quality

| Order No. | MK | 3455 format | Chuck taper |
|---|---|---|---|
| 0001 | 1 | 6.05 | B 10 |
| 0004 | 1 | 6.05 | B 12 |
| 0007 | 1 | 6.05 | B 16 |
| 0010 | 2 | 7.65 | B 10 |
| 0013 | 2 | 7.65 | B 12 |
| 0016 | 2 | 7.65 | B 16 |
| 0019 | 2 | 7.65 | B 18 |
| 0022 | 2 | 7.65 (W314) | B 22 |

| Order No. | MK | 3455 format | Chuck taper |
|---|---|---|---|
| 0025 | 3 | 10.05 | B 12 |
| 0028 | 3 | 10.05 | B 16 |
| 0031 | 3 | 10.05 | B 18 |
| 0034 | 3 | 10.05 | B 22 |
| 0037 | 4 | 14.05 | B 16 |
| 0040 | 4 | 14.05 | B 18 |
| 0043 | 4 | 14.05 (W314) | B 22 |

## MK reducing sleeve

**Design:** Standard design, similar to DIN 2185, male taper, ground.

**Application:** For mounting tools with Morse taper shank.

format professional quality

| Order No. | MK outer/inner | 3463 format | Total length mm |
|---|---|---|---|
| 0001 | 2/1 | 7.65 | 92 |
| 0004 | 3/1 | 10.05 | 99 |
| 0007 | 3/2 | 10.05 | 112 |
| 0010 | 4/1 | 14.05 | 124 |
| 0013 | 4/2 | 14.05 | 124 |
| 0016 | 4/3 | 14.05 | 140 |
| 0019 | 5/1 | 22.10 (W314) | 156 |

| Order No. | MK outer/inner | 3463 format | Total length mm |
|---|---|---|---|
| 0022 | 5/2 | 22.10 | 156 |
| 0025 | 5/3 | 22.10 | 156 |
| 0028 | 5/4 | 22.10 | 171 |
| 0031 | 6/2 | 55.40 | 218 |
| 0034 | 6/3 | 55.40 | 218 |
| 0037 | 6/4 | 55.40 | 218 |
| 0040 | 6/5 | 55.40 (W314) | 218 |

## MK extension sleeve

**Design:** Standard design, similar to DIN 2187, male taper ground.

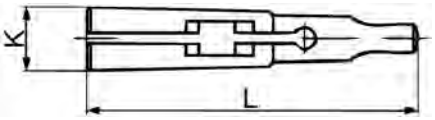
**Application:** For mounting tools with Morse taper shank.

| Order No. | MK outer/inner | 3466 format | Total length mm |
|---|---|---|---|
| 0001 | 1/1 | 11.25 | 145 |
| 0004 | 1/2 | 13.30 | 160 |
| 0007 | 2/1 | 13.30 | 160 |
| 0010 | 2/2 | 16.05 | 175 |
| 0013 | 2/3 | 18.75 | 200 |
| 0016 | 3/1 | 16.05 | 175 |
| 0019 | 3/2 | 19.45 | 194 |
| 0022 | 3/3 | 22.90 | 215 |
| 0025 | 3/4 | 26.30 | 240 |
| | | (W314) | |

| Order No. | MK outer/inner | 3466 format | Total length mm |
|---|---|---|---|
| 0028 | 4/1 | 19.45 | 200 |
| 0031 | 4/2 | 23.60 | 215 |
| 0034 | 4/3 | 27.60 | 240 |
| 0037 | 4/4 | 31.80 | 265 |
| 0040 | 4/5 | 53.60 | 300 |
| 0043 | 5/2 | 28.30 | 247 |
| 0046 | 5/3 | 33.10 | 268 |
| 0049 | 5/4 | 53.60 | 300 |
| 0052 | 5/5 | 67.20 | 335 |
| | | (W314) | |

## Taper chuck for taps

**Design: DIN 6328,** with Morse taper for mounting cylindrical taps with driving squares. Strong and positive locking mounting Completely hardened.




DIN 6328

| Order No. | Type | 3476 | Hole Ø mm | MK outer | K mm | L mm |
|---|---|---|---|---|---|---|
| 0001 | FM501/1 | 18.70 | 3.5 | 1 | 12.2 | 65.5 |
| 0003 | FM501/1 | 18.70 | 4 | 1 | 12.2 | 65.5 |
| 0005 | FM501/1 | 18.70 | 4.5 | 1 | 12.2 | 65.5 |
| 0007 | FM501/1 | 18.70 | 5 | 1 | 12.2 | 65.5 |
| 0009 | FM501/1 | 18.70 | 5.5 | 1 | 12.2 | 65.5 |
| 0011 | FM501/1 | 18.70 | 6 | 1 | 12.2 | 65.5 |
| 0013 | FM501/1 | 18.70 | 7 | 1 | 12.2 | 65.5 |
| 0015 | FM501/1 | 18.70 | 8 | 1 | 12.2 | 65.5 |
| 0017 | FM501/2 | 21.00 | 5.5 | 2 | 18 | 80 |
| 0019 | FM501/2 | 21.00 | 6 | 2 | 18 | 80 |
| 0021 | FM501/2 | 21.00 | 7 | 2 | 18 | 80 |
| 0023 | FM501/2 | 21.00 | 8 | 2 | 18 | 80 |
| 0025 | FM501/2 | 21.00 | 9 | 2 | 18 | 80 |
| 0027 | FM501/2 | 21.00 | 10 | 2 | 18 | 80 |
| 0029 | FM501/2 | 21.00 | 11 | 2 | 18 | 80 |
| | | (W315) | | | | |

| Order No. | Type | 3476 | Hole Ø mm | MK outer | K mm | L mm |
|---|---|---|---|---|---|---|
| 0031 | FM501/2 | 21.00 | 12 | 2 | 18 | 80 |
| 0033 | FM501/3 | 28.20 | 8 | 3 | 24.1 | 99 |
| 0035 | FM501/3 | 28.20 | 9 | 3 | 24.1 | 99 |
| 0037 | FM501/3 | 28.20 | 10 | 3 | 24.1 | 99 |
| 0039 | FM501/3 | 28.20 | 11 | 3 | 24.1 | 99 |
| 0041 | FM501/3 | 28.20 | 12 | 3 | 24.1 | 99 |
| 0043 | FM501/3 | 28.20 | 14 | 3 | 24.1 | 99 |
| 0045 | FM501/3 | 28.20 | 16 | 3 | 24.1 | 99 |
| 0047 | FM501/4 | 41.65 | 12 | 4 | 31.6 | 124 |
| 0049 | FM501/4 | 41.65 | 14 | 4 | 31.6 | 124 |
| 0051 | FM501/4 | 41.65 | 16 | 4 | 31.6 | 124 |
| 0053 | FM501/4 | 41.65 | 18 | 4 | 31.6 | 124 |
| 0055 | FM501/4 | 41.65 | 20 | 4 | 31.6 | 124 |
| 0059 | FM501/4 | 41.65 | 22 | 4 | 31.6 | 124 |
| 0061 | FM501/4 | 41.65 | 25 | 4 | 31.6 | 124 |
| | | (W315) | | | | |

## Taper drift

**Design: DIN 317,** made of special steel, hardened and in burnished colour.

**Application:** For tool tapers DIN 228.

DIN 317

| Order No. | MK | 3469 format | Total length mm |
|---|---|---|---|
| 0001 | 0 | 2.30 | 90 |
| 0004 | 1–2 | 2.81 | 140 |
| 0007 | 3 | 4.46 | 190 |
| 0010 | 4 | 9.25 | 225 |
| 0013 | 5–6 | 15.05 | 265 |
| | | (W314) | |

## Taper drift - semi-automatic

**Design:** Made from special steel, hardened and annealed in burnished colour. With one-hand operation for easy driving out without additional tools.

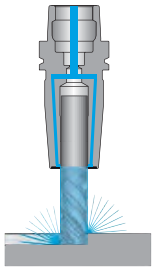
**Application:** For tool tapers DIN 228.

| Order No. | MK | 3472 format | Total length mm |
|---|---|---|---|
| 0001 | 1–3 | 45.60 | 330 |
| 0004 | 4–6 | 62.50 | 380 |
| | | (W314) | |

# COOL FLASH

## Cooling taken to extremes

According to the motto "Making the Good Even Better", HAIMER has developed the new **COOL FLASH SYSTEM** for shrink-fit holders on the basis of the existing Cool-Jet. The coolant lubricant emerges through several slots, slides along the cutter and cools to the cutting edge of the tool!



HAIMER
Qualität gewinnt.

**COOL-FLASH advantages:**

- Optimum jet guidance to the cutting edge
- Up to 100% longer life
- No more balls of chips on the tool
- Even at high speeds
- Optimum spinning! No longer out of balance! No disturbing contours!
- Low cost and subsequent installation is possible

# SAFE-LOCK™

## The seat belt for your tools

In high-performance cutting (HPC) it can happen that the tool is pulled out of the chuck. This is due to a slow micro creep motion. It occurs during machining with high torque and high attractive forces. Even chucks with extremely high holding force cannot prevent micro creep. This can turn high quality workpieces into scrap. The **SAFE-LOCK™**-system provides a remedy. Driver elements in the chuck engage in grooves on tool shank. In addition to the frictional clamping forces of the shrink fit chuck, the tool is held positively. Thus, micro-creep is effectively prevented and your tool holds.

HAIMER
Qualität gewinnt.

**Safe-Lock™ advantages:**

- For high-performance clamping
- Highly accurate tension due to shrink technology
- High torque due to positive transport technique
- No loss in accuracy
- No stripping of tool
- No damage to workpiece and machine
- The groove at the milling shaft is designed in a manner that the milling tool is pulled into the chuck (depending on the turning direction)
- Patent registered: licensing possible

## Weldon system surface clamping chuck

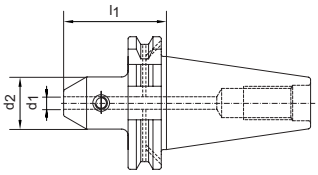
**Design: DIN 69 871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3
Taper surface roughness: Ra < 0.001 mm
Bore tolerance: H5
Balancing quality: G6.3 15000 min⁻¹
Concentricity: <0.01 mm
Hardened 58 ± 2HRC

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Face chuck with clamping screw.

DIN 69871 | Form AD/B | G 6.3 15.000 | ≤ 10 µm



| Order No. | Ø $d_1$ mm | 3542 SK 40 | 3544 SK 50 | $l_1$ mm 3542 | $l_1$ mm 3544 | Ø $d_2$ mm |
|---|---|---|---|---|---|---|
| 0001 | 6 | 35.30 | 50.50 | 50 | 63 | 25 |
| 0004 | 6 | 42.20 | 60.30 | 100 | 100 | 25 |
| 0007 | 6 | 70.00 | 91.40 | 160 | 160 | 25 |
| 0010 | 8 | 33.20 | 49.10 | 50 | 63 | 28 |
| 0013 | 8 | 39.20 | 58.60 | 100 | 100 | 28 |
| 0016 | 8 | 67.90 | 88.80 | 160 | 160 | 28 |
| 0019 | 10 | 33.20 | 49.10 | 50 | 63 | 35 |
| 0022 | 10 | 39.20 | 58.60 | 100 | 100 | 35 |
| 0025 | 10 | 67.90 | 88.80 | 160 | 160 | 35 |
| 0028 | 12 | 33.20 | 49.10 | 50 | 63 | 42 |
| 0031 | 12 | 39.20 | 58.60 | 100 | 100 | 42 |
| 0034 | 12 | 67.90 | 88.80 | 160 | 160 | 42 |
| 0037 | 14 | 33.20 | 49.10 | 50 | 63 | 44 |
| 0040 | 14 | 39.20 | 58.60 | 100 | 100 | 44 |
| 0043 | 14 | 67.90 | 88.80 | 160 | 160 | 44 |
| 0046 | 16 | 33.20 | 49.10 | 63 | 63 | 48 |
| 0049 | 16 | 39.20 (W360) | 58.60 (W360) | 100 | 100 | 48 |

| Order No. | Ø $d_1$ mm | 3542 SK 40 | 3544 SK 50 | $l_1$ mm 3542 | $l_1$ mm 3544 | Ø $d_2$ mm |
|---|---|---|---|---|---|---|
| 0052 | 16 | 67.90 | 88.80 | 160 | 160 | 48 |
| 0055 | 18 | 33.20 | 49.10 | 63 | 63 | 50 |
| 0058 | 18 | 39.20 | 58.60 | 100 | 100 | 50 |
| 0061 | 18 | 67.90 | 88.80 | 160 | 160 | 50 |
| 0064 | 20 | 33.20 | 49.10 | 63 | 63 | 52 |
| 0067 | 20 | 39.20 | 58.60 | 100 | 100 | 52 |
| 0070 | 20 | 67.90 | 88.80 | 160 | 160 | 52 |
| 0073 | 25 | 39.20 | 54.80 | 100 | 80 | 65 |
| 0074 | 25 | 73.90 | 69.90 | 160 | 100 | 65 |
| 0076 | 25 | – | 90.70 | – | 160 | 72 |
| 0076 | 32 | 39.40 | – | 100 | – | 72 |
| 0079 | 32 | 74.30 | 58.10 | 160 | 100 | 72 |
| 0082 | 32 | – | 92.10 | – | 160 | 72 |
| 0082 | 40 | 48.10 | – | 120 | – | 80 |
| 0085 | 40 | – | 62.40 | – | 120 | 80 |
| 0091 | 50 | – (W360) | 130.50 (W360) | – | 120 | 120 |

## Precision face chuck system Weldon

**Design: DIN 69 871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

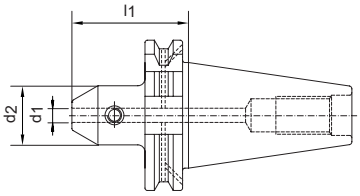
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G2.5 22000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Face chuck with clamping screw.

DIN 69871 | Form AD/B | G 2.5 22.000 | ≤ 3 µm

HAIMER Quality Wins



| Order No. | Ø $d_1$ mm | 3212 HAIMER SK 40 | 3214 HAIMER SK 50 | $l_1$ mm 3212 | $l_1$ mm 3214 | Ø $d_2$ mm 3212 | Ø $d_2$ mm 3214 |
|---|---|---|---|---|---|---|---|
| 0001 | 6 | 69.00 | 114.00 | 50 | 63 | 25 | 25 |
| 0004 | 6 | 80.00 | 132.00 | 100 | 100 | 25 | 25 |
| 0007 | 6 | – | 163.00 | – | 160 | – | 25 |
| 0010 | 8 | 69.00 | 114.00 | 50 | 63 | 28 | 28 |
| 0013 | 8 | 80.00 | 132.00 | 100 | 100 | 28 | 28 |
| 0016 | 8 | – | 163.00 | – | 160 | – | 28 |
| 0019 | 10 | 64.00 | 114.00 | 50 | 63 | 35 | 35 |
| 0022 | 10 | 80.00 | 132.00 | 100 | 100 | 35 | 35 |
| 0025 | 10 | – | 163.00 | – | 160 | – | 35 |
| 0028 | 12 | 64.00 | 114.00 | 50 | 63 | 42 | 42 |
| 0031 | 12 | 80.00 | 132.00 | 100 | 100 | 42 | 42 |
| 0034 | 12 | – | 163.00 | – | 160 | – | 42 |
| 0037 | 14 | 64.00 | 114.00 | 50 | 63 | 42 | 42 |
| 0040 | 14 | 80.00 | 132.00 | 100 | 100 | 42 | 42 |
| 0043 | 14 | – | 163.00 | – | 160 | – | 42 |
| 0045 | 16 | 88.00 | – | 35 | – | 48 | – |
| 0046 | 16 | 79.00 | 124.00 | 63 | 63 | 48 | 48 |
| 0049 | 16 | 86.00 (W394) | 132.00 (W394) | 100 | 100 | 48 | 48 |

| Order No. | Ø $d_1$ mm | 3212 HAIMER SK 40 | 3214 HAIMER SK 50 | $l_1$ mm 3212 | $l_1$ mm 3214 | Ø $d_2$ mm 3212 | Ø $d_2$ mm 3214 |
|---|---|---|---|---|---|---|---|
| 0052 | 16 | – | 177.00 | – | 160 | – | 48 |
| 0055 | 18 | 79.00 | 124.00 | 63 | 63 | 48 | 48 |
| 0058 | 18 | 86.00 | 145.00 | 100 | 100 | 48 | 48 |
| 0061 | 18 | – | 177.00 | – | 160 | – | 48 |
| 0063 | 20 | 88.00 | – | 40 | – | 52 | – |
| 0064 | 20 | 79.00 | 124.00 | 63 | 63 | 52 | 52 |
| 0067 | 20 | 86.00 | 145.00 | 100 | 100 | 52 | 52 |
| 0070 | 20 | – | 177.00 | – | 160 | – | 52 |
| 0072 | 25 | 88.00 | – | 60 | – | 65 | – |
| 0073 | 25 | 107.00 | 135.00 | 100 | 80 | 65 | 65 |
| 0074 | 25 | – | 145.00 | – | 100 | – | 65 |
| 0075 | 32 | 108.00 | – | 70 | – | 72 | – |
| 0076 | 25 | – | 177.00 | – | 160 | – | 65 |
| 0076 | 32 | 107.00 | – | 100 | – | 72 | – |
| 0079 | 32 | – | 142.00 | – | 100 | – | 72 |
| 0082 | 32 | – | 185.00 | – | 160 | – | 72 |
| 0085 | 40 | – | 142.00 | – | 100 | – | 78 |
| 0088 | 40 | – (W394) | 210.00 (W394) | – | 160 | – | 78 |

## System Weldon surface clamping chuck with coolant duct holes

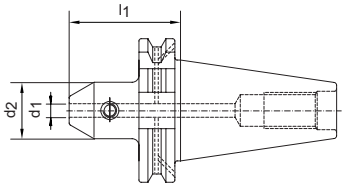
**Design:** Made of alloy case-hardened steel, with central coolant duct hole and lateral coolant channel slots, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm.
Taper to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality G6.3 at 15000 min⁻¹

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Face chuck with clamping screw.

DIN 69871 | Form AD/B | G 6.3 | 15.000



| Order No. | $d_1$ mm | 3222 SK 40 | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|
| 0006 | 6 | 50.00 | 50 | 25 |
| 0008 | 8 | 48.00 | 50 | 28 |
| 0010 | 10 | 48.00 | 50 | 35 |
| 0012 | 12 | 48.00 | 50 | 42 |
| 0014 | 14 | 48.00 (W360) | 50 | 44 |

| Order No. | $d_1$ mm | 3222 SK 40 | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|
| 0016 | 16 | 48.00 | 63 | 48 |
| 0018 | 18 | 48.00 | 63 | 50 |
| 0020 | 20 | 48.00 | 63 | 52 |
| 0025 | 25 | 58.30 | 100 | 65 |
| 0032 | 32 | 60.30 (W360) | 100 | 72 |

## Precision face chuck system Whistle Notch

**Design: DIN 69871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

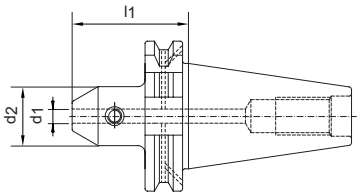
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 22000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For clamping cutters with cylindrical shank and inclined clamping surface to DIN 1835-E and DIN 6535-HE.

**Scope of delivery:** Face chuck with clamping screw and length setting screw.

DIN 69871 | Form AD/B | G 2.5 | 22.000 | ≤ 3 µm

HAIMER Quality Wins.



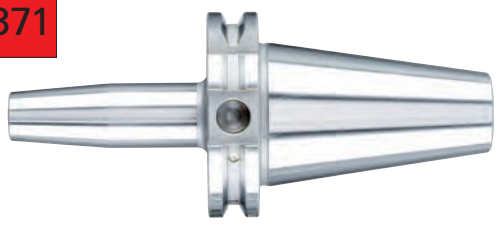
| Order No. | $d_1$ mm | 3216 HAIMER SK 40 | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|
| 4006 | 6 | 83.00 | 50 | 25 |
| 4008 | 8 | 83.00 | 50 | 28 |
| 4010 | 10 | 83.00 | 50 | 35 |
| 4012 | 12 | 83.00 | 50 | 42 |
| 4014 | 14 | 83.00 | 50 | 42 |
| 4016 | 16 | 93.00 | 63 | 48 |
| 4018 | 18 | 93.00 | 63 | 48 |
| 4020 | 20 | 93.00 | 63 | 52 |
| 4025 | 25 | 124.00 | 100 | 65 |
| 4032 | 32 | 128.00 (W394) | 100 | 72 |

| Order No. | $d_1$ mm | 3218 HAIMER SK 50 | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|
| 5006 | 6 | 142.00 | 63 | 25 |
| 5008 | 8 | 142.00 | 63 | 28 |
| 5010 | 10 | 142.00 | 63 | 35 |
| 5012 | 12 | 142.00 | 63 | 42 |
| 5014 | 14 | 142.00 | 63 | 42 |
| 5016 | 16 | 155.00 | 63 | 48 |
| 5018 | 18 | 155.00 | 63 | 48 |
| 5020 | 20 | 155.00 | 63 | 52 |
| 5025 | 25 | 169.00 | 80 | 65 |
| 5032 | 32 | 169.00 | 100 | 72 |
| 5040 | 40 | 169.00 (W394) | 100 | 78 |

## Shrink-fit chuck DIN 69871

found on 3/89.

DIN 69871

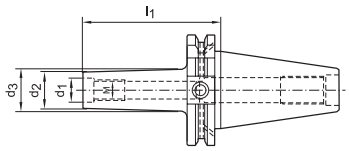


## Clamping chuck for screw-in cutters

**Design: DIN 69871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

DIN 69871 | Form AD/B | ≤ 10 µm



**3559** **SK 40, balancing quality G2.5 25000 min⁻¹**

**3560** **SK 50, balancing quality: G6.3 12000 min⁻¹**

| Order No. | M | 3559 SK 40 | l1 mm | d1 mm | d2 mm | d3 mm |
|---|---|---|---|---|---|---|
| 4001 | M6 | 101.00 | 69 | 6.5 | 10 | 13 |
| 4004 | M6 | 113.00 | 94 | 6.5 | 10 | 13 |
| 4007 | M6 | 132.00 | 119 | 6.5 | 10 | 13 |
| 4011 | M8 | 101.00 | 69 | 8.5 | 13 | 23 |
| 4021 | M8 | 113.00 | 94 | 8.5 | 13 | 23 |
| 4031 | M8 | 132.00 | 119 | 8.5 | 13 | 25 |
| 4041 | M10 | 101.00 | 69 | 10.5 | 18 | 23 |
| 4051 | M10 | 113.50 | 94 | 10.5 | 18 | 28 |
| 4061 | M10 | 132.00 | 119 | 10.5 | 18 | 32 |
| 4071 | M12 | 101.00 | 69 | 12.5 | 21 | 24 |
| 4081 | M12 | 113.50 | 94 | 12.5 | 21 | 31 |
| 4091 | M12 | 132.00 | 119 | 12.5 | 21 | 33 |
| 4101 | M16 | 105.00 | 69 | 16.5 | 29 | 34 |
| 4111 | M16 | 115.00 | 94 | 16.5 | 29 | 34 |
| 4121 | M16 | 132.00 | 119 | 16.5 | 29 | 36 |
| 4131 | M16 | 143.00 (W360) | 144 | 16.5 | 29 | 36 |

| Order No. | M | 3560 SK 50 | l1 mm | d1 mm | d2 mm | d3 mm |
|---|---|---|---|---|---|---|
| 0071 | M12 | 126.00 | 69 | 12.5 | 21 | 24 |
| 0081 | M12 | 154.00 | 119 | 12.5 | 21 | 33 |
| 0091 | M12 | 174.50 | 169 | 12.5 | 21 | 40 |
| 0101 | M16 | 126.00 | 69 | 16.5 | 29 | 34 |
| 0111 | M16 | 154.00 | 119 | 16.5 | 29 | 36 |
| 0121 | M16 | 174.50 (W360) | 169 | 16.5 | 29 | 42.5 |

## Extension for screw-in milling cutters

**Design:** Cylindrical shank to DIN 1835 B, with tapered design.

**Application:** For holding milling tools with clamping thread.

| Order No. | M | 3635 | D1 mm | d mm | D mm | A mm | L mm |
|---|---|---|---|---|---|---|---|
| 0201 | M8 | 77.80 | 16 | 8.5 | 12.8 | 115 | 60 |
| 0204 | M8 | 89.90 | 16 | 8.5 | 12.8 | 160 | 100 |
| 0207 | M10 | 77.80 | 20 | 10.5 | 17.8 | 120 | 60 |
| 0210 | M10 | 89.90 | 20 | 10.5 | 17.8 | 160 | 100 |
| 0213 | M12 | 93.40 | 25 | 12.5 | 20.8 | 160 | 100 |
| 0216 | M16 | 96.80 (W378) | 32 | 17 | 28.8 | 160 | 100 |

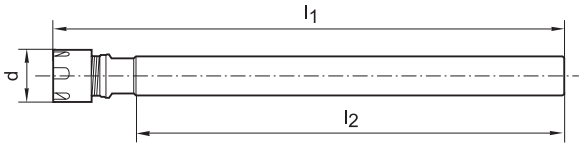
## Mini collet chuck ER

**Design:** These cylindrical collet chuck holder for collets to DIN 6499 (ER) have a **lateral clamping surface,** an extremely slim design and are used as boring bar milling cutters. The holder is supplied with standard clamping nut (mini nut).

**Application:** For extension of tools for cylindrical shanks to DIN 1835 B+E as well as DIN 6535 HB. Slim design.

**Scope of delivery:** Collet chuck complete with clamping nut.

**Note:** Tensioning nut Type M, see 📖 3/103, collets, see 📖 3/97.



| Order No. | Clamping range mm | 3588 | Collet | Ø mm | l1 mm | l2 mm | d mm |
|---|---|---|---|---|---|---|---|
| 0001 | 0.5– 7 | 62.40 | ER11 | 10 | 122 | 100 | 16 |
| 0002 | 0.5– 7 | 62.40 | ER11 | 12 | 122 | 100 | 16 |
| 0003 | 0.5– 7 | 62.40 | ER11 | 16 | 122 | 100 | 16 |
| 0004 | 0.5– 7 | 70.30 | ER11 | 16 | 122 | 160 | 16 |
| 0006 | 0.5– 7 | 62.40 | ER11 | 20 | 72 | 50 | 16 |
| 0011 | 0.5– 7 | 65.10 | ER11 | 20 | 122 | 100 | 16 |
| 0013 | 0.5– 7 | 71.70 | ER11 | 20 | 122 | 160 | 22 |
| 0036 | 0.5–10 | 62.40 | ER16 | 12 | 150 | 120 | 22 |
| 0041 | 0.5–10 | 62.40 (W360) | ER16 | 16 | 130 | 100 | 22 |

| Order No. | Clamping range mm | 3588 | Collet | Ø mm | l1 mm | l2 mm | d mm |
|---|---|---|---|---|---|---|---|
| 0046 | 0.5–10 | 71.70 | ER16 | 16 | 190 | 160 | 22 |
| 0051 | 0.5–10 | 75.40 | ER16 | 16 | 230 | 200 | 22 |
| 0056 | 0.5–10 | 62.40 | ER16 | 20 | 130 | 100 | 22 |
| 0016 | 0.5–10 | 71.00 | ER16 | 20 | 160 | 130 | 22 |
| 0021 | 0.5–10 | 72.60 | ER16 | 20 | 190 | 160 | 22 |
| 0024 | 0.5–10 | 62.40 | ER20 | 20 | 130 | 100 | 22 |
| 0026 | 0.5–13 | 72.60 | ER20 | 20 | 197 | 160 | 28 |
| 0031 | 0.5–13 | 80.40 (W360) | ER20 | 20 | 237 | 200 | 28 |

## Collet chuck ER

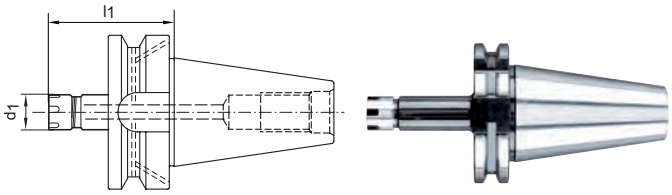
**Design: DIN 69871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. Hardened 58 ±2 HRC.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: < 0.01 mm.

**Application:** To nest tools with cylindrical shank to DIN 1835 B+E as well as DIN 6535 HB

**Scope of delivery:** Collet chuck complete with clamping nut.

DIN 69871 | Form AD/B | ≤ 10 µm




**3561** SK 40, balancing quality G2.5 25000 min⁻¹

**3566** SK 50, balancing quality: G6.3 15000 min⁻¹

| Order No. | Clamping range mm | 3561 SK 40 | Collet | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 4011 | 0.5– 7 | 89.10 | ER11 | 16 | 70 |
| 4021 | 0.5– 7 | 102.50 | ER11 | 16 | 100 |
| 4031 | 0.5– 7 | 119.50 | ER11 | 16 | 160 |
| 4041 | 0.5–10 | 89.10 | ER16 | 22 | 70 |
| 4051 | 0.5–10 | 102.50 | ER16 | 22 | 100 |
| 4061 | 0.5–10 | 119.50 | ER16 | 22 | 160 |
| 4071 | 0.5–16 | 93.40 | ER25 | 35 | 70 |
| 4081 | 0.5–16 | 102.50 | ER25 | 35 | 100 |
| 4091 | 0.5–16 | 119.50 (W364) | ER25 | 35 | 160 |

| Order No. | Clamping range mm | 3566 SK 50 | Collet | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 5041 | 0.5–10 | 120.96 | ER16 | 22 | 70 |
| 5051 | 0.5–10 | 131.76 | ER16 | 22 | 100 |
| 5061 | 0.5–10 | 140.40 | ER16 | 22 | 160 |
| 5071 | 0.5–16 | 120.96 | ER25 | 35 | 70 |
| 5081 | 0.5–16 | 131.76 | ER25 | 35 | 100 |
| 5091 | 0.5–16 | 140.40 (W364) | ER25 | 35 | 160 |

## Collet chuck type ER

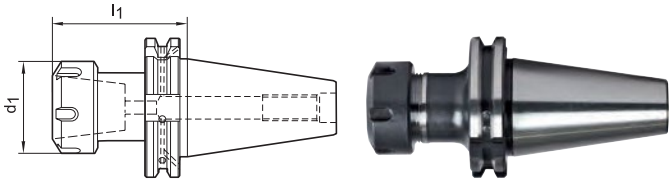
**Design: DIN 69871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: < 0.01 mm.
Balancing quality: G6.3 15000 min⁻¹.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6353 HB.

**Scope of delivery:** Collet chuck complete with clamping nut.

DIN 69871 | Form AD/B | G 6.3 15.000 | ≤ 10 µm




| Order No. | Clamping range mm | 3564 SK 40 | Collet | $l_1$ mm | $d_1$ mm |
|---|---|---|---|---|---|
| 0001 | 1 –10 | 44.00 | ER16 | 63 | 32 |
| 0004 | 1 –10 | 50.00 | ER16 | 100 | 32 |
| 0007 | 1 –10 | 83.60 | ER16 | 160 | 32 |
| 0010 | 0.5–16 | 44.00 | ER25 | 60 | 42 |
| 0013 | 0.5–16 | 53.80 | ER25 | 100 | 42 |
| 0016 | 0.5–16 | 83.60 | ER25 | 160 | 42 |
| 0019 | 2 –20 | 46.00 | ER32 | 70 | 50 |
| 0022 | 2 –20 | 54.40 | ER32 | 100 | 50 |
| 0023 | 2 –20 | 85.50 | ER32 | 160 | 50 |
| 0025 | 3 –26 | 48.60 | ER40 | 80 | 63 |
| 0028 | 3 –26 | 61.50 | ER40 | 100 | 63 |
| 0031 | 3 –26 | 89.30 (W364) | ER40 | 160 | 63 |

| Order No. | Clamping range mm | 3565 SK 50 | Collet | $l_1$ mm | $d_1$ mm |
|---|---|---|---|---|---|
| 0001 | 1 –10 | 82.10 | ER16 | 100 | 32 |
| 0004 | 1 –10 | 112.00 | ER16 | 160 | 32 |
| 0006 | 0.5–16 | 69.20 | ER25 | 60 | 42 |
| 0007 | 0.5–16 | 82.10 | ER25 | 100 | 42 |
| 0010 | 0.5–16 | 112.00 | ER25 | 160 | 42 |
| 0013 | 2 –20 | 69.20 | ER32 | 70 | 50 |
| 0016 | 2 –20 | 98.50 | ER32 | 100 | 50 |
| 0019 | 2 –20 | 112.00 | ER32 | 160 | 50 |
| 0022 | 3 –30 | 69.20 | ER40 | 80 | 63 |
| 0023 | 3 –30 | 98.50 | ER40 | 100 | 63 |
| 0025 | 3 –30 | 115.00 (W364) | ER40 | 160 | 63 |

## Precision collet chuck Type ER

NEW

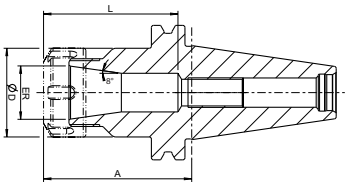
**Design: DIN 69871, Form AD,** made of alloy case-hardened steel. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 18000 min$^{-1}$.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For clamping tools with cylindrical shank in collets to DIN 6499.

**Scope of delivery:** Collet chuck complete with clamping nut.

DIN 69871 | Form AD | G 2.5 18.000 | ≤ 3 µm



| Order No. | Clamping range mm | 3704 HAIMER | SK | Collet | Ø D mm | L mm | A mm |
|---|---|---|---|---|---|---|---|
| 0010 | 0.5–10 | 52.00 | 40 | ER16 | 28 | * | 70 |
| 0015 | 1 –16 | 52.00 | 40 | ER25 | 42 | 63.5 | 70 |
| 0020 | 1.5–20 | 52.00 (W394) | 40 | ER32 | 50 | 65.5 | 70 |

* Drilled through.

## Precision collet chuck Type ER

**Design: DIN 69871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

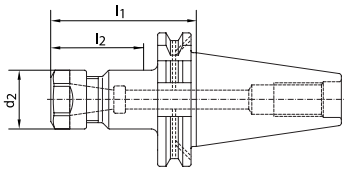
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For clamping tools with cylindrical shank in collets to DIN 6499.

**Scope of delivery:** Collet chuck complete with clamping nut (finely balanced, with slide coating for increased clamping force).

**Note:** Dimension $l_2$ specifies the maximum insertion depth for tools.

DIN 69871 | Form AD/B | G 2.5 22.000 | ≤ 3 µm



| Order No. | Clamping range mm | 3224 HAIMER SK 40 | 3225 HAIMER SK 50 | Collet | $l_2$ mm | $l_1$ mm | Ø $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 0.5–10 | 77.00 | 120.00 | ER16 | ** | 70 | 28 |
| 0004 | 0.5–10 | 80.00 | 140.00 | ER16 | ** | 100 | 28 |
| 0007 | 0.5–10 | 96.00 | 168.00 | ER16 | ** | 160 | 28 |
| 0010 | 1 –16 | 77.00 | 133.00 | ER25 | 62 | 70 | 42 |
| 0013 | 1 –16 | 91.00 | 140.00 | ER25 | 57 | 100 | 42 |
| 0016 | 1 –16 | 125.00 | 168.00 | ER25 | 57 | 160 | 42 |
| 0019 | 1.5–20 | 77.00 | 133.00 | ER32 | 64 | 70 | 50 |
| 0022 | 1.5–20 | 93.00 | 140.00 | ER32 | 64 | 100 | 50 |
| 0023 | 1.5–20 | 132.00 | 168.00 | ER32 | 64 | 160 | 50 |
| 0025 | 2.5–26 | 87.00 | 144.00 | ER40 | 73 | 70 | 63 |
| 0028 | 2.5–26 | 107.00 | 152.00 | ER40 | 73 | 100 | 63 |
| 0031 | 2.5–26 | 144.00 (W394) | 180.00 (W394) | ER40 | 73 | 160 | 63 |

** Drilled through.

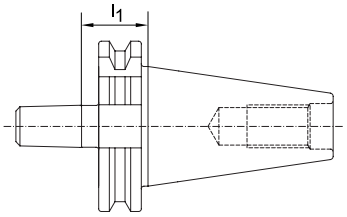
## Precision drill chuck mounting

**Design: DIN 69871, Form A,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 238. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper tolerance: AT3.
Balancing quality: G6.3 8000 min$^{-1}$.
Hardened 60 -2 HRC.

**Application:** For mounting drill chucks.

DIN 69871 | Form A | G 6.3 8.000



| Order No. | Chuck taper | 3211 HAIMER | SK | $l_1$ mm |
|---|---|---|---|---|
| 0100 | B 16 | 63.00 | 40 | 26 |
| 0150 | B 16 | 100.00 (W394) | 50 | 26 |

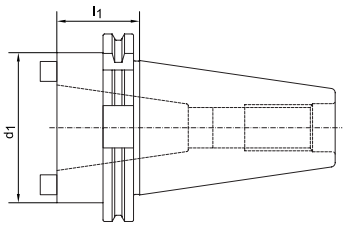
## Precision reducing sleeve

**Design: DIN 69871, Form A,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. **All functional surfaces finely machined** and **guaranteed quality** thanks to double 100 % control.

Taper tolerance: AT3.
Balancing quality: G6.3 8000 min⁻¹.
Hardened 60 -2 HRC.

**Application:** For mounting steep taper tools according to DIN 69871 (Form AD, SK 40) and JIS B 6339 (BT 40).

DIN 69871 | Form AD | G 6.3 | 8.000



| Order No. | SK outer/inner | 3211 HAIMER | $l_1$ mm | $d_1$ mm |
|---|---|---|---|---|
| 0200 | 50/40 | 254.00 (W394) | 43 | 78 |

## Precision HG chuck

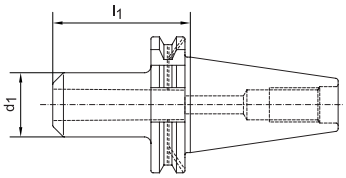
**Design: DIN 69871, Form AD/B,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper tolerance: AT3.
Taper surface roughness: Ra < 0.001 mm.
Shank tolerance: h6.
Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For high-precision clamping tools with cylindrical shank using special collets. Also for shanks with clamping surfaces. Very well suited for high-speed machining.

**Scope of delivery:** HG Clamping chuck with clamping screw and pull-out hook, **without** collet.

DIN 69871 | Form AD/B | G 2.5 | 25.000 | ≤ 3 µm

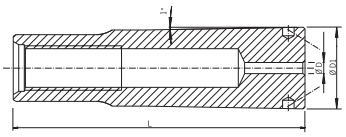


| Order No. | Clamping range mm | 3213 HAIMER SK 40 | 3215 HAIMER SK 50 | HG | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0001 | 2– 8 | 125.00 | 206.00 ◊ | 01 | 30 | 65 |
| 0004 | 2– 8 | 145.00 | 239.00 ◊ | 01 | 30 | 100 |
| 0007 | 2– 8 | 177.00 | 297.00 ◊ | 01 | 30 | 160 |
| 0010 | 10–14 | 125.00 | 206.00 ◊ | 02 | 35 | 70 |
| 0013 | 10–14 | 145.00 (W394) | 239.00 ◊ (W394) | 02 | 35 | 100 |

| Order No. | Clamping range mm | 3213 HAIMER SK 40 | 3215 HAIMER SK 50 | HG | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0016 | 10–14 | 177.00 | 297.00 ◊ | 02 | 35 | 160 |
| 0019 | 16–20 | 125.00 | 206.00 ◊ | 03 | 48 | 75 |
| 0022 | 16–20 | 145.00 | 239.00 ◊ | 03 | 48 | 100 |
| 0025 | 16–20 | 177.00 (W394) | 297.00 ◊ (W394) | 03 | 48 | 160 |

## HG collet

**Application:** For high-precision and economical clamping of tools with cylindrical shank in HG chucks within a high clamping range.



| Order No. | Ø D mm | 3295 HAIMER | HG | Ø D1 mm | L mm |
|---|---|---|---|---|---|
| 0102 | 2 | 117.00 | 01 | 14.7 | 52.5 |
| 0103 | 3 | 117.00 | 01 | 14.7 | 52.5 |
| 0104 | 4 | 117.00 | 01 | 14.7 | 52.5 |
| 0105 | 5 | 74.00 | 01 | 14.7 | 52.5 |
| 0106 | 6 | 74.00 | 01 | 14.7 | 52.5 |
| 0108 | 8 | 74.00 (W394) | 01 | 14.7 | 52.5 |

| Order No. | Ø D mm | 3295 HAIMER | HG | Ø D1 mm | L mm |
|---|---|---|---|---|---|
| 0110 | 10 | 74.00 | 02 | 17.87 | 64.2 |
| 0112 | 12 | 74.00 | 02 | 17.87 | 64.2 |
| 0114 | 14 | 74.00 | 02 | 17.87 | 64.2 |
| 0116 | 16 | 74.00 | 03 | 26.147 | 69.7 |
| 0118 | 18 | 74.00 | 03 | 26.147 | 69.7 |
| 0120 | 20 | 74.00 (W394) | 03 | 26.147 | 69.7 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

# Clamping sleeves with Pin-Lock

APC clamping sleeve with mechanical pull-out protection

The Albrecht precision clamping sleeve with pull-out protection makes it possible to hold tool shanks with Weldon clamping surfaces positive-locking in the clamping sleeve in line with DIN 1835-B and DIN 6535-HB. The pull-out protection supports the clamping force of the clamping sleeve.

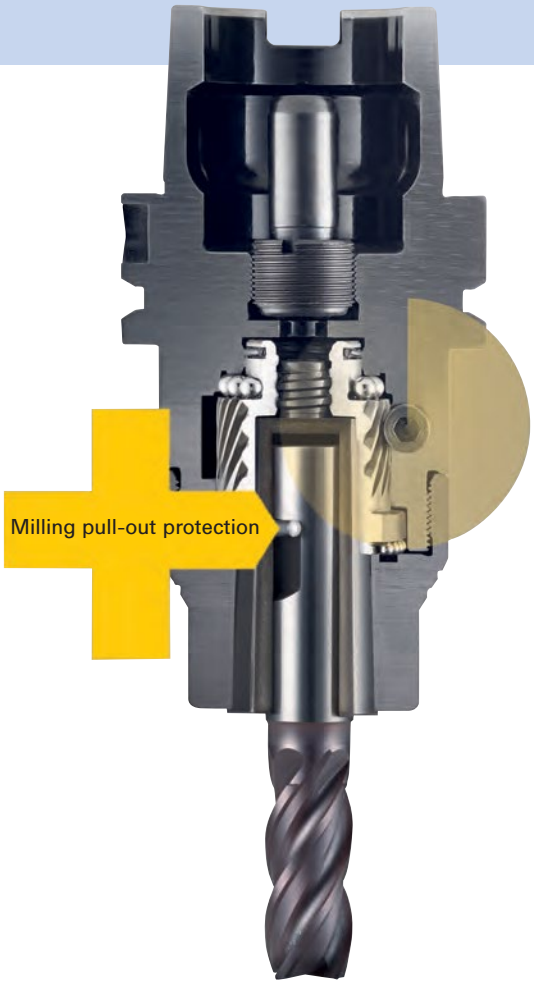
All positive features of the APC precision clamping chuck like concentricity and damping remain without limitation. Special coating.
Fully maintenance-free.

Central = for tools with internal coolant supply. 100 % sealed up to 100 bar coolant pressure.
Periphery = additional coolant and rinse effect.

Increases process capability.

Available individually or as pin lock set (adapter sleeve with safety pin, 3 replacement pins, splint driver and torque wrench).

ALBRECHT
Precision Chucks




DIN 69871

3/45

DIN 69893

3/67

## Precision chuck APC

**Design:** Highest clamping force due to integrated screw gearing. Extremely high vibration damping. Quick tool change occurs laterally by means of hexagonal wrench. Maintenance free, sealed against coolant and dirt.

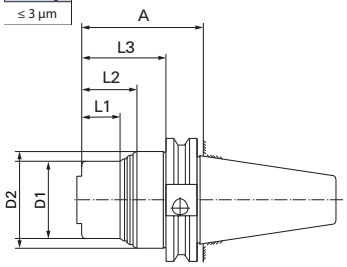
Balancing quality: G2.5 20000 $min^{-1}$.
Concentricity: ≤ 0.003 mm (for 2.5 x D).

**Application:** For heavy-duty machining as well as HSC and HPC processing. For clamping cylindrical shanks in accordance with DIN 1835 A, B and DIN 6535 HA, HB and HE to D = 20 mm.

DIN 69871 | Form AD | G 2.5 20.000

ALBRECHT Precision Chucks

≤ 3 µm



| Order No. | Clamping range mm | 3223 ALBRECHT SK 40 | A mm | D2 mm | D1 mm | L1 mm | L2 mm | L3 mm |
|---|---|---|---|---|---|---|---|---|
| 0020 | 2–20 | 292.80 | 63 | 50 | 40 | 20 | 28 | 43 |
| 0025 | 16–32 | 359.50 (W318) | 102 | – | 63 | 83 | – | – |

| Order No. | Clamping range mm | 3226 ALBRECHT SK 50 | A mm | D2 mm | D1 mm | L1 mm | L2 mm | L3 mm |
|---|---|---|---|---|---|---|---|---|
| 0020 | 2–20 | 360.30 | 62 | 63 | 40 | 18 | 38 | 43 |
| 0025 | 16–32 | 445.60 (W318) | 102 | – | 70 | 83 | – | – |

## Clamping sleeve for precision chuck APC

**Design:** Very resistant special coating. Integrated length stop, front and rear adjustable. Coolant is supplied through the length stop.

**Application:** For quick and easy change of clamping sleeves and tools.

**3227** **For chuck APC 2–20.**
**3228** **For chuck APC 16-32.**

3227

3228

| Order No. | Clamping Ø mm | 3227 ALBRECHT |
|---|---|---|
| 2003 | 3 | 85.60 |
| 2004 | 4 | 85.60 |
| 2006 | 6 | 85.60 |
| 2008 | 8 | 85.60 |
| 2010 | 10 | 85.60 |
| 2012 | 12 | 85.60 |
| 2014 | 14 | 85.60 |
| 2016 | 16 | 85.60 (W318) |

| Order No. | Clamping Ø mm | 3227 ALBRECHT |
|---|---|---|
| 2020 | 20 | 85.60 (W318) |

| Order No. | Clamping Ø mm | 3228 ALBRECHT |
|---|---|---|
| 2516 | 16 | 141.60 |
| 2520 | 20 | 141.60 |
| 2525 | 25 | 141.60 |
| 2532 | 32 | 141.60 (W318) |

## Clamping sleeve Pin-Lock for precision chuck APC

**Design:** Very resistant special coating, maintenance-free. Simple mechanical pull-out protection in connection with Weldon shank.

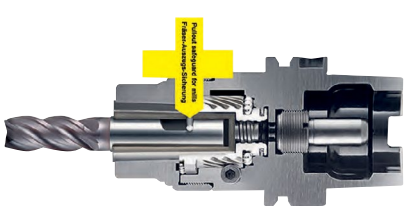
**Application:** Mechanical pull-out protection in connection with Weldon shank in accordance with DIN 6535 HB and DIN 1835 B. The pin prevents the milling cutter from coming out.

**Scope of delivery:** Set consisting of adapter sleeve, safety pin, pin punch and torque wrench.

**3227** **For chuck APC 2-20.**
**3228** **For chuck APC 2-25.**

3227

3228



| Order No. | Clamping Ø mm | 3227 ALBRECHT | Design |
|---|---|---|---|
| 1016 | 16 | 214.10 | Set |
| 1116 | 16 | 149.30 (W318) | Spare sleeve |

| Order No. | Clamping Ø mm | 3228 ALBRECHT | Design |
|---|---|---|---|
| 1016 | 16 | 246.60 | Set |
| 1116 | 16 | 181.70 | Spare sleeve |
| 1020 | 20 | 246.60 | Set |
| 1120 | 20 | 181.70 | Spare sleeve |
| 1025 | 25 | 246.60 | Set |
| 1125 | 25 | 181.70 (W318) | Spare sleeve |

## Chuck key for precision chuck APC

NEW

ALBRECHT
Precision Chucks

**Design:** Chuck key with visual torque display.

| Order No. | Spanner width | 3229 ALBRECHT |
|---|---|---|
| 0604 | 4 | 24.50 (W318) |

## Diameter head mount with front-side cooling channel holes

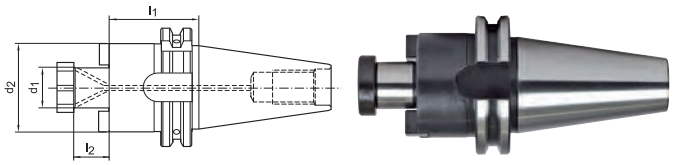
**Design: DIN 69871, Form AD,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 15000 min⁻¹.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest milling cutters with **cross groove, DIN 1880.**

**Scope of delivery:** Shell end mill arbour with cutting retaining screw and cylinder head screw.

DIN 69871 | Form AD | G 6.3 15.000 | ≤ 10 µm




| Order No. | $d_1$ mm | 3618 | SK | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 4016 | 16 | 41.70 | 40 | 35 | 17 | 38 |
| 4022 | 22 | 41.70 | 40 | 35 | 19 | 48 |
| 4027 | 27 | 42.60 | 40 | 40 | 21 | 58 |
| 4032 | 32 | 45.40 | 40 | 50 | 24 | 78 |
| 4040 | 40 | 56.20 (W372) | 40 | 50 | 27 | 88 |

| Order No. | $d_1$ mm | 3618 | SK | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 5016 | 16 | 58.80 | 50 | 35 | 17 | 38 |
| 5022 | 22 | 58.80 | 50 | 35 | 19 | 48 |
| 5027 | 27 | 58.80 | 50 | 40 | 21 | 58 |
| 5032 | 32 | 62.40 | 50 | 50 | 24 | 78 |
| 5040 | 40 | 71.30 (W372) | 50 | 55 | 27 | 88 |

## Diameter head mount with front-side cooling channel holes

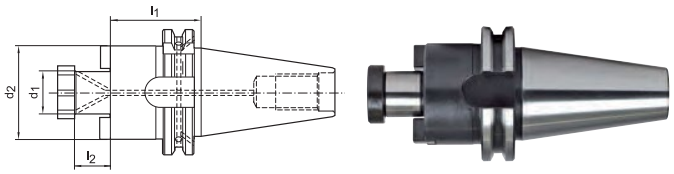
**Design: DIN 69871, Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. Hardened 58 ±2 HRC.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 15000 min⁻¹.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest milling cutters with **cross groove, DIN 1880.**

**Scope of delivery:** Shell end mill arbour with cutting retaining screw and cylinder head screw.

DIN 69871 | Form AD/B | G 6.3 15.000 | ≤ 10 µm




| Order No. | $d_1$ mm | 3619 | SK | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 0001 | 16 | 42.20 | 40 | 35 | 17 | 38 |
| 0002 | 16 | 62.60 | 40 | 100 | 17 | 38 |
| 0004 | 22 | 42.20 | 40 | 35 | 19 | 48 |
| 0007 | 22 | 62.60 | 40 | 100 | 19 | 48 |
| 0010 | 27 | 43.10 | 40 | 40 | 21 | 58 |
| 0013 | 27 | 62.60 | 40 | 100 | 21 | 58 |
| 0016 | 32 | 45.90 | 40 | 50 | 24 | 78 |
| 0019 | 32 | 67.00 | 40 | 100 | 24 | 78 |
| 0022 | 40 | 57.60 | 40 | 50 | 27 | 88 |
| 0025 | 40 | 81.30 (W372) | 40 | 100 | 27 | 88 |

| Order No. | $d_1$ mm | 3619 | SK | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 0026 | 16 | 58.80 | 50 | 35 | 17 | 38 |
| 0027 | 16 | 73.10 | 50 | 100 | 17 | 32 |
| 0028 | 22 | 58.80 | 50 | 35 | 19 | 48 |
| 0029 | 22 | 73.10 | 50 | 100 | 19 | 40 |
| 0031 | 27 | 58.80 | 50 | 40 | 21 | 58 |
| 0032 | 27 | 73.10 | 50 | 100 | 21 | 48 |
| 0034 | 32 | 62.40 | 50 | 50 | 24 | 78 |
| 0035 | 32 | 76.60 | 50 | 100 | 24 | 58 |
| 0037 | 40 | 71.30 | 50 | 50 | 27 | 88 |
| 0038 | 40 | 87.30 (W372) | 50 | 100 | 27 | 70 |

## Precision diameter head mount with front-side cooling channel holes

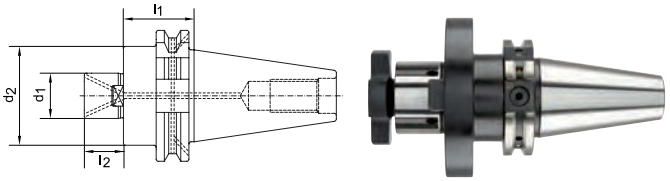
**Design: DIN 69871, Form AD/B,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. With coolant outlet holes on the end face for milling cutters and internal cooling.

Taper tolerance: AT3.
Concentricity: < 0.006 mm.
Balancing quality: G2.5 22000 min$^{-1}$.
Hardened 60 -2 HRC.

**Application:** To mount cutter heads and milling cutters with cross groove to DIN 1880 as well as mounting to DIN 2079 from clamping diameter 40 possible (4 additional threaded holes).

DIN 69871 | Form AD/B | G 2.5 22.000 | ≤ 6 µm

**Scope of delivery:** Milling head mounting complete with cutter retaining screw.




| Order No. | $d_1$ mm | 3220 HAIMER | SK | $d_2$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0001 | 16 | 90.00 | 40 | 32 | 17 | 35 |
| 0002 | 16 | 106.00 | 40 | 36 | 17 | 100 |
| 0004 | 22 | 90.00 | 40 | 48 | 19 | 35 |
| 0007 | 22 | 107.00 | 40 | 48 | 19 | 100 |
| 0010 | 27 | 90.00 | 40 | 48 | 21 | 35 |
| 0013 | 27 | 113.00 | 40 | 60 | 21 | 100 |
| 0016 | 32 | 104.00 | 40 | 78 | 24 | 50 |
| 0019 | 32 | 143.00 | 40 | 78 | 24 | 100 |
| 0022 | 40 | 123.00 (W394) | 40 | 87 | 27 | 50 |

| Order No. | $d_1$ mm | 3220 HAIMER | SK | $d_2$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0028 | 22 | 131.00 * | 50 | 48 | 19 | 35 |
| 0029 | 22 | 154.00 * | 50 | 48 | 19 | 100 |
| 0031 | 27 | 135.00 * | 50 | 60 | 21 | 35 |
| 0032 | 27 | 161.00 * | 50 | 60 | 21 | 100 |
| 0034 | 32 | 139.00 | 50 | 78 | 24 | 35 |
| 0035 | 32 | 184.00 | 50 | 78 | 24 | 100 |
| 0037 | 40 | 156.00 | 50 | 89 | 27 | 50 |
| 0038 | 40 | 184.00 (W394) | 50 | 89 | 27 | 100 |

* Also suitable for ANSI CAT.

## Combi shell end mill arbour

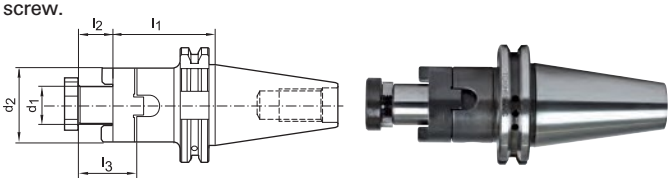
**Design: DIN 69871, Form AD,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 15000 min$^{-1}$.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest milling cutters with **cross groove, DIN 1880.**

DIN 69871 | Form AD | G 6.3 15.000 | ≤ 10 µm

**Scope of delivery:** Combi shell end mill arbour with cutter retaining screw.




| Order No. | $d_1$ mm | 3606 | SK | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 4160 | 16 | 45.40 | 40 | 55 | 17 | 27 | 32 |
| 4165 | 16 | 57.70 | 40 | 100 | 17 | 27 | 32 |
| 4220 | 22 | 46.40 | 40 | 55 | 19 | 31 | 40 |
| 4225 | 20 | 58.80 | 40 | 100 | 19 | 31 | 40 |
| 4270 | 27 | 46.40 | 40 | 55 | 21 | 33 | 48 |
| 4275 | 27 | 59.90 | 40 | 100 | 21 | 33 | 48 |
| 4320 | 32 | 51.80 | 40 | 60 | 24 | 38 | 58 |
| 4325 | 32 | 63.10 | 40 | 100 | 24 | 38 | 58 |
| 4400 | 40 | 59.00 | 40 | 60 | 27 | 41 | 70 |
| 4405 | 40 | 69.50 (W370) | 40 | 100 | 27 | 41 | 70 |

| Order No. | $d_1$ mm | 3606 | SK | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 5160 | 16 | 63.20 | 50 | 55 | 17 | 27 | 32 |
| 5220 | 22 | 63.20 | 50 | 55 | 19 | 31 | 40 |
| 5270 | 27 | 65.30 | 50 | 55 | 21 | 33 | 48 |
| 5320 | 32 | 67.40 | 50 | 55 | 24 | 38 | 58 |
| 5400 | 40 | 73.70 (W370) | 50 | 55 | 27 | 41 | 70 |

## Combi shell end mill arbour NEW

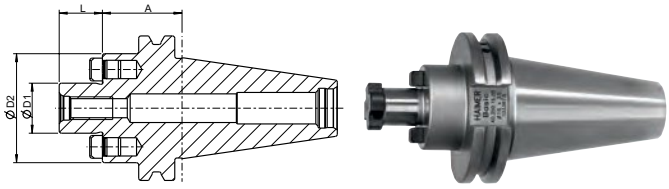
**Design: DIN 69871, Form AD,** made of alloy case-hardened steel. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 8000 min$^{-1}$.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** To mount cutter heads and milling cutters with cross groove.

DIN 69871 | Form AD | G 6.3 8.000 | ≤ 6 µm

**Scope of delivery:** Milling head mounting complete with cutter retaining screw.




| Order No. | Ø D1 mm | 3704 HAIMER | SK | Ø D2 mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 0025 | 16 | 61.00 | 40 | 36 | 17 | 35 |
| 0030 | 22 | 61.00 | 40 | 48 | 19 | 35 |
| 0035 | 27 | 61.00 (W394) | 40 | 48 | 21 | 35 |

## Precision combi mount-on milling die

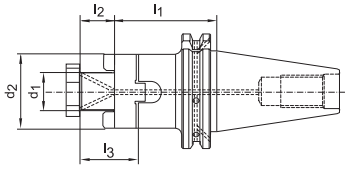
**Design: DIN 69871, Form AD/B,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 254. With transverse and longitudinal grooves. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper tolerance: AT3.
Balancing quality: G2.5 22000 min⁻¹.
Concentricity: < 0.006 mm.
Hardened 60 -2 HRC.

**Application:** For clamping shell end mills DIN 841 and DIN 1880 as well as single angle milling cutters DIN 842 and milling heads DIN 1830.

**Scope of delivery:** Shell end mill arbour complete with cutter retaining screw, driving ring and feather key.

DIN 69871 | Form AD/B | G 2.5 22.000 | ≤ 6 µm



| Order No. | $d_1$ mm | 3221 HAIMER | SK | $d_2$ mm | $l_2$ mm | $l_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|---|
| 4160 | 16 | 95.00 | 40 | 32 | 17 | 27 | 55 |
| 4220 | 22 | 100.00 | 40 | 40 | 19 | 31 | 55 |
| 4270 | 27 | 104.00 | 40 | 48 | 21 | 33 | 55 |
| 4320 | 32 | 115.00 | 40 | 58 | 24 | 38 | 60 |
| 4400 | 40 | 137.00 (W394) | 40 | 70 | 27 | 41 | 60 |

| Order No. | $d_1$ mm | 3221 HAIMER | SK | $d_2$ mm | $l_2$ mm | $l_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|---|
| 5220 | 22 | 139.00 | 50 | 40 | 19 | 31 | 55 |
| 5270 | 27 | 143.00 | 50 | 48 | 21 | 33 | 55 |
| 5320 | 32 | 159.00 | 50 | 58 | 24 | 38 | 55 |
| 5400 | 40 | 171.00 (W394) | 50 | 70 | 27 | 41 | 55 |

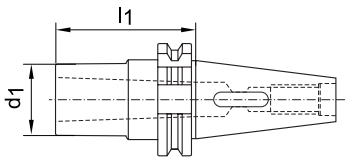
## Spacer

**Design: DIN 69871, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: G6.3 15000 min⁻¹
Hardened 58 ±2 HRC.

**Application:** To nest tools with Morse taper shank and **tangs.**

DIN 69871 | Form AD | G 6.3 15.000



| Order No. | Inner MK | 3670 SK 40 | 3671 SK 50 | $d_1$ mm | $l_1$ mm 3670 | $l_1$ mm 3671 |
|---|---|---|---|---|---|---|
| 0001 | 1 | 33.20 | – | 25 | 50 | – |
| 0004 | 2 | 33.20 | 47.50 | 32 | 50 | 60 |
| 0007 | 3 | 33.20 (W370) | 47.50 (W370) | 40 | 70 | 65 |

| Order No. | Inner MK | 3670 SK 40 | 3671 SK 50 | $d_1$ mm | $l_1$ mm 3670 | $l_1$ mm 3671 |
|---|---|---|---|---|---|---|
| 0010 | 4 | 37.30 | 47.50 | 48 | 95 | 95 |
| 0013 | 5 | – (W370) | 51.00 (W370) | 63 | – | 105 |

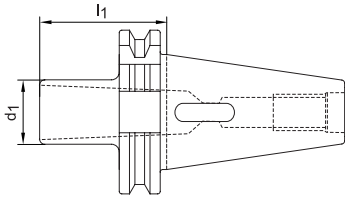
## Precision spacer sleeve

**Design: DIN 69871, Form A,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper tolerance: AT3.
Concentricity: < 0.008 mm.
Hardened 60 -2 HRC.

**Application:** For mounting tools with Morse taper shanks with **tangs** to DIN 228-1, Form B.

DIN 69871 | Form A | G 6.3 8.000 | ≤ 8 µm



| Order No. | MK | 3217 HAIMER SK 40 | 3219 HAIMER SK 50 | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0001 | 1 | 75.00 | – | 25 | 50 |
| 0004 | 2 | 75.00 | 129.00 | 32 | 50 |
| 0007 | 3 | 79.00 | 131.00 | 40 | 70 |
| 0010 | 4 | 84.00 (W394) | 135.00 (W394) | 48 | 95 |

## Spacer sleeve for MK shank with locking thread

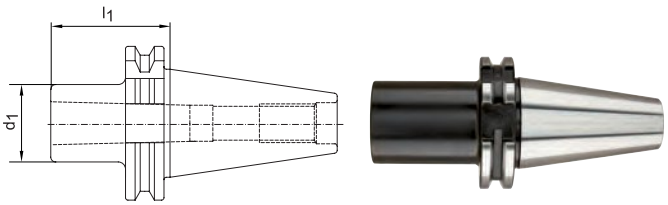
**Design: DIN 69871, Form AD,** balanced. Case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 254.

Taper tolerance: AT3.
Balancing quality: G6.3 15000 min⁻¹.
Concentricity: < 0.008 mm.
Hardened 58 -2 HRC.

**Application:** For clamping tools with Morse taper shanks with **locking thread** according to DIN 228-1, Form A.

**Scope of delivery:** Spacer sleeve, complete with mounted retaining screw.

DIN 69871 | Form AD | G 6.3 15.000 | ≤ 8 µm




| Order No. | MK | 3217 SK 40 | 3219 SK 50 | $d_1$ mm | $l_1$ mm 3217 | $l_1$ mm 3219 |
|---|---|---|---|---|---|---|
| 0204 | 2 | 59.80 | 78.30 | 32 | 50 | 60 |
| 0207 | 3 | 59.80 | 78.30 | 40 | 70 | 65 |
| 0210 | 4 | 63.30 (W370) | 83.10 (W370) | 48 | 95 | 70 |

## Spacer

**Design: DIN 69871, Form AD,** balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

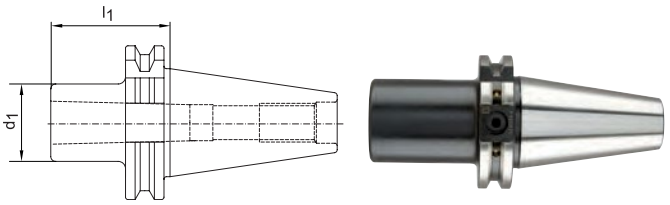
Taper tolerance: AT3.
Balancing quality: G6.3 8000 min⁻¹.
Concentricity: < 0.008 mm.
Hardened 60 -2 HRC.

**Application:** For clamping tools with Morse taper shanks with **locking thread** according to DIN 228-1, Form A.

**Scope of delivery:** Spacer sleeve, complete with mounted retaining screw.

DIN 69871 | Form AD | G 6.3 8.000 | ≤ 8 µm

HAIMER Quality Wins.




| Order No. | MK | 3217 HAIMER SK 40 | 3219 HAIMER SK 50 | $d_1$ mm | $l_1$ mm 3217 | $l_1$ mm 3219 |
|---|---|---|---|---|---|---|
| 0104 | 2 | 85.00 | 129.00 | 32 | 50 | 60 |
| 0107 | 3 | 94.00 | 130.00 | 40 | 70 | 65 |
| 0110 | 4 | 100.00 (W394) | 135.00 (W394) | 48 | 95 | 70 |

## CNC short drill chuck for clockwise and anti-clockwise rotation

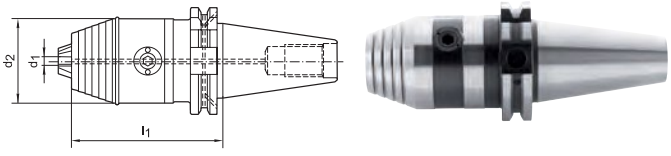
**Design: DIN 69871, Form AD/B.** Made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.
Clamping using a hex spanner essentially increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during left-handed rotation or being quickly decelerated from higher speeds.

Taper angle: Tolerance AT3.
Concentricity: < 0.03 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank.

**Scope of delivery:** Short drill chuck with hex spanner.

DIN 69871 | Form AD/B | ≤ 30 µm




| Order No. | Clamping range mm | 3525 | SK | $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0011 | 1 –13 | 187.00 | 40 | 50 | 90 |
| 0001 | 1.5–16 | 190.50 | 40 | 50 | 95 |
| 0012 | 0.5–13 | 259.00 | 50 | 50 | 95 |
| 0002 | 1.5–16 | 265.50 (W360) | 50 | 50 | 95 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## CNC short drill chuck for clockwise and anti-clockwise rotation

DIN 69871 | Form AD | ≤ 30 µm

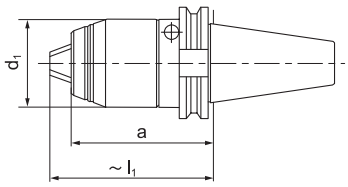
format professional quality

**Design:** Short model, guide elements of rigid design, hardened and ground wearing parts for a long life span. Compact design and high rigidity result in best machining results. High clamping forces are reached by the integrated worm gear at low effort,
**Holding torque > 75 Nm at 13 mm diameter.** Machining is safe thanks to automatic blocking of the worm gear even when running anti-clockwise and quickly decelerated spindle.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: pre-balanced up to 7000 $min^{-1}$ at a residual imbalance of max. 40 gmm.
Concentricity: 0.03 mm.
Max. permissible speed: 7000 $min^{-1}$.

**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

**Scope of delivery:** Short drill chuck with hex spanner.



| Order No. | Clamping range mm | 3525 format | SK | ~L1 mm | $d_1$ mm |
|---|---|---|---|---|---|
| 0101 | 1–16 | 203.00 (W324) | 40 | 80 | 50 |

## CNC short drill chuck AKL for clockwise and anti-clockwise rotation

DIN 69871 | Form AD | G 2.5 20.000 | ≤ 30 µm

ALBRECHT Precision Chucks

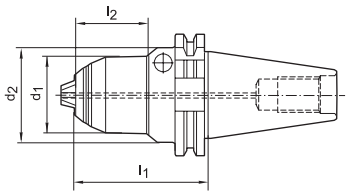
**Design: DIN 69871, Form AD.** Short design, guide elements of rigid design, hardened and ground wear parts ensure high concentricity and long life. 100 % concentricity test with different plug gauge diameters at various measuring points, based on DIN ISO 10888. Compact design and high rigidity result in best machining results. High clamping forces are reached by the integrated worm gear at low effort, **Holding torque > 75 Nm at 13 mm diameter.** Machining is safe thanks to automatic blocking of the worm gear even when running anti-clockwise and quickly decelerated spindle.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 20000 $min^{-1}$.
Concentricity: < 0.03 mm.

**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

**Scope of delivery:** Short drill chuck with hex spanner.

**Note:** Higher speeds possible with special balancing.
ULTRA design (concentricity ≤ 0.015 mm) available upon request.



| Order No. | Clamping range mm | 3483 ALBRECHT | SK | $l_1$ mm | $l_2$ mm | $d_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 0.5–10 | 279.00 | 40 | 69 | 37.5 | 38 | 45 |
| 0007 | 1 –16 | 243.20 | 40 | 80 | – | 50 | – |
| 0009 | 1 –16 | 318.20 (W318) | 50 | 80 | – | 50 | – |

## CNC precision chuck for clockwise and anti-clockwise rotation

DIN 69871 | Form A | G 6.3 25.000 | ≤ 20 µm

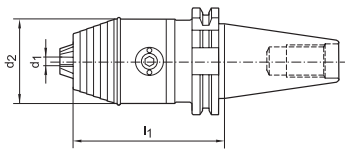
WTE MAPAL GROUP

**Design: DIN 69871, Form A.** Short design, chuck and shank in one piece. Taper to DIN 254. Clamping (using a hex spanner) essentially increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during left-handed rotation or being quickly decelerated from higher speeds.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 25000 $min^{-1}$.
Concentricity: 0.02 mm.

**Application:** To nest tools with cylindrical shank.

**Scope of delivery:** Short drill chuck with hex spanner.



| Order No. | Clamping range $d_1$ mm | 3534 WTE | SK | $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0002 | 0.3– 8 | 294.00 | 40 | 36 | 70 |
| 0005 | 0.5–13 | 246.00 | 40 | 50 | 90 |
| 0010 | 2.5–16 | 258.50 | 40 | 57 | 95 |
| 0015 | 0.5–13 | 306.50 | 50 | 50 | 106 |
| 0020 | 2.5–16 | 317.00 (W325) | 50 | 57 | 111 |

## CNC precision chuck for clockwise and anti-clockwise rotation

**Design: DIN 69871, Form AD/B.** Short design with **central coolant supply,** modular design. Taper to DIN 254. Clamping (using a hex spanner) considerably increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during anti-clockwise rotation or being quickly decelerated from higher speeds.

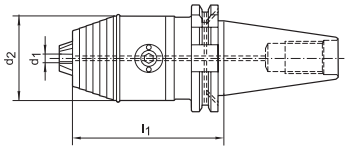
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 25000 min$^{-1}$.
Concentricity: 0.02 mm.

**Application:** To nest tools with a cylindrical shank with internal cooling.

DIN 69871 | Form AD/B | G 6.3 25.000 | ≤ 20 µm

WTE MAPAL GROUP

**Scope of delivery:** Short drill chuck with hex spanner incl. sealing disc for coolant drill bits with 3-6 mm Ø.



| Order No. | Clamping range $d_1$ mm | 3535 WTE | SK | $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0002 | 0.3–8 | 319.00 | 40 | 36 | 73 |
| 0001 | 0.5–13 | 296.00 | 40 | 50 | 90 |
| 0007 | 2.5–16 | 308.50 | 40 | 57 | 95 |
| 0004 | 0.5–13 | 354.50 | 50 | 50 | 106 |
| 0010 | 2.5–16 | 369.00 (W325) | 50 | 57 | 111 |

## MICRO universal chuck

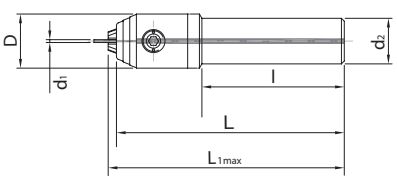
**Design:** With cylindrical shank for clockwise and anti-clockwise rotation, with a speed range of up to 60000 min$^{-1}$ and internal cooling.

Balancing quality: G2.5 25000 min$^{-1}$.

**Application:** For the transmission of high holding forces and torques in the smallest space.

G 2.5 25.000 | ≤ 5 µm

WTE MAPAL GROUP



| Order No. | Clamping range $d_1$ mm | 3401 WTE | Holding fixture $d_2$ mm | Open length L mm | Closed length $L_1$ mm | Outer Ø D mm | Shank length l mm |
|---|---|---|---|---|---|---|---|
| 1008 | 0.2–3.4 | 419.00 | 10 | 70 | 73 | 19 | 40 |
| 1010 | 0.2–3.4 | 440.00 | 10 | 100 | 103 | 19 | 70 |
| 1016 | 0.2–3.4 | 483.00 | 10 | 160 | 163 | 19 | 130 |
| 1608 | 0.2–3.4 | 419.00 | 16 | 80 | 83 | 19 | 50 |
| 1610 | 0.2–3.4 | 440.00 | 16 | 100 | 103 | 19 | 70 |
| 1616 | 0.2–3.4 | 483.00 | 16 | 160 | 163 | 19 | 130 |
| 2008 | 0.2–3.4 | 419.00 | 20 | 80 | 83 | 19 | 52 |
| 2010 | 0.2–3.4 | 440.00 | 20 | 100 | 103 | 19 | 72 |
| 2016 | 0.2–3.4 | 483.00 (W325) | 20 | 160 | 163 | 19 | 32 |

| Order No. | Clamping range $d_1$ mm | 3401 WTE | Holding fixture $d_2$ mm | Open length L mm | Closed length $L_1$ mm | Outer Ø D mm | Shank length l mm |
|---|---|---|---|---|---|---|---|
| 2100 | 0.2–6.4 | 440.00 | 16 | 100 | 104 | 25 | 60 |
| 2150 | 0.2–6.4 | 461.00 | 16 | 150 | 154 | 25 | 110 |
| 2200 | 0.2–6.4 | 503.00 | 16 | 200 | 204 | 25 | 160 |
| 2101 | 0.2–6.4 | 440.00 | 20 | 100 | 104 | 25 | 60 |
| 2151 | 0.2–6.4 | 461.00 | 20 | 150 | 154 | 25 | 110 |
| 2201 | 0.2–6.4 | 503.00 (W325) | 20 | 200 | 204 | 25 | 160 |

## Hydro expansion clamping chuck

found on 📖 3/81.

📖 3/81

## Precision chuck extension AMC

**Design:** High-precision chuck extension together with a precision chuck. The tool clamping takes place via a precision clamping sleeve. Shank ∅ tolerance H6.

**Application:** Makes it possible to work in hard-to-access areas. For clamping cylindrical shanks HA, HB and HE.

ALBRECHT
Precision Chucks

3663 1410

3663 1415

3663 2010

3663 2015

| Order No. | Cylindrical shank ∅ x L mm | 3663 ALBRECHT | Shank | Clamping range mm |
|---|---|---|---|---|
| 1410 | 14 x 100 | 220.60 | HA | 1–6 |
| 1415 | 14 x 150 | 231.90 | HA | 1–6 |
| | | (W318) | | |

| Order No. | Cylindrical shank ∅ x L mm | 3663 ALBRECHT | Shank | Clamping range mm |
|---|---|---|---|---|
| 2010 | 20 x 100 | 231.90 | HB | 1–6 |
| 2015 | 20 x 150 | 243.20 | HB | 1–6 |
| | | (W318) | | |

## Precision adapter sleeve for chuck extension

**Design:** Very resistant special coating. Quick and easy adapter sleeve and tool change.

| Order No. | Clamping range mm | 3663 ALBRECHT |
|---|---|---|
| 0001 | 1 | 141.30 |
| 0002 | 2 | 84.90 |
| 0003 | 3 | 73.70 |
| | | (W318) |

| Order No. | Clamping range mm | 3663 ALBRECHT |
|---|---|---|
| 0004 | 4 | 73.70 |
| 0005 | 5 | 73.70 |
| 0006 | 6 | 73.70 |
| | | (W318) |

## Weldon system surface clamping chuck

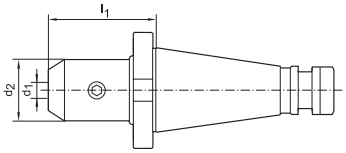
**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6353 HB.

**Scope of delivery:** Face chuck with integrated clamping screw, from ∅ 25 mm with two clamping screws.

DIN 2080 | Form A | ≤ 10 µm



| Order No. | $d_1$ mm | 3540 | SK | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 4006 | 6 | 36.40 | 40 | 50 | 25 |
| 4008 | 8 | 34.10 | 40 | 50 | 28 |
| 4010 | 10 | 34.10 | 40 | 50 | 35 |
| 4012 | 12 | 34.10 | 40 | 50 | 42 |
| 4014 | 14 | 34.10 | 40 | 50 | 44 |
| 4016 | 16 | 34.10 | 40 | 63 | 48 |
| 4018 | 18 | 34.10 | 40 | 63 | 50 |
| 4020 | 20 | 34.10 | 40 | 63 | 52 |
| 4025 | 25 | 37.70 | 40 | 90 | 65 |
| 4032 | 32 | 42.60 | 40 | 90 | 72 |
| | | (W360) | | | |

| Order No. | $d_1$ mm | 3540 | SK | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 5006 | 6 | 53.30 | 50 | 50 | 25 |
| 5008 | 8 | 51.00 | 50 | 50 | 28 |
| 5010 | 10 | 51.00 | 50 | 63 | 35 |
| 5012 | 12 | 51.00 | 50 | 63 | 42 |
| 5014 | 14 | 51.00 | 50 | 63 | 44 |
| 5016 | 16 | 51.00 | 50 | 63 | 48 |
| 5018 | 18 | 51.00 | 50 | 63 | 50 |
| 5020 | 20 | 51.00 | 50 | 63 | 52 |
| 5025 | 25 | 57.30 | 50 | 80 | 65 |
| 5032 | 32 | 61.30 | 50 | 85 | 72 |
| | | (W360) | | | |

## Collet chuck ER

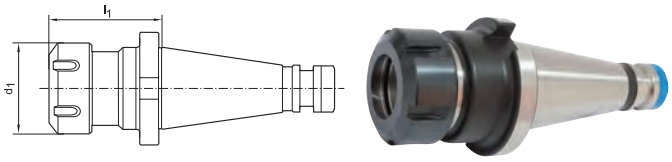
**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. Hardened 58 ±2 HRC.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: 0.02 mm.

**Application:** To nest tools with cylindrical shank in collets to DIN 6499 (ER).

**Scope of delivery:** Collet chuck ER with clamping nut.

DIN 2080 | Form A | ≤ 20 µm




| Order No. | Clamping range mm | 3572 | SK | Collet | $l_1$ mm | $d_1$ mm |
|---|---|---|---|---|---|---|
| 4160 | 1–10 | 59.20 | 40 | ER16 | 50 | 25 |
| 4250 | 1–16 | 44.00 | 40 | ER25 | 53 | 45 |
| 4320 | 2–20 | 46.50 | 40 | ER32 | 68 | 50 |
| 4400 | 3–26 | 48.70 (W364) | 40 | ER40 | 80 | 63 |

| Order No. | Clamping range mm | 3572 | SK | Collet | $l_1$ mm | $d_1$ mm |
|---|---|---|---|---|---|---|
| 5032 | 2–20 | 72.40 | 50 | ER32 | 68 | 50 |
| 5040 | 3–26 | 74.90 (W364) | 50 | ER40 | 76 | 63 |

## Combi shell end mill arbour

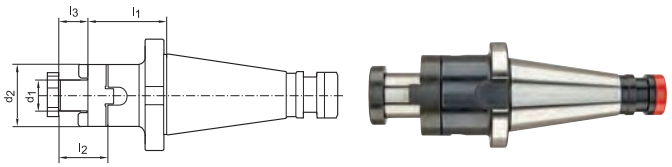
**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: SK 40 = 0.01 mm, SK 50 = 0.015 mm.
Hardened 58 ±2 HRC.

**Application:** For mounting tools with longitudinal and cross groove.

**Scope of delivery:** Combi shell end mill arbour complete with cutter retaining screw, driving ring and feather key.

DIN 2080 | Form A | ≤ 10 µm | ≤ 15 µm




| Order No. | $d_1$ mm | 3601 | SK | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 4016 | 16 | 43.70 | 40 | 52 | 27 | 17 | 32 |
| 4022 | 22 | 43.70 | 40 | 52 | 31 | 19 | 40 |
| 4028 | 27 | 43.70 | 40 | 52 | 33 | 21 | 48 |
| 4034 | 32 | 47.40 | 40 | 52 | 38 | 24 | 58 |
| 4040 | 40 | 55.40 (W370) | 40 | 52 | 41 | 27 | 70 |

| Order No. | $d_1$ mm | 3601 | SK | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 5016 | 16 | 61.60 | 50 | 55 | 27 | 17 | 32 |
| 5022 | 22 | 61.60 | 50 | 55 | 31 | 19 | 40 |
| 5027 | 27 | 61.60 | 50 | 55 | 33 | 21 | 48 |
| 5032 | 32 | 66.00 | 50 | 55 | 38 | 24 | 58 |
| 5040 | 40 | 68.70 (W370) | 50 | 55 | 41 | 27 | 70 |

## Milling head mounting

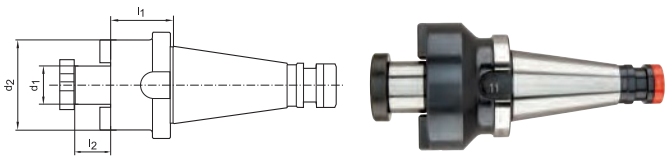
**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: SK 40 = 0.01 mm, SK 50 = 0.015 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cross groove to DIN 1880.

**Scope of delivery:** Combi shell end mill arbour with cutter retaining screw.

DIN 2080 | Form A | ≤ 10 µm | ≤ 15 µm




| Order No. | $d_1$ mm | 3613 | SK | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 4022 | 22 | 47.50 | 40 | 45 | 19 | 48 |
| 4027 | 27 | 47.50 | 40 | 45 | 21 | 58 |
| 4032 | 32 | 50.00 | 40 | 50 | 24 | 78 |
| 4040 | 40 | 61.40 (W372) | 40 | 55 | 27 | 88 |

| Order No. | $d_1$ mm | 3613 | SK | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 5022 | 22 | 62.60 | 50 | 45 | 19 | 48 |
| 5027 | 27 | 63.70 | 50 | 45 | 21 | 58 |
| 5032 | 32 | 62.30 | 50 | 50 | 24 | 78 |
| 5040 | 40 | 79.30 (W372) | 50 | 50 | 27 | 88 |

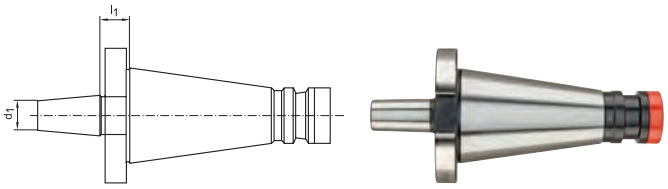
## Drill chuck mounting

**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** For mounting three-jaw drill chucks with inside taper according to DIN 238.

DIN 2080 | Form A | ≤ 10 µm



| Order No. | Chuck taper $d_1$ | 3665 | SK | $l_1$ mm |
|---|---|---|---|---|
| 4016 | B 16 | 43.10 (W360) | 40 | 17 |

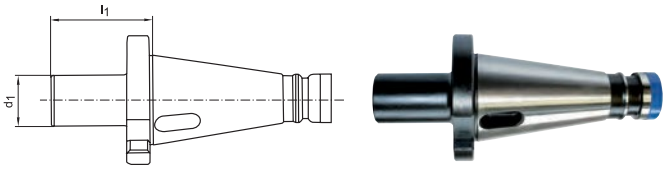
## Spacer

**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with Morse taper shank and **tangs.**

DIN 2080 | Form A | ≤ 10 µm



| Order No. | Inner MK | 3672 | Outer SK | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 4001 | 1 | 33.90 | 40 | 25 | 50 |
| 4002 | 2 | 33.90 | 40 | 32 | 50 |
| 4003 | 3 | 33.90 | 40 | 40 | 65 |
| 4004 | 4 | 36.30 (W370) | 40 | 48 | 95 |

| Order No. | Inner MK | 3672 | Outer SK | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 5001 | 1 | 48.40 | 50 | 25 | 45 |
| 5002 | 2 | 48.40 | 50 | 32 | 60 |
| 5003 | 3 | 48.40 | 50 | 40 | 65 |
| 5004 | 4 | 51.00 | 50 | 48 | 70 |
| 5005 | 5 | 53.50 (W370) | 50 | 63 | 105 |

## CNC chuck for clockwise and anti-clockwise rotation

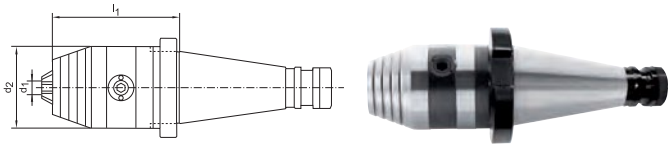
**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. Clamping using a hex spanner considerably increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during anti-clockwise rotation or being quickly decelerated from higher speeds.

Taper angle: AT3.
Concentricity: ≤ 0,03 mm.
Hardened 58 ±2 HRC.

DIN 2080 | Form A | ≤ 30 µm

**Application:** To nest tools with cylindrical shank.

**Scope of delivery:** Short drill chuck with hex spanner.



| Order No. | Clamping range $d_1$ mm | 3522 | SK | $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0001 | 1.5–16 | 191.50 (W360) | 40 | 50 | 95 |

## CNC short drill chuck for clockwise and anti-clockwise rotation

**Design:** Short design, guide elements of rigid design, hardened and ground wear parts ensure high concentricity and long life. Compact design and high rigidity lead to the best machining results. High clamping forces are reached by the integrated worm gear at low effort, **Holding torque > 75 Nm at 13 mm diameter.** Machining is safe thanks to automatic blocking of the worm gear even when running anti-clockwise and quickly decelerated spindle.

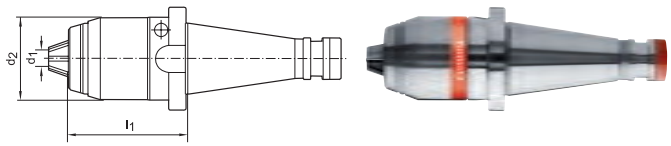
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: pre-balanced up to 7000 $min^{-1}$ at a residual imbalance of max. 40 gmm.
Concentricity: < 0.03 mm.
Max. permissible speed: 7000 $min^{-1}$.

DIN 2080 | Form A | ≤ 30 µm

format professional quality

**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

**Scope of delivery:** Short drill chuck with hex spanner.



| Order No. | Clamping range $d_1$ mm | 3522 format | SK | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 0101 | 1–16 | 219.00 (W324) | 40 | 73 | 50 |

## CNC precision chuck for clockwise and anti-clockwise rotation

**Design: DIN 2080, Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. Short design, chuck and shank in one piece. Clamping (using a hex spanner) considerably increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during anti-clockwise rotation or being quickly decelerated from higher speeds.

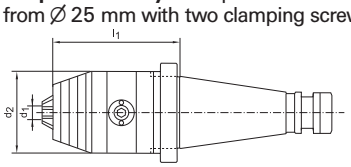
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 7000 min$^{-1}$.
Concentricity: 0.02 mm.
Hardened 58 ±2 HRC.

DIN 2080 | Form A | G 6.3 25.000 | ≤ 20 µm

WTE MAPAL GROUP

**Application:** To nest tools with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6353 HB.

**Scope of delivery:** CNC precision chuck with integrated clamping screw, from ∅ 25 mm with two clamping screws.



| Order No. | Clamping range $d_1$ mm | 3531 WTE | SK | $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0002 | 0.3– 8 | 294.00 | 40 | 36 | 62 |
| 0005 | 0.5–13 | 246.00 | 40 | 50 | 83 |
| 0010 | 2.5–16 | 258.50 | 40 | 57 | 83 |
| 0015 | 0.5–13 | 306.50 | 50 | 50 | 100 |
| 0020 | 2.5–16 | 317.00 (W325) | 50 | 57 | 100 |

## CNC short drill chuck AKL for clockwise and anti-clockwise rotation

**Design: DIN 2080, Form A.** Short design, guide elements of rigid design, hardened and ground wear parts ensure high concentricity and long life. 100 % concentricity test with different plug gauge diameters at various measuring points, based on DIN ISO 10888. Compact design and high rigidity result in best machining results. High clamping forces are reached by the integrated worm gear at low effort, **Holding torque > 75 Nm at 13 mm diameter.** Machining is safe thanks to automatic blocking of the worm gear even when running anti-clockwise and quickly decelerated spindle.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 20000 min$^{-1}$
Concentricity: < 0.03 mm.

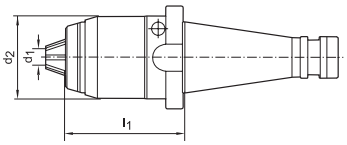
**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

DIN 2080 | Form A | G 2.5 20.000 | ≤ 30 µm

ALBRECHT Precision Chucks

**Scope of delivery:** Short drill chuck with hex spanner.

**Note:** Higher speeds possible with special balancing.



| Order No. | Clamping range $d_1$ mm | 3480 ALBRECHT | SK | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 0007 | 1–16 | 255.90 | 40* | 73 | 50 |
| 0009 | 1–16 | 318.20 (W318) | 50 | 77 | 50 |

* With ring groove for automatic tool clamping.

## Weldon system surface clamping chuck

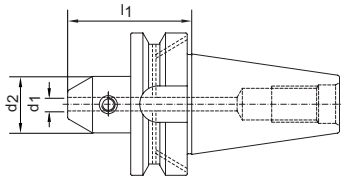
**Design: JIS B 6339 (MAS-BT), Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 15000 min$^{-1}$.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank and lateral driving plane.

**Scope of delivery:** Face chuck with clamping screw.

JIS B 6339 MAS/BT | Form AD/B | G 6.3 15.000 | ≤ 10 µm



| Order No. | $d_1$ mm | 3563 | BT | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 4006 | 6 | 36.20 | 40 | 50 | 25 |
| 6106 | 6 | 44.50 | 40 | 100 | 25 |
| 4008 | 8 | 35.00 | 40 | 50 | 28 |
| 6108 | 8 | 42.50 | 40 | 100 | 28 |
| 4010 | 10 | 35.00 | 40 | 63 | 35 |
| 6110 | 10 | 42.50 | 40 | 100 | 35 |
| 4012 | 12 | 35.00 | 40 | 63 | 42 |
| 6112 | 12 | 42.50 | 40 | 100 | 42 |
| 4014 | 14 | 35.00 | 40 | 63 | 44 |
| 6114 | 14 | 42.50 | 40 | 100 | 44 |
| 4016 | 16 | 35.00 | 40 | 63 | 48 |
| 6116 | 16 | 42.50 | 40 | 100 | 48 |
| 4018 | 18 | 35.00 (W360) | 40 | 63 | 50 |

| Order No. | $d_1$ mm | 3563 | BT | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 6118 | 18 | 42.50 | 40 | 100 | 50 |
| 4020 | 20 | 35.00 | 40 | 63 | 52 |
| 6120 | 20 | 42.50 | 40 | 100 | 52 |
| 4025 | 25 | 40.30 | 40 | 90 | 65 |
| 4032 | 32 | 42.30 | 40 | 100 | 72 |
| 7006 | 6 | 62.00 | 50 | 63 | 25 |
| 7008 | 8 | 59.80 | 50 | 63 | 28 |
| 7010 | 10 | 59.80 | 50 | 70 | 35 |
| 7012 | 12 | 59.80 | 50 | 80 | 42 |
| 7016 | 16 | 59.80 | 50 | 80 | 48 |
| 7020 | 20 | 59.80 | 50 | 80 | 52 |
| 7025 | 25 | 65.10 | 50 | 100 | 65 |
| 7032 | 32 | 69.60 (W360) | 50 | 105 | 72 |

## Precision face chuck system Weldon

**Design: JIS B 6339 (MAS-BT), Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

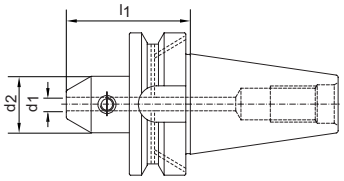
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G2.5 22000 min$^{-1}$.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** To nest tools with cylindrical shank and lateral driving plane.

**Scope of delivery:** Face chuck with clamping screw.

**Note:** Suitable precision pulling bolts are found on 📖 3/110.

JIS B 6339 MAS/BT | Form AD/B | G 2.5 22.000 | ≤ 3 µm



| Order No. | $d_1$ mm | 3232 HAIMER | BT | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 4006 | 6 | 75.00 | 40 | 50 | 25 |
| 6106 | 6 | 85.00 | 40 | 100 | 25 |
| 4008 | 8 | 75.00 | 40 | 50 | 28 |
| 6108 | 8 | 85.00 | 40 | 100 | 28 |
| 4010 | 10 | 75.00 | 40 | 63 | 35 |
| 6110 | 10 | 85.00 | 40 | 100 | 35 |
| 4012 | 12 | 75.00 | 40 | 63 | 42 |
| 6112 | 12 | 85.00 | 40 | 100 | 42 |
| 4014 | 14 | 75.00 | 40 | 63 | 44 |
| 4016 | 16 | 75.00 | 40 | 63 | 48 |
| 6116 | 16 | 92.00 | 40 | 100 | 48 |
| 4018 | 18 | 84.00 | 40 | 63 | 50 |

(W394)

| Order No. | $d_1$ mm | 3232 HAIMER | BT | $l_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| 4020 | 20 | 84.00 | 40 | 63 | 52 |
| 6120 | 20 | 92.00 | 40 | 100 | 52 |
| 4025 | 25 | 107.00 | 40 | 90 | 59 |
| 4032 | 32 | 115.00 | 40 | 100 | 72 |
| 5006 | 6 | 123.00 | 50 | 63 | 25 |
| 5008 | 8 | 123.00 | 50 | 63 | 28 |
| 5010 | 10 | 128.00 | 50 | 70 | 35 |
| 5012 | 12 | 128.00 | 50 | 80 | 42 |
| 5016 | 16 | 128.00 | 50 | 80 | 48 |
| 5020 | 20 | 144.00 | 50 | 80 | 52 |
| 5025 | 25 | 144.00 | 50 | 100 | 65 |
| 5032 | 32 | 151.00 | 50 | 105 | 72 |

(W394)

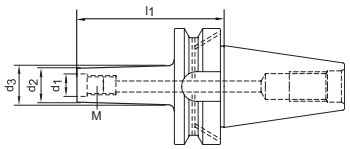
## Clamping chuck for screw-in cutters

**Design: JIS B 6339 (MAS-BT), Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** For nesting milling heads with clamping thread.

JIS B 6339 MAS/BT | Form AD/B | G 2.5 25.000 | ≤ 10 µm



| Order No. | M | 3570 BT 40 | $d_1$ mm | $d_2$ mm | $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 3981 | M6 | 99.00 | 6.5 | 10 | 20 | 77 |
| 3991 | M6 | 108.00 | 6.5 | 10 | 20 | 102 |
| 4001 | M6 | 124.00 | 6.5 | 10 | 23 | 127 |
| 4011 | M8 | 99.40 | 8.5 | 13 | 23 | 77 |
| 4021 | M8 | 106.50 | 8.5 | 13 | 23 | 102 |
| 4031 | M8 | 124.00 | 8.5 | 13 | 25 | 127 |
| 4041 | M10 | 99.00 | 10.5 | 18 | 23 | 77 |
| 4051 | M10 | 106.50 | 10.5 | 18 | 28 | 102 |
| 4071 | M10 | 124.00 | 10.5 | 18 | 32 | 127 |
| 4081 | M12 | 99.00 | 12.5 | 21 | 24 | 77 |
| 4091 | M12 | 106.50 | 12.5 | 21 | 31 | 102 |
| 4101 | M12 | 124.00 | 12.5 | 21 | 33 | 127 |
| 4111 | M16 | 103.00 | 16.5 | 29 | 34 | 77 |
| 4121 | M16 | 113.00 | 16.5 | 29 | 34 | 102 |
| 4131 | M16 | 124.00 | 16.5 | 29 | 36 | 127 |
| 4141 | M16 | 143.00 | 16.5 | 29 | 40 | 152 |

(W360)

| Order No. | M | 3571 BT 50 | $d_1$ mm | $d_2$ mm | $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 5081 | M12 | 121.00 | 12.5 | 21 | 24 | 89 |
| 5091 | M12 | 147.50 | 12.5 | 21 | 33 | 138 |
| 5101 | M12 | 171.00 | 12.5 | 21 | 40 | 188 |
| 5111 | M16 | 124.50 | 16.5 | 29 | 34 | 89 |
| 5121 | M16 | 147.50 | 16.5 | 29 | 36 | 138 |
| 5131 | M16 | 171.00 | 16.5 | 29 | 42.5 | 188 |

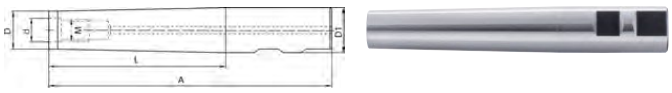
(W360)

## Extension for screw-in milling cutters

**Design:** Cylindrical shank to DIN 1835 B, with tapered design.

**Application:** For holding milling tools with clamping thread.

DIN 1835 B



| Order No. | M | 3635 | D1 mm | d mm | D mm | A mm | L mm |
|---|---|---|---|---|---|---|---|
| 0201 | M8 | 77.80 | 16 | 8.5 | 12.8 | 115 | 60 |
| 0204 | M8 | 89.90 | 16 | 8.5 | 12.8 | 160 | 100 |
| 0207 | M10 | 77.80 (W378) | 20 | 10.5 | 17.8 | 120 | 60 |

| Order No. | M | 3635 | D1 mm | d mm | D mm | A mm | L mm |
|---|---|---|---|---|---|---|---|
| 0210 | M10 | 89.90 | 20 | 10.5 | 17.8 | 160 | 100 |
| 0213 | M12 | 93.40 | 25 | 12.5 | 20.8 | 160 | 100 |
| 0216 | M16 | 96.80 (W378) | 32 | 17 | 28.8 | 160 | 100 |

## Collet chuck type ER

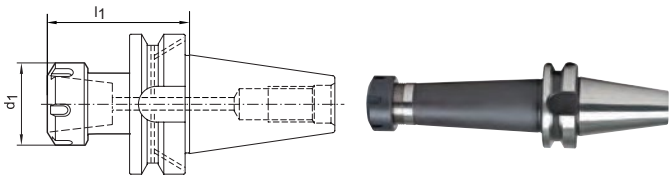
**Design: JIS B 6339 (MAS-BT), Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 15000 min⁻¹.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank in collets to DIN 6499 (ER).

**Scope of delivery:** Collet chuck complete with clamping chuck.

JIS B 6339 MAS/BT | Form AD/B | G 6.3 15.000 | ≤ 10 µm



| Order No. | Clamping range mm | 3580 | BT | Collet | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 4160 | 1–10 | 44.70 | 40 | ER16 | 32 | 63 |
| 4161 | 1–10 | 51.10 | 40 | ER16 | 32 | 100 |
| 4162 | 1–10 | 85.50 | 40 | ER16 | 32 | 160 |
| 4250 | 1–16 | 44.70 | 40 | ER25 | 42 | 60 |
| 4251 | 1–16 | 55.60 | 40 | ER25 | 42 | 100 |
| 4252 | 1–16 | 90.30 | 40 | ER25 | 42 | 160 |
| 4320 | 2–20 | 46.70 | 40 | ER32 | 50 | 70 |
| 4321 | 2–20 | 55.60 | 40 | ER32 | 50 | 100 |
| 4322 | 2–20 | 92.30 | 40 | ER32 | 50 | 160 |
| 4400 | 3–26 | 50.20 | 40 | ER40 | 63 | 80 |
| 4401 | 3–26 | 62.90 | 40 | ER40 | 63 | 100 |
| 4402 | 3–26 | 96.40 (W364) | 40 | ER40 | 63 | 160 |

| Order No. | Clamping range mm | 3580 | BT | Collet | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 5160 | 1–10 | 75.30 | 50 | ER16 | 32 | 70 |
| 5161 | 1–10 | 93.00 | 50 | ER16 | 32 | 100 |
| 5250 | 1–16 | 75.30 | 50 | ER25 | 42 | 70 |
| 5251 | 1–16 | 93.00 | 50 | ER25 | 42 | 100 |
| 5320 | 2–20 | 79.90 | 50 | ER32 | 50 | 70 |
| 5321 | 2–20 | 110.00 | 50 | ER32 | 50 | 100 |
| 5400 | 3–26 | 79.90 | 50 | ER40 | 63 | 80 |
| 5401 | 3–26 | 112.50 (W364) | 50 | ER40 | 63 | 100 |

## Collet chuck type ER

NEW

**Design: JIS B 6339 (MAS-BT), Form AD,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

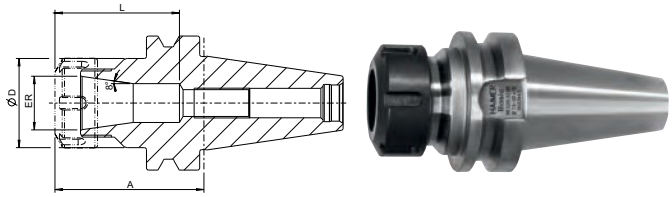
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 18000 min⁻¹.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank in collets to DIN 6499 (ER).

**Scope of delivery:** Collet chuck complete with clamping chuck.

JIS B 6339 MAS/BT | Form AD | G 2.5 18.000 | ≤ 3 µm

HAIMER Quality Wins



| Order No. | Clamping range mm | 3704 HAIMER | BT | Collet | ∅ D mm | L mm | A mm |
|---|---|---|---|---|---|---|---|
| 0040 | 0.5–10 | 52.00 | 40 | ER16 | 28 | * | 70 |
| 0045 | 1 –16 | 52.00 | 40 | ER25 | 42 | 58.5 | 70 |
| 0050 | 2 –20 | 54.00 (W394) | 40 | ER32 | 50 | 65.5 | 70 |

* Drilled through.

## Precision collet chuck Type ER

**Design: JIS B 6339 (MAS-BT), Form AD/B,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm.
**All functional surfaces finely machined** and **guaranteed quality** thanks to double 100 % control.

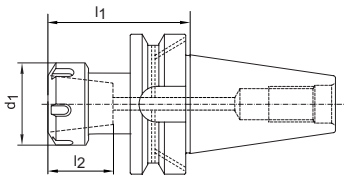
Taper tolerance: AT3.
Balancing quality: G2.5 22000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For clamping tools with cylindrical shank in collets to DIN 6499.

**Scope of delivery:** Collet chuck complete with clamping nut (balanced, with anti-friction coating for increased clamping force).

**Note:** Dimension $l_2$ specifies the maximum insertion depth for tools.

JIS B 6339 MAS/BT | Form AD/B | G 2.5 22.000 | ≤ 3 µm



| Order No. | Clamping range mm | 3234 HAIMER | BT | Collet | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 4160 | 0.5–10 | 77.00 | 40 | ER16 | 28 | 70 |
| 4161 | 0.5–10 | 83.00 | 40 | ER16 | 28 | 100 |
| 4162 | 0.5–10 | 107.00 | 40 | ER16 | 28 | 160 |
| 4250 | 1 –16 | 77.00 | 40 | ER25 | 42 | 70 |
| 4251 | 1 –16 | 91.00 | 40 | ER25 | 42 | 100 |
| 4252 | 1 –16 | 137.00 | 40 | ER25 | 42 | 160 |
| 4320 | 1.5–20 | 80.00 | 40 | ER32 | 50 | 70 |
| 4321 | 1.5–20 | 94.00 | 40 | ER32 | 50 | 100 |
| 4323 | 1.5–20 | 139.00 | 40 | ER32 | 50 | 160 |
| 4400 | 2.5–26 | 91.00 | 40 | ER40 | 63 | 70 |
| 4401 | 2.5–26 | 107.00 | 40 | ER40 | 63 | 100 |
| 4402 | 2.5–26 | 151.00 | 40 | ER40 | 63 | 160 |

(W394)

| Order No. | Clamping range mm | 3234 HAIMER | BT | Collet | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 5160 | 0.5–10 | 128.00 | 50 | ER16 | 28 | 70 |
| 5161 | 0.5–10 | 145.00 | 50 | ER16 | 28 | 100 |
| 5162 | 0.5–10 | 177.00 | 50 | ER16 | 28 | 160 |
| 5250 | 1 –16 | 139.00 | 50 | ER25 | 42 | 70 |
| 5251 | 1 –16 | 145.00 | 50 | ER25 | 42 | 100 |
| 5252 | 1 –16 | 191.00 | 50 | ER25 | 42 | 160 |
| 5320 | 1.5–20 | 139.00 | 50 | ER32 | 50 | 70 |
| 5321 | 1.5–20 | 145.00 | 50 | ER32 | 50 | 100 |
| 5322 | 1.5–20 | 204.00 | 50 | ER32 | 50 | 160 |
| 5400 | 2.5–26 | 151.00 | 50 | ER40 | 63 | 80 |
| 5401 | 2.5–26 | 157.00 | 50 | ER40 | 63 | 100 |
| 5402 | 2.5–26 | 217.00 | 50 | ER40 | 63 | 160 |

(W394)

## Collet chuck Mini type ER

**Design: JIS B 6339 (MAS-BT), Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

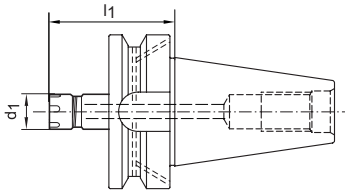
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 15000 min⁻¹.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank in collets in accordance with DIN 6499 (ER), slim design.

**Scope of delivery:** Collet chuck complete with clamping nut.

**Note:** Suitable clamping nuts are found on 📖 3/103.

JIS B 6339 MAS/BT | Form AD/B | G 6.3 15.000 | ≤ 10 µm



| Order No. | $d_1$ mm | 3585 | BT | Collet | $l_1$ mm |
|---|---|---|---|---|---|
| 4011 | 16 | 82.00 | 40 | ER11 | 70 |
| 4021 | 16 | 86.00 | 40 | ER11 | 100 |
| 4031 | 16 | 112.50 | 40 | ER11 | 160 |
| 4041 | 22 | 82.00 | 40 | ER16 | 70 |
| 4051 | 22 | 86.00 | 40 | ER16 | 100 |
| 4061 | 22 | 112.50 | 40 | ER16 | 160 |
| 4071 | 35 | 82.00 | 40 | ER25 | 70 |
| 4081 | 35 | 86.00 | 40 | ER25 | 100 |
| 4091 | 35 | 112.50 | 40 | ER25 | 160 |

(W364)

| Order No. | $d_1$ mm | 3585 | BT | Collet | $l_1$ mm |
|---|---|---|---|---|---|
| 5041 | 22 | 129.50 | 50 | ER16 | 70 |
| 5051 | 22 | 140.50 | 50 | ER16 | 100 |
| 5061 | 22 | 151.50 | 50 | ER16 | 160 |
| 5071 | 35 | 129.50 | 50 | ER25 | 70 |
| 5081 | 35 | 140.50 | 50 | ER25 | 100 |
| 5091 | 35 | 151.50 | 50 | ER25 | 160 |

(W364)

## Precision HG chuck

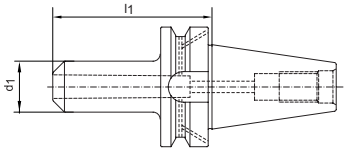
**Design: JIS B 6339 (MAS-BT), Form AD/B,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. **All functional surfaces finely machined** and **guaranteed quality** thanks to double 100 % control.

JIS B 6339 MAS/BT | Form AD/B | G 2.5 25.000 | ≤ 3 µm

Taper tolerance: AT3.
Shank tolerance: h6.
Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm on the tool (3 x d).
Hardened 60 -2 HRC.

**Application:** For high-precision clamping tools with cylindrical shank using special collets. Very well suited for high-speed machining.

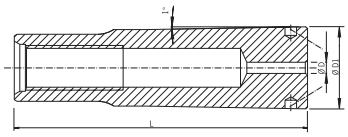
**Scope of delivery:** HG Clamping chuck with clamping screw and pull-out hook, **without** collet.



| Order No. | Clamping range mm | 3233 HAIMER BT 40 | 3235 HAIMER BT 50 | HG | Ø $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0001 | 2– 8 | 130.00 | – | 01 | 30 | 65 |
| 0004 | 2– 8 | 145.00 | – | 01 | 30 | 100 |
| 0007 | 2– 8 | – | 297.00 ◊ | 01 | 30 | 160 |
| 0010 | 10–14 | 130.00 | 213.00 ◊ | 02 | 35 | 70 |
| 0013 | 10–14 | 145.00 | 237.00 ◊ | 02 | 35 | 100 |
| 0016 | 10–14 | – | 297.00 ◊ | 02 | 35 | 160 |
| 0019 | 16–20 | 130.00 | 208.00 ◊ | 03 | 48 | 75 |
| 0022 | 16–20 | 145.00 (W394) | – (W394) | 03 | 48 | 100 |

## HG collet

**Application:** For high-precision and economical clamping of tools with cylindrical shank in HG chucks within a high clamping range.



| Order No. | Ø D mm | 3295 HAIMER | HG | Ø D1 mm | L mm |
|---|---|---|---|---|---|
| 0102 | 2 | 117.00 | 01 | 14.7 | 52.5 |
| 0103 | 3 | 117.00 | 01 | 14.7 | 52.5 |
| 0104 | 4 | 117.00 | 01 | 14.7 | 52.5 |
| 0105 | 5 | 74.00 | 01 | 14.7 | 52.5 |
| 0106 | 6 | 74.00 | 01 | 14.7 | 52.5 |
| 0108 | 8 | 74.00 (W394) | 01 | 14.7 | 52.5 |

| Order No. | Ø D mm | 3295 HAIMER | HG | Ø D1 mm | L mm |
|---|---|---|---|---|---|
| 0110 | 10 | 74.00 | 02 | 17.87 | 64.2 |
| 0112 | 12 | 74.00 | 02 | 17.87 | 64.2 |
| 0114 | 14 | 74.00 | 02 | 17.87 | 64.2 |
| 0116 | 16 | 74.00 | 03 | 26.147 | 69.7 |
| 0118 | 18 | 74.00 | 03 | 26.147 | 69.7 |
| 0120 | 20 | 74.00 (W394) | 03 | 26.147 | 69.7 |

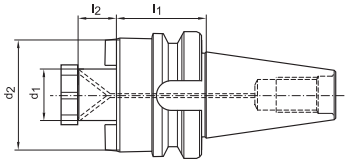
## Diameter head mount with front-side cooling channel holes

**Design: JIS B 6339 (MAS-BT), Form AD,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

JIS B 6339 MAS/BT | Form AD | G 6.3 15.000 | ≤ 10 µm

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 15000 min⁻¹.
Concentricity: < 0.01 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cross groove to DIN 1880.



| Order No. | $d_1$ mm | 3622 | BT | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 4016 | 16 | 43.50 | 40 | 40 | 17 | 38 |
| 4022 | 22 | 43.50 | 40 | 40 | 19 | 48 |
| 4027 | 27 | 44.40 | 40 | 40 | 21 | 58 |
| 4032 | 32 | 47.20 | 40 | 50 | 24 | 78 |
| 4040 | 40 | 56.90 * (W372) | 40 | 50 | 27 | 88 |

| Order No. | $d_1$ mm | 3622 | BT | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 5016 | 16 | 58.80 | 50 | 40 | 17 | 38 |
| 5022 | 22 | 58.80 | 50 | 40 | 19 | 48 |
| 5027 | 27 | 58.80 | 50 | 40 | 21 | 58 |
| 5032 | 32 | 62.40 | 50 | 50 | 24 | 78 |
| 5040 | 40 | 71.30 * (W372) | 50 | 50 | 27 | 88 |

* Additionally 4 threaded holes to mount cutter heads using tool fixture to DIN 2079



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Diameter head mount with front-side cooling channel holes

NEW

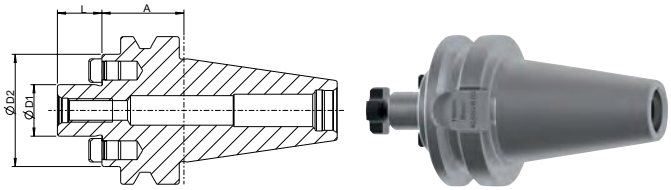
**Design: JIS B 6339 (MAS-BT), Form AD,** precision balanced.
Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm.
**All functional surfaces finely machined** and **guaranteed quality** thanks to double 100 % control.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cross groove to DIN 1880.

JIS B 6339 MAS/BT | Form AD | G 6.3 8.000 | ≤ 6 µm

HAIMER Quality Wins.




| Order No. | Ø D1 mm | 3704 HAIMER | BT | Ø D2 mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 0055 | 16 | 59.00 | 40 | 36 | 17 | 35 |
| 0060 | 22 | 58.00 (W394) | 40 | 48 | 19 | 35 |

| Order No. | Ø D1 mm | 3704 HAIMER | BT | Ø D2 mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 0065 | 27 | 58.00 (W394) | 40 | 48 | 21 | 35 |

## Precision diameter head mount with front-side cooling channel holes

**Design: JIS B 6339 (MAS-BT), Form AD/B,** precision balanced.
Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm.
**All functional surfaces finely machined** and **guaranteed quality** thanks to double 100 % control. With coolant outlet holes on the end face for milling cutters and internal cooling.

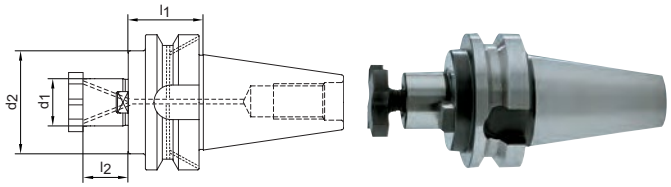
Taper tolerance: AT3.
Balancing quality: G2.5 22000 min$^{-1}$.
Concentricity: < 0.006 mm.
Hardened 60 -2 HRC.

**Application:** To nest cutter heads and milling cutters with cross groove DIN 1880.

**Scope of delivery:** Milling head mounting complete with cutter retaining screw.

JIS B 6339 MAS/BT | Form AD/B | G 2.5 22.000 | ≤ 6 µm

HAIMER Quality Wins.




| Order No. | Ø $d_1$ mm | 3236 HAIMER | BT | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 4022 | 22 | 86.00 | 40 | 35 | 19 | 48 |
| 4027 | 27 | 86.00 | 40 | 35 | 21 | 48 |
| 4032 | 32 | 115.00 | 40 | 65 | 24 | 78 |
| 4040 | 40 | 128.00 (W394) | 40 | 70 | 27 | 87 |

| Order No. | Ø $d_1$ mm | 3236 HAIMER | BT | $l_1$ mm | $l_2$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|
| 5022 | 22 | 143.00 | 50 | 55 | 19 | 48 |
| 5027 | 27 | 144.00 | 50 | 55 | 21 | 60 |
| 5032 | 32 | 152.00 | 50 | 55 | 24 | 78 |
| 5040 | 40 | 156.00 (W394) | 50 | 55 | 27 | 89 |

## Combi shell end mill arbour

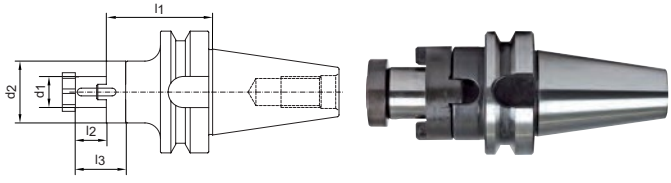
**Design: JIS B 6339 (MAS-BT), Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 15000 min$^{-1}$.
Concentricity: BT 40 = 0.01 mm, BT 50 = 0.015 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with longitudinal and cross groove to DIN 841, 842, 1830 and 1880.

**Scope of delivery:** Combi shell end mill arbour complete with cutter retaining screw, driving ring and feather key.

JIS B 6339 MAS/BT | Form AD | G 6.3 15.000 | ≤ 10 µm | ≤ 15 µm




| Order No. | Ø $d_1$ mm | 3610 | BT | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 4016 | 16 | 38.60 | 40 | 55 | 17 | 27 | 32 |
| 4022 | 22 | 39.50 | 40 | 55 | 19 | 31 | 40 |
| 4027 | 27 | 39.50 | 40 | 55 | 21 | 33 | 48 |
| 4032 | 32 | 44.10 | 40 | 60 | 24 | 38 | 58 |
| 4040 | 40 | 51.40 (W370) | 40 | 60 | 27 | 41 | 70 |

| Order No. | Ø $d_1$ mm | 3610 | BT | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 5016 | 16 | 55.10 | 50 | 70 | 17 | 27 | 32 |
| 5022 | 22 | 55.10 | 50 | 70 | 19 | 31 | 40 |
| 5027 | 27 | 56.90 | 50 | 70 | 21 | 33 | 48 |
| 5032 | 32 | 58.80 | 50 | 70 | 24 | 38 | 58 |
| 5040 | 40 | 64.30 (W370) | 50 | 70 | 27 | 41 | 70 |

## Precision combi mount-on milling die

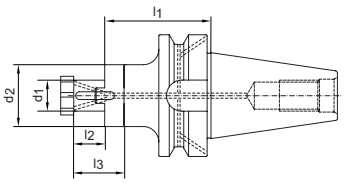
**Design: JIS B 6339 (MAS-BT), Form AD/B,** precision balanced. Made of alloy case-hardened steel, with a core tensile strength of min. approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper tolerance: AT3.
Balancing quality: G2.5 22000 min⁻¹.
Concentricity: 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For clamping shell end mills DIN 841 and DIN 1880 as well as single angle milling cutters DIN 842 and milling heads DIN 1830.

**Scope of delivery:** Combi - Shell end mill arbour complete with cutter retaining screw, driving ring and feather key.

JIS B 6339 MAS/BT | Form AD/B | G 2.5 22.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3238 HAIMER | BT | Ø $d_2$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm |
|---|---|---|---|---|---|---|---|
| 4016 | 16 | 98.00 | 40 | 32 | 55 | 17 | 27 |
| 4022 | 22 | 102.00 | 40 | 40 | 55 | 19 | 31 |
| 4027 | 27 | 107.00 | 40 | 48 | 55 | 21 | 33 |
| 4032 | 32 | 117.00 | 40 | 58 | 60 | 24 | 38 |
| 4040 | 40 | 140.00 (W394) | 40 | 70 | 70 | 27 | 41 |

| Order No. | Ø $d_1$ mm | 3238 HAIMER | BT | Ø $d_2$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm |
|---|---|---|---|---|---|---|---|
| 5016 | 16 | 144.00 | 50 | 32 | 70 | 17 | 27 |
| 5022 | 22 | 144.00 | 50 | 40 | 70 | 19 | 31 |
| 5027 | 27 | 150.00 | 50 | 48 | 70 | 21 | 33 |
| 5032 | 32 | 230.00 | 50 | 58 | 70 | 24 | 38 |
| 5040 | 40 | 252.00 (W394) | 50 | 70 | 70 | 27 | 41 |

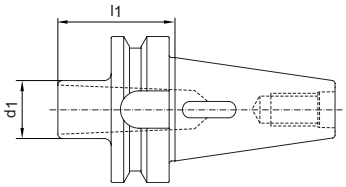
## Spacer

**Design: JIS B 6339 (MAS-BT), Form AD,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 15000 min⁻¹.
Hardened 58 ±2 HRC.

**Application:** To nest tools with Morse taper shank and **tangs.**

JIS B 6339 MAS/BT | Form AD | G 6.3 15.000



| Order No. | Inner MK | 3682 BT 40 | BT | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 4001 | 1 | 31.40 | 40 | 25 | 50 |
| 4002 | 2 | 31.40 | 40 | 32 | 50 |
| 4003 | 3 | 31.40 | 40 | 40 | 70 |
| 4004 | 4 | 34.30 (W370) | 40 | 48 | 95 |

| Order No. | Inner MK | 3684 BT 50 | BT | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0002 | 2 | 48.70 | 50 | 32 | 60 |
| 0003 | 3 | 48.70 | 50 | 40 | 65 |
| 0004 | 4 | 48.70 (W370) | 50 | 48 | 95 |


NEU FORMAT indexing inserts

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format professional quality

2/195, 2/203, 2/229

2/197, 2/210, 2/239

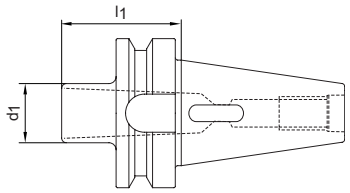
## Precision spacer sleeve

**Design: JIS B 6339 (MAS-BT), Form AD,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 8000 min$^{-1}$.
Hardened 60 -2 HRC.

**Application:** To nest tools with Morse taper shank and **tangs.**

JIS B 6339 MAS/BT | Form AD | G 6.3 8.000



| Order No. | Inner MK | 3237 HAIMER BT 40 | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|
| 4001 | 1 | 77.00 | 25 | 50 |
| 4002 | 2 | 77.00 | 32 | 50 |
| 4003 | 3 | 80.00 | 40 | 70 |
| 4004 | 4 | 85.00 (W394) | 48 | 95 |

| Order No. | Inner MK | 3237 HAIMER BT 50 | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|
| 5002 | 2 | 142.00 | 32 | 60 |
| 5003 | 3 | 148.00 | 40 | 65 |
| 5004 | 4 | 154.00 (W394) | 48 | 95 |

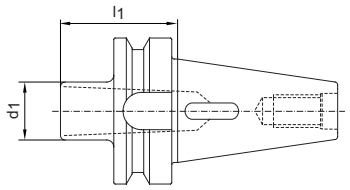
## Spacer

**Design: JIS B 6339 (MAS-BT), Form AD,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 15000 min$^{-1}$.
Hardened 58 ±2 HRC.

**Application:** For nesting tools with Morse taper shank and **locking thread.**

JIS B 6339 MAS/BT | Form AD | G 6.3 15.000



| Order No. | Inner MK | 3683 | BT | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 4001 | 1 | 49.60 | 40 | 25 | 50 |
| 4002 | 2 | 49.60 (W370) | 40 | 32 | 50 |

| Order No. | Inner MK | 3683 | BT | $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 4003 | 3 | 49.60 | 40 | 40 | 70 |
| 4004 | 4 | 53.20 (W370) | 40 | 48 | 95 |

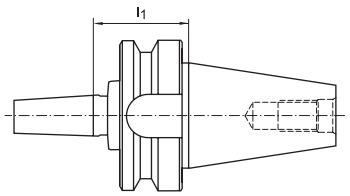
## Drill chuck mounting

**Design: JIS B 6339 (MAS-BT), Form A,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254.

Taper angle: Tolerance AT3.
Taper surface roughness: RA < 0.001 mm.
Bore tolerance: H5.
Balancing quality: G6.3 15000 min$^{-1}$.
Hardened 58 ±2 HRC.

**Application:** For mounting drill chucks with inside taper according to DIN 238.

JIS B 6339 MAS/BT | Form A | G 6.3 15.000



| Order No. | Chuck taper | 3667 | BT | $l_1$ mm |
|---|---|---|---|---|
| 4016 | B 16 | 33.00 | 40 | 25 |
| 5016 | B 16 | 49.60 (W370) | 50 | 32 |

## CNC short drill chuck

**Design:** Short design, guide elements of rigid design, hardened and ground wear parts ensure high concentricity and long life. Compact design and high rigidity lead to the best machining results. High clamping forces are reached by the integrated worm gear at low effort, **Holding torque > 75 Nm at 13 mm diameter.** Machining is safe thanks to automatic blocking of the worm gear even when running anti-clockwise and quickly decelerated spindle.

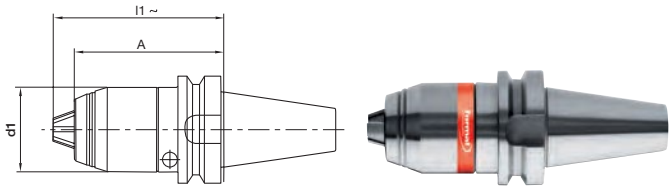
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: pre-balanced up to 7000 $min^{-1}$ at a residual imbalance of max. 40 gmm.
Concentricity: < 0.03 mm.
Max. permissible speed: 7000 $min^{-1}$.

**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

JIS B 6339 MAS/BT | Form AD | ≤ 30 µm

format professional quality

**Scope of delivery:** Short drill chuck with hex spanner.




| Order No. | Clamping range mm | 3528 format | BT | A mm | $l_1$ mm | $d_1$ mm |
|---|---|---|---|---|---|---|
| 0101 | 1–16 | 219.00 (W324) | 40 | 88 | 100 | 50 |

## CNC precision short drill chuck AKL for clockwise and anti-clockwise rotation

**Design: JIS B 6339 (MAS-BT), Form AD**. Short design, guide elements of rigid design, hardened and ground wear parts ensure high concentricity and long life. 100 % concentricity test with different plug gauge diameters at various measuring points, based on DIN ISO 10888. Compact design and high rigidity result in best machining results. High clamping forces are reached by the integrated worm gear at low effort, **Holding torque > 75 Nm at 13 mm diameter.** Machining is safe thanks to automatic blocking of the worm gear even when running anti-clockwise and quickly decelerated spindle.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G2.5 20000 $min^{-1}$.
Concentricity: 0.03 mm.

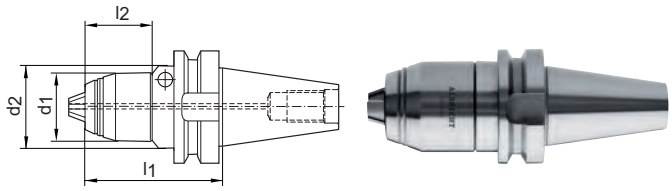
**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

JIS B 6339 MAS/BT | Form AD | G 2.5 20.000 | ≤ 30 µm

ALBRECHT Precision Chucks

**Scope of delivery:** Short drill chuck with hex spanner.

**Note:** Higher speeds possible with special balancing. Also available as ULTRA design (concentricity ≤ 0.015 mm).




| Order No. | Clamping range mm | 3486 ALBRECHT | BT | $l_1$ mm | $l_2$ mm | $d_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 0.5–10 | 279.00 | 40 | 77 | 38 | 38 | 45 |
| 0007 | 1 –16 | 255.90 | 40 | 88 | – | 50 | – |
| 0009 | 1 –16 | 321.60 (W318) | 50 | 99 | – | 50 | – |

## CNC precision short drill chuck for clockwise and anti-clockwise rotation

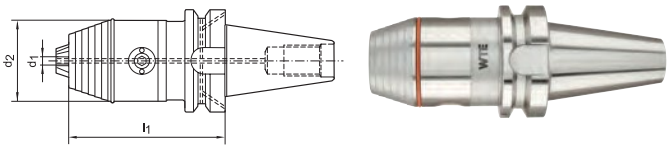
**Design: JIS B 6339 (MAS-BT), Form AD/B,** made of alloy case-hardened steel, with a core tensile strength of approx. 950 N/mm² and a hardness depth of min. 0.5 mm. Taper according to DIN 254. **Short design with central coolant supply,** chuck and shank in one piece. Clamping (using a hex spanner) essentially increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during left-handed rotation or being quickly decelerated from higher speeds. Sealing disc in chuck for inner coolant drills.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 25000 $min^{-1}$.
Concentricity: 0.02 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with a cylindrical shank with internal cooling.

JIS B 6339 MAS/BT | Form AD/B | G 6.3 25.000 | ≤ 20 µm

WTE MAPAL GROUP




| Order No. | Clamping range mm | 3529 WTE BT 40 | 3530 WTE BT 50 | $d_2$ mm | $l_1$ mm 3529 | $l_1$ mm 3530 |
|---|---|---|---|---|---|---|
| 0002 | 0.3– 8 | 319.00 | – | 36 | 81 | – |
| 0005 | 0.5–13 | 296.00 | 354.50 | 50 | 98 | 110 |
| 0010 | 2.5–16 | 308.50 (W325) | 369.00 (W325) | 57 | 98 | 110 |

## Weldon system surface clamping chuck

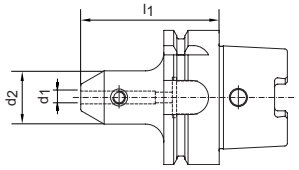
**Design: DIN 69893, Form A.** Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 950 N/mm².

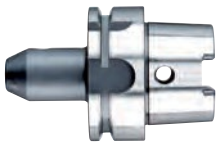
Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 ±2 HRC.

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Face chuck with clamping screw.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3270 | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0001 | 6 | 95.20 | 63 | 25 | 65 |
| 0007 | 6 | 113.50 | 63 | 25 | 120 |
| 0013 | 8 | 95.20 | 63 | 28 | 65 |
| 0019 | 8 | 113.50 | 63 | 28 | 120 |
| 0025 | 10 | 90.80 | 63 | 35 | 65 |
| 0031 | 10 | 107.50 | 63 | 35 | 120 |
| 0037 | 12 | 90.80 | 63 | 42 | 80 |
| 0043 | 12 | 107.50 | 63 | 42 | 120 |
| 0049 | 14 | 90.80 (W360) | 63 | 44 | 80 |

| Order No. | Ø $d_1$ mm | 3270 | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0055 | 14 | 107.50 | 63 | 44 | 120 |
| 0061 | 16 | 90.80 | 63 | 48 | 80 |
| 0067 | 16 | 107.50 | 63 | 48 | 120 |
| 0073 | 18 | 90.80 | 63 | 50 | 80 |
| 0079 | 18 | 107.50 | 63 | 50 | 120 |
| 0085 | 20 | 90.80 | 63 | 52 | 80 |
| 0091 | 20 | 107.50 | 63 | 52 | 120 |
| 0097 | 25 | 95.20 | 63 | 65 | 110 |
| 0109 | 32 | 94.80 (W360) | 63 | 72 | 110 |

## Precision face chuck system Weldon

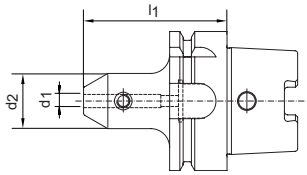
**Design: DIN 69893, Form A,** precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. More precise than DIN.

Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 -2 HRC.

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Face chuck with clamping screw, without coolant pipe.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3252 HAIMER | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0001 | 6 | 109.00 | 63 | 25 | 65 |
| 0007 | 6 | 169.00 | 63 | 25 | 160 |
| 0013 | 8 | 109.00 | 63 | 28 | 65 |
| 0019 | 8 | 169.00 | 63 | 28 | 160 |
| 0025 | 10 | 109.00 | 63 | 35 | 65 |
| 0031 | 10 | 169.00 | 63 | 35 | 160 |
| 0037 | 12 | 109.00 | 63 | 42 | 80 |
| 0043 | 12 | 169.00 | 63 | 42 | 160 |
| 0049 | 14 | 109.00 | 63 | 44 | 80 |
| 0055 | 14 | 169.00 (W394) | 63 | 44 | 160 |

| Order No. | Ø $d_1$ mm | 3252 HAIMER | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0061 | 16 | 109.00 | 63 | 48 | 80 |
| 0067 | 16 | 169.00 | 63 | 48 | 160 |
| 0073 | 18 | 109.00 | 63 | 50 | 80 |
| 0079 | 18 | 169.00 | 63 | 50 | 160 |
| 0085 | 20 | 109.00 | 63 | 52 | 80 |
| 0091 | 20 | 169.00 | 63 | 52 | 160 |
| 0097 | 25 | 115.00 | 63 | 65 | 110 |
| 0103 | 25 | 169.00 | 63 | 65 | 160 |
| 0109 | 32 | 122.00 | 63 | 72 | 110 |
| 0115 | 32 | 179.00 (W394) | 63 | 72 | 160 |

## Weldon system surface clamping chuck with cooling channel slots

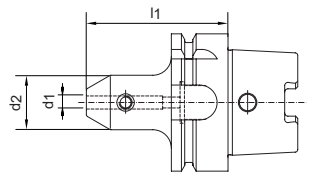
**Design: DIN 69893, Form A.** With internal coolant supply. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 950 N/mm².

Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 ±2 HRC.

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Face chuck with clamping screw, without coolant pipe.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3271 | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0001 | 6 | 123.00 | 63 | 25 | 65 |
| 0013 | 8 | 123.00 | 63 | 28 | 65 |
| 0025 | 10 | 116.50 | 63 | 35 | 80 |
| 0037 | 12 | 116.50 | 63 | 42 | 80 |
| 0049 | 14 | 116.50 (W360) | 63 | 44 | 80 |

| Order No. | Ø $d_1$ mm | 3271 | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0061 | 16 | 116.50 | 63 | 48 | 80 |
| 0073 | 18 | 116.50 | 63 | 50 | 80 |
| 0085 | 20 | 116.50 | 63 | 52 | 110 |
| 0097 | 25 | 125.00 | 63 | 65 | 110 |
| 0109 | 32 | 128.50 (W360) | 63 | 72 | 110 |

## Precision face chuck system Weldon

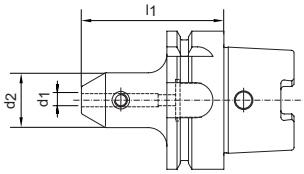
**Design: DIN 69893, Form A,** precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. More precise than DIN.

Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 -2 HRC.

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Face chuck with clamping screw.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3254 HAIMER | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0001 | 6 | 150.00 ◊ | 100 | 25 | 80 |
| 0007 | 6 | 197.00 ◊ | 100 | 25 | 160 |
| 0013 | 8 | 150.00 ◊ | 100 | 28 | 80 |
| 0019 | 8 | 197.00 ◊ | 100 | 28 | 160 |
| 0025 | 10 | 150.00 ◊ | 100 | 35 | 80 |
| 0031 | 10 | 197.00 ◊ | 100 | 35 | 160 |
| 0037 | 12 | 150.00 ◊ | 100 | 42 | 80 |
| 0043 | 12 | 197.00 ◊ | 100 | 42 | 160 |
| 0049 | 14 | 150.00 ◊ | 100 | 44 | 80 |
| 0055 | 14 | 197.00 ◊ (W394) | 100 | 44 | 160 |

| Order No. | Ø $d_1$ mm | 3254 HAIMER | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0061 | 16 | 150.00 ◊ | 100 | 48 | 100 |
| 0067 | 16 | 197.00 ◊ | 100 | 48 | 160 |
| 0073 | 18 | 150.00 ◊ | 100 | 50 | 100 |
| 0079 | 18 | 197.00 ◊ | 100 | 50 | 160 |
| 0085 | 20 | 150.00 ◊ | 100 | 52 | 100 |
| 0091 | 20 | 197.00 ◊ | 100 | 52 | 160 |
| 0097 | 25 | 154.00 ◊ | 100 | 65 | 100 |
| 0103 | 25 | 197.00 ◊ | 100 | 65 | 160 |
| 0109 | 32 | 157.00 ◊ | 100 | 72 | 100 |
| 0115 | 32 | 203.00 ◊ (W394) | 100 | 72 | 160 |

## Precision face chuck system Whistle Notch

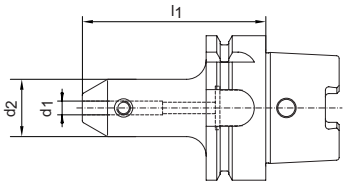
**Design: DIN 69893, Form A,** balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. More precise than DIN.

Balancing quality: G6.3 8000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 -2 HRC.

**Application:** For clamping cutters with cylindrical shank and inclined clamping surface to DIN 1835-E and DIN 6535-HE.

**Scope of delivery:** Face chuck with clamping screw and setting screw.

DIN 69893 | Form A | G 6.3 8.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3253 HAIMER HSK 63 | 3255 HAIMER HSK 100 | Ø $d_2$ mm | $l_1$ mm 3253 | $l_1$ mm 3255 |
|---|---|---|---|---|---|---|
| 0001 | 6 | 128.00 ◊ | 182.00 ◊ | 25 | 80 | 90 |
| 0013 | 8 | 128.00 ◊ | 182.00 ◊ | 28 | 80 | 90 |
| 0025 | 10 | 128.00 ◊ | 182.00 ◊ | 35 | 80 | 90 |
| 0037 | 12 | 128.00 ◊ (W394) | 182.00 ◊ (W394) | 42 | 90 | 100 |

| Order No. | Ø $d_1$ mm | 3253 HAIMER HSK 63 | 3255 HAIMER HSK 100 | Ø $d_2$ mm | $l_1$ mm 3253 | $l_1$ mm 3255 |
|---|---|---|---|---|---|---|
| 0061 | 16 | 128.00 ◊ | 182.00 ◊ | 48 | 100 | 100 |
| 0085 | 20 | 128.00 ◊ | 182.00 ◊ | 52 | 100 | 110 |
| 0097 | 25 | 135.00 ◊ | 182.00 ◊ | 64 | 110 | 120 |
| 0109 | 32 | 139.00 ◊ (W394) | 186.00 ◊ (W394) | 72 | 110 | 120 |

## Clamping chuck for screw-in cutters

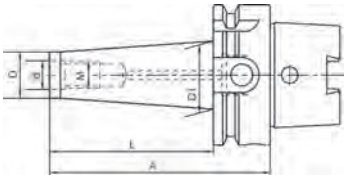
**Design: HSK 63, DIN 69893, Form A+C,** made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². High repeat accuracy when changing tools. Fixed axial positioning through flange contact surface.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 12000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 ±2 HRC.

**Application:** For nesting tools with clamping thread.

**Note:** Clamping nut type M (Order No. 3644), see 📖 3/103.

DIN 69893 | Form A+C | G 6.3 12.000 | ≤ 3 µm



| Order No. | M | 3707 HAIMER | HSK | L mm | A mm | d mm | D mm | D1 mm |
|---|---|---|---|---|---|---|---|---|
| 0002 | M6 | 171.50 ◊ | 63 | 25 | 51 | 6.5 | 10 | – |
| 0005 | M6 | 181.50 ◊ | 63 | 50 | 76 | 6.5 | 10 | – |
| 0008 | M6 | 202.50 ◊ | 63 | 75 | 101 | 6.5 | 10 | – |
| 0011 | M8 | 177.50 ◊ | 63 | 50 | 76 | 8.5 | 13 | 23 |
| 0014 | M8 | 194.50 ◊ | 63 | 75 | 101 | 8.5 | 13 | 23 |
| 0017 | M8 | 218.50 ◊ | 63 | 100 | 126 | 8.5 | 13 | 26 |
| 0020 | M10 | 177.50 ◊ | 63 | 50 | 76 | 10.5 | 18 | 23 |
| 0023 | M10 | 194.50 ◊ (W360) | 63 | 75 | 101 | 10.5 | 18 | 28 |

| Order No. | M | 3707 HAIMER | HSK | L mm | A mm | d mm | D mm | D1 mm |
|---|---|---|---|---|---|---|---|---|
| 0026 | M10 | 218.50 ◊ | 63 | 100 | 126 | 10.5 | 18 | 32 |
| 0029 | M12 | 177.50 ◊ | 63 | 50 | 76 | 12.5 | 21 | 24 |
| 0032 | M12 | 194.50 ◊ | 63 | 75 | 101 | 12.5 | 21 | 31 |
| 0035 | M12 | 218.50 ◊ | 63 | 100 | 126 | 12.5 | 21 | 33 |
| 0038 | M16 | 177.50 ◊ | 63 | 50 | 76 | 17 | 29 | 34 |
| 0041 | M16 | 194.50 ◊ | 63 | 75 | 101 | 17 | 29 | 34 |
| 0044 | M16 | 218.50 ◊ (W360) | 63 | 100 | 126 | 17 | 29 | 36 |

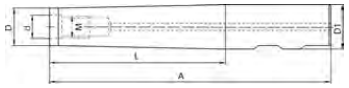


Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Extension for screw-in milling cutters

**Design:** Cylindrical shank to DIN 1835 B, with tapered design.

**Application:** For holding milling tools with clamping thread.



| Order No. | M | 3635 | D1 mm | d mm | D mm | A mm | L mm |
|---|---|---|---|---|---|---|---|
| 0201 | M8 | 77.80 | 16 | 8.5 | 12.8 | 115 | 60 |
| 0204 | M8 | 89.90 | 16 | 8.5 | 12.8 | 160 | 100 |
| 0207 | M10 | 77.80 | 20 | 10.5 | 17.8 | 120 | 60 |
| 0210 | M10 | 89.90 | 20 | 10.5 | 17.8 | 160 | 100 |
| 0213 | M12 | 93.40 | 25 | 12.5 | 20.8 | 160 | 100 |
| 0216 | M16 | 96.80 | 32 | 17 | 28.8 | 160 | 100 |
| | | (W378) | | | | | |

## Miniature collet chuck for ER collets

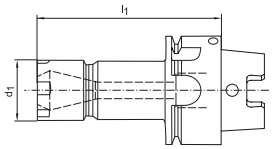
**Design: DIN 69893, Form A,** made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². High repeat accuracy when changing tools. Fixed axial positioning through flange contact surface.

DIN 69893 | Form A | G 6.3 12.000 | ≤ 3 µm

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: G6.3 12000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank in collets to DIN 6499 (ER).

**Scope of delivery:** Collet chuck complete with clamping nut.



| Order No. | Clamping range mm | 3729 | $d_1$ mm | $l_1$ mm | Collet |
|---|---|---|---|---|---|
| 0001 | 0.5– 7 | 145.00 | 16 | 100 | ER11 |
| 0003 | 0.5–10 | 145.00 | 22 | 100 | ER16 |
| 0006 | 1 –16 | 145.00 | 35 | 100 | ER25 |
| 0007 | 0.5– 7 | 171.00 | 16 | 160 | ER11 |
| 0009 | 0.5–10 | 171.00 | 22 | 160 | ER16 |
| 0011 | 1 –16 | 171.00 | 35 | 160 | ER25 |
| | | (W364) | | | |

## Precision HG chuck

**Design: DIN 69893, Form A,** precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. More precise than DIN.

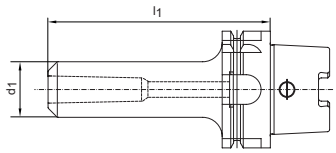
DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm

HAIMER

Shank tolerance: h6.
Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm on the tool (3 x d).
Hardened 58 -2 HRC.

**Application:** For high-precision clamping of tools with cylindrical shank, also with clamping surfaces. Very well suited for high-speed machining.

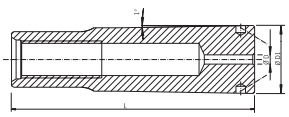
**Scope of delivery:** HG clamping chuck with clamping screw and pull-out hook.



| Order No. | Clamping range mm | 3257 HAIMER HSK 63 | 3259 HAIMER HSK 100 | Ø $d_1$ mm | $l_1$ mm | HG |
|---|---|---|---|---|---|---|
| 0004 | 2– 8 | 185.00 | 216.00 ◊ | 30 | 120 | 01 |
| 0007 | 2– 8 | 227.00 ◊ | 277.00 ◊ | 30 | 160 | 01 |
| 0016 | 10–14 | 185.00 | 216.00 ◊ | 35 | 120 | 02 |
| 0019 | 10–14 | 236.00 ◊ | 277.00 ◊ | 35 | 160 | 02 |
| 0028 | 16–20 | 185.00 | 216.00 ◊ | 48 | 120 | 03 |
| 0031 | 16–20 | 242.00 ◊ | 277.00 ◊ | 48 | 160 | 03 |
| | | (W394) | (W394) | | | |

## HG collet

**Application:** For high-precision and economical clamping of tools with cylindrical shank in HG chucks within a high clamping range.



| Order No. | Ø D mm | 3295 HAIMER | HG | Ø D1 mm | L mm |
|---|---|---|---|---|---|
| 0102 | 2 | 117.00 | 01 | 14.7 | 52.5 |
| 0103 | 3 | 117.00 | 01 | 14.7 | 52.5 |
| 0104 | 4 | 117.00 | 01 | 14.7 | 52.5 |
| 0105 | 5 | 74.00 | 01 | 14.7 | 52.5 |
| 0106 | 6 | 74.00 | 01 | 14.7 | 52.5 |
| 0108 | 8 | 74.00 (W394) | 01 | 14.7 | 52.5 |

| Order No. | Ø D mm | 3295 HAIMER | HG | Ø D1 mm | L mm |
|---|---|---|---|---|---|
| 0110 | 10 | 74.00 | 02 | 17.87 | 64.2 |
| 0112 | 12 | 74.00 | 02 | 17.87 | 64.2 |
| 0114 | 14 | 74.00 | 02 | 17.87 | 64.2 |
| 0116 | 16 | 74.00 | 03 | 26.147 | 69.7 |
| 0118 | 18 | 74.00 | 03 | 26.147 | 69.7 |
| 0120 | 20 | 74.00 (W394) | 03 | 26.147 | 69.7 |

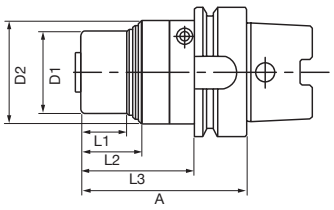
## Precision chuck APC

**Design:** Highest clamping force due to integrated screw gearing. Quick tool change occurs laterally by means of hexagonal wrench. Maintenance free, sealed against coolant and dirt.

Concentricity: ≤ 0.003 mm (for 2.5 x D).

**Application:** For heavy-duty machining as well as HSC and HPC processing. For clamping cylindrical shanks in accordance with DIN 1835 A, B and DIN 6535 HA, HB and HE to D = 20 mm.

DIN 69893 | Form A | G 2.5 | 20.000 | ≤ 3 µm




ALBRECHT Precision Chucks

3275

3276

| Order No. | Clamping range mm | 3275 ALBRECHT HSK 63 | A mm | D2 mm | D1 mm | L1 mm | L2 mm | L3 mm |
|---|---|---|---|---|---|---|---|---|
| 0020 | 2–20 | 333.30 | 92 | 53 | 40 | 20 | 31 | 66 |
| 0025 | 16–32 | 423.50 (W318) | 132 | – | 63 | 106 | – | – |

| Order No. | Clamping range mm | 3276 ALBRECHT HSK 100 | A mm | D2 mm | D1 mm | L1 mm | L2 mm | L3 mm |
|---|---|---|---|---|---|---|---|---|
| 0020 | 2–20 | 447.30 | 100 | 70 | 40 | 18 | 43 | 71 |
| 0025 | 16–32 | 558.00 (W318) | 139 | – | 70 | 110 | – | – |

## Clamping sleeve for precision chuck APC

**Design:** Very resistant special coating. Integrated length stop, front and rear adjustable. Coolant is supplied through the length stop.

**Application:** For quick and easy change of clamping sleeves and tools.

**3227** For chuck APC 2–20.

**3228** For chuck APC 16–32.

3327

3228

| Order No. | Clamping Ø mm | 3227 ALBRECHT |
|---|---|---|
| 2003 | 3 | 85.60 |
| 2004 | 4 | 85.60 |
| 2006 | 6 | 85.60 |
| 2008 | 8 | 85.60 |
| 2010 | 10 | 85.60 |
| 2012 | 12 | 85.60 |
| 2014 | 14 | 85.60 |
| 2016 | 16 | 85.60 |
| 2020 | 20 | 85.60 (W318) |

| Order No. | Clamping Ø mm | 3228 ALBRECHT |
|---|---|---|
| 2516 | 16 | 141.60 |
| 2520 | 20 | 141.60 |
| 2525 | 25 | 141.60 |
| 2532 | 32 | 141.60 (W318) |

## Clamping sleeve Pin-Lock for precision chuck APC

**Design:** Very resistant special coating, maintenance-free. Simple mechanical pull-out protection in connection with Weldon shank.

**Application:** Mechanical pull-out protection in connection with Weldon shank in accordance with DIN 6535 HB and DIN 1835 B. The pin prevents the milling cutter from coming out.

**Scope of delivery:** Set consisting of adapter sleeve, safety pin, pin punch and torque wrench.

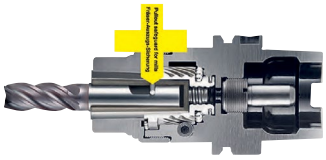
**3227** **For chuck APC 2-20.**

**3228** **For chuck APC 2-25.**

ALBRECHT Precision Chucks

3227

3228



| Order No. | Clamping Ø mm | 3227 ALBRECHT | Design |
|---|---|---|---|
| 1016 | 16 | 214.10 | Set |
| 1116 | 16 | 149.30 (W318) | Spare sleeve |

| Order No. | Clamping Ø mm | 3228 ALBRECHT | Design |
|---|---|---|---|
| 1016 | 16 | 246.60 | Set |
| 1116 | 16 | 181.70 | Spare sleeve |
| 1020 | 20 | 246.60 | Set |
| 1120 | 20 | 181.70 | Spare sleeve |
| 1025 | 25 | 246.60 | Set |
| 1125 | 25 | 181.70 (W318) | Spare sleeve |

## Chuck key for precision chuck APC

NEW

**Design:** Chuck key with visual torque display.

ALBRECHT Precision Chucks

| Order No. | Spanner width | 3229 ALBRECHT |
|---|---|---|
| 0604 | 4 | 24.50 (W318) |

## Collet chuck type ER

**Design: DIN 69893, Form A**, precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm².

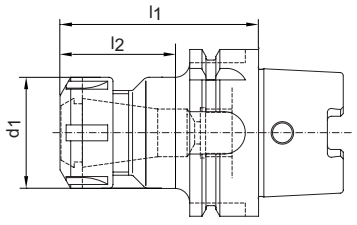
Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 ±2 HRC.

**Application:** For clamping milling cutters with cylindrical shank in collets in accordance with DIN 6499.

**Scope of delivery:** Collet chuck complete with clamping nut.

**Note:** Dimension $l_2$ specifies the maximum insertion depth for tools.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | Clamping range mm | 3277 | HSK | Collet | Ø $d_1$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|---|
| 0013 | 0.5–10 | 99.40 | 63 | ER16 | 28 | 47 | 75 |
| 0016 | 0.5–10 | 103.50 | 63 | ER16 | 28 | 33 | 100 |
| 0025 | 1 –16 | 99.40 | 63 | ER25 | 42 | 48 | 75 |
| 0028 | 1 –16 | 110.00 | 63 | ER25 | 42 | 41 | 100 |
| 0037 | 1.5–20 | 103.50 | 63 | ER32 | 50 | 47 | 75 |
| 0040 | 1.5–20 | 111.00 | 63 | ER32 | 50 | 47 | 100 |
| 0049 | 2.5–26 | 107.50 | 63 | ER40 | 63 | 53 | 90 |
| 0052 | 2.5–26 | 118.00 (W364) | 63 | ER40 | 63 | 53 | 120 |

## Collet chuck type ER

**Design: DIN 69893, Form A,** precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. More precise than DIN.

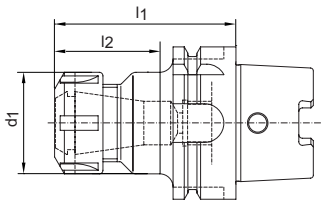
DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm

Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.003 mm.
Hardened 58 -2 HRC.

**Application:** For clamping milling cutters with cylindrical shank in collets in accordance with DIN 6499.

**Scope of delivery:** Collet chuck complete with clamping nut (balanced, with anti-friction coating for increased clamping force), **without** coolant pipe.

**Note:** Dimension $l_2$ specifies the maximum insertion depth for tools.



| Order No. | Clamping range mm | 3256 HAIMER HSK 63 | 3258 HAIMER HSK 100 | Collet | ∅ $d_1$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 0.5– 7 | 142.00 * | – | ER11 | 19 | 26.5 | 75 |
| 0004 | 0.5– 7 | 131.00 | – | ER11 | 19 | – | 100 |
| 0013 | 0.5–10 | 142.00 * | – | ER16 | 28 | 46.5 | 75 |
| 0016 | 0.5–10 | 115.00 | 168.00 ◊ | ER16 | 28 | 32.5 | 100 |
| 0019 | 0.5–10 | 141.00 | 212.00 ◊ | ER16 | 28 | 32.5 | 160 |
| 0025 | 1 –16 | 142.00 * | – | ER25 | 42 | 48 | 75 |
| 0028 | 1 –16 | 126.00 | 186.00 ◊ | ER25 | 42 | 41 | 100 |
| 0031 | 1 –16 | 156.00 | 236.00 ◊ | ER25 | 42 | 41 | 160 |
| 0037 | 1.5–20 | 151.00 * | – | ER32 | 50 | 47 | 75 |
| 0040 | 1.5–20 | 132.00 | 200.00 ◊ | ER32 | 50 | 47 | 100 |
| 0043 | 1.5–20 | 171.00 | 249.00 ◊ | ER32 | 50 | 47 | 160 |
| 0049 | 2.5–26 | 156.00 * | – | ER40 | 63 | 53 | 85 |
| 0052 | 2.5–26 | 145.00 | 210.00 ◊ | ER40 | 63 | 53 | 120 |
| 0055 | 2.5–26 | 189.00 (W394) | 269.00 ◊ (W394) | ER40 | 63 | 53 | 160 |

* Without thread for setting screw.

## Diameter head mount with front-side cooling channel holes

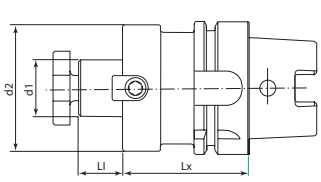
**Design: DIN 69893, Form A,** precision balanced with cooling channel bore. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 950 N/mm².

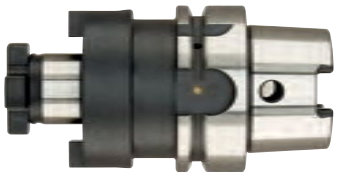
DIN 69893 | Form A | G 2.5 25.000 | ≤ 6 µm

Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.006 mm.
Hardened 58 ±2 HRC.

**Application:** To nest cutter heads and milling cutters with cross groove DIN 1880.

**Scope of delivery:** Milling head mounting with cutter retaining screw.



| Order No. | $d_1$ mm | 3278 | HSK | $d_2$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0001 | 16 | 121.00 | 63 | 38 | 17 | 50 |
| 0004 | 16 | 130.50 | 63 | 38 | 17 | 100 |
| 0013 | 22 | 121.00 | 63 | 48 | 19 | 50 |
| 0016 | 22 | 130.50 | 63 | 48 | 19 | 100 |
| 0025 | 27 | 121.00 | 63 | 58 | 21 | 60 |
| 0028 | 27 | 133.00 | 63 | 58 | 21 | 100 |
| 0037 | 32 | 139.00 | 63 | 78 | 24 | 60 |
| 0040 | 32 | 150.50 | 63 | 78 | 24 | 100 |
| 0049 | 40 | 155.50 | 63 | 88 | 27 | 60 |
| 0052 | 40 | 168.50 (W372) | 63 | 88 | 27 | 100 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Precision diameter head mount with front-side cooling channel holes

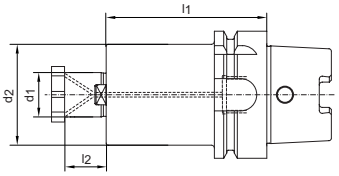
**Design: DIN 69893, Form A**, precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. More precise than DIN. With coolant outlet holes on the end face for milling cutters and internal cooling.

Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: < 0.006 mm.
Hardened 58 -2 HRC.

**Application:** To mount cutter heads and milling cutters with cross groove to DIN 1880 as well as mounting to DIN 2079 from clamping diameter 40 possible (4 additional threaded holes).

**Scope of delivery:** Milling head mounting complete with cutter retaining screw, **without** coolant pipe.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 6 µm



| Order No. | $d_1$ mm | 3262 HAIMER HSK 63 | 3264 HAIMER HSK 100 | $d_2$ mm | $l_2$ mm | $l_1$ mm 3262 | $l_1$ mm 3264 |
|---|---|---|---|---|---|---|---|
| 0001 | 16 | 145.00 | 180.00 ◊ | 36 | 17 | 50 | 50 |
| 0004 | 16 | – | 195.00 ◊ | 36 | 17 | – | 100 |
| 0007 | 16 | – | 221.00 ◊ | 36 | 17 | – | 160 |
| 0013 | 22 | 145.00 | 184.00 ◊ | 48 | 19 | 50 | 50 |
| 0016 | 22 | 166.00 ◊ | 199.00 ◊ | 48 | 19 | 100 | 100 |
| 0019 | 22 | 190.00 ◊ | 226.00 ◊ | 48 | 19 | 160 | 160 |
| 0025 | 27 | 152.00 | 189.00 ◊ | 60 | 21 | 60 | 50 |
| 0028 | 27 | 166.00 ◊ | 203.00 ◊ | 60 | 21 | 100 | 100 |
| 0031 | 27 | 197.00 ◊ | 232.00 ◊ | 60 | 21 | 160 | 160 |
| 0037 | 32 | 161.00 | 200.00 ◊ | 78 | 24 | 60 | 50 |
| 0040 | 32 | 174.00 ◊ | 213.00 ◊ | 78 | 24 | 100 | 100 |
| 0043 | 32 | 206.00 ◊ | 242.00 ◊ | 78 | 24 | 160 | 160 |
| 0049 | 40 | 173.00 | 205.00 ◊ | 87 | 27 | 60 | 60 |
| 0052 | 40 | 186.00 ◊ | 215.00 ◊ | 87 | 27 | 100 | 100 |
| 0055 | 40 | – (W394) | 249.00 ◊ (W394) | 87 | 27 | – | 160 |

## Combi shell end mill arbour

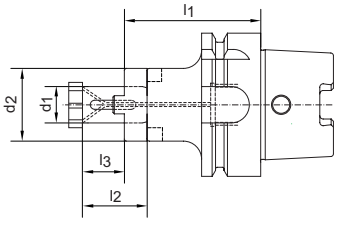
**Design: DIN 69893, Form A,** precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 950 N/mm².

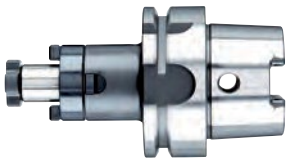
Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: < 0.006 mm.
Hardened 58 ±2 HRC.

**Application:** For clamping shell end mills DIN 841 and DIN 1880 as well as single angle milling cutters DIN 842 and milling heads DIN 1830.

**Scope of delivery:** Combi shell end mill arbour complete with cutter retaining screw, driving ring and feather key.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 6 µm



| Order No. | Ø $d_1$ mm | 3279 | HSK | Ø $d_2$ mm | $l_2$ mm | $l_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 16 | 109.50 | 63 | 32 | 27 | 17 | 60 |
| 0004 | 16 | 118.00 | 63 | 32 | 27 | 17 | 100 |
| 0013 | 22 | 111.50 | 63 | 40 | 31 | 19 | 60 |
| 0016 | 22 | 120.00 | 63 | 40 | 31 | 19 | 100 |
| 0025 | 27 | 116.50 | 63 | 48 | 33 | 21 | 60 |
| 0028 | 27 | 127.50 | 63 | 48 | 33 | 21 | 100 |
| 0037 | 32 | 122.00 | 63 | 58 | 38 | 24 | 60 |
| 0040 | 32 | 130.50 | 63 | 58 | 38 | 24 | 100 |
| 0049 | 40 | 130.50 | 63 | 70 | 41 | 27 | 70 |
| 0052 | 40 | 141.00 (W370) | 63 | 70 | 41 | 27 | 100 |

## Precision combi mount-on milling die

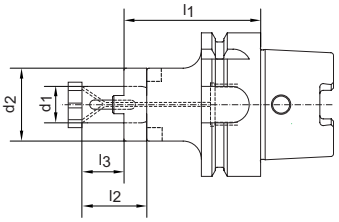
**Design: DIN 69893, Form A,** precision balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. More precise than DIN.

Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.006 mm.
Hardened 58 -2 HRC.

**Application:** For clamping shell end mills DIN 841 and DIN 1880 as well as single angle milling cutters DIN 842 and milling heads DIN 1830.

**Scope of delivery:** Combi shell end mill arbour complete with cutter retaining screw, driving ring and feather key.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 6 µm



| Order No. | Ø $d_1$ mm | 3261 HAIMER HSK 63 | 3263 HAIMER HSK 100 | Ø $d_2$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 16 | 131.00 | 157.00 ◊ | 32 | 60 | 27 | 17 |
| 0004 | 16 | 144.00 ◊ | 201.00 ◊ | 32 | 100 | 27 | 17 |
| 0007 | 16 | 171.00 ◊ | 236.00 ◊ | 32 | 160 | 27 | 17 |
| 0013 | 22 | 137.00 | 166.00 ◊ | 40 | 60 | 31 | 19 |
| 0016 | 22 | 150.00 ◊ | 204.00 ◊ | 40 | 100 | 31 | 19 |
| 0019 | 22 | 180.00 ◊ | 236.00 ◊ | 40 | 160 | 31 | 19 |
| 0025 | 27 | 143.00 | 182.00 ◊ | 48 | 60 | 33 | 21 |
| 0028 | 27 | 157.00 ◊ | 210.00 ◊ | 48 | 100 | 33 | 21 |
| 0031 | 27 | 189.00 ◊ | 277.00 ◊ | 48 | 160 | 33 | 21 |
| 0037 | 32 | 151.00 | 194.00 ◊ | 58 | 60 | 38 | 24 |
| 0040 | 32 | 168.00 ◊ | 215.00 ◊ | 58 | 100 | 38 | 24 |
| 0043 | 32 | 196.00 ◊ | 277.00 ◊ | 58 | 160 | 38 | 24 |
| 0049 | 40 | 159.00 | 224.00 ◊ | 70 | 70 | 41 | 27 |
| 0052 | 40 | 176.00 ◊ | 232.00 ◊ | 70 | 100 | 41 | 27 |
| 0055 | 40 | 203.00 ◊ (W394) | 277.00 ◊ (W394) | 70 | 160 | 41 | 27 |

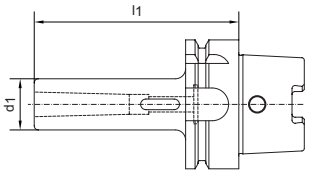
## Spacer

**Design: DIN 69893, Form A**, balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 950 N/mm².

Balancing quality: G2.5 25000 min⁻¹.
Concentricity: < 0.008 mm.
Hardened 58 ±2 HRC.

**Application:** For mounting tools with Morse taper shanks with **tangs**.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 8 µm



| Order No. | MK | 3274 | HSK | Ø $d_1$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0001 | 1 | 83.60 | 63 | 25 | 100 |
| 0004 | 2 | 85.00 | 63 | 32 | 120 |
| 0007 | 3 | 85.30 | 63 | 40 | 140 |
| 0010 | 4 | 92.60 (W370) | 63 | 48 | 160 |

## Precision spacer sleeve

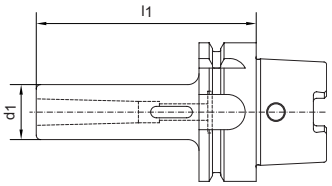
**Design: DIN 69893, Form A**, balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.
More precise than DIN.

Balancing quality: G6.3 8000 min$^{-1}$.
Concentricity: < 0.008 mm.
Hardened 58 -2 HRC.

**Application:** For mounting tools with Morse taper shanks with **tangs**.

DIN 69893 | Form A | G 6.3 8.000 | ≤ 8 µm

HAIMER Quality Wins.



| Order No. | MK | 3265 HAIMER HSK 63 | 3266 HAIMER HSK 100 | Ø $d_1$ mm | $l_1$ mm 3265 | $l_1$ mm 3266 |
|---|---|---|---|---|---|---|
| 0001 | 1 | 96.00 | 143.00 ◊ | 25 | 100 | 110 |
| 0004 | 2 | 103.00 | 150.00 ◊ | 32 | 120 | 120 |
| 0007 | 3 | 109.00 | 168.00 ◊ | 40 | 140 | 150 |
| 0010 | 4 | 109.00 (W394) | 180.00 ◊ (W394) | 48 | 160 | 170 |

## Precision spacer sleeve

**Design: DIN 69893, Form A**, balanced. Made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm². **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.
More precise than DIN.

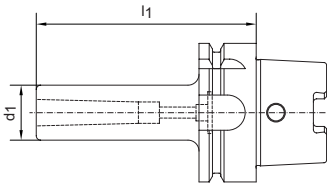
Balancing quality: G6.3 8000 min$^{-1}$.
Concentricity: < 0.008 mm.
Hardened 58 -2 HRC.

**Application:** For mounting tools with Morse taper shanks **with tangs** in accordance with DIN 228-1, Form A.

**Scope of delivery:** Spacer sleeve with retaining screw.

DIN 69893 | Form A | G 6.3 8.000 | ≤ 8 µm

HAIMER Quality Wins.



| Order No. | MK | 3265 HAIMER HSK 63 | 3266 HAIMER HSK 100 | Ø $d_1$ mm | $l_1$ mm 3265 | $l_1$ mm 3266 |
|---|---|---|---|---|---|---|
| 0101 | 1 | – | 160.00 ◊ | 25 | – | 110 |
| 0102 | 2 | 124.00 | 163.00 ◊ | 32 | 120 | 120 |
| 0103 | 3 | 129.00 | 186.00 ◊ | 40 | 140 | 150 |
| 0104 | 4 | 140.00 (W394) | 189.00 ◊ (W394) | 48 | 160 | 170 |

## CNC short drill chuck for clockwise and anti-clockwise rotation

**Design: DIN 69893, Form A.** Short design, guide elements of rigid design, hardened and ground wear parts ensure high concentricity and long life.

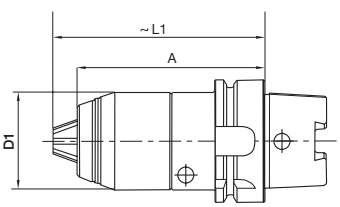
Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: pre-balanced up to 7000 min$^{-1}$ at a residual imbalance of max. 40 gmm.
Concentricity: 0.03 mm.
Max. permissible speed: 7000 min$^{-1}$.

**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

**Scope of delivery:** Short drill chuck with hex spanner.

DIN 69893 | Form A | ≤ 30 µm

format professional quality



| Order No. | Clamping range mm | 3488 format | HSK | A mm | L1 mm | D1 mm |
|---|---|---|---|---|---|---|
| 0101 | 1–16 | 288.00 (W324) | 63 | 98 | 110 | 50 |

## CNC short drill chuck AKL for clockwise and anti-clockwise rotation

**Design: DIN 69893, Form A.** Short design, guide elements of rigid design, hardened and ground wear parts ensure high concentricity and long life. 100 % concentricity test with different plug gauge diameters at various measuring points, based on DIN ISO 10888. Compact design and high rigidity result in best machining results.
High clamping forces are reached by the integrated worm gear at low effort, **Holding torque > 75 Nm at 13 mm diameter.** Machining is safe thanks to automatic blocking of the worm gear even when running anti-clockwise and quickly decelerated spindle.

Taper angle: Tolerance AT3.
Taper surface roughness: Ra < 0.001 mm.
Balancing quality: pre-balanced up to 7000 min$^{-1}$ at a residual imbalance of max. 40 gmm.
Concentricity: < 0.03 mm.
Max. permissible speed: 7000 min$^{-1}$.

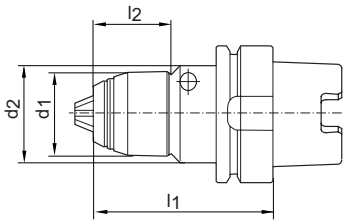
**Application:** For drilling, countersinking, reaming, thread cutting and for simple finishing milling work. Can be used in machining centres, turning, drilling and milling machines.

**Scope of delivery:** Short drill chuck with hex spanner.

**Note:** Higher speeds possible with special balancing. Also available as ULTRA design (concentricity ≤ 0.015 mm).

DIN 69893 | Form A | G 2.5 | 20.000 | ≤ 30 µm

ALBRECHT Precision Chucks



| Order No. | Clamping range mm | 3489 ALBRECHT | HSK | $l_1$ mm | $l_2$ mm | $d_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 0.5–10 | 355.00 | 63 | 85 | 38 | 38 | 45 |
| 0007 | 1 –16 | 323.90 | 63 | 98 | – | 50 | – |
| 0009 | 1 –16 | 413.80 (W318) | 100 | 104 | – | 50 | – |

## CNC precision drill chuck for clockwise and anti-clockwise rotation

**Design: DIN 69893, Form A,** made of special case-hardened steel for highly stressed components, with a core tensile strength of min. 1000 N/mm$^2$. Chuck and shank in one piece. Clamping (using a hex spanner) essentially increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during left-handed rotation or being quickly decelerated from higher speeds.

Taper angle: Tolerance AT3.
Balancing quality: G6.3 25000 min$^{-1}$.
Concentricity: 0.02 mm.
Hardened 58 ±2 HRC.

**Application:** To nest tools with cylindrical shank.

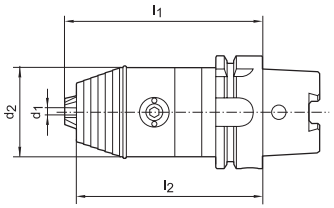
**Scope of delivery:** CNC precision drill chuck with hex spanner including sealing disc for coolant drill bits with 3-6 mm Ø.

**3523** **Without coolant supply.**

**3524** **With central coolant supply.**

DIN 69893 | Form A | G 6.3 | 25.000 | ≤ 20 µm

WTE MAPAL GROUP



| Order No. | Clamping range mm | 3523 WTE | 3524 WTE | HSK | $d_2$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|---|
| 0002 | 0.3– 8 | 467.00 | 509.50 | 63 | 36 | 96 | 99 |
| 0001 | 0.5–13 | 317.00 | 354.50 | 63 | 50 | 104 | 110 |
| 0007 | 2.5–16 | 331.50 | 365.50 | 63 | 57 | 104 | 115 |
| 0004 | 0.5–13 | 390.50 ◊ | 427.50 ◊ | 100 | 50 | 111 | 117 |
| 0010 | 2.5–16 | 402.50 ◊ (W325) | 438.50 ◊ (W325) | 100 | 57 | 111 | 122 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Precision collet chuck CENTRO P 3 µm

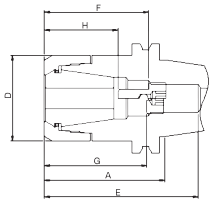
**Design: DIN 69871, Form AD/B,** constant concentricity and repeatability of 0.003 mm at a distance of 3 x D (max. 50 mm) in conjunction with FAHRION precision collet GERC-HP/-HPD/-HPdd (2 µm) and tap collets GERC-GBD. Voltage using roller wrench without risk of injury. Up to 100 % higher holding torques than with conventional collet chucks. Insensitive to temperature fluctuations. Very good vibration damping and stability.

Balancing quality: G2.5 25000 min$^{-1}$.

**Application:** In the HSC and HPC range as well as for high-precision machining results. To nest tools with cylindrical shank as well as in line with DIN 1835 B, 1835 E, 6535 B and 6535 E.

**Note:** Delivered without clamping nut (Order No. 3657) and roller wrench (Order No. 3657).

DIN 69871 | Form AD/B | G 2.5 25.000



FAHRION® PRAZISION CENTRO|P®

| Order No. | Clamping range mm | 3567 FAHRION® | SK | Collet/clamping nut | A mm | D mm | E mm | G mm | H mm |
|---|---|---|---|---|---|---|---|---|---|
| 0016 | 1–10 | 97.50 | 40 | GERC16-HP/-HPD/HPC16 | 70 | 30 | 55 | 28–45 | 16–31 |
| 0025 | 1–16 | 98.50 | 40 | GERC25-HP/-HPD/-HPDD/HPC25 | 70 | 40 | 114 | 35–60 | 20–42 |
| 0032 | 2–20 | 98.00 (W315) | 40 | GERC32-HP/-HPD/-HPDD/HPC32 | 70 | 50 | 99 | 55–75 | 42–62 |

Further dimensions available on request.

## Precision collet chuck CENTRO P 3 µm

NEW

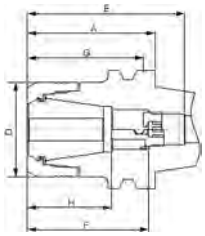
**Design: JIS B 6339 (MAS-BT), Form AD/B,** constant concentricity and repeatability of 0.003 mm at a distance of 3 x D (max. 50 mm) in conjunction with FAHRION precision collet GERC-HP/-HPD/-HPdd (2 µm) and tap collets GERC-GBD. Voltage using function key without risk of injury. Up to 100 % higher holding torques than with conventional collet chucks. Insensitive to temperature fluctuations. Very good vibration damping and stability.

Balancing quality: G2.5 25000 min$^{-1}$.

**Application:** In the HSC and HPC range as well as for high-precision machining results. To nest tools with cylindrical shank as well as in line with DIN 1835 B, 1835 E, 6535 B and 6535 E.

**Note:** Delivered without clamping nut (Order No. 3657) and roller wrench (Order No. 3657).

JIS B 6339 MAS/BT | Form AD | G 2.5 25.000



FAHRION® PRAZISION CENTRO|P®

| Order No. | Clamping range mm | 3567 FAHRION® | BT | Collet/clamping nut | A mm | D mm | E mm | G mm | H mm |
|---|---|---|---|---|---|---|---|---|---|
| 2133 | 1–10 | 81.50 | 40 | GERC16-HP/-HPD/-GBD/HPC16 | 75 | 30 | 110 | 39–52 | 29–38 |
| 2134 | 1–16 | 81.50 | 40 | GERC25-HP/-HPD/-GBD/HPC16 | 75 | 40 | 90 | 41–58 | 36–40 |
| 2135 | 2–20 | 81.50 (W315) | 40 | GERC32-HP/-HPD/-GBD/PHPC32 | 75 | 50 | 100 | 41–72 | 41–55 |

## Precision collet chuck CENTRO P 3 µm

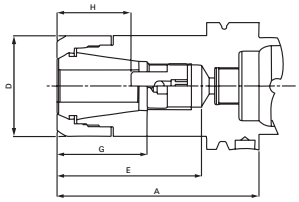
**Design:** Constant concentricity and repeatability of 0.003 mm at a distance of 3 x D (max. 50 mm) in conjunction with FAHRION precision collet GERC-HP/-HPD/-HPdd (2 µm) as well as tap collets GERC-GBD. Voltage using function key without risk of injury. Up to 100 % higher holding torques than with conventional collet chucks. Insensitive to temperature fluctuations. Very good vibration damping and stability.

Balancing quality: G2.5 25000 min$^{-1}$.

**Application:** In the HSC and HPC range as well as for high-precision machining results. To nest tools with cylindrical shank as well as in line with DIN 1835 B, 1835 E, 6535 B and 6535 E.

**Note:** Delivered without clamping nut (Order No. 3657) and roller wrench (Order No. 3657).

DIN 69893 | Form A | G 2.5 25.000



FAHRION® PRAZISION CENTRO|P®

| Order No. | Clamping range mm | 3569 FAHRION® | HSK | Collet/clamping nut | A mm | D mm | E mm | G mm | H mm |
|---|---|---|---|---|---|---|---|---|---|
| 1016 | 1–10 | 120.00 | 63 | GERC16-HP/-HPD/HPC16 | 55 | 30 | 32 | – | – |
| 0116 | 1–10 | 120.00 | 63 | GERC16-HP/-HPD/HPC16 | 100 | 30 | 71 | 28–45 | 16–31 |
| 0216 | 1–10 | 148.00 ◊ | 63 | GERC16-HP/-HPD/HPC16 | 130 | 30 | 87 | 26–50 | 17–38 |
| 0316 | 1–10 | 157.00 | 63 | GERC16-HP/-HPD/HPC16 | 160 | 30 | 106 | 28–45 | 16–31 |
| 0025 | 1–10 | 119.00 | 63 | GERC25-HP/-HPD/-HPDD/HPC25 | 60 | 32 | 37 | – | – |
| 0125 | 1–16 | 119.00 | 63 | GERC25-HP/-HPD/-HPDD/HPC25 | 100 | 40 | 70 | 35–55 | 24–37 |
| 0225 | 1–16 | 157.00 ◊ | 63 | GERC25-HP/-HPD/-HPDD/HPC25 | 130 | 40 | 89 | 37–60 | 12–42 |
| 0325 | 1–16 | 167.00 | 63 | GERC25-HP/-HPD/-HPDD/HPC25 | 160 | 40 | 128 | 35–60 | 24–42 |
| 0032 | 2–20 | 119.00 | 63 | GERC32-HP/-HPD/-HPDD/HPC32 | 70 | 50 | 46 | – | – |
| 0132 | 2–20 | 119.00 | 63 | GERC32-HP/-HPD/-HPDD/HPC32 | 100 | 50 | 71 | 41–57 | 26–39 |
| 0232 | 2–20 | 157.00 ◊ | 63 | GERC32-HP/-HPD/-HPDD/HPC32 | 130 | 50 | 101 | 42–69 | 18–41 |
| 0332 | 2–20 | 168.00 (W315) | 63 | GERC32-HP/-HPD/-HPDD/HPC32 | 160 | 50 | 129 | 52–70 | 26–60 |

Further dimensions available on request.

## Precision collet chuck CENTRO P 3 - slim design

**Design: DIN 69893, Form A,** slim design with hollow shank taper for HPCM mini nuts. Constant concentricity and repeatability of 0.003 mm at a distance of 3 x D (max. 50 mm) in conjunction with FAHRION precision collet GERC-HP/-HPD/-HPDD (2 µm) as well as tap collets GERC-GBD. Voltage using function key without risk of injury. Insensitive to appearing temperature fluctuations. Very good vibration damping and stability.

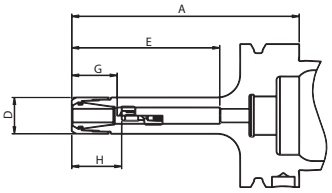
Balancing quality: G2.5 25000 min$^{-1}$.

**Application:** In the HSC and HPC range as well as for high-precision machining results. To nest tools with cylindrical shank as well as in line with DIN 1835 B, 1835 E, 6535 B and 6535 E.

**Note:** Delivered without clamping nut (Order No. 3657) and roller wrench (Order No. 3657).

DIN 69893 | Form A | G 2.5 25.000

FAHRION® PRAZISION CENTRO|P®



| Order No. | Clamping range mm | 3587 FAHRION® PRAZISION | HSK | Collet/clamping nut | A mm | D mm | E mm | G mm | H mm |
|---|---|---|---|---|---|---|---|---|---|
| 0011 | 1– 7 | 129.00 | 63 | GERC11-HP/HPC11M | 70 | 16 | 48 | 15–32 | 7–22 |
| 0111 | 1– 7 | 129.00 | 63 | GERC11-HP/HPC11M | 100 | 16 | 78 | 18–36 | 12–26 |
| 0211 | 1– 7 | 168.00 ◊ | 63 | GERC11-HP/HPC11M | 130 | 16 | 108 | 15–32 | 7–22 |
| 0311 | 1– 7 | 178.00 | 63 | GERC11-HP/HPC11M | 160 | 16 | 138 | 18–36 | 12–26 |
| 0016 | 1–10 | 130.00 | 63 | GERC16-HP/-HPD/HPC16MS | 70 | 22 | 46 | 27–34 | 14–20 |
| 0116 | 1–10 | 130.00 | 63 | GERC16-HP/-HPD/HPC16MS | 100 | 22 | 71 | 27–44 | 14–30 |
| 0216 | 1–10 | 169.00 ◊ | 63 | GERC16-HP/-HPD/HPC16MS | 130 | 22 | 87 | 27–52 | 14–38 |
| 0316 | 1–10 | 178.00 (W315) | 63 | GERC16-HP/-HPD/HPC16MS | 160 | 22 | 97 | 27–52 | 14–38 |

Further dimensions available on request.

## Precision collet chuck set CENTRO P 3 µm

**Design:** Supplied in plastic case.

| Order No. | Design | 3567 FAHRION® PRAZISION | 3569 FAHRION® PRAZISION | Clamping range mm | Set contents |
|---|---|---|---|---|---|
| 0110 | DIN 69871, SK 40, Form AD/B | 372.00 | – | 2–20 | 1 collet chuck CP32-BTB40-A=70<br>1 clamping nut HPC32<br>5 collets GERC32-HP (6, 8, 10, 12 and 16 mm)<br>1 roller wrench RO50 |
| 0100 | DIN 69893, HSK 63, Form A | – | 390.00 | 2–20 | 1 collet chuck CP32-HSK-A63-A=100<br>1 clamping nut HPC32<br>5 collets GERC32-HP (6, 8, 10, 12 and 16 mm)<br>1 roller wrench RO50 |
| | | (W315) | (W315) | | |

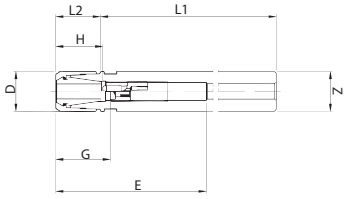
## Extension for precision collet chuck CENTRO P

**Design:** With cylindrical shank, length 150 mm.

**Application:** In the HSC and HPC range as well as for high-precision machining results. To nest tools with cylindrical shank as well as in line with DIN 1835 B, 1835 E, 6535 B and 6535 E.

**Note:** Delivered without clamping nut (Order No. 3657) and roller wrench (Order No. 3657).

FAHRION® PRAZISION CENTRO|P®



| Order No. | Clamping range mm | 3567 FAHRION® PRAZISION | Collet/clamping nut | Z mm | D mm | L1 mm | L2 mm | E mm | G mm | H mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0050 | 1– 5 | 135.00 ◊ | GERC8-HP/HPC8M | 10 | 10 | 138 | 12 | 16 | – | – |
| 0055 | 1– 7 | 116.00 ◊ | GERC11-HP/HPC11M | 16 | 16 | 133 | 17 | 68 | 18–36 | 12–26 |
| 0060 | 1–10 | 116.00 ◊ (W315) | GERC16-HP, -HPD/HPC16MS | 16 | 22 | 117 | 33 | 68 | 28–48 | 16–35 |

## Precision clamping nut HPC

**Design:** For use in the FAHRION CENTRO P for high performance cutting, with double-cylinder guide, trapezoidal thread and coated surface to reduce friction, for high holding torque and to improve concentricity.

FAHRION® PRAZISION
CENTRO|P®

**3657** 3008–3016 **Design:** Mini with extreme slim structure.

**3657** 1016–1032 **Design:** Normal.

| Order No. | Type | 3657 FAHRION® PRAZISION | Clamping range mm | Max. dia. mm | Total length mm | For collet chuck |
|---|---|---|---|---|---|---|
| 3008 | HPC8M* | 38.00 | 1– 5 | 10 | 12 | GERC8-HP |
| 3011 | HPC11M* | 33.00 | 1– 7 | 16 | 16.2 | GERC11-HP |
| 3016 | HPC16MS* | 33.00 (W315) | 1–10 | 22 | 20.9 | GERC16-HP, -HPD |

| Order No. | Type | 3657 FAHRION® PRAZISION | Clamping range mm | Max. dia. mm | Total length mm | For collet chuck |
|---|---|---|---|---|---|---|
| 1016 | HPC16 | 28.00 | 1–10 | 30 | 23.4 | GERC16-HP, -HPD |
| 1025 | HPC25 | 31.00 | 2–16 | 40 | 25.6 | GERC25-HP, -HPD, -HPDD |
| 1032 | HPC32 | 33.00 (W361) | 2–20 | 50 | 26.9 | GERC32-HP, -HPD, -HPDD |

## Roller spanner for HPC clamping nuts

**Design:** For use on the FAHRION CENTRO P. Function key with standard handle.

**Application:** Enables uncomplicated clamping of tools without risk of injury, no slipping as possible with standard or hook spanners.

**Note:** The outer diameter of the clamping nuts must comply with the DIN tolerances.

| Order No. | For clamping nut | 3657 FAHRION® PRAZISION | ∅ mm |
|---|---|---|---|
| 0010 | HPC8M | 74.00 | 10 |
| 0016 | HPC11M | 58.50 | 16 |
| 0024 | HPC16MS | 58.50 | 22 |
| 0300 | HPC16/ST16 | 58.50 | 30 |
| 0400 | HPC25/ST25 | 58.50 | 40 |
| 0500 | HPC32/ST32 | 58.50 | 50 |
| 0630 | HPC40/ST40 | 65.00 (W361) | 63 |

## Torque roller wrench attachment DRO

**Design:** With VKT adaptation to the defined tightening of the clamping nuts with a torque wrench.

**Note:** The outer diameter of the clamping nut must comply with DIN tolerances. Torque wrenches can be found from 📖 6/106.

| Order No. | For clamping nut | 3657 FAHRION® PRAZISION | Square mm |
|---|---|---|---|
| 0916 | HPC11M | 58.50 | 9 x 12 |
| 0930 | HPC16/ST16 | 58.50 | 9 x 12 |
| 1440 | HPC25/ST25 | 58.50 | 14 x 18 |
| 1450 | HPC32/ST32 | 58.50 (W361) | 14 x 18 |

## Precision collet GERC-HP

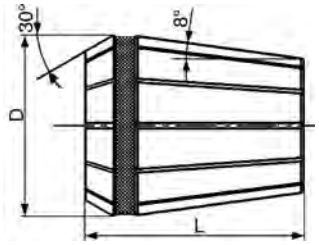
**Design: Precision collets GERC-HP DIN ISO 15488-B (old DIN 6499).** The collets have an average system accuracy of 3 µm (with distance 3 x D max. 50 mm) in precision collet chucks (for GERC8-HP it is 6 µm). They are all protected against corrosion with the new FAHRION Protect coating.

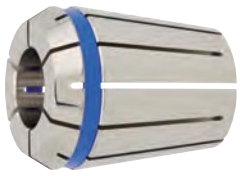
GERC-HP collets are especially suitable for use in the HSC range and for high-precision machining results, where you only have nominal size (tolerance h10) machining.

In the standard collet chuck they have normal clamping diameter bridging; the blue identification ring, which does not have any sealing function, needs to be removed. However, we recommend machining to nominal size.

DIN 6499

FAHRION® PRAZISION



| Order No. | GERC8-HP/4004E Ø mm | 3582 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0000 | 1 | 63.00 | 8.5 | 13.6 |
| 0002 | 1.5 | 63.00 | 8.5 | 13.6 |
| 0001 | 2 | 48.75 | 8.5 | 13.6 |
| 0003 | 2.5 | 48.75 | 8.5 | 13.6 |
| 0004 | 3 | 41.65 | 8.5 | 13.6 |
| 0005 | 3.5 | 41.65 | 8.5 | 13.6 |
| 0007 | 4 | 41.65 | 8.5 | 13.6 |
| 0008 | 4.5 | 41.65 | 8.5 | 13.6 |
| 0010 | 5 | 41.65 (W315) | 8.5 | 13.6 |

| Order No. | GERC11-HP/4008E Ø mm | 3584 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0000 | 1 | 60.90 | 11.3 | 18 |
| 0002 | 1.5 | 60.90 | 11.3 | 18 |
| 0001 | 2 | 46.70 | 11.3 | 18 |
| 0003 | 2.5 | 46.70 | 11.3 | 18 |
| 0004 | 3 | 39.60 | 11.3 | 18 |
| 0005 | 3.5 | 39.60 | 11.3 | 18 |
| 0007 | 4 | 39.60 | 11.3 | 18 |
| 0008 | 4.5 | 39.60 | 11.3 | 18 |
| 0010 | 5 | 39.60 | 11.3 | 18 |
| 0011 | 5.5 | 39.60 | 11.3 | 18 |
| 0013 | 6 | 39.60 | 11.3 | 18 |
| 0014 | 6.5 | 39.60 | 11.3 | 18 |
| 0016 | 7 | 39.60 (W315) | 11.3 | 18 |

| Order No. | GERC16-HP/426E Ø mm | 3581 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0000 | 1 | 59.90 | 17 | 27.5 |
| 0001 | 2 | 44.70 | 17 | 27.5 |
| 0004 | 3 | 38.10 | 17 | 27.5 |
| 0007 | 4 | 38.10 | 17 | 27.5 |
| 0010 | 5 | 38.10 | 17 | 27.5 |
| 0013 | 6 | 38.10 | 17 | 27.5 |
| 0016 | 7 | 38.10 | 17 | 27.5 |
| 0019 | 8 | 38.10 | 17 | 27.5 |
| 0022 | 9 | 38.10 | 17 | 27.5 |
| 0025 | 10 | 38.10 (W315) | 17 | 27.5 |

| Order No. | GERC25-HP/430E Ø mm | 3583 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0000 | 1 | 60.90 | 26 | 34 |
| 0001 | 2 | 46.20 | 26 | 34 |
| 0004 | 3 | 39.10 | 26 | 34 |
| 0007 | 4 | 39.10 | 26 | 34 |
| 0010 | 5 | 39.10 | 26 | 34 |
| 0013 | 6 | 39.10 | 26 | 34 |
| 0016 | 7 | 39.10 | 26 | 34 |
| 0019 | 8 | 39.10 | 26 | 34 |
| 0022 | 9 | 39.10 | 26 | 34 |
| 0025 | 10 | 39.10 | 26 | 34 |
| 0028 | 12 | 39.10 | 26 | 34 |
| 0031 | 14 | 39.10 | 26 | 34 |
| 0034 | 16 | 39.10 (W315) | 26 | 34 |

| Order No. | GERC32-HP/470E Ø mm | 3596 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0001 | 2 | 47.20 | 33 | 40 |
| 0004 | 3 | 39.60 | 33 | 40 |
| 0007 | 4 | 39.60 | 33 | 40 |
| 0010 | 5 | 39.60 | 33 | 40 |
| 0013 | 6 | 39.60 | 33 | 40 |
| 0016 | 7 | 39.60 | 33 | 40 |
| 0019 | 8 | 39.60 | 33 | 40 |
| 0022 | 9 | 39.60 | 33 | 40 |
| 0025 | 10 | 39.60 | 33 | 40 |
| 0028 | 12 | 39.60 | 33 | 40 |
| 0031 | 14 | 39.60 | 33 | 40 |
| 0034 | 16 | 39.60 | 33 | 40 |
| 0037 | 18 | 39.60 | 33 | 40 |
| 0040 | 20 | 39.60 (W315) | 33 | 40 |

# Hydro expansion clamping holder

The hydraulic expansion tool-holder with axial length adjustment for metal and wood working machines with rotating tools.

Designed for automatic tool changes

- DIN 69871, DIN 69893-A, DIN 69893-F, DIN 69893-E und JIS B6339 MAS BT.

Designed for manual tool changes

- DIN 69893-C.

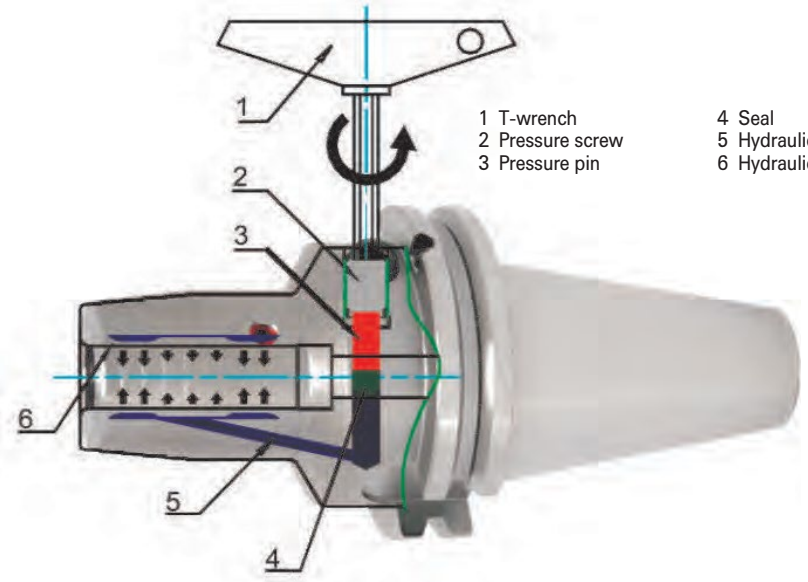
Hydraulic fluid is compressed using a hydraulic clamping set (pressure screw, pressure pin, seal).
The pressure causes a uniform deformation of the expansion sleeve so the tool shank is clamped with higher concentricity.

**Advantages of the Hydraulic expansion holder**

- Quicker tool changes
- Higher concentricity
- Vibration-damping tool clamping
- Increased tool service life
- Reduction in micro-outbreaks on the cutting edge

- Improved surface quality
- Flexibility due to the use of reduction sleeves

- Low maintenance due to closed clamping system
- Simple to operate

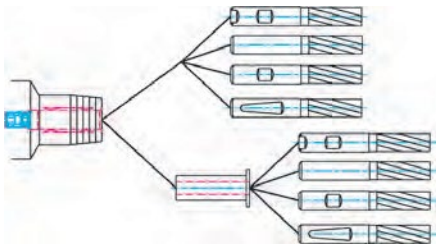


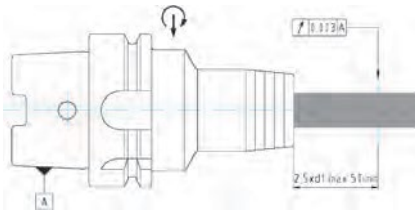

1 T-wrench
2 Pressure screw
3 Pressure pin
4 Seal
5 Hydraulic oil
6 Hydraulic bush

- Material 1600–1800 N/mm$^2$ tensile strength
- Hardness 52 + 2 HRC
- Holder balanced
- Laser marking
- Max. revolutions 40000 min$^{-1}$ (Observe rpm limits, interface, fine balancing recommended!)
- Optimum operating temperature 20–50 °C; higher temperatures upon request, not more than 80 °C
- Coolant pressure maximum 80 bar
- Adjustment 10 mm
- Machinable shafts (tolerance h 6) with and without ruduction sleeve:
- DIN 1835 shapes A, B, C, D
- DIN 6535 shapes H, HB, HE

**WTE Hydraulic expansion holder**

- Greater torque transmission
- Design equiv. to DIN 69882-7
- Higher positioning and repeat accuracy
- Tool clamp with highest concentrcity – maximum 3 µm
- Concentricity inspection and balancing protocol for each delivered hydraulic expansion holder
- Continuous enhancements
- Certified production acc. to DIN EN ISO 9001:2000





Concentricity of the WTE hydraulic expansion holder with test mandrel in a tensioned state.

## Precision collet GERC-HPD - sealed

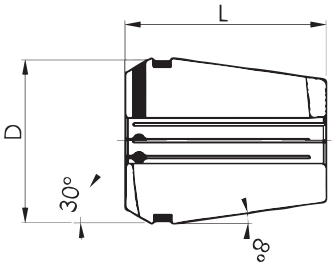
**Design: Precision collets GERC-HPD similar to DIN ISO 15488-A (old DIN 6499).**
The collets have an average system accuracy of 3 µm (with distance 3 x D max. 50 mm) in precision collet chucks (for GERC8-HP it is 6 µm). They are all protected against corrosion with the new FAHRION Protect coating.

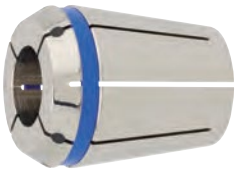
GERC-HPD collets have a seal for internal cooling and can be used up to 120 bar. Shanks with lateral face can only be used in a limited way, i.e. the face must be behind the rubber plug to ensure sealing. They are especially suitable for use in the HSC range and for high-precision machining results.

GERC-HPD does not have clamping diameter bridging (tolerance h8). During use in a standard collet chuck, the blue identification ring must be removed.

DIN 6499

FAHRION® PRAZISION



| Order No. | GERC16-HPD/425E Ø mm | 3579 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0004 | 3 | 51.30 | 16.7 | 27.5 |
| 0007 | 4 | 51.30 | 16.7 | 27.5 |
| 0010 | 5 | 56.90 | 16.7 | 27.5 |
| 0013 | 6 | 51.30 | 16.7 | 27.5 |
| 0019 | 8 | 51.30 | 16.7 | 27.5 |
| 0025 | 10 | 51.30 (W315) | 16.7 | 27.5 |

| Order No. | GERC25-HPD/429E Ø mm | 3577 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0004 | 3 | 59.90 | 25.7 | 34 |
| 0007 | 4 | 54.30 | 25.7 | 34 |
| 0010 | 5 | 59.90 | 25.7 | 34 |
| 0013 | 6 | 54.30 | 25.7 | 34 |
| 0019 | 8 | 54.30 | 25.7 | 34 |
| 0025 | 10 | 54.30 | 25.7 | 34 |
| 0028 | 12 | 54.30 | 25.7 | 34 |
| 0031 | 14 | 54.30 | 25.7 | 34 |
| 0034 | 16 | 54.30 (W315) | 25.7 | 34 |

| Order No. | GERC32-HPD/469E Ø mm | 3578 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0004 | 3 | 61.90 | 32.7 | 40 |
| 0007 | 4 | 56.30 | 32.7 | 40 |
| 0010 | 5 | 61.90 | 32.7 | 40 |
| 0013 | 6 | 56.30 | 32.7 | 40 |
| 0019 | 8 | 56.30 | 32.7 | 40 |
| 0025 | 10 | 56.30 | 32.7 | 40 |
| 0028 | 12 | 56.30 | 32.7 | 40 |
| 0031 | 14 | 56.30 | 32.7 | 40 |
| 0034 | 16 | 56.30 | 32.7 | 40 |
| 0037 | 18 | 56.30 | 32.7 | 40 |
| 0040 | 20 | 56.30 (W315) | 32.7 | 40 |

## Precision collet set GERC-HP/-HPD

**Design: DIN ISO 15488-B (DIN 6499 old).** Averaged system accuracy 3 µm in CENTRO P. All collets are protected against corrosion by the FAHRION Protect coating.
Supplied in wooden case.

**3578 0115**

| Order No. | Clamping range Ø mm | 3578 FAHRION® PRAZISION | Collet type | Set contents |
|---|---|---|---|---|
| 0100 | 3–10 | 244.60 | GERC16-HP | 3; 4; 5; 6; 8; 10 |
| 0103 | 3–10 | 329.90 | GERC16-HPD | 3; 4; 5; 6; 8; 10 |
| 0106 | 4–16 | 295.40 | GERC25-HP | 4; 6; 8; 10; 12; 14; 16 |
| 0109 | 4–16 | 403.00 | GERC25-HPD | 4; 6; 8; 10; 12; 14; 16 |
| 0112 | 4–20 | 339.00 | GERC32-HP | 4; 6; 8; 10; 12; 14; 16; 20 |
| 0115 | 4–20 | 475.00 (W315) | GERC32-HPD | 4; 6; 8; 10; 12; 14; 16; 20 |

## Precision collet GERC-HPDD

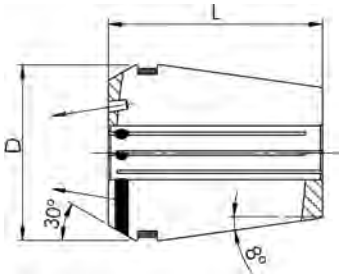
**Design: Precision collets GERC-HPDD similar to DIN ISO 15488-A (DIN 6499 old).**
The collets have an averaged system accuracy of 3 µm (with distance 3 x D max. 50 mm) in precision collet chucks.

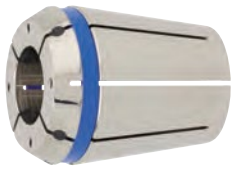
They have a seal for internal cooling (up to 120 bar) and additional spray nozzles so that, in the case of a workpiece without a cooling channel, the coolant sprays up to the cut. Shanks with lateral face can only be used in a limited way, i.e. the face must be behind the rubber plug to ensure sealing.
They are especially suitable for use in the HSC range and for high-precision machining results in CENTRO P.

The GERC-HPDD do not have clamping diameter bridging (tolerance h8), neither in CENTRO P nor in the standard collet chuck, where the blue identification ring, which does not have any sealing function, needs to be removed.

DIN 6499

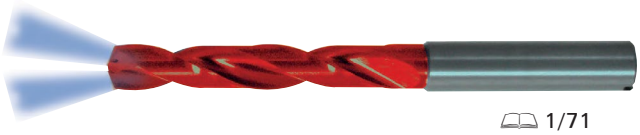
FAHRION® PRAZISION



| Order No. | GERC25-HPPDD/ 429E ∅ mm | 3600 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0007 | 4 | 82.20 | 26 | 34 |
| 0013 | 6 | 82.20 | 26 | 34 |
| 0019 | 8 | 82.20 | 26 | 34 |
| 0025 | 10 | 82.20 | 26 | 34 |
| 0028 | 12 | 82.20 | 26 | 34 |
| 0031 | 14 | 82.20 (W315) | 26 | 34 |

| Order No. | GERC32-HPDD/ 469E ∅ mm | 3602 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0007 | 4 | 85.30 | 26 | 34 |
| 0013 | 6 | 85.30 | 26 | 34 |
| 0019 | 8 | 85.30 | 26 | 34 |
| 0025 | 10 | 85.30 | 26 | 34 |
| 0028 | 12 | 85.30 | 26 | 34 |
| 0031 | 14 | 85.30 | 26 | 34 |
| 0034 | 16 | 85.30 | 26 | 34 |
| 0037 | 18 | 85.30 (W315) | 26 | 34 |



1/71

## SuperLine spiral drill

can be found on 1/71.

## Precision hydro expansion clamping chuck - short, slim

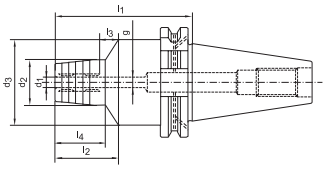
**Design: DIN 69871, Form AD/B, with internal cooling.** Material with tensile strength of 1600–1800 N/mm², hardness of 52 ±2 HRC. Hydraulic fluid is compressed using a hydraulic clamping set (pressure screw, pressure pin, seal) using a hexagonal T-key. The pressure forces developed effects even deformation by which the tool shank is being clamped with high concentricity (max. 3 µm). Taper to DIN 254.
Hole for data carrier/chip (Ballauf).

Taper angle: Tolerance AT3.
Maximum speed: 40000 min$^{-1}$.
Optimal operating temperature: 20–50 °C.
Coolant pressure max: 80 bar.
Adjustment track: 10 mm.
Balancing quality: G2.5 25000 min$^{-1}$.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69871 | Form AD/B | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP



| Order No. | $d_1$ | 3439 WTE SK 40 | 3440 WTE SK 50 | $d_2$ | $d_3$ | $l_1$ | $l_2$ | $l_3$ | $l_4$ mm | | g | | A/F mm | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | mm | mm | 3439 | 3440 | 3439 | 3440 | 3439 | 3440 |
| 0002 | 6 | 364.50 | 510.50 | 26 | 49.5 | 80 | 37 | 10 | 29 | 29 | M5 | M5 | 2.5 | 2.5 |
| 0006 | 6 | 547.50 ◊ | 659.50 ◊ | 26 | 49.5 | 110 | 37 | 10 | 29 | 29 | M5 | M5 | 2.5 | 2.5 |
| 0008 | 8 | 364.50 | 510.50 | 28 | 49.5 | 80 | 37 | 10 | 30 | 30 | M6 | M6 | 3 | 3 |
| 0011 | 8 | 547.50 ◊ | 659.50 ◊ | 28 | 49.5 | 110 | 37 | 10 | 30 | 30 | M6 | M6 | 3 | 3 |
| 0014 | 10 | 364.50 | 510.50 | 30 | 49.5 | 80 | 41 | 10 | 35 | 35 | M6 | M8 | 3 | 4 |
| 0017 | 10 | 547.50 ◊ | 659.50 ◊ | 30 | 49.5 | 110 | 41 | 10 | 35 | 35 | M8 x 1 | M8 x 1 | 3 | 4 |
| 0020 | 12 | 318.50 | 463.50 | 32 | 49.5 | 80 | 46 | 10 | 40 | 39 | M10 | M10 | 5 | 5 |
| 0023 | 12 | 455.50 ◊ | 572.50 ◊ | 32 | 49.5 | 110 | 46 | 10 | 40 | 40 | M10 x 1 | M10 x 1 | 5 | 5 |
| 0026 | 14 | 364.50 | 510.50 | 34 | 49.5 | 80 | 46 | 10 | 40 | 37 | M10 | M10 | 5 | 5 |
| 0029 | 14 | 547.50 ◊ | 659.50 ◊ | 34 | 49.5 | 110 | 46 | 10 | 40 | 40 | M10 | M10 x 1 | 5 | 5 |
| 0032 | 16 | 364.50 | 510.50 ◊ | 38 | 49.5 | 80 | 49 | 10 | 45 | 40 | M10 | M12 | 5 | 6 |
| 0035 | 16 | 547.50 ◊ | 659.50 ◊ | 38 | 49.5 | 110 | 49 | 10 | 45 | 45 | M12 x 1 | M12 x 1 | 5 | 6 |
| 0038 | 18 | 364.50 | 510.50 | 40 | 49.5 | 80 | 49 | 10 | 46 | 41 | M10 | M12 | 5 | 6 |
| 0041 | 18 | 547.50 ◊ | 659.50 ◊ | 40 | 49.5 | 110 | 49 | 10 | 46 | 46 | M12 x 1 | M12 x 1 | 5 | 6 |
| 0044 | 20 | 318.50 | 463.50 | 42 | 49.5 | 80 | 51 | 10 | 47 | 42 | M10 | M16 | 8 | 8 |
| 0047 | 20 | 455.50 ◊ | 572.50 ◊ | 42 | 49.5 | 110 | 51 | 10 | 47 | 42 | M16 x 1 | M16 x 1 | 8 | 8 |
| 0050 | 25 | 364.50 | 510.50 | 55 | 60 | 100 | 57 | 10 | 28 | 48 | M16 | M16 | 8 | 8 |
| 0053 | 25 | 547.50 ◊ | 659.50 ◊ | 55 | 63 | 110 | 57 | 10 | 28 | 48 | M16 x 1 | M16 x 1 | 8 | 8 |
| 0056 | 32 | 364.50 | 510.50 | 63 | 70 | 100 | 61 | 10 | 25.5 | 61 | M16 | M16 | 8 | 8 |
| 0059 | 32 | 547.50 ◊ | – | 63 | 59 | 110 | 61 | 10 | 50 | – | M16 x 1 | – | 8 | – |
| 0060 | 32 | – (W326) | 659.50 ◊ (W326) | 63 | 70 | 110 | 61 | 10 | – | 50 | – | M16 x 1 | – | 8 |

## Precision hydro expansion clamping chuck - short, heavy

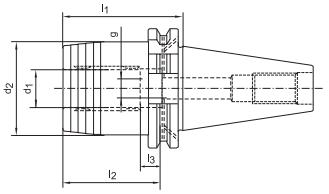
**Design: DIN 69871, Form AD/B, with internal cooling.**
Material with tensile strength of 1600–1800 N/mm², hardness of 52 ±2 HRC. Hydraulic fluid is compressed using a hydraulic clamping set (pressure screw, pressure pin, seal) using a hexagonal T-key. The pressure forces developed effects even deformation by which the tool shank is being clamped with high concentricity (max. 3 µm). Taper to DIN 254. Hole for data carrier/chip (Ballauf).

Taper angle: Tolerance AT3.
Maximum speed: 40000 min$^{-1}$.
Optimal operating temperature: 20–50 °C.
Coolant pressure max: 80 bar.
Adjustment track: 10 mm.
Balancing quality: G2.5 25000 min$^{-1}$.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69871 | Form AD/B | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP



| Order No. | $d_1$ | 3443 WTE | SK | $d_2$ | $l_1$ | $l_2$ | $l_3$ | g | A/F |
|---|---|---|---|---|---|---|---|---|---|
| | mm | | | mm | mm | mm | mm | | mm |
| 0002 | 20 | 176.50 | 40 | 49.5 | 64.5 | 51 | 10 | M10 | 8 |
| 0005 | 32 | 240.00 (W326) | 50 | 72 | 81 | 61 | 10 | M16 | 8 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Precision hydro expansion clamping chuck - short, slim

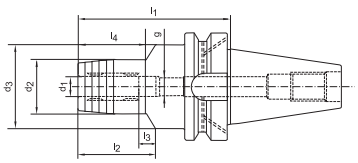
**Design: JIS B 6339 (MAS-BT), Form AD/B, with internal cooling.**
Material with tensile strength of 1600–1800 N/mm², hardness of 52 ±2 HRC. Hydraulic fluid is compressed using a hydraulic clamping set (pressure screw, pressure pin, seal) using a hexagonal T-key. The pressure forces developed effects even deformation by which the tool shank is being clamped with high concentricity (max. 3 µm). Taper to DIN 254. Hole for data carrier/chip (Ballauf).

JIS B 6339 MAS/BT | Form AD/B | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP

Taper angle: Tolerance AT3.
Maximum speed: 40000 min$^{-1}$.
Optimal operating temperature: 20–50 °C.
Coolant pressure max: 80 bar.
Adjustment track: 10 mm.
Balancing quality: G2.5 25000 min$^{-1}$.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.



| Order No. | $d_1$ mm | 3442 WTE | BT | $d_2$ mm | $d_3$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | $l_4$ mm | g | A/F mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0202 | 6 | 364.50 ◊ | 40 | 26 | 49.5 | 90 | 37 | 10 | 29 | M5 | 2.5 |
| 0205 | 8 | 364.50 ◊ | 40 | 28 | 49.5 | 90 | 37 | 10 | 30 | M6 | 3 |
| 0208 | 10 | 364.50 ◊ | 40 | 30 | 49.5 | 90 | 41 | 10 | 35 | M6 | 3 |
| 0211 | 12 | 318.50 ◊ | 40 | 32 | 49.5 | 90 | 46 | 10 | 40 | M10 | 5 |
| 0214 | 14 | 364.50 ◊ | 40 | 34 | 49.5 | 90 | 46 | 10 | 40 | M10 | 5 |
| 0217 | 16 | 364.50 ◊ | 40 | 38 | 49.5 | 90 | 49 | 10 | 46 | M10 | 5 |
| 0220 | 18 | 364.50 ◊ | 40 | 40 | 49.5 | 90 | 49 | 10 | 46 | M10 | 5 |
| 0223 | 20 | 318.50 ◊ | 40 | 42 | 49.5 | 90 | 51 | 10 | 47 | M10 | 5 |
| 0226 | 25 | 364.50 ◊ | 40 | 55 | 52 | 90 | 57 | 10 | 50 | M10 | 5 |
| 0229 | 6 | 510.50 ◊ | 50 | 26 | 49.5 | 110 | 37 | 10 | 29 | M5 | 2.5 |
| 0232 | 8 | 510.50 ◊ | 50 | 28 | 49.5 | 110 | 37 | 10 | 30 | M6 | 3 |
| 0235 | 10 | 510.50 ◊ | 50 | 30 | 49.5 | 110 | 41 | 10 | 35 | M8 | 4 |
| 0238 | 12 | 463.50 ◊ | 50 | 32 | 49.5 | 110 | 46 | 10 | 36 | M10 | 5 |
| 0241 | 14 | 510.50 ◊ | 50 | 34 | 49.5 | 110 | 46 | 10 | 37 | M10 | 5 |
| 0244 | 16 | 510.50 ◊ | 50 | 38 | 49.5 | 110 | 49 | 10 | 40 | M12 | 6 |
| 0247 | 18 | 510.50 ◊ | 50 | 40 | 49.5 | 110 | 49 | 10 | 41 | M12 | 6 |
| 0250 | 20 | 463.50 ◊ | 50 | 42 | 49.5 | 110 | 51 | 10 | 42 | M16 | 8 |
| 0253 | 25 | 510.50 ◊ | 50 | 55 | 60 | 110 | 57 | 10 | 48 | M16 | 8 |
| 0256 | 32 | 510.50 ◊ (W326) | 50 | 63 | 70 | 115 | 61 | 10 | 61 | M16 | 8 |

## Precision hydro expansion clamping chuck - short, heavy

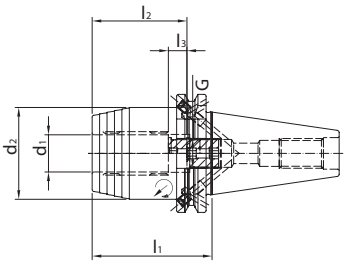
**Design: JIS B 6339 (MAS-BT), Form AD/B, with internal cooling.**
Material with tensile strength of 1600–1800 N/mm², hardness of 52 ±2 HRC. Hydraulic fluid is compressed using a hydraulic clamping set (pressure screw, pressure pin, seal) using a hexagonal T-key. The pressure forces developed effects even deformation by which the tool shank is being clamped with high concentricity (max. 3 µm). Taper to DIN 254. Hole for data carrier/chip (Ballauf).

JIS B 6339 MAS/BT | Form AD/B | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP

Taper angle: Tolerance AT3.
Maximum speed: 40000 min$^{-1}$.
Optimal operating temperature: 20–50 °C.
Coolant pressure max: 80 bar.
Adjustment track: 10 mm.
Balancing quality: G2.5 25000 min$^{-1}$.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.



| Order No. | $d_1$ mm | 3442 WTE | BT | $d_2$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | g | A/F mm |
|---|---|---|---|---|---|---|---|---|---|
| 0302 | 20 | 218.00 | 40 | 49.5 | 72.5 | 51 | 10 | M10 | 5 |
| 0305 | 32 | 295.50 (W326) | 50 | 72 | 90 | 61 | 10 | M16 | 8 |

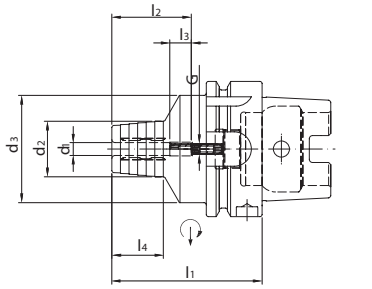
## Precision hydro expansion clamping chuck - short, slim

**Design: HSK 63, DIN 69893, Form A, with internal cooling.** Material with tensile strength of 1600–1800 N/mm² and hardness of 52 ±2 HRC. Hydraulic fluid is compressed using a hydraulic clamping set (pressure screw, pressure pin, seal) using a hexagonal T-key. The pressure forces developed effects even deformation by which the tool shank is being clamped with high concentricity (max. 3 µm). Taper to DIN 254. Hole for data carrier/chip (Ballauf).

Taper angle: Tolerance AT3.
Maximum speed: 40000 min⁻¹.
Optimal operating temperature: 20–50 °C.
Coolant pressure max: 80 bar.
Adjustment track: 10 mm.
Balancing quality: G2.5 25000 min⁻¹.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | $d_1$ mm | 3547 WTE | HSK | $d_2$ mm | $d_3$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | $l_4$ mm | G | Spanner width mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0002 | 6 | 397.50 | 63 | 26 | 50 | 70 | 37 | 10 | 24 | M5 | 2.5 |
| 0005 | 6 | 781.00 ◊ | 63 | 28 | 50 | 150 | 37 | 10 | 110 | M5 | 2.5 |
| 0008 | 8 | 397.50 | 63 | 28 | 50 | 70 | 37 | 10 | 24 | M6 | 3 |
| 0011 | 8 | 781.00 ◊ | 63 | 28 | 50 | 150 | 37 | 10 | 110 | M6 | 3 |
| 0014 | 10 | 397.50 | 63 | 30 | 50 | 80 | 41 | 10 | 32 | M6 | 3 |
| 0017 | 10 | 781.00 ◊ | 63 | 30 | 50 | 150 | 41 | 10 | 110 | M6 | 3 |
| 0020 | 12 | 364.50 | 63 | 32 | 50 | 85 | 46 | 10 | 40 | M10 | 5 |
| 0023 | 12 | 781.00 ◊ | 63 | 32 | 50 | 150 | 46 | 10 | 110 | M10 | 5 |
| 0026 | 14 | 397.50 ◊ | 63 | 34 | 50 | 85 | 46 | 10 | 40 | M10 | 5 |
| 0029 | 14 | 781.00 ◊ | 63 | 34 | 50 | 150 | 46 | 10 | 110 | M10 | 5 |
| 0032 | 16 | 397.50 | 63 | 38 | 50 | 90 | 49 | 10 | 45 | M10 | 5 |
| 0035 | 16 | 781.00 ◊ | 63 | 38 | 50 | 150 | 49 | 10 | 110 | M10 | 5 |
| 0038 | 18 | 397.50 | 63 | 40 | 50 | 90 | 49 | 10 | 46 | M10 | 5 |
| 0041 | 18 | 781.00 ◊ | 63 | 40 | 50 | 150 | 49 | 10 | 110 | M10 | 5 |
| 0044 | 20 | 364.50 | 63 | 42 | 50 | 90 | 51 | 10 | 48 | M10 | 5 |
| 0047 | 20 | 781.00 ◊ | 63 | 42 | 50 | 150 | 51 | 10 | 110 | M10 | 5 |
| 0050 | 25 | 397.50 (W326) | 63 | 57 | 53 | 120 | 57 | 10 | 63 | M10 | 5 |

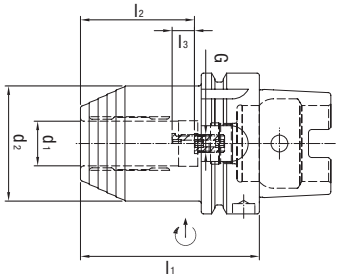
## Precision hydro expansion clamping chuck - short, heavy

**Design: DIN 69893, Form A, with internal cooling.** Material with tensile strength of 1600–1800 N/mm² and hardness of 52 ±2 HRC. Hydraulic fluid is compressed using a hydraulic clamping set (pressure screw, pressure pin, seal) using a hexagonal T-key. The pressure forces developed effects even deformation by which the tool shank is being clamped with high concentricity (max. 3 µm). Taper to DIN 254. Hole for data carrier/chip (Ballauf).

Taper angle: Tolerance AT3.
Maximum speed: 40000 min⁻¹.
Optimal operating temperature: 20–50 °C.
Coolant pressure max: 80 bar.
Adjustment track: 10 mm.
Balancing quality: G2.5 25000 min⁻¹.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | $d_1$ mm | 3547 WTE | HSK | $d_2$ mm | $d_3$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | $l_4$ mm | G | Spanner width mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0100 | 20 | 238.00 (W326) | 63 | 20 | 57 | 80 | 51 | 10 | 35 | M8 x 1 | 5 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Precision HPH chuck - short, heavy

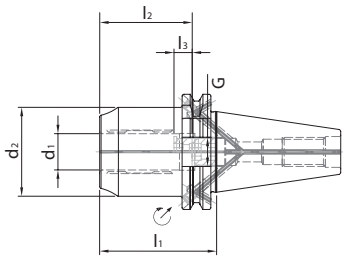
**Design:** High Performance Holder. Short, heavy-duty design. For extremely high holding forces and very high transferable torque. Vibration-reducing effect for a better workpiece surface. High temperature resistance. Hole for data carrier/chip (Ballauf).

Concentricity: 0.003 mm
Balancing quality: G2.5 25000 min$^{-1}$.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69871 | Form AD/B | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP



| Order No. | $d_1$ mm | 3553 WTE | SK | $d_2$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | G mm | Spanner width mm |
|---|---|---|---|---|---|---|---|---|---|
| 0020 | 12 | 230.00 ◊ | 40 | 42 | 50 | 46 | 10 | M8 x 1 x 13.5 | 3 |
| 0044 | 20 | 230.00 ◊ (W326) | 40 | 49 | 64.5 | 51 | 10 | M16 x 1 x 13.5 | 8 |

## Precision HPH chuck Multi 3°

NEW

**Design:** High Performance Holder. Short, heavy-duty design. For high holding forces and high, transferable torque. Long service life. Vibration-reducing effect for a better workpiece surface. Quick and easy clamping. Temperature resistant to 120 °C. Slim 3° contour as seen on shrink-fit holding fixtures. Maximum flexibility thanks to the use of reducing sleeves.

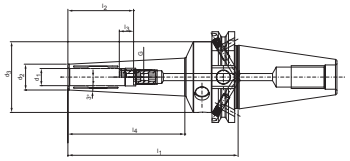
Concentricity: < 0.003 mm.
Balancing quality: G2.5 25000 min$^{-1}$.

**Application:** Ideal for use in tool- and mould-making.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69871 | Form AD/B | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP



| Order No. | $d_1$ mm | 3553 WTE | SK | $d_2$ mm | $d_3$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | $l_4$ mm | G | A/F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0050 | 3 | 611.50 | 40 | 9 | 49.5 | 120 | 28 | 16 | 79.5 | M3 | 1.5 |
| 0051 | 4 | 611.50 | 40 | 10 | 49.5 | 120 | 28 | 12 | 79.5 | M3 | 1.5 |
| 0052 | 5 | 611.50 | 40 | 11 | 49.5 | 120 | 28 | 8 | 80 | M3 | 1.5 |
| 0053 | 6 | 539.50 | 40 | 12 | 49.5 | 120 | 37 | 10 | 79.9 | M5 | 2.5 |
| 0054 | 8 | 539.50 | 40 | 14 | 49.5 | 120 | 37 | 10 | 79.9 | M6 | 3 |
| 0055 | 10 | 539.50 | 40 | 16 | 49.5 | 120 | 41 | 10 | 80.9 | M8 x 1 | 3 |
| 0056 | 12 | 539.50 (W326) | 40 | 18 | 49.5 | 120 | 46 | 10 | 81.9 | M10 x 1 | 5 |

## Precision HPH chuck - short, heavy

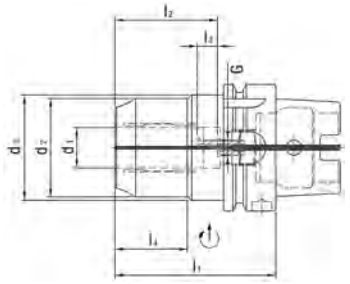
**Design:** High Performance Holder. Short, heavy-duty design. For extremely high holding forces and very high transferable torque. Vibration-reducing effect for a better workpiece surface. High temperature resistance. Hole for data carrier/chip (Ballauf).

Concentricity: < 0.003 mm.
Balancing quality: G2.5 25000 min$^{-1}$.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP



| Order No. | $d_1$ mm | 3556 WTE | HSK | $d_2$ mm | $d_3$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | $l_4$ mm | G | A/F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | 12 | 250.00 ◊ | 63 | 42 | 52.5 | 80 | 46 | 10 | 34 | M8 x 1 | 3 |
| 0044 | 20 | 250.00 ◊ (W326) | 63 | 49 | 52.5 | 80 | 51 | 10 | 36 | M8 x 1 | 3 |

## Precision HPH chuck Multi 3°

NEW

**Design:** High Performance Holder. Short, heavy-duty design. For high holding forces and high, transferable torque. Long service life. Vibration-reducing effect for a better workpiece surface. Quick and easy clamping. Temperature resistant to 120 °C. Slim 3° contour as seen on shrink-fit holding fixtures. Maximum flexibility thanks to the use of reducing sleeves.

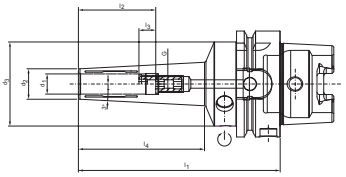
Concentricity: < 0.003 mm.
Balancing quality: G2.5 25000 $min^{-1}$.

**Application:** Ideal for use in tool- and mould-making.

**Scope of delivery:** Hydro expansion clamping chuck with hexagonal T-key.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm

WTE MAPAL GROUP



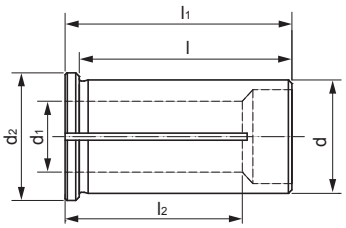
| Order No. | $d_1$ mm | 3556 WTE | HSK | $d_2$ mm | $d_3$ | $l_1$ mm | $l_2$ mm | $l_3$ mm | $l_4$ mm | G | A/F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0050 | 3 | 731.50 | 63 | 9 | 50 | 120 | 28 | 16 | 73 | M3 | 1.5 |
| 0051 | 4 | 731.50 | 63 | 10 | 50 | 120 | 28 | 12 | 73 | M3 | 1.5 |
| 0052 | 5 | 731.50 | 63 | 11 | 50 | 120 | 28 | 8 | 73 | M3 | 1.5 |
| 0053 | 6 | 659.50 | 63 | 12 | 50 | 120 | 37 | 10 | 73 | M5 | 2.5 |
| 0054 | 8 | 659.50 | 63 | 14 | 50 | 120 | 37 | 10 | 74 | M6 | 3 |
| 0055 | 10 | 659.50 | 63 | 16 | 50 | 120 | 41 | 10 | 74 | M8 x 1 | 3 |
| 0056 | 12 | 659.50 (W326) | 63 | 18 | 50 | 120 | 46 | 10 | 75 | M10 x 1 | 5 |

## Reducing sleeve

**Design:** Metal sealed – coolant-resistant. Coolant pressure up to max. 80 bar. Slotted for flexible diameter application.

**Application:** For reducing the clamping diameter on hydro expansion and HPH clamping chucks.

WTE MAPAL GROUP



| Order No. | d mm | 3443 WTE | $d_1$ mm | l mm | $l_1$ mm | $l_2$ mm |
|---|---|---|---|---|---|---|
| 0057 | 12 | 235.00 NEW | 2 | 44 | 40 | 20 |
| 0058 | 12 | 130.00 NEW | 3 | 44 | 40 | 29 |
| 0059 | 12 | 130.00 NEW | 4 | 44 | 40 | 29 |
| 0060 | 12 | 130.00 NEW | 5 | 44 | 40 | 29 |
| 0502 | 12 | 105.50 | 6 | 44 | 40 | 36 |
| 0505 | 12 | 105.50 | 8 | 44 | 40 | 37 |
| 0508 | 12 | 115.00 | 10 | 44 | 40 | 40 |
| 0510 | 20 | 97.90 NEW | 3 | 54 | 50 | 28 |
| 0512 | 20 | 97.90 NEW | 4 | 54 | 50 | 28 |
| 0514 | 20 | 97.90 NEW | 5 | 54 | 50 | 28 |
| 0602 | 20 | 76.90 | 6 | 54 | 50 | 36 |
| 0605 | 20 | 76.90 | 8 | 54 | 50 | 37 |
| 0608 | 20 | 76.90 | 10 | 54 | 50 | 40 |
| 0611 | 20 | 76.90 | 12 | 54 | 50 | 45 |
| 0614 | 20 | 76.90 | 14 | 54 | 50 | 45 |
| 0617 | 20 | 76.90 | 16 | 54 | 50 | 48 |
| 0645 | 25 | 106.50 NEW | 3 | 60 | 56 | 29 |
| 0646 | 25 | 106.50 NEW | 4 | 60 | 56 | 29 |
| 0647 | 25 | 106.50 NEW | 5 | 60 | 56 | 29 |
| 0648 | 25 | 83.20 NEW | 6 | 60 | 56 | 37 |
| 0649 | 25 | 83.20 NEW | 8 | 60 | 56 | 37 |
| 0650 | 25 | 83.20 NEW | 10 | 60 | 56 | 40 |
| 0651 | 25 | 83.20 NEW | 12 | 60 | 56 | 46 |
| 0652 | 25 | 83.20 NEW | 14 | 60 | 56 | 47 |
| 0653 | 25 | 83.20 NEW (W326) | 16 | 60 | 56 | 48 |

Continued overleaf

## Reducing sleeve

Continued

| Order No. | d mm | 3443 WTE | $d_1$ mm | l mm | $l_1$ mm | $l_2$ mm |
|---|---|---|---|---|---|---|
| 0654 | 25 | 83.20 NEW | 18 | 60 | 56 | 48 |
| 0655 | 25 | 83.20 NEW | 20 | 60 | 56 | 50 |
| 0620 | 32 | 97.90 NEW | 6 | 64 | 60 | 36 |
| 0623 | 32 | 97.90 NEW | 8 | 64 | 60 | 36 |
| 0626 | 32 | 97.90 NEW | 10 | 64 | 60 | 40 |
| 0629 | 32 | 97.90 NEW | 12 | 64 | 60 | 45 |
| 0632 | 32 | 97.90 NEW | 14 | 64 | 60 | 46 |
| 0635 | 32 | 97.90 NEW | 16 | 64 | 60 | 48 |
| 0638 | 32 | 97.90 NEW | 18 | 64 | 60 | 49 |
| 0641 | 32 | 97.90 NEW | 20 | 64 | 60 | 49 |
| 0664 | 32 | 139.00 NEW | 22 | 64 | 60 | 50 |
| 0644 | 32 | 97.90 NEW (W326) | 25 | 64 | 60 | 56 |

## Hydro expansion extension

NEW

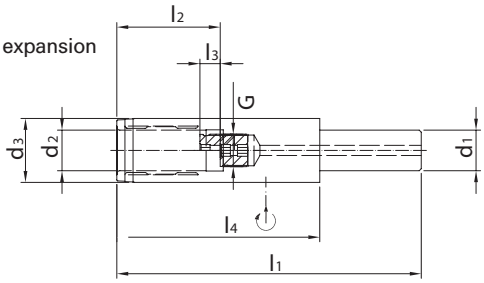
WTE MAPAL GROUP

**Design:** Central coolant supply. Slim interfering contour. Flexible clamping range thanks to the use of reducing sleeves.

G 2.5 25.000 ≤ 6 µm

Balancing quality: G2.5 25000 $min^{-1}$.
Concentricity: 0.006 mm.

**Application:** To extend and for use in hydro expansion and precision collet chucks.



| Order No. | $d_1$ mm | 3443 WTE | $d_2$ mm | $d_3$ mm | $l_1$ mm | $l_2$ mm | $l_3$ mm | $l_4$ mm | G | A/F |
|---|---|---|---|---|---|---|---|---|---|---|
| 0666 | 20 | 268.00 | 12 | 25 | 150 | 46 | 10 | 100 | M10 x 1 | 5 |
| 0667 | 20 | 268.00 | 20 | 31.5 | 150 | 51 | 10 | 100 | M16 x 1 | 5 |
| 0668 | 32 | 268.00 | 20 | 31.5 | 150 | 51 | 10 | 90 | M16 x 1 | 5 |
| 0669 | 32 | 277.00 (W326) | 20 | 31.5 | 200 | 51 | 10 | 90 | M16 x 1 | 5 |

HAIMER
Quality Wins.

# Power Clamp advantages

**The five most important reasons for the HAIMER shrink technology**

1. For ∅ 3–50 mm for carbide and HSS tools

2. Shrinking and cooling in record time
– changing tools at the press of a button
– water cooled cooling element
– concentrated cooling efficiency due to contact cooling
– gentle cooling: no material distortion

3. Universal shrinking technology with flexible modular system
– suitable for all requirements
– even for extremely long tools

4. Workshop oriented, safe handling
– optimal protection against burns
– hot parts must not be taken in the hand
– no heating of the taper
– no heating of the tool
– ease of use

5. Minimum heating due to manual operation
– long life of the chuck
– short cooling time
– low energy consumption due to precisely metered energy supply

**HighQ – high quality and reliability.**

## Precision shrink-fit device Power Clamp Economic Plus

**Design:** High-performance shrink-fit device for all tools.
With standard coil and removable guide washers, single-station system and integrated contact cooling.

Output: 13 kW.
Connection: 3 x 400-480 V, 16 A.
Max. length of thermal shrink chuck: 510 mm.

**Application:** For carbide and HSS tools with ∅ 3–32 mm.

**Scope of delivery:** Coolant manager, fitting mould and mount holder.

| Order No. | Dimensions mm | 3429 HAIMER |
|---|---|---|
| 0100 | 860 x 600 x 990 | 9450.00 ◊ (W393) |

## Mount holder

**Design:** Receiving holder for precision shrinking devices Power Clamp Economic Plus.

| Order No. | For taper size | 3429 HAIMER |
|---|---|---|
| 0530 | SK/BT30 | 94.00 ◊ |
| 0540 | SK/BT40 | 94.00 ◊ |
| 0550 | SK/BT50 | 94.00 ◊ |
| 0650 | HSK 50 | 94.00 ◊ |
| 0663 | HSK 63 | 94.00 ◊ |
| 0610 | HSK 100 | 94.00 ◊ (W393) |

## Precision shrink-fit device Power Clamp Comfort NG

**Design:** High-performance shrink-fit device for all tools.
Upgradable with HD coil for shrinking Heavy Duty shrink fit chucks up to ∅ 50 mm. With intelligent NG coil and contact cooling and rotary table with 3 stations.

Output: 13 kW.
Connection: 3 x 400-480 V, 16 A.
Max. length of thermal shrink chuck: 570 mm.

**Application:** For carbide and HSS tools with ∅ 3–32 mm.

**Scope of delivery:** Shrinking device, coolant manager and 1 holder for rotary table.

| Order No. | Dimensions mm | 3429 HAIMER |
|---|---|---|
| 0115 | 860 x 600 x 990 | 12362.00 ◊ (W393) |

## Shrink-fit chuck SK 40

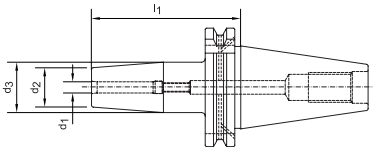
**Design:** All functional surfaces machined. Made of heat-resistant hot working steel, hardened 54 -2 HRC. Fine balancing with balancing screws. Suitable for HSS and carbide tools.

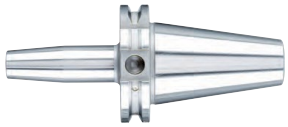
Shank tolerance: h6.
Balancing quality: G6.3 15000 min$^{-1}$.
Concentricity: < 0.003.

**Application:** Suitable for inductive, contact and hot air shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw.

DIN 69871 | Form AD/B | G 6.3 15.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3448 | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0308 | 3 | 130.00 | 15 | 22 | 80 |
| 0408 | 4 | 130.00 | 15 | 22 | 80 |
| 0508 | 5 | 130.00 | 15 | 22 | 80 |
| 0608 | 6 | 79.40 | 20 | 27 | 80 |
| 0612 | 6 | 137.00 | 20 | 27 | 120 |
| 0808 | 8 | 79.40 | 20 | 27 | 80 |
| 0812 | 8 | 137.00 | 20 | 27 | 120 |
| 1008 | 10 | 79.40 | 24 | 31 | 80 |
| 1012 | 10 | 137.00 | 24 | 31 | 120 |
| 1208 | 12 | 79.40 | 24 | 31 | 80 |
| 1212 | 12 | 137.00 (W358) | 24 | 31 | 120 |

| Order No. | Ø $d_1$ mm | 3448 | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 1408 | 14 | 79.40 | 27 | 34 | 80 |
| 1412 | 14 | 137.00 | 27 | 34 | 120 |
| 1608 | 16 | 79.40 | 27 | 34 | 80 |
| 1612 | 16 | 137.00 | 27 | 34 | 120 |
| 1808 | 18 | 79.40 | 33 | 40 | 80 |
| 1812 | 18 | 137.00 | 33 | 40 | 120 |
| 2008 | 20 | 79.40 | 33 | 40 | 80 |
| 2012 | 20 | 137.00 | 33 | 40 | 120 |
| 2510 | 25 | 103.00 | 44 | 53 | 100 |
| 2512 | 25 | 140.50 | 44 | 53 | 120 |
| 3210 | 32 | 109.00 (W358) | 44 | 53 | 100 |

## Precision shrink-fit chuck SK 40

NEW

**Design:** Made of heat-resistant hot working steel. Suitable for HSS and carbide tools. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

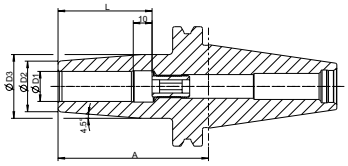
Taper angle: Tolerance AT3.
Shank tolerance: h6.
Balancing quality: G2.5 18000 min$^{-1}$.
Concentricity: < 0.003.

**Application:** Suitable for inductive, contact and hot air shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw.

DIN 69871 | Form AD | G 2.5 18.000 | ≤ 3 µm

HAIMER Quality Wins.



| Order No. | Ø D1 mm | 3448 HAIMER | Ø D2 mm | Ø D3 mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 3220 | 6 | 83.00 | 21 | 27 | 36 | 80 |
| 3225 | 8 | 83.00 | 21 | 27 | 36 | 80 |
| 3230 | 10 | 83.00 (W394) | 24 | 32 | 42 | 80 |

| Order No. | Ø D1 mm | 3448 HAIMER | Ø D2 mm | Ø D3 mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 3235 | 12 | 83.00 | 24 | 32 | 47 | 80 |
| 3240 | 16 | 83.00 | 27 | 34 | 50 | 80 |
| 3245 | 20 | 83.00 (W394) | 33 | 42 | 52 | 80 |

## Precision shrink-fit chuck

**Design:** **DIN 69871, Form AD/B,** precision balanced. Made of heat-resistant hot working steel. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. Fine balancing with balancing screws. Suitable for HSS and carbide tools.

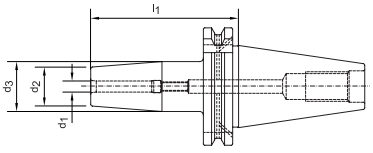
Taper tolerance: AT3.
Shank tolerance: h6.
Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: < 0.003 mm on the tool (3 x d).
Hardened 54 -2 HRC.

**Application:** Suitable for inductive, contact and hot air shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw.

DIN 69871 | Form AD/B | G 2.5 25.000 | ≤ 3 µm

HAIMER Quality Wins.



| Order No. | Ø $d_1$ mm | 3445 HAIMER SK 40 | 3446 HAIMER SK 50 | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0308 | 3 | 155.00 * | – | 10 | – | 80 |
| 0408 | 4 | 155.00 * | – | 10 | – | 80 |
| 0508 | 5 | 155.00 * | – | 10 | – | 80 |
| 0608 | 6 | 121.00 | 187.00 | 21 | 27 | 80 |
| 0613 | 6 | 181.00 ◊ | 244.00 ◊ | 21 | 27 | 130 |
| 0616 | 6 | 192.00 ◊ | 252.00 ◊ | 21 | 27 | 160 |
| 0620 | 6 | 192.00 ◊ | 286.00 ◊ | 21 | 27 | 200 |
| 0808 | 8 | 121.00 | 187.00 | 21 | 27 | 80 |
| 0813 | 8 | 181.00 ◊ (W394) | 244.00 ◊ (W394) | 21 | 27 | 130 |

| Order No. | Ø $d_1$ mm | 3445 HAIMER SK 40 | 3446 HAIMER SK 50 | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0816 | 8 | 192.00 ◊ | 252.00 ◊ | 21 | 27 | 160 |
| 0820 | 8 | 192.00 ◊ | 286.00 ◊ | 21 | 27 | 200 |
| 1008 | 10 | 121.00 | 187.00 | 24 | 32 | 80 |
| 1013 | 10 | 181.00 ◊ | 244.00 ◊ | 24 | 32 | 130 |
| 1016 | 10 | 192.00 ◊ | 252.00 ◊ | 24 | 32 | 160 |
| 1020 | 10 | 192.00 ◊ | 286.00 ◊ | 24 | 32 | 200 |
| 1208 | 12 | 121.00 | 187.00 | 24 | 32 | 80 |
| 1213 | 12 | 181.00 ◊ | 244.00 ◊ | 24 | 32 | 130 |
| 1216 | 12 | 192.00 ◊ (W394) | 252.00 ◊ (W394) | 24 | 32 | 160 |

* Without setting screw, without thread for balancing screws, with slots in the clamping bore for coolant supply.

Continued overleaf

## Precision shrink-fit chuck

Continued

| Order No. | Ø $d_1$ mm | 3445 HAIMER SK 40 | 3446 HAIMER SK 50 | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 1220 | 12 | 192.00 ◊ | 286.00 ◊ | 24 | 32 | 200 |
| 1408 | 14 | 121.00 | 187.00 | 27 | 34 | 80 |
| 1413 | 14 | 181.00 ◊ | 244.00 ◊ | 27 | 34 | 130 |
| 1416 | 14 | 192.00 ◊ | 252.00 ◊ | 27 | 34 | 160 |
| 1420 | 14 | 192.00 ◊ | 286.00 ◊ | 27 | 34 | 200 |
| 1608 | 16 | 121.00 | 203.00 | 27 | 34 | 80 |
| 1613 | 16 | 181.00 ◊ | 244.00 ◊ | 27 | 34 | 130 |
| 1616 | 16 | 192.00 ◊ | 260.00 ◊ | 27 | 34 | 160 |
| 1620 | 16 | 192.00 ◊ | 286.00 ◊ | 27 | 34 | 200 |
| 1808 | 18 | 121.00 | 203.00 | 33 | 42 | 80 |
| 1813 | 18 | 181.00 ◊ | 244.00 ◊ | 33 | 42 | 130 |
| 1816 | 18 | 192.00 ◊ | 260.00 ◊ | 33 | 42 | 160 |
| 1820 | 18 | 192.00 ◊ | 286.00 ◊ | 33 | 42 | 200 |
| | | (W394) | (W394) | | | |

| Order No. | Ø $d_1$ mm | 3445 HAIMER SK 40 | 3446 HAIMER SK 50 | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 2008 | 20 | 121.00 | 203.00 | 33 | 42 | 80 |
| 2013 | 20 | 181.00 ◊ | 244.00 ◊ | 33 | 42 | 130 |
| 2016 | 20 | 192.00 ◊ | 260.00 ◊ | 33 | 42 | 160 |
| 2020 | 20 | 192.00 ◊ | 286.00 ◊ | 33 | 42 | 200 |
| 2510 | 25 | 129.00 | 203.00 | 44 | 53 | 100 |
| 2513 | 25 | 181.00 ◊ | 244.00 ◊ | 44 | 53 | 130 |
| 2516 | 25 | 192.00 ◊ | 268.00 ◊ | 44 | 53 | 160 |
| 2520 | 25 | 192.00 ◊ | 286.00 ◊ | 44 | 53 | 200 |
| 3210 | 32 | 135.00 | 207.00 | 44 | 53 | 100 |
| 3213 | 32 | – | 254.00 ◊ | 44 | 53 | 130 |
| 3216 | 32 | – | 268.00 ◊ | 44 | 53 | 160 |
| 3220 | 32 | – | 286.00 ◊ | 44 | 53 | 200 |
| | | (W394) | (W394) | | | |

## Precision shrink-fit chuck BT40

NEW

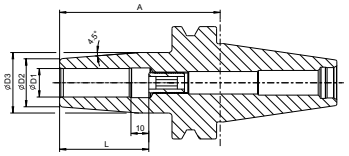
**Design:** Made of heat-resistant hot working steel. Suitable for HSS and carbide tools. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Taper angle: Tolerance AT3.
Shank tolerance: h6.
Balancing quality: G2.5 18000 $min^{-1}$.
Concentricity: < 0.003.

**Application:** Suitable for inductive, contact and hot air shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw.

JIS B 6339 MAS/BT | Form AD | G 2.5 18.000 | ≤ 3 µm



| Order No. | D1 mm | 3446 HAIMER | D2 mm | D3 mm | L mm |
|---|---|---|---|---|---|
| 3225 | 6 | 87.00 ◊ | 21 | 27 | 36 |
| 3230 | 8 | 87.00 ◊ | 21 | 27 | 36 |
| 3235 | 10 | 87.00 ◊ | 24 | 32 | 42 |
| 3240 | 12 | 87.00 ◊ | 24 | 32 | 47 |
| 3245 | 16 | 87.00 ◊ | 27 | 34 | 50 |
| 3250 | 20 | 87.00 ◊ | 33 | 42 | 52 |
| | | (W394) | | | |

## Precision shrink-fit chuck

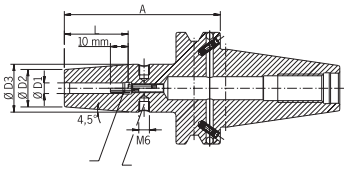
**Design: JIS B 6339 (MAS-BT), Form AD/B,** precision balanced. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. **More precise than DIN.** Made of heat-resistant hot working steel, fine balancing with balancing screws possible. Suitable for HSS and carbide tools.

Taper tolerance: AT3.
Shank tolerance: h6.
Balancing quality: G2.5 25000 $min^{-1}$.
Concentricity: < 0.003 mm on the tool (3 x d).
Hardened 54 -2 HRC.

**Application:** Suitable for inductive, contact and hot air shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw.

JIS B 6339 MAS/BT | Form AD/B | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3441 HAIMER BT 40 | 3444 HAIMER BT 50 | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm 3441 | $l_1$ mm 3444 |
|---|---|---|---|---|---|---|---|
| 0309 | 3 | 155.00 ◊* | – | 10 | – | 90 | – |
| 0409 | 4 | 155.00 ◊* | – | 10 | – | 90 | – |
| 0509 | 5 | 155.00 ◊* | – | 10 | – | 90 | – |
| 0609 | 6 | 126.00 ◊ | 193.00 ◊ | 21 | 27 | 90 | 100 |
| 0809 | 8 | 126.00 ◊ | 193.00 ◊ | 21 | 27 | 90 | 100 |
| 1009 | 10 | 126.00 ◊ | 193.00 ◊ | 24 | 32 | 90 | 100 |
| 1209 | 12 | 126.00 ◊ | 193.00 ◊ | 24 | 32 | 90 | 100 |
| 1409 | 14 | 126.00 ◊ | 193.00 ◊ | 27 | 34 | 90 | 100 |
| 1609 | 16 | 126.00 ◊ | 207.00 ◊ | 27 | 34 | 90 | 100 |
| 1809 | 18 | 126.00 ◊ | 207.00 ◊ | 33 | 42 | 90 | 100 |
| 2009 | 20 | 126.00 ◊ | 207.00 ◊ | 33 | 42 | 90 | 100 |
| 2510 | 25 | 132.00 ◊ | 207.00 ◊ | 44 | 53 | 100 | 100 |
| 3210 | 32 | 135.00 ◊ | 207.00 ◊ | 44 | 53 | 100 | 100 |
| | | (W394) | (W394) | | | | |

* Without setting screw, without thread for balancing screws, with slots in the clamping bore for coolant supply.

## Precision shrink-fit chuck

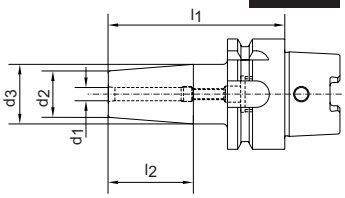
**Design: DIN 69893, Form A or E,** precision balanced. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. **More precise than DIN.** Made of heat-resistant hot working steel, hardened 54 -2 HRC. Fine balancing with balancing screws possible. Suitable for HSS and carbide tools.

Shank tolerance: h6.
Balancing quality: G2.5 25000 $min^{-1}$.
Concentricity: < 0.003 mm on the tool (3 x d).

**Application:** Suitable for inductive, contact and hot air shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw, **without** coolant pipe.

DIN 69893 | Form A | Form E | G 2.5 25.000 | ≤ 3 µm



3548

3562

| Order No. | Ø $d_1$ mm | 3548 HAIMER Form A | 3562 HAIMER Form E | HSK | Ø $d_2$ mm 3548 | Ø $d_2$ mm 3562 | Ø $d_3$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0306 | 3 | 157.00 ◊* | 157.00 ◊* | 50 | 10 | 10 | – | – | 60 |
| 0406 | 4 | 157.00 ◊* | 157.00 ◊* | 50 | 10 | 10 | – | – | 60 |
| 0506 | 5 | 157.00 ◊* | 157.00 ◊* | 50 | 10 | 10 | – | – | 60 |
| 0606 | 6 | 120.00 ◊ | – | 50 | 21 | – | 27 | 36 | 80 |
| 0608 | 6 | – | 120.00 ◊ | 50 | – | 21 | 27 | 36 | 80 |
| 0808 | 8 | 120.00 ◊ | 120.00 ◊ | 50 | 21 | 21 | 27 | 36 | 80 |
| 1008 | 10 | 120.00 ◊ | 120.00 ◊ | 50 | 24 | 21 | 32 | 42 | 85 |
| 1208 | 12 | 120.00 ◊ | – | 50 | 24 | – | 32 | 47 | 90 |
| 1209 | 14 | – | 120.00 ◊ | 50 | – | 24 | 32 | 47 | 90 |
| 1409 | 14 | 120.00 ◊ | 120.00 ◊ | 50 | 27 | 27 | 34 | 47 | 90 |
| 1609 | 16 | 120.00 ◊ | 120.00 ◊ | 50 | 27 | 27 | 34 | 50 | 95 |
| | | (W394) | (W394) | | | | | | |

* Without setting screw, without thread for balancing screws, with slots in the clamping bore for coolant supply.

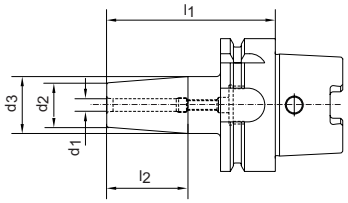
## Shrink-fit chuck

**Design: DIN 69893, Form A,** precision balanced.
All functional surfaces machined.

Shank tolerance: h6.
Balancing quality: G6.3 15000 $min^{-1}$.
Concentricity: 0.003 mm.

**Application:** Suitable for inductive, contact and hot air shrink devices.

DIN 69893 | Form A | G 6.3 15.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3451 | HSK | Ø $d_2$ mm | Ø $d_3$ mm | $l_1$ mm | $l_2$ mm |
|---|---|---|---|---|---|---|---|
| 0308 | 3 | 149.50 | 63 | 15 | 22 | 80 | – |
| 0408 | 4 | 149.50 | 63 | 15 | 22 | 80 | – |
| 0508 | 5 | 149.50 | 63 | 15 | 22 | 80 | – |
| 0608 | 6 | 122.00 | 63 | 20 | 27 | 80 | 36 |
| 0612 | 6 | 157.00 | 63 | 20 | 27 | 120 | 36 |
| 0808 | 8 | 122.00 | 63 | 20 | 27 | 80 | 36 |
| 0812 | 8 | 157.00 | 63 | 20 | 27 | 120 | 36 |
| 1008 | 10 | 122.00 | 63 | 24 | 31 | 85 | 42 |
| 1012 | 10 | 157.00 | 63 | 24 | 31 | 120 | 42 |
| 1209 | 12 | 122.00 | 63 | 24 | 31 | 90 | 47 |
| 1212 | 12 | 157.00 | 63 | 24 | 31 | 120 | 47 |
| 1409 | 14 | 122.00 | 63 | 27 | 34 | 90 | 47 |
| 1412 | 14 | 157.00 | 63 | 27 | 34 | 120 | 47 |
| 1609 | 16 | 122.00 | 63 | 27 | 34 | 95 | 50 |
| 1612 | 16 | 157.00 | 63 | 27 | 34 | 120 | 50 |
| 1809 | 18 | 122.00 | 63 | 33 | 40 | 95 | 50 |
| 1812 | 18 | 157.00 | 63 | 33 | 40 | 120 | 50 |
| 2010 | 20 | 122.00 | 63 | 33 | 40 | 100 | 52 |
| 2012 | 20 | 157.00 | 63 | 33 | 40 | 120 | 52 |
| 2511 | 25 | 131.50 | 63 | 44 | 53 | 115 | 58 |
| 3212 | 32 | 143.00 | 63 | 44 | 53 | 120 | 58 |
| | | (W358) | | | | | |

## Precision shrink-fit chuck

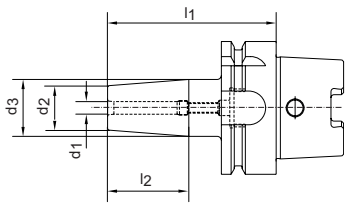
**Design: DIN 69893, Form A,** precision balanced. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. **More precise than DIN.** Made of heat-resistant hot working steel. Fine balancing with balancing screws possible. For HSS and carbide tools.

Shank tolerance: h6.
Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: < 0.003 mm on the tool (3 x d).
Hardened 54 -2 HRC.

**Application:** Suitable for inductive, contact and hot air shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw, **without** coolant pipe.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3549 HAIMER HSK 63 | Ø $d_2$ mm | Ø $d_3$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0308 | 3 | 171.00 * | 10 | – | – | 80 |
| 0408 | 4 | 171.00 * | 10 | – | – | 80 |
| 0508 | 5 | 171.00 * | 10 | – | – | 80 |
| 0608 | 6 | 141.00 | 21 | 27 | 36 | 80 |
| 0613 | 6 | 202.00 ◊ | 21 | 27 | 36 | 130 |
| 0616 | 6 | 221.00 ◊ | 21 | 27 | 36 | 160 |
| 0620 | 6 | 258.00 ◊ | 21 | 27 | 36 | 200 |
| 0808 | 8 | 140.00 | 21 | 27 | 36 | 80 |
| 0813 | 8 | 202.00 ◊ | 21 | 27 | 36 | 130 |
| 0816 | 8 | 221.00 ◊ | 21 | 27 | 36 | 160 |
| 0820 | 8 | 258.00 ◊ | 21 | 27 | 36 | 200 |
| 1008 | 10 | 140.00 | 24 | 32 | 42 | 85 |
| 1013 | 10 | 202.00 ◊ | 24 | 32 | 42 | 130 |
| 1016 | 10 | 221.00 ◊ | 24 | 32 | 42 | 160 |
| 1020 | 10 | 258.00 ◊ | 24 | 32 | 42 | 200 |
| 1209 | 12 | 140.00 | 24 | 32 | 47 | 90 |
| 1213 | 12 | 202.00 ◊ | 24 | 32 | 47 | 130 |
| 1216 | 12 | 221.00 ◊ | 24 | 32 | 47 | 160 |
| 1220 | 12 | 258.00 ◊ | 24 | 32 | 47 | 200 |
| 1409 | 14 | 140.00 | 27 | 34 | 47 | 90 |
| 1413 | 14 | 202.00 ◊ | 27 | 34 | 47 | 130 |
| 1416 | 14 | 221.00 ◊ | 27 | 34 | 47 | 160 |
| 1420 | 14 | 258.00 ◊ | 27 | 34 | 47 | 200 |
| 1609 | 16 | 140.00 | 27 | 34 | 50 | 95 |
| 1613 | 16 | 202.00 ◊ | 27 | 34 | 50 | 130 |
| 1616 | 16 | 221.00 ◊ | 27 | 34 | 50 | 160 |
| 1620 | 16 | 258.00 ◊ | 27 | 34 | 50 | 200 |
| 1809 | 18 | 140.00 | 33 | 42 | 50 | 95 |
| 1813 | 18 | 202.00 ◊ | 33 | 42 | 50 | 130 |
| | | (W394) | | | | |

| Order No. | Ø $d_1$ mm | 3549 HAIMER HSK 63 | Ø $d_2$ mm | Ø $d_3$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 1816 | 18 | 221.00 ◊ | 33 | 42 | 50 | 160 |
| 1820 | 18 | 258.00 ◊ | 33 | 42 | 50 | 200 |
| 2010 | 20 | 140.00 | 33 | 42 | 52 | 100 |
| 2013 | 20 | 202.00 ◊ | 33 | 42 | 52 | 130 |
| 2016 | 20 | 221.00 ◊ | 33 | 42 | 52 | 160 |
| 2020 | 20 | 258.00 ◊ | 33 | 42 | 52 | 200 |
| 2511 | 25 | 148.00 | 44 | 53 | 58 | 115 |
| 2513 | 25 | 202.00 ◊ | 44 | 53 | 58 | 130 |
| 2516 | 25 | 221.00 ◊ | 44 | 53 | 58 | 160 |
| 2520 | 25 | 258.00 ◊ | 44 | 53 | 58 | 200 |
| 3212 | 32 | 152.00 | 44 | 53 | 58 | 120 |
| 3216 | 32 | 221.00 ◊ | 44 | 53 | 58 | 160 |
| 3220 | 32 | 258.00 ◊ | 44 | 53 | 58 | 200 |
| | | (W394) | | | | |

| Order No. | Ø $d_1$ mm | 3551 HAIMER HSK 100 | Ø $d_2$ mm | Ø $d_3$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|---|
| 0608 | 6 | 210.00 ◊ | 21 | 27 | 36 | 85 |
| 0808 | 8 | 210.00 ◊ | 21 | 27 | 36 | 85 |
| 1009 | 10 | 210.00 ◊ | 24 | 32 | 42 | 90 |
| 1209 | 12 | 210.00 ◊ | 24 | 32 | 47 | 95 |
| 1409 | 14 | 210.00 ◊ | 27 | 34 | 47 | 100 |
| 1610 | 16 | 210.00 ◊ | 27 | 34 | 50 | 100 |
| 1810 | 18 | 210.00 ◊ | 33 | 42 | 50 | 100 |
| 2010 | 20 | 210.00 ◊ | 33 | 42 | 52 | 105 |
| 2511 | 25 | 210.00 ◊ | 44 | 53 | 58 | 115 |
| 3212 | 32 | 210.00 ◊ | 44 | 53 | 58 | 120 |
| | | (W394) | | | | |

* Without setting screw, without thread for balancing screws, with slots in the clamping bore for coolant supply.

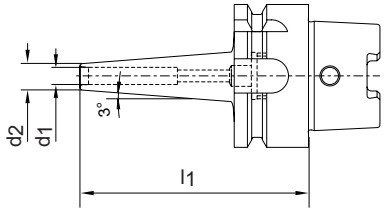
## Mini - shrink-fit chuck

**Design:** Precision balanced. Slim design for precision machining, no interfering edges, this also makes spots that are difficult to reach accessible.

Balancing quality: G6.3 15000 min$^{-1}$.
Concentricity: 3 µm.

**Application:** For all carbide tools with shank tolerance h6.

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø $d_1$ mm | 3454 | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0608 | 6 | 139.00 | 63 | 9 | 80 |
| 0612 | 6 | 153.50 | 63 | 9 | 120 |
| 0808 | 8 | 139.00 | 63 | 11 | 80 |
| 0812 | 8 | 153.50 | 63 | 11 | 120 |
| 1008 | 10 | 139.00 | 63 | 13 | 80 |
| 1012 | 10 | 153.50 | 63 | 13 | 120 |
| 1208 | 12 | 139.00 | 63 | 15 | 80 |
| 1212 | 12 | 153.50 | 63 | 15 | 120 |
| | | (W358) | | | |

## Precision mini shrink-fit chuck

**Design: DIN 69893, Form A,** precision balanced. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. **More precise than DIN.** Extremely slim design for precision machining, no interfering edges, this also makes spots that are difficult to reach accessible. Optimal rigidity with 3° bevel, suitable for mould inclines.

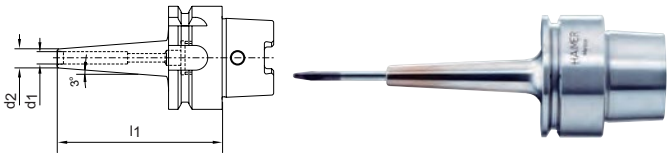
Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: 3 µm on the tool (3 x d).
Hardened 54 -2 HRC.

**Application:** For all carbide tools with shank tolerance h6.

**Note:** Delivery **without** coolant pipe..

DIN 69893 | Form A | G 2.5 25.000 | ≤ 3 µm

**Caution:** Shrink fitting only with shrink and cooling sleeves.




| Order No. | Ø $d_1$ mm | 3552 HAIMER | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0608 | 6 | 181.00 | 63 | 9 | 80 |
| 0612 | 6 | 194.00 | 63 | 9 | 120 |
| 0808 | 8 | 181.00 | 63 | 11 | 80 |
| 0812 | 8 | 194.00 (W394) | 63 | 11 | 120 |

| Order No. | Ø $d_1$ mm | 3552 HAIMER | HSK | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 1008 | 10 | 181.00 | 63 | 13 | 80 |
| 1012 | 10 | 194.00 | 63 | 13 | 120 |
| 1208 | 12 | 181.00 | 63 | 15 | 80 |
| 1212 | 12 | 194.00 (W394) | 63 | 15 | 120 |

## Shrink extension

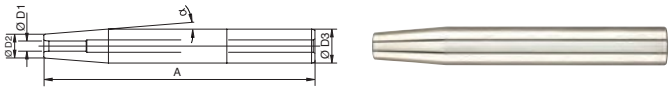
**Design:** Made of hot working steel. Drilled through. With length setting screw.

Shank tolerance: h6
Balancing quality: G6.3 15000 min$^{-1}$.
Concentricity: 0.003 mm.

**Application:** All-purpose and can be used over and over. For carbide and HSS shanks.

≤ 3 µm

**Scope of delivery:** With length setting screw.




| Order No. | Ø D1 mm | 3458 | Ø D2 mm | Ø D3 mm | A mm | α ° |
|---|---|---|---|---|---|---|
| 0110 | 6 | 81.60 | 10 | 20 | 150 | 4.5 |
| 0115 | 8 | 81.60 (W358) | 12 | 20 | 150 | 4.5 |

| Order No. | Ø D1 mm | 3458 | Ø D2 mm | Ø D3 mm | A mm | α ° |
|---|---|---|---|---|---|---|
| 0120 | 10 | 81.60 | 14 | 20 | 150 | 4.5 |
| 0125 | 12 | 81.60 (W358) | 16 | 20 | 150 | 4.5 |

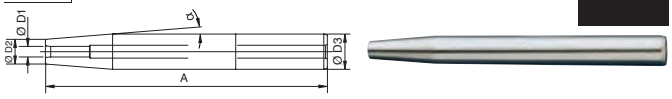
## Precision shrink extension

**Design:** Absolute concentricity, optimal and almost unlimited extensions possible. All-purpose and always reusable. Shank tolerance: h6.

**Application:** For carbide and HSS shanks.

**Note:** Vibration-reducing shrink extensions with heavy metal core available upon request.

≤ 3 µm




| Order No. | Ø D1 mm | 3550 HAIMER | Ø D2 mm | Ø D3 mm | A mm | α ° | Cooling with heat sink Ø mm | Additionally cooling adapter size |
|---|---|---|---|---|---|---|---|---|
| 0110 | 6 | 87.00 * | 14 | 20 | 160 | 4.5 | 14–16 | 1.2 |
| 0115 | 8 | 87.00 * | 14 | 20 | 160 | 4.5 | 14–16 | 1.2 |
| 0120 | 10 | 87.00 * | 20 | 25 | 160 | 4.5 | 6– 8 | – |
| 0125 | 12 | 87.00 * | 20 | 25 | 160 | 4.5 | 6– 8 | – |
| 0130 | 14 | 87.00 * | 20 | 25 | 160 | 4.5 | 6– 8 | – |
| 0135 | 16 | 87.00 * | 22 | 25 | 160 | 4.5 | 6– 8 | – |
| 0140 | 20 | 118.00 * | 27 | 32 | 160 | 4.5 | 14–16 | – |
| 0220 | 3 | 87.00 * | 10 | 16 | 160 | 4.5 | 14–16 | 1.1 |
| 0225 | 4 | 87.00 ** | 10 | 16 | 160 | 4.5 | 14–16 | 1.1 |
| 0230 | 5 | 87.00 ** | 10 | 16 | 160 | 4.5 | 14–16 | 1.1 |
| 0235 | 6 | 87.00 ** | 14 | 20 | 160 | 4.5 | 14–16 | 1.2 |
| 0240 | 8 | 87.00 ** | 14 | 20 | 160 | 4.5 | 14–16 | 1.2 |
| 0245 | 10 | 87.00 ** | 20 | 25 | 160 | 4.5 | 6– 8 | – |
| 0250 | 12 | 87.00 ** | 20 | 25 | 160 | 4.5 | 6– 8 | – |
| 0255 | 14 | 87.00 ** | 20 | 25 | 160 | 4.5 | 6– 8 | – |
| 0260 | 16 | 87.00 ** | 22 | 25 | 160 | 4.5 | 6– 8 | – |
| 0265 | 20 | 118.00 ** | 27 | 32 | 160 | 4.5 | 14–16 | – |
| 0310 | 6 | 188.00 ◊** | 14 | 20 | 300 | 4.5 | 14–16 | 1.2 |
| 0315 | 8 | 188.00 ◊** | 14 | 20 | 300 | 4.5 | 14–16 | 1.2 |
| 0320 | 10 | 188.00 ◊** | 20 | 25 | 300 | 4.5 | 6– 8 | – |
| 0325 | 12 | 188.00 ◊** | 20 | 25 | 300 | 4.5 | 6– 8 | – |
| 0330 | 14 | 188.00 ◊** | 20 | 25 | 300 | 4.5 | 6– 8 | – |
| 0335 | 16 | 188.00 ◊** (W394) | 22 | 25 | 300 | 4.5 | 6– 8 | – |

* With length setting screw (travel distance 10 mm).
** Without length setting screw, any length setting (telescope).
*** Only carbide shanks, without setting screw (telescope).
**** Only carbide shanks, with setting screw.
Continued overleaf

## Precision shrink extension

Continued

| Order No. | Ø D1 mm | 3550 HAIMER | Ø D2 mm | Ø D3 mm | A mm | α ° | Cooling with heat sink Ø mm | Additionally cooling adapter size |
|---|---|---|---|---|---|---|---|---|
| 0340 | 20 | 188.00 ◊** | 27 | 32 | 300 | 4.5 | 14–16 | – |
| 0410 | 3 | 87.00 ◊*** | 6 | 16 | 160 | 3 | 6– 8 | 2.01 |
| 0415 | 4 | 87.00 ◊*** | 7 | 16 | 160 | 3 | 6– 8 | 2.02 |
| 0420 | 5 | 87.00 ◊*** | 8 | 16 | 160 | 3 | 6– 8 | 2.03 |
| 0425 | 6 | 87.00 ◊**** | 9 | 16 | 160 | 3 | 6– 8 | 2.04 |
| 0430 | 8 | 87.00 ◊**** | 11 | 16 | 160 | 3 | 6– 8 | 2.05 |
| 0435 | 10 | 87.00 ◊**** | 13 | 16 | 160 | 3 | 6– 8 | 2.06 |
| 0510 | 6 | 100.00 ◊*** | 9 | 20 | 200 | 3 | 6– 8 | 2.04 |
| 0515 | 8 | 100.00 ◊*** | 11 | 20 | 200 | 3 | 6– 8 | 2.05 |
| 0520 | 10 | 100.00 ◊*** | 13 | 20 | 200 | 3 | 6– 8 | 2.06 |
| 0525 | 12 | 100.00 ◊*** | 15 | 20 | 200 | 3 | 6– 8 | 2.07 |

(W394)

* With length setting screw (travel distance 10 mm).
** Without length setting screw, any length setting (telescope).
*** Only carbide shanks, without setting screw (telescope).
**** Only carbide shanks, with setting screw.

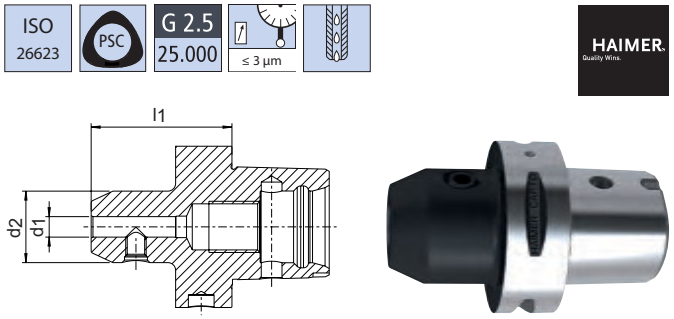
## Precision chuck system Weldon Capto C6

**Design: ISO 26623**, precision balanced. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. **More precise than DIN.** Innovative modular clamping system with highest precision. Exact positioning in the spindle, highest concentricity, torque and rigidity. All-purpose use in turning and milling processes and multitask centres.

Balancing quality: G2.5 25000 $min^{-1}$.
Concentricity: 0.003 mm.
Hardened 60 -2 HRC.

**Application:** For clamping milling cutters with cylindrical shank and lateral driving plane in accordance with DIN 1835-B and DIN 6535-HB.

**Scope of delivery:** Clamping chuck with clamping screw.




| Order No. | Ø $d_1$ mm | 3280 HAIMER | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|
| 0006 | 6 | 260.00 ◊ | 25 | 55 |
| 0008 | 8 | 260.00 ◊ | 28 | 55 |
| 0010 | 10 | 260.00 ◊ | 35 | 60 |
| 0012 | 12 | 260.00 ◊ | 42 | 60 |
| 0014 | 14 | 260.00 ◊ | 44 | 60 |
| 0016 | 16 | 260.00 ◊ | 48 | 65 |

(W394)

| Order No. | Ø $d_1$ mm | 3280 HAIMER | Ø $d_2$ mm | $l_1$ mm |
|---|---|---|---|---|
| 0018 | 18 | 260.00 ◊ | 50 | 65 |
| 0020 | 20 | 260.00 ◊ | 52 | 65 |
| 0025 | 25 | 260.00 ◊ | 64 | 80 |
| 0032 | 32 | 260.00 ◊ | 72 | 90 |
| 0040 | 40 | 260.00 ◊ | 80 | 100 |

(W394)

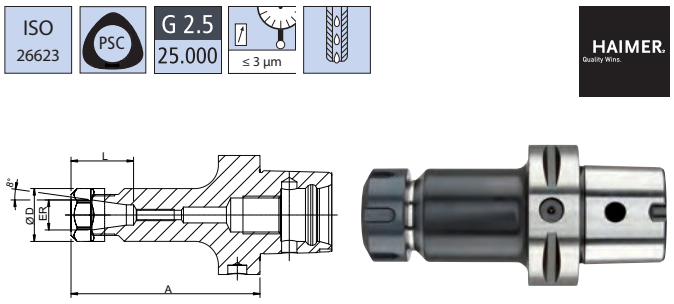
## Precision collet chuck Type ER Capto C6

**Design: ISO 26623**, precision balanced. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control. Innovative modular clamping system with the highest precision. Exact positioning in the spindle, highest concentricity, torque and rigidity. All-purpose in turning and milling processes and in multitask centres.

Hardened 60 -2 HRC.

**Application:** For clamping tools with cylindrical shank in collets to ISO 15488 (previously DIN 6499).

**Scope of delivery:** Collet chuck complete with clamping nut (balanced, with anti-friction coating for increased clamping force).




| Order No. | Clamping range mm | 3282 HAIMER | Collet | Ø D mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 0116 | 0.5–10 | 273.00 ◊ | ER16 | 28 | 60 | 60 |
| 0216 | 0.5–10 | 286.00 ◊ | ER16 | 28 | 100 | 100 |
| 0316 | 0.5–10 | 299.00 ◊ | ER16 | 28 | 130 | 130 |
| 0125 | 1 –16 | 273.00 ◊ | ER25 | 42 | 60 | 60 |
| 0225 | 1 –16 | 286.00 ◊ | ER25 | 42 | 100 | 100 |
| 0325 | 1 –16 | 299.00 ◊ | ER25 | 42 | 130 | 130 |

(W394)

| Order No. | Clamping range mm | 3282 HAIMER | Collet | Ø D mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 0132 | 1.5–20 | 273.00 ◊ | ER32 | 50 | 60 | 60 |
| 0232 | 1.5–20 | 286.00 ◊ | ER32 | 50 | 100 | 100 |
| 0332 | 1.5–20 | 299.00 ◊ | ER32 | 50 | 130 | 130 |
| 0140 | 2.5–26 | 273.00 ◊ | ER40 | 63 | 65 | 60 |
| 0240 | 2.5–26 | 286.00 ◊ | ER40 | 63 | 100 | 100 |
| 0340 | 2.5–26 | 299.00 ◊ | ER40 | 63 | 130 | 130 |

(W394)

## Precision milling head mounting Capto C6

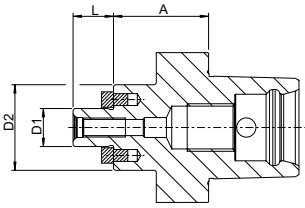
**Design: ISO 26623**, precision balanced. Innovative modular clamping system with highest precision. Exact positioning in the spindle, highest concentricity, torque and rigidity. All-purpose in turning and milling processes and in multitask centres. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: 0.006 mm.
Hardened 60 -2 HRC.

**Application:** To mount cutter heads and milling cutters with cross groove DIN 1880.

**Scope of delivery:** Milling head mounting with cutter retaining screw.

ISO 26623 | PSC | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø D1 mm | 3284 HAIMER | Ø D2 mm | L mm | A mm |
|---|---|---|---|---|---|
| 0016 | 16 | 232.00 ◊ | 36 | 17 | 40 |
| 0022 | 22 | 238.00 ◊ | 48 | 19 | 25 |
| 0027 | 27 | 243.00 ◊ | 60 | 21 | 25 |

(W394)

| Order No. | Ø D1 mm | 3284 HAIMER | Ø D2 mm | L mm | A mm |
|---|---|---|---|---|---|
| 0032 | 32 | 249.00 ◊ | 63 | 24 | 25 |
| 0040 | 40 | 254.00 ◊ | 70 | 27 | 40 |

(W394)

## Precision shrink-fit chuck Capto C6

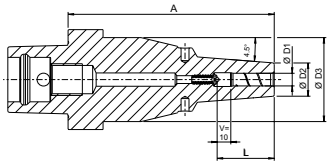
**Design: ISO 26623**, precision balanced. Innovative modular clamping system with highest precision. Exact positioning in the spindle, highest concentricity, torque and rigidity. All-purpose in turning and milling processes and in multitask centres. **All functional surfaces machined** and **guaranteed quality** thanks to double 100 % control.

Balancing quality: G2.5 25000 min$^{-1}$.
Concentricity: 0.003 mm on the tool (3 x d).
Hardened 60 -2 HRC.

**Application:** Shrink-fit chuck suitable for all types of shrink devices.

**Scope of delivery:** Shrink-fit chuck with length setting screw.

ISO 26623 | PSC | G 2.5 25.000 | ≤ 3 µm



| Order No. | Ø D1 mm | 3286 HAIMER | Ø D2 mm | Ø D3 mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 0665 | 6 | 336.00 ◊* | 22 | 27 | 36 | 65 |
| 0680 | 6 | 352.00 ◊ | 21 | 27 | 36 | 80 |
| 0610 | 6 | 381.00 ◊ | 21 | 27 | 36 | 100 |
| 0613 | 6 | 395.00 ◊ | 21 | 27 | 36 | 130 |
| 0865 | 8 | 336.00 ◊* | 21 | 27 | 36 | 65 |
| 0880 | 8 | 352.00 ◊ | 21 | 27 | 36 | 80 |
| 0810 | 8 | 381.00 ◊ | 21 | 27 | 36 | 100 |
| 0813 | 8 | 395.00 ◊ | 21 | 27 | 36 | 130 |
| 1065 | 10 | 336.00 ◊* | 24 | 32 | 42 | 65 |
| 1080 | 10 | 352.00 ◊ | 24 | 32 | 42 | 80 |
| 1010 | 10 | 381.00 ◊ | 24 | 32 | 42 | 100 |
| 1013 | 10 | 395.00 ◊ | 24 | 32 | 42 | 130 |
| 1265 | 12 | 336.00 ◊* | 24 | 32 | 47 | 65 |
| 1280 | 12 | 352.00 ◊ | 24 | 32 | 47 | 80 |
| 1210 | 12 | 381.00 ◊ | 24 | 32 | 47 | 100 |
| 1213 | 12 | 395.00 ◊ | 24 | 32 | 47 | 130 |
| 1470 | 14 | 336.00 ◊* | 29.5 | 34 | 46 | 70 |
| 1485 | 14 | 352.00 ◊ | 27 | 34 | 47 | 85 |
| 1410 | 14 | 381.00 ◊ | 27 | 34 | 47 | 100 |

(W394)

| Order No. | Ø D1 mm | 3286 HAIMER | Ø D2 mm | Ø D3 mm | L mm | A mm |
|---|---|---|---|---|---|---|
| 1413 | 14 | 395.00 ◊ | 27 | 34 | 47 | 130 |
| 1670 | 16 | 336.00 ◊* | 27 | 34 | 50 | 70 |
| 1685 | 16 | 352.00 ◊ | 27 | 34 | 50 | 85 |
| 1610 | 16 | 381.00 ◊ | 27 | 34 | 50 | 100 |
| 1613 | 16 | 395.00 ◊ | 27 | 34 | 50 | 130 |
| 1870 | 18 | 336.00 ◊* | 33 | 42 | 50 | 70 |
| 1885 | 18 | 352.00 ◊ | 33 | 42 | 50 | 85 |
| 1810 | 18 | 381.00 ◊ | 33 | 42 | 50 | 100 |
| 1813 | 18 | 395.00 ◊* | 33 | 42 | 50 | 130 |
| 2070 | 20 | 336.00 ◊ | 33 | 42 | 50 | 70 |
| 2085 | 20 | 352.00 ◊ | 33 | 42 | 52 | 85 |
| 2010 | 20 | 381.00 ◊ | 33 | 42 | 52 | 100 |
| 2013 | 20 | 395.00 ◊ | 33 | 42 | 52 | 130 |
| 2580 | 25 | 336.00 ◊* | 44 | 53 | 58 | 80 |
| 2590 | 25 | 352.00 ◊ | 44 | 53 | 58 | 90 |
| 2513 | 25 | 395.00 ◊ | 44 | 53 | 58 | 130 |
| 3280 | 32 | 336.00 ◊* | 44 | 53 | 58 | 80 |
| 3295 | 32 | 352.00 ◊ | 44 | 53 | 58 | 95 |
| 3213 | 32 | 395.00 ◊ | 44 | 53 | 58 | 130 |

(W394)

* Ultra short design without length setting screw

## Precision short drill chuck C6

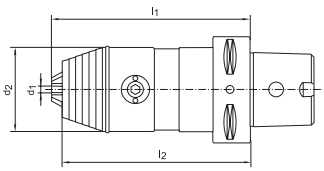
**Design:** Modular design. Clamping (using a hex spanner) considerably increases clamping force in comparison to conventional chucks. At the same time, this secures the chuck against becoming loose during anti-clockwise rotation or being quickly decelerated from higher speeds. Taper to DIN 254.

Balancing quality: G6.3 25000 min$^{-1}$.
Concentricity: 0.02 mm.

**Application:** To mount tools with cylindrical shank.

**Scope of delivery:** Precision chuck with hex spanner.

ISO 26623 | PSC | G 6.3 25.000 | ≤ 20 µm



| Order No. | $d_1$ mm | 3288 WTE | $d_2$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0005 | 0.3– 8 | 679.50 ◊ | 36 | 90 | 93 |
| 0010 | 0.5–13 | 650.50 ◊ | 50 | 112 | 118 |

(W325)

| Order No. | $d_1$ mm | 3288 WTE | $d_2$ mm | $l_2$ mm | $l_1$ mm |
|---|---|---|---|---|---|
| 0015 | 2.5–16 | 663.50 ◊ | 57 | 117 | 123 |

(W325)

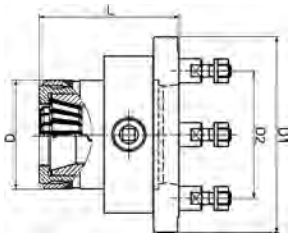
## Hand clamping chuck HSPF 40

**Design:** Basic chuck with precisely adapted intermediate flange with short taper DIN 55027/ISO 702/III. Greater holding power and accurate concentricity due to collets as three-jaw chucks.

**Application:** Conventional and CNC machines, e.g. for turning, drilling, milling and grinding. Ideal for small series.

**Scope of delivery:** Security key, bolts and nuts.

FAHRION PRÄZISION



| Order No. | Clamping range mm | 3614 FAHRION PRÄZISION | Short taper | D mm | $D_1$ mm | $D_2$ mm | L mm | Collet |
|---|---|---|---|---|---|---|---|---|
| 0005 | 1–42 | 1555.00 | Size 5 | 90 | 167 | 133.4 | 127 | 185E*, 780E* |
| 0010 | 1–42 | 1622.00 | Size 6 | 90 | 137 | 104.8 | 116 | 173E, 775E* |
| | | (W315) | | | | | | * Available upon request. |

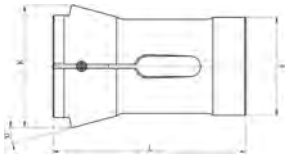
## Pressure collet chuck 173E

**Design:** According to DIN 6343 with a smooth bore (up to Ø 8.0 mm) or transverse grooves (from Ø 8.5 mm).

**Closure range:** h9, i.e. only nominal size can be clamped.

**Application:** For workpiece clamping (bar or chuck work) in conventional, single-spindle lathes, e.g. with hand clamping chucks HSPF and CNC turning machines directly in the spindle or in a collet chuck.

FAHRION PRÄZISION



| Order No. | Hole mm | 3615 FAHRION PRÄZISION | F mm | K mm | L mm |
|---|---|---|---|---|---|
| 0001 | 3 | 53.80 | 48 | 60 | 94 |
| 0004 | 4 | 53.80 | 48 | 60 | 94 |
| 0007 | 5 | 53.80 | 48 | 60 | 94 |
| 0010 | 6 | 53.80 | 48 | 60 | 94 |
| 0013 | 7 | 53.80 | 48 | 60 | 94 |
| 0016 | 8 | 53.80 | 48 | 60 | 94 |
| 0019 | 9 | 53.80 | 48 | 60 | 94 |
| 0022 | 10 | 53.80 | 48 | 60 | 94 |
| 0025 | 11 | 53.80 | 48 | 60 | 94 |
| 0028 | 12 | 53.80 | 48 | 60 | 94 |
| 0031 | 13 | 53.80 | 48 | 60 | 94 |
| 0034 | 14 | 53.80 | 48 | 60 | 94 |
| 0037 | 15 | 53.80 | 48 | 60 | 94 |
| 0040 | 16 | 53.80 | 48 | 60 | 94 |
| 0043 | 17 | 53.80 | 48 | 60 | 94 |
| 0046 | 18 | 53.80 | 48 | 60 | 94 |
| 0049 | 19 | 53.80 | 48 | 60 | 94 |
| 0052 | 20 | 53.80 | 48 | 60 | 94 |
| 0055 | 21 | 53.80 | 48 | 60 | 94 |
| 0058 | 22 | 53.80 | 48 | 60 | 94 |
| | | (W315) | | | |

| Order No. | Hole mm | 3615 FAHRION PRÄZISION | F mm | K mm | L mm |
|---|---|---|---|---|---|
| 0061 | 23 | 53.80 | 48 | 60 | 94 |
| 0064 | 24 | 53.80 | 48 | 60 | 94 |
| 0067 | 25 | 53.80 | 48 | 60 | 94 |
| 0070 | 26 | 53.80 | 48 | 60 | 94 |
| 0073 | 27 | 53.80 | 48 | 60 | 94 |
| 0076 | 28 | 53.80 | 48 | 60 | 94 |
| 0079 | 29 | 53.80 | 48 | 60 | 94 |
| 0082 | 30 | 53.80 | 48 | 60 | 94 |
| 0085 | 31 | 53.80 | 48 | 60 | 94 |
| 0088 | 32 | 53.80 | 48 | 60 | 94 |
| 0091 | 33 | 53.80 | 48 | 60 | 94 |
| 0094 | 34 | 53.80 | 48 | 60 | 94 |
| 0097 | 35 | 53.80 | 48 | 60 | 94 |
| 0100 | 36 | 53.80 | 48 | 60 | 94 |
| 0103 | 37 | 53.80 | 48 | 60 | 94 |
| 0106 | 38 | 53.80 | 48 | 60 | 94 |
| 0109 | 39 | 53.80 | 48 | 60 | 94 |
| 0112 | 40 | 53.80 | 48 | 60 | 94 |
| 0115 | 41 | 53.80 | 48 | 60 | 94 |
| 0118 | 42 | 53.80 | 48 | 60 | 94 |
| | | (W315) | | | |

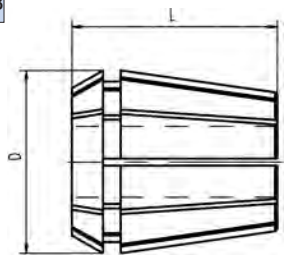
Up to Ø 8.0 with a smooth bore, from Ø 9.0 mm with grooves.

## Collet - System ER

**Design: Double slotted.** System ER, Concentricity 0.015 mm. No flexing motion on the milling cutters for high precision during machining and long service life.

**Application:** Multi-range collet from ∅ 2 mm for clamping up to max. 1 mm below nominal diameter (ER11 0.5 mm).

DIN 6499-B



| Order No. | ER11/4008E ∅ mm | 3589 | D mm | L mm |
|---|---|---|---|---|
| 0001 | 1 | 15.65 | 11.5 | 18 |
| 0004 | 1.5 | 15.65 | 11.5 | 18 |
| 0007 | 2 | 15.65 | 11.5 | 18 |
| 0010 | 2.5 | 15.65 | 11.5 | 18 |
| 0013 | 3 | 12.25 | 11.5 | 18 |
| 0016 | 3.5 | 12.25 | 11.5 | 18 |
| 0019 | 4 | 12.25 | 11.5 | 18 |
| 0022 | 4.5 | 12.25 | 11.5 | 18 |
| 0025 | 5 | 12.25 | 11.5 | 18 |
| 0028 | 5.5 | 12.25 | 11.5 | 18 |
| 0031 | 6 | 12.25 | 11.5 | 18 |
| 0034 | 6.5 | 12.25 | 11.5 | 18 |
| 0037 | 7 | 12.25 | 11.5 | 18 |
| | | (W368) | | |

| Order No. | ER16/426E ∅ mm | 3591 | D mm | L mm |
|---|---|---|---|---|
| 0002 | 1 | 15.95 | 17 | 27 |
| 0001 | 2 | 15.95 | 17 | 27 |
| 0004 | 3 | 12.25 | 17 | 27 |
| 0007 | 4 | 12.25 | 17 | 27 |
| 0010 | 5 | 12.25 | 17 | 27 |
| 0013 | 6 | 12.25 | 17 | 27 |
| 0016 | 7 | 12.25 | 17 | 27 |
| 0019 | 8 | 12.25 | 17 | 27 |
| 0022 | 9 | 12.25 | 17 | 27 |
| 0025 | 10 | 12.25 | 17 | 27 |
| | | (W368) | | |

| Order No. | ER20/428E ∅ mm | 3599 | D mm | L mm |
|---|---|---|---|---|
| 0002 | 1 | 17.70 | 21 | 31.5 |
| 0001 | 2 | 17.70 | 21 | 31.5 |
| 0004 | 3 | 13.20 | 21 | 31.5 |
| 0007 | 4 | 13.20 | 21 | 31.5 |
| 0010 | 5 | 13.20 | 21 | 31.5 |
| 0013 | 6 | 13.20 | 21 | 31.5 |
| 0016 | 7 | 13.20 | 21 | 31.5 |
| 0019 | 8 | 13.20 | 21 | 31.5 |
| 0022 | 9 | 13.20 | 21 | 31.5 |
| 0025 | 10 | 13.20 | 21 | 31.5 |
| 0028 | 11 | 13.20 | 21 | 31.5 |
| 0031 | 12 | 13.20 | 21 | 31.5 |
| 0034 | 13 | 13.20 | 21 | 31.5 |
| | | (W368) | | |

| Order No. | ER25/430E ∅ mm | 3592 | D mm | L mm |
|---|---|---|---|---|
| 0001 | 2 | 17.15 | 26 | 34 |
| 0004 | 3 | 13.20 | 26 | 34 |
| 0007 | 4 | 13.20 | 26 | 34 |
| 0010 | 5 | 13.20 | 26 | 34 |
| 0013 | 6 | 13.20 | 26 | 34 |
| 0016 | 7 | 13.20 | 26 | 34 |
| 0019 | 8 | 13.20 | 26 | 34 |
| 0022 | 9 | 13.20 | 26 | 34 |
| | | (W368) | | |

| Order No. | ER25/430E ∅ mm | 3592 | D mm | L mm |
|---|---|---|---|---|
| 0025 | 10 | 13.20 | 26 | 34 |
| 0028 | 11 | 13.20 | 26 | 34 |
| 0031 | 12 | 13.20 | 26 | 34 |
| 0034 | 13 | 13.20 | 26 | 34 |
| 0037 | 14 | 13.20 | 26 | 34 |
| 0040 | 15 | 13.20 | 26 | 34 |
| 0043 | 16 | 13.20 | 26 | 34 |
| | | (W368) | | |

| Order No. | ER32/470E ∅ mm | 3593 | D mm | L mm |
|---|---|---|---|---|
| 0001 | 3 | 13.20 | 33 | 40 |
| 0004 | 4 | 13.20 | 33 | 40 |
| 0007 | 5 | 13.20 | 33 | 40 |
| 0010 | 6 | 13.20 | 33 | 40 |
| 0013 | 7 | 13.20 | 33 | 40 |
| 0016 | 8 | 13.20 | 33 | 40 |
| 0019 | 9 | 13.20 | 33 | 40 |
| 0022 | 10 | 13.20 | 33 | 40 |
| 0025 | 11 | 13.20 | 33 | 40 |
| 0028 | 12 | 13.20 | 33 | 40 |
| 0031 | 13 | 13.20 | 33 | 40 |
| 0034 | 14 | 13.20 | 33 | 40 |
| 0037 | 15 | 13.20 | 33 | 40 |
| 0040 | 16 | 13.20 | 33 | 40 |
| 0043 | 17 | 13.20 | 33 | 40 |
| 0046 | 18 | 13.20 | 33 | 40 |
| 0049 | 19 | 13.20 | 33 | 40 |
| 0052 | 20 | 13.20 | 33 | 40 |
| | | (W368) | | |

| Order No. | ER40/972E ∅ mm | 3594 | D mm | L mm |
|---|---|---|---|---|
| 0001 | 4 | 15.15 | 41 | 46 |
| 0004 | 5 | 15.15 | 41 | 46 |
| 0007 | 6 | 15.15 | 41 | 46 |
| 0010 | 7 | 15.15 | 41 | 46 |
| 0013 | 8 | 15.15 | 41 | 46 |
| 0016 | 9 | 15.15 | 41 | 46 |
| 0019 | 10 | 15.15 | 41 | 46 |
| 0022 | 11 | 15.15 | 41 | 46 |
| 0025 | 12 | 15.15 | 41 | 46 |
| 0028 | 13 | 15.15 | 41 | 46 |
| 0031 | 14 | 15.15 | 41 | 46 |
| 0034 | 15 | 15.15 | 41 | 46 |
| 0037 | 16 | 15.15 | 41 | 46 |
| 0040 | 17 | 15.15 | 41 | 46 |
| 0043 | 18 | 15.15 | 41 | 46 |
| 0046 | 19 | 15.15 | 41 | 46 |
| 0049 | 20 | 15.15 | 41 | 46 |
| 0052 | 21 | 15.15 | 41 | 46 |
| 0055 | 22 | 15.15 | 41 | 46 |
| 0058 | 23 | 15.15 | 41 | 46 |
| 0061 | 24 | 15.15 | 41 | 46 |
| 0064 | 25 | 15.15 | 41 | 46 |
| 0067 | 26 | 15.15 | 41 | 46 |
| | | (W368) | | |

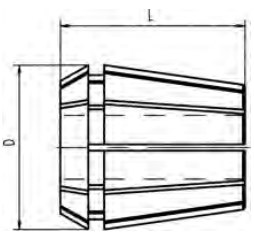
## Collet - System ER - sealed

**Design:** Collets with **sealing** by plugs. System ER, Concentricity 0.015 mm. No flexing motion on the milling cutters for high precision during machining and long service life.

**Application:** To mount tools with a cylindrical shank and internal cooling.

**Important: nominal size = span diameter.**

DIN 6499-B



| Order No. | ER16/425E Ø mm | 3607 | D mm | L mm |
|---|---|---|---|---|
| 0004 | 3 | 28.10 | 17 | 27 |
| 0007 | 4 | 28.10 | 17 | 27 |
| 0010 | 5 | 28.10 | 17 | 27 |
| 0013 | 6 | 28.10 | 17 | 27 |
| 0016 | 7 | 28.10 | 17 | 27 |
| 0019 | 8 | 28.10 | 17 | 27 |
| 0022 | 9 | 28.10 | 17 | 27 |
| 0025 | 10 | 28.10 | 17 | 27 |
| | | (W368) | | |

| Order No. | ER20/427E Ø mm | 3608 | D mm | L mm |
|---|---|---|---|---|
| 0004 | 3 | 28.10 | 21 | 31.5 |
| 0007 | 4 | 28.10 | 21 | 31.5 |
| 0010 | 5 | 28.10 | 21 | 31.5 |
| 0013 | 6 | 28.10 | 21 | 31.5 |
| 0016 | 7 | 28.10 | 21 | 31.5 |
| 0019 | 8 | 28.10 | 21 | 31.5 |
| 0022 | 9 | 28.10 | 21 | 31.5 |
| 0025 | 10 | 28.10 | 21 | 31.5 |
| 0028 | 11 | 28.10 | 21 | 31.5 |
| 0031 | 12 | 28.10 | 21 | 31.5 |
| 0034 | 13 | 28.10 | 21 | 31.5 |
| | | (W368) | | |

| Order No. | ER25/429E Ø mm | 3609 | D mm | L mm |
|---|---|---|---|---|
| 0004 | 3 | 29.20 | 26 | 34 |
| 0007 | 4 | 29.20 | 26 | 34 |
| 0010 | 5 | 29.20 | 26 | 34 |
| 0013 | 6 | 29.20 | 26 | 34 |
| 0016 | 7 | 29.20 | 26 | 34 |
| 0019 | 8 | 29.20 | 26 | 34 |
| 0022 | 9 | 29.20 | 26 | 34 |
| 0025 | 10 | 29.20 | 26 | 34 |
| 0028 | 11 | 29.20 | 26 | 34 |
| 0031 | 12 | 29.20 | 26 | 34 |
| 0034 | 13 | 29.20 | 26 | 34 |
| 0037 | 14 | 29.20 | 26 | 34 |
| 0040 | 15 | 29.20 | 26 | 34 |
| 0043 | 16 | 29.20 | 26 | 34 |
| | | (W368) | | |

| Order No. | ER32/469E Ø mm | 3612 | D mm | L mm |
|---|---|---|---|---|
| 0001 | 3 | 29.70 | 33 | 40 |
| 0004 | 4 | 29.70 | 33 | 40 |
| 0007 | 5 | 29.70 | 33 | 40 |
| 0010 | 6 | 29.70 | 33 | 40 |
| 0013 | 7 | 29.70 | 33 | 40 |
| 0016 | 8 | 29.70 | 33 | 40 |
| 0019 | 9 | 29.70 | 33 | 40 |
| 0022 | 10 | 29.70 | 33 | 40 |
| 0025 | 11 | 29.70 | 33 | 40 |
| 0028 | 12 | 29.70 | 33 | 40 |
| 0031 | 13 | 29.70 | 33 | 40 |
| 0034 | 14 | 29.70 | 33 | 40 |
| 0037 | 15 | 29.70 | 33 | 40 |
| 0040 | 16 | 29.70 | 33 | 40 |
| 0043 | 17 | 29.70 | 33 | 40 |
| 0046 | 18 | 29.70 | 33 | 40 |
| 0049 | 19 | 29.70 | 33 | 40 |
| 0052 | 20 | 29.70 | 33 | 40 |
| | | (W368) | | |

| Order No. | ER40/471E Ø mm | 3623 | D mm | L mm |
|---|---|---|---|---|
| 0001 | 4 | 31.30 | 41 | 46 |
| 0004 | 5 | 31.30 | 41 | 46 |
| 0007 | 6 | 31.30 | 41 | 46 |
| 0010 | 7 | 31.30 | 41 | 46 |
| 0013 | 8 | 31.30 | 41 | 46 |
| 0016 | 9 | 31.30 | 41 | 46 |
| 0019 | 10 | 31.30 | 41 | 46 |
| 0022 | 11 | 31.30 | 41 | 46 |
| 0025 | 12 | 31.30 | 41 | 46 |
| 0028 | 13 | 31.30 | 41 | 46 |
| 0031 | 14 | 31.30 | 41 | 46 |
| 0034 | 15 | 31.30 | 41 | 46 |
| 0037 | 16 | 31.30 | 41 | 46 |
| 0040 | 17 | 31.30 | 41 | 46 |
| 0043 | 18 | 31.30 | 41 | 46 |
| 0046 | 19 | 31.30 | 41 | 46 |
| 0049 | 20 | 31.30 | 41 | 46 |
| 0052 | 21 | 31.30 | 41 | 46 |
| 0055 | 22 | 31.30 | 41 | 46 |
| 0058 | 23 | 31.30 | 41 | 46 |
| 0061 | 24 | 31.30 | 41 | 46 |
| 0064 | 25 | 31.30 | 41 | 46 |
| 0067 | 26 | 31.30 | 41 | 46 |
| | | (W368) | | |

## Collet set with wooden base

DIN 6499-B

| Order No. | Clamping range mm | 3594 | Collet type | Content |
|---|---|---|---|---|
| 0103 | 1– 7 | 137.50 | ER11/4008E Ø | 13-piece |
| 0105 | 1–10 | 109.00 | ER16/426E Ø | 10-piece |
| 0107 | 2–13 | 167.50 | ER20/428E Ø | 12-piece |
| 0110 | 2–16 | 178.00 | ER25/430E Ø | 15-piece |
| 0115 | 3–20 | 230.50 | ER32/470E Ø | 18-piece |
| 0120 | 4–26 | 353.50 | ER40/472E Ø | 23-piece |
| | | (W320) | | |

## Precision collet GERC-B - System ER

**Design: ISO 15488-B (DIN 6499 old).** These collets set a standard in terms of precision for standard collet chucks. The super finish design with a surface roughness of < 1.6 µm offers a higher load ratio, higher rigidity and clamping forces as well as higher system concentricity. They are all protected against corrosion with the new **FAHRION Protect coating**.

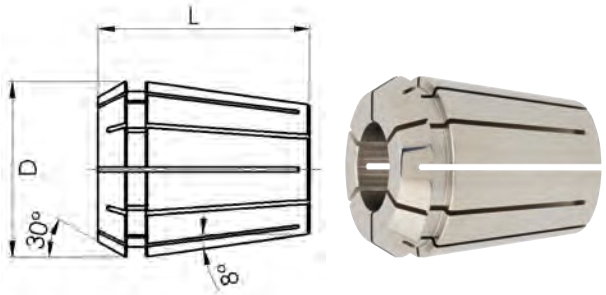
- **Precise** – Concentricity and repetition accuracy **5 µm.**
- **Stabile** – Only 12 slots required to achieve the required clamping diameter bridging for DIN ISO 15488-B. Our collets are significantly less prone to misalign in the lower clamping area as compared with 16-fold slotted collets.
- **Gentle** – All longitudinal edges are not only deburred but also additionally rounded which protects the inner cone on the collet chuck from any markings. This is precondition to ensuring constant high concentricity.

**Application:** To mount tools with cylindrical shank in line with DIN 1835 B, 1835 E, 6535 B and 6535 E.

DIN 6499-B

FAHRION® PRAZISION

**Note:** Clamp diameter bridging is 1 mm (below Ø 2.0 mm = 0.5 mm). The largest Ø is always stated, i.e. Ø 16 mm clamps back to Ø 15 mm (labelling is e.g. GERC 32 F 470 E16).




| Order No. | GERC11-B/4008E Ø mm | 3595 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0601 | 1 | 24.90 | 11.3 | 18 |
| 0604 | 1.5 | 24.90 ◊ | 11.3 | 18 |
| 0607 | 2 | 24.90 | 11.3 | 18 |
| 0610 | 2.5 | 24.90 ◊ | 11.3 | 18 |
| 0613 | 3 | 20.10 | 11.3 | 18 |
| 0615 | 3.5 | 20.10 ◊ | 11.3 | 18 |
| 0616 | 4 | 20.10 | 11.3 | 18 |
| 0618 | 4.5 | 20.10 ◊ | 11.3 | 18 |
| 0619 | 5 | 20.10 | 11.3 | 18 |
| 0621 | 5.5 | 20.10 ◊ | 11.3 | 18 |
| 0622 | 6 | 20.10 | 11.3 | 18 |
| 0624 | 6.5 | 20.10 ◊ | 11.3 | 18 |
| 0625 | 7 | 20.10 (W319) | 11.3 | 18 |

| Order No. | GERC16-B/426E Ø mm | 3595 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0001 | 1 | 24.00 | 17 | 27.5 |
| 0004 | 1.5 | 24.00 | 17 | 27.5 |
| 0007 | 2 | 24.00 | 17 | 27.5 |
| 0010 | 2.5 | 24.00 | 17 | 27.5 |
| 0013 | 3 | 18.95 | 17 | 27.5 |
| 0016 | 4 | 18.95 | 17 | 27.5 |
| 0019 | 5 | 18.95 | 17 | 27.5 |
| 0022 | 6 | 18.95 | 17 | 27.5 |
| 0025 | 7 | 18.95 | 17 | 27.5 |
| 0028 | 8 | 18.95 | 17 | 27.5 |
| 0031 | 9 | 18.95 | 17 | 27.5 |
| 0034 | 10 | 18.95 (W319) | 17 | 27.5 |

| Order No. | GER20-B/428E Ø mm | 3595 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0501 | 2 | 24.80 | 21 | 31.5 |
| 0504 | 2.5 | 24.80 ◊ | 21 | 31.5 |
| 0507 | 3 | 19.65 | 21 | 31.5 |
| 0510 | 4 | 19.65 | 21 | 31.5 |
| 0513 | 5 | 19.65 | 21 | 31.5 |
| 0516 | 6 | 19.65 | 21 | 31.5 |
| 0519 | 7 | 19.65 | 21 | 31.5 |
| 0522 | 8 | 19.65 | 21 | 31.5 |
| 0525 | 9 | 19.65 | 21 | 31.5 |
| 0528 | 10 | 19.65 | 21 | 31.5 |
| 0531 | 11 | 19.65 | 21 | 31.5 |
| 0534 | 12 | 19.65 | 21 | 31.5 |
| 0537 | 13 | 19.65 (W319) | 21 | 31.5 |

| Order No. | GERC25-B/430E Ø mm | 3595 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0101 | 2 | 26.10 | 26 | 34 |
| 0104 | 2.5 | 26.10 | 26 | 34 |
| 0107 | 3 | 20.15 | 26 | 34 |
| 0110 | 4 | 20.15 | 26 | 34 |
| 0113 | 5 | 20.15 | 26 | 34 |
| 0116 | 6 | 20.15 | 26 | 34 |
| 0119 | 7 | 20.15 | 26 | 34 |
| 0122 | 8 | 20.15 | 26 | 34 |
| 0125 | 9 | 20.15 | 26 | 34 |
| 0128 | 10 | 20.15 | 26 | 34 |
| 0131 | 11 | 20.15 | 26 | 34 |
| 0134 | 12 | 20.15 | 26 | 34 |
| 0137 | 13 | 20.15 | 26 | 34 |
| 0140 | 14 | 20.15 | 26 | 34 |
| 0143 | 15 | 20.15 | 26 | 34 |
| 0146 | 16 | 20.15 (W319) | 26 | 34 |

| Order No. | GERC32-B/470E Ø mm | 3595 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0201 | 3 | 21.50 | 33 | 40 |
| 0204 | 4 | 21.50 | 33 | 40 |
| 0207 | 5 | 21.50 | 33 | 40 |
| 0210 | 6 | 21.50 | 33 | 40 |
| 0213 | 7 | 21.50 | 33 | 40 |
| 0216 | 8 | 21.50 | 33 | 40 |
| 0219 | 9 | 21.50 | 33 | 40 |
| 0222 | 10 | 21.50 | 33 | 40 |
| 0225 | 11 | 21.50 | 33 | 40 |
| 0228 | 12 | 21.50 | 33 | 40 |
| 0231 | 13 | 21.50 | 33 | 40 |
| 0234 | 14 | 21.50 | 33 | 40 |
| 0237 | 15 | 21.50 | 33 | 40 |
| 0240 | 16 | 21.50 | 33 | 40 |
| 0243 | 17 | 21.50 | 33 | 40 |
| 0246 | 18 | 21.50 | 33 | 40 |
| 0249 | 19 | 21.50 | 33 | 40 |
| 0252 | 20 | 21.50 (W319) | 33 | 40 |

| Order No. | GERC40-B/472E Ø mm | 3595 FAHRION® PRAZISION | D mm | L mm |
|---|---|---|---|---|
| 0301 | 3 | 37.20 | 41 | 46 |
| 0304 | 4 | 27.80 | 41 | 46 |
| 0307 | 5 | 27.80 | 41 | 46 |
| 0310 | 6 | 27.80 | 41 | 46 |
| 0313 | 7 | 27.80 | 41 | 46 |
| 0316 | 8 | 27.80 | 41 | 46 |
| 0319 | 9 | 27.80 (W319) | 41 | 46 |

Continued overleaf



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Precision collet GERC-B - System ER

Continued

| Order No. | GERC40-B/472E Ø mm | 3595 FAHRION® PRÄZISION | D mm | L mm |
|---|---|---|---|---|
| 0322 | 10 | 27.80 | 41 | 46 |
| 0325 | 11 | 27.80 | 41 | 46 |
| 0328 | 12 | 27.80 | 41 | 46 |
| 0331 | 13 | 27.80 | 41 | 46 |
| 0334 | 14 | 27.80 | 41 | 46 |
| 0337 | 15 | 27.80 | 41 | 46 |
| 0340 | 16 | 27.80 | 41 | 46 |
| 0343 | 17 | 27.80 | 41 | 46 |
| 0346 | 18 | 27.80 (W319) | 41 | 46 |

| Order No. | GERC40-B/472E Ø mm | 3595 FAHRION® PRÄZISION | D mm | L mm |
|---|---|---|---|---|
| 0349 | 19 | 27.80 | 41 | 46 |
| 0351 | 20 | 27.80 | 41 | 46 |
| 0355 | 21 | 27.80 | 41 | 46 |
| 0358 | 22 | 27.80 | 41 | 46 |
| 0361 | 23 | 27.80 | 41 | 46 |
| 0364 | 24 | 27.80 | 41 | 46 |
| 0367 | 25 | 27.80 | 41 | 46 |
| 0370 | 26 | 27.80 (W319) | 41 | 46 |

## Precision collet set GERC-B - System ER

**Design: ISO 15488-B (DIN 6499 old),** Concentricity and repeat accuracy: 5 µm. Protection against corrosion with the **FAHRION Protect coating**.
Supplied in wooden case.

| Order No. | Clamping range mm | 3595 FAHRION® PRÄZISION | Collet type | Content |
|---|---|---|---|---|
| 0401 | 1– 7 | 299.50 | GERC11-B/4008E | 13-piece |
| 0405 | 1–10 | 217.25 | GERC16-B/426E | 10-piece |
| 0407 | 2–13 | 264.00 | GERC20-B/428E | 12-piece |
| 0410 | 2–16 | 334.00 | GERC25-B/430E | 15-piece |
| 0415 | 3–20 | 417.20 | GERC32-B/470E | 18-piece |
| 0420 | 4–26 | 678.00 (W319) | GERC40-B/472E | 23-piece |

## Precision collet GERC-BD - sealed

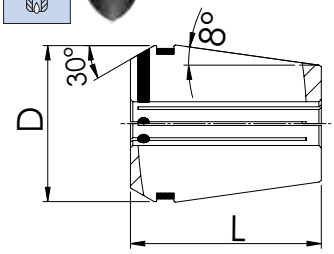
**Design: Similar to ISO 15488-A,** with seal for internal cooling and **FAHRION Protect coating** against corrosion. Useable up to 120 bar.

**Concentricity:** 0.005 mm

**Note:** Shanks with lateral face can only be used in a limited way, i.e. the face must be behind the rubber plug to ensure sealing.

DIN 6499-B

FAHRION® PRÄZISION



| Order No. | GERC16-BD/425E Ø mm | 3628 FAHRION® PRÄZISION | D mm | L mm |
|---|---|---|---|---|
| 0001 | 3 | 43.70 | 16.7 | 27.5 |
| 0004 | 4 | 43.70 | 16.7 | 27.5 |
| 0007 | 5 | 49.20 | 16.7 | 27.5 |
| 0010 | 6 | 43.70 | 16.7 | 27.5 |
| 0013 | 8 | 43.70 | 16.7 | 27.5 |
| 0016 | 10 | 43.70 (W319) | 16.7 | 27.5 |

| Order No. | GERC25-BD/429E Ø mm | 3628 FAHRION® PRÄZISION | D mm | L mm |
|---|---|---|---|---|
| 0101 | 3 | 51.30 | 25.7 | 34 |
| 0104 | 4 | 45.70 | 25.7 | 34 |
| 0107 | 5 | 51.30 | 25.7 | 34 |
| 0110 | 6 | 45.70 | 25.7 | 34 |
| 0113 | 8 | 45.70 | 25.7 | 34 |
| 0116 | 10 | 45.70 | 25.7 | 34 |
| 0119 | 12 | 45.70 | 25.7 | 34 |
| 0122 | 14 | 45.70 | 25.7 | 34 |
| 0125 | 16 | 45.70 (W319) | 25.7 | 34 |

| Order No. | GERC32-BD/469E Ø mm | 3628 FAHRION® PRÄZISION | D mm | L mm |
|---|---|---|---|---|
| 0201 | 3 | 53.30 | 32.7 | 40 |
| 0204 | 4 | 47.70 | 32.7 | 40 |
| 0207 | 5 | 53.30 | 32.7 | 40 |
| 0210 | 6 | 47.70 | 32.7 | 40 |
| 0213 | 8 | 47.70 | 32.7 | 40 |
| 0216 | 10 | 47.70 | 32.7 | 40 |
| 0219 | 12 | 47.70 | 32.7 | 40 |
| 0222 | 14 | 47.70 | 32.7 | 40 |
| 0225 | 16 | 47.70 | 32.7 | 40 |
| 0228 | 18 | 47.70 | 32.7 | 40 |
| 0231 | 20 | 47.70 (W319) | 32.7 | 40 |

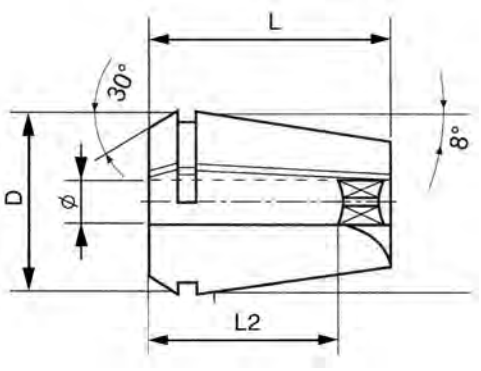
## Collet for taps with female square

**Design: ISO 15488-B (DIN 6499-B old).** High clamping force thanks to double slot. With female square.

**Application:** For clamping threaded bores with square driver.

**Note:** Delivery without drill bit.

DIN 6499-B



| Order No. | ER16/426G Ø mm | 3598 | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 1601 | 3.5 | 30.20 | 2.7 | 17 | 27.5 | 18 |
| 1604 | 4 | 30.20 | 3 | 17 | 27.5 | 18 |
| 1607 | 4.5 | 30.20 | 3.4 | 17 | 27.5 | 18 |
| 1610 | 5 | 30.20 | 4 | 17 | 27.5 | 18 |
| 1613 | 5.5 | 30.20 | 4.3 | 17 | 27.5 | 18 |
| 1616 | 6 | 30.20 | 4.9 | 17 | 27.5 | 18 |
| 1619 | 7 | 30.20 | 5.5 | 17 | 27.5 | 18 |
| 1622 | 8 | 30.20 (W368) | 6.2 | 17 | 27.5 | 22 |

| Order No. | ER20/428G Ø mm | 3598 | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 2001 | 3.5 | 31.40 | 2.7 | 20.7 | 31.5 | 18 |
| 2004 | 4 | 31.40 | 3 | 20.7 | 31.5 | 18 |
| 2007 | 4.5 | 31.40 | 3.4 | 20.7 | 31.5 | 18 |
| 2010 | 5.5 | 31.40 | 4.3 | 20.7 | 31.5 | 18 |
| 2013 | 6 | 31.40 | 4.9 | 20.7 | 31.5 | 18 |
| 2016 | 7 | 31.40 | 5.5 | 20.7 | 31.5 | 18 |
| 2019 | 8 | 31.40 | 6.2 | 20.7 | 31.5 | 22 |
| 2022 | 9 | 31.40 | 7 | 20.7 | 31.5 | 22 |
| 2025 | 10 | 31.40 | 8 | 20.7 | 31.5 | 25 |
| 2028 | 11 | 31.40 (W368) | 9 | 20.7 | 31.5 | 25 |

| Order No. | ER25/430G Ø mm | 3598 | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 2501 | 3.5 | 31.40 | 2.7 | 26 | 34 | 18 |
| 2504 | 4 | 31.40 | 3 | 26 | 34 | 18 |
| 2507 | 4.5 | 31.40 | 3.4 | 26 | 34 | 18 |
| 2510 | 5 | 31.40 | 4 | 26 | 34 | 18 |
| 2513 | 5.5 | 31.40 | 4.3 | 26 | 34 | 18 |
| 2516 | 6 | 31.40 | 4.9 | 26 | 34 | 18 |
| 2519 | 7 | 31.40 | 5.5 | 26 | 34 | 18 |
| 2522 | 8 | 31.40 | 6.2 | 26 | 34 | 22 |
| 2525 | 9 | 31.40 | 7 | 26 | 34 | 22 |
| 2528 | 10 | 31.40 | 8 | 26 | 34 | 25 |
| 2531 | 11 | 31.40 | 9 | 26 | 34 | 25 |
| 2534 | 12 | 31.40 (W368) | 9 | 26 | 34 | 25 |

| Order No. | ER32/472G Ø mm | 3598 | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 3201 | 4 | 32.40 | 3 | 33 | 40 | 18 |
| 3204 | 4.5 | 32.40 | 3.4 | 33 | 40 | 18 |
| 3207 | 5 | 32.40 | 4 | 33 | 40 | 18 |
| 3210 | 5.5 | 32.40 | 4.3 | 33 | 40 | 18 |
| 3213 | 6 | 32.40 | 4.9 | 33 | 40 | 18 |
| 3216 | 7 | 32.40 | 5.5 | 33 | 40 | 18 |
| 3219 | 8 | 32.40 | 6.2 | 33 | 40 | 22 |
| 3222 | 9 | 32.40 | 7 | 33 | 40 | 22 |
| 3225 | 10 | 32.40 | 8 | 33 | 40 | 25 |
| 3228 | 11 | 32.40 | 9 | 33 | 40 | 25 |
| 3231 | 12 | 32.40 | 9 | 33 | 40 | 25 |
| 3234 | 14 | 32.40 | 11 | 33 | 40 | 25 |
| 3237 | 16 | 32.40 | 12 | 33 | 40 | 25 |
| 3240 | 18 | 32.40 (W368) | 14.5 | 33 | 40 | 25 |

| Order No. | ER40/472G Ø mm | 3598 | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 4001 | 6 | 33.50 | 4.9 | 41 | 46 | 18 |
| 4004 | 7 | 33.50 | 5.5 | 41 | 46 | 18 |
| 4007 | 8 | 33.50 | 6.3 | 41 | 46 | 22 |
| 4010 | 9 | 33.50 | 7 | 41 | 46 | 22 |
| 4013 | 10 | 33.50 | 8 | 41 | 46 | 25 |
| 4016 | 11 | 33.50 | 9 | 41 | 46 | 25 |
| 4019 | 12 | 33.50 | 9 | 41 | 46 | 25 |
| 4022 | 14 | 33.50 | 11 | 41 | 46 | 25 |
| 4025 | 16 | 33.50 | 12 | 41 | 46 | 25 |
| 4028 | 18 | 33.50 | 14.5 | 41 | 46 | 25 |
| 4031 | 20 | 33.50 (W368) | 16 | 41 | 46 | 28 |

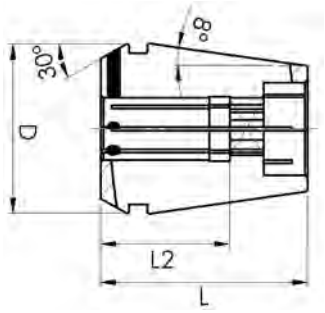
## Precision tap collet GERC-GBD - sealed

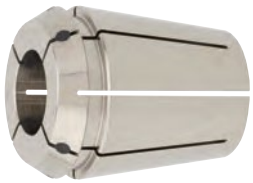
**Design: Similar to ISO 15488-A** (DIN 6499 old). Tap collets GER-GBD have a **concentricity of 10 µm** and can be used in precision collet chucks CENTRO P, in tapping chucks SYNCHRO T and in standard collet chucks. They have a square drive for driving the tap as well as a seal for internal cooling up to 120 bar. They are all protected against corrosion with the **FAHRION Protect coating**.

**Application:** Can be used for DIN as well as for ISO taps.

DIN 6499-B

FAHRION® PRAZISION



| Order No. | GERC16-GBD/ 4031E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0101 | 2.8 | 49.30 | 2.1 | 16.7 | 27.5 | 18 |
| 0104 | 3.5 | 42.10 | 2.7 | 16.7 | 27.5 | 18 |
| 0107 | 4 | 42.10 | 3.2 | 16.7 | 27.5 | 18 |
| 0110 | 4.5 | 42.10 | 3.55 | 16.7 | 27.5 | 18 |
| 0113 | 5 | 42.10 (W319) | 4 | 16.7 | 27.5 | 18 |

| Order No. | GERC16-GBD/ 4031E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0116 | 5.5 | 42.10 | 4.5 | 16.7 | 27.5 | 18 |
| 0119 | 6 | 42.10 | 5 | 16.7 | 27.5 | 18 |
| 0122 | 7 | 42.10 | 5.6 | 16.7 | 27.5 | 18 |
| 0125 | 8 | 42.10 (W319) | 6.3 | 16.7 | 27.5 | 22 |

| Order No. | GERC20-GBD/ 4276E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0127 | 3.5 | 44.20 | 2.7 | 20.7 | 31.5 | 18 |
| 0129 | 4 | 44.20 | 3 | 20.7 | 31.5 | 18 |
| 0131 | 4.5 | 44.20 | 3.4 | 20.7 | 31.5 | 18 |
| 0133 | 5.5 | 44.20 | 4.3 | 20.7 | 31.5 | 18 |
| 0135 | 6 | 44.20 (W319) | 4.9 | 20.7 | 31.5 | 18 |

| Order No. | GERC20-GBD/ 4276E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0137 | 7 | 44.20 | 5.5 | 20.7 | 31.5 | 18 |
| 0139 | 8 | 44.20 | 6.2 | 20.7 | 31.5 | 18 |
| 0141 | 9 | 44.20 | 7 | 20.7 | 31.5 | 22 |
| 0143 | 10 | 44.20 | 8 | 20.7 | 31.5 | 22 |
| 0145 | 11 | 44.20 (W319) | 9 | 20.7 | 31.5 | 25 |

| Order No. | GERC25-GBD/ 4282E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0151 | 3.5 | 46.20 | 2.7 | 25.7 | 34 | 18 |
| 0154 | 4 | 46.20 | 3.2 | 25.7 | 34 | 18 |
| 0157 | 4.5 | 46.20 | 3.55 | 25.7 | 34 | 18 |
| 0160 | 5 | 46.20 | 4 | 25.7 | 34 | 18 |
| 0163 | 5.5 | 46.20 | 4.5 | 25.7 | 34 | 18 |
| 0166 | 6 | 46.20 (W319) | 5 | 25.7 | 34 | 18 |

| Order No. | GERC25-GBD/ 4282E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0169 | 7 | 46.20 | 5.6 | 25.7 | 34 | 18 |
| 0172 | 8 | 46.20 | 6.3 | 25.7 | 34 | 22 |
| 0175 | 9 | 46.20 | 7.1 | 25.7 | 34 | 22 |
| 0178 | 10 | 46.20 | 8 | 25.7 | 34 | 25 |
| 0181 | 11 | 46.20 | 9 | 25.7 | 34 | 25 |
| 0184 | 12 | 46.20 (W319) | 9 | 25.7 | 34 | 25 |

| Order No. | GERC32-GBD/ 4537E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0000 | 4 | 50.75 | 3.2 | 32.7 | 40 | 18 |
| 0001 | 4.5 | 50.75 | 3.55 | 32.7 | 40 | 18 |
| 0002 | 5 | 50.75 | 4 | 32.7 | 40 | 18 |
| 0004 | 5.5 | 50.75 | 4.5 | 32.7 | 40 | 18 |
| 0007 | 6 | 50.75 | 5 | 32.7 | 40 | 18 |
| 0010 | 7 | 50.75 | 5.6 | 32.7 | 40 | 18 |
| 0013 | 8 | 50.75 | 6.6 | 32.7 | 40 | 22 |
| 0016 | 9 | 50.75 (W319) | 7.1 | 32.7 | 40 | 22 |

| Order No. | GERC32-GBD/ 4537E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0019 | 10 | 50.75 | 8 | 32.7 | 40 | 25 |
| 0022 | 11 | 50.75 | 9 | 32.7 | 40 | 25 |
| 0025 | 12 | 50.75 | 9 | 32.7 | 40 | 25 |
| 0028 | 14 | 50.75 | 11.2 | 32.7 | 40 | 25 |
| 0031 | 16 | 50.75 | 12.5 | 32.7 | 40 | 25 |
| 0034 | 18 | 50.75 | 14.5 | 32.7 | 40 | 25 |
| 0037 | 20 | 50.75 (W319) | 16 | 32.7 | 40 | 25 |

| Order No. | GERC40-GBD/ 4716E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0201 | 6 | 59.70 | 5 | 40.7 | 46 | 18 |
| 0204 | 7 | 59.70 | 5.6 | 40.7 | 46 | 18 |
| 0207 | 8 | 59.70 | 6.6 | 40.7 | 46 | 22 |
| 0210 | 9 | 59.70 | 7.1 | 40.7 | 46 | 22 |
| 0213 | 10 | 59.70 | 8 | 40.7 | 46 | 25 |
| 0216 | 11 | 59.70 (W319) | 9 | 40.7 | 46 | 25 |

| Order No. | GERC40-GBD/ 4716E ∅ mm | 3597 FAHRION® | Square mm | D mm | L mm | L2 mm |
|---|---|---|---|---|---|---|
| 0219 | 12 | 59.70 | 9 | 40.7 | 46 | 25 |
| 0222 | 14 | 59.70 | 11.2 | 40.7 | 46 | 25 |
| 0225 | 16 | 59.70 | 12 | 40.7 | 46 | 25 |
| 0228 | 18 | 59.70 | 14.5 | 40.7 | 46 | 33 |
| 0231 | 20 | 59.70 (W319) | 16 | 40.7 | 46 | 33 |

## Wood pedestal for collet

| Order No. | Collet | 3644 | Drilled holes |
|---|---|---|---|
| 0016 | ER16 | 15.65 | 10 |
| 0020 | ER20 | 15.65 | 12 |
| 0025 | ER25 | 15.90 | 15 |
| 0032 | ER32 | 16.65 | 18 |
| 0040 | ER40 | 17.70 | 23 |
| | | (W368) | |

## Clamping nut for ER - standard with eccentric ring

**Design:** Pre-balanced G6.3 15000 min$^{-1}$.

**Note:** Chuck keys found from 📖 3/106.

G 6.3
15.000

| Order No. | For collet chuck | 3644 | Outer Ø mm | Thread mm | Length mm |
|---|---|---|---|---|---|
| 0110 | ER11M* | 18.55 | 16 | M13 x 0.75 | 12 |
| 0160 | ER16** | 18.55 | 32 | M22 x 1.5 | 18 |
| 0161 | ER16M* | 18.55 | 22 | M19 x 1 | 18 |
| 0200 | ER20 | 18.55 | 28 | M24 x 1 | 19 |
| 0201 | ER20M* | 18.55 | 28 | M24 x 1 | 19 |
| 0250 | ER25 | 18.55 | 42 | M32 x 1.5 | 20 |
| 0320 | ER32 | 18.70 | 50 | M40 x 1.5 | 22.5 |
| 0400 | ER40 | 23.90 | 63 | M50 x 1.5 | 22.5 |
| | | (W378) | | | |

* Type M = mini design
** Safety nut.

## Precision clamping nut ER, precision balanced

**Design:** With highest concentricity and finely balanced, no wear and high clamping force thanks to special anti-friction coating. Low vibrations thanks to pre-balancing.

**Balancing quality:** G2.5 22000 min$^{-1}$.

G 2.5
22.000

HAIMER Quality Wins.

| Order No. | For collet chuck | 3645 HAIMER | Outer Ø mm | Thread mm | Length mm |
|---|---|---|---|---|---|
| 0160 | ER16 | 35.00 | 28 | M22 x 1.5 | 17 |
| 0250 | ER25 | 37.00 | 42 | M32 x 1.5 | 20 |
| 0320 | ER32 | 38.00 | 50 | M40 x 1.5 | 22.3 |
| 0400 | ER40 | 40.00 | 63 | M50 x 1.5 | 25.3 |
| | | (W394) | | | |

## Clamping nut ER - sealable

**Design:** Clamping nut ER in line with DIN for sealing discs.
**Pre-balanced G6.3 15000 min$^{-1}$.**

**Application:** For sealing collets using sealing discs.

**Note:** Sealing discs are found on 📖 3/104.

G 6.3
15.000

| Order No. | For collet chuck | 3639 | Outer Ø mm | Thread mm | Length mm |
|---|---|---|---|---|---|
| 0161 | ER16M* | 32.40 | 22 | M19 x 1 | 22 |
| 0160 | ER16 | 32.40 | 32 | M22 x 1.5 | 22.5 |
| 0251 | ER25M* | 33.30 | 35 | M30 x 1.5 | 25 |
| 0250 | ER25 | 33.30 | 42 | M32 x 1.5 | 25 |
| 0320 | ER32 | 35.10 | 50 | M40 x 1.5 | 28 |
| 0400 | ER40 | 43.80 | 63 | M50 x 1.5 | 31 |
| | | (W378) | | | |

* Type M = mini design

## Sealing disc for sealable clamping nut ER

**Design:** Made of steel, with O-ring made of high-strength PEM, laser-inscribed. Useable up to 70 bar.

**Application:** For cost-effective sealing of collets type ER in sealable clamping nuts. Clamping range = nominal dimension - 0.5 mm.

| Order No. | ER 16 for collet bore | 3639 |
|---|---|---|
| 1604 | 3/2.5 | 12.45 |
| 1607 | 4/3.5 | 12.45 |
| 1610 | 5/4.5 | 12.45 |
| 1613 | 6/5.5 | 12.45 |
| | | (W378) |

| Order No. | ER 16 for collet bore | 3639 |
|---|---|---|
| 1616 | 7/6.5 | 11.55 |
| 1619 | 8/7.5 | 11.55 |
| 1622 | 9/8.5 | 11.55 |
| 1625 | 10/9.5 | 11.55 |
| | | (W378) |

| Order No. | ER 25 for collet bore | 3639 |
|---|---|---|
| 2501 | 3/2.5 | 9.90 |
| 2504 | 4/3.5 | 12.45 |
| 2507 | 5/4.5 | 12.45 |
| 2510 | 6/5.5 | 12.45 |
| 2513 | 7/6.5 | 12.45 |
| 2516 | 8/7.5 | 12.45 |
| 2519 | 9/8.5 | 11.55 |
| | | (W378) |

| Order No. | ER 25 for collet bore | 3639 |
|---|---|---|
| 2522 | 10/ 9.5 | 11.55 |
| 2525 | 11/10.5 | 11.55 |
| 2528 | 12/11.5 | 11.55 |
| 2531 | 13/12.5 | 11.55 |
| 2534 | 14/13.5 | 11.55 |
| 2537 | 15/14.5 | 11.55 |
| 2540 | 16/15.5 | 11.55 |
| | | (W378) |

| Order No. | ER 32 for collet bore | 3639 |
|---|---|---|
| 3201 | 3/ 2.5 | 9.90 |
| 3204 | 4/ 3.5 | 12.45 |
| 3207 | 5/ 4.5 | 12.45 |
| 3210 | 6/ 5.5 | 12.45 |
| 3213 | 7/ 6.5 | 12.45 |
| 3216 | 8/ 7.5 | 11.55 |
| 3219 | 9/ 8.5 | 11.55 |
| 3222 | 10/ 9.5 | 11.55 |
| 3225 | 11/10.5 | 11.55 |
| | | (W378) |

| Order No. | ER 32 for collet bore | 3639 |
|---|---|---|
| 3228 | 12/11.5 | 11.55 |
| 3231 | 13/12.5 | 11.55 |
| 3234 | 14/13.5 | 11.55 |
| 3237 | 15/14.5 | 11.55 |
| 3240 | 16/15.5 | 11.55 |
| 3243 | 17/16.5 | 11.55 |
| 3246 | 18/17.5 | 11.55 |
| 3249 | 19/18.5 | 11.55 |
| 3252 | 20/19.5 | 11.55 |
| | | (W378) |

| Order No. | ER 40 for collet bore | 3639 |
|---|---|---|
| 4001 | 3/ 2.5 | 12.35 |
| 4004 | 4/ 3.5 | 15.55 |
| 4007 | 5/ 4.5 | 15.55 |
| 4010 | 6/ 5.5 | 15.55 |
| 4013 | 7/ 6.5 | 12.60 |
| 4016 | 8/ 7.5 | 12.60 |
| 4019 | 9/ 8.5 | 12.60 |
| 4022 | 10/ 9.5 | 12.60 |
| 4025 | 11/10.5 | 12.60 |
| 4028 | 12/11.5 | 12.60 |
| 4031 | 13/12.5 | 12.60 |
| 4034 | 14/13.5 | 12.60 |
| | | (W378) |

| Order No. | ER 40 for collet bore | 3639 |
|---|---|---|
| 4037 | 15/14.5 | 12.60 |
| 4040 | 16/15.5 | 12.60 |
| 4043 | 17/16.5 | 12.60 |
| 4046 | 18/17.5 | 12.60 |
| 4049 | 19/18.5 | 12.60 |
| 4052 | 20/19.5 | 12.60 |
| 4055 | 21/20.5 | 12.60 |
| 4058 | 22/21.5 | 12.60 |
| 4061 | 23/22.5 | 12.60 |
| 4064 | 24/23.5 | 12.60 |
| 4067 | 25/24.5 | 12.60 |
| 4070 | 26/25.5 | 12.60 |
| | | (W378) |

## Milling cutter arbour ring - Form A

**Design: DIN 2084, Form A, slim.** From hardened spring band steel, punched.

DIN 2084 | Form A

| Order No. | Hole mm | 3630 | Width mm | Outer Ø mm |
|---|---|---|---|---|
| 0201 | 16 | 1.40 | 0.03 | 25 |
| 0204 | 16 | 1.14 | 0.05 | 25 |
| 0207 | 16 | 0.75 | 0.1 | 25 |
| 0210 | 16 | 0.75 | 0.2 | 25 |
| 0213 | 16 | 0.77 | 0.3 | 25 |
| 0216 | 16 | 0.84 | 0.5 | 25 |
| 0219 | 16 | 0.86 | 0.6 | 25 |
| 0222 | 16 | 1.18 | 1 | 25 |
| 0225 | 22 | 1.51 | 0.03 | 33 |
| 0228 | 22 | 1.26 | 0.05 | 33 |
| 0231 | 22 | 0.83 | 0.1 | 33 |
| 0234 | 22 | 0.86 | 0.2 | 33 |
| 0237 | 22 | 0.97 | 0.3 | 33 |
| 0240 | 22 | 1.22 | 0.5 | 33 |
| 0243 | 22 | 1.26 | 0.6 | 33 |
| 0246 | 22 | 1.78 | 1 | 33 |
| 0249 | 27 | 1.75 | 0.03 | 39 |
| 0252 | 27 | 1.56 | 0.05 | 39 |
| 0255 | 27 | 0.92 | 0.1 | 39 |
| 0258 | 27 | 0.99 | 0.2 | 39 |

(W378)

| Order No. | Hole mm | 3630 | Width mm | Outer Ø mm |
|---|---|---|---|---|
| 0261 | 27 | 1.24 | 0.3 | 39 |
| 0264 | 27 | 1.43 | 0.5 | 39 |
| 0267 | 27 | 1.61 | 0.6 | 39 |
| 0270 | 27 | 2.18 | 1 | 39 |
| 0273 | 32 | 2.34 | 0.03 | 45 |
| 0276 | 32 | 1.91 | 0.05 | 45 |
| 0279 | 32 | 1.14 | 0.1 | 45 |
| 0282 | 32 | 1.65 | 0.2 | 45 |
| 0285 | 32 | 1.60 | 0.3 | 45 |
| 0288 | 32 | 1.71 | 0.5 | 45 |
| 0291 | 32 | 1.94 | 0.6 | 45 |
| 0294 | 32 | 2.68 | 1 | 45 |
| 0297 | 40 | 2.69 | 0.03 | 54 |
| 0300 | 40 | 2.35 | 0.05 | 54 |
| 0303 | 40 | 1.63 | 0.1 | 54 |
| 0306 | 40 | 2.78 | 0.2 | 54 |
| 0309 | 40 | 2.78 | 0.3 | 54 |
| 0312 | 40 | 2.73 | 0.5 | 54 |
| 0315 | 40 | 3.23 | 0.6 | 54 |
| 0318 | 40 | 4.51 | 1 | 54 |

(W378)

## Milling cutter arbour ring - Form B

**Design: DIN 2084, Form B, wide.** Made of case-hardened spring steel strap.

DIN 2084 | Form B

| Order No. | Hole mm | 3632 | Width mm | Outer Ø mm |
|---|---|---|---|---|
| 0201 | 16 | 7.65 | 2 | 27 |
| 0204 | 16 | 7.65 | 3 | 27 |
| 0207 | 16 | 8.90 | 5 | 27 |
| 0210 | 16 | 9.05 | 6 | 27 |
| 0213 | 16 | 12.20 | 10 | 27 |
| 0216 | 16 | 15.25 | 20 | 27 |
| 0219 | 16 | 19.15 | 30 | 27 |
| 0225 | 22 | 8.00 | 2 | 34 |
| 0228 | 22 | 8.10 | 3 | 34 |
| 0231 | 22 | 9.35 | 5 | 34 |
| 0234 | 22 | 9.95 | 6 | 34 |
| 0237 | 22 | 16.40 | 10 | 34 |
| 0240 | 22 | 22.00 | 20 | 34 |
| 0243 | 22 | 22.60 | 30 | 34 |
| 0252 | 27 | 8.40 | 2 | 41 |
| 0255 | 27 | 8.75 | 3 | 41 |
| 0258 | 27 | 10.80 | 5 | 41 |
| 0261 | 27 | 11.70 | 6 | 41 |

(W378)

| Order No. | Hole mm | 3632 | Width mm | Outer Ø mm |
|---|---|---|---|---|
| 0264 | 27 | 14.45 | 10 | 41 |
| 0267 | 27 | 19.45 | 20 | 41 |
| 0270 | 27 | 27.00 | 30 | 41 |
| 0279 | 32 | 9.55 | 2 | 47 |
| 0282 | 32 | 11.15 | 3 | 47 |
| 0285 | 32 | 12.50 | 5 | 47 |
| 0288 | 32 | 13.55 | 6 | 47 |
| 0291 | 32 | 17.45 | 10 | 47 |
| 0294 | 32 | 24.80 | 20 | 47 |
| 0297 | 32 | 29.90 | 30 | 47 |
| 0306 | 40 | 12.65 | 2 | 55 |
| 0309 | 40 | 12.80 | 3 | 55 |
| 0312 | 40 | 15.80 | 5 | 55 |
| 0315 | 40 | 16.90 | 6 | 55 |
| 0318 | 40 | 22.20 | 10 | 55 |
| 0321 | 40 | 30.50 | 20 | 55 |
| 0324 | 40 | 37.00 | 30 | 55 |

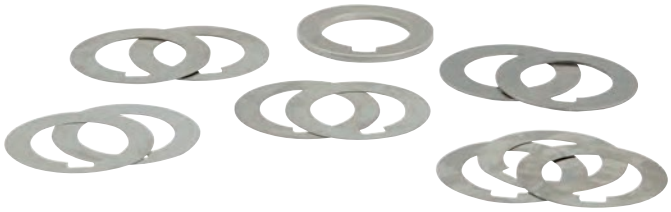
(W378)

## Milling cutter arbour ring set, Form A

**Design: DIN 2084,** spring steel strap, hardened.

DIN 2084 | Form A

| Order No. | Hole mm | 3634 | Content |
|---|---|---|---|
| 0201 | 16 | 75.80 | 35-piece |
| 0204 | 22 | 86.30 | 35-piece |
| 0207 | 27 | 95.20 | 35-piece |
| 0210 | 32 | 105.50 | 35-piece |
| 0213 | 40 | 132.50 | 35-piece |
| 0216 | 16 | 108.00 | 60-piece |
| 0219 | 22 | 132.00 | 60-piece |
| 0222 | 27 | 151.50 | 60-piece |
| 0225 | 32 | 185.50 | 60-piece |
| 0228 | 40 | 208.00 | 60-piece |
| | | (W378) | |



**Assortment of 35 pieces**

Content – Ring width mm/piece

| 0.03 | 0.04 | 0.05 | 0.10 | 0.20 | 0.30 | 0.50 | 0.60 | 1.00 | 1.50 |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 5 | 5 | 6 | 3 | 3 | 3 | 2 | 2 | 1 |

**Assortment of 60 pieces**

Content – Ring width mm/piece

| 0.03 | 0.04 | 0.05 | 0.10 | 0.20 | 0.30 | 0.50 | 0.60 | 1.00 | 1.50 |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 10 | 10 | 10 | 5 | 5 | 4 | 3 | 2 | 1 |

## Chuck key

**Application:** For standard clamping nut.

**Note:** Clamping nuts are found on 📖 3/103.

| Order No. | For size | 3648 |
|---|---|---|
| 0016 | ER16 | 11.75 |
| 0025 | ER25 | 12.10 |
| 0032 | ER32 | 16.15 |
| 0040 | ER40 | 22.20 |
| | | (W378) |

## Collet key made of special steel

**Design:** Hardened and galvanised.

**Application:** For clamping nuts ER.

| Order No. | For size | 3643 AMF |
|---|---|---|
| 0016 | ER16 | 10.45 |
| 0020 | ER20 | 11.00 |
| 0025 | ER25 | 12.00 |
| 0032 | ER32 | 16.80 |
| 0040 | ER40 | 22.10 |
| | | (W342) |

## Collet key with adapter for torque spanner

**Design:** Made of special steel, hardened and galvanised, drive 1/2 in. square.

**Application:** For clamping nuts ER. Prevent spindle damage through controlled tightening in the machine when changing tools.

**Note:** Torque spanner setting value depends on the extension length S. Torque wrench is found on 📖 6/106.

| Order No. | For size | 3643 AMF | S mm |
|---|---|---|---|
| 0116 | ER16 | 35.70 | 45 |
| 0125 | ER25 | 36.70 | 60 |
| 0132 | ER32 | 42.60 | 60 |
| 0140 | ER40 | 47.90 | 60 |
| | | (W342) | |

## Mini collet key

| Order No. | For size | 3664 |
|---|---|---|
| 0011 | ER11 | 13.10 |
| 0016 | ER16 | 14.10 |
| 0020 | ER20 | 15.65 |
| 0025 | ER25 | 17.15 |
| | | (W378) |

## Precision torque wrench Power Collet Chuck

**Design:** Two-armed torque wrenches for optimal power transmission due to even introduction of forces, controlled concentricity, no one-sided clamping. For highest clamping and repeat accuracy with dial gauge. Maximum torque for highest clamping forces, no small clamping diameters overload.

| Order No. | Size | 3648 HAIMER |
|---|---|---|
| 0100 | ER 16/ER 25/ ER 32 | 465.00 (W392) |

## Socket for torque spanners

| Order No. | For collet chuck | 3648 HAIMER |
|---|---|---|
| 0116 | ER16 | 80.00 |
| 0125 | ER25 | 80.00 |
| 0132 | ER32 | 80.00 (W392) |

## Chuck key

**Application:** For cutter retaining screws.

| Order No. | Pin Ø mm | 3654 | Thread |
|---|---|---|---|
| 0016 | 16 | 9.90 | M8 |
| 0022 | 22 | 12.90 | M10 |
| 0027 | 27 | 14.90 | M12 |
| 0032 | 32 | 19.85 | M16 |
| 0040 | 40 | 27.20 (W378) | M20 |

## Cutter retaining screw

**Application:** For milling head mountings and combination attachment mill arbors.

**3650** Without internal cooling. Cross handle.

**3675** With internal cooling. Hexagon socket.

DIN 6367

| Order No. | For mandrel Ø mm | 3650 | 3675 | Thread | Head Ø mm | Head strength mm | A/F |
|---|---|---|---|---|---|---|---|
| 0016 | 16 | 5.60 | 15.55 | M8 x 16 | 20 | 6 | 5 |
| 0022 | 22 | 5.60 | 17.10 | M10 x 22 | 28 | 7 | 6 |
| 0027 | 27 | 8.25 | 18.65 | M12 x 27 | 35 | 8 | 8 |
| 0032 | 32 | 11.80 | 21.80 | M16 x 32 | 42 | 9 | 10 |
| 0040 | 40 | 17.00 (W378) | 24.90 (W378) | M20 x 40 | 52 | 10 | 12 |

3650

3675

## Driving ring

**Application:** For combi shell end mill arbours.

| Order No. | For pin Ø mm | 3652 |
|---|---|---|
| 0016 | 16 | 12.55 |
| 0022 | 22 | 16.05 |
| 0027 | 27 | 17.25 |
| 0032 | 32 | 21.90 |
| 0040 | 40 | 26.60 (W378) |

## Feather key sliding block

**Application:** For combi shell end mill arbours.

| Order No. | For pin Ø mm | 3656 |
|---|---|---|
| 0016 | 16 | 3.54 |
| 0022 | 22 | 3.54 |
| 0027 | 27 | 3.54 |
| 0032 | 32 | 3.78 |
| 0040 | 40 | 3.94 |
| | | (W378) |

## Hexagon socket replacement screw

**Application:** For collet Weldon and Whistle Notch system.

| Order No. | Size | 3642 | Thread |
|---|---|---|---|
| 0060 | 6 | 1.30 | M6 x 10 |
| 0080 | 8 | 1.30 | M8 x 10 |
| 0100 | 10 | 1.30 | M10 x 12 |
| 0120 | 12/14 | 2.80 | M12 x 16 |
| 0160 | 16/18 | 2.80 | M14 x 16 |
| 0200 | 20 | 2.80 | M16 x 16 |
| 0250 | 25 | 6.05 | M18 x 20 |
| 0320 | 32 | 6.05 | M20 x 20 |
| | | (W378) | |

## Sealing plug

**Application:** For sealing the coolant supply on the collar.

**Note:** Use each plug only once. Only for HAIMER tool holders.

| Order No. | For tool holder | 3642 HAIMER | Content Piece |
|---|---|---|---|
| 4045 | SK 40/BT 40 | 10.00 | 50 |
| 4046 | SK 50/BT 50 | 14.00 | 50 |
| | | (W394) | |

## Coolant sealing pipe

**Design:** With 2 sealing rings, special O-ring up to 120 bar.

| Order No. | For HSK | 3678 |
|---|---|---|
| 0030 | A 50/E 50 | 8.55 |
| 0035 | A 63 | 8.55 |
| 0040 | A 100 | 11.35 |
| | | (W378) |

## Precision coolant pipe

**Design:** 2 O-rings for easy movement of the pipe. **Special coating** with extremely smooth surface, up to 120 bar.

**Application:** Necessary for all HSK machines with internal cooling. Protects the spindle sealing system from soiling.

| Order No. | For HSK | 3661 HAIMER |
|---|---|---|
| 0030 | A 50/E 50 | 11.00 |
| 0035 | A 63 | 11.00 |
| 0040 | A 100 | 13.50 |
| | | (W394) |

## Socket spanner

**Application:** For connecting or replacing coolant pipes in high-speed machining centres with HSK shank.

| Order No. | For HSK | 3678 |
|---|---|---|
| 0050 | 50 | 22.70 |
| 0055 | 63 | 22.70 |
| 0060 | 100 | 25.70 |
| | | (W378) |

## Socket spanner

**Application:** For connecting or replacing coolant pipes in high-speed machining centres with HSK shank.

| Order No. | For HSK | 3661 HAIMER |
|---|---|---|
| 0050 | 50 | 37.00 |
| 0055 | 63 | 38.00 |
| 0060 | 100 | 44.00 |
| | | (W394) |

## Taper wiper - hard wood

**Design:** Leather trimming with hard wood handle.

**Application:** For cleaning tool holding fixtures on machine spindles, taper sleeves or taper gauges.

| Order No. | For size | 3660 format |
|---|---|---|
| 0005 | MK 1 | 6.90 |
| 0010 | MK 2 | 6.90 |
| 0015 | MK 3 | 8.50 |
| 0020 | MK 4 | 12.20 |
| 0025 | MK 5 | 15.30 |
| 0030 | SK 40 | 13.00 |
| 0035 | SK 50 | 18.35 |
| | | (W378) |

3660 0005

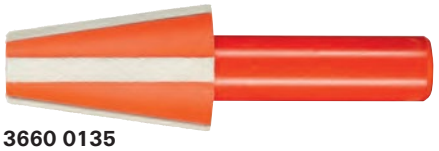
3660 0030

## Taper wiper - plastic

**Design:** Leather trimming with hard PVC handle. Moisture and fluctuations in temperature have no effect on the stability.

**Application:** For cleaning tool holding fixtures on machine spindles, taper sleeves or taper gauges.

| Order No. | For size | 3660 format |
|---|---|---|
| 0110 | MK 1 | 9.40 NEW |
| 0115 | MK 2 | 10.80 NEW |
| 0120 | MK 3 | 14.20 NEW |
| 0125 | MK 4 | 20.50 NEW |
| 0130 | MK 5 | 29.90 NEW |
| 0135 | SK 40 | 20.20 NEW |
| 0140 | SK 50 | 36.30 NEW |
| 0063 | HSK 63 | 49.70 |
| 0100 | HSK 100 | 68.80 |
| | | (W378) |



3660 0135

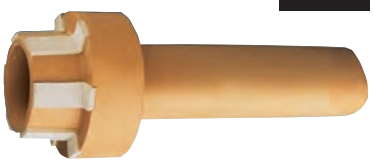
3660 0125

## Taper wiper

**Design:** Leather trimming with plastic handle.

**Application:** For cleaning tool holding fixtures on machine spindles, taper sleeves or taper gauges.

| Order No. | For size | 3662 HAIMER |
|---|---|---|
| 0201 | HG 01 | 61.00 |
| 0202 | HG 02 | 70.00 |
| 0203 | HG 03 | 77.00 |
| | | (W394) |



## Retention stud

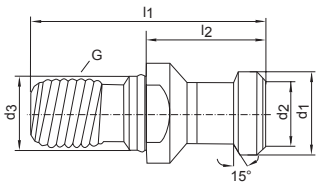
**Design:** Hardened in operation, with a hardness of 58 ± 2 HRC, hardness penetration depth 0.5-0.8. Thread is soft-rolled to DIN, ground parallel and burnished.

**Application:** For tools with taper shank DIN 69871 and JIS 6339 (MAS BT) in machining centres and CNC machines.

format professional quality

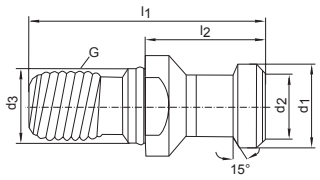
### DIN 69872 A

| Order No. | SK | 3685 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 40 | 6.80 | 19 | 14 | 17 | M16 | 54 | 26 | 15 |
| 0010 | 50 | 9.50 (W380) | 28 | 21 | 25 | M24 | 74 | 34 | 15 |



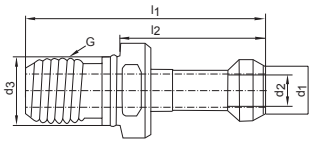

### DIN 69872 B

| Order No. | SK | 3685 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0015 | 40 | 6.80 | 19 | 14 | 17 | M16 | 54 | 26 | 15 |
| 0020 | 50 | 9.50 (W380) | 28 | 21 | 25 | M24 | 74 | 34 | 15 |



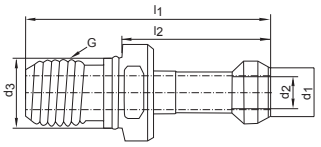

### JIS B 6339, without hole

| Order No. | BT | 3685 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0035 | 40 | 6.80 | 15 | 10 | 17 | M16 | 60 | 35 | 45 |
| 0040 | 40 | 6.80 | 15 | 10 | 17 | M16 | 60 | 35 | 60 |
| 0045 | 40 | 6.80 (W380) | 15 | 10 | 17 | M16 | 60 | 35 | 90 |



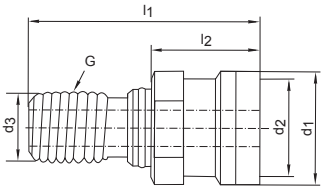

### JIS B 6339, with through hole

| Order No. | BT | 3691 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0035 | 40 | 6.80 | 15 | 10 | 17 | M16 | 60 | 35 | 45 |
| 0040 | 40 | 6.80 | 15 | 10 | 17 | M16 | 60 | 35 | 60 |
| 0045 | 40 | 6.80 (W380) | 15 | 10 | 17 | M16 | 60 | 35 | 90 |



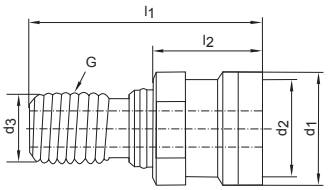

### Ott ring groove with through-hole

| Order No. | SK | 3685 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0050 | 40 | 7.50 (W380) | 25 | 21.1 | 17 | M16 | 53 | 25 | 15 |



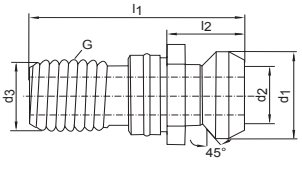

### Ott ring groove with internal

| Order No. | SK | 3685 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0055 | 40 | 8.10 (W380) | 25 | 21.1 | 17 | M16 | 53 | 25 | 15 |



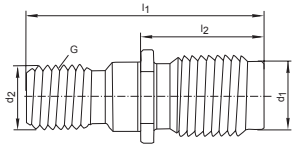

### ISO 7388 II B with through-hole

| Order No. | SK | 3685 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0025 | 40 | 6.80 | 18.95 | 12.95 | 17 | M16 | 44.5 | 16.4 | 45 |
| 0030 | 50 | 9.50 (W380) | 29.1 | 19.6 | 25 | M24 | 65.5 | 25.55 | 45 |




### Buttress thread bolt, without hole

| Order No. | SK | 3685 format | $d_1$ mm | $d_2$ mm | $d_3$ mm | G | $l_1$ mm | $l_2$ mm | Deg. |
|---|---|---|---|---|---|---|---|---|---|
| 0060 | 40 | 14.50 (W380) | S 20 x 2 | 17 | – | M16 | 56.2 | 28 | – |



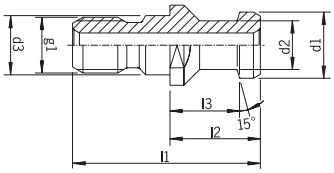
## Precision retention stud

**Design:** Manufactured from special high-strength steel, elaborate heat treatment in several steps. Specific tempering of the most heavily stressed parts, high impact strength.
All functional surfaces finely machined after hardening.

**The retention studs provide highest safety and reliability.**

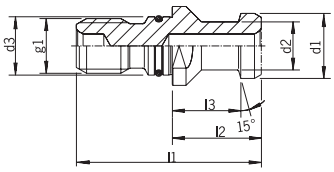
### DIN 69872 A

| Order No. | SK | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 |
|---|---|---|---|---|---|---|---|---|---|
| 0105 | 40 | 10.00 | 19 | 14 | 17 | 54 | 26 | 20 | M16 |
| 0110 | 50 | 16.00 (W394) | 28 | 21 | 25 | 74 | 34 | 25 | M24 |



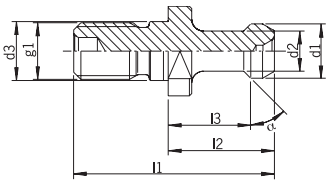

### DIN 69872 B

| Order No. | SK | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 |
|---|---|---|---|---|---|---|---|---|---|
| 0115 | 40 | 10.00 | 19 | 14 | 17 | 54 | 26 | 20 | M16 |
| 0120 | 50 | 16.00 (W394) | 28 | 21 | 25 | 74 | 34 | 25 | M24 |



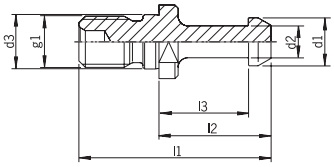

### JIS B 6339, without hole

| Order No. | BT | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 | α |
|---|---|---|---|---|---|---|---|---|---|---|
| 0125 | 40 | 10.00 | 15 | 10 | 17 | 60 | 35 | 28 | M16 | 45 |
| 0130 | 50 | 16.00 (W394) | 23 | 17 | 25 | 85 | 45 | 35 | M24 | 45 |



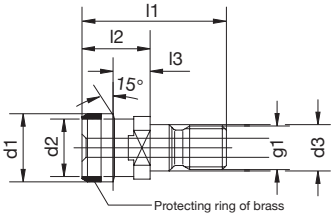

### MORI-SEIKI MAS 90°

| Order No. | BT | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 |
|---|---|---|---|---|---|---|---|---|---|
| 0135 | 40 | 10.00 | 15 | 10 | 17 | 60 | 35 | 28 | M16 |
| 0140 | 50 | 16.00 (W394) | 23 | 17 | 25 | 85 | 45 | 35 | M24 |



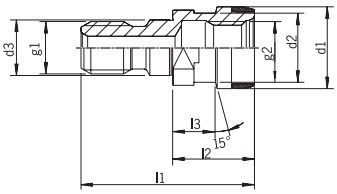

### Ott ring groove with through hole, brass protective ring

| Order No. | SK | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 |
|---|---|---|---|---|---|---|---|---|---|
| 0145 | 40 | 15.00 (W394) | 25 | 21.1 | 17 | 53 | 25 | 13.6 | M16 |



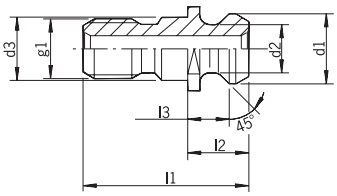

### Ott ring groove with internal thread, brass

| Order No. | SK | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 | G2 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0155 | 40 | 15.00 | 25 | 21.1 | 17 | 53 | 25 | 13.6 | M16 | M16 |
| 0160 | 50 | 17.00 (W394) | 39.3 | 32 | 25 | 65 | 25 | 13.35 | M24 | M24 |



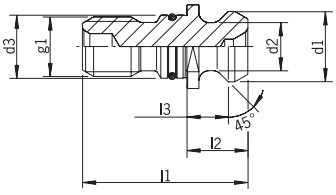

### ISO 7388 B with through-hole

| Order No. | SK | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 |
|---|---|---|---|---|---|---|---|---|---|
| 0165 | 40 | 10.00 | 18.95 | 12.95 | 17 | 44.5 | 16.4 | 11.15 | M16 |
| 0170 | 50 | 16.00 (W394) | 29.10 | 19.6 | 25 | 65.5 | 25.55 | 17.95 | M24 |



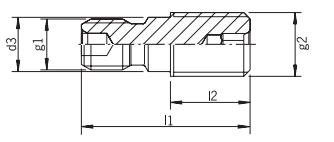

### ISO 7388 B sealed

| Order No. | SK | 3685 HAIMER | d1 mm | d2 mm | d3 mm | l1 mm | l2 mm | l3 mm | G1 |
|---|---|---|---|---|---|---|---|---|---|
| 0175 | 40 | 10.00 | 18.95 | 12.95 | 17 | 44.5 | 16.4 | 11.15 | M16 |
| 0180 | 50 | 16.00 (W394) | 29.1 | 19.6 | 25 | 65.5 | 25.55 | 17.95 | M24 |




### Retention stud with buttress thread S 20

| Order No. | SK | 3685 HAIMER | d3 mm | l1 mm | l2 mm | G1 | G2 |
|---|---|---|---|---|---|---|---|
| 0185 | 40 | 24.50 (W394) | 17 | 53 | 25 | M16 | S 20 x 2 |



## Tapping device

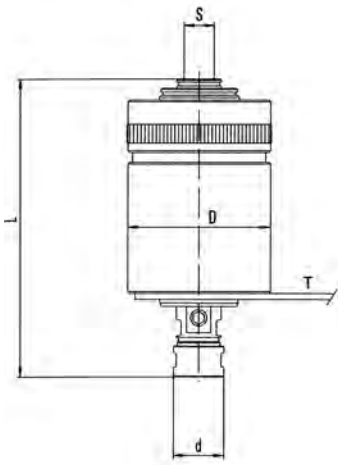
TAPMATIC

**Design: With adjustable friction clutch and quick reverse.** Length compensation compensates for the difference between machine advance and thread pitch. The integrated adjustable thrust ensures immediate thread cutting. You save time during the reversing action because the tap returns faster (1.75:1). Suitable for **drives with clockwise rotation**. The shanks (Morse tapers, cylindrical shanks or steep tapers) are interchangeable and allow insertion and screwing in respectively. The driving square for the tap is adjustable.

**Application:** For thread cutting on all hand-fed bench drills and box column drills and where the rotational direction cannot be reversed.

**Scope of delivery:** Thread cutting device with retaining bracket, 2 chuck keys and Allen key.

**Note:** The precision collet 📖 3/113 and plug-in cone need to be ordered separately. Thread cutting devices for left-hand threads upon request.



| Order No. | Cutting range in steel | 1873 TAPMATIC | Tool holder S, internal taper | Collets | Speed max. $min^{-1}$ | Pull-out T mm | Dimensions D mm | Dimensions d mm | Dimensions L mm | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | M1.4 - M7 | 568.50 | B 16 | J115, J116, J117 | 2000 | 3.5 | 48 | 19 | 113 | 0.5 |
| 0010 | M3 - M12 | 850.50 | B 16 | J420, J421, J422, J423 | 1500 | 6 | 70 | 27 | 153 | 1.4 |
| 0015 | M5 - M18 | 1152.00 | B 18 | J440, J441, J443, J445 | 1200 | 9 | 76 | 36 | 176 | 2.1 |
| 0020 | M10 - M30 | 1866.00 (W180) | JT 4 | J461, J462 | 600 | 13 | 105 | 57 | 219 | 5 |

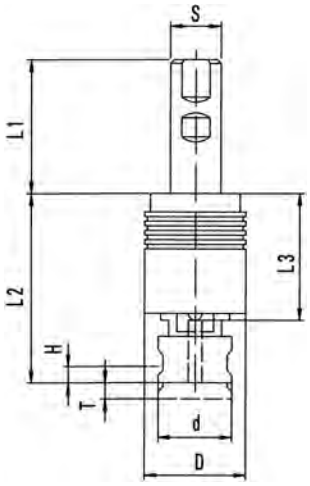
## Tapping chuck with cylindrical shank

TAPMATIC

**Design:** Length compensation on tension and compression, compensating for the difference between machine advance and thread pitch. The integrated adjustable thrust ensures immediate thread cutting. The driving square for the tap is adjustable, with modular steep taper fixture for fitting and cylindrical shank with surface to DIN 1835 B and E. Various steep tapers can be modularly fitted.

**Application:** Ideal for use in CNC machining centres or feed units with reversing of rotation.

**Note:** Please order multi-range collet 📖 3/113 separately.



| Order No. | Cutting range in steel | 1879 TAPMATIC | Cylindrical shank S mm | Collets | Length compensation, tension T mm | Length compensation, compression H mm | Dimensions D mm | Dimensions d mm | Dimensions L1 mm | Dimensions L2 mm | Dimensions L3 mm | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | M1.4 - M7 | 325.50 | 20 | J116, J117 | 4.5 | 5 | 27 | 19 | 50 | 53 | 26 | 0.2 |
| 0010 | M3 - M12 | 374.00 | 25 | J421, J422 | 7 | 7 | 38 | 27 | 56 | 71 | 36 | 0.4 |
| 0015 | M5 - M18 | 437.50 | 25 | J440, J443 | 11 | 11 | 47.5 | 37 | 56 | 96 | 56 | 0.8 |
| 0020 | M10 - M30 | 690.00 (W180) | 25 | J461, J462 | 17 | 17 | 63.5 | 57 | 56 | 128 | 78 | 2 |

## Precision collet Rubber-Flex

**Design:** The lamellas move parallel across the whole clamping range which results in constant concentricity. With high radial clamping force, the rubber is resistant to cooling lubricants and temperatures up to 100 °C.

**Application:** For bridging large diameters when clamping tools with cylindrical shank. For use in thread cutting devices, drill holders and tool holders.

FAHRION® PRAZISION

| Order No. | Collet diameter mm | 1869 FAHRION® PRAZISION | Collet type |
|---|---|---|---|
| 0115 | 1 – 2.5 | 33.70 | 710E RFJ115 |
| 0116 | 2.5– 4.5 | 33.70 | 710E RFJ116 |
| 0117 | 4.5– 6.5 | 33.70 | 710E RFJ117 |
| 0420 | 4.5– 8 | 34.30 | 715E RFJ420 |
| 0421 | 3.5– 6.5 | 34.30 | 715E RFJ421 |
| 0422 | 6.5–10 | 34.30 | 715E RFJ422 |
| 0423 | 2 – 4.5 | 34.30 (W357) | 715E RFJ423 |

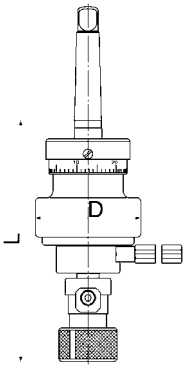
| Order No. | Collet diameter mm | 1869 FAHRION® PRAZISION | Collet type |
|---|---|---|---|
| 0440 | 7 –13 | 38.00 | 750E RFJ440 |
| 0441 | 4.5– 9.7 | 37.90 | 750E RFJ441 |
| 0443 | 2.8– 7 | 38.00 | 750E RFJ443 |
| 0445 | 10 –15 | 40.60 | 750E RFJ445 |
| 0461 | 9.1–16 | 88.60 | 766E RFJ461 |
| 0462 | 16 –23 | 88.60 (W357) | 766E RFJ462 |

## Thread cutting device with Morse taper

**Design:** You save time during the reversing action because the tap returns faster thanks to the planetary gear (2:1). Immediately effective reversal on changing feed direction. Continuous setting of the safety clutch by turning the sleeve nut with guide value scale. Simple turning of the cam disc enables changing the cam coupling to surface friction for small threads. **Suitable for both right-hand and left-hand threads.** The continuously clamping jaws can accommodate all tap shanks within the cutting range, including those with intermediate and inch sizes.

**Application:** For thread cutting on all hand-fed bench drills and box column drills and where the rotational direction cannot be reversed.

FAHRION® PRAZISION



| Order No. | Cutting range in steel | 1878 FAHRION® PRAZISION | MK | Clamping range mm | Speed max. $min^{-1}$ | D mm | L mm |
|---|---|---|---|---|---|---|---|
| 0005 | M3 - M10 | 383.00 | 1 | 2.5–10 | 600 | 69 | 156 |
| 0010 | M3 - M10 | 383.00 | 2 | 2.5–10 | 600 | 69 | 158 |
| 0015 | M6 - M16 | 522.00 | 2 | 4.5–12.5 | 400 | 82 | 183 |
| 0020 | M6 - M16 | 522.00 | 3 | 4.5–12.5 | 400 | 82 | 183 |
| 0025 | M14 - M27 | 822.00 | 3 | 11 –22.4 | 250 | 105 | 244 |
| 0030 | M14 - M27 | 822.00 (W180) | 4 | 11 –22.4 | 250 | 105 | 246 |

## Tapping device

**Design:** Maintenance-free and can be used for left and right hand threads.

**Application:** Automatic thread cutting on drilling machines with manual feed.

| Order No. | For taps | 1872 | MK | Length compensation, tension mm | Notching path mm | For insert type |
|---|---|---|---|---|---|---|
| 1201 | M3 - M12 | 478.00 | 1 | 12.5 | 6 | FE1/FES1 |
| 1202 | M3 - M12 | 468.50 | 2 | 12.5 | 6 | FE1/FES1 |
| 1203 | M3 - M12 | 468.50 | 3 | 12.5 | 6 | FE1/FES1 |
| 2002 | M8 - M20 | 566.50 | 2 | 16.5 | 8 | FE2/FES2 |
| 2003 | M8 - M20 | 556.00 | 3 | 16.5 | 8 | FE2/FES2 |
| 2004 | M8 - M20 | 556.00 (W289) | 4 | 16.5 | 8 | FE2/FES2 |

**Tapping chuck with minimum length compensation SYNCHRO T**

The feed axis is synchronised with spindle rotary movement on CNC machining centres. This means that threads with tool mounts without length compensation can be cut ("rigid tapping") with these synchronised spindles. Practice, however, has shown that there are synchronisation faults. High axial forces reducing the service life by high flange friction develop as a result when rigid tapping chucks are being used leading to threads which are not true to gauge size or result in inaccurate threads. This problem is eliminated using tapping chucks with minimum length compensation.

**SYNCHRO T tapping chucks technical features:**

- minimum length compensation on tension/compression (±0.5 mm)
- high radial rigidity due to double bearing
- high concentricity
- high clamping force through clamping using collet chuck taps with female square
- separate compression/tension mechanism
- defined, adjustable compression/tension forces
- compact, wear-free design
- long service life
- internal coolant supply
- no clamping nuts with sealing discs necessary when using coolants, because the FAHRION tapping collets GERC-GBD are delivered with sealing plugs (usable up to 120 bar).
- minimum quantity lubrication (MQL) possible upon request



## Tapping chuck with minimum length compensation SYNCHRO T

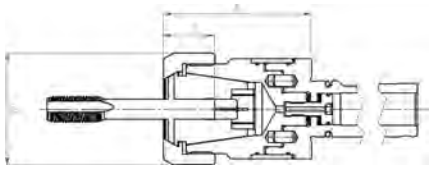
**Design:** With cylindrical shank to **DIN 1835 B+E.**

**Scope of delivery:** Tapping chuck with clamping nut ST-GB.

**Note:** Tightening occurs by means of roller spanner (Order No. 3657 on 📖 3/76). Suitable collets can be found on 📖 3/102.

DIN 1835 B+E | Form AD

FAHRION® PRAZISION



| Order No. | For taps | 1871 FAHRION® PRAZISION | Mounting shank Ø mm | Outer Ø D mm | Projection length A mm | Collet |
|---|---|---|---|---|---|---|
| 1100 | M3 - M12 | 270.00 | 25 | 30 | 58 | GERC16 |
| 1110 | M3 - M20 | 278.00 | 25 | 40 | 65 | GERC25 |
| 1120 | M4 - M27 | 323.00 | 25 | 50 | 87 | GERC32 |
| 1130 | M4 - M33 | 323.00 (W181) | 32 | 63 | 109 | GERC40 |

## Tapping chuck with minimum length compensation SYNCHRO T

**Design:** With steep taper shank in line with **DIN 69871, Form AD/B.**

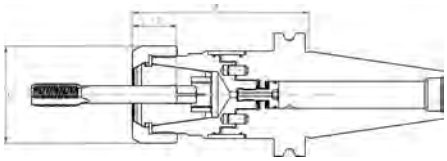
**Balancing quality:** G6.3 12000 min$^{-1}$.

Scope of delivery: **Tapping chuck with clamping nut ST-GB.**

Note: **Tightening occurs by means of roller spanner (Order No. 3657 on** 📖 3/76). Suitable collets can be found on 📖 3/102.

DIN 69871 | Form AD/B

FAHRION® PRAZISION



| Order No. | For taps | 1871 FAHRION® PRAZISION | SK | Outer Ø D mm | Projection length A mm | Collet |
|---|---|---|---|---|---|---|
| 1140 | M3 - M12 | 414.00 | 40 | 30 | 79 | GERC16 |
| 1150 | M3 - M20 | 424.00 | 40 | 40 | 84 | GERC25 |
| 1160 | M4 - M27 | 424.00 | 40 | 50 | 95 | GERC32 |
| 1170 | M4 - M33 | 424.00 (W181) | 40 | 63 | 105 | GERC40 |

## Tapping chuck with minimum length compensation SYNCHRO T

**Design:** With steep taper shank in line with **JIS B 6339 (MAS-BT), Form AD/B.**

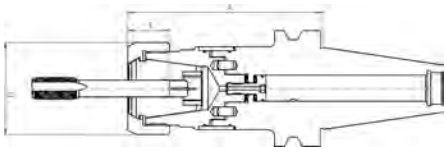
**Balancing quality:** G6.3 12000 min$^{-1}$.

Scope of delivery: **Tapping chuck with clamping nut ST-GB.**

Note: **Tightening occurs by means of roller spanner (Order No. 3657 on** 📖 3/76). Suitable collets can be found on 📖 3/102.

JIS B 6339 MAS/BT | Form AD/B

FAHRION® PRAZISION



| Order No. | For taps | 1871 FAHRION® PRAZISION | BT | Outer Ø D mm | Projection length A mm | Collet |
|---|---|---|---|---|---|---|
| 1180 | M3 - M12 | 414.00 | 40 | 30 | 84 | GERC16 |
| 1190 | M3 - M20 | 424.00 | 40 | 40 | 89 | GERC25 |
| 1200 | M4 - M27 | 422.40 | 40 | 50 | 110 | GERC32 |
| 1210 | M4 - M33 | 424.00 (W181) | 40 | 63 | 115 | GERC40 |

## Tapping chuck with minimum length compensation SYNCHRO T

**Design:** With hollow shaft taper to **DIN 69893, Form A,** with internal cooling.

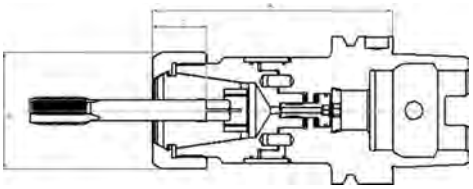
DIN 69893 | Form A

FAHRION® PRAZISION

**Balancing quality: G6.3 18000 min$^{-1}$.**

**Scope of delivery:** Tapping chuck with clamping nut ST-GB.

**Note:** Tightening occurs by means of roller spanner (Order No. 3657 on 📖 3/76). Suitable collets can be found on 📖 3/102.



| Order No. | For taps | 1871 FAHRION® PRAZISION | HSK | Outer Ø D mm | Projection length A mm | Collet |
|---|---|---|---|---|---|---|
| 1220 | M3 - M12 | 439.00 | 63 | 30 | 89 | GERC16 |
| 1230 | M3 - M12 | 599.00 | 100 | 30 | 95 | GERC16 |
| 1240 | M3 - M20 | 468.00 | 63 | 40 | 94 | GERC25 |
| 1250 | M3 - M20 | 561.00 | 100 | 40 | 101 | GERC25 |
| 1260 | M4 - M27 | 488.00 | 63 | 50 | 105 | GERC32 |
| 1270 | M4 - M27 | 585.30 | 100 | 50 | 110 | GERC32 |
| 1280 | M4 - M33 | 488.00 | 63 | 63 | 134 | GERC40 |
| 1290 | M4 - M33 | 584.00 (W181) | 100 | 63 | 133 | GERC40 |

## Thread cutting tools

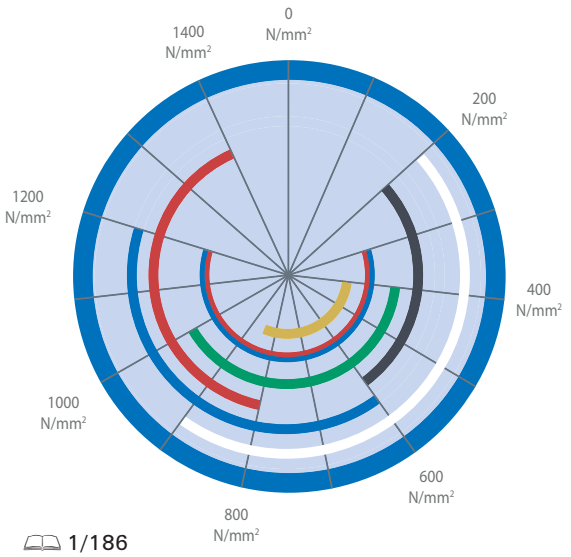
You will find an extensive overview of our thread cutting tool programme from 📖 1/152.

The thread cutting tool compass for fast orientation can be found on 📖 1/186.

📖 1/174

📖 1/170

📖 1/178




📖 1/186

📖 1/199

📖 1/214

## Thread cutting quick-change chuck

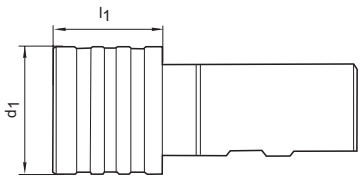
**Design:** The optimal and smooth-running length compensation on tension and compression compensates for the difference between machine advance and thread pitch.

The thread depth can be adjusted to ±0.1 mm. The safety clutch prevents tool breakage during difficult machining tasks in connection with inserts.

## Thread cutting quick-change chuck with elastic length compensation

**Design:** With cylindrical shank to **DIN 1835, Form B+E.**

DIN 1835 B+E | Form A

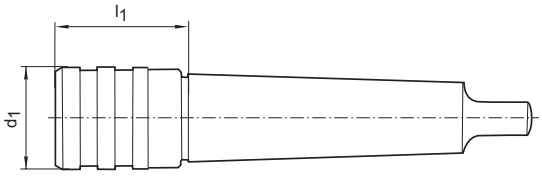


| Order No. | For taps | 1901 | Shank Ø mm | For insert type | Insert Ø mm | Length compensation, pressure mm | Length compensation, tension mm | Outer Ø $d_1$ mm | Projection length $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | M3 - M12 | 139.00 | 20 | FE1/FES1 | 19 | 7 | 7 | 38 | 41 |
| 0010 | M3 - M12 | 141.50 | 25 | FE1/FES1 | 19 | 7 | 7 | 38 | 41 |
| 0015 | M3 - M12 | 191.00 | 32 | FE1/FES1 | 19 | 7 | 7 | 38 | 41 |
| 0025 | M6 - M20 | 164.50 | 25 | FE2/FES2 | 31 | 12 | 12 | 55 | 63 |
| 0030 | M6 - M20 | 170.00 | 32 | FE2/FES2 | 31 | 12 | 12 | 55 | 63 |
| 0035 | M14 - M33 | 253.50 (W185) | 32 | FE3/FES3 | 48 | 17.5 | 17.5 | 79 | 97 |

## Thread cutting quick-change chuck with elastic length compensation

**Design:** With MK shank in line with **DIN 228-B, Form A.**

DIN ISO 228 | Form A

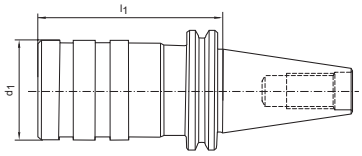


| Order No. | For taps | 1905 | MK | For inserts type | Insert Ø mm | Length compensation, pressure mm | Length compensation, tension mm | Outer Ø $d_1$ mm | Projection length $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | M3 - M12 | 127.50 | 2 | FE1/FES1 | 19 | 7 | 7 | 36 | 46 |
| 0010 | M3 - M12 | 132.00 | 3 | FE1/FES1 | 19 | 7 | 7 | 36 | 46 |
| 0015 | M6 - M20 | 134.00 | 3 | FE2/FES2 | 31 | 12 | 12 | 68 | 68 |
| 0020 | M6 - M20 | 145.00 | 4 | FES/FES2 | 31 | 12 | 12 | 70 | 70 |
| 0025 | M14 - M33 | 266.00 | 4 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 108 |
| 0030 | M14 - M33 | 296.50 (W185) | 5 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 103 |

## Thread cutting quick-change chuck with elastic length compensation

**Design:** With steep taper shank **DIN 69871, Form A.**

DIN 69871 | Form A

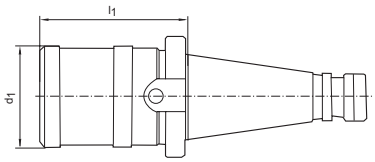


| Order No. | For taps | 1883 | SK | For insert type | Insert Ø mm | Length compensation, pressure mm | Length compensation, tension mm | Outer Ø $d_1$ mm | Projection length $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | M3 - M12 | 140.00 | 40 | FE1/FES1 | 19 | 7 | 7 | 38 | 59 |
| 0010 | M6 - M20 | 179.00 | 40 | FE2/FES2 | 31 | 12 | 12 | 54 | 97 |
| 0012 | M14 - M33 | 240.00 | 40 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 156 |
| 0015 | M3 - M12 | 231.50 | 50 | FE1/FES1 | 19 | 7 | 7 | 38 | 63 |
| 0020 | M6 - M20 | 260.50 | 50 | FE2/FES2 | 31 | 12 | 12 | 55 | 97 |
| 0022 | M14 - M33 | 325.00 (W185) | 50 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 140 |

## Thread cutting quick-change chuck with elastic length compensation

**Design:** With steep taper shank **DIN 2080, Form A.**

DIN 2080 | Form A

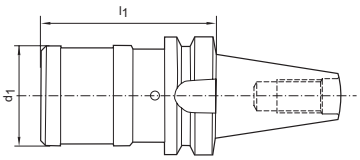


| Order No. | For taps | 1906 | SK | For insert type | Insert Ø mm | Length compensation, pressure mm | Length compensation, tension mm | Outer Ø $d_1$ mm | Projection length $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | M3 - M12 | 165.50 | 40 | FE1/FES1 | 19 | 7 | 7 | 36 | 50 |
| 0015 | M6 - M20 | 179.00 | 40 | FE2/FES2 | 31 | 12 | 12 | 53 | 78 |
| 0035 | M14 - M33 | 261.00 | 40 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 143 |
| 0010 | M3 - M12 | 223.50 | 50 | FE1/FES1 | 19 | 7 | 7 | 36 | 54 |
| 0020 | M6 - M20 | 227.50 | 50 | FE2/FES2 | 31 | 12 | 12 | 53 | 80 |
| 0040 | M14 - M33 | 325.00 (W185) | 50 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 130 |

## Thread cutting quick-change chuck with elastic length compensation

**Design:** With steep taper shank in line with **JIS B 6339 (MAS-BT), Form A.**

JIS B 6339 MAS/BT | Form A



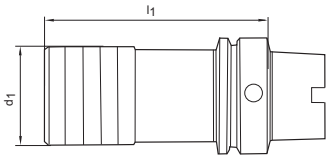
| Order No. | For taps | 1903 | BT | For insert type | Insert Ø mm | Length compensation, pressure mm | Length compensation, tension mm | Outer Ø $d_1$ mm | Projection length $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | M3 - M12 | 146.00 | 40 | FE1/FES1 | 19 | 7 | 7 | 36 | 67.5 |
| 0015 | M6 - M20 | 174.00 | 40 | FE2/FES2 | 31 | 12 | 12 | 53 | 94.5 |
| 0035 | M14 - M33 | 248.50 | 40 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 164.5 |
| 0010 | M3 - M12 | 230.00 | 50 | FE1/FES1 | 19 | 7 | 7 | 36 | 77 |
| 0020 | M6 - M20 | 240.00 | 50 | FE2/FES2 | 31 | 12 | 12 | 53 | 102.5 |
| 0040 | M14 - M33 | 325.00 (W185) | 50 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 142.5 |

## Thread cutting quick-change chuck with elastic length compensation

**Design:** With HSK shank in line with **DIN 69893, Form A.**

**Application:** For thread cutting, to nest thread cutting inserts FE/FES.

DIN 69893 | Form A



| Order No. | For taps | 1912 | HSK | For insert type | Insert Ø mm | Length compensation, pressure mm | Length compensation, tension mm | Outer Ø $d_1$ mm | Projection length $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | M3 - M12 | 321.00 ◊ | 63 | FE1/FES1 | 19 | 7.5 | 7.5 | 40 | 81 |
| 0010 | M6 - M20 | 342.00 ◊ | 63 | FE2/FES2 | 31 | 10 | 10 | 53 | 119 |
| 0015 | M14 - M33 | 445.50 | 63 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 176 |
| 0020 | M3 - M12 | 410.00 | 100 | FE1/FES1 | 19 | 7.5 | 7.5 | 40 | 90 |
| 0025 | M6 - M20 | 454.50 | 100 | FE2/FES2 | 31 | 10 | 10 | 53 | 138 |
| 0030 | M14 - M33 | 467.00 (W185) | 100 | FE3/FES3 | 48 | 17.5 | 17.5 | 78 | 190 |

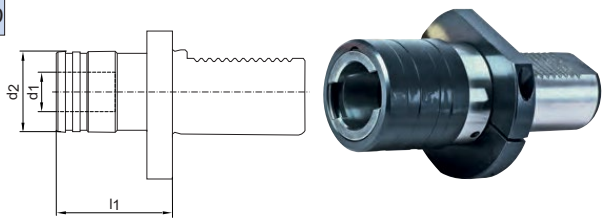
## Thread cutting quick-change chuck with elastic length compensation

**Design:** With VDI shank to **DIN 69880.**

**Application:** For thread cutting, for mounting thread cutting inserts FE/FES.

**Scope of delivery:** Coolant pipe and connection included in scope of delivery.

DIN 69880



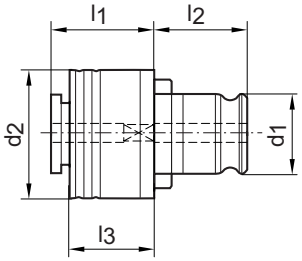

| Order No. | For taps | 1918 | VDI | For insert type | Insert Ø $d_1$ mm | Length compensation, pressure mm | Length compensation, tension mm | Outer Ø $d_2$ mm | Projection length $l_1$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | M3 - M12 | 208.50 | 30 | FE1/FES1 | 19 | 9 | 9 | 36 | 61.5 |
| 0015 | M6 - M20 | 249.50 | 30 | FE2/FES2 | 31 | 15 | 15 | 53 | 84 |
| 0010 | M3 - M12 | 219.00 | 40 | FE1/FES1 | 48 | 9 | 9 | 36 | 61.5 |
| 0020 | M6 - M20 | 249.50 | 40 | FE2/FES2 | 31 | 15 | 15 | 53 | 84 |
| 0040 | M3 - M12 | 253.00 | 50 | FE1/FES1 | 48 | 9 | 9 | 36 | 61.5 |
| 0050 | M6 - M20 | 291.00 | 50 | FE2/FES2 | 31 | 15 | 15 | 53 | 84 |
| 0060 | M14 - M33 | 379.50 (W185) | 50 | FE3/FES3 | 48 | 24 | 24 | 79 | 110 |

## Quick-change adapter FES for thread cutting quick-change chuck

**Design: With built-in torque-limiting safety clutch.**

**Application:** For blind holes.

| Type | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| FES 1 | 25 | 21.5 | 25 | 19 | 32 |
| FES 2 | 34 | 35 | 31 | 31 | 50 |
| FES 3 | 45 | 55.5 | 41 | 48 | 72 |



| Order No. | Insert type | 1887 | Drill Ø mm | Square mm | For tap DIN 371 | For tap DIN 376 | For tap JIS standard | For tap ISO standard |
|---|---|---|---|---|---|---|---|---|
| 0001 | FES 1 | 38.10 | 2.7 | 2.1 | M2 | – | – | – |
| 0004 | FES 1 | 38.10 | 3.5 | 2.7 | M3 | – | – | – |
| 0007 | FES 1 | 38.10 | 4 | 3 | M3.5 | – | – | – |
| 0016 | FES 1 | 38.10 | 4.5 | 3.4 | M4 | – | – | – |
| 0019 | FES 1 | 38.10 | 5 | 4 | – | – | M4 | – |
| 0022 | FES 1 | 38.10 | 6 | 4.9 | M5/M6 | – | – | – |
| 0025 | FES 1 | 38.10 | 6.3 | 5 | – | – | – | M6 |
| 0028 | FES 1 | 38.10 | 8 | 6.3 | M8 | – | – | M8 |
| 0031 | FES 1 | 38.10 | 7 | 5.5 | – | M10 | M10 | – |
| 0034 | FES 1 | 38.10 | 10 | 8 | M10 | – | – | – |
| 0037 | FES 1 | 38.10 (W185) | 9 | 7.1 | – | M12 | – | M12 |

| Order No. | Insert type | 1889 | Drill Ø mm | Square mm | For tap DIN 371 | For tap DIN 376 | For tap JIS standard | For tap ISO standard |
|---|---|---|---|---|---|---|---|---|
| 0001 | FES 2 | 51.20 | 6 | 4.9 | M6 | – | – | – |
| 0004 | FES 2 | 51.20 | 6.3 | 5 | – | – | – | M6 |
| 0007 | FES 2 | 51.20 | 8 | 6.3 | M8 | – | – | M8 |
| 0010 | FES 2 | 51.20 | 7 | 5.5 | – | M10 | M10 | – |
| 0013 | FES 2 | 51.20 | 10 | 8 | M10 | – | – | – |
| 0016 | FES 2 | 51.20 | 9 | 7.1 | – | M12 | – | M12 |
| 0019 | FES 2 | 51.20 | 11 | 9 | – | M14 | – | – |
| 0022 | FES 2 | 51.20 | 11.2 | 9 | – | – | – | M14 |
| 0025 | FES 2 | 51.20 | 12 | 9 | – | M16 | – | – |
| 0028 | FES 2 | 51.20 | 12.5 | 10 | – | – | M16 | M16 |
| 0031 | FES 2 | 51.20 | 14 | 11 | – | M18 | M18 | – |
| 0034 | FES 2 | 51.20 | 14 | 11.2 | – | – | – | M20 |
| 0037 | FES 2 | 51.20 | 16 | 12 | – | M20 | – | – |
| 0040 | FES 2 | 51.20 (W185) | 16 | 12.5 | – | – | – | M24 |

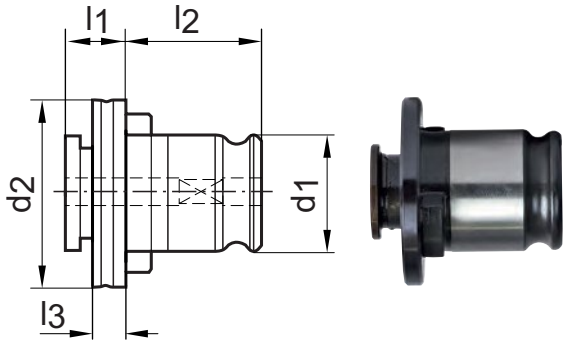
| Order No. | Insert type | 1913 | Drill Ø mm | Square mm | For tap DIN 371 | For tap DIN 376 | For tap JIS standard | For tap ISO standard |
|---|---|---|---|---|---|---|---|---|
| 0001 | FES 3 | 125.00 | 11 | 9 | – | M14 | – | – |
| 0004 | FES 3 | 125.00 | 12 | 9 | – | M16 | – | – |
| 0007 | FES 3 | 125.00 | 14 | 11 | – | M18 | M18 | – |
| 0010 | FES 3 | 125.00 | 16 | 12 | – | M20 | – | – |
| 0013 | FES 3 | 125.00 | 18 | 14.5 | – | M22 | – | – |
| 0016 | FES 3 | 125.00 | 18 | 14.5 | – | M24 | – | – |
| 0019 | FES 3 | 125.00 | 20 | 16 | – | M27 | – | – |
| 0022 | FES 3 | 125.00 | 22 | 18 | – | M30 | – | – |
| 0025 | FES 3 | 125.00 | 25 | 20 | – | M33 | – | – |
| 0028 | FES 3 | 125.00 (W185) | 28 | 22 | – | M36 | – | – |

## Quick-change adapter FE for thread cutting quick-change chuck

**Design: Without safety clutch.**

**Application:** For through holes.

| Type | $l_1$ mm | $l_2$ mm | $l_3$ mm | $d_1$ mm | $d_2$ mm |
|---|---|---|---|---|---|
| FE 1 | 7 | 21.5 | 4 | 19 | 30 |
| FE 2 | 11 | 35 | 5 | 31 | 48 |
| FE 3 | 14 | 21.5 | 6 | 48 | 70 |




| Order No. | Insert type | 1887 | Drill Ø mm | Square mm | For tap DIN 371 | For tap DIN 376 | For tap JIS standard | For tap ISO standard |
|---|---|---|---|---|---|---|---|---|
| 1001 | FE 1 | 17.40 | 2.8 | 2.1 | M2–M2.6 | M4 | – | – |
| 1004 | FE 1 | 17.40 | 3.5 | 2.7 | M3 | M5 | – | – |
| 1016 | FE 1 | 17.40 | 4.5 | 3.4 | M4 | M6 | – | – |
| 1019 | FE 1 | 17.40 | 5 | 4 | – | – | M4 | M5 |
| 1022 | FE 1 | 17.40 | 6 | 4.9 | M5/M6 | M8 | – | – |
| 1028 | FE 1 | 17.40 | 8 | 6.3 | M8 | M11 | – | M8/M10 |
| 1031 | FE 1 | 17.40 | 7 | 5.5 | M7 | M10 | M10 | – |
| 1034 | FE 1 | 17.40 | 10 | 8 | M10 | – | – | – |
| 1037 | FE 1 | 17.40 (W185) | 9 | 7.1 | – | M12 | – | M12 |

| Order No. | Insert type | 1889 | Drill Ø mm | Square mm | For tap DIN 371 | For tap DIN 376 | For tap JIS standard | For tap ISO standard |
|---|---|---|---|---|---|---|---|---|
| 1001 | FE 2 | 24.90 | 6 | 4.9 | M5/M6 | M8 | – | – |
| 1007 | FE 2 | 24.90 | 8 | 6.3 | M8 | M11 | – | M8/M10 |
| 1010 | FE 2 | 24.90 | 7 | 5.5 | M7 | M10 | M10 | – |
| 1013 | FE 2 | 24.90 | 10 | 8 | M10 | – | – | – |
| 1016 | FE 2 | 24.90 | 9 | 7.1 | – | M12 | – | M12 |
| 1019 | FE 2 | 24.90 | 11 | 9 | – | M14 | – | – |
| 1025 | FE 2 | 24.90 | 12 | 9 | – | M16 | – | – |
| 1031 | FE 2 | 24.90 | 14 | 11 | – | M18 | M18 | – |
| 1040 | FE 2 | 24.90 (W185) | 16 | 12 | – | M20 | – | – |

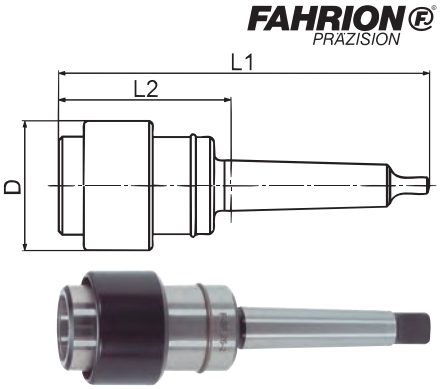
| Order No. | Insert type | 1913 | Drill Ø mm | Square mm | For tap DIN 371 | For tap DIN 376 | For tap JIS standard | For tap ISO standard |
|---|---|---|---|---|---|---|---|---|
| 1001 | FE 3 | 55.10 | 11 | 9 | – | M14 | – | – |
| 1004 | FE 3 | 55.10 | 12 | 9 | – | M16 | – | – |
| 1007 | FE 3 | 55.10 | 14 | 11 | – | M18 | M18 | – |
| 1010 | FE 3 | 55.10 | 16 | 12 | – | M20 | – | – |
| 1013 | FE 3 | 55.10 | 18 | 14.5 | – | M22/24 | – | – |
| 1016 | FE 3 | 55.10 | 20 | 16 | – | M27 | – | – |
| 1019 | FE 3 | 55.10 | 22 | 18 | – | M30 | – | – |
| 1022 | FE 3 | 55.10 | 25 | 20 | – | M33 | – | – |
| 1025 | FE 3 | 55.10 (W185) | 28 | 22 | – | M36 | – | – |

## Quick-change chuck SF

**Design:** This quick-change adapter can be used to quickly switch the machine from drilling to thread cutting. Morse cone mount with lug DIN 228-B.

**Application:** Application usually takes place on vertical drilling machines and drilling machines with **clockwise and anti-clockwise rotation.**

**Note:** With quick-change inserts E (drilling and countersinking) and GE (thread cutting) the machine can be quickly adapted.

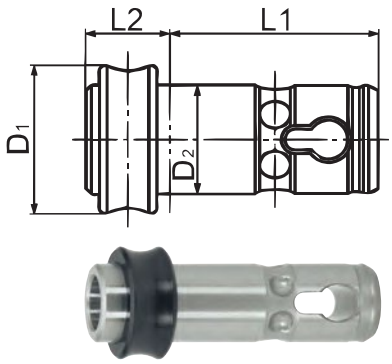



| Order No. | Type | 1923 FAHRION® PRAZISION | MK | For hole in steel Ø mm | L1 mm | L2 mm | D mm |
|---|---|---|---|---|---|---|---|
| 0020 | 26 | 158.50 | 2 | 24 | 150 | 75.5 | 48 |
| 0030 | 34 | 210.00 | 3 | 32 | 176 | 82 | 61 |
| 0040 | 46 | 312.00 (W315) | 4 | 50 | 222 | 104 | 86 |

## Tool insert E for quick-change chuck SF

**Design:** With inner cone and tang slot for clamping sleeves to DIN 6329.

**Application:** To mount clamping sleeves in line with DIN 6329 for clamping cylindrical twist drills with driver and countersink or as direct mount for cutting tools with morse cone (Order No. 1080 📖 1/42).

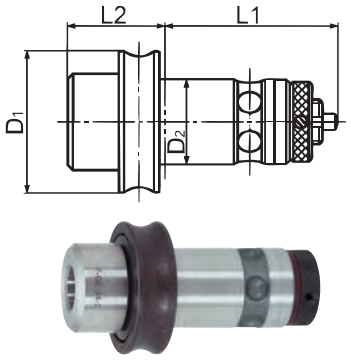



| Order No. | Type | 1924 FAHRION® PRAZISION | MK | L1 mm | L2 mm | $D_1$ mm | $D_2$ mm |
|---|---|---|---|---|---|---|---|
| 0001 | 26 | 94.50 | 1 | 60 | 18 | 37 | 26 |
| 0004 | 26 | 95.00 | 2 | 60 | 30 | 37 | 26 |
| 0007 | 34 | 117.50 | 1 | 65 | 22 | 46 | 34 |
| 0010 | 34 | 117.50 | 2 | 65 | 26 | 46 | 34 |
| 0013 | 34 | 117.50 | 3 | 65 | 43 | 46 | 34 |
| 0016 | 46 | 138.00 | 1 | 82 | 23 | 58 | 46 |
| 0019 | 46 | 138.00 | 2 | 82 | 23 | 58 | 46 |
| 0022 | 46 | 138.00 | 3 | 82 | 27 | 58 | 46 |
| 0025 | 46 | 142.10 (W315) | 4 | 82 | 53 | 58 | 46 |

## Tapping holder GE for quick-change chuck SF

**Design:** With inner cone as well as adjustable safety friction clutch, guide value scale and ejector pin.

**Application:** To mount clamping sleeves in line with DIN 6328 (Order No. 3476 📖 3/36) for the clamping of threaded bores with square driver.




| Order No. | Type | 1926 FAHRION® PRAZISION | MK | Cutting range | L1 mm | L2 mm | $D_1$ mm | $D_2$ mm |
|---|---|---|---|---|---|---|---|---|
| 0001 | 26 | 309.60 | 1 | M1 - M10 | 60 | 28 | 43 | 26 |
| 0004 | 26 | 309.60 | 2 | M4 - M16 | 60 | 39 | 43 | 26 |
| 0007 | 34 | 317.70 | 1 | M1 - M10 | 65 | 23 | 56 | 34 |
| 0010 | 34 | 317.70 | 2 | M4 - M16 | 65 | 37 | 56 | 34 |
| 0013 | 34 | 322.80 | 3 | M8 - M20 | 65 | 53 | 56 | 34 |
| 0016 | 46 | 404.00 | 2 | M4 - M16 | 82 | 28 | 70 | 46 |
| 0019 | 46 | 404.00 | 3 | M8 - M20 | 82 | 42 | 70 | 46 |
| 0022 | 46 | 411.00 (W315) | 4 | M16 - M33 | 82 | 67 | 70 | 46 |

## Assembly jig SK40EQUIP

NEW

**Design:** High-strength, fibre-reinforced polyamide for high stability during assembly. With 4 holding magnets in the horizontal mount for safety.

**Application:** For the efficient and tool-mount-friendly equipping and removing – vertically and horizontally – of cutting tools and retention studs on tool holders. Can be affixed onto any workbench.

| Order No. | Size | 1926 | Dimensions L x W x H mm |
|---|---|---|---|
| 0025 | SK 40 | 99.00 (W388) | 120 x 150 x120 |

## Assembly jig with rollers, basic

FAHRION® PRAZISION

**Design:** Assembly jig with rollers, friction-fit, therefore self-clamping.

**Application:** Simple and secure clamping of tool holders on the collar using rollers, for mounting and removing cutting tools. For all conventional tool holders, such as SK (DIN 69871), HSK (Forms A, B, C, D, E, F), C (polyagonal shanks), JIS B 6339 and CAT (ANSI B5.50).

| Order No. | For tool holder | 3965 FAHRION® PRAZISION | Collar ∅ mm |
|---|---|---|---|
| 0100 | SK 30/HSK 50/C5 | 123.00 | 50 |
| 0110 | SK 40/HSK 63/BT 40/CAT 40 | 123.00 | 63 |
| 0120 | SK 50 | 243.00 | 97.5 |
| 0130 | HSK 100/BT 50/CAT 50 | 243.00 (W361) | 100 |

## Mounting block

**Design:** Quick and easy assembly and removal of tool holders in vertical and horizontal positions. This excludes the risk of tool damage. Also suitable for modular tool holding fixtures.

| Order No. | Standard | 3695 | Size |
|---|---|---|---|
| 2040 | DIN 2080 | 168.00 | SK 40 |
| 2050 | DIN 2080 | 238.00 | SK 50 |
| 6940 | DIN 69871 | 168.00 | SK 40 |
| 6950 | DIN 69871 | 238.00 | SK 50 |
| 6340 | JIS B 6339 | 168.00 | BT 40 |
| 6350 | JIS B 6339 | 238.00 (W360) | BT 50 |

## Installation fixture

**Design:** Simple system for quick and secure assembly and removal, both horizontally and vertically. This excludes the risk of tool damage.

| Order No. | Standard | 3697 | Size |
|---|---|---|---|
| 0040 | DIN 2080 | 275.00 | SK 40 |
| 0045 | DIN 2080 | 275.00 | SK 50 |
| 0050 | DIN 69871 | 275.00 | SK 40 |
| 0055 | DIN 69871 | 275.00 | SK 50 |
| 0060 | JIS B 6339 | 275.00 | BT 40 |
| 0065 | JIS B 6339 | 275.00 | BT 50 |
| 0030 | DIN 69880 | 297.00 | VDI 30 |
| 0035 | DIN 69880 | 297.00 | VDI 40 |
| 0070 | DIN 69880 | 473.00 | VDI 50 |
| 0075 | DIN 69880 | 495.00 | VDI 60 |
| 0010 | DIN 69893 | 352.00 | HSK-A 50 |
| 0015 | DIN 69893 | 330.00 (W363) | HSK-A 63 |

## Tool presetter BWT-Compact

**Design:** Easy to use thanks to drive via hand wheels with fine adjustment in both axial directions. Tried and tested Mitutoyo measuring system. Measurements are taken using the 2D probe. Stable, anodised aluminium body.

**Concentricity (at 200 mm):** 0.02 mm.

**Application:** For the quick and precise measuring of tools.

| Order No. | Morse taper | 3745 tecXellent | Clearance mm | Adjustment Ø mm | Dimensions L x W x H mm | Weight kg |
|---|---|---|---|---|---|---|
| 0105 | SK 40 | 3350.00 ◊ | 300 | 230 | 400 x 180 x 580 | 27 |
| 0110 | SK 50 | 3550.00 ◊ (W388) | 400 | 300 | 500 x 180 x 780 | 29 |

## Tool presetting device ADI-Compact

**Design:** Easy to use thanks to drive via hand wheels with fine adjustment in both axial directions. Contactless measuring of tool bits. 20x magnification allows easy measurement of cutting geometries. With data output and precision-mounted tool holder.

**Concentricity (at 200 mm):** 0.02 mm.
**Digital measurement data display:** 0.01 mm.

| Order No. | Morse taper | 3745 tecXellent | Clearance mm | Adjustment Ø mm | Dimensions L x W x H mm | Weight kg |
|---|---|---|---|---|---|---|
| 0115 | SK 40 | 5550.00 ◊ | 300 | 230 | 400 x 300 x 620 | 36 |
| 0120 | SK 50 | 5850.00 ◊ (W388) | 400 | 300 | 500 x 300 x 780 | 40 |

## Universal 3D probe

IP 67

HAIMER Quality Wins

**Design: Protection class IP 67.** Precise Universal 3D probe for incorporating in the milling spindle or countersunk head; the spindle axis is positioned accurately on the workpiece or device edges. Any approach direction (X, Y, Z-axis). The dial gauge always deflects in the same direction and indicates the distance between the spindle axis and the workpiece edge. As soon as the display is set to zero, the spindle axis is positioned without prolonged attempts; without calculations, without sign problems, precisely on the edge of the workpiece. This reduces the additional costs. increases productivity and relieves employees. The probe tip is changed without requiring a tool; recalibration of the probe is not necessary. The enlarged travel path in combination with the tried and tested predetermined breaking point provide additional safety. For maximum measuring accuracy, all universal 3D probes are individually measured and aligned during installation. For extremely easy handling, the Universal 3D probe is available with an integrated steep taper adaptor (Order No. 3770 0010). The steep taper (DIN 69871, SK 40) and Universal 3D probe form one unit.

**Application:** For setting workpiece zero points and length measurements on milling and grinding machines (insulated probe tip) as well as for centring holes and spindles.

**Scope of delivery:** 3D probe and short probe tip ∅ 4 mm.

**Note:** The new generation probe tips are also compatible with existing Universal 3D probes. Replacement probe tip (Order No. 3777 📖 3/125).

| Order No. | Shank ∅ | 3770 HAIMER | Ball tip ∅ mm | Display accuracy mm | Housing ∅ mm | Length without clamping shank mm |
|---|---|---|---|---|---|---|
| 0005 | 20 mm | 285.00 | 4 | 0.01 | 65 | 113 |
| 0010 | SK 40/DIN 69871 | 307.00 (W392) | 4 | 0.01 | 65 | 113 |

## Digital 3D probe

IP 64

HAIMER Quality Wins

**Design:** Protection class IP 64. The digital 3D probe is a development of the tried and tested mechanical 3D probe. The spindle or countersunk head can be positioned quickly and reliably on the reference edges. The start-up process can be traced accurately on the digital dial gauge. The zero setting is found immediately. The machine measuring system can be zeroed without calculations, as the spindle axis stands directly on the probed edge. Digit height of the LC display 8.5 mm, in this way the values remain unambiguous and correctly readable from a distance, even on large machining centres.

**Function:** Switch-on and switch-off, mm/inch-conversion.

**Application:** For setting workpiece zero points and length measurements on milling and grinding machines (insulated probe tip) as well as for centring holes and spindles.

**Scope of delivery:** 3D probe with battery and short probe tip ∅ 4 mm.

**Note:** The new generation probe tips are also compatible with existing Universal 3D probes. Replacement probe tip (Order No. 3777 📖 3/125).

| Order No. | Shank ∅ mm | 3775 HAIMER | Ball tip ∅ mm | Display accuracy mm | Repeat accuracy mm | Measuring accuracy mm | Housing ∅ mm | Length without clamping shank mm |
|---|---|---|---|---|---|---|---|---|
| 0005 | 20 | 506.00 (W392) | 4 | 0.001 | 0.001 | 0.005 | 65 | 113 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Zero Master analogue

IP 67

HAIMER Quality Wins.

**Design: Protection class IP 67.** Smallest 3D probe in the world, for incorporating in the milling spindle or countersunk head; the spindle axis is positioned accurately on the workpiece or device edges. Any approach direction (X, Y, Z-axis). The size of the Zero Master is adapted to small machines. The small, analogue dial gauge always deflects in the same direction and indicates the distance between the spindle axis and the workpiece edge. As soon as the display is set to zero, the spindle axis is positioned without prolonged attempts; without calculations, without sign problems, precisely on the edge of the workpiece. This reduces the additional costs. increases productivity and relieves employees. The clamping shaft has a diameter of 10 mm and can therefore also be used on machines with SK 30 or with small HSK spindles. Large workpieces can also be measured through the shortened housing, which projects only a little way out of the spindle. The probe tip is changed without requiring a tool; recalibration of the probe is not necessary. The enlarged travel path in combination with the tried and tested predetermined breaking point provide additional safety. For maximum measuring accuracy, all 3D probes are individually measured and aligned during installation. The Zero Master can be equipped with a short (ball Ø 4 mm) and a long (ball Ø 8 mm) probe tip. The probe tips are compatible with all other Haimer 3D probes.

**Application:** For setting workpiece zero points and length measurements on milling and grinding machines (insulated probe tip) as well as for centring holes and spindles.

**Scope of delivery:** 3D probe with short probe tip Ø 4 mm.

**Note:** Replacement probe tip (Order No. 3777 📖 3/125).

| Order No. | Shank Ø mm | 3777 HAIMER | Ball tip Ø mm | Display accuracy mm | Housing Ø mm | Length without clamping shank mm |
|---|---|---|---|---|---|---|
| 0000 | 10 | 285.00 (W392) | 4 | 0.01 | 49 | 96 |

## 3D probe NEW GENERATION

IP 67

HAIMER Quality Wins.

**Design: Protection class IP 67.** Further development of the Universal 3D probe, with improved mechanism and new, compact, handy housing, for incorporating in the milling spindle or countersunk head. The spindle axis is positioned accurately on the workpiece or device edges. Any approach direction (X, Y, Z-axis). The large, analogue 1/100 mm dial gauge (2 pointers) with marked travel path (safety distance) always deflects in the same direction and indicates the distance between the spindle axis and the workpiece edge. As soon as the display is set to zero, the spindle axis is positioned without prolonged attempts; without calculations, without sign problems, precisely on the edge of the workpiece. This reduces the additional costs. increases productivity and relieves employees. The original Haimer probe tip for max. accuracy of 0.01 mm is changed without requiring a tool; recalibration of the probe is not necessary. The enlarged travel path in combination with the tried and tested predetermined breaking point provide additional safety. For maximum measuring accuracy, all 3D probes are individually measured and aligned during installation.

**Application:** For setting workpiece zero points, length and depth measurements on milling and grinding machines (insulated probe tip) as well as for centring holes and spindles. Also used for testing the straightness and evenness of surfaces.

**Scope of delivery:** 3D probe with short probe tip Ø 4 mm. Replacement probe tip (Order No. 3777 📖 3/125).

| Order No. | Shank Ø mm | 3777 HAIMER | Ball tip Ø mm | Display accuracy mm | Housing Ø mm | Length without clamping shank mm |
|---|---|---|---|---|---|---|
| 0010 | 12 | 285.00 (W392) | 4 | 0.01 | 62 | 100 |

## 3D probe NG with short adapter

**Design:** Protection class IP 67. With integrated short adapter and enlarged travel path. No manual setting of the concentricity nor recalibration required.

**Concentricity:** 0.01 mm.
**Accuracy:** 0.01 mm.

**Application:** Simple workpiece measuring when there is little space around the machine, in milling and grinding machines, and for workpiece zero setting and length measurements in any probe direction.

**Note:** Replacement probe tip (Order No. 3777 📖 3/125).

IP 67

HAIMER Quality Wins.

| Order No. | Morse taper | 3769 HAIMER | Length mm |
|---|---|---|---|
| 0015 | HSK-E 25 | 307.00 ◊ | 126.5 |
| 0020 | HSK-E 32 | 307.00 ◊ | 136.5 |
| 0025 | HSK-E 40 | 307.00 ◊ | 136.5 |
| 0030 | HSK-E 50 | 307.00 ◊ | 143.5 |
| 0035 | HSK-A 32 | 307.00 ◊ | 136.5 |
| 0040 | HSK-A 40 | 307.00 ◊ | 136.5 |
| 0045 | HSK-A 50 | 307.00 ◊ | 143.5 |
| 0005 | SK 30 | 307.00 | 136.1 |
| 0010 | BT 30 | 307.00 | 135.5 |
| | | (W392) | |

3769 0045

3769 0005

3769 0010

## Replacement probe tip for 3D probe

**Application:** Compatible with Universal 3D probe (Order No. 3770), Zero Master analogue (Order No. 3777), 3D probe NEW Generation (Order No. 3777), digital 3D probe (Order No. 3775) and 3D probe NG (Order No. 3769).

| Order No. | Ball tip ∅ mm | 3777 HAIMER | Length mm |
|---|---|---|---|
| 0004 | 4 | 20.50 | 25 |
| 0008 | 8 | 34.00 | 65 |
| | | (W392) | |

## Precision centring device Centro

**Design:** At slow speeds, the spindle is moved close to the axis being searched for. The probe tip slides along the wall of the bore hole or shank. As long as the spindle and the axis being searched for do not align, the probe tip deflects during rotation and transfers the movement onto a large dial gauge. The dial gauge does not turn with the spindle, and thus can always be viewed by the operator. The position of the spindle can now be corrected until the pointers on the dial gauge stand still. Concentricity errors of the spindle or clamping are aligned. With clamping shank ∅ 16 mm.

**Application:** For the fast and precise determination of bores, spindles, planing surfaces and reference edges centred to the working spindle on milling machines. Can be used horizontally or vertically.

**Scope of delivery:** Precision centring device with straight probe tip ∅ 5 mm.

HAIMER Quality Wins.

| Order No. | Measuring range hole mm | 4276 HAIMER | Measurement range shaft mm | Reading mm | Centring precision mm | Max. rpm 1/min | Housing ∅ mm |
|---|---|---|---|---|---|---|---|
| 0125 | 3–125 | 345.00 | 0–125 | 0.01 | 0.003 | 150 | 80 |
| | | (W392) | | | | | |

## Probe tip for precision centring device Centro

| Order No. | Design | 4276 HAIMER | Ball tip ∅ mm |
|---|---|---|---|
| 1001 | Straight probe tip | 24.50 | 5 |
| 2001 | Curved probe tip | 32.00 | 5 |
| | | (W392) | |

## Edge finder - mechanical

**Design:** All parts are hardened and ground, with smooth and cylindrical clamping shank. Clamping shank and feeler head are spring-connected. Supplied in a plastic case.

**Application:** For aligning workpiece surfaces or edges.

| Order No. | Size | 3754 | Probe head Ø mm | Clamping shaft diameter mm |
|---|---|---|---|---|
| 0003 | 3 | on request | 10 | 10 |
| 0005 | 5 | on request | 10 + 4 | 10 |

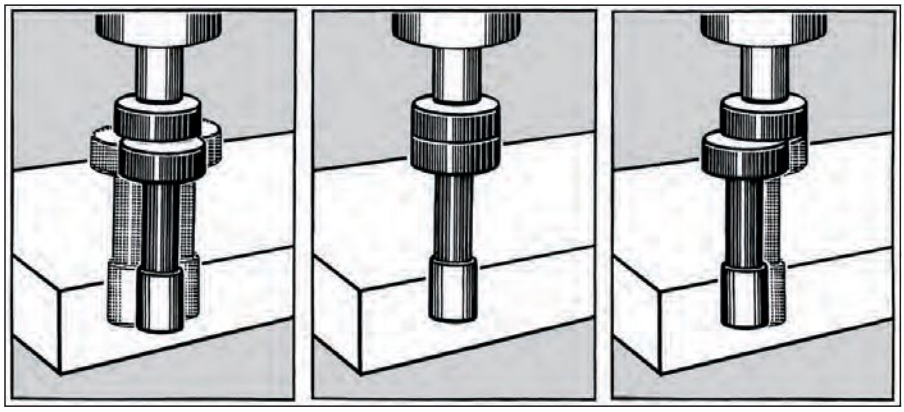
3754 0003 3754 0005

## Edge finder - mechanical

NEW

**Design:** Hardened, precision-ground and lapped, with smooth and cylindrical clamping shank. Clamping shank and feeler head are spring-connected. Supplied in a plastic case.

**Application:** For aligning workpiece surfaces or edges with a precision of 0.01 mm. Makes it easier to record the zero line. Spindle speed approx. 600 $min^{-1}$.



Start-up, probe runs non-round

Sensor piece touches the workpiece and runs smoothly

Probe moves suddenly to the side = reference point/zero line

... 1001 ... 1003 ... 1005

| Order No. | Size | 3755 TSCHORN | Probe head Ø mm | Clamping shaft diameter mm |
|---|---|---|---|---|
| 1001 | 1 | 47.30 | 6 | 6 |
| 1003 | 3 | 28.20 | 10 | 10 |
| 1005 | 5 | 28.20 (W390) | 10 + 4 | 10 |

## Replacement springs for edge finders

NEW

| Order No. | Size | 3755 TSCHORN | PU |
|---|---|---|---|
| 1008 | 1 | 29.40 | 10 |
| 1010 | 3/5 | 28.60 (W390) | 10 |

## Edge finder - optical

NEW

**Design:** Probe precision 0.01 mm, hardened and precision ground, with luminous red LED display.

**Application:** For measurements on drilling and milling machines, machining centres, for external and internal centring. The indicator lights up on touching the workpiece edge. The zero line is reached allowing for stylus sphere radius. The stylus can be used with standing or rotating spindle. The resiliently mounted ball folds away on passing the workpiece edge so as to avoid damage to the probe.

**Scope of delivery:** Edge finder including battery A23.

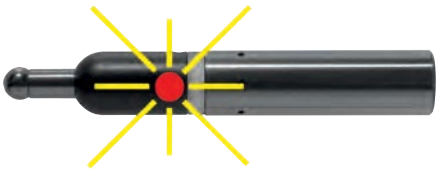
| Order No. | Mounting shank Ø mm | 3757 TSCHORN | Design | Total length approx. mm |
|---|---|---|---|---|
| 1016 | 16 | 82.80 | 2D with illuminated display | 99 |
| 1020 | 20 | 67.60 | 2D with illuminated display | 94 |
| 1022 | 16 | 130.50 | 3D with illuminated display | 111 |
| 1024 | 20 | 130.50 (W390) | 3D with illuminated display | 106 |

## Edge finder - optical/acoustic

**Design:** Hardened and precision ground, with luminous red LED display. Supplied in a plastic case.

**Application:** For measurements on drilling and milling machines, as well as machining centres with a precision of 0.01 mm. For external and internal centring. The indicator lights up on touching the workpiece edge and a signal will sound. The zero line is reached allowing for stylus sphere radius. The stylus can be used with standing or rotating spindle. The resiliently mounted ball folds away on passing the workpiece edge so as to avoid damage to the stylus.

**Scope of delivery:** Edge finder including battery A23.



| Order No. | Shank Ø mm | 3757 | Design | Total length approx. mm |
|---|---|---|---|---|
| 0030 | 20 | on request | 2D | 119 |
| 0035 | 20 | on request | 3D | 131 |

## Workpiece stop Stop-Loc

NEW

**Design:** Manual universal length stop made of anodised aluminium for the fast calculation of length measurements. Readings in millimetres and inches. 2 slides in red and gold for the simple reading of measuring values on both sides.

**Application:** Easy presetting of tools. Can be used for turning, milling, drilling, sawing and grinding.

| Order No. | Setting length mm | 3757 |
|---|---|---|
| 0040 | 140 | 23.50 (W346) |

## 5D workpiece stop

**Design:** The workpiece stop is made from an ultra-stable aluminium construction, and can be freely adjusted across 5 axes, with speed and flexibility. The workpiece stop can be combined in many ways using the additionally available combination element.

**Application:** The workpiece stop is, amongst other things, a versatile instrument for positioning on processing machines or during assembly works.

**Scope of delivery:** Workpiece stop with T-slot nut M8x12 and hex spanner.

| Order No. | Dimension mm | 3757 |
|---|---|---|
| 0100 | Ø 39 x 150 x 190 | on request |

## Workpiece stop system ESSET 5D

skantek

**Design:** Body made of anodised aluminium, clamping lever with plastic-coated die-cast zinc. The stop has a modular design and **can be freely rotated and moved across 5 axes**. Several units can be combined. With 2-step adjustment mechanism and one stop plate to be used as internal stop (grooves, etc.).

**Application:** Can be used for many machining operations on drilling and milling machines. Can be uses as internal and external stop. Can be combined with double stop (Order No. 3955 0020) as multiple system design, so that several units can be bundled together. **Hooked, ball or fork stop heads can be manufactured for specific conditions.**

| Order No. | Design | 3955 skantek | Working area mm |
|---|---|---|---|
| 0010 | Single stop | 130.50 | 150 |
| 0020 | Double stop | 251.00 (W346) | 300 |

3955 0020

## Slot nut

| Order No. | For slot width mm | 3956 skantek | Thread |
|---|---|---|---|
| 0010 | 10 | 5.00 | M8 |
| 0012 | 12 | 5.00 | M8 |
| 0014 | 14 | 5.00 | M8 |
| 0016 | 16 | 5.00 | M8 |
| 0018 | 18 | 5.00 (W346) | M8 |

## Zero adjuster

NEW

TSCHORN

**Design:** From hardened steel, with elastic touch surface.

**Application:** For positioning of workpiece surfaces or tool lengths in the Z-direction on rotary or milling machines. The device is placed onto the workpiece. Using the machine spindle, the cutting tool, e.g. milling cutter, is then moved on the touch surface until the pointer is at zero on the dial gauge. The distance from the cutting tool to the workpiece is now precisely 50 mm, thereby the blades are not damaged when measuring.

**Scope of delivery:** Zero setter with dial gauge.

| Order No. | Design | 3759 TSCHORN | Overall Ø mm | Sensing plate Ø mm |
|---|---|---|---|---|
| 1001 | without magnetic base | 139.00 | 39 | 19 |
| 1004 | with magnetic base | 181.50 (W390) | 39 | 19 |

## Marking tool

**Design:** High-quality guides and robust special needle. Stepless adjustment via knurled nut across a scale of 0-15 mm, including when clamped. Ideal for small and medium lot sizes. Mounting in 20 mm collets or Weldon mount. Quick needle change by simply pulling out needle. The surface of the material structure is only compressed on the surface - the material is not weakened.

**Eccentric needle:** Clearer marking. The higher the eccentricity and the spindle speed, the deeper the marking. External cooling recommended.

**Centric needle:** External cooling not required.

**Application:** For marking various materials, including aluminium, titanium, steel, bronze etc.

**Note:** Marking needles not included.

### 3760 0006 Marker large

Function control for use in automation (only in Weldon mount). The tool machine requires an internal coolant supply as well as an M-command that can be cancelled at any time.

| Order No. | Design | 3760 |
|---|---|---|
| 0006 | Marker large | 704.50 (W001) |

3760 0006

### 3760 0011–0017 Marking needles– Marker Large

| Order No. | Eccentricity mm | 3760 | Needle tip radius mm | Length mm |
|---|---|---|---|---|
| 0012 | 0 | 302.50 NEW | 0.5 | 53.5 |
| 0011 | 0 | 302.50 | 1 | 53.5 |
| 0013 | 0.1 | 302.50 NEW | 1 | 53.5 |
| 0015 | 0.2 | 302.50 NEW | 1 | 53.5 |
| 0017 | 0.3 | 302.50 NEW (W001) | 1 | 53.5 |

### 3761 0008 NEW Marker medium

| Order No. | Design | 3761 |
|---|---|---|
| 0008 | Marker medium | 503.00 (W001) |

3761 0008

### 3761 0011–0015 Marking needles - Marker Medium

| Order No. | Eccentricity mm | 3761 | Needle tip radius mm | Length mm |
|---|---|---|---|---|
| 0011 | 0 | 302.50 | 0.5 | 53.5 |
| 0012 | 0 | 302.50 NEW | 1 | 53.5 |
| 0013 | 0.1 | 302.50 NEW | 1 | 53.5 |
| 0014 | 0.2 | 302.50 NEW | 1 | 53.5 |
| 0015 | 0.3 | 302.50 NEW (W001) | 1 | 53.5 |

## Cleaning tool Cleaner

**Design:** Cleaning tool for mounting in machine spindle, suitable for 16 mm Weldon mounts.

**Application:** Repeatable, systematic and thorough cleaning of machine space (BALL) and the workpiece / clamping device (STICK).

### Cleaner, set

| Order No. | Insertion depth mm | 3762 AMF | Set contents |
|---|---|---|---|
| 1000 | 40 | 822.50 (W001) | each of 1 ball horizontal, vertical control<br>each of 1 stick 30; 100; 180 mm<br>3 universal jets<br>1 manometer<br>1 adapter piece<br>1 ball joint<br>4 replacement screw plugs<br>1 hexagon screw driver |

### Cleaning tool Cleaner, Ball

| Order No. | Design | 3762 AMF | Insertion depth mm | Length mm |
|---|---|---|---|---|
| 0005 | Cleaner Ball, vertical | 210.00 | 40 | 110 |
| 0010 | Cleaner ball, horizontal | 210.00 (W001) | 40 | 120 |

3762 0005

3762 0010

### Cleaning tool Cleaner, Manometer

**Application:** Screwed into the cleaner to control the current cooling lubricant pressure.

| Order No. | Design | 3762 AMF | Pressure range bar | Ø mm |
|---|---|---|---|---|
| 0015 | Pressure gauge | 8.25 (W001) | 0–60 | 44 |

### Cleaning tool Cleaner, stick

**Application:** Ideally suited to cleaning holes, pockets, undercuts and other contours.

| Order No. | Design | 3762 AMF | Length mm | Ø mm | Insertion depth mm |
|---|---|---|---|---|---|
| 0020 | Stick short | 58.80 | 30 | 16 | 40 |
| 0025 | Stick standard | 65.90 | 100 | 16 | 40 |
| 0030 | Stick long | 78.10 (W001) | 180 | 16 | 40 |

### Cleaning tool Cleaner, universal jets

| Order No. | Design | 3762 AMF | Flow rate | Length mm | Ø mm |
|---|---|---|---|---|---|
| 0035 | Jet UD40 | 77.40 | A little | 10 | 16 |
| 0040 | Jet UD45 | 77.40 | Standard | 10 | 16 |
| 0045 | Jet UD50 | 77.40 (W001) | A lot | 10 | 16 |

### Ball joint and adapter piece

**Application:** For variable combination of two or more cleaners.

| Order No. | Design | 3762 AMF |
|---|---|---|
| 0050 | Ball joint, max. 30° displacement | 115.50 |
| 0055 | Adapter piece G1/8–G1/4 | 8.80 (W001) |

3762 0050

3762 0055

## Drilling machine vice

**Design:** Body made from cast iron. The interchangeable jaws are hardened, ground and burnished, one of the jaws is smooth and the other comes with longitudinal and transverse prisms. Both jaws have support surfaces to clamp flat workpieces. The overall length remains the same when the jaws are opened since the burnished spindle moves protected in the handle. With universal fixing option through mounting slots and oblong holes. With non-slip handle.

**Application:** For clamping of workpieces on drilling machines. Moreover, ideally suitable for fixing workpieces on measuring machines.

| Order No. | Jaw width mm | 3805 format | Jaw span mm | Slot distance mm | Weight kg |
|---|---|---|---|---|---|
| 0085 | 80 | 46.50 | 70 | 105 | 3.6 |
| 0100 | 100 | 60.10 | 92 | 125 | 4.3 |
| 0120 | 120 | 75.70 | 110 | 150 | 6.3 |
| 0150 | 150 | 124.50 (W328) | 125 | 170 | 8.1 |

## Drilling machine vice, forged

NEW

**Design:** Forged body, extremely stable, large clamping range, **long design.** Hardened clamping surfaces and recessed grips for easy operation. Quick adjustment with recessed hexagon.

**Application:** For clamping of workpieces on drilling machines.

| Order No. | Jaw width mm | 3805 format | Jaw span mm | Slot distance mm | Weight kg |
|---|---|---|---|---|---|
| 1100 | 110 | 202.50 (W328) | 170* | 138 | 9.5 |

* 145 mm with jaws .

## Set of jaws

NEW

**Design:** For drilling machine vice (Order No. 3805).

| Order No. | Jaw width mm | 3805 format | Design |
|---|---|---|---|
| 1110 | 110 | 37.30 | unhardened |
| 1115 | 110 | 42.20 (W328) | hardened |

## Precision drilling machine vice

**Design: Long design,** body made from special cast iron. Both jaws have support surfaces to clamp flat workpieces. With universal fixing option thanks to oblong holes. With hex handle and handle bore.

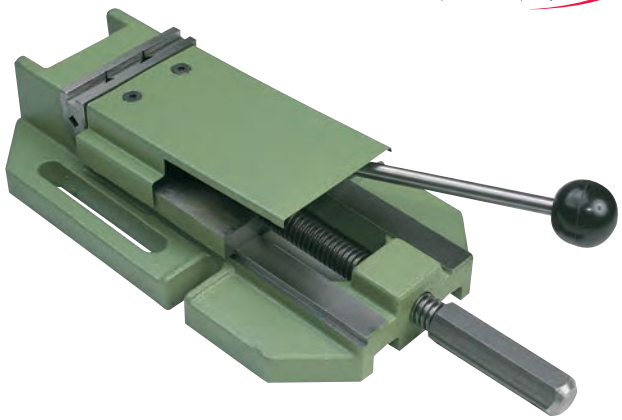
**Application:** For clamping of workpieces on drilling machines.

| Order No. | Jaw width mm | 3807 format | Jaw span mm | Slot distance mm | Weight kg |
|---|---|---|---|---|---|
| 0080 | 80 | 109.50 | 70 | 110 | 4 |
| 0100 | 100 | 183.50 | 110 | 140 | 9 |
| 0125 | 125 | 278.50 | 130 | 165 | 15 |
| 0160 | 160 | 465.00 | 225 | 210 | 29 |
| | | (W328) | | | |

## Precision drilling machine vice

**Design: With one-hand operation via eccentric,** body made from special cast iron. Both jaws have support surfaces to clamp flat workpieces. With universal fixing option through mounting slots and oblong holes. With hex handle and handle bore.

**Application:** For quick and easy clamping of workpieces on drilling machines.



| Order No. | Jaw width mm | 3809 format | Jaw span mm | Slot distance mm | Weight kg |
|---|---|---|---|---|---|
| 0100 | 100 | 306.50 | 80 | 140 | 13 |
| 0125 | 125 | 460.00 | 125 | 160 | 21 |
| | | (W328) | | | |

## Spare clamp jaws

**Design:** Spare prismatic jaws in set including 4 screws.

**Note:** Suitable for (Order No. 3807 und 3809).

| Order No. | Jaw width mm | 3811 format |
|---|---|---|
| 0080 | 80 | 43.20 |
| 0100 | 100 | 58.00 |
| 0125 | 125 | 67.40 |
| 0160 | 160 | 75.40 |
| | | (W328) |

## Precision drilling machine vice

**Design: Large clamping range,** body made from special cast iron. The interchangeable and reversible jaws are hardened, ground and burnished, one of the jaws is smooth and the other comes with longitudinal and transverse prisms. Both jaws have support surfaces to clamp flat workpieces. With universal fixing option through mounting slots and oblong holes. With pushed-through T-handle.

**Application:** For clamping of workpieces on drilling machines.

**Note:** Angle drive upon request.

| Order No. | Jaw width mm | 3810 ROHM | Jaw span mm | Slot distance mm | Weight kg |
|---|---|---|---|---|---|
| 1110 | 110 | 283.00 | 130 | 140 | 9.5 |
| 1135 | 135 | 345.00 | 160 | 170 | 13.5 |
| 1160 | 160 | 541.00 (W331) | 220 | 210 | 25 |

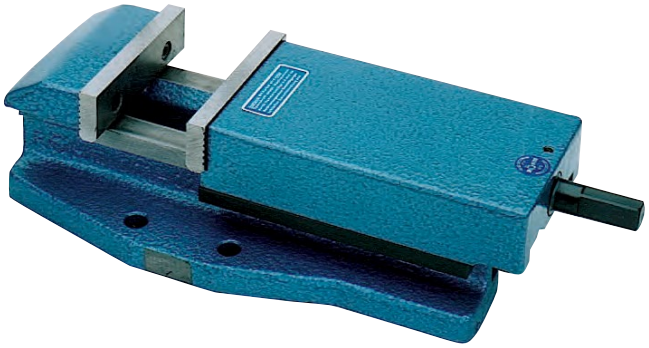
## Machine vice - mechanical

**Design:** Body made from special cast iron, hardened and ground clamping jaws.

**Application:** For clamping of workpieces on drilling/milling machines and machining centres.

**Scope of delivery:** Machine vice with hand crank.

**Note:** Replacement jaws (Order No. 3840, 3841 and 3842 3/137).



| Order No. | Size | 3823 format | Jaw width mm | Jaw span mm | Jaw height mm | Clamping force kN | Open length mm | Weight approx. kg |
|---|---|---|---|---|---|---|---|---|
| 1092 | 1 | 425.50 | 92 | 85 | 31.6 | 18 | 362 | 12 |
| 2113 | 2 | 515.50 | 113 | 105 | 31.6 | 25 | 423 | 13.5 |
| 3135 | 3 | 659.50 | 135 | 125 | 39.6 | 35 | 510 | 25 |
| 4160 | 4 | 828.50 (W328) | 160 | 145 | 49.6 | 45 | 575 | 40 |

## Rotary plate

**Design:** With ground contact edge and graduation. The vice is fixed on the rotary plate by means of fastening screws and T-nuts.

**Application:** For machine vices (Order No. 3823).

**Scope of delivery:** Standard rotary plate including necessary fastening screws and T-nuts.

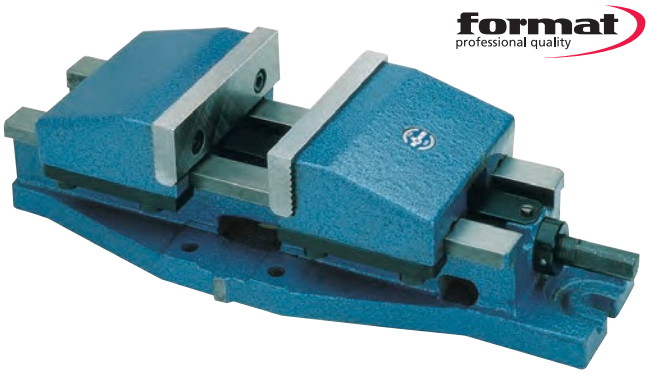
| Order No. | For size | 3834 format | Diameter mm |
|---|---|---|---|
| 0007 | 1/2 | 335.50 | 242 |
| 0011 | 3 | 336.50 | 280 |
| 0016 | 4 | 381.50 (W328) | 340 |

## Centric vice - mechanical

**Design: Low, sturdy design,** body made from special cast iron. The interchangeable and reversible jaws are hardened, ground and burnished, one of the jaws is smooth and the other comes with longitudinal and transverse prisms. The jaws are mechanically adjusted and the hand crank is used to bridge the whole clamping range. The spindle is covered and thus protected from dirt and chips. **With centric clamping,** the lateral guides allow for easy and precise arrangement of the vice.

**Application:** For milling and planing all types of moulds, slots and grooves. **The centric clamping makes it possible to use with various workpiece widths without affecting the central position of the workpieces.**

**Note:** Rotary plate (Order No. 3831 📖 3/134).
Replacement jaws (Order No. 3840, 3841 and 3842 📖 3/137).



| Order No. | Size | 3828 format | Jaw width mm | Jaw span mm | Jaw height mm | Clamping force kN | Open length mm | Height mm | Weight approx. kg |
|---|---|---|---|---|---|---|---|---|---|
| 2113 | 2 | 762.00 | 113 | 110 | 31.6 | 15 | 358 | 93.5 | 12.4 |
| 3135 | 3 | 916.00 | 135 | 140 | 39.6 | 22 | 408 | 106 | 19 |
| 4160 | 4 | 1314.00 | 160 | 180 | 49.6 | 24 | 495 | 124.5 | 31 |
| 5200 | 5 | 1792.00 | 200 | 300 | 62.6 | 25 | 655 | 142.5 | 52 |
| 6250 | 6 | 2177.00 (W328) | 250 | 400 | 62.6 | 28 | 767 | 148.5 | 71 |

## Universal rotary plate

**Design:** With ground contact edge and graduation. The vice is fixed on the rotary plate by means of T-slot screws and T-nuts.

**Application:** For centric vice (Order No. 3828).

**Scope of delivery:** Rotary plate with the necessary T-slot screws and nuts.

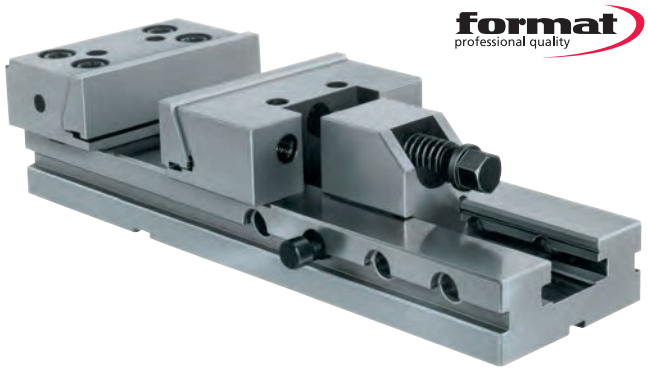
| Order No. | For size | 3831 format | Diameter mm | Weight approx. kg |
|---|---|---|---|---|
| 0006 | 2 | 328.50 | 245 | 5 |
| 0011 | 3 | 391.00 | 295 | 8 |
| 0016 | 4 | 499.00 | 345 | 11.5 |
| 0021 | 5 | 617.50 | 450 | 16.5 |
| 0026 | 6 | 625.00 (W328) | 450 | 17.3 |

## Machine vice - mechanical

**Design:** Body and jaws made of steel, hardened (60 HRC) and ground. The tolerance range is within 0.02 mm. Draw-down jaws also lockable. Fastening is done by grid holes or jaws.

**Application:** For use on machining centres and machine tools with high working accuracy.

**Note:** Rotary plate upon request.



| Order No. | Jaw width mm | 3836 format | Jaw span mm | Jaw height mm | Total length mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|
| 1125 | 125 | 467.00 | 150 | 40 | 401 | 30 | 12.7 |
| 1152 | 150 | 561.00 | 200 | 50 | 487 | 50 | 25.6 |
| 1153 | 150 | 700.00 | 300 | 50 | 587 | 50 | 29.5 |
| 1175 | 175 | 980.50 (W336) | 400 | 60 | 701 | 60 | 51.2 |

## Machine vice - mechanical power boosted

**Design:** High accuracy and wear resistance due to precise, hardened jaw guides. Stepwise clamping force presetting. Optimal coolant and chip flow due to optimised design.

**Application:** For use on machining centres and machine tools with high working accuracy.

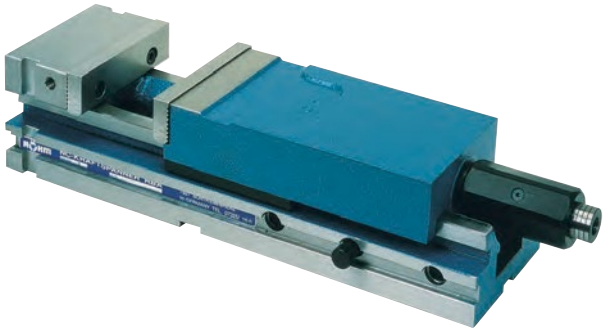
| Order No. | Jaw width mm | 3835 RÖHM | Jaw span mm | Jaw height mm | Total length mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|
| 0113 | 113 | 1339.00 | 170 | 31.6 | 583 | 30 | 24 |
| 0135 | 135 | 1648.00 | 220 | 39.6 | 679 | 40 | 39 |
| 0160 | 160 | 2060.00 (W331) | 310 | 49.6 | 817 | 50 | 60 |

## NC power clamp RBA - mechanical/hydraulic

**Design:** Mechanical, hydraulic drive with hand crank. Body made of steel, with homogeneously drop-forged stationary jaw. All wear parts, especially jaw guides, are hardened and ground. The slim design allows space-saving clamping side by side. Exact ±0.01 mm height adjustment upon customer request. Blocking device for pre-clamping of workpieces. Self-retightening action in the hydraulic unit by built-in disc springs. **With ground-side, lateral or face-side clamping (face-side clamping with support angle).** A gas spring secures the unlocked jaw against falling down. Rapid adjustment of the clamping range via locking pin. The short design of the movable jaw (made of steel) allows a reduced overall length even by max. clamping width. Additional stepped or special form jaws (see accessories) can be fixed on the top of the stationary and movable jaws. Robust of the movable jaw flat bed guide. The drive spindle is protected against dirt and chips.

**Application:** For universal use on milling machines and machining centres.

**Note:** Form jaws and angle drive upon request.



| Order No. | Size | 3838 RÖHM | Jaw width mm | Jaw span mm | Total length mm | Clamping force kN | Weight approx. kg |
|---|---|---|---|---|---|---|---|
| 0092 | 1 | 1545.00 | 92 | 100 | 490 | 25 | 15.5 |
| 0113 | 2 | 1545.00 | 113 | 170 | 583 | 30 | 24 |
| 0135 | 3 | 1648.00 | 135 | 220 | 681 | 40 | 39 |
| 0160 | 4 | 2318.00 (W332) | 160 | 310 | 817 | 50 | 60 |

## NC compact clamping system

**Design: With mechanical/mechanical clamping system.**
The workpiece support surfaces are hardened and ground on the cast-iron NC compact clamping system. With a stationary and a movable stepped jaw, reversible, hardened and ground. With clamping surfaces for clamping jaws and stable chip protection, prevents chips from penetrating the interior of the body. Turning the clamping jaws extends the clamping range.

**Application:** Ideal for use on milling machines and machining centres.

**Scope of delivery:** NC compact clamping system with stepped jaws.

**Note:** For clamping jaws and T-nut set see (Order No. 3851 📖 3/138).
For suitable hand crank see (Order No. 3856 📖 3/137).

| Order No. | Jaw width mm | 3839 format | Jaw height mm | Clamping range mm | extended clamping range mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|
| 1125 | 125 | 1617.00 | 40 | 0–216 | 71–312 | 40 | 41 |
| 1160 | 160 | 2810.00 (W001) | 50 | 0–320 | 131–451 | 60 | 79 |

Extended clamping range by reversing the jaws.

## NC compact clamp FKS, mechanical/mechanical

**Design: Clamping system mechanical/mechanical with power transmitter, manually operated.** The stable steel base body and all guides have been hardened and ground on all sides, all clamping slides with cross grooves are hardened on all sides and the functional surfaces ground. The drive spindle is provided with pre-setting of clamping force. With clamping surfaces for clamping jaws and stable chip protection, prevents chips from penetrating the interior of the body. All wear-prone guides and the spindle thread can be greased using grease nipples mounted on both sides. Turning the clamping jaws extends the clamping range.

**Application:** Ideal for use on machining centres. Can be clamped base side.

**Scope of delivery:** NC compact clamping system **with a stationary and a movable stepped jaw.**

**Note:** For clamping jaws and T-nut set see (Order No. 3851 📖 3/138). For suitable hand crank see (Order No. 3856 📖 3/137).

| Order No. | Jaw width mm | 3845 format | Jaw height mm | Clamping range mm | extended clamping range mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|
| 1125 | 125 | 1851.00 | 40 | 0–216 | 97–312 | 40 | 41 |
| 1160 | 160 | 2872.00 🚚 (W001) | 50 | 0–320 | 131–451 | 60 | 79 |

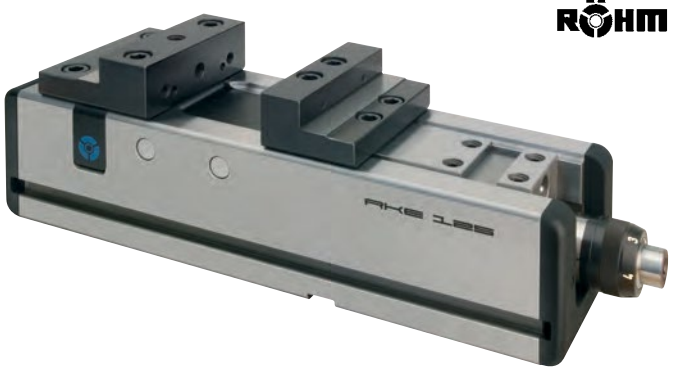
Extended clamping range by reversing the jaws.

## NC compact clamping system RKE

**Design:** Steel body and guides are hardened and ground on all sides. Long clamping slide with clutch. Drive spindle with pre-setting of clamping force. Turning the clamping jaws extends the clamping range.

**Application:** Ideal for use on machining centres.

**Note:** Horizontal, lateral and vertical (when combined with a base plate) clamping possible, for example as DUO clamping tower (back to back).



| Order No. | Jaw width mm | 3844 RÖHM | Jaw height mm | Clamping range mm | extended clamping range mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|
| 1092 | 92 | 2101.00 | 32 | 0–138 | 71–208 | 25 | 15 |
| 1125 | 125 | 2410.00 | 40 | 0–216 | 97–312 | 40 | 41 |
| 1160 | 160 | 3739.00 🚚 | 50 | 0–320 | 131–451 | 60 | 79 |
| 1200 | 200 | 4110.00 🚚 (W333) | 60 | 0–315 | 131–451 | 60 | 85 |

Extended clamping range by reversing the jaws.

## NC compact clamping system RKE-LV

**Design: Clamping system mechanical/mechanical with power transmitter, manually operated,** short, compact design. The sturdy steel base body and all guides are hardened and ground. With stable chip protection, tension and large clamping range. The workpiece 0-point is located on the operator side. The RKE-LV enables precisely accurate positioning and minimum machining times. No displacement of the movable top jaw. Turning the clamping jaws extends the clamping range.

**Application:** Ideal for use on machining centres.
**Collision-free 5-side processing in one clamp.**

**Scope of delivery:** NC compact clamping system RKE_LV **with a stationary and a movable WZR stepped jaw.**

| Order No. | Jaw width mm | 3856 RÖHM | Jaw height mm | Clamping range mm | extended clamping range mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|
| 0125 | 125 | 2410.00 (W333) | 40 | 0–96 | 96–192 | 40 | 29 |

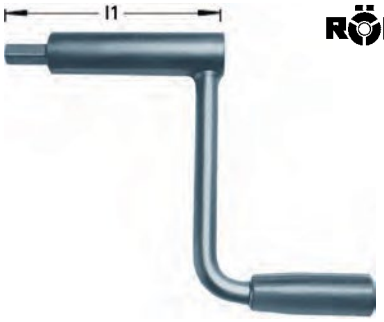
Extended clamping range by reversing the jaws.

## Hand crank

**Design:** With rotating ball handle and external hex.

**Application:** For NC compact clamping system.

| Order No. | For size | 3856 RÖHM | Hexagonal mm | Length l1 mm |
|---|---|---|---|---|
| 1120 | 92 | 28.80 | 12 | 90 |
| 1125 | 125/160/200 | 36.10 (W335) | 14 | 160 |




## Stepped jaw set SB

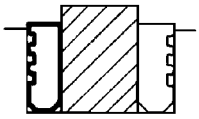
NEW

**Design:** Reversible stepped jaw. For compact clamping system RKE (Order No. 3844) and RKE-LV (Order No. 3856).

| Order No. | Jaw width mm | 3846 RÖHM | Height mm |
|---|---|---|---|
| 0126 | 125 | 515.00 | 40 |
| 0128 | 160 | 824.00 (W332) | 50 |

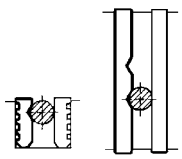
## Clamping jaw for machine vices

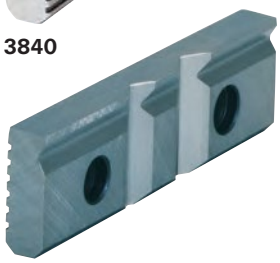
**3840** **Design:** For machine vices (Order No. 3823), (Order No. 3828) and (Order No. 3838). Standard jaws, smooth ground. One side smooth, one side grooved.



3840

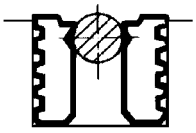
**3841** **Design:** For machine vices (Order No. 3823), (Order No. 3828) and (Order No. 3838). V-groove jaws. Horizontally and vertically ground V-blocks, hardened. For combining with standard jaws (Order No. 3863) for the precise positioning of workpieces.





3841

**3842** **Design:** For machine vices (Order No. 3823), (Order No. 3828) and (Order No. 3838). V-groove and standard jaws, with workpiece support. Unhardened and burnished.



3842

| Order No. | Jaw width mm | 3840 RÖHM Piece | 3841 RÖHM Piece | 3842 RÖHM Set | For size |
|---|---|---|---|---|---|
| 0092 | 92 | 41.20 | 72.10 | – | 1 |
| 0113 | 113 | 46.40 | 81.40 | 63.90 | 2 |
| 0125 | 125 | 51.50 NEW | – | – | – |
| 0135 | 135 | 56.70 | 99.40 | 75.70 | 3 |
| 0160 | 160 | 72.10 | 127.00 | 99.40 | 4 |
| 0200 | 200 | 92.70 (W332) | 163.00 ◊ (W332) | – (W332) | 5 |

## Single clamping jaw for NC compact clamping system

**Design:** For NC compact clamping system.

**Application:** For front-end and base-side mounting.

| Order No. | Suitable for T-slot mm | 3851 | Thread |
|---|---|---|---|
| 0120 | 12 | 30.90 | M10 x 50 |
| 0140 | 14 | 33.00 | M12 x 55 |
| 0160 | 16 | 33.00 | M12 x 60 |
| 0180 | 18 | 37.10 | M16 x 60 |
| 0200 | 20 | 37.10 | M16 x 65 |
| 0220 | 22 | 37.10 | M16 x 65 |
| | | (W335) | |

## Fixed slot nuts for NC compact clamping systems

**Design:** Case-hardened and ground. For NC compact clamping systems.

**Scope of delivery:** 2 T-slot nuts including attachment screws.

| Order No. | Size | 3851 | Length mm |
|---|---|---|---|
| 2012 | 20 x 12 | 27.80 | 22 |
| 2014 | 20 x 14 | 29.90 | 25 |
| 2016 | 20 x 16 | 31.90 | 25 |
| 2018 | 20 x 18 | 34.00 | 25 |
| 2020 | 20 x 20 | 36.10 | 22 |
| 2022 | 20 x 22 | 38.10 | 32 |
| | | (W335) | |

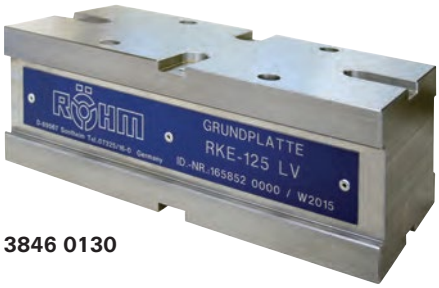
## Accessories for NC compact clamp

| Order No. | Accessories | 3846 |
|---|---|---|
| 0005 | Clamping width extension (clamping range max. 630 mm)* | 1494.00 ◊ |
| 0010 | Angle drive 90° | 613.00 ◊ |
| 0130 | Base plate** | 876.00 ◊ |
| | | (W335) |

* Only suitable for RKE.
** Only suitable for RKE-LV.

3846 0005

3846 0010




3846 0130

## NC compact centric vice RKZ-M

NEW

**Design:** Steel body and guides are hardened and ground on all sides. Short, compact design with large clamping stroke and constant clamping force. Turning the clamping jaws extends the clamping range.

**Application:** Ideal for use on machining centres, milling machines and grinding machines. Optimised for 5-axis processing.

**Scope of delivery:** Compact clamping system with stepped jaws.

**Note:** For clamping jaws and set of T-nuts see 📖 3/138.

| Order No. | Jaw width mm | 3858 | Jaw height mm | Jaw span mm | extended clamping range mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|
| 0010 | 50 | 1133.00 | 20 | 0–39 | 72–111 | 10 | 3.5 |
| 0017 | 70 | 1339.00 | 25 | 0–58 | 95–153 | 15 | 7 |
| 0022 | 92 | 1957.00 | 32 | 0–76 | 132–208 | 20 | 18 |
| 0025 | 125 | 2472.00 | 40 | 0–97 | 172–269 | 25 | 32.5 |
| | | (W333) | | | | Extended clamping range by reversing the jaws. | |

## Stepped jaw

**Design:** For centric vice RKZ-M.

| Order No. | For jaw width mm | 3851 | Jaw height mm |
|---|---|---|---|
| 0050 | 50 | 309.00 ◊ | 20 |
| 0070 | 70 | 309.00 ◊ | 25 |
| 0092 | 92 | 309.00 NEW | 32 |
| 0125 | 115 | 515.00 NEW | 40 |
| | | (W335) | |

## Hand crank

**Design:** With internal octagon. For compact clamping system RKZ-M.

| Order No. | For size | 3848 | Internal octagon mm | Length mm |
|---|---|---|---|---|
| 1110 | 50 | 28.80 | 12 | 80 |
| 1115 | 70 | 28.80 | 14 | 125 |
| 1120 | 92 | 36.10 | 19 | 160 |
| 1125 | 125 | 43.30 | 19 | 200 |
| | | (W338) | | |

## Drive adapter

**Design:** For torque spanners. For centric vice RKZ-M.

| Order No. | For size | 3848 | Spanner width hexagon x square mm |
|---|---|---|---|
| 2050 | 50 | 56.70 | 8 x 12 |
| 2070 | 70 | 56.70 | 10 x 14 |
| 2100 | 92/125 | 77.30 | 14 x 19 |
| | | (W335) | |

## Centric vice

**Design:** Steel mount hardened and ground with high set clamping jaws. Long jaw guide and compact design, with very large clamping stroke.

**Application:** Ideal for use in 5-axis machining centres.

**Scope of delivery:** Centring vice with SKB claw jaws.

**3854** **Short design**

**3861** **Long version**

| Order No. | | 0125 | 0125 |
|---|---|---|---|
| **Jaw width** | **mm** | **125** | **125** |
| **3854** | | **1700.00** | – |
| **3861** | | – | **1800.00** |
| Jaw span | mm | 23–142 | 23–222 |
| Clamping force | kN | 25 | 25 |
| Parallel element height | mm | 128 | 128 |
| Weight | kg | 17.4 | 20.3 |

(W333)

Clamping solutions such as the embossing method are fully responding to current trends. In the process, a mark is being embossed onto the workpiece in an embossing station. Special embossing jaws grip exactly into these small recesses on the clamping action into the vice.

Exactly this very effect the innovative RÖHM claw jaws offer. Yet using this technology, your goals will be achieved even faster and more cost-effectively. Because 'embossing' and clamping are carried out in one single processing step – and you can spare an embossing station.

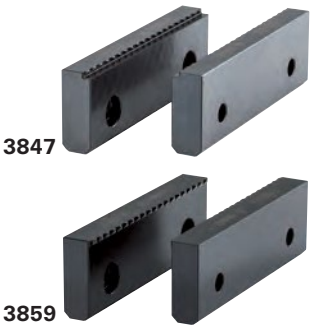
## Sets of claw jaws for NC compact clamping systems.

**Design:** With hardened claw tips. Thus the clamping forces are increased by factor 3–5 in contrast to standard jaws and 5-side machining is enabled in one clamping. This results in less loss of material on the workpiece, shorter machining times as well as shortened production and costs per piece.

**Application:** Can be used for the manual or hydraulic clamping of parallel unmachined and sawn parts on vices. **For universal use by screwing on the RÖHM NC compact clamping system.** Clever alternative to stamping.

**3847** **Claw jaw SKB with fine stage.**

**3859** **Claw jaw SKB without fine stage.**



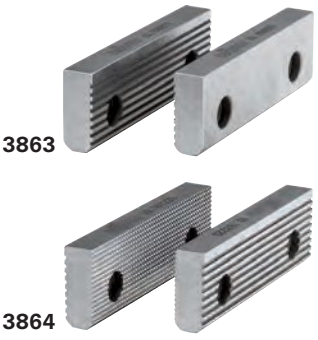

| Order No. | Jaw width mm | 3847 Set | 3859 Set | Jaw height mm | Jaw thickness mm |
|---|---|---|---|---|---|
| 0092 | 92 | 350.00 ◊ | 288.00 ◊ | 32 | 14 |
| 0125 | 125 | 433.00 | 361.00 | 40 | 16 |
| 0160 | 160 | 608.00 (W335) | 505.00 (W335) | 50 | 18 |

## Normal jaw set

**Design:** For machine vices RKE (Order No. 3844), RKE-LV (Order No. 3856) and RKZ-M (Order No. 3858).

**3863** **Type SGN,** one smooth side, one grooved side.

**3864** **Type SGNf,** one finely grooved side, one long-grooved side.




| Order No. | Jaw width mm | 3863 RÖHM Set | 3864 RÖHM Set | Height mm |
|---|---|---|---|---|
| 0125 | 125 | 92.70 (W335) | 116.00 (W335) | 39.6 |

## V-block jaw set PB

NEW

**Design:** With horizontal and vertical V-block. For compact clamping system (Order No. 3858) and centric vice RZM (Order No. 3854).

| Order No. | Jaw width mm | 3841 RÖHM Set | Height mm | V-block height mm | Horizontal clamping range mm | Vertical clamping range mm |
|---|---|---|---|---|---|---|
| 0140 | 125 | 433.00 (W332) | 40 | 24 | 15–40 | 18–60 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## V-block/standard jaw set SBO

**Design:** Unhardened and burnished. With workpiece support. For compact clamping system RKE (Order No. 3844), RKE-LV (Order No. 3856) and centric vice (Order No. 3854).

| Order No. | For size | 3842 ROHM Set | Jaw width mm |
|---|---|---|---|
| 0135 | 3 | 75.70 (W332) | 135 |

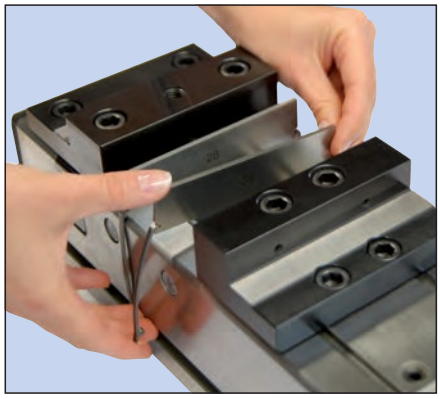
## Precision workpiece support bar Cliparc

**Design:** The Cliparc system precision pads remain where you positioned them during processing and when opening the machine vice. Thus, no time-consuming repositioning is required and laborious assembling of parallels is no longer needed. Supplied in wooden case.

**Parallelism: < 0.005 mm.**

**Application:** Set the Cliparc clamp clips into the precision pads and click them into place on the vice. **No mounting tools necessary.**

**Scope of delivery:** Set with 10 different pairs of bars and 4 clamp clips.



| Order No. | Width of jaws and parallel elements mm | 3851 ROHM | Parallel element height mm | Suitable for |
|---|---|---|---|---|
| 1092 | 92 | 462.00 | 10/16/18/20/23/25/26/27/28/29 | 3844 1092 |
| 1125 | 125 | 462.00 | 10/15/20/25/28/30/33/35/36/37 | 3845 1125<br>3844 1125<br>3856 0125 |
| 1160 | 160 | 823.00 | 10/15/20/25/30/35/40/43/45/47 | 3845 1160<br>3844 1160<br>3844 1200 |
| | | (W001) | | |

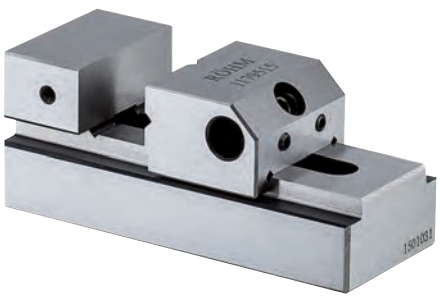
## Precision clamping fixtures PL-S micro

**Design:** Body and jaws made of alloy tool steel, hardened and precision ground. The stationary jaw is smooth, whilst the mobile jaw comes **with a horizontally ground V-block** and quick adjustment. Clamping and releasing through Allen key. With quick adjustment and draw-down effect. Side clamping surfaces for clamping jaws. Supplied in a wooden case, without Allen key.

Angularity[1]: 100 mm = 0.005 mm
Parallelism[2]: 100 mm = 0.002 mm

**Application:** For high working accuracy in precision grinding, milling, measuring and eroding.

**Note:** Allen key is found on 📖 5/123.



| Order No. | Size | 3875 ROHM | Jaw width mm | Jaw span mm | Jaw height mm | Total height mm | Total length mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| 0030 | 1 | 119.00 | 34 | 25 | 15 | 35 | 75 | 2 | 0.35 |
| 0045 | 2 | 155.00 (W337) | 45 | 50 | 20 | 45 | 110 | 2 | 1 |

[1] Base area for the stationary jaw clamping surface.
[2] Base area for upper guide edge.

## Precision clamping fixture PL-S

**Design:** Body and jaws made of alloy tool steel, hardened and precision ground. The stationary jaw is smooth, whilst the mobile jaw comes **with a horizontally and vertically ground V-block** and quick adjustment. Clamping and releasing through Allen key. With quick adjustment and draw-down effect. Jaw adjustable in steps, locks into place automatically. Side clamping surfaces for clamping jaws. No spindle which could e.g. foul during the erosion process. Supplied in wooden case, without Allen key.

Angularity[1]: 100 mm = 0.005 mm
Parallelism[2]: 100 mm = 0.002 mm

**Application:** Predominantly for use in tool making on grinding, milling and engraving machines, on jig drills, for measuring and inspection work, and for manufacturing processes requiring the most utmost clamping precision.

**Note:** Allen key is found on 📖 5/123.

| Order No. | Size | 3877 ROHM | Jaw width mm | Jaw span mm | Jaw height mm | Total height mm | Total length mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| 0070 | 1 | 242.00 | 70 | 80 | 30 | 62 | 160 | 2.5 | 3 |
| 0090 | 2 | 309.00 | 90 | 120 | 40 | 80 | 210 | 3 | 5.8 |
| 0120 | 3 | 412.00 (W337) | 120 | 150 | 40 | 90 | 280 | 4 | 13.5 |

[1] Base area for the stationary jaw clamping surface.
[2] Base area for upper guide edge.

## Precision clamping fixture PL-G with threaded spindle

**Design:** Body and jaws made of alloy tool steel, hardened and precision ground on all sides. The stationary jaw is smooth, whilst the mobile jaw comes with a horizontally ground V-block. Clamping and releasing through threaded spindle. Side clamping surfaces for clamping jaws. Supplied in wooden case.

Angularity: 100 mm = 0.005 mm
Parallelism: 100 mm = 0.002 mm

**Application:** Predominantly for use in tool making on grinding, milling and engraving machines, on jig drills, for measuring and inspection work, and for manufacturing processes requiring the most utmost clamping precision.

| Order No. | Size | 3879 ROHM | Jaw width mm | Jaw span mm | Jaw height mm | Total height mm | Total length mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| 0060 | 0 | 206.00 | 60 | 55 | 25 | 50 | 110 | 2 | 1.6 |
| 0070 | 1 | 258.00 | 73 | 100 | 35 | 67 | 210 | 4 | 4 |
| 0090 | 2 | 309.00 (W337) | 88 | 125 | 40 | 88 | 250 | 4 | 7.6 |

## Precision sine wave vice PS-SV with front rotating shaft

**Design:** Body and jaws made of alloy tool steel, hardened and precision ground. The stationary jaw is smooth, the mobile jaw comes with a horizontally ground V-block. Clamping and releasing through threaded spindle. Angle adjustment with a setting range of 0°–46° is performed using gauge blocks according to the sinus principle; bearing pins and headed dowels are hardened and ground to an accuracy of 0.001 mm. The clamping device can be positively locked in every angular position. Supplied in wooden case.

Angularity: 100 mm = 0.005 mm,
Parallelism: 100 mm = 0.002 mm,
Angular deviation at 45° ±15" .

**Application:** For high working accuracy in tool-making when grinding, milling, measuring, etc.

| Order No. | Size | 3881 ROHM | Jaw width mm | Jaw span mm | Jaw height mm | Total height mm | Total length mm | Clamping force kN | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| 0070 | 1 | 2009.00 | 70 | 80 | 30 | 93 | 160 | 6 | 5.3 |
| 0090 | 2 | 3039.00 (W337) | 90 | 120 | 40 | 113 | 210 | 7 | 11 |

**Formula for calculating the gauge block x**
x = sin α • K (for support surface A)
x = sin α • K + 1 (for support surface B)

**Example:**
Wanted: Gauge block for angle adjustment of 24° 15' on the Precision sine bar machine vice PS-SV.
Given: K = 100, sin α = 0.4107.
Calculation: x = 0.4107 • 100 = 41.07.
The height of the gauge block 41.07 mm.

# CAPTIS clamping system

The flexible modular system for external and internal clamping.

The modular clamping system CAPTIS impresses with its flexibility and compact design offering greater space in which to work. Due to the quick-change function, it takes less than one minute to switch between external and internal clamping. The comprehensive clamping by the CAPTIS collet stands out with its proven quality achieved by the high concentricity and repeat accuracy of 0.01 mm, as well as the good distribution of force.

- Modular design for greatest flexibility
- Compact construction for more work space in the machine
- Various combinations and conversion options
- Areas of application: Rotary machines, drilling, milling, processing centres and measuring machines

## Coordinate table with dovetail guide

**Design:** Made of special cast iron, clamping surface and guides ground. Flatness accuracy is 0.03 mm, lead accuracy over 100 mm is 0.01 mm. The dove tail guides are adjustable by guide rails. Whirled trapezoidal threaded spindle with axial bearings. Graduated drums with zero point adjustment, thus direct reading without conversion possible. With scale division 0.05 mm.
The tables from 450 x 240 mm feature a water channel as well as a clamping lever on both axes, so that you can clamp in any position.

**Application:** For use on drilling machines and for light milling work.

**Note:** Other models and dimensions available on request.

skantek

| Order No. | Clamping surface mm | 3997 skantek | Number of T-slots | Width of T-slots mm | Distance of T-slots mm | Longitudinal movement mm | Cross motion mm | Spindle pitch mm | Capacity kg | Full height (-0.01) | Area mm | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 300 x 160 | 1105.00 | 3 | 10 | 50 | 180 | 100 | 2 | 75 | 78 | 160 x 160 | 16 |
| 0020 | 450 x 240 | 2022.00 ◊ | 3 | 14 | 60 | 275 | 155 | 5 | 280 | 126 | 259 x 200 | 52 |
| 0030 | 580 x 240 | 2114.00 ◊ (W395) | 3 | 14 | 60 | 375 | 155 | 5 | 280 | 126 | 259 x 200 | 60 |

## Pair of precision parallel pads

**Design:** Case-hardened **(hardness 600–700 HV10)** and precision plane-parallel ground in pairs. Nominal dimension tolerance in height and width ±0.01 mm. Size measurements on face side.

**Application:** Parallel pads are used as supports for workpieces during various different processes, and help to guarantee parallel clamping.

amf

| Order No. | Width mm | 3869 amf | Height mm | Length mm |
|---|---|---|---|---|
| 0001 | 4 | 44.30 | 12 | 100 |
| 0003 | 5 | 45.70 | 18 | 100 |
| 0005 | 6 | 46.90 | 19 | 100 |
| 0007 | 8 | 48.40 | 26 | 125 |
| 0009 | 10 | 50.10 (W342) | 33 | 125 |

| Order No. | Width mm | 3869 amf | Height mm | Length mm |
|---|---|---|---|---|
| 0011 | 12 | 52.10 | 40 | 125 |
| 0013 | 8 | 58.50 | 26 | 150 |
| 0015 | 10 | 60.10 | 33 | 150 |
| 0017 | 12 | 61.20 | 40 | 150 |
| 0019 | 14 | 63.80 (W342) | 42 | 150 |

## Set of parallel pads

**Design: Nominal sizes to ISO 2768 m.** Case-hardened and ground in pairs.
Pair tolerance for h = 0.01. Supplied in wooden case, with removable folding lid.

**Application:** Parallel pads are used as supports for workpieces during various different processes. They reduce clamping times thus reducing workpiece costs.

format professional quality

| Order No. | 0001 |
|---|---|
| **Length mm** | **150** |
| **3870 format** | **373.00** |
| Contents of set, 1 pair each h x w mm | 14 x 10; 16 x 10; 18 x 10; 20 x 10; 22 x 10; 24 x 10; 26 x 10; 28 x 10; 30 x 10; 32 x 10; 35 x 10; 40 x 10; 45 x 10; 50 x 10 |

(W340)

## Set of parallel pads

**Design:** Case-hardened (hardness 600–700 HV10) and precision ground in pairs. Machined plane-parallel and true to angle. Pair tolerance ±0.01 mm. Delivered in wooden stand.

**Application:** Parallel pads are used as supports for workpieces during various different processes, and help to guarantee parallel clamping.

**3870** **Super-precision, nominal dimension tolerance (height and width): ± 0.01 mm**

**3871** **Precision, Nominal dimension tolerance (height): ± 0.01 mm**

... 0003

... 0005 + ... 0007

| Order No. | | 0003 | 0005 | 0007 |
|---|---|---|---|---|
| **Length** | **mm** | **100** | **125** | **150** |
| **3870** format | | **488.00** | **560.00** | **613.50** |
| **3871** format | | **321.00** | **350.00** | **401.50** |
| Support height | mm | 2-24 (1-mm-grading) | 8–42 (1-mm-grading) * | 8–42 (1-mm-grading) * |
| Contents of set, 1 pair each w x h | mm | 2 x 5; 2 x 10; 2 x 15; 2 x 20; 3 x 6; 3 x 11; 3 x 16; 3 x 21; 4 x 7; 4 x 12; 4 x 17; 4 x 22; 5 x 8; 5 x 13; 5 x 18; 5 x 23; 6 x 9; 6 x 14; 6 x 19; 6 x 24 | 8 x 11; 8 x 16; 8 x 21; 8 x 26; 8 x 31; 8 x 36; 10 x 13; 10 x 18; 10 x 23; 10 x 28; 10 x 33; 10 x 38; 12 x 15; 12 x 20; 12 x 25; 12 x 30; 12 x 35; 12 x 40; 14 x 17; 14 x 22; 14 x 27; 14 x 32; 14 x 37; 14 x 42 | 8 x 11; 8 x 16; 8 x 21; 8 x 26; 8 x 31; 8 x 36; 10 x 13; 10 x 18; 10 x 23; 10 x 28; 10 x 33; 10 x 38; 12 x 15; 12 x 20; 12 x 25; 12 x 30; 12 x 35; 12 x 40; 14 x 17; 14 x 22; 14 x 27; 14 x 32; 14 x 37; 14 x 42 |

* Except 9 mm.

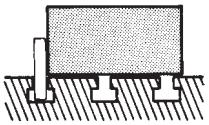
(W340)

## Precision parallel guide, pair

**Design:** Case-hardened and height-ground in pairs acc. to pair tolerance IT 5. Nominal dimension tolerance in height in line with DIN ISO 2768m, h7 in the width; other dimensions in accordance with DIN ISO 2768.

**Application:** Preferably for smaller up to medium sized machines. They are adapted in their thickness to machine T-slots with tolerance H 8.
One pair of these guides is placed in a machine slot so that the workpieces can be quickly aligned parallel to the table.
Can additionally be used as parallels for machine T-slots.

**Note:** Several even pairs are available upon request for an additional charge.



| Order No. | Width mm | 3913 AMF | Height mm | Length mm |
|---|---|---|---|---|
| 0010 | 8 | 88.60 | 25 | 100 |
| 0020 | 10 | 95.40 | 32 | 100 |
| 0030 | 12 | 109.50 | 40 | 100 |
| 0040 | 14 | 118.50 | 50 | 100 |
| 0050 | 16 | 132.50 | 50 | 160 |

(W342)

| Order No. | Width mm | 3913 AMF | Height mm | Length mm |
|---|---|---|---|---|
| 0060 | 18 | 155.00 | 63 | 160 |
| 0070 | 20 | 162.50 | 63 | 160 |
| 0075 | 22 | 243.00 | 80 | 160 |
| 0080 | 24 | 270.00 | 80 | 160 |
| 0090 | 28 | 307.50 | 100 | 160 |

(W342)

## Cover rail for T-slot

**Design:** Made of aluminium profile. Cutting to desired length is possible without any problems using a fine saw blade.

**Note:** Cleaning the machine table groove no longer necessary. Before processing always cover the free slots with the cover strips. After processing, they can be removed easily.

| Order No. | Slot width mm | 3914 AMF | Length mm |
|---|---|---|---|
| 0012 | 12 | 18.25 | 1000 |
| 0014 | 14 | 19.30 | 1000 |
| 0016 | 16 | 20.80 | 1000 |
| 0018 | 18 | 21.50 | 1000 |

(W342)

| Order No. | Slot width mm | 3914 AMF | Length mm |
|---|---|---|---|
| 0022 | 22 | 24.00 | 1000 |
| 0028 | 28 | 30.60 | 1000 |
| 0036 | 36 | 35.90 | 1000 |

(W342)

## Slot reamers

| Order No. | Size/slot | 3914 AMF | Handle design | Weight g |
|---|---|---|---|---|
| 1420 | 14–20 | 3.46 | Steel | 105 |
| 2232 | 22–32 | 7.50 (W342) | 2-component handle | 100 |

3914 1420

3914 2232

## Screw paste

**Design:** The paste, which is based on mineral grease, has a synergistically acting combination of highly effective, white solid lubricants. It is heat-resistant and water washout resistant (water washout test to DIN 51807, T.2; loss of grease after 1 hr./37.8 °C = 1.4 %).

**Application:** Used to lubricate frequently handled screws/nuts in clamping devices. This particularly when aggressive cooling lubricants are being used. Non-lubricated (dry) screw connection are subjected to high friction forces (reduction of tension force) and rapid wear when frequently tightened. AMF screw paste enhances the achievable tension force through optimal sliding characteristics and is gentle on material (longer service life).

| Order No. | Operative temperature range °C | 3914 AMF | Content ml |
|---|---|---|---|
| 0075 | -25 to +125 | 8.20 (W342) | 75 |

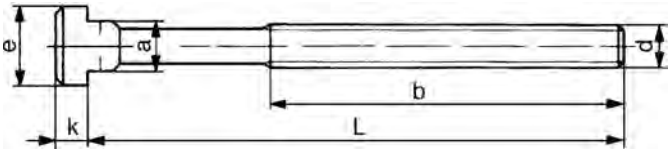
## Screw for T-slot, complete with nut and washer

**Design: DIN 787.** The T-slot guide is milled, stamped with strength grade. Forged and rolled thread.

**Material: M6 -M12 tempered to strength grade 10.9.**
**M14-M24 tempered to strength grade 8.8.**

**Scope of delivery:** Screw with nut (Order No. 3906 📖 3/151) and washer (Order No. 3909 📖 3/152).

DIN 787



| Order No. | Slot width mm | 3900 format | Thread Ø x length mm | Width a mm | Thread length b mm | Head size e mm | Head thickness k mm |
|---|---|---|---|---|---|---|---|
| 5001 | 6 | 4.77 | M6 x 25 | 5.7 | 15 | 10 | 4 |
| 5002 | 6 | 4.81 | M6 x 40 | 5.7 | 28 | 10 | 4 |
| 5003 | 6 | 5.15 | M6 x 63 | 5.7 | 40 | 10 | 4 |
| 5005 | 8 | 5.15 | M8 x 32 | 7.7 | 22 | 13 | 6 |
| 5006 | 8 | 5.35 | M8 x 50 | 7.7 | 35 | 13 | 6 |
| 5007 | 8 | 5.65 | M8 x 80 | 7.7 | 50 | 13 | 6 |
| 5010 | 10 | 5.15 | M10 x 40 | 9.7 | 30 | 15 | 6 |
| 5020 | 10 | 5.25 | M10 x 63 | 9.7 | 45 | 15 | 6 |
| 5025 | 10 | 5.45 | M10 x 80 | 9.7 | 50 | 15 | 6 |
| 5030 | 10 | 5.65 | M10 x 100 | 9.7 | 60 | 15 | 6 |
| 5040 | 12 | 5.65 | M12 x 50 | 11.7 | 35 | 18 | 7 |
| 5050 | 12 | 5.95 | M12 x 80 | 11.7 | 55 | 18 | 7 |
| 5055 | 12 | 6.35 | M12 x 100 | 11.7 | 65 | 18 | 7 |
| 5060 | 12 | 6.50 | M12 x 125 | 11.7 | 75 | 18 | 7 |
| 5061 | 12 | 7.45 | M12 x 160 | 11.7 | 100 | 18 | 7 |
| 5063 | 12 | 7.50 | M12 x 200 | 11.7 | 120 | 18 | 7 |
| 5070 | 14 | 5.80 | M12 x 50 | 13.7 | 35 | 22 | 8 |
| 5080 | 14 | 6.10 (W340) | M12 x 80 | 13.7 | 55 | 22 | 8 |

Continued overleaf

## Screw for T-slot, complete with nut and washer

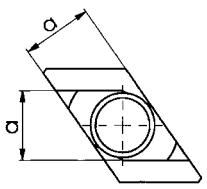
Continued

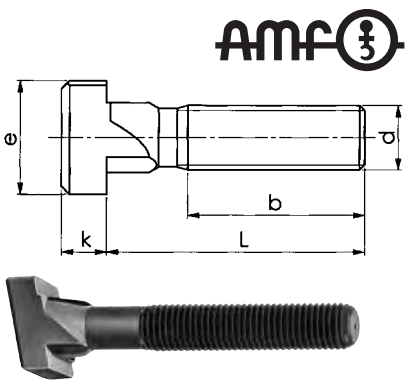
| Order No. | Slot width mm | 3900 format | Thread ∅ x length mm | Width a mm | Thread length b mm | Head size e mm | Head thickness k mm |
|---|---|---|---|---|---|---|---|
| 5085 | 14 | 6.50 | M12 x 100 | 13.7 | 65 | 22 | 8 |
| 5090 | 14 | 6.75 | M12 x 125 | 13.7 | 75 | 22 | 8 |
| 5092 | 14 | 7.10 | M12 x 160 | 13.7 | 100 | 22 | 8 |
| 5093 | 14 | 7.55 | M12 x 200 | 13.7 | 120 | 22 | 8 |
| 5095 | 16 | 6.90 | M14 x 63 | 15.7 | 45 | 25 | 9 |
| 5091 | 16 | 7.10 | M14 x 80 | 15.7 | 55 | 25 | 9 |
| 5096 | 16 | 7.70 | M14 x 100 | 15.7 | 65 | 25 | 9 |
| 5094 | 16 | 7.85 | M14 x 125 | 15.7 | 75 | 25 | 9 |
| 5097 | 16 | 8.30 | M14 x 160 | 15.7 | 100 | 25 | 9 |
| 5098 | 16 | 10.25 | M14 x 250 | 15.7 | 120 | 25 | 9 |
| 5100 | 16 | 7.55 | M16 x 63 | 15.7 | 45 | 25 | 9 |
| 5110 | 16 | 8.30 | M16 x 100 | 15.7 | 65 | 25 | 9 |
| 5120 | 16 | 9.20 | M16 x 160 | 15.7 | 100 | 25 | 9 |
| 5125 | 16 | 11.50 | M16 x 250 | 15.7 | 150 | 25 | 9 |
| 5130 | 18 | 7.90 | M16 x 63 | 17.7 | 45 | 28 | 10 |
| 5140 | 18 | 8.40 | M16 x 100 | 17.7 | 65 | 28 | 10 |
| 5145 | 18 | 8.80 | M16 x 125 | 17.7 | 85 | 28 | 10 |
| 5150 | 18 | 9.55 | M16 x 160 | 17.7 | 100 | 28 | 10 |
| 5155 | 18 | 11.70 | M16 x 250 | 17.7 | 150 | 28 | 10 |
| 5160 | 20 | 11.70 | M20 x 80 | 19.7 | 55 | 32 | 12 |
| 5170 | 20 | 12.40 | M20 x 125 | 19.7 | 85 | 32 | 12 |
| 5172 | 20 | 14.65 | M20 x 200 | 19.7 | 125 | 32 | 12 |
| 5175 | 20 | 18.35 | M20 x 315 | 19.7 | 190 | 32 | 12 |
| 5177 | 22 | 12.60 | M20 x 80 | 21.7 | 55 | 35 | 14 |
| 5180 | 22 | 12.60 | M20 x 125 | 21.7 | 85 | 35 | 14 |
| 5182 | 22 | 15.10 | M20 x 200 | 21.7 | 125 | 35 | 14 |
| 5185 | 22 | 20.20 | M20 x 315 | 21.7 | 190 | 35 | 14 |
| 5188 | 28 | 17.95 | M24 x 100 | 27.7 | 70 | 44 | 18 |
| 5190 | 28 | 20.20 | M24 x 160 | 27.7 | 110 | 44 | 18 |
| 5200 | 28 | 23.80 | M24 x 250 | 27.7 | 150 | 44 | 18 |
| 5210 | 28 | 32.20 (W340) | M24 x 400 | 27.7 | 240 | 44 | 18 |

## Rhombus bolt for T-slots

**Design:** Forged with milled T-slot guide and rolled thread.

**Material: Tempered to strength grade 8.8.**




| Order No. | Slot width mm | 3899 AMF | Thread ∅ x length mm | Width a mm | Thread length b mm | Head size e mm | Head thickness k mm |
|---|---|---|---|---|---|---|---|
| 0120 | 14 | 16.75 | M12 x 50 | 13.7 | 35 | 22 | 8 |
| 0121 | 14 | 17.55 | M12 x 80 | 13.7 | 55 | 22 | 8 |
| 0122 | 14 | 18.90 | M12 x 125 | 13.7 | 75 | 22 | 8 |
| 0160 | 18 | 20.50 | M16 x 63 | 17.7 | 45 | 28 | 10 |
| 0161 | 18 | 21.70 | M16 x 100 | 17.7 | 65 | 28 | 10 |
| 0162 | 18 | 24.80 | M16 x 160 | 17.7 | 100 | 28 | 10 |
| 0200 | 22 | 56.00 | M20 x 80 | 21.7 | 55 | 35 | 14 |
| 0201 | 22 | 48.80 | M20 x 125 | 21.7 | 85 | 35 | 14 |
| 0202 | 22 | 57.00 | M20 x 200 | 21.7 | 120 | 35 | 14 |
| 0240 | 28 | 76.80 | M24 x 100 | 27.7 | 70 | 44 | 18 |
| 0241 | 28 | 77.30 | M24 x 125 | 27.7 | 85 | 44 | 18 |
| 0242 | 28 | 69.30 (W342) | M24 x 250 | 27.7 | 150 | 44 | 18 |

## Stud

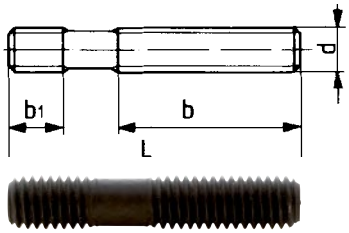
**Design: DIN 6379.** The thread is rolled. The set screws specially developed for tensioning purposes are adapted to the preferred numbers..

**Material: M6 -M12 tempered to strength grade 10.9,**
**M14-M24 tempered to strength grade 8.8.**

**Application:** For individual use in combination with extension nuts (Order No. 3908 📖 3/152), collar nuts (Order No. 3907 📖 3/151) etc.

DIN 6379

format professional quality




| Order No. | Thread Ø x length mm | 3901 format | Thread length b mm | Thread length $b_1$ mm |
|---|---|---|---|---|
| 0001 | M6 x 32 | 0.52 | 16 | 9 |
| 0003 | M6 x 50 | 0.65 | 30 | 9 |
| 0005 | M6 x 80 | 0.74 | 50 | 9 |
| 0006 | M8 x 40 | 0.74 | 20 | 11 |
| 0007 | M8 x 63 | 0.78 | 40 | 11 |
| 0008 | M8 x 100 | 0.94 | 63 | 11 |
| 0011 | M8 x 125 | 1.20 | 75 | 11 |
| 0009 | M8 x 160 | 1.33 | 100 | 11 |
| 0010 | M10 x 50 | 0.83 | 25 | 13 |
| 0020 | M10 x 80 | 1.07 | 50 | 13 |
| 0030 | M10 x 125 | 1.46 | 75 | 13 |
| 0040 | M10 x 200 | 1.94 | 122 | 13 |
| 0050 | M12 x 50 | 1.11 | 25 | 15 |
| 0060 | M12 x 63 | 1.18 | 32 | 15 |
| 0070 | M12 x 80 | 1.31 | 50 | 15 |
| 0080 | M12 x 100 | 1.50 | 63 | 15 |
| 0090 | M12 x 125 | 1.79 | 75 | 15 |
| 0100 | M12 x 200 | 1.91 | 122 | 15 |
| 0110 | M14 x 63 | 1.46 | 32 | 17 |
| 0115 | M14 x 80 | 1.61 | 50 | 17 |
| 0120 | M14 x 100 | 1.81 | 63 | 17 |
| 0125 | M14 x 125 | 1.78 | 75 | 17 |
| 0130 | M14 x 160 | 2.07 | 100 | 17 |
| 0135 | M14 x 250 | 3.27 | 160 | 17 |
| 0140 | M16 x 63 | 2.00 | 32 | 19 |
| 0150 | M16 x 80 | 1.83 | 50 | 19 |
| 0160 | M16 x 100 | 2.20 | 63 | 19 |
| 0170 | M16 x 125 | 2.16 | 75 | 19 |
| 0180 | M16 x 160 | 2.79 | 100 | 19 |
| 0190 | M16 x 250 | 4.00 | 160 | 19 |
| 0200 | M20 x 80 | 2.83 | 32 | 27 |
| 0210 | M20 x 125 | 3.68 | 70 | 27 |
| 0220 | M20 x 200 | 5.45 | 122 | 27 |
| 0230 | M20 x 250 | 6.35 | 160 | 27 |
| 0240 | M20 x 315 | 8.05 | 200 | 27 |
| 0250 | M20 x 500 | 11.50 | 315 | 27 |
| 0300 | M24 x 100 | 4.96 | 45 | 35 |
| 0310 | M24 x 160 | 5.85 | 100 | 35 |
| 0320 | M24 x 250 | 8.75 | 160 | 35 |
| 0330 | M24 x 400 | 12.50 | 250 | 35 |
| | | (W340) | | |

## T-slot nut

**Design: DIN 508.** With internal thread.

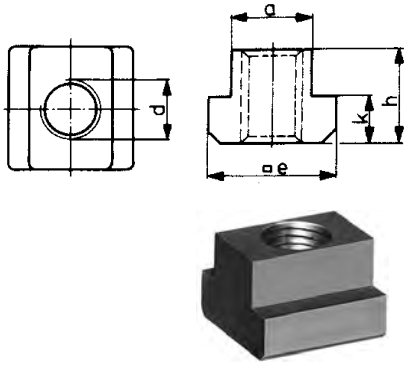
**Material: Tempered to strength grade 10.**

**Note:** The full load-bearing capacity can only be achieve if the entire thread length is screwed.

DIN 508

format professional quality

amf




| Order No. | d x T-slot | 3902 format | 3981 amf | Dimension a mm | Dimension e mm | Dimension h mm | Dimension k mm |
|---|---|---|---|---|---|---|---|
| 0005 | M6 x 8 | 1.18 | 1.24 | 7.7 | 13 | 10 | 6 |
| 0010 | M8 x 10 | 1.22 | 1.29 | 9.7 | 15 | 12 | 6 |
| 0020 | M10 x 12 | 1.26 | 1.34 | 11.7 | 18 | 14 | 7 |
| 0030 | M12 x 14 | 1.61 | 1.68 | 13.7 | 22 | 16 | 8 |
| 0040 | M14 x 16 | 1.80 | 2.14 | 15.7 | 25 | 18 | 9 |
| 0050 | M16 x 18 | 2.26 | 2.64 | 17.7 | 28 | 20 | 10 |
| 0060 | M18 x 20 | – | 4.17 | 19.7 | 32 | 24 | 12 |
| 0070 | M20 x 22 | 3.78 | 4.42 | 21.7 | 35 | 28 | 14 |
| 0080 | M24 x 28 | 7.10 | 8.15 | 27.7 | 44 | 36 | 18 |
| | | (W340) | (W342) | | | | |

## T-slot nut

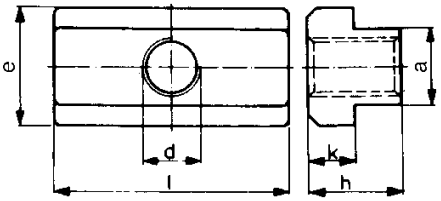
DIN 508

**Design: DIN 508, long design,** with internal thread.

**Material: Tempered to strength grade 10.**

**Application:** For precision machinery; the larger support surface relieves the burden on the machine table slots.

**Note:** The full load-bearing capacity can only be achieve if the entire thread length is screwed.



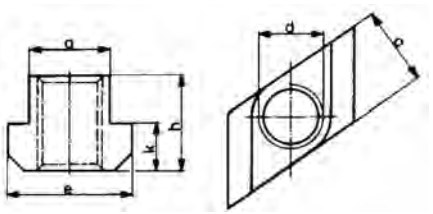
| Order No. | d x T-slot | 3903 format | 3986 AMF | Dimension a mm | Dimension e mm | Measurement l mm | Dimension h mm | Dimension k mm |
|---|---|---|---|---|---|---|---|---|
| 0010 | M6 x 8 | 2.71 | 3.14 | 7.7 | 13 | 26 | 10 | 6 |
| 0020 | M8 x 10 | 2.66 | 3.10 | 9.7 | 15 | 30 | 12 | 6 |
| 0030 | M10 x 12 | 2.87 | 3.35 | 11.7 | 18 | 36 | 14 | 7 |
| 0040 | M12 x 14 | 3.12 | 3.63 | 13.7 | 22 | 44 | 16 | 8 |
| 0050 | M14 x 16 | 3.90 | 4.55 | 15.7 | 25 | 50 | 18 | 9 |
| 0060 | M16 x 18 | 4.95 | 5.75 | 17.7 | 28 | 56 | 20 | 10 |
| 0070 | M18 x 20 | – | 8.10 | 19.7 | 32 | 64 | 24 | 12 |
| 0080 | M20 x 22 | 8.40 | 9.60 | 21.7 | 35 | 70 | 28 | 14 |
| 0090 | M24 x 28 | 16.20 (W340) | 18.70 (W342) | 27.7 | 44 | 88 | 36 | 18 |

## Rhombus T-slot nut

**Design:** With internal thread.

**Application:** Thanks to its special design, the slot nut can be inserted from above if lateral insertion is not possible.

**Note:** The reduced support surface in the T-slot means that the load-bearing capacity is lower than on comparable T-slot nuts DIN 508.



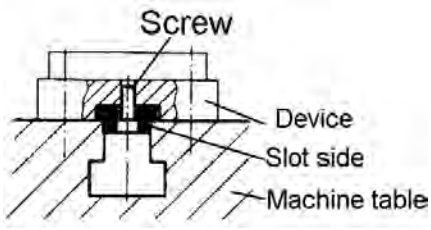
| Order No. | d x T-slot | 3904 format | Dimension a mm | Dimension e mm | Dimension h mm | Dimension k mm | Strength grade |
|---|---|---|---|---|---|---|---|
| 0003 | M8 x 10 | 3.08 | 9.7 | 15 | 12 | 6 | 8 |
| 0005 | M10 x 12 | 3.19 | 11.7 | 18 | 14 | 7 | 8 |
| 0010 | M12 x 14 | 3.25 | 13.7 | 22 | 16 | 8 | 8 |
| 0015 | M14 x 16 | 4.28 | 15.7 | 25 | 18 | 9 | 6 |
| 0020 | M16 x 18 | 4.56 | 17.7 | 28 | 20 | 10 | 6 |
| 0030 | M20 x 22 | 7.50 | 21.7 | 35 | 28 | 14 | 6 |
| 0035 | M20 x 28 | 12.20 | 27.7 | 44 | 36 | 18 | 8 |
| 0040 | M24 x 28 | 11.60 (W340) | 27.7 | 44 | 36 | 18 | 6 |

## Fixed slot nut

**Design:** Case-hardened and exactly ground for symmetry, tolerance compliant.

**Material: Steel C 15.**

**Application:** The fixed slot nuts are screwed into the standard, 20 mm wide aligning groove on vices or devices in pairs. You can work on machines with different slot widths by changing the slot nuts.




Fitting surface h6 ground

| Order No. | Nominal dimension of slots for machines b mm | 3905 AMF | Nominal dimension of slots for device mm | Height mm | Length mm | For screws DIN 84/912 |
|---|---|---|---|---|---|---|
| 0010 | 10 | 20.80 | 20 | 10 | 22 | M6 x 10 |
| 0020 | 12 | 19.10 | 20 | 10 | 22 | M6 x 10 |
| 0030 | 14 | 19.10 | 20 | 10 | 25 | M6 x 16 |
| 0040 | 16 | 19.10 | 20 | 10 | 25 | M6 x 16 |
| 0050 | 18 | 19.10 | 20 | 10 | 25 | M6 x 16 |
| 0060 | 20* | 6.95 | 20 | 10 | 22 | M6 x 16 |
| 0070 | 22 | 23.70 | 20 | 12 | 32 | M6 x 16 |
| 0080 | 24 | 28.50 | 20 | 12 | 32 | M6 x 16 |
| 0090 | 28 | 28.00 (W342) | 20 | 12 | 32 | M6 x 16 |

* Flat slot nut.

## Loose slot nut

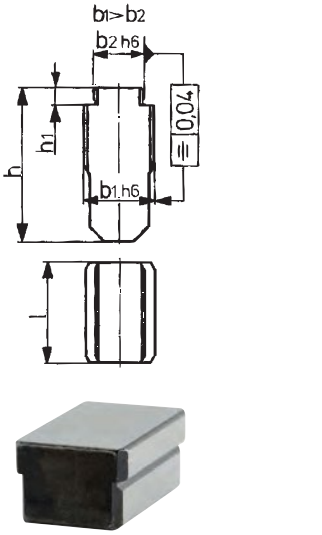
**Design: DIN 6323,** case-hardened and ground.

**Material: Steel C 15.**

**Application:** The slot nuts are inserted from the side following rough alignment. No slot nuts protruding on the bottom will disturb while transporting the jig and the machine table cannot be damaged.

DIN 6323

| Order No. | Nominal dimension of slots for machines b mm | 3905 amf | Nominal dimension of slots for device mm | h mm | $H_1$ mm | l mm |
|---|---|---|---|---|---|---|
| 5010 | 10 | 17.80 | 12 | 12 | 3.6 | 20 |
| 5020 | 12 | 14.80 | 12 | 28.6 | 5.5 | 20 |
| 5025 | 12 | 26.40 | 20 | 14 | 5.5 | 32 |
| 5030 | 14 | 25.70 | 20 | 14 | 5.5 | 32 |
| 5040 | 16 | 25.70 | 20 | 14 | 5.5 | 32 |
| 5050 | 18 | 25.70 | 20 | 14 | 5.5 | 32 |
| 5060 | 20 | 25.50 | 20 | 45.5 | 7 | 32 |
| 5070 | 22 | 37.30 | 20 | 50.5 | 7 | 40 |
| 5080 | 24 | 44.10 | 20 | 55.5 | 7 | 40 |
| 5090 | 28 | 46.30 (W342) | 20 | 61.5 | 7 | 40 |




## Hexagon nut

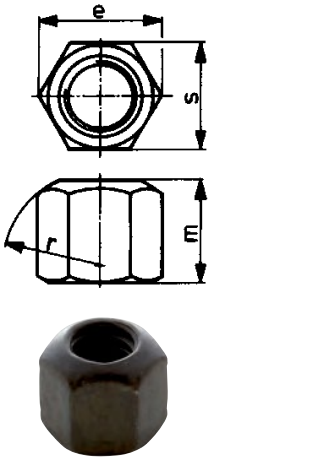
**Design: DIN 6330B. Height 1.5 d.** One end is spherical for conical seats DIN 6319D or G; the other end is flat for washers DIN 6340.

**Material: Tempered steel to strength grade 10.**

DIN 6330-B

| Order No. | Thread | 3906 format | Hexagon square width across flats mm | Dimension e mm | Height m mm | Height r mm |
|---|---|---|---|---|---|---|
| 0005 | M6 | 0.31 | 10 | 11.05 | 9 | 9 |
| 0010 | M8 | 0.31 | 13 | 14.4 | 12 | 12 |
| 0020 | M10 | 0.50 | 16 | 17.8 | 15 | 15 |
| 0030 | M10* | 0.50 | 17 | 18.9 | 15 | 15 |
| 0040 | M12 | 0.56 | 18 | 20.03 | 18 | 17 |
| 0050 | M12* | 0.56 | 19 | 21.1 | 18 | 17 |
| 0060 | M14 | 0.81 | 21 | 23.4 | 21 | 20 |
| 0070 | M14* | 0.81 | 22 | 24.5 | 21 | 20 |
| 0080 | M16 | 0.96 | 24 | 26.8 | 24 | 22 |
| 0090 | M18 | 1.72 | 27 | 30.1 | 27 | 24 |
| 0100 | M20 | 1.74 | 30 | 33.5 | 30 | 27 |
| 0110 | M22* | 3.16 | 32 | 35.7 | 33 | 30 |
| 0120 | M22 | 2.89 | 34 | 37.7 | 33 | 30 |
| 0130 | M24 | 2.44 (W340) | 36 | 40 | 36 | 32 |

* Old DIN standard.



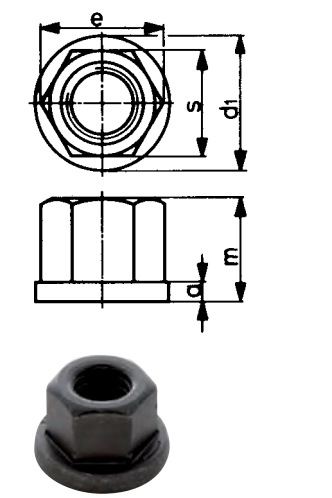

## Hexagon nut with collar

**Design: DIN 6331. Height 1.5 d.** Forged and tempered. One end with collar so no need for washers if the size of the bore or the clamping slot allows.

**Material: Tempered steel to strength grade 10.**

DIN 6331

| Order No. | Thread | 3907 format | 3986 amf | Hexagon square width across flats mm | Dimension e mm | Height m mm | Height a mm | Collar Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0200 | M8 | 0.54 | 0.53 | 13 | 14.4 | 12 | 3.5 | 18 |
| 0205 | M10 | 0.72 | 0.70 | 16 | 17.8 | 15 | 4 | 22 |
| 0210 | M12 | 0.78 | 0.76 | 18 | 20.03 | 18 | 4 | 25 |
| 0215 | M16 | 1.42 | 1.48 | 24 | 26.8 | 24 | 5 | 31 |
| 0220 | M18 | 2.13 | 2.49 | 27 | 30.1 | 27 | 5 | 34 |
| 0225 | M20 | 2.26 | 2.64 | 30 | 33.5 | 30 | 6 | 37 |
| 0230 | M24 | 3.40 (W340) | 3.99 (W342) | 36 | 40 | 36 | 6 | 45 |

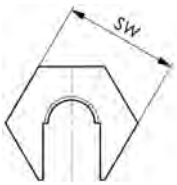


## Quick-clamping nut without collar

**Design:** Quick-clamping nut, tempered and galvanised.

**Material: Tempered steel to strength grade 6.**

**Benefits:**
- Effortless bridging of long screw thread and clamping spindles
- Easy assembly/disassembly on narrow and blind spots
- No searching of the thread
- No sizing on the thread caused by external influences
- No adverse effects from fouling such as paint residues or rust



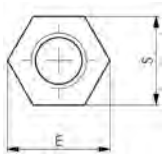
| Order No. | Thread | 3905 AMF | Spanner width mm | M mm | Weight g |
|---|---|---|---|---|---|
| 5900 | M6 | 4.59 | 16 | 9 | 10 |
| 5910 | M8 | 5.10 | 19 | 10.5 | 15 |
| 5920 | M10 | 6.25 | 22 | 12.5 | 23 |
| 5930 | M12 | 6.75 | 27 | 15 | 44 |
| 5940 | M16 | 9.65 | 34 | 16 | 68 |
| 5950 | M20 | 25.30 (W342) | 41 | 22 | 85 |

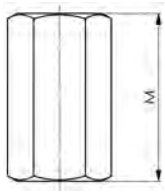
## Extension nut

**Design: Height 3 d.** Both ends are flat. **Cannot be screwed through,** the thread engagement length should be min. 1 x d. However, we recommend half height of nut (1.5 x d) for optimum strength.

**Material: Tempered steel to strength grade 10.**

**Application:** To connect two studs (Order No. 3901 📖 3/149) or to connect studs with T-slot nuts (Order No. 3900 📖 3/147).



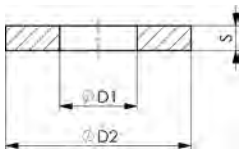
| Order No. | Thread | 3908 format | 3992 AMF | Width of keys mm | Dimension E mm | Height M mm |
|---|---|---|---|---|---|---|
| 0005 | M6 | 0.99 | 1.12 | 10 | 11.05 | 18 |
| 0010 | M8 | 0.99 | 1.12 | 13 | 14.4 | 24 |
| 0020 | M10 | 1.10 | 1.34 | 16 | 17.8 | 30 |
| 0030 | M10* | 1.10 | 1.34 | 17 | 18.9 | 30 |
| 0040 | M12 | 1.29 | 1.57 | 18 | 20.03 | 36 |
| 0050 | M12* | 1.29 | 1.57 | 19 | 21.1 | 36 |
| 0060 | M14 | 1.94 | 2.28 | 21 | 23.4 | 42 |
| 0070 | M14* | 1.94 | 2.28 | 22 | 24.5 | 42 |
| 0080 | M16 | 2.34 | 2.74 | 24 | 26.8 | 48 |
| 0090 | M18 | 3.28 | 3.84 | 27 | 30.1 | 54 |
| 0100 | M20 | 4.42 | 5.15 | 30 | 33.5 | 60 |
| 0110 | M22* | – | 7.05 | 32 | 35.7 | 66 |
| 0120 | M22 | – | 7.05 | 34 | 37.7 | 66 |
| 0130 | M24 | 7.10 (W340) | 8.15 (W342) | 36 | 40 | 72 |

* Old DIN standard.

## Washer

**Design: DIN 6340.** Punched, pressed flat and tempered, strength 1200-1400 N/mm².

DIN 6340



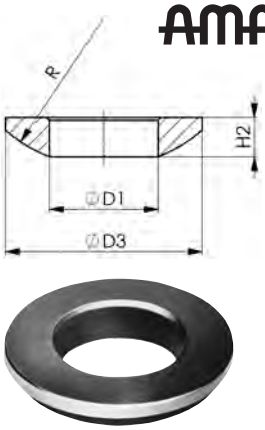
| Order No. | Größe | 3909 format | 3993 AMF | Size inch | Hole Ø D1 mm | Outer Ø D2 mm | Strength s mm |
|---|---|---|---|---|---|---|---|
| 0005 | M6 | 0.36 | 0.45 | 1/4 | 6.4 | 17 | 3 |
| 0010 | M8 | 0.40 | 0.48 | 5/16 | 8.4 | 23 | 4 |
| 0020 | M10 | 0.46 | 0.53 | 3/8 | 10.5 | 28 | 4 |
| 0030 | M12 | 0.55 | 0.61 | 1/2 | 13 | 35 | 5 |
| 0040 | M14 | 0.63 | 0.71 | – | 15 | 40 | 5 |
| 0050 | M16 | 0.72 | 0.84 | 5/8 | 17 | 45 | 6 |
| 0060 | M18 | 0.95 | 1.11 | – | 19 | 45 | 6 |
| 0070 | M20 | 1.24 | 1.48 | 3/4 | 21 | 50 | 6 |
| 0080 | M22 | 1.54 | 1.82 | 7/8 | 23 | 50 | 8 |
| 0090 | M24 | 1.84 (W340) | 2.18 (W342) | 7/8 | 25 | 60 | 8 |

## Spherical washer

**Design:** Case-hardened and phosphatised.

DIN 6319-C

| Order No. | Size | 3910 AMF | Hole Ø D1 mm | Outer Ø D3 mm | Height H2 mm | Radius R mm |
|---|---|---|---|---|---|---|
| 0110 | M8 | 0.40 | 8.4 | 17 | 3.2 | 12 |
| 0120 | M10 | 0.53 | 10.5 | 21 | 4 | 15 |
| 0130 | M12 | 0.63 | 13 | 24 | 4.6 | 17 |
| 0140 | M14 | 1.02 | 15 | 28 | 5 | 22 |
| 0150 | M16 | 0.92 | 17 | 30 | 5.3 | 22 |
| 0160 | M20 | 1.60 | 21 | 36 | 6.3 | 27 |
| 0170 | M24 | 2.46 (W342) | 25 | 44 | 8.2 | 32 |




## Conical seat

**Design:** Case-hardened and phosphatised. Suitable for screw strength corresponding to 8.8.

**Application:** Just for level, closed ring surface.

**Note:** Not allowed for slots.

DIN 6319-D

| Order No. | Size | 3911 AMF | Maximum screw strength kN | Hole Ø D2 mm | Outer Ø D4 mm | Height H3 mm |
|---|---|---|---|---|---|---|
| 0110 | M8 | 0.40 | 17 | 9.6 | 17 | 3.5 |
| 0120 | M10 | 0.59 | 26 | 12 | 21 | 4.2 |
| 0130 | M12 | 0.63 | 38 | 14.2 | 24 | 5 |
| 0140 | M14 | 1.12 | 53 | 16.5 | 28 | 5.6 |
| 0150 | M16 | 1.16 | 73 | 19 | 30 | 6.2 |
| 0160 | M20 | 1.88 | 117 | 23.2 | 36 | 7.5 |
| 0170 | M24 | 3.14 (W342) | 168 | 28 | 44 | 9.5 |

## Conical seat

**Design:** Punched, pressed and tempered.

**Application:** Especially suitable for clamping over the slot at clamping arms and slots.

DIN 6319G

| Order No. | For screws metric | 3912 AMF | Hole Ø D2 mm | Outer Ø D4 mm | Height H3 mm |
|---|---|---|---|---|---|
| 0110 | M8 | 0.91 | 9.6 | 24 | 5 |
| 0120 | M10 | 0.91 | 12 | 30 | 5 |
| 0130 | M12 | 1.16 | 14.2 | 36 | 6 |
| 0140 | M14 | 1.82 | 16.5 | 40 | 6 |
| 0150 | M16 | 1.82 | 19 | 44 | 7 |
| 0160 | M20 | 2.49 | 23.2 | 50 | 8 |
| 0170 | M24 | 4.36 (W342) | 28 | 60 | 10 |

## Clamping screw set for T-slots

**Design:** All parts tempered, strength gradees 8 or 10. The sets can be openly placed in the tool cabinet thanks to the folding lid. Supplied in wooden case.

**3915** **Supplied:** In stable box.

**3995** **Delivery:** In wooden case.

3915 format professional quality

3995 AMF

| Order No. | | 0010 | 0020 | 0025 | 0030 | 0035 | 0040 |
|---|---|---|---|---|---|---|---|
| **T-slots** | | **M12 x 12** | **M12 x 14** | **M14 x 16** | **M16 x 18** | **M18 x 20** | **M20 x 22** |
| **3915** format (W340) | | **141.00** | **141.00** | **154.00** | **175.50** | **237.00** | **264.50** |
| **3995** AMF (W342) | | **147.00** | **148.00** | **177.50** | **202.50** | **273.50** | **304.50** |
| T-slot screw mm | | 2 x 50<br>4 x 80<br>4 x 125 | 2 x 50<br>4 x 80<br>– | 2 x 63<br>4 x 100<br>– | 2 x 63<br>4 x 100<br>– | **<br>–<br>– | 2 x 80<br>4 x 125<br>– |
| Stud mm | | 4 x 63<br>4 x 100<br>4 x 200 | 4 x 63<br>4 x 100<br>4 x 125<br>4 x 200 | 4 x 63<br>4 x 100<br>4 x 160<br>4 x 250 | 4 x 80<br>4 x 125<br>4 x 160<br>4 x 250 | 6 x 80<br>8 x 125<br>4 x 200<br>4 x 315 | 4 x 80<br>4 x 125<br>4 x 200<br>4 x 315 |
| Nut for T-slots | | * | 4 x | 4 x | 4 x | 10 x | 4 x |
| Hexagon nut | | 4 x | 4 x | 4 x | 4 x | 4 x | 4 x |
| Extension nut | | 4 x | 4 x | 4 x | 4 x | 4 x | 4 x |
| Spherical washer | | 4 x | 4 x | 4 x | 4 x | – | 4 x |
| Conical seat | | 4 x | 4 x | 4 x | 4 x | – | 4 x |
| Washer | | 4 x | 4 x | 4 x | 4 x | 10 x | 4 x |
| Dimensions L x W x H3915 | mm | 340 x 340 x 55 | 340 x 340 x 55 | 410 x 410 x 55 | 410 x 410 x 55 | 525 x 480 x 70 | 525 x 480 x 70 |
| Dimensions L x W x H3995 | mm | 278 x 234 x 36 | 278 x 234 x 36 | 317 x 239 x 44 | 339 x 294 x 48 | 359 x 342 x 56 | 358 x 342 x 56 |

* Nuts for T-slots DIN 508 cannot be used for these sizes.
** Instead of DIN 787, M18 x 20 additionally contains 4 studs DIN 6379, 125 mm and 2 pieces 80 mm, each with nuts for T-slots DIN 508 and washers DIN 6340.

## Clamping tool assortment box

**Design:** Made of tempered steel. The assortment boxes contain all necessary elements for rapid clamping tools, jigs or workpieces on T-slot tables. All parts in accordance with DIN or factory standards are replaceable and can be supplemented at any time.

**3916** **Supplied:** In stable box.

**3996** The folding lid can be removed so that the box can be stored open in the tool cabinet.

**Scope of delivery:** Wooden case with screw paste.

3916 format professional quality

3996 AMF

| Order No. | | 0010 | 0020 | 0030 | 0040 | 0050 | 0070 |
|---|---|---|---|---|---|---|---|
| **T-slots** | | **M10 x 10** | **M12 x 12** | **M12 x 14** | **M16 x 16** | **M16 x 18** | **M20 x 22** |
| **3916** format (W340) | | **353.00** | **401.00** | **419.50** | **541.50** | **552.00** | **541.50** |
| **3996** AMF (W342) | | **407.00** | **463.50** | **483.00** | **625.50** | **636.00** | **625.50** |
| Universal stepped setting up blocks | | 4 x SZ 1<br>4 x SZ 2<br>2 x SZ 3 | –<br>4 x SZ 2<br>4 x SZ 3 | –<br>4 x SZ 2<br>4 x SZ 3 | –<br>4 x SZ 2<br>4 x SZ 3 | –<br>4 x SZ 2<br>4 x SZ 3 | –<br>4 x SZ 2<br>4 x SZ 3 |
| Clamps with stepped teeth | | 4 x 11/80 | 4 x 14/100 | 4 x 14/100 | 4 x 18/125 | 4 x 18/125 | 4 x 22/160 |
| T-slot screw mm | | 2 x 40<br>4 x 63<br>4 x 100 | 2 x 50<br>4 x 80<br>4 x 125 | 2 x 50<br>4 x 80<br>4 x 125 | 2 x 63<br>4 x 100<br>4 x 160 | 2 x 63<br>4 x 100<br>4 x 160 | –<br>4 x 125<br>4 x 200 |
| Stud | mm | 4 x 80 | 4 x 100 | 4 x 100 | 4 x 125 | 4 x 125 | 4 x 125 |
| Hexagon nut | | 6 x | 6 x | 6 x | 6 x | 6 x | 6 x |
| Extension nut | | 4 x | 4 x | 4 x | 4 x | 4 x | 4 x |
| Conical seat | | 6 x | 6 x | 6 x | 6 x | 6 x | 6 x |
| Deep clamping jaws | | 4 x SZ 12 | 4 x SZ 12 | 4 x SZ 14 | 4 x SZ 16 | 4 x SZ 18 | ** |
| Slot reamers | | – | – | 1 x 14–20 | 1 x 14–20 | 1 x 14–20 | 1 x 22–32 |
| Combination ring spanner | | 1 x A/F 16 | 1 x A/F 18 | 1 x A/F 18 | 1 x A/F 24 | 1 x A/F 24 | 1 x A/F 30 |
| Dimensions L x W x H3916 | mm | 432 x 328 x 55 | 412 x 424 x 55 | 412 x 424 x 55 | 485 x 418 x 55 | 485 x 418 x 55 | 562 x 485 x 70 |
| Dimensions L x W x H3996 | mm | 355 x 270 x 47 | 460 x 330 x 50 | 460 x 330 x 50 | 510 x 415 x 50 | 510 x 415 x 50 | 480 x 528 x 60 |

The deep clamping jaws come complete with nuts for T-slots DIN 508, screws DIN 912 as well as two hexagon socket screw key DIN 911.
** M20 x 22 without deep clamping jaws Order No. 3934. 4 spring-loaded clamp holders included.

## Clamping tool basic assortment

**Design:** All parts are manufactured from tempered steel, T-slot screws tempered, thread rolled.

**Application:** Ideal for toolmaking, production and training facilities.

| Order No. | Size | 3916 AMF | Clamping force kN | Clamping heights with 2/4 clamping positions mm | Dimensions L x W x H mm | Weight kg |
|---|---|---|---|---|---|---|
| 0031 | M12 x 14 | 221.00 | 20 | 165/ 70 | 210 x 173 x 85 | 10 |
| 0036 | M14 x 16 | 250.00 | 28 | 195/100 | 210 x 173 x 85 | 11.1 |
| 0051 | M16 x 18 | 291.50 (W342) | 40 | 205/130 | 236 x 208 x 95 | 15.2 |

**Set contents:**

| ForSize | Clamp with universal Stepped teeth pc. x size | Stepped setting up blocks pc. x size | Screws for T-slots pc. x size | Studs pc. x L | Hexagon nuts pc. x L | Washers pc. | Extension nuts pc. |
|---|---|---|---|---|---|---|---|
| M12 – M14 | 2 x 14 x 100/2 x 14 x 160 | 4 x 2/4 x 3 | 2 x 50/4 x 80/4 x 125 | 2 x 100 | 6 | 6 | 2 |
| M14 – M16 | 2 x 14 x 100/2 x 14 x 160 | 4 x 2/4 x 3 | 2 x 63/4 x 100/4 x 160 | 2 x 100/2 x 160 | 6 | 6 | 2 |
| M16 – M18 | 2 x 18 x 125/2 x 18 x 200 | 4 x 2/4 x 3 | 2 x 63/4 x 100/4 x 160 | 2 x 100/2 x 160 | 6 | 6 | 4 |

## Set of clamping elements

**Design:** Set made of plastic, comprising 55 elements. Camping jaws, stepped setting up blocks and nuts made of high-strength PBT plastic, red.
Studs, anodised aluminium.

**Application:** Suitable for use on 3D coordinate measuring machines, engraving and electrical discharge machines as well as for all clamping processes, which only require very low clamping and holding forces. Depending on the leverage selected, the possible holding force (approx. 500 N) is achieved by tightening the nut on the knurl. The nut can be slackened using a spanner if the clamping elements should have become stuck.

**Benefits:**
- Weight only 1/4 against aluminium elements and 1/10 against steel elements
- Corrosion-resistant to hand sweat
- Very easy handling
- No damage to machine table and workpiece
- Versatile combinations possible.

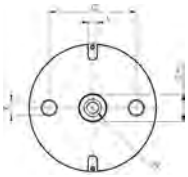
| Order No. | M | 3916 AMF | Dimensions L x W x H mm | Weight kg |
|---|---|---|---|---|
| 0600 | M6 | 493.50 | 440 x 370 x 50 | 1.7 |
| 0800 | M8 | 493.50 | 440 x 370 x 50 | 1.74 |
| 1000 | M10 | 504.00 | 440 x 370 x 50 | 1.77 |
| 1200 | M12 | 504.00 (W342) | 440 x 370 x 50 | 1.8 |

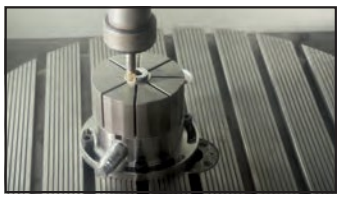
## Mechanical collet

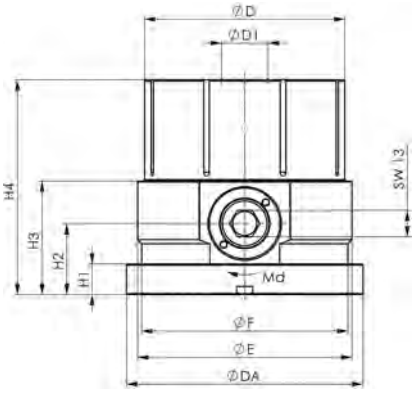
**Design:** Base body made of bronzed steel. Mechanism in the body is protected from dirt and coolant. Circumferential clamping edge for mounting on the machine table. Mount for AMF-Zero-Point-System on the bottom side.

**Application:** For clamping complex workpiece contours. Faster and easier exchange of the collets.

**Scope of delivery:** Mount and collet.





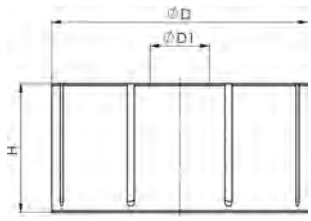


| Order No. | Ø D mm | 3916 AMF | Ø D1 mm | Ø DA mm | Ø M mm | H1 mm | H2 mm | H3 mm | H4 mm |
|---|---|---|---|---|---|---|---|---|---|
| 4099 | 99 | 1032.00 (W342) | 23 | 117 | 25 | 15 | 35 | 56 | 106 |

## Collet, individual

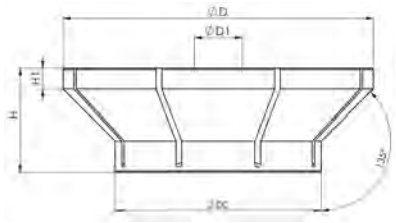
**Design:** Made of anodised, high-strength aluminium.

**Application:** The workpiece contour is milled into the collet with a minimum depth of 2 mm.




3916 4149

3916 4149




3916 4199

3916 4199

| Order No. | Ø D mm | 3916 AMF | Ø D1 mm | Ø D2 mm | Height mm |
|---|---|---|---|---|---|
| 4149 | 99 | 383.00 | 23 | 99 | 50 |
| 4199 | 149 | 275.50 (W342) | 23 | 99 | 50 |

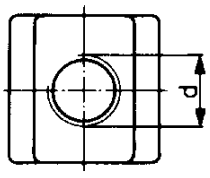
## T-slot nut

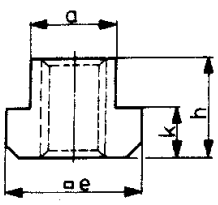
**Design: DIN 508.** With internal thread.

**Material: Tempered to strength grade 10.**

**Note:** The full load-bearing capacity can only be achieve if the entire thread length is screwed.

DIN 508



| Order No. | d x T-slot | 3902 formal | Dimension a mm | Dimension e mm | Dimension h mm | Dimension k mm |
|---|---|---|---|---|---|---|
| 0030 | M12 x 14 | 1.61 (W340) | 13.7 | 22 | 16 | 8 |

# SAFE AND EFFICIENT SPANNING - VACUUM TECHNOLOGY BY AMF

Vacuum clamp technology is a quicker, more secure clamping method for different workpieces. This clamp system is best suited to metals, NF metals, wood and synthetics, with smooth to course surface finishing.

## ONE SYSTEM - TWO TYPES OF CLAMPING

The AMF vacuum clamping technology can be operated both with available compressed air and with an external vacuum pump. Above all it's a cost-effective way of clamping.

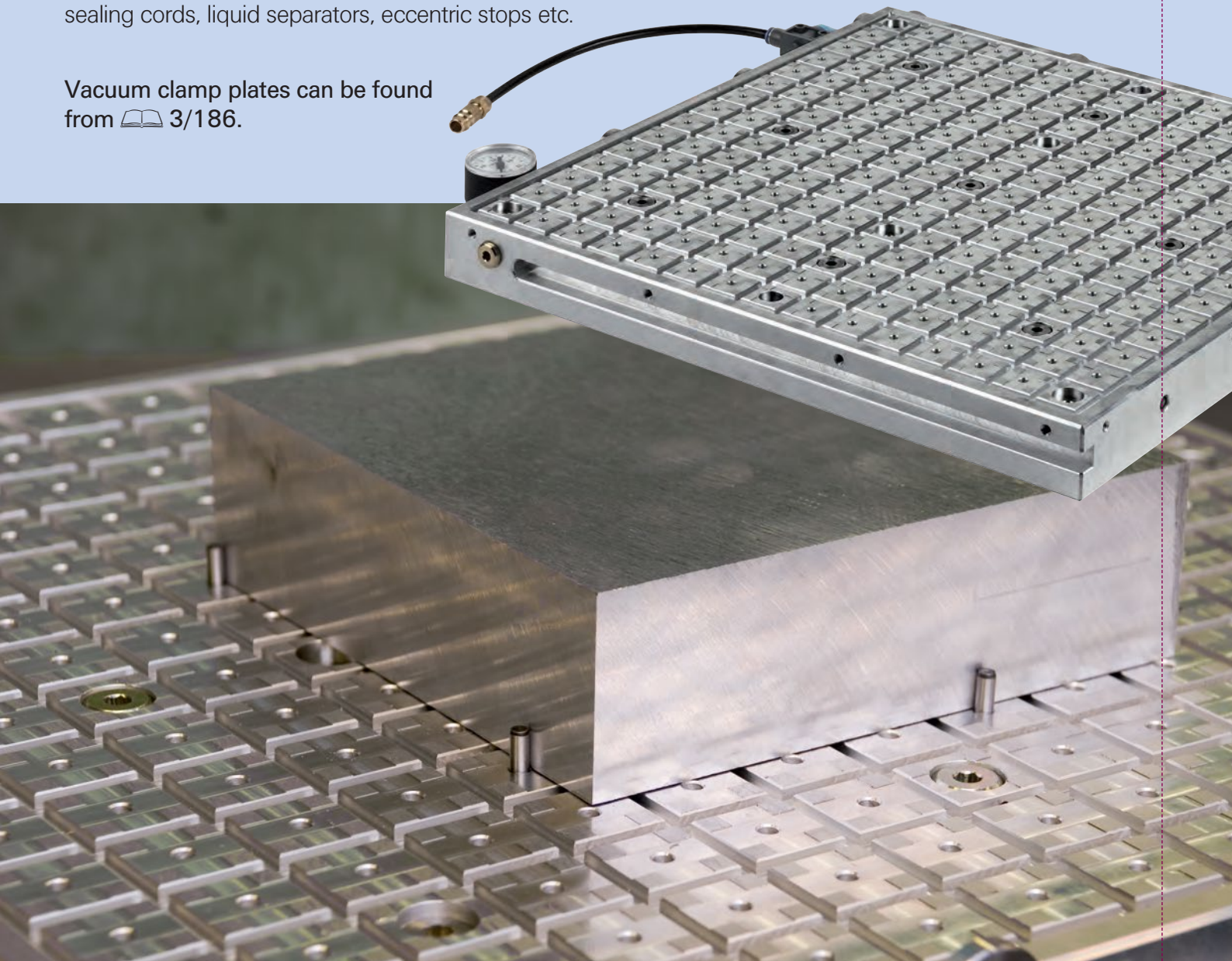
## EASY AND UNCOMPLICATED DESIGN

Lateral slots allow the AMF vacuum clamping plate to be easily fastened to the machine table or a base plate using clamps.

## EXTENSIVE ACCESSORIES

AMF offers an extensive range of accessories for vacuum clamping, such as adapter plates, sealing cords, liquid separators, eccentric stops etc.

Vacuum clamp plates can be found from 3/186.



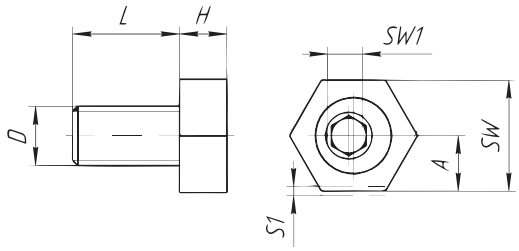
**Universal clamping system for clamping from all workpiece shapes, whether square, diagonal, concave or convex.**

**Design:** The special feature of this clamping device is the **steel screw (strength 10.9) with the eccentric head.** The eccentric tappet gives the clamping motion a very high clamping force. **A hexagonal brass disc serves as clamping piece.**

**Application:** All workpieces with the most varied shapes can be clamped with retaining studs and 1 or 2 clamping screws. The small installation height enables machining the workpiece surface without problems. Thus, the position of the clamping jaws does not have to be taken into account in CNC programming work. In addition, the compact dimensions allow space-saving multiple clamping. The tension clamps can also be used as dog.

## Eccentric tension clamp

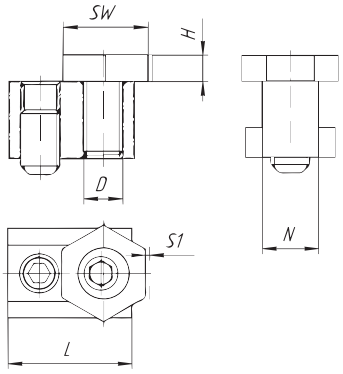
**Application:** For screwing-in and clamping onto jigs.

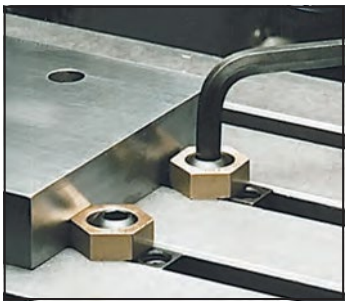


| Order No. | Thread ∅ D mm | 3917 | PU | Length of thread L mm | Hexagonal washer SW mm | Washer height H mm | Eccentric travel S1 mm | Distance A mm | Clamping force kN |
|---|---|---|---|---|---|---|---|---|---|
| 0000 | M4 | 5.65 | 10 | 10 | 8 | 2.8 | 0.8 | 3.8 | 0.9 |
| 0010 | M6 | 6.05 | 10 | 12 | 16 | 4.8 | 1.3 | 7.8 | 3.4 |
| 0020 | M8 | 6.25 | 12 | 16 | 20 | 4.8 | 1 | 10.2 | 3.6 |
| 0030 | M10 | 6.80 | 10 | 20 | 20 | 6.4 | 1.6 | 10.2 | 9 |
| 0040 | M12 | 9.35 | 8 | 25 | 25 | 9.5 | 2 | 12.7 | 18 |
| 0050 | M16 | 14.10 (W343) | 4 | 30 | 30 | 12.7 | 2.5 | 15 | 27 |

## Eccentric tension clamp with T-slot nut

**Application:** The tempered T-slot nuts are pushed in the T-slot guide and locked with a threaded pin. Tensioning takes place by twisting the eccentric screw.



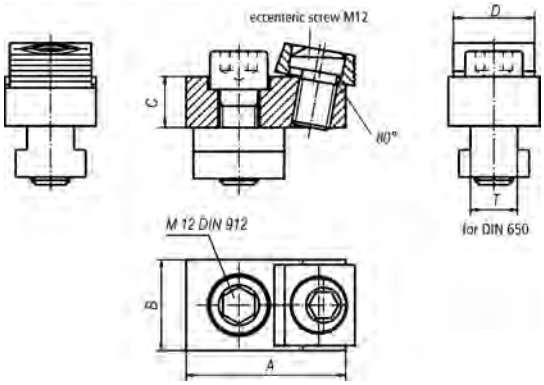



| Order No. | T-slot width N mm | 3917 | PU | Thread D | Recessed hexagon mm | Hexagonal washer SW mm | Washer height H mm | Eccentric travel S1 mm | Clamping force kN |
|---|---|---|---|---|---|---|---|---|---|
| 0060 | 8 | 25.70 | 2 | M6 | 3 | 16 | 4.8 | 1 | 3.4 |
| 0070 | 10 | 26.60 | 2 | M6 | 4 | 16 | 4.8 | 1 | 3.4 |
| 0080 | 12 | 27.30 | 2 | M8 | 5 | 21 | 4.8 | 1 | 3.6 |
| 0090 | 14 | 27.60 | 2 | M10 | 7 | 21 | 6.4 | 1.6 | 9 |
| 0100 | 16 | 28.30 | 2 | M12 | 8 | 25 | 9.5 | 2 | 18 |
| 0110 | 18 | 29.50 | 2 | M12 | 8 | 25 | 9.5 | 2 | 18 |
| 0120 | 20 | 36.50 | 2 | M16 | 12 | 30 | 12.7 | 2.5 | 27 |
| 0130 | 22 | 51.80 (W343) | 2 | M16 | 12 | 30 | 12.7 | 2.5 | 27 |

## Draw-down clamping claw with eccentric screw

**Design:** With tempered T-slot nut and hardened clamp disc.

**Application:** The clamping screw can be rotated so that processed workpieces can be clamped without damage using the smooth side. In addition, sawn parts, forged parts or cast parts can be clamped using the serrated edge. The workpiece is pressed against the base support by the draw-down effect. The clamp disc adapts to the workpiece angular position, thus also non-rectangular workpieces can be clamped.

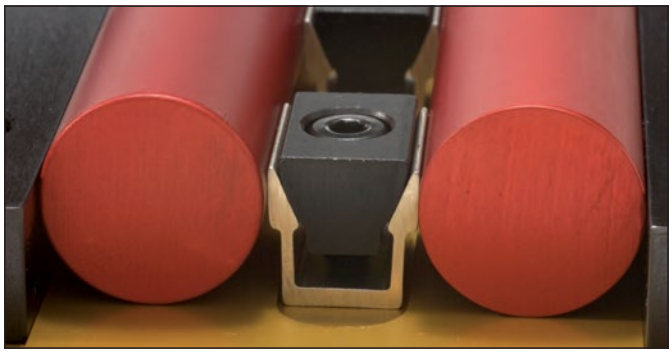


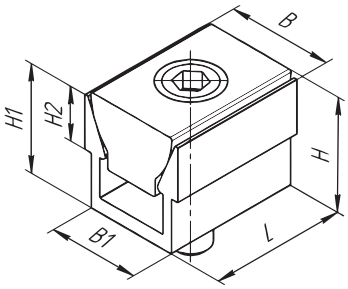

| Order No. | Slot width mm | 3917 POWERCLAMP | Dimension A mm | Dimension B mm | Dimension C mm | Dimension D mm | Eccentric travel mm | Clamping force kN |
|---|---|---|---|---|---|---|---|---|
| 0140 | 14 | 67.10 | 50 | 28.4 | 16 | 25.5 | 2 | 18 |
| 0150 | 16 | 67.10 | 50 | 28.4 | 16 | 25.5 | 2 | 18 |
| 0160 | 18 | 72.90 | 50 | 28.4 | 16 | 25.5 | 2 | 18 |
| 0170 | without slot nut | 58.70 (W343) | 50 | 28.4 | 16 | 25.5 | 2 | 18 |

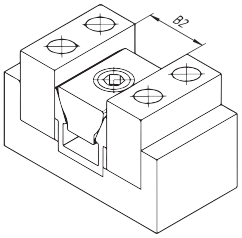
## Double wedge clamp

**Design:** aluminium profile coated, steel wedge tempered. Multiple clamping is enabled thanks to compact dimensions.

**Application:** 2 workpieces are simultaneously clamped by one clamping element Ideal for clamping round and rectangular workpieces.






| Order No. | Width B mm | 3917 POWERCLAMP | PU | Max. spreading mm | Height H mm | Length L mm | Size B1 mm | Size B2 mm | Dimension H2 mm | Screw | A/F | Clamping force kN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0180 | 6.1 | 16.55 | 6 | 6.7 | 6.9 | 8.1 | 5.3 | 6.1 | 3.6 | M2 | 1.5 | 0.9 |
| 0190 | 9.1 | 16.55 | 6 | 10 | 9.7 | 11.9 | 7.9 | 9.1 | 4.7 | M2.5 | 2 | 1.3 |
| 0200 | 12.3 | 12.20 | 8 | 13.2 | 14.5 | 15.9 | 10.4 | 12.3 | 5.6 | M4 | 3 | 2.2 |
| 0210 | 18.6 | 16.90 | 6 | 20.3 | 19 | 23.8 | 16.1 | 18.6 | 9.5 | M6 | 5 | 6.7 |
| 0220 | 24.8 | 20.10 | 4 | 26.9 | 25.9 | 31.7 | 20.8 | 24.8 | 12.7 | M8 | 6 | 8.9 |
| 0230 | 37.3 | 88.40 | 2 | 39.9 | 38.6 | 47.6 | 30.8 | 37.3 | 19 | M12 | 10 | 15.6 |
| 0240 | 49.7 | 134.50 (W343) | 2 | 53 | 51.5 | 63.5 | 41.2 | 49.7 | 25.4 | M16 | 14 | 26.7 |

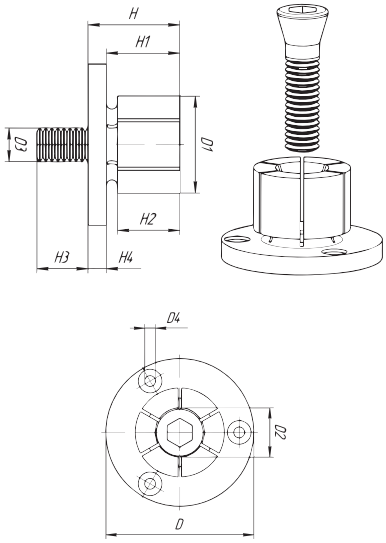
## Clamping mandrel XPA

**Design:** Made of construction steel, with hardened and coated clamping screw. The mounting flange diameter is concentric to the clamping diameter so that high repeat accuracy of the parts is achieved.

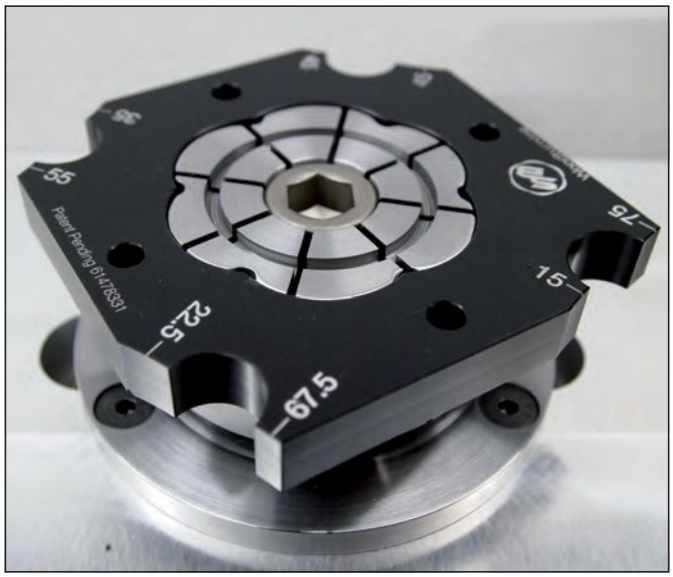
**Application:** Almost every workpiece (e.g. rotary part, milled part, drilled parts etc.) has at least one hole, and this is what is used by the XPA clamping mandrel for clamping. Thus clamping takes place from inside enabling machining of the 2nd side without problem. The compact dimensions allow multi-face machining without disturbing edges for the tool. The clamping mandrel can be machined and can be adapted to the respective diameters by turing and milling. Can be automated using hydraulic and pneumatic equipment.

**Scope of delivery:** Clamping mandrel with 3 fastening screws.

**Note:** Allen key is found from 📖 5/123.



| Order No. | Clamping range $D_1$ mm | 3917 POWERCLAMP | ∅ D h9 mm | Dimension D3 | Dimension D4 mm | Dimension H mm | Size H1 mm | Dimension H2 mm | Dimension H3 mm | Dimension H4 mm | Clamping force kN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0380 | 4.1– 7.4 | 67.40 | 20 | M2 | M2 | 10.7 | 7.6 | 6.1 | 4.1 | 3 | 1.1 |
| 0390 | 7.2– 12.4 | 68.20 | 29.72 | M4 | M3 | 21.8 | 16 | 15 | 8 | 5.9 | 4.2 |
| 0400 | 12.2– 14.4 | 71.60 | 31.5 | M6 | M3 | 24.9 | 19 | 15 | 12 | 5.9 | 8.5 |
| 0410 | 13.5– 20 | 75.60 | 37.5 | M8 | M3 | 24.9 | 19 | 15 | 14 | 5.9 | 11.1 |
| 0420 | 18 – 27 | 97.20 | 50 | M10 | M4 | 28.6 | 22.2 | 17.5 | 17 | 5.9 | 20 |
| 0430 | 23 – 35.3 | 121.00 | 56 | M12 | M4 | 31.8 | 25.4 | 20.6 | 21 | 6.4 | 26.3 |
| 0440 | 29.3– 42 | 155.00 | 69.5 | M16 | M5 | 39.6 | 31.8 | 27 | 22 | 6.4 | 44.5 |
| 0450 | 29.3– 51.5 | 159.00 | 75.5 | M16 | M5 | 39.6 | 31.8 | 27 | 22 | 7.9 | 44.5 |
| 0460 | 29.3– 77.7 | 292.00 | 107.5 | M16 | M6 | 45.5 | 37.6 | 32.3 | 20 | 7.9 | 44.5 |
| 0470 | 29.3–103 | 376.00 (W343) | 132.9 | M16 | M6 | 45.5 | 37.6 | 32.3 | 20 | 7.9 | 44.5 |

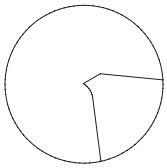


## Clamp PITBULL®

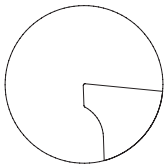
**Design: The Pitbull® tension clmaps are available in 3 different versions:**
- **made of tool steel, with knife edge for unmachined parts (cast, forged or sawn parts)**
- **made of tool steel, with blunt edge for general work**
- **made of brass, with blunt edge to avoid striations caused by clamping**

Application: Simple and ingenious. **The rear of the clamp projects forwards and downwards by drawing the screw (DIN 912). This results in an absolute draw-down effect for exact machining of different workpieces. Moreover, ideal for multiple clamping work. The compact dimensions allow multi-face machining without disturbing edges for the tool.**

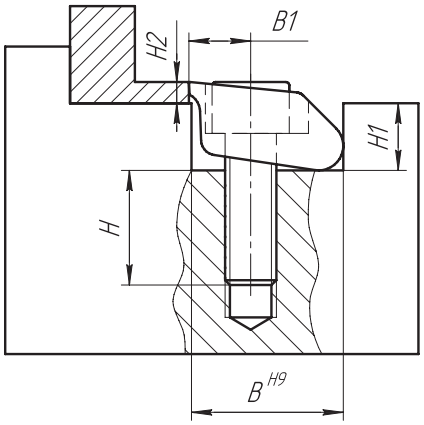
Scope of delivery: **Tension clamp with screw (DIN 912), clamp and O-ring.**



**Knife edge**



**Blunt edge**



**3917 0310**

**3917 0320**

### Tension clamp made of tool steel with knife edge

| Order No. | Thread | 3917 | PU | Clamping width mm | Clamping travel mm | Dimension B H9 mm | Size B1 mm | Dimension H mm | Size H1 mm | Dimension H2 mm | Tightening torque N•m | Clamping force kN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0250 | M2.5 | 21.20 | 8 | 9.5 | 0.15 | 9.5 | 3.8 | 6.6 | 3.6 | 1.9 | 1.8 | 2.8 |
| 0280 | M4 | 22.00 | 8 | 12.7 | 0.4 | 12.7 | 5.6 | 9.9 | 4.8 | 2.6 | 5.6 | 6.6 |
| 0310 | M6 | 28.30 | 6 | 19.1 | 0.6 | 19.05 | 22.5 | 14.48 | 7.2 | 3.8 | 22.5 | 16 |
| 0340 | M10 | 42.50 | 4 | 25.4 | 1.7 | 25.4 | 40 | 18.03 | 11.4 | 6.3 | 40 | 26 |
| 0360 | M12 | 77.50 (W343) | 2 | 38.1 | 1.9 | 38.1 | 145 | 19.56 | 16.3 | 9.5 | 145 | 50 |

### Tension clamp made of tool steel, with blunt edge

| Order No. | Thread | 3917 | PU | Clamping width mm | Clamping travel mm | Dimension B H9 mm | Size B1 mm | Dimension H mm | Size H1 mm | Dimension H2 mm | Tightening torque N•m | Clamping force kN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0260 | M2.5 | 21.10 | 8 | 9.5 | 0.15 | 9.5 | 3.8 | 6.6 | 3.6 | 1.9 | 1.8 | 2.8 |
| 0290 | M4 | 21.70 | 8 | 12.7 | 0.4 | 12.7 | 5.1 | 9.9 | 4.8 | 2.6 | 5.6 | 6.6 |
| 0320 | M6 | 28.10 | 6 | 19.1 | 0.6 | 19.05 | 7.6 | 14.48 | 7.2 | 3.8 | 22.5 | 16 |
| 0350 | M10 | 42.50 | 4 | 25.4 | 1.2 | 25.4 | 10.2 | 18.03 | 11.4 | 6.3 | 40.5 | 26 |
| 0370 | M12 | 77.50 (W343) | 2 | 38.1 | 1.9 | 38.1 | 15.2 | 19.56 | 16.3 | 9.5 | 145 | 50 |

### Tension clamp made of brass, with blunt edge

| Order No. | Thread | 3917 | PU | Clamping width mm | Clamping travel mm | Dimension B H9 mm | Size B1 mm | Dimension H mm | Size H1 mm | Dimension H2 mm | Tightening torque N•m | Clamping force kN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0270 | M2.5 | 21.30 | 8 | 9.5 | 0.15 | 9.5 | 3.8 | 5.59 | 3.6 | 1.9 | 0.6 | 0.9 |
| 0300 | M4 | 22.10 | 8 | 12.7 | 0.4 | 12.7 | 5.1 | 8.64 | 4.8 | 2.6 | 2.8 | 1.8 |
| 0330 | M6 | 28.40 (W343) | 6 | 19.1 | 0.6 | 19.05 | 7.6 | 11.18 | 7.2 | 3.8 | 5.6 | 4.2 |

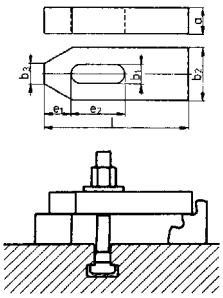
## Clamp

**Design:** Made of tempered steel, lacquered. With plane-parallel clamping and support surfaces.

**Application:** Clamps can be combined with different stepped setting up blocks to accommodate different workpiece shapes and sizes.

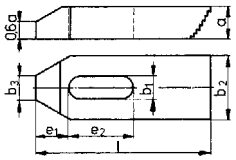
**3918** **DIN 6314, straight clamp.**

**3919** **Clamp with stepped teeth,** suitable for packing block (Order No. 3926).



3918

DIN 6314



3919

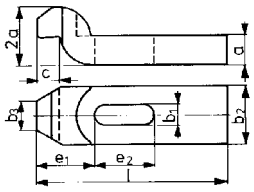
| Order No. | Slot width $b_1$ mm | 3918 format | 3919 format | Length l mm | For screws | a mm | $b_2$ mm | $b_3$ mm | $e_1$ mm | $e_2$ mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0007 | 6.6 | 3.69 | 7.20 | 50 | M6 | 10 | 20 | 8 | 10 | 20 |
| 0009 | 9 | 4.67 | 8.80 | 60 | M8 | 12 | 25 | 10 | 13 | 22 |
| 0011 | 11 | – | 8.80 | 80 | M10 | 15 | 30 | 12 | 15 | 30 |
| 0013 | 11 | – | 13.65 | 125 | M10 | 15 | 30 | 12 | 15 | 70 |
| 0011 | 11 | 5.20 | – | 80 | M10 | 15 | 30 | 12 | 15 | 30 |
| 0014 | 14 | 6.25 | 10.25 | 100 | M12/M14 | 20 | 40 | 14 | 21 | 40 |
| 0016 | 14 | 7.10 | – | 125 | M12/M14 | 20 | 40 | 14 | 21 | 50 |
| 0017 | 14 | – | 17.85 | 160 | M12/M14 | 20 | 40 | 14 | 21 | 90 |
| 0018 | 18 | 8.75 | 16.10 | 125 | M16/M18 | 25 | 50 | 18 | 26 | 45 |
| 0020 | 18 | 11.60 | – | 160 | M16/M18 | 25 | 50 | 18 | 26 | 65 |
| 0021 | 18 | – | 29.10 | 200 | M16/M18 | 25 | 50 | 18 | 26 | 110 |
| 0022 | 22 | 16.70 | 25.90 | 160 | M20/M22 | 30 | 60 | 22 | 30 | 60 |
| 0024 | 22 | 20.70 (W340) | – (W340) | 200 | M20/M22 | 30 | 60 | 22 | 30 | 80 |

## Goose neck clamp

**Design: DIN 6313,** made of tempered steel, lacquered. With plane-parallel clamping and support surfaces.

**Application:** Clamps can be combined with different stepped setting up blocks to accommodate different workpiece shapes and sizes.

DIN 6316



| Order No. | Slot width $b_1$ mm | 3920 format | Length l mm | For screws | a mm | $b_2$ mm | $b_3$ mm | c mm | $e_1$ mm | $e_2$ mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0007 | 6.6 | 6.75 | 60 | M6 | 10 | 20 | 10 | 8 | 22 | 20 |
| 0009 | 9 | 8.10 | 80 | M8 | 12 | 25 | 12 | 9 | 27.5 | 25 |
| 0011 | 11 | 8.65 | 100 | M10 | 15 | 30 | 15 | 12 | 36 | 32 |
| 0014 | 14 | 9.85 | 125 | M12/M14 | 20 | 40 | 20 | 16 | 44 | 40 |
| 0018 | 18 | 15.80 | 160 | M16/M18 | 25 | 50 | 25 | 20 | 51.5 | 50 |
| 0022 | 22 | 23.20 (W340) | 160 | M20/M22 | 30 | 60 | 30 | 24 | 59 | 55 |

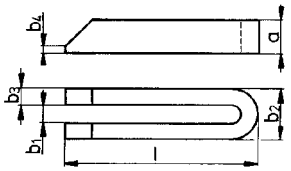
## Clamp, forked, bevelled

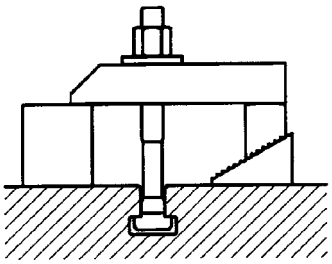
**Design: DIN 6315, Form B,** made of tempered steel, lacquered. With plane-parallel clamping and support surfaces.

**Application:** Clamps can be combined with different stepped setting up blocks to accommodate different workpiece shapes and sizes.

DIN 6315-B

format professional quality



| Order No. | Slot width $b_1$ mm | 3921 format | Length l mm | For screws | a mm | $b_2$ mm | $b_3$ mm | $b_4$ mm |
|---|---|---|---|---|---|---|---|---|
| 0007 | 6.6 | 5.40 | 60 | M6 | 12 | 19 | 6 | 3 |
| 0009 | 9 | 5.40 | 80 | M8 | 15 | 25 | 8 | 4 |
| 0011 | 11 | 6.15 | 100 | M10 | 20 | 31 | 10 | 5 |
| 0014 | 14 | 7.40 | 125 | M12/M14 | 25 | 38 | 12 | 6 |
| 0015 | 14 | 8.55 | 160 | M12/M14 | 25 | 38 | 12 | 6 |
| 0016 | 14 | 10.85 | 200 | M12/M14 | 25 | 38 | 12 | 6 |
| 0018 | 18 | 10.35 | 160 | M16/M18 | 30 | 48 | 15 | 8 |
| 0019 | 18 | 12.10 | 200 | M16/M18 | 30 | 48 | 15 | 8 |
| 0020 | 18 | 17.45 | 250 | M16/M18 | 40 | 48 | 15 | 10 |
| 0022 | 22 | 15.90 | 200 | M20/M22 | 40 | 52 | 15 | 10 |
| 0024 | 22 | 21.50 | 250 | M20/M22 | 40 | 62 | 20 | 10 |
| 0026 | 22 | 27.90 (W340) | 315 | M20/M22 | 40 | 62 | 20 | 10 |

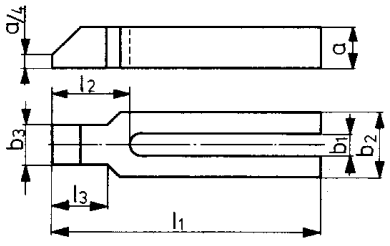
## Forked clamp with nose

**Design:** Made of tempered steel, lacquered. With plane-parallel clamping and support surfaces.

**Application:** Clamps can be combined with different stepped setting up blocks to accommodate different workpiece shapes and sizes.

DIN 6315GN

format professional quality

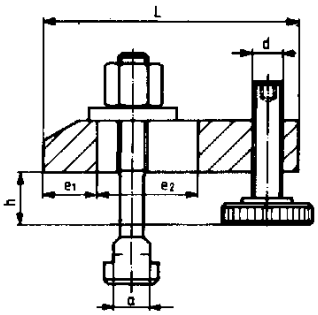


| Order No. | Slot width $b_1$ mm | 3922 format | $l_1$ mm | For screws | a mm | $b_2$ mm | $b_3$ mm | $l_2$ mm | $l_3$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0009 | 9 | 11.20 | 100 | M8 | 15 | 30 | 16 | 32 | 18 |
| 0011 | 11 | 13.55 | 125 | M10 | 20 | 30 | 20 | 38 | 24 |
| 0014 | 14 | 15.20 | 160 | M12/M14 | 25 | 40 | 24 | 47 | 30 |
| 0018 | 18 | 21.80 | 200 | M16/M18 | 30 | 50 | 28 | 57 | 36 |
| 0022 | 22 | 35.90 (W340) | 250 | M20/M22 | 40 | 60 | 35 | 68 | 45 |

## Clamp, bevelled, with adjustable support screw

**Design:** Made of tempered steel, lacquered.

**Scope of delivery:** Clamp with stud, screw for T-slot DIN 787 (Order No. 3900), nut (Order No. 3906) and washer (Order No. 3909).



3924 format professional quality

3998 AMF

| Order No. | Slot width mm | 3924 format | 3998 AMF | T-slot screw | Slot width mm | h mm | $l_1$ mm | $e_1$ mm | $e_2$ mm |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | 10 | 19.60 | 22.10 | M10 x 10 x 80 | 11 | 8–32 | 39 | 15 | 30 |
| 0012 | 12 | 22.60 | 25.50 | M12 x 12 x 100 | 14 | 10–40 | 49 | 21 | 40 |
| 0014 | 14 | 22.60 | 25.50 | M12 x 14 x 100 | 14 | 10–38 | 49 | 21 | 40 |
| 0015 | 16 | 31.20 | 35.10 | M16 x 16 x 125 | 18 | 13–48 | 55 | 26 | 45 |
| 0018 | 18 | 32.60 | 36.70 | M16 x 18 x 125 | 18 | 13–46 | 55 | 26 | 45 |
| 0022 | 22 | 51.70 (W340) | 57.90 (W342) | M20 x 22 x 160 | 22 | 16–65 | 69 | 30 | 60 |

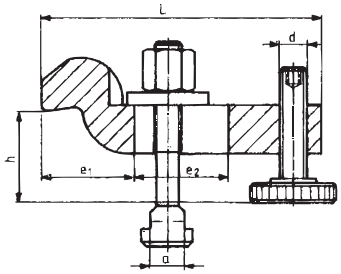
h = depends on slot depth to DIN 650 as well as nut thread engagement length.

## Goose neck clamp with adjustable support screw

**Design:** Made of tempered steel, lacquered.

**Scope of delivery:** Clamp with stud, screw for T-slot DIN 787 (Order No. 3900), nut (Order No. 3906) and washer (Order No. 3909).

format professional quality



| Order No. | Slot width mm | 3925 format | T-slot screw | Slot width mm | h mm | $l_1$ mm | $e_1$ mm | $e_2$ mm |
|---|---|---|---|---|---|---|---|---|
| 0011 | 10 | 26.50 | M10 x 10 x 80 | 11 | 22–46 | 39 | 36 | 32 |
| 0014 | 12 | 30.80 | M12 x 12 x 100 | 14 | 28–58 | 49 | 44 | 40 |
| 0015 | 14 | 30.80 | M12 x 14 x 100 | 14 | 28–56 | 49 | 44 | 40 |
| 0017 | 16 | 41.60 | M16 x 16 x 125 | 18 | 36–71 | 55 | 51.5 | 50 |
| 0018 | 18 | 41.60 | M16 x 18 x 125 | 18 | 36–69 | 55 | 51.5 | 50 |
| 0020 | 22 | 66.30 (W340) | M20 x 22 x 160 | 22 | 43–92 | 69 | 59 | 70 |

h = depends on slot depth to DIN 650 as well as nut thread engagement length.

## Detent clamping lever

**Design:** Made of steel, burnished.

**Application:** For adjustable clamps (Order No. 3924, 3925 und 3931).

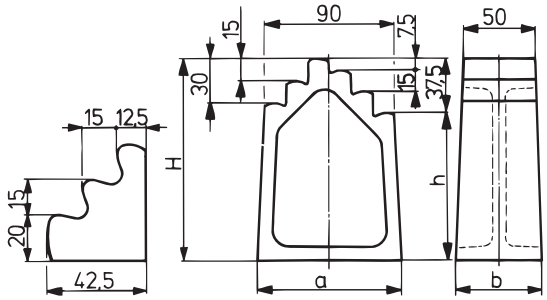
format professional quality

| Order No. | Size | 3925 format | l mm | d mm | h mm |
|---|---|---|---|---|---|
| 5010 | M12 | 42.30 | 135 | 33 | 48 |
| 5020 | M16 | 52.10 (W340) | 158 | 40 | 64 |

## Step block

**Design: DIN 6318,** With clamping steps each with 7.5 mm height difference.
Machine casting, lacquered. Base and steps surface milled.

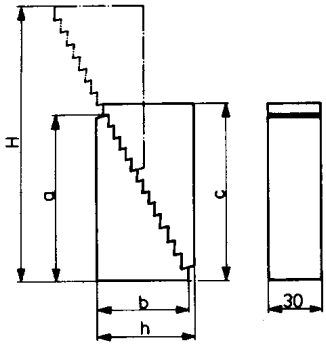
DIN 6318



| Order No. | Size mm | 3928 AMF | Clamping height h-H mm | Length A mm | Width B1 mm | Width B2 mm |
|---|---|---|---|---|---|---|
| 1050 | 50 | 14.80 | 12.5– 50 | 42.5 | 50 | 50 |
| 1095 | 95 | 23.70 | 57.5– 95 | 95 | 55 | 50 |
| 1140 | 140 | 30.30 | 102.5–140 | 100 | 60 | 50 |
| 1185 | 185 | 41.60 | 147.5–185 | 105 | 65 | 50 |
| 1230 | 230 | 49.40 | 192.5–230 | 110 | 70 | 50 |
| 1275 | 275 | 55.90 | 237.5–275 | 115 | 75 | 50 |
| 1320 | 320 | 68.80 (W342) | 282.5–320 | 120 | 80 | 50 |

## Universal stepped setting up block

**Design:** Made of tempered steel, lacquered.
The vertical step height is 4.65 mm and horizontal 2.3 mm, depth 30 mm.

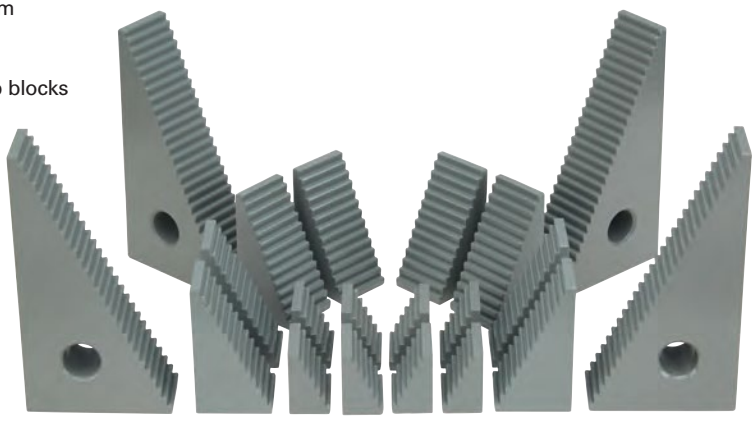


| Order No. | Size | 3926 format | Clamping height h-H mm | a mm | b mm | c mm |
|---|---|---|---|---|---|---|
| 0010 | 1 | 2.96 | 23– 51 | 33 | 19 | 38 |
| 0020 | 2 | 5.40 | 39–107 | 66 | 35.5 | 70 |
| 0030 | 3 | 13.35 (W340) | 71–208 | 131 | 68 | 135 |

## Universal stepped setting up blocks set

**Design:** Made of tempered steel, lacquered. Clamping height from 23 to 208 mm. Supplied in stable box.

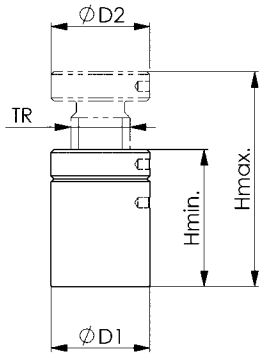
**Scope of delivery:**
Set of universal stepped setting up block with stepped setting up blocks
8 pieces, size 1 (Order No. 3926 0010),
8 pieces, size 2 (Order No. 3926 0020),
4 pieces, size 3 (Order No. 3926 0030).



| Order No. | Dimensions W x H x D mm | 3927 format | Content |
|---|---|---|---|
| 0001 | 280 x 155 x 40 | 127.00 (W340) | 20-piece |

## Screw jack with flat support

**Design:** Made of tempered steel. Spindle with self-locking trapezoidal thread. Centre hole Ø 12 mm for mounting various attachments.



3929 format professional quality

3892 AMF

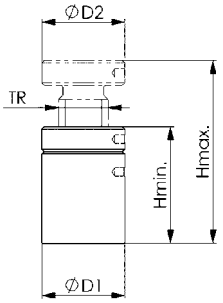
| Order No. | Size mm | 3929 format | 3892 AMF | Height-adjustable h-H mm | TR | Attachment Ø D2 mm | Base Ø D1 mm | Load capacity kN |
|---|---|---|---|---|---|---|---|---|
| 0052 | 52 | 25.00 | 29.20 | 42– 52 | 30 x 4 | 50 | 50 | 100 |
| 0070 | 70 | 26.90 | 31.20 | 50– 70 | 30 x 4 | 50 | 50 | 100 |
| 0100 | 100 | 30.60 | 35.50 | 70–100 | 30 x 4 | 50 | 50 | 100 |
| 0140 | 140 | 53.40 | 62.70 | 100–140 | 40 x 7 | 68 | 68 | 120 |
| 0200 | 210 | 106.50 (W340) | 113.00 (W342) | 140–210 | 50 x 8 | 80 | 70 | 170 |

## Bench vice with magnetic base

**Design:** Medium heavy screw jacks.. Base body and spindle made of tempered steel, lacquered. Spindle with self-locking trapezoidal thread and end safety device. With 12 mm Ø centre hole to mount various attachments.

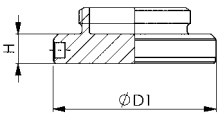
**Application:** For clamps with slot width of approx. 14–22 mm.

**Note:** See (Order No. 3930 and 3932) for suitable attachments.



| Order No. | Size mm | 3905 AMF | Height-adjustable h-H mm | Attachment Ø mm | Base Ø mm | Load capacity kN |
|---|---|---|---|---|---|---|
| 7000 | 62 | 49.80 | 52– 62 | 50 | 50 | 100 |
| 7100 | 80 | 51.00 | 60– 80 | 50 | 50 | 100 |
| 7200 | 110 | 52.30 (W342) | 80–110 | 50 | 50 | 100 |

## Magnetic base for bench vice

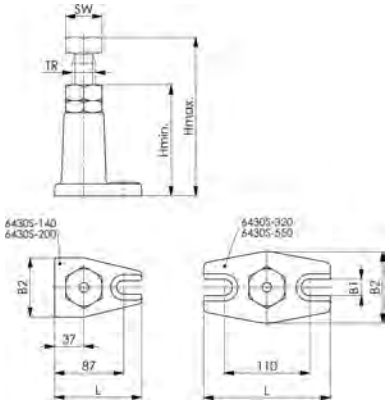


| Order No. | H mm | 3905 AMF | D1 mm |
|---|---|---|---|
| 7300 | 10 | 36.00 (W342) | 55 |

## Screw jack with locking nut

**Design:** Made of tempered steel with trapezoidal thread. Spindle head burnished, base made of cast iron painted. Centring hole: Ø 12 mm. Round spindle head.

**Note:** Do not adjust screw jack under load.

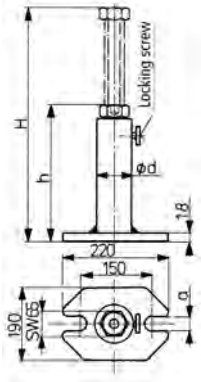


3929 format professional quality 3893 AMF

| Order No. | Size mm | 3929 format | 3893 AMF | Height-adjustable h-H mm | TR mm | $B_1$ mm | $B_2$ mm | L mm | Load capacity kN |
|---|---|---|---|---|---|---|---|---|---|
| 0140 | 140 | – | 67.40 | 100–140 | 30 x 6 | 18 | 75 | 110 | 60 |
| 0200 | 200 | – | 85.00 | 140–200 | 30 x 6 | 18 | 75 | 110 | 60 |
| 0320 | 320 | 111.00 | 117.50 | 200–320 | 30 x 6 | 22 | 90 | 160 | 40 |
| 0550 | 550 | 129.50 (W340) | 137.00 (W342) | 320–550 | 30 x 6 | 22 | 90 | 160 | 25 |

## Screw jack, heavy

**Design:** Made of tempered steel with trapezoidal thread. Spindle head burnished, base made of heat treatable steel, lacquered. Centring hole: Ø 12 mm. Round spindle head.



3929 format professional quality

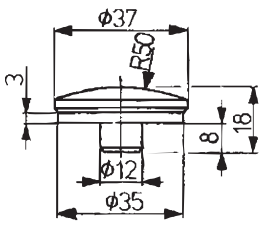
3892 AMF

| Order No. | Size mm | 3929 format | 3892 AMF | Height-adjustable h-H mm | a mm | d mm | Load capacity kN |
|---|---|---|---|---|---|---|---|
| 0300 | 300 | 191.00 | 222.00 | 200– 300 | 26 | 40 x 7 | 80 |
| 0460 | 460 | 231.00 | 266.50 | 290– 470 | 26 | 40 x 7 | 60 |
| 0750 | 750 | 385.00 | 342.50 | 430– 750 | 26 | 40 x 7 | 50 |
| 1250 | 1250 | 513.00 (W340) | 454.50 (W342) | 710–1250 | 26 | 40 x 7 | 40 |

## Ball attachment

**Design:** Made of tempered steel, tempered, annealed in burnished finish.

**Application:** For screw jacks (Order No. 3929).

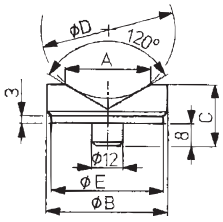


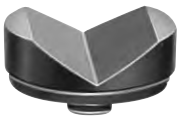
| Order No. | Ø D mm | 3932 format |
|---|---|---|
| 0010 | 37 | 5.80 (W340) |

## Prism attachment

**Design:** Made of tempered steel, annealed in burnished finish.

**Application:** For screw jacks (Order No. 3929).



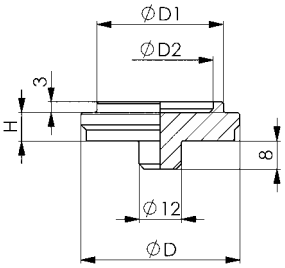



| Order No. | Size | 3932 format | A mm | Ø B mm | C mm | Ø D mm | Ø E mm |
|---|---|---|---|---|---|---|---|
| 0030 | 45 | 11.50 (W340) | 32 | 45 | 23 | 10–50 | 42 |

## Centring plate

**Design:** Made of tempered steel, annealed in burnished finish.

**Application:** The centring plate allows screw jacks with a 50 mm diameter to be placed on all Format screw jacks and levelling mounts with a 12 mm diameter mounting hole.

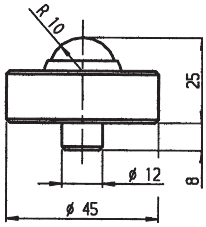


| Order No. | H mm | 3932 format | D mm | D1 mm | D2 mm |
|---|---|---|---|---|---|
| 0090 | 8 | 7.85 (W340) | 45 | 35.8 | 30 |

## Attachment with rotatable ball

**Design:** Made of tempered steel, tempered, annealed in burnished finish. The ball is hardened.

**Application:** This robust element is suitable for supporting and aligning cast and forged workpieces.



| Order No. | Load capacity kN | 3930 format |
|---|---|---|
| 0001 | 30 | 22.80 (W340) |

## Correction wedge

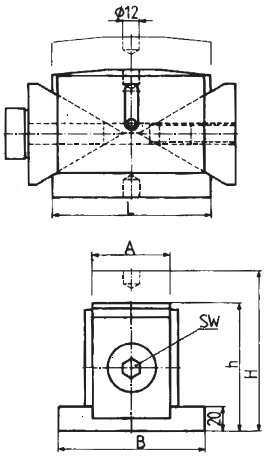
**Design:** Made of tempered ductile cast iron and steel, annealed in burnished finish. With 12 mm ∅ centre hole. The correcting wedge can easily be adjusted using normal manual force under 1/3 load of load capacity (F max.). The finely machined wedge surfaces allow smooth, sensitive adjustment, more precise than 1/10 mm, optionally by knurled thumb screw or hexagon screw driver. Precise vertical movements without lateral displacement are ensured thanks to the double wedge action.

**Application:** For clamping delicate cast iron or forgings on large machine tools. There is also the possibility to place the correcting wedge onto "heavy screw jacks" . This requires parallel pins DIN 6325 (12 x 30 mm).

**Scope of delivery:** Correcting wedge with spherical adapter (Order No. 3930).

**3930** **Recessed hexagon**

**3894** **Protruding hexagon**



3930 0010 format professional quality  3930 0020 + 3930 0030

3894 AMF

| Order No. | Size | 3930 format | 3894 AMF | Height adjustment h-H mm | A mm | B mm | L mm | Spanner width mm | H* mm/U | Load capacity kN |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 63 | – | 229.00 | 50– 63 | 40 | 40 | 63 | 13 | 0.86 | 40 |
| 0010 | 63 | 197.00 | – | 50– 63 | 40 | 60 | 65 | 8 | 0.86 | 35 |
| 0020 | 125 | – | 492.00 | 100–125 | 60 | 115 | 125 | 24 | 1.16 | 100 |
| 0020 | 125 | 424.50 | – | 100–125 | 60 | 118 | 128 | 14 | 1.16 | 90 |
| 0030 | 190 | – | 1286.00 | 170–190 | 80 | 145 | 175 | 36 | 2.02 | 250 |
| 0030 | 190 | 1104.00 (W340) | – (W342) | 170–190 | 80 | 150 | 183 | 22 | 2.02 | 220 |

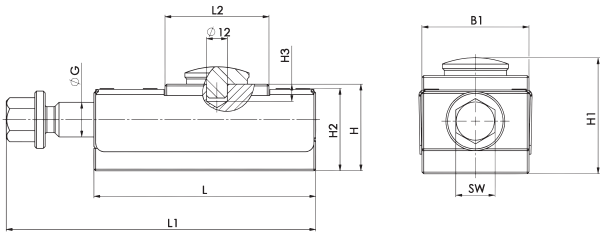
* H mm/U = height adjustment per rotation.

## Precision height correction wedge

**Design:** Made of case-hardened steel. The finely machined wedge surfaces allow smooth, sensitive adjustment, more precise than 1/10 mm. With 12 mm diameter centre hole. Operation possible using a spanner thus ensuring high safety and easy handling at high adjustment forces. The double wedge action results in a precise vertical movement without lateral displacement. Higher safety properties when aligning heavy and large components is achieved thanks to the precision height-adjustable wedge flat design. The precision correcting wedge has an additional centring hole in the bottom base area (suitable for a pin ISO 8734 - 12 mm dia).

**Application:** The correcting wedge can be adjusted under load. The height adjustment per rotation is 0.71 mm.

**Scope of delivery:** Correcting wedge with spherical adapter.




| Order No. | Size | 3898 amf | H min. mm | H max. mm | F max. kN | A/F mm | Weight kg |
|---|---|---|---|---|---|---|---|
| 0040 | 55 | 814.00 | 50 | 55 | 40 | 22 | 2.8 |
| 0250 | 85 | 1039.00 (W342) | 77 | 85 | 250 | 36 | 11.5 |

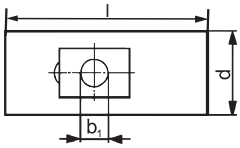
**Dimension table**

| Size | B1 | G | H1 | H2 | H3 | L | L1 | L2 |
|---|---|---|---|---|---|---|---|---|
| 55 | 60 | 20 | 60-65 | 47.5 | 10 | 128 | 150-179 | 60 |
| 85 | 100 | 30 | 87-95 | 74.0 | 20 | 210 | 242-287 | 81 |

## Clamping claw, steplessly adjustable

**Design:** Clamping claw made of steel, forged, tempered and galvanised.

**Scope of delivery:** Clamping jaws with screw for T-slots DIN 787 (Order No. 3900), hexagon nut DIN 6330B (3906) and washer DIN 6340 (Order No. 3909).



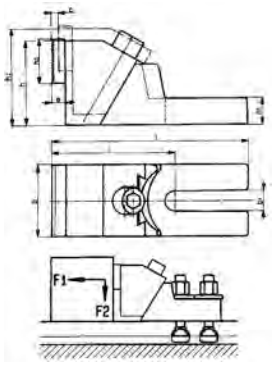
| Order No. | Slot width mm | 3931 format | $b_1$ mm | T-slot screw | Clamping height mm | d x l mm |
|---|---|---|---|---|---|---|
| 5012 | 12 | 34.50 | 17 | M12 x 12 x 125 | 0–50 | 50 x 140 |
| 5014 | 14 | 35.10 | 17 | M12 x 14 x 125 | 0–50 | 50 x 140 |
| 5016 | 16 | 38.00 | 17 | M16 x 16 x 160 | 0–75 | 50 x 140 |
| 5018 | 18 | 38.00 (W340) | 17 | M16 x 18 x 160 | 0–75 | 50 x 140 |

## Stable clamping jaw

**Design:** Base body made of malleable iron; clamping jaws of tempered steel, case-hardened. Height and stable design with a strong pull-down and resilience force. With interchangeable and reversible jaws with a fluted and a smooth side.

**Application:** For lateral clamping of high workpieces.

**Note:** All mounting screws should be ordered separately based on the slot width of the screws for T-slots DIN 787 (Order No. 3900).



| Order No. | Slot width mm | 3933 format | b mm | $b_1$ mm | c mm | e mm | h mm | $H_1$ mm | $H_2$ mm | $H_3$ mm | l mm | $l_1$ mm | F1 kN | F2 kN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0019 | 12 | 190.00 | 65 | 19 | 8 | 12 | 85 | 38 | 99 | 40 | 179 | 112.5 | 8 | 1.2 |
| | 14 | | | | | | | | | | | | 15 | 2.2 |
| | 16 | | | | | | | | | | | | 20 | 3.0 |
| | 18 | | | | | | | | | | | | 28 | 4.2 |
| 0026 | 20 | 263.50 | 75 | 26 | 11 | 12 | 100 | 45 | 118 | 40 | 230 | 138.5 | 25 | 4.5 |
| | 22 | | | | | | | | | | | | 25 | 4.5 |
| | 24 | | | | | | | | | | | | 32 | 4.8 |
| | 28 | | | | | | | | | | | | 32 | 4.8 |
| | 30 | | | | | | | | | | | | 36 | 5.4 |

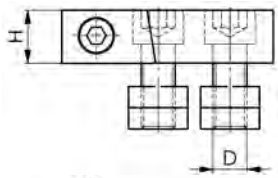
(W340)

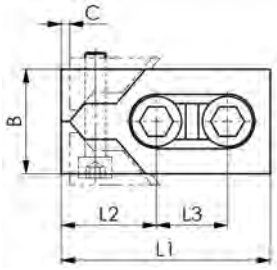
## Deep clamping jaw

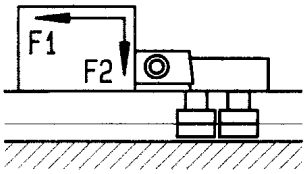
**Design:** Tempered and annealed in burnished finish. Particularly flat design, no protruding clamping screws. Jaws clamp simultaneously forward and downward through wedge action.

**Application:** For clamping low disks.

**Scope of delivery:** Deep clamping jaw (pair) complete with mounting screws DIN 912, nuts for T-slots DIN 508 (Order No. 3902) and hexagon screw driver DIN 911.



| Order No. | Slot width mm | 3934 format | b mm | c mm | d | h mm | l mm | $l_1$ mm | $l_2$ mm | F1 kN | F2 kN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0012 | 12 | 70.60 | 40 | 3 | M10 | 20 | 80 | 39 | 26 | 16 | 0.6 |
| 0014 | 14 | 76.30 | 40 | 3 | M12 | 20 | 80 | 39 | 26 | 22 | 0.9 |
| 0016 | 16 | 81.90 | 40 | 3 | M12 | 20 | 80 | 39 | 26 | 22 | 0.9 |
| 0018 | 18 | 100.00 | 50 | 4 | M16 | 25 | 100 | 46 | 34 | 36 | 1.4 |
| 0020 | 20 | 107.50 | 50 | 4 | M16 | 25 | 100 | 46 | 34 | 36 | 1.4 |
| 0022 | 22 | 176.50 (W340) | 78 | 5 | M20 | 30 | 140 | 65 | 50 | 36 | 1.4 |

## Flat clamps

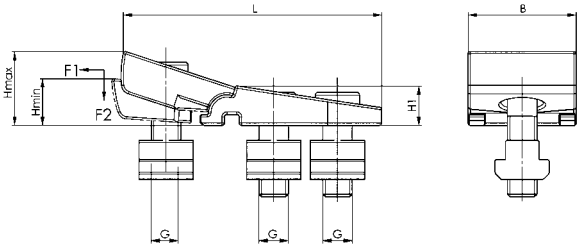
**Design:** Steel, tempered and annealed in burnished finish.

**Benefits:**
- For clamping very flat workpieces
- Lateral clamping of workpieces to machine surfaces completely without interfering contour
- Horizontal and vertical deployment option

**Application:** Push flat clamp into the T-slot in the machine table, position on workpiece, secure fixing screw for machine table. The workpiece is clamped through operating the clamping screw.

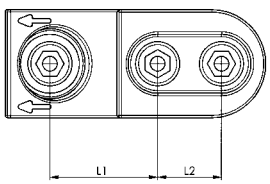
**Scope of delivery:** Flat clamp, complete with fixtures for fastening.

**Note:** In order to minimise wear to the mounting screws, we recommend using AMF screw paste. It has a synergistically acting combination of solid lubricants and is heat-resistant and water washout resistant.




**Dimension table**

| Size | B | H1 | L | L1 | L2 |
|---|---|---|---|---|---|
| M12x14 | 44 | 16 | 110 | 45–48 | 26 |
| M12x16 | 44 | 16 | 110 | 45–48 | 26 |
| M16x18 | 56 | 19 | 130 | 50–54 | 33 |
| M16x20 | 56 | 19 | 130 | 50–54 | 33 |
| M20x22 | 62 | 22 | 152 | 58–63 | 41 |
| M20x24 | 62 | 22 | 152 | 58–63 | 41 |
| M20x28 | 62 | 22 | 152 | 58–63 | 41 |

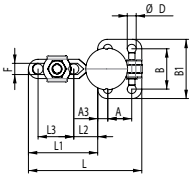


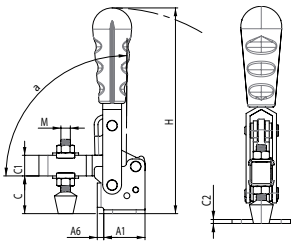
| Order No. | Size | 3934 AMF | Slot | G | F1 kN | F2 kN | H min. mm | H max. mm | Weight g |
|---|---|---|---|---|---|---|---|---|---|
| 1214 | M12x14 | 63.90 | 14 | M12 | 15 | 7.5 | 16 | 25 | 579 |
| 1216 | M12x16 | 68.10 | 16 | M12 | 15 | 7.5 | 16 | 25 | 600 |
| 1618 | M16x18 | 82.10 | 18 | M16 | 20 | 10 | 19 | 30 | 1011 |
| 1620 | M16x20 | 89.50 | 20 | M16 | 20 | 10 | 19 | 30 | 1055 |
| 2022 | M20x22 | 125.50 | 22 | M20 | 30 | 15 | 22 | 36 | 1670 |
| 2024 | M20x24 | 154.00 | 24 | M20 | 30 | 15 | 22 | 36 | 1705 |
| 2028 | M20x28 | 162.50 (W342) | 28 | M20 | 30 | 15 | 22 | 36 | 1807 |

## Vertical acting toggle clamp

**Design:** With angled mounting foot, non-rotating bushings and stainless steel rivets. Galvanised and passivated. Plastic handle with a long holding arm version. Long holding arm design.

**Scope of delivery:** Vertical acting toggle clamp complete with pressure spindle.



**Dimension table**

| Size | A | A1 | A3 | A6 | B | B1 | C | C1 | C2 | D | F | H | L | L1 | L2 | L3 | M | α |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16 | 26 | 5 | - | 23.4 | 33.4 | 19 | 8 | 2 | 4.4 | 5 | 77 | 50.4 | 24.4 | 3.5 | 16.4 | M5 | 67.4° |
| 2 | 12.7 | 27 | 7 | - | 26.9 | 37.9 | 23 | 11 | 3 | 5.1 | 6 | 111 | 69.9 | 42.9 | 15 | 21.5 | M6 | 93° |
| 3 | 19 | 35 | 8 | 5.5 | 32 | 47 | 32 | 17.5 | 3.2 | 7.1 | 8.9 | 175 | 90 | 55 | 19 | 28 | M8 | 90.4° |
| 4 | 32 | 50 | 9 | 10 | 45 | 64 | 42 | 22 | 4 | 8.3 | 10.6 | 218 | 143 | 92.8 | 23 | 60.5 | M10 | 90° |

| Order No. | Size | 3896 | Hole Ø mm | Clamping height mm | Total height mm | Total length mm | Holding force N |
|---|---|---|---|---|---|---|---|
| 0010 | 1 | 9.15 | 4.4 | 19 | 77 | 50.4 | 450 |
| 0020 | 2 | 11.75 | 5.1 | 23 | 111 | 69.9 | 1500 |
| 0030 | 3 | 13.85 | 7.1 | 32 | 175 | 90 | 2500 |
| 0040 | 4 | 21.00 (W340) | 8.3 | 42 | 218 | 143 | 3400 |

## Vertical acting toggle clamp with horizontal foot.

**Design:** Vertical acting toggle clamp with open support arm and horizontal foot. Galvanised and passivated. The stainless steel rivets run in case-hardened bearing bushings except for sizes 0 and 1 due to lack of space. Bearing bushings are greased. Ergonomic, oil-resistant handle with large hand rest and soft component. Safety clamping piece with finger guard. Captive fastener for pressure screw at clamping arm end.

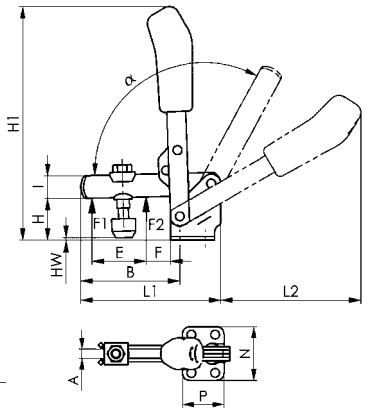
**3936** Galvanised and passivated.

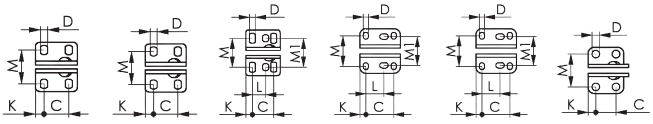
**Scope of delivery:** Vertical clamping mechanism, complete with tempered, galvanised pressure screw.

**3935** **Stainless steel,** polished.

**Scope of delivery:** Vertical acting toggle clamp, complete with rustproof pressure screw.
**Also suitable for the food industry.**

**Note:** Cross arm for 2-point tension see (Order No. 3946).






**Dimension table**

| Size | A | B | C | D | E | F | H | H1 | HW min. | HW max. | I | K | L | L1 | L2 | M | M1 | N | P | α | α* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 31 | 8.5–13.5 | 4.5 | 14 | 5.5 | 18 | 81 | –1.5 | 3.5 | 8 | 5.5 | – | 49 | 50 | 23 | – | 32 | 22 | 95° | – |
| 1 | 5 | 39 | 16 | 4.5 | 18 | 6 | 19 | 98.5 | –4.0 | 2 | 10 | 5.5 | – | 61 | 59 | 22.5–26 | – | 35 | 27 | 95° | – |
| 2 | 6 | 52 | 20 | 5.5 | 25 | 11 | 23 | 139.5 | –3.0 | 4.5 | 12 | 6 | 12.5 | 78 | 89 | 23.0–31 | 27 | 43 | 32 | 105° | 60° |
| 3 | 8 | 79 | 20 | 7.5 | 37 | 19 | 33 | 186 | 2.0 | 11 | 18 | 7.5 | – | 112 | 112 | 32.5 | – | 46 | 35 | 105° | 60° |
| 4 | 10 | 101 | 32 | 8.6 | 54 | 16 | 42.5 | 221 | –6.0 | 22.5 | 20 | 13 | – | 141 | 130 | 43.5–46.5 | – | 64 | 53 | 105° | 60° |
| 5 | 14 | 140 | 45 | 8.5 | 73 | 34 | 55.8 | 281 | –3.0 | 27.5 | 25 | 9.5 | 26.5–31.5 | 195 | 185 | 145 –50 | 45 | 70 | 65 | 115° | 60° |
| 6 | 14 | 165.5 | 50.5 | 13 | 89 | 28 | 81 | 333 | –2.5 | 55 | 30 | 24.5 | – | 231 | 206 | 67.5–72.5 | – | 100 | 90 | 140° | 60° |

*The opening angle can be changed by press fitting a stop pin.

| Order No. | Size | 3936 | 3935 | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|---|
| 0000 | 0 | 13.20 | 23.30 | 0.5 | 0.7 | M4 x 25 | 60 |
| 0010 | 1 | 14.90 | 25.70 | 0.6 | 1.1 | M5 x 30 | 105 |
| 0020 | 2 | 19.15 | 32.80 | 0.8 | 1.2 | M6 x 35 | 175 |
| 0030 | 3 | 22.60 | 45.60 | 1.2 | 2.5 | M8 x 45 | 410 |
| 0040 | 4 | 30.30 | – | 1.7 | 3 | M8 x 65 | 630 |
| 0050 | 5 | 48.70 | – | 3 | 5 | M12 x 80 | 1480 |
| 0060 | 6 | 65.90 (W342) | – (W342) | 3.4 | 5.5 | M12 x 110 | 2200 |

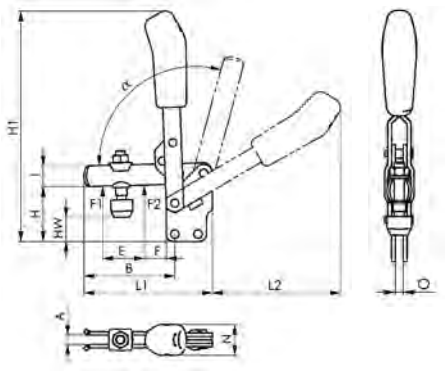
## Vertical clamp with horizontal foot

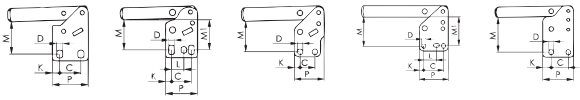
**Design:** Vertical clamping mechanism with open support arm and vertical foot. Galvanised and passivated. The stainless steel rivets run in case-hardened bearing bushings except for size 1 due to lack of space. Bearing bushings are greased. Ergonomic, oil-resistant handle with large hand rest and soft component. Safety clamping piece with finger guard. Captive fastener for pressure screw at clamping arm end.

**Application:** For fastening on webs and for welded designs.

**Scope of delivery:** Vertical clamping mechanism, complete with tempered, galvanised pressure screw.

**Note:** Cross arm for 2-point tension see (Order No. 3946).





Size 1 Size 2 Size 3, 4 Size 5 Size 6

**Dimension table**

| Size | A | B | C | D | E | F | H | H1 | HW min. | HW max. | I | K | L | L1 | L2 | M | M1 | N | O | P | α | α* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 39 | 16 | 4.5 | 18 | 6 | 29 | 109 | 6 | 12.5 | 10 | 5.5 | – | 61 | 59 | 23.5–25 | – | 19 | 5 | 27 | 95° | – |
| 2 | 6 | 52 | 20 | 5.5 | 25 | 11 | 38 | 144 | 11.5 | 19.5 | 12 | 6 | 12.5 | 78 | 80 | 28.5–32 | 30 | 21 | 5 | 32 | 105° | 60° |
| 3 | 8 | 79 | 20 | 7.5 | 36 | 19 | 48 | 200 | 16.5 | 25 | 18 | 7.5 | – | 112 | 114 | 41 | – | 27 | 6 | 40 | 105° | 60° |
| 4 | 10 | 101 | 32 | 8.6 | 54 | 16 | 65 | 244 | 16.5 | 45.5 | 20 | 13 | – | 141 | 130 | 55.5 | – | 35 | 8 | 53 | 105° | 60° |
| 5 | 14 | 140 | 45 | 8.5 | 72 | 35 | 77 | 301 | 18 | 49 | 25 | 9.5 | 26.5–31.5 | 195 | 183 | 66 | 64 | 45 | 10 | 65 | 115° | 60° |
| 6 | 14 | 165 | 50.5 | 13 | 89 | 28 | 117 | 369 | 33 | 90.5 | 30 | 24.5 | – | 231 | 206 | 102 | – | 45 | 10 | 90 | 140° | 60° |

*The opening angle can be changed by press fitting a stop pin.

| Order No. | Size | 3937 amf | F1 kN | F2 kN | Clamping lever length mm | Clamping arm length mm | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|---|---|
| 0010 | 1 | 14.55 | 0.6 | 1.1 | 115 | 60 | M5 x 30 | 105 |
| 0020 | 2 | 19.15 | 0.8 | 1.2 | 157 | 82 | M6 x 35 | 175 |
| 0030 | 3 | 22.60 | 1.2 | 2.5 | 220 | 98 | M8 x 45 | 410 |
| 0040 | 4 | 30.30 | 1.7 | 3 | 252 | 140 | M8 x 65 | 630 |
| 0050 | 5 | 48.70 | 3 | 5 | 321 | 195 | M12 x 80 | 1480 |
| 0060 | 6 | 68.90 (W342) | 3.4 | 5.5 | 382 | 230 | M12 x 110 | 2200 |

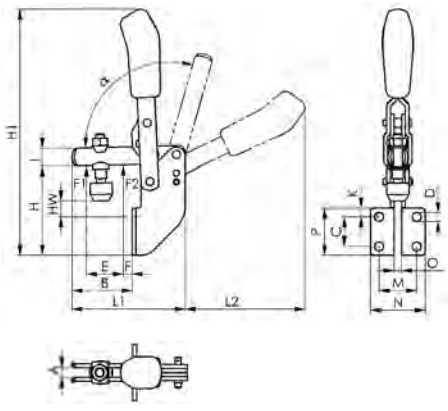
## Vertical clamping mechanism with angular foot

**Design:** Vertical acting toggle clamp with open support arm and angular foot. Galvanised and passivated. The stainless steel rivets run in case-hardened bearing bushings except for size 1 due to lack of space. Bearing bushings are greased. Ergonomic, oil-resistant handle with large hand rest and soft component. Safety clamping piece with finger guard. Captive fastener for pressure screw at clamping arm end.

**Application:** For side mounting.

**Scope of delivery:** Vertical clamping mechanism, complete with tempered, galvanised pressure screw.

**Note:** Cross arm for 2-point tension see (Order No. 3946).
Size 2 also available in stainless steel upon request.



**Dimension table**

| Size | A | B | C | D | E | F | H | H1 | HW min. | HW max. | I | K | L1 | L2 | M | N | O | P | α | α* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 34.5 | 14 | 4.5 | 18 | 7 | 45 | 125 | 2.5 | 9 | 10 | 10 | 61 | 58 | 20 | 30 | 5 | 30 | 98° | – |
| 2 | 6 | 41 | 20 | 6.1 | 25 | 6 | 60 | 167 | 7.5 | 15.5 | 12 | 6 | 77 | 81 | 25.5 | 37 | 5 | 32 | 105° | 60° |
| 3 | 8 | 63 | 24 | 6.5 | 37 | 11 | 71 | 223 | 9 | 17.5 | 18 | 7 | 111 | 112 | 28.5 | 42.5 | 6 | 38 | 105° | 60° |

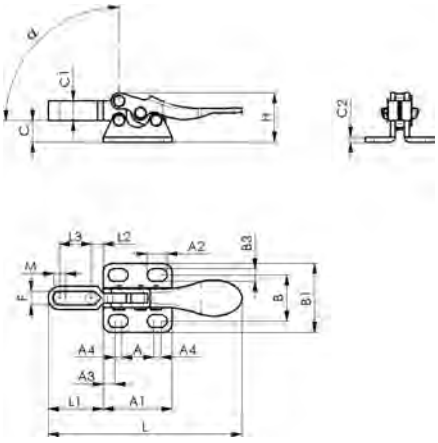
*The opening angle can be changed by press fitting a stop pin.

| Order No. | Size | 3938 amf | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0010 | 1 | 16.75 | 0.8 | 1.1 | M5 x 30 | 125 |
| 0020 | 2 | 21.00 | 1 | 1.2 | M6 x 35 | 220 |
| 0030 | 3 | 22.70 (W342) | 1.4 | 2.5 | M8 x 45 | 400 |

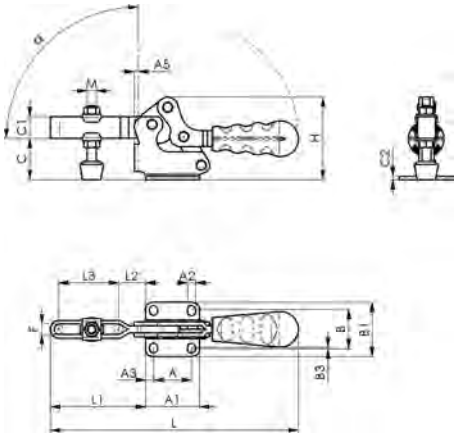
## Horizontal clamp

**Design:** Steel, galvanised and passivated with media-resistant lever arm and foot mounting.. Stainless steel rivets

**Application:** Optimal for use in batch production.



3897 0000



3897 0010–0040

3897 0000

3897 0010–0040

**Dimension table**

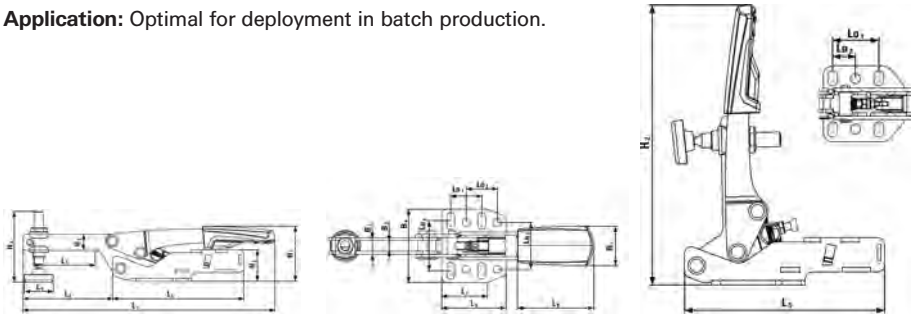
| Size | A | A1 | A2 | A3 | B | B1 | B3 | C | C1 | C2 | F | H | L | L1 | L2 | L3 | M | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 11.1 | 24 | 6.8 | 4 | 16 | 23.8 | 4.4 | 7.4 | 6.8 | 1.6 | 4.8 | 17 | 68 | 21 | 5 | 12 | M4 | 87° |
| **1** | 13.5 | 25 | 5.2 | 5.7 | 19 | 27 | – | 19 | 9.5 | 2 | 5.8 | 38.2 | 105 | 36.8 | 12 | 20 | M5 | 94° |
| **2** | 26 | 38 | 5.5 | 6 | 28 | 40 | 3 | 25 | 14 | 2.5 | 6.2 | 52.6 | 162 | 61.4 | 19 | 36.5 | M6 | 96° |
| **3** | 26 | 42 | 6.6 | 8 | 31 | 47 | 2.5 | 34 | 17.5 | 3 | 9 | 68.5 | 189 | 66.3 | 22 | 36.8 | M8 | 95° |
| **4** | 41.2 | 59 | 8.7 | 9 | 43 | 59 | 1.8 | 45 | 23.8 | 4 | 11.4 | 90 | 269 | 103 | 28.5 | 64.8 | M10 | 95° |

| Order No. | Size | 3897 | Clamping height mm | Total height mm | Total length mm | Holding force N |
|---|---|---|---|---|---|---|
| 0000 | **0** | **7.05** | 7.4 | 17 | 68 | 380 |
| 0010 | **1** | **10.40** | 19 | 38.2 | 105 | 700 |
| 0020 | **2** | **12.45** | 25 | 52.6 | 162 | 900 |
| 0030 | **3** | **15.30** | 34 | 68.5 | 189 | 2200 |
| 0040 | **4** | **20.20** (W340) | 45 | 90 | 269 | 3400 |

## Horizontal clamping mechanism, self-adjusting

**Design:** Horizontal clamping mechanism with open arm and horizontal base plate. Adjustable clamping force depending on set screw adjustment. **Automatic, continuous adjustment to various workpiece heights and widths with very consistent clamping force,** without manual adjustment of the pressure screw position. The base plate hole pattern fits both mm and inches. With high quality 2-component plastic handle and removable protective cap on the thrust plate.

**Application:** Optimal for deployment in batch production.



**Dimension table**

| Clamping | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | H1 | H2 | H3 | H4 | H5 | B1 | B2 | B3 | B4 | Lo1 | Lo2 | Lo3 | Lo4 | ∅ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **40** | 210 | 66 | 40 | 23 | 115 | 64 | 50 | 53 | 46 | 155 | 13 | 50 | 20 | 13 | 8 | 26 | 57 | 25.4 | 25.4 | 38 | 32–44 | 6.3 |
| **60** | 210 | 66 | 40 | 23 | 115 | 64 | 50 | 53 | 64 | 175 | 13 | 68 | 38 | 13 | 8 | 26 | 57 | 25.4 | 25.4 | 38 | 32–44 | 6.3 |

| Order No. | Jaw span mm | 3971 format | Clamping force N | Weight g |
|---|---|---|---|---|
| 0045 | **40** | **20.80** | 2500 | 380 |
| 0065 | **60** | **21.40** (W340) | 2500 | 420 |

## Horizontal clamping mechanisms with horizontal foot

**Design:** Horizontal clamping mechanism with open support arm and horizontal foot. Galvanised and passivated. The stainless steel rivets run in case-hardened bearing bushings except for sizes 0 and 1 due to lack of space. Bearing bushings are greased. Ergonomic, oil-resistant handle with large hand rest and soft component. Safety clamping piece with finger guard. Captive fastener for pressure screw at clamping arm end.

**3939** Galvanised and passivated.

**Scope of delivery:** Complete with tempered, galvanised pressure screw.

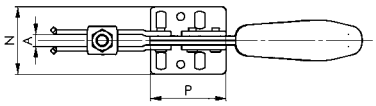
**3949** **Stainless steel,** polished.

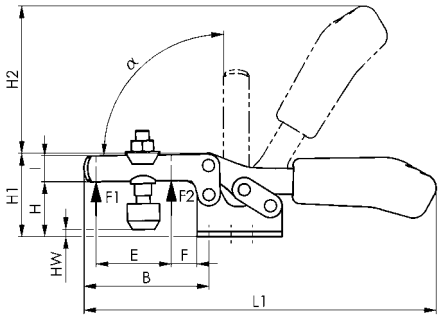
**Scope of delivery:** Complete with rustproof pressure screw.
**Also suitable for the food industry.**

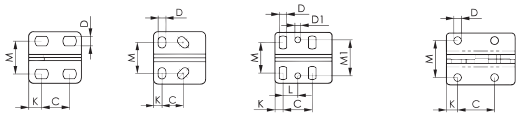
Cross arm for 2-point tension see (Order No. 3946).

3939

3949



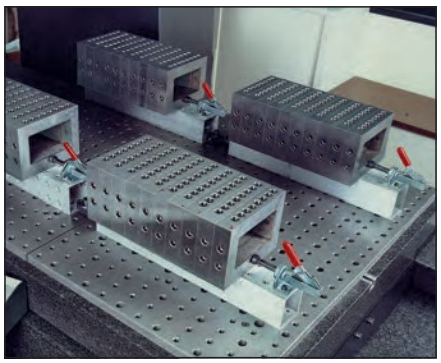



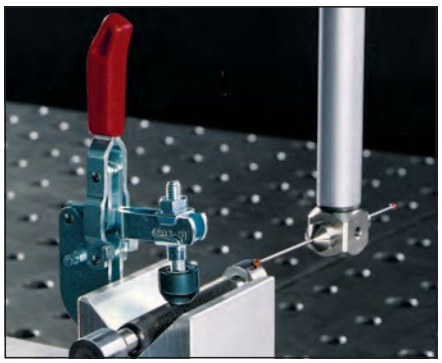



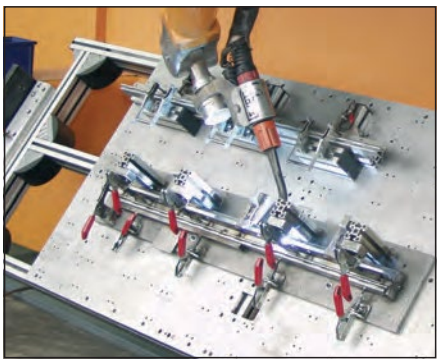

**Dimension table**

| Size | A | B | C | D | D1 | E | F | H | H1 | H2 | HW min. | HW max. | I | K | L | L1 | M | M1 | N | P | α |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 28 | 11.5–15.5 | 4.6 | – | 9.0 | 5.5 | 14.5 | 23 | 34 | –5.5 | 0 | 7.5 | 6.3 | – | 79 | 16 | – | 25 | 25.5 | 90° |
| 1 | 5 | 42 | 13.0–14.5 | 5.2 | – | 18.7 | 8 | 19 | 30 | 49 | –3 | 2.5 | 10 | 5.5 | – | 120 | 18 –21.5 | – | 34 | 34 | 90° |
| 2 | 6 | 64 | 26.0 | 5.6 | 5.6 | 32 | 16 | 24 | 45 | 68 | –1.5 | 5 | 13.2 | 6 | 12.7 | 162 | 19.5–29.5 | 28.5 | 42 | 38 | 90° |
| 3 | 8 | 73 | 25.7 | 6.5 | 5.1 | 38 | 14 | 32 | 48.5 | 86 | –2 | 9 | 15 | 7 | 13 | 206 | 22 –31.8 | 31.6 | 45.5 | 50 | 90° |
| 4 | 10 | 113 | 41 | 8.5 | 8.5 | 63 | 27 | 45 | 75 | 126 | –4 | 24 | 20 | 8 | 20.5 | 287 | 29 –43 | 43 | 58 | 57 | 90° |
| 5 | 10 | 123 | 41.5 | 8.5 | – | 78 | 16 | 46 | 73 | 128 | 1.7 | 25 | 25 | 12.5 | – | 321 | 41.5 | – | 58 | 77 | 90° |

| Order No. | Size | 3939 AMF | 3949 AMF | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|---|
| 0000 | 0 | 11.45 | 21.00 | 0.25 | 0.4 | M4 x 25 | 35 |
| 0010 | 1 | 16.60 | 29.60 | 0.8 | 1.1 | M5 x 30 | 105 |
| 0020 | 2 | 18.45 | 32.90 | 1 | 1.2 | M6 x 35 | 185 |
| 0030 | 3 | 23.20 | 40.60 | 1.8 | 2.5 | M8 x 45 | 320 |
| 0040 | 4 | 29.80 | – | 2 | 3 | M8 x 65 | 700 |
| 0050 | 5 | 47.50 (W342) | – (W342) | 3 | 5 | M8 x 65 | 1080 |







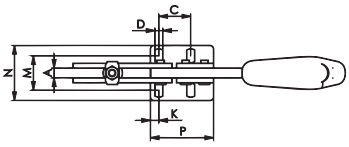
## Horizontal ratchet plus

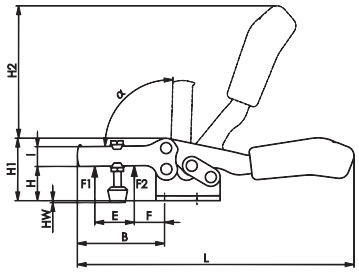
NEW

**Design:** Horizontal clamping mechanism with increased holding forces, open support arm and horizontal foot. Galvanised and passivated with stainless steel rivets and greased bearing bushings. Oil-resistant handle with large hand rest. Safety clamping piece with captive fastener for pressure screw at clamping arm end.

**Scope of delivery:** Complete with tempered, galvanised pressure screw.

**Note:** Pressure screws can be found on 📖 3/181.



**Dimension table**

| Size | A | B | C | D | E | F | H | H1 | H2 | HW min. | HW max. | I | K | L | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 8 | 71 | 26 | 6.5 | 39 | 14 | 28 | 51 | 108 | –1 | 12 | 16 | 7 | 224 | 23.5–34 | 46 | 52 |
| 3 | 8 | 78 | 26 | 6.5 | 43 | 22 | 3.5 | 58 | 112 | –1 | 13 | 18 | 6.5 | 242 | 25.5–36 | 47 | 52.5 |
| 4 | 10 | 120 | 41.5 | 8.6 | 69 | 23 | 41 | 77 | 135 | –2 | 16.5 | 24 | 10.5 | 329 | 34.5–45 | 60 | 76 |

| Order No. | Size | 3949 AMF | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0035 | 2 | 26.70 | 1.6 | 3 | M6 x 50 | 450 |
| 0040 | 3 | 31.10 | 2.5 | 4 | M8 x 58 | 560 |
| 0045 | 4 | 40.40 (W342) | 3.5 | 8 | M10 x 76 | 1250 |

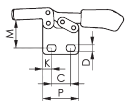
## Horizontal clamping mechanisms with vertical foot

**Design:** Horizontal clamping mechanism with open support arm and vertical foot. Galvanised and passivated. The stainless steel rivets run in case-hardened bearing bushings except for sizes 0 and 1 due to lack of space. Bearing bushings are greased. Ergonomic, oil-resistant handle with large hand rest and soft component. Safety clamping piece with finger guard. Captive fastener for pressure screw at clamping arm end.

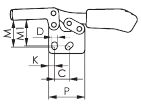
**Application:** For fastening on webs and for welded designs.

**Scope of delivery:** Complete with tempered, galvanised pressure screw.

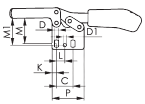
**Note:** Cross arm for 2-point tension see (Order No. 3946).



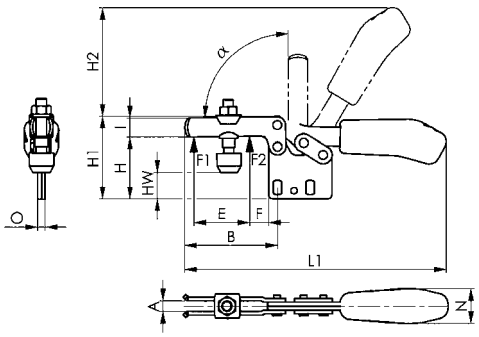

Size 0, 5




Size 1




Size 2, 3, 4



**Dimension table**

| Size | A | B | C | D | D1 | E | F | H | H1 | H2 | HW min. | HW max. | I | K | L | L1 | M | M1 | N | O | P | α |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4 | 28 | 11.5–15.5 | 4.6 | – | 9 | 5 | 24.5 | 33 | 34 | 4.7 | 10.7 | 7.5 | 6.3 | – | 79 | 20 | – | 12 | 3 | 25.5 | 90° |
| 1 | 5 | 42 | 13 –14.5 | 5.2 | – | 18.5 | 8 | 31.5 | 43 | 49 | 8 | 15 | 10 | 5.5 | – | 120 | 23.5–25.5 | 24.5 | 18 | 5 | 34 | 90° |
| 2 | 6 | 64 | 26 | 5.6 | 5.6 | 32 | 16 | 40 | 61 | 68 | 15 | 22 | 13.2 | 6 | 12.7 | 164 | 29.5–34 | 34 | 21 | 5 | 38 | 90° |
| 3 | 8 | 73 | 25.7 | 6.5 | 5.1 | 38.5 | 14 | 49 | 65 | 86 | 14.5 | 26 | 15 | 7 | 13 | 206 | 37.5–42.5 | 42 | 27 | 6 | 50 | 90° |
| 4 | 10 | 113 | 41 | 8.5 | 8.5 | 63 | 27 | 66.5 | 97 | 115 | 17.5 | 46 | 20 | 8 | 20.5 | 287 | 52 –59 | 59 | 34 | 8 | 57 | 90° |
| 5 | 10 | 123 | 41.5 | 8.5 | – | 78 | 16 | 65 | 92.5 | 128 | 21.5 | 45 | 25 | 12.5 | – | 321 | 57 | – | 36 | 10 | 77 | 90° |

| Order No. | Size | 3940 AMF | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0000 | 0 | 11.60 | 0.25 | 0.4 | M4 x 25 | 35 |
| 0010 | 1 | 16.60 | 0.8 | 1.1 | M5 x 30 | 105 |
| 0020 | 2 | 18.45 | 1 | 1.2 | M6 x 35 | 185 |
| 0030 | 3 | 23.40 | 1.8 | 2.5 | M8 x 45 | 320 |
| 0040 | 4 | 32.00 | 2 | 3 | M8 x 65 | 700 |
| 0050 | 5 | 50.80 (W342) | 3 | 5 | M8 x 65 | 1080 |

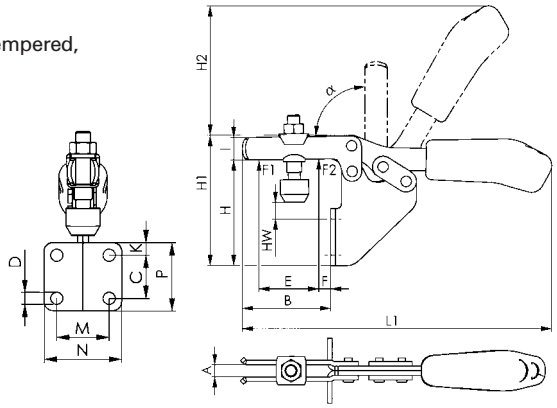
## Horizontal clamping mechanisms with angular foot

**Design:** Horizontal clamping mechanism with open support arm and horizontal foot. Galvanised and passivated. The stainless steel rivets run in case-hardened bearing bushings except for sizes 0 and 1 due to lack of space. Bearing bushings are greased. Ergonomic, oil-resistant handle with large hand rest and soft component. Safety clamping piece with finger guard. Captive fastener for pressure screw at clamping arm end.

**Application:** For side mounting.

**Scope of delivery:** Complete with tempered, galvanised pressure screw.

Cross arm for 2-point tension see (Order No. 3946).



**Dimension table**

| Size | A | B | C | D | E | F | H | H1 | H2 | HW min. | HW max. | I | K | L1 | M | N | P | α |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 6.2 | 52 | 20 | 5.6 | 32 | 10.5 | 73 | 94 | 68 | 22 | 29.5 | 13.2 | 6 | 162 | 25.5 | 37 | 32 | 90° |
| 3 | 8 | 59 | 24 | 6.8 | 37 | 6.5 | 70 | 86.5 | 86 | 5 | 16 | 15 | 7 | 206 | 28.5 | 42.5 | 38 | 90° |

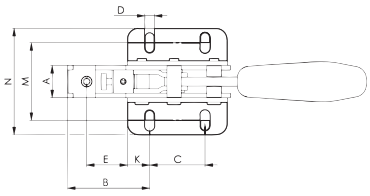
| Order No. | Size | 3941 AMF | Holding force F1 kN | Holding force F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0020 | 2 | 20.70 | 1 | 1.2 | M6 x 35 | 245 |
| 0030 | 3 | 25.50 (W342) | 1.8 | 2.5 | M8 x 45 | 390 |

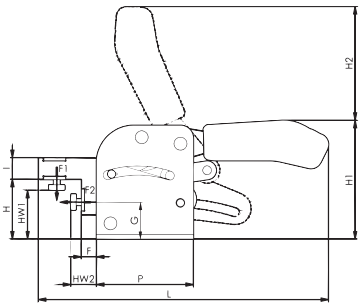
## Combi-clamp

**Design:** Galvanised and passivated. Stainless steel rivet that runs in case-hardened bearing bushings. Bearing bushings greased. Ergonomic, oil-resistant handle with large hand rest and soft component.

**Benefits:**
- Positioning and clamping in a single operation
- Robust and stable design
- Easy workpiece removal due to completely retracted clamping arm
- Superior quality acc. to the AMF quality standard

**Application:** When welding jigs, it is vital that the individual components are positioned exactly and securely clamped. In practice, this is ensured with simultaneous use of push rod clamping devices in connection with Vertical acting toggle clamps. The AMF Combi-clamp meets these two task in a single operation thus making the deployment of different toggle clamps redundant. The Combi-clamp sliding block guide translates the lever arm movement into a horizontal and vertical clamping movement thus positioning and clamping the workpiece at the same time. Discover the potential savings by using the new AMF Combi-clamp!



**Dimension table**

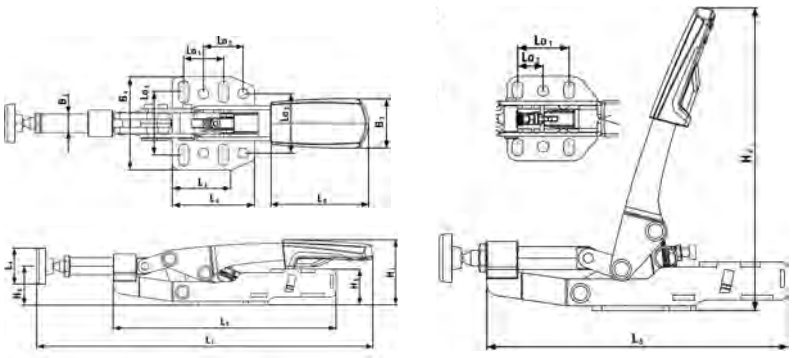
| Size | A | B | C | D | E | F | G | H | H1 | H2 | HW1min. | HW1max. | HW2min. | HW2max. | I | K | L | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17 | 33 | 40 | 5.5 | 15 | 0.5 | 22 | 36 | 74 | 62 | 25 | 32 | 5 | 10 | 12 | 7.5 | 150 | 34.5–39.5 | 53 | 55 |
| 2 | 19.5 | 56 | 50 | 6.5 | 32 | 9 | 28 | 46 | 94 | 87 | 30 | 40 | 14 | 24 | 16 | 12.5 | 219 | 48.5–61.5 | 75 | 75 |
| 3 | 29 | 74 | 50 | 8.5 | 37 | 14 | 34 | 55.5 | 110 | 106 | 40 | 50 | 20 | 30 | 20 | 20 | 270 | 60–80 | 96 | 90 |

| Order No. | Size | 3941 AMF | F1 kN | F2 kN | Weight g |
|---|---|---|---|---|---|
| 0110 | 1 | 57.10 | 1 | 1 | 340 |
| 0120 | 2 | 60.90 | 2 | 2 | 700 |
| 0130 | 3 | 74.60 (W342) | 3 | 3 | 1620 |

## Push rod clamping device, self adjusting

**Design:** Push rod clamping device with horizontal base plate. Adjustable clamping force depending on set screw adjustment. **Automatic, continuous adjustment of clamping height to various workpiece heights and widths with very consistent clamping force,** without manual adjustment of the pressure screw position. The base plate hole pattern fits both mm and inches. With high quality 2-component plastic handle and removable protective cap on the thrust plate.

**Application:** Optimal for deployment in batch production.



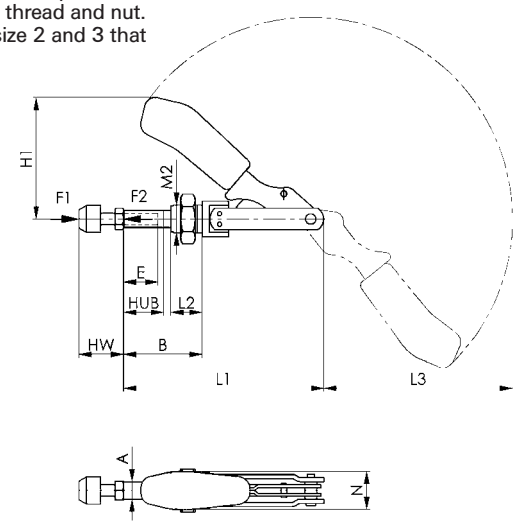
**Dimension table**

| Clamping range | L1 | L3 | L4 | L5 | L6 | L7 | L8 | H1 | H2 | H5 | B1 | B3 | B4 | Lo1 | Lo2 | Lo3 | Lo4 | ∅ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 225–245 | 20 | 23 | 148 | 64 | 50 | 53 | 46 | 160 | 20 | 12 | 26 | 57 | 25,4 | 25,4 | 38 | 32–44 | 6,3 |

| Order No. | Jaw span mm | 3973 format | Clamping force N | Weight g |
|---|---|---|---|---|
| 0025 | **35** | **21.90** (W340) | 2500 | 200 |

## Push rod clamping device

**Design:** Without angular foot. Push-pull clamping devices (push rod and hand lever running parallel) Long push rod guide with mounting thread and nut. Galvanised and passivated. Stainless steel rivets for size 2 and 3 that run in case-hardened bearing bushings.
Lever components and push rods mode of tempered steel. Bearing bushings greased. Push rod clamping devices with front-facing thread for direct installation in sheet metal walls or in jigs. Handle made of red, oil-resistant plastic.
For sizes 0, 2 and 3: Ergonomic, oil-resistant handle with large hand rest and soft component. Complete with tempered, galvanised pressure screw.



**Dimension table**

| Size | A | B min. | B max. | E | H1 | Stroke | HW min. | HW max. | L1 | L2 | L3 | M2 | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 6.5 | 10.5 | 26.5 | 13 | 37 | 16 | 12 | 20 | 66.5 | 10 | 54 | M10 x 1 | 15 |
| **1** | 8 | 17.5 | 37.5 | 20 | 45.5 | 20 | 12 | 20 | 91 | 16 | 74 | M12 x 1.5 | 18 |
| **2** | 10 | 20 | 46 | 20 | 66 | 26 | 17 | 25 | 114 | 19 | 105 | M16 x 1.5 | 22 |
| **3** | 12 | 24 | 56 | 30 | 82.5 | 32 | 22 | 35 | 140 | 22 | 127 | M20 x 1.5 | 27 |
| **5** | 16 | 26.5 | 66.5 | 50 | 99 | 40 | 30 | 50 | 171.5 | 25 | 158 | M24 x 1.5 | 34.5 |
| **5–M27** | 16 | 26.5 | 66.5 | 50 | 99 | 40 | 30 | 50 | 171.5 | 25 | 158 | M27 x 2.0 | 34.5 |

| Order No. | Size | 3942 AMF | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0100 | **0** | **22.00** | 0.8 | 0.8 | M4 x 20 | 60 |
| 0110 | **1** | **24.40** | 1 | 1 | M4 x 20 | 100 |
| 0120 | **2** | **24.70** | 2 | 2 | M6 x 25 | 245 |
| 0130 | **3** | **28.30** | 2.5 | 2.5 | M8 x 35 | 330 |
| 0150 | **5** | **45.60** | 4.5 | 4.5 | M12 x 50 | 700 |
| 0155 | **5-M27*** | **46.40** (W342) | 4.5 | 4.5 | M12 x 50 | 720 |

* Destarco dimensions

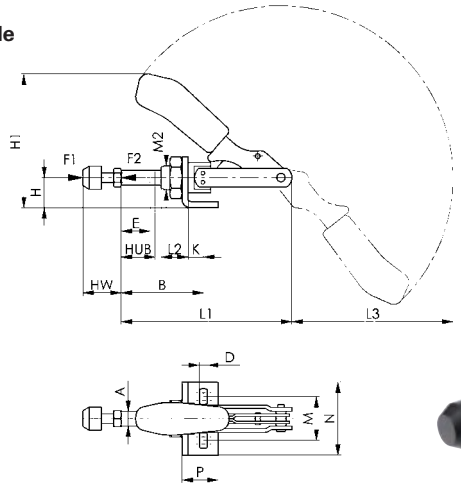
## Push rod clamping device with small angular foot

**Design: Push-pull clamping devices** with small angular foot (push rod and hand lever running parallel). **Long push rod guide with mounting thread and nut.**Galvanised and passivated. Lever components and push rod mode of tempered steel. The stainless steel rivets run in case-hardened bearing bushings except for sizes 0, 1 and 5 due to lack of space. Bearing bushings are greased. Handle made of red, oil-resistant plastic.
For sizes 0, 2 and 3: Ergonomic, oil-resistant handle with large hand rest and soft component. Hand lever rotatable in any angular position relative to the base area.

**Application: Can be used as push-pull clamping device.** The clamp can be affixed to sheet metal without the angular foot, or screwed into fixturing bodies with its thread.

**Scope of delivery:** Complete with tempered, galvanised pressure screw.

**Note:** Sizes 0 and 3 also available in stainless steel design.



**Dimension table**

| Size | A | B min. | B max. | D | E | H | H1 | Stroke | HW min. | HW max. | K | L1 | L2 | L3 | M | M2 | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 6.5 | 17 | 33 | 4.5 | 13 | 12 | 49.3 | 16 | 12 | 20 | 6.5 | 66.5 | 10 | 54 | 16 | M10 x 1 | 25 | 16 |
| 1 | 8 | 24.5 | 44.5 | 4.5 | 20 | 15 | 60.5 | 20 | 12 | 20 | 7 | 91 | 16 | 74 | 16 –19.5 | M12 x 1.5 | 30 | 20 |
| 2 | 10 | 32.5 | 58.5 | 5.6 | 20 | 20 | 85.5 | 26 | 17 | 25 | 12.5 | 114 | 19 | 105 | 31.8–36 | M16 x 1.5 | 50 | 34 |
| 3 | 12 | 37 | 69 | 6.5 | 30 | 25 | 108 | 32 | 22 | 35 | 13 | 140 | 22 | 127.5 | 29.5–42.5 | M20 x 1.5 | 60 | 30 |
| 5 | 16 | 41.5 | 81.5 | 8.5 | 50 | 30 | 129.5 | 40 | 30 | 50 | 15.5 | 171.5 | 25 | 158 | 29 –46 | M24 x 1.5 | 65 | 35 |
| 5–M27 | 16 | 41.5 | 81.5 | 8.5 | 50 | 30 | 129.5 | 40 | 30 | 50 | 15.5 | 171.5 | 25 | 158 | 29 –46 | M27 x 2.0 | 65 | 35 |

| Order No. | Size | 3942 | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0000 | 0 | 25.00 | 0.8 | 0.8 | M4 x 20 | 65 |
| 0010 | 1 | 26.20 | 1 | 1 | M4 x 20 | 125 |
| 0020 | 2 | 26.80 | 2 | 2 | M6 x 25 | 245 |
| 0030 | 3 | 32.40 | 2.5 | 2.5 | M8 x 35 | 445 |
| 0050 | 5 | 49.20 | 4.5 | 4.5 | M12 x 50 | 880 |
| 0055 | 5-M27* | 54.20 (W342) | 4.5 | 4.5 | M12 x 50 | 900 |

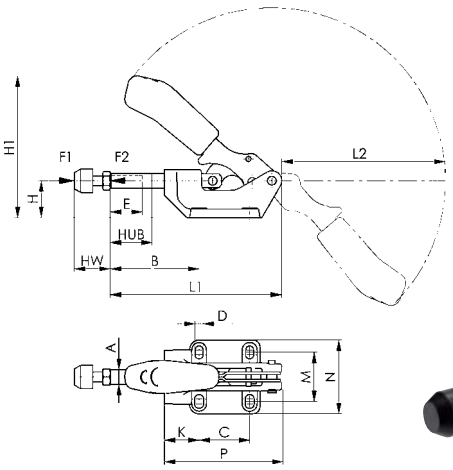
* Destarco dimensions

## Push rod clamping device

Design: Push-pull clamping devices (push rod and hand lever running parallel). **Heavy design with long push rod guide.** Base body made of malleable iron, lacquered. Galvanised and passivated. Lever components and push rod mode of tempered steel. Rustproof rivets for size 3 run in case-hardened bearing bushings. The bearing bushings are greased. Handle made of red, oil-resistant plastic.
For size 3: Ergonomic, oil-resistant handle with large hand rest and soft component.

**Application: Can be used as push-pull clamping device.** Ideal for deployment in special clamping devices and in series production.

**Scope of delivery:** Complete with tempered, galvanised pressure screw.



**Dimension table**

| Size | A | B min. | B max. | C | D | E | H | H1 | Stroke | HW min. | HW max. | K | L1 | L2 | M | N | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 12 | 40 | 72 | 41 | 6.5 | 30 | 30 | 116 | 32 | 22 | 35 | 28 | 139 | 135 | 36–44 | 60 | 95 |
| 5 | 16 | 58 | 98 | 41 | 8.5 | 50 | 38 | 137.5 | 40 | 30 | 50 | 45 | 174 | 156 | 41–50 | 71 | 121 |
| 7 | 22 | 59 | 105 | 70 | 11 | 50 | 55 | 179 | 50 | 30 | 50 | 45 | 218 | 192 | 57–65 | 93 | 158 |

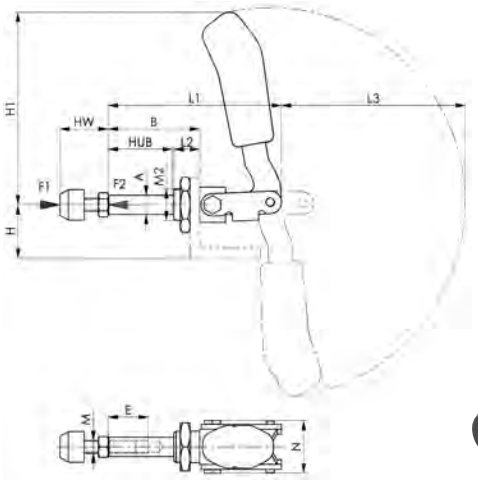
| Order No. | Size | 3943 | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0030 | 3 | 41.90 | 4 | 4 | M8 x 35 | 540 |
| 0050 | 5 | 62.00 | 10 | 10 | M12 x 50 | 1115 |
| 0070 | 7 | 130.50 (W342) | 25 | 25 | M12 x 50 | 2840 |

## Push rod clamping device

**Design: Push-pull clamping devices,** short design. **Long push rod guide with mounting thread and nut.** Galvanised and passivated. Stainless steel rivets. Tempered fitting screws. Bearing bushings greased. Ergonomic, oil-resistant handle with large hand rest and soft component.

**Scope of delivery:** Complete with tempered, galvanised pressure screw.

**Application: Can be used as push-pull clamping device.** For mounting onto sheet metal walls. In addition, the push rod clamping device can be screwed in into fixturing bodies with front-facing thread. Moreover, flange mounting is possible using an angular foot (Order No. 3957).



**Dimension table**

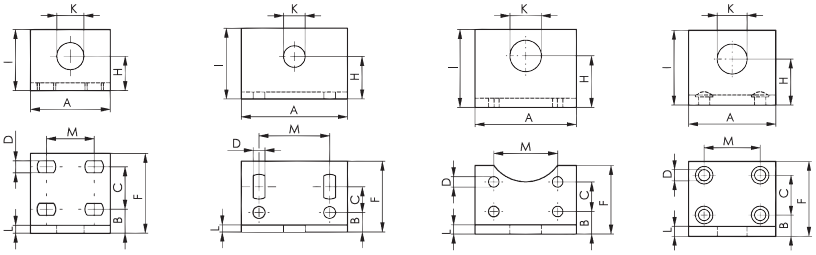
| Size | A | B | E | H | H1 | Stroke | HW min. | HW max. | L1 | L2 | L3 | M | M2 | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 10 | 36 | 15 | 24 | 73 | 21.5 | 17 | 25 | 68.5 | 13 | 68 | M6 | M16 x 1.5 | 30.5 |
| **3** | 12 | 57 | 25 | 33 | 123 | 40 | 22 | 35 | 108 | 16 | 115 | M8 | M20 x 1.5 | 33 |
| **5** | 16 | 92 | 45 | 37 | 149 | 67 | 30 | 50 | 175 | 24 | 139 | M12 | M24 x 1.5 | 49 |

| Order No. | Size | **3954** AMF | F1 kN | F2 kN | Pressing spindle | Weight g |
|---|---|---|---|---|---|---|
| 0020 | **2** | **25.90** | 1 | 1 | M6 x 25 | 130 |
| 0030 | **3** | **29.70** | 2.5 | 2.5 | M8 x 35 | 320 |
| 0050 | **5** | **48.00** (W342) | 4 | 4 | M12 x 50 | 1200 |

Also available in stainless steel design.

## Angular foot

**Application: Stable angular foot for push rod clamping devices (Order No. 3954 and 3942 0100–3942 0155).** Extended application range by greater clamping height. For installation in jigs. Fastening by means of 4 screws (not included in delivery).




Size 0 | Size 1, 2 | Size 3 | Size 5

**Dimension table**

| Size | A | B | C | D | F | H | I | K | L | M | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0** | 30 | 9 | 16 | 4.5 | 30 | 13 | 23 | 10.2 | 3 | 15.5–20.5 | 35 |
| **1** | 60 | 11 | 11–18 | 6.7 | 40 | 24 | 40 | 12.2 | 4 | 40 | 135 |
| **2** | 60 | 11 | 11–18 | 6.7 | 40 | 24 | 40 | 16 | 5 | 40 | 160 |
| **3** | 65 | 14.5 | 19 | 6.7 | 44 | 33 | 50 | 20.2 | 6 | 41 | 235 |
| **5** | 70 | 17 | 32 | 9 | 60 | 37 | 60 | 24 | 8 | 45 | 450 |

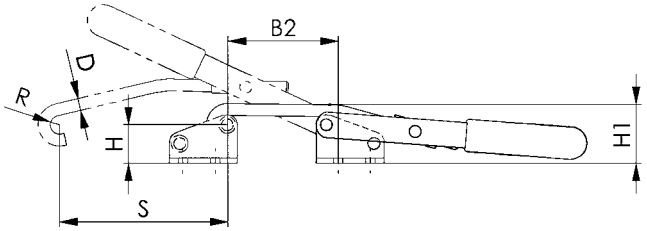
| Order No. | Size | **3957** AMF | A mm | F mm | I mm |
|---|---|---|---|---|---|
| 0000 | **0** | **4.40** | 30 | 30 | 23 |
| 0010 | **1** | **6.15** | 60 | 40 | 40 |
| 0020 | **2** | **7.00** | 60 | 40 | 40 |
| 0030 | **3** | **9.00** | 65 | 44 | 50 |
| 0050 | **5** | **21.80** (W342) | 70 | 60 | 60 |

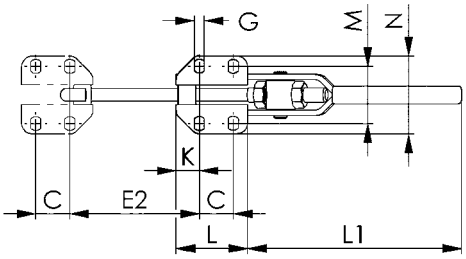
## Hook type toggle clamp

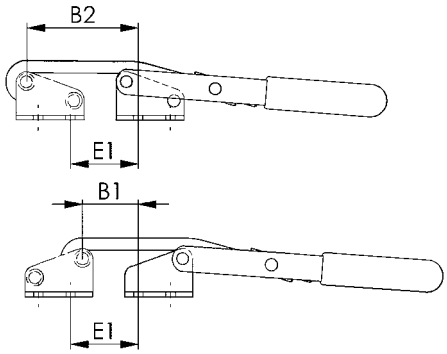
**Design:** Galvanised and passivated. Case-hardened and greased bearing bushings. Stainless steel rivets. Hook and clamping sleeves tempered, Handle made of red, oil-resistant plastic.

**Application:** For fastening flaps and lids on containers with counterholders (Order No. 3945).

**Note:** Also available in stainless steel design.



| Order No. | Size | 3944 | Piston force kN | Adjustment track mm | Total height mm | Total length mm |
|---|---|---|---|---|---|---|
| 0010 | 1 | 22.40 | 2 | 8 | 111 | 130 |
| 0030 | 3 | 25.20 | 3 | 12 | 181 | 230 |
| 0050 | 5 | 43.10 (W342) | 5 | 14 | 282 | 308 |

**Dimension table**

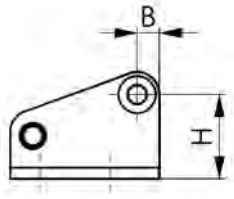
| Size | B1 | B2 | C | D | E1 | E2 | G | H | H1 | K | L | L1 | M | N | R | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16–23 | 35–42 | 19 | 5.3 | 17–24 | 35–42 | 4.5 | 22.7 | 34.5 | 6 | 31 | 62.6 | 26 –30 | 40 | 4.5 | 45 |
| 3 | 32–44 | 65–77 | 19 | 7.1 | 39–51 | 72–84 | 5.5 | 22.7 | 36 | 13 | 40 | 123.5 | 31.5–35.5 | 45 | 5.5 | 98 |
| 5 | 26–40 | 57–71 | 29 | 10.75 | 27–42 | 58–73 | 11.2 | 49 | 69 | 13 | 55 | 189.5 | 55.5–63 | 85 | 8 | 147 |

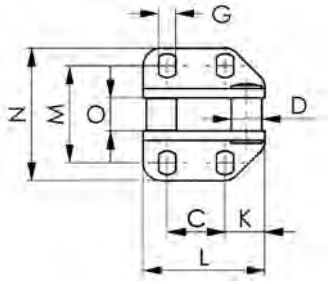
## Counterholder

**Design:** Galvanised and passivated. Case-hardened bushings. Stainless steel rivets.

**Application:** For hook type toggle clamps (Order No. 3944).

**Note:** Also available in stainless steel design.






| Order No. | Size | 3945 | Total height mm | Total length mm |
|---|---|---|---|---|
| 0010 | 1 | 9.00 | 29 | 31 |
| 0030 | 3 | 10.60 | 29 | 40 |
| 0050 | 5 | 14.65 (W342) | 61 | 55 |

**Dimension table**

| Size | B | C | D | G | H | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6 | 19 | 8 | 4.5 | 22.7 | 6 | 31 | 26 –30 | 40 | 6.9 |
| 3 | 6 | 19 | 10 | 5.5 | 22.7 | 13 | 40 | 31.3–35.8 | 45 | 10.9 |
| 5 | 12 | 29 | 15 | 11.2 | 49.1 | 13 | 55 | 56.5–64.0 | 86 | 13.8 |

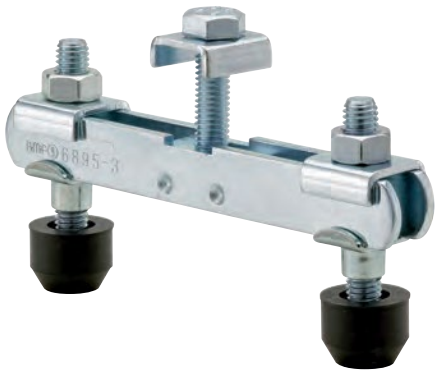
## Cross arm for toggle clamp

**Design:** Galvanised and passivated.

**Application:** For the simultaneous clamping of 2 small workpieces as well as for the secure and fixed clamping or large workpieces at 2 points. Fastening is possible above and below the clamping arm.

**Scope of delivery:** Complete with tempered pressure screws and fastening screw.

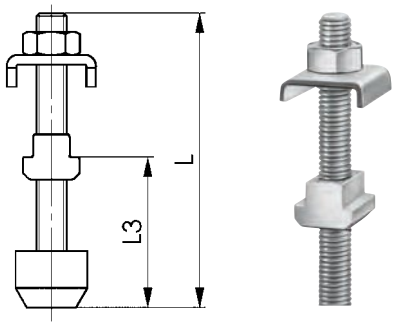
**Suitable for:**
Size 3 for toggle clamp (Order No. 3935, 3936, 3937, 3938, 3939, 3940, 3941 and 3949),
Size 4 for toggle clamp (Order No. 3935, 3936, 3937, 3939, 3940, 3947 and 3949),
Size 6 for toggle clamp (Order No. 3935, 3936, 3937).



| Order No. | Size | 3946 AMF | Screw DIN 933 | Clamping range mm | Length mm | Weight g |
|---|---|---|---|---|---|---|
| 0010 | 3 | 18.20 | M8 x 45 | 34–100 | 120 | 200 |
| 0020 | 4 | 20.40 | M8 x 65 | 40–125 | 150 | 370 |
| 0030 | 6 | 30.40 (W342) | M12 x 80 | 54–200 | 240 | 985 |

## Pressing spindle for open support arm

**Design:** Tempered, galvanised and passivated. Strength grade 8.8, **with removable protective cap.** Size 0–3 with washer element. Size 4-6 with nut for T-slot.

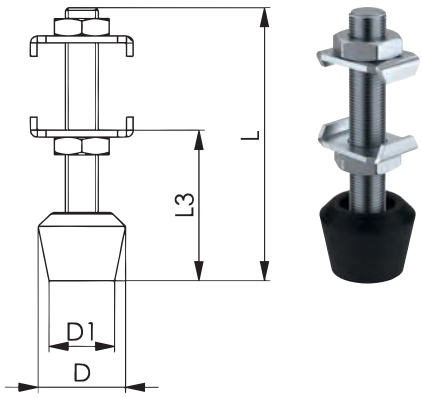



| Order No. | Size | 3946 AMF | Screw DIN 933 | Nut for T-slot DIN 508 | L mm | L3 mm | Weight g |
|---|---|---|---|---|---|---|---|
| 0040 | 0/0 | 4.43 | M4 x 25 | – | 32 | 13–20 | 5 |
| 0045 | 0 | 3.78 | M4 x 25 | – | 32 | 13–20 | 5 |
| 0050 | 1 | 3.82 | M5 x 30 | – | 38 | 17–24 | 10 |
| 0060 | 2 | 3.85 | M6 x 35 | – | 45 | 19–28 | 22 |
| 0070 | 3 | 4.03 | M8 x 45 | – | 58 | 22–34 | 40 |
| 0080 | 4 | 4.71 | M8 x 65 | M8 x 10 | 78 | 21–50 | 62 |
| 0090 | 6 | 8.35 (W342) | M12 x 80 | M12 x 14 | 97 | 28–58 | 160 |

## Pressing spindle plus NEW

**Design:** For horizontal clamp plus (Order No. 3949). Matt black, complete with washers, hexagon nuts. Screw with vulcanised pressure piece made from oil-resistant neoprene to protect the workpieces. Strength grade 8.8.

**Note:** You can find the horizontal clamp plus on 📖 3/175.

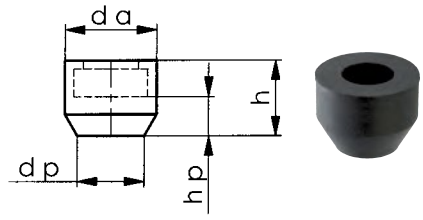



| Order No. | Size | 3946 AMF | M x L | D mm | L3 mm | Weight g |
|---|---|---|---|---|---|---|
| 0092 | 2 | 6.60 | M6 x 50 | 16 | 17–29 | 20 |
| 0093 | 3 | 8.05 | M8 x 58 | 21 | 21–34 | 36 |
| 0094 | 4 | 9.30 (W342) | M10 x 76 | 26 | 28–44 | 95 |

## Protective cap for pressing spindle

**Design:** From oil-resistant neoprene (hardness 70 Shore A) to protect sensitive workpieces.

**Application:** Suitable for pressing spindle (Order No. 3946) or as spare part for all listed AMF clamps with protective cap.




| Order No. | Size | 3946 AMF | A/F | Thread | d a mm | d p mm | h mm | h p mm |
|---|---|---|---|---|---|---|---|---|
| 0100 | 0/0 + 0 | 0.82 | 7 | M4 | 11 | 7 | 8.5 | 4.2 |
| 0110 | 1 | 0.82 | 8 | M5 | 12.5 | 8 | 10 | 5 |
| 0120 | 2 | 0.93 | 10 | M6 | 15 | 10 | 12 | 6 |
| 0130 | 3 + 4 | 0.95 | 13 | M8 | 19 | 13 | 15 | 7.5 |
| 0140 | 6 | 1.33 (W342) | 18* | M12 | 25 | 18 | 20 | 9.5 |

* As a result of the change of the screws M12 from DIN 933 to ISO 4017, the screw head changes from A/F 19 to A/F 18. The new A/F 18 protective cap is marked with '6' on the pressing-on surface.

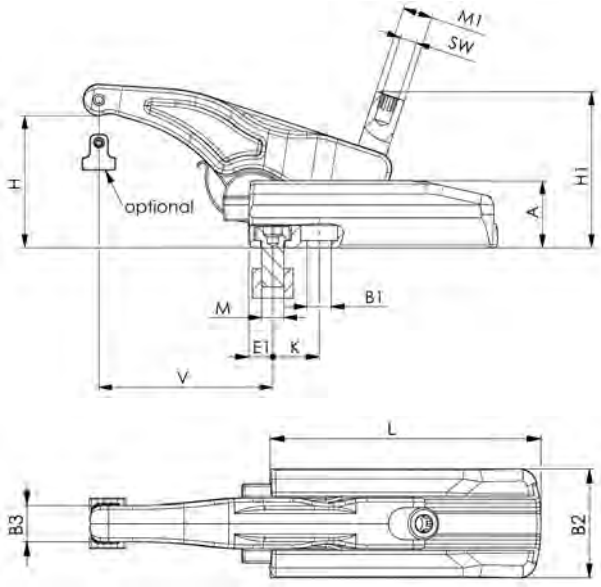
## Power clamp, long design

NEW

amf

**Design:** Steplessly adjustable clamping element made from alloy tempered steel in forged, black zinc-plated design. Low construction height. Continuous adjustment of height and length.

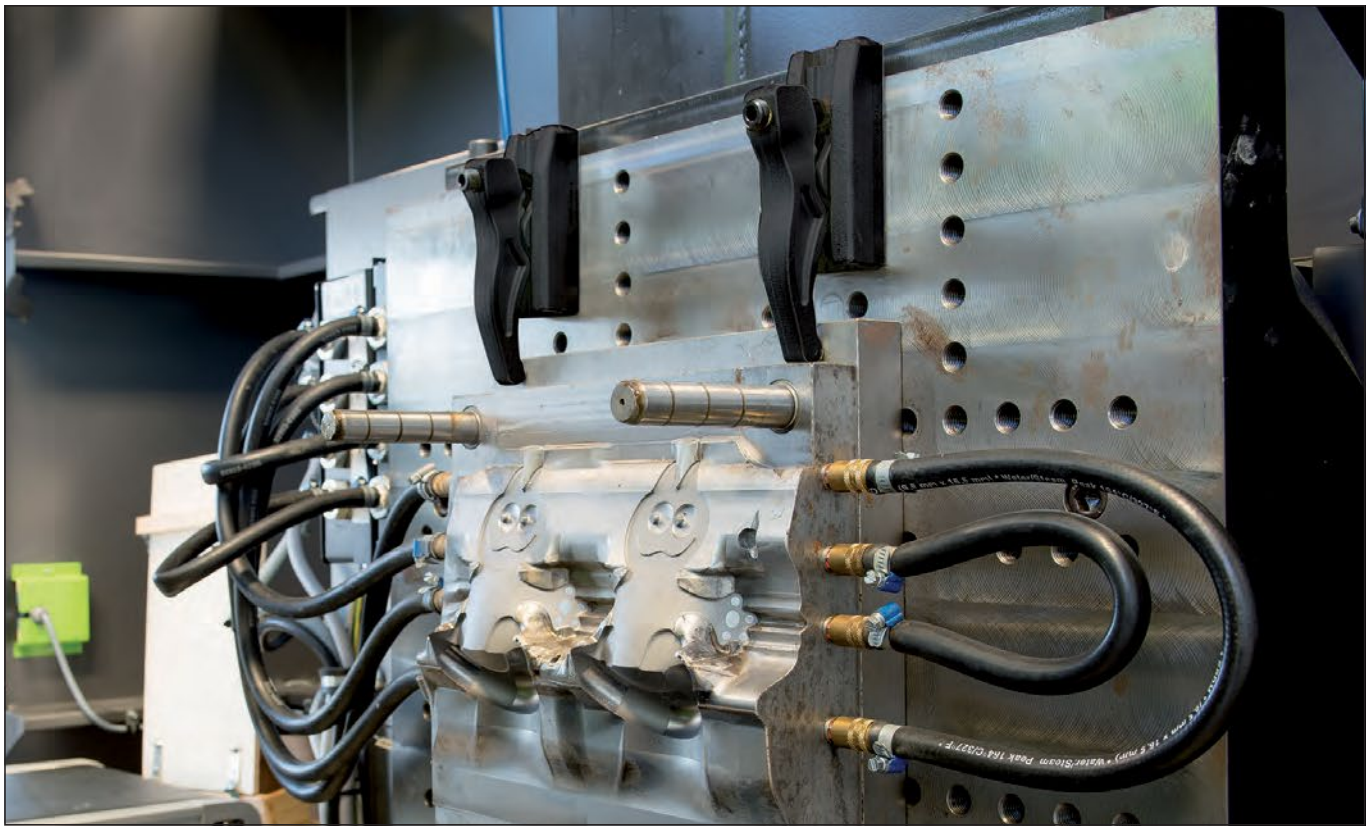
**Scope of delivery:** Complete with fixing set.



| Order No. | Size | 3946 amf | M | Slot mm | H mm | V mm | Clamping force kN | Weight g |
|---|---|---|---|---|---|---|---|---|
| 0180 | 30 | 209.00 | M12 | 14 | 6–68 | 13–110 | 30 | 2013 |
| 0181 | 30 | 209.00 | M16 | 18 | 6–68 | 16–114 | 30 | 2045 |
| 0182 | 43 | 222.50 (W342) | M16 | 18 | 5–80 | 16–134 | 43 | 3158 |

**Dimension table**

| Size | A | B1 | B2 | B3 | E1 | H1 | K | L | M1 | A/F |
|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 36 | 13 | 54 | 18 | 13 | 85 | 25 | 135 | M16 | 8 |
| 30 | 36 | 17 | 54 | 18 | 16 | 85 | 28 | 135 | M16 | 8 |
| 43 | 42 | 17 | 60 | 20 | 16 | 105 | 32 | 155 | M20 | 10 |

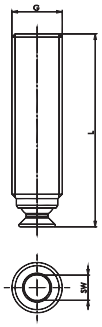


## Ball pressure screw

NEW

**Design:** Tempered steel, burnished.

| Order No. | Size | 3946 AMF | M1 | L mm | A/F | Clamping force kN | Weight g |
|---|---|---|---|---|---|---|---|
| 0183 | 30 | 14.60 | M16 | 62 | 8 | 30 | 80 |
| 0184 | 43 | 29.60 (W342) | M20 | 78 | 10 | 43 | 165 |



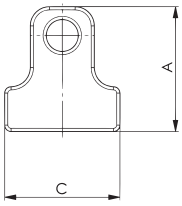
## Pressure piece

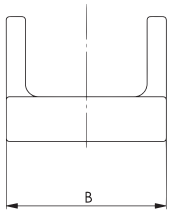
NEW

**Design:** Stainless steel, complete with clamping pin.

INOX

| Order No. | Size | 3946 AMF | Shape | Height A mm | Length B mm | Width C mm | Clamping force kN | Weight g |
|---|---|---|---|---|---|---|---|---|
| 0185 | 30 | 4.66 | DG | 19.5 | 25 | 18 | 30 | 28 |
| 0186 | 30 | 4.86 | DR | 19.5 | 25 | 18 | 30 | 27 |
| 0187 | 43 | 4.82 | DG | 24 | 30 | 20 | 43 | 47 |
| 0188 | 43 | 4.95 (W342) | DR | 24 | 30 | 20 | 43 | 48 |



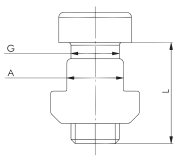



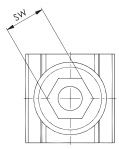
## Fixing set

NEW

**Design:** Consists of hexagon socket head cap screw DIN 6912, strength grade 12.9 and T-slot nut DIN 508.

| Order No. | Size | 3946 AMF | Slot width A mm | Thread G x L | A/F | Weight g |
|---|---|---|---|---|---|---|
| 0189 | 30/32 | 5.90 | 14 | M12 x 25 | 10 | 67 |
| 0190 | 30/32 | 7.30 | 16 | M12 x 30 | 10 | 86 |
| 0191 | 30/32 | 7.60 | 18 | M12 x 30 | 10 | 118 |
| 0192 | 30 | 7.65 | 18 | M16 x 30 | 14 | 141 |
| 0193 | 30 | 8.25 | 20 | M16 x 35 | 14 | 188 |
| 0194 | 30/43 | 9.90 | 22 | M16 x 40 | 14 | 262 |
| 0195 | 30 | 14.85 | 24 | M16 x 40 | 14 | 346 |
| 0196 | 40/43 | 7.95 | 18 | M16 x 35 | 14 | 148 |
| 0197 | 40/43 | 9.40 | 20 | M16 x 40 | 14 | 196 |
| 0198 | 40/43 | 15.95 (W342) | 24 | M16 x 45 | 14 | 354 |



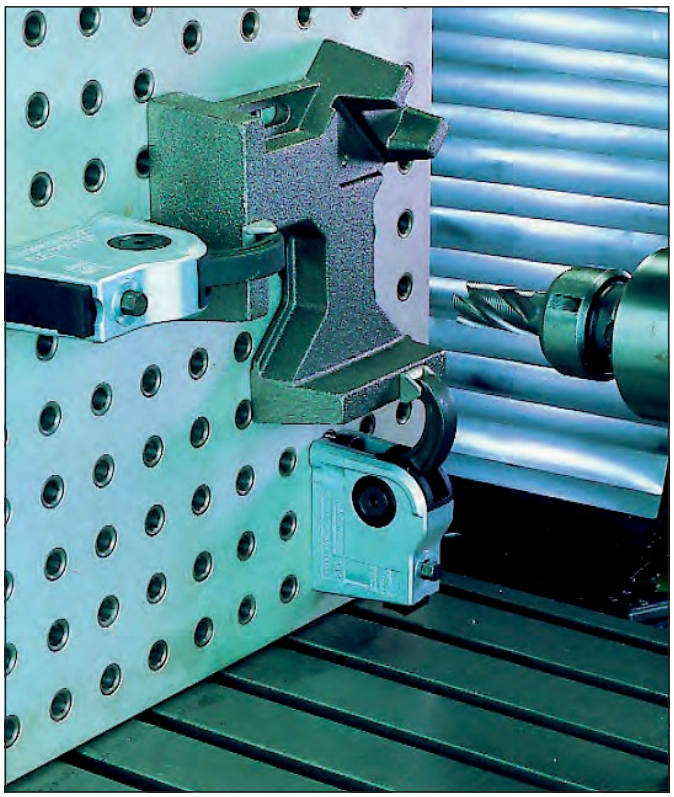



## Machine table clamp BS

**Design:** Rail and slide made of tempered steel, galvanised zinc-plated surface, steel base, drop-forged, plastic-coated steel lever. Swivel-mounted and steplessly height-adjustable, with lever mechanism for rapid clamping and release.

**Application:** For drilling machines and light milling work. Mounting on the machine table by means of a T-slot nut and Allen screw.

| Order No. | Size | 3948 BESSEY | Clamping height mm | Projection mm | Rail mm | Clamping force at 50 mm clamping height approx. kN | Hole for attachment screw mm |
|---|---|---|---|---|---|---|---|
| 0020 | 2 | 106.00 | 200 | 100 | 19.5 x 9.5 | 3.5 | 10.5 |
| 0030 | 3 | 121.00 | 200 | 120 | 22 x 10.5 | 5.5 | 13 |
| 0040 | 4 | 132.00 | 200 | 120 | 28 x 11 | 7.5 | 16.5 |
| 0050 | 5 | 154.50 (W344) | 240 | 140 | 30 x 15 | 10 | 16.5 |



## Compact clamp

**Design:** BAS compact clamps are distinguished by their high clamping force and extremely compact design, measuring 95 x 35 x 78 mm. This results in 30 % less area and 50 % less space required with a **clamping force up to 16000 N.** The shell and pressure arms are made from tempered stainless steel (42 CrMo4) and as such are highly stressable and very long-lasting. The worn gear ensures high clamping force. A special elastomer seal around the clamping arm protects the interior from fouling. The pressure pads are made of aluminium and provide optimal pressure distribution and smooth clamping. Handle recesses on both sides ensure optimal hold in any positioning.

**Application:** For quick and secure clamping of workpieces on tool machines, measuring tables and jig manufacturing. Ideal for assembly, when drilling, reaming, milling, grinding, honing, eroding, inspecting etc.

**Note:** To bridge large clamp heights we recommend the BASO clamping base (Order No. 3952), for quick and secure clamping the BASKN T-bar spanner (Order No. 3953).

**3950** **Compact clamp with fixing hole open.**

**3951** **Compact clamp with fixing hole closed.**

**3950**

**3951**

| Order No. | Model | 3950 BESSEY | 3951 BESSEY | Clamping height mm | Projection mm | With Al pressure shoe |
|---|---|---|---|---|---|---|
| 0010 | BAS-C 9-4 | 211.00 | – | 88 | 40 | yes |
| 0020 | BAS-C 10-6 | 218.50 | – | 97 | 60 | yes |
| 0030 | BSP-C 10-6 | 225.50 | – | 97 | 60 | no |
| 0040 | BAS-CB 9-4 | – | 211.00 | 88 | 40 | yes |
| 0050 | BAS-CB 10-6 | – | 218.50 | 97 | 60 | yes |
| 0060 | BSP-CB 10-6 | – (W344) | 225.50 (W344) | 97 | 60 | no |

## Clamping base

**Design:** Fixing hole: open, incl. hexagon socket head cap screw M10 x 25 DIN 912.

**Application:** For compact clamps.

| Order No. | Model | 3952 BESSEY | Clamping height extension mm | Mounting thread | For cyl. scr. DIN 912 |
|---|---|---|---|---|---|
| 0010 | BASO | 66.70 (W344) | 80 | M10 | M10/M12 |

## Clamping key

**Design:** For tightening the compact clamp.

| Order No. | Model | 3953 BESSEY | Spanner width hexagon socket | Spanner width ball hexagonal | Toggle length mm |
|---|---|---|---|---|---|
| 0010 | BASKN | 22.30 (W344) | A/F 11 | A/F 8 + A/F 10 | 230 |

## Vacuum clamping plate

**Design:** Vacuum plate with slots and suction points on the upper side. Easy positioning via holes for stop pins or lateral, height-adjustable eccentric stops Lateral grooves or fastening holes allow the vacuum clamping plate to be fastened to a base plate. Fixture plates can additionally be fixed using a sword or locating pin. By inserting the sealing cord, one or more fields can be defined for the desired workpiece size. All suction points are interconnected.

**Application:** The workpieces to be processed are clamped by the creation of a vacuum using the integrated venturi nozzle technology or with an external vacuum pump. By means of individual grid allocation it is also possible to clamp and machine multiple, different workpieces at the same time. The vacuum clamping plate is ready to use right away since all of the necessary components are included in the scope of supply. Typical applications are milling and grinding jobs.

**Benefits:**
- Vacuum clamping plates can be operated both with compressed air using the integrated venturi nozzle, and with an external vacuum pump
- Save money by using the venturi nozzle
- Low operating costs thanks to low compressed air use
- Vacuum plates can be combined
- High holding forces
- For universal use
- High coefficient of friction allows for secure clamping of non-processed workpiece surfaces
- The sealing cords balance small irregularities on the workpiece surface
- Non-warping and vibration-free five-side processing

**Scope of delivery:** Vacuum clamping plate made of aluminium, integrated venturi nozzle, sound absorber, vacuum meter, cut-off valve, 6 eccentric stops, 2 m pneumatic hose, male coupling for compressed air connection and 10 m sealing cord ∅ 4.5 mm.

**Note:** Operation only with dry, filtered and non-oiled compressed air max. suction volumes vs atmosphere: 21.8 l/min. Operating pressure for max. suction volume flow: 3.5 bar. Please consult the assembly instructions. The mounting holes make it easy to integrate the vacuum clamping plate into the AMF Zero-Point clamping system.

**3962** Grid 25 x 25 mm.

**3964** Grid 12.5 x 12.5 mm.

| Order No. | Dimensions L x W x H mm | 3962 25 x 25 | 3964 12.5 x 12.5 | No. of suction points | Operating pressure bar | Max. vacuum % | Weight kg |
|---|---|---|---|---|---|---|---|
| 0150 | 150 x 150 x 40 | 744.00 ◊ | 1179.00 ◊ | 1 | 3.5–6 | 93 | 1 |
| 0200 | 300 x 200 x 40 | 915.00 ◊ | 1289.00 ◊ | 3 | 3.5–6 | 93 | 6 |
| 0300 | 300 x 400 x 40 | 1233.00 ◊ | 1728.00 ◊ | 9 | 3.5–6 | 93 | 12 |
| 0400 | 400 x 400 x 40 | 1360.00 ◊ | 2188.00 ◊ | 9 | 3.5–6 | 93 | 16 |
| 0401 | 400 x 600 x 40 | 2053.00 ◊ (W342) | 2910.00 ◊ (W342) | 9 | 3.5–6 | 93 | 24 |

## Adapter mat

**Design:** Adapter mat, rubber.

**Application:** The sealing cord is inserted into the raster of the rubber adapter mat. Go up to the end of the area to be machined in the workpiece. Next, the adapter mat is placed onto the vacuum clamping plate. The adapter mat is perforated within the marked clamping surface using a 3-5 mm ∅ hole punch. The location of the holes must be in the area of the raster cuts of the vacuum clamping plate. The workpiece to be machined is placed on it and fixed using the adjustable eccentric stops.

**Benefits:**
- The good coefficient of friction offers very good resistance to displacement forces arising during processing
- The adapter mat can be cut into up to 2 mm deep without problem
- When always using with the same contours, the adapter mat can often be reused as there will be no wear

| Order No. | Dimensions L x W mm | 3967 | Materialdicke ±0.2 mm | Weight g |
|---|---|---|---|---|
| 0005 | 150 x 150 | 4.53 ◊ | 4 | 110 |
| 0010 | 300 x 200 | 6.45 ◊ | 4 | 275 |
| 0015 | 300 x 400 | 12.80 ◊ | 4 | 550 |
| 0020 | 400 x 400 | 17.00 ◊ | 4 | 780 |
| 0025 | 600 x 400 | 25.40 ◊ (W342) | 4 | 1110 |

## Adapter plate

**Design:** Adapter plate made of aluminium.

**Application:** The sealing cord is inserted into the raster of the rubber adapter mat. Go up to the end of the area to be machined in the workpiece. Next, the adapter plate is screwed down to the vacuum clamping plate. The workpiece to be machined is placed on it and fixed using the adjustable eccentric stops.

**Benefits:**
- The adapter plate can be overcut by up to 2 mm (elimination of cuts)
- Preferred areas of application include the processing of thin sheets, foils, boards and even paper

| Order No. | Dimensions L x W mm | 3967 AMF | Materialdicke ±0.1 mm | Weight kg |
|---|---|---|---|---|
| 0030 | 150 x 150 | 305.50 ◊ (W342) | 10 | 0.6 |
| 0035 | 300 x 200 | 482.50 ◊ (W342) | 10 | 1.6 |
| 0040 | 300 x 400 | 642.50 ◊ (W342) | 10 | 3.3 |
| 0045 | 400 x 400 | 475.00 ◊ (W342) | 10 | 4.4 |
| 0050 | 600 x 400 | 684.00 ◊ (W342) | 10 | 6.6 |

## Surface-mounted block

**Design:** The surface-mounted block has grooves and a suction point on its upper side. The field size is individually defined by inserting the sealing cord. The surface-mounted block is placed directly over a suction point on the vacuum clamping plate. The underside has a sealing cord of 2.0 mm Ø

**Application:** Deployment of surface-mounted blocks allows openings for machining. Workpieces can be drilled through without the vacuum clamping plate or the component itself being damaged.

**Note:** Please order sealing cord Ø 4.0 mm separately.

| Order No. | Max. vacuum % | 3967 AMF | No. of suction points | Dimensions L x W x H mm | Weight g |
|---|---|---|---|---|---|
| 0055 | 93 | 344.00 ◊ (W342) | 1 | 78 x 78 x 40 | 600 |

## Adapter mat

**Design:** Adapter mat, rubber.

**Application:** Suitable for surface-mounted block (Order No. 3967 0055).

**Benefits:**
- The good coefficient of friction offers very good resistance to displacement forces arising during processing
- The adapter mat can be cut into up to 2 mm deep without problem
- When always using with the same contours, the adapter mat can often be reused as there will be no wear

| Order No. | Dimensions L x W mm | 3967 AMF | Materialdicke ±0.2 mm | Weight g |
|---|---|---|---|---|
| 0060 | 78 x 78 | 3.81 ◊ (W342) | 4 | 60 |

## Adapter plate

**Design:** Adapter plate made of aluminium.

**Application:** Suitable for surface-mounted block (Order No. 3967 0055).

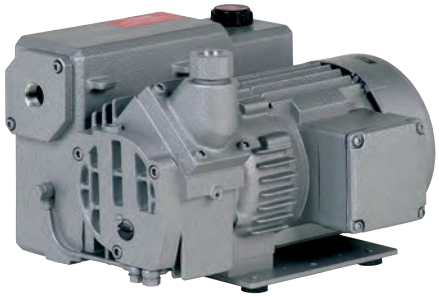
**Benefits:**
- The adapter plate can be overcut by up to 2 mm (elimination of cuts)
- Preferred areas of application include the processing of thin sheets, foils, boards and even paper

| Order No. | Dimensions L x W mm | 3967 AMF | Materialdicke ±0.1 mm | Weight g |
|---|---|---|---|---|
| 0065 | 78 x 78 | 77.30 ◊ (W342) | 10 | 200 |

## Rotary vane vacuum pump

**Application:** If there is no compressed air available where the vacuum clamping plate is to be used, we recommend using the AMF rotary vane vacuum pump. It ensures reliable continuous operation of the clamping plates used. Thanks to its small design, the pump can be attached directly to your machine.

**Scope of delivery:** Vacuum pump with suction-side fine sieve filter, oil mist separator, switch valve for rough or fine vacuum operation, anti-vibration buffer and first oil fill, no gas ballast.



| Order No. | Vacuum % | 3967 AMF | Suction power $m^3/h$ | Lubrication | Motor power V/Hz | Noise level dB | Protection type | Continuous operation % | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| 0070 | 99 | 2663.00 ◊ (W342) | 15 | Oil | 230/50 | 59 | 54 | 100 | 19 |

## Liquid separator with vacuum filter

**Application:** The liquid separator effectively removes the condensate from the vacuum clamping system and protects it from soiling.

**Benefits:**
- Removes 99 % of contained liquid
- Maintenance-free
- Reduces system's operating and maintenance costs
- Easy to install (in front of the vacuum pump)

**Scope of delivery:** Liquid separator, vacuum filter, mounting unit, ball valve, connection 1/2" AG – 15 mm. Plastic tube Ø 15 x 12 mm (2 m length), coupling socket and double nipple.

**Note:** The set is supplied already assembled.

| Order No. | Dimensions mm | 3967 AMF | Connection | Weight kg |
|---|---|---|---|---|
| 0075 | 230 x 210 x 90 | 675.00 ◊ (W342) | 3/4" | 1.6 |

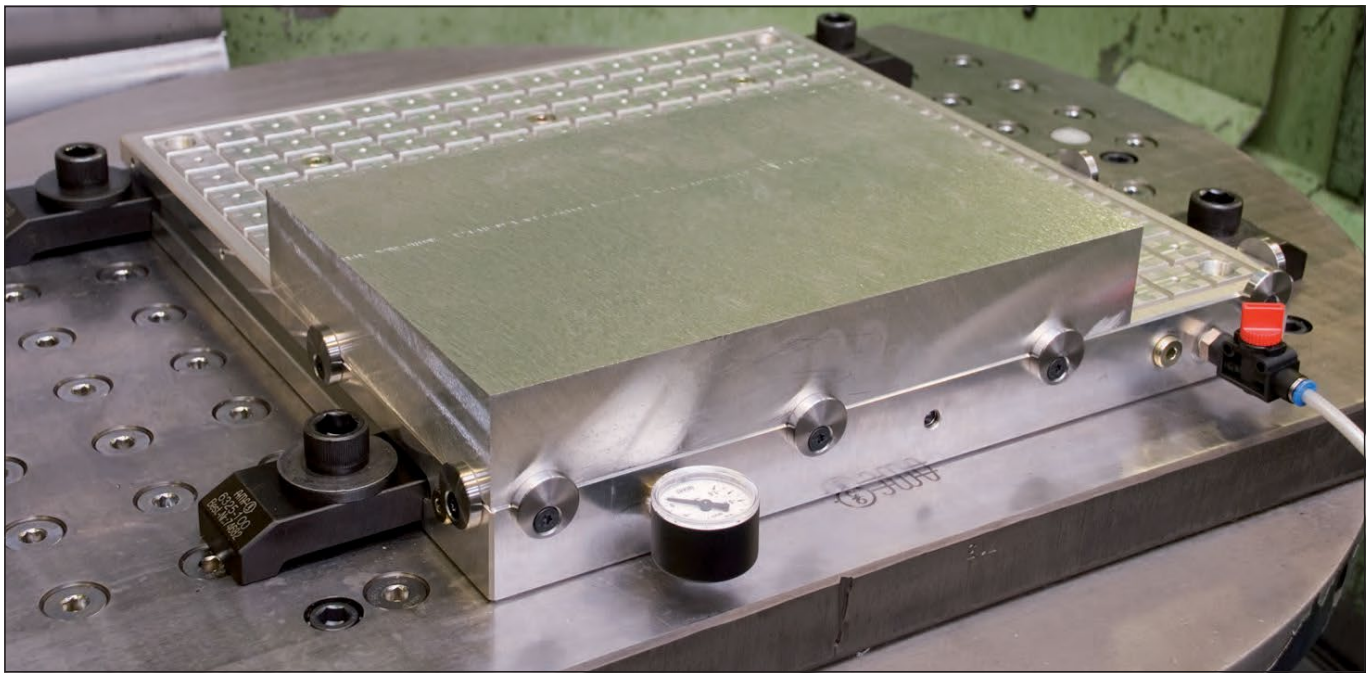
## Sealing cord

**Design:** Silicone sealing cord, anthracite-coloured. Shore hardness 8-13°.

**Application:** The sealing cord is inserted in the groove to delimit the clamping surface.

**Benefits:**
- Multiple workpieces can be clamped, even with different sizes.

| Order No. | Slot width mm | 3967 AMF | Ø mm | Length m | Weight g |
|---|---|---|---|---|---|
| 0080 | 4 | 17.85 ◊ (W342) | 4.5 ±0.45 | 10 | 320 |



## BM permanent-magnetic clamping plate

**Design:** With transverse pole pitch. A strong permanent-ceramic magnet system with low installation height and narrow pole pitch enables deployment for many tasks. A long and maintenance-free service life is ensured by the cast iron base body and robust upper plate as well as through the magnetic system. Machining of the upper plate without impairing the holding force is possible up to a depth of 15 mm in steel and 7 mm in NFM materials. Attachment on the machining tables is done using 2 clamping jaws.

**Lines of force:** approx. 8 mm above the pole plate, **therefore no magnetisation of the tools.**

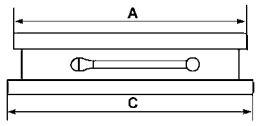
**Holding force:** max. 80–100 N/cm² with ground workpiece clamping surface.

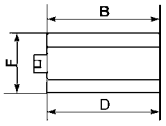
**Application:** Ideal for machining on surface grinding machines. Can furthermore be used on spark erosion systems.

**Scope of delivery:** Clamping plate with 2 stop bars.

**Note:** Further dimensions available on request.

Machining of the upper plate without impairing the holding force is possible up to a depth of 15 mm in steel and 7 mm in NFM materials. The clamping plates are normally supplied with 2 stop bars.



| Order No. | Table size A x B mm | 3958 | Pole pitch mm | Base area C x D mm | F mm | Weight kg |
|---|---|---|---|---|---|---|
| 0010 | 250 x 150 | 794.00 ◊ | St 6/NE 5 | 258 x 147 | 65 | 15 |
| 0020 | 300 x 150 | 921.00 ◊ | St 6/NE 5 | 308 x 147 | 65 | 18 |
| 0030 | 350 x 150 | 1021.00 ◊ | St 6/NE 5 | 358 x 147 | 65 | 21 |
| 0040 | 400 x 200 | 1487.00 ◊ | St 6/NE 5 | 413 x 197 | 72 | 32 |
| 0050 | 450 x 200 | 1620.00 ◊ | St 6/NE 5 | 463 x 197 | 72 | 36 |
| 0060 | 500 x 200 | 1759.00 ◊ | St 6/NE 5 | 515 x 197 | 72 | 40 |
| | | (W350) | | | | |

## BM permanent-magnetic clamping plate

**Design:** With transverse pole pitch in **reinforced magnetic design.** The double and reinforced permanent-ceramic magnetic system distributes the clamping force very highly and evenly. A long and maintenance-free service life is ensured by the solid cast iron base body and robust upper plate as well as through the magnetic system. Machining of the upper plate without impairing the holding force is possible up to a depth of 15 mm in steel and 7 mm in NFM materials. Attachment on the machining tables is done using 2 clamping jaws.

**Lines of force:** approx. 10 mm above the pole plate, **therefore no magnetisation of the tools.**

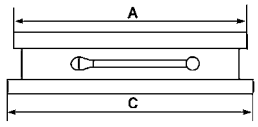
**Holding force:** max. 120–150 N/cm² with ground workpiece clamping surface.

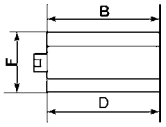
**Application:** Für difficult cutting machining.. Ideal for milling, planing, drilling, grinding and eroding.

**Scope of delivery:** Clamping plate with 2 stop bars.

**Note:** Further dimensions available on request.

Machining of the upper plate without impairing the holding force is possible up to a depth of 15 mm in steel and 7 mm in NFM materials. The clamping plates are normally supplied with 2 stop bars.



| Order No. | Table size A x B mm | 3959 | Pole pitch mm | Base area C x D mm | F mm | Weight kg |
|---|---|---|---|---|---|---|
| 0010 | 250 x 150 | 1013.00 ◊ | St 8/NE 5 | 260 x 145 | 93 | 20 |
| 0020 | 300 x 150 | 1139.00 ◊ | St 8/NE 5 | 310 x 145 | 93 | 24 |
| 0030 | 350 x 150 | 1256.00 ◊ | St 8/NE 5 | 360 x 145 | 93 | 28 |
| 0040 | 400 x 200 | 1757.00 ◊ | St 8/NE 5 | 395 x 195 | 93 | 39 |
| 0050 | 500 x 200 | 2031.00 ◊ | St 8/NE 5 | 495 x 195 | 93 | 49 |
| 0060 | 600 x 200 | 2366.00 ◊ | St 8/NE 5 | 595 x 195 | 93 | 64 |
| | | (W350) | | | | |

## BM permanent-magnetic clamping plate

**Design:** With transverse pole pitch and extremely low installation height. The high-energy neodymium-iron-boron NdFeB (noble earths) magnet system, the small installation height and the finest pole pitch offer a great variety of application options. The massive construction of the base body and the stable upper plate as well as the high-energy magnetic system ensure an extremely long and maintenance-free service life. All clamping plates are equipped with a removable actuating lever. Machining of the upper plate without impairing the holding force is possible up to a depth of 5 mm. Attachment on the machining tables is done using 2 clamping jaws.

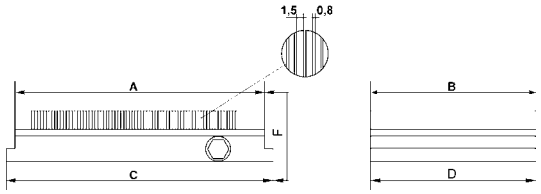
**Holding force:** max. 80–100 N/cm² (magnet quality N50) with ground workpiece clamping surface.

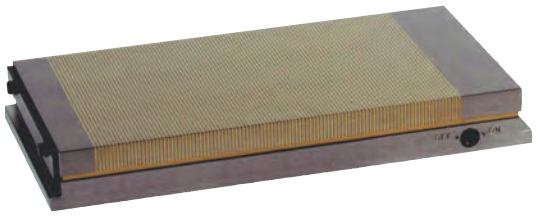
**Application:** The clamping plates have been especially designed for clamping very thin and small workpieces. The clamping systems can also be used on spark erosion systems.

**Scope of delivery:** Clamping plate with 2 stop bars.

**Note:** Further dimensions available on request.

The upper plate can be machined up to a depth of 5 mm without impairing the holding force. The clamping plates are normally supplied with 2 stop bars.



| Order No. | Table size A x B mm | 3960 | Pole pitch mm | Base area C x D mm | Overall height F mm | Weight kg |
|---|---|---|---|---|---|---|
| 0010 | 150 x 100 | 691.50 ◊ | St 1.5/NE 0.8 | 165 x 100 | 40 | 5 |
| 0020 | 250 x 150 | 881.50 ◊ | St 1.5/NE 0.8 | 265 x 150 | 40 | 13 |
| 0030 | 350 x 150 | 1141.00 ◊ | St 1.5/NE 0.8 | 365 x 150 | 40 | 18 |
| 0040 | 450 x 150 | 1408.00 ◊ (W350) | St 1.5/NE 0.8 | 465 x 150 | 40 | 23 |

## BM precision sine bar clamping table

**Design:** With the finest transverse pole pitch, easy to pivot across the longitudinal axis and permanent-magnetic clamping plates. The high-energy neodymium-iron-boron NdFeB (noble earths) magnet system and the finest pole pitch offer a great variety of application options. The massive construction and the stable upper plate as well as the high-energy magnetic system ensure an extremely long and maintenance-free service life. All clamping plates are equipped with a removable actuating lever. The sine bar clamping table is of all-steel construction, can be swivelled up to 75° and has an extremely low installation height. The gauge blocks can be adjusted up to 45°. The support surface for gauge blocks lies 2 mm below the 0 line, thus allowing very small angles to be set: the setting accuracy for the angle is ± 5 arc seconds. Machining of the upper plate without impairing the holding force is possible up to a depth of 5 mm. Attachment on the machining tables is done using clamping jaws.

**Lines of force:** The magnetic field generated during operation is very low, and thus the residual magnetism in the workpiece and tool is insignificant.

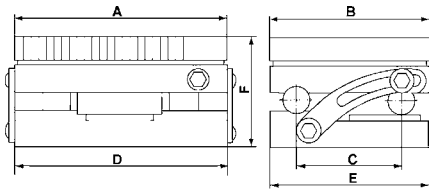
**Holding force:** max. 80–100 N/cm² (magnet quality N50) with ground workpiece clamping surface.

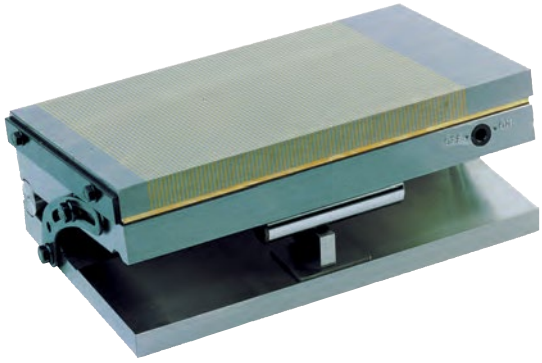
**Application:** Ideal for the extremely precise grinding of very thin and small workpieces with non-parallel surfaces. The angles can bet set using gauge blocks. The table needs to be locked into place on the main shank in order to avoid any oscillations during the grinding process. The clamping systems can also be used on spark erosion systems.

**Scope of delivery:** Sine bar clamping table with 2 stop bars and a sine lookup table.

**Note:** Further dimensions available on request.

The upper plate can be machined up to a depth of 5 mm without impairing the holding force. The clamping plates are normally supplied with 2 stop bars.



| Order No. | Table size A x B mm | 3961 | Pole pitch mm | Base area D x E mm | Overall height F mm | Dimension C mm | Weight kg |
|---|---|---|---|---|---|---|---|
| 0010 | 250 x 150 | 2317.00 ◊ | St 1.5/NE 0.8 | 250 x 150 | 77 | 125 | 18 |
| 0020 | 300 x 150 | 2619.00 ◊ (W350) | St 1.5/NE 0.8 | 300 x 150 | 77 | 125 | 22 |

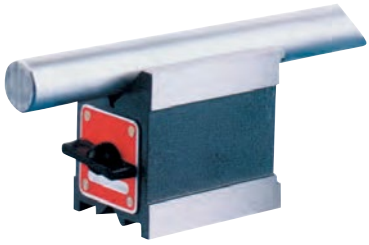
## BM permanent-magnetic V-block

**Design:** With 3 magnetic surfaces, 2 prismatic, top and bottom, 1 flat. With on-off switchable rotary switch.

**Application:** For measuring, grinding and inspection work.

**3965** **One V-block.**

**3966** **Two V-blocks, ground to one height in pairs.**



| Order No. | Length mm | 3965 | 3966 | Width mm | Height mm | Parallelism mm | Angularity mm | Holding force N |
|---|---|---|---|---|---|---|---|---|
| 0010 | 100 | 473.00 (W350) | 917.50 (W350) | 70 | 95 | 0.01 | 0.025 | 2000 |

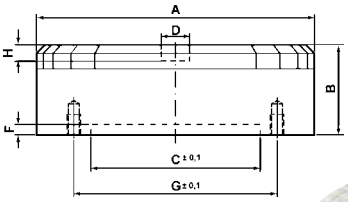
## BM permanent-magnetic round chuck

**Design: With parallel pole pitch** in enhanced magnetic design. An especially strong, permanent-ceramic magnet system with high, evenly distributed holding force across the whole clamping surface ensures the deployment on lathes and grinding machines. The worked-in centring grooves facilitate aligning the workpieces. All round chucks can receive centring (see table, size D and H, for dimension) as required. Machining of the upper plate without impairing the holding force is possible up to a depth of 15 mm in steel and 7 mm in NFM materials. The clamping force can be continuously regulated from zero to maximum.

**Holding force:** max. 120–150 N/cm² with ground workpiece clamping surface.

**Application:** Designed for heavy chip removal. For machining on lathes and grinding machines.

**Note:** Further dimensions available on request.



| Order No. | Ø A mm | 3968 | Pole pitch mm | Height B mm | Centring Ø x depth C x F mm | D mm | Index circle G mm | Magn. field height H mm | Threaded holes | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|
| 0205 | 200 | 1120.00 ◊ | St 8/NE 5 | 80 | 150 x 4.5 | 20 | 182 | 6 | M8 (4x) | 13 |
| 0255 | 250 | 1512.00 ◊ | St 8/NE 5 | 80 | 200 x 4.5 | 20 | 232 | 15 | M8 (4x) | 20 |
| 0305 | 300 | 2072.00 ◊ (W350) | St 8/NE 5 | 85 | 250 x 4.5 | 20 | 285 | 15 | M8 (4x) | 29 |

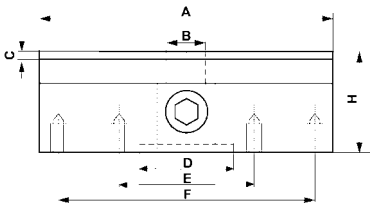
## BM permanent-magnetic round chuck

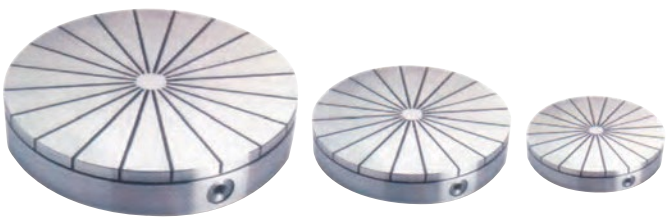
**Design: With radial pole pitch.** An especially strong, high-energy magnet system made from neodymium-iron-boron (NdFeB) with high, evenly distributed holding force across the whole clamping surface. The round chucks can be equipped with a through-hole to mount centring devices and coolant supply.

**Holding force:** max. 160–180 N/cm² with ground workpiece clamping surface.

**Application:** For machining on grinding machines.

**Note:** Further dimensions available on request.



| Order No. | A mm | 3969 | B mm | C mm | H mm | D mm | F mm | Threaded holes | Number of poles |
|---|---|---|---|---|---|---|---|---|---|
| 0150 | 150 | 1032.00 ◊ | 15 | 20 | 60 | 90 | 115 | M8 x 15 (4x) | 10 |
| 0200 | 200 | 1350.00 ◊ | 20 | 25 | 60 | 160 | 180 | M8 x 15 (4x) | 12 |
| 0250 | 250 | 1636.00 ◊ | 20 | 25 | 60 | 200 | 235 | M10 x 15 (4x) | 12 |
| 0300 | 300 | 2422.00 ◊ | 35 | 40 | 80 | 250 | 270 | M12 x 20 (7x) | 14 |
| 0350 | 350 | 3216.00 ◊ (W350) | 35 | 40 | 80 | 250 | 280 | M12 x 20 (6x) | 16 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## BM panel demagnetisation device

**Design:** Equipped with signal light, on / off switch and connection cable with plug.
Supply voltage: AC 230 volts, 50 Hz.

**Application:** For the simple demagnetisation of workpieces with residual magnetism.

**Note:** Other supply voltages upon request.

| Order No. | Length mm | 3970 | Width mm | Height mm | Performance VA |
|---|---|---|---|---|---|
| 0010 | 160 | 495.50 | 120 | 115 | 286 |
| 0020 | 220 | 752.50 | 170 | 120 | 660 |
| 0030 | 210 | 615.00 * (W352) | 155 | 110 | 45 |

* For continuous operation 100 % ED.

## Permanent-magnetic lifting tool with flexible shaft

**Design:** With flexible, chrome-plated shaft and internal steel spindle and plastic handle.

**Application:** To remove steel chips, screws and other parts.

| Order No. | Magnet Ø mm | 3972 | Overall Ø mm | Total length mm | Holding force N |
|---|---|---|---|---|---|
| 0012 | 9 | 14.35 | 12 | 460 | 10 |
| 0015 | 12 | 18.85 (W516) | 15 | 520 | 18 |

## Magnetic lifting tool with flexible shaft

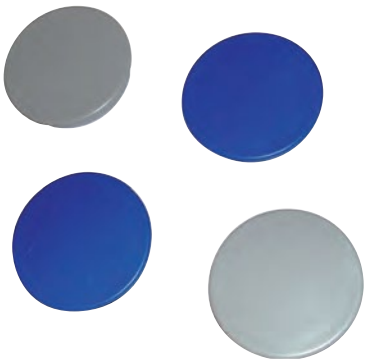
**Design:** Made of chrome-vanadium steel, with flexible shaft and ergonomic plastic handle.

| Order No. | Magnet Ø mm | 6523 | Overall Ø mm | Total length mm | Holding force N |
|---|---|---|---|---|---|
| 0009 | 8 | 35.05 | 11 | 475 | 11 |
| 0018 | 15 | 39.15 (W529) | 18 | 545 | 45 |

## Organising magnet, round and flat

**Design:** High-quality plastic cap of flat design. It provides a good basis for printing or bonding any symbols or logos.

| Order No. | Ø mm | 3991 | Height mm | Holding force N | Colour |
|---|---|---|---|---|---|
| 0725 | 25 | 0.50 | 7 | 4 | grey |
| 0726 | 25 | 0.50 | 7 | 4 | blue |
| 0740 | 40 | 0.79 | 8 | 10 | grey |
| 0741 | 40 | 0.79 (W354) | 8 | 10 | blue |



## Organising magnet with imprint

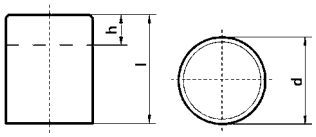
**Design:** High-quality plastic cap in flat design, with "PREMIUM format GROUP" - imprint.

| Order No. | Ø mm | 3991 | Height mm | Holding force N |
|---|---|---|---|---|
| 0750 | 30 | 1.04 (W352) | 8 | 6 |

## Round holding magnet

**Design:** Made of AlNiCo 500 material. In smooth design with fitting tolerance of h 6. Steel housing, well shielded. Max. operating temperature is max. 450 °C. **The total length "l" can be shortened by the dimension "h", without reducing the holding force.**

**Application:** For press fitting or gluing in.

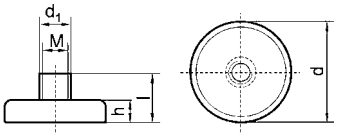


| Order No. | Ø d mm | 3974 format | Height l mm | Max. shortening h mm | Holding force N | Weight g |
|---|---|---|---|---|---|---|
| 0006 | 6 | 3.72 | 10 | 2 | 2 | 2 |
| 0008 | 8 | 4.02 | 12 | 3 | 4 | 4.5 |
| 0010 | 10 | 4.23 | 16 | 6 | 8.5 | 9.5 |
| 0013 | 13 | 4.83 | 18 | 6 | 12 | 18 |
| 0016 | 16 | 5.95 | 20 | 6 | 20 | 30 |
| 0020 | 20 | 8.05 | 25 | 5 | 40 | 57 |
| 0025 | 25 | 15.00 | 30 | 7 | 60 | 106 |
| 0032 | 32 | 29.20 | 35 | 4 | 160 | 187 |
| 0040 | 40 | 56.40 (W352) | 45 | 5 | 240 | 390 |

## Magnetic flat grippers with threaded bushing

**Design:** Made of hard ferrite, surface galvanised and shielded, with threaded bushing. The recommended operating temperature is max. 100 °C.

**Application:** For easy installation in jigs. Installation is done by screwing on.



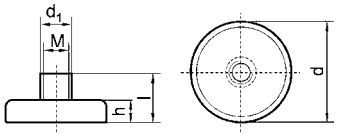
| Order No. | Ø d mm | 3975 format | Overall height l mm | Magnet height h mm | Bushes Ø $d_1$ mm | Thread | Length of thread mm | Holding force N | Weight g |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | 10 | 1.59 | 11.5 | 4.5 | 6 | M3 | 7 | 4 | 3 |
| 0013 | 13 | 1.74 | 11.5 | 4.5 | 6 | M3 | 7 | 10 | 5 |
| 0016 | 16 | 1.89 | 11.5 | 4.5 | 6 | M3 | 7 | 18 | 6 |
| 0020 | 20 | 2.40 | 13 | 6 | 6 | M3 | 7 | 30 | 11 |
| 0025 | 25 | 2.57 | 15 | 7 | 8 | M4 | 8 | 40 | 20 |
| 0032 | 32 | 2.89 | 15 | 7 | 8 | M4 | 8 | 80 | 32 |
| 0040 | 40 | 3.86 (W352) | 18 | 8 | 10 | M5 | 10 | 125 | 60 |

## Neodymium magnetic flat grippers with threaded bushing

NEW

**Design:** Made of neodymium, surface galvanised and shielded, with threaded bushing. The recommended operating temperature is max. 80 °C.

**Application:** For easy installation in jigs. Installation is done by screwing on.



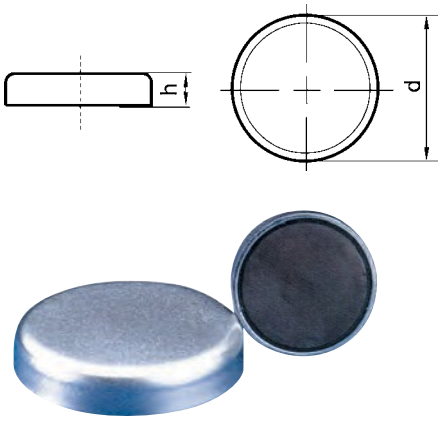
| Order No. | Ø d mm | 3975 format | Overall height l mm | Magnet height h mm | Bushes Ø $d_1$ mm | Thread | Holding force N | Weight g |
|---|---|---|---|---|---|---|---|---|
| 0045 | 6 | 2.35 | 11.5 | 4.5 | 6 | M3 | 5 | 2 |
| 0050 | 8 | 2.44 | 11.5 | 4.5 | 6 | M3 | 13 | 3 |
| 0055 | 10 | 2.87 | 11.5 | 4.5 | 6 | M3 | 25 | 4 |
| 0060 | 13 | 3.20 | 11.5 | 4.5 | 6 | M3 | 60 | 5 |
| 0065 | 16 | 3.83 | 11.5 | 4.5 | 6 | M4 | 95 | 7 |
| 0070 | 20 | 5.85 | 13 | 6 | 8 | M4 | 140 | 16 |
| 0075 | 25 | 8.75 | 14 | 7 | 8 | M4 | 200 | 27 |
| 0080 | 32 | 12.65 (W352) | 15.5 | 7 | 10 | M5 | 350 | 45 |

## Magnetic flat grippers without threaded bushing

**Design:** Made of hard ferrite, surface galvanised and shielded, without threaded bushing. The recommended operating temperature is max. 100 °C.

**Application:** For easy installation in jigs. Installation is carried out by gluing in or press fitting.

| Order No. | Ø d mm | 3976 format | Magnet height h mm | Holding force N | Weight g |
|---|---|---|---|---|---|
| 0010 | 10 | 1.39 | 4.5 | 4 | 2 |
| 0013 | 13 | 1.52 | 4.5 | 10 | 3 |
| 0016 | 16 | 1.68 | 4.5 | 18 | 5 |
| 0020 | 20 | 2.13 | 6 | 30 | 10 |
| 0025 | 25 | 2.35 | 7 | 40 | 18 |
| 0032 | 32 | 2.68 | 7 | 80 | 29 |
| 0040 | 40 | 3.52 (W352) | 8 | 125 | 55 |



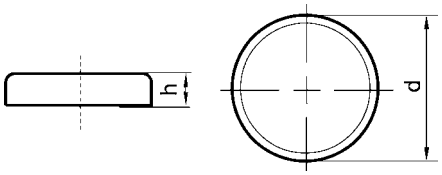



## Neodymium magnetic flat grippers without threaded bushing NEW

**Design:** Made of neodymium, surface galvanised and shielded, without threaded bushing. The recommended operating temperature is max. 80 °C.

**Application:** For easy installation in jigs. Installation is carried out by gluing in or press fitting.

| Order No. | Ø d mm | 3976 format | Magnet height h mm | Holding force N | Weight g |
|---|---|---|---|---|---|
| 0050 | 6 | 2.13 | 4.5 | 5 | 1 |
| 0055 | 8 | 2.24 | 4.5 | 13 | 2 |
| 0060 | 10 | 2.66 | 4.5 | 25 | 2.5 |
| 0065 | 13 | 2.98 | 4.5 | 60 | 4 |
| 0070 | 16 | 3.40 | 4.5 | 95 | 6 |
| 0075 | 20 | 5.35 | 6 | 140 | 14 |
| 0080 | 25 | 7.90 | 7 | 200 | 25 |
| 0085 | 32 | 11.70 (W352) | 7 | 350 | 40 |

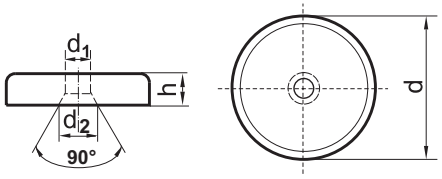


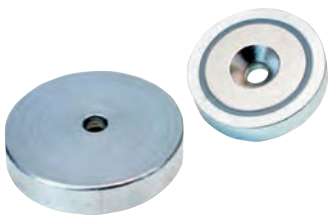
## Neodymium magnetic flat grippers with through hole and countersinking NEW

**Design:** Made of neodymium, surface galvanised and shielded, with through hole and 90° countersinking. The recommended operating temperature is max. 80 °C.

**Application:** For easy installation in jigs. Installation is carried out by gluing in or press fitting.

| Order No. | Ø d mm | 3976 format | Magnet height h mm | Hole Ø $d_1$ mm | Countersink diameter $d_2$ mm | Holding force N | Weight g |
|---|---|---|---|---|---|---|---|
| 0090 | 16 | 3.83 | 4.5 | 3.5 | 6.6 | 75 | 6 |
| 0095 | 20 | 5.20 | 6 | 4.5 | 9.3 | 105 | 13 |
| 0100 | 25 | 7.05 | 7 | 4.5 | 9 | 160 | 24 |
| 0105 | 32 | 11.15 | 7 | 5.5 | 11 | 310 | 39 |
| 0110 | 40 | 15.20 (W352) | 8 | 5.5 | 10.3 | 500 | 73 |



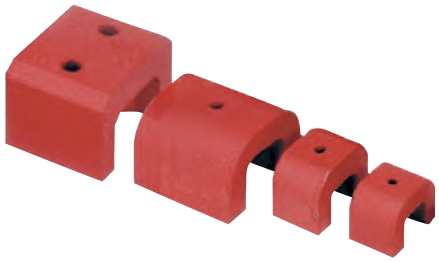
## Strong horseshoe magnet

**Design:** Made of AlNiCo 500. Bridge shape magnet with high holding power and hole for mounting. With back iron plate.
**Operating temperature:** Magnet: 450 °C
Colour: 300 °C

**Application:** For lifting, positioning, holding, aligning, etc.

| Order No. | Width mm | 3977 format | Height mm | Hole mm | Holding force N |
|---|---|---|---|---|---|
| 0030 | 30 | 8.30 | 20 | 5.2 | 45 |
| 0040 | 40 | 14.60 | 25 | 5 | 90 |
| 0045 | 45 | 21.00 | 30 | 5 | 118 |
| 0057 | 57.2 | 48.90 (W352) | 34.9 | 7.9* | 235 |

* With two through-holes.



## Pot magnet

**Design:** Made of AlNiCo 500. Shielded, with tapped blind hole for mounting. With back iron plate.
**Operating temperature:** Magnet: 450 °C
Colour: 300 °C

**Application:** For installation in jigs, for holding, clamping, assembling, etc.

| Order No. | ∅ mm | 3978 format | Height mm | Thread | Holding force N |
|---|---|---|---|---|---|
| 0017 | 17.5 | 2.83 | 16 | M6 | 26 |
| 0020 | 20.6 | 3.57 | 19 | M6 | 40 |
| 0027 | 27 | 6.55 | 25 | M6 | 61 |
| 0035 | 35 | 11.15 | 30 | M6 | 147 |
| 0065 | 65 | 50.00 (W352) | 43 | M12 | 400 |

## Flat pot magnet

**Design:** Made of AlNiCo 500. Shielded, with tapped blind hole for mounting and countersinking on the contact surface. With back iron plate.
**Operating temperature:** Magnet: 450 °C
Colour: 300 °C

**Application:** For installation in jigs and holding.

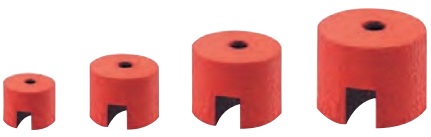
| Order No. | ∅ mm | 3979 format | Height mm | Hole mm | Holding force N |
|---|---|---|---|---|---|
| 0019 | 19.1 | 3.29 | 7.5 | 3.7 | 30 |
| 0028 | 28.6 | 5.55 | 8.5 | 4.8 | 50 |
| 0038 | 38.1 | 9.60 (W352) | 10.4 | 4.8 | 130 |

## Button magnet

**Design:** Made of AlNiCo 500. With a divided magnetic contact surface and through-hole for mounting. With back iron plate.
**Operating temperature:** Magnet: 450 °C
Colour: 300 °C

**Application:** For positioning, holding and for laboratory purposes.

| Order No. | ∅ mm | 3980 format | Height mm | Hole mm | Holding force N |
|---|---|---|---|---|---|
| 0012 | 12.7 | 2.30 | 9.5 | 4.4 | 7 |
| 0019 | 19.1 | 3.36 | 12.7 | 4.8 | 19 |
| 0025 | 25.4 | 7.50 | 15.9 | 4.8 | 34 |
| 0031 | 31.8 | 14.35 (W352) | 25.4 | 7.1 | 48 |

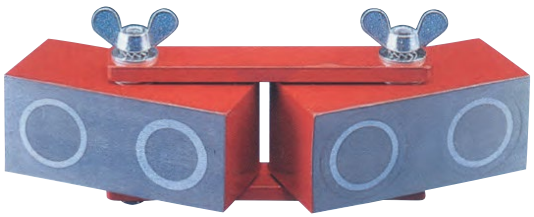


## BM Adjustable magnetic positioner

**Design:** Two magnetic blocks connected by a joint, clampable at every angle, each with magnetic surface. Fixation is carried out using wing nuts.
**Operating temperature:** Magnet: 450 °C
Colour: 300 °C

**Application:** As welding and mounting aids to hold sheet metals and flat irons.

**Note:** Individual magnetic blocks on request.

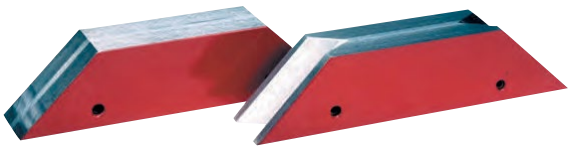


| Order No. | Length mm | 3982 | Block dimensions mm | Holding force N |
|---|---|---|---|---|
| 0010 | 125 | 38.10 | 60 x 25 x 25 | 150 |
| 0020 | 190 | 85.00 (W350) | 90 x 40 x 40 | 250 |

## BM permanent-magnetic mitre clamps

**Design:** All 4 front faces are magnetic.
**Operating temperature:** Magnet: 450 °C
Colour: 300 °C

**Application:** As welding and mounting aid for frame processing.

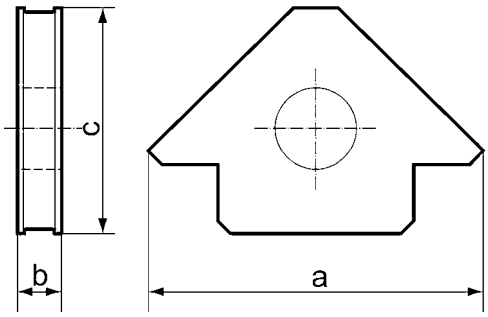


| Order No. | Design | 3984 | Length mm | Width mm | Height mm | Vee-block | Holding force N |
|---|---|---|---|---|---|---|---|
| 0010 | Flat | 112.50 | 170 | 35 | 40 | – | 250 |
| 0020 | prismatic | 160.50 (W350) | 170 | 35 | 40 | 90° | 250 |

## Permanent multiple angle magnet

**Design:** Fixed angle at 45° and 90°.

**Application:** As welding and mounting aid for flat and round workpieces.



| Order No. | a mm | 3985 | b mm | c mm | Holding force N |
|---|---|---|---|---|---|
| 0010 | 120 | 10.50 | 15 | 82 | 110 |
| 0020 | 160 | 18.00 (W352) | 20 | 100 | 220 |

## BM permanent lifting magnet

**Design:** The permanent lifting magnets features a strong and powerful high-energy magnet system neodymium. The low dead weight and the prismatic pole surfaces which can also be optionally re-ground, ensure high service life and optimal application options. The actuating lever safety lock guarantees that the lifting magnets cannot be switched off without external action during operation. Manufactured according to current EU Machinery Directive.

**Application:** For transporting, lifting and fixing round and flat materials made from a wide range of ferromagnetic materials.

**Scope of delivery:** With operating instructions, test certificate und EC Declaration of Conformity.

| Order No. | Dimensions L x W x H mm | 3989 | Total height mm | Recommended flat material lifting force kN | Recommended round material lifting force kN | Tested lifting force kN | Adapter for round material, Ø mm | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 0010 | 188 x 80 x 75 | 770.00 | 152 | 2.5 | 1 | 8* | 40–350 | 7 |
| 0020 | 262 x 100 x 95 | 1159.00 | 185 | 5 | 2.5 | 16* | 60–400 | 17 |
| 0030 | 360 x 140 x 135 | 1961.00 (W355) | 235 | 10 | 5 | 35* | 80–400 | 42 |

* Measured on a steel plate St37, ground, 60 mm thick.

**Safety notice:** For safety reasons, a coefficient of 1:3 is recommended for the tested lifting force to accommodate variable conditions like surface quality, material alloy and board thickness of the workpieces. The stated lifting capacities should therefore be regarded as guide values.

## Magnetic tape

**Design:** Magnetic tape with coloured PVC coating.

**Note:** Further dimensions and colours available on request.

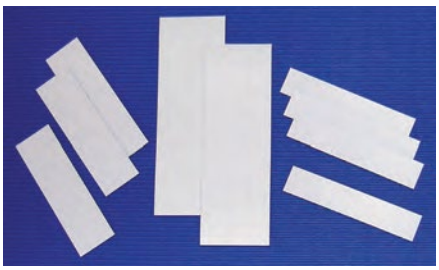
| Order No. | Width mm | 3991 | Colour | Roll lengths m | Thickness mm |
|---|---|---|---|---|---|
| 0020 | 20 | 47.10 | white | 30 | 0.6 |
| 0030 | 20 | 56.70 | yellow | 30 | 0.6 |
| 0040 | 20 | 56.70 | blue | 30 | 0.6 |
| 0120 | 30 | 63.50 | white | 30 | 0.6 |
| 0130 | 30 | 78.20 | yellow | 30 | 0.6 |
| 0140 | 30 | 78.20 | blue | 30 | 0.6 |
| 0220 | 40 | 82.80 | white | 30 | 0.6 |
| 0230 | 40 | 99.80 | yellow | 30 | 0.6 |
| 0240 | 40 | 99.80 (W354) | blue | 30 | 0.6 |

## Magnetic labels

**Design:** Magnetic labels with white PVC coating.

**Note:** Further designs available upon request.

| Order No. | Dimensions L x W mm | 3991 | Colour | Thickness mm |
|---|---|---|---|---|
| 0520 | 100 x 20 | 17.70 | white | 0.6 |
| 0530 | 100 x 30 | 26.50 (W354) | white | 0.6 |



**NEW**

**All items marked with this icon have been added to our range.**

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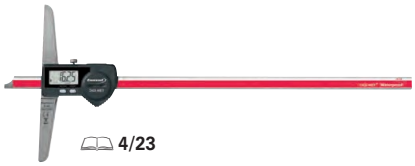
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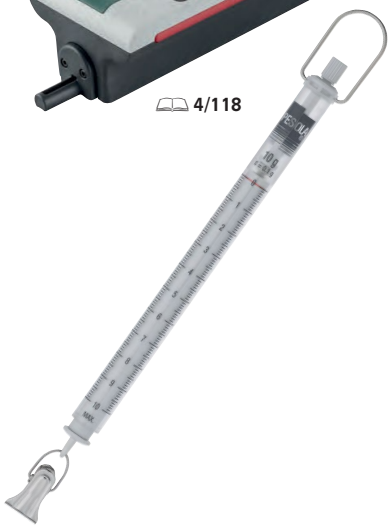
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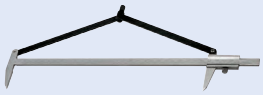
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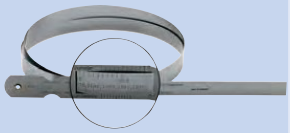
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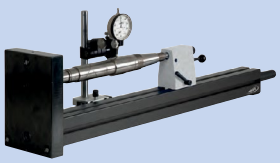
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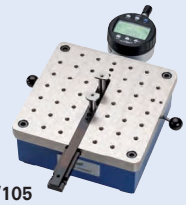
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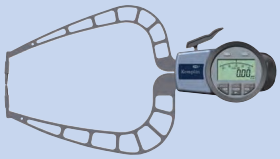
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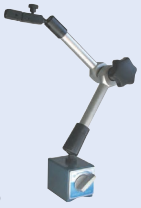
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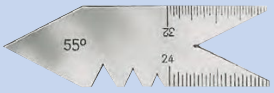

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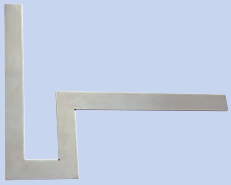
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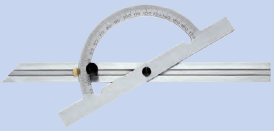
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# Mahr

# Specialists in the world of measuring technology

**Global.** As the innovation leader and one of the world's largest manufacturers of measuring technology, Mahr offers application-oriented and reliable solutions.

**Versatile.** Mahr offers a broad range of products in the field of precision gauges as well as in surface and form metrology. The same applies to the measurement of shafts, gear wheels and tools.

**Experienced.** Mahr offers solutions for various measuring tasks and traditionally meets the requirements of several fields of industry in terms of quality, safety and sustainability – for more than 150 years.

4/12

4/33

4/43

# Specialist for industry and craft

**Service.** With its comprehensive and globally connected service network, Mahr offers various services: starting with the procurement of spare parts, extending to measuring equipment management and calibrations in accordance with DIN EN ISO 17025.

**Competencies.** In production metrology, Mahr combines experience, innovation and commitment. Process-oriented solutions are becoming ever-more significant in this respect – in collaboration with customers from all areas of the processing industry. This includes for instance automotive and aerospace technology, medical and electrical engineering as well as mechanical engineering and optical technology.

**Quality assurance.** Precision and productivity form a unit in mechanical engineering. Mahr's proven measuring technology contributes to optimising the production processes of low as well as high volumes. In the areas of turning, grinding, milling, drilling, honing, laser and eroding, the products meet the growing requirements of production metrology – with customer- and application-appropriate solutions. They offer budget-oriented quality assurance and generate a valuable competitive edge with continuously improved quality and reduced production costs.

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4/90

format
professional quality

**Our FORMAT measuring technology programme**
offers a professional solution for every application.

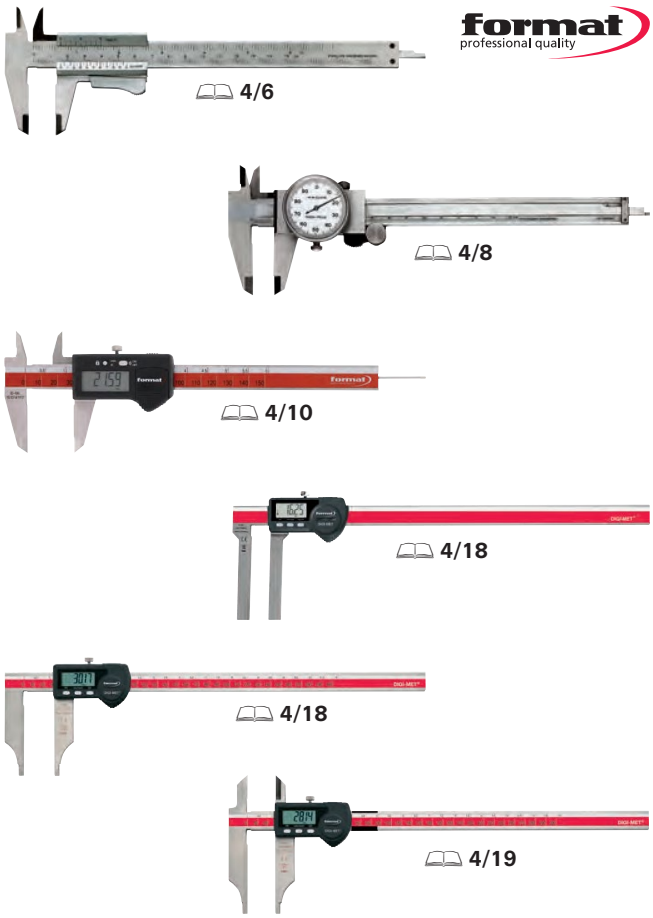
## Pictogram Abstracts

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Standard | e.g. | DIN 862 | Equiv. to DIN 862 | Factory standard | Equiv. to company standard | EG II | Equiv. to EU Accuracy class II |
| Protection type | e.g. | IP 54 | Protection class IP 54 | IP 67 | Protection class IP 67 | | |
| Design | e.g. | Ø 1,6 mm | Round depth gauges | | Angular depth gauge | INOX | Stainless steel |
| | e.g. | M | Metric ISO thread | MF | Metric precision thread | Absolute function | Absolute system |
| Data output | e.g. | opto RS232 | Interface RS232 opto-connected | USB | USB interface | | Integrated radio connection |
| | e.g. | RS232 | Interface RS232 | Digimatic | Digimatic interface | | |
| Application | e.g. | | Horizontal standard measurement | | Horizontal overhead measurement | | Vertical reversal measurement |
| Packaging | e.g. | | Wood or plastic cases | | Artificial leather or plastic case | | |

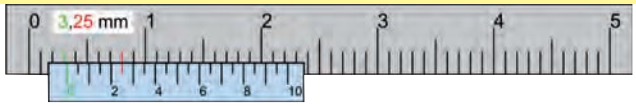

## Guaranteed good beyond all measures

First rate precision with FORMAT measuring technology. Whether mechanical or digital, with FORMAT pocket calipers, measurements are exact.

All FORMAT calipers meet the highest quality requirements and are characterised by particular accuracy.

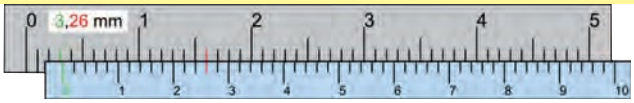


## Vernier reading 0.05 mm with 1/20 division




**Vernier 1/20 has a measurement value of 0.05 mm, that means 3 graduation marks on the vernier mean 3 x 0.05 mm = 0.15 mm.**

## Vernier reading 0.02 mm with 1/50 division




Vernier 1/50 has a measurement value of 0.02 mm, that means 3 graduation marks on the vernier mean 3 x 0.02 mm = 0.06 mm. With this accuracy, a threshold is reached, which is just barely readable without aid to the human eye.

## Slide, brass

**Design:** Made of solid brass. Readings in mm and English inches.

| Order No. | Measurement range mm | 4001 format | Design | Reading below mm | Jaw length mm |
|---|---|---|---|---|---|
| 0008 | 80 | 7.75 | Standard jaw | 0.1 | 25 |
| 0010 | 100 | 8.15 | Standard jaw | 0.1 | 25 |
| 0080 | 80 | 7.75 | Nib jaw | 0.1 | 20 |
| 0100 | 100 | 8.15 | Nib jaw | 0.1 | 20 |
| | | (W401) | | | |

**4001 0008 standard jaw**

**4001 0010 nib jaw**

## Pocket calipers with rectangular depth gauge

**Design:** Made of stainless steel, completely hardened, scale parts and vernier matt chrome-plated. Rear side with thread table. Supplied in an artificial leather case.

**Application:** For inside, outside, depth and step measurements.

DIN 862 | INOX

| Order No. | Measurement range mm | 4001 format | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0150 | 150 | 20.60 | with torque locking | 0.05 | 1/ 128 | 40 |
| 0151 | 150 | 20.60 | with locking screw | 0.05 | 1/ 128 | 40 |
| 0201 | 200 | 45.50 | with locking screw | 0.05 | 1/ 128 | 50 |
| 0301 | 300 | 80.70 | with locking screw | 0.05 | 1/ 128 | 60 |
| 0155 | 150 | 21.90 | with torque locking | 0.02 | 1/1000 | 40 |
| 0156 | 150 | 21.90 | with locking screw | 0.02 | 1/1000 | 40 |
| | | (W401) | | | | |

**4001 0150 with torque locking**

**4001 0151 with locking screw**

## Pocket caliper with round depth gauge

**Design:** Made of stainless steel, completely hardened, scale parts and vernier matt chrome-plated. Rear side with thread table. Supplied in an artificial leather case.

**Application:** For inside, outside, depth and step measurements.

DIN 862 | INOX | Ø 1,6 mm

| Order No. | Measure-ment range mm | 4005 format | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0150 | 150 | 29.30 | with torque locking | 0.05 | 1/ 128 | 40 |
| 0151 | 150 | 29.30 | with locking screw | 0.05 | 1/ 128 | 40 |
| 0155 | 150 | 30.10 | with torque locking | 0.02 | 1/1000 | 40 |
| 0156 | 150 | 30.10 | with locking screw | 0.02 | 1/1000 | 40 |
| | | (W401) | | | | |

**4005 0150 with torque locking**

**4005 0151 with locking screw**

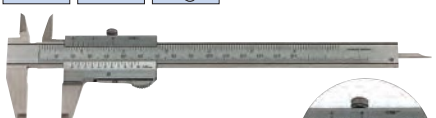
## Pocket caliper TWIN

**Design:** Made of stainless steel. With lowered head pitch and thread table on the back, **with rectangular depth.** Supplied in an artificial leather case.

**Application:** For inside, outside, depth and step measurements.

DIN 862 | INOX

| Order No. | Measure-ment range mm | 4011 format | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0151 | 150 | 33.10 | with locking screw and torque adjustment | 0.05 | 1/128 | 40 |
| | | (W401) | | | | |



Locking screw
+ torque locking
= **TWIN**

## Pocket caliper Soft Glide

NEW

**Design:** made of rustproof steel, hardened, reading parts and vernier matt chrome-plated, with rectangular depth gauge, **particularly smooth lead** . Rear side with thread table. Supplied in artificial leather bag.

DIN 862 | INOX | format professional quality

**Application:** For inside, outside, depth and step measurements.

| Order No. | Measurement range mm | 4011 format | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0152 | 150 | 38.60 (W401) | with locking screw | 0.05 | 1/128 | 40 |

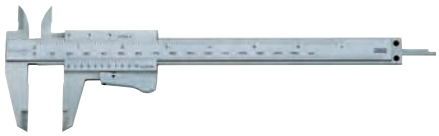
## Precision pocket caliper with parallax-free reading

**Design:** made of stainless steel, hardened, reading parts and vernier matt chrome-plated, **with rectangular depth gauge,** thread table on rear side. Supplied in plastic case.

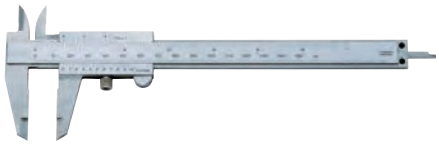
DIN 862 | INOX | format professional quality

**Application:** For inside, outside, depth and step measurements.

| Order No. | Measurement range mm | 4008 format | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0150 | 150 | 36.40 | with torque locking | 0.05 | 1/ 128 | 40 |
| 0151 | 150 | 36.40 | with locking screw | 0.05 | 1/ 128 | 40 |
| 0155 | 150 | 37.20 | with torque locking | 0.02 | 1/1000 | 40 |
| 0156 | 150 | 37.20 (W401) | with locking screw | 0.02 | 1/1000 | 40 |



**4008 0150 with torque locking**



**4008 0151 with locking screw**

## Precision pocket caliper with parallax-free reading and double prism guide

**Design:** Made of stainless steel, hardened, double prism guide for almost backlash-free slide movement, measuring faces precision ground, reading parts and vernier chrome-plated, **with rectangular depth gauge,** thread table on rear side. Supplied in plastic case.

DIN 862 | INOX | format professional quality

**Application:** For inside, outside, depth and step measurements.

| Order No. | Measure-ment range mm | 4009 format | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0150 | 150 | 51.00 | with locking screw | 0.05 | 1/ 128 | 40 |
| 0155 | 150 | 53.30 (W401) | with locking screw | 0.02 | 1/1000 | 40 |

## Pocket caliper for left-handers

**Design:** made of stainless steel, hardened, reading parts and vernier matt chrome-plated, **with rectangular depth gauge,** thread table on rear side. Supplied in an artificial leather case.

DIN 862 | INOX | format professional quality

**Application:** For inside, outside, depth and step measurements.

| Order No. | Measurement range mm | 4002 format | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0150 | 150 | 33.50 | with torque locking | 0.05 | 1/ 128 | 40 |
| 0151 | 150 | 33.50 | with locking screw | 0.05 | 1/ 128 | 40 |
| 0155 | 150 | 29.50 | with torque locking | 0.02 | 1/1000 | 40 |
| 0156 | 150 | 29.50 (W401) | with locking screw | 0.02 | 1/1000 | 40 |

## Small pocket caliper

**Design:** made of stainless steel, hardened, reading parts and vernier matt chrome-plated, **with rectangular depth gauge,** thread table on rear side. Supplied in an artificial leather case.

DIN 862 | INOX | format professional quality

**Application:** For inside, outside, depth and step measurements within narrow measurement ranges.

| Order No. | Measurement range mm | 4004 format | Design | Reading below mm | Jaw length mm |
|---|---|---|---|---|---|
| 0100 | 100 | 18.85 | with locking screw | 0.05 | 25 |
| 0105 | 100 | 19.55 (W401) | with locking screw | 0.02 | 25 |

## Caliper with scales dislpay

NEW

**Design:** Made of rustproof steel, hardened. Vernier and scale division matt chrome-plated, main scale slightly stepped to protect against wear, **with rectangular depth gauge**, rear side with thread table. Supplied in a case.

**Application:** For inside, outside, depth and step measurements.

**Note:** Depth measuring bridge 75 x 7 mm (order no. 4024 0075, 📖 4/13).

DIN 862 | INOX

| Order No. | Measurement range mm | 4013 Mahr | Design | Reading below mm | Reading above inch | Jaw length mm |
|---|---|---|---|---|---|---|
| 0152 | 150 | 28.50 | with locking screw | 0.05 | 1/ 128 | 40 |
| 0252 | 200 | 77.00 | with locking screw | 0.05 | 1/ 128 | 50 |
| 0352 | 300 | 185.50 | with locking screw | 0.05 | 1/ 128 | 64 |
| 0153 | 150* | 36.00 | with locking screw | 0.02 | 1/1000 | 40 |
| 0253 | 200* | 85.50 | with locking screw | 0.02 | 1/1000 | 50 |
| 0353 | 300* | 193.00 | with locking screw | 0.02 | 1/1000 | 64 |
| 0154 | 150 | 35.00 (W488) | with torque locking | 0.05 | 1/ 128 | 40 |

* Accuracy acc. to company standard.

4013 0152 with locking screw

4013 0154 with torque locking

## Dial caliper

**Design:** Made of stainless steel, hardened, reading parts matt chrome-plated, toothed rack covered, measuring faces precision ground, with roller fine adjustment, locking screw and **rectangular depth gauge.** Supplied in an artificial leather case.

**Application:** For inside, outside, depth and step measurements.

**Note:** Depth measuring bridge 75 x 7 mm (Order No. 4014 0075, 📖 4/13).

DIN 862 | INOX

| Order No. | Measurement range mm | 4013 format | Reading mm | Pointer revolution mm | Jaw length mm |
|---|---|---|---|---|---|
| 0150 | 150 | 39.10 | 0.02 | 2 | 40 |
| 0151 | 150 | 42.70 (W401) | 0.01 | 1 | 40 |

## Dial caliper

NEW

**Design:** Made of stainless steel, hardened, reading parts matt chrome-plated, with roller fine adjustment and locking screw and **rectangular depth gauge.** Rotatable dial for zero-point adjustment. Supplied in a case.

**Application:** For inside, outside, depth and step measurements.

**Note:** Depth measuring bridge 75 x 7 mm (order no. 4024 0075, 📖 4/13).

DIN 862 | INOX

| Order No. | Measurement range mm | 4015 Mahr | Reading mm | Pointer revolution mm | Jaw length mm |
|---|---|---|---|---|---|
| 2150 | 150 | 98.00 | 0.01 | 1 | 40 |
| 2151 | 150 | 81.50 (W488) | 0.02 | 2 | 40 |

## Digital pocket caliper with drive wheel

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 12 mm, with data output RS 232. Supplied with battery CR 2032, 3 V, in plastic case.

**Function:** On and off switch, mm/inch-switching, reset (zero setting) possible in any position.

**Application:** For inside, outside, depth and step measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

DIN 862 | INOX | RS232 | Ø 1,6 mm

| Order No. | Measure-ment range mm | 4006 | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 0151 | 150 | 35.90 | with round depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 0150 | 150 | 30.80 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 0152 | 150* | 61.60 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 0200 | 200 | 56.40 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 50 |
| 0300 | 300 | 92.30 (W409) | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 60 |

* With HM measuring faces.

4006 0200

## Digital pocket caliper with metal housing

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD 12 mm. Supplied with battery CR 357, 1.5 V, in a plastic case.

**Function:** On and off switch, mm/inch-switching, reset (zero setting) possible in any position.

**Application:** For inside, outside, depth and step measurements.

**Note:** Replacement battery: (Order No. 4026 0357, 📖 4/13).

DIN 862 | INOX

| Order No. | Measurement range mm | 4007 | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 0150 | 150 | 36.90 (W409) | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |

## The Absolute System

- The measuring tool is always ready to measure
- The zero position stays locked for other measurements after setting once.
- No zeroing after switching.

Absolute function

## Pocket caliper for left-handers

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw. Digit height of the LCD display 12 mm, with data output RS 232. Supplied with battery CR 357, 1.5 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Application:** For inside, outside, depth and step measurements.

**Note:** Replacement battery: (Order No. 4026 0357, 📖 4/13).

DIN 862 | INOX | Absolute function | RS232

| Order No. | Measurement range mm | 4007 | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 2150 | 150 | 66.70 (W409) | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |

## Digital pocket caliper with absolute system

NEW

**Design:** Made of stainless steel, hardened, metal housing, with locking screw. Supplied with adapter for drive roller and battery CR1632, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Application:** For inside, outside, depth and step measurements.

**Note:** Replacement battery available upon request.

DIN 862 | INOX | Absolute function

| Order No. | Measurement range mm | 4007 | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 3150 | 150 | 51.30 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 3200 | 200 | 66.70 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 50 |
| 3300 | 300 | 107.50 (W409) | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 60 |

## Digital pocket caliper

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 7.5 mm, inductive measurement system. Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside, outside, depth and step measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

DIN 862 | INOX | Absolute function | Certificate | Ø 1,5 mm

| Order No. | Measurement range mm | 4020 format | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 1150 | 150 | 102.00 | with round depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1151 | 150 | 102.00 (W404) | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |

## Digital pocket caliper DATA

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 7.5 mm, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside, outside, depth and step measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.

DIN 862 | INOX | Absolute function | Certificate | RS232 | USB | Digimatic | Ø 1,5 mm

| Order No. | Measurement range mm | 4020 format | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 1200 | 150 | 129.50 | with round depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1205 | 150 | 129.50 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1220 | 200 | 174.00 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 50 |
| 1300 | 300 | 230.00 (W404) | without depth gauge | 0.01 mm (0.0005 inch) | 65 |

📖 4/11

**Digital calipers waterproof**

Whether dry or wet:
EASY MEASURING,
EXACT WORKING!

## Protection class overview

| First Digit | Importance for protection of operating equipment |
|---|---|
| 0 | Not protected |
| 1 | Protection against penetration by solid foreign bodies With a diameter larger than 50 mm |
| 2 | Protection against penetration by solid foreign bodies With a diameter larger than 12.5 mm |
| 3 | Protection against penetration by solid foreign bodies With a diameter larger than 2.5 mm |
| 4 | Protection against penetration by solid foreign bodies With a diameter larger than 1 mm |
| 5 | Protected against dust |
| 6 | Dust-tight |

| Second Digit | Water protection |
|---|---|
| 0 | Not protected |
| 1 | Protection against vertical drips |
| 2 | Protection against dripping water with 15° incline |
| 3 | Protection against water spray |
| 4 | Splashproof |
| 5 | Protection against jets of water |
| 6 | Protection against strong jets of water |
| 7 | Protection against temporary submersion |
| 8 | Protection against prolonged submersion |

**Example:** measuring instrument with protection
**IP 67:** (IP – International Protection).
This is a dust-proof measuring device that can be briefly submerged.

## Digital pocket calipers

NEW

DIN 862 | INOX | Absolute function | RS232 | Digimatic | USB

Ø 1,5 mm

Mahr

**Design:** Made of stainless steel, hardened, lapped guideway, with locking screw, digit height of LCD display 8.5 mm. Supplied with battery CR 2032, 3 V, in a plastic case.

**Functions:** Automatic on and off switch, automatic switching by means of slider movement, mm/inch switching, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside, outside, depth and step measurements.

**Note:** Depth measuring bridge 75 x 7 mm (order no. 4024 0075, 📖 4/13).
Replacement battery (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4246 0190, 📖 4/54).
Data cable USB (Order No. 4246 0195, 📖 4/54).
Data cable RS 232 (Order No. 4246 0180, 📖 4/54).

| Order No. | Measurement range mm | 4020 Mahr | Design | Data output | Reading | Jaw length mm |
|---|---|---|---|---|---|---|
| 1310 | 150 | 109.50 | with round depth gauge | – | 0.01 mm (0.0005 inch) | 40 |
| 1320 | 150 | 109.50 | with square depth gauge | – | 0.01 mm (0.0005 inch) | 40 |
| 1330 | 150 | 135.00 | with round depth gauge | RS232, Digimatic, USB | 0.01 mm (0.0005 inch) | 40 |
| 1340 | 150 | 135.00 | with square depth gauge | RS232, Digimatic, USB | 0.01 mm (0.0005 inch) | 40 |
| 1350 | 200 | 188.00 | with square depth gauge | RS232, Digimatic, USB | 0.01 mm (0.0005 inch) | 50 |
| 1360 | 300 | 239.00 (W488) | without depth gauge | – | 0.01 mm (0.0005 inch) | 64 |

## Digital pocket caliper waterproof

DIN 862 | INOX | IP 67 | Absolute function | Certificate | Ø 1,5 mm

format professional quality

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 8.5 mm, inductive measurement system. Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside, outside, depth and step measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

| Order No. | Measurement range mm | 4023 format | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 1150 | 150 | 138.00 | with round depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1151 | 150 | 138.00 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1200 | 200 | 200.50 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 50 |
| 1300 | 300 | 259.00 (W404) | without depth gauge | 0.01 mm (0.0005 inch) | 65 |

## Digital pocket caliper

NEW

**Design:** Made of stainless steel, hardened, lapped guideway, with locking screw, digit height of LCD display 11 mm, heightened guideway to protect the scale, dirt wiper in slide. Supplied with battery CR 2032, 3 V, in case.

**Functions:** On and automatic off switch, automatic on by means of slider movement, mm/inch switching, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting), counting direction change.

**Application:** For inside, outside, depth and step measurements.

**Note:** Depth measuring bridge 75 x 7 mm
(Order No. 4024 0075, 📖 4/13).
Replacement battery (Order No. 4026 2032, 📖 4/13).

DIN 862 | INOX | IP 67 | Absolute function | Ø 1,5 mm

| Order No. | Measurement range mm | 4023 Mahr | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 1400 | 150 | 164.00 | with round depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1401 | 150 | 164.00 (W488) | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |

## Digital pocket caliper with data output

NEW

**Design:** Made of stainless steel, hardened, lapped guideway, with locking screw, digit height of LCD display 8.5 mm, heightened guideway to protect the scale, dirt wiper in slide, data output variable RS 232, Digimatic and USB. Supplied with battery CR 2032, 3 V, in case.

**Functions:** On and automatic off switch, automatic on by means of slider movement, mm/inch switching, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting), counting direction change.

**Application:** For inside, outside, depth and step measurements.

**Note:** Depth measuring bridge 75 x 7 mm
(Order No. 4024 0075, 📖 4/13).
Replacement battery (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4246 0190, 📖 4/54).
Data cable USB (Order No. 4246 0195, 📖 4/54).
Data cable RS 232 (Order No. 4246 0180, 📖 4/54).

DIN 862 | INOX | IP 67 | RS232 | Digimatic | USB | Absolute function | Ø 1,5 mm

| Order No. | Measurement range mm | 4023 Mahr | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 1402 | 150 | 212.00 | with round depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1403 | 150 | 212.00 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1404 | 200 | 235.00 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 50 |
| 1405 | 300 | 315.00 (W488) | without depth gauge | 0.01 mm (0.0005 inch) | 64 |

## Digital pocket caliper with integrated radio system

NEW

**Design:** Made of stainless steel, hardened, lapped guideway, with locking screw, digit height of LCD display 11 mm, heightened guideway to protect the scale, dirt wiper in slide, data transfer via intgrated radio system. Supplied with battery CR 2032, 3 V, in case.

**Functions:** On and automatic off switch, automatic on by means of slider movement, mm/inch switching, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting), counting direction change.

**Application:** For inside, outside, depth and step measurements.

**Note:** Depth measuring bridge 75 x 7 mm
(Order No. 4024 0075, 📖 4/13).
Replacement battery (Order No. 4026 2032, 📖 4/13).
Radio receiver (Order No. 4246 0195, 📖 4/54).

DIN 862 | INOX | IP 67 | Absolute function | Ø 1,5 mm

| Order No. | Measurement range mm | 4023 Mahr | Design | Reading | Jaw length mm |
|---|---|---|---|---|---|
| 1406 | 150 | 214.00 | with round depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1407 | 150 | 214.00 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 40 |
| 1408 | 200 | 237.00 | with rectangular depth gauge | 0.01 mm (0.0005 inch) | 50 |
| 1409 | 300 | 315.00 (W488) | without depth gauge | 0.01 mm (0.0005 inch) | 64 |

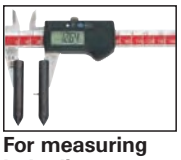
## Measuring tool set extensions

**Design:** Accessories set made of steel, burnished black. For digital caliper gauge with a jaw length of 40 mm. Supplied in a wooden box.

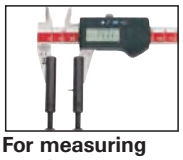
**Application:** For measuring hole distances, grooves and recesses.

| Order No. | Set contents | 4028 format |
|---|---|---|
| 0005 | Pair of measuring inserts with disc, disc ∅ 6, 10 and 12.5 mm<br>Pair of measuring inserts with 60° taper, ∅ 9 and 12.5 mm<br>Measuring insert pair with cylindrical measuring faces 1.5 mm<br>Measuring insert base right and left<br>Hexagonal wrench | 170.00 |
| | | (W404) |

format professional quality



For measuring hole distances



For measuring notches

For measuring distances

For measuring hole distances

For measuring notches

## Depth gauge bridge

**Design:** Made of rustproof steel, with clamping screw.

**Application:** For mounting onto pocket calipers. For measuring depths, holes, grooves, recesses etc.

**Note:** Suitable for all pocket calipers up to a measuring range of 200 mm.

| Order No. | Dimension mm | 4014 format | 4024 Mahr |
|---|---|---|---|
| 0075 | 75 x 7 | 20.00 (W403) | 29.50 NEW (W488) |

INOX

format professional quality

Mahr

## Data cable

**Application:** For data transmission from digital measuring equipment to PC or printer without complex interfaces.

| Order No. | Design | 4025 format | Interface | Length m |
|---|---|---|---|---|
| 0002 | Data cable SIMPLEX | 83.60 | Opto RS 232 | 2 |
| 0003 | Data cable USB incl. software | 79.00 | USB | 2 |
| 0004 | Data cable Digimatic | 69.60 (W404) | Digimatic | 2 |

opto RS232 | USB | Digimatic

format professional quality

4025 0002

4025 0003

4025 0004

## Replacement battery

NEW

VARTA DIE BATTERIE-EXPERTEN

**Design:** Replacement battery for digital measuring equipment.

| Order No. | Type | 4026 VARTA | Voltage V | Capacity mAh | System |
|---|---|---|---|---|---|
| 0357 | V13GS/V357 | 2.70 | 1.55 | 155 | Silver (ZN/AG20) |
| 2025 | CR2025 | 2.15 | 3.00 | 170 | Lithium (Li/Mn02) |
| 2032 | CR2032 | 2.15 (W710) | 3.00 | 230 | Lithium (Li/Mn02) |

4026 0357

4026 2025

4026 2032

## Workshop caliper without tips

**Design:** Made of stainless steel, hardened, scale parts and vernier matt chrome-plated, main scale set back, with locking screw. Supplied in transport packaging.

**Application:** For inside and outside measurements.

DIN 862 | INOX | Certificate | format professional quality

**4030** without fine adjustment

**4031** with fine adjustment

| Order No. | Measurement range mm | 4030 format | 4031 format | Reading below mm | Reading above inch | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|---|
| 0300 | 300 | 148.50 | 159.50 | 0.05 | 1/128 | 90 | 10 |
| 0500 | 500 | 386.00 | 391.50 | 0.05 | – | 150 | 20 |
| 0800 | 800 | 485.50 | 487.00 | 0.05 | – | 150 | 20 |
| 1000 | 1000 | 645.50 | 615.00 | 0.05 | – | 150 | 20 |
| 1500 | 1500* | 1423.00 | 1367.00 | 0.05 | – | 200 | 30 |
| 2000 | 2000* | 2147.00 | 2074.00 | 0.05 | – | 200 | 30 |
| 0305 | 300 | 148.50 | 153.50 | 0.02 | 1/50 | 90 | 10 |
| 0505 | 500 | 386.00 | 391.50 | 0.02 | – | 150 | 20 |
| 0805 | 800 | 485.50 | 473.50 | 0.02 | – | 150 | 20 |
| 1005 | 1000 | 645.50 | 615.00 | 0.02 | – | 150 | 20 |
| 1505 | 1500* | – | 1367.00 | 0.02 | – | 200 | 30 |
| 2005 | 2000* | – | 2074.00 | 0.02 | – | 200 | 30 |
| | | (W407) | (W407) | | | | |

* Without traceable calibration certificate

**4030**

**4031**

**Fine adjustment**

## Workshop caliper without tips

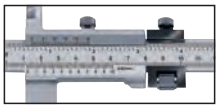
NEW

**Design:** Made of stainless steel, hardened. Vernier matt chrome-plated, main scale slightly deepened to protect against wear, laser scales, with fine adjustment. Supplied in box, from measuring range 1000 mm individually packed.

**Application:** For inside and outside measurements.

DIN 862 | INOX | Certificate | HELIOS·PREISSER

| Order No. | Measurement range mm | 4033 HELIOS·PREISSER | Reading below mm | Reading above inch | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|
| 0250 | 250 | 144.00 | 0.05 | 1/128 | 80 | 10 |
| 0300 | 300 | 157.50 | 0.05 | 1/128 | 90 | 10 |
| 0500 | 500 | 406.50 | 0.05 | – | 150 | 20 |
| 0600 | 600 | 474.50 | 0.05 | – | 150 | 20 |
| 0800 | 800 | 511.50 | 0.05 | – | 150 | 20 |
| 1000 | 1000 | 623.50 | 0.05 | – | 150 | 20 |
| | | (W410) | | | | |



**Fine adjustment**

## Workshop calipers with tips

**Design:** Made of stainless steel, hardened, scale parts and vernier matt chrome-plated, main scale set back, with locking screw and blade tips. Supplied in transport packaging.

**Application:** For inside and outside measurements.

DIN 862 | INOX | Certificate | format professional quality

**4034** without fine adjustment

**4035** with fine adjustment

| Order No. | Measurement range mm | 4034 format | 4035 format | Reading below mm | Reading above inch | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|---|
| 0250 | 250 | 143.00 | 168.00 | 0.05 | 1/128 | 80 | 10 |
| 0300 | 300 | 154.50 | 179.50 | 0.05 | 1/128 | 90 | 10 |
| 0500 | 500 | 457.50 | 507.00 | 0.05 | – | 150 | 20 |
| 0800 | 800 | 645.50 | 709.50 | 0.05 | – | 150 | 20 |
| 1000 | 1000 | 772.50 | 808.50 | 0.05 | – | 150 | 20 |
| 1500 | 1500* | 1626.00 | 1723.00 | 0.05 | – | 200 | 30 |
| 2000 | 2000* | 2508.00 | 2675.00 | 0.05 | – | 200 | 30 |
| 0255 | 250 | 143.00 | 168.00 | 0.02 | 1/50 | 80 | 10 |
| 0305 | 300 | 154.50 | 179.50 | 0.02 | 1/50 | 90 | 10 |
| 0505 | 500 | 457.50 | 507.00 | 0.02 | – | 150 | 20 |
| 0805 | 800 | 645.50 | 709.50 | 0.02 | – | 150 | 20 |
| 1005 | 1000 | 772.50 | 808.50 | 0.02 | – | 150 | 20 |
| 1505 | 1500* | 1626.00 | 1723.00 | 0.02 | – | 200 | 30 |
| | | (W407) | (W407) | | | | |

* Without test certificate.

**4034**

**4035**

**Fine adjustment**

## Workshop calipers with tips

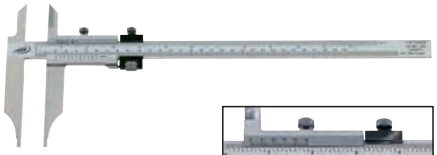
NEW

DIN 862 | INOX | Certificate | HELIOS·PREISSER

**Design:** Made of stainless steel, hardened. Vernier and reading parts matt chrome-plated, main scale slightly deepened to protect against wear, laser scales, with fine adjustment. Supplied in box, from measuring range 1000 mm individually packed.

**Application:** For inside and outside measurements.

| Order No. | Measurement range mm | 4036 HELIOS·PREISSER | Reading below mm | Reading above inch | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|
| 1250 | 250 | 177.50 | 0.05 | 1/128 | 80 | 10 |
| 1300 | 300 | 190.00 | 0.05 | 1/128 | 90 | 10 |
| 1500 | 500 | 532.50 | 0.05 | – | 150 | 20 |
| 1800 | 800 | 697.00 | 0.05 | – | 150 | 20 |
| 1001 | 1000 | 823.00 | 0.05 | – | 150 | 20 |
| | | (W410) | | | | |



Fine adjustment

## Workshop caliper without points with long measuring jaw

Factory standard | INOX | format professional quality

**Design:** Made of stainless steel, vernier and scale high-precision laser graduations, with locking screw. Main scale slightly stepped to protect against wear. Supplied in transport packaging.

**Application:** For inside and outside measurements.

**4037** **Without fine adjustment,** reading 0.05 mm, vernier and scale matt chrome plated

**4038** **Without fine adjustment,** reading 0.02 mm, vernier and scale matt chrome plated

**4042** **Without fine adjustment,** reading 0.05 mm, vernier and scale matt chrome plated

| Order No. | Measurement range mm | 4037 format | 4038 format | 4042 format | Reading below mm | Reading above inch | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|---|---|
| 0300 | 300 | 247.50 | – | 267.00 | 0.05 | 1/128 | 150 | 10 |
| 0400 | 400 | 461.50 | – | – | 0.05 | – | 200 | 20 |
| 0500 | 500 | 513.50 | – | – | 0.05 | – | 200 | 20 |
| 0501 | 500 | 612.50 | – | 612.50 | 0.05 | – | 250 | 20 |
| 0800 | 800 | 747.50 | – | – | 0.05 | – | 200 | 20 |
| 0801 | 800 | 952.00 | – | – | 0.05 | – | 300 | 20 |
| 1000 | 1000 | 1156.00 | – | 989.00 | 0.05 | – | 300 | 20 |
| 1001 | 1000 | 1579.00 | – | – | 0.05 | – | 500 | 20 |
| 1500 | 1500 | 1621.00 | – | – | 0.05 | – | 300 | 30 |
| 2000 | 2000 | 2635.00 | – | – | 0.05 | – | 300 | 30 |
| 0505 | 500 | – | 562.00 | – | 0.02 | – | 200 | 20 |
| 0506 | 500 | – | 662.50 | – | 0.02 | – | 250 | 20 |
| 0805 | 800 | – | 809.00 | – | 0.02 | – | 200 | 20 |
| 1005 | 1000 | – | 1220.00 | – | 0.02 | – | 300 | 20 |
| | | (W407) | (W407) | (W407) | | | | |

4037

4038/4042

Fine adjustment

## Workshop caliper

NEW

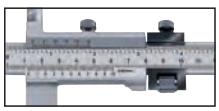
DIN 862 | INOX | Certificate | HELIOS·PREISSER

**Design:** Made of stainless steel, hardened. Vernier and reading parts matt chrome-plated, main scale slightly deepened to protect against wear, laser scales, with fine adjustment. Supplied in box, from measuring range 1000 mm individually packed.

**Application:** For inside and outside measurements.

| Order No. | Measurement range mm | 4043 HELIOS·PREISSER | Reading below mm | Reading above inch | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|
| 0250 | 250 | 163.00 | 0.05 | 1/128 | 80 | 10 |
| 0300 | 300 | 175.50 | 0.05 | 1/128 | 90 | 10 |
| 0500 | 500 | 461.00 | 0.05 | – | 150 | 20 |
| 0800 | 800 | 571.00 | 0.05 | – | 150 | 20 |
| 1000 | 1000 | 698.00 | 0.05 | – | 150 | 20 |
| 1500 | 1500* | 1495.00 ◊ | 0.05 | – | 200 | 30 |
| 2000 | 2000* | 2266.00 ◊ | 0.05 | – | 200 | 30 |
| | | (W410) | | | | |

* without test certificate.



Fine adjustment



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Workshop caliper with long measuring jaws

NEW

DIN 862 | INOX | Certificate

HELIOS·PREISSER

**Design:** Made of stainless steel, hardened. Vernier matt chrome-plated, main scale slightly deepened to protect against wear, laser scales. Supplied in box, from measuring range 1000 mm individually packed.

**Application:** For inside and outside measurements.

| Order No. | Measurement range mm | 4042 HELIOS·PREISSER | Reading below mm | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|
| 1050 | 500 | 562.00 | 0.05 | 250 | 20 |
| 1100 | 1000 | 927.00 (W410) | 0.05 | 300 | 20 |

## Workshop caliper with point and parallax-free reading

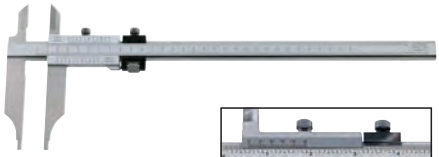
DIN 862 | INOX | Certificate

format professional quality

**Design:** Made of stainless steel, hardened, reading parts and vernier matt chrome-plated and precision lasered scale, **direct reading of inside and outside measurements,** with knife-edge points, locking screw and fine adjustment. Supplied in transport packaging.

**Application:** For inside and outside measurements.

| Order No. | Measurement range mm | 4039 format professional quality | Reading below mm | Reading above mm | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|
| 0200 | 200 | 186.00 | 0.05 | 0.05 | 80 | 10 |
| 0250 | 250 | 204.50 | 0.05 | 0.05 | 80 | 10 |
| 0300 | 300 | 209.50 | 0.05 | 0.05 | 90 | 10 |
| 0500 | 500 | 602.00 | 0.05 | 0.05 | 150 | 20 |
| 0305 | 300 | 209.50 (W407) | 0.02 | 0.02 | 90 | 10 |



**Fine adjustment**

## Aluminium workshop caliper with tips

Factory standard

format professional quality

**Design:** Measuring surface made of stainless steel, hardened. Lightweight design, slide and track made of aluminium, hard anodised (1100 HV), with locking screw, knife-edge points and parallax-free reading. Supplied in wood case, over measuring range 1500 mm in transport packaging.

**Application:** For inside and outside measurements.

| Order No. | Measurement range mm | 4040 format professional quality | Reading below mm | Jaw length mm | Hole dimension mm | Weight g |
|---|---|---|---|---|---|---|
| 0300 | 300 | 366.50 | 0.02 | 90 | 20 | 300 |
| 0500 | 500 | 547.50 | 0.02 | 150 | 20 | 800 |
| 0800 | 800 | 729.50 | 0.02 | 150 | 20 | 1600 |
| 1000 | 1000 | 855.00 | 0.02 | 150 | 20 | 1780 |
| 1500 | 1500 | 2218.00 | 0.05 | 200 | 20 | 2100 |
| 2000 | 2000 | 2581.00 (W407) | 0.05 | 200 | 20 | 2500 |

## Inner security grooves/calipers

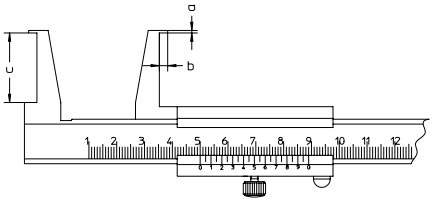
Factory standard | INOX

HELIOS·PREISSER

**Design:** Made of rustproof steel. Reading part matt chrome-plated, main scale slightly deepened to protect against wear. Supplied in transport packaging.

**Application:** For measuring the diameters of grooves and recesses, e.g. for inner circlips.

| Order No. | Measurement range mm | 4045 HELIOS·PREISSER | Reading below mm | Jaw length c mm | a mm | b mm |
|---|---|---|---|---|---|---|
| 1016 | 10–160 | 145.00 | 0.05 | 25 | 0.9 | 3.0 |
| 2016 | 20–160 | 193.00 | 0.05 | 40 | 2.0 | 5.0 |
| 2620 | 26–200 | 297.00 | 0.05 | 60 | 3.0 | 7.0 |
| 3025 | 30–250 | 336.00 | 0.05 | 80 | 4.0 | 8.5 |
| 3530 | 35–300 | 375.00 (W410) | 0.05 | 100 | 5.0 | 10.0 |



## Digital inner security grooves/caliper

NEW

Factory standard | INOX | Absolute function | RS232 | Digimatic | USB

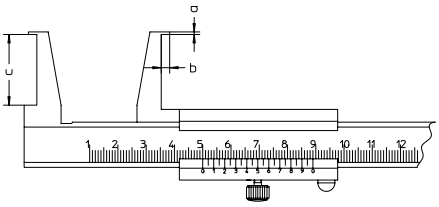
HELIOS·PREISSER

**Design:** Made of stainless steel, with locking screw, digit height of LCD display 7.5 mm, with data output variable RS 232, Digimatic and USB. Supplied in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Application:** For measuring the diameters of grooves and recesses, e.g. for inner circlips.

**Note:** Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable RS 232 available on request.




| Order No. | Measurement range mm | 4045 HELIOS·PREISSER | Reading mm | Jaw length c mm | a mm | b mm |
|---|---|---|---|---|---|---|
| 3535 | 10–160 | 390.50 ◊ | 0.01 mm (0.0005 inch) | 25 | 0.9 | 3.0 |
| 3540 | 20–160 | 440.00 ◊ | 0.01 mm (0.0005 inch) | 40 | 2.0 | 5.0 |
| 3545 | 26–200 | 806.50 ◊ | 0.01 mm (0.0005 inch) | 60 | 3.0 | 7.0 |
| | | (W410) | | | | |

## Marking calipers with fine adjustment

Factory standard

**Design:** Made of hardened steel. Reading parts and vernier matt chrome-plated, with hardened marking edges and long, T-shaped marking bars, with locking screw and fine adjustment. Supplied in a wooden box.

| Order No. | Measurement range mm | 4044 | Reading below mm | Stop length mm |
|---|---|---|---|---|
| 0016 | 160 | 92.30 | 0.05 | 100 |
| 0025 | 250 | 107.50 | 0.05 | 140 |
| 0030 | 300 | 143.50 | 0.05 | 160 |
| 0050 | 500 | 225.50 | 0.05 | 160 |
| | | (W400) | | |

## Marking caliper with fine adjustment, stainless steel

Factory standard | INOX

format professional quality

**Design:** Made of rustproof steel, hardened. Reading parts and vernier matt chrome-plated, with hardened marking edges and long, T-shaped marking bars, with locking screw and fine adjustment. Supplied in a carton.

| Order No. | Measurement range mm | 4050 format | Reading below mm | Stop length mm |
|---|---|---|---|---|
| 0016 | 160 | 139.50 | 0.05 | 135 |
| 0025 | 250 | 181.00 | 0.05 | 135 |
| 0030 | 300 | 227.50 | 0.05 | 160 |
| 0050 | 500 | 249.00 | 0.05 | 160 |
| | | (W407) | | |

## Wooden case for workshop calipers

format professional quality

**Design:** Made of wood with PU foam insert.

**Application:** Designed to protect pocket, workshop and depth gauge calipers when stored.

| Order No. | Dimensions (L x W x H) mm | 4041 format | Callipers without tips mm | Calliper with tips mm | Depth gauge callipers mm |
|---|---|---|---|---|---|
| 0200 | 315 x 130 x 20 | 11.20 | 200 x 80 | 200 x 80 | 200 |
| 0250 | 370 x 145 x 20 | 14.35 | 250 x 80 | 250 x 80 | 250 |
| 0300 | 435 x 175 x 20 | 17.20 | 300 x 90 | 300 x 90 | 300 |
| 0500 | 690 x 200 x 20 | 34.60 | 500 x 150 | – | – |
| 0501 | 690 x 250 x 21 | 35.70 | 500 x 200 | 500 x 150 | – |
| 0502 | 700 x 315 x 21 | 61.80 | 500 x 250 | 500 x 200 | – |
| 0503 | 610 x 180 x 20 | 33.80 | 400 x 125 | – | – |
| 0800 | 1000 x 220 x 21 | 51.40 | 800 x 150 | – | – |
| 0801 | 1000 x 270 x 21 | 80.80 | 800 x 200 | 800 x 150 | – |
| 1000 | 1200 x 220 x 21 | 62.80 | 1000 x 150 | – | – |
| 1001 | 1200 x 270 x 21 | 108.00 | 1000 x 200 | 1000 x 150 | – |
| 1002 | 1200 x 380 x 21 | 137.50 | 1000 x 300 | – | – |
| 1500 | 1800 x 310 x 25 | 171.50 | 1500 x 200 | – | – |
| 1501 | 1800 x 380 x 25 | 206.50 | 1500 x 300 | 1500 x 200 | – |
| 2000 | 2300 x 310 x 25 | 320.50 | 2000 x 200 | – | – |
| | | (W403) | | | |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Digital universal caliper

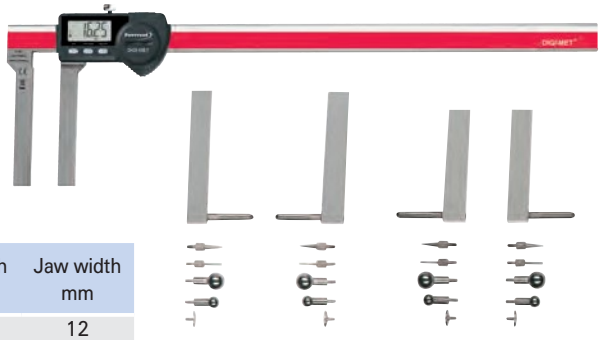
Factory standard | INOX | IP 65 | format professional quality
Absolute function | RS232 | USB | Digimatic

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 8.5 mm for 300 mm and 12.5 mm over 500 mm measuring range, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in a wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For diverse measuring tasks, quickly retrofittable to the appropriate measurement, suitable for all measuring inserts with thread M2.5.

**Note:** Supplied without measuring inserts and without adjustment measurement.
Interchangeable steel measuring insert (Order No. 4236, 📖 4/49).
Interchangeable carbide measuring insert (Order No. 4237, 📖 4/49).
Extension piece for measuring insert (Order No. 4238, 📖 4/50).
Replacement battery (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.





**For outside measurements** **For inside measurements**

| Order No. | Measurement range mm | 4055 format | Reading | Jaw length mm | Jaw width mm |
|---|---|---|---|---|---|
| 0403 | 300 | 593.00 | 0.01 mm (0.0005 inch) | 90 | 12 |
| 0405 | 500 | 777.50 | 0.01 mm (0.0005 inch) | 100 | 16 |
| | | (W404) | | | |

## Digital workshop calipers without tips, with fine adjustment

Factory standard | INOX | Absolute function | opto RS232

**Design:** Made of stainless steel, with locking screw, digit height of LCD display 12 mm, with data output Opto RS 232. Supplied with battery CR 2032, 3 V, in plastic case, over measuring range 1000 mm in transport packaging.

**Functions:** On and off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position, hold function (measurement memory).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

| Order No. | Measurement range mm | 4054 | Reading | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|
| 0300 | 300 | 205.00 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 0500 | 500 | 225.50 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 0800 | 800 | 400.00 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 1000 | 1000 | 544.00 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 1500 | 1500* | 1231.00 | 0.01 mm (0.0005 inch) | 200 | 20 |
| 2000 | 2000* | 1642.00 | 0.01 mm (0.0005 inch) | 200 | 20 |
| | | (W400) | | * Measuring rod made of steel. | |

## Digital workshop calipers without tips

DIN 862 | INOX | Absolute function | format professional quality
Certificate | RS232 | USB | Digimatic

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 8.5 mm for 300 mm and 12.5 mm over 500 mm measuring range, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in a wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.

| Order No. | Measurement range mm | 4056 format | Reading | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|
| 0300 | 300 | 367.00 | 0.01 mm (0.0005 inch) | 90 | 10 |
| 0500 | 500 | 538.00 | 0.01 mm (0.0005 inch) | 125 | 20 |
| 0800 | 800 | 878.50 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 1000 | 1000 | 1085.00 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 1500 | 1500* | 2613.00 | 0.01 mm (0.0005 inch) | 200 | 30 |
| 2000 | 2000* | 3165.00 | 0.01 mm (0.0005 inch) | 200 | 30 |
| | | (W404) | | * Without test certificate. | |

## Digital workshop calipers with tips

DIN 862 | INOX | Absolute function | format professional quality
Certificate | RS232 | USB | Digimatic

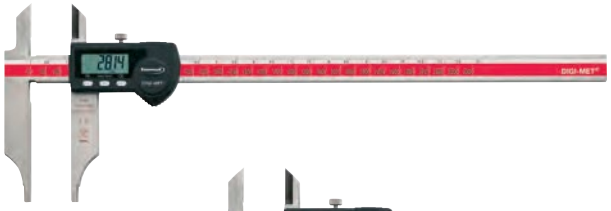
**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 8.5 mm for 300 mm and 12.5 mm over 500 mm measuring range, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in a wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.

**4057** without fine adjustment **4058** with fine adjustment



4057

4058

| Order No. | Measurement range mm | 4057 format | 4058 format | Reading | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|---|
| 0300 | 300 | 412.00 | 457.50 | 0.01 mm (0.0005 inch) | 90 | 10 |
| 0500 | 500 | 609.50 | 663.50 | 0.01 mm (0.0005 inch) | 125 | 20 |
| 0800 | 800 | 986.50 | 1039.00 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 1000 | 1000 | 1164.00 (W404) | 1164.00 (W404) | 0.01 mm (0.0005 inch) | 150 | 20 |

## Digital workshop calipers without tips

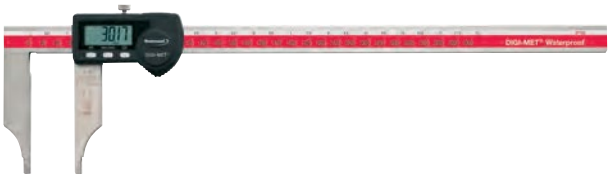
DIN 862 | INOX | IP 65 | format professional quality
Absolute function | Certificate | RS232 | USB | Digimatic

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 8.5 mm for 300 mm and 12.5 mm over 500 mm measuring range, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in a wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.



| Order No. | Measurement range mm | 4062 format | Reading | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|
| 0301 | 300 | 412.00 | 0.01 mm (0.0005 inch) | 90 | 10 |
| 0501 | 500 | 752.50 | 0.01 mm (0.0005 inch) | 125 | 20 |
| 1001 | 1000 | 1290.00 (W404) | 0.01 mm (0.0005 inch) | 150 | 20 |

## Digital workshop caliper

NEW

DIN 862 | INOX | Absolute function | HELIOS·PREISSER
Certificate | RS232 | Digimatic | USB

**Design:** Made of stainless steel, inductive measurement system, with locking screw, digit height of LCD display 8.5 mm for 300 mm and 12.5 mm over 500 mm measuring range, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.

| Order No. | Measurement range mm | 4060 HELIOS·PREISSER | Reading | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|
| 1030 | 300 | 371.50 | 0.01 mm (0.0005 inch) | 90 | 10 |
| 1050 | 500 | 522.00 | 0.01 mm (0.0005 inch) | 125 | 20 |
| 1080 | 800 | 912.50 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 1100 | 1000 | 1079.00 (W410) | 0.01 mm (0.0005 inch) | 150 | 20 |

## Digital workshop caliper with tips

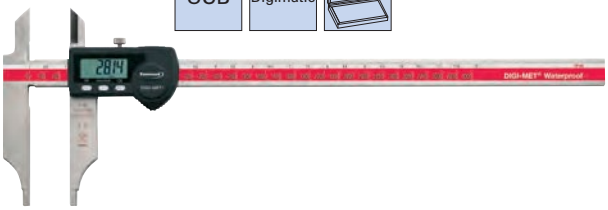
DIN 862 | INOX | IP 65 | Absolute function | Certificate | RS232 | USB | Digimatic

**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 8.5 mm for 300 mm and 12.5 mm over 500 mm measuring range, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in a wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.



| Order No. | Measurement range mm | 4061 format | Reading | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|
| 0301 | 300 | 448.50 | 0.01 mm (0.0005 inch) | 90 | 10 |
| 0501 | 500 | 843.00 | 0.01 mm (0.0005 inch) | 125 | 20 |
| 1001 | 1000 | 1291.00 (W404) | 0.01 mm (0.0005 inch) | 150 | 20 |

## Digital workshop caliper with tips

NEW

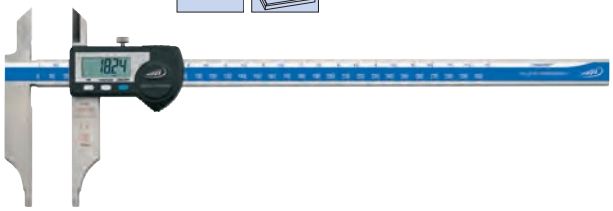
DIN 862 | INOX | Absolute function | Certificate | RS232 | Digimatic | USB

**Design:** Made of stainless steel, inductive measurement system, with locking screw, digit height of LCD display 8.5 mm for 300 mm and 12.5 mm over 500 mm measuring range, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.



| Order No. | Measurement range mm | 4060 HELIOS·PREISSER | Reading | Jaw length mm | Hole dimension mm |
|---|---|---|---|---|---|
| 1130 | 300 | 403.00 | 0.01 mm (0.0005 inch) | 90 | 10 |
| 1150 | 500 | 612.00 | 0.01 mm (0.0005 inch) | 125 | 20 |
| 1180 | 800 | 999.50 | 0.01 mm (0.0005 inch) | 150 | 20 |
| 1110 | 1000 | 1210.00 (W410) | 0.01 mm (0.0005 inch) | 150 | 20 |

## Digital aluminium workshop caliper, extra light

Factory standard

**Design:** Measuring faces made of stainless steel, hardened, lightweight construction, slide and bar made of aluminium, hard anodised (1100 HV). Easy, even running due to double prism guide. With locking screw and knife-edge points, digit height of LCD display 10.5 mm. Supplied with battery CR 2032, 3 V, in a wooden case.

**Functions:** Switch-on and switch-off, mm/inch-switching, reset (zeroing) possible in any position, hold function (measurement value memory).

**Application:** For inside and outside measurements.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

| Order No. | Measurement range mm | 4063 format | Reading | Jaw length mm | Hole dimension mm | Weight g |
|---|---|---|---|---|---|---|
| 0300 | 300 | 533.00 | 0.01 mm (0.0005 inch) | 90 | 10 | 450 |
| 0500 | 500 | 740.50 | 0.01 mm (0.0005 inch) | 150 | 20 | 1300 |
| 0800 | 800 | 1041.00 | 0.01 mm (0.0005 inch) | 150 | 20 | 1550 |
| 1000 | 1000 | 1228.00 (W404) | 0.01 mm (0.0005 inch) | 150 | 20 | 1700 |

## Depth gauge caliper with stepped measuring surface

**Design:** Made of stainless steel, hardened, vernier matt chrome-plated, high-precision laser-made graduations on both sides, with locking screw. Supplied in plastic case.

DIN 862 | INOX

format professional quality

| Order No. | Measurement range mm | 4076 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0200 | 200 | 34.40 | 0.05 | 100 | 8 x 3 |
| 0300 | 300 | 62.90 | 0.05 | 150 | 12 x 4 |
| 0500 | 500 | 115.50 | 0.05 | 150 | 12 x 4 |
| 0801 | 800 | 293.50 | 0.05 | 250 | 20 x 6 |
| 1001 | 1000 | 440.00 (W412) | 0.05 | 250 | 20 x 6 |

| Order No. | Measurement range mm | 4076 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0205 | 200 | 36.40 | 0.02 | 100 | 8 x 3 |
| 0305 | 300 | 68.50 | 0.02 | 150 | 12 x 4 |
| 0505 | 500 | 122.00 (W401) | 0.02 | 150 | 12 x 4 |

## Depth gauge caliper with stepped measuring surface

NEW

**Design:** Made of stainless steel, vernier and scale high-precision laser graduations, main scale slightly deepened to protect against wear, with locking screw. Supplied in a carton.

DIN 862 | INOX | Certificate

HELIOS · PREISSER

| Order No. | Measurement range mm | 4076 HELIOS · PREISSER | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 2150 | 150 | 72.40 | 0.05 | 100 | 8 x 3 |
| 2200 | 200 | 74.60 | 0.05 | 100 | 8 x 3 |
| 2250 | 250 | 83.00 | 0.05 | 130 | 12 x 4 |
| 2300 | 300 | 90.30 (W410) | 0.05 | 150 | 12 x 4 |

## Depth gauge caliper with measuring pin

**Design:** Made of stainless steel, hardened, reading parts and vernier matt chrome-plated, high-precision laser-made graduations on both sides, with hardened measuring pin and locking screw. Supplied in wooden box.

DIN 862 | INOX

format professional quality

| Order No. | Measurement range mm | 4077 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm | Measuring pin Ø mm |
|---|---|---|---|---|---|---|
| 0080 | 80 | 44.60 | 0.05 | 50 | 8 x 3 | 1.0 |
| 0200 | 200 | 86.40 | 0.05 | 100 | 8 x 3 | 1.5 |
| 0300 | 300 | 121.50 (W412) | 0.05 | 150 | 12 x 4 | 2.0 |

| Order No. | Measurement range mm | 4077 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm | Measuring pin Ø mm |
|---|---|---|---|---|---|---|
| 0085 | 80 | 34.40 | 0.02 | 50 | 8 x 3 | 1.0 |
| 0205 | 200 | 93.60 | 0.02 | 100 | 8 x 3 | 1.5 |
| 0305 | 300 | 130.50 (W401) | 0.02 | 150 | 12 x 4 | 2.0 |

## Depth gauge caliper with measuring pin

NEW

DIN 862 | INOX | Certificate

HELIOS·PREISSER

**Design:** Made of stainless steel, reading parts matt chrome-plated and high-precision laser-made graduations, with exchangeable measuring pin und locking screw, main scale slightly deepened to protect against wear, from 150 mm measuring range with double-sided measuring beam division, so that they can also be used as normal depth gauge caliper. Supplied in a carton.

| Order No. | Measurement range mm | 4077 HELIOS·PREISSER | Reading below mm | Bridge length mm | Measuring bar cross-section mm | Measuring pin Ø mm |
|---|---|---|---|---|---|---|
| 1080 | 80* | 62.00 (W410) | 0.05 | 50 | 8 x 3 | 1.0 |
| 1150 | 150 | 81.90 | 0.05 | 100 | 8 x 3 | 1.5 |
| 1200 | 200 | 85.00 | 0.05 | 100 | 8 x 3 | 1.5 |
| 1250 | 250 | 94.50 | 0.05 | 130 | 12 x 4 | 2.0 |
| 1300 | 300 | 107.00 | 0.05 | 150 | 12 x 4 | 2.0 |

* Factory standard

## Depth gauge calipers with stepped measuring rod

DIN 862 | INOX

format professional quality

**Design:** Made of stainless steel, hardened, vernier matt chrome-plated, high-precision laser-made graduations on both sides, double-sided measuring beam division, so that they can also be used as normal depth gauge calipers, with locking screw. Supplied in plastic case.

| Order No. | Measurement range mm | 4078 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0200 | 200 | 80.30 | 0.05 | 100 | 8 x 3 |
| 0300 | 300 | 98.60 | 0.05 | 150 | 12 x 4 |
| 0510 | 500 | 234.50 (W412) | 0.05 | 150 | 12 x 4 |

| Order No. | Measurement range mm | 4078 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0205 | 200 | 87.10 | 0.02 | 100 | 8 x 3 |
| 0305 | 300 | 115.00 (W401) | 0.02 | 150 | 12 x 4 |

## Depth gauge calipers with stepped measuring rod

NEW

DIN 862 | INOX | Certificate

HELIOS·PREISSER

**Design:** Made of stainless steel, reading parts and vernier matt chrome-plated, high-precision laser-made graduations on both sides, double-sided measuring beam division, so that they can also be used as normal depth gauge calipers, with locking screw. Supplied in a carton.

| Order No. | Measurement range mm | 4078 HELIOS·PREISSER | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0400 | 150 | 93.40 | 0.05 | 100 | 8 x 3 |
| 0420 | 200 | 94.50 | 0.05 | 100 | 8 x 3 |
| 0425 | 250 | 109.00 | 0.05 | 130 | 12 x 4 |
| 0430 | 300 | 115.50 (W410) | 0.05 | 150 | 12 x 4 |

## Depth gauge calipers with double-sided stepped measuring rod

DIN 862 | INOX

format professional quality

**Design:** Made of stainless steel, hardened, reading parts and vernier matt chrome-plated, high-precision laser-made graduations on both sides, with double-sided, stepped measuring beam for repositioning, with locking screw. Supplied in plastic case.

| Order No. | Measurement range mm | 4079 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0200 | 200 | 90.60 | 0.05 | 100 | 8 x 3 |
| 0300 | 300 | 105.50 (W412) | 0.05 | 100 | 12 x 4 |

| Order No. | Measurement range mm | 4079 format | Reading below mm | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0205 | 200 | 92.50 | 0.02 | 100 | 8 x 3 |
| 0305 | 300 | 119.50 (W401) | 0.02 | 100 | 12 x 4 |

## Digital depth gauge calipers with straight measuring rod

**Design:** Made of stainless steel, hardened, measuring faces precision ground and hardened, with locking screw, digit height of LCD display 6 mm, with data output Opto RS 232. Supplied with battery CR 2032, 3 V, in a wooden box.

**Functions:** Switch-on and off, mm/inch-switching, reset (zeroing) possible in any position, hold function (measurement value memory).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable (Order No. 4025 0002, 📖 4/13).

DIN 862 | INOX | Certificate | opto RS232

4078 2000

| Order No. | Measurement range mm | 4078 | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 1200 | 200 | 68.70 | 0.01 mm (0.0005 inch) | 100 | 14.5 x 4 |
| 1300 | 300 | 113.00 | 0.01 mm (0.0005 inch) | 150 | 14.5 x 4 |
| 1500 | 500 | 195.00 | 0.01 mm (0.0005 inch) | 150 | 14.5 x 4 |
| 2000 | 1000 | 564.50 (W400) | 0.01 mm (0.0005 inch) | 250 | 14.5 x 4 |

## Digital depth gauge calipers with straight measuring rod

**Design:** Made of stainless steel, hardened, measuring faces precision ground and hardened, with locking screw, digit height of LCD display 8 mm, with data output Opto RS 232. Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, ABS (absolute and relative measurements), no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable (Order No. 4025 0002, 📖 4/13).

DIN 862 | INOX | IP 54 | Absolute function | opto RS232

| Order No. | Measurement range mm | 4098 | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0200 | 200 | 93.90 | 0.01 mm (0.0005 inch) | 100 | 12 x 4 |
| 0300 | 300 | 159.00 | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |
| 0500 | 500 | 297.50 (W435) | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |

## Digital depth gauge caliper with straight measuring rod

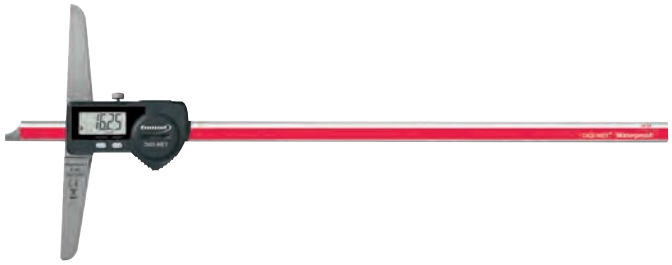
**Design:** Made of stainless steel, hardened, measuring faces precision ground, with locking screw, digit height of LCD display 7.5 mm, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in a wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.

DIN 862 | INOX | IP 67 | Absolute function | Certificate | RS232 | USB | Digimatic

format professional quality



| Order No. | Measurement range mm | 4080 format | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 1150 | 150 | 272.50 NEW | 0.01 mm (0.0005 inch) | 100 | 12 x 4 |
| 1200 | 200 | 291.50 | 0.01 mm (0.0005 inch) | 100 | 12 x 4 |
| 1300 | 300 | 338.50 | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |
| 1500 | 500 | 438.50 | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |
| 2000 | 1000 | 1246.00 (W404) | 0.01 mm (0.0005 inch) | 250 | 30 x 7 |

## Digital depth gauge caliper with double-sided stepped measuring rod

DIN 862 | INOX | IP 54 | Absolute function | opto RS232

**Design:** Made of stainless steel, hardened, measuring faces precision ground and hardened, with locking screw, digit height of LCD display 6 mm, with data output Opto RS 232. Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, ABS (absolute and relative measurements), no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable (Order No. 4025 0002, 📖 4/13).

| Order No. | Measurement range mm | 4097 | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0300 | 300 | 172.00 (W435) | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |

## Digital depth gauge calipers with stepped measuring rod

DIN 862 | INOX | IP 54 | Absolute function | opto RS232

**Design:** Made of stainless steel, hardened, measuring faces precision ground and hardened, with locking screw, digit height of LCD display 8 mm, with data output Opto RS 232. Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, ABS (absolute and relative measurements), no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable (Order No. 4025 0002, 📖 4/13).

| Order No. | Measurement range mm | 4096 | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0300 | 300 | 154.50 | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |
| 0500 | 500 | 294.00 (W435) | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |

## Digital depth gauge calipers with plate measuring insert

DIN 862 | INOX | Absolute function | RS232 | USB | Digimatic

format professional quality

**Design:** Made of stainless steel, hardened, with locking screw, digit height of LCD display 7.5 mm, inductive measurement system, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with plate measuring insert Ø 7.5 x 1 mm, measuring insert Ø 4 mm, flat and spherical, battery CR 2032, 3 V, in a wooden box.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.

| Order No. | Measurement range mm | 4084 format | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 0100 | 100 | 529.50 (W404) | 0.01 mm (0.0005 inch) | 85 | 16 x 3 |

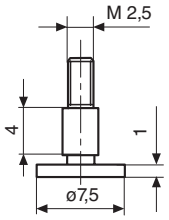
## Slitter insert

NEW

**Design:** Made of rustproof steel, adapter M2.5.

**Note:** Further measuring inserts from 📖 4/49.

| Order No. | Plate-Ø mm | 4084 format |
|---|---|---|
| 0150 | 7.5 | 20.20 (W404) |



## Digital depth gauge caliper with measuring pin

**Design:** Made of stainless steel, hardened, measuring faces precision ground and hardened, with locking screw, digit height of LCD display 8 mm, with data output Opto RS 232. Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch-switching, ABS (absolute and relative measurements), zero setting possible in any position.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable (Order No. 4025 0002, 📖 4/13).

DIN 862 | INOX | IP 54 | opto RS232

| Order No. | Measurement range mm | 4097 | Reading | Bridge length mm | Measuring pin ∅ mm |
|---|---|---|---|---|---|
| 0025 | 25 | 69.20 (W435) | 0.01 mm (0.0005 inch) | 50 | 1.5 |

## Digital depth gauge caliper with stepped measuring surface

NEW

**Design:** Made of rustproof steel, hardened, with locking screw, digit height of LCD display 7.5 mm, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable RS 232 available on request.

DIN 862 | INOX | IP 67 | Certificate | Absolute function

HELIOS·PREISSER

| Order No. | Measurement range mm | 4093 HELIOS·PREISSER | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 1150 | 150 | 332.00 | 0.01 mm (0.0005 inch) | 100 | 8 x 3 |
| 1200 | 200 | 376.00 | 0.01 mm (0.0005 inch) | 100 | 8 x 3 |
| 1300 | 300 | 422.00 | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |
| 1500 | 500 | 485.00 (W410) | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |

## Digital depth gauge calipers with measuring pin

NEW

**Design:** Made of rustproof steel, hardened, with locking screw, digit height of LCD display 7.5 mm, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable RS 232 available on request.

DIN 862 | INOX | IP 67 | Certificate | Absolute function

HELIOS·PREISSER

| Order No. | Measurement range mm | 4093 HELIOS·PREISSER | Reading | Bridge length mm | Measuring pin ∅ mm |
|---|---|---|---|---|---|
| 2200 | 200 | 409.50 | 0.01 mm (0.0005 inch) | 100 | 2 |
| 2300 | 300 | 455.50 (W410) | 0.01 mm (0.0005 inch) | 150 | 2 |

## Digital depth gauge calipers with measuring pin

NEW

**Design:** Made of rustproof steel, hardened, with locking screw, digit height of LCD display 11 mm, **measuring bridge extendable with optional extension**. Supplied in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of slider movement, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position, ± pre-set function (measurement value presetting).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

DIN 862 | INOX | IP 67 | Certificate | Absolute function

HELIOS·PREISSER

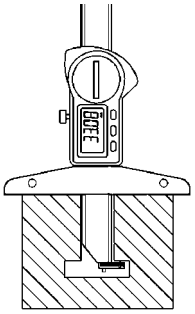
| Order No. | Measurement range mm | 4093 HELIOS·PREISSER | Reading | Bridge length mm | Measuring pin Ø mm |
|---|---|---|---|---|---|
| 3300 | 300 | 479.00 | 0.01 mm (0.0005 inch) | 150 | 1.5 |
| 3500 | 500 | 551.00 (W410) | 0.01 mm (0.0005 inch) | 150 | 1.5 |

## Accessories for depth gauge caliper

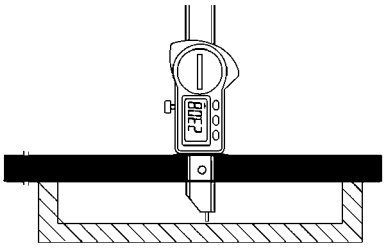
NEW

**Design:** Made of rustproof steel.

| Order No. | Design | 4081 HELIOS·PREISSER |
|---|---|---|
| 1200 | Measuring bridge, 200 mm | 89.20 |
| 1300 | Measuring bridge, 300 mm | 104.00 |
| 1400 | Measuring insert | 59.80 (W410) |



Measuring insert



Measuring bridge

## Digital small depth gauge caliper with measuring pin

NEW

**Design:** Made of rustproof steel, hardened, with locking screw, digit height of LCD display 7.5 mm, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable RS 232 available on request.

INOX | IP 67 | Absolute function | RS232 | USB | Digimatic

HELIOS·PREISSER

| Order No. | Measurement range mm | 4093 HELIOS·PREISSER | Reading | Bridge length mm | Measuring pin Ø mm |
|---|---|---|---|---|---|
| 3625 | 25 | 251.00 (W410) | 0.01 mm (0.0005 inch) | 48 | 2 |

## Digital depth gauge caliper with double-sided stepped measuring rod

NEW

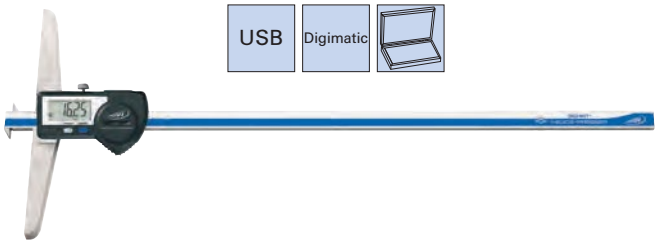
**Design:** Made of rustproof steel, hardened, with locking screw, digit height of LCD display 7.5 mm, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, no re-zeroing after switching (absolute system), reset (zeroing) possible at each position.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable RS 232 available on request.

Factory standard | INOX | IP 67 | Certificate | Absolute function | RS232 | USB | Digimatic

HELIOS·PREISSER



| Order No. | Measurement range mm | 4093 HELIOS·PREISSER | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 4200 | 200 | 425.00 | 0.01 mm (0.0005 inch) | 100 | 12 x 4 |
| 4300 | 300 | 513.50 (W410) | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |

## Digital depth gauge calipers with stepped measuring rod

NEW

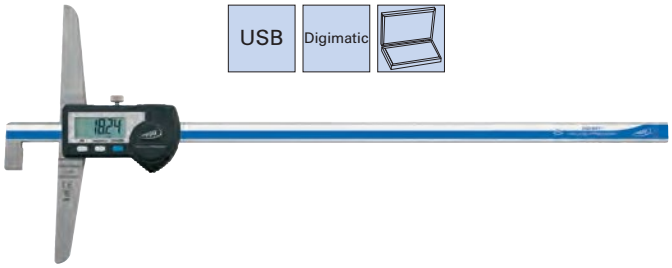
Factory standard | INOX | IP 67 | Certificate | Absolute function | RS232 | USB | Digimatic

HELIOS·PREISSER

**Design:** Made of rustproof steel, hardened, with locking screw, digit height of LCD display 7.5 mm, with data output variable RS 232, USB and Digimatic (DATA Variable). Supplied in wooden case.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable RS 232 available on request.



| Order No. | Measurement range mm | 4093 HELIOS·PREISSER | Reading | Bridge length mm | Measuring bar cross-section mm |
|---|---|---|---|---|---|
| 5300 | 300 | 432.50 | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |
| 5500 | 500 | 503.00 (W410) | 0.01 mm (0.0005 inch) | 150 | 12 x 4 |

## Depth gauge with bored through toothed rack

Factory standard

**Design:** For mounting the adjustable depth gauge needle with ∅ 2 mm and a measuring depth from 200 mm. The depth gauge needle is stretched and adjusted by means of the cord screw at the top of the gauge. Supplied in plastic case.

| Order No. | Measurement range mm | 4093 Käfer | Reading mm | Housing ∅ mm | 1 pointer revolution mm |
|---|---|---|---|---|---|
| 1030 | 30 | 218.50 (W423) | 0.01 | 58 | 1 |

## Measuring needle for depth gauge with bored through toothed rack

| Order No. | Measurement range mm | 4093 Käfer |
|---|---|---|
| 0002 | 200 | 8.60 (W423) |

## Depth gauge

Factory standard

**Design:** The measuring bridge matt chrome-plated and hardened. Support surface finely lapped. The clamping collet made of metal guarantees reliable clamping of the dial gauge and thus increases the measurement certainty. An additional socket head screw makes it easier to replace the dial gauge. Measuring insert with external thread M2.5.
The millimetre display on Order No. 4093 0030 has a concentric layout, permitting a simple and reliable reading. Supplied with a 10 mm-long special measuring insert and measuring bridge 80 x 16 mm, in plastic case.

**Note:** You can find suitable measuring inserts on 📖 4/49.

| Order No. | Measurement range mm | 4093 Käfer | Reading mm | Housing ∅ mm | Support surface mm | 1 pointer revolution mm |
|---|---|---|---|---|---|---|
| 0010 | 10 | 124.50 | 0.01 | 58 | 80 x 16 | 1 |
| 0030 | 30 | 176.00 (W423) | 0.01 | 58 | 80 x 16 | 1 |

## Measuring bridge for depth gauge

**Design:** The measuring bridges have a mounting hole ∅ 8 mm H7. They are matt chrome-plated and hardened. The support surfaces are finely lapped.

| Order No. | Dimensions mm | 4093 Käfer |
|---|---|---|
| 0050 | 50 x 16 | 58.00 |
| 0080 | 80 x 16 | 58.00 |
| 0120 | 120 x 20 | 66.60 |
| 0150 | 150 x 20 | 92.90 (W423) |

## Measuring set, 9-piece

**Design:** Supplied in an aluminium case.

| Order No. | Design | 4099 | Set contents |
|---|---|---|---|
| 0009 | 9-piece | 140.50 | 1 pocket caliper, 150 mm<br>1 outside micrometer 0-25 mm<br>1 hair angle 100 x 70 mm, DIN 875/1<br>1 straight edge 150 x 13 x 0.5<br>1 straight edge 100 mm, DIN 874/0<br>1 compass 200 mm<br>1 depth measuring bridge 75 mm<br>1 scriber 250 mm<br>1 carbide scriber 150 mm |
| 1009 | 9-piece | 179.50 | 1 digital pocket caliper, 150 mm<br>1 outside micrometer 0-25 mm<br>1 hair angle 100 x 70 mm, DIN 875/1<br>1 straight edge 150 x 13 x 0.5 mm<br>1 straight edge 100 mm, DIN 874/0<br>1 compass 200 mm<br>1 depth measuring bridge 75 mm<br>1 scriber 250 mm<br>1 carbide scriber 150 mm |

(W400)

**4099 0009**

**4099 1009**

## Measuring set, 8-piece

**Design:** Supplied in a wooden case.

**Application:** Optimally suitable as a starter package for trainees.

| Order No. | Design | 4095 format | Set contents |
|---|---|---|---|
| 0008 | 8-piece | 84.50 | 1 pocket caliper, 150 mm, rustproof<br>1 outside micrometer, 0–25 mm<br>1 flat angle, 100 x 70 mm, grade 2<br>1 straightedge, 100 mm<br>1 spring dividers, 125 mm<br>1 scriber, 175 mm<br>1 flexible ruler, 150 mm, rustproof<br>1 centre punch |

(W404)

9/128

9/132

3M format professional quality

Personal protective equipment can be found from page 9/127.

## Measuring set, 8-piece

NEW

**Design:** Supplied in a wooden case.

**Scope of delivery:**
1 packet caliper available
1 outside micrometer, 0–25 mm
1 straight edge 200 x 13 x 0.5
1 hair angle 100 x 70 mm, DIN 875/00
1 straight edge 100 mm, DIN 874/00
1 scriber 180 mm
1 set of radius gauges 1–7 mm, concave und convex
1 set of thread gauges 0.4–7.0/4–62, ISO and Whitworth thread

**4094 1100** Analogue pocket caliper, 150 mm

**4094 1200 + 1300** Digital pocket caliper, 150 mm

**4094 1400 + 1500** Digital pocket caliper, IP 67, 150 mm

| Order No. | Design | 4094 format | Depth gauge |
|---|---|---|---|
| 1100 | analogue | 145.00 | square |
| 1200 | digital | 210.50 | ∅ 1.5 mm |
| 1300 | digital | 210.50 | square |
| 1400 | digital, IP67 | 210.50 | ∅ 1.5 mm |
| 1500 | digital, IP67 | 210.50 | square |

(W404)

4094 1100

4094 1200

IP 67

4094 1400

## Outside micrometer

**Design:** Reading parts matt chrome-plated, measuring faces carbide-tipped, measuring force regulation by means of ratchet stop, with hand thermal insulation, locking by means of clamping lever. Supplied with adjustment key, from measuring range 25-50 mm with setting measurement, in a plastic case.

DIN 863

| Order No. | Measurement range mm | 4100 format | Reading mm | Spindle ∅ mm | Gradient mm | Drum ∅ mm |
|---|---|---|---|---|---|---|
| 0025 | 0– 25 | 18.75 | 0.01 | 6.5 | 0.5 | 17.0 |
| 0050 | 25– 50 | 23.70 | 0.01 | 6.5 | 0.5 | 17.0 |
| 0075 | 50– 75 | 28.20 | 0.01 | 6.5 | 0.5 | 17.0 |
| 0100 | 75–100 | 31.10 | 0.01 | 6.5 | 0.5 | 17.0 |
| 0125 | 100–125 | 38.10 | 0.01 | 6.5 | 0.5 | 17.0 |
| 0150 | 125–150 | 42.50 | 0.01 | 6.5 | 0.5 | 17.0 |
| 0175 | 150–175 | 47.50 | 0.01 | 6.5 | 0.5 | 17.0 |
| 0200 | 175–200 | 54.70 | 0.01 | 6.5 | 0.5 | 17.0 |

(W416)

## Outside micrometer set

**Design:** Supplied in a wooden case.

| Order No. | Measurement range mm | 4103 format | Set contents |
|---|---|---|---|
| 0004 | 0–100 | 108.00 | 1 outside micrometer, 0– 25 mm<br>1 outside micrometer, 25– 50 mm<br>1 outside micrometer, 50– 75 mm<br>1 outside micrometer, 75–100 mm)<br>3 setting standards, 25; 50 and 75 mm<br>1 setting key |

(W416)

## Outside micrometer with ratchet stop

**Design:** Reading parts matt chrome-plated, measuring faces carbide-tipped, measuring force regulation by means of ratchet stop, with hand thermal insulation, locking by means of clamping lever. Supplied with adjustment key, from measuring range 25-50 mm with setting measurement, in a plastic case.

DIN 863

format professional quality

| Order No. | Measurement range mm | 4105 format | Reading mm | Spindle Ø mm | Gradient mm | Drum Ø mm |
|---|---|---|---|---|---|---|
| 0025 | 0– 25 | 27.20 | 0.01 | 6.5 | 0.5 | 19.0 |
| 0050 | 25– 50 | 31.50 | 0.01 | 6.5 | 0.5 | 19.0 |
| 0075 | 50– 75 | 35.90 | 0.01 | 6.5 | 0.5 | 19.0 |
| 0100 | 75–100 | 41.90 | 0.01 | 6.5 | 0.5 | 19.0 |
| | | (W416) | | | | |

## Outside micrometer with thick thimble scale

**Design:** Reading parts matt chrome-plated, measuring faces carbide-tipped, measuring force regulation by means of ratchet stop, with hand thermal insulation, locking by means of clamping lever. Supplied with adjustment key, from measuring range 25-50 mm with setting measurement, in a plastic case.

DIN 863

format professional quality

| Order No. | Measurement range mm | 4107 format | Reading mm | Spindle Ø mm | Gradient mm | Drum Ø mm |
|---|---|---|---|---|---|---|
| 0025 | 0– 25 | 67.40 | 0.01 | 8.0 | 1.0 | 28.0 |
| 0050 | 25– 50 | 73.60 | 0.01 | 8.0 | 1.0 | 28.0 |
| 0075 | 50– 75 | 83.50 | 0.01 | 8.0 | 1.0 | 28.0 |
| 0100 | 75–100 | 86.70 | 0.01 | 8.0 | 1.0 | 28.0 |
| | | (W416) | | | | |

## Outside micrometer

NEW

**Design:** Reading parts matt chrome-plated, measuring spindle and anvil made of hardened steel, measuring force regulation by means of ratchet stop, with hand thermal insulation, locking by means of clamping lever. Available from measuring range 25–50 mm with dimension adjustment, in case.

DIN 863

Mahr

| Order No. | Measurement range mm | 4104 Mahr | Reading mm | Spindle Ø mm | Gradient mm | Drum Ø mm |
|---|---|---|---|---|---|---|
| 1025 | 0– 25 | 49.00 | 0.01 | 6.5 | 0.5 | 17.5 |
| 1050 | 25– 50 | 79.50 | 0.01 | 6.5 | 0.5 | 17.5 |
| 1075 | 50– 75 | 99.00 | 0.01 | 6.5 | 0.5 | 17.5 |
| 1100 | 75–100 | 113.00 | 0.01 | 6.5 | 0.5 | 17.5 |
| 1125 | 100–125 | 154.00 | 0.01 | 6.5 | 0.5 | 17.5 |
| 1150 | 125–150 | 171.50 | 0.01 | 6.5 | 0.5 | 17.5 |
| 1175 | 150–175 | 190.50 | 0.01 | 6.5 | 0.5 | 17.5 |
| 1200 | 175–200 | 211.50 | 0.01 | 6.5 | 0.5 | 17.5 |
| | | (W488) | | | | |

## Outside micrometer set

NEW

| Order No. | Measurement range mm | 4104 Mahr | Set contents |
|---|---|---|---|
| 1110 | 0–100 | 298.00 | 1 outside micrometer, 0– 25 mm<br>1 outside micrometer, 25– 50 mm<br>1 outside micrometer, 50– 75 mm<br>1 outside micrometer, 75–100 mm)<br>3 setting standards, 25; 50 and 75 mm |
| 1210 | 100–200 | 654.00 | 1 outside micrometer, 100–125 mm)<br>1 outside micrometer, 125–150 mm)<br>1 outside micrometer, 150–175 mm)<br>1 outside micrometer, 175–200 mm)<br>3 setting standards, 125; 150 and 175 mm |
| | | (W488) | |

## Outside micrometer

**Design:** Reading parts matt chrome plated, measuring surfaces carbide-tipped, light metal frame, painted. With clamping lever, measuring force control by means of ratchet stop and hand thermal protection. With replaceable inserts and anvils. Supplied with adjusting dimensions, in wooden case, over measuring range 300-400 mm in transport packaging.

Factory standard

| Order No. | Measurement range mm | 4118 | Reading mm | Spindle Ø mm | Gradient mm | Measuring drum Ø mm |
|---|---|---|---|---|---|---|
| 0001 | 0– 100* | 164.00 | 0.01 | 8.0 | 0.05 | 16 |
| 0102 | 100– 200* | 225.50 | 0.01 | 8.0 | 0.05 | 16 |
| 0203 | 200– 300* | 236.00 | 0.01 | 8.0 | 0.05 | 16 |
| 0304 | 300– 400 | 256.50 | 0.01 | 8.0 | 0.05 | 25 |
| 0405 | 400– 500 | 308.00 | 0.01 | 8.0 | 0.05 | 25 |
| 0506 | 500– 600 | 349.00 | 0.01 | 8.0 | 0.05 | 25 |
| 0607 | 600– 700 | 410.50 | 0.01 | 8.0 | 0.05 | 25 |
| 0708 | 700– 800 | 492.50 | 0.01 | 8.0 | 0.05 | 25 |
| 0809 | 800– 900 | 574.50 | 0.01 | 8.0 | 0.05 | 25 |
| 0910 | 900–1000 | 636.00 | 0.01 | 8.0 | 0.05 | 25 |

(W400)

* Malleable iron bracket, painted.

## Outside micrometer

**Design:** Reading parts matt chrome plated, measuring surfaces carbide-tipped, light metal frame, painted. With clamping lever, measuring force control by means of ratchet stop and hand thermal protection. With replaceable inserts and anvils. Supplied with adjusting dimensions, in wooden box.

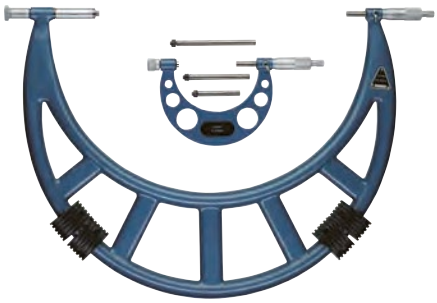
Factory standard

format professional quality

| Order No. | Measurement range mm | 4114 format | Reading mm | Spindle Ø mm | Gradient mm | Measuring drum Ø mm |
|---|---|---|---|---|---|---|
| 0001 | 0– 100* | 240.50 | 0.01 | 8.0 | 0.5 | 20 |
| 0102 | 100– 200* | 297.00 | 0.01 | 8.0 | 0.5 | 20 |
| 0203 | 200– 300* | 326.50 | 0.01 | 8.0 | 0.5 | 20 |
| 0304 | 300– 400 | 410.50 | 0.01 | 8.0 | 0.5 | 24 |
| 0405 | 400– 500 | 469.00 | 0.01 | 8.0 | 0.5 | 24 |
| 0506 | 500– 600 | 539.50 | 0.01 | 8.0 | 0.5 | 24 |
| 0607 | 600– 700 | 666.50 | 0.01 | 8.0 | 0.5 | 24 |
| 0708 | 700– 800 | 766.50 | 0.01 | 8.0 | 0.5 | 24 |
| 0809 | 800– 900 | 880.00 | 0.01 | 8.0 | 0.5 | 24 |
| 0910 | 900–1000 | 993.00 | 0.01 | 8.0 | 0.5 | 24 |

(W416)

* Malleable iron bracket, painted.



Holder for outside micrometers can be found from page 4/37.

format professional quality

## Digital outside micrometer

**Design:** Measuring faces carbide-tipped, digit height of LCD display 6.5 mm. With measuring force controls by means of ratchet stop, clamping lever and hand thermal protection. Supplied with dimension adjustment, from measuring range 25–50 mm with setting measurement and battery CR 357 1.5 V, in a plastic case.

**Function:** Switch-on and switch-off, reset (zeroing) possible in any position, automatic switch-off.

**Note:** Replacement battery: (Order No. 4026 0357, 📖 4/13).

DIN 863

| Order No. | Measurement range mm | 4106 format | Reading mm | Spindle Ø mm | Gradient mm |
|---|---|---|---|---|---|
| 0025 | 0– 25 | 86.00 | 0.001 | 6.5 | 0.5 |
| 0050 | 25– 50 | 102.50 | 0.001 | 6.5 | 0.5 |
| 0075 | 50– 75 | 112.50 | 0.001 | 6.5 | 0.5 |
| 0100 | 75–100 | 122.00 (W404) | 0.001 | 6.5 | 0.5 |

## Digital outside micrometer

**Design:** Measuring faces carbide-tipped, ratchet integrated in measuring drum. With clamping lever, quick drive and hand thermal protection. Digit height of the LCD 7.5 mm, inductive measuring system, with variable data output RS 232, USB and Digimatic (DATA Variable). Supplied with battery CR 2032, 3 V, in plastic case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of turning the drum, key lock set for zero position, **re-zeroing after switching deleted (absolute system)**, reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable RS 232 available on request.

DIN 863-1 | Absolute function | RS232 | USB | Digimatic

| Order No. | Measurement range mm | 4108 format | Reading mm | Spindle Ø mm | Gradient mm |
|---|---|---|---|---|---|
| 0025 | 0– 25 | 200.50 | 0.001 | 6.5 | 0.635 |
| 0050 | 25– 50 | 256.00 | 0.001 | 6.5 | 0.635 |
| 0075 | 50– 75 | 355.50 | 0.001 | 6.5 | 0.635 |
| 0100 | 75–100 | 408.50 (W404) | 0.001 | 6.5 | 0.635 |

## Digital outside micrometer, ABS System

NEW

**Design:** Lacquered steel bracket, advance ratchet stop, quick drive and thermal protection. Digit height on LCD display 8.5 mm, protected in acc. with IP 40. Supplied with battery CR 2032, 3 V, in case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of turning the drum, key lock set for zero position, re-zeroing after switching deleted (absolute system), **ABS (switching from relative to absolute measurement),** reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

DIN 863-1 | Absolute function | IP 40

| Order No. | Measurement range mm | 4111 Mahr | Reading mm | Spindle Ø mm | Gradient mm |
|---|---|---|---|---|---|
| 2000 | 0–25 | 151.00 (W488) | 0.001 | 6.5 | 0.635 |

## Digital outside micrometer, IP 65

NEW

**Design:** Measuring spindle rustproof, fully hardened and ground, lacquered steel bracket, advance ratchet stop, quick drive and thermal protection. Digit height on LCD display 8.5 mm, **protected in acc. with IP 65**. Supplied with battery CR 2032, 3 V, in case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of turning the drum, key lock set for zero position, re-zeroing after switching deleted (absolute system), ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

Factory standard | INOX | Absolute function | IP 65

| Order No. | Measurement range mm | 4111 Mahr | Reading mm | Spindle Ø mm | Gradient mm |
|---|---|---|---|---|---|
| 2010 | 0–25 | 202.50 (W488) | 0.001 | 6.5 | 0.635 |

## Digital outside micrometer

NEW

DIN 863-1 | INOX | Absolute function | IP 65 | RS232 | USB | Digimatic

Mahr

**Design:** Measuring spindle rustproof, fully hardened and ground, lacquered steel bracket, advance ratchet stop, quick drive and thermal protection. Digit height of the LCD display 8.5 mm, protection in acc. with IP 65, **data output RS 232, Digimatic and USB**. Supplied with battery CR 2032, 3 V, in case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of turning the drum, key lock set for zero position, re-zeroing after switching deleted (absolute system), ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4111 Mahr | Reading mm | Spindle Ø mm | Gradient mm |
|---|---|---|---|---|---|
| 2025 | 0– 25* | 259.00 | 0.001 | 6.5 | 0.635 |
| 2050 | 25– 50* | 297.00 | 0.001 | 6.5 | 0.635 |
| 2075 | 50– 75* | 389.00 | 0.001 | 6.5 | 0.635 |
| 2100 | 75–100* | 447.00 | 0.001 | 6.5 | 0.635 |
| 2125 | 100–125 | 600.00 | 0.001 | 6.5 | 0.635 |
| 2150 | 125–150 | 615.00 | 0.001 | 6.5 | 0.635 |
| 2175 | 150–175 | 633.00 | 0.001 | 6.5 | 0.635 |
| 2200 | 175–200 | 645.00 | 0.001 | 6.5 | 0.635 |

(W488)

* Factory standard

## Digital outside micrometer set

NEW

| Order No. | Measurement range mm | 4111 Mahr | Set contents |
|---|---|---|---|
| 2210 | 0–100 | 1365.00 | 1 outside micrometer, 0– 25 mm<br>1 outside micrometer, 25– 50 mm<br>1 outside micrometer, 50– 75 mm<br>1 outside micrometer, 75–100 mm)<br>3 setting standards, 25; 50 and 75 mm |

(W488)

## Outside blade micrometer for external grooves

Factory standard

format professional quality

**Design:** Reading parts matt chrome-plated, hardened steel measuring surfaces, measuring force regulation by means of ratchet stop, with non-rotating spindle and hand thermal insulation. Supplied with adjustment key, from measuring range 25-50 mm with setting measurement, in a plastic case.

**Application:** For measuring outer grooves.

| Order No. | Measurement range mm | 4119 format | Reading mm | Spindle Ø mm | Gradient mm | Drum Ø mm | Measuring face mm |
|---|---|---|---|---|---|---|---|
| 0025 | 0– 25 | 286.00 | 0.01 | 6.5 | 0.5 | 18.0 | 0.75 x 6.0 |
| 0050 | 25– 50 | 346.50 | 0.01 | 6.5 | 0.5 | 18.0 | 0.75 x 6.0 |
| 0075 | 50– 75 | 372.00 | 0.01 | 6.5 | 0.5 | 18.0 | 0.75 x 6.0 |
| 0100 | 75–100 | 403.00 | 0.01 | 6.5 | 0.5 | 18.0 | 0.75 x 6.0 |

(W416)

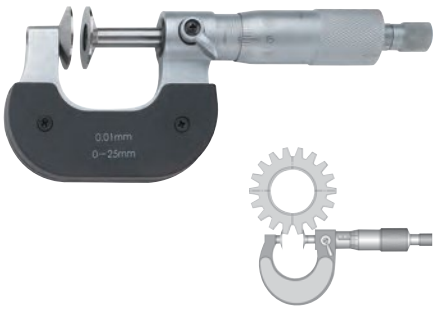
## Outside disc micrometer for tooth width measurements

DIN 863

format professional quality

**Design:** Reading parts matt chrome-plated, hardened spindle, lapped measuring plane-parallel plate, measuring force regulation by means of ratchet stop, with hand thermal insulation, locking by means of clamping lever. Supplied with adjustment key, in a plastic case.

**Application:** For reference-free measuring tooth widths of spur gears and toothed wheels for modules 0.5–6.0 mm. Also suitable for measuring the thickness of soft materials such as rubber, plastic, paper, etc.



| Order No. | Measurement range mm | 4120 format | Reading mm | Spindle Ø mm | Gradient mm | Drum Ø mm | Measuring plate mm |
|---|---|---|---|---|---|---|---|
| 0025 | 0– 25 | 84.60 | 0.01 | 6.5 | 0.5 | 17.0 | 20.0 |
| 0050 | 25– 50 | 93.80 | 0.01 | 6.5 | 0.5 | 17.0 | 20.0 |
| 0075 | 50– 75 | 109.00 | 0.01 | 6.5 | 0.5 | 17.0 | 20.0 |
| 0100 | 75–100 | 121.50 | 0.01 | 6.5 | 0.5 | 17.0 | 20.0 |
| 0125 | 100–125 | 143.00 | 0.01 | 6.5 | 0.5 | 17.0 | 30.0 |
| 0150 | 125–150 | 149.00 | 0.01 | 6.5 | 0.5 | 17.0 | 30.0 |

(W416)

## Outside micrometer for pipe walls

**Design:** Reading parts matt chrome-plated, hardened and ground spindle, measuring force regulation by means of ratchet stop, with spherical anvil Ø 4.7 x 27 mm. Supplied in a plastic case.

DIN 863

format professional quality

| Order No. | Measurement range mm | 4121 format | Reading mm | Spindle Ø mm | Gradient mm | Drum Ø mm |
|---|---|---|---|---|---|---|
| 0025 | 0–25 | 51.40 (W416) | 0.01 | 6.5 | 0.5 | 17.0 |

## Index plate micrometer screw

**Design:** Measuring faces carbide-tipped, reading parts matt chrome-plated, measuring force regulation by means of ratchet stop. Supplied in plastic case.

**Application:** For measuring plates and bands.

Factory standard

format professional quality

| Order No. | Measurement range mm | 4126 format | Reading mm | Spindle Ø mm | Gradient mm | Disk Ø mm |
|---|---|---|---|---|---|---|
| 0015 | 0–15 | 105.50 | 0.01 | 6.5 | 1.0 | 50 |
| 0025 | 0–25 | 160.00 (W416) | 0.01 | 6.5 | 1.0 | 50 |

## Outside V-anvil micrometer

**Design:** Reading parts matt chrome-plated, hardened and ground spindle, lapped plane parallel measuring faces, measuring force regulation by means of ratchet stop, with hand thermal insulation, with clamping device and adjustment nut. The spindle pitch is adapted to the respective prism angle. Supplied with adjustment key, in a plastic case.

**Application:** For measuring 3-blade (prism angle 60°) and 5-blade (prism angle 108°) tools such as milling cutters, reamers, etc.

DIN 863-3

format professional quality

| Order No. | Measurement range mm | 4125 format | Reading mm | Spindle Ø mm | Drum Ø mm | Prism angle ° |
|---|---|---|---|---|---|---|
| 0015 | 1–15 | 163.00 | 0.01 | 6.5 | 17.0 | 60 |
| 0020 | 5–20 | 168.50 | 0.01 | 6.5 | 17.0 | 60 |
| 0035 | 20–35 | 200.50 | 0.01 | 6.5 | 17.0 | 60 |
| 0050 | 35–50 | 243.50 | 0.01 | 6.5 | 17.0 | 60 |
| 1025 | 5–25 | 160.50 | 0.01 | 6.5 | 17.0 | 108 |
| 1045 | 25–45 | 211.50 | 0.01 | 6.5 | 17.0 | 108 |
| 1065 | 45–65 | 240.50 (W416) | 0.01 | 6.5 | 17.0 | 108 |

## Indicator micrometer

NEW

**Design:** Operating and reading parts matt chrome-plated, hardened and ground spindle, carbide reinforced, with clamping device. Supplied in a case.

**Application:** For quick check of diameter of cylindrical parts, thickness and length measurement.

DIN 863-3

Mahr

| Order No. | Measurement range mm | 4132 Mahr | Reading mm | Spindle Ø mm | Drum Ø mm |
|---|---|---|---|---|---|
| 1025 | 0–25 | 645.00 | 0.01 | 7.5 | 17.5 |
| 1050 | 25–50 | 711.00 (W488) | 0.01 | 7.5 | 17.5 |

## Outside spline micrometer

NEW

DIN 863-3

Mahr

**Design:** Operating and reading parts matt chrome-plated, hard-lacquered steel bracket, hardened and ground spindle, carbide reinforced, quick drive, measuring force regulation through ratchet stop, with clamping device. Available from measuring range 25–-50 mm with dimension adjustment, in case.

**Application:** For measuring grooves, splined shafts, recesses, etc.

| Order No. | Measurement range mm | 4132 Mahr | Reading mm | Spindle Ø mm | Drum Ø mm |
|---|---|---|---|---|---|
| 6025 | 0– 25 | 198.00 | 0.01 | 3.0 | 17.5 |
| 6050 | 25– 50 | 241.50 | 0.01 | 3.0 | 17.5 |
| 6075 | 50– 75 | 275.00 | 0.01 | 3.0 | 17.5 |
| 6100 | 75–100 | 292.00 | 0.01 | 3.0 | 17.5 |
| | | (W488) | | | |

## Outside blade micrometer

NEW

Factory standard

Mahr

**Design:** Operating and reading parts matt chrome-plated, hard-lacquered steel bracket, hardened and ground spindle, carbide reinforced, quick drive, measuring force regulation through ratchet stop, with clamping device. Available from measuring range 25–-50 mm with dimension adjustment, in case.

**Application:** For measuring narrow grooves, recesses, etc.

| Order No. | Measurement range mm | 4132 Mahr | Reading mm | Spindle thickness mm | Drum Ø mm |
|---|---|---|---|---|---|
| 2025 | 0– 25 | 275.00 | 0.01 | 0.8 | 17.5 |
| 2050 | 25– 50 | 336.00 | 0.01 | 0.8 | 17.5 |
| 2075 | 50– 75 | 358.00 | 0.01 | 0.8 | 17.5 |
| 2100 | 75–100 | 390.00 | 0.01 | 0.8 | 17.5 |
| | | (W488) | | | |

## Outside disc micrometer

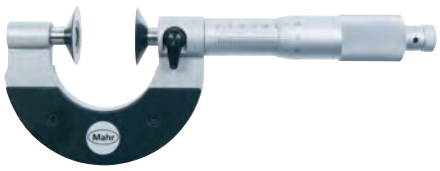
NEW

DIN 863-3

Mahr

**Design:** Operating and reading parts matt chrome-plated, hard-lacquered steel bracket, hardened and ground spindle, carbide reinforced, quick drive, measuring force regulation through ratchet stop, with clamping device. Available from measuring range 25–-50 mm with dimension adjustment, in case.

**Application:** For measuring tooth distances Wk from module 0.8 as indirect determination of tooth thickness for spur gears with straight and helical teeth, recesses on shafts, recess distances, centring wheels, soft materials such as rubber, cardboard, felt, etc.



| Order No. | Measurement range mm | 4132 Mahr | Reading mm | Spindle Ø mm | Drum Ø mm |
|---|---|---|---|---|---|
| 3025 | 0– 25 | 273.00 | 0.01 | 25.0 | 19.0 |
| 3050 | 25– 50 | 309.00 | 0.01 | 25.0 | 19.0 |
| 3075 | 50– 75 | 318.00 | 0.01 | 25.0 | 19.0 |
| 3100 | 75–100 | 378.00 | 0.01 | 25.0 | 19.0 |
| | | (W488) | | | |

## Outside micrometer for thread measurement

NEW

DIN 863-3

Mahr

**Design:** Operating and reading parts matt chrome-plated, steel bracket, spindle and anvil with mounting bore for exchangeable measuring inserts, hardened and ground, steel ball in bottom of hole for the installation of measurement inserts, anvil adjustable, measuring force regulation through ratchet stop, with clamping device. Supplied in a case.

**Application:** For measuring flanges and outer diameters on external threads by means of exchangeable measurement inserts.

**Note:** Adjustment dimensions (Order No. 4118, 📖 4/37).

| Order No. | Measurement range mm | 4132 Mahr | Reading mm | Spindle Ø mm | Drum Ø mm |
|---|---|---|---|---|---|
| 4025 | 0– 25 | 360.00 | 0.01 | 6.5 | 19.0 |
| 4050 | 25– 50 | 431.00 | 0.01 | 6.5 | 19.0 |
| 4075 | 50– 75 | 465.00 | 0.01 | 6.5 | 19.0 |
| 4100 | 75–100 | 504.00 | 0.01 | 6.5 | 19.0 |
| | | (W488) | | | |

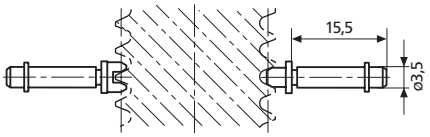
## Thread measuring inserts

NEW

**Design:** Made of wear-resistant special steel, hardened. With cylindrical mounting shank and retainer ring which allows free rotation inside the bore of measuring spindle and anvil. Supplied in pairs with rear sight and cone.

**Note:** For inclinations 0.20–0.45 mm the rear sight overbridges 3 gears. Setting therefore with thread adjustment pins, otherwise with dimensions adjustments.

DIN 863-3




Mahr

### 4132 Metric 60°

| Order No. | Thread pitch mm | 4132 Mahr Metric 60° |
|---|---|---|
| 4105 | 0.20 | 21.70 ◊ |
| 4110 | 0.25 | 21.70 ◊ |
| 4115 | 0.30 | 21.70 ◊ |
| 4120 | 0.35 | 21.70 ◊ |
| 4125 | 0.40 | 21.70 ◊ |
| 4130 | 0.45 | 21.70 ◊ |
| 4135 | 0.50–0.70 | 21.70 ◊ |
| 4140 | 0.70–1.00 | 21.70 ◊ |
| 4145 | 1.25–2.00 | 21.70 ◊ |
| 4150 | 2.00–3.50 | 21.70 ◊ |
| 4155 | 3.50–5.00 | 21.70 ◊ |
| 4160 | 5.00–7.00 | 21.70 ◊ |
| 4165 | 7.00–9.00 | 21.70 ◊ |

(W490)

### 4132 Trapeze 30°

| Order No. | Thread pitch mm | 4132 Mahr Trapeze 30° |
|---|---|---|
| 4170 | 1.00 | 110.00 ◊ |
| 4175 | 1.50 | 110.00 ◊ |
| 4180 | 2.00 | 110.00 ◊ |
| 4185 | 3.00 | 110.00 ◊ |
| 4190 | 4.00 | 110.00 ◊ |
| 4195 | 5.00 | 110.00 ◊ |
| 4200 | 6.00 | 110.00 ◊ |
| 4205 | 7.00 | 110.00 ◊ |
| 4210 | 8.00 | 110.00 ◊ |
| 4215 | 9.00 | 110.00 ◊ |
| 4220 | 10.00 | 110.00 ◊ |
| 4225 | 12.00 | 182.50 ◊ |
| 4230 | 14.00 | 182.50 ◊ |
| 4235 | 16.00 | 182.50 ◊ |
| 4240 | 18.00 | 447.00 ◊ |
| 4245 | 20.00 | 447.00 ◊ |

(W490)

### 4132 Whitworth 55°

| Order No. | Thread pitch mm | 4132 Mahr Whitworth 55° |
|---|---|---|
| 4250 | 40.00–32.00 | 27.75 ◊ |
| 4255 | 32.00–24.00 | 27.75 ◊ |
| 4260 | 24.00–18.00 | 27.75 ◊ |
| 4265 | 18.00–14.00 | 27.75 ◊ |
| 4270 | 14.00-10.00 | 27.75 ◊ |
| 4275 | 10.00– 7.00 | 27.75 ◊ |
| 4280 | 7.00– 4.50 | 27.75 ◊ |
| 4285 | 4.50– 3.00 | 58.50 ◊ |
| 4290 | 3.00– 2.50 | 21.70 ◊ |

(W490)

## Digital outside micrometer for measuring inserts

NEW

**Design:** Measuring spindle and anvil rustproof, fully hardened and ground, carbide reinforced, chrome-plated steel bracket, advance ratchet stop, quick drive and thermal protection. Digit height of the LCD display 8.5 mm, protection in acc. with IP 65, data output via radio transmission (with optional transmitter module) RS 232, Digimatic and USB. With mounting shaft for measuring inserts 3.5 mm. Supplied with battery CR 2032, 3 V, in case.

**Functions:** On and automatic off switch, mm/inch switching, automatic switching by means of turning the drum, key lock set for zero position, re-zeroing after switching deleted (absolute system), ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

DIN 863-3 | INOX | IP 52
Absolute function | RS232 | USB
Digimatic |

Mahr

4132 5010

| Order No. | Measurement range mm | 4132 Mahr | Reading mm | Spindle Ø mm | Drum Ø mm | Accessories |
|---|---|---|---|---|---|---|
| 5010 | 0–25 | 819.00 ◊ | 0.001 | 6.5 | 20.9 | incl. measuring inserts |
| 5015 | 0–25 | 409.00 ◊ (W488) | 0.001 | 6.5 | 20.9 | – |

## Measuring inserts (not shown)

NEW

| Order No. | Design | 4132 Mahr | Shaft length mm |
|---|---|---|---|
| 5020 | Flat, 6.5 mm | 30.75 ◊ | 6.0 |
| 5025 | Flat, 6.5 mm | 21.10 ◊ | 15.5 |
| 5030 | Reduced measuring face, 2.3 x 2 mm | 39.50 ◊ | 6.0 |
| 5035 | Reduced measuring face, 2.3 x 2 mm | 26.75 ◊ | 15.5 |
| 5040 | Plate, 11.3 mm | 35.00 ◊ | 6.0 |
| 5045 | Plate, 11.3 mm | 24.60 ◊ | 15.5 |
| 5050 | Convex, 6.5 mm | 38.00 ◊ | 6.0 |
| 5055 | Tip, 60° | 52.00 ◊ | 6.0 |
| 5060 | Cutting edge, 0.75 mm | 56.00 ◊ (W488) | 6.0 |

## Adjusting dimensions

**Design:** Measuring surface hardened, two parallel planar measuring surfaces, from length 300 mm with crowned measuring surfaces, insulated plastic handle.

| Order No. | Measurement range mm | 4118 |
|---|---|---|
| 1001 | 25 | 11.30 |
| 1004 | 50 | 11.30 |
| 1007 | 75 | 11.30 |
| 1010 | 100 | 13.55 |
| 1013 | 125 | 16.95 |
| 1016 | 150 | 16.95 (W400) |

| Order No. | Measurement range mm | 4118 |
|---|---|---|
| 1019 | 175 | 16.95 |
| 1022 | 200 | 16.95 |
| 1025 | 250 | 22.60 |
| 1030 | 325 | 50.80 |
| 1033 | 425 | 59.80 |
| 1036 | 525 | 67.70 (W400) |

## Adjusting dimension (not shown)

NEW

Mahr

**Design:** One side with tip, opposite side with prism-shaped recess. Tip and recess with flank angle of the thread to be examined.

| Order No. | Measurement range mm | 4118 Mahr | For thread |
|---|---|---|---|
| 2000 | 25 | 86.50 ◊ | metric, UST 60° |
| 2010 | 50 | 94.50 ◊ | metric, UST 60° |
| 2020 | 75 | 103.50 ◊ | metric, UST 60° |
| 2030 | 100 | 112.50 ◊ (W488) | metric, UST 60° |

| Order No. | Measurement range mm | 4118 Mahr | For thread |
|---|---|---|---|
| 2005 | 25 | 86.50 ◊ | Whitworth 55° |
| 2015 | 50 | 94.50 ◊ | Whitworth 55° |
| 2025 | 75 | 103.50 ◊ | Whitworth 55° |
| 2035 | 100 | 112.50 ◊ (W488) | Whitworth 55° |

## Micrometer stand

**Design:** With cast iron base. Tilt locking device.

format professional quality

| Order No. | For measurement range mm | 4108 format |
|---|---|---|
| 0001 | 0–300 | 33.70 (W416) |

## Inside caliper micrometer with measuring jaw

**Design:** Reading parts matt chrome-plated, measuring faces carbide-tipped and finely lapped, measuring force regulation by means of ratchet stop. Supplied in plastic case.

**Note:** Further sizes available upon request.

DIN 863

format professional quality

| Order No. | Measurement range mm | 4133 format | Reading mm | Spindle pitch mm | Measuring drum Ø mm |
|---|---|---|---|---|---|
| 0030 | 5– 30 | 73.60 | 0.01 | 0.5 | 17.0 |
| 0050 | 25– 50 | 81.90 | 0.01 | 0.5 | 17.0 |
| 0075 | 50– 75 | 91.50 | 0.01 | 0.5 | 17.0 |
| 0100 | 75–100 | 99.50 (W416) | 0.01 | 0.5 | 17.0 |

## Inside micrometer

**Design:** Reading parts matt chrome-plated, carbide measuring faces, spherically lapped. Screw-on extension rods with hand thermal protection handle. Supplied in a wooden box.

DIN 863-4

| Order No. | Measurement range mm | 4156 format | Reading mm | Spindle pitch mm | Extension rods mm | Measuring drum Ø mm |
|---|---|---|---|---|---|---|
| 0150 | 50– 150 | 444.50 | 0.01 | 0.5 | 25/50 | 17.0 |
| 0250 | 50– 250 | 540.50 | 0.01 | 0.5 | 25/50/100 | 17.0 |
| 0450 | 50– 450 | 666.50 | 0.01 | 0.5 | 25/50/100/200 | 17.0 |
| 0850 | 50– 850 | 837.50 | 0.01 | 0.5 | 25/50/100/200/400 | 17.0 |
| 1450 | 50–1450 | 1063.00 | 0.01 | 0.5 | 25/50/100/200/400/600 | 17.0 |
| | | (W416) | | | | |

## Extension for inside micrometer

| Order No. | Length mm | 4156 format |
|---|---|---|
| 0025 | 25 | 81.70 |
| 0050 | 50 | 83.10 |
| 0100 | 100 | 92.20 |
| 0200 | 200 | 113.00 |
| 0400 | 400 | 150.00 |
| 0600 | 600 | 209.50 |
| | | (W416) |

## Inside micrometer

NEW

**Design:** Reading parts matt chrome-plated, measuring faces spherically lapped, one measuring surfaces can be readjusted. Light pipe construction with high rigidity. From measurement range 100–125 mm with thermal protection handle and locking screw. Supplied in a case.

DIN 863-4

| Order No. | Measurement range mm | 4140 Mahr | Reading mm | Spindle pitch mm | Measuring drum Ø mm |
|---|---|---|---|---|---|
| 2040 | 30– 40 | 157.00 | 0.01 | 0.5 | 12.5 |
| 2050 | 40– 50 | 160.50 | 0.01 | 0.5 | 12.5 |
| 2070 | 50– 70 | 163.50 | 0.01 | 0.5 | 13.5 |
| 2100 | 70–100 | 166.00 | 0.01 | 0.5 | 13.5 |
| 2125 | 100–125 | 175.00 | 0.01 | 0.5 | 20.0 |
| 2150 | 125–150 | 183.50 | 0.01 | 0.5 | 20.0 |
| 2175 | 150–175 | 195.00 | 0.01 | 0.5 | 20.0 |
| 2200 | 175–200 | 201.00 | 0.01 | 0.5 | 20.0 |
| | | (W488) | | | |

## Extension for inside micrometer

NEW

| Order No. | Length mm | 4140 Mahr |
|---|---|---|
| 2225 | 25 | 69.00 |
| 2250 | 50 | 72.50 |
| 3100 | 100 | 77.50 |
| 3200 | 200 | 81.00 |
| 3400 | 400 | 113.00 |
| 3800 | 800 | 219.50 |
| | | (W488) |

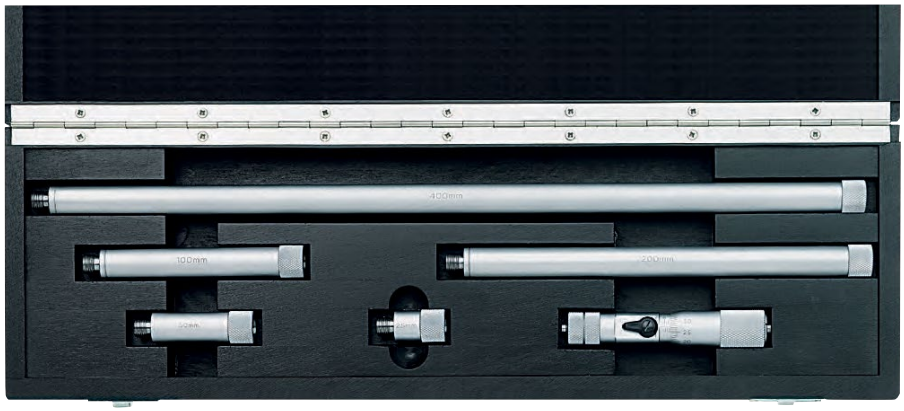
## Inside micrometer set

NEW

**Design:** Reading parts matt chrome-plated, measuring faces spherically lapped, one measuring surfaces can be readjusted. Light pipe construction with high rigidity. With thermal protection handle and locking screw. Supplied in a case.

Factory standard

Mahr



| Order No. | Measurement range mm | 4142 Mahr | Set contents |
|---|---|---|---|
| 0150 | 100–150 | 439.00 | 1 measuring element, internal dimensions 100–125 mm<br>1 extension, 25 mm |
| 0300 | 100–300 | 588.00 | 1 measuring element, internal dimensions 100–125 mm<br>1 extension, 25 mm<br>1 extension, 50 mm<br>1 extension, 100 mm |
| 0500 | 100–500 | 669.00 | 1 measuring element, internal dimensions 100–125 mm<br>1 extension, 25 mm<br>1 extension, 50 mm<br>1 extension, 100 mm<br>1 extension, 200 mm |
| 0900 | 100–900 | 780.00 | 1 measuring element, internal dimensions 100–125 mm<br>1 extension, 25 mm<br>1 extension, 50 mm<br>1 extension, 100 mm<br>1 extension, 200 mm<br>1 extension, 400 mm |

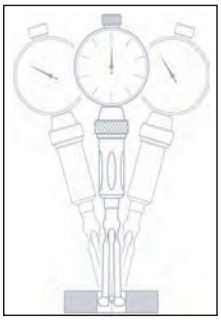
(W488)

## Bore gauge with automatic centering

**Design:** With fixed tips made of steel, moveable carbide measuring bolts, dial gauge ∅ 58 mm. Supplied with dial gauge, in a wooden case.

**Application:** For quick measurement of various hole properties.

format professional quality



| Order No. | Measurement range mm | 4143 format | Reading mm | Measuring depth mm |
|---|---|---|---|---|
| 0035 | 18– 35 | 114.00 | 0.01 | 115 |
| 0050 | 35– 50 | 114.00 | 0.01 | 150 |
| 0160 | 50–160 | 122.00 | 0.01 | 200 |

(W418)

## Setting instrument for inside measuring device

**Design:** Adjustment tool for precise adjustment of inside precision measuring instruments to the required target value using gauge blocks. Adjustment jaws are made of carbide, lapped to gauge block quality. Adjustment options horizontal and vertical. Accuracy: 2.0 µm. Supplied with base, in a wooden box.

**Note:** Supplied without gauge block.

| Order No. | For measurement range mm | 4151 format |
|---|---|---|
| 0045 | 4.5–160 | 1448.00 |
| 0180 | 18.0–290 | 1431.00 |
| 1600 | 160.0–510 | 2081.00 |

(W416)

## Inside measuring device with automatic centring

NEW

Mahr

**Design:** Hard chrome-plated measuring surfaces, constant measuring force via integrated measuring force spring. Supplied with measuring device holder, measuring probe and needle, in wooden case.

**Application:** For quick measurement of various hole properties. Flexible halves of the measuring probe are pressed apart with needle with precisely lapped cone. This movement is transferred to the display unit.

| Order No. | Measurement range mm | 4146 Mahr | Number measuring probe | Individual measuring range mm |
|---|---|---|---|---|
| 0015 | 1.5–4.2 | 1080.00 | 10 | 1.50–1.90<br>1.80–2.20<br>2.05–2.45<br>2.30–2.70<br>2.55–2.95<br>2.80–3.20<br>3.05–3.45<br>3.30–3.70<br>3.55–3.95<br>3.80–4.20 |
| 0020 | 3.7–7.3 | 648.00 | 7 | 3.70–4.30<br>4.20–4.80<br>4.70–5.30<br>5.20–5.80<br>5.70–6.30<br>6.20–6.80<br>6.70–7.30 |

(W490)

| Order No. | Measurement range mm | 4146 Mahr | Number measuring probe | Individual measuring range mm |
|---|---|---|---|---|
| 0025 | 6.7–10.3 | 648.00 | 7 | 6.70– 7.10<br>7.20– 7.80<br>7.70– 8.30<br>8.20– 8.80<br>8.70– 9.30<br>9.20– 9.80<br>9.70–10.30 |
| 0030 | 9.4–18.6 | 825.00 | 9 | 9.40–10.60<br>10.40–11.60<br>11.40–12.60<br>12.40–13.60<br>13.40–14.60<br>14.40–15.60<br>15.40–16.60<br>16.40–17.60<br>17.40–18.60 |

(W490)

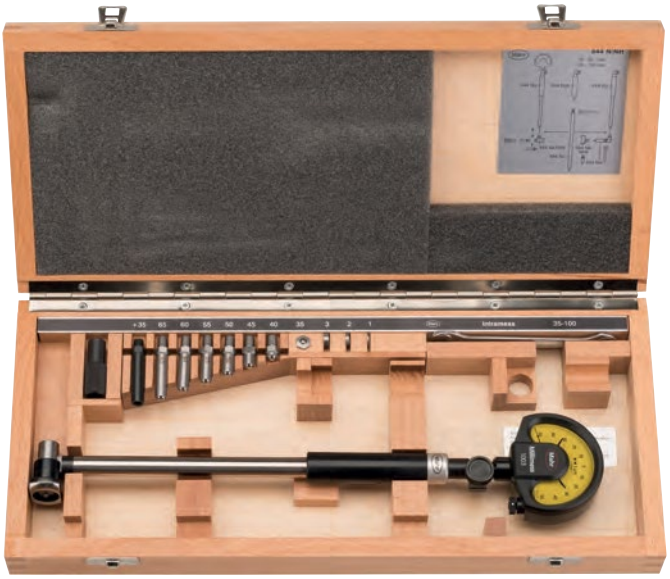
## Inside measuring device with automatic centring

NEW

Mahr

**Design:** Carbide reinforced measuring surfaces, constant measuring force via integrated measuring force spring. Broad centring bridge for automatic centring in hole. With exchangable contact with hardened steel ball. Measuring pin movements are transferred via the ring segment to the display device. Device shaft and transmission rod made of Invar steel (resistant against all heat influences, warm hands do not impact the measuring result). Supplied with measuring device holder, measuring probe and contact, in wooden case.

**Application:** For quick measurement of various hole properties.



| Order No. | Measurement range mm | 4146 Mahr | Measuring probe path mm | Measuring depth mm |
|---|---|---|---|---|
| 0040 | 18– 50 | 465.00 | 1.3 | 115 |
| 0045 | 35–100 | 537.00 (W490) | 1.3 | 148 |

## Bore micrometer

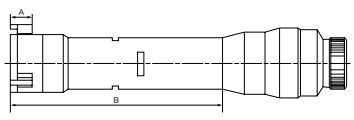
**Design:** Reading parts glare-free matt chrome-plated, measuring drum with ratchet stop, carbide-tipped measuring faces. Up to measurement range 6 mm with 2 point measurement, from measurement range 6 mm with 3 point measurement. Supplied in plastic case.

DIN 863

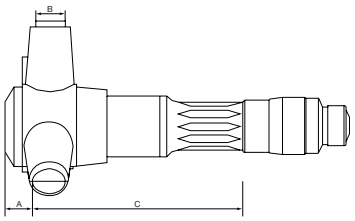
format professional quality

**Application:** Up to measurement range 100 mm for through-hole/blind hole bores, from measurement range 100 mm for through-hole bores.

**Note:** Up to measurement range 100 mm with adjustment ring.




Measurement range 6–100 mm




Measurement range 100–300 mm

| Order No. | Measurement range mm | 4161 format | Reading mm | Error limit µm | A mm | B mm | C mm |
|---|---|---|---|---|---|---|---|
| 0001 | 3– 4 | 331.50 | 0.001 | 4 | – | – | – |
| 0004 | 4– 5 | 331.50 | 0.001 | 4 | – | – | – |
| 0007 | 5– 6 | 331.50 | 0.001 | 4 | – | – | – |
| 0010 | 6– 8 | 259.00 | 0.001 | 4 | 2.8 | 52 | – |
| 0013 | 8–10 | 259.00 | 0.001 | 4 | 2.8 | 52 | – |
| 0016 | 10–12 | 259.00 | 0.001 | 4 | 2.8 | 52 | – |
| 0019 | 11–14 | 207.50 | 0.005 | 4 | 6.3 | 75 | – |
| 0022 | 14–17 | 207.50 | 0.005 | 4 | 6.3 | 75 | – |
| 0025 | 17–20 | 207.50 | 0.005 | 4 | 6.3 | 75 | – |
| 0028 | 20–25 | 259.00 | 0.005 | 4 | 9.5 | 85 | – |
| 0031 | 25–30 | 259.00 | 0.005 | 4 | 9.5 | 85 | – |
| 0034 | 30–35 | 259.00 | 0.005 | 4 | 9.5 | 85 | – |
| 0037 | 35–40 | 259.00 (W418) | 0.005 | 4 | 9.5 | 85 | – |

Continued overleaf

## Bore micrometer

Continued

| Order No. | Measurement range mm | 4161 format | Reading mm | Error limit µm | A mm | B mm | C mm |
|---|---|---|---|---|---|---|---|
| 0040 | 40– 50 | 311.00 | 0.005 | 5 | 18.0 | 90 | – |
| 0043 | 50– 60 | 311.00 | 0.005 | 5 | 18.0 | 90 | – |
| 0046 | 60– 70 | 331.50 | 0.005 | 5 | 18.0 | 90 | – |
| 0049 | 70– 80 | 331.50 | 0.005 | 5 | 18.0 | 90 | – |
| 0052 | 80– 90 | 352.50 | 0.005 | 5 | 18.0 | 90 | – |
| 0055 | 90–100 | 352.50 | 0.005 | 5 | 18.0 | 90 | – |
| 0058 | 100–125 | 456.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| 0061 | 125–150 | 456.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| 0064 | 150–175 | 456.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| 0067 | 175–200 | 456.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| 0070 | 200–225 | 539.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| 0073 | 225–250 | 539.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| 0076 | 250–275 | 539.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| 0079 | 275–300 | 539.00 | 0.005 | 8 | 19.0 | 18 | 132 |
| | | (W418) | | | | | |

## Bore micrometer set

**Design:** Supplied with adjustment rings and screwdriver, in a wooden case.

| Order No. | Measurement range mm | 4175 format | Set contents |
|---|---|---|---|
| 0006 | 3– 6 | 923.00 | 1 two point inside micrometer each 3–4 mm, 4–5 mm, 5–6 mm, 1 adjusting ring Ø 4 mm, Ø 5 mm and Ø 6 mm |
| 0012 | 6– 12 | 728.50 | 1 three point inside micrometer each, 6–8 mm, 8–10 mm, 10–12 mm, 1 adjusting ring Ø 8 mm and Ø 10 mm |
| 0020 | 11– 20 | 469.50 | 1 three point inside micrometer each, 11–14 mm, 14–17 mm, 17–20 mm, 1 adjusting ring Ø 11 mm and Ø 17 mm |
| 0040 | 20– 40 | 822.50 | 1 three point inside micrometer each, 20–25 mm, 25–30 mm, 30–35 mm, 35–40 mm, 1 adjusting ring Ø 25 mm and Ø 35 mm |
| 0100 | 40–100 | 1655.00 | 1 three point inside micrometer each, 40–50 mm, 50–60 mm, 60–70 mm, 70–80 mm, 80–90 mm, 90–100 mm, 1 adjusting ring Ø 50 mm, Ø 70 mm and Ø 90 mm |
| | | (W418) | |

## Self-centering inside micrometer.

NEW

DIN 863-4

Mahr

**Design:** Reading parts glare-free matt chrome-plated, measuring spindle rustproof, fully hardened and ground, quick drive with ratchet stop, from 12 mm carbide reinforced measuring faces. Supplied with Allen key and key to change measuring heads (from 30 mm), in plastic case.

**Application:** For the measurement of through-holes, blind holes and centering shoulders.

**Note:** Up to measuring range 40 mm measuring head made of aluminium to save weight.

| Order No. | Measurement range mm | 4176 Mahr | Reading mm | Error limit µm |
|---|---|---|---|---|
| 0010 | 6– 8 | 360.00 | 0.001 | 4 |
| 0015 | 8–10 | 360.00 | 0.001 | 4 |
| 0020 | 10–12 | 364.00 | 0.001 | 4 |
| 0025 | 12–16 | 364.00 | 0.001 | 4 |
| 0030 | 16–20 | 381.00 | 0.001 | 4 |
| 0035 | 20–25 | 390.00 | 0.001 | 4 |
| 0040 | 25–30 | 397.00 | 0.001 | 4 |
| 0045 | 30–40 | 447.00 | 0.001 | 4 |
| 0050 | 40–50 | 447.00 | 0.001 | 4 |
| | | (W488) | | |

| Order No. | Measurement range mm | 4176 Mahr | Reading mm | Error limit µm |
|---|---|---|---|---|
| 0055 | 50– 60 | 516.00 | 0.001 | 5 |
| 0060 | 60– 70 | 531.00 | 0.001 | 5 |
| 0065 | 70– 85 | 549.00 | 0.001 | 5 |
| 0070 | 85–100 | 561.00 | 0.001 | 5 |
| 0075 | 100-125 | 783.00 | 0.001 | 6 |
| 0080 | 125–150 | 924.00 | 0.001 | 6 |
| 0085 | 150–175 | 999.00 | 0.001 | 7 |
| 0090 | 175–200 | 1045.00 | 0.001 | 7 |
| | | (W488) | | |

## Self-centering inside micrometer set

NEW

Mahr

DIN 863-4

**Design:** Reading parts glare-free matt chrome-plated, measuring spindle rustproof, fully hardened and ground, quick drive with ratchet stop, from 12 mm carbide reinforced measuring faces. Supplied with Allen key and key to change measuring heads (from 30 mm), in plastic case.

**Application:** For the measurement of through-holes, blind holes and centering shoulders.

**Note:** Up to measuring range 40 mm measuring head made of aluminium to save weight.

| Order No. | Measurement range mm | 4176 Mahr | Set contents |
|---|---|---|---|
| 0100 | 6– 12 | 1015.00 | 3 micrometers 6.0–8.0 mm, 8.0–10.0 mm and 10.0–12.0 mm<br>2 adjusting rings 8 mm, 10 mm |
| 0110 | 12– 20 | 789.00 | 2 micrometers 12.0–16.0 mm and 16.0–20.0 mm<br>1 adjusting ring 16 mm |
| 0115 | 20– 50 | 1790.00 | 4 micrometers 20.0–25.0 mm, 25.0–30.0 mm, 30.0–40.0 mm and 40.0–50.0 mm<br>2 adjusting rings, 25 and 40 mm |
| 0120 | 50–100 | 2125.00 | 4 micrometers 50.0–60.0 mm, 60.0–70.0 mm, 70.0–85.00 mm and 85.0–100.0 mm<br>2 adjusting rings, 60 and 85 mm |
| | | (W488) | |

## Digital inside micrometer

NEW

Mahr

DIN 863-4 | IP 52 | Absolute function | RS232 | USB | Digimatic

**Design:** With 3-line, self-centring measuring head, measuring probe from 12 mm carbide reinforced. From 40 mm measuring head made of aluminium to save weight, digit height of LCD display 8.5 mm, data output variable with wireless connection (with optional transmitter module), RS 232, Digimatic and USB. Supplied with basic unit, measuring head and battery CR 2032, 3 V, in case.

**Functions:** With mm/inch switching, automatic switching by means of turning the drum, key lock set for zero position, re-zeroing after switching deleted (absolute system), ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value), ABS (switching from relative to absolute measurement).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4168 Mahr | Reading mm | Error limit µm | Measuring depth mm |
|---|---|---|---|---|---|
| 3000 | 6– 8 | 1030.00 | 0.001 | 4 | 58 |
| 3005 | 8– 10 | 1030.00 | 0.001 | 4 | 58 |
| 3010 | 10– 12 | 1035.00 | 0.001 | 4 | 58 |
| 3015 | 12– 16 | 1035.00 | 0.001 | 4 | 64 |
| 3020 | 16– 20 | 1070.00 | 0.001 | 4 | 64 |
| 3025 | 20– 25 | 1090.00 | 0.001 | 4 | 68 |
| 3030 | 25– 30 | 1095.00 | 0.001 | 4 | 68 |
| 3035 | 30– 40 | 1135.00 | 0.001 | 4 | 76 |
| 3040 | 40– 50 | 1135.00 | 0.001 | 4 | 76 |
| 3045 | 50– 60 | 1200.00 | 0.001 | 5 | 79 |
| 3050 | 60– 70 | 1215.00 | 0.001 | 5 | 79 |
| 3055 | 70– 85 | 1225.00 | 0.001 | 5 | 97 |
| 3060 | 85–100 | 1235.00 | 0.001 | 5 | 97 |
| 3065 | 100–125 | 1485.00 ◊ | 0.001 | 6 | 132 |
| 3070 | 125–150 | 1625.00 ◊ | 0.001 | 6 | 132 |
| 3075 | 150–175 | 1715.00 ◊ | 0.001 | 7 | 132 |
| 3080 | 175–200 | 1740.00 ◊ | 0.001 | 7 | 132 |
| | | (W488) | | | |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Digital inside micrometer set

NEW

DIN 863-4 | IP 52 | Absolute function | RS232 | USB | Digimatic

Mahr

**Design:** With 3-line, self-centring measuring head, measuring probe from 12 mm carbide reinforced. From 40 mm measuring head made of aluminium to save weight, digit height of LCD display 8.5 mm, data output variable with wireless connection (with optional transmitter module), RS 232, Digimatic and USB. Supplied with basic unit, measuring head and battery CR 2032, 3 V, in case.

**Functions:** With mm/inch switching, automatic switching by means of slide movement, key lock set for zero position, re-zeroing after switching deleted (absolute system), ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value), ABS (switching from relative to absolute measurement).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4168 Mahr | Set contents |
|---|---|---|---|
| 3100 | 6– 12 | 1690.00 | 3 micrometers 6.0–8.0 mm, 8.0–10.0 mm and 10.0–12.0 mm<br>2 adjusting rings 8 mm, 10 mm |
| 3110 | 12– 20 | 1475.00 | 2 micrometers 12.0–16.0 mm and 16.0–20.0 mm<br>1 adjusting ring 16 mm |
| 3120 | 20– 50 | 2290.00 | 4 micrometers 20.0–25.0 mm, 25.0–30.0 mm, 30.0–40.0 mm and 40.0–50.0 mm<br>2 adjusting rings, 25 and 40 mm |
| 3125 | 50–100 | 2755.00 | 4 micrometers 50.0–60.0 mm, 60.0–70.0 mm, 70.0–85.0 mm and 85.0–100.0 mm<br>2 adjusting rings, 60 and 85 mm |
| | | (W488) | |

## Inside measuring pistol

NEW

Factory standard

Mahr

**Design:** Connection thread to exchange measuring heads, self-centring measuring head with three measuring heads protruding from the right offset by 120°, measuring probe from 12 mm carbide reinforced. From 12 mm measuring probe to bottom of hole, from 40 mm measuring head made of aluminium to save weight. Supplied with: Basic device, measuring head, without display device, in case.

**Application:** For the measurement of through-holes, blind holes and centering shoulders.

**Note:** Dial gauge 0.0005 mm (Order No. 4246 0050, 📖 4/51).

| Order No. | Measurement range mm | 4168 Mahr | Error limit µm | Measuring depth mm | Measuring depth with extension mm |
|---|---|---|---|---|---|
| 4000 | 6– 8 | 759.00 ◊ | 3 | 58 | 133 |
| 4010 | 8– 10 | 759.00 ◊ | 3 | 58 | 133 |
| 4015 | 10– 12 | 771.00 ◊ | 3 | 58 | 133 |
| 4020 | 12– 16 | 777.00 ◊ | 3 | 64 | 139 |
| 4025 | 16– 20 | 798.00 ◊ | 3 | 64 | 139 |
| 4030 | 20– 25 | 798.00 ◊ | 3 | 68 | 218 |
| 4035 | 25– 30 | 819.00 ◊ | 3 | 68 | 218 |
| 4040 | 30– 40 | 858.00 ◊ | 3 | 76 | 226 |
| 4045 | 40– 50 | 858.00 ◊ | 3 | 76 | 226 |
| 4050 | 50– 60 | 924.00 ◊ | 4 | 79 | 229 |
| 4055 | 60– 70 | 936.00 ◊ | 4 | 79 | 229 |
| 4060 | 70– 85 | 951.00 ◊ | 4 | 97 | 247 |
| 4065 | 85–100 | 963.00 ◊ | 4 | 97 | 247 |
| | | (W488) | | | |

## Inside measuring pistol set

NEW

Factory standard | Absolute function | RS232 | USB | Digimatic

Mahr

**Design:** Connection thread to exchange measuring heads, self-centring measuring head with three measuring heads protruding from the right offset by 120°, measuring probe from 12 mm carbide reinforced. From 12 mm measuring probe to bottom of hole, from 40 mm measuring head made of aluminium to save weight, data output variable radio transmission, RS 232, Digimatic and USB. Supplied with: Basic device, measurinf head and display device, in case.

**Application:** For the measurement of through-holes, blind holes and centering shoulders.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value), ABS (switching from relative to absolute measurement).

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4168 Mahr | Set contents |
|---|---|---|---|
| 4070 | 6– 12 | 1795.00 ◊ | 3 micrometers 6.0–8.0 mm, 8.0–10.0 mm and 10.0–12.0 mm<br>2 adjusting rings 8 mm, 10 mm<br>1 dial gauge 0.0005 mm |
| 4075 | 12– 20 | 1600.00 ◊ | 2 micrometers 12.0–16.0 mm and 16.0–20.0 mm<br>1 adjusting ring 16 mm<br>1 dial gauge 0.0005 mm |
| 4080 | 20– 50 | 2360.00 ◊ | 4 micrometers 20.0–25.0 mm, 25.0–30.0 mm, 30.0–40.0 mm and 40.0–50.0 mm<br>2 adjusting rings, 25 and 40 mm<br>1 dial gauge 0.0005 mm |
| 4085 | 50–100 | 2865.00 ◊ | 4 micrometers 50.0–60.0 mm, 60.0–70.0 mm, 70.0–85.0 mm and 85.0–100.0 mm<br>2 adjusting rings, 60 and 85 mm<br>1 dial gauge 0.0005 mm |
| | | (W488) | |

## Precision dial gauge

DIN 878

**Design:** Robust metal housing, measuring bolts and clamping shaft (Ø 8 mm h6) are hardened, ground and made of stainless steel. Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

**4200** Matt chrome-plated, with locking screw.

**4203** Revolving dial for zero setting, two adjustable tolerance marks.

4200 Standard design

format professional quality

4203 With increased measuring force

Käfer

4203 Numbered anticlockwise

Käfer

4203 Inverted spring balancer

Käfer

| Order No. | Measurement range mm | 4200 format | 4203 Käfer | Variant | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|---|---|
| 0010 | 10 | 19.70 | 33.60 | Standard design | 0.01 | 58 | 1.0 |
| 0015 | 10 | – | 46.00 | Numbered anticlockwise | 0.01 | 58 | 1.0 |
| 0020 | 10 | – | 52.70 ◊ | With increased measuring force | 0.01 | 58 | 1.0 |
| 0025 | 10 | – | 52.70 ◊ | With reduced measuring force | 0.01 | 58 | 1.0 |
| 0030 | 10 | – | 51.60 | With inverted spring balancer | 0.01 | 58 | 1.0 |
| | | (W422) | (W423) | | | | |

## Precision dial gauge, protected against impacts

DIN 878

**Design: with impact protection,** measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, rustproof steel, the measuring bolt is lapped. Supplied in plastic case.

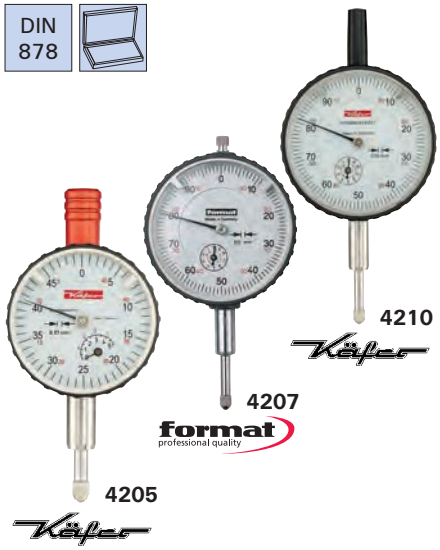
**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

**4205** The sleeve, which is guided accurately over the measuring bolt, is arranged and sprung so that impacts are not transferred into the dial gauge gearing.

**4207** High-quality impact protection through a shockproof wheel in a mature design lessens the risk of damage occurring on the teeth.

**4210** With precision indicator adjustment. The sleeve, which is guided accurately over the measuring bolt, is arranged and sprung in such a way that impacts are not transferred into the dial gauge gear.

| Order No. | Measurement range mm | 4205 Käfer | 4207 format | 4210 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|---|---|
| 0005 | 5 | 63.40 | – | – | 0.01 | 40 | 0.5 |
| 0010 | 10 | – (W423) | 42.60 (W422) | 80.20 (W423) | 0.01 | 58 | 1.0 |




## Precision dial gauge with large measurement range

Factory standard

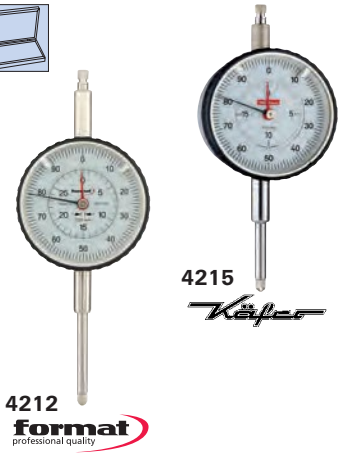
**Design:** Measuring bolts and clamping shaft (Ø 8 mm h6 for measuring range 100 mm Ø 10 mm h6) are made of resistant, rustproof steel, the measuring bolt is lapped. The bearing points on the measuring instruments are embedded in ruby jewel components. Supplied in a case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

**4212** With concentrically arranged millimetre display.

**4215** With shockproof wheel, which protects the measuring bolt against damage.

| Order No. | Measurement range mm | 4212 format | 4215 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|---|
| 0020 | 20 | – | 95.80 | 0.01 | 58 | 1.0 |
| 0030 | 30 | 87.10 | 98.40 | 0.01 | 58 | 1.0 |
| 0050 | 50 | 125.00 | 132.00 | 0.01 | 58 | 1.0 |
| 0080 | 80 | – | 268.00 | 0.01 | 58 | 1.0 |
| 0100 | 100 | 321.00 (W422) | 339.50 (W423) | 0.01 | 80 | 1.0 |




## Precision dial gauge

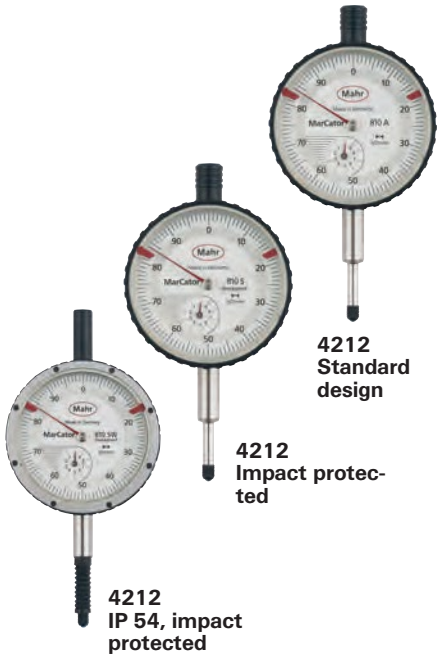
NEW

DIN 787 | IP 54

**Design:** High-contrast dial, adjustable tolerance marks, chrome-plated housing, lifting cap with dust-protection function at end of measuring bolt, precision-toothed wheels and sprockets. Supplied in a case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

| Order No. | Measurement range mm | 4212 Mahr | Design | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|---|
| 0110 | 10 | 40.00 | Standard design | 0.01 | 58 | 1.0 |
| 0115 | 10 | 59.00 | Impact protected | 0.01 | 58 | 1.0 |
| 0120 | 10 | 84.50 (W488) | IP 54, impact protected | 0.01 | 61 | 1.0 |

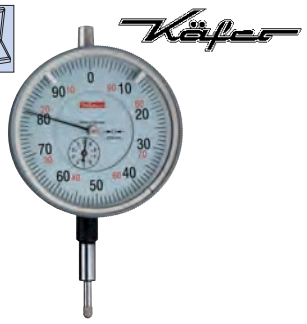


## Large precision dial gauge

**Design:** Resistant synthetic glass. With concentrically arranged millimetre display; the measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, rustproof steel, the measuring bolt is lapped. Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

Factory standard



| Order No. | Measurement range mm | 4222 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|
| 0810 | 10 | 94.70 | 0.01 | 80 | 1.0 |
| 1010 | 10 | 109.50 (W423) | 0.01 | 100 | 1.0 |

## Small precision dial gauge

**Design:** Resistant synthetic glass, measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, stainless steel, the measuring bolt is lapped. Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

**4218** Robust metal housing

**4220** Rotating dial for zero setting, with two adjustable tolerance marks.

DIN 878

4218

4220

| Order No. | Measure-ment range mm | 4218 format | 4220 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|---|
| 0003 | 3 | 41.50 | – | 0.01 | 40 | 0.5 |
| 3203 | 3 | – | 61.10 | 0.01 | 32 | 0.5 |
| 4003 | 5 | – | 40.20 | 0.01 | 40 | 0.5 |
| 4010 | 10 | – | 68.40 | 0.01 | 40 | 1.0 |
| | | (W422) | (W423) | | | * With impact protection. |

## Small precision dial gauge

NEW

**Design:** High-contrast dial, adjustable tolerance marks, chrome-plated housing, lifting cap with dust-protection function at end of measuring bolt, precision-toothed wheels and sprockets. Supplied in a case.

**Application:** All locations where spatial situations call for a smaller display device.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

DIN 878

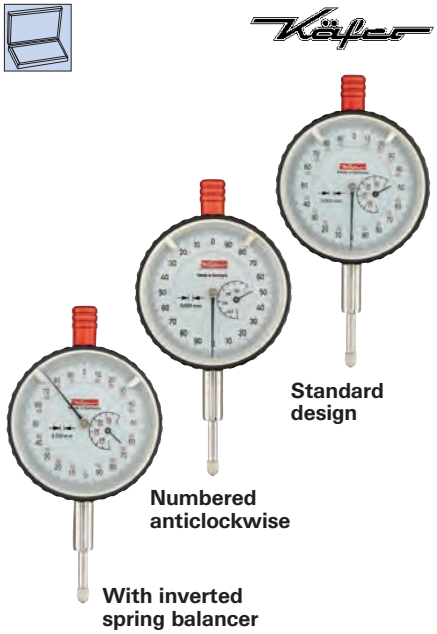
4220

| Order No. | Measurement range mm | 4220 Mahr | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|
| 4015 | 3 | 47.50 | 0.01 | 40 | 0.5 |
| 4020 | 3* | 60.00 | 0.01 | 40 | 0.5 |
| 4025 | 5 | 58.00 (W488) | 0.01 | 40 | 1.0 * With impact protection. |

## Precision dial gauge

**Design: With precision toothed wheel measuring mechanism** with high resolution of the measurement value. The bearing points on the measuring instruments are are embedded in ruby jewel components. Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.



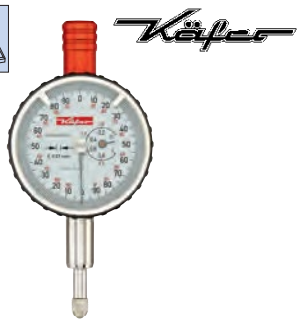

| Order No. | Measure-ment range mm | 4224 Käfer | Variant | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|---|
| 0010 | 1 | 98.00 | Standard design | 0.001 | 58 | 0.2 |
| 0015 | 1 | 101.50 | Numbered anticlockwise | 0.001 | 58 | 0.2 |
| 0020 | 1 | 108.00 ◊ | With increased measuring force | 0.001 | 58 | 0.2 |
| 0025 | 1 | 108.00 ◊ | With reduced measuring force | 0.001 | 58 | 0.2 |
| 0030 | 1 | 107.00 (W423) | With inverted spring balancer | 0.001 | 58 | 0.2 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Precision dial gauge, protected against impacts

Factory standard



**Design: With impact protection** and **precision toothed wheel measuring mechanism** with high resolution of the measurement value. The bearing points on the measuring instruments are are embedded in ruby jewel components. The sleeve, which is guided accurately over the measuring bolt, is arranged and sprung in such a way that impacts are not transferred into the dial gauge gear. Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

| Order No. | Measurement range mm | 4225 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|
| 4001 | 1 | 109.00 | 0.001 | 40 | 0.2 |
| 4005 | 5 | 131.50 | 0.001 | 40 | 0.2 |
| 5801 | 1 | 114.50 | 0.001 | 58 | 0.2 |
| 5805 | 5 | 127.50 | 0.001 | 58 | 0.2 |
| | | (W423) | | | |

## Precision dial gauge, oil and waterproof

DIN 878

**Design: With impact protection,** measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, rustproof steel, the measuring bolt is lapped. The sleeve, which is guided accurately over the measuring bolt, is arranged and sprung in such a way that impacts are not transferred into the dial gauge gear. With bellows on the measuring bolt and O-ring seal on scale and rear panel to protect against liquids and contamination. Supplied in a case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

| Order No. | Measurement range mm | 4228 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|
| 4403 | 3 | 96.80 | 0.01 | 44.5 | 0.5 |
| 6110 | 10 | 96.80 | 0.01 | 61.5 | 1.0 |
| 6101 | 1* | 155.00 | 0.001 | 61.5 | 0.2 |
| | | (W423) | | | |

* Accuracy acc. to company standard.

## Precision dial gauge with holding magnet

DIN 878

**Design:** Robust metal housing, measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, stainless steel, the measuring bolt is lapped. Rotating dial for zero setting, with two adjustable tolerance marks. **With strong rear wall magnet for use without stand and holder.** Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

| Order No. | Measurement range mm | 4230 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|
| 0005 | 3 | 99.80 | 0.01 | 40 | 0.5 |
| 0010 | 10 | 96.00 | 0.01 | 58 | 1.0 |
| | | (W423) | | | |

## Precision dial gauge with precision dial indicator measuring element FEINIKA

Factory standard

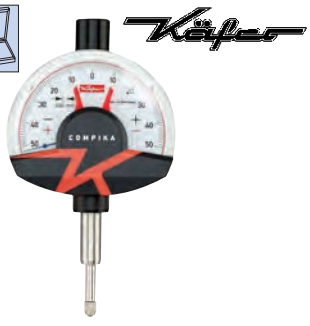
**Design: With impact protection.** All moving parts of the measuring instrument are embedded in high-quality ruby jewels components. Measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, stainless steel, the measuring bolt is lapped. Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

| Order No. | Measurement range mm | 4232 Käfer | Reading mm | Housing Ø mm | 1 pointer revolution mm |
|---|---|---|---|---|---|
| 4001 | 1 | 168.50 | 0.001 | 40 | 0.1 |
| 5801 | 1 | 168.50 | 0.001 | 58 | 0.1 |
| | | (W423) | | | |

## Precision indicator Compika

DIN 879



**Design: With impact protection.** All moving parts of the measuring instrument are embedded in high-quality ruby jewels components. Measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, stainless steel, the measuring bolt is lapped. Supplied in plastic case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

| Order No. | Measurement range mm | 4235 Käfer | Reading mm | Housing Ø mm | Free stroke mm |
|---|---|---|---|---|---|
| 0101 | 0.5 | 135.50 | 0.01 | 62 | 2.5 |
| 1001 | 0.1 | 170.00 | 0.001 | 62 | 3.0 |
| | | (W423) | | | |

## Cable release/Lifting lever

**Design:** Special accessories for dial gauges and precision indicators.
**Cable release:** For all precision indicators. On dial gauges, there must be a special adaptor for cable releases (special design).
**Lifting lever:** For dial gauges. Pivots to allow the user to bring it quickly into the most suitable position.

**Application:** For quick lifting of the measuring bolt.

| Order No. | Design | 4239 Käfer |
|---|---|---|
| 0005 | Cable release | 7.95 |
| 0010 | Lifting lever | 5.90 |
| | | (W423) |

4239 0005

4239 0010

## Precision indicator

NEW

Factory standard | IP 54

**Design:** With special impact protection. All moving parts of the measuring instrument are embedded in stones. Measuring bolts and clamping shaft (Ø 8 mm h6) are made of resistant, rustproof steel, adjustable tolerance marks, blockable fine adjustment. Supplied in a case.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.

| Order No. | Measurement range mm | 4239 Mahr | Reading mm | Housing Ø mm | Free stroke mm | Protection type |
|---|---|---|---|---|---|---|
| 0015 | 0.025 | 336.00 | 0.0005 | 63 | 2.8 | – |
| 0020 | 0.025 | 351.00 | 0.0005 | 63 | 2.8 | IP 54 |
| 0025 | 0.050 | 191.50 | 0.0010 | 63 | 2.8 | – |
| 0030 | 0.050 | 207.50 | 0.0010 | 63 | 2.8 | IP 54 |
| 0035 | 0.130 | 191.50 | 0.0050 | 63 | 2.5 | – |
| 0040 | 0.130 | 207.50 | 0.0050 | 63 | 2.5 | IP 54 |
| 0045 | 0.250 | 141.00 | 0.0100 | 63 | 2.5 | – |
| 0050 | 0.250 | 161.50 | 0.0100 | 63 | 3.5 | IP 54 |
| | | (W489) | | | | |

## Measuring insert for dial gauges and precision indicators

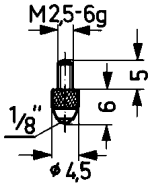
**Design:** With external thread M2.5. All dial gauges and precision indicators are standard supplied with measuring insert No 1 made of hardened steel.

**4236** Steel

**4237** Carbide tipped

| Order No. | Illust-ration | 4236 Käfer | 4237 Käfer | Design |
|---|---|---|---|---|
| 0001 | 1 | 1.05 | 4.78 | Standard |
| 0002 | 10 | 4.04 | 26.90 | flat, Ø 4.8 mm |
| 0003 | 11 | 4.53 | 44.00 | flat, Ø 10 mm |
| 0018 | 11 | 19.95 | – | flat, Ø 20 mm |
| 0019 | 11 | 19.95 | – | flat, Ø 35 mm |
| 0004 | 12 | 5.55 | 87.00 | curved, Ø 10 mm |
| 0005 | 13 | 5.55 | 49.70 | pointed, 45° |
| 0006 | 14 | 6.75 | 23.40 | cyl. pin Ø 1.5 mm |
| 0007 | 15 | 5.25 | – | pointed, 0.5 mm |
| 0008 | 16 | 3.28 | – | convex, 16 mm long |
| 0009 | 17 | – | 12.10 | convex, 26 mm long |
| 0010 | 18 | 6.75 | 24.40 | Ball Ø 1 mm |
| 0011 | 18 | 6.75 | 24.40 | Ball Ø 2 mm |
| 0012 | 18 | 6.75 | 24.40 | Ball Ø 3 mm |
| 0013 | 18 | 6.75 | 24.40 | Ball Ø 4 mm |
| 0014 | 18 | 6.75 | 24.40 | Ball Ø 5 mm |
| 0017 | 20 | 7.25 | 54.20 | Cutting edge, 5 mm wide |
| 0016 | 21 | 3.28 | – | convex, Ø 3 mm |
| 0020 | 22 | 121.50 | – | Roll, Ø 7.5 mm |
| | | (W423) | (W423) | |

Measuring inserts with ruby or sapphire balls available on request.

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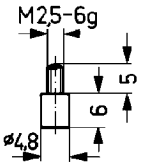


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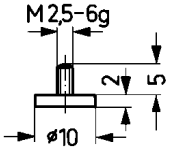


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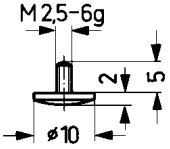


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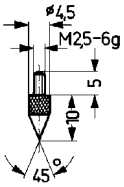


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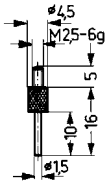


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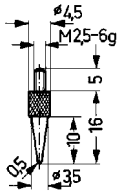


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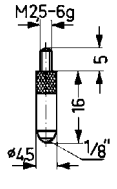


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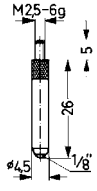


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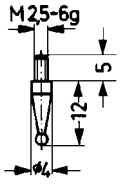


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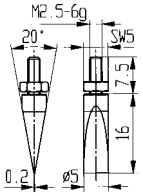


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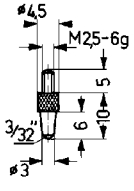


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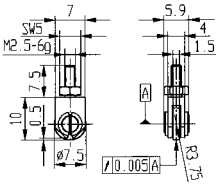


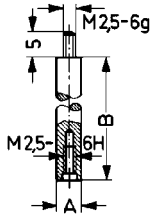

22

## Extension piece for measuring insert

**Design:** Made of hardened steel, with external thread ∅ M2.5, without measuring inserts.

| Order No. | Length mm | 4238 Käfer |
|---|---|---|
| 0010 | 10 | 4.16 |
| 0020 | 20 | 4.16 |
| 0030 | 30 | 4.16 |
| 0040 | 40 | 4.16 |
| 0050 | 50 | 4.16 |
| 0060 | 60 | 4.16 |
| 0070 | 70 | 4.16 |
| 0080 | 80 | 4.16 |
| 0090 | 90 | 4.16 |
| 0100 | 100 | 4.16 |

(W423)




## Digital dial gauge

**Design:** Digit height of LCD 12 mm. With interchangeable stylus tips M2.5. Clamping shaft ∅ 8 mm. Delivered with battery CR 2032, 3 V, in transport packaging.

**Functions:** On and off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Replacement battery (Order No. 4026 2032, 📖 4/13).

Factory standard | Absolute function

| Order No. | Measurement range mm | 4243 | Reading mm | Housing ∅ mm | Accuracy mm |
|---|---|---|---|---|---|
| 0011 | 12.5 | 87.20 | 0.01 | 57 | 0.02 |

(W436)

## Digital dial gauge

**Design:** Digit height of LCD 10 mm. With interchangeable stylus tips M2.5. Clamping shank ∅ 8 mm. With data output USB. Supplied with battery CR 2032, 3 V, in transport packaging.

**Functions:** On and off switch, mm/inch-switching, ORIGIN, TOL, ABS (absolute and relative measurements), zero setting possible in any position.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Replacement battery (Order No. 4026 2032, 📖 4/13).

Factory standard | IP 54 | Absolute function | USB

| Order No. | Measurement range mm | 4244 | Reading mm | Housing ∅ mm | Accuracy mm |
|---|---|---|---|---|---|
| 0011 | 12.5 | 104.50 | 0.01 | 60 | 0.01 |
| 0021 | 25.0 | 138.50 | 0.01 | 60 | 0.01 |
| 0016 | 12.5 | 217.50 | 0.001 | 60 | 0.004 |
| 0026 | 25.0 | 295.00 | 0.001 | 60 | 0.005 |

(W435)

## Digital dial gauge

**Design:** Digit height of LCD 12 mm. With interchangeable stylus tips M2.5. Clamping shank ∅ 8 mm. With data output RS 232, USB and Digimatic. Supplied with battery CR 2032, 3 V, in transport packaging.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position, ± pre-set function (setting a numerical value).

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Replacement battery (Order No. 4026 2032, 📖 4/13).
Data cable USB (Order No. 4025 0003, 📖 4/13).
Data cable Digimatic (Order No. 4025 0004, 📖 4/13).
Data cable RS 232 available on request.

Factory standard | IP 52 | Absolute function | RS232 | USB | Digimatic

| Order No. | Measurement range mm | 4241 format | Reading mm | Housing ∅ mm | Accuracy mm |
|---|---|---|---|---|---|
| 0011 | 12.5 | 147.00 | 0.01 | 60 | 0.02 |
| 0020 | 12.5 | 319.00 NEW | 0.001 | 60 | 0.02 |

(W404)

## Digital dial gauge

NEW

Factory standard | IP 52 | Absolute function
RS232 | USB | Digimatic

Mahr

**Design:** Clamping shaft and measuring bolts made of rustproof, hardened steel. Digit height of LCD 12 mm. With interchangeable stylus tips M2.5. Clamping shaft Ø 8 mm, protective cap at end of measuring bolt. With data output RS 232, USB and Digimatic. Supplied with battery CR 2032, 3 V.

**Functions:** Automatic on and off switch, mm/inch switching, automatic activation by moving switch, key lock set for zero position, re-zeroing after switching deleted (absolute system), reset (zeroing) possible at each position, counting direction change, ± pre-set function (setting a numerical value).

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Replacement battery (Order No. 4026 2032, 📖 4/13).
Lifting cap (Order No. 4246 0165, 📖 4/54).
Eyelet rear wall (Order No. 4246 0175, 📖 4/54).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4246 Mahr | Reading mm | Housing Ø mm | Accuracy mm |
|---|---|---|---|---|---|
| 0010 | 12.5 | 148.50 | 0.01 | 53.8 | 0.02 |
| 0015 | 12.5 | 196.50 | 0.005 | 53.8 | 0.015 |
| 0020 | 12.5 | 302.00 (W488) | 0.001 | 53.8 | 0.005 |

## Digital dial gauge with tolerance display

NEW

Factory standard | IP 42 | Absolute function
RS232 | USB | Digimatic

Mahr

**Design:** Clamping shaft and measuring bolts made of rustproof, hardened steel. Digit height on LCD display 12 mm, operating and display part can be rotated by 280 °. With interchangeable stylus tips M2.5. Clamping shaft Ø 8 mm, protective cap at end of measuring bolt. With data output RS 232, USB and Digimatic. Supplied with battery CR 2450, 3 V.

**Functions:** Automatic on and off switch, mm/inch switching, automatic activation by moving switch, key lock set for zero position, re-zeroing after switching deleted (absolute system), tolerance entry, ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, counting direction change, ± pre-set function (setting a numerical value). For reading 0.0005 mm with adjustable numerical increment.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Lifting cap (Order No. 4246 0165, 📖 4/54).
Eyelet rear wall (Order No. 4246 0175, 📖 4/54).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

**4246**
**0.0005 mm**

**4246**
**0.01 mm**

| Order No. | Measurement range mm | 4246 Mahr | Reading mm | Housing Ø mm | Accuracy mm |
|---|---|---|---|---|---|
| 0025 | 12.5 | 278.00 | 0.01 | 60.5 | 0.02 |
| 0030 | 25.0 | 366.00 | 0.01 | 60.5 | 0.02 |
| 0035 | 50.0 | 633.00 | 0.01 | 60.5 | 0.02 |
| 0040 | 100.0 | 807.00 (W488) | 0.01 | 60.5 | 0.02 |

| Order No. | Measurement range mm | 4246 Mahr | Reading mm | Housing Ø mm | Accuracy mm |
|---|---|---|---|---|---|
| 0045 | 12.5 | 343.00 | 0.0005 | 60.5 | 0.004 |
| 0050 | 25.0 | 409.00 | 0.0005 | 60.5 | 0.004 |
| 0055 | 50.0 | 705.00 | 0.0005 | 60.5 | 0.007 |
| 0060 | 100.0 | 864.00 (W488) | 0.0005 | 60.5 | 0.008 |

## Digital dial gauge with radio transmission

NEW

Mahr

Factory standard | IP 42 | Absolute function

RS232 | USB

Digimatic

**Design:** Clamping shaft and measuring bolts made of rustproof, hardened steel. Digit height on LCD display 12 mm, operating and display part can be rotated by 280 °. With interchangeable stylus tips M2.5. Clamping shaft Ø 8 mm, protective cap at end of measuring bolt. With data output via radio connection, RS 232, USB and Digimatic. Supplied with battery CR 2450, 3 V.

**Functions:** Automatic on and off switch, mm/inch switching, automatic activation by moving switch, key lock set for zero position, re-zeroing after switching deleted (absolute system), tolerance entry, ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, counting direction change, ± pre-set function (setting a numerical value), with adjustable numerical increment.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Lifting cap (Order No. 4246 0165, 📖 4/54).
Eyelet rear wall (Order No. 4246 0175, 📖 4/54).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4246 Mahr | Reading mm | Housing Ø mm | Accuracy mm |
|---|---|---|---|---|---|
| 0065 | 12.5 | 395.00 | 0.0005 | 60.5 | 0.004 |
| 0070 | 25.0 | 447.00 | 0.0005 | 60.5 | 0.004 |
| 0085 | 25.0* | 447.00 | 0.0005 | 60.5 | 0.004 |
| 0075 | 50.0 | 738.00 | 0.0005 | 60.5 | 0.008 |
| 0080 | 100.0 | 900.00 | 0.0005 | 60.5 | 0.009 |

(W488)

* Measuring force 0-0 N

## Digital dial gauge, IP 54

NEW

Mahr

Factory standard | IP 54 | Absolute function

RS232 | USB

Digimatic

**Design:** Clamping shaft and measuring bolts made of rustproof, hardened steel. Digit height on LCD display 11 mm, operating and display part can be rotated by 280°. With interchangeable stylus tips M2.5. Clamping shaft Ø 8 mm, protective cap at end of measuring bolt. With data output via radio transmission, RS 232, USB and Digimatic. Supplied with battery CR 2450, 3 V.

**Functions:** Automatic on and off switch, mm/inch switching, automatic activation by moving switch, key lock set for zero position, re-zeroing after switching deleted (absolute system), tolerance entry, ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, counting direction change, ± pre-set function (setting a numerical value), with adjustable numerical increment.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Lifting cap (Order No. 4246 0165, 📖 4/54).
Eyelet rear wall (Order No. 4246 0175, 📖 4/54).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4246 Mahr | Reading mm | Housing Ø mm | Accuracy mm | With radio transmission |
|---|---|---|---|---|---|---|
| 0090 | 12.5 | 412.00 | 0.0005 | 60.5 | 0.004 | – |
| 0100 | 12.5 | 445.00 | 0.0005 | 60.5 | 0.004 | • |
| 0095 | 25.0 | 464.00 | 0.0005 | 60.5 | 0.004 | – |
| 0105 | 25.0 | 496.00 | 0.0005 | 60.5 | 0.004 | • |

(W488)

## Digital dial gauge for concentricity and evenness testing

NEW

Factory standard | IP 42 | Absolute function

RS232 | USB

Digimatic

Mahr

**Design:** Clamping shaft and measuring bolts made of rustproof, hardened steel. Digit height on LCD display 8.5 mm, operating and display part can be rotated by 280°. With interchangeable stylus tips M2.5. Clamping shaft Ø 8 mm, protective cap at end of measuring bolt. With data output via radio transmission, RS 232, USB and Digimatic. Supplied with battery CR 2450, 3 V.

**Functions:** Automatic on and off switch, mm/inch switching, automatic activation by moving switch, key lock set for zero position, re-zeroing after switching deleted (absolute system), **MAX/MIN storage for reversal point search,** tolerance entry, ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, counting direction change, ± pre-set function (setting a numerical value).

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49. .
Lifting cap (Order No. 4246 0165, 📖 4/54).
Eyelet rear wall (Order No. 4246 0175, 📖 4/54).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4246 Mahr | Reading mm | Housing Ø mm | Accuracy mm | With radio transmission |
|---|---|---|---|---|---|---|
| 0110 | 12.5 | 431.00 | 0.0005 | 60.5 | 0.004 | – |
| 0120 | 12.5 | 463.00 | 0.0005 | 60.5 | 0.004 | • |
| 0115 | 25.0 | 489.00 | 0.0005 | 60.5 | 0.004 | – |
| 0125 | 25.0 | 522.00 (W488) | 0.0005 | 60.5 | 0.004 | • |

## Digital dial gauge

NEW

Factory standard | IP 42 | Absolute function

RS232 | USB

Digimatic

Mahr

**Design:** Clamping shaft and measuring bolts made of rustproof, hardened steel. Digit height on LCD display 8.5 mm, operating and display part can be rotated by 280°. With interchangeable stylus tips M2.5. Clamping shaft Ø 8 mm, protective cap at end of measuring bolt. With data output via radio transmission, RS 232, USB and Digimatic. Supplied with battery CR 2450, 3 V.

**Functions:** Automatic on and off switch, mm/inch switching, automatic activation by moving switch, key lock set for zero position, re-zeroing after switching deleted (absolute system), MAX/MIN storage for reversal point search, tolerance entry, ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, counting direction change, ± pre-set function (setting a numerical value).

**Application:** The reversal point is automatically determined by a 2-point inside or outside measurement through oscillation, than a preset value can be simply assigned to it. During the measurement. the measured ACTUAL value is saved by the MIN or MAX function and shown in the display. In order to perform measuring movements with corresponding measuring accuracy, 64 measurement values are processed per second.

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Lifting cap (Order No. 4246 0165, 📖 4/54).
Eyelet rear wall (Order No. 4246 0175, 📖 4/54).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4246 Mahr | Reading mm | Housing Ø mm | Accuracy mm | With radio transmission |
|---|---|---|---|---|---|---|
| 0130 | 12.5 | 488.00 | 0.0005 | 60.5 | 0.004 | – |
| 0135 | 25.0 | 525.00 (W488) | 0.0005 | 60.5 | 0.004 | • |

## Inductive precision indicator for concentricity and evenness testing

NEW

Mahr

Factory standard | IP 54 | Absolute function

RS232 | USB

Digimatic

**Design:** Clamping shaft and measuring bolts made of rustproof, hardened steel. Precision ball guide of the measuring bolt for a smaller reversal range. Digit height on LCD display 6.5 mm, operating and display part can be rotated by 280°. With interchangeable stylus tips M2.5. Clamping shaft ∅ 8 mm, protective cap at end of measuring bolt. With data output RS 232, USB and Digimatic, **remote controlled via interface.** Supplied with power supply unit, bellows and key for forward stroke setting.

**Functions:** Automatic on and off switch, mm/inch switching, key lock set for zero position, re-zeroing after switching deleted (absolute system), MAX/MIN storage for reversal point search, tolerance entry, ABS (switching from relative to absolute measurement), reset (zeroing) possible at each position, counting direction change, ± pre-set function (setting a numerical value).

**Note:** Suitable measuring inserts M2.5 are found on 📖 4/49.
Eyelet rear wall (Order No. 4246 0175, 📖 4/54).
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measure-ment range mm | 4246 Mahr | Reading mm | Housing ∅ mm | Accuracy mm | Design |
|---|---|---|---|---|---|---|
| 0140 | 0.9 | 651.00 | 0.0005 | 65.0 | 0.0006 | For static measurement tasks |
| 0145 | 0.9 | 687.00 | 0.0005 | 65.0 | 0.0006 | For dynamic and tolerance measurement functions |
| | | (W489) | | | | |

## Accessories for Mahr dial gauges

NEW

Mahr

4246 0180

4246 0185

4246 0190

4246 0195

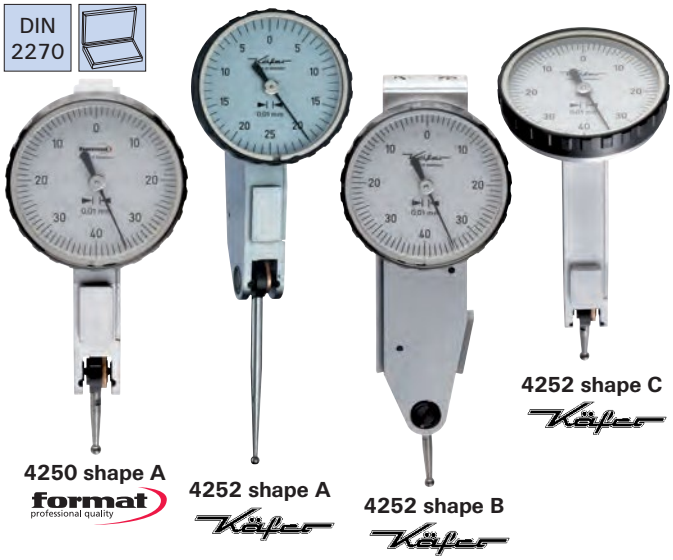
| Order No. | Design | 4246 Mahr | 4246 Mahr |
|---|---|---|---|
| 0165 | Lifting cap | 2.20 ◊ | – |
| 0175 | Eyelet rear wall | 24.20 ◊ | – |
| 0180 | Data connection cabl RS 232 | – | 68.50 ◊ |
| 0185 | Data connection cable Digimatic | – | 80.50 ◊ |
| 0190 | Data connection cable USB, incl. software | – | 92.00 ◊ |
| 0195 | USB-radio receiver incl.software | – | 90.00 ◊ |
| 0200 | Data connection cable USB | – | 82.50 ◊ |
| | | (W488) | (W489) |

## Precision lever gauge

**Design:** Housing for protection of the dovetail guides hard chrome-plated, resistant against impacts, bearing for lever gauge shaft in precision ball bearings, movements bearing supported with rubies, automatic switching of measuring direction, housing with three milled dovetail guides for holding the clamping shaft (Ø 8 mm h6), measuring insert M1.6 with 2 mm Ø carbide-tipped, rotating outer ring. Supplied with key, in plastic case.

**Application:** To check the concentricity of shafts and sleeves, for centring bore holes, alignment of surfaces and parallelism inspections.

DIN 2270



4250 shape A (format) | 4252 shape A (Käfer) | 4252 shape B (Käfer) | 4252 shape C (Käfer)

**4250** **Shape A** = Measuring insert pivots by 240° at right angle to scale.

**4252** **Shape A** = Measuring insert pivots by 240° at right angle to scale.

**Shape B** = Measuring insert pivotable parallel to scale by 240°.

**Shape C** = Measuring insert pivotable to back of scale by 240°.

| Order No. | Measurement range mm | 4250 format | 4252 Käfer | Reading mm | Scale numbering mm | Housing Ø mm | Probe length mm | Shape |
|---|---|---|---|---|---|---|---|---|
| 0008 | 0.8 | 86.50 | – | 0.01 | 0– 40–0 | 32 | 12.8 | A |
| 1033 | 0.5 | – | 111.00 | 0.01 | 0– 25–0 | 32 | 35.7 | A |
| 1036 | 0.2 | – | 95.50 | 0.002 | 0–100–0 | 32 | 12.8 | A |
| 1040 | 0.8 | – | 80.00 | 0.01 | 0– 40–0 | 40 | 12.8 | A |
| 1043 | 0.5 | – | 112.50 | 0.01 | 0– 25–0 | 40 | 35.7 | A |
| 1046 | 0.2 | – | 96.70 | 0.002 | 0–100–0 | 40 | 12.8 | A |
| 1402 | 2.0 | – | 132.00 | 0.02 | 0–100–0 | 40 | 35.7 | A |
| 2031 | 0.8 | – | 101.00 | 0.01 | 0– 40–0 | 32 | 12.8 | B |
| 2034 | 0.5 | – | 115.50 | 0.01 | 0– 25–0 | 32 | 35.7 | B |
| 2047 | 0.2 | – | 117.00 | 0.002 | 0–100–0 | 40 | 12.8 | B |
| 3032 | 0.8 | – | 104.50 | 0.01 | 0– 40–0 | 32 | 12.8 | C |
| 3045 | 0.5 | – | 125.00 | 0.01 | 0– 25–0 | 40 | 35.7 | C |
| 3048 | 0.2 | – | 119.00 | 0.002 | 0–100–0 | 40 | 12.8 | C |
| | | (W422) | (W423) | | | | | |

## Lever gauge with pivoting measurement sensor

**Design:** The measurement sensor is adjustable to the right and left by 110°, the lever movement is switchable. Support on top and bottom clamping shaft (Ø 8 mm h6). Supplied in plastic case.

Factory standard

| Order No. | Measurement range mm | 4255 format | Reading mm | Scale numbering | Housing Ø mm | Probe length mm |
|---|---|---|---|---|---|---|
| 0008 | 0.8 | 90.60 | 0.01 | 0–40–0 | 28 | 12 |
| | | (W422) | | | | |

## Lever gauge

NEW

**Design:** High-contract dial, sealed with O ring, safety disk made of mineral glass for highest protection against breakage, scratching, hot chipping as well as the highest resistance solvents, matt-chrome=plated protective housing with 3 integrated dovetail guideways, shockproof measuring unit, antimagnetic design, automatic adjustment to the probe direction, causing error-free reading, ball-bearing mounted double lever, overload protection by means of slip clutch, measuring insert with carbide ball. Supplied with key to exchange measuring inserts, measuring insert Ø 2 mm, clamping shaft (Ø 8 mm h6), in case.

**Application:** Measurement of concentricity, axial runout, parallelism and evenness deviations, centring of shafts or holes, parallel or right-angled alignment of workpieces.

Factory standard | DIN 2270

Mahr

| Order No. | Measurement range mm | 4254 Mahr | Reading mm | Scale numbering | Housing Ø mm | Probe length mm |
|---|---|---|---|---|---|---|
| 0025 | 0.25 | 99.50 | 0.01 | 0–25–0 | 30.0 | 13.6 |
| 0030 | 0.40* | 84.50 | 0.01 | 0–40–0 | 40.5 | 13.6 |
| 0035 | 0.80 | 149.50 | 0.01 | 0–40–0 | 40.5 | 13.6 |
| | | (W488) | | | | * DIN 2270 |

## Digital lever gauge

NEW

Mahr

Factory standard | IP 65 | RS232 | USB | Digimatic

**Design:** Inductive measurement system, the display is water and cooling-agent resistance, combined digit and scale display, operating and display part can be rotated by 360°, matt chrome-plated protective housing with 3 dovetail guideways, shockproof measuring unit, axles mounted in precious stones, automatic adjustment of probe direction, antimagnetic design, ball-bearing mounted double lever, overload protection by means of slip clutch. With data output RS 232, USB and Digimatic. Supplied with clamping shaft, key to exchange measuring inserts, measuring insert Ø 2 mm, in case.

**Functions:** On and automatic off switching, mm/inch switching, MIN-MAX for concentricity and evenness testing.

**Application:** Measurement of concentricity, axial runout, parallelism and evenness deviations, centring of shafts or holes, parallel or right-angled alignment of workpieces.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13, 9/12).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Measurement range mm | 4254 Mahr | Reading mm | Housing Ø mm | Measuring insert length mm |
|---|---|---|---|---|---|
| 0040 | 0.40 | 311.00 | 0.001 | 43.0 | 14.50 |
| 0045 | 0.25 | 351.00 (W488) | 0.001 | 43.0 | 41.24 |

## Clamping holder for lever gauges

format professional quality

**Design:** Rectangualr holder, with mounting holes Ø 4 mm h7 and Ø 8 mm h7 as well as dovetail guideway.

| Order No. | Dimensions mm | 4256 format |
|---|---|---|
| 0001 | 6 x 12 x 80 | 18.55 (W422) |

## Clamping shaft for lever gauges

Käfer

**Design:** (Ø 8 mm h6) with dovetail guideway.

| Order No. | 4257 Käfer |
|---|---|
| 0005 | 11.35 (W423) |

## Stylii for lever gauges

**Design:** With Ø M1.6 thread.

4257 0012

4257 0015

4257 0035

| Order No. | Length mm | 4257 Käfer | Design | Ball Ø mm |
|---|---|---|---|---|
| 0012 | 12.8 | 9.75 | Carbide ball | 2 |
| 0015 | 12.8 | 19.05 | Ruby ball, antimagnetic | 2 |
| 0035 | 35.7 | 15.60 (W423) | Carbide ball | 2 |

## Centring holder for lever gauges

**Design:** Clamping shaft (Ø 8 mm h6) with adapter (Ø 4 mm h7) and dovetail clamping. Adaptor for lever gauges (Ø 4 mm h7). Also included: Adaptor (Ø 8 mm h7).

**Note**: Supplied without dial gauge.

| Order No. | 4257 Käfer |
|---|---|
| 0001 | 28.70 (W423) |

## Inductive measuring probe

NEW

IP 64

Mahr

**Design:** Variants without and with pneumatic lift or addition, measuring bolt mounted in ball guide, high linearity throughout the entire measuring range, outstanding electromagnetic shielding (EMC), all probes can be converted with included cap from axial to radial cable output. Resistant agains oil, petrol, water and aliphates. Moderately resistant against acids, bases, solvents and ozone. Supplied with cap for cable output on side and key for forward stroke setting.

**4259 0400–0415** Standard design

**4259 0420–0430** Vacuum lift-off

| Order No. | Measurement range mm | 4259 Mahr | Compatibility |
|---|---|---|---|
| 0400 | 2 | 253.00 ◊ | Mahr-VLDT |
| 0410 | 2 | 253.00 ◊ | Tesa |
| 0415 | 2 | 253.00 ◊ (W489) | Marposs |

| Order No. | Measurement range mm | 4259 Mahr | Compatibility |
|---|---|---|---|
| 0420 | 5 | 354.00 ◊ | Mahr-VLDT |
| 0425 | 5 | 354.00 ◊ | Tesa |
| 0430 | 5 | 354.00 ◊ (W489) | Marposs |

4259 Standard design

4259 Vacuum lift-off

## Display device

NEW

IP 42 | RS232 | USB | Digimatic

Mahr

**Design:** High-resolution and high-contrast **TFT colour display** 110 mm (4.3"), 480 x 272 pixels. Display continuously inclined for optimum angle, extremely easy operation, mains or battery-operated, also suitable for mobile use when powered by batteries. Compact enclosure, can be wall mounted. Data output via radio transmission and RS 232. Supplied with AC adapter.

**Functions:** On and automatic off switch, mm/inch switching, reset (zeroing) possible in any position, counting direction inversion, ± preset function (measurement value pre-adjustment).

**Note:** Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB (Order No. 4942 0050, 📖 4/130).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Display range µm | 4259 Mahr | Reading µm | Probe inputs | Compatibility |
|---|---|---|---|---|---|
| 0435 | 5000 | 897.00 ◊ (W489) | 0.1 | 1 | Mahr |

## Display device Millimar C1208 M / C1216 M

NEW

IP 42 | RS232

Mahr

**Design: Background-lit LCD display, 115 mm x 70 mm**, with scale display and two-digit digital display, 5 three-colour status lamps for warning and tolerance limits, up to 2 features can be shown at the same time, additional resolution of 0.01 µm for a measurement range of ± 200 µm (only 4259 0445), 2 inputs for inductive probes, data output via radio transmission or cable-based via RS 232, 3 digital inputs for measurement start, master measurement, measurement value transmission, 3 digital outputs for go, no-go, rework, measuring time, programmable analogue output voltage (only 4259 0445, max. ± 5 V). Supplied with AC adapter.

**Functions:** Favourites, with the SELECT button, frequently used settings can be called directly, static measurements ± A, ± B and all combinations, dynamic measurements: Max, Min, Max-Min, Max+Min, average value, auto-detect mode. Programmable via integrated keyboard or RS 232 interface via MS Windows configuration software.

**Note:** Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).

| Order No. | Display range µm | 4259 Mahr | Reading mm | Probe inputs | Compatibility |
|---|---|---|---|---|---|
| 0440 | 1000 | 1285.00 ◊ | 0.1 | 2 | Mahr |
| 0445 | 1000 | 1765.00 ◊ (W489) | 0.01 | 2 | Mahr |

## Display device Millimar C 1245 M / C 1245 T

NEW

IP 42 | RS232

Mahr

**Design:** With **analogue pointer instrument, LCD display 53 mm x 40 mm.** Measurement value storage for 5000 measurement values, measurement start/stop, 5 three-colour status lamps for warning and tolerance limits, up to 3 features can be displayed at the same time, 2 input modules can be used in the basic unit. 1 analogue output, 3 digital inputs for measurement start, master measurement/zeroing, data transmission, 6 digital outputs for go, no-go, rework, grouped goods, measuring time, 4 classes. Data output via radio transmission and RS 232. Supplied with power plug cable.

**Functions:** Measurement start/stop, dynamic measurements: Max, Min, Max-Min, Max+Min, average, static functions: n, x-cross, S, Xmax, Xmin, R, 16 features can be defined, via a formula editor (80 characters) the input channels C1 to C8 are mathematically linked via the 4 basic arithmetic operations with factor and brackets, static measurements: current value, square root, arc-tangent, programmable via incorporated keyboard or RS 232 interfaces via MS Windows configuration software, measurement value storage for 5000 measurement values.

**Note:** Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).

| Order No. | Display range µm | 4259 Mahr | Reading mm | Probe inputs | Compatibility |
|---|---|---|---|---|---|
| 0450 | 2000 | 2980.00 ◊ | 0.1 | 4 | Mahr |
| 0455 | 2000 | 2980.00 ◊ (W489) | 0.1 | 4 | Tesa |

## Fast precision thickness measuring device

Käfer

**Design: Similar to DIN 878**, bracket made of aluminium, with lifting wheel with plastic grip plates for thermal hand insulation, zero setting through rotating outer ring, measuring force approx. 1 N, with flat measuring faces. 1 revolution = 1 mm. Supplied in plastic case.

**Application:** Handy device for measuring different materials in measurement range 0–10 mm, e.g. paper, textiles, films, plates, etc.

| Order No. | Measurement range mm | 4260 Käfer | Reading mm | Dial gauge Ø mm | Bracket depth mm | Measuring face Ø mm |
|---|---|---|---|---|---|---|
| 0015 | 0–10 | 97.50 | 0.01 | 40 | 18 | 6.35 |
| 0045 | 0–10 | 113.00 (W423) | 0.01 | 40 | 45 | 6.35 |

## Precision thickness gauge

Käfer

**Design: Similar to DIN 878**, bracket made of aluminium, zero setting through rotating outer ring, with flat measuring probes. 1 revolution = 1 mm. Supplied in plastic case.

**Application:** For measuring soft leather, card, paper, foils, etc.

**Note:** Thickness gauges in other measurement ranges and bracket depths and different measuring inserts for other materials available on request.

| Order No. | Measurement range mm | 4262 Käfer | Reading mm | Dial gauge Ø mm | Bracket depth mm | Measuring face Ø mm |
|---|---|---|---|---|---|---|
| 0050 | 0–10 | 115.50 | 0.01 | 58 | 50 | 10.0 |
| 0053 | 0–10* | 117.00 | 0.01 | 58 | 50 | 10.0 |
| 0100 | 0–10 | 145.00 | 0.01 | 58 | 100 | 10.0 |
| 0503 | 0–30 | 164.00 (W423) | 0.01 | 58 | 50 | 10.0 With lifting device |

## Thickness gauge

Factory standard

Käfer

**Design:** Bracket made of aluminium, zero setting through rotating outer ring, with flat measuring probes. 1 revolution = 10 mm. Supplied in plastic case.

**Application:** For measuring soft leather, card, paper, foils, etc.

**Note:** Thickness gauges in other measurement ranges and bracket depths and different measuring inserts for other materials available on request.

| Order No. | Measurement range mm | 4262 Käfer | Reading mm | Dial gauge Ø mm | Bracket depth mm | Measuring face Ø mm |
|---|---|---|---|---|---|---|
| 0200 | 0–30 | 152.00 (W423) | 0.1 | 58 | 200 | 10.0 |

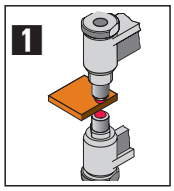
## Precision fast outside measuring gauge

**Design:** Each with one fixed and one moveable probe arm, direct measuring result when moveable probe arm is deflected, with adjustable carbide ball measuring support. Supplied in transport packaging.

Factory standard | Certificate

Kroeplin Längenmesstechnik

**Application:** For quick measurement of plates, films, external grooves, etc.



| Order No. | Measurement range | 4265 Kroeplin Längenmesstechnik | Reading | Measuring depth | Error limit | Repeatability limit | Type of measuring contact | Length of measuring contact, mvbl. | Length of measuring contact, fixed | Measuring force |
|---|---|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm | mm | N |
| 0010 | 0–10 | 99.70 | 0.1 | 36 | 0.1 | 0.05 | K ∅ 5 1 | 5 | 5.0 | 0.3–1.3 |
| 0011 | 0–10 | 114.50 (W424) | 0.1 | 25 | 0.1 | 0.05 | K ∅ 2/R0.5 2 | 5 | 0.8 | 0.3–1.3 |

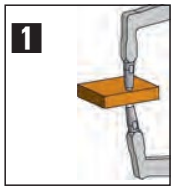
## Precision fast outside measuring gauge Oditest

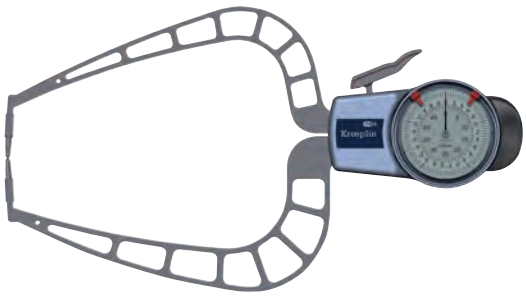
**Design:** Each with one fixed and one moveable probe arm, direct measuring result when moveable probe arm is deflected. The moveable probe arm is cranked, and the measuring contacts are made of carbide. Supplied in transport packaging.

Factory standard | IP 65 | Certificate

Kroeplin Längenmesstechnik

**Application:** For quick measurement of pipes and hollow bodies, etc.



| Order No. | Measurement range | 4266 Kroeplin Längenmesstechnik | Reading | Measuring depth | Error limit | Repeatability limit | Type of measuring contact | Length of measuring contact, mvbl. | Length of measuring contact, fixed | Measuring force |
|---|---|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm | mm | N |
| 0010 | 0–10 | 354.00 | 0.005 | 35 | 0.015 | 0.005 | K ∅ 1.5 1 | 19.1 | 18.6 | 0.8–1.2 |
| 0020 | 0–20 | 354.00 | 0.010 | 85 | 0.030 | 0.010 | K ∅ 1.5 1 | 24.7 | 24.6 | 1.1–1.6 |
| 0021 | 0–20 | 354.00 | 0.010 | 80 | 0.030 | 0.010 | K ∅ 1.5 2 | 24.7 | 2.5 | 1.1–1.6 |
| 0052 | 0–50 | 407.50 | 0.050 | 167 | 0.050 | 0.025 | K ∅ 3.0 1 | 30.0 | 30.0 | 0.8–1.7 |
| 0053 | 0–50 | 407.50 (W424) | 0.050 | 169 | 0.050 | 0.025 | K ∅ 3.0 2 | 30.0 | 4.3 | 0.8–1.7 |

## Outside measuring gauge with analogue/digital display

**Design:** The new generation of measuring gauges is characterised by a clear LCD dial design, making reliable measurement value finding easier. Supplied with 2 micro batteries AAA/LR03, 1.5 V (for 4267 0020 with screwdriver), in transport packaging.

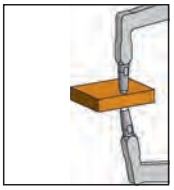
Factory standard | IP 67 | Certificate

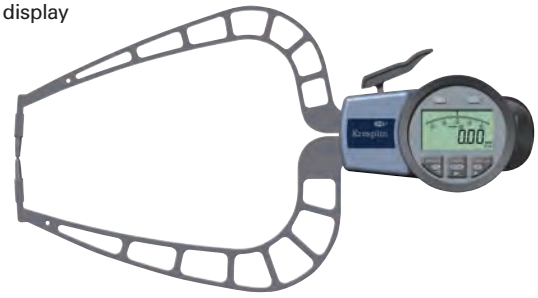
Kroeplin Längenmesstechnik

**Functions:** Absolute and relative measuring programme, mm/inch-switching, red-green display with tolerance measurements, conversion of the numerical increment.

**Application:** For the quick measurement of slot, bore and wall thicknesses.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).





| Order No. | Measurement range | 4267 Kroeplin Längenmesstechnik | Reading | Measuring depth | Error limit | Repeatability limit | Type of measuring contact | Length of measuring contact, mvbl. | Length of measuring contact, fixed | Measuring force |
|---|---|---|---|---|---|---|---|---|---|---|
| | mm | | mm | mm | mm | mm | mm | mm | mm | N |
| 0020 | 0–20 | 364.00 | 0.01 | 85 | 0.03 | 0.01 | K ∅ 1.5 | 24.7 | 24.6 | 1.1–1.6 |
| 0030 | 0–30 | 364.00 | 0.02 | 116 | 0.04 | 0.02 | K ∅ 3.0 | 30.0 | 30.0 | 0.9–1.6 |
| 0061 | 0–50 | 503.50 (W424) | 0.02 | 167 | 0.06 | 0.04 | K ∅ 3.0 | 30.0 | 30.0 | 0.8–1.7 |

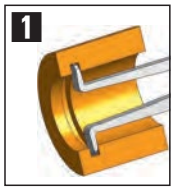
## Intertest quick inside measuring gauge

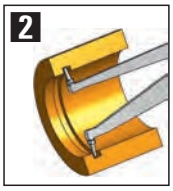
**Design:** For robust workshop use, damped movement with steel thread transmission for higher precision, measuring contact made of carbide, adjustable tolerance marks. Supplied in transport packaging.

**Application:** For measuring inner grooves and recesses.

Factory standard | IP 65 | Certificate

Kroeplin Längenmesstechnik



| Order No. | Measurement range mm | 4268 Kroeplin Längenmesstechnik | 4269 Kroeplin Längenmesstechnik | Reading mm | Measuring depth mm | Slot depth mm | Slot width mm | Error limit mm | Repeatability limit mm | Type of measuring contact mm | Length of measuring contact, mvbl. mm | Length of measuring contact, fixed mm | Measuring force N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0012 | 2.5–12 | 354.00 | – | 0.005 | 12 | 0.7 | 0.5 | 0.015 | 0.005 | Cutting edge R 0.1 1 | 0.9 | 0.9 | 0.8–1.2 |
| 0015 | 5 –15 | 354.00 | – | 0.005 | 35 | 2.3 | 0.8 | 0.015 | 0.005 | K Ø 0.6 1 | 2.5 | 2.5 | 0.8–1.2 |
| 0030 | 10 –30 | – | 354.00 | 0.010 | 85 | 5.2 | 1.2 | 0.030 | 0.010 | K Ø 1.0 1 | 5.3 | 5.3 | 1.1–1.6 |
| 0040 | 20 –40 | – | 354.00 | 0.010 | 85 | 7.0 | 1.2 | 0.030 | 0.010 | K Ø 1.0 1 | 7.3 | 7.3 | 1.1–1.6 |
| 0050 | 30 –50 | – | 354.00 | 0.010 | 85 | 7.0 | 1.2 | 0.030 | 0.010 | K Ø 1.0 1 | 7.3 | 7.3 | 1.1–1.6 |
| 0060 | 40 –60 | – | 354.00 | 0.010 | 85 | 8.3 | 1.2 | 0.030 | 0.010 | K Ø 1.0 2 | 8.5 | 8.5 | 1.1–1.6 |
| 0070 | 50 –70 | – | 354.00 | 0.010 | 85 | 8.3 | 1.2 | 0.030 | 0.010 | K Ø 1.0 2 | 8.5 | 8.5 | 1.1–1.6 |
| 0080 | 60 –80 | – (W424) | 354.00 (W424) | 0.010 | 85 | 8.3 | 1.2 | 0.030 | 0.010 | K Ø 1.0 2 | 8.5 | 8.5 | 1.1–1.6 |

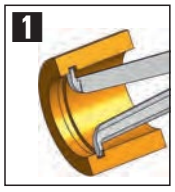
## Intertest quick inside measuring gauge

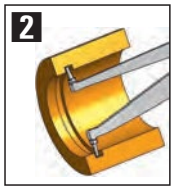
**Design:** For robust workshop use, damped movement with steel thread transmission for higher precision, measuring contact made of carbide, adjustable tolerance marks. With adjustable handle. Supplied in transport packaging.

**Application:** For measuring inner grooves and recesses.

Factory standard | IP 65 | Certificate

Kroeplin Längenmesstechnik



| Order No. | Measurement range mm | 4270 Kroeplin Längenmesstechnik | Reading mm | Measuring depth mm | Slot depth mm | Slot width mm | Error limit mm | Repeatability limit mm | Type of measuring contact mm | Length of measuring contact, mvbl. mm | Length of measuring contact, fixed mm | Measuring force N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0066 | 15– 65 | 407.50 | 0.05 | 188 | 5.5 | 1.9 | 0.05 | 0.025 | K Ø 1.5 1 | 6.0 | 6.0 | 0.9–1.9 |
| 0091 | 40– 90 | 407.50 | 0.05 | 192 | 8.3 | 2.4 | 0.05 | 0.025 | K Ø 2.0 2 | 8.5 | 8.5 | 0.9–1.9 |
| 0121 | 70–120 | 469.50 (W424) | 0.05 | 192 | 8.3 | 2.4 | 0.05 | 0.025 | K Ø 2.0 2 | 8.5 | 8.5 | 0.9–1.9 |

## Fast inside measuring gauge with analogue/digital display

Factory standard | IP 67 | Certificate

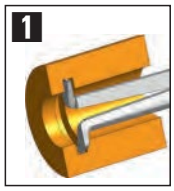
Kroeplin Längenmesstechnik

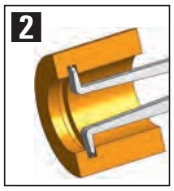
**Design:** The new generation of measuring gauges is characterised by a clear LCD dial design, making reliable measurement value finding easier. Supplied with screwdriver and 2 micro batteries AAA/LR03, 1.5 V, in transport packaging.

**Functions:** Absolute and relative measuring programme, mm/inch-switching, red-green display with tolerance measurements, conversion of the numerical increment.

**Application:** For measuring grooves and holes.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).



| Order No. | Measurement range mm | 4271 Kroeplin Längenmesstechnik | Reading mm | Measuring depth mm | Slot depth mm | Slot width mm | Error limit mm | Repeatability limit mm | Type of measuring contact mm | Length of measuring contact, mvbl. mm | Length of measuring contact, fixed mm | Measuring force N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0025 | 5–15 | 364.00 | 0.005 | 35 | 2.3 | 0.8 | 0.015 | 0.005 | K Ø 0.6 1 | 2.5 | 2.5 | 0.8–1.2 |
| 0030 | 10–30 | 364.00 | 0.010 | 85 | 5.2 | 1.2 | 0.030 | 0.010 | K Ø 1.0 1 | 5.3 | 5.3 | 1.1–1.6 |
| 0040 | 20–40 | 364.00 | 0.010 | 85 | 7.0 | 1.2 | 0.030 | 0.010 | K Ø 1.0 2 | 7.3 | 7.3 | 1.1–1.6 |
| 0050 | 30–50 | 364.00 (W424) | 0.010 | 85 | 7.0 | 1.2 | 0.030 | 0.010 | K Ø 1.0 2 | 7.3 | 7.3 | 1.1–1.6 |

## Inside measuring gauge with 3-point measurement

NEW

Factory standard | IP 67 | USB | Digimatic | Certificate

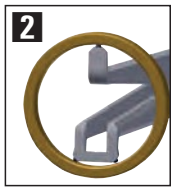
Kroeplin Längenmesstechnik

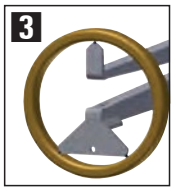
**Design:** Quick centring through 3-point detection, protection class IP 67, data output with USB, Digimatic and U-WAVE®, application-specific measurement programmes and measurement contacts. Supplied with 2 micro batteries AAA/LR03, 1.5 V in transport packaging.

**Functions:** Absolute and relative measuring programme, mm/inch-switching, red-green display with tolerance measurements, conversion of the numerical increment.

**Application:** To measure inner diameters.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).



| Order No. | Measurement range mm | 4271 Kroeplin Längenmesstechnik | Reading mm | Measuring depth mm | Slot depth mm | Slot width mm | Error limit mm | Repeatability limit mm | Type of measuring contact mm | Length of measuring contact, mvbl. mm | Length of measuring contact, fixed mm | Measuring force N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0070 | 7–14 | 437.00 | 0.002 | 34 | 2.2 | 0.8 | 0.01 | 0.004 | K Ø 0.6 1 | 2.5 | 2.4 | 1.1–1.6 |
| 0075 | 10–20 | 437.00 | 0.005 | 75 | 3.5 | 1.6 | 0.02 | 0.010 | K Ø 1.0 2 | 4.6 | 3.7 | 1.1–1.6 |
| 0080 | 15–30 | 437.00 (W424) | 0.005 | 77 | 5.0 | 1.6 | 0.02 | 0.010 | K Ø 1.0 3 | 5.8 | 5.5 | 1.1–1.6 |

## Small measuring stand

**Design:** With round, non-switchable magnetic base, locking screw for the swivel arm. Measuring device is clamped using a knurled nut. Dial gauge adaptor Ø 8 mm.

**Application:** For clamping dial gauges and lever gauges, particularly suitable in constricted spaces.

**Note:** Supplied without dial gauge. Dial gauges are found from 📖 4/45.

| Order No. | Projection mm | 4285 format | Magnet Ø mm | Total height mm | Adhesive force N | Stand Ø mm | Magnetic base thread |
|---|---|---|---|---|---|---|---|
| 0001 | 100 | 47.50 (W352) | 35 | 135 | 150 | 8 | M6 |

## Small measuring stand

**Design:** With round, non-switchable magnetic base, mechanical central clamping and fine adjustment. Measuring device is clamped using a knurled nut. Dial gauge adapter Ø 8 mm H7. Supplied in a wooden box.

**Application:** For clamping dial gauges and lever gauges, particularly suitable in constricted spaces.

**Note:** Dial gauges are found from 📖 4/45.

| Order No. | Projection mm | 4286 format | Magnet Ø mm | Column height mm | Adhesive force N |
|---|---|---|---|---|---|
| 0100 | 150 | 66.90 (W434) | 35 | 180 | 150 |

## Magnetic articulated measuring stand

**Design:** Five-axis articulated measuring stand, central locking with spring-mounted clamping. With powerful magnet with prism sole which can be switched on and off, fast clamping in any position. Arms made of red anodised, high-strength aluminium alloy, can be combined as required. **With fine adjustment on magnetic base for constricted spaces and areas which are hard to access,** zero setting takes place quicker than when using any other fine adjustment. With dial gauge Ø 8 mm and dovetail adaptor. Supplied in transport packaging.

**Application:** For clamping dial gauges, precision indicators, lever gauges and measuring probes.

**Note:** Dial gauges are found from 📖 4/45.

| Order No. | Projection mm | 4298 format | Magnetic base L x W x H mm | Adhesive force N | Magnetic base thread | Weight kg |
|---|---|---|---|---|---|---|
| 0005 | 80/ 50 | 97.90 | 40 x 30 x 35 | 320 | M5 | 0.42 |
| 0010 | 110/ 80 | 119.00 | 60 x 50 x 55 | 800 | M8 | 1.28 |
| 0015 | 140/110 | 140.50 (W434) | 60 x 50 x 55 | 800 | M8 | 1.46 |

## Replacement articulated arm

| Order No. | Arm length (column/swivel arm) mm | 4298 format | Magnetic base adapter | Dial gauge adapter |
|---|---|---|---|---|
| 0100 | 50/ 50 | 71.70 | M5 | M6 |
| 0105 | 80/ 50 | 76.20 | M5 | M6 |
| 0110 | 80/ 80 | 80.70 | M5 | M6 |
| 0115 | 110/ 50 | 85.20 | M8 | M6 |
| 0120 | 110/ 80 | 87.40 | M8 | M6 |
| 0125 | 110/110 | 93.00 | M8 | M6 |
| 0130 | 140/ 50 | 104.50 | M8 | M6 |
| 0135 | 140/ 80 | 106.50 | M8 | M6 |
| 0140 | 140/110 | 109.00 | M8 | M6 |
| 0145 | 140/140 | 111.00 (W434) | M8 | M6 |

## Replacement magnetic base

| Order No. | Thread | 4298 format | Dimensions L x W x H mm | Adhesive force N | Weight kg |
|---|---|---|---|---|---|
| 0150 | M5 | 32.40 | 40 x 30 x 35 | 320 | 0.25 |
| 0155 | M8 | 35.40 | 60 x 50 x 55 | 800 | 1.10 |
| 0160 | M8 | 57.20 (W434) | 75 x 50 x 55 | 1000 | 1.38 |

## Magnetic articulated measuring stand

**Design:** Five-axis articulated measuring stand, central locking with spring-mounted clamping. With powerful magnet with prism sole which can be switched on and off, fast clamping in any position. Arms made of gold anodised, high-strength aluminium alloy, can be combined as required. **Withfine adjustment on the upper part with universal swivel joint clamping** With dial gauge ∅ 6 and 8 mm and dovetail adaptor.

**Application:** For clamping dial gauges, precision indicators, lever gauges and measuring probes.

**Note:** Dial gauges are found from 📖 4/45.

HOLDTEC Modulare Messstative

| Order No. | Projection mm | 4299 HOLDTEC Modulare Messstative | Magnetic base L x W x H mm | Adhesive force N | Magnetic base thread | Weight kg |
|---|---|---|---|---|---|---|
| 0005 | 80/ 50 | 113.50 | 40 x 30 x 35 | 320 | M5 | 0.43 |
| 0010 | 110/ 80 | 160.00 | 60 x 50 x 55 | 800 | M8 | 1.25 |
| 0015 | 140/110 | 192.50 (W421) | 60 x 50 x 55 | 800 | M8 | 1.42 |

## Dial gauge adapter NEW

**Design:** With 1/4" dovetail guide.

**Note:** Dial gauges are found from 📖 4/45.

4299 0030

4299 0025

4299 0020

| Order No. | Design | 4299 HOLDTEC Modulare Messstative | Dial gauge adapter | Length mm | Thread | Material |
|---|---|---|---|---|---|---|
| 0020 | All-purpose dial gauge adapter | 54.50 | 3/8" , 6 mm + 8 mm | 71.0 | M6 | Metal |
| 0025 | Dial gauge adapter without fine adjustment | 27.20 | 8 mm | 21.5 | M6 | Metal |
| 0030 | Dial gauge adapter | 38.10 (W421) | 8 mm | 62.0 | M6 | Plastic |

## Replacement articulated arm

| Order No. | Arm length (column/swivel arm) mm | 4299 HOLDTEC Modulare Messstative | Magnetic base adapter | Dial gauge adapter |
|---|---|---|---|---|
| 0100 | 80/ 50 | 99.70 | M5 | M6 |
| 0105 | 110/ 80 | 143.50 | M8 | M6 |
| 0110 | 140/110 | 161.00 (W421) | M8 | M6 |

## Replacement magnetic base

| Order No. | Thread | 4299 HOLDTEC Modulare Messstative | Dimensions L x W x H mm | Adhesive force N | Weight kg |
|---|---|---|---|---|---|
| 0115 | M5 | 24.60 | 40 x 30 x 35 | 320 | 0.23 |
| 0120 | M8 | 27.40 | 60 x 50 x 55 | 800 | 1.00 |
| 0125 | M8 | 42.30 | 75 x 50 x 55 | 1000 | 1.27 |
| 0130 | M10 x 1.25 | 65.30 | 120 x 50 x 55 | 1300 | 2.00 |
| 0135 | M6, M8, M10, M12, M10 x 1.25 | 63.30 | 75 x 50 x 55 | 1000 | 1.35 |

(W421)

HOLDTEC Modulare Messstative

## Accessories

| Order No. | Design | 4299 HOLDTEC Modulare Messstative | Thread | Adhesive force N |
|---|---|---|---|---|
| 0140 | Vacuum base ∅ 92 mm | 56.80 | M8 | 350 |
| 0160 | Screw terminal 75 mm | 27.90 | M8 internal thread | – |
| 0165 | Screw terminal 75 mm with plastic guard | 30.00 | M8 internal thread | – |

(W421)

4299 0140

4299 0165

## Magnetic measuring stand

NEW

**Design:** With magnetic base which can be switched on and off and prismatic sole. Transverse arm with joint and fine adjustment. Dial gauge adapter ∅ 8 mm H7. Supplied in a wooden box.

**Application:** For clamping dial gauges, precision indicators, lever gauges and measuring probes.

**Note:** Dial gauges are found from 📖 4/45.

| Order No. | Projection mm | 4299 | Magnetic base L x W x H mm | Adhesive force N | Stand ∅ mm | Magnetic base thread | Weight kg |
|---|---|---|---|---|---|---|---|
| 0170 | 220 | 75.20 (W434) | 70 x 50 x 55 | 800 | 16 | M10 | 2.0 |

## Magnetic articulated measuring stand

**Design:** Mechanical central lock on the star grip. With magnetic base which can be switched on and off and prismatic sole. Two ball joints and one central joint provide mobility in any direction, with fine adjustment. Dial gauge adapter ∅ 8 mm H7. Supplied in a wooden box.

**Application:** For clamping dial gauges, precision indicators, lever gauges and measuring probes.

**Note:** Dial gauges are found from 📖 4/45.

4299

4291 format professional quality

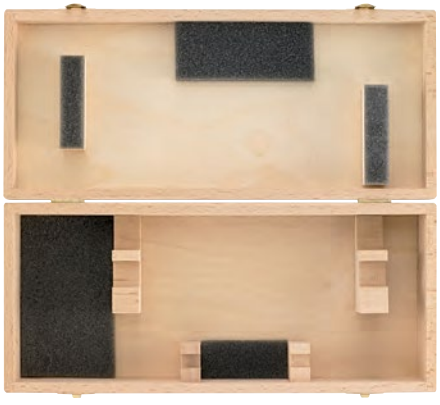
| Order No. | Projection mm | 4299 | 4291 format professional quality | Magnetic base L x W x H mm | Total height mm | Adhesive force N | Magnetic base thread | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 0370 | 260 | – | 62.10 | 59 x 50 x 55 | 370 | 600 | M8 | 1.8 |
| 0175 | 375 | 123.00 NEW (W434) | – (W434) | 62 x 50 x 55 | 430 | 800 | M10 | 2.0 |

## Replacement magnetic base

| Order No. | Thread | 4292 format professional quality | Dimensions (L x W x H) mm |
|---|---|---|---|
| 0008 | M8 | 19.30 (W434) | 59 x 50 x 55 |

## Replacement wooden box

**Design:** For magnetic measurement stand



| Order No. | Design | 4287 format professional quality |
|---|---|---|
| 1000 | mit Schaumstoffeinlage | 23.50 (W403) |

## Magnetic holder with universal swivel and pivot arm

**Design:** Low construction height, measuring instrument holder can be pivoted 360°, with star handle screws for secure clamping and locking. With two strong round magnets on the holding side for good, flat adhesion of the contact surface. Dial gauge adapter Ø 8 mm H7.

**Application:** For clamping dial gauges, precision indicators, and lever gauges.

**Note:** Supplied without dial gauge. Dial gauges are found from 📖 4/45.

| Order No. | Projection mm | 4295 Käfer | Adhesive force N | Dimensions mm | High magnetic base mm |
|---|---|---|---|---|---|
| 0045 | 35 | 54.70 (W423) | 180 | 73 x 38 x 46 | 11 |

## Magnetic holder with universal swivel and pivot arm, with prismatic magnetic base

**Design:** Low construction height, measuring instrument holder can be pivoted 360°, with star handle screws for secure clamping and locking. With prismatic magnetic base and additional adhesive surfaces on both longitudinal sides. Dial gauge adapter Ø 8 mm H7.

**Application:** For clamping dial gauges, precision indicators, and lever gauges.

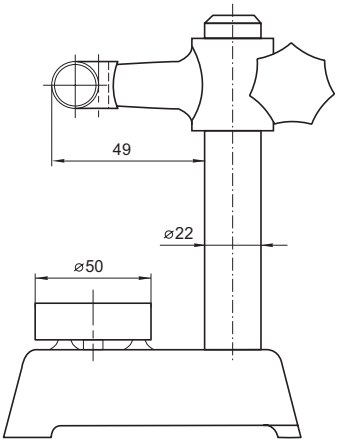
**Note:** Supplied without dial gauge. Dial gauges are found from 📖 4/45.

| Order No. | Projection mm | 4297 Käfer | Adhesive force N | Dimensions mm | High magnetic base mm |
|---|---|---|---|---|---|
| 0059 | 35 | 94.70 (W423) | 180 | 72 x 37 x 59 | 26 |

## Small measuring table with rigid arm

**Design:** Table made of hardened steel. With flat table surface and cast-base. Receiving hole Ø 8 mm. Supplied in transport packaging.

**Note:** Dial gauges are found from 📖 4/45.

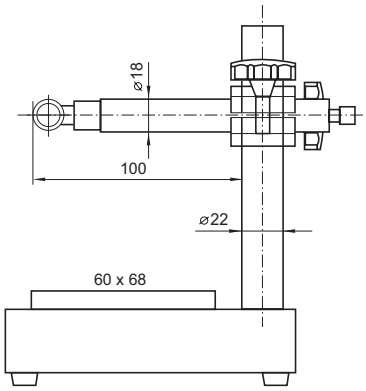


| Order No. | Measuring height mm | 4300 format | Projection mm | Columns Ø mm | Table size mm |
|---|---|---|---|---|---|
| 0003 | 100 | 180.50 (W434) | 49 | 22 | Ø 50 |

## Small measuring table with adjustable swivel arm.

**Design:** Table made of hardened steel. With dirt grooves and a cast iron base. Receiving hole Ø 8 mm. Supplied in transport packaging.

**Note:** Dial gauges are found from 📖 4/45.



4300 0007

| Order No. | Measuring height mm | 4300 format | Projection mm | Columns Ø mm | Swivel arm Ø mm | Table size mm |
|---|---|---|---|---|---|---|
| 0007 | 100 | 231.00 | 100 | 22 | 18 | 60 x 68 |
| 0008 | 150 | 375.00 | 135 | 28 | 20 | 98 x 115 |
| | | (W434) | | | | |

## Measuring table

NEW

**Design:** Table made of hardened steel. With thread column and adjustable swivel arm, dirt grooves and cast-iron base. Receiving hole Ø 8 mm. Supplied in cardboard box.

**Note:** Dial gauges are found from 📖 4/45.

| Order No. | Measuring height mm | 4300 HELIOS·PREISSER | Projection mm | Columns Ø mm | Swivel arm Ø mm | Table size mm |
|---|---|---|---|---|---|---|
| 0025 | 160 | 764.50 ◊ | 200 | 35 | 22 | 170 x 215 |
| | | (W410) | | | | |

## Fine measuring table

NEW

DIN 876

**Design:** Table made of hard stone, evenness of base plate in acc. with DIN 876-00. Thread column and swivel arm chrome plated. Height adjustable by means of thread spindle with adjusting ring. Receiving hole Ø 8 mm. Supplied in cardboard box.

**Note:** Dial gauges are found from 📖 4/45.

| Order No. | Measuring height mm | 4300 HELIOS·PREISSER | Projection mm | Columns Ø mm | Swivel arm Ø mm | Table size mm |
|---|---|---|---|---|---|---|
| 0030 | 200 | 643.50 ◊ | 200 | 35 | 22 | 150 x 260 |
| 0035 | 220 | 1577.00 ◊ | 220 | 35 | 22 | 300 x 350 |
| | | (W410) | | | | |

## Single parallel gauge block

**Design:** High alloy steel, minimum hardness of 800 HV. Coefficient of linear expansion: (11.5 ± 1.0) x $10^{-6}$ $K^{-1}$. Maximum dimensions and shape stability due to careful **artificial aging.** Wear-resistant and has very good adhesion properties when pushing.

**Each gauge block is marked with an individual ID No.**

For lengths
0.5 to 10.0 mm, the height is 30 mm and the depth 9 mm.
For 10.0 to 1000.0 mm, the height is 35 mm and the depth 9 mm.

DIN EN ISO 3650

**4350** **Tolerance class 0:** Calibration of other gauges and measuring devices in air-conditioned measurement laboratory.

**4351** **Tolerance class 1:** Most often-used standard in the measurement room for the inspection of gauges and for setting measuring instruments.

**4352** **Tolerance class 2:** Most often-used working standard in production for the inspection of gauges and for setting measuring instruments.



| Order No. | Length mm | 4350 Tol. 0 | 4351 Tol. 1 | 4352 Tol. 2 |
|---|---|---|---|---|
| 0000 | 0.500 | 27.60 ◊ | 22.40 | 13.05 |
| 0001 | 1.000 | 21.20 ◊ | 15.75 | 10.55 |
| 0002 | 1.001 | 23.20 ◊ | 19.55 | 10.55 |
| 0003 | 1.002 | 23.20 ◊ | 19.55 | 10.55 |
| 0004 | 1.003 | 23.20 ◊ | 19.55 | 10.55 |
| 0005 | 1.004 | 23.20 ◊ | 19.55 | 10.55 |
| 0006 | 1.005 | 23.20 ◊ | 19.55 | 10.55 |
| 0007 | 1.006 | 23.20 ◊ | 19.55 | 10.55 |
| 0008 | 1.007 | 23.20 ◊ | 19.55 | 10.55 |
| 0009 | 1.008 | 23.20 ◊ | 19.55 | 10.55 |
| 0010 | 1.009 | 23.20 ◊ | 19.55 | 10.55 |
| 0011 | 1.010 | 22.40 ◊ | 17.20 | 10.55 |
| 0012 | 1.020 | 22.40 ◊ | 17.20 | 10.55 |
| 0013 | 1.030 | 22.40 ◊ | 17.20 | 10.55 |
| 0014 | 1.040 | 22.40 ◊ | 17.20 | 10.55 |
| 0015 | 1.050 | 22.40 ◊ | 17.20 | 10.55 |
| 0016 | 1.060 | 22.40 ◊ | 17.20 | 10.55 |
| 0017 | 1.070 | 22.40 ◊ | 17.20 | 10.55 |
| 0018 | 1.080 | 22.40 ◊ | 17.20 | 10.55 |
| 0019 | 1.090 | 22.40 ◊ | 17.20 | 10.55 |
| 0020 | 1.100 | 22.40 ◊ | 17.20 | 10.55 |
| 0021 | 1.110 | 22.40 ◊ | 17.20 | 10.55 |
| 0022 | 1.120 | 22.40 ◊ | 17.20 | 10.55 |
| 0023 | 1.130 | 22.40 ◊ | 17.20 | 10.55 |
| 0024 | 1.140 | 22.40 ◊ | 17.20 | 10.55 |
| 0025 | 1.150 | 22.40 ◊ | 17.20 | 10.55 |
| 0026 | 1.160 | 22.40 ◊ | 17.20 | 10.55 |
| 0027 | 1.170 | 22.40 ◊ | 17.20 | 10.55 |
| 0028 | 1.180 | 22.40 ◊ | 17.20 | 10.55 |
| 0029 | 1.190 | 22.40 ◊ | 17.20 | 10.55 |
| 0030 | 1.200 | 22.40 ◊ | 17.20 | 10.55 |
| 0031 | 1.210 | 22.40 ◊ | 17.20 | 10.55 |
| 0032 | 1.220 | 22.40 ◊ | 17.20 | 10.55 |
| 0033 | 1.230 | 22.40 ◊ | 17.20 | 10.55 |
| 0034 | 1.240 | 22.40 ◊ | 17.20 | 10.55 |
| 0035 | 1.250 | 22.40 ◊ | 17.20 | 10.55 |
| 0036 | 1.260 | 22.40 ◊ | 17.20 | 10.55 |
| 0037 | 1.270 | 22.40 ◊ | 17.20 | 10.55 |
| 0038 | 1.280 | 22.40 ◊ | 17.20 | 10.55 |
| 0039 | 1.290 | 22.40 ◊ | 17.20 | 10.55 |
| 0040 | 1.300 | 22.40 ◊ | 17.20 | 10.55 |
| 0041 | 1.310 | 22.40 ◊ | 17.20 | 10.55 |
| 0042 | 1.320 | 22.40 ◊ | 17.20 | 10.55 |
| 0043 | 1.330 | 22.40 ◊ | 17.20 | 10.55 |
| 0044 | 1.340 | 22.40 ◊ | 17.20 | 10.55 |
| | | (W436) | (W436) | (W436) |

| Order No. | Length mm | 4350 Tol. 0 | 4351 Tol. 1 | 4352 Tol. 2 |
|---|---|---|---|---|
| 0045 | 1.350 | 22.40 ◊ | 17.20 | 10.55 |
| 0046 | 1.360 | 22.40 ◊ | 17.20 | 10.55 |
| 0047 | 1.370 | 22.40 ◊ | 17.20 | 10.55 |
| 0048 | 1.380 | 22.40 ◊ | 17.20 | 10.55 |
| 0049 | 1.390 | 22.40 ◊ | 17.20 | 10.55 |
| 0050 | 1.400 | 22.40 ◊ | 17.20 | 10.55 |
| 0051 | 1.410 | 22.40 ◊ | 17.20 | 10.55 |
| 0052 | 1.420 | 22.40 ◊ | 17.20 | 10.55 |
| 0053 | 1.430 | 22.40 ◊ | 17.20 | 10.55 |
| 0054 | 1.440 | 22.40 ◊ | 17.20 | 10.55 |
| 0055 | 1.450 | 22.40 ◊ | 17.20 | 10.55 |
| 0056 | 1.460 | 22.40 ◊ | 17.20 | 10.55 |
| 0057 | 1.470 | 22.40 ◊ | 17.20 | 10.55 |
| 0058 | 1.480 | 22.40 ◊ | 17.20 | 10.55 |
| 0059 | 1.490 | 22.40 ◊ | 17.20 | 10.55 |
| 0060 | 1.500 | 22.40 ◊ | 17.20 | 10.55 |
| 0061 | 1.600 | 22.40 ◊ | 17.20 | 10.55 |
| 0062 | 1.700 | 22.40 ◊ | 17.20 | 10.55 |
| 0063 | 1.800 | 22.40 ◊ | 17.20 | 10.55 |
| 0064 | 1.900 | 22.40 ◊ | 17.20 | 10.55 |
| 0065 | 2.000 | 21.20 ◊ | 14.75 | 10.55 |
| 0066 | 2.500 | 21.20 ◊ | 14.75 | 10.55 |
| 0067 | 3.000 | 21.20 ◊ | 14.75 | 10.55 |
| 0068 | 3.500 | 21.20 ◊ | 14.75 | 10.55 |
| 0069 | 4.000 | 21.20 ◊ | 14.75 | 10.55 |
| 0070 | 4.500 | 21.20 ◊ | 14.75 | 10.55 |
| 0071 | 5.000 | 21.20 ◊ | 14.75 | 10.55 |
| 0072 | 5.500 | 22.40 ◊ | 17.20 | 11.60 |
| 0073 | 6.000 | 22.40 ◊ | 17.20 | 11.60 |
| 0074 | 6.500 | 22.40 ◊ | 17.20 | 11.60 |
| 0075 | 7.000 | 22.40 ◊ | 17.20 | 11.60 |
| 0076 | 7.500 | 22.40 ◊ | 17.20 | 11.60 |
| 0077 | 8.000 | 22.40 ◊ | 17.20 | 11.60 |
| 0078 | 8.500 | 22.40 ◊ | 17.20 | 11.60 |
| 0079 | 9.000 | 22.40 ◊ | 17.20 | 11.60 |
| 0080 | 9.500 | 22.40 ◊ | 17.20 | 11.60 |
| 0081 | 10.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0082 | 10.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0083 | 11.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0084 | 11.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0085 | 12.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0086 | 12.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0087 | 13.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0088 | 13.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0089 | 14.000 | 31.90 ◊ | 19.55 | 11.75 |
| | | (W436) | (W436) | (W436) |

Continued overleaf

## Single parallel gauge block

Continued

| Order No. | Length mm | 4350 Tol. 0 | 4351 Tol. 1 | 4352 Tol. 2 |
|---|---|---|---|---|
| 0090 | 14.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0091 | 15.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0092 | 15.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0093 | 16.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0094 | 16.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0095 | 17.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0096 | 17.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0097 | 18.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0098 | 18.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0099 | 19.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0100 | 19.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0101 | 20.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0102 | 20.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0103 | 21.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0104 | 21.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0105 | 22.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0106 | 22.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0107 | 23.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0108 | 23.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0109 | 24.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0110 | 24.500 | 31.90 ◊ | 19.55 | 11.75 |
| 0111 | 25.000 | 31.90 ◊ | 19.55 | 11.75 |
| 0112 | 30.000 | 34.00 ◊ (W436) | 22.40 (W436) | 13.60 (W436) |
| 0113 | 40.000 | 36.10 ◊ | 23.70 | 14.50 |
| 0114 | 50.000 | 38.10 ◊ | 24.60 | 15.80 |
| 0115 | 60.000 | 42.50 ◊ | 27.30 | 18.00 |
| 0116 | 70.000 | 46.60 ◊ | 29.20 | 19.35 |
| 0117 | 75.000 | 51.00 ◊ | 31.60 | 20.20 |
| 0118 | 80.000 | 53.10 ◊ | 36.00 | 22.40 |
| 0119 | 90.000 | 55.10 ◊ | 37.20 | 23.70 |
| 0120 | 100.000 | 57.20 ◊ | 40.50 | 25.00 |
| 0125 | 125.000 | 149.00 ◊ | 98.90 | 72.30 |
| 0150 | 150.000 | 226.00 ◊ | 145.00 | 92.50 |
| 0175 | 175.000 | 298.50 ◊ | 180.50 | 93.10 |
| 0200 | 200.000 | 344.00 ◊ | 211.00 | 124.00 |
| 0250 | 250.000 | 394.00 ◊ | 255.00 | 142.00 |
| 0300 | 300.000 | 435.00 ◊ | 292.50 | 170.00 |
| 0350 | 350.000 | 485.00 ◊ | 400.00 | 268.00 |
| 0400 | 400.000 | 530.50 ◊ | 395.50 | 235.00 |
| 0450 | 450.000 | 597.00 ◊ | 514.50 ◊ | 349.50 ◊ |
| 0500 | 500.000 | 638.50 ◊ | 450.50 ◊ | 277.50 ◊ |
| 0600 | 600.000 | 1105.00 ◊ | 675.00 ◊ | 385.50 ◊ |
| 0700 | 700.000 | 1231.00 ◊ | 809.00 ◊ | 418.00 ◊ |
| 0800 | 800.000 | 1484.00 ◊ | 901.00 ◊ | 506.00 ◊ |
| 0900 | 900.000 | 1948.00 ◊ | 1125.00 ◊ | 637.00 ◊ |
| 1000 | 1000.000 | 2342.00 ◊ (W436) | 1352.00 ◊ (W436) | 738.00 ◊ (W436) |

## Parallel gauge block set

**Design:** Supplied in a wooden case.

**4360** **Tolerance class 0:** Calibration of other gauges and measuring devices in air-conditioned measurement laboratory.

**4361** **Tolerance class 1:** Most often-used standard in the measurement room for the inspection of gauges and for setting measuring instruments.

**4362** **Tolerance class 2:** Most often-used working standard in production for the inspection of gauges and for setting measuring instruments.

DIN EN ISO 3650 | Certificate

| Order No. | Number in set | 4360 format Tol. 0 | 4361 format Tol. 1 | 4362 format Tol. 2 | Dimensions in mm | Graduation mm | Number |
|---|---|---|---|---|---|---|---|
| 0032 | 32 | 365.00 | 238.50 | 126.50 | 1.005 | 1.005 | 1 |
| | | | | | 1.01 – 1.09 | 0.01 | 9 |
| | | | | | 1.10 – 1.90 | 0.1 | 9 |
| | | | | | 1.00 – 9.00 | 1.0 | 9 |
| | | | | | 10.00 – 30.00 | 10.0 | 3 |
| | | | | | 50.00 | – | 1 |
| 0047 | 47 | 545.00 | 314.50 | 210.50 | 1.005 | 1.005 | 1 |
| | | | | | 1.01 – 1.20 | 0.01 | 20 |
| | | | | | 1.30 – 1.90 | 0.1 | 7 |
| | | | | | 1.00 – 9.00 | 1.0 | 9 |
| | | | | | 10.00 –100.00 | 10.0 | 10 |
| 0087 | 87 | 825.50 | 542.00 | 314.50 | 1.001– 1.009 | 0.001 | 9 |
| | | | | | 1.01 – 1.49 | 0.01 | 49 |
| | | | | | 0.50 – 9.50 | 0.5 | 19 |
| | | | | | 10.00 –100.00 | 10.0 | 10 |
| 0103 | 103 | 1053.00 | 643.00 | 379.00 | 1.005 | 1.005 | 1 |
| | | | | | 1.01 – 1.49 | 0.01 | 49 |
| | | | | | 0.50 – 24.50 | 0.5 | 49 |
| | | | | | 25.00 –100.00 | 25.00 | 4 |
| | | (W437) | (W437) | (W437) | | | |

## Parallel gauge block set

NEW

DIN EN ISO 3650 | Certificate

Mahr

**Design:** Supplied with lettering strips and Mahr calibration sheet, in wooden box.

**436A** **Tolerance class 0:** Calibration of other gauges and measuring devices in air-conditioned measurement laboratory.

**436B** **Tolerance class 1:** Most often-used standard in the measurement room for the inspection of gauges and for setting measuring instruments.

**436C** **Tolerance class 2:** Most often-used working standard in production for the inspection of gauges and for setting measuring instruments.

| Order No. | Number in set | 436A Mahr Tol. 0 | 436B Mahr Tol. 1 | 436C Mahr Tol. 2 | Dimensions in mm | Graduation mm | Number |
|---|---|---|---|---|---|---|---|
| 0032 | 32 | 1075.00 ◊ | 786.00 ◊ | 672.00 ◊ | 1.005 | – | 1 |
| | | | | | 1.010– 1.090 | 0.01 | 9 |
| | | | | | 1.100– 1.900 | 0.1 | 9 |
| | | | | | 1.000– 9.000 | 1 | 9 |
| | | | | | 10.000– 30.000 | 10 | 3 |
| | | | | | 50.000 | – | 1 |
| 0047 | 47 | 1635.00 ◊ | 1330.00 ◊ | 1100.00 ◊ | 1.005 | – | 1 |
| | | | | | 1.010– 1.190 | 0.01 | 19 |
| | | | | | 1.200– 1.900 | 0.1 | 8 |
| | | | | | 1.000– 9.000 | 1 | 9 |
| | | | | | 10.000–100.000 | 10 | 10 |
| 0087 | 87 | 2815.00 ◊ | 1865.00 ◊ | 1670.00 ◊ | 0.500 | – | 1 |
| | | | | | 1.001– 1.009 | 0.001 | 9 |
| | | | | | 1.010– 1.490 | 0.01 | 49 |
| | | | | | 1.000– 9.500 | 0.5 | 18 |
| | | | | | 10.000–100.000 | 10 | 10 |
| 0111 | 111 | 3825.00 ◊ | 3055.00 ◊ | 2780.00 ◊ | 0.500 | – | 1 |
| | | | | | 1.001– 1.009 | 0.001 | 9 |
| | | | | | 1.010– 1.490 | 0.01 | 49 |
| | | | | | 1.000– 24.500 | 0.5 | 48 |
| | | | | | 25.000–100.000 | 25 | 4 |
| 0121 | 121 | 4180.00 ◊ | 3335.00 ◊ | 3125.00 ◊ | 0.500 | – | 1 |
| | | | | | 1.001– 1.009 | 0.001 | 9 |
| | | | | | 1.010– 1.490 | 0.01 | 49 |
| | | | | | 1.600– 1.900 | 0.1 | 4 |
| | | | | | 1.000– 24.500 | 0.5 | 48 |
| | | | | | 30.000– 40.000 | 10 | 2 |
| | | | | | 60.000– 90.000 | 10 | 4 |
| | | | | | 25.000–100.000 | 25 | 4 |
| | | (W489) | (W489) | (W489) | | | |

## Long parallel gauge block set

NEW

DIN EN ISO 3650 | Certificate

Mahr

**Design:** Space-saving vertical arrangement of all parallel gauge blocks. Supplied with lettering strips and Mahr calibration sheet, in wooden box.

**436D** **Tolerance class 0:** Calibration of other gauges and measuring devices in air-conditioned measurement laboratory.

**436E** **Tolerance class 1:** Most often-used standard in the measurement room for the inspection of gauges and for setting measuring instruments.

**436F** **Tolerance class 2:** Most often-used working standard in production for the inspection of gauges and for setting measuring instruments.

| Order No. | Number in set | 436D Mahr Tol. 0 | 436E Mahr Tol. 1 | 436F Mahr Tol. 2 | Nominal dimension mm |
|---|---|---|---|---|---|
| 0005 | 5 | 8745.00 ◊ | 6625.00 ◊ | 5330.00 ◊ | 600/700/800/900/1000 |
| 0008 | 8 | 3915.00 ◊ | 2965.00 ◊ | 2480.00 ◊ | 125/150/175/200/250/300/400/500 |
| | | (W489) | (W489) | (W489) | |

## Parallel gauge block set, ceramic

**Design:** Made of zirconium oxide ceramic, extremely wear-resistant and corrosion-free. Each gauge block is marked with an individual ID No. **Supplied in a wooden box.**

Tolerance class 1: **Most often-used standard in the measurement room for the inspection of gauges and for setting measuring instruments.**

DIN EN ISO 3650 | Certificate

| Order No. | Number in set | 4374 | Dimensions in mm | Graduation mm | Number |
|---|---|---|---|---|---|
| 1032 | 32 | 1017.00 | 1.005 | – | 1 |
| | | | 1.01– 1.09 | 0.01 | 9 |
| | | | 1.10– 1.90 | 0.1 | 9 |
| | | | 1.00– 9.00 | 1.0 | 9 |
| | | | 10.00–30.00 | 10.0 | 3 |
| | | | 50.00 | – | 1 |

(W436)

| Order No. | Number in set | 4374 | Dimensions in mm | Graduation mm | Number |
|---|---|---|---|---|---|
| 1047 | 47 | 1414.00 | 1.005 | – | 1 |
| | | | 1.01 – 1.20 | 0.01 | 20 |
| | | | 1.30 – 1.90 | 0.1 | 7 |
| | | | 1.00 – 9.00 | 1.0 | 9 |
| | | | 10.00 –100.00 | 10.0 | 10 |

(W436)

## Gauge block test set for caliper

**Design:** Made of high-quality, specially alloyed and unstressed special steel of high stability and good adhesive properties. The hardness of the gauge blocks is 800 HV (64 HRC), making them highly stable and exceptionally wear resistant. Each gauge block is marked with an individual ID number. Supplied in a wooden box.

**Tolerance class 1:** Most often-used standard in the measurement room for the inspection of gauges and for setting measuring instruments.

For lengths
0.5 to 10.0 mm, the height is 30 mm and the depth 9 mm.
For 10.0 to 1000.0 mm, the height is 35 mm and the depth 9 mm.

**Application:** For verification in acc. with VDI/VDE/DGQ Z 2618, Sheet 8, of calipers.

DIN EN ISO 3650

| Order No. | Number in set | 4126 | Nominal dimension mm |
|---|---|---|---|
| 0003 | 3 | 171.50 | 30.0/41.3/131.4 |

(W436)

## Optical flat diameter

**Design:** Flat glass plate for checking evenness and slip test on high-precision, even surfaces acc. to the interference method. Supplied in a wooden box.

| Order No. | ∅ mm | 4130 | Thickness mm | Evenness µm |
|---|---|---|---|---|
| 1045 | 45 | 161.00 | 15 | 0.1 |

(W436)

## Calibration pin set

NEW

Mahr

**Design:** Made of gauge steel, hardened, aged several times.

**Application:** As setting gauge for displaying measuring devices, for the examination of axle distances, cones and other workpieces in connection with gauge blocks, for the determination of the flange diameter of threads or partial circle diameters of toothing.

**4390 0010** Tolerance class 0 Lapped

**4390 0015 + 0025** Tolerance class 1 Lapped

**4390 0020 + 0030** Tolerance class 2 Ground

| Order No. | Number | 4390 (Mahr) Tol. 0 | Measurement range | Graduation mm | Tolerance mm |
|---|---|---|---|---|---|
| 0010 | 41 | 1870.00◊ | 0.1–0.5 | 0.01 | 0.0005 |

(W489)

| Order No. | Number | 4390 (Mahr) Tol. 1 | Measurement range | Graduation mm | Tolerance mm |
|---|---|---|---|---|---|
| 0015 | 41 | 1305.00◊ | 0.1–0.5 | 0.01 | 0.0010 |
| 0025 | 91 | 1855.00◊ | 0.1–1.0 | 0.01 | 0.0010 |

(W489)

| Order No. | Number | 4390 (Mahr) Tol. 2 | Measurement range | Graduation mm | Tolerance mm |
|---|---|---|---|---|---|
| 0020 | 41 | 945.00◊ | 0.1– 0.5 | 0.01 | 0.0015 |
| 0030 | 91 | 1115.00◊ | 1.0–10.0 | 0.1 | 0.0015 |

(W489)



Articles marked ◊ are not held in stock, procurement is effected at short notice.

# Calibration pin holder/plain plug gauge



## Calibration pin holder

NEW

**Design:** Calibration pin holder made with pressure die-casting procedure with clamping screw.

**Application:** For holding two calibration pins lying within a tolerance field.

| Order No. | For calibration pins Ø mm | 4391 |
|---|---|---|
| 0001 | 1– 2 | 10.75 ◊ |
| 0002 | 2– 4 | 12.25 ◊ |
| 0003 | 4– 6 | 22.30 ◊ |
| 0004 | 6– 8 | 29.80 ◊ |
| 0005 | 8–10 | 33.50 ◊ |

(W442)

## Plain plug gauge

**Design:** Go and no-go sides made of hardened gauge steel.

**Application:** For checking bores for dimensional accuracy.

**Note:** Intermediate dimensions and other tolerances available on request.

DIN 2245 | H7

HELIOS·PREISSER

| Order No. | Ø mm | 4400 HELIOS·PREISSER |
|---|---|---|
| 0002 | 2 | 31.30 |
| 0003 | 3 | 22.80 |
| 0004 | 4 | 20.40 |
| 0005 | 5 | 19.20 |
| 0006 | 6 | 19.20 |
| 0007 | 7 | 20.40 |
| 0008 | 8 | 20.40 |
| 0009 | 9 | 21.70 |
| 0010 | 10 | 22.80 |
| 0011 | 11 | 22.80 |
| 0012 | 12 | 24.20 |
| 0013 | 13 | 25.30 |
| 0014 | 14 | 25.30 |
| 0015 | 15 | 26.00 |
| 0016 | 16 | 26.00 |
| 0017 | 17 | 27.20 |
| 0018 | 18 | 28.20 |
| 0019 | 19 | 28.20 |
| 0020 | 20 | 28.20 |
| 0021 | 21 | 29.70 |

(W443)

| Order No. | Ø mm | 4400 HELIOS·PREISSER |
|---|---|---|
| 0022 | 22 | 30.30 |
| 0023 | 23 | 31.30 |
| 0024 | 24 | 31.30 |
| 0025 | 25 | 32.60 |
| 0026 | 26 | 33.80 |
| 0027 | 27 | 33.80 |
| 0028 | 28 | 34.90 |
| 0030 | 30 | 34.90 |
| 0032 | 32 | 38.60 |
| 0033 | 33 | 39.30 |
| 0034 | 34 | 40.40 |
| 0035 | 35 | 40.40 |
| 0036 | 36 | 41.40 |
| 0037 | 37 | 42.20 |
| 0038 | 38 | 43.50 |
| 0040 | 40 | 44.70 |
| 0042 | 42 | 46.10 |
| 0044 | 44 | 49.60 |
| 0045 | 45 | 50.60 |
| 0046 | 46 | 51.30 |

(W443)

| Order No. | Ø mm | 4400 HELIOS·PREISSER |
|---|---|---|
| 0047 | 47 | 53.60 |
| 0048 | 48 | 54.60 |
| 0050 | 50 | 56.70 |
| 0052 | 52 | 59.80 |
| 0055 | 55 | 63.00 |
| 0058 | 58 | 67.20 |
| 0060 | 60* | 69.30 |
| 0062 | 62* | 73.50 |
| 0065 | 65* | 73.50 |
| 0068 | 68* | 80.80 |
| 0070 | 70* | 81.90 |
| 0072 | 72* | 84.00 |
| 0075 | 75* | 88.20 |
| 0080 | 80* | 93.40 |
| 0085 | 85* | 99.80 |
| 0090 | 90* | 106.00 |
| 0095 | 95* | 111.50 |
| 0100 | 100* | 116.50 |

(W443)

* Consisting of 1 piece each go and no-go side.

## Plain plug gauge set, 7-part

**Design:** Supplied in a wooden case.

| Order No. | Set contents | 4400 HELIOS·PREISSER |
|---|---|---|
| 0312 | 3; 4; 5; 6; 8; 10; 12 mm | 149.00 |

(W443)

## Plain setting ring

**Design:** Made of hardened gauge steel. The actual dimension is engraved on the adjusting rings.

**Application:** For adjusting inside measuring instruments.

DIN 2250C

HELIOS·PREISSER

| Order No. | Ø mm | 4401 HELIOS·PREISSER |
|---|---|---|
| 0040 | 4.0 | 50.60 |
| 0045 | 4.5 | 50.60 |
| 0050 | 5.0 | 49.60 |
| 0060 | 6.0 | 48.30 |
| 0070 | 7.0 | 48.30 |
| 0080 | 8.0 | 48.30 |
| 0090 | 9.0 | 48.30 |
| 0100 | 10.0 | 48.30 |
| 0110 | 11.0 | 49.60 |
| 0120 | 12.0 | 50.60 |
| 0130 | 13.0 | 51.30 |
| 0140 | 14.0 | 51.30 |
| 0150 | 15.0 | 52.50 |
| 0160 | 16.0 | 52.50 |
| 0170 | 17.0 | 53.60 |
| 0180 | 18.0 | 53.60 |
| | | (W443) |

| Order No. | Ø mm | 4401 HELIOS·PREISSER |
|---|---|---|
| 0190 | 19.0 | 54.60 |
| 0200 | 20.0 | 56.70 |
| 0220 | 22.0 | 56.70 |
| 0240 | 24.0 | 60.90 |
| 0250 | 25.0 | 62.00 |
| 0260 | 26.0 | 63.00 |
| 0280 | 28.0 | 64.00 |
| 0300 | 30.0 | 59.80 |
| 0320 | 32.0 | 67.20 |
| 0340 | 34.0 | 68.20 ◊ |
| 0360 | 36.0 | 69.30 ◊ |
| 0380 | 38.0 | 72.40 ◊ |
| 0400 | 40.0 | 73.50 |
| 0420 | 42.0 | 77.70 |
| 0440 | 44.0 | 81.90 ◊ |
| 0450 | 45.0 | 84.00 |
| | | (W443) |

| Order No. | Ø mm | 4401 HELIOS·PREISSER |
|---|---|---|
| 0460 | 46.0 | 86.10 ◊ |
| 0500 | 50.0 | 93.40 |
| 0550 | 55.0 | 105.00 |
| 0600 | 60.0 | 113.50 |
| 0650 | 65.0 | 124.00 ◊ |
| 0700 | 70.0 | 137.50 |
| 0750 | 75.0 | 147.00 ◊ |
| 0800 | 80.0 | 160.50 |
| 0850 | 85.0 | 180.50 ◊ |
| 0900 | 90.0 | 198.50 |
| 0950 | 95.0 | 220.50 ◊ |
| 1000 | 100.0 | 238.50 |
| 1250 | 125.0 | 299.00 ◊ |
| 1750 | 175.0 | 520.00 ◊ |
| | | (W443) |

## Screw plug gauge

**Design:** Made of hardened gauge steel, tolerance class 6H, with go and no-go sides (from thread M42 only go or no-go side). For metric ISO regular threads **DIN 13.**

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

DIN ISO 1502 | DIN 2280 | DIN 13 | M

**4403** Screw plug gauge

4403 HELIOS·PREISSER

**4416** Precision screw plug gauge

4416

| Order No. | Thread Ø x pitch | 4403 HELIOS·PREISSER | 4416 |
|---|---|---|---|
| 0016 | M1.6 x 0.35 | – | 74.60 |
| 0018 | M1.8 x 0.35 | – | 68.80 |
| 0020 | M2.0 x 0.40 | – | 58.50 |
| 0022 | M2.2 x 0.45 | – | 62.80 |
| 0025 | M2.5 x 0.45 | – | 50.40 |
| 0030 | M3.0 x 0.50 | 68.20 | 43.20 |
| 0035 | M3.5 x 0.60 | – | 44.30 |
| 0040 | M4.0 x 0.70 | 64.00 | 40.60 |
| 0050 | M5.0 x 0.80 | 63.00 | 39.70 |
| 0060 | M6.0 x 1.00 | 60.90 | 38.40 |
| 0080 | M8.0 x 1.25 | 63.00 | 39.70 |
| 0100 | M10.0 x 1.50 | 67.20 | 42.60 |
| 0120 | M12.0 x 1.75 | 72.40 | 45.50 |
| 0140 | M14.0 x 2.00 | – | 49.00 |
| 0160 | M16.0 x 2.00 | – | 52.60 |
| | | (W443) | (W446) |

| Order No. | Thread Ø x pitch | 4403 HELIOS·PREISSER | 4416 |
|---|---|---|---|
| 0180 | M18.0 x 2.50 | – | 57.20 |
| 0200 | M20.0 x 2.50 | – | 61.50 |
| 0220 | M22.0 x 2.50 | – | 65.00 |
| 0240 | M24.0 x 3.00 | – | 73.30 |
| 0270 | M27.0 x 3.00 | – | 81.50 |
| 0300 | M30.0 x 3.50 | – | 90.30 |
| 0330 | M33.0 x 3.50 | – | 99.70 |
| 0360 | M36.0 x 4.00 | – | 107.50 |
| 0390 | M39.0 x 4.00 | – | 119.00 |
| 0420 | M42.0 x 4.50* | – | 78.70 |
| 0421 | M42.0 x 4.50** | – | 70.40 |
| 0450 | M45.0 x 4.50* | – | 84.50 |
| 0451 | M45.0 x 4.50** | – | 76.30 |
| 0480 | M48.0 x 5.00* | – | 91.00 |
| 0481 | M48.0 x 5.00** | – | 82.40 |
| | | (W443) | (W446) |

* Thread go plug gauge.
** Thread no-go plug gauge

## Screw plug gauge set, 7-piece

DIN 13 | M

**Design:** Made of hardened gauge steel, tolerance class 6H, with go and no-go sides (from thread M42 only go or no-go side). For metric ISO regular threads **DIN 13.** Supplied in a wooden box.

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

| Order No. | Set contents | 4416 |
|---|---|---|
| 0010 | M3; M4; M5; M6; M8; M10; M12 | 350.00 (W446) |

## Screw plug gauge, TiCN coated

NEW

DIN ISO 1502 | DIN 2280 | DIN 13 | M

**Design:** Made of hardened gauge steel 6H, with go and no-go sides. For metric ISO regular threads **DIN 13.** Go side TiCN-coated for increased tool life.

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

| Order No. | Thread ∅ x pitch | 4407 TiCN |
|---|---|---|
| 0000 | M6 x 1.00 | 58.80 ◊ |
| 0010 | M8 x 1.25 | 63.90 ◊ |
| 0015 | M10 x 1.50 | 68.70 ◊ |
| 0020 | M12 x 1.75 | 73.10 ◊ (W446) |

## Precision thread gauge MultiCheck Digital

NEW

DIN ISO 1502 | DIN 13 | RS232 | Certificate | M

**Design:** For ISO metric threads DIN 13. Secure measurement results with digitial view. Thread depth can be read up to 4 x D. Use of standard thread plug gauges, easy exchange of no longer dimensionally toleranced Data output RS 232.

**Application:** Inspection of thread gauge content and thread depth with only one means of measurement.

| Order No. | Thread ∅ x pitch | 4407 |
|---|---|---|
| 0025 | M6 x 1.00 | 606.00 ◊ |
| 0030 | M8 x 1.25 | 642.00 ◊ |
| 0035 | M10 x 1.50 | 645.00 ◊ |
| 0040 | M12 x 1.75 | 770.00 ◊ (W446) |

## Thread ring gauge

**Design:** Made of high-quality, **tolerance class 6g.**
For metric ISO regular threads **DIN 13.**

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

**4404** **Thread go ring gauge**
**4405** **Thread no-go gauge ring**

DIN ISO 1502 | DIN 13 | M

4404

DIN 2285

4405

DIN 2299

| Order No. | Thread ∅ x pitch | 4404 | 4405 |
|---|---|---|---|
| 0010 | M1.0 x 0.25 | 123.00 ◊ | 123.00 ◊ |
| 0012 | M1.2 x 0.25 | 116.50 ◊ | 116.50 ◊ |
| 0014 | M1.4 x 0.30 | 88.20 ◊ | 88.20 ◊ |
| 0016 | M1.6 x 0.35 | 76.20 ◊ | 76.20 ◊ |
| 0018 | M1.8 x 0.35 | 67.10 ◊ | 67.10 ◊ |
| 0020 | M2.0 x 0.40 | 64.40 ◊ | 64.40 ◊ |
| 0025 | M2.5 x 0.45 | 50.60 ◊ | 50.60 ◊ |
| 0030 | M3.0 x 0.50 | 39.00 | 39.00 |
| 0035 | M3.5 x 0.60 | 40.30 | 40.30 |
| 0040 | M4.0 x 0.70 | 35.90 | 35.90 |
| 0050 | M5.0 x 0.80 | 35.90 | 35.90 |
| 0060 | M6.0 x 1.00 | 35.90 | 35.90 |
| 0080 | M8.0 x 1.25 | 36.80 | 36.80 |
| 0100 | M10.0 x 1.50 | 42.30 | 42.30 |
| 0120 | M12.0 x 1.75 | 47.20 (W444) | 47.20 (W444) |

| Order No. | Thread ∅ x pitch | 4404 | 4405 |
|---|---|---|---|
| 0140 | M14.0 x 2.00 | 50.40 | 50.40 |
| 0160 | M16.0 x 2.00 | 56.00 | 56.00 |
| 0180 | M18.0 x 2.50 | 65.00 | 65.00 |
| 0200 | M20.0 x 2.50 | 71.70 | 71.70 |
| 0220 | M22.0 x 2.50 | 78.90 | 78.90 |
| 0240 | M24.0 x 3.00 | 84.40 | 84.40 |
| 0270 | M27.0 x 3.00 | 93.80 | 93.80 |
| 0300 | M30.0 x 3.50 | 102.50 | 102.50 |
| 0330 | M33.0 x 3.50 | 112.50 ◊ | 112.50 ◊ |
| 0360 | M36.0 x 4.00 | 121.50 ◊ | 121.50 ◊ |
| 0390 | M39.0 x 4.00 | 132.00 ◊ | 132.00 ◊ |
| 0420 | M42.0 x 4.50 | 143.50 ◊ | 143.50 ◊ |
| 0450 | M45.0 x 4.50 | 151.50 ◊ | 151.50 ◊ |
| 0480 | M48.0 x 5.00 | 161.00 ◊ (W444) | 161.00 ◊ (W444) |

## Thread ring gauge set, 7-piece

**Design:** Supplied in a wooden case.

**4416** **0012** **Thread go ring gauge**
**4416** **0014** **Thread no-go gauge ring**

| Order No. | Set contents | 4416 |
|---|---|---|
| 0012 | M3; M4; M5; M6; M8; M10; M12 | 304.50 |
| 0014 | M3; M4; M5; M6; M8; M10; M12 | 304.50 (W446) |

M

DIN 2285 **4416 0012**

DIN 2299 **4416 0014**

## Thread gauge for ISO metric fine threads

**Design:** Made of hardened gauge steel. For metric ISO precision thread **DIN 13.**

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

**4421** **Thread limit plug gauge, tolerance field 6H,** with go and no-go side (from thread M42 x 1.5 only with go or no-go side).

**4422** **Thread go ring gauge, tolerance class 6g.**

**4423** **Thread no-go gauge ring, tolerance class 6g.**

DIN 13 | MF

**4421**

DIN 2280

DIN 2285

DIN 2299

**4422**

**4423**

| Order No. | Thread Ø x pitch | 4421 | 4422 | 4423 |
|---|---|---|---|---|
| 0301 | M3 x 0.35 | 95.00 | – | – |
| 0401 | M4 x 0.35 | 89.00 | – | – |
| 0402 | M4 x 0.50 | 69.90 | 55.00 | 55.00 |
| 0502 | M5 x 0.50 | 67.80 | 54.30 | 54.30 |
| 0602 | M6 x 0.50 | 64.30 | 55.60 | 55.60 |
| 0603 | M6 x 0.75 | 46.50 | 42.60 | 42.60 |
| 0703 | M7 x 0.75 | 46.90 | 51.00 | 51.00 |
| 0802 | M8 x 0.50 | 69.80 | 59.80 | 59.80 |
| 0803 | M8 x 0.75 | 46.50 | 44.30 | 44.30 |
| 0804 | M8 x 1.00 | 42.90 | 40.40 | 40.40 |
| 0904 | M9 x 1.00 | 45.60 | 49.80 | 49.80 |
| 1003 | M10 x 0.75 | 49.10 | 49.20 | 49.20 |
| 1004 | M10 x 1.00 | 45.20 | 45.20 | 45.20 |
| 1104 | M11 x 1.00 | 48.60 | 56.30 | 56.30 |
| 1204 | M12 x 1.00 | 49.10 | 51.30 | 51.30 |
| 1206 | M12 x 1.50 | 44.70 | 48.60 | 48.60 |
| 1404 | M14 x 1.00 | 52.20 | 55.40 | 55.40 |
| 1406 | M14 x 1.50 | 47.70 | 51.80 | 51.80 |
| 1504 | M15 x 1.00 | 58.50 | 71.70 | 71.70 |
| 1506 | M15 x 1.50 | 58.50 | 68.50 | 68.50 |
| 1604 | M16 x 1.00 | 55.50 | 60.00 | 60.00 |
| 1606 | M16 x 1.50 | 50.00 | 56.60 | 56.60 |
| 1804 | M18 x 1.00 | 58.90 | 66.10 | 66.10 |
| 1806 | M18 x 1.50 | 53.70 | 61.00 | 61.00 |
| 1807 | M18 x 2.00 | 59.10 | – | – |
| 2004 | M20 x 1.00 | 62.90 | 71.00 | 71.00 |
| 2006 | M20 x 1.50 | 57.70 | 67.40 | 67.40 |
| 2007 | M20 x 2.00 | 61.20 | 71.40 | 71.40 |
| 2204 | M22 x 1.00 | 70.50 | 78.50 | 78.50 |
| 2206 | M22 x 1.50 | 63.50 | 72.10 | 72.10 |
| 2207 | M22 x 2.00 | 65.40 | 75.90 | 75.90 |
| 2404 | M24 x 1.00 | 75.90 | 83.80 | 83.80 |
| 2406 | M24 x 1.50 | 68.10 | 76.50 | 76.50 |
| 2407 | M24 x 2.00 | 69.40 | 79.10 | 79.10 |
| 2506 | M25 x 1.50 | 70.00 | 79.40 | 79.40 |
| 2606 | M26 x 1.50 | 72.10 | 82.00 | 82.00 |
| | | (W446) | (W444) | (W444) |

| Order No. | Thread Ø x pitch | 4421 | 4422 | 4423 |
|---|---|---|---|---|
| 2706 | M27 x 1.50 | 74.40 | 85.00 | 85.00 |
| 2707 | M27 x 2.00 | 75.50 | 87.60 | 87.60 |
| 2806 | M28 x 1.50 | 76.50 | 86.70 | 86.70 |
| 3004 | M30 x 1.00 | 93.20 | 98.90 | 98.90 |
| 3006 | M30 x 1.50 | 82.60 | 91.10 | 91.10 |
| 3007 | M30 x 2.00 | 83.10 | 94.80 | 94.80 |
| 3206 | M32 x 1.50 | 84.50 ◊ | 96.60 | 96.60 ◊ |
| 3306 | M33 x 1.50 | 86.70 ◊ | 98.90 | 98.90 ◊ |
| 3307 | M33 x 2.00 | 88.90 ◊ | 101.00 | 101.00 ◊ |
| 3506 | M35 x 1.50 | 90.80 ◊ | 103.50 | 103.50 ◊ |
| 3606 | M36 x 1.50 | 92.90 ◊ | 106.00 | 106.00 ◊ |
| 3607 | M36 x 2.00 | 95.70 ◊ | 108.50 | 108.50 ◊ |
| 3609 | M36 x 3.00 | 106.00 ◊ | 119.50 | 119.50 ◊ |
| 3806 | M38 x 1.50 | 100.50 ◊ | 111.50 | 111.50 ◊ |
| 3907 | M39 x 2.00 | 108.00 ◊ | 118.50 | 118.50 ◊ |
| 4006 | M40 x 1.50 | 106.00 ◊ | 117.00 | 117.00 ◊ |
| 4007 | M40 x 2.00 | 112.50 ◊ | 123.50 | 123.50 ◊ |
| 4206 | M42 x 1.50 | 64.40 ◊* | 123.50 | 123.50 ◊ |
| 4216 | M42 x 1.50 | 59.30 ◊** | – | – |
| 4207 | M42 x 2.00 | 66.50 ◊* | 126.00 | 126.00 ◊ |
| 4217 | M42 x 2.00 | 61.10 ◊** | – | – |
| 4209 | M42 x 3.00 | 77.80 ◊* | 134.00 | 134.00 ◊ |
| 4219 | M42 x 3.00 | 71.80 ◊** | – | – |
| 4506 | M45 x 1.50 | 68.50 ◊* | 130.00 | 130.00 ◊ |
| 4516 | M45 x 1.50 | 62.80 ◊** | – | – |
| 4507 | M45 x 2.00 | 70.40 ◊* | 132.50 | 132.50 ◊ |
| 4517 | M45 x 2.00 | 65.20 ◊** | – | – |
| 4509 | M45 x 3.00 | 82.10 ◊* | 142.00 | 142.00 ◊ |
| 4519 | M45 x 3.00 | 75.80 ◊** | – | – |
| 4806 | M48 x 1.50 | 72.50 ◊* | 136.50 | 136.50 ◊ |
| 4816 | M48 x 1.50 | 66.80 ◊** | – | – |
| 4807 | M48 x 2.00 | 74.60 ◊* | 140.00 | 140.00 ◊ |
| 4817 | M48 x 2.00 | 68.80 ◊** | – | – |
| 4809 | M48 x 3.00 | 86.70 ◊* | 149.50 | 149.50 ◊ |
| 4819 | M48 x 3.00 | 80.00 ◊** | – | – |
| | | (W446) | (W444) | (W444) |

* Thread go plug gauge.
** Thread no-go plug gauge

## Thread gauge for UNC coarse thread

**Design:** Made of hardened gauge steel. Gauge dimensions according to ANSI/ASME B1.2. For UNC coarse thread.

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

**4428** **Thread limit plug gauge.** Tolerance class 2B. With go and no-go sides.

**4429** **Thread go ring gauge.** Tolerance class 2A.

**4430** **Thread no-go gauge ring.** Tolerance class 2A.

UNC

DIN 2280

DIN 2285

DIN 2299

4428

4429

4430

| Order No. | Thread | 4428 | 4429 | 4430 | Gears per inch |
|---|---|---|---|---|---|
| 0004 | UNC No. 4 | 65.10 | 57.20 | 57.20 | 40 |
| 0006 | UNC No. 6 | 52.90 | 45.00 | 45.00 | 32 |
| 0008 | UNC No. 8 | 50.20 | 42.40 | 42.40 | 32 |
| 0014 | UNC 1/4 | 48.60 | 39.70 | 39.70 | 20 |
| 0516 | UNC 5/16 | 48.60 | 42.10 | 42.10 | 18 |
| 0038 | UNC 3/8 | 50.00 | 46.10 | 46.10 | 16 |
| 0012 | UNC 1/2 | 55.70 | 55.00 | 55.00 | 13 |
| 0058 | UNC 5/8 | 62.20 | 64.70 | 64.70 | 11 |
| 0034 | UNC 3/4 | 70.90 | 76.20 | 76.20 | 10 |
| 1000 | UNC 1 | 92.30 (W446) | 101.50 (W444) | 101.50 (W444) | 8 |

## Thread gauge for UNF fine-pitch thread

**Design:** Made of hardened gauge steel. Gauge dimensions according to ANSI/ASME B1.2. For UNF fine-pitch thread

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

**4433** **Thread limit plug gauge.** Tolerance class 2B. With go and no-go sides.

**4434** **Thread go ring gauge.** Tolerance class 2A.

**4435** **Thread no-go gauge ring.** Tolerance class 2A.

UNF

DIN 2280

DIN 2285

DIN 2299

4433

4434

4435

| Order No. | Thread | 4433 | 4434 | 4435 | Gears per inch |
|---|---|---|---|---|---|
| 0010 | UNF No. 10 | 48.80 | 40.20 | 40.20 | 32 |
| 0014 | UNF 1/4 | 48.60 | 39.90 | 39.90 | 28 |
| 0516 | UNF 5/16 | 48.60 | 42.10 | 42.10 | 24 |
| 0038 | UNF 3/8 | 50.10 | 46.10 | 46.10 | 24 |
| 0716 | UNF 7/16 | 52.20 | 49.50 | 49.50 | 20 |
| 0012 | UNF 1/2 | 55.70 | 55.00 | 55.00 | 20 |
| 0916 | UNF 9/16 | 58.10 | 59.30 | 59.30 | 18 |
| 0058 | UNF 5/8 | 62.20 | 65.40 | 65.40 | 18 |
| 0034 | UNF 3/4 | 69.80 | 76.20 | 76.20 | 16 |
| 1000 | UNF 1 | 85.30 (W446) | 101.50 (W444) | 101.50 (W444) | 12 |

## Thread gauge for NPT tapered pipe thread

**Design:** Made of hardened gauge steel. Gauge dimensions according to ANSI/ASME B1.20.1. Thread gauge for NPT tapered pipe thread, taper 1:16.

**Application:** For threads with sealant.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

NPT

4414

**4414** Thread limit plug gauge

**4415** Thread limit ring gauge

4415

| Order No. | Thread | 4414 | 4415 | Gears per inch |
|---|---|---|---|---|
| 0018 | NPT 1/8 | 123.50 | 205.50 | 27 |
| 0014 | NPT 1/4 | 131.50 | 210.00 | 18 |
| 0038 | NPT 3/8 | 141.50 | 221.00 | 18 |
| 0012 | NPT 1/2 | 154.00 | 240.00 | 14 |
| 0034 | NPT 3/4 | 171.00 | 262.50 | 14 |
| 1000 | NPT 1 | 198.00 | 297.00 | 11.5 |
| | | (W446) | (W444) | |

## Thread gauge for Whitworth pipe thread

**Design:** Made of hardened gauge steel. Gauge dimensions according to DIN EN ISO 228-2. For Whitworth pipe thread.

**Application:** For inspecting threads.

**Note:** In order to prevent premature breaking away of the thread gear, the first thread gear is ground and removes coarse dirt. Intermediate dimensions and other tolerances available on request.

G

DIN ISO 228

4417

**4417** Thread limit plug gauge. With go and no-go sides.

DIN 2280

**4418** Thread go ring gauge

DIN 2285

**4419** Thread no-go gauge ring

DIN 2299

4418

4419

| Order No. | Thread | 4417 | 4418 | 4419 | Gears per inch |
|---|---|---|---|---|---|
| 0018 | G 1/8 | 52.10 | 45.80 | 45.80 | 28 |
| 0014 | G 1/4 | 57.20 | 54.70 | 54.70 | 19 |
| 0038 | G 3/8 | 65.80 | 63.00 | 63.00 | 19 |
| 0012 | G 1/2 | 75.40 | 74.60 | 74.60 | 14 |
| 0034 | G 3/4 | 87.60 | 90.60 | 90.60 | 14 |
| 1000 | G 1 | 106.00 | 109.00 | 109.00 | 11 |
| 1014 | G 1.1/4 | 75.00 * | 135.00 | 135.00 | 11 |
| 1914 | G 1.1/4 | 69.30 ** | – | – | 11 |
| 1012 | G 1.1/2 | 86.60 * | 151.00 | 151.00 | 11 |
| 1912 | G 1.1/2 | 79.90 ** | – | – | 11 |
| 2000 | G 2 | 108.00 * | 185.50 | 185.50 | 11 |
| 2900 | G 2 | 99.70 ** | – | – | 11 |
| | | (W446) | (W444) | (W444) | |

* Thread go plug gauge.
** Thread no-go plug gauge

## Twist drill grinding gauge

**Application:** For controlling the cutting edges on twist drills with 118° point angle.

| Order No. | For twist drills up to Ø mm | 4451 format |
|---|---|---|
| 0050 | 50 | 2.14 (W447) |

## Angled thread cutter gauge

**Design:** Marked with dimensions and different recesses.

**Application:** For inspecting the grinding on lathe tools and for setting up the steels on the support.

| Order No. | For thread | 4453 format |
|---|---|---|
| 0055 | WW 55° | 3.53 |
| 0060 | M60° | 3.32 (W447) |

## Trapezoidal thread steel gauge

**Design:** With 30° recess, cleanly milled.

**Application:** For measuring trapezoidal gauges of 2–12 mm pitch and flange angle.

DIN 103

| Order No. | 4455 format |
|---|---|
| 0001 | 3.63 (W447) |

## Lathe tool and thread steel gauge

**Design:** For trapezoidal Whitworth and metric threads. For angles of 0–30° und 40–80°. Supplied individually packed.

DIN 103

| Order No. | Dimensions mm | 4457 format | Thickness mm |
|---|---|---|---|
| 0001 | 90 x 40 | 12.90 (W447) | 2 |

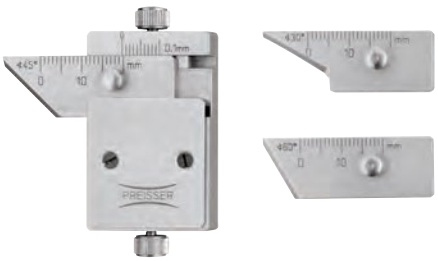
## Chamfer measuring instrument

NEW

**Design:** Made of chrome-plated special steel, for verification of chamfers on workpieces, with exchangeable dimension rails, for chamfers with 30°, 45° and 60°. The attachment side is adjustable, with locking screw for dimension rail and attachment side. Supplied with test rulers 30°, 45° and 60° in a wooden box.

**Application:** For the exact measurement of chamfering.

| Order No. | Measurement range mm | 4460 HELIOS·PREISSER | Dimension mm | Reading mm |
|---|---|---|---|---|
| 0001 | 0–10 | 176.50 (W410) | 48 x 30 x 9 | 0.1 |

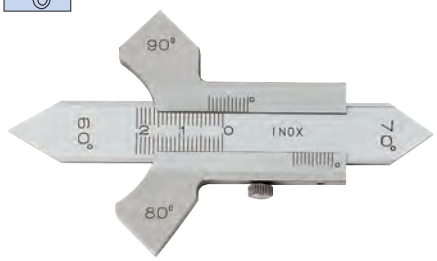


## Weld seam gauge with slide

**Design:** Made of special steel. Supplied in plastic case.

**Application:** For measuring flat weld seams and weld seams in corners as well as the V-seam angles 60°/70°/80° and 90°.

| Order No. | Measurement range mm | 4461 format | Reading mm |
|---|---|---|---|
| 0020 | 20 | 34.90 (W447) | 0.1 |




## Weld seam gauge

**Design:** With 12 polished sheets arranged in a fan shape on the ring.

**Application:** For measurement of the weld seams on the right angle welded corners.

| Order No. | Measurement range mm | 4463 format |
|---|---|---|
| 0012 | 3–12 | 20.40 (W447) |

## Weld seam template

**Design:** Measuring tool made of rustproof steel for simple and fast inspection of weld seam dimensions. Measurement errors are mainly resolved through one-side application of the gauge. Supplied in plastic case.

| Order No. | Reading mm | 4463 format |
|---|---|---|
| 0020 | 0.1 | 119.00 (W447) |

## Thread pitch gauge

**Design:** Made of steel, with precisely milled teeth.

**Application:** For checking the pitch on male and female threads.

| Order No. | Thread | 4467 format | Gradient mm | Threads inch | Number of faces |
|---|---|---|---|---|---|
| 0050 | metric | 4.23 | 0.25–6.00 | – | 24 |
| 0052 | metric + Whitworth | 5.70 | 0.25–6.00 | 4–62 | 52 |
| 0058 | metric + Whitworth + pipe thread | 7.35 | 0.25–6.00 | 4–62 | 58 |
| 0060 | UNC | 4.02 | – | 4–64 | 22 |
| 0065 | UNF | 4.02 (W447) | – | 12–80 | 16 |

## Precision nozzle gauge

**Design:** Hardened and ground, round measuring needle, nickel-plated housing. Supplied in plastic case.

**Application:** For measurements on all types of nozzles and smaller bores.

| Order No. | Measurement range mm | 4471 format | Reading mm | Taper |
|---|---|---|---|---|
| 0003 | 0–3 | 64.10 | 0.1 | 1:10 |
| 0005 | 0–5 | 85.10 (W447) | 0.1 | 1:10 |

## Plug gauge, conical

**Design:** Hardened and ground, round measuring needle made of rustproof steel, knurled handle.

**Application:** For measurements of bores.

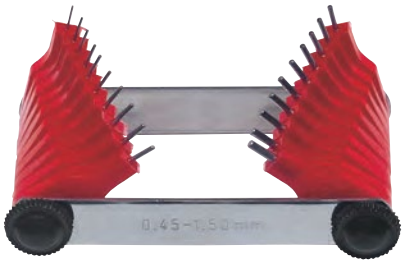
| Order No. | Measurement range mm | 4472 format | |
|---|---|---|---|
| 0006 | 1– 6 | 82.50 | |
| 0015 | 4–15 | 112.00 | |
| 0030 | 15–30 | 233.00 | |
| 0045 | 30–45 | 347.50 | |
| 0060 | 45–60 | 557.50 | |
| | | (W447) | |

## Jet gauge

**Design:** With steel pins, coated in plastic. Shell made of steel.

**Application:** For measurements on all types of nozzles and smaller bores.

| Order No. | Measurement range mm | 4473 format | Number of measuring pins |
|---|---|---|---|
| 0015 | 0.45–1.5 | 10.40 | 20 |
| 0030 | 1.50–3.0 | 10.40 | 16 |
| | | (W447) | |



## Small Hole Gauges

**Design:** Made of hardened steel.

| Order No. | Measurement range mm | 4475 format | Gradient mm | Number of holes | Surface |
|---|---|---|---|---|---|
| 0010 | 0.1–10 | 104.00 | 0.1 | 100 | Finely polished |
| 0015 | 3.0–10 | 91.40 | 0.1 | 70 | Nitrated |
| | | (W447) | | | |

## Profile gauge

**Design:** Spring-hardened pins.

| Order No. | Measurement range mm | 4476 format | Dimensions mm | Pin Ø mm |
|---|---|---|---|---|
| 0015 | 150 x 40 | 25.20 | 154 x 85 | 1.0 |
| 0030 | 300 x 60 | 77.50 | 350 x 150 | 1.0 |
| | | (W447) | | |

## Radius gauge

**Design:** Made of normal steel, radii concave and convex, with dimensions on cover sheet.
Pitch in mm:
1.0– 3 mm increasing by 0.25 mm,
3.5–20 mm increasing by 0.50 mm,
20.0–25 mm increasing by 1.00 mm.

**Application:** For inspecting inner and outer radii.

| Order No. | Radii in mm | 4479 format | Number of faces |
|---|---|---|---|
| 0007 | 1.0– 7 | 9.85 | 17 |
| 0015 | 7.5–15 | 11.80 | 16 |
| 0025 | 15.5–25 | 11.80 | 15 |
| | | (W447) | |

## ISO tolerance slide

**Design:** Made of aluminium, anodised, deep black print, sealed against scratches, with tables on the front and back.

**Application:** For direct reading of standard bore holes H6 to H13 acc. DIN 7154 from 1–160 mm Ø and standard shafts h5 to h12 acc. to DIN 7155 from 1–160 mm Ø.

| Order No. | Dimensions mm | 4480 format |
|---|---|---|
| 0001 | 280 x 80 | 22.50 (W447) |

## DIN thread slide

**Execution:** Made of aluminium, anodised, deep-black print, sealed against scratches, with tables on front and back side for metric ISO thread (DIN 13), Withworth thread (DIN 11), Withworth pipe thread (DIN 259).

**Application:** For the direct reading of all fundamental theoretical thread dimensions as well as wedge width, wedge height and shaft and hub keyway depth for 10–500 mm shaft Ø.

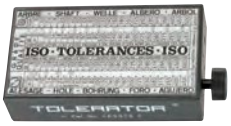
| Order No. | Dimensions mm | 4481 format |
|---|---|---|
| 0001 | 260 x 50 | 17.95 (W447) |

## Display device

**4482 0001** ISO tolerance key **Tolerator.** For reading all tolerance values.

**4482 0002** ISO thread indicator **Filetor.** For reading all determinations of a thread.

**4482 0003** Measurement convertor **Convertor.** For converting mm to inches and vice versa.




Tolerator

Filetor

Convertor

| Order No. | Design | 4482 format | Dimensions mm |
|---|---|---|---|
| 0001 | Tolerator | 82.30 | 60 x 30 x 110 |
| 0002 | Filetor | 82.30 | 60 x 30 x 110 |
| 0003 | Convertor | 82.30 (W447) | 60 x 30 x 110 |

## Feeler gauge

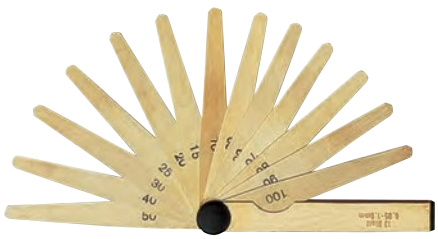
**Application:** For inspecting intermediate spaces, contact distances, etc.

**4483** **Sensor gauge.** Blades made of hardened spring steel, individually labelled with the size, conically tapering in high-gloss nickel-plated shell, with locking nut.

**4485** **Sensor gauge, antimagnetic** Blades made of brass, individually labelled with the size, conically tapering, with locking nut.

**4487** **Piston clearance gauge.** Blades made of spring steel, individually labelled with the size, conically tapering, with locking nut.

4483



4485

4487

| Order No. | Number of blades | 4483 format | 4485 format | 4487 format | Measurement range mm | Blade length mm |
|---|---|---|---|---|---|---|
| 0008 | 8 | 1.99 | – | – | 0.05-0.5 to 0.3 mm by 0.05 mm, above this increasing by 0.1 mm | 100 |
| 0013 | 13 | 2.50 | – | – | 0.05–1.00 to 0.3 mm by 0.5 mm, above this increasing by 0.1 mm | 100 |
| 0013 | 13 | – | – | 13.60 | 0.05-1.00 to 0.3 mm by 0.05 mm, above this increasing by 0.1 mm | 300 |
| 0020 | 20 | 4.18 | 17.55 | – | 0.05-1.00 mm, increasing by 0.05 mm | 100 |
| 0020 | 20 | – | – | 20.20 | 0.05-1.00 mm, increasing by 0.05 mm | 300 |
| 0021 | 21 | 7.60 (W447) | – (W447) | – (W447) | 0.05-2.00 to 0.1 mm by 0.05 mm, above this increasing by 0.1 mm | 100 |

## Feeler gauge strip

**Design:** Made of hardened spring steel, thickness given in mm from size 0.08, marked at regular intervals on the tape. Material width **13 mm,** Length each **5 m.** Supplied in plastic box, coiled.

**Application:** Especially suitable for repeating checks on the same material thickness, e.g. in series inspections. Also suitable as a basis for aligning machine components in production and assembly.

| Order No. | Thickness mm | 4489 format |
|---|---|---|
| 0000 | 0.005 | 89.90 |
| 0001 | 0.010 | 38.10 |
| 0002 | 0.020 | 32.60 |
| 0003 | 0.030 | 11.85 |
| 0004 | 0.040 | 11.85 |
| 0005 | 0.050 | 8.35 |
| 0006 | 0.060 | 9.95 |
| 0007 | 0.070 | 9.90 |
| 0008 | 0.080 | 9.70 |
| 0009 | 0.090 | 9.90 |
| 0010 | 0.100 | 8.40 |
| 0012 | 0.120 | 8.50 |
| 0015 | 0.150 | 8.05 |
| 0018 | 0.180 | 10.45 |
| 0020 | 0.200 | 8.05 |
| 0025 | 0.250 | 8.05 |
| 0030 | 0.300 | 8.50 |
| 0035 | 0.350 | 9.15 |
| 0040 | 0.400 | 9.05 |
| 0045 | 0.450 | 10.30 |
| 0050 | 0.500 | 9.05 |
| 0060 | 0.600 | 12.65 |
| 0070 | 0.700 | 12.65 |
| 0080 | 0.800 | 12.65 |
| 0090 | 0.900 | 12.60 |
| 0100 | 1.000 | 12.60 |
| | | (W447) |

## Sensor gauge tape in workshop box

**Design:** Made of hardened spring steel, edges free of burrs, thickness given in mm (from size 0.08), marked at regular intervals on the tape. Material width **13.0 mm,** Respective length **5 m.** Supplied in wall holder and with holder for feeler gauge strip, 15-piece.

**Application:** Especially suitable for repeating checks on the same material thickness, e.g. in series inspections. Also suitable as a basis for aligning machine components in production and assembly.

| Order No. | Thickness mm | 4490 format | Set contents |
|---|---|---|---|
| 0100 | 0.01–0.25 | 217.50 | 0.01; 0.02; 0.03; 0.04; 0.05; 0.06; 0.07; 0.08; 0.09; 0.10; 0.12; 0.15; 0.18; 0.20; 0.25 |
| 0200 | 0.30–1.00 | 227.50 | 0.30; 0.35; 0.40; 0.45; 0.50; 0.55; 0.60; 0.65; 0.70; 0.75; 0.80; 0.85; 0.90; 0.95; 1.00 |
| | | (W447) | |

## Holder for sensor gauge tape

**Design:** Made of impact-resistant plastic, reinforced with sprung steel rail

| Order No. | 4491 format |
|---|---|
| 0001 | 4.10 |
| | (W447) |

## Metal foil

**Design:** Foil tape 150 x 2500 mm. Supplied in a plastic box.

**Application:** For setting up tools, adjusting apparatus, aligning tolerances, placing under devices, setting up moulds, setting bearings, etc.

**Note:** The plastic boxes can be attached to each other and stacked.

**4494** **Steel, unalloyed**
**4496** **Brass (MS 63)**
**4498** **Rustproof steel (18 Cr 9 Ni)**

| Order No. | Thickness mm | 4494 | 4496 | 4498 | Tolerance mm |
|---|---|---|---|---|---|
| 0025 | 0.025 | 21.70 | 18.50 | 31.10 | 0.002 |
| 0050 | 0.050 | 12.60 | 17.60 | 25.60 | 0.003 |
| 0075 | 0.075 | 12.65 | 19.65 | 25.20 | 0.005 |
| 0100 | 0.100 | 12.30 | 22.10 | 26.10 | 0.005 |
| 0150 | 0.150 | 12.65 | 26.90 | 30.00 | 0.005 |
| 0200 | 0.200 | 13.10 | 31.70 | 35.80 | 0.007 |
| 0250 | 0.250 | 14.70 | 35.80 | 38.40 | 0.007 |
| 0300 | 0.300 | 16.70 | 40.30 | 40.90 | 0.007 |
| 0400 | 0.400 | 18.95 | 43.30 | 43.10 | 0.010 |
| 0500 | 0.500 | 20.90 (W448) | 50.10 (W448) | 46.90 (W448) | 0.010 |

## Metal shim assortment, brass

**Design:** Consisting of 4 individual boxes each with 1 box foil tape 150 x 1200 mm, the film thicknesses 0.025 mm, 0.050 mm, 0.075 mm and 0.100 mm.

| Order No. | Dimensions mm | 4499 |
|---|---|---|
| 0001 | 150 x 1200 | 38.00 (W448) |

## Precision folding magnifyer made of metal

**Design:** Lens made of silicate, highly resistant against chemical and mechanical effects. Matt chrome-plated brass housing with eyelet, lens frame made of black lacquered metal

ESCHENBACH

| Order No. | Magnification | 4504 ESCHENBACH | Lens Ø mm |
|---|---|---|---|
| 0006 | 6 x | 39.90 | 21 |
| 0008 | 8 x | 40.80 | 21 |
| 0010 | 10 x | 42.50 | 21 |
| 0020 | 20 x | 83.40 NEW (W451) | 17 |

## Biconvex magnifying glass economic

NEW

**Design:** PXM® light lens with DUPLEX coating, breakproof, antistatic, large field of vision. Plan convex additional lens in handle with 5x magnification. Eyelet on handle end.

ESCHENBACH

| Order No. | Magnification | 4507 ESCHENBACH | Lens Ø mm |
|---|---|---|---|
| 0100 | 2 x | 49.50 | 100 |
| 0065 | 3 x | 31.20 (W451) | 65 |

## Magnifier to wear mena ZOOM

NEW

**Design:** Meniscus & aspherical PXM® light lens, breakproof. Continuously adjustable magnification 2.2 to 3.4-fold. Sharp and distortion-free magnification.

ESCHENBACH

2.2

3.4

| Order No. | Magnification | 4507 ESCHENBACH | Lens Ø mm |
|---|---|---|---|
| 0110 | 2.2 x – 3.4 x | 86.90 (W451) | 65 |

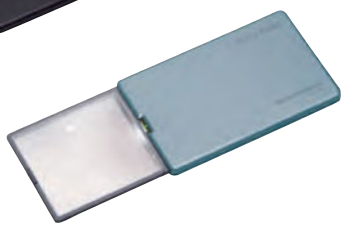
## Pocket illuminated magnifier easyPOCKET

**Design:** Diffractive aspherical PXM® plastic light lens, breakproof and antistatic. Illumination: super-flat SMD LED, ultra-flat and light-weight design. Supplied with 2 batteries CR 357, 1.5 V.

**Note:** Replacement battery: (Order No. 4026 0357, 📖 4/13).

ESCHENBACH

4507 1030



4507 1040

| Order No. | Magnification | 4507 ESCHENBACH | Design | Dimensions mm |
|---|---|---|---|---|
| 1030 | 3 x | 52.10 | black | 86 x 54 x 6 |
| 1040 | 4 x | 57.30 (W451) | blue-metallic | 86 x 54 x 6 |

## Illuminated magnifier mobilux® LED

**Design:** Aspherical PXM® synthetic light lens with cera-tec coating, breakproof, glass-like scratchproofness. SMD LED - Service life approx. 50,000 hours, 3 colour temperatures selectable by means of incl. pudh-on filter. Supplied with lanyard and textile case of lens protection.

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

| Order No. | Magnification | 4508 ESCHENBACH | Lens size mm | Dioptre |
|---|---|---|---|---|
| 0040 | 4 x | 69.50 | 75 x 50 | 16* |
| 0050 | 5 x | 59.10 | Ø 58 | 20 |
| 0070 | 7 x | 52.10 | Ø 35 | 28 |
| 0100 | 10 x | 53.90 | Ø 35 | 38 |
| 0125 | 12.5 x | 58.20 (W451) | Ø 35 | 50 |

* Diffractive-aspheric lens.

ESCHENBACH

## mobase – stand for mobilux® LED

NEW

**Design:** mobase enables free, two-handed work with mobilux® LED. Exact observation distance, changes mobilux® intio stand magnifier.

| Order No. | Suitable for | 4509 ESCHENBACH |
|---|---|---|
| 0010 | 4508 0040 | 10.35 ◊ |
| 0015 | 4508 0050 | 10.35 ◊ |
| 0020 | 4508 0100 and 4508 0125 | 10.35 ◊ (W451) |

## Magnifier light powerlux

**Desgin:** Ergonomic design. Aspherical PXM® synthetic light lens with cera-tec® coating, breakproof, glass-like scratchproofness. Suitable for right-handed and left-handed people. Provides uniform bright and glare-free illumination using two SMD LEDs Lies ergonomically in the hand, accurate illumination. Switches off automatically after 30 minutes. Supplied with 3 Mignon batteries AA/LR 06, 1.5 V.

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

| Order No. | Magnification | 4508 ESCHENBACH | Lens Ø mm | Design |
|---|---|---|---|---|
| 0075 | 3.5 x | 92.20 | 58 | cold white, approx. 8000 K |
| 0080 | 5 x | 92.20 | 58 | cold white, approx. 8000 K |
| 0085 | 7 x double lenses | 112.00 (W451) | 58 | cold white, approx. 8000 K |

ESCHENBACH

## Magnifier light varioLED

**Design:** Ring illumination with 36 high-performance LED primary optics enable optimum bundling of light. Aspherical PXM® synthetic light lens with cera-tec® coating, breakproof, enables sharp-edged, undistorted and shadow-free images. Brightness can be adjusted individually. Low power consumption (15W). Table clamp for 18-74 mm. Replacement lens with 2.5x magnification.

| Order No. | Magnification | 4522 ESCHENBACH | Lens Ø mm | Design | Projection mm |
|---|---|---|---|---|---|
| 0100 | 1.9 x | 521.00 | 132 | 36 LEDs | 900 |
| 0105 | 2.5 x | 86.90 | 132 | Replacement lens | 900 |
| 0110 | – | 17.30 (W451) | – | Lens spray protection | – |

ESCHENBACH

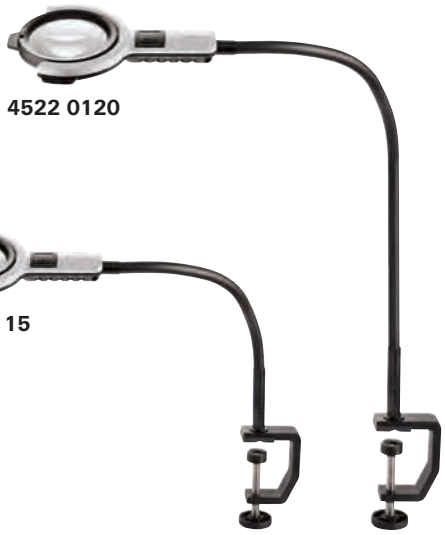
## Illuminated magnifier varioLED flex

NEW

ESCHENBACH

**Design:** Aspherical PXM® synthetic light lens with cera-tec® coating, breakproof, glass-like scratchproofness. Shadow-free LED ring and segment illumination, illuminance approx. 6,000 lx., low energy consumption (5W). Ergonomic magnifier grip, low weight and compact dimensions

| Order No. | Magnification | 4522 ESCHENBACH | Lens ∅ mm | Length mm |
|---|---|---|---|---|
| 0115 | 2.5 x | 356.00 | 76 | 350 |
| 0120 | 2.5 x | 390.50 (W451) | 76 | 600 |



4522 0120



4522 0115

## Eyeglass magnifier maxDetail

ESCHENBACH

**Design:** Magnifying glasses with dioptre compensation +/3 dpt, can be adjusted independently of one another. Working distance 40 cm. Large PD area of 60–68 mm. PXM® plastic light-weigth lens, breakproof. Individual alignment of the individual lens. Supplied with hard foam case.

**Application:** Ideal for restorations, welding, testing/checking and cosmetics.

| Order No. | Magnification | 4522 ESCHENBACH | Weight g |
|---|---|---|---|
| 2000 | 2 x | 86.00 (W451) | 49 |

## Flip-up magnifier maxDetail clip

ESCHENBACH

**Design:** Especially created for glasses wearers with the advantages of glasses clip-ons in maxDetail construction with high-folding lens. PXM® plastic light lens breakproof. Optics can be height-adjusted, for each type of glasses, with 5 height adjustments. Large PD range from 62–70 mm. Field of vision 85 mm. Working distance from eye/lens ca. 400 mm. Supplied in hard foam case.

**Application:** Ideal for restorations, welding, testing/checking and cosmetics.

**Note:** Supplied without glasses.

| Order No. | Magnification | 4522 ESCHENBACH | Weight g |
|---|---|---|---|
| 2005 | 2 x | 80.00 (W451) | 23 |

## Binocular headband magnifier laboCOMFORT

ESCHENBACH

**Design:** Binocular PXM® light lens with surface coating. Optimum protection against scattered light through completely closed shield. If not being used, the shield can easily be lifted. Individual adjustment of shield by means of height adjustment function. Good air circulation is enabled with the disconnected brow rest. Exceptionally suitable for people who wear glasses. No restrictions to the field of vision.

| Order No. | Magnification | 4525 ESCHENBACH | Working distance mm | Weight g |
|---|---|---|---|---|
| 0020 | 2 x | 86.00 | 250 | 198 |
| 0030 | 3 x | 86.00 (W451) | 130 | 198 |

## headlight LED

NEW

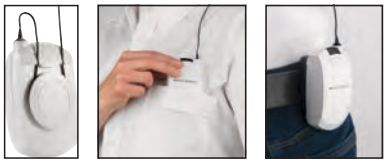
ESCHENBACH

**Design:** Small, light-weight and compact LED spotlight. Easy handling, bundling of light at a certain working distance by means of CPC optics (Compound Parabolic Concentrator), enables shadow-free and flicker-free working, precision glare-free, light focus, power supply via handy, compact battery enclosure and cable guide, illumination: approx. 3200 lx in 250 mm and 1200 lx in 400 mm, lighting duration: approx. 8 hours in regular mode and approx. 14 hours in eco mode with longlife batteries or rechargeable batteries. Supplied in hard foam case.

**4526 0010** with wear system for people who do not wear glasses.

**4526 0015** with clip for wearers of glasses

**4526 0020** with attachment for maxDetail



| Order No. | Design | 4526 ESCHENBACH |
|---|---|---|
| 0010 | Carrying system | 102.50 ◊ |
| 0015 | Clip for wearers of glasses | 102.50 ◊ |
| 0020 | Attachment | 167.00 ◊ (W451) |

4526 0010

4526 0015

4526 0020

## Magnifier

NEW

ESCHENBACH

**Design:** Plan convex PXM® light lens, breakproof, antistatic, DUPLEX-coated for sharp, distortion-free illustration. Enclosure made of black plastic, with scale on side. Division of scale into millimetres.

| Order No. | Magnification | 4528 ESCHENBACH | Dimensions mm | Lens ∅ mm |
|---|---|---|---|---|
| 0005 | 5 x | 15.55 | 15 x 15 | 12 |
| 0008 | 8 x | 14.70 | 20 x 20 | 16 |
| 0010 | 10 x | 12.95 (W451) | 30 x 30 | 28 |

## Precision scale magnifier

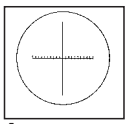
ESCHENBACH

**Design:** Achromatic silicate plastic lens for distortion-free and sharp depictions, with housing made of glass fibre-reinforced polyamide, focusing via focusing ring. Replaceable measurement scale for different applications. Supplied with standard scale (Order No. 4835 0500), in plastic case.

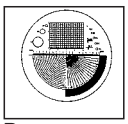
| Order No. | Magnification | 4535 ESCHENBACH | Lens ∅ mm |
|---|---|---|---|
| 0007 | 7 x | 78.20 | 23 |
| 0010 | 10 x | 86.90 (W451) | 23 |

## Precision measurement scale

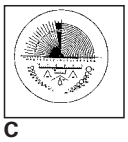
| Order No. | Type | 4535 ESCHENBACH | ∅ mm | Design |
|---|---|---|---|---|
| 0500 | A | 25.10 | 23 | Standard |
| 0600 | B | 25.10 | 23 | Polar grid, angle, radius |
| 0700 | C | 25.10 | 23 | Angle, radius, bores |
| 0800 | D | 25.10 (W451) | 23 | Length in mm |



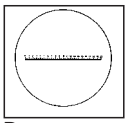
A



B



C



D

## LED Illumination device for precision scale magnifier

**Design:** Grip sleeve for 2 batteries Type Baby (R 14). Supplied with LED lamp.

**Note:** Supplied without batteries.

ESCHENBACH

| Order No. | 4535 ESCHENBACH |
|---|---|
| 0101 | 65.20 (W451) |

## Digital hand magnifier mobilux® DIGITAL Inspection

NEW

**Design:** With high magnifying range and extensice setting options, measurement software, live image transfer to PC, stand screw on base; display: 4.3 inch, matted, resolution 480 x 272, Magnification, max. 15x, illumination: 2 LEDs, individually switchable, storage: up to 10000 images (on SD card), photo resolution: 1280 x 720 (HD, complete image, without zoom), photo format: 16 : 9, JPEG, battery duration: approx. 3.0 h, charging time, approx. 2.15 h, weight: 230 g. Delivery with software, SD card (4 GB), charging device (with adapters for EU, US, GB, AUS), USB cable (2.0 m), hand carrying strap, short instruction in case.

ESCHENBACH

USB

| Order No. | Magnification | 4534 ESCHENBACH |
|---|---|---|
| 0010 | 4–12 x | 651.00 (W451) |

## Stereo zoom microscope

NEW

**Design:** High-quality optics for bright, sharp, three-dimensional images. Magnification can be adjusted via zoom lens, focus via ergonomic handwheel, on both sides for left-handers and right-handers. Prism head 45°, rotatable by 360° pupil distance adjustable (54–76 mm) dioptre compensation, integrated LED-incident and transmitted, continuously adjustable. Supplied with ocular 10x, cover hood, glass plate and white/black plate.

**Application:** For the inspection of workpieces in manufacturing and quality assurance.

Mahr

| Order No. | Magnification | 4538 Mahr | Connection |
|---|---|---|---|
| 0010 | 7 x – 45 x | 903.00 ◊ | – |
| 0015 | 7 x – 45 x | 1150.00 ◊ (W491) | with camera connection |


# Measuring tool sets

available with analogue, digital or IP67 digital calipers can be found on 4/29.

format professional quality

## Workshop measurement microscope MM 220

NEW

RS232 USB

Mahr

**With control and display unit**
Large, high-contrast graphic LCD display with background lighting. QC 200 additionally with measurement and analysis function for point, straight, circular, angle, pitch, intersection, Magic function for automatic recognition of geometry based on measured measuring points, simple measurement programme creation by teach-in procedure and user guidance in several languages.

| Order No. | Magnification | 4539 Mahr | Measurement range X/Y mm | Control and display unit |
|---|---|---|---|---|
| 0010 | 8 x – 40 x | 10200.00 ◊ | 100/100 | QC 100 |
| 0015 | 8 x – 40 x | 11740.00 ◊ | 200/100 | QC 100 |
| 0020 | 8 x – 40 x | 11790.00 ◊ | 100/100 | QC 200 |
| 0025 | 8 x – 40 x | 13175.00 ◊ (W491) | 200/100 | QC 200 |

## Workshop measurement microscope

NEW

Mahr

**Design:** Measurement microscope with control and display unit M3 software and touchscreen computer. Integrated colour camera, zoom lens, optional motor-power, LED ring light: 1 ring and 4 segments, each can be switched and dimmed, LED transmitted light: dimmable. Solid base made of hard granite, stable steel cross table, precision bearings, quick and fine adjustment of shafts. Accuracy and reliability through optical incremental measuring system, laser pointer for position finding. 23" touchscreen with keyboard and mouse. Windows 8 Pro serves as the basis, which therefore enable the installation of other software, operation via Multi-Touch on the monitor or with the mouse/keyboard. Supplied with measurement microscope with software and touchscreen PC incl. stop and calibration sheet.

**Functions:** Target/actual evaluation with tolerance indication, protocol printout with company logo, graphic representation with dimensions, automatic edge recognition also for low-contrast objects, stitching and statistic functions.

**Application:** Measurement or determination of geometric elements (point, straight, circular, pitch, intersection, etc.) via automatic edge recognition e.g. for stamping and forming parts, plastic parts as well as electronic circuit boards.

| Order No. | Magnification | 4541 Mahr | Measurement range X/Y mm | Table size mm |
|---|---|---|---|---|
| 0010 | 35 x – 225 x | 19470.00 ◊ | 100/100 | 270 x 210 |
| 0015 | 35 x – 225 x | 22145.00 ◊ (W491) | 250/170 | 420 x 280 |

## Workshop measurement microscope with CNC control

NEW

Mahr

**Design:** Measurement microscope with control and display unit M3 software and touchscreen computer. 3-axis CNC control via servo motor and joystick, control of axis movement and speed regulations via joystick. Integrated colour camera, zoom lens, mechanical and motor-power, LED ring light: 1 ring and 4 segments, each can be switched and dimmed, LED transmitted light: dimmable. Solid base made of hard granite, stable steel cross table, precision bearings, quick and fine adjustment of shafts, accuracy and reliability through optical incremental measuring system, laser pointer for position finding. 23" touchscreen with keyboard and mouse. Windows 8 Pro serves as the basis, which therefore enable the installation of other software, operation via Multi-Touch on the monitor or with the mouse/keyboard. Supplied with measurement microscope with software and touchscreen PC incl. stop and calibration sheet.

**Functions:** Target/actual evaluation with tolerance indication, protocol printout with company logo, graphic representation with dimensions, automatic edge recognition also for low-contrast objects, stitching and statistic functions.

**Application:** Measurement or determination of geometric elements (point, straight, circular, pitch, intersection, etc.) via automatic edge recognition e.g. for stamping and forming parts, plastic parts as well as electronic circuit boards.

| Order No. | Measurement range X/Y/Z mm | 4541 Mahr | Table size mm |
|---|---|---|---|
| 0020 | 200/100/200 | 31725.00 ◊ | 370 x 210 |
| 0025 | 250/170/200 | 33775.00 ◊ (W491) | 420 x 280 |

## Measurement microscope with telecentric fixed lens

NEW

Mahr

**Design:** Measurement microscope with control and display unit M3 software and touchscreen computer. Telecentric fixed lens, integrated 5 megapixel colour camera, LED ring light: dimmable, LED transmitted light: dimmable, optional height adjustable (96 x 72 mm). Measuring table with height adjustment. Can be updated via USB stick. Supplied with measurement microscope with software and touchscreen PC incl. mouse and keyboard.

**Functions:** 4 display modes: video-live image, digital display, element and tolerance display, automatic parts recognition, automatic measurement of all features of a part within an image field, comparison of the measurement with the CAD drawing via DXF function, measurement and analysis function for point, line, circle, angle, pitch, section, simple measurement programme creation with the teach-in process, user guidance in several languages.

| Order No. | Measurement range X/Y mm | 4542 Mahr | Travel Z mm |
|---|---|---|---|
| 0010 | 32/24 | 18760.00 ◊ | 30 |
| 0015 | 57/42 | 24190.00 ◊ | 30 |
| 0020 | 96/72 | 27165.00 ◊ (W491) | 30 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Scriber, burnished

**Design:** Burnished scriber, with screw-in chrome vanadium tips, knurled handles.

**Application:** For marking workpieces.

**4801** One straight tip

**4802** One straight tip, one tip curved 90°

| Order No. | Length mm | 4801 | 4802 |
|---|---|---|---|
| 0175 | 175 | 1.59 | – |
| 0250 | 250 | – | 2.25 |
| | | (W478) | (W478) |

4801

4802

## Scriber with carbide tip

**Design:** Burnished scriber, with one straight and one 70°angled, screwed in carbide tip. Handle knurled.

**Application:** For marking workpieces.

| Order No. | Length mm | 4804 |
|---|---|---|
| 0250 | 250 | 9.10 (W478) |

## Scriber with carbide tip

**Design:** Straight shape, with clip.

**Application:** For marking workpieces.

| Order No. | Length mm | 4803 |
|---|---|---|
| 0150 | 150 | 2.98 (W478) |

## Scriber, ball pen shape

**Design:** Straight shape, metal casing with clip.
With lowerable tip to protect needle and to minimise risk of injuries.

**Application:** For marking workpieces.

| Order No. | Design | 4805 |
|---|---|---|
| 0150 | Scriber 150 mm | 8.80 |
| 1150 | Replacement needles | 2.93 (W478) |

## Scriber with carbide needle

**Design:** Straight shape, 150 mm long, with clip and silver-painted shaft. Needles can be re-sharpened and replaced.

**Application:** For marking of metals and other materials with smooth surfaces with a hardness up to **60 HRC.**

**4800 0005** Ergonomic grip zone, with drop mechanism, shaft made of aluminium. Carbide needle with tip in sleeve (32 x Ø 2 mm).

**4800 0010** With drop mechanism, shaft made of plastic. Carbide needle with tip in sleeve (32 x Ø 2 mm).

**4800 0015** With tipless, superfine carbide microneedle, 40 x Ø 0.38 mm. Shaft made of aluminium. Marking takes place by means of circular cutting edge. With soft-push mechanism, clamping head lowerable through side trigger in the holder. Push-button needle feed. Simply regrind end face of needle or snap off ca. 3 mm in length.

| Order No. | Design | 4800 |
|---|---|---|
| 0005 | Ergo-Plus | 18.00 |
| 0010 | Top-Form | 11.50 |
| 0015 | Fine-Marker | 29.80 (W478) |

| Order No. | Design | 4800 |
|---|---|---|
| 0050 | Carbide replacement needle for Ergo-Plus and Top-Form | 5.80 |
| 0055 | Carbide replacement needle for Fine-Marker | 6.30 (W478) |

## Dividers

**Design:** Made of special steel, with rivet joint, tips hardened, ground and finely polished.

**4811** **Without wing**

**4812** **With wing**

| Order No. | Length mm | 4811 format | 4812 format | Working area Ø mm |
|---|---|---|---|---|
| 0150 | 150 | 8.05 | 9.90 | 200 |
| 0200 | 200 | 9.85 | 14.05 | 230 |
| 0250 | 250 | 12.90 | 17.90 | 320 |
| 0300 | 300 | 15.20 (W478) | 21.00 (W478) | 375 |

4811

4812

## Precision spring compass

**Design:** Made of special steel, tips hardened, ground and finely polished. With continuous spindle and quick clamping nut.

| Order No. | Stock length mm | 4813 format | Working area Ø mm |
|---|---|---|---|
| 0150 | 150 | 6.55 | 160 |
| 0200 | 200 | 9.00 | 225 |
| 0250 | 250 | 10.15 (W478) | 275 |

## Inside and outside calipers

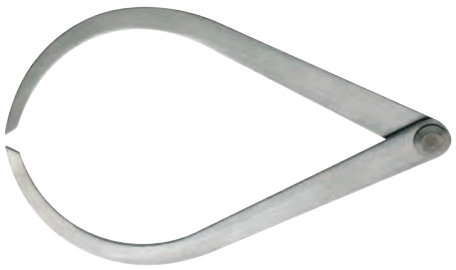
**Design:** Made of bright steel, ground and polished, with extra-strong rivet joint. Hardened measuring faces.

**4815** **Inside calipers (inside probe)**

**4816** **Outside calipers (outside probe)**

| Order No. | Length mm | 4815 format | 4816 format | Working area Ø mm |
|---|---|---|---|---|
| 0150 | 150 | 6.00 | 6.00 | 200 |
| 0200 | 200 | 7.15 | 7.15 | 300 |
| 0250 | 250 | 9.55 | 9.55 | 350 |
| 0300 | 300 | 11.80 (W478) | 11.80 (W478) | 500 |

4815



4816

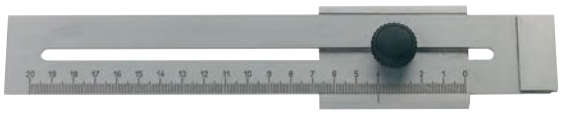
## Precision marking gauge

**Design:** With hardened marking edges, locking screw and laser mm graduation. Scale matted. Flat design.

**Application:** For easy marking of workpieces.

| Order No. | Measurement range mm | 4817 format |
|---|---|---|
| 0200 | 200 | 24.70 |
| 0250 | 250 | 28.90 |
| 0300 | 300 | 32.40 |

(W461)



## Marking gauge with round measuring rod, rustproof

**Design:** With guide groove and round stop plate. With mm graduation, locking screw and hardened, replaceable tips. With mm graduation, locking screw and hardened, replaceable tips. Supplied in transport packaging.

INOX

| Order No. | Measurement range | 4820 format | Reading mm | Measuring rods Ø mm |
|---|---|---|---|---|
| 0003 | 300 mm | 57.90 | 0.1 | 12 |
| 0004 | 500 mm | 108.00 | 0.1 | 12 |
| 0005 | Replacement tip | 4.75 | – | – |

(W461)

## Marking gauge with roller

NEW

**Design:** Reading parts matt chrome-plated, with locking screw and hardened, replaceable tip. Supplied with hardened needle, in an artificial leather case.

**Application:** For easy marking of workpieces.

INOX

| Order No. | Measurement range mm | 4824 format | Reading below mm | Reading above mm |
|---|---|---|---|---|
| 0200 | 200 | 38.00 | 1/20 | 1/128 |
| 0400 | 400 | 63.20 | 1/20 | 1/128 |
| 0410 | Replacement tip | 4.66 | – | – |

(W461)

## Precision beam compass

**Design:** Graduated straightedge with mm divisions, accurate and easy fine adjustment using a friction wheel. Positioning slide with reference marking and replaceable tips.

Factory standard

| Order No. | Measurement range mm | 4822 format | Reading mm | Cross-section mm |
|---|---|---|---|---|
| 0005 | 500 | 146.50 | 1/10 | 25 x 6 |
| 0010 | 1000 | 182.00 | 1/10 | 25 x 6 |
| 0020 | 2000 | 260.00 | 1/10 | 25 x 6 |
| 0001 | Replacement tip pair | 10.05 | – | – |

(W478)

## Compass vernier calipers

**Design:** Made of hardened special steel, with laser scale and locking screw.

**Application:** For marking without any additional measuring aids in tooling, mechanical engineering and fixture construction.

| Order No. | Measurement range mm | 4823 format | Reading mm | For circle Ø mm | Jaw length mm |
|---|---|---|---|---|---|
| 0020 | 200 | 74.90 | 1/10 | 400 | 40 |
| 0030 | 300 | 96.30 | 1/10 | 600 | 40 |

(W478)

## Steel square

**Design:** Made of steel, galvanised, machined on all sides.

**Application:** For simple straightening work and marking off work.

**4601** Flat square

**4602** Stop angle

4601

4602

| Order No. | Stock length mm | 4601 format | 4602 format | Cross-section mm |
|---|---|---|---|---|
| 0100 | 100 x 70 | 4.24 | 7.20 | 20 x 5 |
| 0150 | 150 x 100 | 5.25 | 8.50 | 20 x 5 |
| 0200 | 200 x 130 | 6.65 | 11.20 | 20 x 5 |
| 0250 | 250 x 160 | 7.05 | 14.45 | 25 x 5 |
| 0300 | 300 x 180 | 8.45 | 15.60 | 25 x 5 |
| 0400 | 400 x 230 | 10.20 | 21.70 | 30 x 5 |
| 0500 | 500 x 280 | 12.60 | 28.60 | 30 x 5 |
| 0750 | 750 x 375 | 19.25 | 43.90 | 30 x 5 |
| 1000 | 1000 x 500 | 26.20 (W453) | 60.20 (W453) | 30 x 5 |

## Flat square and stop angle

**Design:** Made of special steel, rectangularity, parallelism and planarity tolerances, flat sides, high edges and test surfaces ground.

DIN 875/II

**Application:** For precise work in mechanical engineering and in the workshop.

**Note:** Flat square (Order No. 4611) and stop angle (Order No. 4612) available up to 2000 mm on request.

**4603** Flat square

**4604** Stop angle

**4611** Flat square

**4612** Stop angle

4603

4604

4611

4612

| Order No. | Stock length mm | 4603 format | 4604 format | 4611 HELIOS·PREISSER | 4612 HELIOS·PREISSER | Cross-section mm | Angle tolerance mm |
|---|---|---|---|---|---|---|---|
| 0075 | 75 x 50 | 6.15 | 7.40 | 6.20 | 8.00 | 15 x 5 | 0.028 |
| 0100 | 100 x 70 | 6.45 | 8.70 | 6.50 | 8.90 | 20 x 5 | 0.030 |
| 0150 | 150 x 100 | 8.10 | 12.10 | 8.90 | 12.75 | 25 x 5 | 0.035 |
| 0200 | 200 x 130 | 10.15 | 16.00 | 10.80 | 16.35 | 30 x 6 | 0.040 |
| 0250 | 250 x 165 | 13.70 | 20.80 | 14.90 | 22.20 | 35 x 7 | 0.045 |
| 0300 | 300 x 175 | 19.40 | 26.40 | 19.10 | 27.90 | 35 x 7 | 0.050 |
| 0400 | 400 x 200 | 28.00 | 40.60 | 28.80 | 42.80 | 35 x 7 | 0.060 |
| 0500 | 500 x 250 | 39.20 | 51.60 | 42.10 | 56.70 | 40 x 8 | 0.070 |
| 0750 | 750 x 375 | 67.30 | 80.80 | 75.60 | 96.60 | 45 x 10 | 0.095 |
| 1000 | 1000 x 500 | 98.60 (W454) | 122.00 (W454) | 110.00 (W410) | 133.50 (W410) | 50 x 10 | 0.120 |

## Flat square and stop angle

**Design:** Rectangularity, parallelism and evenness tolerances. Upright edges and flat sides ground precisely. Examination surfaces precision ground and adjusted.

**Application:** For highly precise work and for inspections in precision mechanical engineering.

DIN 875/I

**4605** Flat square made of special steel
**4606** Stop angle made of special steel
**4613** Flat square made of rustproof steel
**4614** Stop angle made of stainless steel

| Order No. | Stock length mm | 4605 format | 4606 format | 4613 HELIOS·PREISSER | 4614 HELIOS·PREISSER | Cross-section mm | Angle tolerance mm |
|---|---|---|---|---|---|---|---|
| 0075 | 75 x 50 | 9.65 | 13.35 | 9.90 | 14.85 | 15 x 5 | 0.014 |
| 0100 | 100 x 70 | 10.25 | 14.45 | 12.00 | 18.05 | 20 x 5 | 0.015 |
| 0150 | 150 x 100 | 12.70 | 19.95 | 16.95 | 24.60 | 25 x 5 | 0.018 |
| 0200 | 200 x 130 | 17.55 | 25.20 | 23.40 | 32.80 | 30 x 6 | 0.020 |
| 0250 | 250 x 165 | 23.50 | 31.60 | 34.10 | 49.30 | 35 x 7 | 0.023 |
| 0300 | 300 x 200 | 32.90 | 41.90 | 41.60 | 59.40 | 40 x 8 | 0.025 |
| 0400 | 400 x 265 | 71.80 | 104.50 | 137.50 | 177.00 | 45 x 10 | 0.030 |
| 0500 | 500 x 330 | 101.00 (W454) | 147.50 (W454) | 171.50 (W410) | 218.00 (W410) | 50 x 10 | 0.035 |

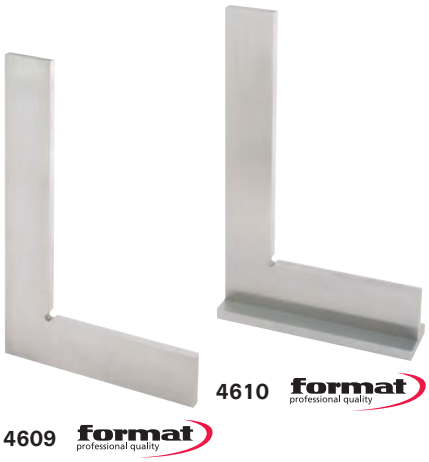
## Precise flat and stop angle, stainless

**Design:** Made of stainless steel, rectangularity, parallelism and planarity tolerances, examination faces, upright sides and flat sides very accurately and precision ground.

**Application:** For highly precise work and for inspections in precision mechanical engineering.

DIN 875/0

**4609** Flat square
**4610** Stop angle
**4619** Flat square
**4620** Stop angle



| Order No. | Stock length mm | 4609 format | 4610 format | 4619 HELIOS·PREISSER | 4620 HELIOS·PREISSER | Cross-section mm | Angle tolerance mm |
|---|---|---|---|---|---|---|---|
| 0050 | 50 x 40 | 29.50 | 29.80 | – | – | 12 x 5 | 0.007 |
| 0075 | 75 x 50 | 31.50 | 34.20 | 31.70 | 34.50 | 15 x 5 | 0.007 |
| 0100 | 100 x 70 | 34.40 | 36.00 | 34.80 | 37.20 | 20 x 5 | 0.007 |
| 0150 | 150 x 100 | 46.00 | 55.80 | 46.20 | 63.90 | 25 x 5 | 0.008 |
| 0200 | 200 x 130 | 66.00 | 90.00 | 69.90 | 91.50 | 30 x 6 | 0.009 |
| 0250 | 250 x 165 | – | – | 73.40 | 133.50 | 35 x 7 | 0.010 |
| 0300 | 300 x 200 | – (W456) | – (W456) | 102.00 (W410) | 150.00 (W410) | 40 x 8 | 0.011 |

## Precision hair angle, rustproof

**Design:** Made of hardened, rustproof steel, rectangularity, parallelism and evenness tolerances. **For highest accuracy.** Upright edges and straightedges finely ground. Supplied in transport packaging.

**Application:** For checks and inspection work using the light-gap method.

DIN 875/00 | INOX

HELIOS·PREISSER

| Order No. | Stock length mm | 4621 HELIOS·PREISSER | Cross-section mm | Angle tolerance mm |
|---|---|---|---|---|
| 0500 | 50 x 40 | 24.20 | 14 x 4 | 0.003 |
| 0750 | 75 x 50 | 28.50 | 15 x 4 | 0.003 |
| 1000 | 100 x 70 | 34.20 | 20 x 5 | 0.003 |
| 1500 | 150 x 100 | 44.20 | 25 x 6 | 0.004 |
| 2000 | 200 x 130 | 65.10 | 30 x 7 | 0.004 |
| 3000 | 300 x 200 | 143.00 | 40 x 8 | 0.005 |
| 5000 | 500 x 330 | 681.50 (W410) | 40 x 10 | 0.007 |

## Precision hair angle with each one wide and one narrow arm, stainless and hardened

**Design:** Made of hardened, rustproof steel, rectangularity, parallelism and evenness tolerances. **For highest accuracy.** Upright edges and straightedges finely ground. Supplied in transport packaging.

**Application:** For checks and inspection work using the light-gap method.

DIN 875/00 | INOX

HELIOS·PREISSER

| Order No. | Stock length mm | 4622 HELIOS·PREISSER | wide arm cross-section mm | narrow arm cross-section mm | Angle tolerance mm |
|---|---|---|---|---|---|
| 0500 | 50 x 40 | 56.70 | 14 x 10 | 16 x 2 | 0.003 |
| 0750 | 75 x 50 | 56.70 | 14 x 10 | 18 x 2 | 0.003 |
| 1000 | 100 x 70 | 73.50 | 16 x 10 | 18 x 2 | 0.003 |
| 1500 | 150 x 100 | 92.40 | 20 x 12 | 22 x 3 | 0.004 |
| 2000 | 200 x 130 | 125.00 | 24 x 14 | 26 x 3 | 0.004 |
| 3000 | 300 x 200 | 182.50 (W410) | 30 x 18 | 32 x 3 | 0.005 |

## Precision bevelled square with sliding ruler

**Design:** Rectangularity, parallelism and evenness tolerances. **For highest accuracy.** Reading parts matt chrome-plated, straightedge 7 x 7 x 100 mm, slidable, adjustable angle up to ± 5°. Supplied in a wooden box.

**Application:** For checks and inspection work using the light-gap method.

HELIOS·PREISSER

| Order No. | Handle mm | 4623 HELIOS·PREISSER | Angle tolerance mm |
|---|---|---|---|
| 0010 | 35 x 13 x 60 | 213.00 (W410) | 0.007 |

## Precision die maker's square, stainless

**Design:** Made of hardened, rustproof steel, rectangularity, parallelism and evenness tolerances. **For maximum precision,** Chamfered bevelled edge on the inside of the long arm. Upright edges and flat sides accurately and precision ground, test surfaces ground. Angle 90°. Supplied in transport packaging.

**Application:** For use in tool and fixture construction.

DIN 875/00 | INOX

HELIOS·PREISSER

| Order No. | Stock length mm | 4625 HELIOS·PREISSER | wide arm cross-section mm | narrow arm cross-section mm | Angle tolerance mm |
|---|---|---|---|---|---|
| 0250 | 25 x 20 | 18.05 | 6.0 x 3.5 | 5.0 x 3.5 | 0.003 |
| 0400 | 40 x 28 | 18.05 (W410) | 8.0 x 3.5 | 5.0 x 3.5 | 0.003 |

## Precision test set

**Design:** Angle acc. **DIN 875/00,** hardened. Straightedge acc. **DIN 874/00,** normal steel, glare-free, burnished. Supplied in a wooden box.

**Application:** For control purposes in tool construction and production.

DIN 874/00 DIN 875/00

HELIOS·PREISSER

| Order No. | Design | 4627 HELIOS·PREISSER | Set contents |
|---|---|---|---|
| 0050 | 5-piece | 186.00 (W410) | 1 bevelled square, size 75 x 50 mm (Order No. 4621 0750)<br>1 rustproof die maker's square with inside measuring edge, size 25 x 20 mm (Order No. 4625 0250)<br>1 rustproof die maker's square with inside measuring edge, size 40 x 28 mm (Order No. 4625 0400)<br>1 straight edge, length, 100 mm (Order No. 4761 0100)<br>1 gauge block scribing tip 60 x 9 x 9 mm |

## Precision centre square

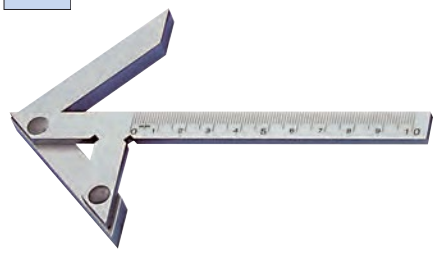
**Design:** Made of special steel, with mm graduation on the rail, upright edges and flat sides ground.

**Application:** For centering and marking the centre point on round disks and shafts.

Factory standard

format professional quality

| Order No. | Dimensions mm | 4631 format | For shafts up to ∅ mm |
|---|---|---|---|
| 0100 | 100 x 70 | 36.40 | 90 |
| 0150 | 150 x 130 | 43.00 | 190 |
| 0200 | 200 x 150 | 53.90 | 220 |
| 0250 | 250 x 160 | 76.70 | 230 |
| 0300 | 300 x 180 | 89.60 (W454) | 280 |



## Steel square 120°

**Design:** Made of special steel, upright edges and flat sides ground.

**Application:** For marking and inspecting of 120°.

Factory standard

format professional quality

| Order No. | Stock length mm | 4633 format | Cross-section mm |
|---|---|---|---|
| 0050 | 50 x 50 | 13.05 | 15 x 5 |
| 0075 | 75 x 75 | 16.65 | 18 x 5 |
| 0100 | 100 x 100 | 20.10 (W454) | 20 x 5 |

## Mitre square 135° with base

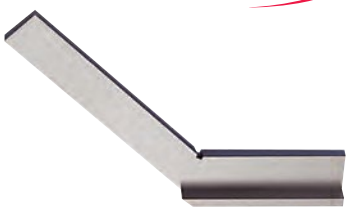
**Design:** Made of special steel, precision finished, with equal width arms, test surfaces and flat sides ground.

**Application:** For accurate marking off and testing of 45° for 90° corner joints.

Factory standard

format professional quality

| Order No. | Stock length mm | 4634 format | Cross-section mm |
|---|---|---|---|
| 0120 | 120 x 80 | 21.40 | 20 x 5 |
| 0150 | 150 x 100 | 24.00 | 20 x 5 |
| 0200 | 200 x 130 | 32.00 (W454) | 25 x 5 |



## Acute angle 45°

**Design:** Made of special steel, upright edges and flat sides ground.

**4635** Acute flat angle square

**4636** Acute angle square

Factory standard

format professional quality

| Order No. | Stock length mm | 4635 format | 4636 format | Cross-section mm |
|---|---|---|---|---|
| 0120 | 120 x 80 | 19.15 | 28.30 | 20 x 5 |
| 0150 | 150 x 100 | 24.90 | 37.20 | 20 x 5 |
| 0200 | 200 x 130 | 37.50 (W454) | 46.70 (W454) | 20 x 5 |

4635

4636

## Flange square

**Design:** Made of galvanised steel, upright edges and flat sides ground.

**Application:** Especially made for accurate alignment of the flanges in pipeline construction

Factory standard

format professional quality

| Order No. | Dimensions mm | 4637 format | Cross-section mm |
|---|---|---|---|
| 0300 | 300 x 300 | 19.15 | 30 x 5 |
| 0400 | 400 x 400 | 23.80 | 30 x 5 |
| 0500 | 500 x 500 | 29.10 (W453) | 30 x 5 |

## Joiner's square

**Design:** Made of spring band steel, chromatised.

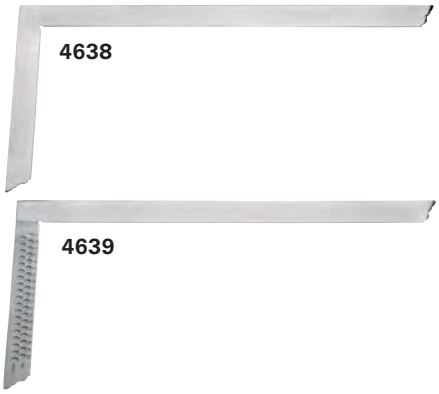
**4638** **Without marking holes**

**4639** **With marking holes and cm scale**

Factory standard

format professional quality

| Order No. | Dimensions mm | 4638 format | 4639 format | Leg width mm |
|---|---|---|---|---|
| 0600 | 600 x 280 | 15.10 | 19.00 | 35 |
| 0800 | 800 x 320 | 19.30 | 23.80 | 35 |
| 1000 | 1000 x 380 | 24.80 (W453) | 29.20 (W453) | 35 |




## Aluminium stop angle

**Design:** Made of aluminium, with easily readable, black mm scale and base arm with mitre for marking off 45° lines.

Factory standard

format professional quality

| Order No. | Stock length mm | 4615 format |
|---|---|---|
| 0300 | 250 | 21.30 |
| 0500 | 300 | 25.20 |
| 1000 | 400 | 30.10 (W453) |

## Straightedge

**Design:** Made of hardened steel with thermal hand protection. Straightedges are finely ground and lapped. Supplied in an artificial leather case.

**Application:** For inspecting the straightness of surfaces using the light-gap method.

**4761** **Special steel, burnished glare-free**

**4764** **Rustproof steel, bevelled edge glare-free matt**

DIN 874/00

4761 format professional quality

4764 HELIOS·PREISSER INOX

| Order No. | Length mm | 4761 format | 4764 HELIOS·PREISSER | Tolerance mm |
|---|---|---|---|---|
| 0075 | 75 | 10.90 | 13.75 | 0.002 |
| 0100 | 100 | 12.30 | 16.15 | 0.002 |
| 0125 | 125 | 14.50 | 16.80 | 0.003 |
| 0150 | 150 | 16.70 | 18.80 | 0.003 |
| 0200 | 200 | 21.30 | 21.70 | 0.003 |
| 0300 | 300 | 39.20 | 47.20 | 0.004 |
| 0500 | 500 | 85.30 (W457) | 116.50 (W410) | 0.004 |

## Precision directional spirit level

NEW

**Design:** Made of high-grade special casting, structure painted. Flat and prismatic measuring face (150°), finely ground Longitudinal level, cross level, and full heat protection, longitudinal level can be viewed from the side. Supplied in a case.

**Application:** For the exact aligning of surface and shafts.

DIN 877

| Order No. | Accuracy mm/m | 4780 | Dimension mm | Measurement range ± mm/m |
|---|---|---|---|---|
| 0160 | 0.3 | 132.50 | 160 x 42 x 42 | 1.80 |
| 0200 | 0.3 | 153.00 | 200 x 42 x 42 | 1.80 |
| 0300 | 0.3 | 185.00 | 300 x 42 x 42 | 1.80 |
| 0161 | 0.1 | 143.00 | 160 x 42 x 42 | 0.60 |
| 0201 | 0.1 | 169.00 | 200 x 42 x 42 | 0.60 |
| 0301 | 0.1 | 205.00 | 300 x 42 x 42 | 0.60 |
| 0162 | 0.02 | 235.00 | 160 x 42 x 42 | 0.12 |
| 0202 | 0.02 | 279.00 | 200 x 42 x 42 | 0.12 |
| 0302 | 0.02 | 330.00 | 300 x 42 x 42 | 0.12 |

(W471)

## Frame dir. spirit level

NEW

**Design:** Made of high-grade special casting, structure painted. Flat and prismatic measuring face (150°), finely ground Longitudinal level, cross level, and full heat protection, longitudinal level can be viewed from the side. Supplied in a case.

**Application:** For the exact aligning of horizontal and vertical surfaces and shafts.

DIN 877

| Order No. | Accuracy mm/m | 4780 | Dimension mm | Measurement range ± mm/m |
|---|---|---|---|---|
| 1503 | 0.3 | 263.00 | 150 x 150 x 42 | 1.50 |
| 2003 | 0.3 | 313.00 | 200 x 200 x 42 | 1.80 |
| 1501 | 0.1 | 307.00 | 150 x 150 x 42 | 0.50 |
| 2001 | 0.1 | 377.00 | 200 x 200 x 42 | 0.60 |
| 1502 | 0.02 | 452.00 | 150 x 150 x 42 | 0.10 |
| 2002 | 0.02 | 548.00 | 200 x 200 x 42 | 0.12 |

(W471)

## Crankpin spirit level

NEW

**Design:** Made of high-grade special casting, structure painted. Flat, prismatic measuring face (150°), longitudinal and transverse prims, finely ground Longitudinal level, cross level, and full heat protection, delivery in case.

**Application:** For the exact alignment of very short horizontal surfaces, cranks and pins on engines or machines.

DIN 877

| Order No. | Accuracy mm/m | 4780 | Dimension mm | Measurement range ± mm/m |
|---|---|---|---|---|
| 3001 | 0.1 | 167.00 | 90 x 42 x 42 | 0.2 |
| 3002 | 0.2 | 156.50 | 60 x 42 x 42 | 0.2 |

(W471)

## Precision straight edge

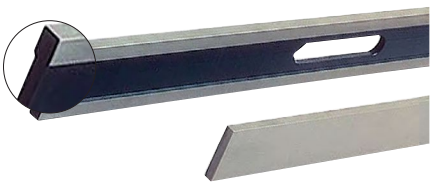
NEW

**Design:** Made of tool steel, raised edges and flat sides processed with great accuracy. With I-shaped cross-sections.

**Application:** For inspections and for highly accurate work in precision mechanical engineering.

DIN 874/I | DIN 874/II | Certificate

format professional quality



| Order No. | Length mm | 4757 format DIN 874/I | Width mm | Thickness mm |
|---|---|---|---|---|
| 0501 | 500 | 46.60 | 40 | 8 |
| 1001 | 1000 | 103.50 | 50 | 10 |
| 1501 | 1500 | 176.00 | 60 | 12 |
| 2001 | 2000* | 548.50 | 70 | 14 |

(W457)

| Order No. | Length mm | 4757 format DIN 874/II | Width mm | Thickness mm |
|---|---|---|---|---|
| 0502 | 500 | 36.20 | 30 | 6 |
| 1002 | 1000 | 67.30 | 40 | 8 |
| 1502 | 1500 | 134.50 | 50 | 10 |
| 2002 | 2000 | 176.00 | 60 | 12 |

(W457)

* With 2 hand slots

## Circumference tapes

Design: **Made of hardened spring steel, scale interval of 1 mm. With 2 divisions for the circumference and diameter.**

Application: **For measuring the circumference and diameter.**

Factory standard

format professional quality

| Order No. | For circumference mm | 4752 format | For diameter mm | Tape width mm | Reading mm |
|---|---|---|---|---|---|
| 0001 | 60– 950 | 45.70 | 20– 300 | 10 | 0.01 |
| 0004 | 940–2200 | 56.00 | 300– 700 | 10 | 0.01 |
| 0007 | 2190–3460 | 73.40 (W463) | 700–1100 | 10 | 0.01 |

| Order No. | For circumference mm | 4752 format | For diameter mm | Tape width mm | Reading mm |
|---|---|---|---|---|---|
| 0013 | 4710–5980 | 104.50 | 1500–1900 | 10 | 0.01 |
| 0016 | 5960–7230 | 127.00 (W463) | 1900–2300 | 10 | 0.01 |

## Work ruler

NEW

**Design:** Made of tool steel, chrome plated.

**DIN 866/A**
Protective end left 5 mm, right 5 mm
Accuracy per meter ± 0.04 mm
Graduation mark thickness
70 to 100 µm

**DIN 866/B**
Protective end left 0 mm, right 10 mm
Accuracy per meter ± 0.10 mm
Graduation mark thickness
100 to 150 µm

DIN 866/A DIN 866/B

format professional quality

| Order No. | Length mm | 4757 format DIN 866/A | Width mm | Thickness mm |
|---|---|---|---|---|
| 0503 | 500 | 41.40 | 30 | 6 |
| 1003 | 1000 | 88.00 | 40 | 8 |
| 1503 | 1500 | 155.00 | 40 | 8 |
| 2003 | 2000 | 269.00 (W457) | 50 | 10 |

| Order No. | Length mm | 4757 format DIN 866/B | Width mm | Thickness mm |
|---|---|---|---|---|
| 0504 | 500 | 31.00 | 25 | 5 |
| 1004 | 1000 | 51.80 | 30 | 6 |
| 1504 | 1500 | 82.80 | 30 | 6 |
| 2004 | 2000 | 155.00 (W457) | 40 | 8 |

## Steel ruler

**Design:** Made of rustproof, hard-rolled spring steel, matt surface, rounded edges, EC accuracy class II, marked from a length of 500 mm.

**Graduation:** Upper edge 1/2 mm, Lower edge 1 mm.

INOX

format professional quality

| Order No. | Length mm | 4751 format | Width mm | Thickness mm | Tolerance mm |
|---|---|---|---|---|---|
| 0100 | 100 | 1.29 | 13 | 0.5 | ± 0.31 |
| 0150 | 150 | 1.38 | 13 | 0.5 | ± 0.33 |
| 0200 | 200 | 1.44 | 13 | 0.5 | ± 0.35 |
| 0250 | 250 | 1.54 | 13 | 0.5 | ± 0.35 |
| 0300 | 300 | 1.77 (W463) | 13 | 0.5 | ± 0.36 |

| Order No. | Length mm | 4751 format | Width mm | Thickness mm | Tolerance mm |
|---|---|---|---|---|---|
| 0500 | 500 | 3.52 (W463) | 18 | 0.5 | ± 0.40 |

| Order No. | Length mm | 4751 format | Width mm | Thickness mm | Tolerance mm |
|---|---|---|---|---|---|
| 1000 | 1000 | 5.90 (W463) | 18 | 0.5 | ± 0.50 |

| Order No. | Length mm | 4751 format | Width mm | Thickness mm | Tolerance mm |
|---|---|---|---|---|---|
| 0330 | 300 | 4.38 | 30 | 1.0 | ± 0.36 |
| 0530 | 500 | 7.95 | 30 | 1.0 | ± 0.40 |
| 1001 | 1000 | 16.30 | 30 | 1.0 | ± 0.50 |
| 1500 | 1500 | 24.40 | 30 | 1.0 | ± 0.60 |
| 2000 | 2000 | 32.10 (W463) | 30 | 1.0 | ± 0.70 |

## Steel ruler with chamfer

**Design:** Made of steel, finely polished, galvanised, with mm graduation, no protective ends.

format professional quality

| Order No. | Length mm | 4759 format | Width mm | Thickness mm |
|---|---|---|---|---|
| 0500 | 500 | 22.80 | 40 | 5 |
| 1000 | 1000 | 42.30 (W457) | 40 | 5 |

## Light metal ruler

**Design:** Made of anodised aluminium, readable without glaring, with back mm scale.

Factory standard

format professional quality

| Order No. | Length mm | 4760 format | Width mm | Thickness mm |
|---|---|---|---|---|
| 0030 | 300 | 13.10 | 50 | 5 |
| 0060 | 600 | 19.80 | 50 | 5 |
| 0100 | 1000 | 28.00 (W457) | 50 | 5 |

## Metal bevel guide/bevel square

**Design:** Made of galvanised steel, with winged nut.

**Application:** The two moveable arms can be adjusted to any angle and locked using the winged nut. For diverse use during simple metalworking.

| Order No. | Length mm | 4642 format | Cross-section mm |
|---|---|---|---|
| 0200 | 200 | 11.20 | 20 x 3 |
| 0300 | 300 | 18.80 | 20 x 3 |
| 0400 | 400 | 30.60 | 25 x 5 |
| 0500 | 500 | 34.20 (W453) | 25 x 5 |

## Protractor

**Design:** Open, semi-circular arc with locking screw. Glare-free scale, matt chrome-plated.

**Application:** For measuring angular degrees 0–180°. Reading 1°.

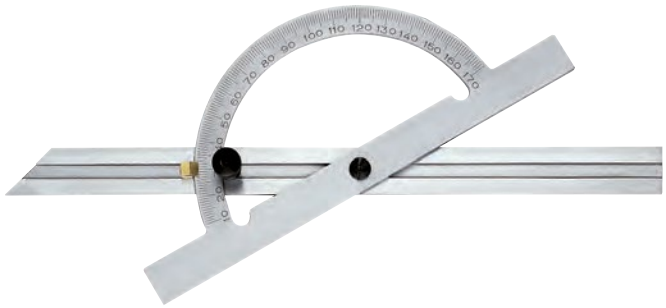
| Order No. | Stock length mm | 4651 format | 4651 format | Graduated semicircle mm |
|---|---|---|---|---|
| 0080 | 120 | 17.90 | – | 80 |
| 0120 | 150 | 20.00 | – | 120 |
| 0150 | 200 | 27.00 | – | 150 |
| 0200 | 300 | 35.70 | – | 200 |
| 0300 | 500 | 85.20 | – | 300 |
| 0301 | 600 | – | 210.00 | 300 |
| 0400 | 800 | – (W461) | 250.50 (W453) | 400 |

## Protractor, adjustable and sliding along length

**Design:** Open, semi-circular arc, adjustable and fixable in length and rail slanted at 45°, made of special steel, glare-free scale, matt chrome-plated.

**Application:** For measuring angular degrees 10°–170°, also on workpieces with small shoulders. Reading 1°.

| Order No. | Stock length mm | 4653 format | Graduated semicircle mm |
|---|---|---|---|
| 0100 | 150 | 32.70 | 100 |
| 0150 | 300 | 38.00 | 150 |
| 0200 | 400 | 45.00 | 200 |
| 0250 | 500 | 54.00 | 250 |
| 0300 | 600 | 61.50 (W461) | 300 |



## Universal angle protractor with magnifier, stainless

Factory standard | INOX

**Design:** Made of stainless steel, matt chrome-plated, rail hardened. Rail with 45° and 60° angles. Vernier reading 5 angular minutes. Vernier and scale disc lie in one plane and thereby ensure a flawless, parallax-free reading. With fine adjustment by means of knurled screw and panorama magnifying glass with views over the entire vernier. Supplied in a wooden box.

| Order No. | Rail mm | 4653 format | Graduation |
|---|---|---|---|
| 1150 | 150 | 162.00 | 4 x 90° |
| 1200 | 200 | 172.00 | 4 x 90° |
| 1300 | 300 | 182.50 (W461) | 4 x 90° |

## Replacement rail

**Design:** Replacement rail with 45° and 60° angles, for universal protractor.

| Order No. | Rail mm | 4653 format |
|---|---|---|
| 1151 | 150 | 31.20 |
| 1201 | 200 | 35.20 |
| 1301 | 300 | 39.20 (W461) |

## Precision protractor with magnifier, rustproof

**Design:** Made of stainless steel, matt chrome-plated, rail hardened. * Accuracy acc. to company standard. With locking screw and fine adjustment. Parallax-free vernier reading 5'. Supplied in a wooden case.

Factory standard | INOX

HELIOS·PREISSER

| Order No. | Rail mm | 4655 HELIOS·PREISSER | Graduation |
|---|---|---|---|
| 0150 | 150 | 167.00 | 4 x 90° |
| 0200 | 200 | 176.00 | 4 x 90° |
| 0300 | 300 | 185.00 | 4 x 90° |
| 0500 | 500 | 194.50 | 4 x 90° |
| | | (W410) | |

## Replacement rail

**Design:** Replacement rail with 45° and 60° angles, for precision protractor.

| Order No. | Rail mm | 4655 HELIOS·PREISSER |
|---|---|---|
| 1150 | 150 | 31.60 |
| 1200 | 200 | 35.60 |
| 1300 | 300 | 39.90 |
| 1500 | 500 | 56.20 |
| | | (W410) |

## Universal angle protractor set

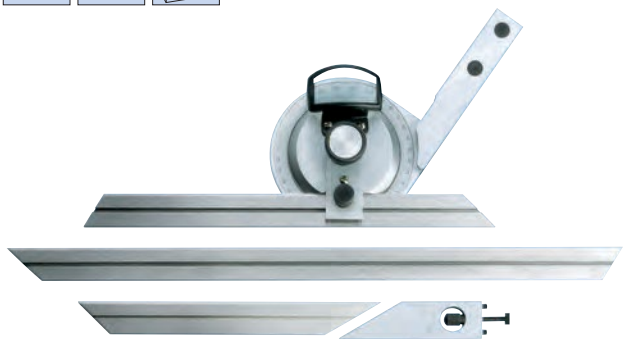
**Design:** Made of rustproof steel. Reading with magnifying glass for field of vision over the entire vernier, finely polished. Quick reading and adjustment of the angle by means of clearly arranged numbers on the scale disc 4 x 90°, vernier reading 1/12 degrees = 5 angular minutes, reading parts glare-free, matt chrome-plated. Supplied with graduated straightedge 150, 200 and 300 mm long, in plastic case.

**Application:** For measuring angles on workpieces, devices and machines. Also suitable as a ruler, cross and mitre square.

Factory standard | INOX

format professional quality

| Order No. | 4657 format |
|---|---|
| 0001 | 71.70 |
| | (W461) |



## Digital universal angle protractor

**Design:** Made of rustproof steel with clamping device. With data output Opto RS 232. Supplied with battery CR 2032, 3 V, in wooden case.

**Functions:** On and off switch, zero setting possible in any position. Accuracy: 1 angle minute or 0.01 angle degree, display difference: ± 0.5 arc minute, display switchable (degrees and minutes, decimal degrees), measuring range switchable (1 x 360°, 2 x 180°, 4 x 90°).

**Note:** Replacement battery (Order No. 4026 2032, 📖 4/13). Data cable Opto RS 232 (Order No. 4025 0002, 📖 4/13).

Factory standard | INOX | opto RS232

HELIOS·PREISSER

| Order No. | Rail mm | 4666 HELIOS·PREISSER |
|---|---|---|
| 0150 | 150 | 1186.00 |
| 0200 | 200 | 1197.00 |
| 0300 | 300 | 1208.00 |
| | | (W410) |

## Replacement rail

**Design:** Replacement rail with 45° and 60° angles, for precision protractor.

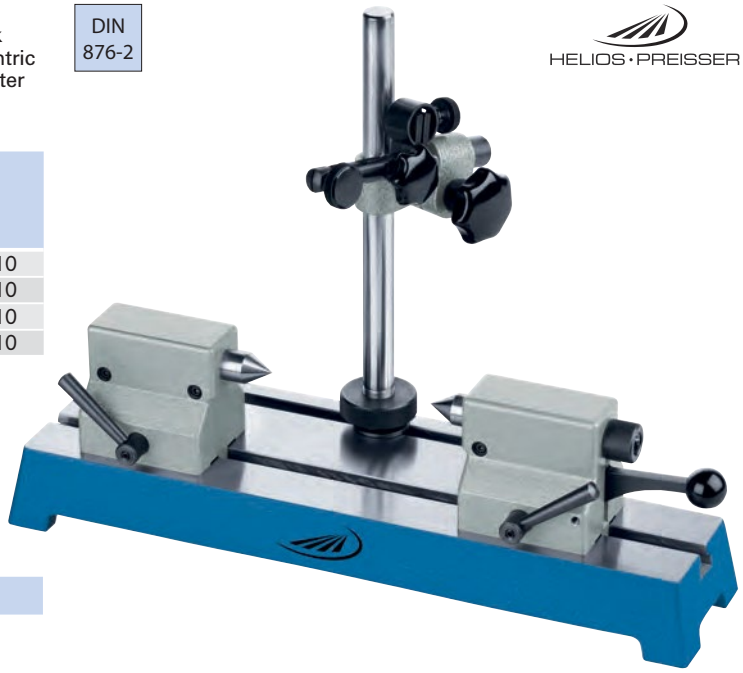
| Order No. | Rail mm | 4655 HELIOS·PREISSER |
|---|---|---|
| 1150 | 150 | 31.60 |
| 1200 | 200 | 35.60 |
| 1300 | 300 | 39.90 |
| | | (W410) |

## Concentricity gauge

**Design:** Contact surface finely ground, evenness acc. DIN 876-2. With 2 sliding tailstocks. Left tailstock with fixed tip, right tailstock with sprung tip, stroke approx. 10 mm. Lock of tailstocks via eccentric clamp. With T-groove and measuring stand. With dial gauge adapter ∅ 8 mm H7 and fine adjustment. Supplied in transport packaging.

DIN 876-2

HELIOS·PREISSER



| Order No. | Tip height mm | 4315 HELIOS·PREISSER | Tip width mm | T-slot width mm | Base plate mm |
|---|---|---|---|---|---|
| 0200 | 50 | 610.00 (W410) | 200 | 10 | 350 x 110 |
| 0350 | 50 | 774.00 (W410) | 350 | 10 | 500 x 110 |
| 0275 | 75 | 697.00 (W410) | 200 | 10 | 350 x 110 |
| 0375 | 75 | 794.00 (W410) | 350 | 10 | 500 x 110 |

## Tailstock left

**Design:** With rotary collet chuck device.

**Note:** Collet F10 from 1–7 mm available upon request.

| Order No. | Tip height mm | 4315 HELIOS·PREISSER | T-slot width mm |
|---|---|---|---|
| 1005 | 50 | 379.00 (W410) | 10 |
| 1010 | 75 | 420.00 (W410) | 10 |

## Prism insert pair

**Application:** Prism inserts are replaced at the tips in the tailstocks.

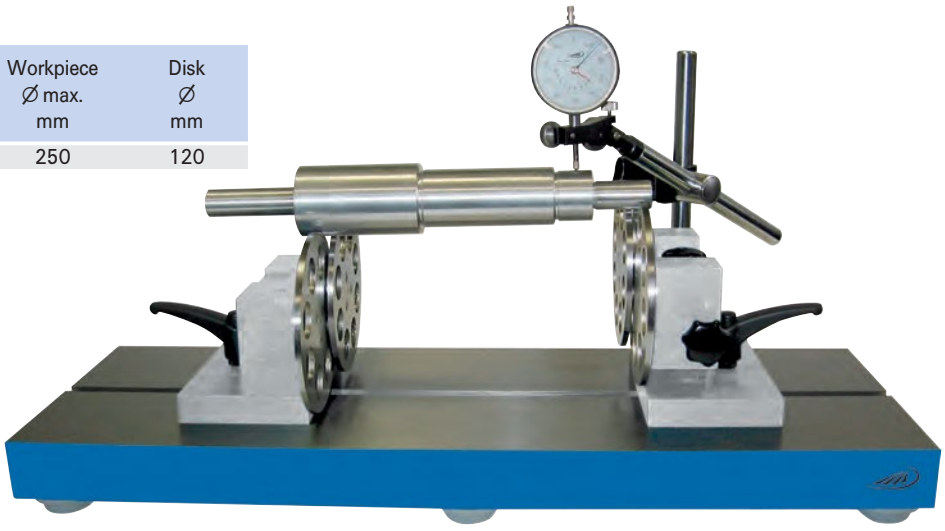
| Order No. | Tip height mm | 4315 HELIOS·PREISSER | Prism mount ∅ mm |
|---|---|---|---|
| 1000 | 50/75 | 88.20 (W410) | 3–15 |

## Concentricity gauge with disk blocks

**Design:** Concentricity gauge Without points, disc blocks can be moved on the base plate. 1 disc block can be adjusted 30 mm in height for diameter alignment High accuracy due to backlash-free bearing-supported rotating discs, concentricity 5 µm, bearing capacity maximum 50 kg. Supplied with measuring stand, in transport packaging.

HELIOS·PREISSER

**Note:** Supplied without dial gauge.
Dial gauges are found from 📖 4/45.



| Order No. | Disc distance max. mm | 4315 HELIOS·PREISSER | Workpiece ∅ max. mm | Disk ∅ mm |
|---|---|---|---|---|
| 0401 | 400 | 3125.00 ◊ (W410) | 250 | 120 |

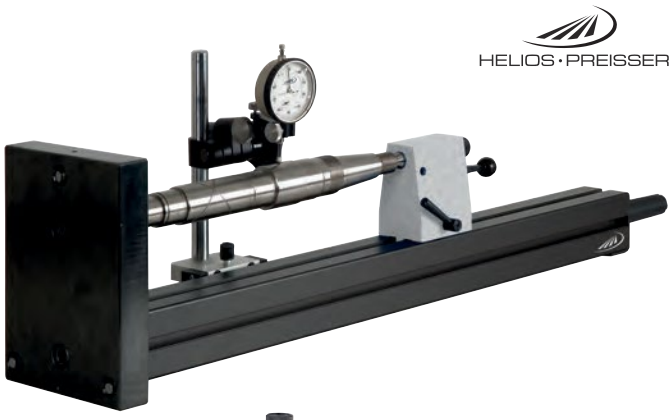
## Shaft testing device vertical and horizontal in lightweight design

**Design:** Vertical base plate with 3 hardened support surfaces, adjustable. Measuring beam made of hard anodised aluminium, aluminium tailstock. Vertical and horizontal alignment. Load capacity up to 15 kg. Supplied in transport packaging.

**Application:** For fast measurement of diameters, distances, shoulders, run-out and concentricity etc. For vertical and horizontal use.

**Note:** Supplied without measuring stand, dial gauge or guide rail. Dial gauges are found from 📖 4/45.

| Order No. | Tip height mm | 4315 HELIOS·PREISSER | Tip width mm | T-slot width mm | Base plate mm |
|---|---|---|---|---|---|
| 0550 | 75 | 907.00 (W410) | 550 | 10.1 + 0.1 | 200 x 150 |



4314 0005

4314 0010

4315

## Accessories for aluminium shaft testing device

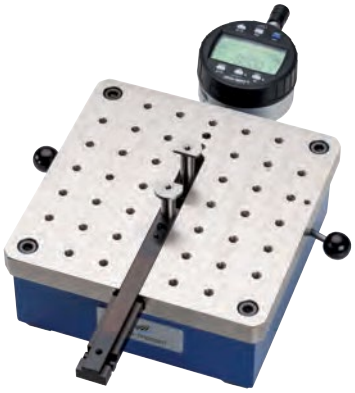
| Order No. | Design | 4314 HELIOS·PREISSER |
|---|---|---|
| 0005 | Measuring stand with guide rail | 328.50 |
| 0010 | Measuring stand with holder | 73.50 (W410) |

## Universal comparator gauge

**Design:** Robust construction, large application area. Analogue and digital dial gauges can optionally be used Dial gauge mounting hole ∅ 8 mm, repeatability 2 µm. Supplied with pairs of probes (Order No. 4314 0040 and 4314 0050) and probe holder (Order No. 4314 0085 and 4314 0090), in aluminium case.

**Application:** For the determination of internal and external diameters on grooves and reliefs in the comparative measuring procedure. The measurement to be taken is determined at the reversal point between a fixed and a moveable probe element. Particularly suitable for serial measurements.

**Note:** Supplied without dial gauge. Dial gauges are found from 📖 4/45.



| Order No. | Dimensions mm | 4314 HELIOS·PREISSER | Internal measurement mm | External measurement mm |
|---|---|---|---|---|
| 0015 | 150 x 150 x 68 | 1793.00 ◊ (W410) | 21–200 | 0–180 |

## Support plate for universal comparator gauge (not shown)

| Order No. | Dimensions mm | 4314 HELIOS·PREISSER |
|---|---|---|
| 0020 | 269 x 149 | 192.00 ◊ (W410) |

## Accessories for universal comparator gauge

**Note:** For miniature probe pair Order No. 4314 0075, the holder pair Order No. 4314 0080 is required.

| Order No. | Illustration | 4314 HELIOS·PREISSER | Design |
|---|---|---|---|
| 0025 | 1 | 91.40 ◊ | Stop piece square prism |
| 0030 | 2 | 104.00 ◊ | Stop piece disc |
| 0035 | 3 | 94.50 ◊ | Stepped square prism stop piece |
| 0040 | 4 | 108.00 ◊ | Probe pair |
| 0045 | 5 | 112.50 ◊ | Probe pair |
| 0050 | 6 | 64.00 ◊ | Probe pair |
| 0055 | 7 | 103.00 ◊ | Probe holder |
| 0060 | 8 | 64.00 ◊ | Probe holder |
| 0065 | 9 | 124.00 ◊ | Probe holder |
| 0070 | 10 | 104.00 ◊ | Probe pair |
| 0075 | 11 | 112.50 ◊ | Miniature probe pair |
| 0080 | 12 | 149.00 ◊ (W410) | Holder pair |

HELIOS·PREISSER

Fig. 1

Fig. 2

Fig. 3

Figl. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Fig. 12

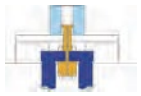
**Application for figure 4**

**Application for figures 7 + 8**

**Application for figures 8**

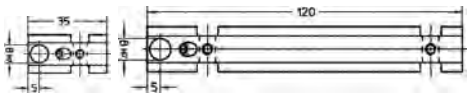
**Application for figures 7 + 9**

**Application for figure 10**


**Application for figures 11 + 12**

## Probe holder

| Order No. | Design | 4314 HELIOS·PREISSER |
|---|---|---|
| 0085 | short | 38.80 ◊ |
| 0090 | long | 48.00 ◊ (W410) |




## Uhrtast comparator gauge

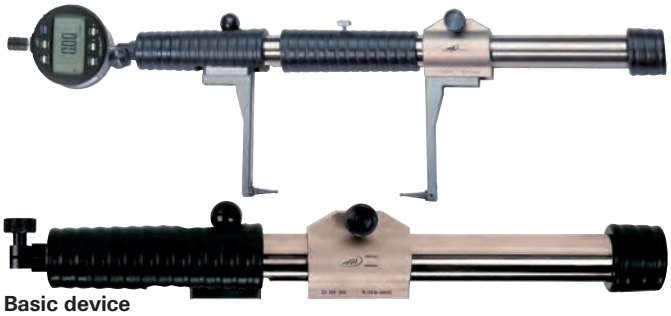
**Design:** With measurement range up to 2000 mm through optional extensions, for inside and outside measurements through switchable direction of measuring force. Setting is carried out using an adjuster, master piece, gauge block combination, ring gauge or outside micrometer Flexible in use due to large selection of measuring probes and measuring inserts. Supplied in a wooden box.

**Application:** Comparator gauge for inside and outside measurement for inspecting workpieces and adjusting machines.

**Note:** The basic device is supplied.

| Order No. | Internal measurement mm | 4314 HELIOS·PREISSER | External measurement mm |
|---|---|---|---|
| 0095 | 15–230 | 1876.00 ◊ (W410) | 5–220 |

HELIOS·PREISSER


Basic device

## Extension for Uhrtast comparator gauge

| Order No. | Length mm | 4314 HELIOS·PREISSER |
|---|---|---|
| 0100 | 100 | 261.50 ◊ |
| 0105 | 200 | 277.00 ◊ |
| 0110 | 500 | 423.00 ◊ (W410) |

## Measuring probe adaptor piece for the Uhrtast comparator gauge

**Design:** Supplied in pairs.

| Order No. | 4314 HELIOS·PREISSER |
|---|---|
| 0115 | 172.00 ◊ (W410) |

## Measuring inserts for the Uhrtast comparator gauge

**Design:** Supplied in pairs.

| Order No. | Design | 4314 HELIOS·PREISSER | Length mm |
|---|---|---|---|
| 0120 | spherical tactile surfaces | 115.50 ◊ | 23 |
| 0125 | spherical tactile surfaces | 115.50 ◊ | 53 |
| 0130 | cylindrical | 115.50 ◊ | 52 |
| 0135 | angled | 192.00 ◊ | 41 |
| 0140 | with measuring plate | 115.50 ◊ | 42 |
| 0145 | Shoulder measuring inserts for outside measurements | 206.00 ◊ | 19 |
| 0150 | Shoulder measuring inserts for outside measurements | 168.00 ◊ | 19 |

(W410)

HELIOS·PREISSER

spherical tactile surfaces

cylindrical

angled

with measuring plate

Shoulder measuring inserts for outside measurements

Shoulder measuring inserts for outside measurements

## Measuring arms for the Uhrtast comparator gauge

**Design:** Measuring arms reversible for internal and external measurement, mounting holes 3.5 and 5 mm. Supplied in pairs.

| Order No. | Length mm | 4314 HELIOS·PREISSER |
|---|---|---|
| 0155 | 40 | 272.00 ◊ |
| 0160 | 80 | 326.50 ◊ |

(W410)

## Adapter for thread measuring inserts

**Design:** Adapter for thread measuring inserts with long shaft and mounting hole 3.5 mm. Supplied in pairs.

**Note:** With measuring inserts with short shafts, the adaptor is not required.

| Order No. | 4314 HELIOS·PREISSER |
|---|---|
| 0175 | 153.50 ◊ |

(W410)

## Depth stop for measuring arms

**Design:** Supplied in pairs.

| Order No. | 4314 HELIOS·PREISSER |
|---|---|
| 0165 | 253.00 ◊ |

(W410)

## Adapter for measuring inserts

**Design:** 5 mm, all measuring inserts of dial gauges with M2.5 can be used. Supplied in pairs.

| Order No. | 4314 HELIOS·PREISSER |
|---|---|
| 0170 | 88.20 ◊ |

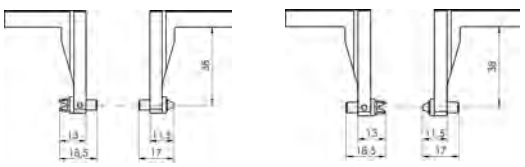
(W410)

## Thread measuring insert

**Design:** Supplied in pairs.

**4314 0180–0220** Measuring insert for metric female thread.

**4314 0225–0270** Measuring insert for metric male thread.



| Order No. | Gradient mm | 4314 HELIOS·PREISSER |
|---|---|---|
| 0180 | 0.4–0.45 | 220.50 ◊ |
| 0185 | 0.5–0.60 | 220.50 ◊ |
| 0190 | 0.7–0.80 | 220.50 ◊ |
| 0195 | 1.0–1.25 | 220.50 ◊ |
| 0200 | 1.5–1.75 | 220.50 ◊ |
| 0205 | 2.0–2.50 | 220.50 ◊ |
| 0210 | 3.0–3.50 | 220.50 ◊ |
| 0215 | 4.0–5.00 | 220.50 ◊ |
| 0220 | 5.5–6.00 | 220.50 ◊ |

(W410)

| Order No. | Gradient mm | 4314 HELIOS·PREISSER |
|---|---|---|
| 0225 | 0.35 | 193.00 ◊ |
| 0230 | 0.4–0.45 | 109.00 ◊ |
| 0235 | 0.5–0.60 | 109.00 ◊ |
| 0240 | 0.7–0.80 | 109.00 ◊ |
| 0245 | 1.0–1.25 | 109.00 ◊ |
| 0250 | 1.5–1.75 | 109.00 ◊ |
| 0255 | 2.0–2.50 | 109.00 ◊ |
| 0260 | 3.0–3.50 | 109.00 ◊ |
| 0265 | 4.0–5.00 | 109.00 ◊ |
| 0270 | 5.5–6.00 | 109.00 ◊ |

(W410)

## Measuring table

**Design:** Supplied with measuring probe adaptor and feet.

**Note:** Supplied without dial gauge and probe.

HELIOS·PREISSER

| Order No. | Supporting table ∅ mm | 4314 HELIOS·PREISSER |
|---|---|---|
| 0275 | 180 | 654.00 ◊ (W410) |

## Height gauge with reading magnifier

**Design:** Made of special steel, **with magnifier.** Reading parts and vernier glare-free matt chrome-plated, with fine adjustment and replaceable, angled carbide scriber. Zero setting and flat ground foot support surface. Supplied in transport packaging.

**Application:** For simple yet accurate marking, scanning and measuring of workpieces and machine parts.

format professional quality

| Order No. | Measurement range mm | 4832 format | Reading mm | Base size mm |
|---|---|---|---|---|
| 0300 | 300 | 118.50 (W483) | 0.02 | 125 x 85 |

## Replacement scriber tip

| Order No. | For measurement range mm | 4832 format |
|---|---|---|
| 1300 | 300 | 26.10 (W483) |

## Digital height gauge

**Design:** Digit height of the LCD 6 mm. With strong base and ground standing surface. With fine adjustment, locking screw and replaceable carbide scriber. Supplied with battery CR 2032, 3 V, in transport packaging.

**Functions:** Switch-on and -off, mm/inch-switching, reset (zeroing) possible in any position, ± preset function (measurement value pre-adjustment).

**Application:** For simple yet accurate marking, scanning and measuring of workpieces and machine parts.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

| Order No. | Measurement range mm | 4840 format | Reading mm |
|---|---|---|---|
| 0300 | 300 | 247.50 | 0.01 |
| 0600 | 600 | 274.00 (W483) | 0.01 |

## Replacement scriber with carbide tip

| Order No. | For measurement range mm | 4840 format |
|---|---|---|
| 1300 | 300 | 26.10 |
| 1600 | 600 | 36.50 (W483) |

## Height gauge

NEW

Factory standard

HELIOS·PREISSER

**Design:** Measuring rod made of special steel. Vernier and scale matt chrome-plated reading, locking screw and exchangeable carbide scriber. Scriber from basic area. Steel base with dirt grooves. Supplied in transport packaging.

**Application:** For simple yet accurate marking, scanning and measuring of workpieces and machine parts.

**483A** **With fine adjustment**

**483B** **Fine adjustment via backward gear rack and adjustment wheel with pinion**

| Order No. | Measurement range mm | 483A | 483B | Reading mm | Base size mm |
|---|---|---|---|---|---|
| 0300 | 300 | 391.50 | 501.00 | 0.02 | 145 x 90 x 44 |
| 0600 | 600 | 490.50 | 632.00 | 0.02 | 189 x 118 x 44 |
| 1000 | 1000 | 675.00 ◊ (W410) | 871.50 ◊ (W410) | 0.02 | 189 x 118 x 44 |

483B

483A

## Digital height gauge

NEW

Factory standard

HELIOS·PREISSER

**Design:** Made of special steel. with exchangeable, angled carbide scriber. Digit height on LCD display 11 mm. Steel base with dirt grooves. Scriber from basic area. Supplied with battery CR 2032, 3 V, in transport packaging.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, reset (zeroing) possible at each position, ± pre-set function (setting a numerical value), ABS (switching from relative to absolute measurement), counting direction change.

**Application:** For simple yet accurate marking, scanning and measuring of workpieces and machine parts.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).

**483C** **With fine adjustment**

**483D** **Fine adjustment via backward gear rack and adjustment wheel with pinion**

| Order No. | Measurement range mm | 483C | 483D | Reading mm | Base size mm |
|---|---|---|---|---|---|
| 0300 | 300 | 566.00 | 697.00 ◊ | 0.01 | 145 x 90 x 44 |
| 0600 | 600 | 707.50 | 871.50 ◊ | 0.01 | 189 x 118 x 44 |
| 1000 | 1000 | 980.50 ◊ (W410) | 1199.00 ◊ (W410) | 0.01 | 189 x 118 x 44 |

483D

483C

## Replacement scriber with carbide tip

NEW

| Order No. | Length mm | 4837 |
|---|---|---|
| 1010 | 75 | 125.00 |
| 1015 | 150 | 138.50 |
| | | (W410) |

## Digital height gauge and marking instrument with movable scriber

NEW

Factory standard | RS232

HELIOS·PREISSER

**Design:** Made of special steel. with exchangeable, moveable, straight scriber. Digit height on LCD display 11 mm. Steel base with dirt grooves. Data output RS 232. Supplied with battery CR 2032, 3 V, in transport packaging.

**Functions:** On and automatic off switch, mm/inch switching, key lock set for zero position, reset (zeroing) possible at each position, ± pre-set function (setting a numerical value), ABS (switching from relative to absolute measurement), counting direction change.

**Application:** For simple yet accurate marking, scanning and measuring of workpieces and machine parts.

**Note:** Replacement battery: (Order No. 4026 2032, 📖 4/13).
Data cable RS 232-Proximity available on request.

| Order No. | Measurement range mm | 4837 HELIOS·PREISSER | Reading mm | Base size mm |
|---|---|---|---|---|
| 0304 | 300 | 598.50 | 0.01 | 145 x 90 x 44 |
| 0604 | 600 | 762.50 | 0.01 | 189 x 118 x 44 |
| 1004 | 1000 | 1035.00 ◊ | 0.01 | 189 x 118 x 44 |
| | | (W410) | | |

## Replacement scriber tip

NEW

**4837 1020–1025**
Straight

**4837 1030–1035**
Angled needle for marking from base surface

| Order No. | Design | 4837 HELIOS·PREISSER |
|---|---|---|
| 1020 | Straight, hardened, 270 mm | 114.50 |
| 1025 | Straight, carbide, 270 mm | 149.00 |
| 1030 | Angled, hardened, 270 mm | 134.50 |
| 1035 | Angled, carbide, 270 mm | 170.00 |
| | | (W410) |

MYTRI

**Measuring plates found on 📖 4/115**

## Vee blocks

**Design:** Made of special cast iron, with 90° prism angle, processed in pairs.

**Quality 1:** Parallelism tolerance < 0.016 mm, prisms and sole ground.
**Quality 3:** Parallelism tolerance < 0.064 mm, prisms and base milled.

**Application:** For aligning and checking cylindrical workpieces.

**Note:** Individual magnetic prisms see (Order No. 3965, 📖 3/191), in pairs see (Order No. 3966, 📖 3/191). Magnetic prism pairs with joint, see (Order No. 3982, 📖 3/196).

| Order No. | Dimensions mm | 4785 format | For shaft Ø mm | Quality |
|---|---|---|---|---|
| 0010 | 100 x 40 x 30 | 69.20 | 6–40 | 1 |
| 0015 | 150 x 50 x 40 | 93.50 | 8–50 | 1 |
| 0020 | 200 x 70 x 50 | 159.00 | 8–70 | 1 |
| 0100 | 100 x 40 x 30 | 49.90 | 6–40 | 3 |
| 0150 | 150 x 50 x 40 | 72.40 | 8–50 | 3 |
| 0200 | 200 x 70 x 50 | 120.50 | 8–70 | 3 |

(W408)

## Precision vee blocks

**Design:** Made of special steel, hardened. End face and stand sides angled, 90° prism angle, processed in pairs.
**Evenness, parallelism and perpendicularity tolerance 0.004 mm.**

| Order No. | Dimensions mm | 4787 HELIOS·PREISSER | For shaft Ø mm |
|---|---|---|---|
| 0005 | 75 x 35 x 30 | 134.50 | 5– 40 |
| 0010 | 150 x 55 x 45 | 234.00 | 5– 60 |
| 0015 | 250 x 85 x 70 | 446.00 | 5–100 |

(W410)

## Vee blocks with clamps

**Design:** Made of special cast iron, with 2 differently sized recesses 90°, prism recesses 90° and end faces ground at an angle to the standing surface, precision ground in pairs.
**Evenness, parallelism and perpendicularity tolerance 0.004 mm.**

**Application:** For aligning and checking cylindrical workpieces.

**Note:** Individual magnetic prisms see (Order No. 3965, 📖 3/191), in pairs see (Order No. 3966, 📖 3/191). Magnetic prism pairs with joint, see (Order No. 3982, 📖 3/196).

| Order No. | Dimensions mm | 4786 format | For shaft Ø mm |
|---|---|---|---|
| 0005 | 50 x 40 x 40 | 176.00 | 5–30 |
| 0010 | 75 x 55 x 55 | 298.00 | 5–50 |
| 0015 | 100 x 75 x 75 | 426.50 | 7–70 |

(W408)

# Digimar 817 CLM Quick Height

**The altimeter Digimar 817 CLM with the innovative Quick Mode. Quick measurement with highest accuracy. Extensive measurement and evaluation options with highest operating comfort.**

### Ideal for measuring with air bearing for large workpieces

With the keys incorporated in the base, the user can comfortably move the measuring slide into the desired position and start the measurement. This particularly facilitates the measuring of large workpieces that cannot be moved and positioned. The user can leave both hands on the measuring device (key air bearing and quick keys) and measure the workpiece entirely.

### Universal measuring options

- Extensive measurement functions in 1D and 2D
- Dynamic measurement functions with analogue display
- Automatic rectangularity and straightness measurement (with accessories)
- Automated measurement processes (measurement programmes)
- Auto-function for chain dimensions and distance measurement

### Highest accuracy and reliability

- Highly accurate, incremental measurement system with double reader head system, insensitive to contamination by dirt
- Robust column made of rustproof steel
- Measuring trolley guided in precision ball bearings
- Temperature compensation via internal temperature sensor

**Quick Mode:** Move measuring slide with hand toward the measurement object.

The motor starts the measurement process automatically.

## Altimeter Digimar 817 CLM Quick Height

NEW

Factory standard | RS232 | USB | Digimatic

Mahr

**Design:** Exceptional measurement accuracy and reliability with the optically incremental measuring system with double reader head, dynamic probe system for high repeatability, air bearing system for easy, jerk-free movement, precise measuring head guidance on stainless steel guide rails, easy measurement processes with motor-driven measuring slide, scanner constant is retained after deactivation, integrated, rechargeable batteries with long operation duration for network-independent measuring, temperature compensation via int. temperature sensor, large and clear function keys, clearly readable LCD display with background lighting, user guidance by means of intuitive icons, user guidance in several languages, possibility to set additional zero points on the workpiece, additional measuring device can be connected with Opto RS 232 interface, future-proof through upgradability, automatic standby switch, adjustable auto-off function without losing measurement values. With data output via radio transmission, RS 232, USB and Digimatic. Supplied with operating and display element, carrier, measuring insert, setting block, charger, USB cable, protective hood and calibration note.

**Functions:** Detection from above and below, ridge width and groove distance incl ridge and groove centre, borehole and shaft diameter incl. borehole and shaft centre, reversal point boreholes (top and bottom), reversal point shaft (top and bottom), calculation of distances and symmetry, dynamic measurement functions, squareness measurement, straightness measurement, measurement in 2D mode, measurement programmes, statistical evaluation, measurement data processing.

**Note:** Radio receive incl. software (Order No. 4942 0030) 4/129).

| Order No. | Measurement range mm | 4845 Mahr |
|---|---|---|
| 0350 | 350 | 5570.00 ◊ |
| 0600 | 600 | 6140.00 ◊ (W490) |

## Altimeter Digimar 816 CL

NEW

Factory standard | RS232 | USB | Digimatic

Mahr

**Design:** Exceptional measurement accuracy and reliability with the optically incremental measuring system with double reader head, dynamic probe system for high repeatability, air bearing system for easy, jerk-free movement, precise measuring head guidance on stainless steel guide rails, easy measurement processes with motor-driven measuring slide, scanner constant is retained after deactivation, integrated, rechargeable batteries with long operation duration for network-independent measuring, temperature compensation via int. temperature sensor, clear function keys, clearly readable LCD display with background lighting, user guidance by means of intuitive icons, user guidance in several languages. With data output via radio transmission, RS 232, USB and Digimatic. Supplied with operating and display element, carrier, measuring insert, setting block, charger, USB cable, protective hood and calibration note.

**Functions:** Detection from above and below, ridge width and groove distance incl ridge and groove centre, borehole and shaft diameter incl. borehole and shaft centre, reversal point boreholes (top and bottom), reversal point shaft (top and bottom), calculation of distances and symmetry, dynamic measurement functions, measurement programmes, statistical evaluation, measurement data processing.

**Note:** Radio receive incl. software (Order No. 4942 0030) 4/129).

| Order No. | Measurement range mm | 4845 Mahr |
|---|---|---|
| 0355 | 350 | 4200.00 ◊ |
| 0605 | 600 | 4760.00 ◊ (W490) |

## Height gauge and marking instrument Digimar 814 N

NEW

RS232

Mahr

**Design:** Large and easily readable digital display, measurement and display device on measuring head, with digital size preset, zeroing of display in each measurement position, entry of tolerance limits for 1 feature, incremental inductive measurement system, ball bearing guidance of measuring head, wear-resistance measuring system, easy to use with hand crank on side of measuring head, constant measuring force, acts selectively upward or downward, can be clamped in all positions for marking tasks, with precision adjustment, network independent via battery operation, universal use thanks to elaborate accessories. With data output via radio transmission, RS 232, USB and Digimatic. Supplied with operating and display element, carrier, probe arm, ball measuring probe, 8 mm, battery, protective hood and calibration note.

**Functions:** Switch-on and automatic off, mm/inch-switching, reset (zeroing) possible in any position, ± preset function (measurement value pre-adjustment), counting direction inversion, tolerance entry, max.-min. for concentricity and planarity testing.

**Application:** For measuring heights and distances between boreholes, surfaces and edges, for marking workpieces.

**Note:** Radio receive incl. software (Order No. 4942 0030) 4/129).

| Order No. | Measurement range mm | 4845 Mahr |
|---|---|---|
| 0320 | 320 | 3345.00 ◊ |
| 0620 | 620 | 4135.00 ◊ |
| | | (W490) |

## Height gauge and marking instrument Digimar 814 N

NEW

RS232

Mahr

**Design:** Large and easily readable digital display, measurement and display device on measuring head, **with measuring table made of hard stone,** incremental inductive measurement system, ball bearing guidance of measuring head, wear-resistance measuring system, easy to use with hand crank on side of measuring head, constant measuring force, acts selectively upward or downward, can be clamped in all positions for marking tasks, with precision adjustment, network independent via battery operation, universal use thanks to elaborate accessories. With data output via radio transmission, RS 232, USB and Digimatic. Supplied with operating and display element, carrier, probe arm, ball measuring probe, 8 mm, battery, protective hood and calibration note.

**Functions:** Switch-on and automatic off, mm/inch-switching, reset (zeroing) possible in any position, ± preset function (measurement value pre-adjustment), counting direction inversion, tolerance entry, max.-min. for concentricity and planarity testing.

**Application:** For measuring heights and distances between boreholes, surfaces and edges, for marking workpieces.

**Note:** Radio receive incl. software (Order No. 4942 0030) 4/129).

| Order No. | Measurement range mm | 4845 Mahr |
|---|---|---|
| 0325 | 320 | 3345.00 ◊ |
| 0625 | 620 | 4135.00 ◊ |
| | | (W490) |

## Measuring probe set

NEW

**Design:** Supplied in case.

| Order No. | Set contents | 4845 Mahr |
|---|---|---|
| 0750 | 1 depth measuring probe<br>1 carrier with extended mount<br>1 disc measuring probe for slots, etc.<br>1 cone measuring probe<br>1 cylinder measuring probe<br>1 holder for M2 lever gauge inserts<br>1 carrier incl. 4 pc. ball probes with shaft mount ∅ 8 mm | 1140.00 ◊ |
| 0755 | 1 depth measuring probe<br>1 carrier with extended mount<br>1 disc measuring probe for slots, etc.<br>1 cone measuring probe<br>1 cylinder measuring probe<br>1 holder for M2 lever gauge inserts | 732.00 ◊ |

(W490)

4845 0750

## Precision granite measuring and control plate

DIN 876

**Design:** Made of fine black granite, surface lapped, polished sides, bottom sawn clean. The measuring uncertainties total 1 µm per 1000 mm length for areas or lengths.

**Note:** Special design on request.

**4772** **Quality 1:** 10 µ + L/100

**4773** **Quality 0:** 4 µ + L/250

| Order No. | Dimensions mm | 4772 MYTRI | 4773 MYTRI | Weight kg |
|---|---|---|---|---|
| 0300 | 300 x 300 x 50 | on request ◊ | on request ◊ | 13 |
| 0400 | 400 x 250 x 60 | on request ◊ | on request ◊ | 18 |
| 0401 | 400 x 400 x 60 | on request ◊ | on request ◊ | 29 |
| 0500 | 500 x 500 x 80 | on request ◊ | on request ◊ | 60 |
| 0630 | 630 x 400 x 80 | on request ◊ | on request ◊ | 60 |
| 0631 | 630 x 630 x 80 | on request ◊ | on request ◊ | 95 |
| 0800 | 800 x 500 x 100 | on request ◊ | on request ◊ | 120 |
| 1000 | 1000 x 630 x 100 | on request ◊ | on request ◊ | 190 |
| 1200 | 1200 x 800 x 150 | on request ◊ | on request ◊ | 432 |
| 1001 | 1000 x 1000 x 150 | on request ◊ | on request ◊ | 450 |
| 1500 | 1500 x 1000 x 150 | on request ◊ | on request ◊ | 675 |
| 2000 | 2000 x 1000 x 200 | on request ◊ | on request ◊ | 1200 |
| | | (999) | (999) | |

## Stands for granite, measuring and control plates

**Design:** Made of stable welded square steel pipe, with an adjustable 3-point bearing and a double-sided tip protection. Stands on 4 adjustment bolts M16 on the feet. The plate is protected on the corners through profile angles against slipping and collisions. The working height of the bearing-supported plate is adjustable from 900 to 920 mm.

**Application:** For supporting hard rock measuring plates (Order No. 4772 and Order No. 4773).

**Note:** Supplied without hard rock plate.

| Order No. | For plate size mm | 4775 MYTRI |
|---|---|---|
| 0630 | 630 x 400 x 80 | on request ◊ |
| 0631 | 630 x 630 x 80 | on request ◊ |
| 0800 | 800 x 500 x 100 | on request ◊ |
| 1000 | 1000 x 630 x 100 | on request ◊ |
| 1001 | 1000 x 1000 x 150 | on request ◊ |
| 1200 | 1200 x 800 x 150 | on request ◊ |
| 1500 | 1500 x 1000 x 150 | on request ◊ |
| 2000 | 2000 x 1000 x 200 | on request ◊ |
| | | (999) |

## Safety cabinet base for granite, measuring and control plates

**Design:** Robust, hammer blow, grey powder-coated steel plate cabinet, S4 VA design, with an adjustable 3-point bearing and a double-sided tip protection. Equipped with 2 doors, cylinder locks, ball bearing-guided drawers and adjustment bolts as well as with Ø 80 mm stainless steel plates on the feet. The working height of the bearing-supported plate is adjustable from 900 to 920 mm.

**Application:** For supporting hard rock measuring plates (Order No. 4772 and Order No. 4773).

**Note:** Supplied without hard rock plate.

| Order No. | For plate size mm | 4774 MYTRI | Cabinet size mm | Number of drawers |
|---|---|---|---|---|
| 0800 | 800 x 500 x 100 | on request ◊ | 820 x 520 | 2 |
| 1000 | 1000 x 630 x 100 | on request ◊ | 1020 x 650 | 2 |
| 1001 | 1000 x 1000 x 150 | on request ◊ | 1020 x 1020 | 2 |
| 1200 | 1200 x 800 x 150 | on request ◊ | 1220 x 820 | 2 |
| 1500 | 1500 x 1000 x 150 | on request ◊ | 1520 x 1020 | 2 |
| 2000 | 2000 x 1000 x 200 | on request ◊ (999) | 2020 x 1020 | 2 |

## Measuring beams

**Design:** Made of granite. The two narrow surfaces are ground precisely and in parallel. With 2 handles from a length of 800 mm.

**Note:** Special design on request.

**4770** **Quality 0:** 4 µ + L/250

**4771** **Quality 00:** 2 µ + L/500

| Order No. | Dimensions mm | 4770 MYTRI | 4771 MYTRI | Quality 0 µ | Güte 00 µ | Weight kg |
|---|---|---|---|---|---|---|
| 0630 | 630 x 50 x 100 | on request ◊ | on request ◊ | 7 | 3 | 10 |
| 0800 | 800 x 50 x 120 | on request ◊ | on request ◊ | 7 | 3 | 15 |
| 1000 | 1000 x 60 x 150 | on request ◊ | on request ◊ | 8 | 4 | 27 |
| 1200 | 1200 x 60 x 180 | on request ◊ | on request ◊ | 8 | 4 | 39 |
| 1500 | 1500 x 70 x 200 | on request ◊ | on request ◊ | 10 | 5 | 63 |
| 2000 | 2000 x 80 x 250 | on request ◊ (999) | on request ◊ (999) | 12 | 6 | 120 |

**Small measuring tables**

can be found from 4/66.

Mahr

# MarSurf

**Handy and precise for roughness measurements on site**

**Integrated calibration standard**
No external calibration standard required. Provides more security for standard-compliant measurements. To examine the standard probe, you need a test standard that is integrated in MarSurf M300 – this ensures that your results are correct!

**Sensor with removable sensor protection**
They measure standard-compliant, 0.002 mm diamond tip, measurement force 0.7 mN. Probe with open skid for various measurement tasks are available.

**Automatic cutoff selection ...**
...ensures the proper measurement results for the non-measurement technician. Profile filter separate a profile into long-wave and shortwave parts. The profile filters defines the transition from roughness to waviness. R-profile (roughness profile) is the deviation of the primary profile from the centre line of the profile filter. When depicting the roughness profile, the centre line is the zero line.

**Integrated memory**
Large memory to save results and profiles.
The MarSurf M 300 Explorer essentially serves to store and document your measurement results and profiles.

## Mobile roughness gauge

NEW

IP 40 | RS232 | USB

Mahr

**Design:** Handy roughness gauge for mobile use, easy and intuitive to operate, large, illuminated 4.3" TFT touch display, display can be rotated, data backup as TXT, X3P, CSV and PDF file, network independent operation: More than 1,200 measurements without having to recharge the device, everything in one product. Small size and low weight (approx. 500 g).
Flexibility of the device: removable drive unit, in all measurement positions: horizontal, vertical, overhead, die 31 indicators offers performance such as a lab device, integrated and removable roughness standard, quick access to your favourite functions with the favourite area in the display, short boot times, the result is available within a matter of a few seconds. The automatic cutoff selection ensures the proper measurement results for the non-measurement technician. Supplied with drive unit (removable), 1 standard probe, standard-compliant, integrated battery, roughness standard, integrated in enclosure (removable) incl. Mahr calibration note, probe protection, chargr/3 network adapter, operating instructions, carry bag with shoulder straps, USB calbe, extension cable with drive unit and height adjustment (inegrated).

**Application:** For shafts, enclosure parts, large machines, large workpieces, milling and turning parts, ground and honed workpieces, in production and manufacturing areas at the machine for the quick determination of the roughness depth of the workpiece in or on the machine.

**Note:** Probes, measurement stands and geometry standards from 📖 4/120.
Radio receiver (Order No. 4942 0030, 📖 4/129).
Transmitter module for e-Stick (Order No. 4942 0040, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB incl. software (Order No. 4246 0190, 📖 4/54).

| Order No. | Sensor tip mm | 4870 Mahr | Memory |
|---|---|---|---|
| 0010 | 0.002 | 2310.00 ◊ | min. 3900 profiles, min. 500000 results, min. 1500 PDF protocols, extendable with microSD card up to 32 GB (increases storage capacity by up to factor 320) |
| 0015 | 0.005 | 2310.00 ◊ (W490) | min. 1350 profiles, min. 500.000 results, min. 250 PDF protocols, extendable with microSD card up to 32 GB |

| Technical data: | |
|---|---|
| Indicators | Ra, Rq, Rz (Ry (JIS) entspr. Rz), Rz (JIS), Rmax, Rp, RpA (ASME), Rpm (ASME), Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, RPc, Rmr (tp (JIS, ASME) acc. Rmr), RSm, RSk, RS, CR, CF, CL, R, Ar, Rx calibration function, dynamic; Ra, Rz, Rsm |
| Calibration function | dynamic; Ra, Rz, Rsm |
| Languages | German, English, French, Italian, Spanish, Portuguese, Dutch, Swedish, Russian, Polish, Czech, Japanese, Chinese, Korean, Hungarian, Turkish, Romanian |
| Other | Block/code password, date/time |
| Data interface | USB, MarConnect (RS 232), microSD Slot for SD/SDHC-Karten to 32 GB |
| Protection type | IP 40 |
| Battery | Li-Ionen battery, 3.7 V, nominal capacity 11.6 Wh, min. 1200 measurements |
| Wide-range power supply | 100 to 264 V |
| Dimensions (H x W x D) | 160 mm x 77 mm x 50 mm |
| Weight | 0.49 kg |
| Measurement principle | Profile method |
| Probe | Inductive skid probe |
| Measurement range | 350 µm |
| Profile resolution | 8 nm |
| Filter in accordance with ISO/JIS | Gaussian filter in acc. with ISO 16610–21 (previously ISO 11562), special filter in acc. with DIN EN ISO 13565–1, ls-filter in acc. with DIN EN ISO 3274 (removable) |
| Cutoff lc in accordance with ISO/JIS | 0.25 mm, 0.8 mm, 2.5 mm, automatic filter recognition |
| Number n of individual measurement paths in acc. with ISO/JIS | selectable: 1 to 16 |
| Shortened cutoff in accordance with ISO/JIS | selectable |
| Probe route Lt in accordance with ISO/JIS | 1.5 mm, 4.8 mm, 15 mm, N x Lc, variable, automatic |
| Probe route in acc. with ISO 12085 (MOTIF) | 1 mm, 2 mm, 4 mm, 8 mm, 12 mm, 16 mm |
| Total route in acc with ISO/JIS | 1.25 mm, 4.0 mm, 12.5 mm |
| Measuring force | approx. 0.7 mN |

## Mobile roughness gauge

NEW

IP 42 | Bluetooth | RS232 | USB | Digimatic

Mahr

**Design:** Easy handling by means of high-resolution colour display and proven user guidance, **wireless Bluetooth connection**, integrated standard in drive unit, large measurement range of 350 µm. Automatic function for profile recognition and corresponding norm-compliant setting of filters and respective scan lengths, integrated memory for the results of approx. 40,000 measurements and 30 profiles, 16 languages (3 of which are Asian), integrated thermal printer with highest print quality, output of R-profile via thermal printer, protocol output at press of a button or automatically.
Data transfer of the results via USB interface to computer, evaluation of the most common indicators, indicator lists (e.g. material share), integrated memory for results and profiles, tolerance monitoring, printing of R-profile (ISO/ASME/JIS), P-profile (MOTIF), material share curve, results protocol, setting of unsymmetrical cut level for tip counting, measuring unit (µm/inch) and standards (ISO/JIS/ASME/MOTIF) selectable, individual measuring routes as well as shortened cuttoff selectable, lock for device setting, built-in battery with power management, plug-in power supply with exchangeable adapters for worldwide use, date and time for protocoling, extendable stationary measuring station, use of probe rows, software MarSurf PS1/M 300 Explorer for protocoling. Supplied with standard probe, normal calibration note, 1 roll of thermal paper, probe protection, face prism, height adjustment, wide-range power supply with 3 adapters, 2 USB cables (for the connection to the computer and the use with cable), hexagon screwdriver, in transport bag.

**Application:** For shafts, enclosure parts, large machines, large workpieces, milling and turning parts, ground and honed workpieces, in production and manufacturing areas at the machine for the quick determination of the roughness depth of the workpiece in or on the machine.

**Note:** Probes, measurement stands and geometry standards from 📖 4/120.
Analysis software SW PS1/M300 Explorer (Bestell-Nr. 4942 0060, 📖 4/130).
Data cable RS 232 (Order No. 4942 0055, 📖 4/130).
Data cable USB incl. software (Order No. 4246 0190, 📖 4/54).
Data cable Digimatic (Order No. 4246 0185, 📖 4/54).

| Order No. | Sensor tip mm | 4870 Mahr | Connection |
|---|---|---|---|
| 0020 | 0.002 | 4400.00 ◊ | Bluetooth |
| 0025 | 0.002 | 4400.00 ◊ (W490) | Cable bound |

**Technical data:**

| | |
|---|---|
| Indicators | Ra, Rz (Ry (JIS) entspr. Rz), Rz (JIS), Rq, Rmax, Rp, RpA (ASME), Rpm (ASME), Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, R3z, RPc, Rmr (tp (JIS, ASME) acc. Rmr), RSm, RSk, S, CR, CF, CL, R, Ar, Rx, Rv |
| Horizontal scale | dep. on cut-off |
| Protocol contents | R-Profile, MRK, P-Profile (MOTIF), depiction of results |
| LC Display | High-resolution, 3.5", 320 x 240 pixels |
| Print | automatic/manual. protocol with time |
| Printer | Thermal printer, 384 point/horizontal line, 20 chars/line |
| Print speed | approx. 6 lines/second acc to approx. 25 mm/s |
| Thermal paper | Ø 40.0 mm– 1.0 mm, width 57.5 mm– 0.5 mm, external coating |
| Calibration function | dynamic |
| Languages | German, English, French, Italian, Spanish, Portuguese, Dutch, Swedish, Russian, Polish, Czech, Japanese, Chinese, Korean, Hungarian, Turkish |
| Connections | Drive unit, plug-in power supply, USB, MarConnect |
| Data interface | RS 232, USB, Digimatic, USB A |
| Rel. humidity | 30 % to 85 % |
| Protection type | M 300 = IP 42, RD 18 = IP 40 |
| Temperature range for operation/work | +5 °C to +40 °C |
| Temperature range for storage | –15 °C to +55 °C |
| Power supply | NiMH accumulator for approx. 1000 measurements (depending on number and length of protocol printouts), plug-in power supply with input voltage 90 to 264 V and three network adapters |
| Dimension (L x W x H) of drive unit | 130 mm x 70 mm x 50 mm |
| Dimensions (L x W x H) of the evaluation device | 190 mm x 140 mm x 75 mm |
| Weight | 4.1 kg |
| Measurement principle | Profile method |
| Probe | Inductive skid probe |
| Measurement range | 350 µm, 180 µm, 90 µm (automatic change) |
| Profile resolution | 8 nm |
| Filter in accordance with ISO/JIS | Gaussian, Ls filter (exchangeable) |
| Cutoff lc in accordance with ISO/JIS | 0.25 mm, 0.8 mm, 2.5 mm |
| Number n of individual measurement paths in acc. with ISO/JIS | selectable: 1–5 |
| Shortened cutoff in accordance with ISO/JIS | selectable |
| Probe route Lt in accordance with ISO/JIS | 1.75 mm, 5.6 mm, 17.5 mm |
| Total route in acc with ISO/JIS | 1.25 mm, 4 mm, 12.5 mm |
| Keying speed | 0.5 mm/s |
| Measuring force | approx. 0.7 mN |
| Weight of drive unit | approx. 0.3 kg |
| Weight of evaluation device | approx. 1 kg |

## Accessories for roughness gauges

NEW

Mahr

4873 0010

| Order No. | Design | 4871 Mahr |
|---|---|---|
| 0005 | Probe extension | 358.00 ◊ (W491) |

| Order No. | Design | 4871 Mahr |
|---|---|---|
| 0010 | Standard probe | 630.00 ◊ |
| 0015 | Standard probe 0.005 mm | 630.00 ◊ |
| 0020 | Standard probe 0.01 mm | 630.00 ◊ |
| 0025 | Probe for bores from 3 mm | 1065.00 ◊ |
| 0030 | Probe for bores from 11 mm | 1515.00 ◊ |
| 0035 | Probe for concave and convex surfaces | 1515.00 ◊ |
| 0040 | Probe for tooth flanges | 1515.00 ◊ (W491) |

| Order No. | Design | 4871 Mahr |
|---|---|---|
| 0045 | Probe for metal sheets | 1595.00 ◊ (W491) |

| Order No. | Design | 4872 Mahr |
|---|---|---|
| 0005 | Analysis software M300 Explorer | 306.00 ◊ (W491) |

| Order No. | Design | 4873 Mahr |
|---|---|---|
| 0010 | Measurement stand, 300 mm, with cast iron base | 897.00 ◊ (W491) |

## Precision crown stopwatch

**Design:** With a black ABS plastic housing and bracket, jerk-, impact-, dust- and water protected pin lever movement, 1 stone made of synthetic ruby. Start, stop, reset is performed via crown.

**Application:** For timing without interruption.

| Order No. | Graduation | 4862 hanhart 1882 | Display time min | Housing Ø mm | Weight g |
|---|---|---|---|---|---|
| 0015 | 1/10 s. | 108.00 | 15 | 55 | 80 |
| 0030 | 1/100 min. | 108.00 (W487) | 30 | 55 | 80 |

## Precision adding stopwatch

**Design:** Diamond cut and chrome-plated brass enclosure, with impact-, dust- and water-protected pin lever, 7 stones made of synthetic ruby, high accuracy.

**Application:** For timing with interruption possibilities, with drag pointer for interim measurement.

| Order No. | Graduation | 4865 hanhart 1882 | Display time min | Housing Ø mm | Weight g |
|---|---|---|---|---|---|
| 0030 | 1/100 min. | 287.00 (W487) | 30 | 55 | 130 |

## Digital stopwatch Accord 1

**Design:** With black ABS plastic housing, spray proof, ultrasound welded viewing window, 1-button operation, top LC display 7-digit, lower LC display 2-digit, 2-digit memory display, decimal division 1/100 minutes. Supplied with Mignon battery AA/LR06, 1.5 V, protective bag and cord.

**Functions:** Start/Stop/Reset – Split/Lap, both times can be switched at any time. Separate system and memory reset, time and date.

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

| Order No. | Display time min | 4867 hanhart 1882 | Memory split/LAP | Weight g |
|---|---|---|---|---|
| 0060 | 99999.99 | 123.00 (W487) | 60 | 90 |

## Digital stopwatch Spectron

**Design:** With grey ABS plastic housing, waterproof, 2 button operation, with 2 1/2 line LCD displays, top 6-digit, lower 7-digit. Decimal classification 1/100 minute. Supplied with micro battery AAA/LR03, 1.5 V, protective bag and cord.

**Functions:** Start/Stop and Split are operated by 2 separate buttons. Start/Stop/Reset – Addition/Split/Lap/Short Lap. Alternation between split, lap and time possible during measurement, selectable 1/100 minute – 1/100 second, 2 countdowns and 65 memories for split and lap.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Display time min | 4869 hanhart 1882 | Dimensions mm | Memory split/LAP | Weight g |
|---|---|---|---|---|---|
| 0065 | 99999.99 | 134.50 (W487) | 82 x 61 x 28 | 65 | 85 |

## Spring scales light

NEW

**Design:** High accuracy, tare and zero position setting with precise grid adjustment, tare area up to 15–20 % of capacity, bright coloured marking for exact reading, inner pipe freely elastic, highest precision as there is no friction, long precision scale with high resolution, corrosion-free and non-fatigue precision fields, sealed, transparent outer pipe with double scale and 360° reading, moisture and dirt-resistant. Ideal for industrial and external applications, light-weight construction, weighs only 20 g.

| Order No. | Load-bearing capacity g | 4894 | Graduation g | Suspension |
|---|---|---|---|---|
| 0010 | 10 | 34.04 | 0.10 | Clamp |
| 0015 | 20 | 32.15 | 0.20 | Clamp |
| 0020 | 50 | 32.15 | 0.50 | Clamp |
| 0025 | 100 | 32.15 (W425) | 1.00 | Clamp |

### Accessories

NEW

| Order No. | Design | 4894 |
|---|---|---|
| 0030 | Clamp with bracket, nickel-plated steel | 15.13 |
| 0035 | Hook, INOX | 17.02 (W425) |

4894 0030

4894 0035

## Spring scales Micro

NEW

**Design:** High accuracy, rotatable bracket, tare an zero setting up to 20 % of capacity, backlash-free springs with high-precision alignment, non-fatigue spring, abrasion-free, colour anodised precision scale with high resolution on aluminium pipe, overload secured up to 1000 g, lower suspension thanks to clip eyelet easy to exchange.

| Order No. | Load-bearing capacity g | 4894 | Graduation g | Suspension |
|---|---|---|---|---|
| 0040 | 10 | 50.12 | 0.10 | Clamp |
| 0045 | 30 | 45.39 | 0.25 | Clamp |
| 0050 | 60 | 45.39 | 0.50 | Clamp |
| 0055 | 100 | 45.39 (W425) | 1.00 | Clamp |

### Accessories

NEW

| Order No. | Design | 4894 |
|---|---|---|
| 0060 | Clamp with clip eyelet, nickel-plated steel | 25.53 |
| 0065 | Hook with clip eyelet, INOX | 22.70 |
| 0070 | Clamp + clamp with clip eyelet, nickel-plated steel, INOX | 6.62 (W425) |

4894 0060

4894 0065

4894 0070

## Spring scales light

NEW

**Design:** Exact, handy precision spring scale, high accuracy, tare and zero setting, up to 20 % of the capacity, rotatable and pivotable suspension brackets, allowing for optimum legibility, integrated recoil dampening, backlash-free springs with high-precision alignment, non-fatigue INOX spring, indicator lobe with precision line at scale level for error-free reading, overload secured up to 5000 g, made of anodised, non-abrasive aluminium pipe, lower suspension can be rotated thanks to clip eyelet and is easy to exchange.

| Order No. | Load-bearing capacity g | 4895 | Graduation g | Suspension |
|---|---|---|---|---|
| 0010 | 300 | 53.90 | 2 | Clamp |
| 0015 | 600 | 53.90 | 5 | Clamp |
| 0020 | 1000 | 53.90 (W425) | 10 | Clamp |

| Order No. | Load-bearing capacity N | 4895 | Graduation N | Suspension |
|---|---|---|---|---|
| 0025 | 3 | 53.90 | 0.02 | Hook |
| 0030 | 6 | 53.90 | 0.05 | Hook |
| 0035 | 10 | 53.90 | 0.10 | Hook |
| 0040 | 25 | 55.79 (W425) | 0.20 | Hook |

## Accessories

NEW

| Order No. | Design | 4895 |
|---|---|---|
| 0045 | Pressure set for conversion to pressure force measurement for Medio line up to max. 2500 g/25 N | 34.99 |
| 0050 | Strong clamp with clip eyelet | 8.51 (W425) |

Pressure set

Clamp

## Spring scales Marco

NEW

**Design:** High accuracy, tare and zero setting, up to 20 % of the capacity, rotatable and pivotable suspension brackets, allowing for optimum legibility, integrated recoil dampening (max. 30 kg.), backlash-free springs with high-precision alignment, non-fatigue springs, indicator lobe with precision line at scale level for error-free reading, non-abrasive, colour anodised precision scale with high resolution and aluminium pipe equipped with drag pointer, overload secured up to 80 kg, hook can be rotated and pivoted, lower suspension can be exchanged.

| Order No. | Load-bearing capacity g | 4895 | Graduation g | Suspension |
|---|---|---|---|---|
| 0055 | 5000 | 110.64 | 50 | Hook |
| 0060 | 10000 | 112.53 | 100 | Hook |
| 0065 | 20000 | 114.42 | 200 | Hook |
| 0070 | 35000 | 118.20 | 500 | Hook |
| 0075 | 50000 | 138.06 (W425) | 500 | Hook |

| Order No. | Load-bearing capacity N | 4895 | Graduation N | Suspension |
|---|---|---|---|---|
| 0080 | 50 | 113.48 | 0.5 | Hook |
| 0085 | 100 | 115.37 | 1.0 | Hook |
| 0090 | 200 | 117.26 | 2.0 | Hook |
| 0095 | 500 | 139.95 (W425) | 5.0 | Hook |

## Accessories

NEW

| Order No. | Design | 4895 |
|---|---|---|
| 0100 | Pressure set for conversion to pressure force measurement | 39.72 |
| 0105 | Load clamp, aluminium | 58.63 (W425) |

4895 0105

4895 0100

## Wall thickness gauge Echometer basic device

IP 54

KARL DEUTSCH

**Design:** Solid basic device for the measurement of wall thickness and speed of sound with the latest meaduring technology and modern design. The device is suitable both for quick quality inspections in Production as well as for measuring the corroded interiors of tanks or pipelines. The wall thickness measurement range comprises – depending on the test head – 0.5 to 400 mm. During the sound velocity measurement, all sound-conductive materials can be measured with a measurement range of 100 to over 19999 m/s. With large, backlit graphics display in 3 selectable display modes: standard display, differential value and minimum value, limit value monitoring with acoustic and visual control, splashproof housing with impact-absorbing protective rubber frame and support bracket. Automatic probe detection. Supplied with operating instructions, 100 ml coupling means ECHOTRACE and 2 batteries LR44, 1.5 V, in carrying case.

**Note:** Optional measurement value storage and data interface as well as software packages ( "EasyExport" and "iCom" ) available upon request.

| Order No. | Dimensions mm | 4935 KARL DEUTSCH |
|---|---|---|
| 0011 | 131 x 81 x 32 | 950.00 ◊ (W494) |

## Regular accessory kit for Echometer basic device

**Design:** Supplied with probe DSE 10.4/6PB 4 (1.2 mm to 250 mm), grip sleeve and 10 protection foils.

| Order No. | 4935 KARL DEUTSCH |
|---|---|
| 0013 | 400.00 ◊ (W494) |

## Layer thickness gauge Leptoskop®

KARL DEUTSCH

**Design:** Portable layer thickness gauge in pocket-size format, illuminated display with large measurement value display, can also be read overhead. With integrated, spring-loaded probe, calibrated at works, over 10 languages selectable, measurement system can be switched to µm, mm, mils and inches. Device made of black ABS plastic. Dimensions 46 x 95 x 16 mm, weight 70 g. Supplied with micro battery AAA/LR03, 1.5 V, in plastic case.

Measurement range:
NFe measurement: 0 to 1200 µm
Fe measurement: 0 to 3000 µm

Measuring uncertainty (after calibration):

| | | | |
|---|---|---|---|
| • For layers | > 100 µm: | 1 % | ± 1.5 µm |
| • For layers | 100–1200 µm: | 1–3 % | ± 1 µm |
| • For layers | > 1200 µm: | 3–5 % | ± 1 µm |

**Application:** For precise measurement of the layer thickness of paints, lacquers, plastics, rubber, chrome, copper, zinc, anodised layers etc. on metal

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).
Optional software packages ("Statistics and data memory", "iCom", "EasyExport") available on request.

**4935 0100** For the thickness measurement of layers which cannot conduct electricity on non-magnetic, electrically conductive base metals (NFe, e.g. aluminium, copper, brass, bronze, austenite etc.) according to the eddy-current procedure (DIN EN ISO 2360).

**4935 0150** For thickness measurements of non-magnetic layers on magnetic base metals (FE, e.g. iron, cast iron, steel, nickel, cobalt etc.) according to the magnetic inductive principle (DIN EN ISO 2178).

**4935 0200** Combination probe for NFe and Fe measurements. The type of base metal is automatically detected.

| Order No. | Design | 4935 KARL DEUTSCH |
|---|---|---|
| 0100 | NFe | 603.00 ◊ |
| 0150 | Fe | 612.00 ◊ |
| 0200 | Fe/NFe | 803.00 ◊ (W494) |

## Layer thickness measuring instrument Leptoskop®

RS232 USB

KARL DEUTSCH

**Design:** Versatile layer thickness measuring instrument with external probe, precise measuring technology and the possibility of fast on-site extension via enabling codes (software modules "Statistics" and "Data storage" ). Large, backlit graphics display (48 x 24 mm), large selection of probes. Measurement range 0–20000 µm (dependent on probes), 10 selectable languages, USB-/RS232 interface and rubber protective frame. Battery lifetime approx. 100 hours. Supplied with Fe probe to 5000 µm, control body, set of calibration foils, operating instructions, acceptance protocol/quality test certificate, measurement protocol, specialist literature and 2 Mignon batteries AA/LR06, 1.5 V, in plastic case.

Measuring uncertainty (after calibration):
Layer thickness < 100 µm: 1 % of the measurement value ± 1 µm
Layer thickness > 100 µm: 1–3 % of the measurement value ± 1 µm
Layer thickness > 1000 µm: 3–5 % of the measurement value ± 10 µm
Layer thickness > 10000 µm: 5 % of the measurement value ± 100 µm

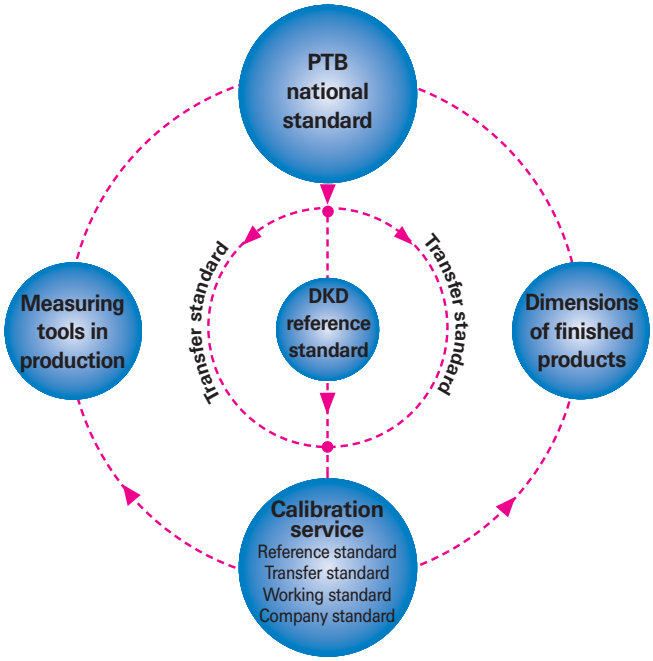
**Application:** Determines the thickness of non-magnetic layers on magnetisable substrate (Fe, acc. to DIN EN ISO 2178) and the thickness of non-conductive layers on conductive base materials acc. to the eddy-current principle (NFe, acc. DIN EN ISO 2360).

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).
Further probes and comprehensive accessories, such as measurement value storage with easy data management such as under Windows, limit value input and monitoring, statistical evaluations with up to 999 measurement values, different PC assessment programs, many calibration options as well as software extension for data storage (e.g. PC software, data cable printer) are available on request.

| Order No. | 4935 KARL DEUTSCH |
|---|---|
| 0250 | 1235.00 ◊ (W494) |

## Test equipment monitoring service/calibration

**Calibration service? – Why?**
More and more, the quality of the products produced is the determining factor in securing a company's future. Stringent customer requirements and international law on the liability of producers, extensive warranties and regulations require the complete identification of measurement and test equipment that can affect product quality. The calibration of measuring tools and test equipment monitoring is of particular importance in DIN EN ISO 9000 standards. Each certified company shall ensure and demonstrate that test equipment is regularly reviewed for applicability and accuracy. The company must prove that the measuring instruments used for **quality-related measurements** and tests are linked to national standards. Traceability must be ensured and documented by means of examination in committed time intervals according to national standards. Much of the measuring and test equipment offered in this sales support is already delivered with a free and **traceable national standards TEST CERTIFICATE**. As an additional service, we offer the calibration of newly ordered measuring tools, as well as re-calibration. The calibration is performed independently of the manufacturer. Naturally, we work exclusively with recognised calibration laboratories associated with the **German Calibration Service (DKD).** The standards **(DKD - standards)** of this calibration office are compared in stipulated time intervals with the national PTB (Physikalisch-Technische Bundesanstalt) standards. The calibration is performed in accordance with predetermined DIN standards, of VDI/VDE/DGQ 2618 et seq. guidelines, or by company standards. **For more information, please get in touch with our expert advisors. When required, the employees of our contractors are also available.**



## Tensile and pressure force gauge

**Design:** Digital force gauge with reversible display, automatic detection of direction. Peak hold function for detecting the peak value or track function for continuous measurement display. Auto power off. Supplied with standard 6-piece attachments and 6 Mignon batteries AA/LR06, 1.5 V, in transport packaging.

**Note:** Replacement battery: (Order No. 9041 0018 📖 9/12).
With one of two optional attachments for tensile test the device becomes a tensiometer for testing material voltage characteristics of cables, wires, threads, cords.

| Order No. | Measurement range N | 4940 SAUTER | Reading N | Measurement units | Thread |
|---|---|---|---|---|---|
| 0500 | 500 | 258.50 (W498) | 0.2 | N, lb, kg, oz | M8 |

## Accessories for pull and pressure force gauge

| Order No. | Design | 4940 SAUTER | Application | For measurement range N | Thread |
|---|---|---|---|---|---|
| 0510 | Tensiometer attachment | 217.00 | For testing material voltage characteristics | 10– 250 | – |
| 0515 | Tensiometer attachment | 300.00 | For testing material voltage characteristics | 500– 1000 | – |
| 0520 | Angle bracket attachment | 93.10 | For tension and tear test | 10– 500 | – |
| 0525 | Stainless steel ball head (package of 2) | 56.90 | For pressure and break test | 10– 5000 | M6/M10 |
| 0530 | Cable clamp attachment (package of 2) | 108.50 | For tensile and tear test | 10– 5000 | – |
| 0535 | Roller clamp attachment (package of 2) | 108.50 | For tensile and tear test | 10– 5000 | M10 |
| 0540 | Universal 2-jaw clamp (package of 2) | 77.60 | For tension and tear test | 10– 5000 | M10 |
| 0545 | 1-jaw clamp attachment (package of 2) | 56.90 | For tension and tear test | 10– 5000 | M6 |
| 0550 | Standard small clamp attachment (package of 2) | 56.90 | For tension and tear test | 10– 500 | M6 |
| 0555 | Ring attachment | 67.20 | For tension and tear test | 10– 500 | – |
| 0560 | Heavy duty small clip attachment (package of 2) | 129.50 | For tension and tear test | 10– 5000 | M10 |
| 0565 | Long clamp attachment (package of 2) | 124.00 | For tension and tear test | 10– 50 | M6 |
| 0570 | 2 wide jaws attachment (package of 2) | 129.50 | For tension and withdrawal test | 10– 5000 | M10 |
| 0580 | Wedge clamp | 424.00 | For tension test | 10– 5000 | M10 |
| 0585 | Wedge clamp | 827.50 | For tension test | 10–10000 | M10 |
| 0590 | Handle made of stainless steel | 87.90 (W498) | For better pulling of the measuring device | – | – |

4940 0520

4940 0540

4940 0555

4940 0560

4940 0565

4940 0570

4094 0580

4940 0585

4940 0590

## Hardness tester Shore-Duometer

**Design:** With drag indicator, max. mode captures the peak value, point mode shows the stable measured value. Supplied in wooden box.

**Application:** Measuring the Shore penetration depth: plastics, resin, Formica, epoxy, acrylic etc. Recommended especially for internal comparison measurements, where standard calibration, e.g. according to DIN 53505 is not possible.

| Order No. | Measurement range | 4941 SAUTER | Reading | Hardness |
|---|---|---|---|---|
| 0100 | 100 HD | 145.00 (W498) | 1.0 HD | Shore D |

## Lever test stand for Shore-Duometer

**Design:** For reproducible hardness testing with base plate of glass. High measurement accuracy due to increased hardness of the base plate.
Mechanical design allows precise measurement movements. Levelling device for precise levelling of the base plate. Levelling test bench for inhomogeneous test objects.

**Application:** Suitable for Shore hardness testing of plastics, leather, etc. The SAUTER HB hardness tester is mounted in a hanging position. The test object is placed on the round testing table right under the probe tip. By depressing the lever, the probe tip is pressed in a defined manner into the test object.

**Note:** The accuracy of the measurement result with this test is about 25% higher than for a hand measurement. Supplied without Shore-Duometer.

| Order No. | Length of stroke mm | 4941 SAUTER | Measuring face Ø mm |
|---|---|---|---|
| 0110 | 15 | 310.50 (W498) | 75 |

## Leeb hardness test device HMM

**Design:** Rebound module is jerked by a spring against the test object. The speed reduction is measured and converted into Leeb hardness values. Tests at any angle (360°) due to automatic compensation. Mini statistics function displays the measured value, average value, the difference between maximum and minimum value, date and time. Measuring value display: Rockwell (B & C), Vickers (HV), Brinell (HB), Shore (HSD), Leeb (HL), tensile strength (MPa). Automatic unit conversion, so that measurement result is automatically re-evaluated in all the cited hardness units.

**Functions:**
Accuracy: 1 % at 800 HLD (± 6 HLD)
Thinnest measurable layer: 8 mm
minimum radius of curvature of the test object (concave/convex : 50 mm

**Scope of delivery:** Impact device (type D), infrared printer, hardness reference block, AC adapter and 3 micro batteries AAA/LR03, in plastic case.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Measurement range yield strength | 4941 SAUTER | Readability (d) HL | Internal data memory |
|---|---|---|---|---|
| 1000 | 375–2639 | 1231.00 (W498) | 1 | 9 |

## Accessories for Leeb hardness test device

| Order No. | Design | 4941 SAUTER | Application |
|---|---|---|---|
| 1010 | Rebound sensor | 507.00 | Short sensor for narrow and flat measurement openings |
| 1015 | Attachment ring | 331.00 | For secure positioning |
| 1020 | Impact body | 119.00 (W498) | – |

4941 1010

4941 1020

4941 1015

## Radio receivers MarConnect

NEW

**Design:** For fitting and retrofitting Mahr hand gauges with data interface, wireless measurement value transfer from measurement device to the computer, secure data transfer via feedback of measurement value reception from the computer to the measurement device, bidirectional radio path (remote query from measurement device). Delivery incl. software interface MarCom.

USB

**4942 0025** **i-Stick**
For measurement device via integrated remote transfer.

**4942 0030** **e-Stick**
Receiver for USB interface.

**4942 0035** **FM2**
TWIN receivers for USB and RS 232 interface.

| Order No. | Design | 4942 Mahr | Radio distance m |
|---|---|---|---|
| 0025 | i-Stick | 90.00 ◊ | 6 |
| 0030 | e-Stick | 91.00 ◊ | 10 |
| 0035 | FM2 | 618.00 ◊ (W489) | 100 |

RS232

Mahr

4942 0025

4942 0030

4942 0035



## Measuring tool sets

available with analogue, digital or IP67 digital calipers can be found on 📖 4/29.

format professional quality

## Transmitter module

NEW

Mahr

**Design:** For retrofitting all Mahr hand gauges with data interface, wireless measurement value transfer from measurement device to the computer, secure data transfer via feedback of measurement value reception from the computer to the measurement device, optical receipt confirmation at transmission module, compact transmission module without external antenna, bidirectional radio path (remote query from measurement device).

| Order No. | Design | 4942 Mahr |
|---|---|---|
| 0040 | e-Stick | 303.00 ◊ |
| 0045 | FM2 | 430.00 ◊ (W489) |

## Data cable

NEW

Mahr

**Design:** For connection of measurement device to a computer.

| Order No. | Design | 4942 Mahr |
|---|---|---|
| 0050 | USB incl. software | 92.00 ◊ |
| 0055 | RS 232 | 68.50 ◊ (W489) |

4942 0050

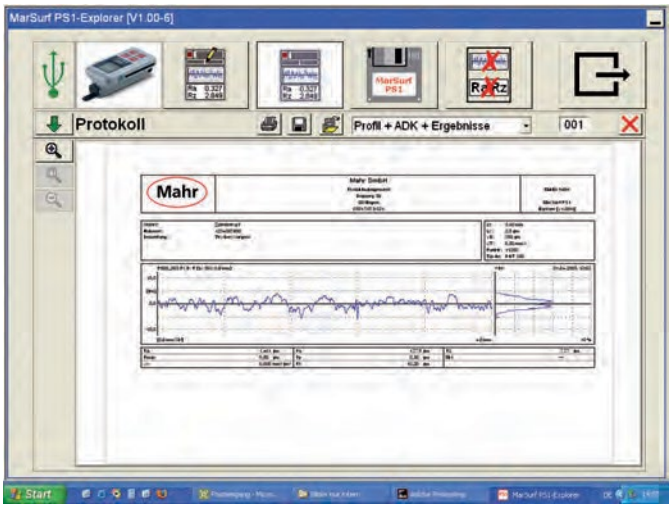
## Analysis software for Mahr roughness gauges

NEW

Mahr

**Design:** The software is used to secure and document your measuring results and profiles easily via the "Drag & Drop" function, the saved data e.g. can be printed out on an A4 sheet or other formats. The measurement data can be depicted in various forms: Profile and results, results, profile + material share curve + results, statistics, and much more

| Order No. | Design | 4942 Mahr |
|---|---|---|
| 0060 | SW PS1/M300 Explorer | 306.00 ◊ (W491) |



## EC accuracy classes

The EC accuracy classes define the maximum variations in measurements. They are divided into 3 classes, considering material and temperature.

Tolerances:

**Folding rulers:**
Class I: ± 0.2 mm to 1 m; ± 0.3 mm to 2 m
Class II: ± 0.5 mm to 1 m; ± 0.7 mm to 2 m; ± 0.3 mm above the joint
Class III: ± 1.0 mm to 1 m; ± 1.4 mm to 2 m; ± 0.5 mm above the joint

**Tape measures:**
The tolerances of 20 °C and a tensile fore of 20 Newtons (N) for plastic and 50 Newtons (N) for stainless steel tapes
Class I: ± 1.1 mm to 10 m
Class II: ± 2.3 mm to 10 m
Class III: ± 4.6 mm to 10 m

## Wooden folding ruler

**Design:** Made of beechwood, brass-plated steel spring, riveted arm connection, 3.0 mm thick arms, colour white, black mm graduation on the upper and lower arm edges.

EG III

| Order No. | Length m | 4671 | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0010 | 2 | 1.95 (W462) | 16 | 3.0 | 10 |

## Wooden folding ruler

**Design:** Made of 3.3 mm thick beechwood, joint height 16 mm, optimum readability thanks to concealed rivets, closely situated joints through the joint plates embedded in the wood.

EG III

format professional quality

| Order No. | Length m | 4671 format | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0020 | 2 | 3.20 (W462) | 16 | 3.3 | 10 |

## Wooden folding ruler

**Design:** Made of beechwood with 3.0 mm thick arms and inner, maintenance-free steel springs **A continuous straight edge comes about through the embedded joints when folded out** Robust, white protective paint with easily readable, black mm graduation on the upper and lower arm edges.

EG III

format professional quality

| Order No. | Length m | 4671 format | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0005 | 2 | 3.43 (W462) | 17 | 3.0 | 10 |

## Wooden folding ruler

Design: **Made of beechwood with 3.0 mm thick arms and concealed, oiled arm connection. Robust, yellow protective paint with easily readable, black mm graduation on the upper and lower arm edges and red tens digits.**

EG III

Hultafors

| Order No. | Length m | 4667 Hultafors | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0005 | 2 | 2.81 (W467) | 17 | 3.0 | 10 |

## Wooden folding ruler

Design: **Made of beechwood with 3.0 mm thick arms and concealed, oiled arm connection. Robust paint, white and yellow alternating in decimal steps. Easily readable, black mm graduation on the upper and lower arm edges and red tenths digits.**

EG III

Hultafors

| Order No. | Length m | 4667 Hultafors | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0010 | 2 | 4.03 (W467) | 17 | 3.0 | 10 |

## Wooden folding ruler

**Design:** Made of painted glass birchwood with 2.3 mm thick arms and concealed, oiled arm connection. The joints are **particularly flexible,** yet hard and stable. Easily readable, black mm graduation on the upper and lower arm edges and red tens digits.

EG III

Hultafors

| Order No. | Length m | 4667 Hultafors | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0015 | 2 | 5.80 (W467) | 17 | 2.3 | 10 |

## Plastic folding rule

**Design:** Made of RGF, bend-resistant plastic, white with black embossed mm graduation on the upper and lower arm edge. The arms engage at an angle of 90°. Riveted joint springs made of metal.

EG III

format professional quality

| Order No. | Length m | 4673 format | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0002 | 2 | 5.25 (W462) | 16 | 3.0 | 10 |

## Plastic folding rule

**Design:** Made of RGF, bend-resistant plastic, white with black embossed mm graduation on the upper and lower arm edge. The arms engage at an angle of 90°. Inner joint springs made of metal and red tenths digits.

EG III

Hultafors

| Order No. | Length m | 4668 Hultafors | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0001 | 1 | 4.33 | 13 | 2.3 | 10 |
| 0002 | 2 | 5.75 (W467) | 15 | 3.0 | 10 |

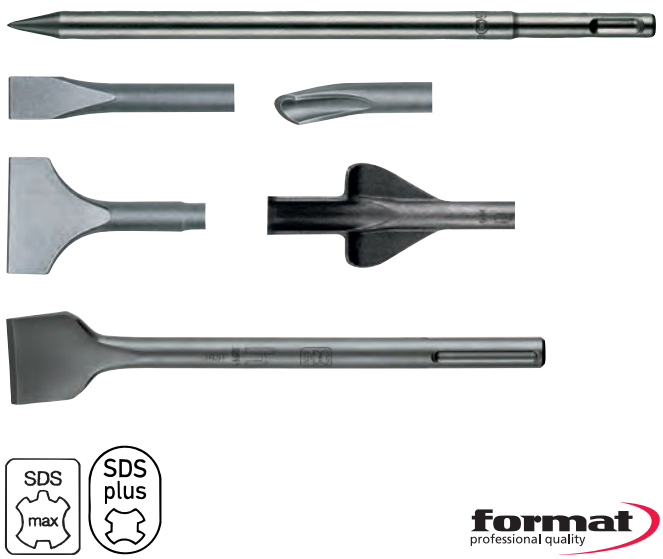
## Light metal folding rule

**Design:** Made of resilient special aluminium alloy with 1.4 mm-thick arms and accurately engaging, galvanised steel springs. Black anodised with silver-coloured, embedded graduations, abrasion resistant and resistant to chemicals, greases and oils.

EG II

BMI MESSZEUGE

| Order No. | Length m | 4672 BMI | Width mm | Joint thickness mm | Joint number |
|---|---|---|---|---|---|
| 0002 | 2 | 19.55 (W462) | 14 | 1.4 | 10 |




format professional quality

**SDS-plus/max chisel**

can be found on 1/91.

| Capsule and frame tape measures | | Resistance against Rust | Resistance against Acid | Insulated | Unbreakable | Wear-resistant | Readable |
|---|---|---|---|---|---|---|---|
| | spring band steel, painted yellow, polyamide-coated, printed graduations | •• | • | | •• | ••• | ••• |
| | spring band steel, painted white, printed graduations | • | | | • | •• | ••• |
| | rustproof steel, printed graduations | ••• | | | •• | • | •• |
| | Plastic glass fibre-reinforced, painted yellow, printed graduations | ••• | | ••• | ••• | • | ••• |

Measuring begin 10 cm after end fitting

Reinforced tape end

## Capsule tape measure

**Design:** Housing made of highly impact resistant plastic, good handling through the large, crank arm mountable on both sides with park position. Measuring begin ca. 10 cm after end fitting. **The tape end is additionally reinforced with a plastic sheath.**

EG II

format professional quality

**4675** Tape made of highly flexible, kink resistant, weather resistant and **polyamide-coated spring band steel, painted yellow** with continuous black mm graduation and red metre digits. Resistant to alkalis, saline solutions, greases, oils and diluted acids.

**4669** Tape made of **hardened spring band steel, painted white** with continuous black mm graduation and red metre digits. The tape is baked in clear lacquer to protect it from wear.

**4676** Tape made of unbreakable, **stainless chromium nickel steel,** matt surface, with printed black mm graduation and red metre digits. The tape is baked in clear lacquer to protect it from wear.

**4677** Tape made of very flexible, **glass-fibre-reinforced plastic, yellow** with one-sided, black cm graduation and red metre digits. Does not conduct electricity when dry.

4675

4669

4676

4677

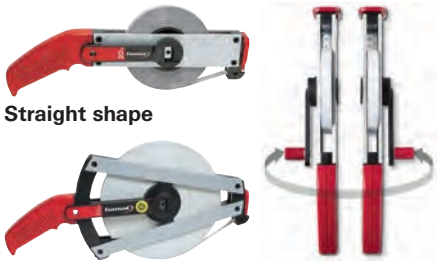
| Order No. | Length m | 4675 format | 4669 format | 4676 format | 4677 format | Tape width mm |
|---|---|---|---|---|---|---|
| 0010 | 10 | 24.10 | 23.60 | 25.30 | 15.05 | 13 |
| 0020 | 20 | 34.20 | 32.30 | 35.50 | 23.40 | 13 |
| 0030 | 30 | 46.80 | 40.20 | 48.70 | 31.70 | 13 |
| 0050 | 50 | – (W463) | – (W463) | 80.90 (W463) | – (W463) | 13 |

## Frame measuring tape

**Design:** Impact-proof frame made of aluminium with slanted plastic handle adskid-proof rubber nipples, easy to handle thanks to the large cranks on both sides with 2-fold bearing mounted crankmechaism and park position. Measuring begin ca. 10 cm after end fitting.

EG II

format professional quality



Straight shape

V-shape

**4678** Tape made of highly flexible, kink resistant, weather resistant and **polyamide-coated spring band steel, painted yellow** with continuous black mm graduation and red metre digits. Resistant to alkalis, saline solutions, greases, oils and diluted acids.

**4674** Tape made of **hardened spring band steel, painted white** with continuous black mm graduation and red metre digits. The tape is baked in clear lacquer to protect it from wear.

**4679** Tape made of unbreakable, **stainless chromium nickel steel,** matt surface, with continuous black mm graduation and red metre digits. The tape is baked in clear lacquer to protect it from wear.

**4680** Tape made of very flexible, **glass-fibre-reinforced plastic, yellow** with one-sided, black cm graduation and red metre digits. Does not conduct electricity when dry.

4678

4674

4679

4680

| Order No. | Length m | 4678 format | 4674 format | 4679 format | 4680 format | Tape width mm | Frame 4678 | Frame 4674 | Frame 4679 | Frame 4680 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | 20 | 37.70 | 29.70 | 46.40 | 32.90 | 13 | straight shape | straight shape | straight shape | straight shape |
| 0030 | 30 | 48.30 | 41.70 | 62.50 | 39.30 | 13 | V-shape | straight shape | V-shape | straight shape |
| 0050 | 50 | 65.20 (W463) | 49.70 (W463) | 77.60 (W463) | 49.10 (W463) | 13 | V-shape | straight shape | V-shape | straight shape |

## Tape measure, self adhesive

**Design:** Painted white, without fittings, lying flat, not curved.

| Order No. | Length m | 4663 BMI | 4664 BMI | Tape width mm |
|---|---|---|---|---|
| 0002 | 2 | 10.50 | 13.15 | 13 |
| 0005 | 5 | 15.25 | 19.10 | 13 |
| 0010 | 10 | 29.90 (W464) | 38.40 (W464) | 13 |

BMI MESSZEUGE

4663

4664

## Pocket tape measure BMImeter

**Design:** It rolls out automatically due to the special treatment of the stainless steel band. Painted white, completely waterproof and unbreakable. Tape lies flat on the table, therefore measurements can be transferred very well. Supplied with stopper and belt clip.

EG II

BMI MESSZEUGE

| Order No. | Length m | 4665 BMI | Tape width mm |
|---|---|---|---|
| 0002 | 2 | 6.25 | 16 |
| 0003 | 3 | 8.55 (W464) | 16 |

## Pocket tape measure

**Design:** Made of curved and hardened spring steel with mm-Duplex graduations, in highly impact-resistant ABS plastic housing. The tape is baked in clear lacquer to protect it from wear. Automatic tape rewind with stop button, moveable end fitting for inner and outer measurements.

EG II

format professional quality

| Order No. | Length m | 4685 format | Tape width mm |
|---|---|---|---|
| 0002 | 2 | 5.70 | 13 |
| 0003 | 3 | 6.30 | 13 |
| 0005 | 5 | 12.05 (W462) | 16 |

## Pocket tape measure twoCOMP

**Design:** Housing made of high impact ABS plastic with soft components, printed graduation, made of curved and tempered spring steel, mm-duplex graduation. Automatic tape rewind with stop button and belt clip.

**4750** Standard design.

**4754** With magnets in end hook.

EG II

BMI MESSZEUGE

| Order No. | Length m | 4750 BMI | 4754 BMI | Tape width mm |
|---|---|---|---|---|
| 0003 | 3 | 5.55 | 6.75 | 16 |
| 0005 | 5 | 8.10 | 9.35 | 19 |
| 0008 | 8 | 12.10 | 13.30 | 25 |
| 0010 | 10 | 21.50 (W464) | 22.80 (W464) | 30 |

## Pocket tape measure

**Design:** Tape with continuous mm graduation in black, rugged plastic housing. Automatic tape rewind with stop button and belt clip.

EG II

TAJIMA

| Order No. | Length m | 4758 TAJIMA | Tape width mm |
|---|---|---|---|
| 0002 | 2.0 | 4.76 | 13 |
| 0003 | 3.0 | 6.45 | 13 |
| 0005 | 5.0 | 9.05 (W569) | 13 |

## Pocket tape measure

**Design:** Tape made of curved, extra-strong spring band steel, with a polymer protective coating, **painted yellow,** with a clearly legible 2-colour print, in highly shockproof, ribbed and ergonomically shaped plastic housing. Automatic tape rewind, locking device and belt clip.

EG II

STANLEY

| Order No. | Length m | 4686 STANLEY | Tape width mm |
|---|---|---|---|
| 0003 | 3 | 3.79 | 12.7 |
| 0005 | 5 | 6.25 | 19.0 |
| | | (W581) | |

## Pocket tape measure with viewing window

**Design:** Free-running tape made of convex and **hardened spring band steel, painted white,** in an impact-resistant polyamide housing. Direct reading of the internal dimensions due to very large viewing window **with magnifying effect.** Graduation in the window is not on the head. The mm-duplex graduations are baked in clear lacquer to protect them from wear. Moveable end fitting for inner and outer measurements.

EG II

format professional quality

| Order No. | Length m | 4689 format | Tape width mm |
|---|---|---|---|
| 0002 | 2 | 5.60 | 13 |
| 0003 | 3 | 6.50 | 13 |
| | | (W462) | |

## Pocket tape measure with viewing window

**Design:** Tape measure with viewing window, tape made of curved steel, **painted yellow,** in impact-resistant plastic housing. Protection of the bottom case by U-shaped aluminium strip. End hook twice riveted.

EG II

STANLEY

| Order No. | Length m | 4687 STANLEY | Tape width mm |
|---|---|---|---|
| 0003 | 3 | 10.15 | 13 |
| | | (W581) | |

## Pocket tape measure with viewing window

**Design:** ABS case, **with stainless steel sole plate,** printed graduation with clear lacquer baked enamel finish, made of curved and tempered **spring steel,** mm-duplex-graduation, graduation in viewing window is not on the head, free-running tape in pull-push design, adjustable initial fitting for inside and outside measurements.

EG II

BMI MESSZEUGE

| Order No. | Length m | 4697 BMI MESSZEUGE | Tape width mm |
|---|---|---|---|
| 0002 | 2 | 8.55 | 13 |
| 0003 | 3 | 10.00 | 13 |
| | | (W464) | |

## Pocket tape measure with viewing window and dividers function

**Design:** Free-running tape made of convex and **hardened spring steel, additionally with tape locker, painted white,** in an impact-resistant polyamide housing. Direct reading through very wide viewing window. The mm-duplex graduations are baked in clear lacquer to protect them from wear. Moveable end fitting for inner and outer measurements. In addition, the tape measures features an **unfolding divider spike,** for drawing circles with a diameter of up to 6 m.

EG II

format professional quality

| Order No. | Length m | 4683 format | Tape width mm |
|---|---|---|---|
| 0003 | 3 | 10.60 | 16 |
| | | (W462) | |

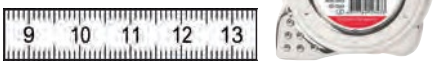
## Pocket tape measure, chromed-plated housing

**Design:** Tape made of convex and **hardened spring band steel, painted white,** in an impact-resistant chrome-plated plastic housing, one-sided mm graduation. With automatic tape rewind, locking device, shock absorbers and belt clip.

EG II

format professional quality

| Order No. | Length m | 4696 format | Tape width mm |
|---|---|---|---|
| 0003 | 3 | 6.30 | 16 |
| 0006 | 5 | 9.60 | 19 |
| 0008 | 8 | 20.50 | 25 |
| | | (W469) | |



## Pocket tape measure, chromed-plated housing

**Design:** Housing made of chrome-plated zinc die casting, heat resistant, printed **graduation with clear lacquer baked enamel finish,** made of curved and tempered **spring steel,** mm duplex graduation. Automatic tape rewind with stop button.

EG II

BMI MESSZEUGE

| Order No. | Length m | 4765 BMI | Tape width mm |
|---|---|---|---|
| 0002 | 2 | 9.95 | 13 |
| 0003 | 3 | 11.50 | 13 |
| | | (W464) | |

## Pocket tape measure, chromed-plated housing

**Design:** Tape made of convex **mylar-coated spring steel, painted yellow,** with a clearly legible 2-colour print, either in chrome-plated plastic or metal housing. Resistant against corrosion, scratches and chemicals With automatic tape rewind, locking device and removable belt clip.

EG II

STANLEY

**4698** **With metal housing**

**4699** **With plastic housing**

| Order No. | Length m | 4698 STANLEY | 4699 STANLEY | Tape width mm |
|---|---|---|---|---|
| 0003 | 3 | 9.05 | – | 12.7 |
| 0005 | 5 | – | 13.85 | 19.0 |
| 0008 | 8 | – | 20.10 | 25.0 |
| 0010 | 10 | – | 21.50 | 25.0 |
| | | (W581) | (W581) | |

## Talmeter

**Design: Steel tape,** in impact-resistant plastic housing. Combined measuring and marking edges and special scale for diameter readings. With fold-out measuring rod for simple inside measurements

EG II

Hultafors

| Order No. | Length m | 4705 Hultafors | Tape width mm |
|---|---|---|---|
| 0200 | 2 | 26.60 | 16 |
| 0300 | 3 | 33.30 | 16 |
| | | (W467) | |

## Telescopic measuring rod mEssfix

**Design:** Made of anodised aluminium. The respective extension length can be read off analogue from a viewing window. Robust, integrated measuring tape with mm graduation and over-dimensioned winding device for extreme use.

**Application:** For vertical and horizontal measurements in the construction industry.

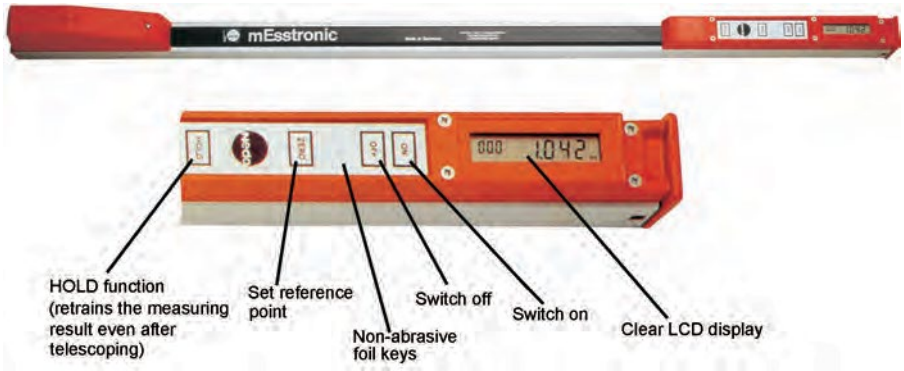
| Order No. | Length m | 4706 | Weight kg |
|---|---|---|---|
| 0300 | 0.70–3.00 | 192.00 | 1.1 |
| 0400 | 0.86–4.00 | 214.50 | 1.4 |
| 0500 | 1.07–5.00* | 235.00 | 1.7 |
| | | (W466) | * Supplied in plastic case. |

## Digital measuring stick mEsstronic Easy

**Design:** Simple to operate and intuitive electronic length measuring device with clear LC display and mm graduation.

**Functions:** on-off switch, hold function (measurement value memory), reference point setting.

**Application:** For vertical and horizontal measurements in the construction industry.




| Order No. | Length m | 4708 | Weight kg |
|---|---|---|---|
| 0300 | 0.70–3.00 | 380.50 | 1.5 |
| 0500 | 1.04–5.00 | 402.50 | 2.1 |
| | | (W466) | |

## Measuring wheel

**Design:** Robust counter, counts forwards and backwards, shockproof and mounted centrally over the wheel, preventing lateral tilt torque. The exact drive is performed by means of a toothed belt. Zeroing is done with the reset lever.

**4710 0100** **Solid metal wheel**
Support bracket with integrated parking brake; the guide rod can be folded to one side for transportation.

**4710 0200** **Plastic spoked wheel**
The brake is integrated into the handle; the guide rod can be folded almost completely away to achieve very small dimensions for transportation.

| Order No. | Measurement range m | 4710 | Wheel circumference m | Reading m | Accuracy % | Weight kg |
|---|---|---|---|---|---|---|
| 0100 | 9999.99 | 158.00 | 1 | 0.01 | 0.02 | 3.65 |
| 0200 | 9999.90 | 136.00 | 1 | 0.01 | 0.05 | 2.30 |
| | | (W466) | | | | |

4710 0100

4710 0200

## Laser distance meter DistanceMaster Compact Pro

NEW

**Design: With Bluetooth interface** and angle measurement, measurement range inside 0.1 to 50 m, high measuring accuracy ± 2 mm (typical), the surface and volume function enables the entry of room sizes, e.g. for the calculation of material quantities, 360° inclination sensor for the determination of horizontal and vertical distance, Pythagoras 1 + 2 + 3, min./max. continuous measurement, with storage options, illuminated 3-line colour LC display, stable,ergonomic housing. Supplied with 2 micro batteries AAA/LR03, 1.5 V, in carrying case.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).
For use with the free Laserliner app MeasureNote (Android and Apple).

| Order No. | Range m | 4745 Laserliner | Accuracy mm | Measurement units | Dimensions mm |
|---|---|---|---|---|---|
| 0300 | 0.1–50 | 90.40 (W465) | ± 2.0 | m, ft, inch | 110 x 43 x 27 |

## Laser distance meter DistanceMaster Pocket Pro

**Design:** Compact laser distance measuring meter for accurate measuring using laser light, measuring range inside 0.05–70 m, LCD display, with 3 switchable measuring planes (front, rear and pin). With min/max. function for the determination of diagonal, horizontal and vertical distances. Simple determination of room circumference using the addition and subtraction function, area and volume function, height measurement with double Pythagoras function, memory function for 50 measurement values. Supplied with 2 micro batteries AAA/LR03, 1.5 V, in carrying case.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Range m | 4745 Laserliner | Accuracy mm | Measurement units | Dimensions mm |
|---|---|---|---|---|---|
| 0500 | 0.05–70 | 92.80 (W465) | ± 2.0 | m, ft, inch | 112 x 48 x24 |

## Laser distance meter DistanceMaster

**Design:** Compact laser distance measuring meter for accurate measuring using laser light, LCD display, with 4 switchable measuring planes (front, rear, stand and pin). Measuring range inside 0.05–100 m. With min/max. function for the determination of diagonal, horizontal and vertical distances. Simple determination of room circumference using the addition and subtraction function. Area and volume function, height measurement with double Pythagoras function, reference mode for the simple transfer of lengths, with 1/4" stand connection. Supplied with probe tip and 2 micro batteries AAA/LR03, 1.5 V, in transport case.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Range m | 4745 Laserliner | Accuracy mm | Measurement units | Dimensions mm |
|---|---|---|---|---|---|
| 0060 | 0.05–100 | 113.00 (W465) | ± 1.5 | m, ft, inch | 124 x 51 x 27 |

## Stand for laser distance measuring meter Distance-Master

**Design:** Continously adjustable stand.

| Order No. | Height m | 4745 Laserliner |
|---|---|---|
| 1000 | 1.5 | 51.90 (W465) |

## Laser distance meter Leica DISTO™

**Design:** Handy laser distance measuring meter with min/max measurement, continuous measurement, area and volume measurement. Also equipped with display illumination, history memory and multifunctional end piece.

**Application:** Distance, area and volume calculations, continuous measurements as well as minimum and maximum measurements.

**4718 0110** **D110** Handy mode; with **Bluetooth**® Smart Technology. Protected against dust and splashproof, ergonomic and compact design with Softgrip. Supplied with 2 micro batteries AAA/LR03, 1.5 V, in carrying case.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

**4718 0201** NEW **D2** Model with large range, protected against dust and splashproof, with 360° incline metre, **Bluetooth**® Smart technology, measuring elements protected through solid rubber components. In addition, it was tested for falls from up to 2 meters high. Supplied with hand loop and 2 micro batteries AAA/LR03, 1.5 V, in transport case.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

**4718 0310** **X310** Model with large range, protected against dust and splashproof, with 360° incline meter, measuring elements protected through solid rubber components. In addition, it was tested for falls from up to 2 meters high. Supplied with hand loop and 2 micro batteries AAA/LR03, 1.5 V, in transport case.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

**4718 0510** **D510** Universal-use model with sharp **colour display and 4x zoom,** protected against dust and splashproof, with self-timer. Automatically calculates room dimensions, such as room circumference, wall and ceiling areas, measures **inclines up to ± 360°** and horizontal distances over obstacles. Can be aimed at far distant targets even in a very brightly lit environment, and can be used to measured roof pitches and facade areas. Using the integrated **Bluetooth**® Smart Technology, measurement data can be easily and correctly transmitted. Supplied with hand loop, operating instructions and 2 Mignon batteries AA/LR06, 1.5 V, in transport case.

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

**4718 0810** **D810 touch** Universal model with **touch screen,** dust- and splashproof, with self-timer, **Bluetooth**® Smart and **USB.** Determination of distances in a photo. By means of the integrated camera, photos can be stored via UBS to a computer. Automatically calculates room dimensions, such as room, wall and ceiling areas, measures **inclines up to ± 360°** and horizontal distances over obstacles. Can be aimed at far distant targets even in a very brightly lit environment, and can be used to determine peaks and terrain profiles and to measure roof pitches and facade areas as well as heights without a reflection point. High functionality is optimally complemented by the **app** Leica DISTO™ sketch. Supplied with hand loop, manufacturer's certificate, operating instructions, Quickstart, software and 2 Mignon batteries AA/LR06, 1.5 V, in transport case.

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

**4718 0910** NEW **S910** Universal model with **touch screen,** dust- and splashproof, with self-timer, Bluetooth ® Smart and USB and **realtime data transfer with WLAN.** Target finder for 4x zoom for perfect targeting, X-Range Power Technology for highest measurement performance. Measures **inclines up to ± 360°** and horizontal distances over obstacles. Can be aimed at far distant targets even in a very brightly lit environment, and can be used to determine peaks and terrain profiles and to measure roof pitches and facade areas as well as heights without a reflection point. High functionality is optimally complemented by the **app** Leica DISTO™ sketch. Supplied with hand loop, Smart Base extensions, operating instructions, belt pouch and USB charging device, incl. 4 plugs.

IP 54

4718 0110

IP 54

4718 0201

IP 65

4718 0310

IP 65

4718 0510

IP 54

4718 0810

IP 54

4718 0910

| Order No. | Model | 4718 Leica Geosystems | Range m | Accuracy mm | Measurement units | Storable measurement values | Dimensions mm |
|---|---|---|---|---|---|---|---|
| 0110 | D110 | 149.00 | 0.2–60 | ± 1.5 | m, ft, in | 10 | 120 x 37 x 23 |
| 0201 | D2 | 179.00 | 0.05–100 | ± 1.5 | m, ft, in | 10 | 114 x 50 x 27 |
| 0310 | X310 | 249.00 | 0.05–120 | ± 1.0 | m, ft, in | 20 | 122 x 55 x 31 |
| 0510 | D510 | 489.00 | 0.05–200 | ± 1.0 | m, ft, in, yd | 30 | 143 x 58 x 29 |
| 0810 | D810 touch | 699.00 | 0.05–200 | ± 1.0 | m, ft, in, yd | 30 | 164 x 61 x 31 |
| 0910 | S910 | 1298.00 (W460) | 0.05–300 | ± 1.0 | m, ft, in | 20 files, 30 points each | 164 x 61 x 32 |

## Cross-line laser AutoCross laser 2 Plus

NEW

IP 54

Laserliner Innovation in Tools

**Design:** Cross-line laser with two high-visibility laser lines, individually switchable . Automatic alignment by means of magnetic damped pendulum system. Optical signals indicate when the device is located outside the levelling range. A pendulum catch protects the device during transport. Line laser class 2M, < 5 mW. Accuracy: 2 mm to 10 m. Self-levelling range: ± 3°, Laser reception range: max. 40 m radius (with optional hand receiver). Supplied with 2 magnetic wall brackets, Accu-rapid battery charger and 3 NiMH Mignon batteries AA/LR06, in plastic case.

**Note:** Replacement battery: (Order No. 9042 0017, 📖 9/12).

| Order No. | Range m | 4717 Laserliner Innovation in Tools | Laser lines | Laser wavelengths nm | Dimensions mm | Weight kg |
|---|---|---|---|---|---|---|
| 0000 | 40 | 146.00 (W465) | 2 | 635 (red) | 115 x 95 x 65 | 0.5 |

## Cross-line laser PowerLine Laser 3D Pro

NEW

IP 54

Laserliner Innovation in Tools

**Design:** With 3 extremely bright 360° laser lines, simple plumb bob function with laser crosses. Optimised for working close to the ceiling, 2.5° self-levelling range, accuracy 2 mm/10 m, additional inclination function to align slopes, with the magnetic wall mount, the device can be used individually or in combination, on walls and magnetic objects. Out-Of-Level: Optical signals indicate when the device is located outside the levelling range. Supplied with magnetic wall bracket, attachable extension board, batteries, quick charger, in plastic case (SORTIMIO L-Boxx 136).

**Application:** Ideal for almost all alignment work in interior and exterior applications.

**Note:** Supplied without laser receiver.

| Order No. | Range m | 4717 Laserliner Innovation in Tools | Laser lines | Laser wavelengths nm | Dimensions mm | Weight kg |
|---|---|---|---|---|---|---|
| 0004 | 40 | 652.00 (W465) | 3 | 635 (red) | 85 x 130 x 155 | 1.18 |

## Cross-line laser AutoLine laser 3D set

NEW

| Order No. | Set contents | 4717 Laserliner Innovation in Tools | Weight kg |
|---|---|---|---|
| 0011 | 1 cross-line laser AutoCross-Laser 3D<br>1 compact stand 300 cm<br>2 transport bags | 623.00 (W465) | 6.75 |

## Laser receiver RangeXtender 40

Laserliner Innovation in Tools

**Design:** With the RX-Ready, the laser lines pulse with a high frequency, meaning that the laser receiver detects the laser lines. Mounting with head and side magnet. The device can be fastened to the yardstick by means of the universal mount. Supplied with universal mount and 2 micro batteries AAA/LR03.

**Application:** For localising laser lines even in adverse lighting conditions.

**Note:** Not suitable for green laser. Replacement battery (Order No. 9041 0018, 📖 9/12).

| Order No. | Reception area m | 4717 Laserliner Innovation in Tools |
|---|---|---|
| 1015 | 40 | 115.50 (W465) |

## Rotation laser Cubus 110 S

NEW

IP 66

Laserliner Innovation in Tools

**Design:** Robust, watertight housing with electronic actuators for fully automatic alignment and vertical reference beam. LD dsiplay on front side. Self-levelling within a range of ± 4°, accuracy ± 1.5 mm to 10 m. Red laser beams, laser class 3R < 5 mW, the hand receiver recognises the lines up to a radius of 400 m: Point, scan, rotation and hand receiver mode. Automatic shutdow in the case of external interference.

**Application:** Ideal for use in interior fittings and interior and outside structural engineering applications.

**Supplied with:** laser receiver, remote control, universal mount, integrated battery, power supply/charger, in plastic case.

| Order No. | Range m | 4719 Laserliner | Laser lines | Laser wavelengths nm | Dimensions mm | Weight kg |
|---|---|---|---|---|---|---|
| 0016 | 100 | 519.00 (W465) | 2 | 635 (red) | 160 x 130 x 145 | 1.3 |

## Rotation laser Quadrum One Touch 410 S

IP 66

Laserliner Innovation in Tools

**Design:** Rotation laser with one button operation, for horizontal levelling at very large distances. Robust, watertight housing. WIth electronic actuators for automatic horizontal alignment, which temperature stable sensor technology. Self-levelling in a range of ± 5, accuracy ± 0.75 mm/10m. Red laser beams, laser class 3R, < 5 mW, the laser receiver detects the lines up to a radius of 400 m. Automatic switch-off on interference. The manual tilt mode permits the creation of gradients up to 5°. The hand laser has an LCD display on the front and rear side, super-bright, three-colour signal LEDs and acoustic melodies which indicate the height of the laser beam, with strong head and lateral magnets. A special motor brake protects the device during transport.

**Supplied:** with laser receiver, remote control, universal mount, high-performance rechargeable battery, power supply/charger and 4 baby batteries C/LR14, 1.5 V, in plastic case.

**Note:** Replacement battery: (Order No. 9041 0012, 📖 9/12).

| Order No. | Range m | 4719 Laserliner | Laser lines | Laser wavelengths nm | Dimensions mm | Weight kg |
|---|---|---|---|---|---|---|
| 0050 | 400 | 745.50 (W465) | 8 | 635 (red) | 215 x 205 x 165 | 2.6 |

## Accessories for rotation laser

**4722 0006** NEW — **Telescope levelling staff**, easily readable, highly stable made of aluminium profile.

**4722 0010** — **Yardstick** for all measurements from floor height, with box level. Height differences can be read off directly without calculations being necessary.

4722 0006 4722 0010

| Order No. | Design | 4722 Laserliner | Reference height m |
|---|---|---|---|
| 0006 | Telescopic levelling staff, 5 m | 48.40 | 0.8–1.9 |
| 0010 | Yardstick for red laser, 2.4 m | 57.80 (W465) | 0.8–1.9 |

## Stands for cross-line and rotation lasers

**4722 0050** NEW — **Lightweight design** made of aluminium with chamfered support surface, 5/8" thread adaptor, robust steel feet. Supplied with hook for plumb bob and carrying belt.

**4722 0035** — **Compact design** made of aluminium with **box level,** 5/8" thread adaptor, **multiple extension stand legs** and crank mechanism for large adjustment range. Problem-free adaptation to different surfaces due to a rubber-steel tip combination.

**4722 0055** NEW — **Robust design** with **integrated backlash-free** and **lockable professional crank mechanism (70 cm),** steel chains and feet. Supplied with carrying belt.

**4722 0045** — **Telescopic stand** made of aluminium, 5/8" thread adapter, can dismantled into 4 parts for easy transport. For clamping between the floor and ceiling, ideal for rapid changes in working height. Supplied with transport bag.

| Order No. | Height m | 4722 Laserliner |
|---|---|---|
| 0050 | 0.95–1.65 | 51.00 |
| 0035 | 0.80–2.90 | 154.00 |
| 0055 | 1.20–2.60 | 186.50 |
| 0045 | 1.43–3.27 | 62.50 (W465) |

4722 0050

4722 0035

4722 0055

4722 0045

## Light metal spirit level

**Design:** Made of strong-walled aluminium, with barrel-shaped horizontal and vertical bubbles. Measuring accuracy in normal position 0.5 mm/m.

**Application:** Suitable for horizontal normal and overhead measurement as well as for vertical normal measurement. **Order No. 4728 also suitable for horizontal and vertical rough measurements.**

**4727** silver coloured anodised. The bubble tubes have laser graduations, which can also be easily read in poor light conditions due to the magnifying effect, 2% gradient can be read at a glance, 5-year guarantee on the bubbles.

**4728** Powder-coated red. The unbreakable, barrel-shaped Plexiglas bubbles are electronically adjusted and ultrasonically welded with the holders. 5-year guarantee on the bubbles. With shock-adsorbing, unbreakable end caps. **With milled measuring face up to 100 cm length.**

4727

4728

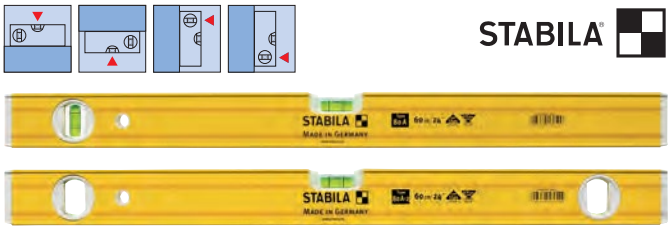
| Order No. | Length cm | 4727 format | 4728 format | Cross-section mm |
|---|---|---|---|---|
| 0030 | 30 | 9.10 | 16.80 | 50 x 22 |
| 0040 | 40 | 10.00 | 18.30 | 50 x 22 |
| 0050 | 50 | 10.45 | 19.15 | 50 x 22 |
| 0060 | 60 | 10.90 | 19.65 | 50 x 22 |
| 0080 | 80 | 12.15 (W468) | 22.00 (W468) | 50 x 22 |

| Order No. | Length cm | 4727 format | 4728 format | Cross-section mm |
|---|---|---|---|---|
| 0100 | 100 | 13.40 | 25.80 | 50 x 22 |
| 0150 | 150 | 27.10 | 48.60 | 50 x 22 |
| 0180 | 180 | 29.80 | – | 50 x 22 |
| 0200 | 200 | 30.20 (W468) | 64.10 (W468) | 50 x 22 |

## Light metal spirit level 80 A

**Design:** Ribbed light metal rectangular profile, with reinforced upper and lower sides. With unbreakable bubble level indicator made of block acrylic glass. To ensure the accuracy, the bubble level indicators are firmly molded into the spirit level body. **With milled measuring face up to 120 cm length.** Measuring accuracy in normal position: 0.5 mm/m, measuring accuracy in reverse position: 0.75 mm/m.

**Application:** Suitable for horizontal and vertical measurements in normal and reverse position.




| Order No. | Length cm | 4766 STABILA | Cross-section mm |
|---|---|---|---|
| 0030 | 30 | 20.10 | 50 x 25 |
| 0040 | 40 | 22.10 | 50 x 25 |
| 0050 | 50 | 24.10 | 50 x 25 |
| 0060 | 60 | 26.50 | 50 x 25 |
| 0080 | 80 | 29.00 (W449) | 50 x 25 |

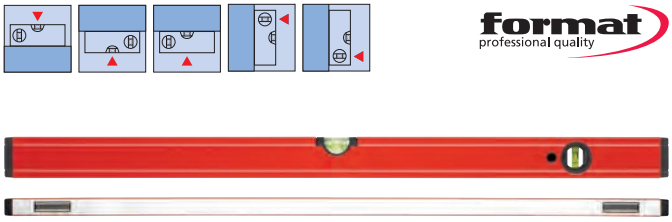
| Order No. | Length cm | 4766 STABILA | Cross-section mm |
|---|---|---|---|
| 0100 | 100 | 32.20 | 50 x 25 |
| 0120 | 120 | 35.40 | 50 x 25 |
| 0150 | 150* | 60.40 | 50 x 25 |
| 0180 | 180* | 70.50 | 50 x 25 |
| 0200 | 200* | 80.50 (W449) | 50 x 25 |

* With 2 vertical bubble level indicators.

## Magnetic spirit level

**Design:** Made of thick-walled aluminium, red powder-coated and with strong adhesive force due to large-volume permanent magnets in the sole. The unbreakable, barrel-shaped Plexiglas bubble level indicators are electronically adjusted and ultrasonically welded with the holders. 5-year guarantee on the service life of the bubble level indicators. With shock-adsorbing, unbreakable end caps. **With milled measuring face up to 100 cm length.** Measuring accuracy in normal position 0.5 mm/m.

**Application:** Particularly suitable for installers, shop fitters and shelf constructors. Suitable for horizontal and vertical normal, overhead and reversal measurements.



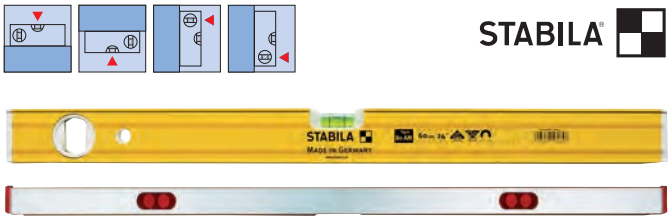
| Order No. | Length cm | 4729 format | Cross-section mm |
|---|---|---|---|
| 0040 | 40 | 31.80 | 50 x 22 |
| 0060 | 60 | 33.90 | 50 x 22 |
| 0080 | 80 | 42.90 (W469) | 50 x 22 |

| Order No. | Length cm | 4729 format | Cross-section mm |
|---|---|---|---|
| 0100 | 100 | 46.00 | 50 x 22 |
| 0180 | 180 | 79.90 (W469) | 50 x 22 |

## Magnetic spirit level 80 AM

**Design:** Ribbed light metal rectangular profile, with reinforced upper and lower sides. With extra strong rare earth magnets, 5 x stronger than normal ferrite magnets. With unbreakable bubble level indicator made of block acrylic glass. To ensure the accuracy, the bubble level indicators are firmly molded into the spirit level body. **With milled measuring face up to 120 cm length.** Measuring accuracy in normal position: 0.5 mm/m, measuring accuracy in reverse position: 0.75 mm/m.

**Application:** Especially suitable for aligning metal objects because of the very strong magnets. Suitable for horizontal and vertical measurements in normal and reverse position.




| Order No. | Length cm | 4767 STABILA | Cross-section mm |
|---|---|---|---|
| 0040 | 40 | 44.20 | 50 x 25 |
| 0060 | 60 | 48.30 | 50 x 25 |
| 0080 | 80 | 51.30 | 50 x 25 |
| 0100 | 100 | 56.80 (W449) | 50 x 25 |

| Order No. | Length cm | 4767 STABILA | Cross-section mm |
|---|---|---|---|
| 0120 | 120 | 59.80 | 50 x 25 |
| 0150 | 150 | 92.60 | 50 x 25 |
| 0180 | 180 | 100.50 | 50 x 25 |
| 0200 | 200 | 113.50 (W449) | 50 x 25 |

## Magnetic spirit level

**Design:** Made of silver-coloured anodised, thick-walled aluminium. With one circular horizontal and one vertical bubble, easily readable even in poor lighting conditions. With shock-adsorbing, unbreakable end caps and a high-strength magnet.
Measuring accuracy in normal position and for reverse 0.5 mm/m.

**Application:** Suitable for horizontal and vertical normal and reversal measurements particularly in confined spaces.

| Order No. | Length cm | 4734 format | Cross-section mm |
|---|---|---|---|
| 0020 | 20 | 29.70 (W462) | 50 x 22 |

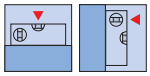
## Universal spirit level

**Design:** Made of plastic, with strong adhesive force through 2 large-volume permanent magnets in the base. The horizontal bubble is permanently installed; the inclination angle bubble is rotating by 180°, one end of the spirit level body is inclined 45°, and the other 60°, with mm graduation. Unbreakable Plexiglas bubbles. 5-year guarantee on the bubbles.

**Application:** For measuring in horizontal normal and reverse measurement as well as for overhead measurements and measurements of inclination angles.

| Order No. | Length cm | 4731 format | Cross-section mm |
|---|---|---|---|
| 0025 | 25 | 25.00 (W462) | 54 x 15 |

## Electrician's spirit level

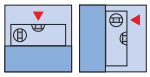


**Design:** Made of red, glass fibre-reinforced ABS plastic. With one round horizontal and one round vertical bubble level indicator an 2 disc magnets. Measuring accuracy in normal position 1.0 mm/

**Application:** Suitable for horizontal and vertical normal measurements.

| Order No. | Length cm | 4740 format | Cross-section mm |
|---|---|---|---|
| 0025 | 25 | 11.20 (W462) | 43 x 22 |

## Magnetic spirit level

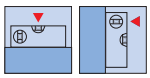


**Design:** Made of solidmetal, with 2 strong magnets. 3 acrylic bubbles (UV- and water-resistant). **With side view and mirror optic**, the bubble can be comfortably observed from the top view. Measuring accuracy in normal position 0.5 mm/m.

**Application:** Suitable for horizontal and vertical normal measurements.

| Order No. | Length cm | 4746 format | Cross-section mm |
|---|---|---|---|
| 0025 | 25 | 31.40 (W468) | 45 x 20 |

## Spirit level Torpedo

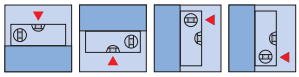


**Design:** Made of aluminium rectangular profile, powder-coated. With unbreakable bubble level indicator made of block acrylic glass. To ensure the accuracy, the bubble level indicators are firmly molded into the spirit level body. With impact resistant plastic end caps. Measuring accuracy in normal position 0.5 mm/m.

**Application:** Suitable for horizontal and vertical normal measurement.

| Order No. | Length cm | 4790 STABILA | Cross-section mm |
|---|---|---|---|
| 0025 | 25 | 12.10 (W449) | 50 x 20 |

## Spirit level Torpedo S



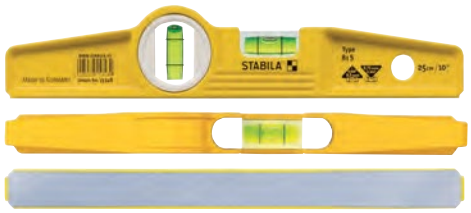
**Design:** Strong die cast aluminium profile with unbreakable bubble level indicators made of block acrylic glass. Trapezoidal shape makes for a sure grip. **With milled measuring surface.** Supplied with belt bag. Measuring accuracy in normal position: 0.5 mm/m, measuring accuracy in reverse position: 0.75 mm/m.

**Application:** Suitable for horizontal and vertical measurements in normal and reverse position.

**4768** Standard design.

**4769** With strong magnets.

**4777** With extra strong rare earth magnets, 5 x stronger than normal ferrite magnets.




| Order No. | Length cm | 4768 STABILA | 4769 STABILA | 4777 STABILA | Cross-section mm |
|---|---|---|---|---|---|
| 0025 | 25 | 35.20 (W449) | 40.80 (W449) | 44.50 (W449) | 45 x 25 |

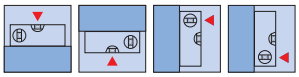
## Magnetic spirit level Torpedo SV REM

**Design:** Strong die cast aluminium profile with unbreakable bubble level indicators made of block acrylic glass. Trapezoidal shape makes for a sure grip. **Milled measuring surface with V groove** for placement e.g. on pipes. **6-ring horizontal bubble level indicator for 1 % and 2 % slope measurements.** With extra strong rare earth magnets, 5 x stronger than normal ferrite magnets. Supplied with belt bag. Measuring accuracy in normal position: 0.5 mm/m, measuring accuracy in reverse position: 0.75 mm/m.

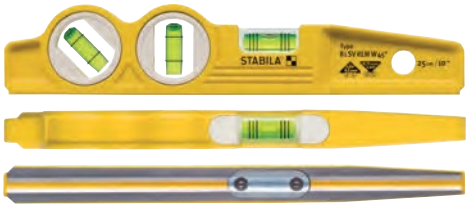
**Application:** Suitable for horizontal and vertical measurements in normal and reverse position, furthermore due to the V-groove easy placement on round components (e.g. pipes), 1 % and 2 % gradient.

**4768 0045** With fixed angle bubble level indicator for inspecting struts and 45° pipes.

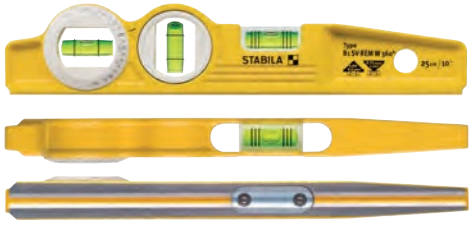
**4768 0360** With a 360° rotatable angle bubble level indicator.



STABILA



4768 0045



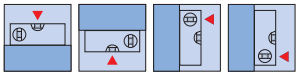
4768 0360

| Order No. | Length cm | 4768 STABILA | Cross-section mm |
|---|---|---|---|
| 0045 | 25 | 48.40 | 50 x 28 |
| 0360 | 25 | 53.30 (W449) | 50 x 28 |

## Spirit level with R profile

**Design:** Made of torsion resistant aluminium five-chamber-R profile, powder coated. Extra wide measuring face (4 cm). High stability during the measurement process. Three reliable guiding marking edges provide the opportunity for marking or cutting over the full length profile. With unbreakable bubble level indicator made of block acrylic glass. To ensure the accuracy, the bubble level indicators are firmly molded into the spirit level body. Removable and shock-absorbing end caps with slip stoppers. Measuring accuracy in normal position and for reverse 0.5 mm/m.

**Application:** Suitable for measuring horizontal and vertical normal and overhead measurements as well as scribing and marking.



STABILA

| Order No. | Length cm | 4723 STABILA | Cross-section mm |
|---|---|---|---|
| 0061 | 61 | 56.60 | 60 x 45 |
| 0081 | 81 | 62.20 | 60 x 45 |
| 0100 | 100 | 68.40 | 60 x 45 |
| 0122 | 122 | 89.20 (W449) | 60 x 45 |

| Order No. | Length cm | 4723 STABILA | Cross-section mm |
|---|---|---|---|
| 0183 | 183 | 121.00 | 60 x 45 |
| 0200 | 200 | 137.50 | 60 x 45 |
| 0244 | 244 | 161.00 (W449) | 60 x 45 |

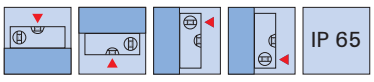
## Spirit level Electronic

**Design:** Made of thick-walled aluminium rectangular profile with gripping grooves, powder-coated. With access opening and a second vertical bubble level indicator. Electronic module for inclinometer. Two displays for easy reading even from above (narrow end side) with switchable lighting. Display displayed in degrees, percent, mm/m and many more. Instantaneous measurement valuation Acoustic guidance in the range of ± 2° to the vertical, horizontal and an individually adjustable reference level as well as Key-Lock for securing the reference plane. Hold and automatic switch-off function. Warning when tilting the spirit level into the second axis. Removable and shock-absorbing end caps with slip stoppers. Supplied with transport bag. Measuring accuracy of the bubble level indicator: in normal position and for reverse 0.5 mm/m. Measuring accuracy of the electronic module: at 0° and 90°: 0.05°, otherwise 0.2°.

**Application:** Suitable for horizontal and vertical measurements in normal and reverse position, as well as generally for any inclinations.

**4778** Standard design

**4779** With extra strong rare earth magnets, 5 x stronger than normal ferrite magnets.




STABILA

4778

4779

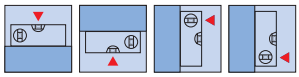
| Order No. | Length cm | 4778 STABILA | 4779 STABILA | Cross-section mm |
|---|---|---|---|---|
| 0040 | 40 | 162.00 * | – | 60 x 30 |
| 0061 | 61 | 181.00 | 189.00 * | 60 x 30 |
| 0081 | 80 | 186.00 (W450) | – (W450) | 60 x 30 |

| Order No. | Length cm | 4778 STABILA | 4779 STABILA | Cross-section mm |
|---|---|---|---|---|
| 0100 | 100 | 190.50 | – | 60 x 30 |
| 0122 | 122 | 199.50 | – | 60 x 30 |
| 0183 | 183 | 237.50 ** (W450) | 270.00 ** (W450) | 60 x 30 |

* Without access opening.
** Without transport bag.

## Telescopic spirit level

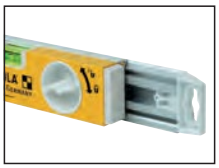
NEW



STABILA

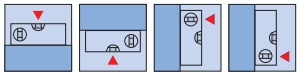
**Design:** Telescope system to extend the measuring surface, LOCK system fix the set length, printed metric scale to determine inner dimensions and clearance dimensions, plastic end caps protect the profile in cases of impact, with a horizontal and a vertical bubble, measuring surface milled. Continuous scribe edge along the full length, integrated slip stopper for a firm seat, measuring accuracy: in normal position ± 0.5 mm/m (closed), ± 1.0 mm/m (extended), reverse measurement ± 0.75 mm/m (closed), ± 1.0 mm/m (extended).

**Application:** Suitable for horizontal and vertical measurements in normal and reverse position.



| Order No. | Length cm | 4720 STABILA | Cross-section mm |
|---|---|---|---|
| 0106 | 63–105 | 63.70 | 60 x 40 |
| 0127 | 80–127 | 71.30 (W450) | 60 x 40 |

## Telescopic spirit level



STABILA

**Design:** Made of strong aluminium rectangular profile, powder-coated. With access openings and 2 vertical and 1 horizontal bubble level indicators. Completely sealed telescope system. 3-chamber aluminium profile protects the push mechanism. Strong eccentric clamp ensures high measurement accuracy. In every position, vertical measurement at eye level. Printed length scale. Two measuring faces. The upper consists of two plates to bridge roughness. Two spacers can be inserted on the plates. Measuring accuracy in normal position 0.5 mm/m, extended 1.0 mm/m. Accuracy in reverse measurement (closed) 0.75 mm/m.

**Application:** Suitable for measuring horizontal and vertical normal and overhead measurements.

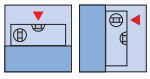
**4788** With spacers for attaching.

**4789** With extra strong rare earth magnets, 5 x stronger than normal ferrite magnets.

| Order No. | Length cm | 4788 STABILA | 4789 STABILA | Cross-section mm |
|---|---|---|---|---|
| 0315 | 183–315 | on request ◊ | – | 115 x 35 |
| 0318 | 186–318 | – (999) | on request ◊ (999) | 115 x 35 |

| Order No. | Length cm | 4788 STABILA | 4789 STABILA | Cross-section mm |
|---|---|---|---|---|
| 0376 | 213–376 | on request ◊ (999) | – (999) | 115 x 35 |

## Spirit level Pocket



STABILA

**Design:** Plastic mini-format spirit level with extra-strong rare earth magnet, 5 times stronger than normal ferrite magnets. With unbreakable bubble level indicator made of block acrylic glass. Permanently precise. Optimal readability. Supplied with belt clip. Measuring accuracy in normal position: 1 mm/m.

**Application:** For measuring horizontal normal position, Order No. 4726 007 and vertical normal position and Order No. 4726 008 when placed on UP switches and sockets.

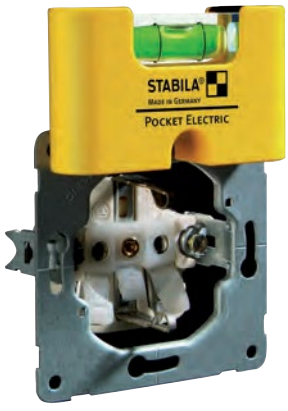
**4726 0006** Magnetic alignment below on measuring surface.

**4726 0007** Magnetic alignment below and to side on aluminium frame. Robust aluminium core housing. **Right-angled aluminium frame** with two precisely milled measuring surfaces, **allows vertical measurements with the horizontal bubble level indicator. V-groove for easy placement on e.g. pipes.** Maximum angle deviation 0.1°.

**4726 0008** Magnetic orientation to the contact edge in back for the switch or socket outlet. Recess for screwdriver guidance. Ideal for electricians

4726 0006

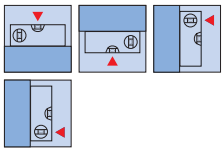
4726 0007




4726 0008

| Order No. | Length cm | 4726 STABILA | Cross-section mm |
|---|---|---|---|
| 0006 | 7 | 9.30 | 40 x 20 |
| 0007 | 7 | 12.75 | 40 x 20 |
| 0008 | 7 | 9.30 (W449) | 40 x 20 |

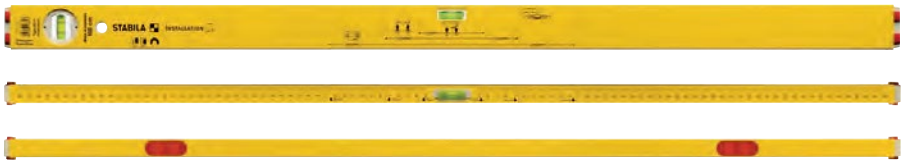
## Installation spirit level



STABILA

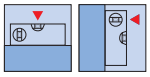
**Design:** Made of especially corrosion resistant aluminium alloy. Strong rectangular profile with smooth sides and powder coating. With extra strong rare earth magnets, 5 x stronger than normal ferrite magnets. Six-ring horizontal bubble level indicator for creating 1% and 2% slope. Top side with continuous H bubble level indicator bridge. Middle-centred mm scale on top of the spirit level for transferring measurements. Printed installation measurements with marking recesses. Standard sizes are particularly flagged by notches and therefore can be easily marked off. With unbreakable bubble level indicator made of block acrylic glass. To ensure the accuracy, the bubble level indicators are firmly molded into the spirit level body. Removable and shock-absorbing end caps with slip stoppers. Measuring accuracy in normal position 0.5 mm/m, measuring accuracy in reverse position: 0.75 mm/m.

**Application:** Suitable for measuring horizontal and vertical normal and reverse measurements. Ideal for installers due to mm scale and installation dimensions.



| Order No. | Length cm | 4791 STABILA | Cross-section mm |
|---|---|---|---|
| 0060 | 60 | 59.70 | 50 x 20 |
| 0100 | 100 | 65.70 (W449) | 50 x 20 |

## Spirit level Electric



STABILA

**Design:** Rectangular section with smooth side surfaces made of corrosion resistant aluminium alloy, powder coated. With integrated metal sleeves to mark the drilling of multiple sockets and signal boxes in both horizontal and vertical alignment. Stopper on the end caps holds the spirit level on the wall. With unbreakable bubble level indicator made of block acrylic glass. To ensure the accuracy, the bubble level indicators are firmly molded into the spirit level body. Measuring accuracy in normal position 0.5 mm/m.

**Application:** Suitable for measuring in horizontal and vertical normal position. Markings make it ideal for the electrician to tag electrical outlets.

**4726 0043** With 4 metal sleeves for marking up to 4 multiple sockets.

**4726 0120** With 8 metal sleeves for marking up to 5 multiple sockets, in addition, low current box, marking for the meter level, high countertop sockets (1150 mm). With printed measuring scale. Both sides useable.

| Order No. | Length cm | 4726 STABILA | Cross-section mm |
|---|---|---|---|
| 0043 | 43 | 31.00 | 50 x 20 |
| 0120 | 120 | 41.90 (W449) | 50 x 20 |

## Bevel protractor SLANT 200

TAJIMA

**Design:** Aluminium frame with magnet and rotating dual measurement role. For one-handed surveying.

**Application:** Suitable for horizontal and vertical normal measurements as well as measurements of inclination angles and gradients.

| Order No. | Length mm | 4792 TAJIMA |
|---|---|---|
| 0200 | 252 | 53.00 (W569) |

## Angle measurement device Winkelfix

**Design:** Quick ad reliable readability of 0.5° with an accuracy of 0.25°. With integrated horizontal and vertical bubble and analogue display. The respective angle position can be locked into place using the locking screw. Robust design for tough conditions.

**Application:** For simple transmission and measurement of angles.

| Order No. | Stock length mm | 4707 Nedo | Model | Weight kg | Compass tip | Measurement range ° |
|---|---|---|---|---|---|---|
| 0300 | 300 | 142.50 | Shorty | 0.7 | no | 180 |
| 0430 | 430 | 157.50 | Mini | 1.0 | no | 180 |
| 0600 | 600 | 176.50 (W466) | MAXI | 1.4 | yes | 180 |

## Digital angle measurement device ArcoMaster

**Design:** Robust aluminium housing with one vertical and one horizontal bubble, one illuminated LC display each on the front and rear sides and a double-sided extendable and foldable measuring arm for angular measurement in areas which are hard to access. Accuracy ± 0.2°. Both displays can be rotated by 180° at the press of a button. Automatic switch-off after 3 minutes; for work without visual contact to the display, the hold function (measurement value memory) can be used, automatic calculation of the bisectors. Supplied with 2 Mignon batteries AA/LR06, 1.5 V, in carrying case.

**Application:** For simple transmission and measurement of angles, even in areas which are hard to access.

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

| Order No. | Stock length mm | 4709 Laserliner | Measurement range ° | Weight kg |
|---|---|---|---|---|
| 0040 | 400 | 114.00 | 0–220 | 0.8 |
| 0060 | 600 | 177.50 (W465) | 0–220 | 1.1 |

## Digital protractor AWM

NEW

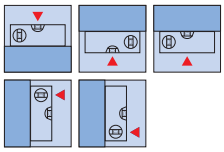
**Design:** Digital display with large digits for easy readability of measured values, lighting can be activated. RESET function enables the quick measurement of a complementary angle. The HOLD function replaces the locking of the arm – for reliable measurements at locations that are difficult to access. Automatic switch-off when not in use after 5 minutes. Measuring accuracy ± 0.1°. Supplied with 2 micro-batteries AAA/LR03.

**Application:** For simple transmission and measurement of angles, even in areas which are hard to access.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Stock length mm | 4793 STABILA | Measurement range ° |
|---|---|---|---|
| 0340 | 350 | 163.50 (W450) | 180 |

## Digital laser-spirit level DigiLevel Laser



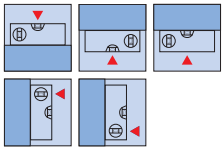
**Design:** Made of robust plastic and silver-coloured anodised aluminium. With one circular horizontal and one vertical bubble, two milled measuring faces strong holding magnets. Fast, electronic measurement of angles between 0° and 90°. The measurement value display is two decimal places between 0° and 1°, and between 1° and 90° with one decimal place. Hold function (measuring value storage) for 9 values, displayed in degrees, inch/feet or percent as well as with acoustic signal when reaching the horizontal or vertical position or a 45° angle. Wall line laser or the optical extension of the measuring surface.
Measuring accuracy of bubbles at least 0.5 mm/m for normal and reversal measurements. Accuracy of the electronic measurement at least 0.2°. Supplied with 2 micro batteries AAA/LR03, 1.5 V, in transport case.

**Application:** Suitable for horizontal and vertical normal, reverse and overhead measurements. Also for the measurement of slopes, inclines and straight lines, as well as for testing the planarity of surfaces.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Length cm | 4724 Laserliner | Cross-section mm |
|---|---|---|---|
| 0060 | 60 | 104.00 (W465) | 72 x 33 |

## Digital laser-spirit level DigiLevel Pro



**Design:** Made of silver-coloured anodised aluminium. With one circular horizontal and one vertical bubble, two milled measuring faces, shock-absorbent end caps and strong holding magnets. The illuminated display turns automatically during overhead measurements. Fast, electronic measurement of angles between 0° and 90°. The measurement value display takes place between 0° and 1° with two decimal places, and between 1° and 90° with 1 decimal place. Hold function (measuring value storage) for 9 values, displayed in degrees, inch/feet or percent as well as with acoustic signal when reaching the horizontal or vertical position or a 45° angle. Point laster for the exact transfer of heights and angles. Measuring accuracy of bubble level indicators at least 0.5 mm/m for normal and reverse measurements. Accuracy of the electronic measurement at least 0.2°. Supplied with 2 micro batteries AAA/LR03, 1.5 V, in carrying case.

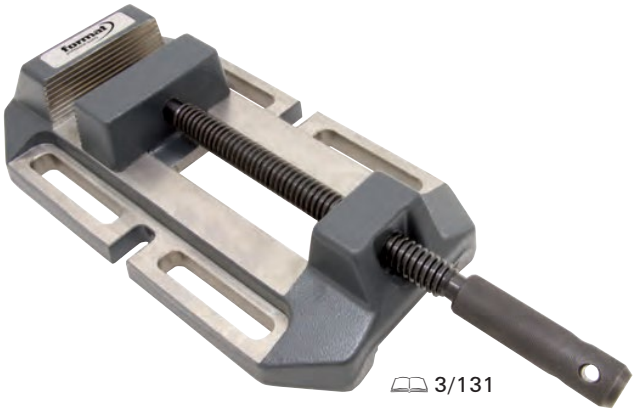
**Application:** Suitable for horizontal and vertical normal, reverse and overhead measurements. Also for the measurement of slopes, inclines and straight lines, as well as for testing the planarity of surfaces.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Length cm | 4732 Laserliner | Cross-section mm |
|---|---|---|---|
| 0300 | 30 | 75.30 | 60 x 33 |
| 0600 | 60 | 111.00 (W465) | 60 x 33 |

## Drilling machine vice

Forged, extremely stable and large clamping range.



📖 3/131

## Mohs scale of hardness

Mohs' hardness, (Ritz hardness), introduced to mineralogy by F. Mohs 1822 and still the standard and functional method for determining hardness today acc. to ten degrees of hardness, each degree of hardness being represented by a frequently-found mineral. Each mineral classified in this hardness scale (Tab.) can leave a scratch in the previous one, and is itself scratched by the mineral next-higher on the scale. If an unknown mineral is scratched e.g. by apatite (hardness 5) and if it can even be scratched by fluorite (hardness 4), then the material has a hardness between 4 and 5. The degree of hardness of the minerals are so large that the direction dependency of the minerals (with the exception of distene with hardness degrees of 4 and 6) is not significant. Minerals up to hardness 2 can be scratched with a fingernail; up to hardness 4 they can be scratched using a knife, whereas window glass can be scratched by all minerals with a hardness > 6.

| Degree of hardness | Stand mineral |
|---|---|
| **1** | Talcum |
| **2** | Gypsum or halite (rock salt) |
| **3** | Calcite (calcareous spar) |
| **4** | Fluorite |
| **5** | Apatite |
| 6 | Adular |
| 7 | Quartz |
| 8 | Topaz |
| 9 | Corundum |
| 10 | Diamond |

## Bedding-in paste

**Application:** For inspection of the surface quality. Apply the paste onto the processed parts and rub them against each other. The evenness of the coloured layer provides information on the processing quality.

| Order No. | Design | 4807 | Colour |
|---|---|---|---|
| 0080 | Tube 60 ml | 9.95 | blue |
| 0250 | Tin 225 ml | 17.85 | blue |
| | | (W475) | |

## Marking spray/fluid

**Design:** Quick-drying, non-reflecting, highly adhesive and easy to remove.

**Application:** For marking processed areas on metal surfaces. Paint or spray on thinly and leave to dry briefly. Carry out marking work and then remove again using solvent spray.

| Order No. | Design | 4808 | Colour |
|---|---|---|---|
| 0300 | Spray can 400 ml | 17.70 | blue |
| 0500 | Small pot 500 ml | 19.25 | blue |
| 1300 | Spray can 400 ml | 17.70 | red |
| 1500 | Small pot 500 ml | 18.95 | red |
| | | (W475) | |

## Colour marker pen

**Design:** Quick-drying, non-reflecting, highly adhesive and easy to remove.

**Application:** For accurate marking of processed areas on metal surfaces. Paint on thinly and leave to dry briefly. Carry out marking work and then remove again using solvent spray.

| Order No. | Colour | 4810 |
|---|---|---|
| 0001 | blue | 12.20 |
| | | (W475) |

## Digital thermometer ThermoTester

**Design:** Digital thermometer for insertion or submersion for several areas of application, quick response and measuring times with large LC display. Accuracy 1.5 % ± 2 °C, resolution 0.1 °C. Supplied with protective cap and battery LR44, 1.5 V.

**Functions:** Hold function, min./max. value display, measurement value display switchable from °C to °F.

| Order No. | Measurement range | 4910 Laserliner | Dimensions mm |
|---|---|---|---|
| 0005 | –40 °C to 250 °C | 11.10 (W465) | 33 x 210 x 20 |

## Digital thermometer ThermoMaster

**Design:** Digital thermometer with impact-proof enclosure and protective rubber sleeve, illuminated and clear LC display. Dual K-type inputs for thermal elements for the differential measurement of two temperatures. With unfolding leg for laboratory use, 1/4" stand connection for flexible locking in stationary superstructures. Switchable resolution from 0.1 °C to 1 °C. Supplied with two ThermoProbe K sensors (-50 °C to 200 °C) and E-block battery 6LR61 9 V, in carrying case.

Accuracy:
–50 °C ... 0 °C/± 2 °C
0 °C ... 1000 °C/± (0.5 % of the display value +1 °C)
1000 °C ... 1300 °C/± (0.8 % of the display value +1 °C)

**Functions:** Hold function, max. function (determines limit value exceedances during prolonged measurements).

| Order No. | Measurement range | 4910 Laserliner | Dimensions mm |
|---|---|---|---|
| 0010 | –50 °C to 1300 °C | 88.20 (W465) | 162 x 76 x 38.5 |

## Temperature sensor

**Design:** Temperature sensor with heat-resistant handle, accuracy class 2.

**Note:** Temperature sensor only for ThermoMaster and ThermoSpot-Vision.

**4910 0050** **ThermoSensor Air,** protected by a metal sleeve (Ø 6.5 mm), for air and gas temperatures.

**4910 0055** **ThermoSensor Tip,** for inserting into soft, highly-viscous materials.

**4910 0060** **Thermo Sensor Touch,** as surface probe for solid surfaces.

| Order No. | Measurement range | 4910 Laserliner | Length mm |
|---|---|---|---|
| 0050 | –50 °C to +800 °C | 49.70 | 165 |
| 0055 | –50 °C to +800 °C | 49.70 | 165 |
| 0060 | –50 °C to +400 °C | 54.40 (W465) | 165 |

0050 0060

## Temperature gauge ThermoSpot One

NEW

**Design:** Temperature gauge with LC display and targeting laser. This contactless measuring method is ideal for temperature measurements in areas which are hard to access. Dangerous measuring zones such as moving machine parts or electrical installations can also be measured. The largest measurement value is shown on the display during the measurement; the last measurement is saved briefly. The measured value display is switchable between °C and °F, laser wavelength: 650 nm, laser class: 2M, <5 mW. Supplied with 2 batteries AA/LR06, 1.5V.

Accuracy:
–38 °C to 0 °C/± 2.55 °C
0 °C to 365 °C/± 2.5 °C

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

| Order No. | Measurement range | 4914 Laserliner | Dimensions mm |
|---|---|---|---|
| 0350 | –38 °C to 365 °C | 28.70 (W465) | 155.5 x 113 x 40 |

## Infrared thermometer ThermoSpot Plus

NEW

Laserliner Innovation in Tools

**Design:** Housing with impact-protection rubber coating and illuminated LC display. Temperature measurement range from –38 °C to 600 °C, optic 12:1. Integrated laser (8-point laser circle) for precise targeting of the measuring point, laser class 2M / < 1 mW. The emissivity can be adjusted to between 0.01 and 1.00. The measurement value display can be switched between °C and °F, whilst still showing the largest value (min./avg./max. function) and the last measurement value stored temporarily (hold function). Supplied with 2 batteries AAA/LR03, 1.5 V.

**Application:** For **surface temperature measurement** at points which are hard to access and in dangerous areas, such as moving machine parts or electrical installations.

**Note:** Replacement battery: (Order No. 9041 0018, 📖 9/12).

| Order No. | Measurement range | 4914 Laserliner Innovation in Tools |
|---|---|---|
| 0105 | –38 °C to 600 °C | 67.50 (W465) |

## Infrared thermometer CondenseSpot Plus

NEW

Laserliner Innovation in Tools

**Design:** Housing with impact-protection rubber coating and illuminated LC display. Temperaturmessbereich von –40 °C bis +365 °C, Optik 12:1. Integrated laser for precise targeting of the measuring point, laser class 2M/< 1 mW. The emissivity can be adjusted to between 0.10 and 0.99. With colour alarm function, heat bridge warning with colour display. The measurement value display can be switched between °C and °F, whilst still showing the lowest, average or largest value (min./avg./max. function) and the last measurement value stored temporarily (hold function). The integrated hygrometer determines the relative humidity and calcultes the dew point temperature. Supplied with 2 batteries AAA/LR06, 1.5 V.

**Application:** For surface temperature measurement at points which are hard to access and in dangerous areas, such as moving machine parts or electrical installations as well as for the measurement of ambient temperature, relative humidity and dew point temperature. Plus the device enables the localization of heat bridges and potential accumulation of condensate.

**Note:** Replacement battery: (Order No. 9939 1015, 📖 9/12).

| Order No. | Measurement range | 4914 Laserliner Innovation in Tools |
|---|---|---|
| 0205 | –40 °C to 365 °C | 87.40 (W467) |

## Material moisture measuring device MoistureMaster

NEW

Laserliner Innovation in Tools

**Design:** The illuminated dot matrix view shows the graphical as well as numerical measuring values. With 12 colour LEDs that display the degree of moisture or dryness of the measured material, plus a warning sound for wet materials. rMenu system with 22 languages, 62 selectable material indicators (56 types of wood and 6 construction materials). The device switches off automatically after 2 minutes when not in use. Supplied with E-block battery 6LR61, 9 V, in carrying bag.

Measurement range/accuracy:
Cement screed: 0 % … 9.7 %/± 0.5 %
Anhydrite screed: 0 % … 8 %/± 0.5 %
Gypsum: 0 % … 45 %/± 0.5 %
Aerated concrete: 0 % … 48 %/± 1 %
Concrete: 0 % … 9.7 %/± 0.5 %
Lime brick: 0 % … 9.9 %/± 0.5 %
Wood: 0 % … 60 %/± 2 % (6 % … 30 %)

**Application:** Material moisture is indicated in % by placing onto the surface of the material (non-destructive).

**Note:** Replacement battery: (Order No. 9041 0025, 📖 9/12).

| Order No. | Operating temperature °C | 4927 Laserliner Innovation in Tools | Dimensions mm |
|---|---|---|---|
| 0007 | 0–40 | 202.00 (W465) | 154 x 81 x 36 |

## Wood and building moisture analyser DampMaster Compact

NEW

Laserliner Innovation in Tools

**Design:** Stable, ergonomic enclosure with protective rubber ring with with large, illuminated LCD display. Shows wood groups, building materials, measurement value, bar display, wet-dry indication, minimum and maximum values. Can be switched from °C to °F, automatic and manual temperature compensation, self-test function, exchangeable measuring tips and automatic deactivation. Supplied with protective cap with self-test function and 4 batteries AAA/LR03, 1.5 V, in carrying bag.

Accuracy:
Wood with 0–30 % moisture: ± 1.0 %
30–60 % moisture: ± 2.0 %
60–90 % moisture: ± 4.0 %
Other materials: ± 0.5 %

**Application:** For the measurement of moisture in 3 groups of wood and 8 construction materials.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Measurement range % | 4922 Laserliner Innovation in Tools |
|---|---|---|
| 0007 | 0–90 | 177.50 (W465) |

## Noise meter SoundTest-Master

Laserliner Innovation in Tools

**Design:** Measuring instrument with illuminated, clear LC display, with selectable time evaluation for optimum adjustment to noise dynamics. With 16000 memory points or realtime logging on the PC. With switchable analog display for visual assessment. Can be calibrated and adjusted using a standard noise level calibrator (94 dB/1kHz). Microphone with removable wind guard. Analog outputs DC and AC. Supplied with software and 6 micro batteries AAA/LR03, 1.5 V, in carrying case.

Frequency range 31.5 Hz – 8000 Hz. dynamic range 50 dB, noise level resolution 0.1%, accuracy ± 1.5 dB.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Noise level dB (A)/dB (C) | 4929 Laserliner Innovation in Tools | Dimensions mm |
|---|---|---|---|
| 0005 | 30–130/30–135 | 177.50 (W465) | 245 x 80 x 35 |

## Layer thickness measuring instrument CoatingTest-Master

Laserliner Innovation in Tools

**Design:** Measuring device for determining non-metallic layers on metal substrates. The layer thickness measurement takes place using the indication and eddy-current principles. With illuminated, clear LCD display and USB interface for the transmission of measurement data and evaluations via software. The small measuring head permits highly accurate measurement of the layer thickness. Internal memory for 400 measurement values. Supplied with calibration references, software, USB cable and 2 micro batteries AAA/LR03, 1.5 V, in plastic case.

Accuracy 0–850 µm (± 3 % + 1 µm), 850–1250 µm (± 5 %).

**Application:** Automatic detection of the subsurface materials (ferrous/ferromagnetic, non-ferrous/non-ferromagnetic). One-point and two-point calibration to increase measuring accuracy. Min./max./avg. display.

**Note:** Replacement battery: (Order No. 9041 0023, 📖 9/12).

| Order No. | Measurement range µm | 4926 Laserliner Innovation in Tools | Dimensions mm |
|---|---|---|---|
| 0005 | 0–1250 | 202.00 (W465) | 110 x 50 x 23 |

**NEW**

**All items marked with this icon have been added to our range.**

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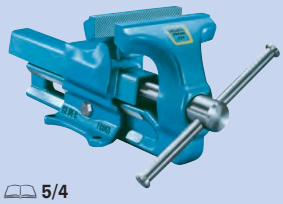
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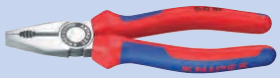
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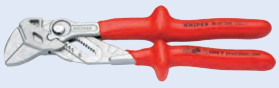
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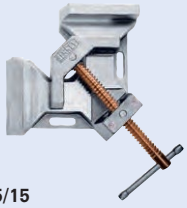
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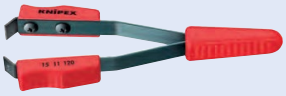
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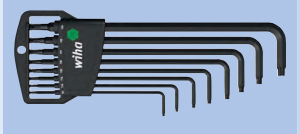
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## Parallel vice

**Design:** Die-forged, jaws and anvil inductive-hardened (52–58 HRC), **with extra large anvil and highly moulded clamping jaws,** which allow for greater clamp depth. Anvil surface suitable for straightening and compressing work. Front-opening, precise tightening due to adjustable guide rail, which is protected from contamination by scrapers, with measurement scale.

**5013** With holder for swivelling and interchangeable pipe clamping jaws.

**Note:** For swing clamps and replacement pipe rams see (Order No. 5028 and 5029).

**5014** With welded pipe-clamping jaws.

5013

5014

| Order No. | Jaw width mm | 5013 format | 5014 format | Jaw span/ depth mm | Clamping range pipes external Ø inch 5013 | 5014 | Hole distance/-Ø mm | Anvil surface mm |
|---|---|---|---|---|---|---|---|---|
| 0100 | 100* | 111.50 | – | 125/ 68 | – | – | 92/11.5 | 65 x 60 |
| 0120 | 120 | 131.00 | 145.00 | 150/ 83 | – | 3/8–2.1/2 | 113/13.5 | 72 x 70 |
| 0140 | 140 | 176.50 | 193.00 | 200/ 96 | – | 3/8–2.1/2 | 145/15.0 | 94 x 85 |
| 0160 | 160 | 221.00 | 239.00 | 225/118 | – | 3/8–3 | 145/15.0 | 120 x 105 |
| 0180 | 180 | 255.50 (W500) | – (W500) | 225/118 | – | – | 145/15.0 | 120 x 105 |

* Without holder for protective jaws.

## Turntable

**Design:** Steel-forged, can be freely adjusted using the set screw.

**Application:** To rotate the vice by 360°.

| Order No. | For jaw width mm | 5021 format |
|---|---|---|
| 0100 | 100 | 39.40 |
| 0120 | 120 | 44.60 |
| 0140 | 140 | 49.70 |
| 0160 | 160 | 54.20 |
| 0180 | 180 | 56.20 (W500) |

## Clamp screw

**Design:** Steel-forged.

**Application:** To affix to workbenches, no drilling required.

| Order No. | For jaw width mm | 5018 format |
|---|---|---|
| 0100 | 100 | 54.00 |
| 0120 | 120 | 54.00 (W500) |

## Height adjuster

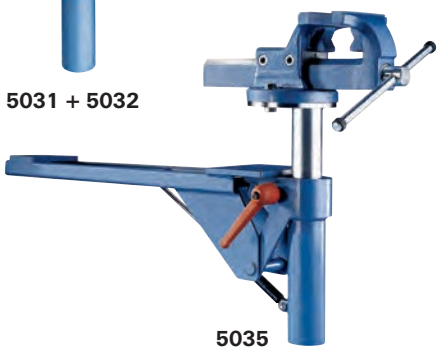
**Design:** Rotates 360°.

**5031** Height adjustment **up to max. 240 mm, automatic** by means of gas spring.

**5032** Height adjustment **up to max. 240 mm, mechanical** by means of spindle.

**5035** Height adjustment **up to max. 200 mm, foldable** for space saving storage under the work bench. Supplied without vice.

5031 + 5032



5035

| Order No. | For jaw width mm | 5031 format | 5032 format | 5035 format |
|---|---|---|---|---|
| 0100 | 100 | 221.50 | – | – |
| 0120 | 120 | 221.50 | 197.00 | 400.50 |
| 0140 | 140 | 221.50 | 197.00 | – |
| 0160 | 160 | 221.50 | 197.00 | – |
| 0180 | 180 | 221.50 (W500) | – (W500) | – (W500) |

## Parallel vice

**Design:** Die-forged, jaws and anvil inductive-hardened (52-58 HRC), anvil surface suitable for straightening and compressing work. Front-opening, precise clamping due to adjustable bearing, which is protected from dirt by a wiper.

**5015** With holder for swivelling and interchangeable pipe clamping jaws.
**Note:** For swing clamps and replacement pipe rams see (Order No. 5028 and 5029).

**5010** With welded pipe-clamping jaws.

| Order No. | Jaw width mm | 5015 format | 5010 format | Jaw span/ depth mm | Clamping range pipes external Ø inch 5015 | 5010 | Hole distance/-Ø mm | Anvil surface mm |
|---|---|---|---|---|---|---|---|---|
| 0115 | 115 | 122.50 | 132.00 | 140/ 70 | – | 3/8–1.1/2 | 102/13.5 | 46 x 60 |
| 0125 | 125 | 134.50 | 144.00 | 160/ 75 | – | 3/8–1.1/2 | 113/13.5 | 50 x 70 |
| 0135 | 135 | 163.50 | 174.50 | 170/ 85 | – | 3/8–1.1/2 | 120/16.0 | 57 x 75 |
| 0150 | 150 | 183.00 (W500) | 195.50 (W500) | 190/100 | – | 3/8–2.1/2 | 137/16.0 | 68 x 84 |

5015

5010

## Turntable

**Design:** Steel-forged, freely adjustable with lock screw.

**Application:** To rotate the vice by 360°.

| Order No. | For jaw width mm | 5006 format |
|---|---|---|
| 0125 | 125 | 41.50 |
| 0135 | 135 | 42.80 |
| 0150 | 150 | 46.80 (W500) |

5006

## Spare jaw for parallel vice

**Design:** Suitable for parallel vices (Order No. 5013 and 5015).

**5028** **Swivel-mounted pipe clamping jaw** (only one required), forged and hardened, for secure and firm clamping (3-point clamping) of pipes.

**5029** **Plastic protective jaw** (2 units required) for the gentle clamping of delicate items.

| Order No. | For jaw width mm | 5028 format | 5029 format |
|---|---|---|---|
| 0120 | 120 | 29.30 | 31.90 |
| 0140 | 140 | 36.00 | 34.20 |
| 0160 | 160 | 40.00 | 36.50 |
| 0180 | 180 | 43.90 (W500) | 39.60 (W500) |

5028

5029

## Precision parallel vice

**Design:** Heavy, solid design made of high-strength grey cast iron, **the best clamping precision due to the long and precise dovetail guide.** Concealed, dirt-proof and smooth-running acme thread spindle, interchangeable and reversible hardened steel jaws, integrated pipe clamping jaws, opens to rear and with large anvil surface for simple straightening work.

**Application:** Suitable for multiple uses due to its solid construction and especially precise guiding/clamping.

| Order No. | Jaw width mm | 5004 LEINEN | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0100 | 100 | 204.00 | 140 | 84 |
| 0125 | 125 | 237.00 | 180 | 88 |
| 0150 | 150 | 368.00 (W501) | 280 | 98 |

5004

## Height adjuster, automatic

**Design:** The automatic gas-pressured spring adjustment up to max. 215 mm gives smooth vertical adjustment and 360° rotation. Supplied without fixing screws.

| Order No. | Jaw width mm | 5005 LEINEN |
|---|---|---|
| 0100 | 100 | 223.00 |
| 0125 | 125 | 223.00 |
| 0150 | 150 | 223.00 (W501) |

5005

## Parallel vice

**Design:** Solid design, fully steel-forged with hardened surface. Jaws and anvil surface-hardened (54–58 HRC), anvil surface suitable for straightening and compression work; front-opening. Precise clamping due to adjustable bearing, with double-trapezoidal thread for rapid clamping of workpieces, cover protects against penetration of metal dust and other foreign particles. With welded pipe-clamping jaws.

format professional quality

| Order No. | Jaw width mm | 5048 format | Jaw span/depth mm | Clamping range pipes external Ø mm | Hole distance mm | Hole Ø mm | Anvil surface mm |
|---|---|---|---|---|---|---|---|
| 0100 | 100 | 110.00 | 125/ 55 | 16–40 | 72 x 58 | 9.5 | 38 x 40 |
| 0120 | 120 | 142.00 | 150/ 74 | 16–58 | 97 x 76 | 11.5 | 48 x 42 |
| 0140 | 140 | 198.00 | 200/ 85 | 18–80 | 119 x 95 | 11.5 | 57 x 54 |
| 0160 | 160 | 265.00 | 225/104 | 18–98 | 139 x 121 | 14.0 | 70 x 56 |
| 0180 | 180 | 285.50 (W500) | 225/104 | 18–98 | 139 x 121 | 14.0 | 70 x 56 |

5048

## Rotary plate/Height adjuster

**5054** **Rotary plate,** steel-forged, freely adjustable with lock screw. To rotate the vice 360°.

**5045** **Height adjuster,** automatic due to gas pressure spring. Allows height adjustment up to max. 240 mm, can be rotated 360°, enabling continuous vertical and horizontal adjustment.

5054

| Order No. | For jaw width mm | 5054 format | 5045 format |
|---|---|---|---|
| 0100 | 100 | 39.70 | – |
| 0120 | 120 | 51.10 | 221.50 |
| 0140 | 140 | 67.20 | 221.50 |
| 0160 | 160 | 79.40 | 221.50 |
| 0180 | 180 | 82.30 (W500) | 221.50 (W500) |

5045

## Vice

**Design:** Fully steel-forged – guaranteed unbreakable. Drop-forged clamping and pipe-clamping jaws. Slimline, drop-forged guide rail for deep clamping option. Large, all-side bearing surface for precise and smooth-running along the guide rail. Protected precision spindle bearing. Anvil integrated into the rear jaw.

BROCKHAUS][HEUER GmbH

| Order No. | Jaw width mm | 5051 BROCKHAUS][HEUER | Jaw span mm | Clamping depth mm | Clamping range pipes external Ø mm | Hole distance mm | Hole Ø mm |
|---|---|---|---|---|---|---|---|
| 0100 | 100 | 114.50 | 125 | 50 | 16– 30 | 73 x 56 | 8.5 |
| 0120 | 120 | 152.50 | 150 | 65 | 16– 55 | 98 x 76 | 11.0 |
| 0140 | 140 | 210.50 | 200 | 80 | 27– 70 | 120 x 96 | 11.0 |
| 0160 | 160 | 289.50 | 225 | 100 | 27–100 | 140 x 120 | 13.0 |
| 0180 | 180 | 314.00 (W504) | 225 | 100 | 27–100 | 140 x 120 | 13.0 |

5051

## Rotary plate/Height adjuster

**5061** **Rotary plate,** steel-forged. Infinitely freely rotatable. Secure locking with spindle key. Closed support plate prevents dirt and chips from penetrating the guide rail. To rotate the vice 360°.

**5055** **Height adjuster,** with high-quality gas pressure spring – geared to the weight of the vice. Height can be freely adjusted up to 200 mm, and rotates 360°. Reduces workload Adapt the vice to suit body size for comfortable working and to avoid postural defects.

5061

| Order No. | For jaw width mm | 5061 BROCKHAUS][HEUER | 5055 BROCKHAUS][HEUER |
|---|---|---|---|
| 0100 | 100* | 33.00 | 153.00 |
| 0120 | 120 | 49.20 | 153.00 |
| 0140 | 140 | 67.40 | 153.00 |
| 0160 | 160/180 | – | 153.00 |
| 0180 | 160/180 | 84.90 (W504) | – (W504) |

* Also suitable for compact vice 120 mm.

5055

## Compact vice

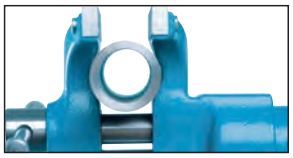
BROCKHAUS][HEUER

**5052** Very compact construction, made of steel, with **quick adjustment HEUER Quicklaunch.** Can be fully opened in 3 seconds – without operating the lever. Pressure spring guarantees secure locking in the desired position. Interchangeable, reversible jaws with smooth and serrated clamping surface. Integrated pipe clamping jaws for pipes between 15 and 50 mm.

**Note:** Despite a jaw width of 120 mm, hole spacing in foot corresponds to a vice with jaw width of 100 mm.

**5053** Robust table clamp with strong clamping spindle for simple and secure operation. For flexible, damage-free fixing of a Brockhaus-Heuer vice with 100 mm jaw width or the compact vice with 120 mm jaw width to the worktop.

5052



| Order No. | Jaw width mm | 5052 BROCKHAUS][HEUER | 5053 BROCKHAUS][HEUER | Jaw span mm | Clamping depth mm | Hole distance mm | Hole ∅ mm |
|---|---|---|---|---|---|---|---|
| 0120 | 120 | 133.50 | – | 130 | 65 | 73 x 56 | 8.5 |
| 0100 | Bench clamp | – (W504) | 31.70 (W504) | – | – | – | – |

## Pair of magnetic protective vice jaws

NEW

SCANGRIP INNOVATION FROM DENMARK

**Design:** With magnet. Suitable for all vices with respective jaw width, also machine vices.

**5074** **Plastic, with a horizontal and a vertical prism.** Ideal for clamping workpieces of a very small diameter.

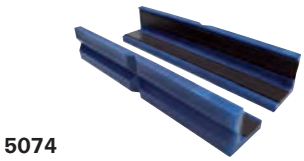
**5075** Aluminium profile, right-angled and plane-parallel, **with small horizontal prism.**

**5076** Aluminium profile, right-angled and plane-parallel, **with fibre coating.** Ideal for workpieces with smooth or delicate surfaces.

**5079** Aluminium profile, right-angled and plane-parallel, with horizontal prisms, as well as **three different-sized vertical prisms.**

**5077** Aluminium profile, right-angled and plane-parallel, **with rubber coating.** Secure hold even with low clamping pressure. Ideal for thin-walled pipes as well as workpieces made of wood or plastic.

**5078** **Felt.** Ideal for very delicate items.



5074

5075

5076

5077

5078

5079

| Order No. | Jaw width mm | 5074 SCANGRIP | 5075 SCANGRIP | 5076 SCANGRIP | 5079 SCANGRIP | 5077 SCANGRIP | 5078 SCANGRIP |
|---|---|---|---|---|---|---|---|
| 4100 | 100 | 6.80 | 17.95 | 21.60 | 21.60 | 21.60 | 15.90 |
| 4115 | 115 | – | 18.55 | 22.60 | 22.60 | 22.60 | – |
| 4120 | 120 | – | 18.55 | 22.60 | 22.60 | 22.60 | – |
| 4125 | 125 | 7.35 | 18.55 | 22.60 | 22.60 | 22.60 | 19.30 |
| 4135 | 135 | – | 19.30 | 23.40 | 23.40 | 23.40 | 20.80 |
| 4140 | 140 | – | 19.30 | 23.40 | 23.40 | 23.40 | – |
| 4150 | 150 | 7.95 | 19.30 | 23.40 | 23.40 | 23.40 | 21.50 |
| 4160 | 160 | – | 19.85 | 24.20 | 24.20 | 24.20 | – |
| 4175 | 175 | – | 19.85 | 24.20 | 24.20 | 24.20 | – |
| 4180 | 180 | – (W503) | 19.85 (W503) | 24.20 (W503) | 24.20 (W503) | 24.20 (W503) | – (W503) |

## Set of magnetic protective jaws

NEW

**Design:** Aluminium profile, right-angled and plane-parallel. Supplied in nylon bag.

**Scope of delivery:**
1 pair with small, horizontal prism (Order no. 5075)
1 pair with workpiece protective fibre coating (Order no. 5076)
1 pair of horizontal prisms and 3 different-sized vertical prisms (Order no. 5079)
1 pair with rubber coating for better grip with less clamping pressure (Order no. 5077)

| Order No. | Jaw width mm | 5088 SCANGRIP |
|---|---|---|
| 0125 | 125 | 69.10 |
| 0150 | 150 | 71.50 (W503) |

## Pair of aluminium protective vice jaws

NEW

SCANGRIP INNOVATION FROM DENMARK

**Design:** Made of aluminium.

**5081** Smooth, with clamping spring. **5082** With prism and magnet stripe.

| Order No. | Jaw width mm | 5081 SCANGRIP | 5082 SCANGRIP |
|---|---|---|---|
| 4100 | 100 | 8.70 | 6.55 |
| 4115 | 115 | 9.20 | – |
| 4120 | 120 | 9.80 | – |
| 4125 | 125 | 9.80 | 7.85 |
| 4135 | 135 | 10.60 | – |
| 4140 | 140 | 10.60 | – |
| 4150 | 150 | 10.60 | 8.75 |
| 4160 | 160 | 11.90 | – |
| 4175 | 175 | 11.90 | – |
| 4180 | 180 | 11.90 (W503) | – (W503) |

5081

5082

## Turning/rotating clamp

UNiSPANN

**Design:** Vice, clamping bracket and screw mounting plate made from light metal alloy, hammer-tone finish and front-opening. The vice can be turned by 360° due to joint ball and rotated by 90° as well as horizontally and vertically adjustable in each angle. The serration on the top of the ball-type mandrel allows for the interchangeable mounting of other devices. With screwed, interchangeable aluminium jaws.

**5083** For screwing onto workbenches.

**5084** For clamping to workbenches up to 80 mm top thickness.

5083

5084

| Order No. | Jaw width mm | 5083 UNiSPANN | 5084 UNiSPANN | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|---|
| 0046 | 46 | 103.00 | 103.00 | 70 | 35 |
| 0080 | 80 | 240.50 (W505) | 240.50 (W505) | 110 | 52 |

## Pipe vice

format professional quality

**Design:** Forged of high-quality steel, body and pipe jaws made of tempered steel, expandable design with self-locking coupling hook, adjustable due to self-locking screws.

**Note:** For replacement support jaw see (Order No. 5040).

| Order No. | For pipes inch | 5039 format | Weight kg |
|---|---|---|---|
| 0010 | 1/2–2 | 106.50 | 5.0 |
| 0020 | 1/2–3 | 141.50 (W500) | 6.4 |

5039

## Work tool

**Design:** With forged 2-inch pipe vice (Order No. 5039 0010), collapsible and easy to transport. With foot pedal, tool shelf and flexural plate with 5 holes.

**Application:** For mobile use, e.g. on a construction site. For clamping and cold-bending of pipes using a bending plate.

**Note:** It is possible to install a 3-inch pipe vice (Order No. 5039 0020). Replacement support jaw see (Order No. 5040).

| Order No. | For pipes inch | 5042 format | Weight kg |
|---|---|---|---|
| 0010 | 1/2–2 | 262.00 (W500) | 22 |

5042

## Hand vice

**Design:** Handles made of high-strength, chrome-alloy tool steel, with interchangeable spindle with trapezoidal thread, secure joint bearing and non-detachable round steel expander spring. Jaws with prism recess for clamping round items, wide mouth and wing nut.

| Order No. | Length mm | 5089 TURNUS | Jaw width mm | Jaw span mm |
|---|---|---|---|---|
| 1000 | 100 | 12.35 | 40 | 18 |
| 1200 | 120 | 14.20 | 45 | 22 |
| 1450 | 145 | 19.35 | 52 | 28 |
| 1600 | 160 | 22.30 | 58 | 35 |
| 1800 | 180 | 34.30 | 60 | 40 |
| 2000 | 200 | 45.30 | 65 | 45 |
| | | (W507) | | |

## Tapered hand vice

**Design:** Handles made of high-strength, chrome-alloy tool steel, with interchangeable spindle with trapezoidal thread, secure joint bearing and non-detachable round steel expander spring. Jaws with narrow mouth and wing nut.

| Order No. | Length mm | 5090 TURNUS | Jaw width mm | Jaw span mm |
|---|---|---|---|---|
| 1200 | 120 | 14.80 | 13 | 20 |
| | | (W507) | | |

## Tapered machine vice

**Design:** Handles made of high-strength, chrome-alloy tool steel, with interchangeable spindle with trapezoidal thread, secure joint bearing and non-detachable round steel expander spring. Jaws with prism recess for clamping round items, wide mouth, as well as hexagonal nut and crank.

| Order No. | Length mm | 5093 TURNUS | Jaw width mm | Jaw span mm |
|---|---|---|---|---|
| 1600 | 160 | 52.40 | 65 | 40 |
| 1800 | 180 | 63.30 | 70 | 40 |
| 2000 | 200* | 79.40 | 80 | 50 |
| 2500 | 250 | 131.50 | 90 | 60 |
| | | (W507) | | |

* Without prismatic recess.

## Tapered tire vice

**Design:** Handles made of high-strength, chrome-alloy tool steel, with secure joint bearing and non-detachable round steel expander spring. Angled jaws and with narrow mouth.

| Order No. | Length mm | 5085 TURNUS | Jaw width mm | Jaw span mm |
|---|---|---|---|---|
| 0125 | 125 | 25.60 | 30 | 30 |
| | | (W507) | | |

## Parallel screw clamps

**Design:** Made of steel, parallel adjustment with 2 thread spindles

**Application:** To hold workpieces together.

| Order No. | Jaw span mm | 5094 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0001 | 36 | 5.50 | 19 |
| 0002 | 46 | 6.60 | 26 |
| 0003 | 60 | 8.30 | 35 |
| 0004 | 87 | 12.25 | 50 |
| 0005 | 116 | 15.40 | 72 |
| | | (W510) | |

## Malleable cast iron clamp, 2-component handle

**Design:** Hollow profile rail made from statically optimised, cold-drawn quality steel, zinc-plated, fixed and mobile brackets made from high-quality, powder-coated cast iron, spindle with trapezoidal thread, burnished, with 2-component plastic handle, **square-shaped for improved force transmission** and mobile-mounted, completely flat pressure plate. The screw clamps to jaw width 400 mm, fitted with plastic protective caps on the pressure plate and on the upper part for gentle clamping.

**Application:** Multi-purpose clamping tool to hold items for processing or connecting to other parts.

| Order No. | Jaw span mm | 5086 format | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0016 | 160 | 12.50 | 80 | 25 x 6 |
| 0020 | 200 | 16.25 | 100 | 27 x 7 |
| 0025 | 250 | 18.85 | 120 | 29 x 9 |
| 0030 | 300 | 24.30 | 140 | 32 x 10 |
| 0040 | 400 | 28.00 | 175 | 32 x 10 |
| 0050 | 500 | 28.40 | 120 | 35 x 11 |
| 0060 | 600 | 29.70 | 120 | 35 x 11 |
| | | (W509) | | |

## Malleable cast iron clamp, wooden handle

**Design:** Hollow profile rail made from statically optimised, cold-drawn quality steel, zinc-plated, fixed and mobile brackets made from high-quality, powder-coated cast iron, spindle with trapezoidal thread, burnished, **with wooden handle** and mobile-mounted, completely flat pressure plate. The screw clamps to jaw width 400 mm, fitted with plastic protective caps on the pressure plate and on the upper part for gentle clamping.

**Application:** Multi-purpose clamping tool for holding items for processing or connecting to other parts.

**5091** Hollow profile rail with ribbing. Clamping force up to **5.5 kN.**

**5092** Hollow profile rail **slip-proof** due to threaded pin in mobile bracket. Clamping force up to **7 kN.** Pressure plates with radii from 80 mm can be swapped without tools.

5091

5092

Slip-guard 5092

| Order No. | Jaw span mm | 5091 format | 5092 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|---|
| 0010 | 100 | 6.35 | 9.65 | 50 | 15 x 5 |
| 0012 | 120 | 8.25 | 12.20 | 60 | 20 x 5 |
| 0016 | 160 | 9.90 | 14.00 | 80 | 25 x 6 |
| 0020 | 200 | 13.05 | 19.55 | 100 | 27 x 7 |
| 0025 | 250 | 15.85 | 23.90 | 120 | 29 x 9 |
| 0030 | 300 | 19.70 | 29.70 | 140 | 32 x 10 |
| 0040 | 400 | 24.10 | 36.30 | 175 | 32 x 10 |
| 0050 | 500 | 24.60 | 37.00 | 120 | 35 x 11 |
| 0060 | 600 | 26.10 | 39.10 | 120 | 35 x 11 |
| 0080 | 800 | 29.40 | 44.10 | 120 | 35 x 11 |
| 0100 | 1000 | 33.00 | 49.40 | 120 | 35 x 11 |
| 0125 | 1250 | 35.70 | 54.50 | 120 | 35 x 11 |
| 0150 | 1500 | 39.20 | 59.70 | 120 | 35 x 11 |
| 0200 | 2000 | 47.90 | 72.80 | 120 | 35 x 11 |
| 0250 | 2500 | 58.30 | 97.80 | 120 | 35 x 11 |
| | | (W509) | (W510) | | |

## Deep jaw screw clamp

**Design:** Hollow profile rail made from statically optimised, cold-drawn quality steel, 6-way serrated and zinc-plated. Fixed and mobile brackets made from high-quality, powder-coated cast iron, spindle with trapezoidal thread, burnished, with wooden handle and mobile-mounted, completely flat pressure plate.

**Application:** Especially for clamping forces up to **7 kN**. Multi-purpose clamping tool for holding widely projecting items for processing or connecting to other parts.

| Order No. | Jaw span mm | 5096 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0039 | 400 | 32.60 | 200 | 35 x 11 |
| 0040 | 400 | 44.40 | 250 | 40 x 11 |
| 0060 | 600 | 46.30 | 250 | 40 x 11 |
| 0080 | 800 | 59.80 | 300 | 45 x 12 |
| 0081 | 800 | 122.50 | 400 | 45 x 12 |
| 0100 | 1000 | 61.60 | 300 | 45 x 12 |
| | | (W510) | | |

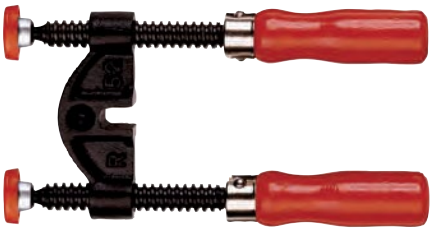
## Edge clamp

**Design:** Spindle with trapezoidal thread, burnished. With bracket for fixing to all standard screw clamps with max. slide rail cross section 13 x 45 mm. With mobile pressure plate and wooden handle.

**Application:** Easy gluing of head and edge strips (in connection with conventional vices). In addition, it is ideally suited to the stabilising of clamps with very large jaw widths.

| Order No. | Number of spindles Piece | 5098 BESSEY | For rail thickness of max. mm |
|---|---|---|---|
| 0006 | 1 | 9.20 | 13 |
| 0050 | 2 | 19.60 NEW (W510) | 13 |

5098 0006



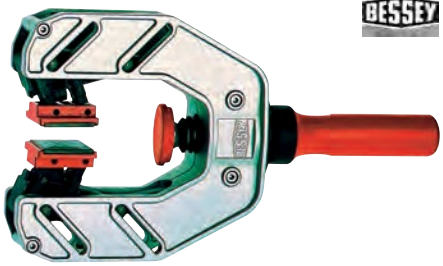
5098 0050

## Single-hand edge clamp

**Design:** Housing made of light, high-quality aluminium, handle made of plastic. Unique function with double spindle: the outer spindle moves the pressure jaws; the inner spindle moves the pressure plate. The pressure jaws and the pressure plate are mobile-mounted. Fixing of clamp and pressing on of edge occurs by activating the handle.

**Application:** For fast, single-hand operation. As such, you always have one hand free to set or adjust the item.

| Order No. | Jaw span mm | 5099 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0005 | 10–55 | 51.50 (W519) | 45 |



## Light screw clamp U

**Design:** Upper part and rail drawn from one piece of quality steel. Slide made from break-proof zinc die casting. Plastic protective caps at upper and lower part to protect the workpiece. Fixed bracket in U-shape for overlapping clamping up to 20 mm.

**Application:** Use for overlapping clamping in limited spaces. Clamping force up to **1.5 kN.**

| Order No. | Jaw span mm | 5111 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0100 | 100 | 5.20 | 50 | 15 x 5 |
| 0150 | 150 | 5.40 | 50 | 15 x 5 |
| 0200 | 200 | 5.60 (W510) | 50 | 15 x 5 |

## All-steel screw clamp

**Design:** Slide rail, fixed bracket and pressure plate manufactured from one piece of structurally optimised, cold-drawn profile steel. Mobile bracket made of forged, galvanised zinc-plated heat-treatable steel, smooth-running spindle with rolled, cold-twisted, burnished trapezoidal thread, **with wooden handle** and mobile pressure plate.

**Application:** Flexible clamping for gentle holding of workpieces. For high clamping forces up to **5 kN** with low tool weight.

| Order No. | Jaw span mm | 5106 format | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0010 | 100 | 9.60 | 50 | 11.5 x 5.6 |
| 0012 | 120 | 11.80 | 60 | 13.5 x 6.5 |
| 0016 | 160 | 14.05 | 80 | 16.0 x 7.5 |
| 0020 | 200 | 19.10 | 100 | 19.5 x 9.5 |
| 0025 | 250 | 22.10 | 120 | 22.0 x 10.5 |
| 0030 | 300 | 27.60 | 140 | 25.0 x 12.0 |
| 0040 | 400 | 32.00 | 120 | 25.0 x 12.0 |
| 0050 | 500 | 34.40 | 120 | 25.0 x 12.0 |
| 0060 | 600 | 36.40 | 120 | 25.0 x 12.0 |
| 0080 | 800 | 44.80 | 120 | 27.0 x 13.0 |
| 0100 | 1000 | 49.80 (W509) | 120 | 27.0 x 13.0 |

## All-steel screw clamp

**Design:** Slide rail, fixed bracket and pressure plate manufactured from one piece of structurally optimised, cold-drawn profile steel. Mobile bracket made of forged, galvanised zinc-plated heat-treatable steel, smooth-running spindle with rolled, cold-twisted, burnished trapezoidal thread, and with mobile pressure plate.

**Application:** Flexible clamping for gentle holding of workpieces. For high clamping forces with low tool weight.

**5134** With 2-component plastic handle, **square-shaped for improved force transmission.** Clamping force up to **5 kN.**

**5132** With ergonomic 2-component plastic handle. 20 % more clamping force per spindle rotation due to optimised rail profile. Greatest security due to linear force transmission at the new mobile bracket. Clamping force up to **6 kN.** Turntables with radii from 80 mm can be swapped without tools.

| Order No. | Jaw span mm | 5134 format | 5132 BESSEY | Jaw protection mm | Slide rail mm 5134 | Slide rail mm 5132 |
|---|---|---|---|---|---|---|
| 0010 | 100 | – | 13.90 | 60 | – | 15.0 x 6.0 |
| 0012 | 120 | – | 17.35 | 60 | – | 15.0 x 6.0 |
| 0016 | 160 | 16.20 | 20.80 | 80 | 16.0 x 7.5 | 17.5 x 6.8 |
| 0020 | 200 | 21.10 | 28.10 | 100 | 19.5 x 9.5 | 22.0 x 8.5 |
| 0025 | 250 | 23.90 | 34.00 | 120 | 22.0 x 10.5 | 24.5 x 9.5 |
| 0030 | 300 | 30.00 | 42.50 | 140 | 25.0 x 12.0 | 28.0 x 11.0 |
| 0040 | 400 | 33.90 | 49.30 | 120 | 25.0 x 12.0 | 28.0 x 11.0 |
| 0050 | 500 | 36.20 | 53.00 | 120 | 25.0 x 12.0 | 28.0 x 11.0 |
| 0060 | 600 | 37.90 | 56.10 | 120 | 25.0 x 12.0 | 28.0 x 11.0 |
| 0080 | 800 | – | 67.50 | 120 | – | 28.0 x 11.0 |
| 0100 | 1000 | – | 75.90 | 120 | – | 28.0 x 11.0 |
| | | (W509) | (W510) | | | |

5134 format professional quality

5132 BESSEY

## All-steel screw clamp OMEGA

**Design:** Slide rail and fixed bracket manufactured from one piece of structurally optimised, cold-drawn profile steel. **Patented OMEGA bend provides a maximum of flexibility and security Clamping force is retained longer also with strong vibrations.** Mobile bracket made of forged and galvanised zinc-plated heat-treatable steel. The smooth-running spindle with rolled, cold-twisted and burnished trapezoidal thread. The mobile pressure plate (order no. 5104) can be exchanged for the respective purpose without tools.

With ergonomic 2-component plastic handle.

**Application:** Flexible clamping for the sensitive and very precise holding of items. The OMEGA bow ensures more accurate clamping pressure. For high clamping forces with low tool weight. Clamping force up to **5 kN.**

| Order No. | Jaw span mm | 5102 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0160 | 160 | 20.60 | 80 | 16.0 x 7.5 |
| 0200 | 200 | 27.90 | 100 | 19.5 x 9.5 |
| 0250 | 250 | 33.80 | 120 | 22.0 x 10.5 |
| 0300 | 300 | 42.20 | 140 | 25.0 x 12.0 |
| 0400 | 400 | 49.00 | 120 | 25.0 x 12.0 |
| | | (W519) | | |

## Pressure plates for screw clamp

**Design:** From galvanised quality steel. Supplied as 4 pieces in a polythene bag.

**Application:** Workpiece-protected clamping of sensitive surfaces such as ceramic and polished workpieces. Can be quickly replaced without tools. Suitable for Bessey temper cast screw clamps (order no. 5092, 📖 5/8), all steel screw clamps (order no. 5132, 📖 5/10) and order no. 5104 0030 continues to be suitable for high performance clamp combination clamp (order no. 5110, 📖 5/13).

| Order No. | For projection mm | 5104 BESSEY |
|---|---|---|
| 0010 | 80 | 7.20 |
| 0020 | 100–120 | 8.45 |
| 0030 | 140–175 | 9.75 |
| | | (W510) |

## Vario clamp attachment

**Design:** Two movable clamping surfaces adapt to all forms in angles from 60°. For all Bessey locksmith, all-steel and temper cast screw clamps from 200 mm clamping width. Supplied as 2 pieces in a polythene bag.

**Application:** For clamping and adjustment of round, oval and angular items.

| Order No. | 5105 BESSEY |
|---|---|
| 0005 | 44.30 |
| | (W519) |

## All steel lever clamp

**Design:** Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made from forged and galvanised zinc-plated heat-treatable steel; **raster mechanism for regulated and secure clamping,** cam made from wear-resistant sintered steel; with plastic-covered release lever; swivel-mounted, hardened and galvanised zinc-plated steel pressure plate, with ergonomic handle.

**Application:** For clamping in little time and with little force.

**5100** Without slip guard.

**5108** **With slip guard.** 10 % more clamping force due to optimised rail profile, clamping force created up to 5 times faster. Clamping force up to **8.5 kN.**

| Order No. | Jaw span mm | 5100 format | 5108 BESSEY | Jaw protection mm | Slide rail mm 5100 | Slide rail mm 5108 |
|---|---|---|---|---|---|---|
| 0012 | 120 | 33.60 | 37.50 | 60 | 13.5 x 6.5 | 15.0 x 6.0 |
| 0016 | 160 | 36.90 | 41.10 | 80 | 16.0 x 7.5 | 17.5 x 6.8 |
| 0020 | 200 | 42.10 | 46.90 | 100 | 19.5 x 9.5 | 22.0 x 8.5 |
| 0025 | 250 | 48.70 | 54.30 | 120 | 22.0 x 10.5 | 24.5 x 9.5 |
| 0030 | 300 | 57.40 | 64.00 | 140 | 25.0 x 12.0 | 28.0 x 11.0 |
| 0040 | 400 | 60.10 | 67.10 | 120 | 25.0 x 12.0 | 28.0 x 11.0 |
| 0050 | 500 | 65.00 | 72.40 | 120 | 25.0 x 12.0 | 28.0 x 11.0 |
| 0060 | 600 | 67.60 (W509) | 75.30 (W510) | 120 | 25.0 x 12.0 | 28.0 x 11.0 |

5100 format professional quality

5108 BESSEY

## Magnesium lever clamp KliKlamp®

**Design:** Slide rail made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket and fixed bracket made from **high-strength and lightweight magnesium,** raster mechanism for regulated and secure clamping; with ergonomic handle; mobile pressure plate and retaining ratchet made from shatterproof, glass-fibre-reinforced plastic. Fixed bracket with four-way prism below the removable plastic protective cap.

**Application:** For clamping in little time and with little force. Clamping force up to **1.2 kN.**

| Order No. | Jaw span mm | 5117 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0012 | 120 | 17.40 | 80 | 20 x 5 |
| 0016 | 160 | 17.90 | 80 | 20 x 5 |
| 0020 | 200 | 18.55 | 80 | 20 x 5 |
| 0025 | 250 | 19.20 (W519) | 80 | 20 x 5 |

## Single-hand clamp

**Design:** Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made from forged and galvanised zinc-plated heat-treatable steel; **casing and ergonomic single-hand clamping lever made from glass-fibre-reinforced polyamide,** can be operated both using the handle and from the rail side, **with button to move the mobile bracket quickly.** A guide bushing keeps the pressure plate straight; with 2-component plastic handle. The screw clamps are fitted with removable plastic protective caps on the pressure plate and on the upper part for gentle clamping.

**Application:** Fix with clamping lever in one move, without relocating, clamping and opening via a 2 component handle, as usual. Also excellently suited for over-head works. Clamping force up to **3.5 kN.**

| Order No. | Jaw span mm | 5123 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0031 | 300 | 33.60 | 100 | 19.5 x 9.5 |
| 0061 | 600 | 40.50 (W510) | 100 | 19.5 x 9.5 |

## Single-hand clamp

**Design:** Slide rail made of special steel, fixed bracket and mobile bracket made of impact-resistant and unbreakable polyamide. **The fixed bracket can be quickly and easily changed from clamping to strutting without the need for tools.**
With soft protective caps and a 2-component plastic handle fitted behind the rail.

**Application:** For clamping forces up to **2 kN**. Comfortable solution for situations where you only have one hand free. Also suited for over-head works.

| Order No. | Jaw span mm | 5129 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0150 | 150 | 19.30 | 80 | 19 x 6 |
| 0300 | 300 | 21.60 | 80 | 19 x 6 |
| 0450 | 450 | 23.80 | 80 | 19 x 6 |
| 0600 | 600 | 26.80 | 80 | 19 x 6 |
| 0900 | 900 | 28.40 (W510) | 80 | 19 x 6 |

## Spring clamp

NEW

**Design:** Made from impact and break proof polyamide with soft, easy-grip handle covers.

**Application:** For single-handed, gentle clamping.

**5135 0025–0075** **Standard**

5135 0025–0075

| Order No. | Jaw span mm | 5135 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0025 | 25 | 2.14 | 30 |
| 0035 | 35 | 2.82 | 37 |
| 0050 | 50 | 4.27 | 50 |
| 0075 | 75 | 5.75 (W510) | 70 |

**5135 0070** **Long version**
With long, pointed clamping arms, particularly suited for narrow gaps and areas far from the edge.

5135 0070

| Order No. | Jaw span mm | 5135 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0070 | 70 | 4.84 (W510) | 110 |

**5135 0055 + 0100** **Adjustable design**
Infinitely adjustable clamping width, even clamping force.

5135 0055 + 0100

| Order No. | Jaw span mm | 5135 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0055 | 55 | 6.75 | 37 |
| 0100 | 100 | 6.95 (W510) | 50 |

## One-hand clamps/screw clamps

**Design:** Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made of forged and galvanised zinc-plated heat-treatable steel; smooth-running spindle with rolled, strain-hardened and burnished trapezoidal thread; mobile special pressure plate, can be pivoted up to 35°. With pushed-through T-handle.

**Application:** Especially for clamping forces up to **12 kN**. As such, it can be used for all metal processing and in steel construction, as well as in woodworking.

| Order No. | Jaw span mm | 5103 format | 5103 format | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|---|
| 0025 | 250 | 60.30 | – | 120 | 30 x 15 |
| 0030 | 300 | 61.70 | – | 140 | 30 x 15 |
| 0050 | 500 | 78.50 | – | 120 | 30 x 15 |
| 0080 | 800 | 90.90 | – | 120 | 30 x 15 |
| 0100 | 1000 | 102.50 | – | 120 | 30 x 15 |
| 0125 | 1250 | 119.00 | – | 120 | 30 x 15 |
| 5000 | Spare pressure plate with spindle | – | 38.70 | – | – |
| 5005 | Spare pressure plate, smooth | – (W509) | 19.40 (W510) | – | – |

## One-hand clamps/screw clamps

**Design:** Fixed bracket and pressure plate manufactured from one piece of Special steel; warp-resistant. Newly designed, U-shaped mobile bracket made of forged heat-treatable steel. Greatest security due to linear force transmission at the new mobile bracket. Heat-resistant, high-performance pressure plate with large ball coupling, can be pivoted 35° and replaced, with hardened and oil-soaked sintered steel insert. **20 % more clamping force per spindle rotation,** due to optimised rail profile.

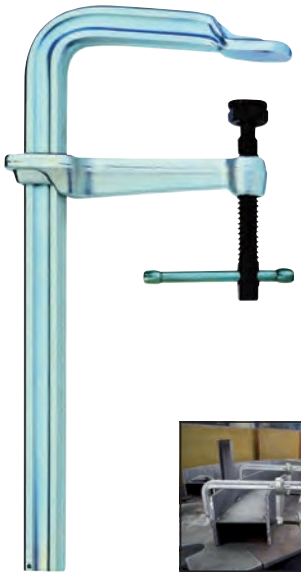
**Application:** Especially for clamping forces up to **12 kN**. As such, it can be used for all metal processing and in steel construction, as well as in woodworking.

| Order No. | Jaw span mm | 5101 BESSEY | 5103 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|---|
| 0250 | 250 | 68.20 | – | 140 | 34 x 13 |
| 0300 | 300 | 69.90 | – | 140 | 34 x 13 |
| 0500 | 500 | 87.60 | – | 140 | 34 x 13 |
| 0800 | 800 | 101.00 | – | 140 | 34 x 13 |
| 1000 | 1000 | 113.50 | – | 140 | 34 x 13 |
| 1250 | 1250 | 131.50 | – | 140 | 34 x 13 |
| 1500 | 1500 | 142.50 | – | 140 | 34 x 13 |
| 5000 | Spare pressure plate with spindle | – | 38.70 | – | – |
| 5005 | Spare pressure plate, smooth | – | 19.40 | – | – |
| | | (W519) | (W510) | | |

## Steelwork screw clamp

**Design:** Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made of forged and galvanised zinc-plated heat-treatable steel; smooth-running spindle with rolled, strain-hardened and phosphate-treated trapezoidal thread. Heat-resistant, high-performance pressure plate with large ball coupling, can be pivoted up to 35° and replaced, with hardened and oil-soaked sintered steel insert. With inserted lever grip and hexagon to clamp with spanner, socket wrench, torque wrench or ratchets.

**Application:** Particularly suitable for clamping forces **to 22 kN**. As such, it can be used for all metal processing and in steel construction.



| Order No. | Jaw span mm | 5109 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0030 | 300 | 129.00 | 175 | 40 x 20 |
| 0040 | 400 | 135.50 | 175 | 40 x 20 |
| 0050 | 500 | 141.50 | 175 | 40 x 20 |
| 0060 | 600 | 147.00 | 175 | 40 x 20 |
| 0080 | 800 | 156.00 | 175 | 40 x 20 |
| 0100 | 1000 | 169.00 | 175 | 40 x 20 |
| | | (W519) | | |

## High-performance clamp KombiKlamp

**Design:** Fixed and sliding bracket as well as pressure plate made of forged special steel With Vario clamping attachment - adapts to round, oval and square workpieces in angles of 60° inside and 60° outside. Easy conversion for spreading. Removable end-stop for quick resetting of the mobile bracket. Pressure plate can be removed without tools. Locking handle with plastic attachment

**Application:** For clamping and strutting round, oval and angular items. Clamping force up to **7.5 kN.**

**Spreading function**

| Order No. | Jaw span mm | 5110 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0300 | 300 | 74.30 | 120 | 30 x 15 |
| | | (W519) | | |

## High performance clamp

**Design:** Slide bracket made of forged tempered steel for maximum safety at high loads. Tool-free removable end-stop for quick repositioning the slide bracket for spreading or to exchange for other slide bracket variations on a modular basis. Wear-resistant, heat-treated spindle. Heat resistant special pressure plate, swivelling up to 35°. For jaw span 3000 mm, optionally with hardened and oil-soaked sintered steel insert for extremely long life due to excellent sliding and fail-safe properties.

**Application:** For clamping and spreading with high clamping forces and large jaw spans over the entire range of metal and wood working. Clamping force up to **6.5 kN** up to jaw span 2000 mm and up to **9 kN** for span 3000 mm.

| Order No. | Jaw span mm | 5072 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0100 | 1000 | 97.70 | 120 | 27 x 13 |
| 0150 | 1500 | 118.00 | 120 | 27 x 13 |
| 0200 | 2000 | 139.00 | 120 | 27 x 13 |
| 0300 | 3000 | 257.00 (W519) | 140 | 30 x 15 |

## Steel bar clamp

**Design: With clamping mechanism located outside the working area.** Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made of heat-treatable steel in precision-casting process, heat-treated and galvanised zinc-plated. The smooth-running spindle with rolled, cold-twisted and burnished trapezoidal thread is protected from spatter. Pressure plate made of high-quality and burnished cast with prism, pivots to 30°. With removable end-stop for quick resetting of the mobile bracket for strutting. With pushed-through T-handle.

**Application:** Particularly for installation and welding works in small openings, at short protrusions and the smallest of space. Clamping force up to **7.5 kN.**

| Order No. | Jaw span mm | 5119 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 3000 | 300 | 87.30 | 120 | 28 x 11 |
| 6000 | 600 | 94.70 (W519) | 120 | 28 x 11 |

## All-steel U screw clamp

**Design:** U-shape-bent fixed bracket with pressure plate. Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made of forged and galvanised zinc-plated heat-treatable steel; smooth-running spindle with rolled, strain-hardened and burnished trapezoidal thread; mobile pressure plate. With inserted locking handle.

**Application:** Especially for clamping forces up to **4 kN**. For comprehensive clamping, e.g. to T-bearings and double T-bearings.

| Order No. | Jaw span mm | 5113 BESSEY | Clamping depth mm | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|---|
| 0025 | 250 | 49.20 (W510) | 60 | 120 | 22 x 10.5 |

## High-performance U screw clamp

**Design:** U-shape-bent fixed bracket with pressure plate. Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made of forged and galvanised zinc-plated heat-treatable steel; smooth-running spindle with rolled, strain-hardened and phosphate-treated trapezoidal thread. Heat-resistant, high-performance pressure plate with large nail head, pivots up to 35°, replaceable, with hardened and oil-soaked sintered steel insert. With pushed-through T-handle.

**Application:** Especially for clamping forces up to **12 kN**. For comprehensive clamping, e.g. to T-bearings and double T-bearings. Fast, low-vibration clamping.

| Order No. | Jaw span mm | 5114 BESSEY | Clamping depth mm | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|---|
| 0030 | 300 | 101.00 (W510) | 100 | 140 | 30 x 15 |

## C screw clamp

**Design:** C-shape, of quality steel, drop-forged and galvanised. Spindle, burnished, with trapezoidal thread and mobile pressure plate. With pushed-through T-handle.

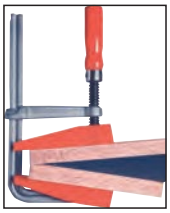
**Application:** Predominately in metal and steel construction, provides extremely high clamping forces due to the minimal projection and robust design. Clamping force up to **22 kN.**

| Order No. | Jaw span mm | 5112 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0006 | 60 | 28.50 | 55 |
| 0010 | 100 | 40.00 | 75 |
| 0012 | 120 | 48.10 | 85 |
| 0015 | 150 | 53.30 | 95 |
| 0020 | 200 | 67.30 (W510) | 105 |

## Surface clamps

**Design:** Slide rail, fixed bracket and pressure plate made from one piece of structurally optimised, cold-drawn profile steel; mobile bracket made of forged and galvanised zinc-plated heat-treatable steel; smooth-running spindle with rolled, strain-hardened and burnished trapezoidal thread. Clamping occurs with the 2 large, tiltable super polyamide clamping surfaces, reinforced with special steel inserts. With wooden handle.

**Application:** For flexible and gentle clamping, and for the sensitive holding of items. The two large clamping surfaces allow you to clamp items with both linear and angled contact surfaces and to fix mitre joints. Clamping force up to **5 kN.**



| Order No. | Jaw span mm | 5124 BESSEY | Jaw protection mm | Slide rail mm |
|---|---|---|---|---|
| 0020 | 200 | 33.50 (W519) | 100 | 19.5 x 9.5 |

## Parallel clamp (quick-action clamp)

**Design:** Jaw made of quality steel, mobile clamp jaws made of hardened steel. Spindle with burnished trapezoidal thread and locking handle.

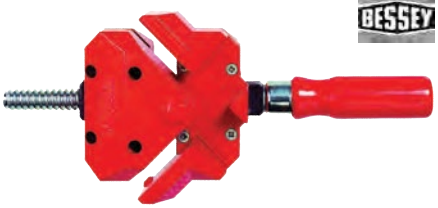
**Application:** For the internal and external clamping of various profiles.

| Order No. | Jaw span mm | 5122 TURNUS |
|---|---|---|
| 0005 | 0– 25 | 11.45 |
| 0010 | 0– 50 | 12.65 |
| 0015 | 0– 75 | 18.15 |
| 0020 | 0–100 | 24.60 |
| 0025 | 0–150 | 45.00 (W527) |

## Angular clamp for wood

**Design:** Body and movable jaws made of plastic-coated die-cast zinc. With wooden handle.

**Application:** For right-angled holding, fixing and aligning of items, also for T-joints. Automatically adjusts to different work piece thickness. Also suitable for plastic and delicate items.



| Order No. | Jaw span mm | 5115 BESSEY | Max. opening mm | Jaw height mm | Jaw length mm |
|---|---|---|---|---|---|
| 0005 | 2 x 55 | 41.90 | 30 | 30 | 46 |
| 0010 | 2 x 100 | 63.90 (W510) | 60 | 36 | 80 |

## Angular clamp for metal

**Design:** Body and clamping jaws made of zinc-plated cast iron; trapezoidal thread made of copper-plated steel, therefore no adhesion of welding beads. The spindle nut is simply supported. With long holes on the side and push-through locking handle.

**Application:** For right-angled holding, fixing and aligning of items, also for T-joints. Suitable for installation on welding and machine tables.

| Order No. | Jaw span mm | 5121 BESSEY | Max. opening mm | Jaw height mm | Jaw length mm |
|---|---|---|---|---|---|
| 0009 | 2 x 90 | 147.00 | 60 | 35 | 110 |
| 0012 | 2 x 120 | 167.00 (W519) | 100 | 61 | 120 |

# Nipper pliers/pincers/bodywork removal pliers

## Pincers

**Design: DIN ISO 9243,** made of special tool steel, hardened and tempered in oil, inductively hardened blades (60 HRC), **head polished,** black atramentised handles.

**Application:** For pulling out nails and staples.

| Order No. | Length mm | 5130 format | 5133 KNIPEX |
|---|---|---|---|
| 0160 | 160 | – | 10.35 |
| 0180 | 180 | 7.20 | 10.75 |
| 0200 | 200 | 8.45 | – |
| 0210 | 210 | – | 11.45 |
| 0225 | 225 | 9.75 | 13.15 |
| 0250 | 250 | 11.90 | 15.65 |
| 0300 | 300 | – (W512) | 22.90 (W525) |

5130 format professional quality

5133 KNIPEX

## Mechanic's nippers (basket pliers)

**Design: DIN ISO 9242,** made of special grade special tool steel, hardened and tempered in oil, inductively hardened blades (61 HRC), **head polished,** black atramentised handles.

**Application:** For twisting and cutting binding wire from the roll in one step.

| Order No. | Length mm | 5136 format | 5139 KNIPEX |
|---|---|---|---|
| 0220 | 220 | 8.80 | 10.95 |
| 0250 | 250 | 9.55 | 11.95 |
| 0280 | 280 | 10.75 | 13.05 |
| 0300 | 300 | 13.00 (W512) | 15.55 (W525) |

5136 format professional quality

5139 KNIPEX

## Power-assembly pliers

**Design: DIN ISO 9242.** Made of special grade tool steel, hardened and tempered in oil, head polished, inductively hardened blades (61 HCR). Slim design for binding low-lying iron. Cutting impact cushioning after severing the binding wire. **25% reduced effort** due to optimum transmission when compared to normal mechanic's nippers of the same length.

**Application:** For twisting and cutting binding wire from the roll in one step.

**5140** Head polished, black atramentised pliers.

**5143** Head and handle zinc-plated.

KNIPEX

5140

5143

| Order No. | Length mm | 5140 KNIPEX | 5143 KNIPEX |
|---|---|---|---|
| 0300 | 300 | 19.70 (W525) | 21.80 (W525) |

## Bodywork removal pliers

**Design: DIN ISO 5743.** Made of special tool steel, forged, hardened and tempered in oil, **polished head**, inductively hardened blades (59 HRC), black atramentised pliers.

KNIPEX

**Application:** For disassembly in car bodywork.

| Order No. | Length mm | 5137 KNIPEX |
|---|---|---|
| 0300 | 300 | 37.00 (W525) |

format
professional quality

**Our FORMAT measuring equipment programme**
offers a professional solution for every application.

## Sample wires for cutting values

| Wire type | Tensile strength (N/mm²) FORMAT | Tensile strength (N/mm²) Knipex |
|---|---|---|
| soft | 200 | 220 |
| medium-hard | 800 | 750 |
| hard | 1600 | 1800 |
| Piano wire | 2000 | 2300 |

## Tip combination pliers

NEW

KNIPEX

**Design:** Made of special grade, special tool steel; hardened and tempered in oil. Extremely torsion-proof, tapering jaws with milled groove to hold and pull out nails, pins etc. as well as gripping zone for flat and round material. Gripping area convex on one side for particularly secure holding of flat material. Particularly easy cutting die to high-transmission power joint.

**Application:** Ideal for work at hard-to-reach places and as a practical helper on-the-go.

**516A** **Polished head,** handles with plastic coating.

516A

**516B** **Polished head,** handles with multi-component plastic covers.

516B

**516C** **Chrome-plated head,** handles with multi-component plastic covers.

516C

**516D** **Head chrome-plated,** Handles with multi-component plastic covers, with handle recess and injected lettering. **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

516D

1000 V

| Order No. | Length mm | 516A KNIPEX | 516B KNIPEX | 516C KNIPEX | 516D KNIPEX | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0145 | 145 | 16.20 (W525) | 17.85 (W525) | 20.00 (W525) | 21.60 (W525) | 2.0 |

## Mini combination pliers

KNIPEX

**Design:** Made of vanadium electric steel, hardened and tempered in oil. **Chrome-plated head,** jaws with grip zones for flat and round materials, inductively hardened blades (60 HRC), handles feature multi-component plastic covers.

| Order No. | Length mm | 5144 KNIPEX | Cutting values Ø hard wire mm |
|---|---|---|---|
| 0110 | 110 | 18.75 (W525) | 1.6 |

## Universal pliers

**Design: DIN ISO 5746.** Made of special tool steel, hardened and tempered in oil. **Polished head,** jaws with grip zones for flat and round materials, inductively hardened blades (60 HRC), handles covered with plastic.

5145 format professional quality

5152 KNIPEX

| Order No. | Length mm | 5145 format professional quality | 5152 KNIPEX | Cutting values Ø hard wire mm 5145 | 5152 |
|---|---|---|---|---|---|
| 0140 | 140 | – | 10.50 | – | 1.8 |
| 0160 | 160 | 7.90 | 10.15 | 1.8 | 2.0 |
| 0180 | 180 | 8.55 | 10.75 | 2.5 | 2.2 |
| 0200 | 200 | 9.90 (W512) | 12.35 (W525) | 2.8 | 2.5 |

## Universal pliers

**Design: DIN ISO 5746.** Made of special tool steel, hardened and tempered in oil. **Polished head,** jaws with grip zones for flat and round materials, inductively hardened blades (60 HRC), handles feature multi-component plastic covers.

| Order No. | Length mm | 5149 format | 5150 KNIPEX | Cutting values Ø hard wire mm 5149 | 5150 |
|---|---|---|---|---|---|
| 0160 | 160 | 9.95 | 13.15 | 1.8 | 2.0 |
| 0180 | 180 | 10.20 | 13.40 | 2.5 | 2.2 |
| 0200 | 200 | 11.90 (W512) | 15.40 (W525) | 2.8 | 2.5 |

5149 format professional quality

5150 KNIPEX

## Universal pliers

**Design: DIN ISO 5746.** Made of special tool steel, hardened and tempered in oil. **Chrome-plated head,** jaws with grip zones for flat and round materials, inductively hardened blades (60 HRC), handles feature multi-component plastic covers.

| Order No. | Length mm | 5148 format | 5153 KNIPEX | Cutting values Ø hard wire mm 5148 | 5153 |
|---|---|---|---|---|---|
| 0160 | 160 | 11.90 | 15.70 | 1.8 | 2.0 |
| 0180 | 180 | 12.40 | 16.85 | 2.5 | 2.2 |
| 0200 | 200 | 14.55 (W512) | 19.15 (W525) | 2.8 | 2.5 |

5148 format professional quality

5153 KNIPEX

## VDE universal pliers

**Design: DIN ISO 5746.** Made of special tool steel, hardened and tempered in oil. **Chrome-plated head**, jaws with grip zones for flat and round materials, inductively hardened blades (60 HRC), **insulated up to 1000 V, conforms to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

**5151** Optimised gripping zone for flat material. Handles with multi-component plastic covers.

**5154** Handles with multi-component plastic covers, with recessed grips and indented lettering.

**5164** Plastic-covered handles.

| Order No. | Length mm | 5151 format | 5154 KNIPEX | 5164 KNIPEX | Cutting values Ø hard wire mm 5151 | 5154/5164 |
|---|---|---|---|---|---|---|
| 0160 | 160 | 14.10 | 18.25 | – | 1.8 | 2.0 |
| 0180 | 180 | 14.85 | 19.70 | 24.40 | 2.5 | 2.2 |
| 0200 | 200 | 16.55 (W512) | 22.00 (W525) | – (W525) | 2.8 | 2.5 |

5151 format professional quality

5154 KNIPEX

5164 KNIPEX

## VDE universal pliers

**Design: DIN ISO 5746.** Made of chromium-vanadium high-performance steel, hardened and tempered in oil. **Chrome-plated head, extremely hard-wearing jaws (53 HRC)** additional hardening, with grip zones for flat and round materials, ultra-precise blades for all wires including piano wire, additional inductive hardening (64 HRC), handles with multi-component plastic covers with recessed grips and indented lettering, **insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

KNIPEX

| Order No. | Length mm | 5155 KNIPEX | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|
| 0160 | 160 | 25.90 | 2.0 | 1.5 |
| 0190 | 190 | 28.70 (W525) | 2.5 | 2.0 |

## Power universal pliers

**Design: DIN ISO 5746.** Made of special grade, special tool steel, hardened and tempered in oil. **Polished head,** jaws with grip zones for flat and round materials. Blades with additional inductive hardening (63 HRC) and with high purchase, **35 % reduced effort due to improved leverage ratio** when compared with normal universal pliers of the same length, thus suitable for all wires, including piano wire and the toughest endurance stress. Plastic-covered handles.

| Order No. | Length mm | 5157 KNIPEX | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|
| 0180 | 180 | 14.60 | 2.5 | 2.0 |
| 0200 | 200 | 15.40 | 2.8 | 2.2 |
| 0225 | 225 | 17.70 (W525) | 3.0 | 2.5 |

## Power universal pliers

**Design: DIN ISO 5746.** Made of special grade, special tool steel, hardened and tempered in oil. **Polished head,** jaws with grip zones for flat and round materials. Blades with additional inductive hardening (63 HRC) and with high purchase, **35 % reduced effort due to improved leverage ratio** when compared with normal universal pliers of the same length, thus suitable for all wires, including piano wire and the toughest endurance stress. Handles with multi-component plastic coating.

| Order No. | Length mm | 5156 KNIPEX | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|
| 0180 | 180 | 16.55 | 2.5 | 2.0 |
| 0200 | 200 | 17.95 | 2.8 | 2.2 |
| 0225 | 225 | 21.30 (W525) | 3.0 | 2.5 |

## Power universal pliers

**Design: DIN ISO 5746.** Made of special grade, special tool steel, hardened and tempered in oil. **Chrome-plated head,** jaws with grip zones for flat and round materials. Blades with additional inductive hardening (63 HRC) and with high purchase, **35 % reduced effort due to improved leverage ratio** when compared with normal universal pliers of the same length, thus suitable for all wires, including piano wire and the toughest endurance stress. Handles with multi-component plastic covers.

| Order No. | Length mm | 5161 KNIPEX | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|
| 0180 | 180 | 21.00 | 2.5 | 2.0 |
| 0200 | 200 | 22.60 | 2.8 | 2.2 |
| 0225 | 225 | 25.60 (W525) | 3.0 | 2.5 |

## VDE power universal pliers

**Design: DIN ISO 5746.** Made of special grade, special tool steel, hardened and tempered in oil. **Chrome-plated head,** jaws with grip zones for flat and round materials. Handles with multi-component plastic covers, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

**5162** Extra long blades with additional inductive hardening (64 HRC). **40% reduced effort due to improved leverage ratio** compared with normal universal pliers of the same length.

**5158** Blades with additional inductive hardening (63 HRC) and with high purchase, **35% reduced effort due to improved leverage ratio** when compared with normal universal pliers of the same length, thus suitable for all wires, including piano wire and the toughest endurance stress. With recessed grips and indented lettering.

| Order No. | Length mm | 5162 format | 5158 KNIPEX | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|
| 0180 | 180 | – | 23.50 | 2.5 | 2.0 |
| 0200 | 200 | – | 24.70 | 2.8 | 2.2 |
| 0200 | 200 | 20.80 | – | 3.0 | 2.5 |
| 0225 | 225 | – (W512) | 27.80 (W525) | 3.0 | 2.5 |

5162 format

5158 KNIPEX

## Flat pliers

**Design: DIN ISO 5745.** Made of special tool steel; forged; hardened and tempered in oil. **Polished head,** with short, flat blades, serrated grip zones.

**5169** Plastic-covered handles.

**5168** Handles with multi-component plastic covers.

| Order No. | Length mm | 5169 KNIPEX | 5168 KNIPEX |
|---|---|---|---|
| 0140 | 140 | 10.45 | 12.85 |
| 0160 | 160 | 10.90 (W525) | 13.00 (W525) |

5169

5168

## Flat pliers

**Design: DIN ISO 5745.** Made of special tool steel; forged; hardened and tempered in oil. **Chrome-plated head,** with short, flat jaws, serrated grip zones. Handles with multi-component plastic coating.

| Order No. | Length mm | 5170 KNIPEX |
|---|---|---|
| 0140 | 140 | 15.75 |
| 0160 | 160 | 16.50 (W525) |

## VDE flat pliers

**Design: DIN ISO 5745.** Made of chromium-vanadium electric steel, forged, hardened and tempered in oil. **Chrome-plated head,** with short, flat jaws, serrated grip zones. Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

| Order No. | Length mm | 5171 KNIPEX |
|---|---|---|
| 0160 | 160 | 19.00 (W525) |

## Multi-purpose pliers

**Design: DIN ISO 5745.** Made of special tool steel, inductively tempered. **Chrome-plated head,** flat-round jaws, serrated grip areas. Handles with multi-component plastic covers. **Radio, stripping and crimping pliers in one tool.**

**5197** Straight jaws, crimping device for wire-end ferrules 1.5 + 2.5 mm² and for cable lugs.

**5199** Jaws angled 35° with special profile for holding and guiding wires, pins and screws.

| Order No. | Length mm | 5197 format | 5199 format | Cutting values Ø hard wire mm |
|---|---|---|---|---|
| 0160 | 160 | 16.85 (W512) | 13.95 (W512) | 1.6 |

5197

5199

## Jewellery bending pliers

**Design:** Made of vanadium electric steel, hardened and tempered in oil. **Polished head.** Fine, pointed round jaws, precision-ground. Blades additionally inductively hardened (60 HRC), handles covered with plastic.

**Application:** For working with fine wire and silver jewellery. Also for **bending and cutting** in the electronics sector, and for bending wire eyelets.

| Order No. | Length mm | 5186 KNIPEX |
|---|---|---|
| 0130 | 130 | 21.90 (W525) |

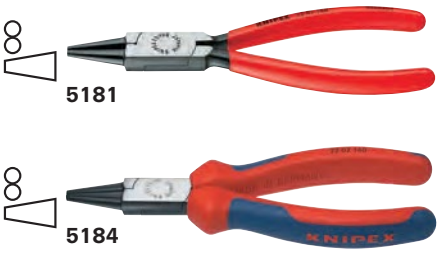
## Round-nose pliers

**Design: DIN ISO 5745.** Made of chromium-vanadium electric steel, hardened and tempered in oil. **Polished head,** with short, round blades, precision-ground, smooth grip zones.

**5181** Plastic-covered handles.

**5184** Handles with multi-component plastic covers.

| Order No. | Length mm | 5181 KNIPEX | 5184 KNIPEX |
|---|---|---|---|
| 0125 | 125 | 10.65 | – |
| 0140 | 140 | 10.65 | 12.75 |
| 0160 | 160 | 10.95 (W525) | 12.90 (W525) |




## Round-nose pliers

**Design: DIN ISO 5745.** Made of chromium-vanadium electric steel, hardened and tempered in oil. **Chrome-plated head,** with short, round blades, precision-ground, smooth grip zones. Handles with multi-component plastic covers.

| Order No. | Length mm | 5182 KNIPEX |
|---|---|---|
| 0140 | 140 | 15.70 |
| 0160 | 160 | 16.50 (W525) |

## VDE round-nose pliers

**Design: DIN ISO 5745.** Made of chromium-vanadium electric steel, hardened and tempered in oil. **Polished head,** with short, round blades, precision-ground, smooth grip zones. Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

| Order No. | Length mm | 5183 KNIPEX |
|---|---|---|
| 0160 | 160 | 18.65 (W525) |

## Long-nose pliers

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Polished head,** long, flat jaws, serrated grip areas, handles covered with plastic.

**5160** Made of special tool steel.

**5187** Made of chromium-vanadium electric steel.

| Order No. | Length mm | 5160 format | 5187 KNIPEX | Jaw length mm 5160 | Jaw length mm 5187 |
|---|---|---|---|---|---|
| 0140 | 140 | – | 13.15 | – | 42.0 |
| 0160 | 160 | 8.00 | 13.45 | 50.0 | 46.5 |
| 0190 | 190 | – (W512) | 15.50 (W525) | – | 50.0 |

## Long-nose pliers

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** long, flat jaws, serrated grip areas, handles with multi-component plastic covers.

**5163** Made of special tool steel.

**5190** Made of chromium-vanadium electric steel.

| Order No. | Length mm | 5163 format | 5190 KNIPEX | Jaw length mm 5163 | Jaw length mm 5190 |
|---|---|---|---|---|---|
| 0140 | 140 | – | 18.25 | – | 42.0 |
| 0160 | 160 | 11.95 | 19.10 | 50.0 | 46.5 |
| 0190 | 190 | – (W512) | 21.00 (W525) | – | 50.0 |

## VDE long-nose pliers

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** long, flat jaws, serrated grip areas, handles with multi-component plastic covers, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**5166** Made of special tool steel.

**5167** Made of chromium-vanadium electric steel With recessed grips and indented lettering.

| Order No. | Length mm | 5166 format | 5167 KNIPEX | Jaw length mm 5166 | Jaw length mm 5167 |
|---|---|---|---|---|---|
| 0160 | 160 | 14.40 (W512) | 21.00 (W525) | 50.0 | 46.5 |

## Long-nose pliers

**Design: DIN ISO 5745,** chromium-vanadium electric steel, hardened in oil, thus highly resilient and wear-resistant. Long, flat, round jaws, serrated grip zones.

**5193** **Head polished,** plastic-coated handles.

**5195** **Chrome-plated head,** handles with multi-component plastic covers.

| Order No. | Length mm | 5193 KNIPEX | 5195 KNIPEX | Jaw length mm |
|---|---|---|---|---|
| 0140 | 140 | 13.15 | 18.25 | 42.0 |
| 0160 | 160 | 13.75 | 18.85 | 46.5 |
| 0190 | 190 | – (W525) | 21.20 (W525) | 50.0 |

## Long-nose pliers

**Design: DIN ISO 5745.** Made of special tool steel, hardened and tempered in oil. **Polished head,** long, round jaws, grip areas finely grooved. Plastic-covered handles.

| Order No. | Length mm | 5175 format | Jaw length mm |
|---|---|---|---|
| 0160 | 160 | 8.20 (W512) | 52.0 |

## Long-nose pliers

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** long, round jaws, with multi-component plastic covers.

**5178** Made of special tool steel, grip areas finely grooved.

**5200** Made of chromium-vanadium electric steel, grip areas smooth.

| Order No. | Length mm | 5178 format | 5200 KNIPEX | Jaw length mm 5178 | Jaw length mm 5200 |
|---|---|---|---|---|---|
| 0160 | 160 | 11.80 (W512) | 18.25 (W525) | 52.0 | 41.0 |

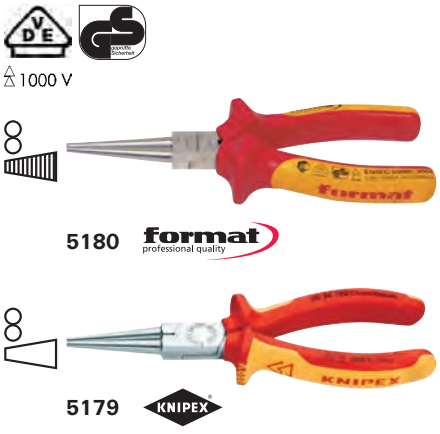
## VDE long-nose pliers

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** long, round jaws, handles with multi-component plastic covers, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**5180** Made of special tool steel, grip areas finely grooved.

**5179** Made of chromium-vanadium electric steel, grip areas smooth. With recessed grips and indented lettering.

| Order No. | Length mm | 5180 format | 5179 KNIPEX | Jaw length mm 5180 | Jaw length mm 5179 |
|---|---|---|---|---|---|
| 0160 | 160 | 14.45 (W512) | 20.80 (W525) | 52.0 | 41.0 |



## Mechanic's pliers

**Design: DIN ISO 5745.** Made of vanadium electric steel, hardened and tempered in oil. **Chrome-plated head,** straight, flat-wide jaws, cross-serrated grip zones, highly resilient, jaws do not twist, handles with multi-component plastic covers.

| Order No. | Length mm | 5203 | Jaw length mm |
|---|---|---|---|
| 0020 | 190 | 21.70 (W525) | 50.0 |

## Mechanic's pliers, straight

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** straight, flat-round jaws, highly resilient, jaws do not twist, handles with multi-component plastic covers.

**5204** Made of special tool steel, grip areas finely grooved.

**5203** Made of vanadium electric steel, grip areas cross-toothed.

| Order No. | Length mm | 5204 | 5203 | Jaw length mm |
|---|---|---|---|---|
| 0005 | 200 | 13.85 (W512) | 23.50 (W525) | 73.0 |

## Mechanic's pliers, angled

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** 40° angle, flat-round jaws, highly resilient, jaws do not twist, handles with multi-component plastic covers.

**5204** Made of special tool steel, grip areas finely grooved.

**5203** Made of vanadium electric steel, grip areas cross-toothed.

| Order No. | Length mm | 5204 | 5203 | Jaw length mm |
|---|---|---|---|---|
| 0010 | 200 | 16.30 (W512) | 25.70 (W525) | 73.0 |

## Mechanic's pliers, offset

**Design: DIN ISO 5745.** Made of vanadium electric steel, hardened and tempered in oil. **Chrome-plated head,** offset, flat-round jaws, cross-serrated grip areas, highly resilient, jaws do not twist, handles with multi-component plastic covers.

| Order No. | Length mm | 5203 | Jaw length mm |
|---|---|---|---|
| 0015 | 200 | 25.80 (W525) | 73.0 |

## Gripping pliers (needle-nose pliers)

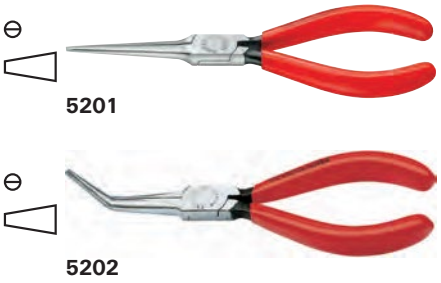
**Design:** Made of chrome-vanadium electric steel, oil hardened and tempered. **Polished head,** with particularly long, smooth-ground jaws, edges carefully deburred, plastic-covered handles.

**Application:** For the finest assembly, bending and adjusting work.

**5201** Straight jaws.

**5202** 45° angled jaws.

| Order No. | Length mm | 5201 | 5202 | Jaw length mm |
|---|---|---|---|---|
| 0160 | 160 | 20.20 (W525) | 22.40 (W525) | 55.0 |



## Adjusting pliers

**Design: DIN ISO 5235.** Made of special grade, special tool steel, hardened and tempered in oil. **Polished head,** polished grip zones, edges carefully deburred, plastic-covered handles.

**Application:** For gripping construction components and wires of the smallest diameters as well as for bending contact and relay springs.

| Order No. | Design | 5209 KNIPEX | Length mm | Jaw length mm |
|---|---|---|---|---|
| 0005 | Flat, pointed jaws | 17.00 | 135 | 34.0 |
| 0010 | Flat, wide jaws | 16.65 (W525) | 135 | 34.0 |

5209 0005

5209 0010

## Radio pliers, straight

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Polished head,** flat-round, straight jaws, serrated grip areas, blades additionally inductively hardened (61 HRC).

**Application:** For gripping and cutting work in precision mechanics.

**5214** Made of special tool steel, handles plastic coated.

**5218** Made of vanadium electric steel, forged, handles plastic coated.

**5221** Made of vanadium electric steel, forged, handles with multi-component plastic covers.

| Order No. | Length mm | 5214 format | 5218 KNIPEX | 5221 KNIPEX | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|
| 0140 | 140 | – | 12.90 | 15.20 | 1.6 |
| 0160 | 160 | 8.20 (W512) | 13.00 (W525) | 15.45 (W525) | 1.6 |

5214 format professional quality

5218 KNIPEX

5221 KNIPEX

## Radio pliers, straight

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** flat-round, straight jaws, serrated grip areas, blades additionally inductively hardened (61 HRC). Handles with multi-component plastic covers.

**Application:** For gripping and cutting work in precision mechanics.

**5215** Made of special tool steel.

**5219** Made of vanadium electric steel, forged.

| Order No. | Length mm | 5215 format | 5219 KNIPEX | Cutting values Ø hard wire mm |
|---|---|---|---|---|
| 0140 | 140 | – | 17.45 | 1.6 |
| 0160 | 160 | 12.70 (W512) | 17.95 (W525) | 1.6 |

5215 format professional quality

5219 KNIPEX

## VDE radio pliers, straight

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** flat-round, straight jaws, serrated grip areas, blades additionally inductively hardened (61 HRC). Handles with multi-component plastic covers, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For gripping and cutting work with voltages up to 1000 Volt in precision mechanics.

**5217** Made of special tool steel.

**5220** Made of vanadium electric steel, forged With recessed grips and indented lettering.

| Order No. | Length mm | 5217 format | 5220 KNIPEX | Cutting values Ø hard wire mm |
|---|---|---|---|---|
| 0160 | 160 | 15.05 (W512) | 20.30 (W525) | 1.6 |

1000 V

5217 format professional quality

5220 KNIPEX

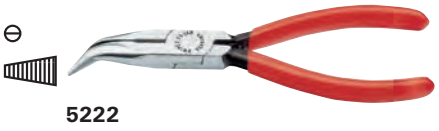
## Radio pliers, angled

**Design: DIN ISO 5745.** Made of vanadium electric steel, forged; hardened and tempered in oil, flat and round angled jaws, serrated grip zones; blades additionally inductively hardened (61 HRC).

**Application:** For gripping and cutting work in precision mechanics.

**5222** Black atramentised, **polished head,** plastic-covered handles.

**5224** **Chrome-plated head,** handles with multi-component plastic covers.


5222

5224

| Order No. | Length mm | 5222 KNIPEX | 5224 KNIPEX | Cutting values Ø hard wire mm |
|---|---|---|---|---|
| 0160 | 160 | 15.50 (W525) | 20.70 (W525) | 1.6 |

## VDE radio pliers, angled

**Design: DIN ISO 5745.** Made of vanadium electric steel, forged; hardened and tempered in oil, **chrome-plated head,** flat and round angled jaws, serrated grip zones, blades additionally inductively hardened (61 HRC). Handles with multi-component plastic covers, with recessed grips and indented lettering. **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For gripping and cutting work with voltages up to 1000 Volt in precision mechanics.

1000 V

| Order No. | Cutting values Ø hard wire mm | 5223 KNIPEX | Length mm |
|---|---|---|---|
| 0160 | 1.6 | 22.90 (W525) | 160 |

## Pointed pliers, straight

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Polished head,** flat-round, straight jaws, serrated grip areas, blades additionally inductively hardened (61 HRC).

**Application:** For gripping, bending and cutting work in precision mechanics.

**5226** Made of special tool steel, handles plastic coated.

**5239** Made of vanadium electric steel, torsion tolerance, elastic precision tips, handles plastic coated.

**5240** Made of vanadium electric steel, torsion tolerance, elastic precision tips, handles multi-component plastic covers.

5226 format professional quality

5239 KNIPEX

5240 KNIPEX

| Order No. | Length mm | 5226 format professional quality | 5239 KNIPEX | 5240 KNIPEX | Cutting values Ø hard wire mm 5226 | 5239/5240 |
|---|---|---|---|---|---|---|
| 0200 | 200 | 9.75 (W512) | 16.80 (W525) | 19.10 (W525) | 1.8 | 2.2 |

## Pointed pliers, straight

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** flat-round, straight jaws, serrated grip areas, blades additionally inductively hardened (61 HRC). Handles with multi-component plastic covers.

**Application:** For gripping, bending and cutting work in precision mechanics.

**5227** Made of special tool steel.

**5242** Made of vanadium electric steel, torsion tolerance, elastic precision tips.

5227 format professional quality

5242 KNIPEX

| Order No. | Length mm | 5227 format professional quality | 5242 KNIPEX | Cutting values Ø hard wire mm 5227 | 5242 |
|---|---|---|---|---|---|
| 0200 | 200 | 13.60 (W512) | 21.40 (W525) | 1.8 | 2.2 |

## VDE pointed pliers, straight

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** flat-round, straight jaws, serrated grip areas, blades additionally inductively hardened (61 HRC). **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For gripping, bending and cutting work in precision mechanics.

**5230** Made of special tool steel, handles with multi-component plastic covers.

**5245** Made of vanadium electric steel, torsion tolerance, elastic precision tips. Handles with multi-component plastic covers, with recessed grips and indented lettering.

**5246** Made of vanadium electric steel, torsion tolerance, elastic precision tips, handles plastic coated.

| Order No. | Length mm | 5230 format | 5245 KNIPEX | 5246 KNIPEX | Cutting values Ø hard wire mm 5230 | 5245/5246 |
|---|---|---|---|---|---|---|
| 0200 | 200 | 17.50 (W512) | 24.80 (W525) | 29.10 (W525) | 1.8 | 2.2 |

## Pointed pliers, angled

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Polished head,** flat-round jaws angled 40°, serrated grip zones, blades additionally inductively hardened (61 HRC).

**Application:** For gripping, bending and cutting work in precision mechanics.

**5232** Made of special tool steel, handles plastic coated.

**5251** Made of vanadium electric steel, torsion tolerance, elastic precision tips, handles plastic coated.

**5252** Made of vanadium electric steel, torsion tolerance, elastic precision tips, handles multi-component plastic covers.

| Order No. | Length mm | 5232 format | 5251 KNIPEX | 5252 KNIPEX | Cutting values Ø hard wire mm 5232 | 5251/5252 |
|---|---|---|---|---|---|---|
| 0200 | 200 | 11.45 (W512) | 18.90 (W525) | 21.10 (W525) | 1.8 | 2.2 |

## Pointed pliers, angled

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** flat-round jaws angled 40°, serrated grip zones, blades additionally inductively hardened (61 HRC). Handles with multi-component plastic covers.

**Application:** For gripping, bending and cutting work in precision mechanics.

**5233** Made of special tool steel.

**5254** Made of vanadium electric steel, torsion tolerant, elastic precision tips.

| Order No. | Length mm | 5233 format | 5254 KNIPEX | Cutting values Ø hard wire mm 5233 | 5254 |
|---|---|---|---|---|---|
| 0200 | 200 | 16.05 (W512) | 25.00 (W525) | 1.8 | 2.2 |

## VDE pointed pliers, angled

**Design: DIN ISO 5745.** Hardened and tempered in oil. **Chrome-plated head,** flat-round jaws angled 40°, serrated grip zones, blades additionally inductively hardened (61 HRC). Handles with multi-component plastic covers, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For gripping, bending and cutting work under voltages up to 1000 Volt in precision mechanics.

**5236** Made of special tool steel.

**5257** Made of vanadium electric steel, torsion tolerance, elastic precision tips. With handle recess and indented lettering.

| Order No. | Length mm | 5236 format | 5257 KNIPEX | Cutting values Ø hard wire mm 5236 | 5257 |
|---|---|---|---|---|---|
| 0200 | 200 | 19.25 (W512) | 27.90 (W525) | 1.8 | 2.2 |

## Sample wires for cutting values

| Wire type | Tensile strength (N/mm²) FORMAT | Tensile strength (N/mm²) Knipex |
|---|---|---|
| soft | 200 | 220 |
| medium-hard | 800 | 750 |
| hard | 1600 | 1800 |
| Piano wire | 2000 | 2300 |

## Assembly pliers

**Design:** Made of special grade, special tool steel; hardened and tempered in oil. Polished head, flat and round jaws, serrated grip zones. Plastic-covered handles.

**Application:** For gripping, adjusting and assembly work with higher gripping force.

| Order No. | Length mm | 5258 |
|---|---|---|
| 0200 | 200 | 20.20 (W525) |

## Assembly pliers, with cross profiles

NEW

**Design: DIN ISO 5743.** Made of special tool steel, hardened and tempered in oil. **Polished head,** flat and round jaws, serrated grip zones with milled, smooth grooves and a serrated gap to grip round items. Plastic-covered handles.

**Application:** For gripping, adjusting and installation works at difficult to access places, e.g. in installation areas or in machine construction and installation.

**5259** Straight jaws.

**5260** Jaws angled at 40°.

| Order No. | Length mm | 5259 | 5260 | Jaw length mm 5259 | Jaw length mm 5260 |
|---|---|---|---|---|---|
| 0280 | 280 | 22.20 (W525) | 23.20 (W525) | 76.5 | 70.0 |

5259

5260

## Power centre cutter

**Design:** Made of chromium-vanadium high-performance steel, hardened and tempered in oil. **Polished head,** with welded hinge axle for heavy-duty use. Cuts hard or thick wires with less effort than side-cutting pliers of the same length. Blades additionally inductively hardened (64 HRC), handles covered with plastic.

| Order No. | Length mm | 5278 | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|
| 0250 | 250 | 32.10 (W525) | 5.0 | 5.0 | 3.8 | 3.5 |

Welded-on Hinge axle

## End-cutting pliers

**Design: DIN ISO 5748.** Hardened and tempered in oil. **Polished head.** For hard and soft wire. Blades additionally inductively hardened (61 HRC). Plastic-covered handles.

**Application:** For cutting hard and soft wire. Also suitable for twisting and cutting binding wire.

**5283** Made of special tool steel.

**5284** Made of special grade, special tool steel.

| Order No. | Length mm | 5283 | 5284 | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0180 | 180 | 10.15 | 11.80 | 3.8 | 3.2 | 2.5 |
| 0200 | 200 | – | 14.70 | 4.0 | 3.5 | 2.8 |
| 0280 | 280 | – (W512) | 16.75 (W525) | 4.5 | 4.0 | 3.2 |

5283

5284

## Power end cutter

**Design: DIN ISO 5748.** Hardened and tempered in oil. **Polished head.** High cutting force with little effort due to the ideal set-up of the cutting angle and transmission ratio. Blades additionally inductively hardened (64 HRC). Plastic-covered handles.

**Application:** For cutting hard and soft wire. Also suitable for twisting and cutting binding wire.

**5280** Made of special tool steel.

**5281** Made of chromium-vanadium electric steel.

| Order No. | Length mm | 5280 format | 5281 KNIPEX | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|---|
| 0140 | 140 | – | 20.70 | 4.0 | 3.1 | 2.0 | 1.5 |
| 0160 | 160 | 16.05 | 21.60 | 4.5 | 3.5 | 2.2 | 2.0 |
| 0200 | 200 | – (W512) | 26.70 (W525) | 5.0 | 3.8 | 3.0 | 2.5 |

5280 format professional quality

5281 KNIPEX

## Bolt end-cutting pliers

**Design:** Made of vanadium electric steel, hardened and tempered in oil. **Polished head.** Particularly high cutting performance compared to other lever end cutters, with less effort due to optimal transmission. Blades additionally inductively hardened (64 HRC). Plastic-covered handles.

**Application:** Ideally suited to wire and fencing construction, as well as for cutting bolts, nails etc.

| Order No. | Length mm | 5287 KNIPEX | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|
| 0200 | 200 | 37.70 (W525) | 6.0 | 4.0 | 3.5 | 3.0 |

## TwinForce® high-performance side-cutting pliers

**Design: DIN ISO 5749.** Made of chromium-vanadium high-performance steel, forged, hardened and tempered in oil. **Polished head.** Optimum transmission due to the double-hinge design for **50% less force** when compared to normal power side-cutting pliers of the same length. Welded-on and precision-milled hinge axles for high stability and zero-clearance working. Dampening of cutting impact to protect the hand. Handles with multi-component plastic covers.

**Application:** For rough and fine cutting of all types of wire and band materials. Particularly suited for multi cutter or especially hard cutting cases.

| Order No. | Length mm | 5291 KNIPEX | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|
| 0180 | 180 | 46.80 (W525) | 5.5 | 4.6 | 3.2 | 3.0 |

## X-Cut compact side-cutting pliers®

**Design:** Made of chromium-vanadium high-performance steel, forged, hardened and tempered in oil. Blades additionally inductively hardened (64 HRC). With high power boost, **40% reduced effort** when compared with side-cutting pliers of the same length due to the improved leverage ratio with the offset pivot point. Double-mounted hinge axle for heavy-duty use over the long term. Handles with multi-component plastic covers.

**Application:** Ideal for universal use in installation, maintenance and production.

**5294 0160** **Polished head.**

**5294 1160** **Head chrome plated.**

**5294 2160** **Chrome-plated head.** With recessed grips and indented lettering. **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

| Order No. | Length mm | 5294 KNIPEX | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|
| 0160 | 160 | 28.20 | 4.8 | 3.8 | 2.7 | 2.2 |
| 1160 | 160 | 33.10 | 4.8 | 3.8 | 2.7 | 2.2 |
| 2160 | 160 | 33.80 (W525) | 4.8 | 3.8 | 2.7 | 2.2 |

5294 0160

5294 1160

5294 2160

## Side cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Polished head,** blades additionally inductively hardened (62 HRC), handles plastic coated.

**5290** Made of special tool steel.

**5299** Made of vanadium electric steel Clean cut with thin copper wires, even at cutting tips.

5290 format professional quality

5299 KNIPEX

| Order No. | Length mm | 5290 format | 5299 KNIPEX | Cutting values Ø medium-hard wire mm 5290 | Cutting values Ø medium-hard wire mm 5299 | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0110 | 110 | – | 13.00 | – | 2.0 | 1.2 |
| 0125 | 125 | 7.85 | 13.00 | 2.3 | 2.3 | 1.5 |
| 0140 | 140 | 8.70 | 13.00 | 2.5 | 2.5 | 1.8 |
| 0160 | 160 | 9.35 | 13.20 | 2.8 | 3.0 | 2.0 |
| 0180 | 180 | 10.90 (W512) | 14.50 (W525) | 3.0 | 3.0 | 2.5 |

## Side cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Polished head,** blades additionally inductively hardened (62 HRC), handles with multi-component plastic covers.

**5292** Made of special tool steel.

**5300** Made of vanadium electric steel Clean cut with thin copper wires, even at cutting tips.

5292 format professional quality

5300 KNIPEX

| Order No. | Length mm | 5292 format | 5300 KNIPEX | Cutting values Ø medium-hard wire mm 5292 | Cutting values Ø medium-hard wire mm 5300 | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0125 | 125 | 10.20 | 15.90 | 2.3 | 2.3 | 1.5 |
| 0140 | 140 | 11.40 | 16.20 | 2.5 | 2.5 | 1.8 |
| 0160 | 160 | 12.60 | 16.60 | 2.8 | 3.0 | 2.0 |
| 0180 | 180 | 13.70 (W512) | 17.75 (W525) | 3.0 | 3.0 | 2.5 |

## Side cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Chrome-plated head,** blades additionally inductively hardened (62 HRC), handles with multi-component plastic covers.

**5293** Made of special tool steel.

**5302** Made of vanadium electric steel Clean cut with thin copper wires, even at cutting tips.

5293 format professional quality

5302 KNIPEX

| Order No. | Length mm | 5293 format | 5302 KNIPEX | Cutting values Ø medium-hard wire mm 5293 | Cutting values Ø medium-hard wire mm 5302 | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0125 | 125 | 11.40 | 18.85 | 2.3 | 2.3 | 1.5 |
| 0140 | 140 | 12.95 | 18.90 | 2.5 | 2.5 | 1.8 |
| 0160 | 160 | 13.55 | 19.70 | 2.8 | 3.0 | 2.0 |
| 0180 | 180 | 15.30 (W512) | 21.60 (W525) | 3.0 | 3.0 | 2.5 |

## VDE side-cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Chrome-plated head,** blades additionally inductively hardened (62 HRC). **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**5296** Made of special tool steel, handles with multi-component plastic covers.

**5305** Made of vanadium electric steel Clean cut with thin copper wires, even at cutting tips. Handles with multi-component plastic covers, with handle recess and indented lettering.

**5306** Made of vanadium electric steel Clean cut with thin copper wires, even at cutting tips. Plastic-covered handles.

| Order No. | Length mm | 5296 format | 5305 KNIPEX | 5306 KNIPEX | Cutting values Ø medium-hard wire mm 5296 | Cutting values Ø medium-hard wire mm 5305/5306 | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|---|
| 0125 | 125 | 13.60 | 20.70 | – | 2.3 | 2.0 | 1.5 |
| 0140 | 140 | 13.60 | 20.90 | – | 2.5 | 2.5 | 1.8 |
| 0160 | 160 | 16.45 | 22.50 | – | 2.8 | 3.0 | 2.0 |
| 0180 | 180 | 18.45 (W512) | 24.20 (W525) | 28.30 (W525) | 3.0 | 3.0 | 2.5 |

1000 V

5296 format professional quality

5305 KNIPEX

5306 KNIPEX

## VDE wire-stripping side-cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Chrome-plated head**, blades additionally inductively hardened (60 HRC), handles with multi-component plastic covers, **insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** Multi-purpose function for cutting and wire stripping.

**5307** Made of special tool steel.

**5308** Made of vanadium electric steel Extra **long tips** for the finest cutting work, even in tight spaces. **25% higher cutting performance** due to the improved leverage ratio when compared with normal side-cutting pliers of the same length. With recessed grips and indented lettering.

| Order No. | Length mm | 5307 format | 5308 KNIPEX | Cutting values Ø soft wire mm | Conductor cross-section mm² |
|---|---|---|---|---|---|
| 0160 | 160 | 27.20 (W512) | 32.80 (W525) | 2.5 | 1.5 + 2.5 |

1000 V

5307 format professional quality

5308 KNIPEX

## Power side-cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Polished head,** blades additionally inductively hardened (64 HRC), handles plastic coated.

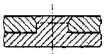
**5314** Made of special steel.

**5323** Made of chromium-vanadium high-performance steel **20% reduced effort due to the improved leverage ratio** when compared with normal side-cutting pliers of the same length. With welded-on hinge axle for heavy-duty use.

| Order No. | Length mm | 5314 format | 5323 KNIPEX | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|
| 0140 | 140 | – | 16.20 | 3.0 | 2.0 | 1.5 |
| 0160 | 160 | 12.05 | 16.65 | 3.4 | 2.5 | 2.0 |
| 0180 | 180 | 12.80 | 18.30 | 3.8 | 2.7 | 2.2 |
| 0200 | 200 | 14.60 | 20.20 | 4.2 | 3.0 | 2.5 |
| 0250 | 250 | – (W512) | 25.20 (W525) | 4.6 | 3.5 | 3.0 |

5314 format professional quality

5323 KNIPEX



**Welded-on hinge axle**

## Power side-cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Polished head,** blades additionally inductively hardened (64 HRC), handles with multi-component plastic covers.

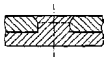
**5315** Made of special steel.

**5322** Made of chromium-vanadium high-performance steel **20% reduced effort due to the improved leverage ratio** when compared with normal side-cutting pliers of the same length. With welded-on hinge axle for heavy-duty use.

| Order No. | Length mm | 5315 format | 5322 KNIPEX | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|
| 0140 | 140 | – | 19.60 | 3.0 | 2.0 | 1.5 |
| 0160 | 160 | 14.60 | 20.20 | 3.4 | 2.5 | 2.0 |
| 0180 | 180 | 15.55 | 22.20 | 3.8 | 2.7 | 2.2 |
| 0200 | 200 | 18.25 | 23.70 | 4.2 | 3.0 | 2.5 |
| 0250 | 250 | – (W512) | 28.40 (W525) | 4.6 | 3.5 | 3.0 |

5315 format professional quality

5322 KNIPEX



Welded-on hinge axle

## Power side-cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Chrome-plated head,** blades additionally inductively hardened (64 HRC), handles with multi-component plastic covers.

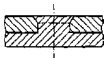
**5317** Made of special steel.

**5324** Made of chromium-vanadium high-performance steel **20% reduced effort due to the improved leverage ratio** when compared with normal side-cutting pliers of the same length. With welded-on hinge axle for heavy-duty use.

| Order No. | Length mm | 5317 format | 5324 KNIPEX | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|
| 0160 | 160 | 16.15 | 24.90 | 3.4 | 2.5 | 2.0 |
| 0180 | 180 | 17.05 | 27.20 | 3.8 | 2.7 | 2.2 |
| 0200 | 200 | 19.25 | 28.50 | 4.2 | 3.0 | 2.5 |
| 0250 | 250 | – (W512) | 34.60 (W525) | 4.6 | 3.5 | 3.0 |

5317 format professional quality

5324 KNIPEX



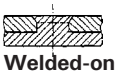
Welded-on hinge axle

## Power side-cutting pliers with opening spring

**Design: DIN ISO 5749.** Made of chromium-vanadium electric steel, hardened and tempered in oil. **Polished head with opening spring,** blades additionally inductively hardened (64 HRC). With high purchase, **20 % reduced effort due to the improved leverage ratio** when compared with normal side-cutting pliers of the same length. With welded-on hinge axle for heavy-duty use. Handles with multi-component plastic covers.

| Order No. | Length mm | 5311 KNIPEX | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|
| 0160 | 160 | 22.50 | 3.4 | 2.5 | 2.0 |
| 0180 | 180 | 24.40 (W525) | 3.8 | 2.7 | 2.2 |

KNIPEX



Welded-on hinge axle

## VDE power side-cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Chrome-plated head,** blades additionally inductively hardened (64 HRC). **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**5320** Made of special steel, handles with multi-component plastic covers.

**5325** Made of chromium-vanadium high-performance steel **20% reduced effort due to the improved leverage ratio** when compared with normal side-cutting pliers of the same length. With welded-on hinge axle for heavy-duty use. Handles with multi-component plastic covers, with handle recess and indented lettering.

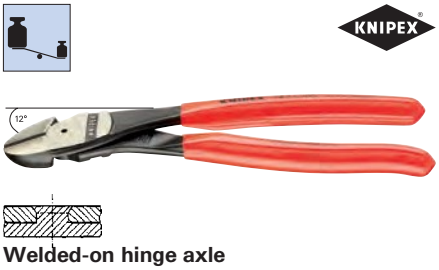
**5331** Made of chromium-vanadium high-performance steel **20% reduced effort due to the improved leverage ratio** when compared with normal side-cutting pliers of the same length. With welded-on hinge axle for heavy-duty use. Plastic-covered handles.

| Order No. | Length mm | 5320 format | 5325 KNIPEX | 5331 KNIPEX | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|---|
| 0160 | 160 | 18.75 | 27.50 | – | 3.4 | 2.5 | 2.0 |
| 0180 | 180 | 20.30 | 29.70 | – | 3.8 | 2.7 | 2.2 |
| 0200 | 200 | 23.40 | 31.50 | 37.90 | 4.2 | 3.0 | 2.5 |
| 0250 | 250 | – (W512) | 40.30 (W525) | 43.00 (W525) | 4.6 | 3.5 | 3.0 |

## Power side-cutting pliers with angled head

**Design: DIN ISO 5749.** Made of chromium-vanadium high-performance steel, hardened and tempered in oil. **Head polished and angled at 12°,** blades additionally inductively hardened (64 HRC). With high purchase, **20 % reduced effort due to the improved leverage ratio** when compared with normal side-cutting pliers of the same length. With welded-on hinge axle for heavy-duty use. Plastic-covered handles.

| Order No. | Length mm | 5312 KNIPEX | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|
| 0200 | 200 | 22.10 (W525) | 4.2 | 3.0 | 2.5 |




## Plastic side-cutting pliers

**Design:** Made of vanadium electric steel, hardened and tempered in oil, with opening spring. **Polished head.** Cutting surface ground flat, without bevel.

**Application:** For smooth cutting (as there is no bevel) of spouts on plastic parts or soft materials such as lead.

**532A** NEW Straight blades. Handles with multi-component plastic covers.

**5326** Straight blades. Plastic-covered handles.
**Length 160 mm:** Extra long blades for the finest work, even in tight spaces. 25% higher cutting performance due to the improved leverage ratio when compared with normal side-cutting pliers of the same length.

**5328** 45° angled cutting. Plastic-covered handles.

**5330** 85° angled cutting. Plastic-covered handles.

| Order No. | Length mm | 532A KNIPEX | 5326 KNIPEX | 5328 KNIPEX | 5330 KNIPEX |
|---|---|---|---|---|---|
| 0125 | 125 | 19.15 | – | – | – |
| 0140 | 140 | – | 17.95 | – | – |
| 0160 | 160 | – | 18.80 | 29.40 | 33.50 |
| 0180 | 180 | – (W525) | 20.20 (W525) | – (W525) | – (W525) |

## Pliers set

**Design:** Handles with multi-component plastic covers, water pump pliers feature plastic-covered handles.

**5321 0010** **Chrome-plated heads.** Supplied in two-coloured foam inlay for storage in mobile workshops or workbenches, dimensions L x W x H 355 x 165 x 33.

**5321 0020** **Polished heads.** Supplied in SB packaging.

**5321 0030** **Polished heads.** Supplied in SB packaging.

**5321 0040** **Chromed heads. Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.** Supplied in SB packaging.

5321 0010

5321 0020

5321 0030

5321 0040

| Order No. | Design | 5321 | Set contents | |
|---|---|---|---|---|
| 0010 | 4-part | 97.00 | 1 universal pliers, 180 mm | (Order no. 5153) |
| | | | 1 pointed pliers, 200 mm | (Order no. 5242) |
| | | | 1 power side-cutter, 180 mm | (Order no. 5324) |
| | | | 1 water pump pliers Cobra®, 250 mm | (Order no. 5593) |
| 0020 | 3-part | 50.80 | 1 universal pliers, 180 mm | (Order no. 5153) |
| | | | 1 side-cutting pliers, 160 mm | (Order no. 5300) |
| | | | 1 water pump pliers Cobra®, 250 mm | (Order no. 5593) |
| 0030 | 3-part | 49.00 NEW | 1 universal pliers, 180 mm | (Order no. 5153) |
| | | | 1 side-cutting pliers, 160 mm | (Order no. 5300) |
| | | | 1 pointed pliers, 200 mm | (Order no. 5240) |
| 0040 | 3-part | 67.00 NEW | 1 VDE universal pliers, 180 mm | (Order no. 5154) |
| | | | 1 VDE side-cutting pliers, 160 mm | (Order no. 5305) |
| | | | 1 VDE pointed pliers, 200 mm | (Order no. 5245) |

(W525)

## Pliers set

**Design:** Made of special tool steel. Supplied in plastic case.

**5327 0010** **Polished heads,** handles covered with plastic.

**5327 0020** **Chrome-plated heads,** handles with multi-component plastic covers.

**5327 0030** **Chrome-plated heads,** handles with multi-component plastic covers, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

5327 0010

5327 0020

5327 0030

| Order No. | Design | 5327 | Set contents | |
|---|---|---|---|---|
| 0010 | 3-part | 29.20 | 1 side-cutting pliers, 160 mm | (Order no. 5290) |
| | | | 1 universal pliers, 180 mm | (Order no. 5145) |
| | | | 1 pointed pliers, straight, 200 mm | (Order no. 5226) |
| 0020 | 3-part | 37.80 | 1 side-cutting pliers, 160 mm | (Order no. 5293) |
| | | | 1 universal pliers, 180 mm | (Order no. 5148) |
| | | | 1 pointed pliers, straight, 200 mm | (Order no. 5227) |
| 0030 | 3-part | 44.90 | 1 VDE side-cutting pliers, 160 mm | (Order no. 5296) |
| | | | 1 VDE universal pliers, 180 mm | (Order no. 5151) |
| | | | 1 VDE pointed pliers, straight, 200 mm | (Order no. 5230) |

(W512)

## Pliers set

**Design:** Made of special tool steel. **Chrome-plated heads,** handles with multi-component plastic covers. Water pump pliers with plastic-covered handles Supplied in plastic case.

format professional quality

5327 0040

5327 0050

| Order No. | Design | 5327 format | Set contents | |
|---|---|---|---|---|
| 0040 | 4-part | 65.70 | 1 radio pliers, straight, 160 mm | (Order no. 5215) |
| | | | 1 side-cutting pliers, 160 mm | (Order no. 5293) |
| | | | 1 universal pliers, 180 mm | (Order no. 5148) |
| | | | 1 water pump pliers with quick adjustment, 250 mm | (Order no. 5814) |
| 0050 | 6-part | 97.40 | 1 pointed pliers, straight, 200 mm | (Order no. 5227) |
| | | | 1 pointed pliers, angled, 200 mm | (Order no. 5233) |
| | | | 1 side-cutting pliers, 160 mm | (Order no. 5293) |
| | | | 1 power side-cutter, 180 mm | (Order no. 5317) |
| | | | 1 universal pliers, 200 mm | (Order no. 5148) |
| | | | 1 water pump pliers with quick adjustment, 250 mm | (Order no. 5814) |
| | | (W512) | | |

## Pliers set with screwdriver

**Design:** Pliers made of special tool steel, **chrome-plated heads**. Supplied in plastic case. Screwdriver made of special steel, with 2-component handle, ergonomic, with integrated soft zones and anti-roll protection.

format professional quality

**5327 0060** Pliers handles with multi-component plastic covers.

**5327 0070** Pliers handles with multi-component plastic covers, all tools **insulated up to 1000 V, IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

VDE GS

1000 V

5327 0060

5327 0070

| Order No. | Design | 5327 format | Set contents | |
|---|---|---|---|---|
| 0060 | 7-part | 57.80 | 1 side-cutting pliers, 160 mm | (Order no. 5293) |
| | | | 1 universal pliers, 180 mm | (Order no. 5148) |
| | | | 1 pointed pliers, straight, 200 mm | (Order no. 5227) |
| | | | 1 slot screwdriver 0.8 x 4 mm | (Order no. 6266) |
| | | | 2 Phillips screwdrivers PH 1; 2 | (Order no. 6300) |
| | | | 1 voltage tester | |
| 0070 | 7-part | 69.20 | 1 VDE side-cutting pliers, 160 mm | (Order no. 5296) |
| | | | 1 VDE universal pliers, 180 mm | (Order no. 5151) |
| | | | 1 VDE pointed pliers, straight, 200 mm | (Order no. 5230) |
| | | | 1 VDE slot screwdriver 0.5 x 3 mm | (Order no. 6278) |
| | | | 2 VDE Phillips screwdrivers PH 1; 2 | (Order no. 6328) |
| | | | 1 voltage tester | |
| | | (W512) | | |

## Internal circlip pliers, straight

**Design: DIN 5256, C-shape, straight.**

**Application:** For assembling internal safety rings.

**5617** Made of chrome-vanadium steel, hardened and tempered in oil, **polished head.** Especially stable tips, non-slip due to cone base. Plastic-covered handles.

**5614** Made of chromium-vanadium steel, forged, hardened and tempered in oil, **polished head.** Non-slip due to special tip shape. Plastic-covered handles.

**5619** **Precision design.** Made of chromium-vanadium electric steel, forged, **head grey atramentised,** with inserted tips made of highest-grade, drawn spring steel wire with large contact surface, hence no twisting of the rings. Utmost precision due to **screwed hinge, as such can be highly loaded** with a service life that is **10 times longer than normal in continuous operation.** Plastic-coated handles.

**5668** **Precision design with opening restriction.** As Order No. 5619, additionally with opening restriction **for standard installation in series production.**

**5618** Made of high-strength rolled steel, with interchangeable tips made of special tool steel and a detachable locking mechanism. **Head and grips black powder varnished.**

Screwed joint

Screwed joint

5617

5614

5619

5668

5618

| Order No. | Size | 5617 format | 5614 KNIPEX | 5619 KNIPEX | 5668 KNIPEX | 5618 KNIPEX | Length mm 5617 | Length mm 5614/5619/5668 | Length mm 5618 | Hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | J 0 | 7.90 | 10.25 | 13.40 | – | – | 145 | 140 | – | 8– 13 |
| 0001 | J 1 | 7.35 | 10.25 | 13.40 | 22.30 | – | 145 | 140 | – | 12– 25 |
| 0002 | J 2 | 7.80 | 10.90 | 14.05 | 23.80 | – | 185 | 180 | – | 19– 60 |
| 0003 | J 3 | 10.05 | 12.40 | 15.85 | – | – | 230 | 225 | – | 40–100 |
| 0004 | J 4 | 17.25 | 20.90 | 27.30 | – | – | 310 | 320 | – | 85–140 |
| 0005 | J 5 | – | – | – | – | 103.00 | – | – | 570 | 122–300 |
| 0006 | J 6 | – | – | – | – | 103.00 | – | – | 580 | 252–400 |
| | | (W512) | (W525) | (W525) | (W525) | (W525) | | | | |

## Internal circlip pliers, curved

**Design: DIN 5256, D-shape, curved.**

**Application:** For assembling internal safety rings.

**5623** Made of chrome-vanadium steel, hardened and tempered in oil, **polished head.** Especially stable tips, non-slip due to cone base. Plastic-covered handles.

**5615** Made of chromium-vanadium steel, forged, hardened and tempered in oil, **polished head.** Non-slip due to special tip shape. Plastic-covered handles.

**5625** **Precision design.** Made of chromium-vanadium electric steel, forged, **head grey atramentised,** with inserted tips made of highest-grade, drawn spring steel wire with large contact surface, hence no twisting of the rings. Utmost precision due to **screwed hinge, as such can be highly loaded** with a service life that is **10 times longer than normal in continuous operation.** Plastic-coated handles.

**5624** Made of high-strength rolled steel, with interchangeable tips made of special tool steel and a detachable locking mechanism. **Head and grips black powder varnished.**

Screwed joint

5623

5615

5625

5624

| Order No. | Size | 5623 format | 5615 KNIPEX | 5625 KNIPEX | 5624 KNIPEX | Length mm 5623 | Length mm 5615/5625 | Length mm 5624 | Hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|
| 0001 | J 01 | 8.35 | 11.60 | 15.25 | – | 135 | 130 | – | 8– 13 |
| 0011 | J 11 | 7.80 | 11.60 | 15.25 | – | 135 | 130 | – | 12– 25 |
| 0021 | J 21 | 8.55 | 11.80 | 15.45 | – | 170 | 160.170 | – | 19– 60 |
| 0031 | J 31 | 10.70 | 13.10 | 17.05 | – | 215 | 210.215 | – | 40–100 |
| 0041 | J 41 | 17.90 | 22.40 | 29.10 | – | 295 | 305.300 | – | 85–140 |
| 0051 | J 51 | – | – | – | 103.50 | – | – | 590 | 122–300 |
| 0061 | J 61 | – | – | – | 103.50 | – | – | 600 | 252–400 |
| | | (W512) | (W525) | (W525) | (W525) | | | | |

## Circlip pliers for internal and external rings, curved 45°

**Design:** Based on DIN, **but curved 45°.** Made of chromium-vanadium steel, forged, hardened and tempered in oil, polished head. Non-slip due to special tip shape. Plastic-covered handles.

**5650** For assembling internal safety rings.

**5654** For assembling external safety rings and for opening circlips.

| Order No. | Size | 5650 | Length mm | Hole Ø mm |
|---|---|---|---|---|
| 0002 | J 02 | 11.75 | 140 | 8– 13 |
| 0012 | J 12 | 11.75 | 140 | 12– 25 |
| 0022 | J 22 | 12.10 | 180 | 19– 60 |
| 0032 | J 32 | 13.20 | 225 | 40–100 |
| | | (W525) | | |

5650

| Order No. | Size | 5654 | Length mm | Hole Ø mm |
|---|---|---|---|---|
| 0002 | A 02 | 13.00 | 130 | 3– 10 |
| 0012 | A 12 | 12.45 | 130 | 10– 25 |
| 0022 | A 22 | 13.50 | 185 | 19– 60 |
| 0032 | A 32 | 15.15 | 210 | 40–100 |
| | | (W525) | | |

5654

## External circlip pliers, straight

**Design: DIN 5254, A-shape, straight.**

**Application:** For assembling external safety rings and for opening circlips.

**5620** Made of chrome-vanadium steel, hardened and tempered in oil, **polished head.** Especially stable tips, non-slip due to cone base. Plastic-covered handles.

5620

**5631** Made of chromium-vanadium steel, forged, hardened and tempered in oil, **polished head.** Non-slip due to special tip shape. Plastic-covered handles.

5631

**5622** **Precision design.** Made of chromium-vanadium electric steel, forged, **head grey atramentised,** with inserted tips made of highest-grade, drawn spring steel wire with large contact surface, hence no twisting of the rings. Utmost precision due to **screwed hinge with internal opening spring, therefore can be highly loaded** with a service life that is **10 times longer than normal in continuous operation.** Plastic-coated handles.

Internal spring

Screwed joint

5622

**5676** **Precision design with opening restriction.** As Order No. 5622, additionally with opening restriction **for standard installation in series production.**

Internal spring

Screwed joint

5676

**5621** Made of high-strength rolled steel, with interchangeable tips made of special tool steel and a detachable locking mechanism. **Head and grips black powder varnished.**

5621

| Order No. | Size | 5620 | 5631 | 5622 | 5676 | 5621 | Length mm 5620 | Length mm 5631/5622/5676 | Length mm 5621 | Hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | A 0 | 9.90 | 11.80 | 15.45 | 19.40 | – | 140 | 140 | – | 3– 10 |
| 0001 | A 1 | 8.00 | 11.20 | 14.45 | 21.60 | – | 140 | 140 | – | 10– 25 |
| 0002 | A 2 | 8.75 | 12.40 | 16.00 | 23.30 | – | 175 | 180 | – | 19– 60 |
| 0003 | A 3 | 11.15 | 13.45 | 17.50 | – | – | 225 | 225.210 | – | 40–100 |
| 0004 | A 4 | 18.30 | 23.50 | 30.40 | – | – | 295 | 320 | – | 85–140 |
| 0005 | A 5 | – | – | – | – | 103.00 | – | – | 560 | 122–300 |
| 0006 | A 6 | – | – | – | – | 103.00 | – | – | 570 | 252–400 |
| | | (W512) | (W525) | (W525) | (W525) | (W525) | | | | |

## External circlip pliers, curved

**Design: DIN 5254, D-shape, curved.**

**Application:** For assembling external safety rings and for opening circlips.

**5626** Made of chrome-vanadium steel, hardened and tempered in oil, **polished head.** Especially stable tips, non-slip due to cone base. Plastic-covered handles.

5626 format professional quality

**5632** Made of chromium-vanadium steel, forged, hardened and tempered in oil, **polished head.** Non-slip due to special tip shape. Plastic-covered handles.

5632 KNIPEX

**5628** **Precision design.** Made of chromium-vanadium electric steel, forged, **head grey atramentised,** with inserted tips made of highest-grade, drawn spring steel wire with large contact surface, hence no twisting of the rings. **Utmost precision due to screwed hinge with internal opening spring, therefore can be highly loaded with a service life that is 10 times longer than normal in continuous operation.** Plastic-coated handles.

Internal spring

Screwed joint

5628 KNIPEX

**5679** **Precision design with opening restriction.** As Order No. 5628, additionally with opening restriction **for standard installation in series production.**

Internal spring

Screwed joint

5679 KNIPEX

**5627** Made of high-strength rolled steel, with interchangeable tips made of special tool steel and a detachable locking mechanism. **Head and grips black powder varnished.**

5627 KNIPEX

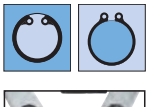
| Order No. | Size | 5626 format | 5632 KNIPEX | 5628 KNIPEX | 5679 KNIPEX | 5627 KNIPEX | Length mm 5626 | 5632 | 5628 | 5679 | 5627 | Hole Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0001 | A 01 | 9.60 | 12.90 | 16.85 | 20.80 | – | 125 | 125 | 130 | 125 | – | 3– 10 |
| 0011 | A 11 | 8.50 | 12.30 | 15.85 | – | – | 125 | 125 | 130 | – | – | 10– 25 |
| 0021 | A 21 | 9.25 | 13.45 | 17.50 | – | – | 160 | 170 | 165 | – | – | 19– 60 |
| 0031 | A 31 | 11.80 | 14.90 | 19.15 | – | – | 200 | 200 | 210 | – | – | 40–100 |
| 0041 | A 41 | 18.95 | 25.50 | 33.00 | – | – | 275 | 300 | 305 | – | – | 85–140 |
| 0051 | A 51 | – | – | – | – | 103.50 | – | – | – | – | 570 | 122–300 |
| 0061 | A 61 | – | – | – | – | 103.50 | – | – | – | – | 580 | 252–400 |
| | | (W512) | (W525) | (W525) | (W525) | (W525) | | | | | | |

## Safety ring tool for internal and external rings

**Design:** Chrome-plated tool body, interchangeable work tips made of chrome-vanadium electro steel. Direct, short holding fixture for a secure hold of the rings. Secure opening, closing and holding of rings due to self-locking precision spindle drive. Hexagonal socket to be operated with angle screwdriver, ratchet key or cordless screwdriver.

**Application:** For the installation or de-installation of external and internal circlip in one step in areas where extreme forces have to be applied with shafts and bearings, e.g. wind and water power systems, tidal systems, generator construction, large machine construction, ship construction as well as aeronautical and space technology.

**Scope of delivery:** Circlip tool, 2 tips for internal rings Ø 6; 9 mm, 2 tips for external rings Ø 6; 9 mm, hexagonal angle screwdriver, plastic case with foam inlay.

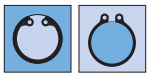


KNIPEX

| Order No. | For shaft/bearing Ø mm | 5625 KNIPEX |
|---|---|---|
| 1000 | 400–1000 | 1096.00 ◊ (W525) |

## Circlip pliers set

**Design: DIN 5254 A and 5256 C (straight shape) as well as DIN 5254 B and 5256 D (curved shape).** Made of chrome-vanadium steel, hardened and tempered in oil, **polished head.** Plastic-coated handles.



**5616** Especially stable tips, non-slip due to cone base. Delivery in synthetic leather roll-up case.

**5606** Forged. Non-slip due to special tip shape. Supplied in nylon roll-up case.

5616 0010 format

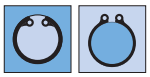
5616 0020 format

5606 KNIPEX

| Order No. | Design | 5616 format | 5606 KNIPEX | Set contents | |
|---|---|---|---|---|---|
| 0010 | 4-part | 34.30 | – | 1 each for internal rings J1 and J2 | (Order no. 5617) |
| | | | | 1 each for external rings A1 and A2 | (Order no. 5620) |
| 0020 | 8-part | 78.10 | – | 1 each for internal rings J1, J2 and J11, J21 | (Order No. 5617 + 5623) |
| | | | | 1 each for external rings A1, A2 and A11, A21 | (Order No. 5620 + 5626) |
| 0010 | 4-part | – | 55.80 | 1 each for internal rings J2 and J21 | (Order No. 5614 + 5615) |
| | | | | 1 each for external rings A2 and A21 | (Order No. 5631 + 5632) |
| | | (W512) | (W525) | | |

## Precision circlip pliers set

**Design: DIN 5254 A and 5256 C (straight shape) as well as DIN 5254 B and 5256 D (curved shape).** Made of chromium-vanadium electric steel, forged, hardened and tempered in oil, **head grey atramentised,** with inserted tips made of highest-grade, drawn spring steel wire with large contact surface, therefore no twisting of the rings. Utmost precision due to **screwed hinge, so can be highly loaded** with up to **10 times longer service life in continuous operation.** Plastic-covered handles.



**Internal spring**

**Screwed joint**

KNIPEX

**5629 0010** Supplied in roll-up case.

**5629 0020** Supplied in two-coloured foam inlay for storage in mobile workshops or workbenches, dimensions L x W x H 355 x 165 x 33.

**5629 0030** Supplied in plastic case with foam inlay.

5629 0010

5629 0020

5629 0030

| Order No. | Design | 5629 KNIPEX | Set contents | |
|---|---|---|---|---|
| 0010 | 4-part | 65.20 | 1 each for internal rings J1 and J2 | (Order no. 5619) |
| | | | 1 each for external rings A1 and A2 | (Order no. 5622) |
| 0020 | 6-part | 101.50 | 1 each for internal rings J1, J2 and J21 | (Order No. 5619 + 5625) |
| | | | 1 each for external rings A1, A2 and A21 | (Order No. 5622 + 5628) |
| 0030 | 8-part | 154.00 | 1 each for internal rings J1, J2, J11 and J21 | (Order No. 5619 + 5625) |
| | | | 1 each for external rings A1, A2, A11 and A21 | (Order No. 5622 + 5628) |
| | | (W525) | | |

## Sample wires for cutting values

| Wire type | Tensile strength (N/mm²) FORMAT | Tensile strength (N/mm²) Knipex |
|---|---|---|
| soft | 200 | 220 |
| medium-hard | 800 | 750 |
| hard | 1600 | 1800 |
| Piano wire | 2000 | 2300 |

## Electrician's side-cutting pliers

**Design: DIN ISO 5749.** Made of vanadium electric steel, hardened and tempered in oil. **Chrome-plated head,** with inserted, play-free, precision hinge. Blades additionally inductively hardened (63 HRC). Handles with multi-component plastic covers.

**Application:** For the finest cutting work at hard-to-access places in electrical engineering.

| Order No. | Design | 5333 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|---|
| 0125 | with bevel, round head | 22.30 (W525) | 125 | 0.4–2.5 | 0.4–1.8 | 0.4–1.0 | 0.4–0.6 |

## Electrician's side-cutting pliers

**Design: DIN ISO 5749.** Made of vanadium electric steel, hardened and tempered in oil. **Polished head,** with inserted, play-free, precision hinge and non-detachable frictionless double spring for even opening. Blades additionally inductively hardened (63 HRC). Handles with multi-component plastic covers.

**Application:** For equal surface separating at hard-to-access places in electrical engineering.

| Order No. | Design | 5334 KNIPEX | Length mm | Cutting values Ø soft wire mm |
|---|---|---|---|---|
| 0125 | without bevel, round head | 21.10 (W525) | 125 | 0.4–2.5 |

## Electrician's universal pliers

**Design:** Made of special tool steel, **polished head,** with opening spring, solid, multi-component plastic-covered handles.

| Order No. | Length mm | 5327 format | Cutting values Ø soft wire mm |
|---|---|---|---|
| 0500 | 120 | 15.80 (W512) | 0.3–1.5 |

## Electronic side-cutting pliers

**Design: DIN ISO 9654.** Made of special tool steel, forged, hardened and tempered in oil, **round polished head, with opening spring.** Blades additionally inductively hardened Solid, multi-component, plastic-covered handles.

| Order No. | Design | 5329 format | Length mm | Cutting values Ø soft wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|
| 0005 | With bevel | 15.80 | 110 | 0.3–1.5 | 0.2–0.6 |
| 0010 | without bevel | 15.80 | 110 | 0.2–1.5 | – |
| 0015 | With bevel and wire clip | 15.80 (W512) | 110 | 0.3–1.5 | 0.2–0.6 |

5329 0005 + 5329 0015

5329 0010

## Electronic side-cutting pliers

**Design: DIN ISO 9654.** Made of special tool steel, forged, hardened and tempered in oil, **pointed, polished head,** with opening spring and inserted, backlash-free joint. Blades additionally inductively hardened Handles with solid, covered multi-component plastic covers.

| Order No. | Design | 5329 format | Length mm | Cutting values Ø soft wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|
| 0018 | With bevel | 26.30 | 115 | 0.3–1.3 | 0.5 |
| 0019 | without bevel | 26.30 (W512) | 115 | 0.2–1.3 | – |

5329 0018

5329 0019

## Electronic side-cutting pliers

**Design: DIN ISO 9654.** Made of special grade, special tool steel, hardened and tempered in oil, slim design, **burnished head**, with non-detachable and frictionless double spring for even opening. Precision blades additionally inductively hardened (HRC 64). Handles with plastic covers.

**Application:** For the finest cutting work at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5332 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|---|
| 0005 | With bevel | 29.20 | 125 | 0.2–1.3 | 0.2–1.0 | 0.2–0.6 | 0.2–0.4 |
| 0010 | With bevel and wire clip | 34.60 | 125 | 0.2–1.3 | 0.2–1.0 | 0.2–0.6 | 0.2–0.4 |
| 0025 | With bevel, narrow head | 33.20 | 125 | 0.2–1.0 | 0.2–0.6 | 0.2–0.5 | 0.2–0.3 |
| | | (W525) | | | | | |

## Electronic side-cutting pliers

**Design: DIN ISO 9654.** Made of special tool steel, hardened and tempered in oil. **Polished head,** with inserted, play-free, precision hinge and non-detachable, frictionless double spring. Blades additionally inductively hardened (62 HRC). Plastic-covered handles.

**Application:** For the finest cutting work at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5335 KNIPEX | 5336 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø Ø medium-hard wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|---|
| 0005 | with bevel, round head | 25.30 | – | 115 | 0.3–1.6 | 0.3–1.2 | 0.3–0.5 |
| 0010 | with bevel, round head | 26.90 | – | 130 | 0.3–2.0 | 0.3–1.5 | 0.3–0.8 |
| 0010 | without bevel, pointed head | – | 26.50 | 115 | 0.3–1.3 | 0.3–1.0 | – |
| | | (W525) | (W525) | | | | |

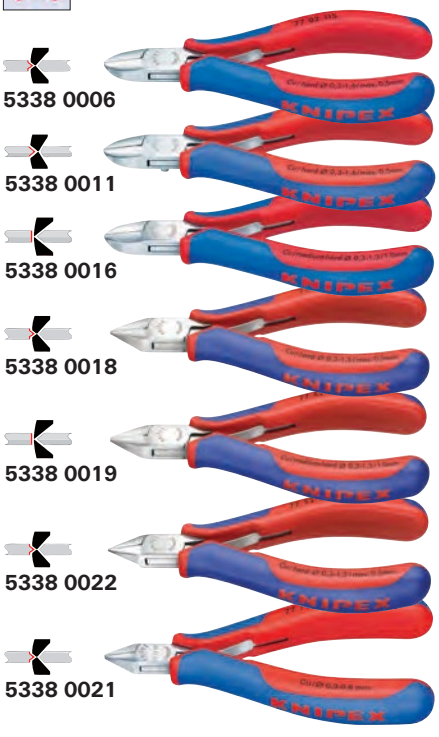
## Electronic side-cutting pliers

**Design: DIN ISO 9654.** Made of special tool steel, hardened and tempered in oil. **Mirror-polished head,** with inserted, play-free, precision hinge and non-detachable frictionless double spring. Blades additionally inductively hardened (62 HRC). Handles with multi-component plastic coating.

**Application:** For the finest cutting work at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5338 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø Ø medium-hard wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0006 | with small bevel, round head | 28.40 | 115 | 0.3–1.6 | 0.3–1.2 | 0.3–0.6 |
| 0011 | With bevel and wire clip, round head | 34.00 | 115 | 0.3–1.6 | 0.3–1.2 | 0.3–0.6 |
| 0016 | without bevel, round head | 28.60 | 115* | 0.3–1.3 | 0.3–1.0 | – |
| 0018 | with small bevel, pointed head | 31.30 | 115 | 0.3–1.3 | 0.3–1.0 | 0.3–0.5 |
| 0019 | without bevel, pointed head | 30.50 | 115* | 0.3–1.3 | 0.3–0.8 | – |
| 0022 | with small bevel, pointed, flat head | 32.00 | 115* | 0.3–1.0 | 0.3–0.8 | 0.3–0.5 |
| 0021 | with small bevel, pointed mini-head | 30.50 | 115 | 0.3–0.8 | – | – |
| | | (W525) | | | | |

* Cutting edge hardness approx. 57 HRC.



## Super Knips® electronic side-cutting pliers

**Design: DIN ISO 9654. Made of stainless steel.** Play-free hinge with stainless steel rivet and with opening spring. Precision-ground blades (54 HRC). Handles with multi-component plastic covers.

**Application:** For the equal separation at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5341 | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm |
|---|---|---|---|---|---|
| 0006 | without bevel | 15.85 | 125 | 0.2–1.6 | 0.2–1.0 |
| 0016 | without bevel, with wire clip | 17.80 | 125 | 0.2–1.6 | 0.2–1.0 |
| 0021 | without bevel, tips 60° angled | 18.45 | 125 | 0.2–1.0 | 0.2–0.6 |

(W525)

INOX

## Super Knips® electronic side-cutting pliers

**Design: DIN ISO 9654.** Made of special tool steel, burnished. Play-free hinge with stainless steel rivet and with opening spring. Precision-ground blades (64 HRC), without bevel. Handles with multi-component plastic coating.

**Application:** For the equal separation at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5344 | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm |
|---|---|---|---|---|---|
| 0006 | without bevel, narrow head | 17.65 | 125* | 0.2–1.0 | – |
| 0010 | without bevel, narrow head, with wire clip | 20.20 | 125* | 0.2–1.0 | – |
| 0016 | without bevel | 16.50 | 125 | 0.2–1.6 | 0.2–1.2 |
| 0020 | without bevel, with wire clip | 18.45 | 125 | 0.2–1.6 | 0.2–1.2 |

(W525)

* Cutting edge hardness approx. 60 HRC.

## Electronic precision side-cutting pliers

**Design: DIN ISO 9654. Made of the finest chromium-vanadium ball bearing steel,** forged. **Anti-glare polished head, with screwed hinge** for the utmost precision and play-free operation of the pliers, as well as undetachable, frictionless double spring for even opening. **The bearing areas are precisely ground,** thereby guaranteeing low-friction movement throughout the opening area. With sharply ground and additionally inductively hardened blades (64 HRC). Handles with specially shaped ergonomic multi-component plastic covers for secure hold as well as effortless and sensitive working.

**Application:** Precision electrician's side-cutting pliers for the highest demands regarding cutting work at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5363 | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0005 | very small bevel, mini-head | 41.70 | 120 | 0.2–1.4 | 0.2–1.0 | 0.2–0.6 |
| 0015 | very small bevel, round head | 39.20 | 125 | 0.2–1.7 | 0.2–1.3 | 0.2–0.7 |
| 0020 | without bevel, round head | 43.80 | 125 | 0.1–1.7 | 0.1–1.0 | – |
| 0025 | very small bevel, pointed head | 39.20 | 125 | 0.2–1.5 | 0.2–1.1 | 0.2–0.6 |
| 0030 | without bevel, pointed head | 43.80 | 125 | 0.1–1.5 | 0.1–0.8 | – |

(W525)

## Electrician's diagonal cutters

**Design: DIN ISO 9654.** Made of special grade, special tool steel, hardened and tempered in oil. **Mirror-polished head,** with inserted, play-free, precision hinge, with opening spring. Hardened blades (56 HRC). Handles with multi-component plastic covers.

**Application:** For the finest cutting work at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5350 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0005 | with small bevel, short head, angled at 15° | 35.20 | 120 | 1.5 | 1.0 | 0.5 |
| 0010 | with small bevel, short head, angled at 27° | 34.60 | 115 | 1.5 | 1.0 | 0.5 |
| 0016 | without bevel, short head, angled at 27° | 35.80 | 115 | 1.3 | – | – |
| 0021 | Mini blade with small bevel | 36.20 | 120 | 0.6 | – | – |
| | | (W525) | | | | |

## Electronic end cutter

**Design: DIN ISO 9654.** Made of special steel, **finely polished head,** with opening spring, small bevel. Solid, multi-component, plastic-covered handles.

**Application:** For the finest cutting work, even in hard-to-access places, in electrical and precision engineering.

| Order No. | Length mm | 5352 format | Cutting values Ø soft wire mm |
|---|---|---|---|
| 0005 | 130 | 15.80 (W512) | 0.5–2.0 |

## Electronic end cutter

**Design: DIN ISO 9654.** Made of special grade, special tool steel, hardened and tempered in oil. **Mirror-polished head,** with inserted, play-free, precision hinge, with opening spring. Hardened blades (56 HRC). Handles with multi-component plastic covers.

**Application:** For the finest cutting work at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5350 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0003 | With bevel | 32.90 (W525) | 115 | 2.0 | 1.0 | 0.6 |

## Electrician's wire-stripping pliers

**Design:** Made of special tool steel, forged, hardened and tempered in oil, **finely polished head,** with opening spring, with adjusting screw to set the desired wire or cord Ø, simple adjustment due to knurled screw. Solid, multi-component, plastic-covered handles.

**Application:** For cords with max. 3 mm Ø.

| Order No. | Length mm | 5348 format |
|---|---|---|
| 0005 | 125 | 17.00 (W512) |

## Electronic wire-stripping cutters

**Design:** Made of special tool steel, hardened and tempered in oil. **Polished head,** with opening spring. Simple adjustment to the wire or cord Ø using the knurled screw and counter nut. Handles with multi-component plastic covers.

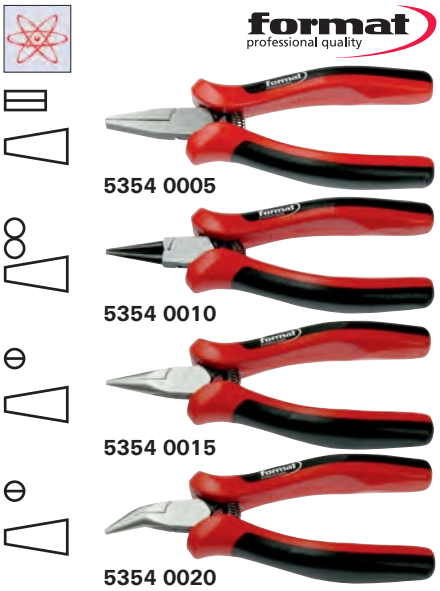
**Application:** For cutting and stripping solid, stranded and fine-stranded conductors.

| Order No. | Length mm | 5355 KNIPEX |
|---|---|---|
| 0130 | 140 | 32.10 (W525) |

## Electronic gripping pliers

**Design: DIN ISO 9655.** Made of special tool steel, forged, hardened and tempered in oil, **finely polished head,** with smooth jaws and opening spring. Solid, multi-component, plastic-covered handles.

| Order No. | Design | 5354 format | Length mm |
|---|---|---|---|
| 0005 | Flat, wide jaws | 12.50 | 130 |
| 0010 | pointed, round jaws | 12.50 | 130 |
| 0015 | flat, round jaws | 13.00 | 130 |
| 0020 | flat, round jaws, angled 35° | 13.30 (W512) | 130 |

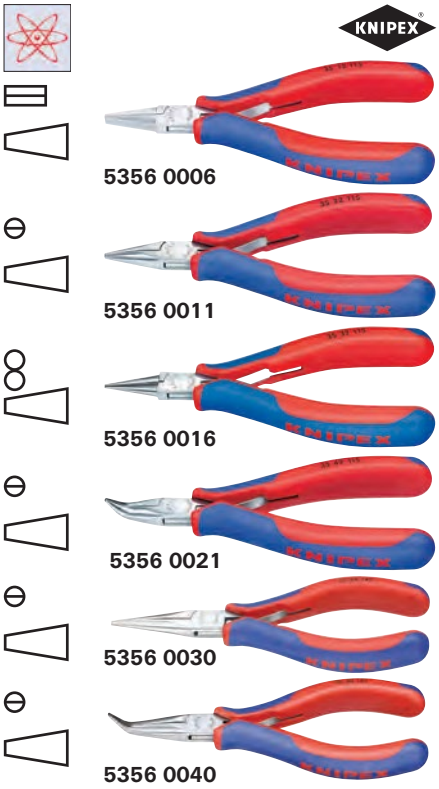



## Electronic gripping pliers

**Design: DIN ISO 9655.** Made of special tool steel, hardened and tempered in oil. **Mirror-polished head.** With inserted, play-free precision hinge and undetachable, frictionless double spring. Smoothly ground grip zones. Handles with multi-component plastic covers.

**Application:** For the gripping, holding and bending in hard-to-access places, in electrical and precision engineering.

| Order No. | Design | 5356 KNIPEX | Length mm | Jaw length mm |
|---|---|---|---|---|
| 0006 | Flat, wide jaws | 23.80 | 115 | 22.5 |
| 0011 | flat, round jaws for bending wire eyelets | 23.80 | 115 | 22.5 |
| 0016 | pointed, round jaws for bending wire eyelets | 23.80 | 115 | 22.5 |
| 0021 | flat, round jaws, angled 45° | 25.70 | 115 | 22.5 |
| 0030 | flat, round, long jaws | 28.20 | 145 | 40.0 |
| 0040 | flat, round, long jaws, angled 45° | 30.40 (W525) | 145 | 35.0 |

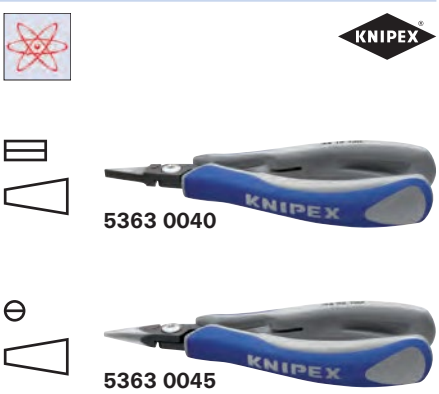



## Precision electrician's gripping pliers

**Design: DIN 9655. Made of the finest chromium-vanadium ball bearing steel,** forged. **Anti-glare polished head, with screwed hinge** for the utmost precision and play-free operation of the pliers, as well as undetachable, frictionless double spring for even opening. **The bearing areas are precisely ground,** thereby guaranteeing low-friction movement throughout the opening area. With sharply ground and additionally inductively hardened (64 HRC) grip zones. Handles with specially shaped ergonomic multi-component plastic covers for secure hold as well as effortless and sensitive working.

**Application:** Precision electrician's gripping pliers for the highest demands of assembly work in hard-to-access places in electrical and precision engineering. For gripping, holding and bending.

| Order No. | Design | 5363 KNIPEX | Length mm | Jaw length mm |
|---|---|---|---|---|
| 0040 | Flat, wide jaws | 35.40 | 130 | 19 |
| 0045 | flat, round jaws | 36.10 (W525) | 130 | 19 |



## Electrician's pliers set

**Design:** Made of special tool steel, forged, hardened and tempered in oil, **finely polished.** With opening spring. Handles with solid, covered multi-component plastic covers. Supplied in a solid case.

**Application:** For fine work, even in hard-to-access places, in electrical and precision engineering.

| Order No. | Design | 5367 format | Set contents | |
|---|---|---|---|---|
| 0005 | 6-part | 100.50 | 1 flat pliers, 130 mm | (Order no. 5354 0005) |
| | | | 1 round-nose pliers, 130 mm | (Order no. 5354 0010) |
| | | | 1 long-nosed pliers, 130 mm | (Order no. 5354 0015) |
| | | | 1 long-nosed pliers curved 35°, 130 mm | (Order no. 5354 0020) |
| | | | 1 side-cutting pliers, 110 mm | (Order no. 5329 0005) |
| | | | 1 wire-stripping pliers, 125 mm | (Order no. 5348 0005) |

(W512)

## Electrician's tool set

**Design:** Supplied in a practical storage box made of impact-resistant plastic with foam inlay.

**Application:** For the finest installation work at hard-to-access places in electrical and precision engineering.

| Order No. | Design | 5361 KNIPEX | Set contents | |
|---|---|---|---|---|
| 0015 | 8-part | 110.50 | 1 long-nosed pliers, 115 mm | (Order no. 5356 0006) |
| | | | 1 side-cutting pliers, 115 mm | (Order no. 5338 0006) |
| | | | 1 slotted screwdriver, 2.5 mm | (Order no. 6366 0025) |
| | | | 1 slotted screwdriver, 3.0 mm | (Order no. 6366 0030) |
| | | | 1 slotted screwdriver, 3.5 mm | (Order no. 6366 0035) |
| | | | 1 slotted screwdriver, 4.0 mm | (Order no. 6366 0040) |
| | | | 1 Phillips screwdriver, PH 0 | (Order no. 6368 0010) |
| | | | 1 Phillips screwdriver, PH 1 | (Order no. 6368 0015) |

(W525)

## ESD-protected tools

For tasks and components that can be damaged by electrostatic discharge.

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**General information ESD**
When using tools on parts that are endangered by electrostatic discharge (ESD – electro static discharge), the relevant standards and regulations (e.g. IEC TR 61340-5, DIN EN 61340-5, SP Method 2472) demand a controlled discharge of electrical loading for the handles of the tools in question.

## ESD electronic side-cutting pliers

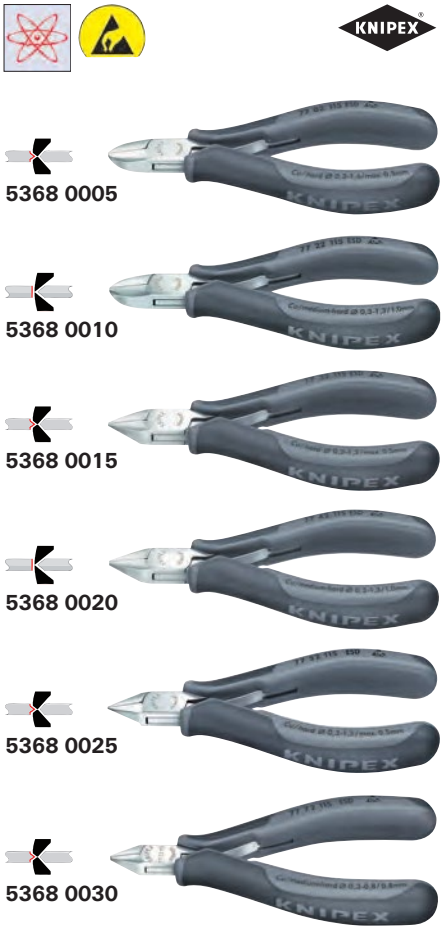
**Design: DIN ISO 9654.** Made of special grade, special tool steel, hardened and tempered in oil, slim design. **Mirror-polished head,** with non-detachable and frictionless double spring for even opening. Precision blades additionally inductively hardened (HRC 62). Handles with plastic covers.

**Application:** For the finest cutting work at hard-to-access places in electrics, especially where **ESD tools** are in use.

| Order No. | Design | 5368 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm |
|---|---|---|---|---|---|---|
| 0005 | with small bevel, round head | 30.10 | 115 | 0.3–1.6 | 0.3–1.2 | 0.3–0.6 |
| 0010 | without bevel, round head | 30.30 | 115* | 0.3–1.3 | 0.3–1.0 | – |
| 0015 | with small bevel, pointed head | 32.40 | 115 | 0.3–1.3 | 0.3–1.0 | 0.3–0.5 |
| 0020 | without bevel, pointed head | 32.20 | 115* | 0.3–1.3 | 0.3–0.8 | – |
| 0025 | with small bevel, pointed, flat head | 33.80 | 115* | 0.3–1.0 | 0.3–0.8 | 0.3–0.5 |
| 0030 | with small bevel, pointed mini-head | 32.20 | 115 | 0.3–0.8 | – | – |

(W525)

* Cutting edge hardness approx. 57 HRC.




## ESD electronic side-cutting pliers Super Knips®

**Design: DIN ISO 9654. Made of stainless steel.** Play-free hinge with stainless steel rivet and with opening spring. Precision-ground blades (54 HRC), without bevel. Handles with multi-component plastic covers.

**Application:** For even separating at hard-to-access places in electrics, especially where **ESD tools** must be used.

| Order No. | Design | 5371 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm |
|---|---|---|---|---|---|
| 0005 | without bevel | 17.55 | 125 | 0.2–1.6 | 0.2–1.0 |
| 0008 | without bevel, with wire clip | 19.15 | 125 | 0.2–1.6 | 0.2–1.0 |

(W525)

## ESD electronic side-cutting pliers Super Knips®

**Design: DIN ISO 9654.** Made of special tool steel. Play-free hinge with stainless steel rivet and with opening spring. Precision-ground blades (64 HRC), without bevel. Handles with multi-component plastic coating.

**Application:** For even separating at hard-to-access places in electrics, especially where **ESD tools** must be used.

| Order No. | Design | 5371 KNIPEX | Length mm | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm |
|---|---|---|---|---|---|
| 0010 | without bevel | 18.15 | 125 | 0.2–1.6 | 0.2–1.2 |
| 0013 | without bevel, with wire clip | 19.80 | 125 | 0.2–1.6 | 0.2–1.2 |

(W525)

## ESD electronics precision side-cutting pliers

**Design: Made of the finest chromium-vanadium ball bearing steel,** forged. **Anti-glare polished head, with screwed hinge** for the utmost precision and play-free operation of the pliers, as well as undetachable, frictionless double spring for even opening. **The bearing areas are precisely ground,** thereby guaranteeing low-friction movement throughout the opening area. With sharply ground and additionally inductively hardened blades (64 HRC). Handles with specially shaped ergonomic multi-component plastic covers for secure hold as well as effortless and sensitive working.

**Application:** Precision electrician's side-cutting pliers for finest, highest demands on cutting work in hard-to-access places in electrics, especially where **ESD tools** must be used.

| Order No. | Design | 5364 | Length | Cutting values Ø soft wire | Cutting values Ø medium-hard wire | Cutting values Ø hard wire |
|---|---|---|---|---|---|---|
| | | | mm | mm | mm | mm |
| 0015 | very small bevel, round head | 40.80 | 125 | 0.2–1.7 | 0.2–1.3 | 0.2–0.7 |
| 0020 | without bevel, round head | 45.30 | 125 | 0.1–1.7 | 0.1–1.0 | – |
| 0025 | very small bevel, pointed head | 40.80 | 125 | 0.2–1.5 | 0.2–1.1 | 0.2–0.6 |
| 0030 | without bevel, pointed head | 45.30 | 125 | 0.1–1.5 | 0.1–0.8 | – |
| | | (W525) | | | | |

5364 0015 + 0020

5364 0025 + 0030

## ESD electronics gripping pliers

**Design: DIN ISO 9655.** Made of special tool steel, hardened and tempered in oil. **Mirror-polished head** With inserted, play-free precision hinge and undetachable, frictionless double spring. Smoothly ground grip zones. Handles with multi-component plastic covers.

**Application:** For the gripping, holding and bending at hard-to-access places in electrics, especially where **ESD tools** must be used.

| Order No. | Design | 5362 | Length | Jaw length |
|---|---|---|---|---|
| | | | mm | mm |
| 0005 | flat, wide jaws | 25.90 | 115 | 22.5 |
| 0010 | flat, round jaws | 25.90 | 115 | 22.5 |
| 0015 | Round, pointed jaws | 25.90 | 115 | 22.5 |
| 0020 | flat, round jaws, angled 45° | 28.00 | 115 | 22.5 |
| | | (W525) | | |

5362 0005

5362 0010

5362 0015

5362 0020

## ESD precision electrician's gripping pliers

**Design: Made of the finest chromium-vanadium ball bearing steel,** forged. **Anti-glare polished head, with screwed hinge** for the utmost precision and play-free operation of the pliers, as well as undetachable, frictionless double spring for even opening. **The bearing areas are precisely ground,** thereby guaranteeing low-friction movement throughout the opening area. With sharply ground and additionally inductively hardened (64 HRC) grip zones. Handles with specially shaped ergonomic multi-component plastic covers for secure hold as well as effortless and sensitive working.

**Application:** Precision electrician's gripping pliers for the highest demands of assembly work in hard-to-access places in electrics, especially where **ESD tools** must be used. For gripping, holding and bending.

| Order No. | Design | 5364 | Length | Jaw length |
|---|---|---|---|---|
| | | | mm | mm |
| 0040 | flat, wide jaws | 37.00 | 130 | 19 |
| 0045 | flat, round jaws | 37.70 | 130 | 19 |
| | | (W525) | | |

5364 0040

5364 0045

## ESD electrician's tool set

**Design:** Supplied in a practical storage box made of impact-resistant plastic with foam inlay.

**Application** For the highest demands of assembly work in hard-to-access places in electrics, especially where **ESD tools** must be used.

**Note:** For ESD electrician's screwdrivers see 📖 6/134.

| Order No. | Design | 5366 KNIPEX | Set contents | |
|---|---|---|---|---|
| 0015 | 8-part | 119.50 | 1 long-nosed pliers, 115 mm | (Order no. 5362 0010) |
| | | | 1 side-cutting pliers, 115 mm | (Order no. 5368 0005) |
| | | | 1 slotted screwdriver, 2.5 mm | (Order no. 6369 0025) |
| | | | 1 slotted screwdriver, 3.0 mm | (Order no. 6369 0030) |
| | | | 1 slotted screwdriver, 3.5 mm | (Order no. 6369 0035) |
| | | | 1 slotted screwdriver, 4.0 mm | (Order no. 6369 0040) |
| | | | 1 Phillips screwdriver, PH 0 | (Order no. 6371 0010) |
| | | | 1 Phillips screwdriver, PH 1 | (Order no. 6371 0015) |
| | | (W525) | | |

## Cable shears

**Design:** Made of stainless steel, with opening spring. Handles with plastic covers.

**Application:** For the single-handed cutting of copper and aluminium cables.

**Note:** Not suitable for steel wire and hard-drawn copper conductors.

INOX

| Order No. | Cutting values mm² | 5374 | Length mm |
|---|---|---|---|
| 0134 | 2.5– 6 | 10.40 NEW | 134 |
| 0168 | 4.0–10 | 11.30 | 168 |
| | | (W523) | |

## Cable shears, offset

**Design: DIN ISO 5743.** Made of special tool steel; forged; hardened and tempered in oil. **Head polished** and **offset for clear view** of the working area, with internal opening spring, single locking lever and clamp protection. Hardened blades with precision sharpening, easy single-handed cutting, smooth, clean and without squashing. Handles with multi-component plastic covers.

**Application:** For the single-handed cutting of copper and aluminium cables.

**Note:** Not suitable for steel wire and hard-drawn copper conductors.

| Order No. | Cutting values Ø mm | 5390 format | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0181 | 18 | 28.70 | 50 | 180 |
| 0220 | 25 | 35.80 | 70 | 220 |
| | | (W512) | | |

## Cable shears

**Design:** Made of special grade, special tool steel; forged; hardened and tempered in oil. **Burnished head,** with self-locking, adjustable screwed hinge and clamping protection. Hardened blades with precision sharpening, easy single-handed cutting, smooth, clean and without squashing. Plastic-coated handles.

**Note:** Not suitable for steel wire and hard-drawn copper conductors.

**5380** For cutting single- and multi-wire copper and aluminium cables.

**5383** For the cutting of single- and multi-wire copper and aluminium cables. Cables with diameters up to 20 mm Ø can also be separated with the pre-cut and re-cut (1st and 2nd blades).

| Order No. | Cutting values Ø mm | 5380 KNIPEX | 5383 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|---|
| 0165 | 15 | 21.90 | – | 50 | 165 |
| 0200 | 20 | – | 34.40 | 70 | 200 |
| | | (W525) | (W525) | | |

5380

PATENTED

5383

## Cable shears

**Design:** Made of special grade, special tool steel; forged; hardened and tempered in oil. **Burnished head,** with self-locking, adjustable screwed hinge and clamping protection. Hardened blades with precision sharpening, easy single-handed cutting, smooth, clean and without squashing. Handles with multi-component plastic covers.

**Note:** Not suitable for steel wire and hard-drawn copper conductors.

**5384 0165** For the cutting of single- and multi-wire copper and aluminium cables.

**5384 0200** For the cutting of single- and multi-wire copper and aluminium cables. Cables with diameters up to 20 mm Ø can also be separated with the pre-cut and re-cut (1st and 2nd blades).

5384 0165

PATENTED

5384 0200

| Order No. | Cutting values Ø mm | 5384 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0165 | 15 | 24.60 | 50 | 165 |
| 0200 | 20 | 39.60 (W525) | 70 | 200 |

## VDE cable shears, offset

**Design: DIN ISO 5743.** Made of special tool steel; forged; hardened and tempered in oil. **Head chrome-plated, polished** and **offset for clear view** of the working area, with internal opening spring, single locking lever and clamp protection. Hardened blades with precision sharpening, easy single-handed cutting, smooth, clean and without squashing. Handles with multi-component plastic covers, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

**Application:** For the single-handed cutting of single- and multi-wire copper and aluminium cables.

**Note:** Not suitable for steel wire and hard-drawn copper conductors.

| Order No. | Cutting values Ø mm | 5385 format | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0180 | 18 | 29.80 | 50 | 180 |
| 0220 | 25 | 41.80 (W512) | 70 | 220 |

## VDE cable shears

**Design:** Made of special grade, special tool steel; forged; hardened and tempered in oil. **Chrome-plated head.** With clamping protection. Hardened blades with precision sharpening, easy single-handed cutting, smooth, clean and without squashing. Self-locking and adjustable screwed hinge. **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

**Application:** For cutting single- and multi-wire copper and aluminium cables.

**5381** Handles with multi-component plastic covers, with handle recess and injected lettering.

**5382** Handles with multi-component plastic covers, with handle recess and injected lettering. Cables with diameters up to 20 mm Ø can also be separated with the pre-cut and re-cut (1st and 2nd blades).

**5387** Plastic-covered handles. Cables with diameters up to 20 mm Ø can also be separated with the pre-cut and re-cut (1st and 2nd blades).

5381

PATENTED

5382

PATENTED

5387

| Order No. | Cutting values Ø mm | 5381 KNIPEX | 5382 KNIPEX | 5387 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|---|---|
| 0165 | 15 | 35.50 | – | – | 50 | 165 |
| 0200 | 20 | – (W525) | 45.10 (W525) | 49.00 (W525) | 70 | 200 |

## VDE cable shears

**Design:** Made of **stainless** surgical steel, air-hardened. Polished head. Hardened blades with precision sharpening, easy single-handed cutting, cuts clean and smooth, without squashing. Self-locking and adjustable screwed hinge with clamping protection. Plastic-coated shock-proof handles, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

**Application:** For cutting single- and multi-wire copper and aluminium cables.

**Note:** Not suitable for steel wire and hard-drawn copper conductors.

| Order No. | Cutting values Ø mm | 5389 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0230 | 16 | 40.90 (W525) | 50 | 230 |

## VDE cable shears KT 8

**Design:** Handy, small shape. Made of steel, forged. **Polished head.** Blades with two sharpened grooves for cutting thin or thick single- and two-core cables. Handles with multi-component plastic covers, **insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

Weidmüller

**Application:** For squash-free cutting of copper and aluminium cables.

**Note:** Not suitable for steel wire, steel-reinforced cable, aluminium alloys and hard-drawn copper conductors.

| Order No. | Cutting values Ø mm | 5386 Weidmüller | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0165 | 8 | 35.70 | 16 | 165 |
| 0200 | 12 | 40.00 NEW (W523) | 25 | 215 |

## Cable shears

**Design:** Made of chrome-vanadium electric steel, oil hardened and tempered. With hardened, precision-cut blades, cuts smoothly and cleanly without squashing. With clamping protection and adjustable screwed hinge.

KNIPEX

**Application:** For single- and multi-wire copper and aluminium cables.

**Note:** Not suitable for steel wire or wire cable.

**5392** **Burnished head.** Low effort due to good leverage and special cutting edge geometry. Arms made of high-strength aluminium pipe. Handles with multi-component plastic covers.

5392

**5396** **Polished head.** Favourable transmission ratios due to toggle. Arms made of steel pipe. Plastic-covered handles.

5396

**5397** **Polished head.** Favourable transmission ratios due to toggle. Arms made of steel pipe. Plastic-coated handles, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

5397

| Order No. | Cutting values Ø mm | 5392 KNIPEX | 5396 KNIPEX | 5397 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|---|---|
| 0501 | 27 | 94.20 | – | – | 150 | 500 |
| 0600 | 27 | – (W525) | 166.00 (W525) | 191.00 (W525) | 150 | 600 |

## Cable sheers with telescopic arms

**Design:** Blade head made of special grade tool steel (interchangeable), hardened and tempered in oil. **Burnished head.** With clamping protection and adjustable screwed hinge. Easy and clean cut due to the new blade shape, less effort required due to optimum transmission. Arms made of high-strength aluminium oval pipe, **arm length adjustable**. The **articulated joint has different settings** to allow for working in narrow spaces and to optimise the lever arm in the case of fully pulled-out arms. Handles with multi-component plastic covers.

KNIPEX

**Application:** For single- and multi-wire copper and aluminium cables.

**Note:** Not suitable for steel wire, hard-drawn copper conductors or steel wire.

| Order No. | Cutting values Ø mm | 5394 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0560 | 38 | 205.50 (W525) | 280 | 550–770 |

## KT 45 R/KT 55 cable shears

**Design:** Made of steel. **Burnished head.** Blade laser cut, robust shape. One-hand operation due to ratchet principle, with unlocking option of swivel blade in any cutting position. Swivel blade can be exchanged. Ergonomic handle covered with thick plastic.

**Application:** For squash-free cutting of copper and aluminium cables.

**Note:** Not suitable for steel wire, steel-reinforced cable, aluminium alloys and hard-drawn copper conductors.

Weidmüller

5401 0290

5401 0365

| Order No. | Cutting values Ø mm | 5401 Weidmüller | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0290 | 45 | 277.50 | 400 | 290 |
| 0365 | 55* | 386.50 | 500 | 365 |
| | | (W523) | * For 4 x 150 mm² Alu-sector cable (house connection cable). | |

## Cable shears

**Design:** Made of special grade, special tool steel; hardened and tempered in oil. **Coated head.** Single-handed operation due to ratchet principle, with 2-gear ring drive for simple cutting; cuts smoothly and cleanly, without squashing. With clamping protection. Solid arm cover with cut area to lay material on when cutting.

**Application:** For the squash-free cutting of single- and multi-wire copper and aluminium cables.

**Note:** Not suitable for steel wire and wire cable.

**5403** Handles with multi-component plastic covers.

**5406** Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

KNIPEX

5403

VDE

1000 V

5406

| Order No. | Cutting values Ø mm | 5403 KNIPEX | 5406 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|---|
| 0250 | 32 | – | 190.50 | 240 | 250 |
| 0251 | 32 | 169.00 | – | 240 | 250 |
| 0280 | 52* | – | 253.50 | 380 | 280 |
| 0281 | 52* | 227.00 | – | 380 | 280 |
| 0320 | 60 | 280.00 (W525) | 306.50 (W525) | 600 | 320 |
| | | | | * For 4 x 150 mm² Alu-sector cable (house connection cable). | |

## Cable sheers with telescopic arms

**Design:** Precision blades made of special grade, special tool steel; hardened and tempered in oil; bracket made of high-strength aluminium oval tubing. **Burnished head.** Extremely high cutting performance due to two-hand operation and ratchet principle, lower effort due to optimum lever transmission. **Arms are multi-adjustable** and can be individually adapted to working conditions. The tool can be opened in any cutting position. Handles with multi-component plastic covers.

**Application:** For the smooth and squash-free cutting of single- and multi-wire copper and aluminium cables, including with hard rubber or plastic covers. Also suitable for cables with iron reinforcement.

**Note:** Not suitable for steel wire and wire cable.

KNIPEX

| Order No. | Cutting values Ø mm | 5404 KNIPEX | Cutting values mm² | Length mm |
|---|---|---|---|---|
| 0680 | 60 | 598.50 | 740 | 600–810 |
| 0820 | 100 | 693.00 (W525) | 960 | 650–860 |

## Wire rope shears

**Design:** Made of chromium-vanadium high-performance steel, hardened and tempered in oil. **Polished head.** Precise, easy-action screw joint with internal opening spring and safety catch. With two extrusions for end caps on Bowden sleeves and end sleeves for control cables. The special blade shape prevents the wire rope from splaying. Handles covered with non-slip plastic.

**Application:** Suitable for single- and multi-wire copper and aluminium cables, wire rope, medium-hard wire and piano wire.

| Order No. | Cutting values wire rope Ø mm | 5421 KNIPEX | Cutting values copper and aluminium Ø mm | Cutting values copper and aluminium mm² | Cutting values Ø piano wire mm | Length mm |
|---|---|---|---|---|---|---|
| 0190 | 5 | 32.90 (W525) | 7 | 10 | 2.5 | 190 |

Pressing the end cap to the pull rope.

Pressing the end cap onto the Bowden shell.

## Wire rope and cable cutters

**Design:** Blade head made of special grade tool steel (interchangeable), hardened and tempered in oil. **Polished head.** Arms made of high-strength aluminium and optimum lever transmission, angular cutting blades allow cutting through single wire ropes. Plastic-covered handles.

**Application:** For copper and aluminium cables, wire cables and round steel, suitable also for cutting overhead cables with integral straining wires.

| Order No. | Cutting values wire rope Ø mm | 5410 KNIPEX | Cutting values round steel Ø mm | Cutting values copper and aluminium mm² | Length mm |
|---|---|---|---|---|---|
| 0445 | 10 | 194.50 | 7 | 95 | 445 |
| 0600 | 14 | 241.50 (W525) | 9 | 150 | 600 |

## Bowden wire cutters

**Design:** Made of special grade, special tool steel; hardened in oil, black atramentised. **Polished head.** Blades additionally inductive-hardened, cuts smoothly and cleanly and without squashing. With spring clip and safety catch The special blade shape prevents the wire rope from splaying, little effort required due to very high transmission ratio. Plastic-covered handles.

**Application:** For Bowden cables and soft wire ropes (also stainless steel).

| Order No. | Cutting values wire rope Ø mm | 5411 KNIPEX | Length mm |
|---|---|---|---|
| 0150 | 3 | 21.00 (W525) | 150 |

## Stripping tool

NEW

**Design:** Body of tool made of fibreglass-reinforced plastic with soft inlays for secure grip, with opening spring and safety catch. Conical ends for work in confined spaces.

**Application:** For the stripping of all conventional round and wet-room cables (e.g. NYM 3 x 1.5 mm² to 5 x 2.5 mm²), data cables (CAT 5–7, twisted pair) and coaxial cables.

| Order No. | Working area Ø mm | 5412 KNIPEX | Conductor cross-section mm² |
|---|---|---|---|
| 0005 | 8–13 | 30.40 (W525) | 0.2 + 0.3 + 0.8 + 1.5 + 2.5 + 4.0 |

## Strippers

**Design:** Polyamide casing, with fixed, TiN-coated blades.

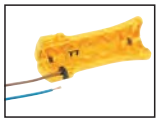
TiN

JOKARI original

**5413** **No. 12**
For all conventional **round cables** (e.g. NYM 3 x 1.5 mm² to 5 x 2.5 mm²) and **wet room cables**. Perfectly suited for working in junction and distribution boxes.

5413

**5414** **All-rounder**
For **round cables** (e.g. NYM 3 x 1.5 mm² to 5 x 2.5 mm²), **data cable** (Cat 5–7), **coax cables** (RG 58, RG 59) and **installation flat cables** . Also suitable for left-handed people. Safety lock with one hand operation.

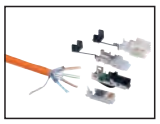


5414

**5415** **Secura No. 15**
For all conventional **round cables** (e.g. NYM 3 x 1.5 mm² to 5 x 2.5 mm²) and **wet room cables**. Perfectly suited for working in junction and distribution boxes. With additional **longitudinal cut provision.**

5415

**5417** **No. 1 Cat**
For **PVC-insulated data and network cables** (e.g. Cat 5–7, twisted pair).



5417

**5420** **Secura Coaxi No. 1**
Suitable for **coax cable** (RG 58; RG 59) and **PVC-flex-cable** (3 x 0.75 mm²). Two-stage stripping.

5420

| Order No. | Working area Ø mm | 5413 JOKARI No. 12 | 5414 JOKARI All-rounder | 5415 JOKARI Secura No. 15 | 5417 JOKARI No. 1 Cat | 5420 JOKARI Secura Coaxi No. 1 | Conductor cross-section mm² |
|---|---|---|---|---|---|---|---|
| 0005 | 8 –13 | 11.80 | – | – | – | – | – |
| 0006 | 4 –15 | – | 15.10 | – | – | – | 1.5 + 2.5 |
| 0006 | 8 –13 | – | – | 25.60 | – | – | 0.2 + 0.3 + 0.8 + 1.5 + 2.5 + 4 |
| 0006 | 4.5–10 | – | – | – | 23.50 | – | – |
| 0005 | 4.8– 7.5 | – | – | – | – | 12.75 | – |
| | | (W523) | (W523) | (W523) | (W523) | (W523) | |

## Stripping and connecting set

NEW

**Design:** Supplied in plastic case.

JOKARI original

| Order No. | Design | 5418 JOKARI | Set contents |
|---|---|---|---|
| 0228 | 227-part | 54.70 | 1 stripper Secura No. 15, Ø 8–13 mm (Order No. 5415 0006)<br>50 Wago COMPACT 2 conductor clamps, white<br>50 Wago COMPACT 3 conductor clamps, orange<br>25 Wago COMPACT 5 conductor clamps, yellow<br>100 cable ties blue, 3.5 x 140 mm, blue<br>1 wooden folding rule 2 m |
| 0404 | 403-part | 94.00 | 1 automatic wire-stripping pliers Super 4 Plus, 0.2-6 mm² (Order No. 5471 0005)<br>1 stripper Secura No. 12, Ø 8–13 mm (Order No. 5413 0005)<br>100 Wago COMPACT 2 conductor clamps, white<br>100 Wago COMPACT 3 conductor clamps, orange<br>100 Wago COMPACT 5 conductor clamps, yellow<br>100 cable ties, 4.5 x 280 mm, natural-coloured<br>1 wooden folding rule 2 m |
| | | (W523) | |

5418 0228

5418 0404

## Micro-precision wire-stripping tool

**Design:** Polyamide casing with adjustable length stop, cutting provision for wires, exchangeable lever blade and adjustable stripping area.

**Application:** For the stripping of all conventional solid and stranded conductors.

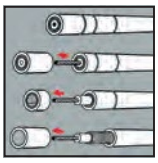
| Order No. | Working area Ø mm | 5422 JOKARI original |
|---|---|---|
| 0005 | 0.12–0.40 | 16.15 |
| 0010 | 0.25–0.80 | 16.15 |
| 0015 | 0.30–1.00 | 16.15 |
| | | (W523) |

## Coaxial cable stripping tool

**Design:** Body of tool made of impact-resistant plastic, with three integrated blades. The cutting depth can be individually corrected with a hexagonal key for each blade, whereby the blade distance remains constant.

**Application:** For the stripping of outer sheath, insulation and dielectric in one action in coax cables (RG 58, RG 59 and RG 62).

| Order No. | Working area | 5424 KNIPEX |
|---|---|---|
| 0005 | RG 58; RG 59; RG 62 | 15.50 |
| | | (W525) |



## Telephone and cable shears

**Design:** Hardened cutting edges made of stainless steel (56 HRC), with two round grips. Grips with ergonomic soft fabric inserts.

**Application:** For the cutting of fine-wired conductors up to 16 mm².

INOX

| Order No. | Length mm | 7131 | Cutting edge length mm |
|---|---|---|---|
| 0140 | 140 | 9.90 | 45 |
| | | (W568) | |

## Belt strap knife/gypsum knife

**Design:** 1-piece curved, carbon-steel blade, ground and polished, with studded beech wood handle from sustainable forestry and ring.

FSC

| Order No. | Blade length mm | 7319 | Length closed/open mm |
|---|---|---|---|
| 0180 | 77 | 6.45 | 108/185 |
| | | (W706) | |

## Cable-stripping knife, wooden handle

**Design:** Carbon-steel blade with grip recesses made of beech wood from sustainable forestry.

FSC

**5429 0185** **1-piece** (lead knife), with fixed blade.

**5429 0195** **1-piece** (electrician's knife) with retractable blade with groove for stripping NYM cables.

**5429 0200** NEW **1-piece** (electrician's knife) with retractable blade with groove for stripping NYM cables. **Blade latch** in open position.

**5432** **2-piece** (industrial knife) with retractable blade and reamer.

| Order No. | Length mm | 5429 format | 5432 format |
|---|---|---|---|
| 0160 | 163 | – | 7.05 |
| 0185 | 192 | 3.53 | – |
| 0200 | 200 | 6.15 | – |
| 0195 | 202 | 3.67 | – |
| | | (W512) | (W512) |

format professional quality

5429 0185

5429 0195 + 0200

5432 0160

## Cable-stripping knife, plastic handle

**Design:** Retractable blade made of carbon steel, ground and polished.

format professional quality

**5430 0195** **1-piece** (electrician's knife), with double-notched blade, with plastic handle.

5430 0195

**5430 1195** **2-piece** (industrial knife), with double blade cut (smooth/wavy) and reamer. Ergonomic comfort-plastic handle with ring.

5430 1195

**5430 2195** **3-piece** (industrial knife), with double blade cut (smooth/wavy), groove and reamer. Ergonomic comfort-plastic handle with ring.

5430 2195

| Order No. | Length mm | 5430 format |
|---|---|---|
| 0195 | 192 | 4.27 |
| 1195 | 160 | 8.50 |
| 2195 | 170 | 9.90 (W512) |

## Cable cutter/working knife, stainless steel

**Design:** Retractable blade made of stainless steel, polished and with plastic handle. Blade catch released using click-action mechanism on the upper side.

INOX

format professional quality

**5433** **1-piece** (electrician's knife), with double-notched blade.

5433

**5437** **1-piece,** blade with two finishes (smooth/serrated).

5437

| Order No. | Length mm | 5433 format | 5437 format |
|---|---|---|---|
| 0195 | 190 | 9.95 (W512) | 9.45 (W512) |

## VDE cable-stripping knife

**Design:** With transparent protective cap and ergonomic multi-component plastic covers, **insulated up to 1000 V, in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

KNIPEX

1000 V

**5434** Made of special tool steel, hardened and tempered in oil. With solid, fixed blade **straight cutting edge.**

5434

**5435** Made of special tool steel, hardened and tempered in oil. With solid, fixed blade, **straight cutting edge,** back of blade coated with plastic to prevent short circuits.

5435

**5438** Made of **stainless** surgical steel, air-hardened. With solid and locked hook blade **sickle-shaped blade** as well as sheath at the tip of the blade. Back of blade coated with plastic to prevent short circuits.

5438

**5439** Made of special tool steel, hardened and tempered in oil. With short, fixed **hook blade,** ideal for stripping of round cables.

5439

| Order No. | Length mm | 5434 KNIPEX | 5435 KNIPEX | 5438 KNIPEX | 5439 KNIPEX |
|---|---|---|---|---|---|
| 0155 | 155 | – | – | 27.40 | 10.25 |
| 0180 | 180 | 10.55 (W525) | 10.60 (W525) | – (W525) | – (W525) |

## Universal cable-stripping knife

**Design:** Made of unbreakable fibreglass-reinforced polyamide, with hooked blade. The rotating internal blade automatically adjusts from round to rip cuts. As a result, longer cable pieces can be stripped in one operation. The cutting depth can be adjusted quickly and accurately by means of the knurled screw on the handle end.

**Application:** For the rapid and simple stripping of all standard cable types.

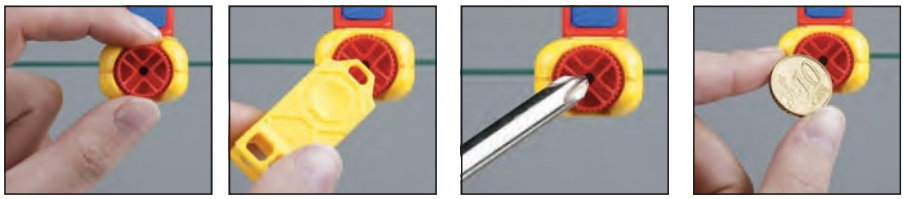
| Order No. | Working area ∅ mm | 5441 format |
|---|---|---|
| 0005 | 4–28 | 6.40 |
| 0011 | Spare blade | 1.94 NEW |
| | | (W512) |

## Universal cable-stripping knife

**Design:** The rotating inner knife automatically repositions the cutting blade to change from circumferential to longitudinal cutting. As a result, longer pieces of cable can be stripped in just one step. The knurled screw at the end of the handle allows the cut depth to be adjusted quickly and with precision. Supplied including 1 spare blade in the handle.

**Application:** For the rapid and simple stripping of all standard cable types.

| Order No. | Design | 5442 JOKARI original | Working area ∅ mm |
|---|---|---|---|
| 0002 | without end blade | 9.35 | 8–28 |
| 0005 | with hooked blade | 10.20 | 8–28 |
| 0007 | with straight blade | 10.80 | 8–28 |
| 0010 | Spare blade | 2.02 | – |
| | | (W523) | |



0002

0005

0007

## Cable cutter system 4-70 NEW

**Design:** Polyamide casing with lateral soft inserts for good grip. The **bracket can be exchanged without additional tools** and thus **easily adapted to the working area.** In addition, the brackets have a hole through which the round cut can be observed. The rotating TiN-coated inner knife automatically repositions the cutting blade to change from circumferential to longitudinal cutting. As a result, longer pieces of cable can be stripped in just one step. The knurled screw in the handle allows the cut depth to be adjusted quickly and with precision; markings allow quick adjustment for repeating cable types. In addition, the end of the handle contains an **exchangeable, retractable hook blade.** The blade can be adjusted to 4.6 mm mantle thickness in 0.6 mm increments by way of the 4-level depth adjustment. Supplied including 1 spare blade in the handle.

**Application:** For the rapid and simple stripping of all standard cable types.

5451 0005

5451 0110–0120

5451 0600

**Safety hook blade**
The blade protection has to be unlocked prior to cutting. Once the blade is lifted off the cutting material, the blade guard once again moves over the blade and is locked. Injuries due to slipping are excluded.

| Order No. | Design | 5451 JOKARI original | Working area ∅ mm |
|---|---|---|---|
| 0005 | Cable stripping knife with bracket | 34.70 | 8–28 |
| 0110 | Bracket No. 35 | 10.80 | 27–35 |
| 0115 | Bracket No. 50 | 10.80 | 35–50 |
| 0120 | Bracket No. 70 | 10.80 | 50–70 |
| 0600 | Cable stripping knife with 5 interchangeable brackets | 87.40 | 4–70 |
| | | (W523) | |

## Safety cable-stripping knife

**Design:** Compact housing made of high-strength synthetic fibreglass. Continuous adjustment of the cutting depth avoids damage to the inner conductor. Automatic changeover from round to longitudinal section.

**Application:** For accurate, fast and safe stripping of all common round cables.

**5443** **With retractable hooked blade,** locks in two positions, therefore **reduced risk of injury.**

**5446** For **stripping** all common flexible and solid conductors with a cross section of 0.5-6 mm².

format professional quality

5443

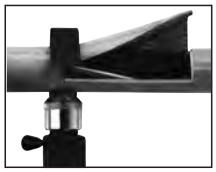
5446

| Order No. | Working area Ø mm | 5443 format | 5446 format |
|---|---|---|---|
| 0005 | 4–28 | 7.50 (W512) | 8.50 (W512) |

## Universal cable-stripping knife

**Design:** Blade can be swivelled for round, longitudinal or spiral cut. With sharp-edged steel bracket to break open incised insulation. Cutting depth adjustable up to insulation thickness 4.5 mm; plastic-coated handle.
Supplied including 1 spare blade in the handle.

**Application:** For the rapid stripping of round cables of various widths at all locations.



Weidmüller

| Order No. | Working area Ø mm | 5444 Weidmüller |
|---|---|---|
| 0005 | 6–25 | 36.40 |
| 0010 | Spare blade | 6.90 (W523) |

## Stripping tool

**Design:** Made of fibreglass-reinforced plastic. Specially shaped blade allows for the stripping of special conductor insulations and conductor configurations. Interchangeable stripping unit. Integrated blade to break notched insulation. Adjustable cutting depth 0.8–2.5 mm.

**Application:** For stripping PVC-round cables in all locations, especially suited to work in cable ducts. Suitable for longitudinal and circumferential cut.

Weidmüller

| Order No. | Working area Ø mm | 5444 Weidmüller |
|---|---|---|
| 0020 | 6–17.3 | 72.90 (W523) |

## Stripping tool

**Design:** Body made of glass-fibre-reinforced plastic. Cutting depth adjustable up to insulation thickness 5.0 mm by means of knurled screw; exchangeable double-sided blade.

**Application:** For stripping round cables. Removal of all insulation layers. Suitable for longitudinal and circumferential cut.

Longitudinal cutting

Circumferential cutting

KNIPEX

| Order No. | Working area Ø mm | 5445 KNIPEX |
|---|---|---|
| 0005 | from 25 | 166.50 (W525) |

## Multi-purpose wire-stripping tool

**Design:** Casing made of unbreakable fibreglass-reinforced polyamide, cutting blade made of special tempered steel.

**Application:** For stripping outer and inner insulation as well as gradual stripping with only one tool without any adjustment.

format professional quality

| Order No. | Working area | 5447 format |
|---|---|---|
| 0005 | External insulation Ø 4 –13 mm<br>stranded wires 0.5–16 mm²<br>coaxial cable Ø 4 – 8 mm | 10.80 (W512) |

## VDE wire-stripping side-cutting pliers

**Design: DIN ISO 5749.** Hardened and tempered in oil. **Chrome-plated head**, blades additionally inductively hardened (60 HRC), handles with multi-component plastic covers, **insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** Multi-purpose function for cutting and wire stripping.

5307 format professional quality

**5307** Made of special tool steel.

**5308** Made of vanadium electric steel Extra **long tips** for the finest cutting work, even in tight spaces. **25% higher cutting performance** due to the improved leverage ratio when compared with normal side-cutting pliers of the same length. With recessed grips and indented lettering.

5308 KNIPEX

| Order No. | Length mm | 5307 format | 5308 KNIPEX | Cutting values Ø soft wire mm 5307 | Cutting values Ø soft wire mm 5308 | Conductor cross-section mm² |
|---|---|---|---|---|---|---|
| 0160 | 160 | 27.20 (W512) | 32.80 (W525) | 4.0 | 2.5 | 1.5 + 2.5 |

## Wire stripper

**Design:** Made of vanadium electric steel, forged, hardened and tempered in oil. **Polished head,** long, flat jaws, serrated grip zones, blades additionally inductively hardened (60 HRC), with stripping holes and crimping zone.

**Application:** For gripping, cutting, bending and wire-stripping of wires as well as for pressing **(trapezoid pressing)** ferrules.

**531A** NEW Plastic-covered handles.

**5313** Handles with multi-component plastic covers.

531A

5313

| Order No. | Length mm | 531A KNIPEX | 5313 KNIPEX | Cutting values Ø medium-hard/hard wire mm | Conductor cross-section mm² |
|---|---|---|---|---|---|
| 0160 | 160 | 25.90 (W525) | 27.40 (W525) | 2.5/1.6 | 0.5–0.75 + 1.5 + 2.5 |

## Electrical installation pliers

**Design:** Made of special grade, special tool steel; forged; hardened and tempered in oil. **Polished head,** serrated grip zones with smooth tips, for the careful gripping of single conductors. Inductively hardened precision blades. With **anti-glare polished head** for the utmost precision and play-free operation. Prominent outer edge on the jaw for working with in-wall sockets and deburring of holes.

**Application:** For universal use in electrical installations **with 6 functions:** bending, deburring, cable-cutting, wire-stripping, crimping of ferrules **(trapezoid pressing)** as well as for gripping flat and round materials.

**Screwed joint**

5372

**5372** Handles with multi-component plastic covers.

**5373** Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

5373

**5375** NEW With integrated opening spring. The clever closing mechanism allows gripping without exposing the sheaths. Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**5375 With integrated opening spring and protective opening limitation**

| Order No. | Length mm | 5372 KNIPEX | 5373 KNIPEX | 5375 KNIPEX | Copper/aluminium cutting values Ø mm | Copper/aluminium cutting values mm² | Stripping values individual conductors mm² | Conductor cross section for cable end sleeves mm² |
|---|---|---|---|---|---|---|---|---|
| 0200 | 200 | 38.20 (W525) | 43.00 (W525) | 44.80 (W525) | 15 | 50 | 0.7–1.5 + 2.5 | 0.5–2.5 |

## Stripping pliers

NEW

KNIPEX

**Design: DIN ISO 5746.** Made of vanadium electric steel, forged, hardened and tempered in oil. **Chrome-plated head,** with angled cable mantle cutter, stripping holes and wire cutter. Blades additionally inductively hardened (61 HRC). Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For stripping of round and wet-room cables (e.g. NYM cables), particularly suited for low-laying cables due to slender head.

| Order No. | Length mm | 5376 KNIPEX | Cutting values Ø medium-hard/hard wire mm | Conductor cross-section |
|---|---|---|---|---|
| 0165 | 165 | 36.60 (W525) | 3.2/2.2 | 8-13 Ø mm/1.5 + 2.5 mm² |

## Wire-stripping pliers

**Design:** Made of special tool steel, hardened and tempered in oil. Simple adjustment to the wire or cord Ø (max. Ø 5 mm or 10 mm²) using the knurled screw and counter nut. With opening spring. Plastic-covered handles.

**Application:** For the stripping of single-strand, multi-strand and finely stranded conductors with plastic or rubber insulation.

5449 format professional quality

5454 KNIPEX

| Order No. | Length mm | 5449 format professional quality | 5454 KNIPEX |
|---|---|---|---|
| 0160 | 160 | 11.65 (W512) | 14.30 (W525) |

## Wire-stripping pliers

**Design:** Made of special tool steel, hardened and tempered in oil. Simple adjustment to the wire or cord Ø (max. Ø 5 mm or 10 mm²) using the knurled screw and counter nut. With opening spring. Handles with multi-component plastic covers.

**Application:** For the stripping of single-strand, multi-strand and finely stranded conductors with plastic or rubber insulation.

5452 format professional quality

5455 KNIPEX

| Order No. | Length mm | 5452 format professional quality | 5455 KNIPEX |
|---|---|---|---|
| 0160 | 160 | 13.15 (W512) | 17.25 (W525) |

## Wire-stripping pliers

**Design:** Made of special tool steel, hardened and tempered in oil. Simple adjustment to the wire or cord Ø (max. Ø 5 mm or 10 mm²) using the knurled screw and counter nut. With opening spring. Handles with multi-component plastic covers.

**Application:** For the stripping of single-strand, multi-strand and finely stranded conductors with plastic or rubber insulation.

5450 format professional quality

5456 KNIPEX

| Order No. | Length mm | 5450 format professional quality | 5456 KNIPEX |
|---|---|---|---|
| 0160 | 160 | 15.30 (W512) | 19.95 (W525) |

## VDE wire-stripping pliers

**Design:** Made of special tool steel, hardened and tempered in oil, **chrome-plated head.** Simple adjustment to the wire or cord Ø (max. Ø 5 mm or 10 mm²) using the knurled screw and counter nut. With opening spring. Handles with multi-component plastic covers, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For the stripping of single-strand, multi-strand and finely stranded conductors with plastic or rubber insulation.

1000 V

5453 format professional quality

5459 KNIPEX

| Order No. | Length mm | 5453 format professional quality | 5459 KNIPEX |
|---|---|---|---|
| 0160 | 160 | 17.50 (W512) | 22.80 (W525) |

## Automatic wire-stripping pliers

**Design:** Made of fibreglass-reinforced polyamide, cutting blade made of special tempered steel. No adjustment required for the conductor cross section.

**Application:** For the wire-stripping of all standard, flexible and solid conductors.

**5474 0005** With **longitudinal stop, adjustable** from 5–12 mm and tempered **wire cutter up to Ø 2 mm.**

**5474 0010** With tempered **wire cutter up to Ø 3 mm.**

| Order No. | Conductor cross-section mm² | 5474 format professional quality |
|---|---|---|
| 0005 | 0.2– 6.0 | 14.60 |
| 0010 | 0.5–16.0 | 49.40 (W512) |

## Automatic wire-stripping pliers

**Design:** Made of impact-resistant, glass-fibre-reinforced plastic; the interchangeable blades automatically adjust to the cable Ø. With longitudinal stop 5-15 mm and wire cutter to 2.5 mm².

**Application:** For the stripping of single-strand, multi-strand and finely stranded conductors with PVC insulation.

| Order No. | Conductor cross-section mm² | 5471 JOKARI original | Length mm |
|---|---|---|---|
| 0005 | 0.2–6.0 | 14.70 (W523) | 165 |

## Automatic wire-stripping pliers

**Design:** Casing made of fibreglass-reinforced plastic; the blades automatically adjust to the cable Ø. With wire cutter for copper and aluminium conductors up to max. 2.5 mm². With longitudinal stop and blades that can be easily interchanged. Handles with ergonomic soft plastic zones.

**Application:** For working in hard-to-access places. For the stripping of single-strand, multi-strand and finely stranded conductors with standard insulation.

| Order No. | Conductor cross-section mm² | 5470 KNIPEX | Length mm |
|---|---|---|---|
| 0005 | 0.2–6.0 | 29.20 | 180 |
| 0010 | Spare blade | 8.55 (W525) | – |

## Automatic wire-stripping pliers

**Design:** Made of impact resistant, fibreglass reinforced plastic, the disc blade automatically adapts to the cable diameter. With longitudinal stop. The blade cassettes are interchangeable. With integrated cable cutters up to 2.5 mm².

**Application:** For stripping and cutting fine-wired and solid conductors with PVC insulation and multi-conductors (AWG 28). 10).

| Order No. | Conductor cross-section mm² | 5478 format professional quality | Length mm |
|---|---|---|---|
| 0005 | 0.08–6.00 | 47.50 (W512) | 190 |

## Automatic wire-stripping pliers MultiStrip 10

PATENTED

**Design:** Made of ductile fibreglass-reinforced plastic with especially smooth-running mechanism. The blades automatically adjust to the cable Ø to prevent the conductor being damaged. The patented mechanism means that there is no need for manual fine adjustments. With wire cutter for copper and aluminium conductors up to 6 mm² (single-wire) or 10 mm² (multiple wires). With longitudinal stop and blades that can be easily interchanged. Handles with ergonomic soft material zones.

**Application:** For the stripping and cutting of fine-wired and solid conductors with PVC insulation and multi-conductors.

| Order No. | Conductor cross-section mm² | 5490 KNIPEX | Length mm |
|---|---|---|---|
| 0005 | 0.03–10 | 74.30 | 195 |
| 0010 | Spare blade | 14.20 (W525) | – |

## Automatic wire-stripping pliers

**Design:** Made of ductile fibreglass-reinforced plastic with especially smooth-running mechanism. The blades automatically adjust to the cable Ø to prevent the conductor being damaged. Wire cutter for copper and aluminium conductors, multi-wire up to 10 mm², single-wire up to 6 mm². With longitudinal stop (only for Order No. 5480 0005) and blades that can be easily interchanged.

**Application:** For the stripping and cutting of fine-wired and solid conductors with PVC insulation and multi-conductors.

| Order No. | Conductor cross-section mm² | 5480 KNIPEX | 5483 KNIPEX | Length mm |
|---|---|---|---|---|
| 0005 | 0.03–10 | 55.90 | – | 200 |
| 0005 | 2.5 –16 | – | 85.70 | 200 |
| 0010 | Spare blade | 14.30 | – | – |
| 0015 | Spare clamping jaws | 3.36 | – | – |
| 0020 | Spare length stop | 1.91 (W525) | – (W525) | – |

5480

5483

## Automatic wire-stripping pliers STRIPAX®

**Design:** Made of fibreglass-reinforced plastic; the blades automatically adjust to the cable Ø. With longitudinal stop. The blade cassettes are interchangeable. With integrated cable cutters up to 6 mm².

5486 + 5489

5488

| Order No. | Conductor cross-section mm² | 5486 Weidmüller | 5489 Weidmüller | 5488 Weidmüller | Length mm | Application |
|---|---|---|---|---|---|---|
| 0005 | 0.08–10 | 66.40 | – | – | 190 | Fine-wire and massive conductors with PVC insulation |
| 0005 | 6.00–16 | – | 123.00 | – | 190 | Fine-wire and massive conductors with PVC insulation |
| 0005 | 0.14– 6 | – | – | 89.90 | 190 | Fine-wire and massive conductors with PVC insulation, UL-specified conductor, halogen-free insulations |
| 0010 | 2.50–10 | – | – | 111.50 NEW | 190 | Fine-wire and massive conductors with PVC insulation, UL-specified conductor, halogen-free insulations |
| 0011 | Spare blade 0.08–10 | 30.70 | – | – | – | – |
| 0011 | Spare blade 6.00–16 | – | 63.50 | – | – | – |
| 0020 | Spare blade 0.14– 6 | – | – | 37.40 | – | – |
| 0025 | Spare blade 2.50–10 | – (W523) | – (W523) | 43.00 NEW (W523) | – | – |

## Automatic wire-stripping pliers

**Design:** Made of fibreglass-reinforced plastic; the blades automatically adjust to the cable Ø. The blades can be replaced. With optical longitudinal stop 15-20 mm.

**5495 0005** Wire-stripping length to 20 mm. For the stripping and cutting of fine-wired and solid conductors with PVC insulation and multi-conductors.

**5495 0010** Cable guide by means of pliers gripping area, thus allowing any stripping length. For the safe stripping of insulated and non-insulated, halogen-free sensor/actor cables with PUR or PVC outer sheath and 3-8-core cables without damaging the internal conductors or insulation structure.

| Order No. | Conductor cross-section mm² | 5495 JOKARI original | Length mm |
|---|---|---|---|
| 0005 | 6 –16 | 61.10 | 166 |
| 0010 | 4.4– 7 | 58.40 (W523) | 166 |

5495 0005

5495 0010

## Cable processing tool QUADRO

NEW

JOKARI original

**Design:** Made of fibreglass-reinforced plastic; the blades automatically adjust to the cable Ø. With longitudinal stop. The core sleeve magazines can be changed quickly and easily. Delivery including 3 magazines and respectively 50 core sleeves 0.5; 0.75; 1; 1.5 mm² and 40 core sleeves of 2.5 mm².

**Application:** Combines **4 functions in one tool:** cutting, stripping, twisting and crimping. Suitable for stranded wires and PVC insulations. Particularly suited for wiring in control boxes and mobile applications.

| Order No. | Conductor cross-section mm² | 5418 JOKARI original | Length mm |
|---|---|---|---|
| 0244 | 0.5–2.5 | 207.00 (W523) | 175 |

## Automatic precision wire-stripping pliers with shaped blades

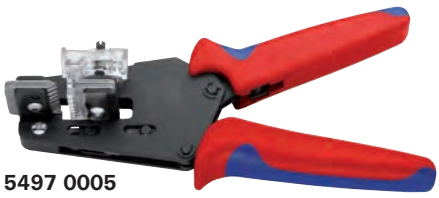
PATENTED

KNIPEX

**Design:** Pliers made of steel, blades made of special tool steel, hardened and tempered in oil. With new, patented wire-stripping mechanism and smooth-running mechanics. **Burnished head.** The precise blade shape prevents damage to the conductor and thus allows for easy stripping of difficult insulating materials. Also fine gauge stranded conductors are stripped gently. Supplied including longitudinal stop for the same wire-stripping lengths for series work. Handles with multi-component plastic covers.

**Application:** Especially suited to extremely tough insulation materials, such as PTFE, silicone or rubber. High operating comfort due to compact and handy design.

| Order No. | Conductor cross-section mm² | 5497 KNIPEX | Length mm |
|---|---|---|---|
| 0005 | 0.03–2.08 | 102.50 | 195 |
| 0010 | 0.14–6.00 | 101.50 (W525) | 195 |



5497 0005

5497 0010

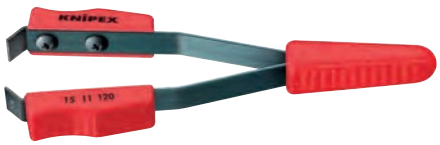
## Coated-wire stripping tweezers

KNIPEX

**Design:** Made of spring steel, with interchangeable, shaped blades, handle shells made of plastic. Supplied including blade for wires with Ø 0.6 mm.

**Application:** To remove coated insulation on copper wires.

| Order No. | Design | 5448 KNIPEX |
|---|---|---|
| 0120 | Coated-wire stripping tweezers, 120 mm | 8.30 |
| 1005 | Spare blade for Ø 0.5 mm | 3.15 |
| 1010 | Spare blade for Ø 0.6 mm | 3.15 |
| 1015 | Spare blade for Ø 0.8 mm | 3.15 |
| 1020 | Spare blade for Ø 1.0 mm | 3.15 (W525) |



HellermannTyton

5/89

**Heat shrink-fit tubing assortment**

For insulating,
colour marking
and as protective sleeve
for inside and outside

## Crimping pliers for ferrules, trapezoid profile

**Design:** Hardened and tempered in oil. **Polished head.**

**Application:** For reliable pressing **(trapezoid profile)** of ferrules DIN 46228 (Part 1 + 4), with plastic collar.

**5499** Made of special tool steel, forged Plastic-covered handles.

**5500** Made of vanadium electric steel Plastic-covered handles.

**5505** Made of vanadium electric steel Handles with multi-component plastic covers.

5499 format professional quality

5500 KNIPEX

5505 KNIPEX

| Order No. | Conductor cross-section mm² | 5499 format | 5500 KNIPEX | 5505 KNIPEX | Length mm |
|---|---|---|---|---|---|
| 0005 | 0.25–2.5 | 16.05 (W512) | 19.60 (W525) | 21.20 (W525) | 145 |

## VDE crimping pliers for ferrules, trapezoid profile

**Design:** Made of vanadium electric steel, forged and hardened in oil. **Polished head.** Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For the reliable pressing **(trapezoid pressing)** of ferrules in line with DIN 46228 (Parts 1 + 4), with plastic protective cover.

1000 V

| Order No. | Conductor cross-section mm² | 5502 KNIPEX | Length mm |
|---|---|---|---|
| 0006 | 0.25–2.5 | 23.50 (W525) | 145 |

## Crimping pliers for ferrules, crescent profile

**Design:** Made of special tool steel, hardened and tempered in oil. **Polished head.** With 9 especially deep crimping recesses and conical sides.

**Application:** For the reliable pressing **(crescent pressing)** of ferrules according to DIN 46228 (Parts 1 + 4), with plastic collar.

**5501** Plastic-covered handles.

**5503** Plastic-covered handles.

**5507** Handles with multi-component plastic covers.

5501 format professional quality

5503 KNIPEX

5507 KNIPEX

| Order No. | Conductor cross-section mm² | 5501 format | 5503 KNIPEX | 5507 KNIPEX | Length mm |
|---|---|---|---|---|---|
| 0006 | 0.25–16 | 17.65 (W512) | 25.70 (W525) | 28.20 (W525) | 180 |

## VDE crimping pliers for ferrules, crescent profile

**Design:** Made of special tool steel, hardened and tempered in oil. **Polished head.** With 9 especially deep crimping recesses and conical sides. Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V in line with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** For the reliable pressing **(crescent pressing)** of ferrules according to DIN 46228 (Parts 1 + 4), with plastic collar.

1000 V

| Order No. | Conductor cross-section mm² | 5513 KNIPEX | Length mm |
|---|---|---|---|
| 0005 | 0.25–16 | 30.00 (W525) | 180 |

## Crimping pliers for ferrules, with front insertion

**Design:** Made of special tool steel, hardened and tempered in oil. **Polished head.** Plastic-covered handles.

**Application:** For the reliable pressing of ferrules in line with DIN 46228 (Parts 1 + 4), with plastic protective cover. Ideal for working in hard-to-access areas, e.g. in narrow and deep control boxes.

| Order No. | Conductor cross-section mm² | 5504 KNIPEX | Length mm |
|---|---|---|---|
| 0005 | 0.5–6 | 36.10 (W525) | 180 |

## Crimping pliers for end sleeves

**Design:** Pliers made of steel, handles with multi-component plastic covers.

**Application:** For the pressing **(trapezoid pressing)** of ferrules in line with DIN 46228 (Parts 1 + 4), **with and without plastic protective cover.**

**5518**
**0005** With **5** crimping zones.

**5518**
**0010** With **3** crimping zones.

5518 0005

5518 0010

| Order No. | Conductor cross-section mm² | 5518 format | Processing | Length mm |
|---|---|---|---|---|
| 0005 | 0.5– 6 | 71.90 | from the side | 205 |
| 0010 | 6.0–16 | 71.90 (W512) | from the side | 205 |

## Crimping pliers with interchangeable magazine MultiCrimp®

**Design:** All loaded parts made of special grade, chromium-vanadium electro-steel, hardened and tempered in oil. **Burnished head.** Handles with multi-component plastic covers for single- and double-handed operation. Safe and dirt-protected storage of interchangeable inserts in round magazine with belt clip. High crimping quality due to precision profile and integral lock. Change of crimping profile without tools. Precise, preset crimping pressure

**Application:** Pliers and quick-change magazine for conventional crimping requirements in various crimping profiles. Available in different designs for 3 or 5 crimping profiles.

5511 0003

5511 0005

| Order No. | Conductor cross-section mm² | 5511 KNIPEX | Application | Processing | Length mm |
|---|---|---|---|---|---|
| 0003 | 0.50– 6.0<br>0.50– 6.0<br>0.25– 6.0 | 173.50 | non-insulated, open connector<br>Insulated cable lugs and connectors<br>Ferrules | from the side | 250 |
| 0005 | 0.50– 6.0<br>0.50– 6.0<br>0.25– 6.0<br>0.50–10.0<br>1.50–4.0 + 6.0 + 10.0 | 226.50 (W525) | non-insulated, open connector<br>insulated cable lugs and connector<br>Ferrules<br>non-insulated cable lugs and connectors<br>non-insulated shock connectors | from the side | 250 |

## Crimping pliers PZ for end sleeves

**Design:** Pliers made of steel, with locking mechanism for correct, complete crimping. Quick-release in case of incorrect operation. Handles with multi-component plastic coating.

**Application:** For the pressing of ferrules DIN 46228 (Parts 1 + 4), **with and without plastic protective cover.**

Weidmüller

**5506** **Trapezoid pressing.** Processing from side.

**5515** **Trapezoid pressing.** Processing from side.

**5521** **Square pressing.** Processing from front.

**5527** **Trapezoid pressing.** Due to rotating die, it is possible to introduce the ferrules both from the side and the front.

**5517** **Trapezoid pressing.** Due to rotating die, it is possible to introduce the ferrules both from the side and the front. Locking knob fixes the crimp insert.

**5514** NEW **Hexagonal pressing.** Processing from side.

**5516** NEW **Square pressing.** Processing from side.

5506

5515

5521

5527

**5517 Locking knob fixes the crimp insert.**

5514

5516

| Order No. | Conductor cross-section mm² | 5506 Weidmüller PZ 4 | 5515 Weidmüller PZ 16 | 5521 Weidmüller PZ 3 | 5527 Weidmüller PZ 6 roto | 5517 Weidmüller PZ 6 roto L | 5514 Weidmüller PZ 10 HEX | 5516 Weidmüller PZ 10 SQR | Crimping zones | Length mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | 0.5 – 4 | 154.00 | – | – | – | – | – | – | 1 | 200 |
| 0005 | 6.0 –16 | – | 161.50 | – | – | – | – | – | 3 | 200 |
| 0005 | 0.5 – 6 | – | – | 172.00 | – | – | – | – | 1 | 200 |
| 0005 | 0.14–10 | – | – | – | – | – | 196.00 | 196.00 | 1 | 200 |
| 0005 | 0.14– 6 | – | – | – | 163.00 | 165.50 | – | – | 1 | 200 |
| | | (W523) | (W523) | (W523) | (W523) | (W523) | (W523) | (W523) | | |

## PreciForce® crimping pliers for end sleeves

**Design:** Made of special grade, chromium-vanadium electric steel, hardened and tempered in oil. **Burnished head.** For optimum crimping results due to the precision profiles and unlockable locking mechanism; precise factory-set crimping pressure. Leverage-transmission handles with multi-component plastic covers. **With 5 crimping zones.**

**Application:** For the pressing **(trapezoid pressing)** of ferrules in line with DIN 46228 (Parts 1 + 4), **with and without plastic protective cover.**

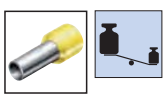
KNIPEX

| Order No. | Conductor cross-section mm² | 5508 KNIPEX | Processing | Length mm |
|---|---|---|---|---|
| 0005 | 0.25–6 | 92.60 (W525) | from the side | 220 |

## Crimping pliers for end sleeves

**Design:** Made of special grade, chromium-vanadium electric steel, hardened and tempered in oil. **Burnished head.** For optimum crimping results due to the precision profiles and unlockable locking mechanism; precise factory-set crimping pressure, **reduces force by hand by up to 30% due to optimum lever transmission.** Two-hand operation for easy crimping of large circuit cross sections. Handles with plastic covers.

**Application:** For the pressing **(trapezoid pressing)** of ferrules in line with DIN 46228 (Parts 1 + 4), **with and without plastic protective cover.**



KNIPEX

| Order No. | Conductor cross-section mm² | 5509 KNIPEX | Processing | Crimping zones | Length mm |
|---|---|---|---|---|---|
| 0005 | 0.25–6 | 107.00 | from the side | 5 | 250 |
| 0010 | 10 + 16 + 25 | 107.00 | from the side | 3 | 250 |
| 0015 | 35 + 50 | 136.50 (W525) | from the side | 2 | 250 |

## Crimping pliers for end sleeves

**Design:** Made of special grade, chromium-vanadium electric steel, hardened in oil. **Burnished head.** For optimum crimping results due to the precision profiles and unlockable locking mechanism; precise factory-set crimping pressure. High purchase due to the leverage transmission, handles with multi-component plastic covers. **With one crimping zone.**

**Application:** For the pressing **(square or hexagonal pressing)** of ferrules in line with DIN 46228 (Parts 1 + 4), **with plastic protective cover.**

| Order No. | Conductor cross-section mm² | 5512 KNIPEX | Processing | Length mm |
|---|---|---|---|---|
| 0005 | 0.08–10 + 16 | 132.00 | from the side | 180 |
| 0015 | 0.08–10 | 139.00 (W525) | from the side | 180 |

PAT. PEND.

KNIPEX

5512 0005 Square crimping

5512 0015 hexagonal crimping

## Crimping pliers for end sleeves

**Design:** Made of special grade, chromium-vanadium electric steel, hardened in oil. **Burnished head.** For optimum crimping results due to the precision profiles and unlockable locking mechanism; precise factory-set crimping pressure. High purchase due to the leverage transmission, handles with multi-component plastic covers. **With one crimping zone.**

**Application:** For the pressing **(square pressing)** of ferrules in line with DIN 46228 (Parts 1 + 4), **with plastic protective cover.**

| Order No. | Conductor cross-section mm² | 5524 KNIPEX | Processing | Length mm |
|---|---|---|---|---|
| 0005 | 0.08–10* | 136.00 | From the front | 190 |
| 0010 | 0.08–10 + 16 | 147.00 (W525) | From the front | 190 |

* Cable end sleeves up to 2.5 mm² can be fed in parallel from the side.

KNIPEX

5524 0005

5524 0005

## Crimping pliers

NEW

**Design:** Handles with multi-component plastic covers.

**Application:** For the cable-cutting and wire-stripping of wires and for the crimping of cable lugs and connectors. With shearing function for studs from M2.6 to M5 and wire-stripping function for PVC conductors.

**5530** Made of vanadium-chrome steel, **burnished head.**

5530

**5533** Made of special steel, painted black.

5533 0215 KNIPEX

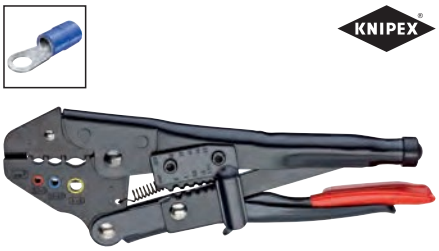
5533 0240

| Order No. | Conductor cross-section | 5530 | 5533 KNIPEX | Application | Processing | Length mm |
|---|---|---|---|---|---|---|
| 0200 | 0.5 –6.0 | 14.80 | – | non-insulated and insulated cable lugs | from the side | 200 |
| 0215 | 0.75–6.0 | – | 16.85 | Insulated cable lugs and connectors | from the side | 230 |
| 0240 | 0.75–6.0<br>0.50–2.5 | – | 19.15 | Insulated cable lugs and connectors<br>non-insulated, open connector | from the side | 240 |
| | | (W539) | (W525) | | | |

## Crimping gripping pliers

**Design:** Made of high-strength special steel, **burnished head.** With quick-release lever and toggle lever transmission for high clamping pressure with low force. The clamping pressure can be adjusted. **With three crimping zones.**

**Application:** For crimping insulated cable lugs and connectors.



| Order No. | Conductor cross-section mm² | 5529 KNIPEX | Processing | Length mm |
|---|---|---|---|---|
| 0005 | 0.5–6 | 73.00 (W525) | from the side | 215 |

## Crimping lever pliers

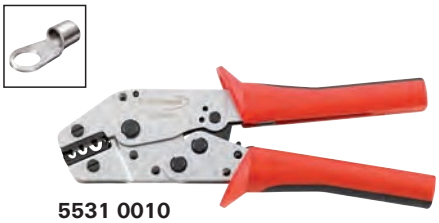
**Design:** Pliers made of steel, locking mechanism guarantees quality crimping. Quick-release in case of incorrect operation. Handles with plastic covers. **With three crimping zones.**

**Application:** For pressing of PVC and polyamide-insulated connections (cable lugs, pin cable lugs, parallel and side connectors as well as plug-in connectors).

**5531**
**0005** For insulated cable lugs.

5531 0005

**5531**
**0010** For non-insulated cable lugs.



5531 0010

| Order No. | Conductor cross-section mm² | 5531 format | Processing | Length mm |
|---|---|---|---|---|
| 0010 | 0.5–6 | 74.30 | from the side | 205 |
| 0005 | 0.5–6 | 79.10 (W512) | from the side | 235 |

## Crimping lever pliers CTI 6 G

**Design:** Pliers made of steel, with stop for precise positioning of the contacts. Locking mechanism guarantees quality crimping. Quick-release in case of incorrect operation, tested in line with DIN EN 60352 T.1 (gas-free pressing). Handles with plastic covers. **With 3 crimping zones.**

**Application:** For pressing of PVC and polyamide-insulated connections (cable lugs, pin cable lugs, parallel and side connectors as well as plug-in connectors).

| Order No. | Conductor cross-section mm² | 5539 Weidmüller | Processing | Length mm |
|---|---|---|---|---|
| 0005 | 0.5–6 | 166.50 (W523) | from the side | 250 |

## Crimping pliers PreciForce®

**Design:** Made of special grade, chromium-vanadium electric steel, hardened and tempered in oil. **Burnished head.** For optimum crimping results due to the precision profiles and unlockable locking mechanism; precise factory-set crimping pressure. Leverage-transmission handles with multi-component covers.

| Order No. | Conductor cross-section mm² | 5510 KNIPEX | Application | Processing | Crimping zones | Length mm |
|---|---|---|---|---|---|---|
| 0005 | 1.5– 4 | 92.60 | non-insulated shock connectors | from the side | 3 | 220 |
| 0010 | 0.5–10 | 92.60 | non-insulated cable lugs and connectors | from the side | 4 | 220 |
| 0015 | 0.1– 2.5 | 106.50 | non-insulated, open connector | from the side | 4 | 220 |
| 0020 | 0.5– 6 | 106.50 | non-insulated, open connector | from the side | 3 | 220 |
| 0025 | 0.5– 6 | 87.00 | Insulated cable lugs and connectors | from the side | 3 | 220 |
| 0030 | 0.5– 6 | 87.00 (W525) | insulated shrinking-sleeve connectors | from the side | 3 | 220 |

## Crimping pliers

**Design:** Made of special grade, chromium-vanadium electric steel, hardened and tempered in oil. **Burnished head.** For optimum crimping results due to the precision profiles and unlockable locking mechanism; precise factory-set crimping pressure, **reduces force by hand by up to 30% due to optimum lever transmission.** Two-hand operation for easy crimping of large circuit cross sections. Handles with plastic covers.

| Order No. | Conductor cross-section mm² | 5536 KNIPEX | Application | Processing | Crimping zones | Length mm |
|---|---|---|---|---|---|---|
| 0005 | 0.1– 2.5 | 129.00 | non-insulated, open connector | from the side | 4 | 250 |
| 0010 | 0.5– 6 | 126.00 | non-insulated, open connector | from the side | 3 | 250 |
| 0013 | 0.5–10 | 111.50 | non-insulated cable lugs and connectors | from the side | 4 | 250 |
| 0014 | 16 + 25 | 116.00 | non-insulated cable lugs and connectors | from the side | 2 | 250 |
| 0015 | 0.5– 6 | 100.50 | Insulated cable lugs and connectors | from the side | 3 | 250 |
| | | (W525) | | | | |

## PreciForce ®crimping pliers for coax connectors

**Design:** Made of special grade, chromium-vanadium electric steel, hardened and tempered in oil. **Burnished head.** For optimum crimping results due to the precision profiles and unlockable locking mechanism; precise factory-set crimping pressure. Leverage-transmission handles with multi-component covers.
**With 6 crimping zones.**

| Order No. | Capacity | 5543 KNIPEX | Processing | Length mm |
|---|---|---|---|---|
| 0005 | RG 58, 174, 188, 316 | 125.00 (W525) | from the side | 220 |

## Crimping pliers for modular jacks

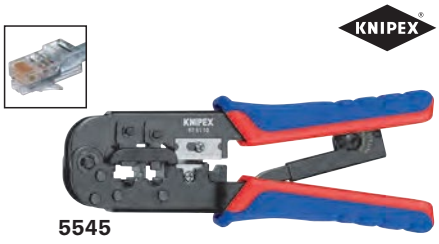
**Design:** Made of special grade, chromium-vanadium electric steel, hardened and tempered in oil. **Burnished head.** With parallel crimping for exact results, high crimping quality due to unlocking of mandatory lock, power-saving lever mechanic, with longitudinal cutter, stripping cutter and stripping function for round cables.

**Application:** Cutting and stripping of flat unshielded telephone cables and pressing of modular jacks.

**5545** **Crimping range:** RJ 11/12 (6-pole) 9.65 mm; RJ 45 (8-pole) 11.68 mm.

**5546** **Crimping range:** RJ 10 (4-pole) 7.65 mm; RJ 11/12 (6-pole) 9.65 mm; RJ 45 (8-pole) 11.68 mm.

| Order No. | Capacity | 5545 KNIPEX | 5546 KNIPEX | Processing | Length mm |
|---|---|---|---|---|---|
| 0005 | 6 + 8-pole | 29.80 | – | from the side | 190 |
| 0005 | 4 + 6 + 8-pole | – (W525) | 96.40 (W525) | from the side | 200 |



## Wire laying device

**Design:** Casing made of plastic, with integrated pulling hook and release blade.

**Application:** For putting on boards, sockets and fields. Pressing and cutting in one operation, for UTP and STP cables with conductor ∅ 0.4–0.8 mm.

| Order No. | Application area | 5541 KNIPEX |
|---|---|---|
| 0005 | UTP and STP cable, LSA-Plus and identically constructed | 38.10 |

## Wire-end sleeves assortment

**Design:** Ferrules with plastic collar according to **DIN colour code, UL approved,** conductor cross-section 0.5-16 mm². Supplied in plastic case.

| Order No. | Design | 5566 format | Set contents |
|---|---|---|---|
| 0050 | 2200-part | 90.20 | each 250 ferrules 0.5; 0.75; 2.5; 4 mm²<br>each 500 ferrules 1; 1.5 mm²<br>100 ferrules 6 mm²<br>each 50 ferrules 10; 16 mm² |

(W512)

## Cable lug/cable connector assortment

**Design:** Insulated ring and pin cable lugs, butt connectors and flat push-on contacts, conductor cross-section from 0.5–6 mm². Supplied in plastic case.

| Order No. | Design | 5567 format | Set contents |
|---|---|---|---|
| 0005 | 600-part | 67.70 | each 50 ring cable lugs 0.5–1.5; 1.5–2.5; 4.0–6.0 mm²<br>each 50 pin cable lugs 0.5–1.5; 1.5–2.5; 4.0–6.0. mm²<br>each 50 shock connectors 0.5–1.5; 1.5–2.5; 4.0–6.0 mm²<br>each 50 flat ferrules 0.5–1.5; 1.5–2.5; 4.0–6.0 mm² |

(W512)

## Cable lug/cable connector assortment

**Design:** Insulated ring and pin cable lugs, butt connectors and flat push-on contacts, conductor cross-section from 0.5–6 mm². Supplied in plastic case with removable inserts.

| Order No. | Design | 5567 format | Set contents |
|---|---|---|---|
| 0010 | 4400-part | 287.50 | each 250 ferrules 4; 6 mm²<br>each 500 ferrules 0.5; 0.75; 1; 1.5; 2.5 mm²<br>each 100 ring cable lugs 0.5–1.5 (M4); 0.5–1.5 (M5); 1.5–2.5; 4.0–6.0 mm²<br>each 100 pin cable lugs 0.5–1.5; 1.5–2.5; 4.0–6.0. mm²<br>each 100 shock connectors 0.5–1.5; 1.5–2.5; 4.0–6.0 mm²<br>each 100 flat ferrules 0.5–1.5 (2.8 mm); 0.5–1.5 (6.3 mm); 1.5–2.5; 4.0–6.0 mm² |

(W512)

## Crimping set for ferrules

**Design:** End sleeves (ferrules) with protective plastic cover, conductor cross-section of 0.5–4 mm². Supplied in plastic cassette.

| Order No. | Design | 5534 format | Set contents |
|---|---|---|---|
| 0005 | 452-part | 29.10 | 1 ferrule pliers (Order No. 5501 0006)<br>1 voltage tester<br>each 100 ferrules 0.5; 0.75; 1.5; 2.5 mm²<br>50 ferrules 4 mm² |

(W512)

## Crimping set for ferrules

**Design:** End sleeves (ferrules) with protective plastic cover, conductor cross-section of 0.5–10 mm². Supplied in stackable TANOS MINI-Systainer®.

**Note:** The TANOS MINI-Systainers® can be linked together.

| Order No. | Design | 5547 KNIPEX | Set contents |
|---|---|---|---|
| 0005 | 1251-part | 214.00 (W525) | **1 crimping pliers** (Order No. 5512 0005)<br>each 200 ferrules 0.5; 0.75; 1; 1.5; 2.5 mm²<br>each 100 ferrules 4; 6 mm²<br>50 ferrules 10 mm² |

## Crimping set for ferrules

**Design:** End sleeves (ferrules) with protective plastic cover, conductor cross-section of 0.5–10 mm². Supplied in stackable TANOS MINI-Systainer®.

**Note:** The TANOS MINI-Systainers® can be linked together.

**5549** With self-adjusting wire stripper (Order No. 5480 0005) and crimping pliers with square pressing (Order No. 5512 0005).

**5550** With self-adjusting wire stripper (Order No. 5480 0005) and crimping pliers with square pressing and front crimping (Order No. 5524 0005).

**5540** With automatic wire stripping pliers MultiStrip® (Order No. 5490 0005) and crimping pliers with square pressing and front crimping (Order No. 5524 0005).

**5549**

**5550**

**5540**

| Order No. | Design | 5549 KNIPEX | 5550 KNIPEX | 5540 KNIPEX | Set contents |
|---|---|---|---|---|---|
| 0005 | 1252-part | 289.50 (W525) | 292.00 (W525) | 304.00 (W525) | each 200 ferrules 0.5; 0.75; 1; 1.5; 2.5 mm²<br>each 100 ferrules 4; 6 mm²<br>50 ferrules 10 mm² |

## Crimping set for ferrules

**Design:** End sleeves (ferrules) with protective plastic cover, conductor cross-section of 0.5–16 mm². Supplied in stackable TANOS MINI-Systainer®.

**Note:** The TANOS MINI-Systainers® can be linked together.

| Order No. | Design | 5544 KNIPEX | Set contents |
|---|---|---|---|
| 0005 | 1191-part | 105.00 (W525) | **1 end sleeve pliers** (Order No. 5503 0006)<br>each 200 ferrules 0.5; 0.75; 1; 1.5 mm²<br>150 ferrules 2.5 mm²<br>each 75 ferrules 4; 6 mm²<br>50 ferrules 10 mm²<br>40 ferrules 16 mm² |

## Crimping set for cable lugs/connector

**Design:** Insulated ring cable lugs, butt connectors, flat push-on contacts, round push-on contacts and connectors, conductor cross-section from 0.5–6 mm². Supplied in stackable TANOS MINI-Systainer®.

**Note:** The TANOS MINI-Systainers® can be linked together.

| Order No. | Design | 5557 | Set contents |
|---|---|---|---|
| 0005 | 301-part | 168.50 | **1 crimping gripping pliers** (Order No. 5529 0005)<br>25 ring lugs 0.5–1.0 mm², Ø 4 mm<br>each 25 ring lugs 1.5–2.5 mm², Ø 4; 5 mm<br>each 25 ring lugs 4.0–6.0 mm², Ø 5; 6 mm<br>each 25 joint connectors 0.5–1; 1.5–2.5 mm²<br>25 flat receptacles 0.5–1.0 mm², Ø 6.3 mm<br>each 25 flat receptacles 1.5–2.5 mm², Ø 6.3; 8 mm<br>25 round receptacles 0.5–1.0 mm², Ø 4 mm<br>25 round plugs 0.5–1.0 mm², Ø 4 mm |

(W525)

## Crimping set for cable lugs/connector

**Design:** Insulated ring cable lugs, butt connectors, flat push-on contacts, round push-on contacts and connectors, conductor cross-section from 0.5–6 mm². Supplied in stackable TANOS MINI-Systainer®.

**Note:** The TANOS MINI-Systainers® can be linked together.

| Order No. | Design | 5537 | Set contents |
|---|---|---|---|
| 0005 | 286-part | 184.00 | **1 crimping pliers PreciForce®** (Order No. 5510 0025)<br>each 25 ring lugs 0.5–1.0 mm², Ø 4; 5 mm<br>each 25 ring lugs 1.5–2.5 mm², Ø 4; 5; 6 mm<br>each 20 ring lugs 4.0–6.0 mm², Ø 6; 8 mm<br>25 insulated joint connectors 0.5–1.0; 1.5–2.5; 4.0–6.0 mm²<br>each 25 flat receptacles 0.5–1.0; 1.5–2.5 mm², Ø 6.3 x 0.8 mm |

(W525)

## Crimping set for cable lugs/connector

**Design:** Insulated ring cable lugs, shock connectors, flat push-on contacts, round push-on contacts and connectors, conductor cross-section from 0.5–6 mm². Supplied in stackable TANOS MINI-Systainer®.

**Note:** The TANOS MINI-Systainers® can be linked together.

| Order No. | Design | 5538 | Set contents |
|---|---|---|---|
| 0005 | 287-part | 276.00 | **1 crimping pliers PreciForce®** (Order No. 5510 0025)<br>**1 automatic wire-stripping pliers** (Order No. 5490 0005)<br>each 25 ring lugs 0.5–1.0 mm², Ø 4; 5 mm<br>each 25 ring lugs 1.5–2.5 mm², Ø 4; 5; 6 mm<br>each 20 ring lugs 4.0–6.0 mm², Ø 6; 8 mm<br>25 insulated joint connectors 0.5–1.0; 1.5–2.5; 4.0–6.0 mm²<br>each 25 flat receptacles 0.5–1.0; 1.5–2.5 mm², Ø 6.3 x 0.8 mm |

(W525)

## Tool box for photovoltaic

**Design:** Impact-resistant plastic case with tools especially for working with solar cables. Foam inlay with recesses for the tools, crimping inserts and positioning aids.

| Order No. | Design | 5535 | Set contents |
|---|---|---|---|
| 0005 | 3-part<br>345 x 280 x 80 mm | 272.00 | 1 automatic wire-stripping pliers (Order No. 5535 0010)<br>1 crimping system pliers without inserts (Order No. 5535 0015)<br>1 VDE cable shears (Order No. 5381 0165) |

(W525)

## Mounting tool for MC3 connectors

**Design:** Casing made of glass-fibre-reinforced plastic. With three capsules integrated into the detachable handle.

**Application:** For the easy and quick installation of MC3 solar plugs as well as the application of solar grommets.

| Order No. | Conductor cross-section mm² | 5535 KNIPEX | Length mm |
|---|---|---|---|
| 0065 | 2.5–10.0 | 135.00 (W525) | 325 |

## Automatic precision wire-stripping pliers with shaped blades

PATENTED

**Design:** Pliers made of steel, interchangeable blades made of special tool steel, hardened and tempered in oil. **Burnished head.** The precise blade shape prevents damage to the conductor and thus allows for easy stripping of difficult insulating materials. With additional cable support for better centring of multi-layered insulated conductors, also fine-core stranded wires are stripped gently. Handles with multi-component plastic covers. Supplied including longitudinal stop for the same wire-stripping lengths for series work.

**Application:** Especially suited to solar cables, especially RADOX® insulations, as well as extremely tough insulation materials, such as PTFE, polyamide, silicone or rubber. High operating comfort due to compact and handy design as well as easily operated mechanics.

| Order No. | Conductor cross-section mm² | 5535 KNIPEX | Length mm |
|---|---|---|---|
| 0010 | 1.5–6.0 | 101.50 (W525) | 195 |

## Crimping system pliers

**Design:** Made of special grade, chromium-vanadium electric steel, hardened and tempered in oil. **Burnished head.** For consistently high crimping results due to the precision profiles and unlockable locking mechanism. Crimp pressure is precisely adjusted ex works. Force enhancement due to optimum lever transmission for fatigue-free working. Handles with multi-component plastic coating. Supplied in plastic case with mounting tools, **without crimping sets.**

**Application:** To be used with exchangeable crimping sets, ideal in case of frequently changing purposes.

| Order No. | Length mm | 5535 KNIPEX |
|---|---|---|
| 0015 | 200 | 133.50 (W525) |

## Accessories for crimping system pliers

5535 0050

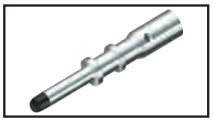
5535 0055

5535 0060

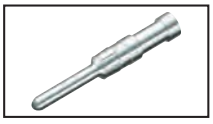
5535 0025

5535 0030

5535 0035



5535 0045



| Order No. | Design | 5535 KNIPEX | Capacity mm² | AWG | Crimping zones |
|---|---|---|---|---|---|
| 0025 | Crimping die for plug connector (Huber + Suhner) | 107.50 | 4.00 + 6.00 | 11 + 10 | 3 |
| 0030 | Crimping die for plug connector MC3 (multi-contact) | 121.00 | 2.50–6.00 | 13–10 | 3 |
| 0035 | Crimping die for plug connector MC4 (multi-contact) | 127.50 | 2.50–6.00 | 13–10 | 3 |
| 0045 | Crimping die for plug connector (Tyco) | 183.50 | 1.50–6.00 | 15–10 | 4 |
| 0050 | Positioning aid plug connector MC3 (multi-contact) | 60.50 | – | – | – |
| 0055 | Positioning aid plug connector MC4 (multi-contact) | 60.50 | – | – | – |
| 0060 | Positioning aid plug connector (Solarlok) | 60.50 (W525) | – | – | – |

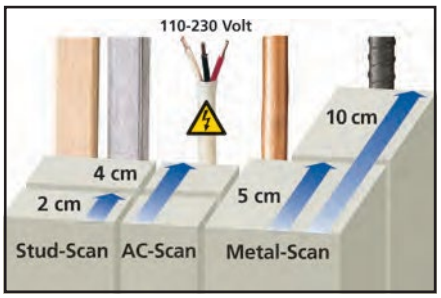
## Tracking device MultiFinder Plus

**Design:** Backlit LCD display with user guidance. Acoustic and optical signals for ease of use and warning notices for high operational reliability. Automatic calibration on different surfaces and containment of measurement objects, one-button operation. Supplied with battery.

**Application:** For the location of joists, hollow spaces, pipes and wires in walls. In metal mode, non-live conductors below the plaster are also located.

**Measurement depth:**

| | |
|---|---|
| Stud framing (wood/metal): | 1– 4 cm |
| Cavities: | 1– 4 cm |
| Copper: | 0– 5 cm |
| Iron: | 0–10 cm |
| Power lines: | 0– 4 cm |



| Order No. | 5562 Laserliner |
|---|---|
| 0500 | 61.40 (W465) |

## CableTracer Pro cable locator

**Design:** Transmitter and receiver feature a high-contrast, illuminated LCD display. Exact localising of the device under test using the bar chart, numerical display and acoustic signals; also displays the DC and AC voltage. The encoded transmitter signal means that it is possible to use up to 7 transmitters and one receiver. In addition, the device features a permanent AC voltage warning, high transmitter frequency and measuring point illumination.

**Application:** For the localising of electrical cables, fuses, circuit breakers, metal pipes as well as disconnections and short circuits in complex installations. Applicable with and without mains power, from 12 V to 400 V.

**Scope of delivery:** locating device, connector cable, measuring probes, measuring clamps and 2 6LR61 monobloc batteries.

CAT III

| Order No. | Measuring depth | | 5562 Laserliner |
|---|---|---|---|
| 0200 | Voltage search: | 0–0.4m | 252.00 |
| | Single pole measurement: | 0–2.0m | |
| | Bipolar measurement: | 0–0.5m | |
| | | | (W465) |

## Voltage testers, single-pole

**Design:** Tested and approved according to **VDE 0680/6**. Blades made of tool steel, nickel-plated. The display system (LED) is integrated into handle.

**5532** **Standard voltage tester,** for **120–250 Volt**. Handles made of clear plastic, with metal clip.

**5564** **Euro voltage tester,** for **125–250 V.** Handle made of red plastic with hand protection and insulated plastic clip.

5532

5564

| Order No. | Total length mm | 5532 | 5564 |
|---|---|---|---|
| 0004 | 140 | 1.17 | – |
| 0005 | 150 | – | 1.56 |
| 0010 | 190 | 1.47 (W514) | 1.92 (W514) |

## Voltage testers, single-pole

**Design:** Tested and approved according to **DIN 57680/6 and VDE 0680/6.** Blades made of tool steel, insulated. The display system (LED) is integrated into the clear ABS plastic handle. With metal clip.

1000 V

| Order No. | Voltage range V | 5563 Wera | Total length mm |
|---|---|---|---|
| 0006 | 150–250 | 5.85 (W543) | 150 |

## Voltage tester, inductive

NEW

**Design: Alternating current.** Made of break-resistant ABS plastic with test probe that lights up red and insulated plastic clip. Supplied with 2 AAA/LR03 micro batteries.

**Application:** For the location of cable breaks, defect fuses in plugs and fixtures; checking of switches, sockets, transformers and FI switches as well as recognising phase conductors and live wires in distribution boxes.

CAT III
1000 V

format professional quality

**5576 0010** 110–1000 V
Additionally with acoustic signal. Also suitable for the recognition of faulty in-line switches.

5576 0010

**5576 0020** 12–1000 V
With LED flashlight in pin end. Additionally with discernible signal (vibration).

5576 0020

| Order No. | Voltage range V | 5576 format | Total length mm |
|---|---|---|---|
| 0010 | 110–1000 | 15.10 | 142 |
| 0020 | 12–1000 | 21.60 (W513) | 160 |

## Voltage tester, inductive

NEW

**Design: Alternating current.** Made of plastic with test probe that lights up and insulated plastic clip. Supplied including 2 AAA/LR03 micro batteries.

**Application:** For the location of cable breaks, defect fuses in plugs and fixtures, as well as faulty switches and bulbs connected in series.

CAT III
1000 V

SAGAB BY ELMA INSTRUMENTS

**5569 0010** Volt stick®
With round test probe.

5569 0010

**5569 0020** Volt Stick® Bright
With flat test probe and integrated bright torch.
With two voltage rages and additional acoustic signal.

CAT IV
600 V

5569 0020

| Order No. | Model | 5569 SAGAB | Voltage range V | Total length mm |
|---|---|---|---|---|
| 0010 | Volt stick® | 20.80 | 230–1000 | 156 |
| 0020 | Volt Stick® Bright | 31.20 (W514) | 20–1000/100–1000 | 153 |

## Magnetic field tester, inductive

NEW

**Design:** Made of plastic with red illuminating probe all around, audible alarm and insulated plastic clip. Supplied with 2 AAA/LR03 micro batteries.

**Application:** For the testing of magnetic valves in pneumatic and hydraulic systems, as well as in the servicing of oil burners. In addition, suitable for testing electrically controlled solenoid valves in vehicles or machinery of any kind.

SAGAB BY ELMA INSTRUMENTS

| Order No. | Model | 5569 SAGAB | Sensitivity | Total length mm |
|---|---|---|---|---|
| 0030 | Magnet Stick | 24.30 (W514) | 0.3 | 152 |

## Voltage and phase sequence testing, without contact

**Design: Alternating current.** Made of shatter-resistant ABS plastic with illuminating probe all around, depending on the test result green or red as well as acoustic signal generator and insulated plastic clip. With automatic shutdown after 5 minutes. Supplied with 2 AAA/LR03 micro batteries.

**Application:** For locating cable breaks, testing for phase balance and the phase as well as phase sequence test in three-phase systems.

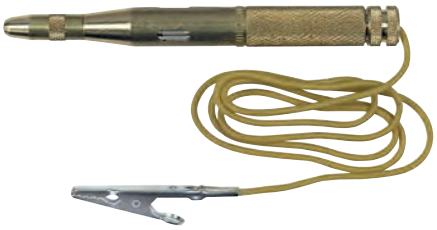
IP 53 CAT IV
600 V

BENNING

| Order No. | Voltage range V | 5568 BENNING | Total length mm |
|---|---|---|---|
| 0150 | 200–1000 | 42.40 (W514) | 153 |

## Automobile light tester

**Design:** For **6–24 Volt, bipolar.** Made of brass, with steel probe, solid cable and terminal.



| Order No. | Total length mm | 5565 |
|---|---|---|
| 0005 | 120 | 3.82 (W514) |

## Car Check voltage tester

**Design:** For **5–48 Volt, bipolar,** direct and alternating current. Made of plastic, probe tip with sliding mechanism as well as test line and rubber-insulated pole clamp.

**Application:** Low electricity consumption makes it ideal for looking for faults in electrical components, as conventional test lamps often cause damage.

Weidmüller

| Order No. | Electricity consumption mA | 5570 Weidmüller | Cable length cm |
|---|---|---|---|
| 0005 | 1.5 | 14.25 (W515) | 130 |

## Voltage tester

**Design:** Tested and **approved according to EN 61010 and EN 61243-3:2010, bipolar.** Casing made of impact-resistant and unbreakable plastic, with rubber handle zone, two test handles and flexible connection cable. Supply includes batteries.

**Application:** For professional testing of DC and AC voltages, continuity, phase and polarity as well as phase sequence detection and single pole testing.

IP 64 | CAT IV 600 V

format professional quality

TÜV Rheinland | GS geprüfte Sicherheit

| Order No. | 1000 |
|---|---|
| **Display** | **LED/LCD** |
| 5579 format | **61.70** |
| DC voltage | 12–690 V |
| AC voltage | 12–690 V |
| Continuity test | Optical/acoustic |
| Frequency | 40–400 Hz |
| Phase sequence test | LED |
| Phase test | LED |
| Polarity test | LED |
| Measuring point illumination | yes |
| Measurement category | CAT IV 600 V, CAT III 1000 V |
| Protection type | IP 64 |
| Batteries | 2 x micro AAA/LR03 |

(W513)

## Voltage tester

**Design:** Tested and approved in line with **EN/IEC 61243-3 (DIN VDE 0682-401), bipolar.** Casing made of impact-resistant and unbreakable plastic, with two test handles and flexible connection cable. The test handles can be connected and thus used single-handed. Supply includes batteries.

**Application:** For the testing or direct and alternating current, as well as for continuity, semiconductor, polarity and phasing tests.

IP 65 | VDE | GS geprüfte Sicherheit

Weidmüller

5571 0010

5572 0050

5572 0060

5573 0005

5574 0010

| Order No. | 0010 | 0050 | 0060 | 0005 | 0010 |
|---|---|---|---|---|---|
| **Model** | **Master Check** | **Combi Check** | **Combi Check Pro** | **Digi Check** | **Digi Check Pro** |
| 5571 Weidmüller | **37.80** | – | – | – | – |
| 5572 Weidmüller | – | **56.70** | **74.30** | – | – |
| 5573 Weidmüller | – | – | – | **108.00** | – |
| 5574 Weidmüller | – | – | – | – | **130.50** |
| Display | LED | LED | LED | LCD | LCD |
| Voltage | 6–400 V | 6–690 V | 6–690 V | 0.3-690 V | 0.3-690 V |
| Continuity test | – | – | ≥ 300 kOhm | ≥ 300 kOhm | ≥ 300 kOhm |
| Semiconductor test | – | yes | yes | yes | yes |
| Phase sequence test | – | LED | LED | LCD | LCD |
| HOLD function | – | – | – | yes | yes |
| Phase test | – | LED | LED | LCD | LCD |
| Polarity test | LED | LED | LED | LCD, 4-digit | LCD, 4-digit |
| Load connection | – | – | yes | – | yes |
| Measuring point illumination | – | yes | yes | yes | yes |
| Protection type | IP 65 | IP 65 | IP 65 | IP 65 | IP 65 |
| Operating temperature | –15 °C to +45 °C | –15 °C to +45 °C | –-15 °C to +45 °C | –15 °C to +45 °C | –15 °C to +45 °C |
| Batteries | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 |

(W515)

## Voltage tester PROFIPOL®+

NEW

BENNING

IP 54 | CAT III 600 V

**Design:** Casing made of impact-resistant and unbreakable plastic, with two test handles and flexible connection cable. The test handles can be connected and thus used single-handed. Supplied with battery.

**Application:** For the professional testing of direct and alternating currents, as well as for phasing and polarity tests. Voltage display at levels 12; 24; 50; 120; 230; 400; 690 V also in empty or removed batteries.

| Order No. | 0010 |
|---|---|
| **Model** | **PROFIPOL®+** |
| **5559** BENNING | **43.00** |
| Display | LED |
| DC voltage | 12–690 V |
| AC voltage | 12–690 V |
| Continuity test | LED, yellow/buzzer |
| Phase test | LED, red |
| Polarity test | LED |
| Measurement category | CAT III 600 V, CAT II 690 V |
| Protection type | IP 54 |
| Batteries | 2 x micro AAA/LR03 |

(W514)

## Voltage and continuity tester

BENNING

IP 65 | CAT IV 600 V

**Design:** Tested and **approved in line with EN/IEC 61243-3 (DIN VDE 0682 Part 401), bipolar.** Casing made of impact-resistant and unbreakable plastic, with rubber handle zone, two test handles and flexible connection cable. Direct display without push-button (high resistance), load connection via push buttons (low resistance), vibration alarm.

**Application:** For the professional testing of direct and alternating currents, as well as for phasing and polarity tests with deliberate triggering of the earth leakage circuit breaker.

**5560 0020** **DUSPOL® analog**
For the professional testing of voltage, phasing and polarity, as well as the rotary field direction.

5560 0020

**5560 0010** **DUSPOL® expert**
For professional checking voltage, **continuity,** phase and polarity as well as the phase sequence. No-contact phase tester/cable break detector (yellow LED flashing). Supplied with batteries, voltage display from 50 V even when the batteries are empty.

5560 0010

**5560 0030** **DUSPOL® digital**
For professional checking of voltage, **continuity, diode,** phase and polarity, phase sequence as well as measuring **resistance** and **frequency.** No-contact phase tester/cable break detector (yellow LED flashing). Measuring point and display lighting. Supplied with batteries, voltage display from 50 V even when the batteries are empty.

5560 0030

| Order No. | 0020 | 0010 | 0030 |
|---|---|---|---|
| **Model** | **DUSPOL® analog** | **DUSPOL® expert** | **DUSPOL® digital** |
| **5560** BENNING | **52.50** | **62.00** | **94.40** |
| Display | Plunger coil/LED | LED | LED/LCD |
| DC voltage | 12–1000 V | 12–1000 V | 1–1200 V |
| AC voltage | 12–1000 V | 12–1000 V | 1-1000 V |
| Resistance | – | – | 0.1–300 kOhm |
| Continuity test | – | LED, yellow/buzzer | LED, yellow/buzzer |
| Frequency | – | – | 1–1000 Hz |
| Phase sequence test | LCD | LED, green | LED, green |
| Phase test | LCD | LED, red | LED, red |
| Polarity test | LED | LED | LED |
| Load connection | yes | yes | yes |
| Vibration alarm | yes | yes | yes |
| Measuring point illumination | – | yes | yes |
| Measurement category | CAT IV 600 V, CAT III 1000 V | CAT IV 600 V, CAT III 1000 V | CAT IV 600 V, CAT III 1000 V |
| Measuring procedure | – | – | TRUE RMS |
| Protection type | IP 65 | IP 65 | IP 65 |
| Batteries | – | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 |

(W514)

## Protective case for voltage tester DUSPOL®

**Design:** Made of durable nylon fabric with Velcro closure and belt loop.

| Order No. | Dimensions mm | 5560 BENNING |
|---|---|---|
| 1000 | 330 x 100 x 60 | 17.75 (W514) |

## Continuity and line tester DUTEST® pro

**Design:** Casing made of impact resistant and unbreakable plastic, with two test handles, flexible test leads and a magnet holder. With visual and audible signal, external voltage and battery voltage display. Precise high power LED flashlight, buzzer volume (3-stage/OFF) and luminosity (4 levels) adjustable. Integrated self-test for LED, LED flashlight and buzzer. Supplied without batteries.

**Application:** For high and low resistance continuity testing of electrical wiring, facilities, equipment and components as well as for polarity testing and no-contact phase testing phase.

IP 30 | CAT III 300 V

| Order No. | 0010 |
|---|---|
| **Continuity test** | **0–100 Ohm/1 kOhm/10 kOhm (LED/buzzer)** |
| **5575 BENNING** | **31.40** |
| Polarity test | LED |
| External voltage display | 6 V–400 V (LED/buzzer) |
| Measurement category | CAT III 300 V |
| Protection type | IP 30 |
| Batteries | 3 x Mignon AA/LR6 |

(W514)

## Phase sequence indicator TRITEST® pro

NEW

**Design:** Casing made of impact resistant and unbreakable plastic, with three test handles, one alligator clip and flexible test leads and a magnet holder and belt clip. With visual signal Precise high-power LED torch Supplied without batteries.

**Application:** For phase sequence indicator and phase voltage display L1, L2 and L3.

CAT III 300 V

| Order No. | 0020 |
|---|---|
| **Phase-sequence indicator** | **right/left** |
| **5575 BENNING** | **60.30** |
| External voltage display | 400–500 V (LED) |
| Measurement category | CAT III 300 V |
| Batteries | 3 x Mignon AA/LR6 |

(W514)

## Alternating current transformer CFlex 2

NEW

**Design:** Large illuminated 4-digit display. Very flexible measuring measuring loop for application in narrow measuring situations, large conductor diameters and covering several conductors The closing mechanism can be operated with gloves. Precise due to true RMS measurement procedure TRUE RMS. Supplied with compact protective bag and batteries.

CAT IV 600 V

| Order No. | 0002 |
|---|---|
| **Alternating current** | **0.1 A-3000 A** |
| **5583 BENNING** | **224.50** |
| Measurement range | 30 A/300 A/3000 A |
| Transformer ratio | 0.01 A/0.1 A/1 A |
| Measurement loop length | 46 cm |
| Length of measuring loop connecting cable | 1.8 m |
| Measurement value memory | HOLD, MAX/MIN |
| Measurement category | CAT IV 600 V |
| Batteries | 2 x micro AAA/LR03 |

(W514)

## MM P3 digital multimeter

**Design:** Small, handy multimeter in pocket format. 132 x 86 x 19 mm, just 130 g including accessories. Overload protection in all ranges and automatic shutdown after 30 minutes (can be deactivated).
Supplied in leather case with attached safety measurement line and batteries.

**Application:** For the measuring of direct and alternating currents as well as resistance, frequency and capacity, continuity and diode testing.

CAT III
300 V

BENNING

| Order No. | 0010 |
|---|---|
| **DC voltage** | **0.1 mV–600 V** |
| **5578 BENNING** | **43.20** |
| AC voltage | 0.1 mV–600 V |
| Resistance | 0.1 Ohm–40 MOhm |
| Continuity/diodes | yes/yes |
| Frequency | 0.001 Hz–5 MHz |
| Capacity | 10 pF–100 µF |
| Measurement category | CAT III 300 V, CAT II 600 V |
| Measuring procedure | RMS |
| Batteries | 2 x LR44 cell batteries |
| Display | LCD |

(W514)

## Digital multimeter

**Design:** GS-tested. Casing made of impact-resistant plastic. The multimeter also features an integrated temperature sensor.

**Application:** For the testing of direct and alternating currents as well as current and resistance, continuity and diode testing. The integrated temperature sensor allows measurements of –40 °C to +400 °C.

**Scope of delivery:** Digital multimeter, plastic box with PUR inlay and viewing window, incl. operator's manual, silicone measuring line, battery and protective holster.

IP 40
CAT III
300 V

format professional quality

| Order No. | 0010 |
|---|---|
| **DC voltage** | **2 V–600 V/1 mV** |
| **5579 format** | **79.40** |
| AC voltage | 2 V–600 V/1 mV |
| Direct current | 200 mA, 10A/0.1, 10 mA |
| Alternating current | 200 mA, 10A/0.1, 10 mA |
| Resistance | 2 kOhm–2 MOhm |
| Temperature | –40 °C to +400 °C |
| Measurement category | CAT III 600 V |
| Protection type | IP 40 |
| Batteries | 1 x 6LR61 block battery |
| Display | LCD |

(W513)

## Digital multimeter

**Design:** Casing made of impact-resistant plastic with **voltage sensor.**

**5587 0300** **MM1-1** Supplied with compact protective bag, dual-insulated safety measurement lines and batteries.

**5587 0350** **MM1-3** Supplied with wire temperature sensor with adapter, suspension mechanism, compact protective bag, dual-insulated safety measurement lines and batteries.

IP 30
CAT III
600 V

BENNING

5587 0300

5587 0350

| Order No. | 0300 | 0350 |
|---|---|---|
| **Model** | **MM 1-1** | **MM 1-3** |
| **5587 BENNING** | **66.60** | **100.50** |
| DC voltage | 0.1 mV-1000 V | 0.1 mV–1000 V |
| AC voltage | 0.1 mV–750 V | 0.1 mV–750 V |
| Direct current | – | 1 mA–10 A |
| Alternating current | – | 1 mA–10 A |
| Resistance | 0.1 Ohm–20 MOhm | 0.1 Ohm–20 MOhm |
| Continuity | yes | yes |
| Frequency | – | 1 Hz–20 MHz |
| Capacity | – | 1 pF–2 mF |
| Temperature | – | –20 °C to +800 °C |
| Measurement category | CAT III 600 V | CAT III 600 V |
| Measuring procedure | RMS | RMS |
| Protection type | IP 30 | IP 30 |
| Batteries | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 |
| Display | LCD | LCD |

(W514)

## Digital multimeter

**Design:** Casing made of impact-resistant plastic. Supplied with compact protective case, dual-insulated safety measurement lines and batteries.

IP 30

BENNING

**5584** **MM 1** Supplied with rubber protection frame.

**5587 0005** **MM 2** Supplied with rubber protection frame.

**5587 0050** **MM 3** Supplied with rubber protection frame.

**5587 0100** **MM 4** Supplied with AC power pliers attachment and measuring tips.

5584 0005

CAT III
600 V

5587 0005

CAT III
600 V

5587 0050

CAT III
300 V

5587 0100

CAT III
300 V

| Order No. | 0005 | 0005 | 0050 | 0100 |
|---|---|---|---|---|
| **Model** | **MM 1** | **MM 2** | **MM 3** | **MM 4** |
| **5584** BENNING | **79.00** | – | – | – |
| **5587** BENNING | – | **93.90** | **118.50** | **136.00** |
| DC voltage | 0.1 mV–600 V | 0.1 mV–1000 V | 0.1 mV–600 V | 1 mV–600 V |
| AC voltage | 1 mV–600 V | 0.1 mV–750 V | 0.1 mV–600 V | 1 mV–600 V |
| Direct current | 0.1 µA–3.2 mA | 0.1 µA–20 A | 0.1 µA–20 A | – |
| Alternating current | – | 0.1 µA–20 A | 0.1 µA–20 A | 0.1 A–300 A |
| Resistance | 0.1 Ohm–32 MOhm | 0.1 Ohm–20 MOhm | 0.1 Ohm–20 MOhm | 0.1 Ohm–42 MOhm |
| Continuity/diodes | yes/yes | yes/yes | yes/yes | yes/yes |
| Frequency | – | – | 1 Hz–200 kHz | – |
| Capacity | – | – | 1 pF–200 µF | – |
| Pliers opening | – | – | – | 30 mm |
| Measurement category | CAT III 600 V | CAT III 600 V | CAT III 300 V | CAT III 300 V |
| Measuring procedure | RMS | RMS | RMS | RMS |
| Protection type | IP 30 | IP 30 | IP 30 | IP 30 |
| Batteries | 2 x micro AAA/LR03 | 1 x 6LR61 block battery | 1 x 6LR61 block battery | 2 x micro AAA/LR03 |
| Display | LCD | LCD | LCD | LCD |

(W514)

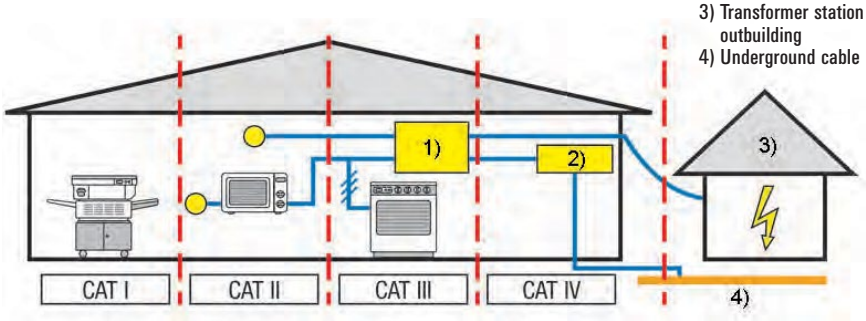
### The measurement categories CAT I to CAT IV

CAT I Applies to measurements on circuits which are not connected to mains (e.g. specially protected devices)

CAT II Applies to measurements on circuits which are electrically directly connected to the low-voltage grid (e.g. appliances)

CAT III Applies to measurements inside the building installation (e.g. distribution boards, wiring, socket outlets, switches)

CAT IV Applies to measurements on the source of the low-voltage installation (e.g. electricity meters, main connection, primary overcurrent protection devices)



## Digital multimeter for industrial application

**Design:** Casing made of impact-resistant plastic with integrated rubber protection frame. With **voltage sensor** and **TRUE RMS measuring process** for precise measurement results also in non-sinus signal sequences. Supplied with compact protective case, dual-insulated safety measurement lines and batteries.

IP 30

BENNING

**5587 0152** NEW — **MM 5-1**

**5587 0155** NEW — **MM 5-2** Micro ampere measuring ranges (400 µA DC/4000 µA DC) for the ionisation current measurement in heating systems.

**5587 0210** NEW — **MM 6-1** Automatic voltage function for automatic identification of DC/AC voltage, low input impedance (LoZ) for the suppression of capacitive/inductive interspersed voltages.

**5587 0215** NEW — **MM 6-2** Automatic voltage function for automatic identification of DC/AC voltage, low input impedance (LoZ) for the suppression of capacitive/inductive interspersed voltages.

**5587 0251** — **MM 7-1** Automatic voltage function for automatic identification of DC/AC voltage, low input impedance (LoZ) for the suppression of capacitive/inductive interspersed voltages. Delivery includes wire temperature sensor with adapter.

5587 0152

CAT III 600 V

5587 0155

CAT III 600 V

5587 0210

CAT IV 600 V

5587 0215

CAT IV 600 V

5587 0251

CAT IV 600 V

| Order No. | 0152 | 0155 | 0210 | 0215 | 0251 |
|---|---|---|---|---|---|
| **Model** | **MM 5-1** | **MM5-2** | **MM 6-1** | **MM 6-2** | **MM 7-1** |
| 5587 BENNING | **94.10** | **144.00** | **164.00** | **180.00** | **210.00** |
| DC voltage | 0.1 mV–600 V | 0.1 mV–600 V | 0.1 mV–1000 V | 0.1 mV–1000 V | 10 µV–1000 V |
| AC voltage | 0.1 mV–600 V | 0.1 mV–600 V | 0.1 mV–1000 V | 0.1 mV–1000 V | 10 µV–1000 V |
| Direct current | – | 1 mA–10 A | 0.1 µA–600 µA | 1 mA–10 A | 10 µA–10 A |
| Alternating current | – | 0.1 µA–10 A | 0.1 µA–600 µA | 1 mA–10 A | 10 µA–10 A |
| Resistance | 0.1 Ohm–40 MOhm | 0.1 Ohm–40 MOhm | 0.1 Ohm–40 MOhm | 0.1 Ohm–40 MOhm | 0.1 Ohm–40 MOhm |
| Continuity/diodes | yes/yes | yes/yes | yes/yes | yes/yes | yes/yes |
| Frequency | 0.01 Hz–50 kHz | 0.01 Hz–50 kHz | 0.01 Hz–100 kHz | 0.01 Hz–100 kHz | 0.01 Hz–100 kHz |
| Capacity | 0.01 nF–1 mF | 0.01 nF–1 mF | 1 nF–10 mF | 1 nF–10 mF | 1 nF–10 mF |
| Temperature | – | –40°C to +400°C | –40°C to +400°C | – | –40°C to +400°C |
| Measurement category | CAT III 600 V | CAT III 600 V | CAT IV 600 V | CAT IV 600 V | CAT IV 600 V |
| Measuring procedure | TRUE RMS | TRUE RMS | TRUE RMS | TRUE RMS | TRUE RMS |
| Protection type | IP 30 | IP 30 | IP 30 | IP 30 | IP 30 |
| Batteries | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 | 1 x 6LR61 block battery | 1 x 6LR61 block battery | 1 x 6LR61 block battery |
| Display | LCD | LCD | LCD | LCD | LCD |

(W514)

## Digital current clamp multimeter

**Design:** Housing made of impact-resistant, unbreakable plastic, with automatic shutdown function.

IP 30

BENNING

**Application:** For the safe current measurement at insulated cables, without having to remove or damage the insulation.

**5585 0101** **CM 1-1** Supplied with compact protective bag and battery.

**5585 0102** **CM 1-2** Supplied with compact protective case, dual-insulated safety measurement lines and batteries.

**5585 0200** **CM 2** Precise due to true RMS measurement procedure TRUE RMS. Tested and approved according to IEC/EN 61010-1 (DIN VDE 0411-1). Ideal for measuring small currents. Supplied with compact protective bag, double insulated safety measurement cables and batteries.

**5585 0501** **CM 5-1** Automatic selection of correct measuring function, incorrect measurements as a result of choosing the wrong measuring range prevented, quick reaction times due to 5 samples per second. The voltage measurement takes place with low input impedance (LoZ) for the suppression of capacitive/inductive interspersed voltages. For continuity and diode testing. Supplied with compact protective bag, double insulated safety measurement cables and battery.

**5585 0700** **CM 7** Ideal for current measurement up to 1000 A (alternate and direct current). Supplied with compact protective bag, double insulated safety measurement cables and battery.

**5585 0900** **CM 9 (stray current pliers)** Precise due to true RMS measurement procedure TRUE RMS. Resolution of 1 µA in the 6 A measuring range For locating current leakages and measuring leakage and residual currents in electrical installations (VDE 0100) and devices (VDE 0701/0702, DGUV Rule 3, Industrial Safety Ordinance). Measurement during normal operation of the plant/unit, ideal for preventive maintenance and troubleshooting, reliable and easy to locate insulation faults. Connectible low-pass filter (50–60 Hz). Supplied with compact protective bag and batteries.

**5585 1100** NEW **CM 11** Ideal for fault detection in electrical systems, controls, devices and MV electrics. Precise measuring of small direct/alternate currents with resolution of 0.1 mA. True real measuring value process TRUE RMS, measuring of standby, stray, difference, leakage and load currents. Supplied with compact protective bag, double insulated safety measurement cables and battery.

5585 0101

CAT III 600 V

5585 0102

CAT III 600 V

5585 0200

CAT III 300 V

5585 0501

CAT IV 600 V

5585 0700

CAT IV 600 V

5585 0900

CAT III 300 V

5585 1100

CAT IV 300 V

| Order No. | 0101 | 0102 | 0200 | 0501 | 0700 | 0900 | 1100 |
|---|---|---|---|---|---|---|---|
| **Model** | **CM 1-1** | **CM 1-2** | **CM 2** | **CM 5-1** | **CM 7** | **CM 9** | **CM 11** |
| **5585 BENNING** | **62.00** | **82.80** | **177.50** | **257.00** | **276.00** | **408.50** | **329.00** |
| DC voltage | – | 0.1 V–600 V | 0.1 mV–600 V | 0.7 V–1000 V | 0.1 V–1000 V | – | 0.1 V–600 V |
| AC voltage | – | 0.1 V–600 V | 1 mV–600 V | 1.3 V–750 V | 0.1 V–750 V | – | 0.01 V–600 V |
| Direct current | – | – | 10 mA–300 A | 0.9 A–600 A | 0.1 A–1000 A | – | 0.1 mA–10 A |
| Alternating current | 10 mA–400 A | 0.1 A–400 A | 100 mA–300 A | 0.9 A–600 A | 0.1 A–1000 A | 1 µA–100 A | 0.1 mA–20 A |
| Resistance | – | 0.1 Ohm–20 MOhm | 0.1 Ohm–40 MOhm | 1 Ohm–10 kOhm | 0.1 Ohm–400 Ohm | – | 0.1 Ohm–600 kOhm |
| Continuity | – | yes | yes | yes | yes | – | yes |
| Frequency | – | – | – | – | 1 Hz–400 Hz | – | – |
| Measurement value memory | HOLD, MAX | HOLD | HOLD, MAX | HOLD, ZERO | HOLD, MAX/MIN, PEAK, ZERO | HOLD, PEAK | HOLD, MAX/MIN, ZERO |
| Measuring procedure | RMS | RMS | TRUE RMS | TRUE RMS | TRUE RMS | TRUE RMS | TRUE RMS |
| Pliers opening | 30 mm | 30 mm | 25 mm | 35 mm | 53 mm | 40 mm | 23 mm |
| Measurement category | CAT III 600 V | CAT III 600 V | CAT III 300 V | CAT IV 600 V | CAT IV 600 V | CAT III 300 V | CAT IV 300 V |
| Protection type | IP 30 | IP 30 | IP 30 | IP 30 | IP 30 | IP 30 | IP 30 |
| Batteries | 1 x 6LR61 block battery | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 | 1 x 6LR61 block battery | 1 x 6LR61 block battery | 2 x micro AAA/LR03 | 2 x micro AAA/LR03 |
| Display | LCD | LCD | LCD | LCD | LCD | LCD | LCD |

(W514)

## Insulation and resistance measuring instrument IT 101

**Design:** Casing made of impact-resistant plastic. With selectable limit values for ISO measurement, green LED for test passed, red LED for test/external voltage, switchable probe tip for triggering the measuring process, internal memory, voltage measurement with low-pass filter, automatic discharge of capacitive voltage. Insulation resistance (50 V-1000 V) with calculation of the resulting current leak, polarisation index (PI) and dielectric absorption ratio (DAR).

**Application:** For insulation and low ohmic measurements on electrical systems, devices, wires, engines and generators.

**Scope of delivery:** Measuring device, switchable probes, measurement lines, crocodile clamps, rubber case, batteries and bag.

IP 40 | CAT IV 600 V

BENNING

| Order No. | 0100 |
|---|---|
| **Model** | **IT 101** |
| **5586 BENNING** | **462.50** |
| Low resistance | 0.01 Ohm–40 Ohm |
| Insulation resistance | 1 kOhm–20 GOhm |
| Resistance | 0.01 Ohm–40 kOhm |
| Voltage | 0.1 V–600 V |
| Measurement value memory | 500 |
| Measuring procedure | TRUE RMS |
| Measurement category | CAT IV 600 V |
| Dimensions (L x W x H)/weight | 207 x 95 x 52 mm/630 g |
| Batteries | 4 x Mignon AA/LR6 |

(W514)

## ST 710/ST 725 device testers

**Design:** Automatic test procedure with pass/fail indication for Class I, II (III) and line test. Voltage measurement at external isolated safety plugs. Three-phase test items tested via optional measuring adapter. **The limit values are preset in line with VDE standard.** Battery capacity for 2500 test samples. Supplied with carry bag and belt, test lead with crocodile clip, power cable and batteries.

**Application:** For **safety checks (DGUV-Rule-3-tests) of electrical equipment and work materials according to VDE 0701-0702,** DGUV Rule 3, OVE/ÖNORM E 8701, NEN 3140. Suitable for electrical engineering, industry, maintenance works, servicing and communities.

BENNING

**5561 0710** **Battery operated.** Testing of electrical devices/tools with on/off button, heating devices, power tools, lights, cable reels, multiple distributors and domestic appliances. **Protective earth/contact current via alternative current leakage method.**

**5561 0725** **Battery and mains operation.** Testing of devices with mains voltage-dependent switching elements/power supply/relay, such as electronically controlled devices/ tools, information and communication technology devices and equipment that can be fully tested only with mains voltage. **Protective earth/contact current via differential measurement/direct measurement.** Data memory for 999 test objects, read out via micro-USB port. Also includes integrated real-time clock to store the measured values with test date, micro USB cable and reading software (CD).

5561 0710

5561 0725

| Order No. | 0710 | 0725 |
|---|---|---|
| **Model** | **ST 710** | **ST 725** |
| **5561 BENNING** | **456.50** | **735.00** |
| Protective conductor resistance | 0.05–20 Ohm | 0.05–20 Ohm |
| Test current | ± 200 mA DC | ± 200 mA DC |
| Insulation resistance | 0.1–20 MOhm | 0.1–20 MOhm |
| Test voltage | 500 V DC | 250 V/500 V |
| Protective earth/contact current via differential measurement/direct measurement | – | 0.25–20 mA/0.1–2 mA |
| Protective earth/contact current via alternative current leakage method | 0.1–20 mA | 0.25–20 mA |
| FI/RCD protective conductor test current | – | 30 mA + 150 mA |
| Performance test | $R_{PE}$, $R_{ISO}$, continuity and short circuit test of the phase/neutral wire | $R_{PE}$, $R_{ISO}$, continuity and short circuit test of the phase/neutral wire |
| Voltage | 50–270 V | 50–270 V |
| Dimensions (L x W x H)/weight | 270 x 115 x 55 mm/800 g | 270 x 115 x 55 mm/950 g |
| Batteries | 6 x Mignon batteries 1.5 V | 6 x Mignon AA/LR6 |

(W511)

## SET ST 755 device tester

NEW

BENNING

**Design:** Modern and intuitive operator surface via capacity touch screen with QWERTZ keyboard and help function, automatic and manual test process with good/bad display, complete test item database incl. test history can be stored on SD card, free factory update, battery-supported in case of power cut. Measurement of ground conductors, insulation resistance, ground/touch current (difference/replacement/direct measurement), function test (V/A/W) in TRUE-RMS process, testing of mobile PRCD (PRCD-S/-S+/-K), FI/RCD test type AC/A/F/B/B+. Interfaces: WLAN, Bluetooth®, 4 x USB type A, 1 x Mini-USB, 1 x RJ 45, 1 x SD-card slot.

**Application:** For **safety inspections of electrical equipment and work equipment in accordance with VDE 0701-0702, DGUV Rule 3,** Ind. Safety Ord. and **electrical medical equipment in accordance with DIN VDE 0751-1** (DIN EN 62353), hospital/nursing home beds.

**Scope of delivery:** Test device in waterproof, dust-proof (IP 67) and unbreakable case, self-compensating test lead, measuring accessories, power cable, SD card, PC software, barcode scanner, barcode labels (1000 units), test stickers (300 units).

| Order No. | 0755 |
|---|---|
| **Model** | **ST 755 SET** |
| **5561** BENNING | **2035.00** |
| Protective conductor resistance | 1 mOhm -20 Ohm |
| Test current | 200 mA DC, 10 A AC |
| Insulation resistance | 0.1 MOhm–100 MOhm |
| Test voltage | 50 V–500 V DC |
| Protective earth/contact current via differential measurement/ direct measurement/alternate eliminating current procedure | 0.05 mA–25 mA |
| Device leakage current and leakage current from appli-cation part for ME devices | 0.05 mA–25 mA |
| PRCD test | PRCD-S/-S+/-K |
| FI/RCD test | AC/A/F/B/B+ |
| Voltage/current | 1 V–360 V/0.1 A–16 A |
| Active/apparent output | 20 W–4000 W |
| Interface | WLAN, Bluetooth®, 4 x USB-A, 1 x Mini-USB, 1 x RJ 45, 1 x SD-card slot |
| Display | Colour LCD touch screen |

(W511)

## Installation tester

BENNING

**Design:** Casing made of impact-resistant plastic, graphical display with background illumination, help function with connection diagram. Help function with connection diagram, online voltage monitor, test procedure with good/bad display.

**Application:** For **safety inspections of electrical installations according to DIN VDE 0100-600 and DIN VDE 0105-100,** e.g. contact voltage, triggering time and triggering current (ramp).

**Scope of delivery:** Tester, test cable with safety plug, 3-wire test lead with 1.5 m length, 3 probes, 3 alligator clips, battery charger with 6 NiMH AA batteries and case.

**5586 0115** NEW — **IT 115** Test of ELCB/RCD circuit breakers, standard and delayed (S) type AC, A, F with AUTO test.

**5586 0130** — **IT 130** Bidirectional interfaces (USB/RS232) Test of ELCB/RCD circuit breakers, standard and delayed (S) type AC, A, F, B, B+ with AUTO test. Measured value memory about 4 levels (object, block, fuse, measuring point), upload of system structures, download of measured values, integrated real time clock (measured value with date/time), test protocol according to ZVEH. Delivery includes PC software, USB cable, RS232 cable and switchable Commander test tip.

5586 0115

5586 0130

| Order No. | 0115 | 0130 |
|---|---|---|
| **Model** | **IT 115** | **IT 130** |
| **5586** BENNING | **768.50** | **1332.00** |
| Low resistance | 0.01 Ohm–2 kOhm | 0.01 Ohm–2 kOhm |
| Insulation resistance | 10 kOhm–1000 MOhm | 10 kOhm–1000 MOhm |
| Line impedance (L-N/L) | 0.01 Ohm–10 kOhm | 0.01 Ohm–10 kOhm |
| Loop impedance (L-PE) | 0.01 Ohm–10 kOhm | 0.01 Ohm–10 kOhm |
| Short-circuit current | 0.01 A–200 kA | 0.01 A–200 kA |
| Rotary field | yes | yes |
| Voltage | 1 V–550 V | 1 V–550 V |
| Frequency | 0 Hz–500 Hz | 0 Hz–500 Hz |
| Measuring procedure | TRUE RMS | TRUE RMS |
| Batteries | 6 x NiMH AA batteries 1.5 V | 6 x NiMH AA batteries 1.5 V |

(W511)

## PV 1-1 photovoltaic installation tester

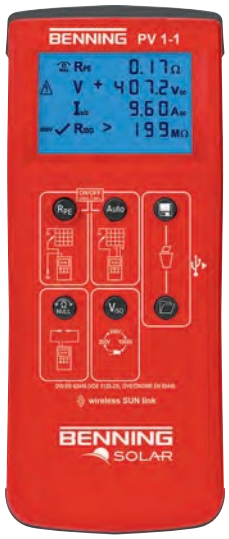
IP 40

BENNING

**Design:** With automatic test run, secure measurement connection even for PV system energy supply. **Measured data storage for 200 photovoltaic strings, USB interface for measured data download.** Integrated real time clock to save measured data with date and time stamp. **Wireless connection** to BENNING SUN 2 irradiation and temperature measurement device (Order No. 5586 0400). ISO measurement result with good/poor display, automatic display of voltage polarity with acoustic/visual warning in case of incorrect poling, direct connection to all standard PV modules with MC4 or Sunclix plug connectors.

**Application:** For installation and repeat tests of photovoltaic systems hooked up to the mains in line with VDE 0126-23 (DIN EN 62446). Suitable for Solarteure (commissioning, repeat tests, trouble-shooting), photovoltaic experts as well as service, cleaning and maintenance teams.

**Scope of delivery:** Test device, test leads, crocodile clamps, MC4/Sunclix test leads, bag, batteries and download software on CD-ROM.




| Order No. | 0300 |
|---|---|
| **Model** | **PV 1-1** |
| **5586** BENNING | **1249.00** |
| Protective conductor resistance | 0.05 Ohm–199 Ohm |
| Test current (DC) | 200 mA |
| Insulation resistance | 0.2 MOhm–199 MOhm |
| Test voltage | 250 V–1000 V |
| Off-load voltage (direct current) | 5 V–1000 V |
| Short-circuit current (direct current) | 0.5 A–15 A |
| Measurement value memory | 200 |
| Dimensions (L x W x H)/weight | 270 x 115 x 55 mm/2800 g |
| Batteries | 6 x Mignon AA/LR6 |

(W511)

## SUN 2 irradiation and temperature measurement device

IP 40

BENNING

**Design:** With calibrated photovoltaic reference cell for precise measurement of solar irradiation, 2-channel temperature sensor, digital compass, data logger for irradiation, module/ambient temperature, date/time stamp with real time clock and adjustable measuring interval (1-60 minutes), **radio link** with ca. 30 m range in the open area to photovoltaic installation tester BENNING PV 1-1 (Order No. 5586 0300) and USB interface for measurement value download.

**Application:** Ideal for the planning, commissioning and repeat tests of photovoltaic systems hooked up to the mains in line with VDE 0126-23 (DIN EN 62446) and testing of thermal solar plants (solar heat). Suitable for Solarteure (commissioning, repeat tests, trouble-shooting, cost-benefit tests), photovoltaic experts as well as service, cleaning and maintenance teams. For measuring solar irradiation, photovoltaic module and ambient temperature, compass point and angle of inclination.

**Scope of delivery:** Measuring device, bag, protective rubber holster, module/ambient temperature sensor, USB cable, reading software (CD) and batteries.

| Order No. | 0400 |
|---|---|
| **Model** | **SUN 2** |
| **5586** BENNING | **392.00** |
| Solar irradiation | 100–1250 W/m² |
| Temperature (module/environment) | –30 °C to +125 °C |
| Compass bearing (direction) | 0°–360° |
| Inclinometer | 0°–80° |
| Real-time clock | Date/time stamp |
| Measurement value memory | 5000 |
| Dimensions (L x W x H)/weight | 150 x 80 x 33 mm/347 g |
| Batteries | 2 x Mignon AA/LR6 |

(W511)

SapiSelco

5/87

**UV-resistant cable ties**

Especially for use in photovoltaic.

## Electrical cabinet key

**Design:** Made of zinc die-cast, cross-shaped. With double bit slot 7 mm/Phillips PH 2, outside square 6; 8 mm; outside triangle 9 mm, double bit 3-5 mm and square radiator valve wrench 5 mm as well as bottle opener.

| Order No. | Dimensions mm | 5592 format |
|---|---|---|
| 0005 | 75 x 110 | 10.15 (W513) |

## Switchboard spanner

**Design:** Made of zinc die-cast, cross-shaped. With 1/4" plastic adapter and double-bit recess 1 x 7 mm/cross recess PH 2 on a chain.

**5588** With outer square 6 mm, step-like outer square 7–8 mm, outer triangle 9 mm, **double bit** 3–5 mm and square radiator valve wrench 5 mm.

**5590** With **step-like inner square** 6–7–8–9 mm, outer square 7; 8 mm, outer triangular 9 mm and square radiator valve wrench 5 mm.

| Order No. | Dimensions mm | 5588 | 5590 |
|---|---|---|---|
| 0005 | 72 x 72 | 13.15 | – |
| 0005 | 89 x 62 | – (W523) | 12.25 (W523) |

## Electrical cabinet key with rotating profiles

**Design:** Made of zinc die-cast. With rotatable key profiles occupied on both sides.

**5590 0030** **In rod shape with magnetic 1/4"-bit and 1/4" socket wrench mount.** With stepped outside four edges 6–7 and 8–9 mm, stepped outside three edges 5–6, 6–7 and 8–9 mm, double bit 3-5 mm and square radiator valve wrench 5 mm.

**5590 0025** **Cross-shaped with chain and karabiner hooks.** With outside square 6 mm, stepped outside four edges 7–8 mm and 9–10 mm, outside triangular 7 mm, stepped outside three edges 8–9 mm and 10–11 mm, double bit 3–5 mm, crescent 6 mm as well as square radiator valve wrench 5 mm.

| Order No. | Dimensions mm | 5590 |
|---|---|---|
| 0030 | 95 x 38 | 14.35 |
| 0025 | 95 x 95 | 26.00 (W523) |

## Switchboard spanner

**Design:** Made of zinc die-cast. Comprises two crosses, which can be connected using magnets. Double-bit recess 1 x 7 mm/cross slot PH 2 on a stainless steel wire rope. With step-like inside square 6–7–8–9 mm, stepped outside four edges 6–7 mm; 8–9 mm and 10–11 mm, stepped outside three edges 7–8 mm; 9–10 mm and 11–12 mm, 3–5 mm double bit, crescent 6 mm and square radiator valve key 5 mm.

| Order No. | Dimensions mm | 5601 KNIPEX |
|---|---|---|
| 0025 | 92 x 92 | 23.60 (W525) |

## Switchboard spanner

**Design:** Body and clip made of glass-fibre-reinforced plastic, key bearer and profile of zinc pressure die cast. Ball pen shape, with fastening clip Swivelling out the key ring means that four different key profiles can be used.

**5601 0010** With rod-shaped external square 5–6–8 mm, external triangle 9 mm, double bit 3–5 mm, bit for cross-slot screws PH 2 and universal 1/4"-bit holder with durable magnet.

**5601 0020** Current and magnetic field finder with on/off button for the no-contact identification of AC voltage and magnetic fields. Optical display using LED, voltage range 50–600 V, frequency range 50–60 Hz. Battery compartment with rotary fastener for two button cells LR44. With rod-shaped external square 6–8 mm, external triangle 9 mm, double bit 3–5 mm, bit for cross-slot screws PH 2 and universal 1/4"-bit holder with durable magnet.

| Order No. | Design | 5601 KNIPEX | Length mm |
|---|---|---|---|
| 0010 | Without voltage finder | 18.60 | 145 |
| 0020 | with current and magnetic field finder | 27.60 (W525) | 155 |

## Spanner for PG screw connections

NEW

Weidmüller

**Design:** Casing made of polyamide plastic, bracket and clamping jaws made of metal. Continuous adjustment of spanner width via countersunk screw in handle.

| Order No. | Width of keys mm | 560A Weidmüller | Length mm |
|---|---|---|---|
| 1124 | 11–24 | 77.20 | 190 |
| 2432 | 24–32 | 77.20 (W523) | 204 |

## Screw connection tool for sensor actuator cables

NEW

Weidmüller

**Design:** Blade with 1/4" receptacle for exchangeable screw attachment. Handle made from 2-component plastic

**Application:** For moulded cables, also suitable for difficult to reach plug connections.

| Order No. | Size | 560B Weidmüller | Length mm |
|---|---|---|---|
| 0008 | M8 | 59.90 | 220 |
| 0012 | M12 | 59.90 (W523) | 220 |

## Pass wrench

**Design:** Two-part combination. Checked and tested in line with DIN 57680 Part 7/ VDE 0680 Part 7.

**Application:** For setting or removing D-screw fitted bolts D II according to DIN 49516 and with attachment also for D-screw fitted bolts D III in accordance with DIN 49516, in fuse socket or outside of fuse socket.

| Order No. | Length x Ø mm | 5594 |
|---|---|---|
| 0005 | 105 x 30 | 6.80 (W516) |

## Cable retraction tape

**Design:** Made from Perlon®, with massive steel ends and pilot spring.

| Order No. | Length m | 5595 | Tape Ø mm |
|---|---|---|---|
| 0010 | 10 | 6.50 | 3 |
| 0015 | 15 | 8.50 | 3 |
| 0020 | 20 | 10.90 (W516) | 3 |

## Cable laying system

**Design:** Robust housing with no external moving parts. Tape runs in and out optimally, without running after the tape. Flexible, thrust stable fiber glass profile with double-sided sleeves M5.

**Application:** For installing electrical, telephone and antenna cables in pipe systems in domestic installations.

**Scope of delivery:** Laying machine, guide heads 8, 11 and 14 mm, 2 splices, 2 towing eyes, cable puller stockings 4-6 mm and 6-9 mm, fibreglass adhesive 5 g and 1 puller aid.

| Order No. | Length m | 5595 | Tape Ø mm | Min. bending radius mm |
|---|---|---|---|---|
| 0030 | 30 | 168.50 (W523) | 3 | 50 |

## Cable ties

**Design:** Made of polyamide 6.6, **self-quenching,** in line with standard UL94 V2 NYLON, within max. 30 seconds. High flexibility even in extreme temperature variations, largely chemical resistant and exceptionally fade resistant. Supplied as 100 pieces in a polythene bag.

**Application:** For the fixing and bundling of tubes, cables and wires.

5600

5610

5690

5691

5692

5693

5669 UV-resistant

| Order No. | Length mm | 5600 SapiSelco natural | 5610 SapiSelco black | 5690 SapiSelco blue | 5691 SapiSelco red | 5692 SapiSelco green | 5693 SapiSelco yellow | 5669 SapiSelco UV-resistant | Width mm | Pack Ø mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | 100 | 0.69 | 0.69 | – | – | – | – | 0.79 | 2.5 | 24 |
| 0010 | 140 | 1.71 | 1.71 | – | – | – | – | – | 3.5 | 36 |
| 0007 | 200 | 1.91 | – | – | – | – | – | – | 2.5 | 55 |
| 0020 | 200 | 3.21 | 3.21 | – | – | – | – | – | 4.5 | 51 |
| 0015 | 280 | 3.32 | – | – | – | – | – | 4.92 | 3.5 | 80 |
| 0025 | 280 | 4.74 | 4.74 | 6.50 | 6.50 | 6.50 | 6.50 | 6.35 | 4.5 | 76 |
| 0027 | 360 | 6.55 | 6.55 | – | – | – | – | 6.70 | 4.5 | 101 |
| 0030 | 360 | 10.25 | 10.15 | – | – | – | – | 12.50 | 7.5 | 101 |
| 0033 | 450 | – | – | – | – | – | – | 23.80 | 7.5 | 136 |
| 0035 | 540 | 21.60 | – | – | – | – | – | – | 7.5 | 164 |
| 0040 | 780 | 47.80 | – | – | – | – | – | – | 9.0 | 235 |
| | | (W516) | (W516) | (W516) | (W516) | (W516) | (W516) | (W516) | | |

## Cable ties assortment

**Design:** Made of polyamide 6.6, **self-quenching,** in line with standard UL94 V2 NYLON, within max. 30 seconds. High flexibility even in extreme temperature variations, largely chemical resistant.

**5673** 0600 Supplied in wall display.

**5673** 1000 + 1500 Supplied in plastic tub.

| Order No. | Design | 5673 SapiSelco | Set contents |
|---|---|---|---|
| 0600 | 600-part | 88.30 | 100 pieces, 3.5 x 140 mm, blue<br>100 pieces, 3.8 x 240 mm, red, detachable<br>100 pieces, 3.5 x 140 mm, natural<br>100 pieces, 4.5 x 200 mm, natural<br>100 pieces, 4.5 x 280 mm, natural<br>100 pieces, 7.5 x 360 mm, natural |
| 1000 | 1000-part | 33.30 | 200 pieces, 4.5 x 200 mm, natural<br>200 units, 4.5 x 200 mm, black<br>100 units, 4.5 x 280 mm, red<br>100 units, 4.5 x 280 mm, green<br>200 pieces, 4.5 x 280 mm, natural<br>200 units, 4.5 x 280 mm, black |
| 1500 | 1500-part | 21.60 | 200 units, 2.5 x 100 mm, natural<br>200 units, 2.5 x 100 mm, black<br>200 units, 3.5 x 140 mm, red<br>200 units, 3.5 x 140 mm, blue<br>200 units, 3.5 x 140 mm, yellow<br>300 units, 3.5 x 140 mm, natural<br>200 units, 3.5 x 140 mm, black |
| | | (W516) | |

5673 0600

5673 1000

5673 1500

## Cable ties, with steel tips

**Design:** Made of polyamide 6.6, natural, **self-quenching,** in line with standard UL94 V2 NYLON, within max. 30 seconds. **Extra high load-bearing capacity due to steel tips.** High flexibility even in cases of large fluctuations in temperature, largely resistant to chemicals. Supplied as 100 pieces in a polythene bag.

**Application:** Everywhere where cable ties must be able to bear high tensile loads.

SapiSelco

| Order No. | Length mm | 5672 SapiSelco | Width mm | Tensile load kg | Pack Ø mm |
|---|---|---|---|---|---|
| 0005 | 100 | 3.54 | 2.5 | 18 | 24 |
| 0010 | 140 | 4.90 | 3.5 | 28 | 36 |
| 0015 | 200 | 9.55 | 4.5 | 40 | 51 |
| 0020 | 360 | 15.25 | 4.5 | 40 | 103 |
| 0025 | 360 | 57.00 (W516) | 7.5 | 80 | 101 |

## Cable ties Click Tie, detachable

**Design:** Made of polyamide 6.6, red, **self-quenching,** in line with standard UL94 V2 NYLON, within max. 30 seconds. Above average colour-fastness, **and can be removed at any time and reused.** Operating temperature between –40°C and +85°C. Supplied as 100 pieces in a polythene bag.

SapiSelco

| Order No. | Length mm | 5667 SapiSelco | Width mm |
|---|---|---|---|
| 0005 | 240 | 6.75 | 3.8 |
| 0010 | 320 | 9.45 | 4.4 |
| 0015 | 500 | 38.20 (W516) | 5.6 |

## Cable tie, detachable

**Design:** In smooth tear-proof thermoplastic polyurethane, black, fire spread as per UL94 HB standard. The UV- and weather-resistant material allows for a gentle bundling and **can be removed at any time and reused.** Operating temperature between –40°C and +85°C.

HellermannTyton

| Order No. | Length mm | 5652 HellermannTyton | Width mm | Tying force N | Pack Ø mm | Content Piece |
|---|---|---|---|---|---|---|
| 0005 | 180 | 10.25 | 7 | 57 | 45 | 16 |
| 0010 | 260 | 10.25 | 11 | 123 | 55 | 8 |
| 0015 | 580 | 14.25 (W516) | 28 | 360 | 150 | 3 |

## SpeedyTie cable ties, detachable

**Design:** Made of polyamide 6.6, yellow, **self-quenching,** in line with standard UL94 V2 NYLON, within max. 30 seconds. Patented locking mechanism **for easy release and reuse** Operating temperature between –40°C and +85°C, short-term at +105 °C.

HellermannTyton

| Order No. | Length mm | 5652 HellermannTyton | Width mm | Tying force N | Pack Ø mm | Content Piece |
|---|---|---|---|---|---|---|
| 0100 | 750 | 8.50 (W516) | 12 | 888 | 210 | 5 |

## Cable tie pliers

**Application:** For tightening and cutting of plastic cable ties.

Weidmüller

| Order No. | Length mm | 5596 Weidmüller | Max. cable tie width mm | Max. cable tie thickness mm |
|---|---|---|---|---|
| 0005 | 160 | 49.50 (W523) | 4.8 | 1.5 |

## Cable tie pliers

**Design:** Made of metal, thus very durable and suitable for multi-purpose use.
With free, quick-adjustment of the tensile force.

**Application:** For automatic tightening and cutting of plastic cable ties.

HellermannTyton

| Order No. | Length mm | 5596 HellermannTyton | Max. cable tie width mm | Max. cable tie thickness mm |
|---|---|---|---|---|
| 0010 | 184 | 188.50 (W523) | 4.8 | 1.5 |

## Cable tie pliers

**Design:** Made of metal, handle covered with plastic. Ergonomic and durable.
With two-level quick-adjustment of the tensile force.

**Application:** For automatic tightening and cutting of plastic cable ties.

HellermannTyton

| Order No. | Length mm | 5596 HellermannTyton | Max. cable tie width mm | Max. cable tie thickness mm |
|---|---|---|---|---|
| 0015 | 190 | 318.50 (W523) | 13.5 | 2.0 |

## Assortment of heat shrink tubing

**Design:** Made of ray cross-linked polyolefin (PEX),
**Shrinkage ratio 3:1.**
Insulation class in line with VDE 0530, dielectric strength in line with ASTM D 2671.
Silicone-free, compatible with copper, as resistant as possible to UV light, solvents as well as acids and bases. Supplied in plastic case.

**Application:** Ideal for insulating, coloured labelling and as cable protection in electronics and cable manufacturing.

HellermannTyton

**5653 0100** Black, self-releasing.

**5653 0110** Multi-coloured, self-quenching (except for the transparent heat shrink tubing).

**5653 0120** Black and transparent, external wall self-releasing (except for the transparent heat shrink tubing). The tubing features **internal adhesive** that melts in the heat, thus providing protection from moisture, making them ideal for use outside.

**5653 0100**

**5653 0110**

**5653 0120**

| Order No. | Design | 5653 HellermannTyton | Set contents | Longitudinal shrinkage max. % | Shrink temperature min. °C | Operating temperature °C | Insulation class | Dielectric strength kV/mm |
|---|---|---|---|---|---|---|---|---|
| 0100 | 220-part | 24.50 | 100 pieces Ø 1.5 mm, L 35 mm, Wd 0.45 mm<br>50 pieces Ø 3.0 mm, L 35 mm, Wd 0.55 mm<br>60 pieces Ø 6.0 mm, L 35 mm, Wd 0.70 mm<br>5 pieces Ø 12.0 mm, L 80 mm, Wd 0.70 mm<br>5 pieces Ø 18.0 mm, L 80 mm, Wd 0.80 mm | +5/–10 | +90 | -55 to +135 | B | 20 |
| 0110 | 975-part | 106.00 | 150 pieces Ø 1.5 mm, L 40 mm, Wd 0.45 mm<br>200 pieces Ø 3.0 mm, L 40 mm, Wd 0.55 mm<br>300 pieces Ø 3.0 mm, L 50 mm, Wd 0.55 mm<br>250 pieces Ø 6.0 mm, L 60 mm, Wd 0.70 mm<br>45 pieces Ø 12.0 mm, L 100 mm, Wd 0.70 mm<br>20 pieces Ø 12.0 mm, L 170 mm, Wd 0.70 mm<br>10 pieces Ø 24.0 mm, L 200 mm, Wd 1.00 mm | +5/–10 | +90 | -55 to +135 | B | 20 |
| 0120 | 385-part | 126.50 | 100 pieces Ø 3.0 mm, L 40 mm, Wd 1.00 mm<br>100 pieces Ø 3.0 mm, L 50 mm, Wd 1.00 mm<br>60 pieces Ø 6.0 mm, L 35 mm, Wd 1.10 mm<br>40 pieces Ø 6.0 mm, L 50 mm, Wd 1.10 mm<br>30 pieces Ø 12.0 mm, L 65 mm, Wd 1.70 mm<br>45 pieces Ø 12.0 mm, L 100 mm, Wd 1.70 mm<br>10 pieces Ø 24.0 mm, L 200 mm, Wd 2.50 mm | +1/–15 | +110 | -55 to +110 | A | 15 |

(W523)

L = length, Wd = wall thickness

## Water pump pliers

**Design: DIN ISO 8976.** The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed.

**5599** Made of chromium-vanadium steel, forged, high-grade tempering, **polished head.**

**5605** **Alligator®.** Made of chromium-vanadium electric steel, hardened and tempered in oil, **polished head,** grip zones with specially hardened teeth (61 HRC). Self-clamping to pipes and nuts. Plastic-coated handles.

| Order No. | Length mm | 5599 format | 5605 KNIPEX | For nuts mm 5599 | For nuts mm 5605 | For pipes inch 5599 | For pipes inch 5605 |
|---|---|---|---|---|---|---|---|
| 0175 | 175 | 7.50 | – | 26 | – | 1 | – |
| 0180 | 180 | – | 15.05 | – | 36 | – | 1.1/2 |
| 0240 | 240 | 8.10 | – | 35 | – | 1.1/4 | – |
| 0250 | 250 | – | 15.85 | – | 46 | – | 2 |
| 0300 | 300 | 14.90 | 23.80 | 43 | 60 | 1.1/2 | 2.3/4 |
| 0400 | 400 | – | 45.90 | – | 95 | – | 3.1/2 |
| | | (W512) | (W525) | | | | |

5599 format professional quality

5605 KNIPEX

## Water pump pliers

**Design: DIN ISO 8976.** The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. Handles with multi-component plastic coating.

**5602** Chrome-vanadium steel forged and high-grade tempered, **head chrome plated and polished.**

**5608** **Alligator®.** Made of chromium-vanadium electric steel, hardened and tempered in oil, **chrome-plated head,** grip zones with specially hardened teeth (61 HRC). Self-clamping to pipes and nuts.

| Order No. | Length mm | 5602 format | 5608 KNIPEX | For nuts mm | For pipes inch |
|---|---|---|---|---|---|
| 0240 | 240 | 17.55 | – | 36 | 1.1/4 |
| 0250 | 250 | – | 24.60 * | 46 | 2 |
| 0300 | 300 | – | 33.70 | 60 | 2.3/4 |
| | | (W512) | (W525) | * With especially narrow handle covers. | |

5602 format professional quality

5608 KNIPEX

## VDE water pump pliers

**Design: DIN ISO 8976. Chrome-plated head,** the pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. **Insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**5604** Made of chrome-vanadium steel, forged and high quality tempered, **head additionally polished.** Handles with multi-component plastic covers.

**5611** **Alligator®.** Made of chromium-vanadium electric steel, hardened and tempered in oil, grip zones with specially hardened teeth (61 HRC). Self-clamping to pipes and nuts. Handles with multi-component plastic covers, with recessed grips and indented lettering.

**5597** **Alligator®.** Made of chromium-vanadium electric steel, hardened and tempered in oil, grip zones with specially hardened teeth (61 HRC). Self-clamping to pipes and nuts. Plastic-covered handles.

| Order No. | Length mm | 5604 format | 5611 KNIPEX | 5597 KNIPEX | For nuts mm | For pipes inch |
|---|---|---|---|---|---|---|
| 0240 | 240 | 22.50 | – | – | 36 | 1.1/4 |
| 0250 | 250 | – | 27.80 | 33.20 | 46 | 2 |
| | | (W512) | (W525) | (W525) | | |

1000 V

5604 format professional quality

5611 KNIPEX

5597 KNIPEX

## Water pump pliers Cobra® ES

**Design: DIN ISO 8976.** Made of chromium-vanadium electric steel, hardened and tempered in oil, **polished head,** grip zones with specially hardened teeth (61 HRC). Very slim design throughout the entire head and joint area, with long, pointed jaws. **Fast and precise setting using the button,** can be adjusted one-handed in the smallest of spaces. The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. Self-clamping to pipes and nuts, with safe handle also on flat workpieces due to three-point contact. Plastic-covered handles.

**Application:** Ideal for servicing and maintenance, device repairs, automobile trade and industry. Only minimum effort required as a result of the slim design, especially when working in narrow spaces.

| Order No. | Length mm | 5612 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|
| 0250 | 250 | 22.40 | 19-fold | 34 | 1.1/4 |
| | | (W525) | | | |

## Water pump pliers with quick adjustment

NEW

format professional quality

**Design:** Made of chrome-vanadium steel, hardened and tempered once, inside jaws with specially hardened teeth (61 HRC). **Particularly large gripping zone.** Opposed serration in rear jaw section for utmost hold of the workpiece. **Fast and precise setting using the button,** can be adjusted using one hand. Optimum arm positioning due to fine adjustment. The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. Self-clamping to pipes and nuts. Handles covered with plastic.

| Order No. | Length mm | 5814 format | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|
| 0180 | 180 | 17.70 | 25-fold | 42 | 1.1/2 |
| 0250 | 250 | 19.25 | 25-fold | 50 | 2 |
| 0300 | 300 | 26.10 (W512) | 25-fold | 70 | 2.3/4 |

## Water pump pliers Cobra®

KNIPEX

**Design: DIN ISO 8976.** Made of chromium-vanadium electric steel, hardened and tempered in oil, grip zones with specially hardened teeth (61 HRC). **Fast and precise setting using the button,** can be adjusted using one hand. The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. Self-clamping onto pipes and nuts.

**5593** **Polished head,** handles with plastic coating.

**5607** **Chrome-plated head,** handles covered with plastic.

**5609** **Chrome-plated head,** handles with multi-component plastic covers.

5593

5607

5609

| Order No. | Length mm | 5593 KNIPEX | 5607 KNIPEX | 5609 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|---|---|
| 0125 | 125 | 18.10 | – | – | 13-fold | 27 | 1 |
| 0150 | 150 | 18.55 | – | – | 11-fold | 30 | 1.1/4 |
| 0180 | 180 | 19.55 | 26.90 | – | 18-fold | 36 | 1.1/2 |
| 0250 | 250 | 20.90 | 27.90 | – | 25-fold | 46 | 2 |
| 0250 | 250* | – | – | 30.50 | 25-fold | 46 | 2 |
| 0300 | 300 | 28.90 (W525) | 36.10 (W525) | 39.40 (W525) | 30-fold | 60 | 2.3/4 |

* With especially narrow handle covers.

## Water pump pliers Cobra® Quick Set

KNIPEX

**Design: DIN ISO 8976.** Made of chromium-vanadium electric steel, hardened and tempered in oil, **polished head,** grip zones with specially hardened teeth (61 HRC). **Fast and precise adjustment directly on the workpiece by sliding action,** locks into place with the first load. Release the set span by pressing a button. The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. Self-clamping to pipes and nuts.

**5593** Plastic-covered handles.

**5685** Handles with narrow multi-component plastic covers.

5593

5685

| Order No. | Length mm | 5593 KNIPEX | 5685 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|---|
| 1250 | 250 | 21.90 | 24.40 | 25-fold | 46 | 2 |
| 1300 | 300 | 29.80 NEW (W525) | – (W525) | 25-fold | 60 | 2.3/4 |

## VDE water pump pliers Cobra®

KNIPEX

**Design: DIN ISO 8976.** Made of chromium-vanadium electric steel, hardened and tempered in oil, chrome-plated head, grip zones with specially hardened teeth (61 HRC). Fast and precise setting using the button, can be adjusted using one hand. The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. Self-clamping to pipes and nuts. Handles with multi-component plastic covers, with recessed grips and indented lettering, **insulated up to 1000 V according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

| Order No. | Length mm | 5528 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|
| 0250 | 250 | 35.10 (W525) | 24-fold | 46 | 2 |

5 Hand Tools

## Pipe and water pump pliers Cobra®

**Design: DIN ISO 8976.** Made of chromium-vanadium electric steel, hardened and tempered in oil, **polished head,** grip zones with specially hardened teeth (61 HRC). **Fast and precise setting using the button,** can be adjusted using one hand. The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The safety guard prevents fingers from being crushed. Self-clamping onto pipes and nuts. **Significantly greater gripping capacity and lighter than similar pipe wrenches.** Plastic-covered handles.

**Great gripping capacity, secure grip.**

| Order No. | Length mm | 5593 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|
| 0400 | 400 | 50.30 | 27-fold | 95 | 3.1/2 |
| 0560 | 560 | 83.80 (W525) | 20-fold | 120 | 4.1/2 |

## Water pump pliers SmartGrip®

**Design: DIN ISO 8976.** Made of chromium-vanadium electric steel, hardened and tempered in oil, **polished head,** grip zones with specially hardened teeth (61 HRC). Slim design throughout the entire head and joint area **Automatic adjustment of the workpiece by simply squeezing the pliers handles,** ideal for frequently surrounding a variety of workpieces, for right- and left-handed people. The inserted sliding joint enables high stability due to the double guide. The safety guard prevents fingers from being crushed. Self-clamping to pipes and nuts.

Locking lever prevents unintentional opening. Plastic-covered handles.

| Order No. | Length mm | 5613 KNIPEX | For nuts mm | For pipes inch |
|---|---|---|---|---|
| 0250 | 250 | 35.90 (W525) | 36 | 1.1/4 |

## Water pump pliers with groove joint

**Design: DIN ISO 8976.** Made of chromium-vanadium electric steel, hardened and tempered in oil. Gripping surface with specially hardened teeth (61 HRC). With attached sliding joint and clamp protection Self-clamping onto pipes and nuts.

**5694** **Polished head.** Plastic-covered handles.

**5695** **Chrome-plated head.** Plastic-covered handles.

**5696** **Chrome-plated head.** Handles with multi-component plastic covers.

5694

5695

5696

| Order No. | Length mm | 5694 KNIPEX | 5695 KNIPEX | 5696 KNIPEX | For nuts mm | For pipes inch |
|---|---|---|---|---|---|---|
| 0250 | 250 | 14.25 (W525) | 19.30 (W525) | 24.30 (W525) | 36 | 1.5/16 |

## Water pump pliers, automatic

NEW

format professional quality

**Design:** Made of chromium-vanadium steel, polished head, grip zones with ground and specially hardened teeth. Automatic setting at the workpiece by simply pressing the pliers handles; loosening grip by simply letting go of the handles. Ideal for regular grasping of different items. Plastic-covered handles.

| Order No. | Length mm | 5797 format | Jaw span mm | For pipes inch |
|---|---|---|---|---|
| 0170 | 170 | 14.85 | 25 | 1 |
| 0240 | 240 | 18.75 | 34 | 1.1/4 |
| 0300 | 300 | 22.90 (W512) | 38 | 1.1/2 |

## Pliers wrench

**Design: DIN ISO 5743.** Made of chromium-vanadium electric steel, hardened and tempered in oil. **Chromed head,** parallel guided, smooth gripping jaws, set using the button, can be adjusted using one hand. Work using the ratchet principle with extremely high clamping force, **10 times stronger than hand force.**

**7156** **Plastic-covered handles.**

**7157** **Handles with multi-component plastic covers.**

**Application:** Ideally suited to gripping, holding, pressing and bending items, also suitable for the gentle assembly of fine-surface fittings due to the play-free surface pressing, also suitable for breaking tiles.

7156

7157

| Order No. | Length mm | 7156 KNIPEX | 7157 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|---|
| 0125 | 125 | 34.50 | – | 11-fold | 23 | 7/8 |
| 0150 | 150 | 38.90 | 41.90 | 14-fold | 27 | 1 |
| 0180 | 180 | 39.90 | 42.30 | 13-fold | 35 | 1.3/8 |
| 0250 | 250 | 45.70 | 49.00 | 17-fold | 46 | 1.3/4 |
| 0300 | 300 | 55.20 | – | 22-fold | 60 | 2.3/8 |
| 0400 | 400 | 98.40 (W525) | – (W525) | 25-fold | 85 | 3.3/8 |

## VDE pliers wrench

**Design:** Made of chrome-vanadium electric steel, oil hardened and tempered. **Chromed head,** parallel guided, smooth gripping jaws, set using the button, can be adjusted using one hand. Work in line with the ratchet principle, with extremely high clamping force – 10 times stronger than hand force. Handles with plastic coating, **insulated up to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** Exceptionally well suited for gripping, holding, pressing and bending of workpieces, with scale for setting the gripping area away from the workpiece.

KNIPEX

1000 V

| Order No. | Length mm | 7145 KNIPEX | For nuts mm | For pipes inch |
|---|---|---|---|---|
| 0250 | 250 | 57.60 (W525) | 46 | 1.3/4 |

## Open gripping pliers

**Design:** Pliers body made of heat-treated, high-alloy steel, nickel-plated, with serrated gripping jaws. **The special jaws shape clamps on 3 sides of the nut, the jaws do not slip off and rounding the nut is prevented.** The setting of the jaw span and the clamping pressure occurs by means of setting screw, with quick release lever.

IRWIN VISE-GRIP

| Order No. | Length mm | 5686 IRWIN VISE-GRIP | For width across flat (AF) mm |
|---|---|---|---|
| 0100 | 100 | 15.90 | 7–14 |
| 0175 | 175 | 18.65 | 11–19 |
| 0250 | 250 | 21.30 (W252) | 16–28 |

## Gripping pliers with curved jaws and wire cutter

**Design:** With integrated wire cutter and serrated gripping jaws. Setting screw to adjust the jaw width and locking pressure.

**5630** Pliers body made of chromium-vanadium steel, gloss nickel-plated, with quick release lever.

**5634** Pliers body made of heat-treated, high-alloy steel, nickel-plated, with quick-release lever.

**5687** Pliers body made of heat-treated, high-alloy steel, nickel-plated. Handles with 2-component plastic covers.

5630 format professional quality

5634 IRWIN VISE-GRIP

5687 IRWIN VISE-GRIP

| Order No. | Length mm | 5630 format | 5634 IRWIN VISE-GRIP | 5687 IRWIN VISE-GRIP | Jaw span mm 5630 | Jaw span mm 5634/5687 |
|---|---|---|---|---|---|---|
| 0100 | 100 | – | 10.85 | – | – | 25 |
| 0125 | 125 | – | 12.25 | 13.45 | – | 29 |
| 0180 | 175 | – | 14.15 | 15.55 | – | 38 |
| 0180 | 180 | 9.35 | – | – | 30 | – |
| 0250 | 250 | 9.75 | 18.85 | 20.80 | 40 | 48 |
| 0300 | 300 | 16.40 (W512) | – (W252) | – (W252) | 65 | – |

## Gripping pliers

**Design:** Pliers body made of heat-treated, high-alloy steel, nickel-plated, with serrated gripping jaws. The jaw span and clamping pressure set means of setting screw, with quick release lever.

IRWIN VISE-GRIP

5635 0175 + 0250

5635 0176 + 0251

| Order No. | Length mm | 5635 IRWIN VISE-GRIP | Design | Jaw span mm |
|---|---|---|---|---|
| 0175 | 175 | 14.15 | straight jaws | 29 |
| 0176 | 175 | 14.15 | Curved jaws | 41 |
| 0250 | 250 | 18.85 | straight jaws | 41 |
| 0251 | 250 | 18.85 (W252) | Curved jaws | 48 |

## Wide-mouthed gripping pliers

**Design:** With wide, flat jaws. The setting of the jaw span and the clamping pressure occurs by means of setting screw, with quick release lever.

**Application:** Ideal for sheet metal working. For the bending, shaping, gluing or flanging of items.

**5639** Pliers body made of chromium-vanadium steel, gloss nickel-plated.

**5638** Pliers body made of heat-treated, high-alloy steel, nickel-plated.

5639 format professional quality

5638 IRWIN VISE-GRIP

| Order No. | Length mm | 5639 format | 5638 IRWIN VISE-GRIP | Jaw span mm | Jaw width mm |
|---|---|---|---|---|---|
| 0178 | 178 | 15.05 | – | 30 | 80 |
| 0200 | 200 | – (W512) | 24.10 (W252) | 78 | 80 |

## Self grip pliers

IRWIN VISE-GRIP

**Design:** Made of high-alloy steel and long, slim jaws. With built-in wire cutter for cutting wire and bolts up to 6 mm ∅ in several steps. The jaw span and clamping pressure are set by means of setting screw, with quick release lever.

**Application:** Ideal for quick and easy working in hard-to-access places. For precision and the finest working right up to the most heavy-duty workshop applications.

| Order No. | Length mm | 5640 IRWIN VISE-GRIP | Jaw span mm |
|---|---|---|---|
| 0100 | 100 | 17.30 | 41 |
| 0150 | 150 | 19.00 | 51 |
| 0225 | 225 | 20.90 (W252) | 70 |

## Wide-span gripping pliers

IRWIN VISE-GRIP

**Design:** Pliers body made of heat-treated, high-alloy special steel, gloss nickel-plated. With serrated gripping jaws. The jaw span and clamping pressure set means of setting screw, with quick release lever.

**Application:** The special jaw shape allows for multiple applications, especially in the plumbing and automobile industries. For secure holding of profiles, pipes and other items.

| Order No. | Length mm | 5643 IRWIN VISE-GRIP | Jaw span mm |
|---|---|---|---|
| 0300 | 300 | 27.00 (W252) | 79 |

## Parallel grip pliers

BESSEY

**Design:** Made of high-strength steel in fine grain structure, with stepless adjustable hardened clamping jaws made of chromium-vanadium steel as well as screws for adjusting the parallel to clamp angular parts up to 9°. Jaws serrated as well as with prism recess for small round parts. With setting screw for clamping pressure and blow-back proof, plastic-coated quick-release lever.

**Application:** For quick and safe clamping and holding of the most varied items.

| Order No. | Jaw span mm | 5651 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0010 | 100 | 49.80 | 65 |
| 0020 | 200 | 54.50 (W519) | 65 |

## Chain gripping pliers

IRWIN VISE-GRIP

**Design:** Pliers body made of heat-treated, high-alloy steel, nickel-plated. The setting of the jaw span and the clamping pressure occurs by means of setting screw, with quick release lever.

**Application:** For the holding and locking of all item shapes that can be encompassed by the chain.

| Order No. | Length mm | 5649 IRWIN VISE-GRIP | Jaw span mm |
|---|---|---|---|
| 0225 | 225 | 38.30 (W252) | 455 |

## Sealing gripping pliers

**Design:** Pliers body made of heat-treated, high-alloy steel, nickel-plated. The setting of the jaw span and the clamping pressure occurs by means of setting screw, with quick release lever.

**Application:** For the temporary sealing of pipes, tubes etc. The rounded clamping jaws prevent the pipes from being damaged.

IRWIN VISE-GRIP

| Order No. | Length mm | 5647 IRWIN VISE-GRIP | Jaw span mm |
|---|---|---|---|
| 0175 | 175 | 19.55 (W252) | 6 |

## Clamping gripping pliers with fixed jaws

**Design: With jaws in C shape.** The setting of the jaw span and the clamping pressure occurs by means of setting screw, with quick release lever.

**Application:** For the comprehensive clamping of bulky items, e.g. corners and profiles.

**5648** Pliers body made of chromium-vanadium steel, gloss nickel-plated.

**5644** Pliers body made of heat-treated, high-alloy steel, nickel-plated.

5648 format professional quality

| Order No. | Length mm | 5648 format | 5644 IRWIN VISE-GRIP | Jaw span mm 5648 | Jaw span mm 5644 |
|---|---|---|---|---|---|
| 0150 | 150 | – | 16.00 | – | 54 |
| 0280 | 275 | – | 27.00 | – | 102 |
| 0280 | 280 | 17.20 | – | 90 | – |
| 0455 | 455 | – | 36.90 | – | 203 |
| 0605 | 605 | – (W512) | 48.30 (W252) | – | 254 |

5644 0605 IRWIN VISE-GRIP

## Clamping gripping pliers with mobile jaws

**Design:** Pliers body made of heat-treated, high-alloy steel, nickel-plated. **With jaws in C shape.** The setting of the jaw span and the clamping pressure occurs by means of setting screw, with quick release lever.

**Application:** The movable jaws enable a cross-clamping of bulky, **uneven and conical workpieces,** e.g. angles and profiles.

IRWIN VISE-GRIP

| Order No. | Length mm | 5646 IRWIN VISE-GRIP | Jaw span mm |
|---|---|---|---|
| 0100 | 100 | 14.20 | 41 |
| 0150 | 150 | 17.40 | 54 |
| 0280 | 275 | 28.80 | 102 |
| 0455 | 455 | 42.60 | 203 |
| 0605 | 605 | 52.60 (W252) | 254 |

## C-shaped gripping pliers

**Design:** Made of high-strength steel in fine grain structure, with two infinitely adjustable C-shaped clamps made of chromium-vanadium steel with serrated, small clamping areas, as well as screws for adjusting the parallel to clamp angular parts up to 9°. Serrated gripping jaws. With setting screw for clamping pressure and blow-back proof, plastic-coated quick-release lever.

**Application:** For the point-shaped and comprehensive clamping and holding of the most varied items.

BESSEY

| Order No. | Jaw span mm | 5657 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0110 | 110 | 62.80 (W519) | 80 |

## Welder's gripping pliers

**Design:** With heavily profiled clamping jaws and 90° curved upper jaw. The setting of the jaw span and the clamping pressure occurs by means of setting screw, with quick release lever.

**Application:** For the clamping and holding of profiled and flat materials during welding. The U-shape ensures visibility during the welding process.

**5642** Pliers body made of chromium-vanadium steel, gloss nickel-plated.

**5641** Pliers body made of heat-treated, high-alloy steel, nickel-plated.

| Order No. | Length mm | 5642 format | 5641 IRWIN VISE-GRIP | Jaw span mm |
|---|---|---|---|---|
| 0225 | 225 | – | 28.40 | 70 |
| 0280 | 280 | 16.55 (W512) | – (W252) | 60 |

5642 format professional quality

5641 IRWIN. VISE-GRIP

## Pipe welder's gripping pliers

format professional quality

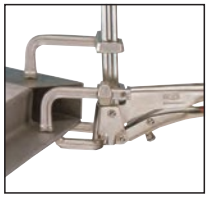
**Design:** Made of high-strength steel, with heavily profiled clamping jaws made of malleable cast iron, as well as prism-shaped angled upper jaw, combustion-resistant. Gloss nickel-plated. With setting screw for clamping pressure and quick-release lever.

**Application:** For clamping and holding pipes and round material in safe three-point contact for welding jobs.

| Order No. | Length mm | 5645 format | Jaw span mm |
|---|---|---|---|
| 0280 | 280 | 18.85 (W512) | 10–85 |

## Welder's gripping pliers Variogrip

**Design:** Made of high-strength steel in fine grain structure, with two flat stepless adjustable (in terms of radius and jaw width) forked and tempered clamping jaws made of chromium-vanadium steel. The upper pressure surfaces are ribbed. **The lower and left clamping bracket can be adjusted independently of one another.** With screw to adjust the parallelism for clamping parts angled up to 9°. Serrated gripping jaws. With setting screw for clamping pressure and blow-back proof, plastic-coated quick-release lever.



**Application:** For secure clamping and holding of 2 items with different thickness or offset items.

| Order No. | Jaw span mm | 5661 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0100 | 100 | 80.10 (W519) | 50–80 |

BESSEY

## Pipe gripping pliers

**Design:** Made of high-strength steel in fine grain structure, with two forked clamping jaws made of chromium-vanadium steel. The two bottom receptacles are prism-shaped. With screw to adjust the parallelism for clamping parts angled up to 9°. Jaws serrated as well as with prism recess for smaller round parts. With setting screw for clamping pressure and blow-back proof, plastic-coated quick-release lever.

**Application:** For secure holding of round objects with the same diameter.

| Order No. | Jaw span mm | 5663 BESSEY | Jaw protection mm |
|---|---|---|---|
| 0110 | 0–110 | 70.90 (W519) | 65 |

BESSEY

## Blacksmith tongs

GEDORE

**Design:** Made of C35 steel, forged, painted black and with long legs as well as applied slip joint.

| Order No. | Length mm | 6750 GEDORE Wolf-mouthed | 6751 GEDORE Round-mouthed |
|---|---|---|---|
| 0501 | 500 | 54.60 (W522) | 45.90 (W522) |

6750

6751

## Compact bolt cutters

**Design:** Made of special tool steel, hardened and tempered in oil, **polished head** and **25° offset for clear view** of the area being worked on. Hardened blades with precision sharpening. **With opening spring and one-hand locking lever. 50% energy savings** with precision toggle force joint. Handles with multi-component plastic coating.

**Application:** For the cutting of piano wire and for soft or hard solid wire, as well as for bolts, nails, rivets and screws.

| Order No. | Length mm | 5697 format | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|
| 0210 | 210 | 37.10 (W512) | 5.2 | 4.0 | 3.6 |

## Compact bolt cutter CoBolt®

**Design:** Made of chromium-vanadium high-performance steel, hardened and tempered in oil, **atramentised head.** Precision cutting blades inductively tempered (64 HRC). Increased cutting performance with less effort due to lever design. **60% reduced effort** when compared to normal powerful side-cutting pliers of the same length due to the optimum transmission.

**Application:** For the cutting of piano wire and for soft or hard solid wire, as well as for bolts, nails, rivets and screws.

**5666** Plastic-covered handles.

5666

**5658** Handles with multi-component plastic covers.

5658

**5665** **With the cutting notch near joints,** thicker wires are held in a favourable position, ideal for suspended ceiling structures. Plastic-covered handles.

Near-joint cutting notch

5665

**5664** **With opening spring and locking mechanism**Handles with multi-component plastic covers.

5664

**5670** **20° angled head** with bracket on one side and side serration for flush cutting. Plastic-covered handles.

5670

**5671** **20° angled head** with bracket on one side and side serration for flush cutting. Handles with multi-component plastic coating.

5671

| Order No. | Length mm | 5666 KNIPEX | 5658 KNIPEX | 5665 KNIPEX | 5664 KNIPEX | 5670 KNIPEX | 5671 KNIPEX | Cutting values Ø soft wire mm | Cutting values Ø medium-hard wire mm | Cutting values Ø hard wire mm | Cutting values Ø piano wire mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0200 | 200 | 29.00 | 31.00 | 32.10 | 34.90 | 35.70 | 42.10 | 6.0 | 5.2 | 4.0 | 3.6 |
| 0250 | 250 | 38.20 NEW | – | – | – | – | – | – | 5.6 | 4.0 | 3.8 |
| 0250 | 250 | – (W525) | – (W525) | 39.90 NEW (W525) | – (W525) | – (W525) | – (W525) | – | 6.0 | 4.3 | 4.2 |

# Bolt cutter/construction steel mat cutter



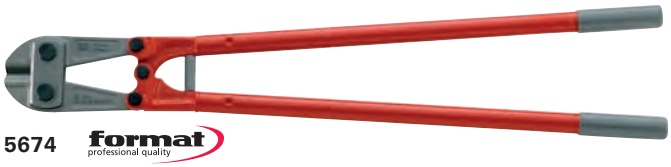
## Bolt cutters

**Design:** With adjustable and replaceable cutter head.

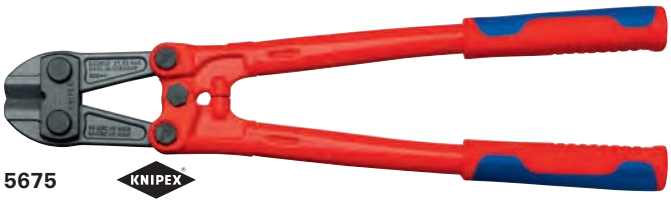
**Application:** For cutting round materials up to **48 HRC.**

**5674** Cutting edges made of chromium-vanadium special steel, drop-forged and inductively hardened. Pipe leg coated, handles with plastic covers.

**5675** Blades made of chromium-vanadium high-performance steel, hardened and tempered in oil. Precision cutting edges additionally inductively hardened, cutting edge hardness approx. 62 HRC. Welded on stop with convenient damper. Pipe leg powder coated, handles with plastic covers.



5674 format professional quality



5675 KNIPEX

| Order No. | Length mm | 5674 format | 5675 KNIPEX | Max. cutting performance Ø 40 HRC 1260 N/mm² mm | Max. cutting performance Ø 48 HRC 1590 N/mm² mm |
|---|---|---|---|---|---|
| 0460 | 460 | 48.70 | 73.30 | 6 | 5 |
| 0610 | 610 | 63.40 | 85.70 | 8 | 7 |
| 0760 | 760 | 83.00 | 112.00 | 9 | 8 |
| 0910 | 910 | 110.00 (W517) | 153.00 (W525) | 10 | 9 |

5674 format professional quality

## Cutter head including attachment screws

| Order No. | For length mm | 5674 format | 5675 KNIPEX |
|---|---|---|---|
| 0461 | 460 | 24.00 | 40.80 |
| 0611 | 610 | 33.60 | 51.80 |
| 0761 | 760 | 50.30 | 72.10 |
| 0911 | 910 | 55.80 (W517) | 79.40 (W525) |

5675 KNIPEX

## Steel wire mesh cutters

**Design:** With adjustable and replaceable cutter head.
Pipe leg coated.

**Application:** For cutting round materials up to **48 HRC.**

**5677** Cutting edges made of chromium-vanadium special steel, drop-forged and inductively hardened. Handles with plastic covers.

5677 format professional quality

**5678** Blades made of chromium-vanadium high-performance steel, hardened and tempered in oil. Precision cutting edges additionally inductively hardened, cutting edge hardness approx. 62 HRC. Welded on stop with convenient damper. Handles with multi-component plastic coating.

5678 KNIPEX

| Order No. | Length mm | 5677 format | 5678 KNIPEX | Max. cutting performance Ø 40 HRC 1260 N/mm² mm | Max. cutting performance Ø 48 HRC 1590 N/mm² mm |
|---|---|---|---|---|---|
| 0950 | 950 | 84.30 (W517) | 110.00 (W525) | 9 | 6 |

## Cutter head including attachment screws

| Order No. | For length mm | 5677 format | 5678 KNIPEX |
|---|---|---|---|
| 0951 | 950 | 51.00 (W517) | 74.70 (W525) |

5677 format professional quality

## Double open-end spanner

**Design: DIN 3110, ISO 3318.** Matt chrome-plated, jaw angled 15°, with flat heads.

**5700** Made of chromium-vanadium steel, forged. Gripping, oval shaft.

5700 format professional quality

**5703** Made of GEDORE vanadium steel 31CrV3 Finely ground heads. Gripping, oval shaft.

5703 GEDORE

**5701** Made of chromium-vanadium steel, forged. Stable shaft with double T profile.

5701 HAZET

| Order No. | Width of keys mm | 5700 format | 5703 GEDORE | 5701 HAZET | Max. length mm | Max. jaw thickness mm |
|---|---|---|---|---|---|---|
| 0005 | 4 x 5* | – | 5.45 | 4.50 | 100 | 3.4 |
| 0010 | 5 x 5.5* | – | 5.45 | 4.95 | 100 | 3.6 |
| 0015 | 5.5 x 7* | – | 4.29 | – | 122 | 3.5 |
| 0025 | 6 x 7 | 1.41 | 3.58 | 4.50 | 123 | 3.5 |
| 0030 | 7 x 8 | – | 4.58 | – | 140 | 3.8 |
| 0040 | 8 x 9 | 2.25 | 3.68 | 4.50 | 143 | 3.8 |
| 0050 | 8 x 10 | 2.25 | 4.49 | 4.80 | 144 | 4.1 |
| 0053 | 9 x 11* | – | 4.97 | – | 157 | 4.5 |
| 0055 | 10 x 11 | 2.25 | 4.18 | 4.65 | 160 | 4.6 |
| 0060 | 10 x 13 | 2.25 | 5.60 | 7.60 | 172 | 5.1 |
| 0070 | 11 x 13 | – | 5.70 | – | 172 | 5.0 |
| 0080 | 12 x 13 | 2.45 | 5.05 | 5.95 | 173 | 5.1 |
| 0090 | 12 x 14 | 2.56 | 5.65 | – | 176 | 5.0 |
| 0100 | 13 x 14 | 2.86 | 5.65 | – | 178 | 5.0 |
| 0105 | 13 x 15 | 2.74 | 6.10 | – | 188 | 5.5 |
| 0120 | 13 x 17 | 3.14 | 6.25 | 7.60 | 206 | 6.0 |
| 0125 | 14 x 15 | 2.45 | 5.40 | 6.10 | 190 | 5.7 |
| 0135 | 14 x 17 | 2.74 | 6.25 | – | 205 | 6.0 |
| 0140 | 16 x 17 | 2.74 | 5.85 | 6.80 | 206 | 6.0 |
| 0145 | 16 x 18 | 3.62 | 7.00 | 8.30 | 206 | 6.0 |
| 0150 | 17 x 19 | 3.62 | 7.10 | 7.70 | 222 | 6.7 |
| 0160 | 18 x 19 | 3.62 | 6.90 | 7.70 | 222 | 6.7 |
| 0165 | 18 x 21 | – | 8.85 | – | 236 | 7.0 |
| | | (W520) | (W522) | (W529) | | |

| Order No. | Width of keys mm | 5700 format | 5703 GEDORE | 5701 HAZET | Max. length mm | Max. jaw thickness mm |
|---|---|---|---|---|---|---|
| 0170 | 19 x 22 | 3.81 | 8.30 | – | 238 | 7.0 |
| 0180 | 19 x 24 | 4.89 | 9.45 | – | 250 | 7.5 |
| 0185 | 20 x 22* | 3.81 | 8.05 | 9.40 | 239 | 7.0 |
| 0193 | 21 x 22 | – | – | 10.25 | 238 | 7.0 |
| 0195 | 21 x 23* | 4.67 | 8.85 | 10.25 | 248 | 7.5 |
| 0205 | 21 x 24 | – | 10.25 | – | 250 | 7.5 |
| 0210 | 22 x 24 | 4.89 | 9.35 | 13.20 | 255 | 7.5 |
| 0220 | 22 x 27* | – | 11.45 | – | 266 | 8.0 |
| 0225 | 24 x 26* | – | 10.75 | 11.45 | 269 | 8.0 |
| 0230 | 24 x 27 | 5.85 | 10.75 | 12.35 | 269 | 8.0 |
| 0235 | 24 x 30 | 7.70 | 12.65 | – | 290 | 8.5 |
| 0245 | 25 x 28* | 6.60 | 12.40 | 13.40 | 284 | 8.5 |
| 0255 | 27 x 30 | 8.05 | 15.05 | – | 302 | 9.0 |
| 0270 | 27 x 32 | 8.05 | 15.00 | 15.85 | 304 | 9.1 |
| 0280 | 30 x 32 | 8.05 | 15.05 | 15.85 | 303 | 9.0 |
| 0285 | 30 x 34 | – | 17.20 | – | 302 | 9.0 |
| 0290 | 30 x 36 | 11.20 | 26.80 | – | 328 | 9.4 |
| 0300 | 32 x 36 | 12.00 | 26.80 | 30.05 | 343 | 10.1 |
| 0310 | 34 x 36 | – | 31.60 | 30.05 | 343 | 10.1 |
| 0320 | 36 x 41 | 17.10 | 35.40 | 37.40 | 397 | 10.5 |
| 0325 | 38 x 42* | – | 41.40 | – | 360 | 10.0 |
| 0335 | 41 x 46 | 25.20 | 47.10 | 53.50 | 440 | 11.4 |
| 0340 | 46 x 50 | – | 65.60 | 69.65 | 498 | 12.3 |
| | | (W520) | (W522) | (W529) | | |

* Non-standard size.

## Double open-ended spanner in American imperial dimensions

**Design:** Made of GEDORE vanadium steel 31CrV3, matt chrome-plated, finely ground jaws, jaw positioned at 15°, with flat heads and non-slip, oval shaft.

American inch sizes

GEDORE

| Order No. | Width of keys inch | 5712 GEDORE | Length mm | Jaw thickness mm |
|---|---|---|---|---|
| 0005 | 1/ 4 x 5/16 | 4.65 | 122 | 4.5 |
| 0010 | 5/16 x 3/ 8 | 5.15 | 140 | 5.0 |
| 0015 | 3/ 8 x 7/16 | 5.40 | 157 | 5.5 |
| 0020 | 7/16 x 1/ 2 | 6.35 | 172 | 6.0 |
| 0025 | 1/ 2 x 9/16 | 6.60 | 190 | 7.0 |
| 0030 | 9/16 x 5/ 8 | 7.20 | 190 | 7.5 |
| 0035 | 19/32 x 11/16 | 7.40 | 205 | 8.0 |
| | | (W522) | | |

| Order No. | Width of keys inch | 5712 GEDORE | Length mm | Jaw thickness mm |
|---|---|---|---|---|
| 0040 | 5 / 8 x 3 / 4 | 7.95 | 222 | 8.5 |
| 0050 | 3 / 4 x 7 / 8 | 9.80 | 236 | 8.5 |
| 0055 | 25 /32 x 13 /16 | 9.80 | 236 | 9.0 |
| 0065 | 7 / 8 x 15 /16 | 11.10 | 250 | 9.0 |
| 0070 | 1 x 1.1/ 8 | 13.65 | 280 | 9.4 |
| 0075 | 1.1/16 x 1.1/ 8 | 16.80 | 302 | 10.0 |
| | | (W522) | | |

# Double open-end spanner

## Double open-ended spanner set

**Design: DIN 3110, ISO 3318.** Matt chrome-plated, jaw angled 15°, with flat heads. Supplied in a box.

American inch sizes

**5706** Made of chromium-vanadium steel, forged. Gripping, oval shaft.

**5709** Made of GEDORE vanadium steel 31CrV3 Finely ground heads. Gripping, oval shaft.

**5704** Made of chromium-vanadium steel, forged. Stable shaft with double T profile. Supply of the 8-piece set in plastic tray (1/3). Suitable for all Hazet workshop trolleys 📖 6/82.

5706 format

5709 GEDORE

5704 HAZET

| Order No. | Design | 5706 format | 5709 GEDORE | 5704 HAZET | Set contents mm/inches |
|---|---|---|---|---|---|
| 0005 | 8-part | 19.95 | 42.40 | – | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22 |
| 0010 | 9-part | 27.00 | – | – | 6x7; 8x9; 10x11; 12x13; 14x15; 17x19; 19x22; 24x27; 30x32 |
| 0015 | 10-part | – | 61.90 | – | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x27 |
| 0017 | 10-part | – | – | 77.30 | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 21x22; 24x26; 27x32 |
| 0020 | 12-part | 43.70 | 89.00 | – | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x27; 25x28; 30x32 |
| 0022 | 12-part | – | – | 99.95 | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x26; 25x28; 27x32 |
| 0025 | 8-part | – | 61.20 | – | 1/4x5/16; 5/16x3/8; 7/16x1/2; 9/16x5/8; 19/32x11/16; 3/4x25/32; 13/16x7/8; 15/16x1 |
| 0030 | 12-part | – | 99.20 | – | 1/4x5/16; 5/16x3/8; 3/8x7/16; 7/16x1/2; 1/2x9/16; 9/16x5/8; 19/32x11/16; 5/8x3/4; 3/4x7/8; 25/32x13/16; 15/16x1; 1.1/16x1.1/8 |
| | | (W520) | (W522) | (W529) | |

## Clamp holder for spranner

**Design:** Made of plastic, with hole for wall attachment. Fits double open-end wrench (Order No. 5701, 📖 5/99) and straight double ring wrench (Order No. 5799, 📖 5/111).

HAZET

| Order No. | Design | 5704 HAZET |
|---|---|---|
| 0800 | 8 sockets | 16.20 |
| 1200 | 12 sockets | 32.85 (W529) |

## Double open-end spanner, small

**Design:** Matt chrome-plated, with unequal jaw angles (15° and 75°) and equal jaw span and flat heads.

**5713** Made of GEDORE vanadium steel 31CrV3, heads finely polished.

**5705** Made of vanadium-chrome steel.

5713 GEDORE

5705 HAZET

| Order No. | Width of keys mm | 5713 GEDORE | 5705 HAZET | Length mm | Jaw thickness mm |
|---|---|---|---|---|---|
| 0001 | 3.2 | – | 8.95 | 70 | 2 |
| 0003 | 3.5 | – | 8.95 | 70 | 2 |
| 0005 | 4.0 | 6.35 | 8.95 | 70 | 2 |
| 0010 | 4.5 | 6.35 | 8.95 | 70 | 2 |
| 0015 | 5.0 | 6.35 | 8.95 | 78 | 2 |
| 0020 | 5.5 | 6.35 | 8.95 | 78 | 2 |
| 0025 | 6.0 | 6.40 | 8.95 | 78 | 2 |
| 0030 | 7.0 | 6.40 (W522) | 8.95 (W529) | 91 | 2 |

| Order No. | Width of keys mm | 5713 GEDORE | 5705 HAZET | Length mm | Jaw thickness mm |
|---|---|---|---|---|---|
| 0035 | 8.0 | 6.40 | 8.95 | 96 | 3 |
| 0040 | 9.0 | 6.60 | – | 103 | 3 |
| 0045 | 10.0 | 6.60 | 8.95 | 105 | 3 |
| 0050 | 11.0 | 6.60 | 9.30 | 116 | 3 |
| 0055 | 12.0 | 6.90 | 10.40 | 116 | 3 |
| 0060 | 13.0 | 6.90 | 9.85 | 131 | 3 |
| 0065 | 14.0 | 6.90 (W522) | 12.15 (W529) | 131 | 3 |

## Double open-end spanner set, small

**Design:** Matt chrome-plated, with unequal jaw angles (15° and 75°) and equal jaw span and flat heads.

**5713** Made of GEDORE vanadium steel 31CrV3, heads finely polished.

**5705** Made of vanadium-chrome steel.

5713 GEDORE

5705 HAZET

| Order No. | Design | 5713 GEDORE | 5705 HAZET | Set contents mm | Supplied in |
|---|---|---|---|---|---|
| 1000 | 11-part | 87.70 | – | 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 | Plastic cassette, with Check Tool insert |
| 1010 | 14-part | – (W522) | 147.50 (W529) | 3.2; 3.5; 4; 4.5; 5; 5.5; 6; 7; 8; 10; 11; 12; 13; 14 | Plastic roll bag |

## Double open-end spanner/single jaw spanner

**Design:** Made of special steel, phosphated, jaw angled 15°.

**5717 DIN 895**

| Order No. | Width of keys mm | 5717 Double jaw | Length mm | Jaw thickness mm |
|---|---|---|---|---|
| 0607 | 6 x 7 | 0.87 | 96 | 3.3 |
| 0809 | 8 x 9 | 0.96 | 105 | 3.8 |
| 0810 | 8 x 10 | 0.96 | 114 | 4.2 |
| 1011 | 10 x 11 | 1.08 | 117 | 4.5 |
| 1013 | 10 x 13 | 1.15 | 117 | 5.0 |
| 1213 | 12 x 13* | 1.21 | 135 | 5.0 |
| 1214 | 12 x 14 | 1.27 | 139 | 5.2 |
| 1315 | 13 x 15 | 1.36 | 151 | 5.4 |
| 1317 | 13 x 17 | 1.52 | 156 | 5.6 |
| 1415 | 14 x 15* | 1.36 | 151 | 5.4 |
| 1417 | 14 x 17 | 1.52 | 156 | 5.6 |
| 1617 | 16 x 17* | 1.55 | 156 | 5.6 |
| 1719 | 17 x 19 | 1.74 | 170 | 6.0 |
| 1819 | 18 x 19* | 1.80 | 170 | 6.0 |
| 1821 | 18 x 21 | 2.17 | 191 | 6.4 |
| 1922 | 19 x 22 | 2.36 | 191 | 6.8 |
| 1924 | 19 x 24 | 2.82 | 206 | 7.2 |
| 2022 | 20 x 22* | 2.48 | 191 | 6.8 |
| 2224 | 22 x 24 | 3.10 | 221 | 7.5 |
| 2227 | 22 x 27* | 3.77 | 241 | 8.5 |
| 2427 | 24 x 27 | 3.80 | 241 | 8.5 |
| 2430 | 24 x 30 | 4.00 | 265 | 9.0 |
| 2730 | 27 x 30 | 4.13 | 265 | 9.0 |
| 2732 | 27 x 32 | 5.45 | 270 | 10.0 |
| 3032 | 30 x 32 | 5.50 | 270 | 10.0 |
| 3036 | 30 x 36 | 7.00 | 297 | 12.0 |
| 3236 | 32 x 36 | 7.05 | 297 | 12.0 |
| 3436 | 34 x 36 | 8.20 | 297 | 12.5 |
| 3641 | 36 x 41 | 10.10 | 344 | 13.5 |
| 4146 | 41 x 46 | 12.25 | 373 | 14.0 |
| 4650 | 46 x 50 | 17.40 | 410 | 15.0 |
| 5055 | 50 x 55 | 23.00 | 452 | 15.5 |
| 5560 | 55 x 60 | 28.90 (W605) | 490 | 18.0 |

**5711 DIN 894**

| Order No. | Width of keys mm | 5711 Single jaw | Length mm | Jaw thickness mm |
|---|---|---|---|---|
| 0006 | 6 | 1.07 | 73 | 3.5 |
| 0007 | 7 | 1.07 | 77 | 3.5 |
| 0008 | 8 | 1.11 | 95 | 3.8 |
| 0009 | 9 | 1.23 | 100 | 4.0 |
| 0010 | 10 | 1.23 | 105 | 4.5 |
| 0011 | 11 | 1.27 | 110 | 5.0 |
| 0012 | 12 | 1.44 | 125 | 5.5 |
| 0013 | 13 | 1.48 | 130 | 5.8 |
| 0014 | 14 | 1.52 | 140 | 6.0 |
| 0015 | 15 | 1.56 | 150 | 6.0 |
| 0016 | 16 | 1.64 | 155 | 6.2 |
| 0017 | 17 | 1.36 | 155 | 6.4 |
| 0018 | 18 | 1.66 | 161 | 6.8 |
| 0019 | 19 | 1.84 | 170 | 7.0 |
| 0022 | 22 | 2.08 | 193 | 8.2 |
| 0024 | 24 | 2.54 | 216 | 8.6 |
| 0025 | 25* | 2.82 | 220 | 8.9 |
| 0027 | 27 | 3.32 | 240 | 9.5 |
| 0030 | 30 | 4.00 | 260 | 10.5 |
| 0032 | 32 | 4.47 | 274 | 11.0 |
| 0034 | 34 | 4.88 | 295 | 11.5 |
| 0036 | 36 | 4.94 | 299 | 12.8 |
| 0038 | 38* | 6.80 | 324 | 13.2 |
| 0041 | 41 | 7.05 | 339 | 15.0 |
| 0046 | 46 | 7.85 | 380 | 15.5 |
| 0050 | 50 | 11.20 | 401 | 16.5 |
| 0055 | 55 | 14.40 | 442 | 17.0 |
| 0060 | 60 | 19.20 | 473 | 17.5 |
| 0065 | 65 | 25.00 | 522 | 18.0 |
| 0070 | 70 | 34.10 | 570 | 19.5 |
| 0075 | 75 | 43.20 | 620 | 21.0 |
| 0080 | 80 | 63.10 | 620 | 22.5 |
| 0085 | 85 | 67.20 | 670 | 22.5 |
| 0090 | 90* | 95.60 | 670 | 22.5 |
| 0095 | 95* | 105.50 | 670 | 22.5 |
| 0100 | 100* | 157.50 | 722 | 25.0 |
| 0105 | 105* | 224.50 | 722 | 25.0 |
| 0110 | 110* | 237.00 | 872 | 25.5 |
| 0115 | 115* | 251.50 | 1000 | 32.0 |
| 0120 | 120* | 267.00 (W605) | 1000 | 32.0 |

* Non-standard size.

## Combination spanner, straight

**Design: DIN 3113, ISO 3318, A-shape.** Matt chrome-plated, ring side angled by 15°.

**5720** Made of chromium-vanadium steel, forged. Gripping, oval shaft.

**5723** Made of GEDORE vanadium steel 31CrV3 Handy, stable hollow shaft.

**5707** Made of chromium-vanadium steel, forged. Stable shaft with double T profile.

| Order No. | Width of keys mm | 5720 format | 5723 GEDORE | 5707 HAZET | Max. length mm | Max. jaw thickness mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|---|
| 0010 | 3.0* | – | 8.40 ° | – | 78 | 2.8 | 2.8 |
| 0015 | 3.2* | – | 8.60 ° | – | 78 | 2.8 | 2.8 |
| 0020 | 3.5* | – | 8.40 ° | – | 78 | 2.8 | 2.8 |
| 0025 | 4.0* | – | 8.40 ° | – | 85 | 3.2 | 3.2 |
| 0002 | 4.5* | – | 8.40 ° | – | 85 | 3.2 | 3.2 |
| 0004 | 5.0* | – | 8.35 ° | – | 92 | 3.6 | 3.6 |
| 0005 | 5.5* | – | 8.35 ° | 7.60 | 105 | 4.0 | 3.6 |
| 0006 | 6.0 | 2.07 | 5.65 | 7.50 | 105 | 4.0 | 5.0 |
| 0007 | 7.0 | 2.07 | 5.55 | 7.50 | 119 | 4.0 | 5.5 |
| 0008 | 8.0 | 2.25 | 5.85 | 7.45 | 130 | 4.5 | 6.0 |
| 0009 | 9.0 | 2.22 | 6.05 | 9.10 | 143 | 4.5 | 6.5 |
| 0110 | 10.0 | 2.36 | 5.85 | 8.50 | 155 | 5.0 | 7.0 |
| 0111 | 11.0 | 2.56 | 6.45 | 10.30 | 169 | 5.5 | 7.5 |
| 0120 | 12.0 | 2.93 | 6.90 | 11.55 | 181 | 5.5 | 8.0 |
| 0130 | 13.0 | 2.84 | 7.00 | 10.65 | 193 | 6.3 | 8.5 |
| 0140 | 14.0 | 3.14 | 7.45 | 12.35 | 205 | 6.5 | 9.0 |
| 0150 | 15.0 | 3.29 | 8.00 | 13.80 | 218 | 7.0 | 9.5 |
| 0160 | 16.0 | 3.38 | 8.45 | 14.05 | 231 | 7.0 | 10.0 |
| 0170 | 17.0 | 3.90 | 8.55 | 13.35 | 243 | 7.5 | 10.5 |
| 0180 | 18.0 | 4.20 | 9.85 | 16.20 | 255 | 8.0 | 11.0 |
| 0190 | 19.0 | 4.59 | 9.65 | 15.05 | 269 | 8.0 | 11.5 |
| 0200 | 20.0* | 5.40 | 11.60 | 19.55 | 280 | 8.5 | 12.0 |
| 0211 | 21.0 | 5.45 | 11.90 | 19.10 | 292 | 8.5 | 12.5 |
| 0220 | 22.0 | 5.45 | 13.25 | 20.60 | 305 | 8.5 | 13.0 |
| 0230 | 23.0* | – | 13.80 | 24.30 | 328 | 9.5 | 13.5 |
| 0240 | 24.0 | 6.65 | 14.90 | 23.60 | 328 | 9.5 | 14.0 |
| 0250 | 25.0* | – | 15.55 | 27.45 | 354 | 10.0 | 14.5 |
| 0255 | 26.0* | – | 15.95 | 27.45 | 354 | 10.0 | 15.0 |
| 0270 | 27.0 | 8.35 | 17.30 | 27.05 | 380 | 10.5 | 15.5 |
| 0280 | 28.0* | – | 19.90 | 33.20 | 380 | 11.0 | 16.0 |
| 0290 | 29.0* | – | 20.30 | 33.20 | 380 | 11.5 | 16.5 |
| 0300 | 30.0 | 9.95 | 20.60 | 37.70 | 406 | 12.2 | 17.0 |
| 0320 | 32.0 | 11.20 | 22.60 | 38.25 | 420 | 12.0 | 18.0 |
| 0340 | 34.0 | – | – | 41.45 | 432 | 13.0 | 19.0 |
| 0360 | 36.0 | 16.60 | 43.40 | 48.55 | 460 | 13.0 | 20.0 |
| 0410 | 41.0 | – | – | 60.30 | 500 | 14.0 | 20.6 |
| 0460 | 46.0 | – | – | 144.60 | 520 | 15.0 | 24.0 |
| 0500 | 50.0 | – | – | 175.40 | 560 | 16.5 | 26.0 |
| 0550 | 55.0 | – | – | 241.40 | 610 | 18.0 | 28.0 |
| 0600 | 60.0 | – | – | 328.30 | 660 | 20.0 | 31.0 |
| | | (W520) | (W522) | (W529) | | | |

* Non-standard size.
° Ring side with hexagon profile.

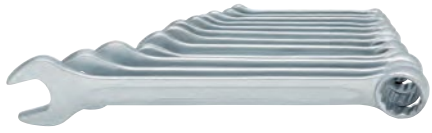
5720 format professional quality

5723 GEDORE

5707 HAZET

## Combination spanner set, straight

**Design:** Supplied in a carton.



5726 format professional quality

5729 GEDORE

5708 HAZET

| Order No. | Design | 5726 format | 5729 GEDORE | 5708 HAZET | Set contents mm |
|---|---|---|---|---|---|
| 0010 | 8-part | – | 72.40 | – | 10; 12; 13; 14; 17; 19; 22; 24 |
| 0005 | 8-part | 20.00 | – | – | 8; 9; 10; 11; 13; 14; 17; 19 |
| 0015 | 10-part | 36.90 | – | – | 10; 11; 13; 14; 17; 19; 22; 24; 27; 30 |
| 0020 | 11-part | – | 83.20 | – | 8; 9; 10; 11; 12; 13; 14; 15; 17; 19; 22 |
| 0027 | 12-part | – | – | 165.10 | 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22 |
| 0030 | 12-part | – | 139.00 | – | 10; 11; 12; 13; 14; 17; 19; 22; 24; 27; 30; 32 |
| 0025 | 12-part | 33.10 | – | – | 6; 7; 8; 9; 10; 11; 12; 13; 14; 17; 19; 22 |
| 0035 | 17-part | – | – | 239.60 | 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27 |
| 0040 | 21-part | – | – | 364.10 | 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32; 34 |
| | | (W520) | (W522) | (W529) | |

## Combination spanner, extra long

**Design: Similar to DIN 3113.** Matt chrome-plated.

**Application:** For deep screws and transmission of greater torque.

**5732** Made of GEDORE vanadium steel 31CrV3
With handy, strong profile shaft.

**573A** NEW Made of vanadium-chrome steel. Stable shaft with double T profile. Polished heads.

5732 GEDORE

573A HAZET

| Order No. | Width of keys mm | 5732 GEDORE | 573A HAZET | Max. length mm | Max. jaw thickness mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|
| 0008 | 8 | 8.10 | – | 170 | 4.5 | 7.0 |
| 0009 | 9 | 9.15 | – | 180 | 4.5 | 7.5 |
| 0010 | 10 | 9.10 | 10.40 | 210 | 5.5 | 8.5 |
| 0011 | 11 | 9.15 | 11.45 | 220 | 5.5 | 9.0 |
| 0012 | 12 | 9.15 | 11.75 | 230 | 5.5 | 10.0 |
| 0013 | 13 | 9.10 | 12.70 | 245 | 6.0 | 10.5 |
| 0014 | 14 | 11.00 | 13.30 | 255 | 6.5 | 11.0 |
| 0015 | 15 | 11.05 | – | 250 | 7.0 | 11.2 |
| 0016 | 16 | 13.00 | – | 265 | 7.5 | 11.8 |
| 0017 | 17 | 12.90 | 19.65 | 305 | 8.5 | 12.5 |
| 0018 | 18 | 16.00 (W522) | – (W529) | 295 | 8.5 | 13.2 |

| Order No. | Width of keys mm | 5732 GEDORE | 573A HAZET | Max. length mm | Max. jaw thickness mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|
| 0019 | 19 | 15.95 | 21.20 | 335 | 9.5 | 15.0 |
| 0021 | 21 | 18.50 | – | 340 | 9.5 | 14.2 |
| 0022 | 22 | 18.30 | 23.90 | 380 | 11.0 | 16.2 |
| 0024 | 24 | 20.40 | 28.65 | 430 | 12.0 | 18.2 |
| 0027 | 27 | 26.10 | 33.35 | 480 | 13.0 | 20.2 |
| 0030 | 30 | 41.70 | 41.30 | 510 | 14.0 | 21.2 |
| 0032 | 32 | 50.40 | 46.65 | 530 | 14.0 | 22.2 |
| 0034 | 34 | 64.00 | – | 520 | 15.0 | 23.2 |
| 0036 | 36 | 63.70 | 54.50 | 580 | 15.0 | 24.2 |
| 0041 | 41 | 71.00 | 68.80 | 600 | 16.0 | 26.0 |
| 0046 | 46 | 115.00 (W522) | – (W529) | 640 | 17.0 | 28.0 |

## Combination spanner set, extra long

5733 GEDORE

573A HAZET

| Order No. | Design | 5733 GEDORE | 573A HAZET | Set contents mm |
|---|---|---|---|---|
| 0800 | 8-part | – | 182.20 | 10; 13; 14; 17; 19; 24; 27; 32 |
| 0015 | 12-part | 227.50 | – | 10; 11; 12; 13; 14; 17; 19; 22; 24; 27; 30; 32 |
| 1200 | 12-part | – (W522) | 250.10 (W529) | 10; 11; 12; 13; 14; 17; 19; 22; 24; 27; 30; 32 |

## Claw spanner

**Design:** Made of GEDORE vanadium steel 31CrV3, matt chrome-plated with angled jaw.

**Application:** For working in hard-to-access places using the fulcrum pin (Order No. 5716).

GEDORE

| Order No. | Width of keys mm | 5714 GEDORE | Length mm | For fulcrum pin Ø mm | Head thickness mm |
|---|---|---|---|---|---|
| 0005 | 13 | 19.80 | 160 | 8 | 5.5 |
| 0010 | 14 | 20.20 | 160 | 8 | 5.5 |
| 0015 | 16 | 26.00 | 200 | 10 | 6.0 |
| 0020 | 17 | 22.90 | 200 | 10 | 6.0 |
| 0025 | 18 | 26.00 | 200 | 12 | 7.0 |
| 0030 | 19 | 26.00 (W522) | 200 | 12 | 7.0 |

| Order No. | Width of keys mm | 5714 GEDORE | Length mm | For fulcrum pin Ø mm | Head thickness mm |
|---|---|---|---|---|---|
| 0035 | 21 | 30.40 | 200 | 12 | 8.0 |
| 0040 | 22 | 30.40 | 200 | 12 | 8.0 |
| 0045 | 24 | 37.30 | 250 | 14 | 9.0 |
| 0050 | 27 | 41.20 | 250 | 14 | 10.0 |
| 0055 | 30 | 44.50 | 250 | 16 | 11.0 |
| 0060 | 32 | 49.70 (W522) | 250 | 16 | 11.8 |

## Fulcrum pin

**Design: DIN 900, A-shape.** Made of GEDORE vanadium steel 31CrV3, matt chrome-plated and fully hardened.

| Order No. | Ø mm | 5716 GEDORE | Length mm |
|---|---|---|---|
| 0015 | 8 | 3.18 | 180 |
| 0020 | 10 | 4.07 | 200 |
| 0025 | 12 | 5.05 (W522) | 250 |

| Order No. | Ø mm | 5716 GEDORE | Length mm |
|---|---|---|---|
| 0030 | 14 | 7.30 | 320 |
| 0035 | 16 | 11.25 (W522) | 400 |

## Combination spanner, offset

**Design: DIN 3113, ISO 3318, B-shape.** Matt chrome-plated, jaw angled 15°, ring polished.

**5730** Made of chromium-vanadium steel, forged. **Ring side deep offset.** Gripping, oval shaft.

**5735** Made of GEDORE vanadium steel 31CrV3. **Ring side deep offset.**

**5710** Made of chromium-vanadium steel, forged. Ring side offset.

5730 format professional quality

5735 GEDORE

5710 HAZET

| Order No. | Width of keys mm | 5730 format | 5735 GEDORE | 5710 HAZET | Max. length mm | Max. jaw thickness mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|---|
| 0005 | 5.5 | – | – | 8.25 ° | 90 | 3.7 | 4.7 |
| 0006 | 6.0 | 2.68 | 6.45 | 8.25 ° | 100 | 4.0 | 5.5 |
| 0007 | 7.0 | 2.76 | 6.40 | 8.25 ° | 112 | 4.3 | 6.3 |
| 0008 | 8.0 | 3.56 | 6.30 | 7.85 ° | 125 | 4.5 | 6.5 |
| 0009 | 9.0 | 3.62 | 7.15 | 8.25 ° | 138 | 4.5 | 7.5 |
| 0010 | 10.0 | 4.57 | 7.10 | 7.85 | 148 | 5.0 | 8.0 |
| 0011 | 11.0 | 4.76 | 7.65 | 8.80 | 158 | 5.2 | 9.0 |
| 0012 | 12.0 | 4.96 | 8.05 | 9.45 | 173 | 5.4 | 9.5 |
| 0013 | 13.0 | 5.20 | 8.70 | 9.60 | 185 | 6.0 | 10.2 |
| 0014 | 14.0 | 5.65 | 8.80 | 10.20 | 198 | 6.3 | 11.0 |
| 0015 | 15.0 | 5.85 | 10.40 | 10.55 | 210 | 6.7 | 11.5 |
| 0016 | 16.0 | 6.15 | 11.25 | 10.75 | 220 | 7.0 | 12.0 |
| 0017 | 17.0 | 6.70 | 11.60 | 11.70 | 232 | 7.5 | 12.5 |
| 0018 | 18.0 | 7.00 | 13.00 | 15.00 | 245 | 7.7 | 13.2 |
| 0019 | 19.0 | 7.10 | 13.60 | 14.20 | 258 | 8.0 | 13.5 |
| 0020 | 20.0* | – | 14.55 | – | 270 | 8.5 | 14.5 |
| 0021 | 21.0 | – | 15.15 | 16.35 | 280 | 8.7 | 14.5 |
| 0022 | 22.0 | 9.15 | 16.80 | 18.90 | 292 | 9.0 | 14.5 |
| 0024 | 24.0 | 10.95 | 19.00 | 20.45 | 318 | 10.2 | 15.5 |
| 0026 | 26.0* | – | 20.40 | – | 340 | 10.3 | 17.5 |
| 0027 | 27.0 | 12.05 | 21.50 | 24.85 | 353 | 10.7 | 17.5 |
| 0028 | 28.0* | – | 24.50 | – | 370 | 11.0 | 19.5 |
| 0029 | 29.0* | – | 26.30 | – | 370 | 11.0 | 19.5 |
| 0030 | 30.0 | 14.70 | 27.20 | 30.95 | 390 | 11.2 | 19.5 |
| 0032 | 32.0 | 16.60 | 28.60 | 30.95 | 412 | 11.8 | 20.5 |
| 0033 | 33.0* | – | 32.70 | – | 412 | 11.8 | 20.5 |
| 0034 | 34.0 | – | 37.00 | – | 412 | 11.8 | 20.5 |
| 0036 | 36.0 | 31.40 | 52.40 | – | 465 | 12.8 | 23.5 |
| 0038 | 38.0* | – | 58.90 | – | 460 | 13.2 | 24.2 |
| 0041 | 41.0 | 48.00 | 63.30 | – | 520 | 14.0 | 25.5 |
| 0046 | 46.0 | – | 85.40 | – | 550 | 15.0 | 27.5 |
| 0050 | 50.0 | – | 105.50 | – | 580 | 16.0 | 29.5 |
| 0055 | 55.0 | – | 131.50 | – | 620 | 17.0 | 30.5 |
| 0060 | 60.0 | – | 182.00 | – | 660 | 18.0 | 32.0 |
| | | (W520) | (W522) | (W529) | | | |

* Non-standard size.
° Ring side with hexagon profile.

## Combination spanner in American inch dimensions

**Design: DIN 3113, ISO 3318, B-shape.** Made of GEDORE vanadium steel 31CrV3. Matt chrome-plated, **ring side deep offset** and slim, jaw angled 15°. Ring with UnitDrive profile.

American inch sizes

GEDORE

| Order No. | Width of keys inch | 5724 GEDORE | Length mm | Jaw thickness mm | Ring thickness mm |
|---|---|---|---|---|---|
| 0005 | 1/4 | 6.80 | 100 | 3.4 | 5.0 |
| 0010 | 5/16 | 7.10 | 125 | 4.0 | 6.5 |
| 0015 | 3/8 | 8.20 | 148 | 4.7 | 8.2 |
| 0020 | 7/16 | 8.65 | 158 | 5.0 | 9.0 |
| 0025 | 1/2 | 8.90 | 185 | 6.0 | 10.2 |
| 0030 | 9/16 | 9.95 | 198 | 6.3 | 11.0 |
| 0035 | 5/8 | 11.35 | 220 | 7.0 | 12.0 |
| 0040 | 11/16 | 14.60 | 245 | 7.7 | 13.2 |
| 0045 | 3/4 | 14.55 | 258 | 8.0 | 13.5 |
| 0050 | 13/16 | 17.10 (W522) | 280 | 8.7 | 14.5 |

| Order No. | Width of keys inch | 5724 GEDORE | Length mm | Jaw thickness mm | Ring thickness mm |
|---|---|---|---|---|---|
| 0055 | 7/8 | 18.65 | 292 | 9.0 | 14.5 |
| 0060 | 15/16 | 20.00 | 318 | 9.5 | 15.5 |
| 0065 | 1 | 20.40 | 340 | 10.3 | 17.5 |
| 0070 | 1.1/16 | 22.50 | 352 | 10.5 | 17.5 |
| 0075 | 1.1/8 | 26.50 | 370 | 11.0 | 19.5 |
| 0080 | 1.1/4 | 30.80 | 412 | 11.8 | 20.5 |
| 0085 | 1.5/16 | 33.10 | 412 | 11.8 | 20.5 |
| 0090 | 1.3/8 | 59.80 | 460 | 12.8 | 23.5 |
| 0095 | 1.1/2 | 64.20 (W522) | 460 | 13.2 | 24.2 |

## Combination spanner set

**Design: DIN 3113, ISO 3318, B-shape.** Matt chrome-plated, jaw angled 15°. Rings polished.

**5728** Made of chromium-vanadium steel, forged. **Ring side deep offset.** Gripping, oval shaft.

**5736** Made of GEDORE vanadium steel 31CrV3, **ring side deep offset.**

**5724** Made of GEDORE vanadium steel 31CrV3, **ring side deep offset.**

**5755** Made of chromium-vanadium steel, forged. Ring side offset.

5728 format professional quality

5736 + 5724 GEDORE

American inch sizes

5755 HAZET

| Order No. | Design | 5728 format | 5736 GEDORE | 5724 GEDORE | 5755 HAZET | Set contents mm/inches |
|---|---|---|---|---|---|---|
| 0005 | 8-part | – | 92.50 | – | – | 10; 12; 13; 14; 17; 19; 22; 24 |
| 0007 | 9-part | 50.10 | – | – | – | 8; 9; 10; 13; 14; 16; 17; 19; 24 |
| 0010 | 11-part | – | 105.00 | – | – | 8; 9; 10; 11; 12; 13; 14; 15; 17; 19; 22 |
| 0015 | 12-part | 96.40 | 177.50 | – | – | 10; 11; 12; 13; 14; 17; 19; 22; 24; 27; 30; 32 |
| 0017 | 17-part | – | 171.00 | – | – | 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22 |
| 0020 | 17-part | – | – | – | 212.30 | 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27 |
| 0800 | 8-part | – (W520) | – (W522) | 97.70 (W522) | – (W529) | 3/8; 7/16; 1/2; 9/16; 5/8; 3/4; 7/8; 1 |

## Collar ratchet spanner

**Design:** Made of chromium-vanadium steel, matt chrome-plated. Jaw angled 15°, ring side with special hexagon profile. The ring side can be opened and attached to nuts in closed systems. In addition, the spring mechanism allows the user to work using the ratchet system. The head can be folded away due to the hinge.

**Application:** Ideal for use in closed systems, such as brake pipes, hydraulic lines, pipes etc. The foldable head can also be used in narrow places.

format professional quality

| Order No. | Width of keys mm | 5718 format | Length mm |
|---|---|---|---|
| 0005 | 8 | 20.90 | 136 |
| 0015 | 10 | 21.90 | 160 |
| 0020 | 11 | 22.90 | 173 |
| 0030 | 13 | 24.90 | 195 |
| 0040 | 15 | 27.40 | 219 |
| 0050 | 17 | 30.10 | 247 |
| 0060 | 19 | 33.80 | 272 |
| 0065 | 22 | 37.10 (W520) | 315 |

## Collar ratchet spanner set

**Design:** Supplied in roll-up case.

| Order No. | Design | 5718 format | Set contents mm |
|---|---|---|---|
| 0400 | 4-part | 99.00 (W520) | 10; 13; 17; 19 |

# Open-end spanner with ring ratchet

## Open-ended spanner with ring ratchet and hinge

**Design:** Made of chromium-vanadium steel. Chrome-plated, straight shape with embossed grip profile shaft. Exact toothed ratchet mechanism with 72 teeth and a return angle of 5°. Jaw positioned at 15°. **The ratchet head swivels 180°.** The torque values exceed those specified by **DIN 3110, ISO 3318.**

| Order No. | Width of keys mm | 5783 format | Length mm | Jaw thickness mm | Ring thickness mm |
|---|---|---|---|---|---|
| 0005 | 8 | 12.15 | 127 | 4.3 | 6.5 |
| 0015 | 10 | 12.95 | 136 | 5.0 | 7.3 |
| 0030 | 13 | 14.75 | 154 | 6.1 | 8.6 |
| 0050 | 17 | 17.90 | 190 | 7.6 | 10.3 |
| 0060 | 19 | 19.65 (W520) | 215 | 8.6 | 11.2 |

## Open-ended spanner with ring ratchet and hinge, in a set

**Design:** Supplied in a tool bag.

| Order No. | Design | 5783 format | Set contents mm |
|---|---|---|---|
| 0500 | 5-part | 81.60 (W520) | 8; 10; 13; 17; 19 |

## Open-end spanner with ring ratchet

**Design:** Straight shape, jaw set at 15°. The torque values exceed those specified by **DIN 3110, ISO 3318.**

**5731** Made of vanadium-chrome steel. Chrome-plated, with non-slip shaped profile shaft. Precise toothed ratchet mechanism with 72 teeth and a reset angle of 5°.

5731 format professional quality

**5721** Made of GEDORE vanadium steel 31CrV3 Matt chrome-plated, with handy and strong tapered shaft. Manganese-phosphate lockout bar and safety catch. **The small number of teeth makes the ratchet extremely robust, while special pawl geometry ensures a very small return angle.** Reset angle of 7° up to jaw span 15 mm, 6° up to jaw span 27 mm and 5° up to jaw span 36 mm. Jaw ground to exact width of spanner.

5721 GEDORE

| Order No. | Width of keys mm | 5731 format | 5721 GEDORE | Max. length mm | Max. jaw thickness mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|
| 0005 | 8 | 7.60 | 11.35 | 140 | 4.0 | 7.0 |
| 0010 | 9 | – | 11.60 | 150 | 4.0 | 7.3 |
| 0015 | 10 | 7.40 | 11.90 | 160 | 4.8 | 7.7 |
| 0020 | 11 | – | 12.20 | 164 | 4.5 | 8.1 |
| 0025 | 12 | – | 12.95 | 170 | 4.8 | 8.6 |
| 0030 | 13 | 8.55 | 13.85 | 180 | 5.8 | 9.0 |
| 0035 | 14 | – | 14.35 | 190 | 5.2 | 9.4 |
| 0040 | 15 | 10.15 | 15.00 | 199 | 6.5 | 9.8 |
| 0045 | 16 | 11.50 | 15.85 | 208 | 6.8 | 10.2 |
| 0050 | 17 | 11.30 | 16.75 | 225 | 7.2 | 10.6 |
| 0055 | 18 | 12.65 | 17.80 | 237 | 7.7 | 11.0 |
| 0060 | 19 | 12.55 | 18.15 | 250 | 8.2 | 11.7 |
| 0063 | 21 | – | 21.90 | 274 | 7.0 | 12.5 |
| 0065 | 22 | 21.20 | 25.00 | 292 | 9.0 | 13.3 |
| 0070 | 24 | 24.50 | 28.60 | 325 | 10.0 | 14.8 |
| 0075 | 27 | – | 62.90 | 359 | 8.5 | 16.0 |
| 0080 | 30 | 45.10 | 69.10 | 401 | 11.4 | 17.4 |
| 0085 | 32 | – | 81.10 | 424 | 9.5 | 17.9 |
| 0095 | 36 | – (W520) | 98.50 (W522) | 480 | 10.5 | 18.9 |

## Open-ended spanner with ring ratchet, in a set

5731 0900 format professional quality

5731 1000

5741 0500 GEDORE

5741 1200

| Order No. | Design | 5731 format | 5741 GEDORE | Set contents mm | Supplied in |
|---|---|---|---|---|---|
| 0400 | 4-part | – | 60.60 | 10; 13; 17; 19 | Polythene bag |
| 0500 | 5-part | – | 86.60 | 8; 10; 13; 17; 19 | Check Tool inlay |
| 0900 | 9-part | 69.90 | – | 8; 10; 13; 17; 19 + 4 adapters | Tool wallet |
| 1000 | 10-part | 129.00 | – | 8; 10; 13; 15; 16; 17; 18; 19; 22; 24 | Tool roll |
| 1200 | 12-part | – (W520) | 204.00 (W522) | 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 | Sheet steel box with ABS inlay |

## Open-ended spanner with ring ratchet, reversible

**Design:** Precisely toothed ratchet mechanism with 72 teeth and a return angle of 5°. Jaw positioned at 15°. The torque exceeds the regulations in line with DIN 3113.

**5749** Made of chrome-vanadium steel, chrome-plated, with gripping embossed profile shaft. The ratchet head is angled 15°.

5749 format professional quality

**5722** Made of GEDORE vanadium steel 31CrV3, matt chrome-plated, with handy and strong tapered shaft. Return angle 7° up to jaw span 15 mm, 6° up to jaw span 27 mm. The ratchet head is angled by 13°.

5722 GEDORE

**5794** In chromium-vanadium steel, matt chrome-plated. The ratchet head is angled 13°.

5794 HAZET

| Order No. | Width of keys mm | 5749 format | 5722 GEDORE | 5794 HAZET | Max. length mm | Max. jaw thickness mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|---|
| 0005 | 8 | 9.25 | 16.65 | 19.65 | 140.0 | 4.9 | 7.0 |
| 0010 | 9 | – | 16.65 | 19.65 | 150.0 | 5.2 | 7.3 |
| 0015 | 10 | 10.70 | 17.70 | 20.35 | 160.0 | 5.6 | 7.7 |
| 0020 | 11 | – | 17.70 | 21.20 | 168.6 | 6.0 | 8.1 |
| 0025 | 12 | – | 18.05 | 22.35 | 180.3 | 6.4 | 8.6 |
| 0030 | 13 | 12.55 | 18.15 | 23.80 | 193.2 | 6.7 | 9.0 |
| 0035 | 14 | – | 21.00 | 24.75 | 204.6 | 7.1 | 9.4 |
| 0040 | 15 | 13.65 | 21.00 | 25.85 | 218.0 | 7.4 | 9.8 |
| 0045 | 16 | 14.95 | 25.00 | 26.90 | 230.2 | 7.7 | 10.2 |
| 0050 | 17 | 15.95 | 25.00 | 27.95 | 242.2 | 8.1 | 10.6 |
| 0055 | 18 | 16.15 | 27.00 | 29.85 | 255.0 | 8.5 | 11.0 |
| 0060 | 19 | 16.10 | 27.00 | 29.85 | 268.3 | 9.1 | 11.7 |
| 0063 | 21 | – | 39.70 | 43.95 | 291.5 | 12.0 | 13.3 |
| 0065 | 22 | 24.70 | 39.70 | 43.95 | 292.0 | 12.0 | 13.3 |
| 0070 | 24 | 29.70 | 46.90 | 55.50 | 333.1 | 12.5 | 14.8 |
| 0075 | 27 | – | – | 74.55 | 359.2 | 14.7 | 15.8 |
| 0080 | 30 | 57.10 | – | 88.20 | 402.5 | 15.2 | 17.3 |
| 0085 | 32 | – (W520) | – (W522) | 101.20 (W529) | 425.8 | 15.7 | 17.8 |

## Open-ended spanner with ring ratchet, reversible, in a set

5749 0900 format

5749 1000

5722 1200 GEDORE

5794 0500 HAZET

| Order No. | Design | 5749 format | 5722 GEDORE | 5794 HAZET | Set contents mm | Supplied in |
|---|---|---|---|---|---|---|
| 0400 | 4-part | – | 87.80 | – | 10; 13; 17; 19 | Polythene bag |
| 0500 | 5-part | – | – | 112.20 | 8; 10; 13; 17; 19 | Carton |
| 0900 | 9-part | 89.20 | – | – | 8; 10; 13; 17; 19 + 4 adapters | Tool wallet |
| 1000 | 10-part | 164.00 | – | – | 8; 10; 13; 15; 16; 17; 18; 19; 22; 24 | Tool roll |
| 1200 | 12-part | – | 292.00 | – | 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 | Sheet steel box with ABS inlay |
| | | (W520) | (W522) | (W529) | | |

## Box spanner adapter for ratchet spanner

**Design:** Made of GEDORE vanadium steel 31CrV3, chrome-plated. With quick swivel, snap ring and push-button release. Manganese-phosphate push button.

**Application:** The adapter turns a ratchet wrench into a full ratchet.

GEDORE

| Order No. | Holding fixture inch | 5769 GEDORE | For width across flat (AF) mm |
|---|---|---|---|
| 0006 | 1/4 | 8.25 | 10 |
| 0011 | 3/8 | 9.15 | 13 |
| 0016 | 1/2 | 11.20 (W522) | 19 |

## Bit adapter for ratchet spanner

**Design:** Made of GEDORE vanadium steel 31CrV3, chrome-plated.

**Application:** The adapter turns a ratchet wrench into a full bit ratchet.

GEDORE

| Order No. | Holding fixture inch | 5769 GEDORE | For width across flat (AF) mm |
|---|---|---|---|
| 0021 | 1/4 | 8.20 (W522) | 10 |

## Joker open-ended spanner with ring ratchet

**Design:** Made of chromium molybdenum steel with nickel-chrome coating. The straight jaw with double hexagonal profile and a reset angle of just 30° allows for efficient work even in narrow places. Handling simplified, waste reduced, risk of slipping minimised due to replaceable, hardened and serrated metal plate on the side of the mouth, which also serves as an end-stop holder and slip-off fuse.

**5727** **With jaws and a straight ring ratchet side.** Fine toothed ratchet mechanism with 80 teeth and a return angle of 4.5° on the ring side.

**572A** NEW **With jaws and a ring switchable 15° angled ratchet side.** Fine toothed ratchet mechanism with 80 teeth and a return angle of 4.5° on the ring side.

5727

572A

The metal plate serves as stop

and holder.

| Order No. | Width of keys mm | 5727 Wera Joker | 572A Wera Joker | | Length mm |
|---|---|---|---|---|---|
| 0005 | 8 | 17.85 | 28.70 | | 144 |
| 0015 | 10 | 17.85 | 28.70 | | 159 |
| 0020 | 11 | 19.80 | 33.30 | | 165 |
| 0025 | 12 | 19.80 | 33.30 | | 171 |
| 0030 | 13 | 19.85 | 33.30 | | 179 |
| 0035 | 14 | 24.80 | 36.80 | | 188 |
| 0040 | 15 | 25.30 | 37.10 | | 200 |
| 0045 | 16 | 25.30 | 37.10 | | 213 |
| 0050 | 17 | 25.60 | 37.50 | | 225 |
| 0055 | 18 | 26.80 | 44.50 | | 235 |
| 0090 | 19 | 28.80 (W526) | 44.50 (W526) | | 246 |

## Double open-end spanner Joker

**With two jaw sides.**

| Order No. | Width of keys mm | 5788 Wera Joker | Length mm |
|---|---|---|---|
| 0060 | 10 x 13 | 19.85 | 167.0 |
| 0150 | 17 x 19 | 28.80 (W526) | 235.0 |

5788

## Joker open-ended spanner with ring ratchet, in a set

**Design:** Supplied in robust nylon folding bag.

**5727** Consisting of open-ended spanners with ring ratchets.

**572A** NEW Consisting of open-ended spanners with reversible ring ratchet.

**5788** Consisting of open-ended wrenches with ring ratchets and double open-ended wrenches.

5727 0400

572A 0400

5788 0600

| Order No. | Design | 5727 Wera Joker | 572A Wera Joker | 5788 Wera Joker | Set contents mm |
|---|---|---|---|---|---|
| 0400 | 4-part | 85.80 | 139.00 | – | 10; 13; 17; 19 |
| 0600 | 6-part | – | – | 143.00 | 10; 13; 17; 19; 10 x 13; 17 x 19 |
| 1100 | 11-part | 244.50 (W526) | 393.00 (W526) | – (W526) | 8; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 |

## Double-end ring spanner, offset

**Design: DIN 838, ISO 3318.** Matt chrome-plated, deeply offset.

**5739** Made of chromium-vanadium steel, forged. Gripping, oval shaft.

**5742** Made of GEDORE vanadium steel 31CrV3. Ring thin-walled.

**5795** Made of chromium-vanadium steel, forged, ring thin walled, polished.

5739 format professional quality

5742 GEDORE

5795 HAZET

| Order No. | Width of keys mm | 5739 format | 5742 GEDORE | 5795 HAZET | Max. length mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|
| 0005 | 5.5° x 7* | – | 9.40 | – | 170 | 5.6 x 6.6 |
| 0015 | 6 x 7 | 2.20 | 7.75 | 9.70 | 182 | 6.0 x 6.5 |
| 0020 | 7 x 8 | – | 9.40 | – | 180 | 5.6 x 6.6 |
| 0030 | 8 x 9 | 2.78 | 7.90 | 10.20 | 192 | 6.8 x 7.8 |
| 0040 | 8 x 10 | 3.27 | 9.15 | – | 192 | 6.8 x 8.5 |
| 0045 | 9 x 11* | – | 10.25 | – | 195 | 7.6 x 9.5 |
| 0055 | 10 x 11 | 3.50 | 8.60 | 10.55 | 203 | 8.5 x 9.5 |
| 0065 | 10 x 13 | 3.58 | 10.60 | – | 214 | 8.5 x 10.5 |
| 0075 | 12 x 13 | 3.88 | 9.15 | 12.70 | 220 | 9.8 x 10.5 |
| 0080 | 12 x 14 | – | 10.75 | – | 212 | 9.6 x 10.6 |
| 0090 | 13 x 14 | – | 10.65 | – | 225 | 10.3 x 10.6 |
| 0095 | 13 x 15 | 4.70 | 10.95 | – | 238 | 10.5 x 11.5 |
| 0110 | 13 x 17 | 4.34 | 12.15 | – | 245 | 10.7 x 12.5 |
| 0120 | 14 x 15 | 3.35 | 9.90 | 12.85 | 240 | 10.8 x 11.8 |
| 0125 | 14 x 17 | 4.53 | – | – | 254 | 10.8 x 12.5 |
| 0135 | 16 x 17 | 4.73 | 11.15 | 14.30 | 255 | 11.8 x 12.5 |
| 0145 | 16 x 18 | 4.62 | 13.65 | – | 265 | 11.8 x 12.8 |
| 0155 | 17 x 19 | 5.85 | 12.95 | 15.25 | 265 | 12.5 x 13.2 |
| 0165 | 18 x 19 | 5.85 | 12.30 | 15.50 | 265 | 12.8 x 13.5 |
| | | (W520) | (W522) | (W529) | | |

| Order No. | Width of keys mm | 5739 format | 5742 GEDORE | 5795 HAZET | Max. length mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|
| 0180 | 19 x 22 | 7.40 | 16.35 | – | 287 | 13.2 x 14.5 |
| 0190 | 19 x 24 | 8.95 | 18.90 | – | 314 | 13.4 x 14.8 |
| 0200 | 20 x 22* | 5.95 | 14.40 | 18.10 | 295 | 13.8 x 14.5 |
| 0202 | 21 x 22 | – | – | 19.90 | 295 | 12.9 x 12.9 |
| 0210 | 21 x 23* | 7.40 | 17.35 | 19.90 | 315 | 14.0 x 14.5 |
| 0225 | 22 x 24 | 9.15 | 18.90 | – | 314 | 14.5 x 15.0 |
| 0230 | 24 x 26* | – | 20.60 | 23.65 | 330 | 14.4 x 15.3 |
| 0240 | 24 x 27 | 9.60 | 19.45 | 25.85 | 340 | 14.8 x 15.8 |
| 0245 | 24 x 30 | 10.40 | 21.90 | – | 360 | 15.0 x 17.0 |
| 0250 | 25 x 28* | 10.00 | 21.50 | 25.85 | 350 | 15.2 x 16.5 |
| 0255 | 27 x 30 | – | 25.50 | – | 345 | 15.4 x 16.4 |
| 0260 | 27 x 32 | 13.35 | 24.80 | 27.95 | 370 | 15.8 x 17.8 |
| 0270 | 30 x 32 | 12.80 | 24.70 | 29.20 | 370 | 16.8 x 18.0 |
| 0290 | 30 x 36 | 18.70 | 45.00 | – | 400 | 17.0 x 19.8 |
| 0295 | 32 x 36 | 18.65 | 43.10 | – | 410 | 18.0 x 20.0 |
| 0300 | 34 x 36 | – | 49.60 | – | 420 | 18.7 x 19.4 |
| 0315 | 36 x 41 | 23.10 | 56.70 | 44.70 | 444 | 19.8 x 20.8 |
| 0320 | 41 x 46 | – | 71.10 | – | 485 | 20.4 x 22.2 |
| 0325 | 46 x 50 | – | 89.50 | – | 535 | 22.2 x 23.6 |
| | | (W520) | (W522) | (W529) | | |

* Non-standard size.
° With hexagon profile.

## Double-end ring spanner set, offset

5748 format professional quality

5751 GEDORE

5798 HAZET

| Order No. | Design | 5748 format | 5751 GEDORE | 5798 HAZET | Set contents mm |
|---|---|---|---|---|---|
| 0005 | 8-part | 30.80 | 79.70 | – | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22 |
| 0007 | 8-part | – | – | 105.50 | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 21x22 |
| 0010 | 9-part | 44.80 | – | – | 6x7; 8x9; 10x11; 12x13; 14x15; 17x19; 19x22; 24x27; 30x32 |
| 0015 | 10-part | – | 123.50 | – | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 24x27; 30x32 |
| 0020 | 12-part | 67.30 | 161.50 | – | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x27; 25x28; 30x32 |
| 0022 | 12-part | – | – | 200.80 | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x26; 25x28; 27x32 |
| | | (W520) | (W522) | (W529) | |

## Double-end ring spanner, straight

**Design: DIN 837 B, ISO 3318.** Chrome-plated, ring thin walled, polished.

**5757** Made of GEDORE vanadium steel 31CrV3. Ring with UnitDrive Profile.

5757 GEDORE

**5799** Made of chromium-vanadium steel, forged. Ring offset to the side, polished.

5799 HAZET

| Order No. | Width of keys mm | 5757 GEDORE | 5799 HAZET | Length mm 5757 | Length mm 5799 | Ring thickness mm 5757 | Ring thickness mm 5799 |
|---|---|---|---|---|---|---|---|
| 0010 | 6 x 7 | 9.60 | 9.55 | 99 | 98 | 4.5 | 4.5 |
| 0015 | 8 x 9 | 9.80 | 9.70 | 114 | 113 | 5.2 | 5.2 |
| 0035 | 10 x 11 | 9.35 | 10.45 | 131 | 125 | 5.8 | 6.0 |
| 0040 | 10 x 13 | 10.35 | – | 149 | – | 6.4 | – |
| 0045 | 12 x 13 | 10.70 | 10.80 | 149 | 139 | 6.4 | 6.2 |
| 0075 | 14 x 15 | 11.35 | 12.50 | 161 | 155 | 8.5 | 7.0 |
| 0090 | 16 x 17 | 11.85 | 14.30 | 169 | 170 | 9.4 | 7.5 |
| 0100 | 17 x 19 | 12.00 | – | 186 | – | 9.4 | – |
| 0110 | 18 x 19 | 12.00 | 16.40 | 186 | 189 | 10.0 | 8.5 |
| 0115 | 19 x 22 | 13.10 | – | 209 | – | 10.0 | – |
| 0120 | 20 x 22* | 13.85 | 19.35 | 209 | 209 | 10.8 | 9.0 |
| 0122 | 21 x 22* | – (W522) | 20.90 (W529) | – | 232 | – | 10.0 |

| Order No. | Width of keys mm | 5757 GEDORE | 5799 HAZET | Length mm 5757 | Length mm 5799 | Ring thickness mm 5757 | Ring thickness mm 5799 |
|---|---|---|---|---|---|---|---|
| 0130 | 21 x 23* | 14.50 | 20.90 | 233 | 232 | 10.8 | 10.0 |
| 0150 | 24 x 26* | – | 23.15 | – | 254 | – | 11.0 |
| 0155 | 24 x 27 | 16.65 | – | 260 | – | 10.8 | – |
| 0160 | 24 x 30 | 19.10 | – | 290 | – | 10.6 | – |
| 0167 | 27 x 32 | – | 30.10 | – | 309 | – | 13.0 |
| 0175 | 30 x 32 | 22.60 | 30.10 | 320 | 324 | 12.6 | 13.0 |
| 0177 | 30 x 34 | – | 34.10 | – | 327 | – | 14.0 |
| 0185 | 30 x 36 | 33.40 | – | 357 | – | 13.8 | – |
| 0190 | 32 x 36 | 33.40 | – | 357 | – | 13.8 | – |
| 0195 | 36 x 41 | 40.50 | – | 391 | – | 15.0 | – |
| 0200 | 41 x 46 | 57.20 | – | 431 | – | 16.2 | – |
| 0205 | 46 x 50 | 71.30 (W522) | – (W529) | 473 | – | 16.5 | – |

* Non-standard size.

## Double-end ring spanner set, straight

5763 GEDORE

**5799** Supplied in plastic clamp holder, suitable for mounting on the wall, with handle.

5799 HAZET

| Order No. | Design | 5763 GEDORE | 5799 HAZET | Set contents mm |
|---|---|---|---|---|
| 0005 | 8-part | 87.90 | – | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22 |
| 0007 | 8-part | – | 104.40 | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 21x22 |
| 0022 | 12-part | – | 237.00 | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x26; 25x28; 27x32 |
| 0015 | 12-part | 161.00 (W522) | – (W529) | 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x27; 25x28; 30x32 |

## Clamp holder for spanner

**Design:** Made of plastic, with hole for wall attachment. Fits double open-end wrench (Order No. 5701, 📖 5/99) and straight double ring wrench (Order No. 5799, 📖 5/111).

| Order No. | Design | 5704 HAZET |
|---|---|---|
| 0800 | 8 sockets | 16.20 |
| 1200 | 12 sockets | 32.85 (W529) |

HAZET

## Double ring ratchet spanner

**Design:** In GEDORE vanadium steel 31CrV3. Matt chrome-plated, with handy and strong tapered shaft. Ring thin walled and flat Manganese-phosphate lockout bar and safety catch. **The small number of teeth makes the ratchet extremely robust, while special pawl geometry ensures a very small return angle.** Return angle 7° up to jaw span 14 x 15 mm, 6° up to jaw span 16 x 17 mm.

GEDORE

| Order No. | Width of keys mm | 5771 GEDORE | Length mm |
|---|---|---|---|
| 0809 | 8 x 9 | 23.00 | 134 |
| 0810 | 8 x 10 | 23.70 | 144 |
| 1011 | 10 x 11 | 24.50 | 154 |
| 1013 | 10 x 13 | 25.30 | 166 |
| 1213 | 12 x 13 | 25.60 | 175 |
| 1415 | 14 x 15 | 27.50 | 197 |
| 1617 | 16 x 17 | 29.50 | 222 |
| 1719 | 17 x 19 | 30.10 | 235 |
| 1819 | 18 x 19 | 30.50 (W522) | 248 |

## Quadro ring ratchet spanner

**Design:** Made of chromium-vanadium steel, with non-slip shaped profile shaft. Precise toothed ratchet mechanism with 72 teeth and a reset angle of just 5°. **4 widths in one spanner.** The torque values exceed those specified by **DIN 3110, ISO 3318.**

format professional quality

| Order No. | Width of keys mm | 5777 format | Length mm |
|---|---|---|---|
| 0007 | 10 x 13/17 x 19 | 23.90 (W520) | 190 |

## Double ring spanner for external TORX® screws

**Design:** Made of GEDORE vanadium steel 31CrV3, matt chrome-plated, straight shape.

GEDORE

| Order No. | Width of keys | 5758 GEDORE | Length mm | For screws mm |
|---|---|---|---|---|
| 0005 | E 6 x E 8 | 12.60 | 110 | M5 –M7 |
| 0010 | E10 x E12 | 13.05 | 140 | M8 –M10 |
| 0015 | E14 x E18 | 15.45 | 180 | M12–M14 |
| 0020 | E20 x E24 | 20.90 (W522) | 225 | M16–M20 |

## VDE open-end/single ring spanner

**Design:** In GEDORE vanadium steel 31CrV3. The handle is covered with a 2-colour multiple coating (red exterior, yellow interior). Jaw positioned at 15°. **VDE-insulated up to 1000 V in line with EN 60900/IEC 60900: 2004.**

1000 V

GEDORE

5764

5761

| Order No. | Width of keys mm | 5764 GEDORE Open-end spanner | 5761 GEDORE Ring spanner | Length mm 5764 | Length mm 5761 |
|---|---|---|---|---|---|
| 0009 | 9 | – | 21.50 | – | 170 |
| 0010 | 10 | 16.70 | 24.60 | 105 | 170 |
| 0011 | 11 | 17.20 | 24.60 | 115 | 180 |
| 0012 | 12 | 17.15 | 25.50 | 125 | 190 |
| 0013 | 13 | 17.15 | 26.00 | 135 | 190 |
| 0014 | 14 | 18.65 | 27.10 | 145 | 210 |
| 0015 | 15 | 18.55 (W522) | 27.00 (W522) | 150 | 215 |

| Order No. | Width of keys mm | 5764 GEDORE Open-end spanner | 5761 GEDORE Ring spanner | Length mm 5764 | Length mm 5761 |
|---|---|---|---|---|---|
| 0017 | 17 | 18.55 | 29.30 | 160 | 220 |
| 0019 | 19 | 18.75 | 29.30 | 175 | 240 |
| 0022 | 22 | 23.10 | 30.40 | 200 | 260 |
| 0024 | 24 | 25.30 | 32.80 | 220 | 280 |
| 0027 | 27 | – | 34.80 | – | 295 |
| 0030 | 30 | – | 39.20 | – | 310 |
| 0032 | 32 | – (W522) | 39.20 (W522) | – | 330 |

## Single-ended ring spanner

**Design:** In GEDORE vanadium steel 31CrV3. Chrome-plated, ring with UnitDrive profile. Solid, offset design for the highest torque.

**Application:** For assembly work with high torques, using an extension tube.

GEDORE

| Order No. | Width of keys mm | 5766 GEDORE | Length mm | Ring thickness mm | Shaft Ø mm |
|---|---|---|---|---|---|
| 0024 | 24 | 23.80 | 180 | 17.0 | 18.3 |
| 0027 | 27 | 24.50 | 190 | 17.0 | 18.3 |
| 0030 | 30 | 26.30 | 200 | 18.0 | 18.2 |
| 0032 | 32 | 28.80 | 235 | 18.0 | 21.3 |
| 0036 | 36 | 35.60 | 245 | 20.0 | 21.3 |
| 0041 | 41 | 41.40 | 265 | 22.0 | 21.3 |
| 0046 | 46 | 48.50 (W522) | 280 | 23.0 | 24.1 |

| Order No. | Width of keys mm | 5766 GEDORE | Length mm | Ring thickness mm | Shaft Ø mm |
|---|---|---|---|---|---|
| 0050 | 50 | 57.00 | 290 | 25.5 | 24.1 |
| 0055 | 55 | 61.40 | 300 | 28.0 | 24.1 |
| 0060 | 60 | 81.50 | 345 | 30.5 | 29.1 |
| 0065 | 65 | 87.70 | 355 | 33.0 | 29.1 |
| 0070 | 70 | 106.00 | 365 | 35.5 | 29.1 |
| 0075 | 75 | 114.00 | 375 | 38.0 | 29.1 |
| 0080 | 80 | 146.50 (W522) | 385 | 40.5 | 29.1 |

## Extension bar for single-ended ring spanner

| Order No. | For width across flat (AF) mm | 5767 GEDORE | Ø x length mm |
|---|---|---|---|
| 0005 | 24–30 | 19.45 | 19 x 460 |
| 0010 | 32–41 | 28.30 (W522) | 22 x 610 |

| Order No. | For width across flat (AF) mm | 5767 GEDORE | Ø x length mm |
|---|---|---|---|
| 0015 | 46–55 | 42.40 | 25 x 760 |
| 0020 | 60–80 | 56.90 (W522) | 30 x 860 |

## Striking open-end wrench

**Design: DIN 133.** Jaw positioned at 15°.

**Application:** For extremely heavy-duty assembly work.

**5807** Made of high-alloy steel, phosphated.

**5770** Made of GEDORE vanadium steel 31CrV3.

5807

5770 GEDORE

| Order No. | Width of keys mm | 5807 | 5770 GEDORE | Length mm | Jaw thickness mm |
|---|---|---|---|---|---|
| 0027 | 27 | – | 17.85 | 180 | 16.5 |
| 0030 | 30 | 14.65 | 19.20 | 190 | 17.0 |
| 0032 | 32 | 18.10 | 19.80 | 195 | 17.5 |
| 0036 | 36 | 19.35 | 23.00 | 210 | 18.5 |
| 0041 | 41 | 22.20 | 30.50 | 225 | 19.5 |
| 0046 | 46 | 26.30 | 38.90 | 255 | 20.0 |
| 0050 | 50 | 34.60 | 42.70 | 280 | 21.5 |
| 0055 | 55 | 45.40 | 57.00 | 310 | 24.5 |
| 0060 | 60 | 50.00 (W605) | 57.40 (W522) | 320 | 24.5 |

| Order No. | Width of keys mm | 5807 | 5770 GEDORE | Length mm | Jaw thickness mm |
|---|---|---|---|---|---|
| 0065 | 65 | – | 75.80 | 350 | 28.0 |
| 0070 | 70 | – | 91.50 | 370 | 30.0 |
| 0075 | 75 | – | 120.00 | 400 | 31.5 |
| 0080 | 80 | – | 121.50 | 405 | 34.5 |
| 0085 | 85 | – | 129.50 | 405 | 34.5 |
| 0090 | 90 | – | 195.00 | 455 | 39.0 |
| 0095 | 95 | – | 201.50 | 455 | 39.0 |
| 0100 | 100 | – (W605) | 354.50 (W522) | 500 | 47.0 |

## Impact ring spanner

**Design: DIN 7444.**

**Application:** For extremely heavy-duty assembly work.

**5808** Made of high-alloy steel, phosphated.

**5773** Made of GEDORE vanadium steel 31CrV3. Wrench width 24 to 60 mm with UnitDrive Profile, from 65 mm jaw span with hexagon profile.

5808

5773 GEDORE

| Order No. | Width of keys mm | 5808 | 5773 GEDORE | Length mm | Ring thickness mm |
|---|---|---|---|---|---|
| 0024 | 24* | 9.65 | 14.80 | 160 | 15.0 |
| 0027 | 27 | 11.40 | 18.05 | 180 | 15.5 |
| 0030 | 30 | 12.15 | 21.20 | 190 | 16.5 |
| 0032 | 32 | 12.90 | 22.80 | 195 | 16.5 |
| 0036 | 36 | 15.80 | 28.10 | 205 | 19.5 |
| 0041 | 41 | 20.40 | 36.90 | 225 | 20.5 |
| 0046 | 46 | 25.00 | 39.60 | 240 | 22.5 |
| 0050 | 50 | 29.00 | 45.80 | 250 | 23.5 |
| 0055 | 55 | 34.00 | 50.80 | 270 | 25.0 |
| 0060 | 60 | – | 54.60 | 270 | 26.0 |
| 0065 | 65 | – (W605) | 71.60 (W522) | 290 | 29.0 |

| Order No. | Width of keys mm | 5808 | 5773 GEDORE | Length mm | Ring thickness mm |
|---|---|---|---|---|---|
| 0070 | 70 | – | 78.90 | 320 | 32.5 |
| 0075 | 75 | – | 85.50 | 325 | 34.0 |
| 0080 | 80 | – | 121.50 | 345 | 35.0 |
| 0085 | 85 | – | 148.00 | 360 | 37.0 |
| 0090 | 90 | – | 178.00 | 400 | 41.5 |
| 0095 | 95 | – | 201.00 | 400 | 41.5 |
| 0100 | 100 | – | 225.50 | 400 | 41.5 |
| 0105 | 105 | – | 282.50 | 435 | 47.5 |
| 0110 | 110 | – | 305.00 | 435 | 47.5 |
| 0115 | 115 | – (W605) | 331.50 (W522) | 435 | 47.5 |

* Non-standard size.

## Half-moon ring spanner

**Design:** In GEDORE vanadium steel 31CrV3. Chrome-plated, ring thin walled.

**Application:** Especially for hard-to-reach places, e.g. engine work.

| Order No. | Width of keys mm | 5776 GEDORE | Length mm | Ring thickness mm |
|---|---|---|---|---|
| 0011 | 11 x 13 | 15.75 | 150 | 7.0 |
| 0013 | 13 x 17 | 20.00 | 185 | 8.5 |
| 0014 | 14 x 17 | 19.90 | 185 | 8.5 |
| 0016 | 16 x 18 | 23.90 | 185 | 8.5 |
| 0019 | 19 x 22 | 25.00 (W522) | 230 | 10.0 |

GEDORE

## Double ring spanner, open

**Design: DIN 3118.** Chrome-plated, ring heads angled 15°. Hexagon opening offset 30° (up to 12 x 14 mm), double hexagon opening offset 15° (from 13 x 15 mm).

**5765** Made of GEDORE vanadium steel 31CrV3, chrome-plated, straight. Hexagon opening offset 30° (up to 12 x 14 mm), double hexagon, opening offset 15° (from 13 x 15 mm).

5765 GEDORE

**5802** Made of chrome-vanadium steel, chrome-plated, **straight.** Opening offset by 15°, hexagon to 12 x 14 mm, after that, double hexagon.

5802 HAZET

**5805** Made of vanadium-chrome steel, chrome plated **offset.** Hexagon opening straight. Ideal for fitting on brake lines.

5805 HAZET

| Order No. | Width of keys mm | 5765 GEDORE | 5802 HAZET | 5805 HAZET | Max. length mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|
| 0008 | 8 x 10 | 13.25 | 17.65 | – | 140 | 7.0/8.0 |
| 0010 | 10 x 11 | 14.30 | 17.65 | 35.60 | 168 | 11.0/11.0 |
| 0011 | 11 x 13 | 14.70 | 19.30 | – | 160 | 8.7/10.5 |
| 0012 | 12 x 14 | 14.90 | 19.30 | – | 170 | 9.5/11.2 |
| 0013 | 13 x 15* | 16.30 | 19.30 | – | 182 | 10.5/11.8 |
| 0014 | 14 x 17 | 16.35 (W522) | – (W529) | – (W529) | 195 | 11.2/12.2 |

| Order No. | Width of keys mm | 5765 GEDORE | 5802 HAZET | 5805 HAZET | Max. length mm | Max. ring thickness mm |
|---|---|---|---|---|---|---|
| 0016 | 16 x 18* | – | 24.40 | – | 208 | 12.0/13.2 |
| 0017 | 17 x 19 | 18.15 | 24.65 | – | 210 | 12.2/13.2 |
| 0019 | 19 x 22 | 22.00 | 29.00 | – | 230 | 13.8/15.8 |
| 0022 | 22 x 24 | 24.60 | – | – | 250 | 15.2/16.2 |
| 0024 | 24 x 27 | 30.30 | 41.95 | – | 270 | 16.2/18.0 |
| 0030 | 30 x 32 | 39.40 (W522) | 54.15 (W529) | – (W529) | 300 | 21.0/23.0 |

* Non-standard size.

format professional quality

6/36

Operation tools

in 1/4" to 1" available as at page 6/2.

## Open-ended socket spanner

**Design:** In GEDORE vanadium steel 31CrV3. Chrome-plated, slim shape with freely mobile box spanner end and UnitDrive profile. Shaft with drill hole for fulcrum pin. Finely ground heads.

**Note:** For fulcrum pins see (Order No. 5716).

| Order No. | Width of keys mm | 5779 GEDORE | Length mm | Jaw thickness mm | Box spanner external Ø mm | For fulcrum pin Ø mm |
|---|---|---|---|---|---|---|
| 0010 | 10 | 15.50 | 179 | 4.7 | 15.5 | 5 |
| 0013 | 13 | 17.20 | 208 | 6.0 | 19.2 | 5 |
| 0017 | 17 | 20.60 | 255 | 7.5 | 24.2 | 8 |
| 0019 | 19 | 23.00 (W522) | 283 | 8.0 | 26.7 | 8 |

## Double-ended swivel-headed spanner

**Design:** In GEDORE vanadium steel 31CrV3. Chrome-plated, extra large swivel zone with thin-walled heads with UnitDrive profile. Finely ground heads. Shaft with drill holes for fulcrum pins.

**Note:** For fulcrum pins see (Order No. 5716).

| Order No. | Width of keys mm | 5762 GEDORE | Length mm | Box spanner internal Ø mm | Box spanner external Ø mm | For fulcrum pin Ø mm |
|---|---|---|---|---|---|---|
| 0008 | 8 x 9 | 30.40 | 200 | 13.0 | 14.2 | 6 |
| 0010 | 10 x 11 | 30.60 | 205 | 15.5 | 16.7 | 6 |
| 0012 | 12 x 13 | 33.00 | 240 | 18.0 | 19.2 | 8 |
| 0013 | 13 x 17 | 38.00 | 275 | 19.2 | 24.2 | 10 |
| 0017 | 17 x 19 | 43.70 (W522) | 315 | 24.2 | 26.7 | 12 |

## Square box spanner

**Design:** Made of GEDORE vanadium steel 31CrV3, chrome-plated. Solid, angled design with especially large head depth for protruding bolts. With dome for extra pointy screw heads.

| Order No. | Width of keys mm | 5768 GEDORE | Length mm |
|---|---|---|---|
| 0005 | 8 | 12.30 | 150 |
| 0010 | 9 | 14.15 | 160 |
| 0015 | 10 | 14.25 | 175 |
| 0020 | 12 | 14.40 | 215 |
| 0025 | 13 | 15.00 | 230 |
| 0030 | 14 | 15.80 | 240 |
| 0035 | 17 | 22.60 (W522) | 280 |

## Triangular box spanner

**Design: DIN 22417.** Made of cold-drawn precision steel pipe, zinc-plated, with undetachable fulcrum pin.

| Order No. | Size | 5784 format | Length mm | Fulcrum pin mm |
|---|---|---|---|---|
| 0004 | M4 | 2.91 | 90 | 5 x 63 |
| 0005 | M5 | 3.17 | 100 | 6 x 63 |
| 0006 | M6 | 3.43 | 112 | 6 x 80 |
| 0008 | M8 | 3.80 | 125 | 6 x 100 |
| 0010 | M10 | 4.38 | 140 | 8 x 125 |
| 0012 | M12 | 5.20 | 160 | 10 x 160 |
| 0016 | M16 | 8.40 (W520) | 180 | 12 x 200 |

## Tubular box spanner

**Design: DIN 896, ISO 2236, B-shape.** Made of smoothly drawn precision steel pipe, chrome-plated, with drill holes for fulcrum pin.

| Order No. | Width of keys mm | 5772 format | Length mm | For fulcrum pin Ø mm |
|---|---|---|---|---|
| 0005 | 6 x 7 | 2.29 | 100 | 6 |
| 0010 | 8 x 9 | 2.29 | 100 | 6 |
| 0015 | 8 x 10 | 2.57 | 120 | 6 |
| 0020 | 10 x 11 | 2.60 | 120 | 6 |
| 0025 | 10 x 13 | 3.10 | 140 | 8 |
| 0030 | 12 x 13 | 3.13 | 140 | 8 |
| 0035 | 13 x 14 | 3.38 | 140 | 8 |
| 0040 | 13 x 15* | 3.78 | 140 | 8 |
| 0045 | 13 x 17 | 4.03 | 150 | 10 |
| 0050 | 14 x 15 | 3.47 | 140 | 8 |

(W520)

| Order No. | Width of keys mm | 5772 format | Length mm | For fulcrum pin Ø mm |
|---|---|---|---|---|
| 0055 | 16 x 17 | 4.03 | 150 | 10 |
| 0060 | 17 x 19 | 4.46 | 160 | 12 |
| 0065 | 18 x 19 | 4.81 | 160 | 12 |
| 0070 | 19 x 22 | 4.92 | 170 | 12 |
| 0075 | 20 x 22 | 4.92 | 170 | 12 |
| 0080 | 21 x 23 | 5.00 | 185 | 14 |
| 0085 | 24 x 27 | 6.50 | 185 | 14 |
| 0090 | 30 x 32 | 7.80 | 200 | 16 |
| 0095 | 36 x 41 | 13.55 | 225 | 18 |
| 0100 | 46 x 50 | 25.30 | 245 | 20 |

(W520)

* Non-standard size.

## Tubular box spanner set

**Design: DIN 896, ISO 2236, B-shape.** Made of smoothly drawn precision steel pipe, chrome-plated, with drill holes for fulcrum pins. Supplied in nylon roll-up case.

| Order No. | Design | 5775 format | Set contents mm |
|---|---|---|---|
| 0005 | 9-part | 34.20 | 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22; stepped fulcrum pin |

(W520)

## Box spanner, forged

**Design: Similar to DIN 896 A, ISO 2236, ISO 1085.** Made of chromium-vanadium steel with hexagonal shaft and full-length drill hole for operation with an open-ended spanner or fulcrum pin. Polished heads.

| Order No. | Width of keys mm | 5787 format | Length mm | For fulcrum pin Ø mm | Shaft jaw span mm |
|---|---|---|---|---|---|
| 0005 | 6 x 7* | 4.44 | 105 | 4 | 8 |
| 0010 | 8 x 9* | 4.74 | 110 | 4 | 9 |
| 0020 | 10 x 11 | 4.88 | 120 | 5 | 11 |
| 0025 | 10 x 13 | 5.95 | 130 | 5 | 13 |
| 0030 | 12 x 13 | 5.95 | 140 | 6 | 13 |
| 0042 | 13 x 16 | 7.50 | 145 | 7 | 15 |
| 0045 | 13 x 17 | 7.50 | 155 | 7 | 15 |
| 0050 | 14 x 15 | 6.90 | 145 | 6 | 14 |
| 0055 | 16 x 17 | 7.50 | 155 | 7 | 16 |
| 0057 | 16 x 18 | 9.30 | 160 | 8 | 18 |
| 0060 | 17 x 19 | 9.45 | 165 | 8 | 18 |
| 0065 | 18 x 19 | 9.45 | 165 | 8 | 18 |

(W520)

| Order No. | Width of keys mm | 5787 format | Length mm | For fulcrum pin Ø mm | Shaft jaw span mm |
|---|---|---|---|---|---|
| 0067 | 18 x 21 | 11.75 | 170 | 9 | 19 |
| 0070 | 19 x 22 | 10.00 | 175 | 9 | 19 |
| 0075 | 20 x 22 | 10.00 | 175 | 9 | 19 |
| 0080 | 21 x 23 | 11.80 | 185 | 10 | 21 |
| 0082 | 21 x 24 | 13.10 | 185 | 12 | 24 |
| 0083 | 24 x 26 | 13.20 | 195 | 12 | 24 |
| 0085 | 24 x 27 | 13.20 | 195 | 12 | 24 |
| 0087 | 25 x 28 | 14.30 | 205 | 12 | 27 |
| 0090 | 30 x 32 | 18.40 | 210 | 14 | 30 |
| 0092 | 30 x 34 | 22.00 | 220 | 14 | 30 |
| 0093 | 32 x 36 | 25.40 | 225 | 16 | 32 |
| 0094 | 34 x 36 | 31.00 | 235 | 16 | 32 |

(W520)

* Without full-length drill hole.

## Fulcrum pin

**Design: DIN 900.** Made of hardened C 45 steel, chrome-plated.

| Order No. | Ø mm | 5778 format | Length mm |
|---|---|---|---|
| 0005 | 5 | 1.23 | 125 |
| 0006 | 6 | 1.29 | 160 |
| 0008 | 8 | 1.47 | 180 |
| 0010 | 10 | 1.83 | 200 |
| 0012 | 12 | 2.67 | 250 |

(W520)

| Order No. | Ø mm | 5778 format | Length mm |
|---|---|---|---|
| 0014 | 14 | 3.72 | 320 |
| 0016 | 16 | 5.75 | 400 |
| 0018 | 18 | 9.15 | 500 |
| 0020 | 20 | 13.45 | 630 |

(W520)

## Stepped tommy bar

**Design:** Made of hardened C 45 steel, chrome-plated. The stepped shape means that the fulcrum pin can fit in several sizes of tubular box spanner.

| Order No. | Increments | 5781 format | Ø mm | Length mm |
|---|---|---|---|---|
| 0005 | 4 | 4.35 | 6; 8; 10; 12 | 280 |

(W520)

## Hose clamp screwdriver

**Design:** With round and flexible blades made of polypropylene. The slide-on parts are compressed. With 3-component Kraftform-Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection. In addition, the screwdriver head is embossed with output symbol and size.

**Application:** Particularly for hose clamps and other hexagonal head screws.

| Order No. | Width of keys mm | 5809 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0060 | 6 | 12.30 | 167 | 265 |
| 0070 | 7 | 12.90 | 167 | 265 |
| 0080 | 8 | 13.45 | 167 | 265 |
| | | (W543) | | |

## Hexagonal box spanner screwdriver

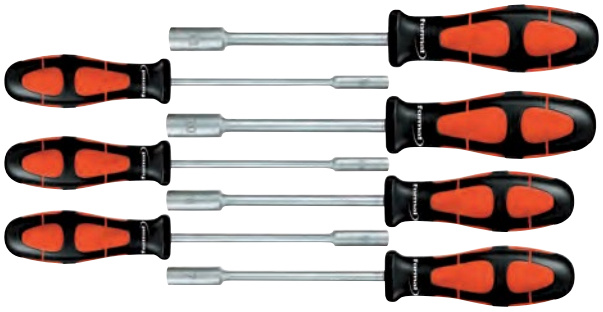
**Design:** With round blade in high-alloy special steel and 2-component handle with anti-roll protection. In addition, the screwdriver head is embossed with output symbol and size.

**Application:** Socket wrench for external hexagonal head screws.

| Order No. | Width of keys mm | 5800 format | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0050 | 5.0 | 4.75 | 125 | 220 |
| 0055 | 5.5 | 4.75 | 125 | 220 |
| 0060 | 6.0 | 4.75 | 125 | 220 |
| 0070 | 7.0 | 5.35 | 125 | 233 |
| 0080 | 8.0 | 5.40 | 125 | 233 |
| 0090 | 9.0 | 5.60 | 125 | 233 |
| 0100 | 10.0 | 5.70 | 125 | 233 |
| 0130 | 13.0 | 7.05 | 135 | 243 |
| | | (W542) | | |

## Hexagonal box spanner screwdriver set

| Order No. | Design | 5800 format | Set contents mm |
|---|---|---|---|
| 0700 | 7-part | 36.60 (W542) | 5; 5.5; 6; 7; 8; 10; 13 |



## VDE hexagonal box spanner screwdriver

**Design:** With round lade burnished and insulated. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection. In addition, the screwdriver head is embossed with output symbol and size. **Handle and blade insulated up to 1000 V according to IEC 60900:2004.**

1000 V

| Order No. | Width of keys mm | 5803 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0055 | 5.5 | 8.15 | 125 | 223 |
| 0060 | 6.0 | 8.35 | 125 | 223 |
| 0070 | 7.0 | 8.85 | 125 | 230 |
| 0080 | 8.0 | 9.10 | 125 | 230 |
| 0090 | 9.0 | 9.50 | 125 | 230 |
| 0100 | 10.0 | 10.75 | 125 | 237 |
| 0110 | 11.0 | 11.60 | 125 | 237 |
| 0120 | 12.0 | 11.90 | 125 | 237 |
| 0130 | 13.0 | 14.20 | 125 | 237 |
| | | (W543) | | |

## Hexagonal box spanner screwdriver with T-handle

**Design:** With round blade made of chromium-vanadium steel.

**5806** Handle made of multi-component plastic, ergonomically shaped.

**5804** Nicromatt Handle made of Weralit II plastic.

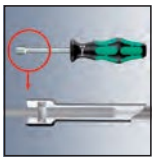
| Order No. | Width of keys mm | 5806 format | 5804 Wera | Blade length mm 5806 | Blade length mm 5804 | Total length mm |
|---|---|---|---|---|---|---|
| 0050 | 5.0 | – | 7.45 | – | 230 | 263 |
| 0055 | 5.5 | – | 7.45 | – | 230 | 263 |
| 0060 | 6.0 | 5.90 | 7.55 | 240 | 230 | 263 |
| 0070 | 7.0 | 5.80 | 7.55 | 240 | 230 | 274 |
| 0080 | 8.0 | 5.80 | 7.75 | 240 | 230 | 274 |
| 0090 | 9.0 | – | 7.90 | – | 230 | 274 |
| 0100 | 10.0 | 6.30 | 8.30 | 240 | 230 | 274 |
| 0110 | 11.0 | – | 8.65 | – | 230 | 274 |
| 0120 | 12.0 | – | 8.80 | – | 230 | 274 |
| 0130 | 13.0 | 7.30 | 9.75 | 240 | 230 | 274 |
| 0170 | 17.0 | 8.20 (W542) | – (W543) | 240 | – | 274 |

## HOLO hexagonal box spanner screwdriver

**Design:** With round, **concave blade,** nicromatt. With 3-component Kraftform Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection. In addition, the screwdriver head is embossed with output symbol and size.

**Application:** The hollow blade makes it ideal for fittings to long bolts and existing threaded rods. In addition, it is ideal for loosening very tight screws.

| Order No. | Width of keys mm | 5801 Wera | Blade length mm | Blade ∅ mm | Total length mm |
|---|---|---|---|---|---|
| 0050 | 5.0 | 8.50 | 70 | 7.2 | 168 |
| 0055 | 5.5 | 8.50 | 70 | 7.2 | 168 |
| 0060 | 6.0 | 8.50 | 70 | 7.2 | 168 |
| 0070 | 7.0 | 8.75 | 80 | 7.2 | 185 |
| 0080 | 8.0 | 9.65 | 80 | 9.3 | 185 |
| 0100 | 10.0 | 10.65 | 80 | 9.3 | 192 |
| 0130 | 13.0 | 11.50 (W543) | 80 | 11.0 | 192 |



## HOLO hexagonal box spanner screwdriver set

**Design:** Supplied in window box.

| Order No. | Design | 5801 Wera | Set contents mm |
|---|---|---|---|
| 1000 | 7-part | 43.30 (W543) | 5; 5.5; 6; 7; 8; 10; 13 |

IDEAL Schlemper-Klemme

9/66

HAZET

6/235

Hose clamps and tools

## Adjustable spanner

**Design: DIN 3117, ISO 6787, A-shape.** jaws angled 15°, with a black, left-handed roller.

**5812** Made of chromium-vanadium steel, matt chrome-plated, polished head. With lasered setting scale.

5812 format professional quality

**5816** Made of GEDORE vanadium steel 31CrV3, nickel and chrome plated, polished head. With lasered setting scale. The **additional striking surface** and protected mechanics allow light blows. Ergonomic handle with handle recess for secure hold.

5816 GEDORE

**5818** Made of GEDORE vanadium steel 31CrV3, phosphated, polished head.

5818 GEDORE

**5815** Made of chrome-vanadium steel, phosphated, high-gloss polished head. With lasered setting scale.

5815 HAZET

| Order No. | Size inch | 5812 format | 5816 GEDORE | 5818 GEDORE | 5815 HAZET | Length mm 5812 | Length mm 5816 | Length mm 5818 | Length mm 5815 | Max. jaw span mm 5812/5816/5818 | Max. jaw span mm 5815 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0015 | 4 | – | – | – | 22.60 | – | – | – | 109 | – | 13 |
| 0020 | 6 | 9.05 | 10.60 | – | 25.35 | 150 | 153 | – | 158 | 20 | 18 |
| 0025 | 8 | 12.00 | 14.10 | – | 28.10 | 200 | 207 | – | 205 | 25 | 23 |
| 0030 | 10 | 15.05 | 17.70 | – | 37.35 | 250 | 255 | – | 255 | 30 | 28 |
| 0036 | 12 | 20.20 | 23.80 | – | 51.95 | 300 | 305 | – | 308 | 36 | 34 |
| 0040 | 15 | – | – | 46.10 | 80.50 | – | – | 380 | 382 | 43 | 43 |
| 0045 | 18 | – (W520) | – (W522) | 69.50 (W522) | 136.50 (W529) | – | – | 455 | 458 | 53 | 53 |

## Open gripping pliers

**Design:** Pliers body made of heat-treated, high-alloy steel, nickel-plated, with serrated gripping jaws. **The special jaws shape clamps on 3 sides of the nut, the jaws do not slip off and rounding the nut is prevented.** Setting screw to adjust the jaw width and locking pressure.

IRWIN VISE-GRIP

| Order No. | Length mm | 5686 IRWIN VISE-GRIP | Jaw span mm |
|---|---|---|---|
| 0100 | 100 | 15.90 | 7–14 |
| 0175 | 175 | 18.65 | 11–19 |
| 0250 | 250 | 21.30 (W252) | 16–28 |

## Multiple slip joint spanner

**Design:** Made of chrome-vanadium electric steel, oil hardened and tempered. **Polished head.** Fast and precise setting using the button, can be adjusted using one hand. Self-clamping (between 17 and 32 mm) to pipes and nuts. The pushed-through slip joint allows for a high degree of stability as a result of the double bearing. The clamping protection prevents squashing injuries. Handles covered with non-slip plastic.

**Application:** For working in line with the ratchet principle, replaces open-ended spanners and adjustable wrenches for metric (10–32 mm) and imperial (3/8–1.1/4" ) for tightening work. Ideal for secure and tight gripping of rounded, rusty or paint-covered nuts and screws. Also ideal for tightening nuts.

KNIPEX

| Order No. | Length mm | 5820 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|
| 0250 | 250 | 23.60 (W525) | 15-fold | 10–32 | 3/8–1.1/4 |

## Hook spanner with nose

**Design: DIN 1810 A-shape.** Made of special steel, hardened and annealed in burnished colour, **with nose.** Rounded edges for better handling.

**Application:** For grooved nuts in line with DIN 1804 and roller bearing nuts in line with DIN 981.

| Order No. | Jaw span mm | 5821 AMF | Length mm | Thickness mm |
|---|---|---|---|---|
| 0120 | 12–14 | 3.60 | 110 | 3 |
| 0160 | 16–20 | 3.45 | 110 | 3 |
| 0250 | 25–28 | 3.71 | 136 | 4 |
| 0300 | 30–32 | 3.71 | 136 | 4 |
| 0340 | 34–36 | 4.56 | 170 | 5 |
| 0400 | 40–42 | 4.56 | 170 | 5 |
| 0450 | 45–50 | 4.98 | 206 | 6 |
| 0520 | 52–55 | 4.98 | 206 | 6 |
| 0580 | 58–62 | 7.30 | 240 | 7 |
| 0680 | 68–75 | 7.30 | 240 | 7 |
| | | (W506) | | |

| Order No. | Jaw span mm | 5821 AMF | Length mm | Thickness mm |
|---|---|---|---|---|
| 0800 | 80– 90 | 10.60 | 280 | 8 |
| 0950 | 95–100 | 10.60 | 280 | 8 |
| 1100 | 110–115 | 17.90 | 335 | 10 |
| 1200 | 120–130 | 17.90 | 335 | 10 |
| 1350 | 135–145 | 24.30 | 385 | 10* |
| 1550 | 155–165 | 24.30 | 385 | 10* |
| 1800 | 180–195 | 41.20 | 470 | 10* |
| 2050 | 205–220 | 43.60 | 470 | 10* |
| 2300 | 230–245 | 73.20 | 568 | 10* |
| 2600 | 260–270 | 73.20 | 568 | 10* |
| | | (W506) | | * Strength deviates from DIN. |

## Hook spanner with pin

**Design: DIN 1810 B-shape.** Made of special steel, hardened and annealed in burnished colour, **with pin.** Rounded edges for better handling.

**Application:** For capstan nuts in line with DIN 1816.

| Order No. | Jaw span mm | 5823 AMF | Length mm | Pin Ø mm | Thickness mm |
|---|---|---|---|---|---|
| 0160 | 16–18 | 4.18 | 110 | 2.5 | 3 |
| 0200 | 20–22 | 4.18 | 110 | 2.5 | 3 |
| 0250 | 25–28 | 4.95 | 136 | 3.0 | 4 |
| 0300 | 30–32 | 4.95 | 136 | 4.0 | 4 |
| 0340 | 34–36 | 5.25 | 170 | 4.0 | 5 |
| 0400 | 40–42 | 5.30 | 170 | 4.0 | 5 |
| 0450 | 45–50 | 6.85 | 206 | 5.0 | 6 |
| 0520 | 52–55 | 6.90 | 206 | 5.0 | 6 |
| | | (W506) | | | |

| Order No. | Jaw span mm | 5823 AMF | Length mm | Pin Ø mm | Thickness mm |
|---|---|---|---|---|---|
| 0580 | 58– 62 | 9.35 | 240 | 5.0 | 7 |
| 0680 | 68– 75 | 9.45 | 240 | 6.0 | 7 |
| 0800 | 80– 90 | 11.80 | 280 | 6.0 | 8 |
| 0950 | 95–100 | 11.80 | 280 | 8.0 | 8 |
| 1100 | 110–115 | 21.80 | 335 | 8.0 | 8* |
| 1200 | 120–130 | 21.80 | 335 | 8.0 | 8* |
| 1350 | 135–145 | 28.00 | 380 | 8.0 | 8* |
| 1550 | 155–165 | 28.00 | 380 | 8.0 | 8* |
| | | (W506) | | | * Strength deviates from DIN. |

## Hook spanner with nose, adjustable

NEW

**Design:** Made of special steel, hardened and annealed in burnished colour, **with nose.** Rounded edges for better handling.

**Application:** For grooved nuts in line with DIN 1804 and roller bearing nuts in line with DIN 981.

| Order No. | Jaw span mm | 582A AMF | Length mm | Thickness mm |
|---|---|---|---|---|
| 0020 | 20–42 | 15.30 | 180 | 4 |
| 0045 | 45–90 | 17.20 | 250 | 6 |
| | | (W506) | | |

| Order No. | Jaw span mm | 582A AMF | Length mm | Thickness mm |
|---|---|---|---|---|
| 0095 | 95–165 | 27.50 | 335 | 10 |
| | | (W506) | | |

## Hinged hook spanner with nose

**Design:** Made of special steel, hardened, annealed in burnishing colour, **with nose,** strengthened rivet and spring washer. Rounded edges for better handling.

**Application:** For grooved nuts in line with DIN 1804 and roller bearing nuts in line with DIN 981.

| Order No. | Jaw span mm | 5822 AMF | Length mm | Thickness mm | Rivet length mm |
|---|---|---|---|---|---|
| 0200 | 20–35 | 12.15 | 165 | 4 | 10.5 |
| 0350 | 35–60 | 12.95 | 210 | 5 | 12.5 |
| 0600 | 60–90 | 16.80 | 280 | 6 | 14.5 |
| | | (W506) | | | |

| Order No. | Jaw span mm | 5822 AMF | Length mm | Thickness mm | Rivet length mm |
|---|---|---|---|---|---|
| 0900 | 90–155 | 24.40 | 335 | 7 | 17.5 |
| 1550 | 155–230 | 40.90 | 460 | 8 | 17.5 |
| | | (W506) | | | |

## Hinged hook spanner with pin

**Design:** Made of special steel, hardened, annealed in burnishing colour, **with nose,** strengthened rivet and spring washer. Rounded edges for better handling.

**Application:** For capstan nuts in line with DIN 1816.

| Order No. | Jaw span mm | 5824 AMF | Length mm | Pin Ø mm | Thickness mm | Rivet length mm |
|---|---|---|---|---|---|---|
| 0220 | 22– 35 | 15.55 | 165 | 3 | 4 | 10.5 |
| 0350 | 35– 60 | 16.75 | 205 | 4 | 5 | 12.5 |
| 0600 | 60– 90 | 20.50 | 280 | 5 | 6 | 14.5 |
| 0601 | 60– 90 | 20.50 | 280 | 6 | 6 | 14.5 |
| 0990 | 95–155 | 31.10 | 335 | 6 | 7 | 17.5 |
| 1650 | 165–230 | 50.00 (W506) | 460 | 10 | 8 | 17.5 |

## Joint hook spanner with pin, for torque wrench

**Design:** Made from special steel, hardened, annealed in burnishing colour, **with pin** and 1/2 square inside mount for torque wrench.

**Application:** For capstan nuts in line with DIN 1816.

**Note:** The adjustment value for the torque spanner depends on the actual dimension. The relevant information and formulas for calculation can be found in your torque spanner owner's manual.
Torque wrench is found from 📖 6/106.

| Order No. | Jaw span mm | 5833 AMF | Pin Ø mm | Thickness mm | Spacing mm |
|---|---|---|---|---|---|
| 0060 | 35–60 | 43.20 | 4 | 5 | 75 |
| 0090 | 60–90 | 45.10 (W506) | 6 | 6 | 100 |

## Two-hole nut spanner, adjustable

**Design:** With electrically welded pins.

**Application:** For two-holed nuts.

**5825** Made from special steel, annealed in burnished colour.

5825

**582B** NEW Made of stainless steel.

582B

| Order No. | Pin distance mm | 5825 AMF | 582B AMF | Length mm | Pin Ø mm | Pin length mm | Arm thickness mm |
|---|---|---|---|---|---|---|---|
| 0150 | 7– 40 | 6.15 * | – | 115 | 1.5 | 2.0 | 3 |
| 0200 | 7– 40 | 5.90 * | – | 115 | 2.0 | 2.5 | 3 |
| 0250 | 7– 40 | 6.15 * | – | 115 | 2.5 | 3.0 | 3 |
| 0300 | 11– 60 | 6.60 | 14.30 | 160 | 3.0 | 4.0 | 4 |
| 0400 | 11– 60 | 6.60 | 14.30 | 160 | 4.0 | 5.0 | 4 |
| 0500 | 14–100 | 10.25 | – | 215 | 5.0 | 6.0 | 4 |
| 0600 | 14–100 | 10.25 | – | 215 | 6.0 | 7.0 | 6 |
| 0800 | 14–100 | 11.00 | – | 215 | 8.0 | 8.0 | 6 |
| 1000 | 22–125 | 14.20 | – | 260 | 8.0 | 8.0 | 6 |
| 1200 | 22–125 | 18.25 (W506) | – (W506) | 260 | 12.0 | 12.0 | 6 |

* Riveted pins.

## Hinged face spanner

**Design:** Made from special steel, annealed in burnishing colour and with electrically welded pin.

**Application:** For two-holed nuts.

| Order No. | Pin distance mm | 5826 AMF | Length mm | Pin Ø mm | Pin length mm | Thick-ness mm |
|---|---|---|---|---|---|---|
| 0005 | 18–40 | 12.65 | 150 | 3 | 4.0 | 5 |
| 0010 | 18–40 | 13.60 | 150 | 4 | 5.0 | 5 |
| 0015 | 40–80 | 17.05 | 220 | 4 | 5.0 | 6 |
| 0020 | 40–80 | 18.15 | 220 | 5 | 6.0 | 6 |
| 0025 | 40–80 | 18.15 (W506) | 220 | 6 | 7.0 | 6 |

| Order No. | Pin distance mm | 5826 AMF | Length mm | Pin Ø mm | Pin length mm | Thick-ness mm |
|---|---|---|---|---|---|---|
| 0030 | 80–125 | 27.30 | 295 | 6 | 7.0 | 8 |
| 0035 | 80–125 | 29.00 | 295 | 7 | 7.5 | 8 |
| 0040 | 80–125 | 29.00 | 295 | 8 | 8.0 | 8 |
| 0045 | 125–200 | 57.60 | 405 | 8 | 8.0 | 10 |
| 0050 | 125–200 | 61.30 (W506) | 405 | 10 | 10.0 | 10 |

## Hinged face spanner set for torque spanner

**Design:** Made of special steel, hardened and burnished, with with removable pin and receptacle for torque wrench.

**Application:** For two-holed nuts.

**Note:** The adjustment value for the torque spanner depends on the actual dimension. The relevant information and formulas for calculation can be found in your torque spanner owner's manual.
Torque wrench is found from 📖 6/106.

| Order No. | Jaw span mm | 5834 AMF | Pin Ø mm | Holding fixture |
|---|---|---|---|---|
| 0040 | 18– 40 | 52.00 | 3; 4 | 3/4" recessed square |
| 0080 | 40– 80 | 70.00 | 4; 5; 6; 7; 8 | 3/4" recessed square |
| 0125 | 80–125 | 79.80 (W506) | 4; 5; 6; 7; 8 | 1/2" recessed square |

## Face spanner

**Design:** Made of special steel, zinc-plated, with electrically welded-on pins.

**Application:** For two-holed nuts. For the clamping of grinding wheels and cutting discs on angle grinders.

**5827** **Straight**

**5828** **Offset**

5827

5828

| Order No. | Pin distance mm | 5827 AMF | 5828 AMF | Pin Ø mm |
|---|---|---|---|---|
| 0005 | 35 | 4.50 (W506) | 4.44 (W506) | 5 |

## Face spanner set, adjustable

**Design:** Made of special steel, galvanised **exchangeable hardened pin,** pin distance 8–100 mm. Delivery in 2-component plastic box.

| Order No. | Design | 5829 AMF | Set contents |
|---|---|---|---|
| 0005 | 13-part 165 x 87 x 36 mm | 33.00 (W506) | 1 adjustable face pin wrench each 2 pairs of pins Ø 1.5; 2; 2.5; 3; 4 mm 2 storage boxes for the pins |

## Hexagonal offset screwdriver

**Design: DIN 911, ISO 2936 K.** Made of chromium-vanadium steel, completely hardened. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials.

**5840** Gloss nickel-plated.
**5838** Gloss nickel-plated.
**5839** Manganese-phosphated.

| Order No. | Width of keys mm | 5840 format | 5838 wiha | 5839 wiha | Stock length mm 5840 | Stock length mm 5838/5839 |
|---|---|---|---|---|---|---|
| 0007 | 0.7* | 0.39 | – | – | 33 x 7 | – |
| 0009 | 0.9* | 0.39 | – | – | 33 x 11 | – |
| 0013 | 1.3 | 0.24 | – | 0.20 | 41 x 13 | 41 x 13 |
| 0015 | 1.5 | 0.18 | 0.21 | 0.20 | 46.5 x 15.5 | 46 x 15 |
| 0020 | 2.0 | 0.18 | 0.21 | 0.20 | 52 x 18 | 51 x 18 |
| 0025 | 2.5 | 0.18 | 0.23 | 0.21 | 58.5 x 20.5 | 57 x 20 |
| 0030 | 3.0 | 0.22 | 0.29 | 0.27 | 66 x 23 | 64 x 23 |
| 0035 | 3.5 | – | 0.42 | – | – | 70 x 26 |
| 0040 | 4.0 | 0.28 | 0.37 | 0.34 | 74 x 29 | 72 x 29 |
| 0045 | 4.5 | – | 0.52 | – | – | 80 x 31 |
| 0050 | 5.0 | 0.42 | 0.49 | 0.46 | 85 x 33 | 83 x 33 |
| 0055 | 5.5 | – | 0.76 | – | – | 90 x 35 |
| 0060 | 6.0 | 0.56 | 0.66 | 0.61 | 96 x 38 | 94 x 38 |
| 0070 | 7.0 | 0.77 | 0.88 | 0.84 | 102 x 41 | 99 x 41 |
| 0080 | 8.0 | 0.95 | 1.12 | 1.04 | 108 x 44 | 105 x 44 |
| 0090 | 9.0 | – | 1.66 | 1.37 | – | 112 x 47 |
| 0100 | 10.0 | 1.34 | 1.74 | 1.52 | 122 x 50 | 119 x 50 |
| 0110 | 11.0 | – | 2.11 | 1.80 | – | 126 x 53 |
| 0120 | 12.0 | 1.90 | 3.06 | 2.83 | 137 x 57 | 134 x 57 |
| 0140 | 14.0 | 3.24 | 3.86 | 3.50 | 154 x 70 | 151 x 70 |
| 0170 | 17.0 | 5.30 | 6.40 | 5.90 | 177 x 80 | 173 x 80 |
| 0190 | 19.0 | 7.25 | 8.65 | 7.70 | 199 x 89 | 195 x 89 |
| 0220 | 22.0 | 11.10 | 13.45 | 11.80 | 222 x 102 | 217 x 102 |
| 0240 | 24.0 | 15.45 | – | 18.05 | 248 x 114 | 241 x 114 |
| 0270 | 27.0 | 21.50 | – | 22.40 | 277 x 127 | 271 x 127 |
| 0320 | 32.0 | 43.50 | – | 46.40 | 347 x 157 | 339 x 157 |
| 0360 | 36.0 | 61.80 | – | – | 391 x 176 | – |
| | | (W528) | (W530) | (W530) | | |

* Manganese-phosphated.

## Hexagonal offset screwdriver set in workshop stand

**Design: DIN 911, ISO 2936 K.** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials. **Delivered in workshop stand** made of metal, printed with drive symbol in original size.

wiha
Tools that work for you

| Order No. | Design | 5849 wiha | Set contents mm |
|---|---|---|---|
| 0030 | 9-part | 25.00 (W530) | 2.5; 3; 4; 5; 6; 8; 10; 12; 14 |

## Hexagonal offset screwdriver set

**Design: DIN 911, ISO 2936 K.** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials. Supplied in plastic bag.

format
professional quality

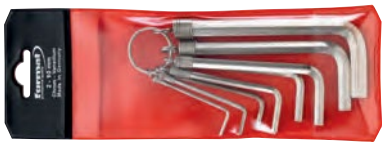
5847 0035

5847 0040

| Order No. | Design | 5847 format | Set contents mm |
|---|---|---|---|
| 0035 | 8-part | 4.62 | 2; 2.5; 3; 4; 5; 6; 8; 10 |
| 0040 | 10-part | 11.65 (W528) | 2; 2.5; 3; 4; 5; 6; 8; 10; 12; 14 |

## Hexagonal offset screwdriver set on ring

**Design: DIN 911, ISO 2936 K.** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials. Supplied incl. flexible attachment on practical key ring.

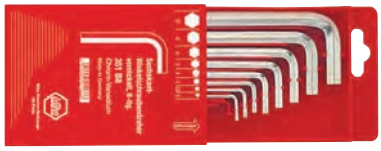


| Order No. | Design | 5847 format | Set contents mm |
|---|---|---|---|
| 0045 | 8-part | 5.65 (W528) | 2; 2.5; 3; 4; 5; 6; 8; 10 |

## Hexagonal offset screwdriver set in sliding box

**Design: DIN 911, ISO 2936 K.** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials. Supplied in plastic sliding box.

5847



5849

| Order No. | Design | 5847 format | 5849 wiha | Set contents mm |
|---|---|---|---|---|
| 0020 | 7-part | – | 7.15 | 2; 2.5; 3; 4; 5; 6; 8 |
| 0005 | 8-part | 6.85 (W528) | 9.55 (W530) | 2; 2.5; 3; 4; 5; 6; 8; 10 |

## Hexagonal offset screwdriver set in hand holder

**Design: DIN 911, ISO 2936 K.** Made of chromium-vanadium steel, completely hardened. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials. Supplied in hand holder.

**5847** **Nickel-plated.**

**5849 0015** **Gloss nickel-plated.**

**5849 0010** **Manganese-phosphated.**

**5849 0012 NEW** **With spherical head, gloss nickel-plated.**

5847

5849 0015

5849 0010

5849 0012

| Order No. | Design | 5847 format | 5849 wiha | Set contents mm |
|---|---|---|---|---|
| 0015 | 7-part | – | 4.17 | 1.5; 2; 2.5; 3; 4; 5; 6 |
| 0047 | 9-part | 5.95 | – | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |
| 0010 | 9-part | – | 5.95 | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |
| 0012 | 9-part | – (W528) | 15.10 (W530) | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |

## Hexagonal offset screwdriver set easy colour

**Design: DIN 911 L, ISO 2936 K.** Made of chromium-vanadium steel, completely hardened, nickel-plated and **coated.** Spanner ends bevelled. **The different coloured finishes make it easier to distinguish between the AFs.** Supplied in hand holder.

| Order No. | Design | 5847 format | Set contents mm |
|---|---|---|---|
| 0012 | 9-part | 13.05 (W528) | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |

## PocketStar® screwdriver set

**Design:** Made of chromium-vanadium steel, completely hardened and matt chrome-plated. In folding holder PocketStar®, made of fibreglass reinforced plastic with eject button for easy blade selection.

**5849 0025 + 0050**

**5865 0200**

**5849 0070**

**5849 0075**

**5849 0056**

**5849 0060**

| Order No. | Design | 5849 wiha | 5865 wiha | Set contents | Length closed mm |
|---|---|---|---|---|---|
| 0025 | 7-part | 10.80 | – | 1.5; 2; 2.5; 3; 4; 5; 6 mm | 95 |
| 0050 | 7-part | 12.65 | – | 2; 2.5; 3; 4; 5; 6; 8 mm | 120 |
| 0200 | 7-part<br>Ball head, MagicRing® | – | 21.20 | 2*; 2.5*; 3; 4; 5; 6; 8 mm | 120 |
| 0070 | 8-part<br>Mini | 15.75 | – | 5 hexagon socket 0.7; 0.9; 1.3; 1.5; 2 mm<br>2 recess 1.5; 2 mm<br>1 cross recess PH 00 | 55 |
| 0075 | 8-part<br>Mini | 19.15 | – | 1 recessed hexagon 2 mm<br>2 recess 1.5; 2 mm<br>1 cross recess PH 00<br>4 recessed TORX® T 4; 5; 6; 7 | 55 |
| 0056 | 6-part | 13.80 | – | 4 inner-hexagon socket 3; 4; 5; 6 mm<br>1 recess 5.5 mm<br>1 cross recess PH 2 | 95 |
| 0060 | 9-part | 17.60 | – | 4 inner-hexagon socket 3; 4; 5; 6 mm<br>1 recess 4.5 mm<br>1 cross recess PH 2<br>3 Inner TORX® T 10; 15; 20 | 120 |
| | | (W530) | (W530) | | |

* Without MagicRing®.

## Hexagonal screwdriver set in folding case

**Design: DIN 911, ISO 2936.** Made of chromium-vanadium steel, completely hardened and nickel-plated. Spanner ends bevelled. Stamped with AF, ISO and material.

**5847 0013–0020** **In nickel-plated folding case.**

**5847 0025 + 0030** **In folding plastic holder with lateral lifting device.**

**5847 0013–0020**

**5847 0025–0030**

| Order No. | Design | 5847 format | Set contents mm | Length closed mm |
|---|---|---|---|---|
| 0013 | 7-part | 6.30 | 1.5; 2; 2.5; 3; 4; 5; 6 | 97 |
| 0015 | 6-part | 7.75 | 2.5; 3; 4; 5; 6; 8 | 115 |
| 0020 | 7-part | 9.70 | 2.5; 3; 4; 5; 6; 8; 10 | 115 |
| 0025 | 6-part | 8.15 | 2.5; 3; 4; 5; 6; 8 | 119 |
| 0030 | 7-part | 10.45 | 2.5; 3; 4; 5; 6; 8; 10 | 127 |
| | | (W528) | | |

## TORX-screwdriver set in folding case, mixed

**Design: DIN 911, ISO 2936.** Made of chromium-vanadium steel, completely hardened and nickel-plated in folding plastic holder with lateral lifting device. Spanner ends bevelled. Stamped with AF, ISO and material.

format professional quality

| Order No. | Design | 5847 format | Set contents | Length closed mm |
|---|---|---|---|---|
| 0032 | 6-part | 9.15 | 4 inner-hexagon socket 3; 4; 5; 6 mm<br>1 recess 5.5 mm<br>1 cross recess PH 2 | 119 |
| | | (W528) | | |

## Hexagonal offset screwdriver in American imperial dimensions

**Design: ASME B18.3-1998.** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated. Spanner ends bevelled. From jaw span 1/8" mm labelled with jaw span and material.

American inch sizes

wiha Tools that work for you

**Note:** Wrench length 7/8" corresponds to 22 mm (Order No. 5838 0220 📖 5/123).

| Order No. | Width of keys inch | 5842 wiha | Stock length mm |
|---|---|---|---|
| 0005 | 0.05 | 0.27 | 45 x 15 |
| 0010 | 1/16 | 0.23 | 47 x 16 |
| 0015 | 5/64 | 0.23 | 51 x 18 |
| 0020 | 3/32 | 0.24 | 55 x 20 |
| 0030 | 1/8 | 0.34 | 62 x 22 |
| 0035 | 9/64 | 0.34 | 63 x 24 |
| 0040 | 5/32 | 0.40 | 67 x 26 |
| 0045 | 3/16 | 0.58 | 74 x 29 |
| 0050 | 7/32 | 0.62 | 84 x 34 |
| 0055 | 1/4 | 1.02 | 90 x 36 |
| 0065 | 5/16 | 1.27 | 102 x 40 |
| 0070 | 3/8 | 2.63 | 116 x 45 |
| 0080 | 1/2 | 3.32 | 146 x 54 |
| 0085 | 9/16 | 3.96 | 160 x 59 |
| 0090 | 5/8 | 6.50 | 175 x 64 |
| 0095 | 3/4 | 9.00 | 203 x 73 |
| 0105 | 1 | 26.40 | 275 x 125 |
| | | (W530) | |

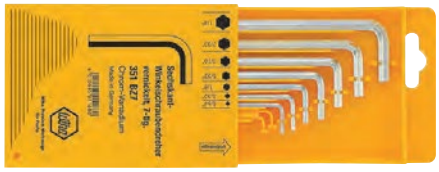
## Hexagonal offset screwdriver set in American imperial dimensions

**5847** Supplied in plastic sliding box.

**5849 0040** Supplied in plastic sliding box.

**5849 0035** Supplied in plastic sliding box ProStar®.

5847 format professional quality



5849 0040 wiha Tools that work for you

5849 0035 wiha Tools that work for you

| Order No. | Design | 5847 format | 5849 wiha | Set contents inch |
|---|---|---|---|---|
| 0040 | 7-part | – | 8.80 | 5/64; 3/32; 1/8; 5/32; 3/16; 7/32; 1/4 |
| 0010 | 8-part | 6.30 | – | 5/64; 3/32; 1/8; 5/32; 3/16; 1/4; 5/16; 3/8 |
| 0035 | 13-part | – | 12.50 | 0.05; 1/16; 5/64; 3/32; 7/64; 1/8; 9/64; 5/32; 3/16; 7/32; 1/4; 5/16; 3/8 |
| | | (W528) | (W530) | |

## Hexagonal offset screwdriver, long

**Design: DIN 911, ISO 2936 L.** Made of chromium-vanadium steel, completely hardened. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials.

**5844** Gloss nickel-plated.

**5845** Gloss nickel-plated.

**5846** Manganese-phosphated.

| Order No. | Width of keys mm | 5844 format | 5845 wiha | 5846 wiha | Stock length mm 5844 | Stock length mm 5845/5846 |
|---|---|---|---|---|---|---|
| 0015 | 1.5 | – | 0.70 | 0.48 | – | 91 x 15 |
| 0020 | 2.0 | 0.40 | 0.48 | 0.46 | 102.0 x 18.0 | 101 x 18 |
| 0025 | 2.5 | 0.47 | 0.58 | 0.56 | 114.5 x 20.5 | 113 x 20 |
| 0030 | 3.0 | 0.56 | 0.70 | 0.66 | 129.0 x 23.0 | 128 x 23 |
| 0040 | 4.0 | 0.73 | 0.84 | 0.82 | 144.0 x 29.0 | 142 x 29 |
| 0050 | 5.0 | 0.83 | 0.95 | 0.92 | 165.0 x 33.0 | 163 x 33 |
| 0060 | 6.0 | 1.03 | 1.31 | 1.23 | 186.0 x 38.0 | 184 x 38 |
| 0070 | 7.0 | – | 1.70 | 1.48 | – | 194 x 41 |
| 0080 | 8.0 | 1.53 | 1.96 | 1.80 | 208.0 x 44.0 | 206 x 44 |
| 0100 | 10.0 | 2.19 | 3.26 | 2.76 | 234.0 x 50.0 | 231 x 50 |
| 0120 | 12.0 | 3.31 | 5.30 | 4.42 | 262.0 x 57.0 | 259 x 57 |
| 0140 | 14.0 | 5.15 | 6.35 | 6.00 | 294.0 x 70.0 | 291 x 70 |
| 0170 | 17.0 | 8.30 | 9.80 | – | 337.0 x 80.0 | 333 x 80 |
| 0190 | 19.0 | 12.20 (W528) | 13.00 (W530) | – (W530) | 379.0 x 89.0 | 375 x 89 |

## Hexagonal screwdriver set, long, in workshop stand

**Design: DIN 911 L, ISO 2936 L.** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials. Supplied in workshop stand.

| Order No. | Design | 5849 wiha | Set contents mm |
|---|---|---|---|
| 0130 | 9-part | 29.40 (W530) | 2.5; 3; 4; 5; 6; 8; 10; 12; 14 |

## Hexagonal screwdriver set, long, in sliding box

**Design: DIN 911 L, ISO 2936 L.** Made of chromium-vanadium steel, completely hardened. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials. Supplied in plastic sliding box.

**5847** Nickel-plated.

**5849** Gloss nickel-plated.

| Order No. | Design | 5847 format | 5849 wiha | Set contents mm |
|---|---|---|---|---|
| 0055 | 8-part | 13.60 (W528) | 15.00 (W530) | 2; 2.5; 3; 4; 5; 6; 8; 10 |

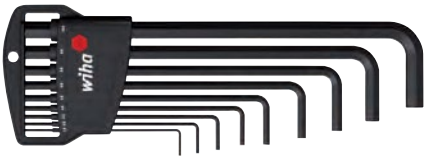
## Hexagonal offset screwdriver set, long, in hand holder

**Design: DIN 911, ISO 2936 L.** Made of chromium-vanadium steel, completely hardened. Spanner ends bevelled. For jaw span 3 mm labelled with AF, ISO and construction materials.

**5847** **Nickel-plated.** Supplied in hand holder.

**5849 0100** **Gloss nickel-plated.** Supplied in plastic sliding box ProStar®.

**5849 0120** **Manganese-phosphated.** Supplied in hand holder.

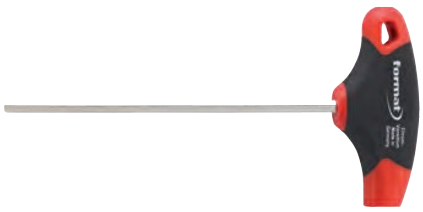



| Order No. | Design | 5847 format | 5849 wiha | Set contents mm |
|---|---|---|---|---|
| 0100 | 9-part | – | 11.25 | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |
| 0120 | 9-part | 11.60 | 9.70 | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |
| | | (W528) | (W530) | |

## Hexagonal screwdriver with T-handle

**Design:** Made of chromium-vanadium steel, nickel-plated. Full-length blade for the transmission of higher torque, front edges bevelled. Handle made of multi-component plastic, ergonomically shaped, with pin hole.

| Order No. | Width of keys mm | 5850 format | Blade length mm |
|---|---|---|---|
| 0005 | 2.0 | 1.98 | 100 |
| 0010 | 2.5 | 2.05 | 100 |
| 0015 | 3.0 | 1.74 | 100 |
| 0020 | 3.0 | 1.96 | 150 |
| 0025 | 3.0 | 2.20 | 200 |
| 0030 | 4.0 | 1.96 | 100 |
| 0035 | 4.0 | 2.20 | 150 |
| 0040 | 4.0 | 2.38 | 200 |
| 0045 | 5.0 | 2.24 | 100 |
| 0050 | 5.0 | 2.38 | 150 |
| 0055 | 5.0 | 2.54 | 200 |
| 0060 | 6.0 | 2.38 | 100 |
| 0065 | 6.0 | 2.54 | 150 |
| 0070 | 6.0 | 2.70 | 200 |
| 0080 | 8.0 | 3.24 | 100 |
| 0085 | 8.0 | 3.44 | 150 |
| 0090 | 8.0 | 3.56 | 200 |
| 0095 | 10.0 | 5.80 | 200 |
| | | (W528) | |



## Hexagonal screwdriver set with T-handle

**Design:** Supplied in a workshop stand.

| Order No. | Design | 5847 format | Set contents mm |
|---|---|---|---|
| 0065 | 7-part | 23.30 | 2 x 100; 2.5 x 100; 3 x 100; 4 x 150; 5 x 150; 6 x 200; 8 x 200 |
| | | (W528) | |

## Hexagonal screwdriver with T-handle and side output

**Design:** Made of chromium-vanadium steel, completely hardened and matt chrome-plated. **The screwdriver features a full-length blade with side output for the transmission of higher torques.** With ergonomic multi-component T-handle with soft zones and pin hole. **Order No. 5851 with ball head.**

| Order No. | Width of keys mm | 5852 wiha | 5851 wiha | Blade length mm |
|---|---|---|---|---|
| 0020 | 2.0 | 3.17 | – | 100 |
| 0025 | 2.5 | 3.24 | – | 100 |
| 0030 | 3.0 | 3.28 | – | 100 |
| 0030 | 3.0 | – | 3.93 | 150 |
| 0040 | 4.0 | 3.49 | 4.13 | 150 |
| 0050 | 5.0 | 3.91 | 5.10 | 150 |
| 0060 | 6.0 | 4.40 | 6.00 | 150 |
| 0080 | 8.0 | 5.65 | 8.50 | 200 |
| 0100 | 10.0 | 9.50 (W530) | 11.35 (W530) | 200 |

5852

5851 with ball head

## Hexagonal screwdriver set with T-handle and side blades

**Design:** Supplied in a workshop stand.

| Order No. | Design | 5852 wiha | Set contents mm |
|---|---|---|---|
| 1000 | 6-part | 44.60 (W530) | 3 x 100; 4 x 150; 5 x 150; 6 x 150; 8 x 200; 10 x 200 |

## Hexagonal offset screwdriver, with ball head, long

**Design: DIN 911, ISO 2936 L.** Made of chromium-vanadium steel, completely hardened. **With ball head** and bevelled short arm. From jaw span 4 mm, stamped with jaw span, AF, ISO and material.

**Note:** Screwing up to an angle of 30° due to the special ball shape.

**5856** **Nickel-plated.**

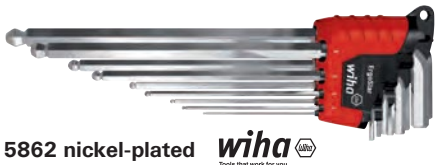
**5862** **Gloss chrome-plated.**

5856

5862

| Order No. | Width of keys mm | 5856 format | 5862 wiha | Stock length mm 5856 | Stock length mm 5862 |
|---|---|---|---|---|---|
| 0015 | 1.5 | 0.80 | 1.05 | 91.5 x 15.5 | 91 x 15 |
| 0020 | 2.0 | 0.90 | 1.05 | 102.0 x 18.0 | 101 x 18 |
| 0025 | 2.5 | 1.05 | 1.07 | 114.5 x 20.5 | 113 x 20 |
| 0030 | 3.0 | 0.90 | 1.13 | 129.0 x 23.0 | 128 x 23 |
| 0040 | 4.0 | 1.28 | 1.48 | 144.0 x 29.0 | 142 x 29 |
| 0050 | 5.0 | 1.52 (W528) | 1.73 (W530) | 165.0 x 33.0 | 163 x 33 |
| 0060 | 6.0 | 1.70 | 2.19 | 186.0 x 38.0 | 184 x 38 |
| 0070 | 7.0 | 2.05 | – | 197.0 x 41.0 | – |
| 0080 | 8.0 | 2.45 | 3.79 | 208.0 x 44.0 | 206 x 44 |
| 0100 | 10.0 | 3.38 | 4.81 | 234.0 x 50.0 | 231 x 50 |
| 0120 | 12.0 | 5.15 (W528) | 7.00 (W530) | 262.0 x 57.0 | 253 x 57 |

## Hexagonal offset screwdriver set, with ball head, long



5862 nickel-plated

5858 0005 nickel-plated

5858 0010 nickel-plated

5858 0100 steel grey

| Order No. | Design | 5858 format | 5862 wiha | Set contents mm |
|---|---|---|---|---|
| 0005 | 8-part | 19.35 | – | 2; 2.5; 3; 4; 5; 6; 8; 10 |
| 0010 | 9-part | 14.65 | 26.30 | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |
| 0100 | 9-part | 12.85 NEW (W528) | – (W530) | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |

## Hexagonal offset screwdriver with ball head and MagicRing®, long

**Design:** Made of chromium-vanadium steel, completely hardened and matt chrome-plated. The ball head features a **MagicRing**® to hold the screws securely. With bevelled spanner ends.

**Application** Especially for inserting or removing screws from hard-to-access places.

wiha Tools that work for you

| Order No. | Width of keys mm | 5865 wiha | Stock length mm |
|---|---|---|---|
| 0020 | 3.0 | 2.81 | 128 x 23 |
| 0025 | 4.0 | 2.89 | 142 x 29 |
| 0030 | 5.0 | 3.23 | 163 x 33 |
| 0035 | 6.0 | 3.79 | 184 x 38 |
| 0040 | 8.0 | 5.40 | 206 x 44 |
| 0045 | 10.0 | 6.95 (W530) | 231 x 50 |

## Hexagonal offset screwdriver set with ball head and MagicRing®, long

**Design:** Supplied in ProStar® hand holder.

| Order No. | Design | 5865 wiha | Set contents mm |
|---|---|---|---|
| 0100 | 9-part | 26.10 (W530) | 1.5*; 2*; 2.5*; 3; 4; 5; 6; 8; 10 * Without MagicRing®. |

## Hexagonal offset screwdriver, with ball head, long

**Design:** Made of special alloy tool steel. Hex-Plus geometry, therefore 20% more static torque and protection of the Allen screw. The ball head enables screwing even in inclined position.

Wera Be a Tool Rebel

**5859** **Chrome-plated blade, hexagonal.**

**585A** NEW **With tube-covered blade to protect fingers, in various colours for easy allocation of wrench widths, round.**

**5861** **BlackLaser blade, hexagonal.**

| Order No. | Width of keys mm | 5859 Wera | 585A Wera | 5861 Wera | 585A | Stock length mm 5859 | 585A | 5861 |
|---|---|---|---|---|---|---|---|---|
| 0005 | 1.5 | 1.14 * | 4.18 | 0.81 * | | 90 x 14 | 90 x 14 | 90 x 14 |
| 0015 | 2.0 | 1.14 | 3.87 | 0.81 | | 100 x 16 | 101 x 16 | 100 x 16 |
| 0025 | 2.5 | 1.40 | 3.78 | 0.81 | | 112 x 18 | 112 x 19 | 112 x 18 |
| 0035 | 3.0 | 2.06 | 3.63 | 0.94 | | 126 x 20 | 123 x 21 | 126 x 20 |
| 0050 | 4.0 | 2.06 | 4.11 | 0.99 | | 140 x 25 | 137 x 24 | 140 x 25 |
| 0060 | 5.0 | 2.54 | 4.09 | 1.22 | | 160 x 28 | 154 x 27 | 160 x 28 |
| 0070 | 6.0 | 2.80 | 5.40 | 1.58 | | 180 x 32 | 172 x 31 | 180 x 32 |
| 0075 | 7.0 | 3.16 | – | 1.96 | – | 190 x 34 | – | 190 x 34 |
| 0085 | 8.0 | 3.55 | 7.90 | 2.54 | | 200 x 36 | 195 x 37 | 200 x 36 |
| 0090 | 10.0 | 4.06 | 10.45 | 3.56 | | 219 x 40 | 224 x 42 | 219 x 40 |
| 0100 | 12.0 | 6.10 (W526) | – (W526) | 4.81 (W526) | – | 248 x 45 | – | 248 x 45 |

* Without hex-plus geometry.

## Hexagonal offset screwdriver set, with ball head, long

**Design:** Delivered in a wear-free solid rubber clip with abrasion-resistant size identification.

**5863** **Chrome-plated blade, hexagonal.**

**585A** NEW **With tube-covered blade to protect fingers, in various colours for easy allocation of wrench widths, round.**

**5869** **BlackLaser blade, hexagonal.**

| Order No. | Design | 5863 Wera | 585A Wera | 5869 Wera | Set contents mm |
|---|---|---|---|---|---|
| 0009 | 9-part | 19.95 * (W526) | 33.30 (W526) | 14.40 * (W526) | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 * 1.5 mm without Hex-Plus geometry. |

## Hexagonal screwdriver with ball head, easy colour, long

**Design: DIN 911 L, ISO 2936 L.** Made of chromium-vanadium steel, completely hardened, nickel-plated and **coated.**. With ball head and bevelled short arm. For jaw span 4 mm, stamped with jaw span, AF, ISO and construction material. **The different coloured finishes make it easier to distinguish between the AFs.**

**Application:** Especially for screwing in hard-to-access places.

**Note:** Screwing up to an angle of 30° due to the special ball shape.

| Order No. | Width of keys mm | 5853 format | | Stock length mm |
|---|---|---|---|---|
| 0015 | 1.5 | 1.17 | | 91.5 x 15.5 |
| 0020 | 2.0 | 1.41 | | 102.0 x 18.0 |
| 0025 | 2.5 | 1.71 | | 114.5 x 20.5 |
| 0030 | 3.0 | 2.01 | | 129.0 x 23.0 |
| 0040 | 4.0 | 2.79 (W528) | | 144.0 x 29.0 |

| Order No. | Width of keys mm | 5853 format | | Stock length mm |
|---|---|---|---|---|
| 0050 | 5.0 | 3.39 | | 165.0 x 33.0 |
| 0060 | 6.0 | 3.93 | | 186.0 x 38.0 |
| 0080 | 8.0 | 4.98 | | 208.0 x 44.0 |
| 0100 | 10.0 | 6.50 (W528) | | 234.0 x 50.0 |

## Hexagonal screwdriver set with ball head, easy colour, long

**Design**: Supplied in hand holder.

| Order No. | Design | 5853 format | Set contents mm |
|---|---|---|---|
| 1000 | 9-part | 29.30 (W528) | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |

## Hexagonal screwdriver with ball head and shortened legs, long

**Design:** With ball head and bevelled short shanks.

**Application:** Especially for screwing in narrow and hard-to-access places.

**5857** Made of chromium-vanadium steel, completely hardened and chrome-plated. **With shortened legs, angled 100°.**

**5854** Made of special alloy tool steel, chrome-plated frame **With shortened shank and Hex-Plus-geometry,** therefore 20% more static torque and protection of the Allen screw.

| Order No. | Width of keys mm | 5857 format | 5854 Wera | Stock length mm 5857 | Stock length mm 5854 |
|---|---|---|---|---|---|
| 0015 | 1.5 | 1.12 | 1.50 * | 90 x 7.5 | 90 x 4.5 |
| 0020 | 2.0 | 1.12 | 1.50 | 100 x 8.0 | 100 x 5.5 |
| 0025 | 2.5 | 1.22 | 1.75 | 112 x 10.5 | 112 x 6.5 |
| 0030 | 3.0 | 1.33 | 2.62 | 127 x 13.0 | 126 x 7.5 |
| 0040 | 4.0 | 1.75 (W528) | 2.62 (W526) | 144 x 15.0 | 140 x 10.0 |

| Order No. | Width of keys mm | 5857 format | 5854 Wera | Stock length mm 5857 | Stock length mm 5854 |
|---|---|---|---|---|---|
| 0050 | 5.0 | 2.13 | 3.32 | 165 x 18.0 | 160 x 12.0 |
| 0060 | 6.0 | 2.70 | 3.52 | 185 x 22.0 | 180 x 15.0 |
| 0080 | 8.0 | 3.74 | 4.58 | 208 x 27.0 | 200 x 19.0 |
| 0100 | 10.0 | 4.64 (W528) | 5.10 (W526) | 232 x 32.0 | 219 x 22.0 |

* Without hex-plus geometry.

## Hexagonal screwdriver set with ball head and shortened shanks, long

**5857** **Supplied in hand holder.**

**5854** **Delivered in a wear-free solid rubber clip,** with abrasion-resistant size identification.

| Order No. | Design | 5857 format | 5854 Wera | Set contents mm |
|---|---|---|---|---|
| 1000 | 9-part | 19.85 (W528) | 27.20 * (W526) | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |

* 1.5 mm without Hex-Plus geometry.

## Stainless hexagonal offset screwdriver, long

**Design: Made of stainless steel,** hard and tough (54 HRC) due to vacuum ice-hardening. With Hex-Plus geometry. This reduces the notch effect and the destruction of the screw head, at the same time 20% more static torque. The ball head enables screwing even in inclined position.

**Application:** Special product for preventing rust in the processing of stainless steel screws.

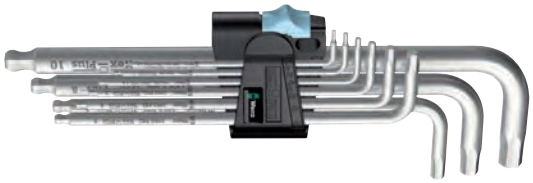
INOX | Hex-Plus

| Order No. | Width of keys mm | 5872 Wera | Stock length mm |
|---|---|---|---|
| 0005 | 1.5 | 3.24 | 90 x 14 |
| 0015 | 2.0 | 3.04 | 100 x 16 |
| 0025 | 2.5 | 2.94 | 112 x 18 |
| 0035 | 3.0 | 2.87 | 126 x 20 |
| 0050 | 4.0 | 3.16 (W584) | 140 x 25 |

| Order No. | Width of keys mm | 5872 Wera | Stock length mm |
|---|---|---|---|
| 0060 | 5.0 | 3.74 | 160 x 28 |
| 0070 | 6.0 | 5.00 | 180 x 32 |
| 0085 | 8.0 | 6.20 | 200 x 36 |
| 0090 | 10.0 | 8.20 (W584) | 219 x 40 |

## Stainless hexagonal offset screwdriver set, long

**Design:** Delivered in a wear-free solid rubber clip with abrasion-resistant size identification.



| Order No. | Design | 5875 Wera | Set contents mm |
|---|---|---|---|
| 0005 | 9-part | 29.90 (W584) | 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 |

## Hexagonal screwdriver with ball head

**Design:** Made of high-alloy special steel, with hexagonal blade. Black Point coating for increased torque and accuracy. The ball head allows for screwing in inclined positions. With 3-component Kraftform-Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossed with output symbol and size.

| Order No. | Width of keys mm | 5867 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0005 | 1.5 | 3.08 | 60 | 130 |
| 0010 | 2.0 | 3.36 | 100 | 170 |
| 0020 | 2.5 | 3.42 | 100 | 181 |
| 0030 | 3.0 | 3.52 | 100 | 181 |
| 0040 | 4.0 | 3.82 (W543) | 100 | 198 |

| Order No. | Width of keys mm | 5867 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0050 | 5.0 | 4.66 | 100 | 205 |
| 0060 | 6.0 | 5.90 | 125 | 230 |
| 0070 | 8.0 | 8.05 | 150 | 262 |
| 0080 | 10.0 | 10.20 | 150 | 262 |
| 0090 | 12.0* | 11.75 (W543) | 150 | 267 |

* Black Kraftform grip with anti-roll protection.

## Hexagonal screwdriver set with ball head

**Design:** Supplied in a carton.

| Order No. | Design | 5868 Wera | Set contents mm |
|---|---|---|---|
| 0005 | 6-part | 29.40 (W543) | 2; 3; 4; 5; 6; 8 |

## Hexagonal offset screwdriver with pin

**Design: DIN 6911.** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated, **with pin.**

**Application:** For hexagonal screws with low head and pilot recess in line with DIN 6912.

| Order No. | Width of keys mm | 5874 wiha | Stock length mm |
|---|---|---|---|
| 0003 | 3 | 1.06 | 64 x 23 |
| 0004 | 4 | 0.88 | 72 x 29 |
| 0005 | 5 | 0.91 | 83 x 33 |
| 0006 | 6 | 1.33 | 94 x 38 |
| 0008 | 8 | 1.75 (W530) | 105 x 44 |

| Order No. | Width of keys mm | 5874 wiha | Stock length mm |
|---|---|---|---|
| 0010 | 10 | 2.42 | 119 x 50 |
| 0012 | 12 | 3.65 | 134 x 57 |
| 0014 | 14 | 5.40 | 151 x 70 |
| 0017 | 17 | 8.95 (W530) | 173 x 80 |

## Hexagonal offset screwdriver set with pin

**Design:** Supplied in foldaway bag.

| Order No. | Design | 5874 wiha | Set contents mm |
|---|---|---|---|
| 1000 | 5-part | 6.85 (W530) | 3; 4; 5; 6; 8 |

## XZN angled screwdriver

**Design:** Made of chromium-vanadium steel, completely hardened and gloss nickel-plated.

| Order No. | Size | 5873 wiha | Stock length mm |
|---|---|---|---|
| 0005 | M5 | 2.28 | 76 x 30 |
| 0006 | M6 | 2.83 | 86 x 34 |
| 0008 | M8 | 3.78 | 98 x 38 |
| 0010 | M10 | 5.10 (W530) | 110 x 46 |

| Order No. | Size | 5873 wiha | Stock length mm |
|---|---|---|---|
| 0012 | M12 | 6.65 | 124 x 52 |
| 0014 | M14 | 8.55 | 138 x 58 |
| 0016 | M16 | 13.80 (W530) | 156 x 71 |

## XZN offset screwdriver set

**Design:** Supplied in foldaway bag.

| Order No. | Design | 5873 wiha | Set contents |
|---|---|---|---|
| 0500 | 5-part | 15.70 (W530) | M5; 6; 8; 10; 12 |

## TORX® offset screwdriver

**Design:** Made of chromium-vanadium steel, completely hardened. Milled profile.

**5876** **Steel grey.**

**5884** **Manganese-phosphated.**

5876 format professional quality

5884 wiha Tools that work for you

| Order No. | Size | 5876 format | 5884 wiha | Stock length mm 5876 | Stock length mm 5884 |
|---|---|---|---|---|---|
| 0050 | T 5 | – | 2.19 | – | 39 x 18 |
| 0060 | T 6 | 1.70 | 1.91 | 44.5 x 18.5 | 41 x 18 |
| 0070 | T 7 | 1.70 | 1.91 | 50.5 x 18.5 | 44 x 18 |
| 0080 | T 8 | 1.70 | 1.91 | 51.0 x 19.0 | 47 x 18 |
| 0090 | T 9 | 1.60 | 1.91 | 51.0 x 19.0 | 51 x 19 |
| 0100 | T 10 | 1.60 | 2.05 | 54.0 x 20.0 | 54 x 20 |
| 0150 | T 15 | 1.63 | 2.12 | 57.5 x 21.5 | 57 x 22 |
| 0200 | T 20 | 1.63 (W528) | 2.16 (W530) | 61.0 x 23.0 | 62 x 23 |

| Order No. | Size | 5876 format | 5884 wiha | Stock length mm 5876 | Stock length mm 5884 |
|---|---|---|---|---|---|
| 0250 | T 25 | 1.66 | 2.22 | 64.5 x 24.5 | 67 x 25 |
| 0270 | T 27 | 1.74 | 2.30 | 69.5 x 26.5 | 72 x 27 |
| 0300 | T 30 | 1.86 | 2.48 | 76.0 x 30.0 | 79 x 30 |
| 0400 | T 40 | 2.12 | 2.93 | 83.0 x 33.0 | 86 x 33 |
| 0450 | T 45 | 2.51 | 3.47 | 91.0 x 37.0 | 90 x 36 |
| 0500 | T 50 | 2.89 | 4.22 | 104.0 x 41.0 | 104 x 41 |
| 0550 | T 55 | – | 5.40 | – | 120 x 47 |
| 0600 | T 60 | – (W528) | 7.20 (W530) | – | 134 x 52 |

## TORX® offset screwdriver set

**5877** Supplied in plastic sliding box.

**5884** Supplied in hand holder.

5877 format professional quality

5884 wiha Tools that work for you

| Order No. | Design | 5877 format | 5884 wiha | Set contents |
|---|---|---|---|---|
| 0005 | 8-part | 14.35 | – | T 9; 10; 15; 20; 25; 27; 30; 40 |
| 1001 | 8-part | – (W528) | 17.60 (W530) | T 9; 10; 15; 20; 25; 27; 30; 40 |

## TORX® offset screwdriver set with ball head, easy colour

**Design:** Made of chromium-vanadium steel, chrome-plated, completely hardened and **powder coated. The coating in different coloured finishes make it easier to distinguish between the AFs.** Supplied in a hand holder.

format professional quality

| Order No. | Design | 5889 format | Set contents |
|---|---|---|---|
| 1000 | 8-part | 34.40 (W528) | T 9; 10; 15; 20; 25; 27; 30; 40 |

## TORX®-screwdriver set in folding case

**Design:** Made of chromium-vanadium steel, completely hardened. Milled profile.

**5877** Steel grey. In folding plastic holder with lateral lifting device.

**5884** Galvanic finish, in folding holder PocketStar®, made of fibreglass reinforced plastic with ejection button.

5877 format professional quality

5884 wiha Tools that work for you

| Order No. | Design | 5877 format | 5884 wiha | Set contents | Length closed mm |
|---|---|---|---|---|---|
| 1010 | 7-part | – | 16.85 | T 7; 8; 9; 10; 15; 20; 25 | 95 |
| 0010 | 8-part | 13.45 | – | T 9; 10; 15; 20; 25; 27; 30; 40 | 127 |
| 1020 | 8-part | – (W528) | 18.30 (W530) | T 9; 10; 15; 20; 25; 27; 30; 40 | 120 |

## TORX® offset screwdriver with drill hole

**Design:** Made of chromium-vanadium steel, steel grey, completely hardened **with drill hole.** Milled profile.

| Order No. | Size | 5881 format | Stock length mm |
|---|---|---|---|
| 0090 | T 9 | 2.12 | 59.0 x 19.0 |
| 0100 | T 10 | 2.12 | 65.0 x 20.0 |
| 0150 | T 15 | 2.12 | 75.5 x 20.5 |
| 0200 | T 20 | 2.50 (W528) | 87.0 x 22.0 |

| Order No. | Size | 5881 format | Stock length mm |
|---|---|---|---|
| 0250 | T 25 | 2.67 | 97.5 x 22.5 |
| 0270 | T 27 | 2.75 | 105.5 x 25.5 |
| 0300 | T 30 | 3.00 | 111.0 x 30.0 |
| 0400 | T 40 | 3.00 (W528) | 119.0 x 33.0 |

## TORX® offset screwdriver set with drill hole

**Design:** Supplied in a plastic holder.

| Order No. | Design | 5881 format | Set contents |
|---|---|---|---|
| 1800 | 8-part | 28.80 (W528) | T 9; 10; 15; 20; 25; 27; 30; 40 |

## TORX® offset screwdriver set, long NEW

**Design:** Made of chromium-vanadium steel, completely hardened, titanium silver, matt. Surface refinement ensures ideal corrosion protection for entire wrench, no oiling or waxing necessary.
**Long design.**

| Order No. | Size | 5891 wiha | Stock length mm |
|---|---|---|---|
| 0050 | T 5 | 2.60 | 72 x 13 |
| 0060 | T 6 | 2.25 | 80 x 15 |
| 0070 | T 7 | 2.25 | 88 x 18 |
| 0080 | T 8 | 2.25 | 101 x 20 |
| 0090 | T 9 | 2.25 | 111 x 21 |
| 0100 | T 10 | 2.43 | 121 x 23 |
| 0150 | T 15 | 2.49 (W530) | 136 x 27 |

| Order No. | Size | 5891 wiha | Stock length mm |
|---|---|---|---|
| 0200 | T 20 | 2.58 | 148 x 29 |
| 0250 | T 25 | 2.67 | 163 x 33 |
| 0270 | T 27 | 2.87 | 176 x 36 |
| 0300 | T 30 | 3.16 | 191 x 38 |
| 0400 | T 40 | 3.89 | 210 x 43 |
| 0450 | T 45 | 5.45 (W530) | 232 x 49 |

## TORX® offset screwdriver set, long NEW

**Design:** Supplied in ProStar® hand holder.

| Order No. | Design | 5891 wiha | Set contents |
|---|---|---|---|
| 1300 | 13-part | 36.40 (W530) | T 5; 6; 7; 8; 9; 10; 15; 20; 25; 27; 30; 40; 45 |

## TORX® offset screwdriver set with ball head, long

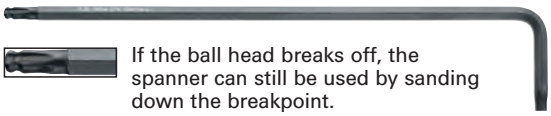
**Design:** Made of chromium-vanadium steel, steel grey, completely hardened. Milled profile. **Long design, with ball head** for screwing up to an angle of 20°.
Supplied in ergonomic plastic hand holder.

| Order No. | Design | 5882 format | Set contents |
|---|---|---|---|
| 1800 | 8-part | 24.60 (W528) | T 9; 10; 15; 20; 25; 27; 30; 40 |

## TORX® offset screwdriver with ball head, long

**Design:** Made of chromium-vanadium steel, completely hardened and manganese-phosphated. **Long design, with optimised ball head geometry** for screwing up to an angle of 25°. All spanners with lasered size and material information.

wiha Tools that work for you



If the ball head breaks off, the spanner can still be used by sanding down the breakpoint.

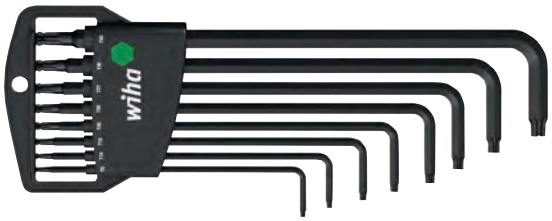
| Order No. | Size | 5890 wiha | Stock length mm |
|---|---|---|---|
| 0090 | T 9 | 2.47 | 111 x 21 |
| 0100 | T 10 | 2.65 | 121 x 23 |
| 0150 | T 15 | 2.77 | 136 x 27 |
| 0200 | T 20 | 2.90 | 148 x 29 |
| | | (W530) | |

| Order No. | Size | 5890 wiha | Stock length mm |
|---|---|---|---|
| 0250 | T 25 | 3.08 | 163 x 33 |
| 0270 | T 27 | 3.29 | 176 x 36 |
| 0300 | T 30 | 3.57 | 191 x 38 |
| 0400 | T 40 | 4.50 | 210 x 43 |
| | | (W530) | |

## TORX® offset screwdriver set with ball head, long

**Design:** Supplied in a plastic holder.

| Order No. | Design | 5890 wiha | Set contents |
|---|---|---|---|
| 1800 | 8-part | 24.20 (W530) | T 9; 10; 15; 20; 25; 27; 30; 40 |




## TORX® offset screwdriver set with holding function

**Design:** Made of special alloy tool steel, BlackLaser. Milled profile **with retention function.** Supplied in wear-resistant solid rubber clip with abrasion-resistant labelling.

**Application:** For the simple setting of screws in threads or timber. Ideal in situations where magnetic holding is not possible due to the application or materials used.

TORX® HF

Wera Be a Tool Rebel

| Order No. | Design | 5888 Wera | Set contents |
|---|---|---|---|
| 0005 | 9-part | 23.00 (W526) | T 8; 9; 10; 15; 20; 25; 27; 30; 40 |

## TORX® screwdriver with T-handle

**Design:** Made of chromium-vanadium steel, chrome-plated, black tip. Full-length blade for the transmission of higher torque. Handle made of multi-component plastic, ergonomically shaped, with pin hole.

format professional quality

| Order No. | Size | 5880 format | Blade length mm |
|---|---|---|---|
| 0005 | T 9 | 4.16 | 100 |
| 0010 | T 10 | 4.24 | 100 |
| 0015 | T 15 | 4.26 | 100 |
| 0020 | T 15 | 4.42 | 200 |
| 0025 | T 20 | 4.55 | 100 |
| 0030 | T 20 | 4.94 | 200 |
| 0035 | T 25 | 4.65 | 100 |
| 0040 | T 25 | 4.94 | 200 |
| 0050 | T 27 | 5.50 | 200 |
| 0055 | T 30 | 4.75 | 100 |
| 0060 | T 30 | 5.75 | 200 |
| 0070 | T 40 | 7.35 | 200 |
| | | (W528) | |

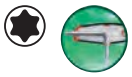
## TORX® screwdriver set with T-handle

**Design:** Supplied in a workshop stand.

| Order No. | Design | 5880 format | Set contents |
|---|---|---|---|
| 1000 | 7-part | 49.20 (W528) | T 9 x 100; T 10 x 100; T 15 x 100; T 20 x 100; T 25 x 100; T 30 x 200; T 40 x 200 |

## TORX® screwdriver with T-handle and side output

**Design:** Made of chromium-vanadium steel, completely hardened and matt chrome-plated. **The screwdriver features a full-length blade with side output for the transmission of higher torques.** With ergonomic multi-component T-handle with soft zones and pin hole.



wiha Tools that work for you

| Order No. | Size | 5892 wiha | Blade length mm |
|---|---|---|---|
| 0100 | T 10 | 6.80 | 100 |
| 0150 | T 15 | 7.00 | 100 |
| 0200 | T 20 | 7.55 | 100 |
| 0250 | T 25 | 7.70 | 150 |
| 0270 | T 27 | 7.85 | 150 |
| 0300 | T 30 | 7.90 | 150 |
| 0400 | T 40 | 8.25 | 150 |
| | | (W530) | |

## TORX® screwdriver set with T-handle and side output

**Design:** Supplied in a workshop stand.

| Order No. | Design | 5892 wiha | Set contents |
|---|---|---|---|
| 1000 | 6-part | 57.30 | T 10 x 100; T 15 x 100; T 20 x 100; T 25 x 150; T 30 x 150; T 40 x 150 |
| | | (W530) | |

## TORX® screwdriver with key pinch/pennant pinch

**Design:** Blade made of chromium-vanadium steel, completely hardened and burnished.

**Application:** For high torque with small screw dimensions. Especially for fixing solid carbide indexable inserts.

**5879** With pennant.
**5893** With key handle.

| Order No. | Size | 5879 format | 5893 wiha | Blade length mm |
|---|---|---|---|---|
| 0001 | T 5 | 2.46 | 2.78 | 35 |
| 0002 | T 6 | 2.46 | 2.78 | 35 |
| 0003 | T 7 | 2.46 | 2.78 | 35 |
| 0004 | T 8 | 2.46 | 2.78 | 40 |
| 0005 | T 9 | 2.13 | 3.04 | 40 |
| 0010 | T 10 | 2.16 | 3.14 | 40 |
| 0015 | T 15 | 2.25 | 3.25 | 45 |
| 0025 | T 20 | 2.46 | 3.55 | 45 |
| | | (W528) | (W530) | |

5879 format professional quality

5893 wiha Tools that work for you

## TORX® screwdriver set with key holder

**Design:** Supplied in a workshop stand with original size output symbols.

| Order No. | Design | 5893 wiha | Set contents |
|---|---|---|---|
| 1000 | 7-part | 26.20 | T 6; 7; 8; 9; 10; 15; 20 |
| | | (W530) | |

## TORX® screwdriver

**Design:** Round blade made of high-alloy special steel. Ergonomic handle with integrated soft areas and roll protection. In addition, the screwdriver head is embossed with output symbol and size.

**5883** Burnished tip. With 2-component handle.

5883 format professional quality

**5886** With Black Point tip for increased torque and accuracy. With 3 component Kraftform Plus handle.

5886 + 5898 Wera

**5898** With **drill hole** and Black Point tip for increased torque and accuracy. With 3 component Kraftform Plus handle.

**5904** Tip nicromatt for more torque and accuracy, **with retention function.** With 3 component Kraftform Plus handle Ideal in situations where magnetic retention is not possible.

5904 Wera

| Order No. | Size | 5883 format | 5886 Wera | 5898 Wera | 5904 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0005 | T 5 | 2.94 | 4.55 | – | – | 60 | 130 |
| 0010 | T 6 | 2.94 | 4.55 | – | – | 60 | 130 |
| 0020 | T 7 | 2.99 | 4.52 | 7.85 | – | 60 | 130 |
| 0030 | T 8 | 2.99 | 4.54 | 7.85 | – | 60 | 141 |
| 0035 | T 9 | 3.20 | 4.52 | 7.85 | – | 60 | 141 |
| 0040 | T 10 | 3.18 | 4.61 | 7.10 | – | 80 | 161 |
| 0010 | T 10 | – | – | – | 5.15 | 80 | 161 |
| 0050 | T 15 | 3.50 | 4.66 | 7.20 | – | 80 | 178 |
| 0015 | T 15 | – | – | – | 5.25 | 80 | 178 |
| 0060 | T 20 | 3.68 | 4.79 | 7.40 | – | 100 | 198 |
| 0020 | T 20 | – | – | – | 5.35 | 100 | 198 |
| 0070 | T 25 | 3.75 | 5.20 | 8.10 | – | 100 | 205 |
| 0025 | T 25 | – | – | – | 5.65 | 100 | 205 |
| 0080 | T 27 | 3.88 | 5.85 | 8.85 | – | 115 | 220 |
| 0090 | T 30 | 4.20 | 6.15 | 9.40 | – | 115 | 220 |
| 0030 | T 30 | – | – | – | 6.55 | 115 | 220 |
| 0100 | T 40 | – | 6.90 | 10.45 | – | 130 | 242 |
| 0105 | T 45 | – | 8.40 | – | – | 130 | 242 |
| | | (W528) | (W543) | (W543) | (W543) | | |

## VDE-TORX® screwdriver

**Design:** With round and insulated blade, with Black Point tip for increased torque and accuracy. With 3-component Kraftform Plus handle, ergonomic, with integrated soft zones and anti-roll protection. **Blade and grip insulated to 1000 V according to IEC 60900.** In addition, the screwdrivers have a head embossed with output symbol and size.

VDE 1000 V

Wera

| Order No. | Size | 5905 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0005 | T 5 | 6.55 | 80 | 161 |
| 0006 | T 6 | 5.85 | 80 | 161 |
| 0007 | T 7 | 5.85 | 80 | 161 |
| 0008 | T 8 | 5.85 | 80 | 161 |
| 0009 | T 9 | 5.85 | 80 | 161 |
| 0010 | T 10 | 6.00 | 80 | 161 |
| | | (W543) | | |

| Order No. | Size | 5905 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0015 | T 15 | 6.10 | 80 | 178 |
| 0020 | T 20 | 6.15 | 80 | 178 |
| 0025 | T 25 | 6.30 | 100 | 205 |
| 0027 | T 27 | 6.55 | 100 | 205 |
| 0030 | T 30 | 6.95 | 100 | 205 |
| 0040 | T 40 | 7.30 | 150 | 262 |
| | | (W543) | | |

## TORX® screwdriver stainless

**Design:** Blade made of stainless steel, hard and tough (54 HRC) due to vacuum ice-hardening. With Kraftform Plus handle, with integrated soft zones and anti-roll protection. In addition, the screwdriver head is embossed with output symbol and size.

**Application:** Special product for preventing rust in the processing of stainless steel screws.

INOX

| Order No. | Size | 5906 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0008 | T 8 | 6.60 | 60 | 141 |
| 0009 | T 9 | 6.60 | 60 | 141 |
| 0010 | T 10 | 7.00 | 80 | 161 |
| 0015 | T 15 | 7.00 (W584) | 80 | 178 |

| Order No. | Size | 5906 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0020 | T 20 | 7.10 | 100 | 198 |
| 0025 | T 25 | 7.60 | 100 | 205 |
| 0027 | T 27 | 8.30 | 115 | 220 |
| 0030 | T 30 | 8.65 (W584) | 115 | 220 |

## TORX® screwdriver set

**Design:** With round blade made of high-alloy special steel. Ergonomic handle with integrated soft areas and roll protection. In addition, the screwdriver head is embossed with output symbol and size. Supplied in a box.

**5902** Burnished tip. With 2-component handle, ergonomic.

**5908** With Black Point tip for more torque and accuracy and 3-component Kraftform Plus handle. Supplied incl. rack.

**5910** With **drill hole** and Black Point tip for increased torque and accuracy. With 3 component Kraftform Plus handle Supplied incl. rack.

**5904** Tip nicromatt for more torque and accuracy, **with retention function.** With 3 component Kraftform Plus handle Ideal where magnetic retention is not possible. Supplied in a carton incl. rack.

5902 format professional quality

5908 Wera

5910 Wera

5904 Wera

| Order No. | Design | 5902 format | 5908 Wera | 5910 Wera | 5904 Wera | Set contents |
|---|---|---|---|---|---|---|
| 0005 | 6-part | 20.70 | 31.90 | 36.90 | – | T 10; 15; 20; 25; 30; 40 |
| 0100 | 6-part | – (W528) | – (W543) | – (W543) | 34.50 (W543) | T 10; 15; 20; 25; 30; 40 |

## Are you looking for a different profile?

Our range of flat-tip and Phillips screwdrivers as well as a large range of sets are available from page 6/117

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# Spark-free tools

Fire hazard in the workplace: Wherever sparks threaten an explosion or fire, tools made of special materials and alloys are required.

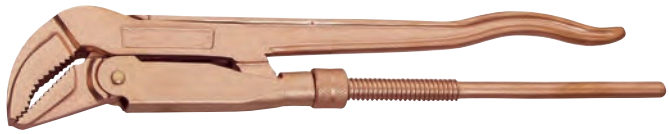
They practically eliminate spark formation and are used where it can be dangerous: This starts with the production of oil and gas and extends to military or civilian emergency services. Also the chemical industry, energy and utilities, pipeline companies, tank cleaners and paint shops rely on these tools.

**Missing an item in stock? Talk to us: we can help you.**

GEDORE

5/141

5/143



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**General information:** These non-arcing tools are extremely corrosion-resistant to many media, such as seawater etc. In addition, the tools made of copper-beryllium are antimagnetic. Both alloys (copper-beryllium and special bronze) have been tested by the German Federal Office for Materials Research and Testing in Berlin. A test is undertaken in line with DIN 50049.2.2 after each batch. This quality testing guarantees that these tools fulfil the highest quality demands at all times.

**Note:** In addition, specific tests can be carried out on each tool. (Prices for this are available upon request.)

**Application:** Non-arcing tools are used across the globe in sectors where sparks pose a risk of explosion or fire, for example in oil and gas production, petrol chemistry, chemical industry, pipeline operations, armed forces, armies, emergency services, tank cleaning and paint shops.

## Double open-end spanner, non-arcing

**Design:** Similar to DIN 3110, made of special bronze.
With flat heads and non-slip shaft.

GEDORE

| Order No. | Width of keys mm | 5970 GEDORE | Length mm |
|---|---|---|---|
| 0005 | 6 x 7 | on request ◊ | 125 |
| 0010 | 8 x 9 | on request ◊ | 125 |
| 0015 | 10 x 11 | on request ◊ | 140 |
| 0020 | 12 x 13 | on request ◊ | 160 |
| 0025 | 14 x 15 | on request ◊ | 200 |
| 0030 | 16 x 17 | on request ◊ | 200 |
| 0035 | 18 x 18 | on request ◊ | 225 |
| 0040 | 20 x 22 | on request ◊ | 240 |

(999)

| Order No. | Width of keys mm | 5970 GEDORE | Length mm |
|---|---|---|---|
| 0045 | 21 x 23 | on request ◊ | 240 |
| 0050 | 24 x 27 | on request ◊ | 270 |
| 0055 | 25 x 28 | on request ◊ | 270 |
| 0060 | 30 x 32 | on request ◊ | 300 |
| 0065 | 36 x 41 | on request ◊ | 370 |
| 0070 | 41 x 46 | on request ◊ | 370 |
| 0075 | 46 x 50 | on request ◊ | 390 |

(999)

## Combination spanner, non-arcing

**Design:** Similar to DIN 3113, made of special bronze.
Ring with bihex profile.

GEDORE

| Order No. | Width of keys mm | 5972 GEDORE | Length mm |
|---|---|---|---|
| 0005 | 6 | on request ◊ | 130 |
| 0015 | 7 | on request ◊ | 130 |
| 0020 | 8 | on request ◊ | 135 |
| 0025 | 9 | on request ◊ | 150 |
| 0035 | 10 | on request ◊ | 150 |
| 0040 | 12 | on request ◊ | 190 |
| 0045 | 13 | on request ◊ | 190 |
| 0055 | 17 | on request ◊ | 210 |
| 0060 | 19 | on request ◊ | 230 |

(999)

| Order No. | Width of keys mm | 5972 GEDORE | Length mm |
|---|---|---|---|
| 0065 | 22 | on request ◊ | 250 |
| 0070 | 24 | on request ◊ | 270 |
| 0075 | 27 | on request ◊ | 280 |
| 0080 | 30 | on request ◊ | 300 |
| 0085 | 32 | on request ◊ | 300 |
| 0090 | 36 | on request ◊ | 330 |
| 0095 | 41 | on request ◊ | 410 |
| 0100 | 46 | on request ◊ | 410 |
| 0105 | 50 | on request ◊ | 540 |

(999)

## Striking ring spanner, non-arcing

**Design:** Similar to DIN 7444.

**Application:** For extremely heavy-duty assembly work.

GEDORE

| Order No. | Width of keys mm | 5974 GEDORE | Length mm |
|---|---|---|---|
| 0005 | 24 | on request ◊ | 150 |
| 0010 | 27 | on request ◊ | 190 |
| 0015 | 30 | on request ◊ | 190 |
| 0020 | 32 | on request ◊ | 190 |
| 0025 | 36 | on request ◊ | 210 |
| 0035 | 41 | on request ◊ | 230 |
| 0040 | 46 | on request ◊ | 240 |

(999)

| Order No. | Width of keys mm | 5974 GEDORE | Length mm |
|---|---|---|---|
| 0045 | 50 | on request ◊ | 255 |
| 0051 | 55 | on request ◊ | 255 |
| 0056 | 60 | on request ◊ | 280 |
| 0061 | 65 | on request ◊ | 295 |
| 0066 | 70 | on request ◊ | 320 |
| 0071 | 75 | on request ◊ | 320 |

(999)

## Set of 1/2" box spanners, non-arcing

**Design:** Supplied in plastic case.

| Order No. | Design | 5976 GEDORE | Set contents |
|---|---|---|---|
| 0006 | 24-part 430 x 480 x 80 mm | on request ◊ | 1 ratchet (Order No. 5976 0011)<br>22 hexagonal box spanner inserts (Order No. 5978) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25; 26; 27; 28; 29; 30; 32 mm<br>1 extension 250 mm<br>1 T-handle 320 mm<br>1 hinged handle 380 mm |

(999)

## 1/2" flex ratchet handle, non-arcing

**Design:** Made of copper-beryllium.

| Order No. | Length mm | 5976 GEDORE |
|---|---|---|
| 0011 | 250 | on request ◊ |

(999)

## Hexagonal box spanner insert 1/2", non-arcing

**Design:** Made of special bronze.

| Order No. | Width of keys mm | 5978 GEDORE | Length mm |
|---|---|---|---|
| 0005 | 10 | on request ◊ | 40 |
| 0015 | 12 | on request ◊ | 40 |
| 0020 | 13 | on request ◊ | 40 |
| 0025 | 17 | on request ◊ | 40 |
| 0031 | 19 | on request ◊ | 42 |

(999)

| Order No. | Width of keys mm | 5978 GEDORE | Length mm |
|---|---|---|---|
| 0035 | 22 | on request ◊ | 42 |
| 0040 | 24 | on request ◊ | 42 |
| 0045 | 27 | on request ◊ | 46 |
| 0050 | 30 | on request ◊ | 46 |
| 0055 | 32 | on request ◊ | 46 |

(999)

## Hexagonal offset screwdriver, non-arcing

**Design:** Similar to DIN 911, ISO 2936, made of special bronze.

| Order No. | Width of keys mm | 5980 GEDORE | Length mm |
|---|---|---|---|
| 0150 | 1.5* | on request ◊ | 55 |
| 0200 | 2.0* | on request ◊ | 55 |
| 0250 | 2.5* | on request ◊ | 55 |
| 0300 | 3.0 | on request ◊ | 60 |
| 0400 | 4.0 | on request ◊ | 70 |

(999)

| Order No. | Width of keys mm | 5980 GEDORE | Length mm |
|---|---|---|---|
| 0500 | 5.0 | on request ◊ | 80 |
| 0600 | 6.0 | on request ◊ | 90 |
| 0800 | 8.0 | on request ◊ | 100 |
| 1000 | 10.0 | on request ◊ | 120 |
| 1200 | 12.0 | on request ◊ | 125 |

(999) * Made of copper-beryllium.

## Hexagonal offset screwdriver set, non-arcing

**Design:** Similar to DIN 911, ISO 2936, made of special bronze. Supplied in holder.

| Order No. | Set contents mm | 5980 GEDORE |
|---|---|---|
| 8000 | 2*; 2.5*; 3; 4; 5; 6; 8; 10 | on request ◊ |

* Made of copper-beryllium. (999)

## Recess screwdriver, non-arcing

**Design:** Made of copper-beryllium.

| Order No. | Blade width mm | 5982 GEDORE | Blade length mm |
|---|---|---|---|
| 0006 | 4.5 | on request ◊ | 100 |
| 0011 | 6.0 | on request ◊ | 150 |
| 0016 | 8.0 | on request ◊ | 150 |
| 0021 | 10.0 | on request ◊ | 200 |

(999)

## Cross recess screwdriver PH, non-arcing

**Design:** Made of copper-beryllium.

GEDORE

| Order No. | Size | 5984 GEDORE | Blade length mm |
|---|---|---|---|
| 0010 | PH 1 | on request ◊ | 80 |
| 0020 | PH 2 | on request ◊ | 100 |
| 0030 | PH 3 | on request ◊ | 150 |

(999)

## Engineer's hammer, non-arcing

**Design:** Similar to DIN 1041, head made of special bronze, blank and peen milled, with hickory handle.

GEDORE

| Order No. | Weight g | 5985 GEDORE |
|---|---|---|
| 0030 | 300 | on request ◊ |
| 0050 | 500 | on request ◊ |
| 0100 | 1000 | on request ◊ |
| 0150 | 1500 | on request ◊ |
| 0200 | 2000 | on request ◊ |

(999)

## Club hammer, non-arcing

**Design:** Head made of special bronze, blank milled, with hickory handle.

GEDORE

| Order No. | Weight g | 5987 GEDORE |
|---|---|---|
| 0150 | 1500 | on request ◊ |
| 0200 | 2000 | on request ◊ |
| 0300 | 3000 | on request ◊ |

(999)

## Sledge hammer, non-arcing

**Design:** Similar to DIN 1042, head made of special bronze, blank and peen milled, with hickory handle.

GEDORE

| Order No. | Weight g | 5988 GEDORE |
|---|---|---|
| 0300 | 3000 | on request ◊ |
| 0400 | 4000 | on request ◊ |
| 0500 | 5000 | on request ◊ |

(999)

## Universal pliers, non-arcing

**Design:** Made of copper-beryllium, handles with multi-component plastic covers.

GEDORE

| Order No. | Length mm | 5990 GEDORE |
|---|---|---|
| 0020 | 200 | on request ◊ |

(999)

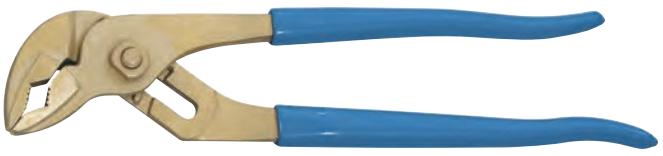
## Water pump pliers, non-arcing

**Design:** Made of copper-beryllium, handles covered with plastic.

GEDORE

| Order No. | Length mm | 5992 GEDORE | Jaw width max. mm |
|---|---|---|---|
| 0025 | 250 | on request ◊ | 30 |
| 0030 | 300 | on request ◊ | 50 |

(999)

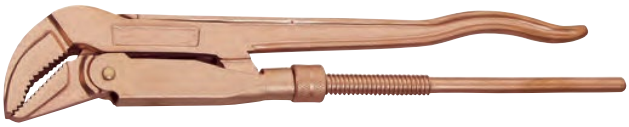


## Corner Sweden pipe pliers, non-arcing

**Design:** Made of copper-beryllium, with undetachable adjustment nut.

GEDORE

| Order No. | For pipes inch | 5993 GEDORE | Length mm |
|---|---|---|---|
| 0006 | 2 | on request ◊ (999) | 540 |



## Adjustable wrench, non-arcing

**Design:** Made of copper-beryllium.

GEDORE

| Order No. | Max. jaw span mm | 5994 GEDORE | Length mm |
|---|---|---|---|
| 0020 | 26 | on request ◊ | 200 |
| 0025 | 30 | on request ◊ | 250 |
| 0030 | 36 | on request ◊ (999) | 300 |

## Bung wrench, non-arcing

**Design:** Made of special bronze.

GEDORE

| Order No. | Length mm | 5995 GEDORE |
|---|---|---|
| 0005 | 380 | on request ◊ (999) |

## Flat chisel, non-arcing

**Design:** Made of special bronze, flat oval shape.

GEDORE

| Order No. | Length mm | 5996 GEDORE | Blade width mm |
|---|---|---|---|
| 0025 | 250 | on request ◊ | 25 |
| 0030 | 300 | on request ◊ (999) | 25 |

## Shovel, non-arcing

**Design:** Blade from special bronze, with straight beach handle.

**5997** Frankfurt shovel.

**5998** Round shovel.

GEDORE

| Order No. | Length mm | 5997 GEDORE | 5998 GEDORE |
|---|---|---|---|
| 0140 | 1400 | on request ◊ (999) | on request ◊ (999) |

5997

5998

## Crow bar, non-arcing

**Design:** Made of special bronze, with hexagonal profile.

GEDORE

| Order No. | Length mm | 5999 GEDORE | Hexagonal mm |
|---|---|---|---|
| 0045 | 450 | on request ◊ | 19 |
| 0060 | 600 | on request ◊ | 19 |
| 0090 | 900 | on request ◊ (999) | 22 |

## Painter trowel, non-sparking

**Design:** Spade made of copper-beryllium, with flat, oval-shaped wooden handle.

„PARIERE"

| Order No. | Width mm | 5986 „PARIERE" |
|---|---|---|
| 0040 | 40 | 29.40 |
| 0060 | 60 | 37.80 |
| 0080 | 80 | 56.00 (W586) |

**NEW**

**All items marked with this icon have been added to our range.**

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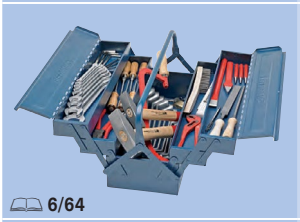

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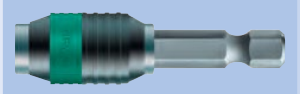
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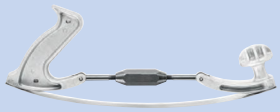
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## Overview screw profile

| | | | |
|---|---|---|---|
| Protruding hexagon | Protruding bi-hexagon | Recessed hexagon | Recessed hexagon with hole |
| Slot | Phillips PH (Phillips) | Phillips PH/S (Phillips slot) | Phillips PZ (Pozidriv) |
| Phillips PZ/S (Pozidriv slot) | Recessed TORX® | Recessed TORX® with hole | Recessed TORX® with studs |
| Protruding TORX® | Recessed TORX PLUS® | XZN/serrated | Recessed square |
| Protruding square | Protruding triangle | Double bit | Spanner |
| TORQ-SET® | TRI-WING® | Crescent | |

## Hexagon socket wrench set 1/4"

**Design:** Tools made of chrome vanadium steel, matte chrome-plated, sockets with curved edge; the recessed hexagons and squares have rounded corners to protect drive and screw head. **The socket wrench inserts are 72-fold serrated, rear swivel angle 5°.** Supplied in a rugged, red/black plastic case with schematic placement indication on the lid. The tools are safely housed in a 2-colour foam insert, so that missing tools are recognised immediately.

6,3 mm
1/4"

format professional quality

6003 0050

6003 0060

6003 0070

| Order No. | Design | 6003 format | Set contents |
|---|---|---|---|
| 0050 | **25-part**<br>**270 x 160 x 60 mm** | **51.40** | 1 reversible ratchet (Order No. 6018 0030)<br>12 hexagon socket wrench inserts (Order No. 6039)<br>4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>1 slot bit (Order No. 6047) 4 mm<br>2 Phillips bits (Order No. 6049) PH 1; 2<br>2 Phillips bits (Order No. 6051) PZ 1; 2<br>5 bits recessed TORX® (Order No. 6053) T 10; 15; 20; 25; 30<br>1 extension (Order No. 6015) 105 mm<br>1 bit adapter for 1/4" bits (Order No. 6033 0050) |
| 0060 | **28-part**<br>**270 x 160 x 60 mm** | **66.80** | 1 reversible ratchet (Order No. 6018 0030)<br>13 hexagon socket bits (Order No. 6039)<br>4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>4 hexagon socket wrench inserts, long (Order No. 6036) 6; 7; 8, 10 mm<br>5 Allen screwdriver sockets (Order No. 6044) 3; 4; 5; 6; 8 mm<br>1 socket handle (Order No. 6027)<br>1 T-handle with sliding block (Order No. 6020)<br>2 extensions (Order 6015) 50; 105 mm<br>1 universal joint (Order No. 6033) |
| 0070 | **31-part**<br>**270 x 160 x 60 mm** | **72.00** | 1 reversible ratchet (Order No. 6018 0030)<br>13 hexagon socket bits (Order No. 6039)<br>4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>4 Allen screwdriver bits recessed hexagon (Order No. 6044) 3; 4; 5; 6; mm<br>2 screwdriver bits slot (Order No. 6047) 4; 5.5 mm<br>2 Phillips screwdriver bits (Order No. 6049) PH 1; 2<br>4 screwdriver bits recessed TORX® (Order No. 6053) T 20; 25; 27; 30<br>1 socket handle (Order No. 6027)<br>1 T-handle with sliding block (Order No. 6020)<br>2 extensions (Order 6015) 50; 105 mm<br>1 universal joint (Order No. 6033) |

(W532)

## Hexagon socket wrench set 1/4"

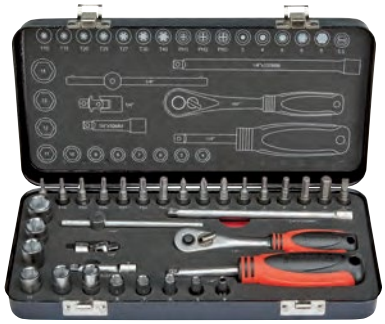
**Design:** Tools made of chrome-vanadium steel, which have hexagon and square sockets with rounded corners for protection of drive and screw head. Supplied in sturdy, painted metal case with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. In the cover there is another foam insert with a schematic indication of tool placement.

6,3 mm
1/4"

format professional quality

6003 0010

6003 0020



6003 0030

| Order No. | Design | 6003 format | Set contents |
|---|---|---|---|
| 0010 | 16-part<br>235 x 105 x 40 mm | 66.60 | 1 reversible ratchet (Order No. 6018 0010)<br>11 hexagon sockets (Order No. 6039) 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 13 mm<br>1 socket handle (Order No. 6027)<br>1 T-handle with sliding block (Order No. 6020)<br>1 extension (Order No. 6015) 105 mm<br>1 universal joint (Order No. 6033) |
| 0020 | 33-part<br>290 x 135 x 40 mm | 97.50 | 1 reversible ratchet (Order No. 6018 0010)<br>11 hexagon sockets (Order No. 6039) 4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver sockets (Order No. 6044) 3; 4; 5; 6; 8 mm<br>4 slot screwdriver bits (Order 6047) 0.6 x 3.5; 0.8 x 4; 1.0 x 5.5; 1.2 x 8 mm<br>4 Phillips PH screwdriver bits (Order No. 6049) 1; 2; 3; 4<br>3 Phillips PZ screwdriver bits (Order No. 6051) 1; 2; 3<br>1 socket handle (Order No. 6027)<br>1 T-handle with sliding block (Order No. 6020)<br>2 extensions (Order 6015) 50; 150 mm<br>1 universal joint (Order No. 6033) |
| 0030 | 33-part<br>290 x 135 x 40 mm | 99.70 | 1 reversible ratchet (Order No. 6018 0010)<br>11 hexagon sockets (Order No. 6039) 4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver sockets (Order No. 6044) 3; 4; 5; 6; 8 mm<br>1 slot screwdriver bit (Order No. 6047) 1.0 x 5.5 mm<br>3 Phillips PH screwdriver bits (Order No. 6049) 1; 2; 3<br>7 recessed TORX® T screwdriver bits (Order No. 6053) 10; 15; 20; 25; 27; 30; 40<br>1 socket handle (Order No. 6027)<br>1 T-handle with sliding block (Order No. 6020)<br>2 extensions (Order 6015) 50; 150 mm<br>1 universal joint (Order No. 6033) |

(W532)

## Hexagon socket wrench set 1/4"

**Design:** Tools made of special steel. Supplied in **"addigrip® compact"** full steel cassettes, permanent fast tool exchange due to professional positioning in the smallest of space.

6,3 mm
1/4"

carolus by GEDORE

6010 0010

6010 0020

6010 0030

6010 0040

| Order No. | Design | 6010 carolus | Set contents |
|---|---|---|---|
| 0010 | **32-part**<br>**197 x 105 x 30 mm** | **84.90** | 1 Readyflex® clearance ratchet® (Order No. 6024 0020)<br>12 hexagon socket wrench inserts 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>6 Allen screwdriver bits 3; 4; 5; 6; 8; 10 mm<br>3 slot screwdriver bits 4; 5.5; 6.5 mm<br>4 Phillips PH screwdriver bits 0; 1; 2; 3<br>1 Minimus® socket handle<br>1 T-handle with sliding block<br>2 extensions 50; 100 mm<br>1 universal joint<br>1 bit socket 1/4" with magnetic intake |
| 0020 | **32-part**<br>**197 x 105 x 30 mm** | **84.50** | 1 Readyflex® clearance ratchet® (Order No. 6024 0020)<br>12 hexagon socket wrench inserts 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>6 Allen screwdriver bits 3; 4; 5; 6; 8; 10 mm<br>7 recessed TORX® screwdriver bits with hole T 10; 15; 20; 25; 27; 30; 40<br>1 Minimus® socket handle<br>1 T-handle with sliding block<br>2 extensions 50; 100 mm<br>1 universal joint<br>1 bit socket 1/4" with magnetic intake |
| 0030 | **32-part**<br>**197 x 105 x 30 mm** | **69.20** | 1 lever wrench (Order No. 6024 0015)<br>12 hexagon socket wrench inserts 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>6 Allen screwdriver bits 3; 4; 5; 6; 8; 10 mm<br>3 slot screwdriver bits 4; 5.5; 6.5 mm<br>4 Phillips PH screwdriver bits 0; 1; 2; 3<br>1 Minimus® socket handle<br>1 T-handle with sliding block<br>2 extensions 50; 100 mm<br>1 universal joint<br>1 machine adapter 1/4" square x 1/4" hexagon, 50 mm |
| 0040 | **32-part**<br>**197 x 105 x 30 mm** | **69.20** | 1 lever wrench (Order No. 6024 0015)<br>12 hexagon socket wrench inserts 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>6 Allen screwdriver bits 3; 4; 5; 6; 8; 10 mm<br>7 recessed TORX® screwdriver bits with hole T 10; 15; 20; 25; 27; 30; 40<br>1 Minimus® socket handle<br>1 T-handle with sliding block<br>2 extensions 50; 100 mm<br>1 universal joint<br>1 machine adapter 1/4" square x 1/4" hexagon, 50 mm |

(W531)

## Hexagon socket wrench set 1/4"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in impact-resistant plastic case, with Check-Tool insert.

6,3 mm
1/4"

GEDORE

6006 0010

6009 0020

6009 0030

| Order No. | Design | 6006 GEDORE | 6009 GEDORE | Set contents |
|---|---|---|---|---|
| 0010 | **16-part**<br>**200 x 120 x 38 mm** | **143.00** | – | 1 lever wrench (Order No. 6013)<br>11 hexagon sockets (Order No. 6040)<br>4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 13 mm<br>1 socket handle (Order No. 6028)<br>1 T-handle with sliding block<br>1 extension (Order No. 6016) 97 mm<br>1 universal joint (Order No. 6034) |
| 0020 | **32-part**<br>**275 x 150 x 42 mm** | – | **248.00** | 1 lever wrench (Order No. 6013)<br>11 hexagon sockets (Order No. 6040)<br>4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver sockets (Order No. 6045) 3; 4; 5; 6; 8 mm<br>4 slot screwdriver bits (Order 6048) 4; 5.5; 6.5; 8 mm<br>3 Phillips PH screwdriver bits (Order No. 6050) 1; 2; 3<br>3 Phillips PZ screwdriver bits (Order No. 6052) 1; 2; 3<br>1 socket handle (Order No. 6028)<br>1 T-handle with sliding block<br>2 extensions (Order 6016) 55; 148 mm<br>1 universal joint (Order No. 6034) |
| 0030 | **36-part**<br>**275 x 150 x 42 mm** | – | **261.00** | 1 lever wrench (Order No. 6013)<br>11 hexagon sockets (Order No. 6040)<br>4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver sockets (Order No. 6045) 3; 4; 5; 6; 8 mm<br>6 protruding TORX® screwdriver bits (Order No. 6046) E 4; 5; 6; 7; 8; 10<br>8 recessed TORX® screwdriver bits (Order No. 6054)<br>T 8; 9; 10; 15; 20; 25; 27; 30<br>1 socket handle (Order No. 6028)<br>1 T-handle with sliding block<br>2 extensions (Order 6016) 55; 148 mm<br>1 universal joint (Order No. 6034) |
| | | (W522) | (W522) | |

## Bi-hexagon socket wrench set 1/4"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in impact-resistant plastic case, with Check-Tool insert.

6,3 mm
1/4"

GEDORE

| Order No. | Design | 6007 GEDORE | Set contents |
|---|---|---|---|
| 0040 | 37-part<br>200 x 120<br>x 38 mm | 138.00 | 1 lever wrench (Order No. 6022)<br>10 bi-hexagon socket wrench inserts<br>4; 5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>4 Allen bits 3; 4; 5; 6 mm<br>3 slot bits 4; 5.5; 6.5 mm<br>2 Phillips PH bits 1; 2<br>3 Phillips PZ bits 1; 2; 3<br>7 recessed TORX® T bits 10; 15; 20; 25; 27; 30; 40<br>3 recessed XZN serration bits 5; 6; 8<br>1 extension (Order No. 6016)<br>1 connector 1/4"<br>1 drive handle 1/4"<br>1 bit adapter 1/4" with 1/4" adapter |
| 0030 | 40-part<br>200 x 120<br>x 38 mm | 169.00 | 1 lever wrench (Order No. 6023)<br>10 bi-hexagon socket wrench inserts<br>4; 5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>5 Allen bits 3, 4, 5, 6, 8 mm<br>2 slot bits 4; 6.5 mm<br>2 Phillips PH bits 1; 2<br>3 Phillips PZ bits 1; 2; 3<br>7 recessed TORX® T bits 10; 15; 20; 25; 27; 30; 40<br>3 recessed XZN serration bits 5; 6; 8<br>1 extension (Order No. 6016)<br>1 universal joint (Order No. 6034)<br>1 connector 1/4"<br>1 Combi tool holder<br>1 adapter<br>1 screwdriver handle<br>1 Bit holder |
| 0050 | 37-part<br>200 x 120<br>x 38 mm | 140.00 | 1 lever wrench (Order No. 6022)<br>10 bi-hexagon socket wrench inserts 3/16" ; 7/32" ; 1/4" ; 9/32" ; 5/16" ; 11/32" ; 3/8" ; 13/32" ; 7/16" ; 1/2"<br>4 Allen bits 1/8" ; 5/32" ; 3/16" ; 1/4"<br>3 slot bits 4; 5.5; 6.5 mm<br>2 Phillips PH bits 1; 2<br>3 Phillips PZ bits 1; 2; 3<br>7 recessed TORX® T bits 10; 15; 20; 25; 27; 30; 40<br>3 recessed XZN serration bits 5; 6; 8<br>1 extension (Order No. 6016)<br>1 connector 1/4"<br>1 drive handle 1/4"<br>1 bit adapter 1/4" with 1/4" adapter |

(W522)

6007 0040

6007 0030

6007 0050

American inch sizes

## Bi-hexagon socket wrench set 1/4"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in impact-resistant plastic case, with Check-Tool insert.

6,3 mm
1/4"

GEDORE

| Order No. | Design | 6009 GEDORE | Set contents |
|---|---|---|---|
| 0040 | 49-part<br>275 x 150<br>x 42 mm | 272.50 | 1 lever wrench (Order No. 6023)<br>10 hexagon socket wrench inserts, long (Order no. 6041)<br>4; 4.5; 5; 6; 7; 8; 9; 10; 12; 13 mm<br>10 bi-hexagon socket wrench inserts<br>4; 5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>5 Allen bits 3, 4, 5, 6, 8 mm<br>2 slot bits 4; 6.5 mm<br>2 Phillips PH bits 1; 2<br>3 Phillips PZ bits 1; 2; 3<br>7 recessed TORX® T bits 10; 15; 20; 25; 27; 30; 40<br>3 recessed XZN serration bits 5; 6; 8<br>2 extensions (Order 6016) 55; 148 mm<br>1 universal joint (Order No. 6034)<br>1 screwdriver handle<br>1 Bit holder with magnet 1/4"<br>1 connector 1/4" |

(W522)

6009 0040

## Power socket spanner bit set 1/4"

NEW

GEDORE

**Design:** Particularly thin-walled socket spanner bits. Suitable for mechanical and manual use. Supplied in a plastic box.

6,3 mm
1/4"

| Order No. | Quantity | 6009 GEDORE | Set contents |
|---|---|---|---|
| 0050 | 35-part<br>143 x 107<br>x 42 mm | 104.00 | 1 lever reversible ratchet<br>11 Power hexagon socket wrench inserts<br>4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>4 bits for Allen 4, 5, 6, 8 mm<br>3 bits for slots 4.5; 5.5; 6.5 mm<br>3 Phillips PH bits 1, 2, 3<br>3 Phillips PZ bits PZ 1; 2; 3<br>7 recessed TORX® bits T 10; 15; 20; 25; 27 30; 40<br>1 Universal extension 50 mm<br>1 bit adapter for 1/4" bits<br>1 Adapter 1/4" -protruding hexagon to 1/4" -protruding square |

(W522)

## Hexagon socket wrench set 1/4"

HAZET

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. Convenient operation thanks to perfectly aligned actuation tools. Supplied in folding plastic case SmartCase.

6,3 mm
1/4"

| Order No. | Design | 6014 HAZET | Set contents |
|---|---|---|---|
| 0080 | 38-part<br>180 x 98<br>x 52 mm | 164.80 | 1 lever wrench (Order No. 6011 0030)<br>10 hexagon socket wrench inserts (Order No. 6837)<br>5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 recessed hexagon bits (Order No. 6843) 3; 4; 5; 6; 7 mm<br>3 slot bits (Order No. 6845) 4.5; 6.5; 8 mm<br>3 Phillips bits (Order No. 6849) PH 1; 2 3<br>3 Phillips bits (Order No. 6853) PZ 1; 2; 3<br>7 recessed TORX® T bits with safety pin<br>T 10; 15; 20; 25; 27; 30; 40<br>1 connector 1/4"<br>2 extensions (Order No. 6831) 55; 101.5 mm<br>1 socket handle (Order No. 6835 0005)<br>1 universal joint (Order No. 6835 0015)<br>1 bit adapter 1/4 |

(W529)

## Hexagon socket wrench set 1/4" HINOX®

HAZET

**Design:** Tools made of **stainless steel.** Supplied in SmartCase The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

**Application:** Special product for preventing rust in the processing of stainless steel screws.

6,3 mm
1/4"

| Order No. | Design | 6014 HAZET | Set contents |
|---|---|---|---|
| 0090 | 24-part<br>185 x 153<br>x 52 mm | 244.60 | 1 lever wrench (Order No. 6011 0040)<br>13 hexagon sockets<br>4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 recessed hexagon screwdriver bits 3; 4; 5; 6; 8 mm<br>2 extensions 55; 147 mm<br>1 drive handle<br>1 T handle with sliding block<br>1 universal joint |

(W529)

## Hexagon socket wrench set 1/4"

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

6,3 mm
1/4"

HAZET

**6014 0040** NEW
Supplied in a plastic box.

**6014 0060**
Screwdriver bits TiN-coated. Supplied in SmartCase.

6014 0040

| Order No. | Design | 6014 HAZET | Set contents |
|---|---|---|---|
| 0040 | 13-part<br>125 x 87<br>x 38 mm | 119.70 | 1 reversible ratchet<br>10 hexagon socket spanner inserts<br>5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>1 extension 55 mm<br>1 universal joint |
| 0060 | 30-part<br>185 x 153<br>x 52 mm | 219.80 | 1 reversible ratchet (Order No. 6011 0030)<br>12 hexagon socket wrench inserts (Order No. 6837)<br>4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver sockets (Order No. 6843) 3; 4; 5; 6; 8 mm<br>3 slot screwdriver bits (Order No. 6845) 3.5; 5.5; 8 mm<br>2 Phillips screwdriver bits (Order No. 6849) PH 1; 2<br>2 Phillips screwdriver bits (Order No. 6853) PZ 1; 2<br>2 extensions (Order 6831) 55; 147 mm<br>1 socket handle (Order No. 6835 0005)<br>1 T-handle with sliding block<br>1 universal joint (Order No. 6835 0015) |
| 0100 | 33-part<br>185 x 153<br>x 52 mm | 241.60 | 1 reversible ratchet (Order No. 6011 0030)<br>11 hexagon sockets (Order No. 6837)<br>4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver sockets (Order No. 6843) 3; 4; 5; 6; 8 mm<br>4 slot screwdriver bits (Order 6845) 3.5; 4; 5.5; 8 mm<br>4 Phillips PH screwdriver bits (Order No. 6849) 1; 2; 3; 4<br>3 Phillips PZ screwdriver bits (Order No. 6853) 1; 2; 3<br>2 extensions (Order 6831) 55; 147 mm<br>1 socket handle (Order No. 6835 0005)<br>1 T-handle with sliding block<br>1 universal joint (Order No. 6835 0015) |
| 0070 | 33-part<br>185 x 153<br>x 52 mm | 265.30 | 1 reversible ratchet (Order No. 6011 0030)<br>11 hexagon sockets (Order No. 6837)<br>5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>4 Allen screwdriver bits recessed hexagon (Order No. 6843)<br>3; 4; 5; 6; mm<br>1 slot screwdriver bit (Order No. 6845) 5.5 mm<br>1 Phillips screwdriver bit (Order no. 6849) PH 2<br>5 screwdriver bits recessed TORX® (Order No. 6857)<br>T 10; 15; 20; 25; 30<br>5 protruding socket inserts TORX® E 5; 6; 7; 8; 10<br>2 extensions (Order 6831) 55; 147 mm<br>1 Universal extension 102 mm (Order no. 6835 0100)<br>1 socket handle (Order No. 6835 0005)<br>1 universal joint (Order No. 6835 0015) |

(W529)

6014 0060

6014 0100 NEW

6014 0070

## Hexagon socket wrench set 1/4" Zyklop Metal

**Design:** Tools made of chrome-vanadium steel. Full metal ratchet made of chrome-molybdenum, forged. Extremely slim, with long lever for easy access to narrow areas and transfer of higher torque, ball lock for secure fit of nuts. Low weight for high mobility, high robustness. Delivery in a very compact fabric box, protects sensitive surfaces.

**6000 0004** With push-through square (Push). 76-fold serrated, rear swivel angle 4.7°.

**6000 0006** With switch lever (Switch) 72-fold serrated, rear swivel angle 5°.

6,3 mm 1/4" | Hex–Plus | Wera Zyklop

6000 0004

6000 0006

| Order No. | Design | 6000 Wera | Set contents |
|---|---|---|---|
| 0004 | 28-part | 99.00 | 1 full-metal ratchet with push-through square (Order No. 6000 0016)<br>9 hexagon sockets 5; 5.5; 6; 7; 8; 10; 11; 12; 13 mm<br>3 Phillips PH bits 1, 2, 3<br>2 Phillips PZ bits for 1, 2<br>4 bits for Allen 3, 4, 5, 6 mm<br>6 recessed TORX® bits T 10; 15; 20; 25; 27 30<br>1 wobble extension 56 mm<br>1 extension with freewheel sleeve 150 mm<br>1 bit adapter for 1/4" bits |
| 0006 | 28-part | 85.10 | 1 full-metal ratchet with reversing lever (Order No. 6000 0017)<br>9 hexagon sockets 5; 5.5; 6; 7; 8; 10; 11; 12; 13 mm<br>3 Phillips PH bits 1; 2; 3<br>2 Phillips PZ bits 1; 2<br>4 Allen bits 3; 4; 5; 6 mm<br>6 recessed TORX® bits T 10, 15, 20, 25 , 27, 30<br>1 wobble extension 56 mm<br>1 extension with freewheel sleeve 150 mm<br>1 bit adapter for 1/4" bits (Order No. 6000 0030) |

(W526)

## Hexagon socket wrench set 1/4" Zyklop Speed

**Design:** With tough bits and nuts. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides in 5 positions (90°, 75° in both directions and 0°). Bidirectional switching and triggering the nut is possible in any position. **72-fold serrated, rear swivel angle 5°.** Allows screwing bits and nuts with just one tool. Delivery in a very compact fabric box, protects sensitive surfaces.

**Application:** Tough bits suitable for universal applications. Suitable for turning screws by hand and machine.

6,3 mm 1/4" | Wera Zyklop

| Order No. | Design | 6000 Wera | Set contents |
|---|---|---|---|
| 0002 | 28-part | 117.00 | 1 Zyklop speed ratchet (Order No. 6000 0015)<br>9 hexagon sockets 5; 5.5; 6; 7; 8; 10; 11; 12; 13 mm<br>3 Phillips PH bits 1, 2, 3<br>2 Phillips PZ bits for 1, 2<br>4 bits for Allen 3, 4, 5, 6 mm<br>6 recessed TORX® bits T 10; 15; 20; 25; 27 30<br>1 wobble extension 56 mm<br>1 extension with freewheel sleeve 150 mm<br>1 bit adapter for 1/4" bits (Order No. 6000 0030) |

(W526)

## Bit assortment Kraftform Kompakt Zyklop Speed

**Design:** With tough bits. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides in 5 positions (90°, 75° in both directions and 0°). Bidirectional switching and triggering the nut is possible in any position. **72-fold serrated, rear swivel angle 5°.** Allows screwing bits and nuts with just one tool. The bits, sockets and ratchets are clearly laid out in a folding bag.

**Application:** Tough viscous bits, especially suitable for turning screws in metal and sheet metal. Suitable for turning screws by hand and machine.

6,3 mm 1/4" | 50 mm

Wera Zyklop

| Order No. | Design | 6483 Wera | Set contents |
|---|---|---|---|
| 0025 | 26-part | 90.20 | 1 Zyklop-ratchet (Order No. 6000 0015)<br>7 hexagon socket wrench inserts 5.5, 6, 7, 8, 10, 12, 13 mm<br>1 slot bit 5.5 x 1.0 mm<br>3 Phillips PH bits 1; 2; 3<br>2 Phillips PZ bits 1; 2<br>4 Allen bits 3; 4; 5; 6 mm<br>6 recessed TORX® bits T 10, 15, 20, 25 , 27, 30<br>1 extension with freewheel sleeve 150 mm<br>1 bit adapter for 1/4" bits (Order No. 6000 0030) |

(W545)

## Hexagon socket wrench set 1/4" Zyklop Speed

**Design:** Tools made of chrome-vanadium steel. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be fixed in 5 positions (90° and 75° in both directions, and 0°). Can be utilised as bit holder in 0° position. **72-fold serrated, rear swivel angle 5°.** Ergonomic Kraftform Plus handle with ball lock for secure fit of the nuts. Bidirectional switching and triggering the nut is possible in any position.
The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. Supplied in a stable metal case with anti-slip rubber feet.

6,3 mm 1/4"

Wera Zyklop

| Order No. | Design | 6000 Wera | Set contents |
|---|---|---|---|
| 0010 | 42-part<br>225 x 161<br>x 48 mm | 181.50 | 1 Zyklop-ratchet (Order No. 6000 0015)<br>13 hexagon socket wrench inserts<br>4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 recessed Allen bits 1/4" 3; 4; 5; 6; 8 mm<br>3 1/4 slot bits 4.5 x 0.6; 5.5 x 1; 8 x 1.2 mm<br>3 1/4" Phillips PH bits 1; 2; 3<br>3 1/4" Phillips PZ bits 1; 2; 3<br>8 recessed 1/4" TORX® bits with hole<br>8; 9; 10; 15; 20; 25; 30; 40<br>1 T-handle with sliding block<br>2 extensions with freewheel sleeve and fixing " flexible-lock"<br>(Order No. 6000 0019 and 6000 0024)<br>75; 150 mm<br>1 wobble extension 56 mm<br>1 universal joint<br>1 bit adapter for 1/4" bits (Order No. 6000 0030) |

(W526)

## Reversible ratchet 1/4"

**Design:** DIN 3122 D 6.3 - ISO 3315, with ball locking device.

6,3 mm
1/4"

**6018 0010** Made of chrome-vanadium-steel, chrome plated. With oval head, push-button release and reversing lever. **32-fold serrated, rear swivel angle 11.25°.** With ergonomic 2-component handle.

**6018 0030** Made of chrome-vanadium-steel, chrome plated. With oval head, push-button release and reversing lever. **72-fold serrated, rear swivel angle 5°.** With ergonomic 2-component handle.

**6023** Made of GEDORE vanadium steel 31CrV3, chrome-plated. With oval head and reversing lever, locking in middle position, **24-fold serrated, rear swivel angle 15°.** Handle with non-slip 2-component plastic cover.

**6013** Made of GEDORE vanadium steel 31CrV3, chrome-plated. With round head and switching washer **70-fold serrated, rear swivel angle 5°.** Handle with non-slip 2-component plastic cover.

**6022** Made of GEDORE vanadium steel 31CrV3, chrome-plated. With oval head, push-button release and reversing lever, locking in middle position, **40-fold serrated, rear swivel angle 9°.** Handle with non-slip 2-component plastic cover.

**6011 0020** Made of chrome-vanadium-steel, chrome plated. With oval head, push-button release and reversing lever. **20-fold serrated, rear swivel angle 18°.** With ergonomic 2-component handle.

**6011 0030** Made of chrome-vanadium-steel, chrome plated. With oval head and reversing lever. **20-fold serrated, rear swivel angle 18°.** With ergonomic 2-component handle.

INOX

**6011 0040** Made of **stainless steel.**With oval head and reversing lever. **20-fold serrated, rear swivel angle 18°.** With ergonomic 2-component handle.

**6011 0050** Made of chrome-vanadium-steel, chrome plated. With round head and switching disk **72-fold serrated, rear swivel angle 5°.** With ergonomic 2-component handle.

**6024** Made of special steel With oval head and reversing lever, robust mechanics. Handle with 2-component plastic cover.

| Order No. | Length mm | 6018 format | 6023 GEDORE | 6013 GEDORE | 6022 GEDORE | 6011 HAZET | 6024 carolus |
|---|---|---|---|---|---|---|---|
| 0020 | 115 | – | – | – | – | 47.05 | – |
| 0030 | 115 | – | – | – | – | 41.15 | – |
| 0040 | 115 | – | – | – | – | 49.65 | – |
| 0050 | 119 | – | – | – | – | 62.00 | – |
| 0015 | 120 | – | – | – | – | – | 19.35 |
| 0010 | 127 | – | – | – | 45.80 | – | – |
| 0010 | 129 | – | 48.70 | 36.30 | – | – | – |
| 0010 | 150 | 22.50 | – | – | – | – | – |
| 0030 | 150 | 15.35 | – | – | – | – | – |
| | | (W532) | (W522) | (W522) | (W522) | (W529) | (W531) |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Repair set for 1/4" ratchet

**Application:** Complete ratchet repair set, suitable for Order No. 6011 0030 and 6011 0060 📖 6/11.

**Scope of delivery:** 1 ratchet wheel, 1 locking piece, 1 shift lever, 2 screws, 1 ball and 1 spring.

6,3 mm
1/4"

| Order No. | Design | 6011 HAZET |
|---|---|---|
| 0100 | 7-part | 15.40 (W529) |

## Push-through twist grip ratchet 1/4"

**Design:** DIN 3122 D 6.3 - ISO 3315, made of chrome vanadium steel, chrome-plated, round head, non-detachable feed-through square and ball lock. **60-fold serrated, rear swivel angle 6°.** Handle with 2-component plastic cover, **rotatable in both directions for space-saving and quick activation of actuation squares.**

**Application:** Especially suitable for work in confined spaces.

6,3 mm
1/4"

| Order No. | Length mm | 6018 format |
|---|---|---|
| 0040 | 180 | 36.90 (W532) |

## Hinged reversible ratchet 1/4"

**Design:** DIN 3122 D 6.3 - ISO 3315, with ball locking device.

**6024** Made of special steel with round head and ring switching. The head can be adjusted in 7 positions by means of the "**flexstop®**"- system. The locking mechanism uses the yellow flex button, **72-fold serrated, rear swivel angle 5°.** Handle with plastic cover.

**6011** Made of chrome-vanadium-steel, chrome plated. With oval head and reversing lever. The head can be adjusted by means of an articulated joint. **20-fold serrated, rear swivel angle 18°.** With ergonomic 2-component handle.

6,3 mm
1/4"

6024 carolus by GEDORE

6011 HAZET

| Order No. | Length mm | 6024 carolus by GEDORE | 6011 HAZET |
|---|---|---|---|
| 0020 | 135 | 34.30 | – |
| 0060 | 135 | – (W531) | 66.45 (W529) |

## Ratchet 1/4" Zyklop Metal

**Design:** Full metal ratchet made of chrome-molybdenum, forged. Finely toothed, with a particularly small return angle. Extremely narrow head, with long lever for easy access to narrow areas and transfer of higher torque, ball lock for secure fit of nuts. Low weight for high mobility, high robustness.

**6000 0016** With push-through square (Push). **76-fold serrated, rear swivel angle 4.7°.**

**6000 0017** With switch lever (Switch) **72-fold serrated, rear swivel angle 5°.**

6,3 mm
1/4"

Wera Zyklop

6000 0016

6000 0017

| Order No. | Length mm | 6000 Wera |
|---|---|---|
| 0016 | 141 | 50.40 |
| 0017 | 141 | 37.10 (W526) |

## Zyklop Metal

Especially narrow head

Double ratchet teeth, rear swing angle max. 5°

Longer handle for high power transmission

Wera Zyklop

## Reversible ratchet 1/4" Zyklop Speed

**Design:** DIN 3122 D 6.3 - ISO 3315, with ball locking device. Made of vanadium-chrome steel with Kraftform handle and freewheeling sleeve. Switching occurs via a hub Bidirectional switching and triggering the nut is possible in any position. The ratchet head is ergonomically shaped and, due to flywheel mass design in connection with the freewheel sleeve allows for fast-paced work. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides with 5 positions (90°, 75° in both directions and 0°). **72-fold serrated, rear swivel angle 5°.** With Kraftform handle for fatigue-free working.

6,3 mm
1/4"

Wera Zyklop

| Order No. | Length mm | 6000 Wera |
|---|---|---|
| 0015 | 152 | 47.60 (W526) |

## Extension 1/4" Zyklop

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With **freewheel sleeve** for quick fastening and releasing and **flexible lock system.** The plug-in tools are permanently connected with the extension with the activated flexible lock system; the nut can be changed quickly with deactivation.

| Order No. | Length mm | 6000 Wera |
|---|---|---|
| 0019 | 75 | 6.60 |
| 0024 | 150 | 7.55 (W526) |

## Bit adapter 1/4" Zyklop

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With **quick change chuck** for a quick tool change.

**Application:** For all 1/4" bits according to DIN 3126 - 6.3 and E 6.3 ISO 1173.

| Order No. | Length mm | 6000 Wera |
|---|---|---|
| 0030 | 37 | 11.75 (W526) |

## Push through ratchet 1/4"

**6012** DIN 3122 C 6.3 - ISO 3315, made of GEDORE vanadium steel 31CrV3, chrome-plated, rugged design with round head, **push-through square** and ball lock, **20-fold serrated, rear swivel angle 18°.** Handle with plastic cover. Supplied with push-through square.

**6030** Push-through square 1/4" for push-through ratchet 1/4" . Made of GEDORE vanadium steel 31CrV3, polished and chrome plated

6,3 mm
1/4"

GEDORE

6012

6030

| Order No. | Length mm | 6012 GEDORE | 6030 GEDORE |
|---|---|---|---|
| 0010 | 129 | 23.70 | – |
| 0010 | 20 | – (W522) | 3.17 (W522) |

## 1/4" extension

**Design:** DIN 3123 B 6.3 – ISO 3316, with ball locking device.

**6015** Made of chrome-vanadium-steel, chrome plated.

**6016** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6831** Made of vanadium-chrome steel, polished and chrome plated.

6,3 mm
1/4"

6015 format professional quality

6016 GEDORE

6831 HAZET

| Order No. | Nominal length mm | 6015 format | 6016 GEDORE | 6831 HAZET |
|---|---|---|---|---|
| 0025 | 25 | – | – | 9.20 |
| 0050 | 50 | 3.27 | – | – |
| 0055 | 55 | – | 6.65 | 9.50 |
| 0100 | 100 | – | 6.85 | 10.55 |
| 0105 | 105 | 3.82 | – | – |
| 0150 | 150 | 4.12 | 6.90 | 12.00 |
| 0300 | 300 | – | 9.50 | – |
| 0400 | 400 | – (W532) | – (W522) | 16.40 (W529) |

## Flexible extension 1/4"

**Design:** DIN 3123 D 6.3 - ISO 3316, with ball locking device.

**6016** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6831** Made of vanadium-chrome steel, polished and chrome plated.

| Order No. | Length mm | 6016 GEDORE | 6831 HAZET |
|---|---|---|---|
| 0120 | 120 | 12.55 | – |
| 0151 | 150 | – (W522) | 19.30 (W529) |

6,3 mm 1/4"

6016 GEDORE

6831 HAZET

## Gimbal extension 1/4"

**Design:** DIN 3123 D 6.3 - ISO 3316, with ball locking device. Made of vanadium-chrome steel, polished and chrome plated. **The extension allows a swivel angle up to 8°.**

| Order No. | Length mm | 6835 HAZET |
|---|---|---|
| 0025 | 25 | 12.00 |
| 0100 | 102 | 14.70 (W529) |

6,3 mm 1/4"

HAZET

## T-handle with sliding block 1/4"

**Design:** DIN 3122 A 6.3 – ISO 3315, with ball locking device.
Made of chrome-vanadium-steel, chrome plated.

| Order No. | Length mm | 6020 format |
|---|---|---|
| 0010 | 115 | 4.30 (W532) |

6,3 mm 1/4"

format professional quality

## Drive handle 1/4"

**Design:** DIN 3122 E 6.3 - ISO 3315, with ball locking device.

**6027** Made of chrome-vanadium-steel, chrome plated.
With ergonomic 2-component handle.

**6028** Made of GEDORE vanadium steel 31CrV3,
polished and chrome plated. Handle with plastic cover.

**6835** In chromium-vanadium steel, matt chrome-plated.
With TRInamicULTRA handle for better slip resistance
even with greasy hands.

| Order No. | Length mm | 6027 format | 6028 GEDORE | 6835 HAZET |
|---|---|---|---|---|
| 0005 | 137 | – | – | 16.50 |
| 0010 | 140 | – | 7.20 | – |
| 0020 | 150 | 6.25 (W532) | – (W522) | – (W529) |

6,3 mm 1/4"

6027 format professional quality

6028 GEDORE

6835 HAZET

## Drive with T-handle 1/4"

**Design:** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.
With ball lock and hanging hole.

**Application:** Particularly suitable for deep screws.

| Order No. | Length mm | 6029 GEDORE |
|---|---|---|
| 0005 | 300 | 11.35 (W522) |

6,3 mm 1/4"

GEDORE

## Bit adapter 1/4"

**Design:** DIN 3126 E 6.3. Made of vanadium-chrome steel, matt chrome plated,
with permanent magnets.

| Order No. | Bit holder inch | 6033 format | Square receptacle inch |
|---|---|---|---|
| 0050 | 1/4 | 2.84 (W532) | 1/4 |

6,3 mm 1/4"

format professional quality

1/4"

1/4"

## Universal joint 1/4"

**Design:** DIN 3123 C 6.3 – ISO 3316, with ball locking device.

6,3 mm
1/4"

**6033** Made of chrome-vanadium-steel, chrome plated.

**6034** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6835** Made of chrome-vanadium-steel, chrome plated.

6033 format professional quality

6034 GEDORE

6835 HAZET

| Order No. | Length mm | 6033 format | 6034 GEDORE | 6835 HAZET |
|---|---|---|---|---|
| 0015 | 36.5 | – | – | 23.60 |
| 0010 | 38.0 | – | 20.20 | – |
| 0020 | 40.0 | 9.00 (W532) | – (W522) | – (W529) |

## Enlarger 1/4"

**Version:** DIN 3123 A 6.3 x 10 – ISO 3316, with ball locking device.

6,3 mm
1/4"

**6036** Made of chrome-vanadium-steel, chrome plated.

**6037** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6835** Made of chrome-vanadium-steel, chrome plated.

6036 format professional quality

6037 GEDORE

6835 HAZET

| Order No. | Design | 6036 format | 6037 GEDORE | 6835 HAZET |
|---|---|---|---|---|
| 0010 | From 1/4" recessed square to 3/8" protruding square. | 2.96 | – | – |
| 0020 | From 1/4" recessed square to 3/8" protruding square. | – (W532) | 8.15 (W522) | 10.55 (W529) |

## Hexagon socket wrench insert 1/4"

**Design:** DIN 3124 – ISO 2725, with ball locking device and knurled handle.

6,3 mm
1/4"

**6039** Made of chromium-vanadium steel, polished and matte chrome-plated.

**6040** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6837** Made of vanadium-chrome steel, polished and chrome plated. **With traction profile** to protect screw head.

6039 format professional quality

6040 GEDORE

6837 HAZET

| Order No. | Width of keys mm | 6039 format | 6040 GEDORE | 6837 HAZET | Length mm 6039 | Length mm 6040 | Length mm 6837 | Outside Ø mm 6039 | Outside Ø mm 6040 | Outside Ø mm 6837 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0030 | 3.0 | – | – | 6.45 | – | – | 25.0 | – | – | 6.2 |
| 0040 | 4.0 | 2.28 | 3.98 | 5.85 | 24.9 | 24.7 | 25.0 | 6.9 | 6.9 | 6.8 |
| 0045 | 4.5 | 2.28 | 3.98 | 5.85 | 24.9 | 24.7 | 25.0 | 7.5 | 7.5 | 7.4 |
| 0050 | 5.0 | 2.28 | 4.13 | 5.85 | 24.9 | 24.7 | 25.0 | 8.2 | 8.2 | 8.1 |
| 0055 | 5.5 | 2.28 | 4.14 | 5.85 | 24.9 | 24.7 | 25.0 | 8.8 | 8.8 | 8.7 |
| 0060 | 6.0 | 2.28 | 4.14 | 5.85 | 24.9 | 24.7 | 25.0 | 9.4 | 9.4 | 9.3 |
| 0070 | 7.0 | 2.28 | 4.14 | 5.85 | 24.9 | 24.7 | 25.0 | 10.8 | 11.0 | 10.9 |
| 0080 | 8.0 | 2.28 | 4.11 | 5.30 | 24.9 | 24.7 | 25.0 | 12.0 | 12.0 | 12.1 |
| 0090 | 9.0 | 2.45 | 4.27 | 5.85 | 24.9 | 24.7 | 25.0 | 13.4 | 13.0 | 13.4 |
| 0100 | 10.0 | 2.45 | 4.26 | 5.15 | 24.9 | 24.7 | 25.0 | 14.5 | 14.0 | 14.6 |
| 0110 | 11.0 | 2.45 | 4.27 | 5.85 | 24.9 | 24.7 | 25.0 | 16.0 | 16.0 | 15.5 |
| 0120 | 12.0 | 2.45 | 4.47 | 6.35 | 24.9 | 24.7 | 25.0 | 16.9 | 17.0 | 17.0 |
| 0130 | 13.0 | 2.49 | 4.45 | 5.40 | 24.9 | 24.7 | 25.0 | 18.1 | 18.0 | 18.0 |
| 0140 | 14.0 | 2.49 (W532) | 4.48 (W522) | 6.35 (W529) | 24.9 | 24.7 | 25.0 | 19.7 | 19.7 | 19.5 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Hexagon socket wrench insert 1/4", long

**Design:** DIN 3124 – ISO 2725-1, with ball locking device and knurled handle.

**6036** Made of chromium-vanadium steel, polished and matte chrome-plated.

**6041** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6841** Made of chrome-vanadium-steel, chrome plated.
**With traction profile** to protect screw head.

6,3 mm
1/4"

6036 format professional quality

6041 GEDORE

6841 HAZET

| Order No. | Width of keys mm | 6036 format | 6041 GEDORE | 6841 HAZET | Length mm | Outside Ø mm 6036 | 6041 | 6841 |
|---|---|---|---|---|---|---|---|---|
| 0040 | 4.0 | – | 13.00 | 15.40 | 50 | – | 6.9 | 23 |
| 0050 | 5.0 | – | 13.00 | 15.40 | 50 | – | 8.2 | 23 |
| 0055 | 5.5 | – | 13.00 | 15.75 | 50 | – | 8.8 | 23 |
| 0060 | 6.0 | – | 13.00 | 15.75 | 50 | – | 9.4 | 23 |
| 0070 | 7.0 | – | 13.15 | 15.75 | 50 | – | 11.0 | 23 |
| 0080 | 8.0 | 4.59 | 13.15 | 15.75 | 50 | 12.0 | 12.0 | 23 |
| 0090 | 9.0 | – | 13.15 | 15.75 | 50 | – | 13.0 | 23 |
| 0100 | 10.0 | 4.59 | 13.70 | 15.85 | 50 | 14.0 | 14.0 | 23 |
| 0110 | 11.0 | – | 13.70 | 15.85 | 50 | – | 16.0 | 23 |
| 0120 | 12.0 | – | 13.70 | 16.10 | 50 | – | 17.0 | 23 |
| 0130 | 13.0 | 4.65 (W532) | 13.70 (W522) | 16.10 (W529) | 50 | 18.0 | 18.0 | 23 |

## Hexagon socket wrench insert 1/4" in American inch sizes

**Design:** DIN 3124 – ISO 2725, made of GEDORE vanadium steel 31CrV3, with ball locking device, polished, matt chrome-plated and knurled handle.

GEDORE

6,3 mm
1/4"

American inch sizes

| Order No. | Width of keys inch | 6042 GEDORE | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0010 | 3/16 | 4.22 | 27.4 | 7.8 |
| 0020 | 7/32 | 4.22 | 27.4 | 8.8 |
| 0030 | 1/4 | 4.28 | 27.4 | 9.8 |
| 0040 | 9/32 | 4.28 | 27.4 | 10.0 |
| 0050 | 5/16 | 4.28 | 27.4 | 12.0 |
| 0060 | 11/32 | 4.28 | 27.4 | 13.0 |
| 0070 | 3/8 | 4.40 | 27.4 | 14.0 |
| 0080 | 7/16 | 4.60 | 27.4 | 16.0 |
| 0090 | 1/2 | 4.60 | 27.4 | 18.0 |
| 0100 | 9/16 | 4.97 (W522) | 27.4 | 20.0 |

## Screwdriver bit set 1/4"

**Design:** Made of GEDORE vanadium steel 31CrV3, polished, chrome plated and knurled handle, tips from GEDORE vanadium special steel, manganese phosphated. Supplied in plastic case with Check-Tool insert

GEDORE

6,3 mm
1/4"

| Order No. | Design | 6043 GEDORE | Set contents |
|---|---|---|---|
| 0010 | 15-part<br>160 x 95 x 38 mm | 108.00 (W522) | 5 Allen screwdriver sockets<br>(Order No. 6045) 3; 4; 5; 6; 8 mm<br>4 slot screwdriver bits<br>(Order 6048) 4; 5.5; 6.5; 8 mm<br>3 Phillips PH screwdriver bits<br>(Order No. 6050) 1; 2; 3<br>3 Phillips PZ screwdriver bits<br>(Order No. 6052) 1; 2; 3 |

## Screwdriver bit 1/4" for Allen screws

**Design:** With ball locking device and knurled handle.

**6044** Made of chrome-vanadium steel, polished and chrome-plated, tips made of chrome-vanadium steel, burnished.

**6045** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, tips of GEDORE vanadium special steel, manganese phosphated.

**6843** Made of chrome vanadium steel, **TiN coated,** for improved service life, higher torque, corrosion resistance and minimal cam-out effect (better grip in the screw).

**6035** Made of GEDORE vanadium steel 31CrV3, tips of GEDORE vanadium special steel, burnished **with ball head,** total swivel angle is about 15–20%.

| Order No. | Width of keys mm | 6044 format | 6045 GEDORE | 6843 HAZET | 6035 GEDORE | Length mm 6044 | 6045/6843 | 6035 |
|---|---|---|---|---|---|---|---|---|
| 0025 | 2.5 | – | – | 6.95 | – | – | 28 | – |
| 0030 | 3.0 | 3.03 | 6.15 | 6.95 | – | 36 | 28 | – |
| 0031 | 3.0 | – | 6.45 | – | – | – | 60 | – |
| 0040 | 4.0 | 3.03 | 6.15 | 6.95 | 7.00 | 36 | 28 | 30.5 |
| 0041 | 4.0 | – | 6.45 | – | – | – | 60 | – |
| 0050 | 5.0 | 3.03 | 6.15 | 6.95 | 7.00 | 36 | 28 | 30.5 |
| 0051 | 5.0 | – | 6.45 | – | – | – | 60 | – |
| 0060 | 6.0 | 3.03 | 6.15 | 6.95 | 7.00 | 36 | 28 | 30.5 |
| 0061 | 6.0 | – | 6.45 | – | – | – | 60 | – |
| 0081 | 8.0 | – | 6.65 | – | – | – | 60 | – |
| 0080 | 8.0* | 3.03 (W532) | 6.15 (W522) | 6.95 (W529) | – (W522) | 36 | 28 | – |

* Not standardised.

6,3 mm 1/4"

6044 format professional quality

6045 GEDORE

6843 HAZET TiN

6035 GEDORE

## Screwdriver bit 1/4" for slot screws

**Design:** With ball locking device and knurled handle.

**6047** Made of chrome-vanadium steel, polished and chrome-plated, tips made of chrome-vanadium steel, burnished.

**6048** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, tips of GEDORE vanadium special steel, manganese phosphated.

**6845** Made of chrome vanadium steel, **TiN coated,** for improved service life, higher torque, corrosion resistance and minimal cam-out effect (better grip in the screw).

| Order No. | Blade width mm | 6047 format | 6048 GEDORE | 6845 HAZET | Blade thickness mm | Length mm |
|---|---|---|---|---|---|---|
| 0010 | 3.5 | – | – | 6.95 | 0.6 | 28 |
| 0010 | 3.5 | 3.44 | – | – | 0.6 | 36 |
| 0020 | 4.0 | 3.44 | – | – | 0.8 | 36 |
| 0010 | 4.0 | – | 6.20 | – | 0.8 | 28 |
| 0030 | 5.5 | – | – | 6.95 | 1.0 | 28 |
| 0030 | 5.5 | 3.44 | – | – | 1.0 | 36 |
| 0020 | 5.5 | – | 6.20 | – | 1.0 | 28 |
| 0030 | 6.5 | – | 6.20 | – | 1.2 | 28 |
| 0040 | 8.0 | – | – | 6.95 | 1.2 | 28 |
| 0040 | 8.0 | 3.82 (W532) | – (W522) | – (W529) | 1.2 | 36 |

6,3 mm 1/4"

6047 format professional quality

6048 GEDORE

6845 HAZET TiN

## Screwdriver bit 1/4" for Phillips screws

**Design:** With ball locking device and knurled handle.

**6049** Made of chrome-vanadium steel, polished and chrome-plated, tips made of chrome-vanadium steel, burnished.

**6050** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, tips of GEDORE vanadium special steel, manganese phosphated.

**6849** Made of chrome vanadium steel, **TiN coated,** for improved service life, higher torque, corrosion resistance and minimal cam-out effect (better grip in the screw).

6,3 mm
1/4"

6049 format

6050 GEDORE

6849 HAZET TiN

| Order No. | Size | 6049 format | 6050 GEDORE | 6849 HAZET | Length mm 6049 | Length mm 6050/6849 |
|---|---|---|---|---|---|---|
| 0010 | PH 1 | 3.44 | 6.20 | 6.95 | 36 | 28 |
| 0020 | PH 2 | 3.44 | 6.20 | 6.95 | 36 | 28 |
| 0030 | PH 3 | 3.44 | 6.20 | – | 36 | 28 |
| 0040 | PH 4 | 3.44 (W532) | – (W522) | – (W529) | 36 | – |

## Screwdriver bit 1/4" for Pozidriv Phillips screws

**Design:** With ball locking device and knurled handle.

**6051** Made of chrome-vanadium steel, polished and chrome-plated, tips made of chrome-vanadium steel, burnished.

**6052** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, tips of GEDORE vanadium special steel, manganese phosphated.

**6853** Made of chrome vanadium steel, **TiN coated,** for improved service life, higher torque, corrosion resistance and minimal cam-out effect (better grip in the screw).

6,3 mm
1/4"

6051 format

6052 GEDORE

6853 HAZET TiN

| Order No. | Size | 6051 format | 6052 GEDORE | 6853 HAZET | Length mm 6051 | Length mm 6052/6853 |
|---|---|---|---|---|---|---|
| 0010 | PZ 1 | 3.44 | 6.90 | 7.80 | 36 | 28 |
| 0020 | PZ 2 | 3.44 | 6.90 | 7.80 | 36 | 28 |
| 0030 | PZ 3 | 3.44 (W532) | – (W522) | – (W529) | 36 | – |

## Screwdriver bit 1/4" for recessed TORX® head screws

**Design:** With ball locking device and knurled handle.

**6053** Made of chrome-vanadium steel, polished and chrome-plated, tips made of chrome-vanadium steel, burnished.

**6054** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, tips made of GEDORE vanadium special steel, burnished.

**6857** Made of chrome vanadium steel, **TiN coated,** for improved service life, higher torque, corrosion resistance and minimal cam-out effect (better grip in the screw).

6,3 mm
1/4"

6053 format

6054 GEDORE

6857 HAZET TiN

| Order No. | Size | 6053 format | 6054 GEDORE | 6857 HAZET | Length mm 6053 | 6054 | 6857 | For screws |
|---|---|---|---|---|---|---|---|---|
| 0008 | T 8 | – | 6.85 | 8.65 | – | 30.5 | 28 | M2.5 |
| 0009 | T 9 | 4.54 | 6.85 | 8.65 | 36 | 30.5 | 28 | M3 |
| 0010 | T 10 | 4.54 | 6.85 | 8.65 | 36 | 30.5 | 28 | M3 - M3.5 |
| 0015 | T 15 | 4.54 | 6.85 | 8.65 | 36 | 30.5 | 28 | M3.5 - M4 |
| 0020 | T 20 | 4.54 | 6.85 | 8.65 | 36 | 30.5 | 28 | M4 - M5 |
| 0025 | T 25 | 4.54 | 6.85 | 8.75 | 36 | 30.5 | 28 | M4.5 - M5 |
| 0027 | T 27 | 4.54 | 6.85 | 8.75 | 36 | 30.5 | 28 | M4.5 - M6 |
| 0030 | T 30 | 4.54 | 6.85 | 8.75 | 36 | 30.5 | 28 | M6 - M7 |
| 0040 | T 40 | 4.54 (W532) | 7.70 (W522) | 8.75 (W529) | 36 | 33.5 | 28 | M7 - M8 |

## Screwdriver bit set 1/4" for recessed and protruding TORX® head screws

**Design:** Made of GEDORE vanadium steel 31CrV3, polished, chrome plated and knurled handle, tips of GEDORE vanadium special steel, burnished. Supplied in plastic case with Check-Tool insert.

6,3 mm
1/4"

GEDORE

| Order No. | Design | 6054 GEDORE | Set contents |
|---|---|---|---|
| 0100 | 15-part<br>160 x 95 x 38 mm | 111.00<br>(W522) | 9 recessed screwdriver bits TORX®<br>(Order No. 6054) T 8; 9; 10; 15; 20; 25; 27; 30; 40<br>6 protruding TORX screwdriver bits®<br>(Order No. 6046) E 4; 5; 6; 7; 8; 10 |

## Socket spanner bit 1/4" for protruding TORX®screws

**Design:** With ball locking device, polished, chrome plated and knurled handle.

6,3 mm
1/4"

**6027** Made of vanadium-chrome steel.

**6046** Made of GEDORE vanadium steel 31CrV3.

6027 format professional quality

6046 GEDORE

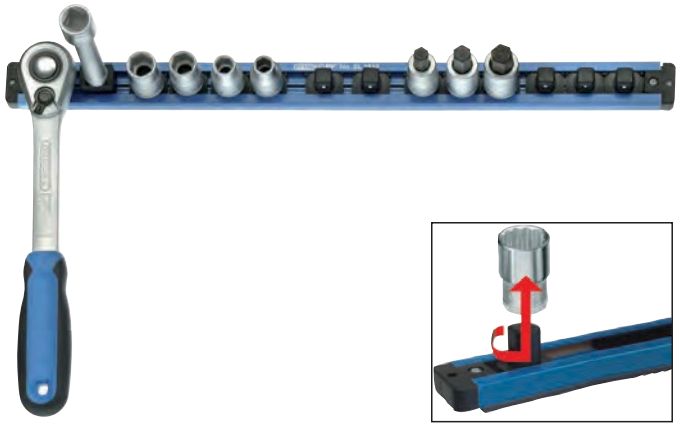
| Order No. | Size | 6027 format | 6046 GEDORE | Length mm | Outside Ø mm | For screws |
|---|---|---|---|---|---|---|
| 0040 | E 4 | 3.03 | 5.80 | 25 | 5.5 | M3 |
| 0050 | E 5 | 3.03 | 5.80 | 25 | 7.0 | M4 |
| 0060 | E 6 | 3.03 | 5.80 | 25 | 8.0 | M5 |
| 0070 | E 7 | 3.03 | 5.85 | 25 | 9.5 | M6 |
| 0080 | E 8 | 3.03 | 5.85 | 25 | 10.5 | M6 – M7 |
| 0100 | E 10 | 3.03<br>(W532) | 6.55<br>(W522) | 25 | 13.0 | M8 |

## Magnetic cable connection 1/4"

**Application:** Suitable for all standard 1/4" sockets. A strong permanent magnet holds the bar securely to FE-metals, for example, to machine covers, tool trolleys or lifting platforms. The strip can be installed horizontally, vertically or even overhead. The strip has additional drill holes for wall installation. Inserts are fixed with a 90° turn. Insert is subsequently locked with the ball. Rotating in the opposite direction unlocks the inserts so they can be removed. **Supplied without tools.**

6,3 mm
1/4"

GEDORE





| Order No. | Adapters | 6043 GEDORE | Dimensions L x W mm |
|---|---|---|---|
| 0013 | 13 protruding square sockets<br>2 recessed square sockets | 26.80<br>(W522) | 380 x 33 |

## Hexagon socket wrench set 3/8"

**Design:** Tools made of chrome-vanadium steel, which have hexagon and square sockets with rounded corners for protection of drive and screw head. Supplied in sturdy, painted metal case with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. In the cover there is another foam insert with a schematic indication of tool placement.

10,0 mm
3/8"

format professional quality

| Order No. | Design | 6056 format | Set contents |
|---|---|---|---|
| 0010 | **17-part**<br>**320 x 150 x 50 mm** | **77.90** | 1 lever ratchet (Order 6058)<br>12 hexagon socket wrench inserts (Order No. 6070) 6; 7; 8; 9; 10; 11; 13; 14; 15; 16; 17; 19 mm<br>1 T-handle with sliding block (Order No. 6062)<br>2 extensions (Order 6060) 125; 250 mm<br>1 universal joint (Order No. 6064) |

(W532)

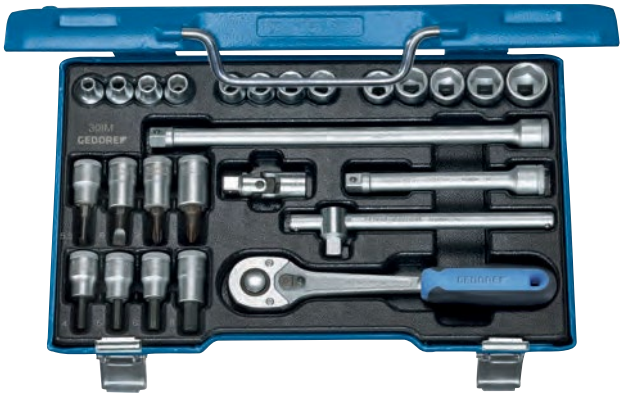
## Hexagon socket wrench set 3/8"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in GEDORIT blue sheet steel case with curved, seamless drawn border and ABS plastic insert.

10,0 mm
3/8"

GEDORE

6055 0011



6055 0040

| Order No. | Design | 6055 GEDORE | Set contents |
|---|---|---|---|
| 0011 | **16-part**<br>**290 x 132 x 55 mm** | **201.00** | 1 reversible ratchet (Order No. 6059 0010)<br>14 hexagon socket wrench inserts (Order No. 6071) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm<br>1 extension (Order No. 6061) 125 mm |
| 0040 | **26-part**<br>**320 x 210 x 55 mm** | **286.50** | 1 reversible ratchet (Order No. 6059 0010)<br>13 hexagon socket bits (Order No. 6070) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 19 mm<br>4 Allen screwdriver bits recessed hexagon (Order No. 6071) 4; 5; 6; 8; mm<br>2 screwdriver bits slot (Order No. 6071) 5.5; 8 mm<br>2 Phillips screwdriver bits (Order No. 6071) PH 2; 3<br>1 T-handle with sliding block (Order No. 6063)<br>2 extensions (Order 6061) 125; 250 mm<br>1 universal joint (Order No. 6065) |

(W522)

## Hexagon socket wrench set 3/8"

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. Supplied in SmartCase with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

10,0 mm
3/8"

HAZET

6859 0016

6859 0017

6859 0032
TiN

| Order No. | Design | 6859 HAZET | Set contents |
|---|---|---|---|
| 0016 | 16-part<br>355 x 235 x 65 mm | 207.60 | 1 lever wrench (Order No. 6870 0010)<br>11 hexagon socket wrench inserts (Order No. 6875) 8; 10; 11; 12; 13; 14; 15; 17; 19; 21; 22 mm<br>2 extensions (Order No. 6871) 126; 254 mm<br>1 T handle with sliding block<br>1 universal joint (Order No. 6872 0005) |
| 0017 | 17-part<br>355 x 235 x 65 mm | 208.70 | 1 reversible ratchet (Order No. 6870 0010)<br>12 hexagon socket bits (Order No. 6875) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22 mm<br>3 extensions (Order No. 6871) 74; 150; 254 mm<br>1 universal joint (Order No. 6872 0005) |
| 0032 | 32-part<br>355 x 235 x 65 mm | 377.10 | 1 reversible ratchet (Order No. 6870 0010)<br>16 hexagon socket wrench inserts (Order No. 6875)<br>6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22 mm<br>4 allen screwdriver sockets 4; 5; 6; 8 mm<br>3 slot screwdriver bits 5.5; 8; 10 mm<br>3 Phillips screwdriver bits PH 1; 2; 3 mm<br>3 extensions (Order No. 6871) 74; 126; 254 mm<br>1 T-handle with sliding block<br>1 universal joint (Order No. 6872 0005) |

(W529)

## Combined hexagon socket wrench set 3/8" and 1/4"

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. Supplied in SmartCase with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

10,0 mm
3/8"

HAZET

| Order No. | Design | 6859 HAZET | Set contents |
|---|---|---|---|
| 0046 | 46-part<br>355 x 235 x 65 mm | 390.20 | **Contents 1/4" :**<br>1 lever wrench (Order No. 6011 0030)<br>12 hexagon socket wrench inserts (Order No. 6837)<br>4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>1 extension (Order No. 6831) 101.5 mm<br>1 drive handle (Order No. 6835 0005)<br>1 universal joint (Order No. 6835 0015)<br>1 bit adapter 1/4" with 1/4" adapter<br>**Contents 3/8" :**<br>1 lever wrench (Order No. 6870 0010)<br>12 hexagon socket bits (Order No. 6875)<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22 mm<br>5 recessed Allen bits 1/4" 3; 4; 5; 6; 8 mm<br>4 slot bits 1/4" 4; 4.5; 5.5; 6 mm<br>2 Phillips bits 1/4" PH 1; 2<br>2 Phillips bits 1/4" PZ 1; 2<br>1 extension (Order No. 6871) 150 mm<br>1 universal joint (Order No. 6872 0005)<br>1 bit adapter 1/4" with 3/8" adapter |

(W529)

## Hexagon socket wrench set 3/8" Zyklop Metal

**Design:** Tools made of chrome-vanadium steel. Full metal ratchet made of chrome-molybdenum, forged. Extremely slim, with long lever for easy access to narrow areas and transfer of higher torque, ball lock for secure fit of nuts. Low weight for high mobility, high robustness. Delivery in a very compact fabric box, protects sensitive surfaces.

10,0 mm 3/8" | Hex–Plus | Wera Zyklop

**6001 0004** With push-through square (Push). **76-fold serrated, rear swivel angle 4.7°.**

**6001 0006** With switch lever (Switch) **72-fold serrated, rear swivel angle 5°.**

6001 0004

6001 0006

| Order No. | Design | 6001 Wera | Set contents |
|---|---|---|---|
| 0004 | 29-part | 123.00 | 1 full-metal ratchet with push-through square (Order No. 6001 0016)<br>9 hexagon sockets 8; 10; 12; 13; 15; 16; 17; 18; 19 mm<br>3 Phillips PH bits 1, 2, 3<br>2 Phillips PZ bits for 1, 2<br>5 bits for Allen 3, 4, 5, 6 8 mm<br>6 recessed TORX® bits T 15; 20; 25; 27; 30 40<br>1 wobble extension 76 mm<br>1 extension with freewheel sleeve 200 mm<br>1 bit adapter for 1/4" bits (Order No. 6001 0030) |
| 0006 | 29-part | 109.00 | 1 full-metal ratchet with reversing lever (Order No. 6001 0017)<br>9 hexagon sockets 8; 10; 12; 13; 15; 16; 17; 18; 19 mm<br>3 Phillips PH bits 1, 2, 3<br>2 Phillips PZ bits for 1, 2<br>5 bits for Allen 3, 4, 5, 6 8 mm<br>6 recessed TORX® bits T 15; 20; 25; 27; 30 40<br>1 wobble extension 76 mm<br>1 extension with freewheel sleeve 200 mm<br>1 bit adapter for 1/4" bits (Order No. 6001 0030) |

(W526)

## Hexagon socket wrench set 3/8" Zyklop Speed

**Design:** With tough bits and nuts. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides in 5 positions (90°, 75° in both directions and 0°). Bidirectional switching and triggering the nut is possible in any position. **72-fold serrated, rear swivel angle 5°.** Allows screwing bits and nuts with just one tool. Delivery in a very compact fabric box, protects sensitive surfaces.

**Application:** Tough bits suitable for universal applications. Suitable for turning screws by hand and machine.

10,0 mm 3/8" | Wera Zyklop

| Order No. | Design | 6001 Wera | Set contents |
|---|---|---|---|
| 0002 | 29-part | 148.50 | 1 Zyklop-ratchet (Order No. 6001 0015)<br>9 hexagon sockets 5; 5.5; 6; 7; 8; 10; 11; 12; 13 mm<br>3 Phillips PH bits 1, 2, 3<br>2 Phillips PZ bits for 1, 2<br>4 bits for Allen 3, 4, 5, 6 mm<br>6 recessed TORX® bits T 10; 15; 20; 25; 27 30<br>1 extension 56 mm<br>1 extension with freewheel sleeve 150 mm<br>1 bit adapter for 1/4" bits (Order No. 6000 0030) |

(W526)

## Hexagon socket wrench set 3/8" Zyklop Speed

10,0 mm
3/8"

Wera Zyklop

**Design:** Tools made of chrome-vanadium steel. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be fixed in 5 positions (90° and 75° in both directions, and 0°). Can be utilised as bit holder in 0° position. **72-fold serrated, rear swivel angle 5°.** Ergonomic Kraftform Plus handle with ball lock for secure fit of the nuts. Right/left switching and triggering the nut is possible in any position. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. In the cover there is another foam insert with a schematic indication of tool placement. Supplied in a robust metal case with anti-slip rubber feet.

| Order No. | Design | 6001 Wera | Set contents |
|---|---|---|---|
| 0010 | 43-part<br>295 x 235 x 55 mm | 236.00 | 1 Zyklop-ratchet (Order No. 6001 0015)<br>18 hexagon sockets 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 24 mm<br>6 Allen bits 1/4" 3, 4, 5, 6, 8, 10 mm<br>1 slot bit 1/4" 5.5 mm<br>2 Phillips bits 1/4" PH 2; 3<br>2 Phillips bits 1/4" PZ 2; 3<br>7 TORX® bits 1/4" with hole T 10, 15, 20, 25, 27, 30, 40<br>1 T-handle with sliding block<br>2 extensions with freewheel sleeve and fixing "flexible-lock" (Order No. 6001 0020 and 6001 0025) 125; 200 mm<br>1 wobble extension 76 mm<br>1 universal joint<br>1 bit adapter for 1/4" bits (Order No. 6001 0030) |
| | | (W526) | |

## Lever reversible ratchet 3/8"

10,0 mm
3/8"

**Design:** DIN 3122 D 10 - ISO 3315, with ball locking device.

**6058** Made of chrome-vanadium-steel, chrome plated. With oval head, push-button release and reversing lever. **32-fold serrated, rear swivel angle 11.25°.** With ergonomic 2-component handle.

**6059 0010** Made of GEDORE vanadium steel 31CrV3, with oval head, push button actuator and switch lever, locked in middle position, **32-fold serrated, rear swivel angle 11.25°.** Handle with non-slip 2-component plastic cover.

**6059 0020** Made of GEDORE vanadium steel 31CrV3, with oval head, push button actuator and switch lever, automatic locking for clockwise or anti-clockwise turning. **60-fold serrated, rear swivel angle 6°.** Handle with non-slip 2-component plastic cover.

**6870 0010** Made of chrome-vanadium-steel, chrome plated. With oval head and reversing lever. **30-fold serrated, rear swivel angle 12°.** With ergonomic 2-component handle.

**6870 0020** Made of chrome-vanadium-steel, chrome plated. With oval head, push-button release and reversing lever. **30-fold serrated, rear swivel angle 12°.** With ergonomic 2-component handle.

**6870 0005** Made of full steel, chrome-plated. With round head and switching disk **72-fold serrated, rear swivel angle 5°.** With ergonomic 2-component handle.

**6870 0015 + 0025** Made of chrome-vanadium-steel, chrome plated. With oval head and reversing lever. The head can be adjusted by means of an articulated joint. **30-fold serrated, rear swivel angle 12°.** With ergonomic 2-component handle.

| Order No. | Length mm | 6058 format | 6059 GEDORE | 6870 HAZET |
|---|---|---|---|---|
| 0005 | 186 | – | – | 59.55 |
| 0010 | 195 | 29.70 | – | – |
| 0010 | 199 | – | – | 47.15 |
| 0020 | 199 | – | – | 55.45 |
| 0010 | 200 | – | 59.20 | – |
| 0020 | 200 | – | 57.10 | – |
| 0015 | 218 | – | – | 67.95 |
| 0025 | 276 | – | – | 67.95 |
| | | (W532) | (W522) | (W529) |

6058 0010 format professional quality

6059 0010 GEDORE

6059 0020 GEDORE

6870 0010 HAZET

6870 0020 HAZET

6870 0005 HAZET

6870 0015 HAZET

## Ratchet 3/8" Zyklop Metal

**Design:** Full metal ratchet made of chrome-molybdenum, forged. Finely toothed, with a particularly small return angle. Extremely slim, with long lever for easy access to narrow areas and transfer of higher torque, ball lock for secure fit of nuts. Low weight for high mobility, high robustness.

**6001 0016** With push-through square (Push). **76-fold serrated, rear swivel angle 4.7°.**

**6001 0017** With switch lever (Switch) **72-fold serrated, rear swivel angle 5°.**

| Order No. | Length mm | 6001 Wera |
|---|---|---|
| 0016 | 222 | 54.20 |
| 0017 | 222 | 41.00 (W526) |

10,0 mm 3/8"

Wera Zyklop

6001 0016

6001 0017

## Reversible ratchet 3/8" Zyklop Speed

**Design:** DIN 3122 D 6.3 - ISO 3315, with ball locking device. Made of vanadium-chrome steel with Kraftform handle and freewheeling sleeve. Switching occurs via a hub Bidirectional switching and triggering the nut is possible in any position. The ratchet head is ergonomically shaped and, due to flywheel mass design in connection with the freewheel sleeve allows for fast-paced work. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides with 5 positions (90°, 75° in both directions and 0°). **72-fold serrated, rear swivel angle 5°.** With Kraftform handle for fatigue-free working.

| Order No. | Length mm | 6001 Wera |
|---|---|---|
| 0015 | 199 | 54.40 (W526) |

10,0 mm 3/8"

Wera Zyklop

## Extension 3/8" Zyklop

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With **freewheel sleeve** for quick fastening and releasing and **flexible lock system.** The plug-in tools are permanently connected with the extension with the activated flexible lock system; the nut can be changed quickly with deactivation.

| Order No. | Length mm | 6001 Wera |
|---|---|---|
| 0020 | 125 | 9.30 |
| 0025 | 200 | 11.00 (W526) |

## Bit adapter 3/8" Zyklop

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With **quick change chuck** for a quick tool change.

**Application:** For all 1/4" bits according to DIN 3126 – 6.3 und E 6.3 ISO 1173.

| Order No. | Length mm | 6001 Wera |
|---|---|---|
| 0030 | 44 | 13.55 (W526) |

## Repair set for 3/8" ratchet

**Application:** Complete ratchet repair set, suitable for Order No. 6870 0010, 6870 0015 and 6870 0025 📖 6/23, 6/24.

**Scope of delivery:** 1 ratchet wheel, 1 locking piece, 1 shift lever, 2 screws, 1 ball and 1 spring.

| Order No. | Design | 6870 HAZET |
|---|---|---|
| 1005 | 7-part | 18.40 (W529) |

10,0 mm 3/8"

HAZET

## 3/8" extension

**Design:** DIN 3123 B 10 – ISO 3316, with ball locking device.

**6060** Made of chrome-vanadium-steel, chrome plated.

**6061** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6871** Made of vanadium-chrome steel, polished and chrome plated.

10,0 mm
3/8"

6060 format professional quality

6061 GEDORE

6871 HAZET

| Order No. | Nominal length mm | 6060 format | 6061 GEDORE | 6871 HAZET |
|---|---|---|---|---|
| 0040 | 36 | – | – | 12.35 |
| 0075 | 76 | – | 8.25 | 13.15 |
| 0125 | 125 | 5.30 | 9.70 | 13.95 |
| 0150 | 150 | – | – | 14.20 |
| 0250 | 250 | 7.20 | 13.75 | 19.15 |
| 0500 | 508 | – (W532) | – (W522) | 38.80 (W529) |

## Flexible extension 3/8"

**Design:** DIN 3123 B 10 – ISO 3316, with ball locking device. Made of vanadium-chrome steel, polished and chrome plated.

10,0 mm
3/8"

HAZET

| Order No. | Length mm | 6872 HAZET |
|---|---|---|
| 0210 | 210 | 25.35 (W529) |

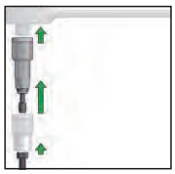
## Magnet extension 3/8"

NEW

**Design:** DIN 3120 ISO 1174, with ball locking device. Made of GEDORE vanadium steel 31CrV3, forged and chrome-plated, spring pin manganese-phosphated. The holding magnet fixes the screw securely in the socket wrench insert. Due to spring mechanism, the holding magnet is always in direct contact with the screw head and ensures centric guiding of the screw.

10,0 mm
3/8"

GEDORE



| Order No. | Length mm | 6061 GEDORE |
|---|---|---|
| 2065 | 65 | 26.90 (W522) |

## Gimbal extension 3/8"

**Design:** DIN 3123 D 10 - ISO 3316, with ball locking device. Made of vanadium-chrome steel, polished and chrome plated. **The extension allows a swivel angle up to 8°.**

10,0 mm
3/8"

HAZET

| Order No. | Length mm | 6872 HAZET |
|---|---|---|
| 0040 | 36 | 14.20 |
| 0075 | 74 | 16.55 |
| 0250 | 254 | 25.50 (W529) |

## T-handle with sliding block 3/8"

**Design:** DIN 3122 A 10 – ISO 3315, with ball locking device. Made of chrome-vanadium-steel, chrome plated.

10,0 mm
3/8"

format professional quality

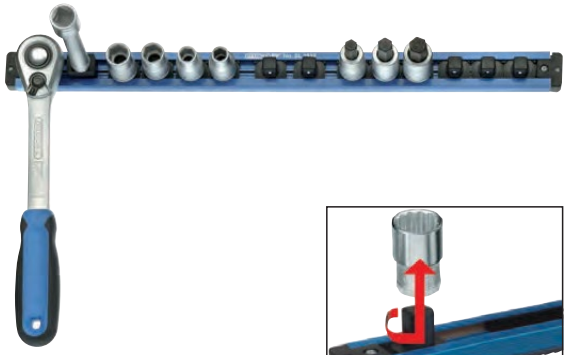
| Order No. | Length mm | 6062 format |
|---|---|---|
| 0010 | 200 | 7.80 (W532) |

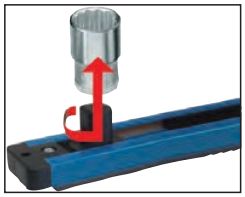
## Magnetic cable connection 3/8"

**Application:** Suitable for all standard 3/8" sockets. A strong permanent magnet holds the bar securely to FE-metals, for example, to machine covers, tool trolleys or lifting platforms. The strip can be installed horizontally, vertically or even overhead. The strip has additional drill holes for wall installation. Inserts are fixed with a 90° turn. Insert is subsequently locked with the ball. Rotating in the opposite direction unlocks the inserts so they can be removed. **Supplied without tools.**

10,0 mm
3/8"

GEDORE





| Order No. | Adapters | 6071 GEDORE | Dimensions L x W mm |
|---|---|---|---|
| 7014 | 14 protruding square sockets<br>2 recessed square sockets | 28.90<br>(W522) | 480 x 33 |

## Universal joint 3/8"

**Design:** DIN 3123 C 10 – ISO 3316, with ball locking device.

10,0 mm
3/8"

**6064** Made of chrome-vanadium-steel, chrome plated.

6064 format professional quality

**6065** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

6065 GEDORE

**6872** Made of vanadium-chrome steel, polished and chrome plated.

6872 HAZET

| Order No. | Length mm | 6064 format | 6065 GEDORE | 6872 HAZET |
|---|---|---|---|---|
| 0010 | 58.0 | 10.70 | – | – |
| 0010 | 52.0 | – | 23.90 | – |
| 0005 | 46.5 | – | – | 25.20 |
| | | (W532) | (W522) | (W529) |

## Reducer 3/8"

**Design:** DIN 3123 A 10 x 12.5 – ISO 3316. With ball lock.

10,0 mm
3/8"

**6066** Made of chrome-vanadium-steel, chrome plated.

6066 format professional quality

**6067** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

6067 GEDORE

**6872** Made of vanadium-chrome steel, polished and chrome plated.

6872 HAZET

| Order No. | Design | 6066 format | 6067 GEDORE | 6872 HAZET |
|---|---|---|---|---|
| 0010 | 3/8" recessed square to 1/4" protruding square | 3.68<br>(W532) | 7.75<br>(W522) | 9.85<br>(W529) |

## Enlarger 3/8"

**Design:** DIN 3123 A 10 x 12.5 – ISO 3316. With ball lock.

10,0 mm
3/8"

**6068** Made of chrome-vanadium-steel, chrome plated.

**6069** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6873** Made of vanadium-chrome steel, polished and chrome plated.

6068 format professional quality

6069 GEDORE

6873 HAZET

| Order No. | Design | 6068 format | 6069 GEDORE | 6873 HAZET |
|---|---|---|---|---|
| 0010 | 3/8" recessed square to 1/2" protruding square | 4.09 (W532) | 7.75 (W522) | 12.55 (W529) |

## Hexagon socket wrench insert 3/8"

**Design:** DIN 3124 – ISO 2725-1, with ball retaining groove and knurled handle.

10,0 mm
3/8"

**6070** Made of chromium-vanadium steel, polished and matte chrome-plated.

**6071** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6875** Made of vanadium-chrome steel, polished and chrome plated.

6070 format professional quality

6071 GEDORE

6875 HAZET

| Order No. | Width of keys mm | 6070 format | 6071 GEDORE | 6875 HAZET | Length mm 6070 | Length mm 6071 | Length mm 6875 | Outside Ø mm 6070 | Outside Ø mm 6071 | Outside Ø mm 6875 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0006 | 6* | 2.45 | 6.35 | 6.70 | 26.0 | 28.0 | 24.0 | 9.4 | 9.7 | 10.0 |
| 0007 | 7 | 2.45 | 6.35 | 6.70 | 26.0 | 28.0 | 24.0 | 10.9 | 11.0 | 10.5 |
| 0008 | 8 | 2.45 | 6.05 | 6.70 | 26.0 | 28.0 | 24.0 | 11.9 | 12.2 | 11.8 |
| 0009 | 9 | 2.45 | 6.10 | 6.70 | 26.0 | 28.0 | 24.0 | 13.4 | 13.5 | 13.0 |
| 0010 | 10 | 2.45 | 6.05 | 5.75 | 26.0 | 28.0 | 25.0 | 14.6 | 14.7 | 14.4 |
| 0011 | 11 | 2.45 | 6.10 | 6.70 | 26.0 | 28.0 | 26.0 | 16.0 | 16.0 | 15.8 |
| 0012 | 12 | – | 6.10 | 6.70 | – | 28.0 | 27.0 | – | 17.2 | 17.0 |
| 0013 | 13 | 2.49 | 6.05 | 5.75 | 26.0 | 28.0 | 27.5 | 18.4 | 18.5 | 18.4 |
| 0014 | 14 | 2.58 | – | 7.45 | 27.0 | – | 29.5 | 19.6 | – | 19.5 |
| 0015 | 15 | 2.68 | – | 7.45 | 27.0 | – | 29.5 | 21.0 | – | 20.9 |
| 0016 | 16 | 2.68 | 6.35 | 7.45 | 27.0 | 30.0 | 29.5 | 22.0 | 22.2 | 22.1 |
| 0017 | 17 | 2.60 | 6.30 | 8.65 | 27.0 | 30.0 | 29.5 | 23.4 | 23.5 | 23.3 |
| 0018 | 18 | 2.81 | 6.35 | 8.65 | 27.0 | 30.0 | 31.5 | 24.7 | 24.7 | 24.8 |
| 0019 | 19 | 2.81 | 6.35 | 8.65 | 29.0 | 30.0 | 31.5 | 25.7 | 26.0 | 25.8 |
| 0021 | 21 | – | – | 8.95 | – | – | 31.5 | – | – | 28.3 |
| 0022 | 22 | 3.42 (W532) | 7.05 (W522) | 8.95 (W529) | 29.0 | 32.0 | 34.0 | 29.5 | 29.7 | 29.6 |

* Non-standard sizes.

## Bi-hexagon socket wrench insert 3/8"

**Design:** DIN 3124 – ISO 2725-1, made of chrome-vanadium steel, with ball retaining groove, polished and matte chrome-plated, with knurled handle.

10,0 mm
3/8"

HAZET

| Order No. | Width of keys mm | 6949 HAZET | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0009 | 9 | 6.70 | 24.0 | 13.0 |
| 0010 | 10 | 5.75 | 25.0 | 14.4 |
| 0011 | 11 | 6.70 | 26.0 | 15.8 |
| 0012 | 12 | 6.70 | 27.0 | 17.0 |
| 0013 | 13 | 5.75 | 27.5 | 18.4 |
| 0014 | 14 | 7.45 | 29.5 | 19.6 |
| 0015 | 15 | 7.45 | 29.5 | 20.9 |
| 0016 | 16 | 7.45 | 29.5 | 22.1 |
| 0017 | 17 | 8.65 | 29.5 | 23.3 |
| 0018 | 18 | 8.65 | 31.5 | 24.6 |
| 0019 | 19 | 8.65 | 31.5 | 25.8 |
| 0020 | 20 | 8.95 | 31.5 | 26.8 |
| 0021 | 21 | 8.95 | 31.5 | 28.3 |
| 0022 | 22 | 8.95 | 34.0 | 29.6 |

(W529)

## Hexagon socket wrench insert 3/8" , long

**Design:** DIN 3124 – ISO 2725-1, made of chrome-vanadium steel, with ball retaining groove, polished and matte chrome-plated, with knurled handle.

10,0 mm
3/8"

HAZET

| Order No. | Width of keys mm | 6950 HAZET | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0008 | 8 | 14.15 | 54 | 12.1 |
| 0009 | 9 | 14.15 | 54 | 13.0 |
| 0010 | 10 | 14.15 | 54 | 14.4 |
| 0011 | 11 | 14.15 | 54 | 15.8 |
| 0012 | 12 | 14.15 | 54 | 17.0 |
| 0013 | 13 | 14.15 | 54 | 18.4 |
| 0014 | 14 | 14.15 | 54 | 19.5 |
| 0015 | 15 | 14.15 | 60 | 20.8 |
| 0016 | 16 | 14.15 | 60 | 21.8 |
| 0017 | 17 | 14.90 | 60 | 23.0 |
| 0018 | 18 | 14.90 | 66 | 24.4 |
| 0019 | 19 | 15.65 | 66 | 25.5 |
| 0022 | 22 | 16.75 | 70 | 29.6 |

(W529)

## Bi-hexagon socket wrench insert 3/8" , long

**Design:** DIN 3124 – ISO 2725-1, made of chrome-vanadium steel, with ball retaining groove, polished and matte chrome-plated, with knurled handle.

10,0 mm
3/8"

HAZET

| Order No. | Width of keys mm | 6951 HAZET | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0009 | 9 | 14.15 | 54 | 13.0 |
| 0010 | 10 | 14.15 | 54 | 14.4 |
| 0011 | 11 | 14.15 | 54 | 15.8 |
| 0012 | 12 | 14.15 | 54 | 17.0 |
| 0013 | 13 | 14.15 | 54 | 18.4 |
| 0014 | 14 | 14.15 | 54 | 19.5 |
| 0015 | 15 | 14.15 | 60 | 20.8 |
| 0016 | 16 | 14.15 | 60 | 21.8 |
| 0017 | 17 | 14.90 | 60 | 23.0 |
| 0018 | 18 | 14.90 | 66 | 24.4 |
| 0019 | 19 | 15.65 | 66 | 25.5 |
| 0021 | 21 | 16.75 | 70 | 28.0 |
| 0022 | 22 | 16.75 | 70 | 29.6 |

(W529)

## Socket wrench insert 3/8" gripper

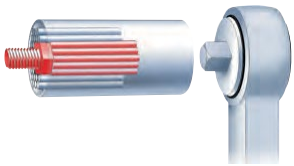
**Design:** Made of quality steel, polished and chrome plated. With 54 hardened steel pins.

**Application:** Grips each **triangular, square and hexagon screw in the range of 7 mm to 19 mm,** regardless of whether inch or metric dimensions. The steel pins fit every nut or bolt to outer profile. In addition, activation of exotic screws as well as hook and eye screws possible. For screws up to 8 mm long.

10,0 mm
3/8"

wiha Tools that work for you

| Order No. | Length mm | 6073 wiha | Outside Ø mm |
|---|---|---|---|
| 0005 | 53.5 | 27.80 (W530) | 25.4 |



Thanks to the 54 movable pins, the gripper adapts to common, but also unusual profiles and allows torque of up to 80 N·m.

## Screwdriver bit 3/8" for Allen screws

**Design:** DIN 7422, with ball retaining groove, polished and chrome-plated, with knurled handle.

**6070** Made of chrome-vanadium steel, tips made of chrome-vanadium steel, burnished.

**6071** Made of GEDORE vanadium steel 31CrV3, tips pressed in, made of GEDORE vanadium special steel, manganese phosphated.

10,0 mm
3/8"

6070 format professional quality

6071 GEDORE

| Order No. | Width of keys mm | 6070 format | 6071 GEDORE | Length mm |
|---|---|---|---|---|
| 2005 | 4 | 4.20 | 6.70 | 47 |
| 2010 | 5 | 4.20 | 6.65 | 47 |
| 2015 | 6 | 4.20 | 6.65 | 47 |
| 2020 | 8 | 4.20 | 6.65 | 49 |
| 2025 | 10 | 4.20 (W532) | 6.70 (W522) | 49 |

## Screwdriver bit 3/8" for Allen screws, TiN coated

**Design:** DIN 7422, made of chrome vanadium steel, with ball retaining groove, polished and chrome plated, with handy knurl, tips made of chrome vanadium steel, **TiN coated,** for higher torque, corrosion resistance and minimal cam-out effect.

**6951** **Short implementation.**

**6952** **Long design,** with offset blade.

**6953** **Extra long design with ball head.**

10,0 mm
3/8"
TiN

HAZET

6951

6952

6953

| Order No. | Width of keys mm | 6951 HAZET | 6952 HAZET | 6953 HAZET | Length mm 6951 | 6952 | 6953 |
|---|---|---|---|---|---|---|---|
| 2000 | 3 | 9.45 | 11.90 * | – | 43.5 | 50 | – |
| 2005 | 4 | 9.45 * | 12.15 | – | 43.5 | 55 | – |
| 2010 | 5 | 9.45 | 12.20 | 13.60 | 43.5 | 60 | 116 |
| 2015 | 6 | 9.45 | 12.40 ° | 14.20 | 43.5 | 65 | 116 |
| 2017 | 7 | 10.30 | 12.85 | 15.40 | 43.5 | 70 | 116 |
| 2020 | 8 | 10.30 | 12.85 ° | 16.40 | 43.5 | 75 | 116 |
| 2022 | 9 | 12.40 * | 15.65 * | – | 43.5 | 80 | – |
| 2025 | 10 | 12.40 (W529) | 15.65 ° (W529) | 20.75 (W529) | 43.5 | 85 | 116 |

* Non-standard sizes.
° Without offset blade.

## Screwdriver bit set 3/8" for Allen screws, TiN coated

**Design:** DIN 7422, made of chrome vanadium steel, with ball retaining groove, polished and chrome plated, with handy knurl, tips made of chrome vanadium steel, **TiN coated,** for higher torque, corrosion resistance and minimal cam-out effect. Supplied in SmartCase with 2K flexible foam insert.

10,0 mm | 3/8" | TiN

| Order No. | Design | 6951 HAZET | Set contents |
|---|---|---|---|
| 1000 | 6-part<br>185 x 153 x 52 mm | 80.30<br>(W529) | 4; 5; 6; 7; 8; 10 mm (Order No. 6952) |

## Screwdriver bit 3/8" for recessed TORX® screws,TiN coated

**Design:** made of chrome vanadium steel, with ball retaining groove, polished and chrome plated, with handy knurl, tips made of chrome vanadium steel, **TiN coated,** for higher torque, corrosion resistance and minimal cam-out effect.

10,0 mm | 3/8" | TiN

| Order No. | Size | 6951 HAZET | Length mm | For screws |
|---|---|---|---|---|
| 5000 | T 15 | 11.15 | 43.5 | M3.5 - M4 |
| 5005 | T 20 | 11.15 | 43.5 | M4 - M5 |
| 5010 | T 25 | 11.15 | 43.5 | M 4.5 - M5 |
| 5015 | T 27 | 11.25 | 43.5 | M4.5 - M5 - M6 |
| 5020 | T 30 | 11.25 | 43.5 | M6 - M7 |
| 5025 | T 40 | 11.90 | 43.5 | M7 - M8 |
| 5030 | T 45 | 11.90 | 43.5 | M8 - M10 |
| 5035 | T 50 | 12.85<br>(W529) | 44.5 | M10 |

## Socket spanner bit 3/8" for protruding TORX®screws

**Design:** Made of chrome-vanadium steel, with ball retaining groove, polished and matte chrome-plated, with knurled handle.

10,0 mm | 3/8"

**6951** **Short implementation.**

**6952** **Long design.**

**6951**

**6952**

| Order No. | Size | 6951 HAZET | 6952 HAZET | Length mm 6951 | Length mm 6952 | Outside Ø mm | For screws |
|---|---|---|---|---|---|---|---|
| 6005 | E 5 | 9.55 | – | 28 | – | 7.0 | M4 |
| 6010 | E 6 | 9.55 | – | 28 | – | 8.0 | M5 |
| 6015 | E 7 | 9.55 | – | 28 | – | 9.0 | M6 |
| 6020 | E 8 | 9.55 | 17.35 | 28 | 65 | 10.5 | M6 - M7 |
| 6025 | E10 | 9.55 | 17.35 | 28 | 65 | 13.0 | M8 |
| 6030 | E11 | 10.15 | – | 28 | – | 14.0 | – |
| 6035 | E12 | 10.25 | 18.40 | 28 | 65 | 14.9 | M10 |
| 6040 | E14 | 10.55<br>(W529) | 19.30<br>(W529) | 28 | 65 | 16.5 | M12 |

## Hexagon socket wrench set 1/2"

**Design:** Tools made of chrome vanadium steel, matte chrome-plated, sockets with curved edge; the recessed hexagons and squares have rounded corners to protect drive and screw head. **The socket wrench inserts are 60-fold serrated, rear swivel angle 5°.** Supplied in a rugged, red/black plastic case with schematic placement indication on the lid. The tools are safely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

12,5 mm
1/2"

format professional quality

| Order No. | Design | 6072 format | Set contents |
|---|---|---|---|
| 0030 | 30-part<br>435 x 260<br>x 55 mm | 150.50 | 1 reversible ratchet (Order No. 6080 00015)<br>19 hexagon socket wrench inserts 8; 9; 10; 11; 12; 13, 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32; 34 mm<br>4 hexagon socket wrench inserts, long (Order No. 6118) 10; 13; 17; 19 mm<br>2 spark plug inserts 16; 21 mm<br>1 T-handle with sliding block<br>2 extensions 125; 250 mm<br>1 universal joint |

(W532)

## Hexagon socket wrench set 1/2"

**Design:** Tools made of chrome-vanadium steel, which have Allen and recessed square sockets with rounded corners for protection of drive and screw head. Supplied in sturdy, painted metal case with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. In the cover there is another foam insert with a schematic indication of tool placement.

12,5 mm
1/2"

format professional quality

6072 0010

| Order No. | Design | 6072 format | Set contents |
|---|---|---|---|
| 0010 | 19-part<br>445 x 185<br>x 50 mm | 109.50 | 1 reversible ratchet (Order No. 6080 0010)<br>14 hexagon sockets (Order No. 6111) 10; 11; 12; 13; 14; 15; 16; 17; 19; 22; 24; 27; 30; 32 mm<br>1 T-handle with sliding block (Order No. 6100)<br>2 extensions (Order 6095) 125; 250 mm<br>1 universal joint (Order No. 6103) |
| 0020 | 27-part<br>435 x 260<br>x 55 mm | 135.00 | 1 lever ratchet (Order 6080)<br>12 hexagon socket bits (Order No. 6111) 10; 11; 12; 13; 14; 15; 17; 19; 22; 24; 27; 30 mm<br>7 recessed screwdriver bits (Order No. 6123) 5; 6; 7; 8; 10; 12; 14 mm<br>4 screwdriver bits recessed TORX® (Order No. 6129) T 30; 40; 45; 50<br>2 extensions (Order 6095) 125; 250 mm<br>1 universal joint (Order No. 6103) |

(W532)

6072 0020

## Socket spanner set 1/2"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in GEDORIT blue sheet steel case with curved, seamless drawn border and ABS plastic insert.

12,5 mm
1/2"

GEDORE

**6074** **With hexagon socket wrench inserts** (Order No. 6113 📖 6/46).

**6077** **With bi-hexagonal socket wrench inserts** (Order No. 6114 📖 6/47).

6074/6077 0012

6074/6077 0022

6074/6077 0041

6074/6077 0052

6074 0100

| Order No. | Design | 6074 GEDORE | 6077 GEDORE | Set contents |
|---|---|---|---|---|
| 0012 | 19-part 315 x 181 x 40 mm | 232.00 | 232.00 | 1 lever wrench (Order No. 6084)<br>15 bits 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24 mm<br>2 extensions (Order 6096) 125; 250 mm<br>1 universal joint (Order No. 6104) |
| 0022 | 23-part 425 x 277 x 55 mm | 282.50 | 283.50 | 1 ratchet wrench (Order No. 6083)<br>18 bits 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm<br>1 T-handle with sliding block (Order No. 6101)<br>2 extensions (Order 6096) 125; 250 mm<br>1 universal joint (Order No. 6104) |
| 0041 | 27-part 425 x 277 x 55 mm | 327.50 | 328.00 | 1 ratchet wrench (Order No. 6085)<br>12 bits 10; 11; 12; 13; 14; 15; 17; 19; 22; 24; 27; 30 mm<br>7 recessed screwdriver bits (Order No. 6124) 5; 6; 7; 8; 10; 12; 14 mm<br>2 slot screwdriver bits 8; 10 mm<br>2 Phillips PH screwdriver bits 2; 3<br>2 extensions (Order 6096) 125; 250 mm<br>1 universal joint (Order No. 6104) |
| 0052 | 28-part 425 x 277 x 55 mm | 348.00 | 348.00 | 1 ratchet wrench (Order No. 6085)<br>23 bits 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 26; 27; 28; 30; 32; 33; 34; 36 mm<br>1 T-handle with sliding block (Order No. 6101)<br>2 extensions (Order 6096) 125; 250 mm<br>1 universal joint (Order No. 6104) |
| 0100 | 42-part 425 x 277 x 55 mm | 467.50 | – | 1 lever wrench (Order No. 6083)<br>16 hexagon socket wrench inserts (Order No. 6113) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm<br>9 Allen screwdriver bits (Order No. 6124) 5; 6; 7; 8; 9; 10; 12; 14; 17 mm<br>9 recessed screwdriver bits TORX® (Order No. 6130) T 20; 25; 27; 30; 40; 45; 50; 55; 60<br>7 protruding TORX screwdriver bits® (Order No. 6122) E 10; 12; 14; 16; 18; 20; 24 |
| | | (W522) | (W522) | |

## Hexagon socket wrench set 1/2"

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. Supplied in SmartCase with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

12,5 mm
1/2"

| Order No. | Design | 6953 HAZET | Set contents |
|---|---|---|---|
| 0017 | 17-part<br>355 x 235<br>x 65 mm | 260.60 | 1 lever ratchet (Order 6954)<br>13 hexagon socket wrench inserts (Order No. 6957)<br>10; 11; 12; 13; 14; 15; 17; 19; 22; 24; 27; 30; 32 mm<br>1 T-handle with sliding block (Order No. 6955)<br>2 extensions (Order 6955) 123; 248 mm |
| 0018 | 18-part<br>355 x 235<br>x 65 mm | 242.10 | 1 lever ratchet (Order 6954)<br>14 hexagon sockets (Order No. 6957)<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27 mm<br>2 extensions (Order 6955) 123; 248 mm<br>1 universal joint (Order No. 6955) |
| 0025 | 25-part<br>355 x 235<br>x 65 mm | 321.40 | 1 lever ratchet (Order 6954)<br>20 hexagon socket wrench inserts (Order No. 6957)<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm<br>1 T-handle with sliding block (Order No. 6955)<br>2 extensions (Order 6955) 123; 248 mm<br>1 universal joint (Order No. 6955) |
| 0044 | 44-part<br>355 x 235<br>x 65 mm | 444.30 | 1 lever ratchet (Order 6954)<br>18 hexagon socket wrench inserts (Order No. 6957)<br>10; 11; 12; 13; 14; 15; 17; 19; 20; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm<br>7 hexagon recessed screwdriver bits, TiN-coated (Order No. 6984) 5; 6; 7; 8; 10; 12; 14 mm<br>4 Phillips bits 5/16" PH 1; 2; 3; 4<br>4 Phillips bits 5/16" PZ 1; 2; 3; 4<br>5 recessed 5/16" TORX® bits T 27; 30; 40; 45; 50<br>1 T-handle with sliding block (Order No. 6955)<br>2 extensions (Order 6955) 123; 248 mm<br>1 universal joint (Order No. 6955)<br>1 bit adapter for 5/16" bits |

(W529)

* Supplied in plastic case.

6953 0017

6953 0018

6953 0025

6953 0044

TiN

## Bi-hexagon socket wrench set 1/2"

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. Supplied in SmartCase with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

12,5 mm
1/2"

| Order No. | Design | 6953 HAZET | Set contents |
|---|---|---|---|
| 1025 | 25-part<br>355 x 235<br>x 65 mm | 321.40 | 1 lever ratchet (Order 6954)<br>20 bi-hexagon socket wrench inserts (Order No. 6957)<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm<br>1 T-handle with sliding block (Order No. 6955)<br>2 extensions (Order 6955) 123; 248 mm<br>1 universal joint (Order No. 6955) |

(W529)

## Hexagon socket wrench set 1/2"

**Design:** Tools made of vanadium steel, chrome plated. Supplied in **"addigrip® compact"** full steel cassettes, fast tool exchange due to professional positioning in the smallest of space.

12,5 mm
1/2"

| Order No. | Design | 6075 carolus | Set contents |
|---|---|---|---|
| 0010 | 24-part<br>475 x 150<br>x 50 mm | 110.00 | 1 reversible ratchet with push-button release<br>17 hexagon socket wrench inserts 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 28; 30; 32 mm<br>1 Adapter 1/2" square x 5/16" hexagon, also suitable for SW 8 mm<br>1 T-handle with sliding block<br>3 extensions 75; 125; 250 mm<br>1 universal joint |

(W531)

## Hexagon socket wrench insert set 1/2" in American inch sizes

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in GEDORIT blue sheet steel case with ABS plastic insert.

12,5 mm 1/2" | American inch sizes

GEDORE

| Order No. | Design | 6077 GEDORE | Set contents |
|---|---|---|---|
| 1001 | 25-part 425 x 277 x 55 mm | 323.50 | 1 lever wrench (Order No. 6083)<br>20 bi-hexagon socket wrench inserts (Order No. 6116)<br>5/16" , 11/32" ; 3/8" , 13/32" ; 7/16" , 1/2" ; 9/16" , 19/32" ; 5/8" , 11/16" ; 3/4" , 25/32" ; 13/16 " , 7/8" ; 15/16" , 1" ; 1-1/16" , 1-1/8" ; 1-3/16" ; 1-1/4"<br>2 extensions (Order No. 6096) 125, 250 mm<br>1 universal joint (Order No. 6104)<br>1 Allen wrench set<br>5/64" , 3/32" ; 1/8" , 5/32" ; 3/16" , 7/32" ; 1/4" , 5/16" |

(W522)

## Hexagon socket wrench set 1/2" Zyklop Metal

**Design:** Tools made of chrome-vanadium steel. Full metal ratchet made of chrome-molybdenum, forged. Extremely slim, with long lever for easy access to narrow areas and transfer of higher torque, ball lock for secure fit of nuts. Low weight for high mobility, high robustness. Delivery in a very compact fabric box, protects sensitive surfaces.

12,5 mm 1/2" | Hex-Plus

Wera Zyklop

**6002 0004** With push-through square (Push). 76-fold serrated, rear swivel angle 4.7°.

**6002 0006** With switch lever (Switch) 72-fold serrated, rear swivel angle 5°.

6002 0004

6002 0006

| Order No. | Design | 6002 Wera | Set contents |
|---|---|---|---|
| 0004 | 28-part | 173.00 | 1 full-metal ratchet with push-through square (Order No. 6002 0016)<br>10 hexagon socket spanner inserts<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm<br>4 Allen bits 5/16" (Order No. 6468) 5; 6; 8; 10 mm<br>2 Phillips bits 5/16" (Order No. 6464) PH 2; 3<br>8 recessed bits 5/16" TORX® (Order No. 6470)<br>T 20; 25; 27; 30; 40; 45; 50; 55<br>1 extension with freewheel sleeve 250 mm<br>1 wobble extension 52 mm<br>1 bit adapter for 5/16" bits |
| 0006 | 28-part | 158.50 | 1 full-metal ratchet with reversing lever (Order No. 6002 0017)<br>10 hexagon socket spanner inserts<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm<br>4 Allen bits 5/16" (Order No. 6468) 5; 6; 8; 10 mm<br>2 Phillips bits 5/16" (Order No. 6464) PH 2; 3<br>8 recessed bits 5/16" TORX® (Order No. 6470)<br>T 20; 25; 27; 30; 40; 45; 50; 55<br>1 extension with freewheel sleeve 250 mm<br>1 wobble extension 52 mm<br>1 bit adapter for 5/16" bits |

(W526)

## Hexagon socket wrench set 1/2" Zyklop Speed

**Design:** With tough bits and nuts. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides in 5 positions (90°, 75° in both directions and 0°). Bidirectional switching and triggering the nut is possible in any position. **72-fold serrated, rear swivel angle 5°.** Allows screwing bits and nuts with just one tool. Delivery in a very compact fabric box, protects sensitive surfaces.

**Application:** Tough bits suitable for universal applications. Suitable for turning screws by hand and machine.

12,5 mm
1/2"

Wera Zyklop

| Order No. | Design | 6002 Wera | Set contents |
|---|---|---|---|
| 0002 | 28-part | 188.00 | 1 Zyklop-ratchet (Order No. 6002 0015)<br>10 hexagon socket spanner inserts<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm<br>2 Phillips bits 5/16" (Order No. 6464) PH 2; 3<br>2 Phillips bits 5/16" (Order No. 6466) PH 2; 3<br>4 Bits 5/16" for recessed hexagon bits (Order no. 6468)<br>5; 6; 8; 10 mm<br>6 recessed bits 5/16" TORX® (Order No. 6470)<br>T 20; 25; 30; 40; 45; 50<br>1 wobble extension 52 mm<br>1 extension with freewheel sleeve 250 mm<br>1 bit adapter for 5/16" bits |

(W526)

## Hexagon socket wrench set 1/2" Zyklop hybrid

NEW

**Design:** Tools made of chrome-vanadium steel, Zyklop hybrid ratchet made of chrome vanadium steel Lightweight, slim ratchet with long lever. Ergonomic Kraftform Plus handle with ball lock for secure fit of the nuts. Left/right switchover. Delivery in a very compact fabric box, protects sensitive surfaces.

12,5 mm
1/2"

Wera Zyklop

| Order No. | Design | 6002 Wera | Set contents |
|---|---|---|---|
| 0060 | 13-part | 179.00 | 1 reversible ratchet Zyklop hybrid<br>10 hexagon socket spanner inserts<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm<br>1 Extension Zyklop Hybrid 250 mm<br>1 extension with freewheel sleeve 250 mm |

(W526)

## Hexagon socket wrench set 1/2" Zyklop Speed

**Design:** Tools made of chrome-vanadium steel. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be fixed in 5 positions (90° and 75° in both directions, and 0°). Can be utilised as bit holder in 0° position. 72-fold serrated, rear swivel angle 5°. Ergonomic Kraftform-Plus handle with ball lock to fit the nuts securely. Right/left switching and triggering the nut is possible in any position. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. Supplied in a stable metal case with anti-slip rubber feet.

12,5 mm
1/2"

Wera Zyklop

| Order No. | Design | 6002 Wera | Set contents |
|---|---|---|---|
| 0010 | 37-part<br>360 x 310<br>x 70 mm | 299.50 | 1 Zyklop-ratchet (Order No. 6002 0015)<br>17 hexagon socket wrench inserts 10; 11; 12; 13; 14;<br>15; 16; 17; 18; 19; 20; 21; 22; 24; 27; 30; 32 mm<br>4 Allen bits 5/16" 5; 6; 8; 10 mm<br>1 Phillips PH bit 5/16" 3<br>1 Phillips PZ bit 5/16" 3<br>7 recessed TORX® T bits 5/16" 20; 25; 27; 30; 40; 50; 55<br>1 T-handle with sliding block<br>2 extensions with freewheel sleeve and fixing<br>"flexible-lock" (Order No. 6002 0020 and 6000 0025)<br>1 wobble extension 52 mm<br>1 universal joint<br>1 bit holder for 5/16" bits |

(W526)

## Combined hexagon socket wrench set 1/4" and 1/2"

**Design:** Tools made of chrome vanadium steel, matte chrome-plated, sockets with curved edge; the recessed hexagons and squares have rounded corners to protect drive and screw head. Supplied in a rugged, red/black plastic case with schematic placement indication on the lid. The tools are safely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

6,3 mm 1/4" | 12,5 mm 1/2"

format professional quality

6105 0010

6105 0020

| Order No. | Design | 6105 format | Set contents |
|---|---|---|---|
| 0010 | 55-part<br>510 x 310 x 90 mm | 165.00 | **Contents 1/4":**<br>1 reversible ratchet (Order No. 6018 0030)<br>12 hexagon socket wrench inserts 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>4 Allen screwdrivers 3; 4; 5; 6 mm<br>2 slot screwdriver bits 4; 5.5 mm<br>2 Phillips PH screwdriver bits 1; 2<br>4 recessed screwdriver bits TORX® T 20; 25; 27; 30<br>1 socket handle<br>1 T-handle with sliding block<br>2 extensions 50; 150 mm<br>1 universal joint<br>**Contents 1/2":**<br>1 reversible ratchet (Order No. 6080 0015)<br>16 hexagon socket wrench inserts 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm<br>4 hexagon socket wrench inserts, long 10; 13; 17; 19 mm<br>1 T-handle with sliding block<br>2 extensions 125, 250 mm<br>1 universal joint |
| 0020 | 58-part<br>510 x 310 x 90 mm | 178.00 | **Contents 1/4":**<br>1 reversible ratchet (Order No. 6018 0030)<br>7 hexagon socket wrench inserts (Order No. 6039) 4; 5; 6; 7; 8; 9; 10 mm<br>3 hexagon socket wrench inserts, long 8; 10; 13 mm<br>4 Allen screwdrivers 3; 4; 5; 6 mm<br>1 slot screwdriver bit 5.5 mm<br>2 Phillips PH screwdriver bits 1; 2<br>9 recessed TORX® screwdriver bits T 8; 9; 10; 15; 20; 25; 27; 30; 40<br>1 socket handle<br>1 T-handle with sliding block<br>2 extensions 50; 105 mm<br>1 universal joint<br>**Contents 1/2":**<br>1 reversible ratchet (Order No. 6080 0015)<br>16 hexagon socket wrench inserts 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm<br>3 hexagon socket wrench inserts, long 13; 17; 19 mm<br>2 spark plug inserts 16; 21 mm<br>1 T-handle with sliding block<br>2 extensions 125, 250 mm<br>1 universal joint |

(W532)

## Combined hexagon socket wrench set 1/4" and 1/2"

**Design:** Tools made of vanadium steel, chrome plated. Supplied in **"addigrip® compact"** full steel cassettes, permanent fast tool exchange due to professional positioning in the smallest of space.

6,3 mm 1/4" | 12,5 mm 1/2"

carolus by GEDORE

| Order No. | Design | 6075 carolus | Set contents |
|---|---|---|---|
| 0100 | 49-part<br>475 x 150 x 50 mm | 159.00 | **Contents 1/4":**<br>1 reversible ratchet and push-button release<br>12 hexagon socket wrench inserts 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>4 allen screwdriver sockets 4; 5; 6; 8 mm<br>1 slot screwdriver bit 5.5 mm<br>1 Phillips screwdriver PH 2<br>1 Phillips screwdriver PZ 2<br>7 recessed TORX® screwdriver bits with hole T 10; 15; 20; 25; 27; 30; 40<br>2 extensions 50; 100 mm<br>1 universal joint<br>**Contents 1/2":**<br>1 reversible ratchet and push-button release<br>13 hexagon socket wrench inserts 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24 mm<br>3 extensions 75; 125; 250 mm<br>1 universal joint<br>1 adapter 1/2" square x 5/16" hexagon, also suitable for SW 8mm |

(W531)

## Combined hexagon socket wrench set 1/4" and 1/2"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, polished and chrome plated. Supplied in GEDORIT blue sheet steel case with ABS plastic insert.

6,3 mm 1/4" | 12,5 mm 1/2"

GEDORE

| Order No. | Design | 6074 GEDORE | Set contents |
|---|---|---|---|
| 0040 | 50-part<br>425 x 277 x 55 mm | 488.50 | **Contents 1/4":**<br>1 lever wrench (Order No. 6013)<br>11 hexagon inserts (Order No. 6040) 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 13 mm<br>4 Allen screwdriver bits recessed hexagon (Order No. 6045) 3; 4; 5; 6; mm<br>3 slot screwdriver bits (Order No. 6048) 4; 5.5; 6.5 mm<br>2 Phillips screwdriver bits (Order No. 6050) PH 1; 2<br>1 T-handle with sliding block (Order No. 6021)<br>2 extensions (Order 6016) 55; 100 mm<br>1 universal joint (Order No. 6034)<br>1 socket handle (Order No. 6028)<br>**Contents 1/2":**<br>1 lever wrench (Order No. 6082)<br>12 hexagon inserts (Order no. 6113) 10; 11; 12; 13; 14; 15; 17; 19; 22; 24; 27; 30 mm<br>5 Allen screwdriver sockets (Order No. 6124) 7; 8; 10; 12; 14 mm<br>2 slot screwdriver bits 8; 10 mm<br>1 Phillips screwdriver PH 3<br>2 extensions (Order 6096) 125; 250 mm<br>1 universal joint (Order No. 6104) |

(W522)

## Combined hexagon socket wrench set 1/4" and 1/2"

**Design:** Tool made of chrome-vanadium steel, polished and chrome plated. Supplied in plastic box with carrying handle, with flexible foam insert.

6,3 mm 1/4" | 12,5 mm 1/2"

| Order No. | Design | 6953 HAZET | Set contents |
|---|---|---|---|
| 0047 | 47-part<br>410 x 216 x 56 mm | 215.00 | **Contents 1/4":**<br>1 reversible ratchet<br>9 hexagon socket wrench inserts (Order No. 6837) 5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>5 recessed Allen bits 1/4" 2; 3; 4; 5; 6 mm<br>3 slot bits 1/4" 4; 6; 8 mm<br>2 Phillips bits 1/4" PH 1; 2<br>2 Phillips bits 1/4" PZ 1; 2<br>5 recessed TORX® bits 1/4" T 10; 15; 20; 25; 30<br>1 drive handle (Order No. 6835) 134 mm<br>1 extension 101.5 mm<br>1 bit adapter for 1/4" bits<br>**Contents 1/2":**<br>1 reversible ratchet<br>14 hexagon sockets (Order No. 6957) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27 mm<br>2 extensions (Order 6955) 123; 248 mm |

(W529)

## Combined hexagon socket wrench – set 1/4" and 1/2" Zyklop Speed

**Design:** Tools made of chrome-vanadium steel. The Zyklop ratchet combines the benefits of 5 different ratchet types in one tool and through its special design achieves very high working speeds. The ratchet head pivots freely and can be fixed in 5 positions (90° and 75° in both directions, and 0°). Can be utilised as bit holder in 0° position. 72-fold serrated, rear swivel angle 5°. Ergonomic Kraftform-Plus handle with ball lock to fit the nuts securely. Right/left switching and triggering the nut is possible in any position. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. Supplied in a stable metal case with anti-slip rubber feet.

6,3 mm 1/4" | 12,5 mm 1/2"

| Order No. | Design | 6002 Wera | Set contents |
|---|---|---|---|
| 0030 | 43-part<br>360 x 310 x 70 mm | 287.50 | **Contents 1/4":**<br>1 Zyklop-ratchet (Order No. 6000 0015)<br>11 hexagon socket spanner inserts 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 12; 13 mm<br>4 Bits, 89 mm long, Allen bits 3; 4; 5; 6 mm<br>1 Bit, 89 mm long, slot 5.5 mm<br>3 bits, 89 mm long, Phillips PH bits 1; 2; 3<br>3 bits, 89 mm long, Phillips PZ bits 1; 2; 3<br>5 Bits, 89 mm long, recessed TORX® with hole T 10; 15; 20; 25; 30<br>1 bit adapter 1/4<br>1 Extension with freewheel sleeve and fixing system " flexible-lock" (Order no. 6000 0024) 150 mm<br>1 Hand bit holder with quick change chuck Rapidaptor<br>**Contents 1/2":**<br>1 Zyklop-ratchet (Order No. 6002 0015)<br>10 hexagon socket spanner inserts 12; 13; 14; 15; 16; 17; 18; 19; 21; 22 mm<br>1 Extension with freewheel sleeve and fixing system " flexible-lock" (Order no. 6000 0025) 250 mm |

(W526)

## Passage socket

The passage socket wrenches are particularly suitable for threaded bolts and tight installation spaces. The socket wrench inserts and ratchet have pipe cross section in order to accommodate long threaded bolts. The ratchet and the socket wrench insert are connected by means of a compact and inside hollow hexagonal system; the socket wrench inserts are plugged into the hexagonal shank of the ratchet. The drive length hidden inside the ratchet shortens the protruding part of the socket wrench insert by approximately 50% compared to the traditional system.

## Passage socket wrench set 1/2"

**Design:** Ratchet made of GEDORE vanadium steel 31CrV3, chrome plated. Socket wrench inserts made of GEDORE steel 42CrMo4 polished and chrome plated. Supplied in blue sheet steel case with foam insert.

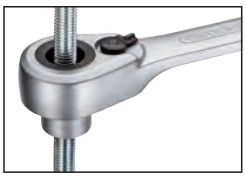
12,5 mm
1/2"

GEDORE

| Order No. | Design | 6094 GEDORE | Set contents |
|---|---|---|---|
| 0140 | 14-part 290 x 132 x 55 mm | 256.50 (W522) | 1 passage ratchet<br>13 hexagon socket wrench inserts 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24 mm |

## Passage reversible ratchet with hexagon drive 1/2"

**Design:** Made of GEDORE vanadium steel 31CrV3, chrome-plated, with Allen intake. Small, drop-shaped head with passage e.g. for threaded rods and reversible levers, 60-part serrated, reset angle 6°. Handle with non-slip 2-component plastic cover.



| Order No. | Length mm | 6094 GEDORE |
|---|---|---|
| 0000 | 270 | 60.20 (W522) |

## Hexagon socket wrench insert, with hexagon drive 1/2"

**Design:** Made of GEDORE steel 42CrMo4, polished and chrome plated. With hexagon drive and passage e.g. for threaded rods.

| Order No. | Width of keys mm | 6094 GEDORE | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0010 | 10 | 11.15 | 24.0 | 15.5 |
| 0011 | 11 | 11.15 | 24.0 | 16.7 |
| 0012 | 12 | 11.15 | 25.0 | 18.0 |
| 0013 | 13 | 11.15 | 25.0 | 19.2 |
| 0014 | 14 | 11.15 | 25.0 | 20.5 |
| 0015 | 15 | 11.15 | 26.5 | 21.7 |
| 0016 | 16 | 11.40 | 26.5 | 22.5 |
| 0017 | 17 | 11.40 | 27.0 | 24.0 |
| 0018 | 18 | 11.40 | 30.5 | 25.5 |
| 0019 | 19 | 12.05 | 30.5 | 26.7 |
| 0021 | 21 | 12.05 | 32.5 | 29.2 |
| 0022 | 22 | 12.05 | 32.5 | 30.5 |
| 0024 | 24 | 12.65 (W522) | 32.5 | 33.0 |

## Reversible ratchet 1/2"

**Design:** DIN 3122 D 12.5 – ISO 3315, with ball locking device.

12,5 mm
1/2"

**6080 0010** Made of chrome-vanadium-steel, chrome plated. With oval head, push-button release and reversing lever. **32-fold serrated, rear swivel angle 11.25°.** With ergonomic 2-component handle.

**6080 0015** Made of chrome-vanadium-steel, chrome plated. With oval head, push-button release and reversing lever. **60-fold serrated, rear swivel angle 6°.** With ergonomic 2-component handle.

**6085** Made of GEDORE vanadium steel 31CrV3, with oval head, push button actuator and switch lever, automatic locking for clockwise or anti-clockwise turning **32-fold serrated, rear swivel angle 11.25°.** Handle with non-slip 2-component plastic cover.

**6083** Made of GEDORE vanadium steel 31CrV3, with oval head, push button actuator and switch lever, automatic locking for clockwise or anti-clockwise turning **60-fold serrated, rear swivel angle 6°.** Handle with non-slip 2-component plastic cover.

**6102** Made of GEDORE vanadium steel 31CrV3, **offset handle** for hard to reach places reduces the risk of injury to the fingers when screwing on flat surfaces, with oval head, push-button release and reversing lever, automatic locking for right and left hand use, **60-fold serrated, backward tilt angle 6°.** Handle with non-slip 2-component plastic cover.

**6084** Made of GEDORE vanadium-chrome steel 31CrV3, with round head. Switching with switching disk, **72-fold serrated, rear swivel angle 5°.** Handle with non-slip 2-component plastic cover.

**6091** Made of vanadium special steel, chrome plated, with oval head and reversing lever, robust mechanics, **36-fold serrated, rear swivel angle 10°.** Handle with 2-component plastic cover.

**6954 0005** Made of chrome-vanadium-steel, chrome plated. With round head and sunken toggle button. **72-fold serrated, rear swivel angle 5°.** With ergonomic 2-component handle.

**6954 0010** Made of vanadium-chrome steel, polished and chrome plated. With oval head and reversing lever. **32-fold serrated.** With ergonomic 2-component handle.

**6954 0015** Made of chrome-vanadium-steel, chrome plated. With oval, polished head, push-button release and reversing lever. **32-fold serrated.** With ergonomic 2-component handle.

**6954 0020** Made of chrome-vanadium-steel, chrome plated. With oval head and reversing lever. Low force input due to longer lever. **32-fold serrated.** With ergonomic 2-component handle.

| Order No. | Length mm | 6080 format | 6085 GEDORE | 6083 GEDORE | 6102 GEDORE | 6084 GEDORE | 6091 carolus | 6954 HAZET |
|---|---|---|---|---|---|---|---|---|
| 0005 | 245 | – | – | – | – | – | – | 62.95 |
| 0010 | 265 | 27.80 | – | – | – | – | – | – |
| 0015 | 265 | 25.60 | – | – | – | – | – | – |
| 0020 | 270 | – | 65.80 | 57.60 | 73.10 | 44.70 | – | – |
| 0010 | 275 | – | – | – | – | – | – | 55.95 |
| 0015 | 275 | – | – | – | – | – | – | 65.65 |
| 0010 | 280 | – | – | – | – | – | 25.60 | – |
| 0030 | 350 | – | 79.10 | – | – | – | – | – |
| 0020 | 389 | – | – | – | – | – | – | 80.10 |
| | | (W532) | (W522) | (W522) | (W522) | (W522) | (W531) | (W529) |

## Push-through twist grip ratchet 1/2"

**Design:** DIN 3122 D 6.3 – ISO 3315, made of chrome vanadium steel, chrome-plated, round head, non-detachable feed-through square and ball lock. **60-fold serrated, rear swivel angle 6°.** Handle with 2-component plastic cover, **rotatable in both directions for space-saving and quick activation of actuation squares.**

**Application:** Especially suitable for work in confined spaces.

12,5 mm
1/2"

format professional quality

| Order No. | Length mm | 6080 format |
|---|---|---|
| 0030 | 290 | 45.90 (W532) |

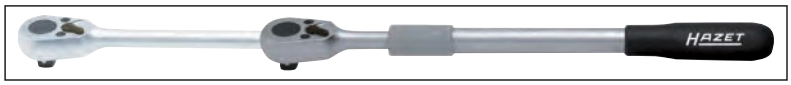
## Reversible ratchet 1/2', pull-out

**Design:** Made of chrome-vanadium steel, chrome-plated, with oval head, additionally polished, with reverse lever. Low force input due to longer lever, simple fixing by means of self-gripping locking ring. Maximum torque 600 N•m. **32-fold serrated.**

12,5 mm
1/2"

HAZET

| Order No. | Length mm | 6954 HAZET |
|---|---|---|
| 0025 | 410–590 | 115.30 (W529) |



## Hinged reversible ratchet 1/2"

**Design:** Made of chrome-vanadium steel, polished and chrome-plated, with oval head and reverse lever. **32-fold serrated.** With 2-component handle.

12,5 mm
1/2"

HAZET

| Order No. | Length mm | 6954 HAZET |
|---|---|---|
| 0030 | 270 | 76.80 |
| 0035 | 511 | 85.45 NEW (W529) |

6954 0030

6954 0035

## Repair set for 1/2" ratchet

**Application:** Complete ratchet repair set, suitable for Order No. 6954 0025 and 6954 0003 📖 6/41.

**Scope of delivery:** 1 ratchet wheel, 1 locking piece, 1 shift lever, 2 screws, 1 ball and 1 spring.

12,5 mm
1/2"

HAZET

| Order No. | Design | 6954 HAZET |
|---|---|---|
| 1000 | 7-part | 21.40 (W529) |

## Ratchet 1/2" Zyklop Metal

**Design:** Full metal ratchet made of chrome-molybdenum, forged. Finely toothed, with a particularly small return angle. Extremely slim, with long lever for easy access to narrow areas and transfer of higher torque, ball lock for secure fit of nuts. Low weight for high mobility, high robustness.

12,5 mm
1/2"

Wera Zyklop

**6002 0016** With push-through square (Push). **76-fold serrated, rear swivel angle 4.7°.**

**6002 0017** With switch lever (Switch) **72-fold serrated, rear swivel angle 5°.**

| Order No. | Length mm | 6002 Wera |
|---|---|---|
| 0016 | 281 | 62.70 |
| 0017 | 281 | 49.90 (W526) |

6002 0016

6002 0017

## Reversible ratchet 1/2" Zyklop Speed

**Design:** DIN 3122 D 6.3 – ISO 3315, with ball locking device. Made of vanadium-chrome steel with Kraftform handle and freewheeling sleeve. Switching occurs via a hub Bidirectional switching and triggering the nut is possible in any position. The ratchet head is ergonomically shaped and, due to flywheel mass design in connection with the freewheel sleeve allows for fast-paced work. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides with 5 positions (90°, 75° in both directions and 0°).
**72-fold serrated, rear swivel angle 5°.** With Kraftform handle for fatigue-free working.

12,5 mm
1/2"

Wera Zyklop

| Order No. | Length mm | 6002 Wera |
|---|---|---|
| 0015 | 277 | 57.20 (W526) |

## Extension 1/2" Zyklop

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With **freewheel sleeve** for quick fastening and releasing and **flexible lock system.** The plug-in tools are permanently connected with the extension with the activated flexible lock system.

| Order No. | Length mm | 6002 Wera |
|---|---|---|
| 0020 | 125 | 9.95 |
| 0025 | 250 | 12.50 (W526) |

## Reversible ratchet 1/2" Zyklop Hybrid

NEW

**Design:** Made of chrome vanadium steel, oval head, push-button release and reversing lever. **72-fold serrated, rear swivel angle 5°.** Long lever and Kraftform handle for optimum force transmission.

12,5 mm
1/2"

Wera Zyklop

6002 0050

6002 0055

| Order No. | Design | 6002 Wera | Length mm |
|---|---|---|---|
| 0050 | Reversible ratchet | 56.20 | 281 |
| 0055 | Reversible ratchet with extension 271.0 mm | 78.80 (W526) | 281 |

## Push through ratchet 1/2"

**Design:** DIN 3122 C 12.5 – ISO 1174, with round head and ball locking device.

12,5 mm
1/2"

**6076** Gear ratchet of vanadium-chrome steel, with ergonomic 2-component handle, **32-fold serrated,** rear swivel angle 11.25°.
**Delivery includes push-through square.**

6076 format professional quality

**6092** Push-through square made of vanadium-chrome steel.

6092 format professional quality

**6078** Gear ratchet of GEDORE vanadium steel 31CrV3, very robust due to double lock blade. Handle with non-slip 2-component plastic cover, **24-fold serrated,** rear swivel angle 15°. **Supplied with push-through square.**

6078 GEDORE

**6093** Push-through square made of GEDORE vanadium steel 31CrV3, chrome plated and polished.

6093 GEDORE

| Order No. | Length mm | 6076 format | 6092 format | 6078 GEDORE | 6093 GEDORE |
|---|---|---|---|---|---|
| 0010 | 250.0 | 23.60 | – | – | – |
| 0010 | 35.0 | – | 2.95 | – | – |
| 0020 | 270.0 | – | – | 35.40 | – |
| 0020 | 37.8 | – (W532) | – (W532) | – (W522) | 3.38 (W522) |

## Flexible handle 1/2"

**Design:** DIN 3122 F12.5 – ISO 3315, made of GEDORE vanadium steel 31CrV3, with ball locking device, polished and chrome plated. Handle with non-slip 2-component plastic cover.

12,5 mm
1/2"

GEDORE

| Order No. | Length mm | 6098 GEDORE |
|---|---|---|
| 0020 | 381 | 41.40 (W522) |

## Crank handle 1/2"

**Design:** DIN 3122 – ISO 3315, GEDORE vanadium steel 31CrV3, polished and chrome plated. Handle with plastic cover.

12,5 mm
1/2"

GEDORE

| Order No. | Length mm | 6098 GEDORE |
|---|---|---|
| 0100 | 395 | 22.10 (W522) |

## 1/2" extension

**Version:** DIN 3123 B 12.5 – ISO 3316, with ball locking device.

**6095** Made of chrome-vanadium-steel, chrome plated.

**6096** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6955** Made of vanadium-chrome steel, polished and chrome plated.

12,5 mm
1/2"

6095 format professional quality

6096 GEDORE

6955 HAZET

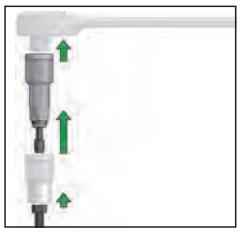
| Order No. | Nominal length mm | 6095 format | 6096 GEDORE | 6955 HAZET |
|---|---|---|---|---|
| 0063 | 63 | – | 8.95 | – |
| 0075 | 75 | 4.94 | – | 11.30 |
| 0076 | 76 | – | 8.95 | – |
| 0125 | 125 | 5.35 | 9.60 | 12.15 |
| 0180 | 180 | – | 12.00 | – |
| 0250 | 250 | 7.35 | 13.65 | 16.50 |
| 0575 | 575* | – (W532) | – (W522) | 41.50 (W529) |

* Non-standard size.

## Magnet extension 1/2"

**Design:** DIN 3120 ISO 1174, with ball locking device. Made of GEDORE vanadium steel 31CrV3, forged and chrome-plated, spring pin manganese-phosphated. The holding magnet fixes the screw securely in the socket wrench insert. The magnetic filed of the magnat holds screws and nuts centric in the socket wrench insert without direct contact.

**Application:** For socket wrench inserts with through bore.



12,5 mm
1/2"

GEDORE

| Order No. | Length mm | 6955 GEDORE |
|---|---|---|
| 0085 | 83 | 30.70 (W522) |

## Gimbal extension 1/2"

**Design:** DIN 3123 D 12.5 - ISO 3316, with ball locking device.

**6099** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.
**The extension allows a swivel angle up to 15°.**

**6956** Made of vanadium-chrome steel, polished and chrome plated.
**The extension allows a swivel angle up to 12.5°.**

12,5 mm
1/2"

6099 GEDORE

6956 HAZET

| Order No. | Nominal length mm | 6099 GEDORE | 6956 HAZET |
|---|---|---|---|
| 0050 | 50 | – | 14.75 |
| 0125 | 125 | 15.20 | 15.80 |
| 0250 | 250 | 18.85 (W522) | 21.10 (W529) |

## T-handle with sliding block 1/2"

**Design:** DIN 3122 ISO 3315, with ball locking device.

**6100** Made of chrome-vanadium-steel, chrome plated.

**6101** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6955** Made of vanadium-chrome steel, polished and chrome plated.

12,5 mm
1/2"

6100 format professional quality

6101 GEDORE

6955 HAZET

| Order No. | Length mm | 6100 format | 6101 GEDORE | 6955 HAZET |
|---|---|---|---|---|
| 0010 | 292 | – | 14.75 | – |
| 0030 | 298 | – | – | 20.60 |
| 0020 | 300 | 9.70 (W532) | – (W522) | – (W529) |

## Universal joint 1/2"

**Design:** DIN 3123 C 12.5 – ISO 3316, with ball locking device.

**6103** Made of chrome-vanadium-steel, chrome plated.

**6104** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6955** Made of vanadium-chrome steel, polished and chrome plated.

12,5 mm
1/2"

6103 format professional quality

6104 GEDORE

6955 HAZET

| Order No. | Length mm | 6103 format | 6104 GEDORE | 6955 HAZET |
|---|---|---|---|---|
| 0015 | 70.0 | – | – | 28.35 |
| 0010 | 73.0 | 11.45 | – | – |
| 0020 | 73.5 | – (W532) | 24.30 (W522) | – (W529) |

## Reducer 1/2"

**Version:** DIN 3123 A 12.5 x 10 – ISO 3316, with ball locking device.

**6106** Made of chrome-vanadium-steel, chrome plated.

**6107** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6955** Made of chrome-vanadium-steel, chrome plated.

12,5 mm
1/2"

6106 format professional quality

6107 GEDORE

6955 HAZET

| Order No. | Design | 6106 format | 6107 GEDORE | 6955 HAZET |
|---|---|---|---|---|
| 0005 | 1/2" recessed square to 3/8" protruding square | – | – | 13.05 |
| 0010 | 1/2" recessed square to 3/8" protruding square | 4.46 | – | – |
| 0020 | 1/2" recessed square to 3/8" protruding square | – (W532) | 8.45 (W522) | – (W529) |

## Enlarger 1/2"

**Version:** DIN 3123 A 12.5 x 20 – ISO 3316,with ball locking device.

**6108** Made of chrome-vanadium-steel, chrome plated.

**6109** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6955** Made of chrome-vanadium-steel, chrome plated.

12,5 mm
1/2"

6108 format professional quality

6109 GEDORE

6955 HAZET

| Order No. | Design | 6108 format | 6109 GEDORE | 6955 HAZET |
|---|---|---|---|---|
| 0010 | 1/2" recessed square to 3/4" protruding square | 7.45 | – | – |
| 0020 | 1/2" recessed square to 3/4" protruding square | – | 10.85 | – |
| 0025 | 1/2" recessed square to 3/4" protruding square | – | – | 16.25 |
| | | (W532) | (W522) | (W529) |

## Adapter set

**Design:** Made of chrome-vanadium steel, chrome plated, with ball lock. Supplied in plastic case with foam insert.

12,5 mm
1/2"

format professional quality

| Order No. | Design | 6108 format | Set contents |
|---|---|---|---|
| 0400 | 4-part 125 x 88 x 46.5 mm | 20.50 | 1 enlarger 1/4" to 3/8"<br>1 enlarger 3/8" to 1/2"<br>1 reducer 3/8" to 1/4"<br>1 reducer 1/2" to 3/8" |
| | | (W532) | |

## Adapter set

**Design:** Made of chrome-vanadium steel, chrome plated, with ball lock. Supplied in SmartCase with set-up function for quick tool access. The tools are held securely housed in a 2-colour foam insert (1/9), thus missing tools are recognised immediately. The lid serves as a storage area for tools taken.

12,5 mm
1/2"

HAZET

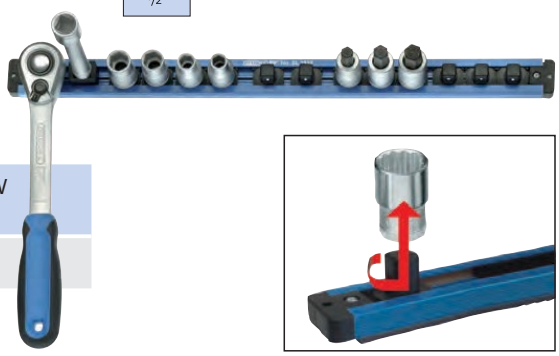
| Order No. | Design | 6955 HAZET | Set contents |
|---|---|---|---|
| 6000 | 6-part 185 x 153 x 52 mm | 86.70 | 1 enlarger 1/4" to 3/8"<br>1 enlarger 3/8" to 1/2"<br>1 enlarger 1/2" to 3/4"<br>1 reducer 3/8" to 1/4"<br>1 reducer 3/4" to 1/2"<br>1 reducer 1/2" to 3/8" |
| | | (W529) | |

## Magnetic cable connection 1/2"

**Application:** Suitable for all standard 1/2" sockets. A strong permanent magnet holds the bar securely to FE-metals, for example, to machine covers, tool trolleys or lifting platforms. The strip can be installed horizontally, vertically or even overhead. The strip has additional drill holes for wall installation. Inserts are fixed with a 90° turn. Insert is subsequently locked with the ball. Rotating in the opposite direction unlocks the inserts so they can be removed. **Supplied without tools.**

12,5 mm
1/2"

GEDORE





| Order No. | Adapters | 6117 GEDORE | Dimensions L x W mm |
|---|---|---|---|
| 0012 | 12 protruding square sockets<br>2 recessed square sockets | 31.90 | 480 x 33 |
| | | (W522) | |

## Hexagon socket wrench insert 1/2"

**Design:** DIN 3124 – ISO 2725-1, with ball retaining groove and knurled handle.

**6111** Made of chromium-vanadium steel, polished and matte chrome-plated.

**6113** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6957** Made of vanadium-chrome steel, polished and chrome plated.

12,5 mm
1/2"

| Order No. | Width of keys mm | 6111 format | 6113 GEDORE | 6957 HAZET | Length mm 6111 | Length mm 6113 | Length mm 6957 | Outside Ø mm 6111 | Outside Ø mm 6113 | Outside Ø mm 6957 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0081 | 8 | 2.59 | 6.50 | 6.80 | 38.0 | 38.0 | 38.0 | 12.9 | 13.0 | 12.0 |
| 0091 | 9* | 2.59 | 6.55 | 6.80 | 38.0 | 38.0 | 38.0 | 14.1 | 14.2 | 13.5 |
| 0101 | 10 | 2.59 | 5.55 | 5.80 | 38.0 | 38.0 | 38.0 | 15.3 | 15.5 | 14.9 |
| 0111 | 11 | 2.59 | 6.00 | 6.80 | 38.0 | 38.0 | 38.0 | 16.6 | 16.7 | 16.4 |
| 0121 | 12 | 2.59 | 6.00 | 6.80 | 38.0 | 38.0 | 38.0 | 18.0 | 18.0 | 17.5 |
| 0131 | 13 | 2.59 | 5.55 | 5.80 | 38.0 | 38.0 | 38.0 | 19.1 | 19.2 | 18.8 |
| 0141 | 14 | 2.59 | 6.10 | 7.05 | 38.0 | 38.0 | 38.0 | 20.4 | 20.5 | 20.3 |
| 0150 | 15 | 2.59 | 6.10 | 7.05 | 38.0 | 39.5 | 38.0 | 21.7 | 21.7 | 21.5 |
| 0160 | 16 | 2.59 | 6.10 | 7.05 | 38.0 | 39.5 | 38.0 | 22.9 | 22.5 | 22.7 |
| 0170 | 17 | 2.77 | 6.55 | 7.60 | 38.0 | 39.5 | 38.0 | 24.1 | 24.2 | 24.1 |
| 0180 | 18 | 2.87 | 7.00 | 8.30 | 38.0 | 39.5 | 38.0 | 25.4 | 25.5 | 25.4 |
| 0190 | 19 | 2.87 | 6.55 | 7.60 | 38.0 | 40.0 | 38.0 | 26.6 | 26.7 | 26.6 |
| 0200 | 20 | – | 7.15 | 8.85 | – | 40.0 | 38.0 | – | 28.0 | 27.8 |
| 0210 | 21 | 3.02 | 7.70 | 8.85 | 41.0 | 41.5 | 38.0 | 29.1 | 29.2 | 29.0 |
| 0220 | 22 | 3.20 | 7.20 | 8.85 | 41.0 | 41.5 | 41.5 | 29.9 | 30.5 | 30.4 |
| 0230 | 23* | – | 7.90 | 10.00 | – | 41.5 | 41.5 | – | 31.7 | 31.4 |
| 0240 | 24 | 3.76 | 7.95 | 9.45 | 41.0 | 41.5 | 44.0 | 32.1 | 33.0 | 32.6 |
| 0250 | 25* | – | 9.15 | 10.00 | – | 41.5 | 44.0 | – | 34.5 | 33.9 |
| 0260 | 26* | – | 8.60 | 10.55 | – | 41.5 | 44.0 | – | 35.5 | 35.1 |
| 0271 | 27 | 4.08 | 9.95 | 12.55 | 44.0 | 41.5 | 46.0 | 36.0 | 36.7 | 36.2 |
| 0280 | 28* | – | 10.60 | 12.55 | – | 43.0 | 47.0 | – | 38.0 | 37.5 |
| 0290 | 29* | – | 11.05 | 12.55 | – | 43.0 | 50.0 | – | 39.2 | 38.7 |
| 0301 | 30 | 6.00 | 10.65 | 12.55 | 44.0 | 43.0 | 50.0 | 39.9 | 40.5 | 40.1 |
| 0321 | 32 | 6.35 | 10.65 | 12.55 | 44.0 | 44.5 | 50.0 | 42.9 | 43.0 | 42.3 |
| 0341 | 34 | 8.00 | 11.55 | 16.50 | 44.0 | 44.5 | 52.0 | 45.4 | 45.5 | 46.0 |
| 0360 | 36* | 10.20 | 16.10 | 18.00 | 44.0 | 44.5 | 57.0 | 47.8 | 48.0 | 49.0 |
| | | (W532) | (W522) | (W529) | | | | | | |

* Non-standard sizes.

6111 format professional quality

6113 GEDORE

6957 HAZET

## Hexagon socket wrench set 1/2" Zyklop NEW

**Design:** Tools made of chrome-vanadium steel, matt chrome plated. With mechanical holding function; holds nuts and screws independent of material and location of use. Delivery in a compact fabric box, protects sensitive surfaces.

12,5 mm
1/2"

Wera Zyklop

| Order No. | Design | 611A Wera | Set contents |
|---|---|---|---|
| 1000 | 10-part | 69.40 | 10 hexagon socket wrench inserts (Order No. 611A) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm |
| | | (W526) | |

## Hexagon socket wrench set 1/2" Zyklop NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical holding function; holds nuts and screws independent of material and location of use.

| Order No. | Width of keys mm | 611A Wera | | Length mm | Outside Ø mm |
|---|---|---|---|---|---|
| 0101 | 10 | 5.35 | | 37.0 | 23.5 |
| 0111 | 11 | 5.35 | | 37.0 | 23.5 |
| 0121 | 12 | 5.35 | | 37.0 | 23.5 |
| 0131 | 13 | 5.45 | | 37.0 | 23.5 |
| 0141 | 14 | 5.90 | | 37.0 | 23.5 |
| 0150 | 15 | 5.90 | | 37.0 | 23.5 |
| 0160 | 16 | 6.00 | | 37.0 | 23.5 |
| 0170 | 17 | 6.40 | | 37.0 | 23.5 |
| 0180 | 18 | 7.05 | | 37.0 | 23.5 |
| 0190 | 19 | 7.05 | | 37.0 | 23.5 |
| | | (W526) | | | |

## Bi-hexagon socket wrench insert 1/2"

**Design:** DIN 3124 – ISO 2725-1, with ball retaining groove and knurled handle.

12,5 mm
1/2"

**6112** Made of chromium-vanadium steel, polished and matte chrome-plated.

**6114** Made of GEDORE vanadium steel 31CrV3, polished and matte chrome plated.

**6958** Made of vanadium-chrome steel, polished and chrome plated.

6112 format professional quality

6114 GEDORE

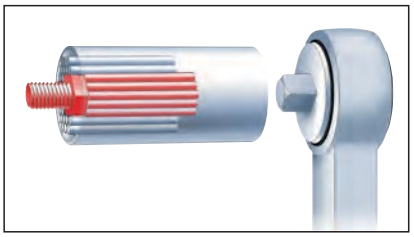
6958 HAZET

| Order No. | Width of keys mm | 6112 format | 6114 GEDORE | 6958 HAZET | Length mm 6112/6114 | Length mm 6958 | Outside Ø mm 6112/6114 | Outside Ø mm 6958 |
|---|---|---|---|---|---|---|---|---|
| 0081 | 8 | 2.59 | 6.55 | 6.80 | 38.0 | 38.0 | 13.0 | 12.0 |
| 0091 | 9* | – | 6.80 | 6.80 | 38.0 | 38.0 | 14.2 | 13.5 |
| 0101 | 10 | 2.59 | 5.60 | 5.80 | 38.0 | 38.0 | 15.5 | 14.9 |
| 0111 | 11 | 2.59 | 6.00 | 6.80 | 38.0 | 38.0 | 16.7 | 16.4 |
| 0121 | 12 | 2.59 | 6.00 | 6.80 | 38.0 | 38.0 | 18.0 | 17.5 |
| 0131 | 13 | 2.59 | 5.55 | 5.80 | 38.0 | 38.0 | 19.2 | 18.8 |
| 0141 | 14 | 2.59 | 6.10 | 7.05 | 38.0 | 38.0 | 20.5 | 20.3 |
| 0150 | 15 | 2.59 | 6.15 | 7.05 | 39.5 | 38.0 | 21.7 | 21.5 |
| 0160 | 16 | 2.59 | 6.15 | 7.05 | 39.5 | 38.0 | 22.5 | 22.7 |
| 0170 | 17 | 2.59 | 6.55 | 7.60 | 39.5 | 38.0 | 24.2 | 24.1 |
| 0180 | 18 | 2.77 | 7.00 | 8.30 | 39.5 | 38.0 | 25.5 | 25.4 |
| 0190 | 19 | 2.87 | 6.55 | 7.60 | 40.0 | 38.0 | 26.7 | 26.6 |
| 0200 | 20 | 2.87 | 7.20 | 8.85 | 40.0 | 38.0 | 28.0 | 27.8 |
| 0210 | 21 | 3.02 | 7.70 | 8.85 | 41.5 | 38.0 | 29.2 | 29.0 |
| 0220 | 22 | 3.20 | 7.20 | 8.85 | 41.5 | 41.5 | 30.5 | 30.4 |
| 0240 | 24 | 3.76 | 7.95 | 9.45 | 41.5 | 44.0 | 33.0 | 32.6 |
| 0271 | 27 | 4.08 | 10.20 | 12.55 | 41.5 | 46.0 | 36.7 | 36.2 |
| 0301 | 30 | 6.00 | 10.90 | 12.55 | 43.0 | 50.0 | 40.5 | 40.1 |
| 0321 | 32* | 6.35 | 10.90 | 12.55 | 44.5 | 50.0 | 43.0 | 42.3 |
| 0360 | 36 | – | – | 18.00 | – | 57.0 | – | 49.0 |
| | | (W532) | (W522) | (W529) | | | * Non-standard sizes. | |

## Socket wrench insert 1/2" gripper

**Design:** Made of quality alloy steel, polished and chrome plated. With 54 hardened, mobile steel pins

**Application:** Grips each **triangular, square and hexagon screw in the range of 13 mm to 32 mm** regardless of whether inch or metric dimensions. The steel pins fit every nut or bolt to outer profile. In addition, activation of exotic screws as well as hook and eye screws possible. For screws up to 8 mm long. For torques of up to 80 N·m.



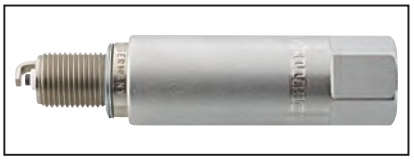
12,5 mm
1/2"

wiha Tools that work for you

| Order No. | Length mm | 6073 wiha | Outside Ø mm |
|---|---|---|---|
| 0010 | 87 | 46.10 (W530) | 43 |

## Spark plug socket 1/2"

Made of chrome-vanadium steel, matt chrome plated, **with rubber ring.**



12,5 mm
1/2"

format professional quality

| Order No. | Width of keys mm | 6979 format | Width of keys inch |
|---|---|---|---|
| 1216 | 16.0 | 5.75 | 5/8 |
| 1221 | 20.8 | 8.55 (W532) | 13/16 |

## Hexagon socket wrench insert 1/2", long

**Design:** DIN 3124 – ISO 2725-1, with ball retaining groove and knurled handle.

**6118** Made of chromium-vanadium steel, polished and matte chrome-plated.

**6982** Made of vanadium-chrome steel, polished and chrome plated.

12,5 mm
1/2"

| Order No. | Width of keys mm | 6118 format | 6982 HAZET | Length mm 6118 | Length mm 6982 | Outside Ø mm 6118 | Outside Ø mm 6982 |
|---|---|---|---|---|---|---|---|
| 0100 | 10 | 7.55 | 15.75 | 77.0 | 85.0 | 15.5 | 14.9 |
| 0120 | 12 | – | 15.75 | – | 85.0 | – | 17.5 |
| 0130 | 13 | 7.55 | 15.75 | 77.0 | 85.0 | 19.0 | 18.8 |
| 0140 | 14 | 7.55 | 16.35 | 77.0 | 85.0 | 20.5 | 19.9 |
| 0150 | 15 | – | 17.30 | – | 85.0 | – | 21.5 |
| 0160 | 16 | – | 17.55 | – | 85.0 | – | 22.7 |
| 0170 | 17 | 7.55 | 17.55 | 77.0 | 85.0 | 24.0 | 24.1 |
| 0180 | 18 | – | 17.55 | – | 85.0 | – | 24.6 |
| 0190 | 19 | 8.40 | 17.55 | 77.0 | 85.0 | 26.0 | 28.5 |
| 0210 | 21 | – | 19.60 | – | 85.0 | – | 28.6 |
| 0220 | 22 | 9.50 | 19.90 | 77.0 | 85.0 | 30.0 | 30.4 |
| 0240 | 24 | 10.40 | 20.25 | 77.0 | 85.0 | 32.0 | 32.6 |
| 0270 | 27 | 11.85 | 22.65 | 77.0 | 85.0 | 36.0 | 36.3 |
| 0300 | 30 | – | 24.25 | – | 85.0 | – | 40.1 |
| 0320 | 32 | – (W532) | 24.55 (W529) | – | 85.0 | – | 42.5 |

6118 format professional quality

6982 HAZET

## Bi-hexagon socket wrench insert 1/2", long

**Design:** DIN 3124 – ISO 2725-1, with ball retaining groove and knurled handle.

**6119** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6983** Made of vanadium-chrome steel, polished and chrome plated.

12,5 mm
1/2"

| Order No. | Width of keys mm | 6119 GEDORE | 6983 HAZET | Length mm 6119 | Length mm 6983 | Outside Ø mm 6119 | Outside Ø mm 6983 |
|---|---|---|---|---|---|---|---|
| 0100 | 10 | 14.80 | 15.75 | 77.0 | 85.0 | 15.5 | 14.9 |
| 0120 | 12 | – | 15.75 | – | 85.0 | – | 17.5 |
| 0130 | 13 | 14.70 | 15.75 | 77.0 | 85.0 | 19.2 | 18.8 |
| 0140 | 14 | 15.45 | 16.35 | 77.0 | 85.0 | 20.5 | 19.9 |
| 0150 | 15 | 16.50 | 17.30 | 77.0 | 85.0 | 21.7 | 21.5 |
| 0160 | 16 | 16.55 | 17.55 | 77.0 | 85.0 | 23.0 | 22.7 |
| 0170 | 17 | 16.45 | 17.55 | 77.0 | 85.0 | 24.2 | 24.1 |
| 0180 | 18 | 17.10 | 17.55 | 82.0 | 85.0 | 25.5 | 24.6 |
| 0190 | 19 | 15.95 | 17.55 | 82.0 | 85.0 | 26.7 | 26.8 |
| 0210 | 21 | 17.25 | 19.60 | 82.0 | 85.0 | 29.2 | 28.6 |
| 0220 | 22 | 17.55 | 19.90 | 82.0 | 85.0 | 30.5 | 30.4 |
| 0240 | 24 | 17.95 | 20.25 | 82.0 | 85.0 | 33.0 | 32.6 |
| 0270 | 27 | 20.00 | 22.65 | 82.0 | 85.0 | 36.7 | 36.3 |
| 0300 | 30 | 20.90 | 24.25 | 82.0 | 85.0 | 40.5 | 40.1 |
| 0320 | 32 | 21.80 (W522) | – (W529) | 82.0 | – | 43.0 | – |

6119 GEDORE

6983 HAZET

## Bi-hexagon socket wrench insert set 1/2", long

**Design:** DIN 3124 – ISO 2725-1, with knurled handle. Made of GEDORE vanadium-chrome steel 31CrV3, with knurled grip. Supplied in GEDORIT blue steel case with foam insert.

12,5 mm
1/2"

GEDORE

| Order No. | Design | 6119 GEDORE | Set contents mm |
|---|---|---|---|
| 1500 | 15-part 320 x 210 x 55 mm | 287.00 (W522) | 10; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 |

## Hexagon socket wrench insert 1/2" in American inch sizes

**Design:** DIN 3124 – ISO 2725-1, with knurled handle. Made of GEDORE vanadium steel 31CrV3, finely polished and matt chrome plated, with knurled handle.

12,5 mm 1/2" | American inch sizes

GEDORE

| Order No. | Wrench size A.F. inch | 6116 GEDORE | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0010 | 5/16 | 6.90 | 38.0 | 13.0 |
| 0020 | 11/32 | 8.35 | 38.0 | 13.9 |
| 0030 | 3/8 | 6.80 | 38.0 | 14.9 |
| 0040 | 13/32 | 6.85 | 38.0 | 15.9 |
| 0050 | 7/16 | 6.85 | 38.0 | 16.7 |
| 0060 | 1/2 | 6.85 | 38.0 | 18.7 |
| 0070 | 9/16 | 7.15 | 38.0 | 20.7 |
| 0080 | 19/32 | 7.15 | 39.5 | 21.7 |
| 0090 | 5/8 | 7.15 | 39.5 | 22.5 |
| 0100 | 11/16 | 7.60 | 39.5 | 24.7 |
| 0110 | 3/4 | 7.60 | 40.0 | 26.7 |
| 0120 | 25/32 | 7.55 | 40.0 | 27.7 |
| 0130 | 13/16 | 8.55 | 41.5 | 28.5 |
| 0140 | 7/8 | 8.55 | 41.5 | 30.6 |
| 0150 | 15/16 | 9.15 | 41.5 | 32.6 |
| 0160 | 1 | 9.15 | 41.5 | 34.6 |
| 0170 | 1.1/16 | 11.20 | 41.5 | 36.7 |
| 0180 | 1.1/8 | 11.25 | 43.0 | 38.6 |
| 0190 | 1.3/16 | 11.60 | 43.0 | 40.6 |
| 0200 | 1.1/4 | 11.90 | 44.5 | 42.6 |
| | | (W522) | | |

## Screwdriver bit 1/2" for Allen screws, short

**Design:** DIN 7422, with ball retaining groove and knurled handle.

12,5 mm 1/2"

**6123** Made of chrome-vanadium steel, chrome-plated, tips made of chrome-vanadium steel, burnished.

6123 format professional quality

**6124** Made of GEDORE vanadium steel 31CrV3, finely polished, chrome plated, tips made of GEDORE vanadium special steel, manganese phosphated.

6124 GEDORE

**6984** Made of chrome vanadium steel, polished and chrome plated, **TiN-coated,** for higher torque, corrosion resistance and minimal cam-out effect.

6984 HAZET TiN

**6125** Made of GEDORE vanadium steel 31CrV3, tips of GEDORE special steel, manganese phosphated.
**With ball head.**

6125 GEDORE

| Order No. | Width of keys mm | 6123 format | 6124 GEDORE | 6984 HAZET | 6125 GEDORE | Length mm |
|---|---|---|---|---|---|---|
| 0040 | 4* | 4.62 | 6.85 | 12.75 | – | 60 |
| 0050 | 5* | 4.62 | 6.85 | 12.75 | – | 60 |
| 0060 | 6 | 4.59 | 6.85 | 12.75 | 7.85 | 60 |
| 0070 | 7 | 4.62 | 6.85 | 12.75 | – | 60 |
| 0080 | 8 | 4.62 | 6.85 | 12.85 | 8.45 | 60 |
| 0090 | 9* | – | 7.35 | 12.85 | – | 60 |
| 0100 | 10 | 4.62 | 7.85 | 12.85 | 9.25 | 60 |
| 0120 | 12 | 4.97 | 7.85 | 14.90 | – | 60 |
| 0140 | 14 | 5.35 | 9.55 | 16.10 | – | 60 |
| 0170 | 17* | 6.15 | 10.60 | 18.05 | – | 60 |
| 0190 | 19* | 6.30 | 11.00 | 19.10 | – | 60 |
| | | (W532) | (W522) | (W529) | (W522) | |

* Non-standard sizes.

## Screwdriver bit set 1/2" Zyklop for Allen screws

NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical hold function. Delivery in a compact fabric box, protects sensitive surfaces.

12,5 mm 1/2" | Hex-Plus

Wera Zyklop

| Order No. | Design | 612A Wera | Set contents mm |
|---|---|---|---|
| 0900 | 9-part | 88.10 (W526) | 4; 5; 6; 7; 8; 10; 12; 14; 17 (Order no. 612A) |

## Screwdriver bit 1/2" for Zyklop for Allen screws

NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical hold function.

| Order No. | Width of keys mm | 612A Wera | | Length mm |
|---|---|---|---|---|
| 0040 | 4 | 7.50 | | 60.0 |
| 0050 | 5 | 7.50 | | 60.0 |
| 0060 | 6 | 7.50 | | 60.0 |
| 0070 | 7 | 7.80 | | 60.0 |
| 0080 | 8 | 7.80 | | 60.0 |
| 0100 | 10 | 8.25 | | 60.0 |
| 0120 | 12 | 8.70 | | 60.0 |
| 0140 | 14 | 9.30 | | 60.0 |
| 0170 | 17 | 11.55 | | 60.0 |
| 0190 | 19 | 12.95 (W526) | | 60.0 |

## Screwdriver bit 1/2" for Allen screws, long

**Design:** DIN 7422, with ball retaining groove and knurled handle.

12,5 mm 1/2"

**6123** Made of chrome-vanadium steel, chrome-plated, tips made of chrome-vanadium steel, burnished.

**6124** Made of GEDORE vanadium steel 31CrV3, finely polished, chrome plated, tips made of GEDORE vanadium special steel, manganese phosphated.

**6984** Made of chrome vanadium steel, polished and chrome plated, **TiN-coated,** for higher torque, corrosion resistance and minimal cam-out effect.

**6990** Made of chrome vanadium steel, polished and chrome plated, **TiN-coated,** for higher torque, corrosion resistance and minimal cam-out effect. **With ball head.**

| Order No. | Width of keys mm | 6123 format | 6124 GEDORE | 6984 HAZET | 6990 HAZET | Length mm 6123/6124/6984 | 6990 |
|---|---|---|---|---|---|---|---|
| 0051 | 5* | – | 7.95 | – | – | 90 | – |
| 0053 | 5* | – | – | – | 13.75 | – | 140 |
| 0052 | 5* | 5.90 | 9.40 | 19.85 | – | 180 | – |
| 0061 | 6 | – | 7.95 | – | – | 90 | – |
| 0062 | 6 | 6.05 | – | 17.25 | 13.75 | 137 | 140 |
| 0063 | 6 | – | 9.40 | 20.20 | – | 160 | – |
| 0071 | 7 | 6.05 | – | – | – | 100 | – |
| 0081 | 8 | 5.10 | – | 15.65 | – | 80 | – |
| 0082 | 8 | – | 7.95 | – | – | 90 | – |
| 0083 | 8 | – | 8.90 | 19.20 | – | 120 | – |
| 0084 | 8 | – | – | – | 14.25 | – | 140 |
| 0101 | 10 | 6.05 | 10.75 | 21.15 | 16.40 | 140 | 140 |
| 0121 | 12 | – | 11.35 | – | 19.00 | 140 | 140 |
| 0141 | 14 | – (W532) | 13.25 (W522) | – (W529) | – (W529) | 140 * Non-standard sizes. | – |

## Screwdriver bit set 1/2" Zyklop for Allen screws, long NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical hold function. Delivery in a compact fabric box, protects sensitive surfaces.

12,5 mm 1/2" | Hex-Plus

Wera Zyklop

| Order No. | Design | 612A Wera | Set contents mm |
|---|---|---|---|
| 0901 | 6-part | 73.10 (W526) | 4; 5; 6; 7; 8; 10 (Order no. 612A) |

## Screwdriver bit 1/2" for Zyklop for Allen screws, long NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical hold function.

| Order No. | Width of keys mm | 612A Wera | | Length mm | Outside ∅ mm |
|---|---|---|---|---|---|
| 0041 | 4 | 9.40 | | 140 | 21.5 |
| 0053 | 5 | 9.40 | | 140 | 21.5 |
| 0062 | 6 | 9.40 | | 140 | 21.5 |
| 0072 | 7 | 9.75 | | 140 | 23.5 |
| 0084 | 8 | 9.75 | | 140 | 23.5 |
| 0101 | 10 | 10.30 (W526) | | 140 | 23.5 |



## Screwdriver bit set 1/2" for Allen screws

**Design:** DIN 74221, with ball retaining groove and knurled handle.

12,5 mm 1/2"

**6126** Made of chrome-vanadium-steel, chrome plated. Tips made of vanadium-chrome steel, burnished. Supplied in black sheet steel case with 2-colour foam insert, thus missing tools are recognised immediately.

6126 format professional quality

**6127** Made of GEDORE vanadium steel 31CrV3, finely polished, chrome plated. Tips made of GEDORE vanadium special steel, manganese phosphated. Supplied in GEDORIT blue sheet steel case with plastic insert.

6127 GEDORE

**6990** Made of chrome vanadium steel, polished and chrome plated, **TiN-coated,** for higher torque, corrosion resistance and minimal cam-out effect. Supplied in SmartCase with set-up function for quick tool access. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately. The lid serves as a storage area for tools taken.

6990 0900 HAZET

TiN

6990 1300 HAZET

TiN

| Order No. | Design | 6126 format | 6127 GEDORE | 6990 HAZET | Set contents mm |
|---|---|---|---|---|---|
| 0010 | 10-part 235 x 105 x 40 mm | 65.00 | – | – | 4; 5; 6; 7; 8; 10; 12; 14; 17; 19 (Order No. 6123) |
| 0010 | 9-part 281 x 79 x 35 mm | – | 81.20 | – | 5; 6; 7; 8; 9; 10; 12; 14; 17 (Order No. 6124) |
| 0900 | 9-part 185 x 153 x 52 mm | – | – | 159.20 | 5; 6; 7; 8; 10; 12; 14; 17; 19 (Order No. 6984) |
| 0910 | 9-part 185 x 153 x 52 mm | – | – | 98.50 NEW | 5; 6; 7; 8; 9; 10; 12; 14; 17 (Order No. 6984) |
| 1300 | 13-part 355 x 235 x 65 mm | – | – | 165.40 | 5; 6; 7; 8; 10; 12; 14; 17; 19 (Order No. 6984); with ball head 6; 7; 8; 10 (Order No. 6990) |
| | | (W532) | (W522) | (W529) | |

## Combined screwdriver bit set 1/4" and 1/2" for Allen screws

**Design:** Made of vanadium-chrome steel, chrome plated, knurled handle. Tips made of vanadium-chrome steel, burnished. Supplied in a rugged, red/black plastic case with schematic placement indication on the lid. The tools are safely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

12,5 mm
1/2"

format professional quality

| Order No. | Design | 6126 format | Set contents |
|---|---|---|---|
| 0020 | 12-part<br>270 x 160 x 60 mm | 54.50<br>(W532) | **Contents 1/4":**<br>3; 4; 5; 6 mm<br>**Contents 1/2":**<br>5; 6; 7; 8; 10; 12; 14; 17 mm |

## Allen screwdriver bit set 1/2" in American inch sizes

**Version:** DIN 7422. Made of GEDORE vanadium steel 31CrV3, finely polished, chrome plated, with knurled handle. Tips made of GEDORE vanadium special steel CrV4, manganese phosphated. Supplied in GEDORIT blue sheet steel case.

12,5 mm
1/2"

American inch sizes

GEDORE

| Order No. | Design | 6127 GEDORE | Set contents |
|---|---|---|---|
| 0020 | 8-part<br>281 x 79 x 35 mm | 87.10<br>(W522) | 3/16"; 7/32"; 1/4"; 9/32";<br>5/16"; 3/8"; 9/16"; 5/8" |

## Screwdriver bit 1/2" for recessed TORX® head screws

**Design:** With ball retaining groove and knurled handle.

**6129** Made of chrome-vanadium steel, chrome-plated, tips made of chrome-vanadium steel, burnished.

**6130** Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, tips made of GEDORE vanadium special steel, burnished.

**6991** Made of chrome vanadium steel, polished and chrome plated, **TiN-coated,** for higher torque, corrosion resistance and minimal cam-out effect.

12,5 mm
1/2"

6129 format professional quality

6130 GEDORE

6991 HAZET
TiN

| Order No. | Size | 6129 format | 6130 GEDORE | 6991 HAZET | Length mm 6129 | Length mm 6130 | Length mm 6991 | For screws |
|---|---|---|---|---|---|---|---|---|
| 0020 | T 20 | 6.45 | 10.30 | – | 60 | 55 | – | M4 – M5 |
| 0025 | T 25 | 6.45 | 10.30 | 13.40 | 60 | 55 | 55 | M4.5 – M5 |
| 0027 | T 27 | 6.45 | 10.30 | 13.40 | 60 | 55 | 55 | M4.5 – M5 – M6 |
| 0030 | T 30 | 6.45 | 10.30 | 13.40 | 60 | 55 | 55 | M6 – M7 |
| 0040 | T 40 | 6.45 | 11.75 | 15.40 | 60 | 55 | 55 | M7 – M8 |
| 0045 | T 45 | 6.45 | 11.75 | 15.40 | 60 | 55 | 55 | M8 – M10 |
| 0050 | T 50 | 6.90 | 11.75 | 15.40 | 60 | 55 | 55 | M10 |
| 0055 | T 55 | 6.90 | 15.40 | 19.20 | 60 | 55 | 56 | M12 |
| 0060 | T 60 | 8.20<br>(W532) | 15.40<br>(W522) | 19.20<br>(W529) | 60 | 55 | 56 | M14 |

## Screwdriver bit set 1/2" Zyklop for recessed TORX® screws

NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical hold function. Delivery in a compact fabric box, protects sensitive surfaces.

12,5 mm
1/2"

Wera Zyklop

| Order No. | Design | 612B Wera | Set contents |
|---|---|---|---|
| 0900 | 9-part | 88.10 (W526) | T 20; 25; 27; 30; 40; 45; 50; 55; 60 (Order no. 612B) |

## Screwdriver bit 1/2" Zyklop for internal TORX® screws

NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated.
With mechanical hold function.

| Order No. | Size | 612B Wera | | Length mm |
|---|---|---|---|---|
| 0020 | T 20 | 8.25 | | 60.0 |
| 0025 | T 25 | 8.25 | | 60.0 |
| 0027 | T 27 | 8.25 | | 60.0 |
| 0030 | T 30 | 8.25 | | 60.0 |
| 0040 | T 40 | 8.25 | | 60.0 |
| 0045 | T 45 | 8.25 | | 60.0 |
| 0050 | T 50 | 8.85 | | 60.0 |
| 0055 | T 55 | 8.85 | | 60.0 |
| 0060 | T 60 | 8.85 (W526) | | 60.0 |

## Screwdriver bit 1/2" for internal TORX® screws, long

**Design:** Made of GEDORE vanadium steel 31CrV3, with ball retaining groove, polished and chrome plated, with knurled handle, tips of GEDORE vanadium special steel, manganese phosphated, burnished.

12,5 mm
1/2"

GEDORE

| Order No. | Size | 6130 GEDORE | Length mm | For screws |
|---|---|---|---|---|
| 0031 | T 30 | 12.10 | 100 | M6 - M7 |
| 0041 | T 40 | 13.70 | 100 | M7 - M8 |
| 0046 | T 45 | 13.70 | 100 | M8 - M10 |
| 0051 | T 50 | 13.70 | 100 | M10 |
| 0056 | T 55 | 17.85 | 100 | M12 |
| 0061 | T 60 | 17.85 (W522) | 100 | M14 |

## Screwdriver bit set 1/2" Zyklop for recessed TORX® screws, long

NEW

Wera Zyklop

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical hold function. Delivery in a compact fabric box, protects sensitive surfaces.

12,5 mm
1/2"

612B 0901

612B 0601

| Order No. | Design | 612B Wera | Set contents |
|---|---|---|---|
| 0601 | 6-part | 73.10 | T 20; 25; 27; 30; 40; 45 (Order no. 612B) |
| 0901 | 9-part | 109.00 (W526) | T 20; 25; 27; 30; 40; 45; 50; 55; 60 (Order no. 612B) |

## Screwdriver bit 1/2" Zyklop for internal TORX® screws

NEW

**Design:** Made of chromium-vanadium steel, matt chrome-plated. With mechanical hold function.

| Order No. | Size | 612B Wera | | Length mm |
|---|---|---|---|---|
| 0021 | T 20 | 10.30 | | 140 |
| 0026 | T 25 | 10.30 | | 140 |
| 0028 | T 27 | 10.30 | | 140 |
| 0031 | T 30 | 10.30 | | 140 |
| 0041 | T 40 | 10.30 | | 140 |
| 0046 | T 45 | 10.30 | | 140 |
| 0051 | T 50 | 11.00 | | 140 |
| 0056 | T 55 | 11.00 | | 140 |
| 0061 | T 60 | 11.00 (W526) | | 140 |

## Socket spanner bit 1/2" for protruding TORX® screws

**Design:** Polished and matte chrome-plated. With ball retaining groove and knurled handle.

**6121** Made of vanadium-chrome steel.

**6122** Made of GEDORE vanadium steel 31CrV3.

12,5 mm
1/2"

6121 format professional quality

6122 GEDORE

| Order No. | Size | 6121 format | 6122 GEDORE | Length mm 6121 | Length mm 6122 | Outside Ø mm 6121 | Outside Ø mm 6122 | For screws |
|---|---|---|---|---|---|---|---|---|
| 0010 | E10 | 3.45 | 9.10 | 38.0 | 38.0 | 13.3 | 13.5 | M8 |
| 0011 | E11 | 3.45 | 9.10 | 38.0 | 38.0 | 14.0 | 14.0 | – |
| 0012 | E12 | 3.45 | 9.10 | 38.0 | 38.0 | 14.9 | 15.5 | M10 |
| 0014 | E14 | 3.45 | 9.90 | 38.0 | 38.0 | 16.7 | 17.0 | M12 |
| 0016 | E16 | 3.94 | 9.90 | 38.0 | 38.0 | 19.0 | 19.0 | M12 |
| 0018 | E18 | 3.94 | 10.45 | 38.0 | 40.0 | 21.0 | 21.0 | M14 |
| 0020 | E20 | 3.94 | 10.45 | 38.0 | 40.0 | 23.5 | 23.5 | M16 |
| 0024 | E24 | 4.73 (W532) | 14.45 (W522) | 38.0 | 41.5 | 28.0 | 28.5 | M18 - M20 |

## Screwdriver insert 1/2" for recessed serrated screws XZN

**Version:** DIN 2324. Made of GEDORE vanadium steel 31CrV3, finely polished and chrome plated, with knurled handle, tips of GEDORE vanadium special steel, manganese phosphated.

12,5 mm
1/2"

GEDORE

| Order No. | Size | 6120 GEDORE | Length mm |
|---|---|---|---|
| 0005 | M5 | 10.70 | 57 |
| 0006 | M6 | 10.80 | 55 |
| 0008 | M8 | 10.70 | 55 |
| 0010 | M10 | 12.50 | 55 |
| 0012 | M12 | 13.80 | 55 |
| 0014 | M14 | 14.35 | 55 |

(W522)

## Screwdriver bit set 1/2" for recessed TORX® screws

**Design:** Made of chrome-vanadium steel, chrome-plated, with knurled handle, with ball retaining groove, tips made of vanadium-chrome steel, burnished. Supplied in black sheet steel case with 2-colour foam insert, thus missing tools are recognised immediately.

12,5 mm
1/2"

format professional quality

| Order No. | Design | 6129 format | Set contents |
|---|---|---|---|
| 0900 | 9-part 236 x 119 x 45 mm | 65.50 | T 20; 25; 27; 30; 40; 45; 50; 55; 60 |

(W532)

## Combined screwdriver bit set 1/4" and 1/2" for TORX® screws

**Design:** Made of chrome-vanadium steel, chrome plated, knurled handle, with ball retaining groove. Tips made of vanadium-chrome steel, burnished. Supplied in a rugged, red/black plastic case with schematic placement indication on the lid. The tools are safely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

12,5 mm
1/2"

format professional quality

| Order No. | Design | 6129 format | Set contents |
|---|---|---|---|
| 0950 | 24-part 355 x 215 x 70 mm | 82.30 | **Contents 1/4":**<br>6 recessed TORX® screwdriver bits (Order No. 6053)<br>T 10; 15; 20; 25; 27; 30<br>6 protruding TORX screwdriver bits® (Order No. 6027)<br>E 4; 5; 6; 7; 8; 10<br>**Contents 1/2":**<br>4 screwdriver bits recessed TORX® (Order No. 6129)<br>T 40; 45; 50; 55<br>8 protruding TORX® screwdriver bits (Order No. 6121)<br>E10; 11; 12; 14; 16; 18; 20; 24 |

(W532)

## Screwdriver bit set 1/2" for TORX® screws

**Design:** Made of GEDORE vanadium steel 31CrV3, polished and chrome-plated, with ball retaining groove and knurled handle. Recessed TORX® insert tips made of GEDORE vanadium special steel, manganese phosphated. Supplied in GEDORIT blue sheet steel case with ABS plastic insert.

12,5 mm
1/2"

GEDORE

6128 0030

6128 0005

6128 0020

6128 0010

| Order No. | Design | 6128 GEDORE | Set contents |
|---|---|---|---|
| 0030 | 9-part<br>281 x 79 x 35 mm | 117.50 | 9 recessed screwdriver bits TORX® (Order No. 6130) T 20; 25; 27; 30; 40; 45; 50; 55; 60 |
| 0020 | 18-part<br>320 x 210 x 55 mm | 260.00 | 9 recessed TORX® screwdriver bits (Order No. 6130) 55 mm long, T 20; 25; 27; 30; 40; 45; 50; 55; 60<br>9 recessed TORX® screwdriver bits (Order No. 6130) 100 mm long, T 20; 25; 27; 30; 40; 45; 50; 55; 60 |
| 0005 | 9-part<br>200 x 120 x 38 mm | 101.50 | 8 protruding TORX® screwdriver bits (Order No. 6122) E10; 11; 12; 14; 16; 18; 20; 24<br>1 enlarger (Order No. 6069) from 3/8" square to 1/2" square |
| 0010 | 17-part<br>320 x 210 x 55 mm | 213.50 | 8 protruding TORX® screwdriver bits (Order No. 6122) E10; 11; 12; 14; 16; 18; 20; 24<br>9 recessed screwdriver bits TORX® (Order No. 6130) T 20; 25; 27; 30; 40; 45; 50; 55; 60 |
| | | (W522) | |

## Hexagon socket wrench set 3/4"

NEW

**Design:** Tools made of chrome-vanadium steel, which have hexagon and square sockets with rounded corners for protection of drive and screw head. Supplied in painted metal case, with handle, lockable by means of padlock (see Order No. 7356 📖 7/68).

20,0 mm
3/4"

Teco

| Order No. | Design | 613A Teco | Set contents |
|---|---|---|---|
| 0010 | 14-part<br>580 x 180<br>x 80 mm | 253.50 | 1 push-through ratchet with square (Order No. 613B 0510)<br>10 hexagon socket bits (Order No. 613H)<br>22; 24; 27; 30; 32; 34; 36; 41; 46; 50 mm<br>1 T-handle with sliding block (Order No. 613D 0010)<br>2 extensions (Order no. 613C) 200; 400 mm |
| | | (W539) | |

## Hexagon socket wrench set 3/4"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in GEDORIT blue sheet steel case.

20,0 mm
3/4"

GEDORE

| Order No. | Design | 6132 GEDORE | Set contents |
|---|---|---|---|
| 0010 | 14-part<br>525 x 203<br>x 72 mm | 410.50 | 1 lever wrench (Order No. 6152)<br>10 hexagon sockets (Order No. 6144)<br>22; 24; 27; 30; 32; 36; 38; 41; 46; 50 mm<br>2 extensions (Order 6154) 200; 400 mm<br>1 T-handle with sliding block (Order No. 6162) |
| 0020 | 16-part<br>555 x 230<br>x 80 mm | 518.50 | 1 lever wrench (Order No. 6152)<br>12 hexagon socket bits (Order No. 6144)<br>22; 24; 27; 30; 32; 36; 38; 41; 46; 50; 55; 60 mm<br>2 extensions (Order 6154) 200; 400 mm<br>1 T-handle with sliding block (Order No. 6162) |
| | | (W522) | |

6132 0010

6132 0020

## Bi-hexagon socket wrench set 3/4"

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. Supplied in metal case with carrying handle, with plastic insert.

20,0 mm
3/4"

HAZET

| Order No. | Design | 6992 HAZET | Set contents |
|---|---|---|---|
| 0015 | 15-part<br>578 x 235<br>x 88 mm | 555.00 | 1 reversible ratchet<br>10 bi-hexagon socket wrench inserts (Order No. 6110)<br>22; 24; 27; 30; 32; 36; 38; 41; 46; 50<br>2 extensions (Order 6994) 200; 400 mm<br>1 rotating rod 500 mm<br>1 sliding piece 60 mm |
| | | (W529) | |

## Push through ratchet 3/4"

**Design:** DIN 3122 B 20 – ISO 3315.

20,0 mm
3/4"

**613B 0510** NEW
Made of vanadium-chrome steel. With round head and pin retention, **36-fold serrated,** rear swivel angle 10°. Handle with plastic cover. Delivery includes push-through square (Order No. 6136).

613B 0510 Teco

**613B 0020** NEW
Push-through square for hole ratchet (Order No. 6133).

613B 0020 Teco

**6138 0510**
Made of GEDORE vanadium steel 31CrV3, chrome-plated, robust design with round head, **push-through square,** and ball lock, **36-fold serrated,** rear swivel angle 10°. Delivery includes push-through square (Order No. 6138 0020).

6138 0510 GEDORE

**6138 0020**
Replacement push-through square for through hole ratchet (Order No. 6138 0510).

6138 0020 GEDORE

| Order No. | Length mm | 613B Teco | 6138 GEDORE |
|---|---|---|---|
| 0510 | 510 | 67.80 | – |
| 0020 | 46 | 6.45 | – |
| 0510 | 510 | – | 83.70 |
| 0020 | 51.5 | – | 9.35 |
| | | (W539) | (W522) |

## Reversible ratchet 3/4"

**Design:** DIN 3122 D 20 – ISO 3315, with security pin.

**613B** NEW — Made of vanadium-chrome steel, with oval head and switch disc. **60-fold serrated,** rear swivel angle 6°.

**6152** — Made of GEDORE vanadium steel 31CrV3, with round head and reversing lever, **50-fold serrated,** rear swivel angle 7.2°.

**6153** — Made of GEDORE vanadium steel 31CrV3, with oval head, **extension tube,** reversing lever and middle position lock, **32-fold serrated,** rear swivel angle 11.25°.

**6993** — Made of vanadium-chrome steel, polished and chrome plated. With oval head. **32-fold serrated.** With rotating rod.

| Order No. | Length mm | 613B Teco | 6152 GEDORE | 6153 GEDORE | 6993 HAZET |
|---|---|---|---|---|---|
| 0010 | 510 | – | 94.60 | – | – |
| 0010 | 542 | 66.30 | – | – | – |
| 0010 | 620 | – (W539) | – (W522) | 150.50 (W522) | 151.90 (W529) |

20,0 mm 3/4"

613B Teco

6152 GEDORE

6153 GEDORE

6993 HAZET

## Repair set for 3/4" ratchet

**Application:** Complete ratchet repair set, suitable for Order No. 6993 0010.

**Scope of delivery:** 1 ratchet wheel, 1 locking piece, 1 shift lever, 2 screws, 1 ball and 1 spring.

| Order No. | Design | 6993 HAZET |
|---|---|---|
| 1000 | 7-part | 48.65 (W529) |

20,0 mm 3/4"

## 3/4" extension

**Design:** DIN 3123 B 20 – ISO 3316, with security pin.

**613C** NEW — Made of chrome-vanadium-steel, chrome plated.

**6154** — Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6994** — Made of vanadium-chrome steel, polished and chrome plated.

| Order No. | Length mm | 613C Teco | 6154 GEDORE | 6994 HAZET |
|---|---|---|---|---|
| 0200 | 200 | 12.10 | 26.20 | 32.50 |
| 0400 | 400 | 20.10 (W539) | 34.90 (W522) | 45.00 (W529) |

20,0 mm 3/4"

613C Teco

6154 GEDORE

6994 HAZET

## T-handle with sliding block 3/4"

**Design:** DIN 3122 A 20 – ISO 3315, with security pin.

**613D** NEW — Made of chrome-vanadium-steel, chrome plated.

**6162** — Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6994** — Made of vanadium-chrome steel, polished and chrome plated.

| Order No. | Length mm | 613D Teco | 6162 GEDORE | 6994 HAZET |
|---|---|---|---|---|
| 0010 | 430 | 22.50 | – | – |
| 0010 | 500 | – (W539) | 33.90 (W522) | 51.00 (W529) |

20,0 mm 3/4"

613D Teco

6162 GEDORE

6994 HAZET

## Universal joint 3/4"

**Design:** DIN 3123 B 20 – ISO 3316, with security pin.

**613E** NEW — Made of chrome-vanadium-steel, chrome plated.

**6156** — Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6995** — Made of vanadium-chrome steel, polished and chrome plated.

| Order No. | Length mm | 613E Teco | 6156 GEDORE | 6995 HAZET |
|---|---|---|---|---|
| 0010 | 104 | 30.70 | – | – |
| 0010 | 105 | – | – | 78.95 |
| 0010 | 108 | – | 84.70 | – |
| | | (W539) | (W522) | (W529) |

20,0 mm
3/4"

613E Teco

6156 GEDORE

6995 HAZET

## Reducer 3/4"

**Design:** DIN 3123 A 20 x 25.

**613F** NEW — Made of chrome-vanadium steel, chrome plated, with locking pin.

**6157** — Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, with locking pin.

**6996** — Made of chrome-vanadium steel, chrome plated, with ball locking, drive with lock to secure pin.

| Order No. | Design | 613F Teco | 6157 GEDORE | 6996 HAZET |
|---|---|---|---|---|
| 0010 | 3/4" recessed square to 1/2" protruding square | 10.35 | 14.35 | 18.45 |
| | | (W539) | (W522) | (W529) |

20,0 mm
3/4"

613F Teco

6157 GEDORE

6996 HAZET

## Enlarger 3/4"

**Design:** DIN 3123 A 25 x 20, with security pin.

**613G** NEW — Made of chrome-vanadium-steel, chrome plated.

**6158** — Made of GEDORE vanadium steel 31CrV3, polished and chrome plated.

**6997** — Made of chrome-vanadium-steel, chrome plated.

| Order No. | Design | 613G Teco | 6158 GEDORE | 6997 HAZET |
|---|---|---|---|---|
| 0010 | 3/4" recessed square to 1" protruding square | 12.60 | 23.50 | 26.55 |
| | | (W539) | (W522) | (W529) |

20,0 mm
3/4"

613G Teco

6158 GEDORE

6997 HAZET

## Hexagon socket wrench insert 3/4"

**Design:** DIN 3124 – ISO 2725-1, with security pin, polished and matt chrome-plated, with pin safety.

20,0 mm
3/4"

**613H** NEW — Made of vanadium-chrome steel.

**6144** — Made of GEDORE vanadium-chrome steel 31CrV3, with knurled grip.

| Order No. | Width of keys mm | 613H | 6144 | Length mm 613H | Length mm 6144 | Outside Ø mm 613H | Outside Ø mm 6144 |
|---|---|---|---|---|---|---|---|
| 0019 | 19 | – | 13.55 | – | 51.5 | – | 29.6 |
| 0022 | 22 | 5.75 | 14.00 | 52 | 51.5 | 32.0 | 33.3 |
| 0024 | 24 | 5.75 | 13.55 | 52 | 51.5 | 34.5 | 35.8 |
| 0027 | 27 | 6.00 | 14.75 | 54 | 54.5 | 38.5 | 39.6 |
| 0030 | 30 | 6.60 | 15.90 | 56 | 57.5 | 43.0 | 43.3 |
| 0032 | 32 | 7.05 | 15.70 | 56 | 57.5 | 45.0 | 45.8 |
| 0033 | 33 | – | 18.90 | – | 57.5 | – | 47.0 |
| 0034 | 34 | 7.95 | – | 56 | – | 46.0 | – |
| 0036 | 36 | 8.70 | 19.35 | 65 | 59.5 | 50.0 | 50.8 |
| 0038 | 38 | 9.20 | 18.55 | 65 | 59.5 | 53.0 | 53.3 |
| 0041 | 41 | 10.70 | 27.50 | 65 | 62.5 | 56.0 | 57.1 |
| 0046 | 46 | 12.15 | 29.00 | 65 | 65.5 | 62.0 | 63.3 |
| 0050 | 50 | 13.30 | 34.70 | 70 | 68.5 | 68.0 | 68.3 |
| 0055 | 55 | 17.25 | 39.20 | 70 | 68.5 | 74.0 | 74.6 |
| 0060 | 60 | 20.00 (W539) | 45.80 (W522) | 70 | 68.5 | 80.0 | 80.8 |

613H Teco

6144 GEDORE

## Bi-hexagon socket wrench insert 3/4"

**Design:** DIN 3124 – ISO 2725-1, made of chrome-vanadium steel, polished and chrome-plated, with locking pin and knurled handle.

20,0 mm
3/4"

HAZET

| Order No. | Width of keys mm | 6110 HAZET | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0022 | 22 | 16.30 | 52.0 | 32.0 |
| 0024 | 24 | 17.00 | 52.0 | 34.0 |
| 0027 | 27 | 19.20 | 54.0 | 38.0 |
| 0030 | 30 | 22.65 | 55.0 | 42.0 |
| 0032 | 32 | 24.15 | 58.0 | 44.5 |
| 0036 | 36 | 27.90 | 61.5 | 49.5 |
| 0038 | 38* | 30.60 | 65.0 | 52.5 |
| 0041 | 41 | 33.35 | 68.5 | 55.5 |
| 0046 | 46 | 37.30 | 73.0 | 62.0 |
| 0050 | 50 | 42.35 | 76.0 | 67.0 |
| 0055 | 55 | 48.65 (W529) | 82.0 | 73.5 |

* Non-standard size.

## Screwdriver bit 3/4" for Allen screws

**Design:** DIN 7422, with locking pin and knurled handle.

20,0 mm
3/4"

**6148** — Made of GEDORE vanadium steel 31CrV3, polished and chrome plated, tips of GEDORE vanadium special steel, manganese phosphated.

**6115** — Made of chrome-vanadium steel, polished and chrome-plated, tips made of chrome-vanadium steel, burnished.

6148 GEDORE

| Order No. | Width of keys mm | 6148 GEDORE | 6115 HAZET | Length mm 6148 | Length mm 6115 |
|---|---|---|---|---|---|
| 0000 | 14 | 16.40 | 26.35 | 80 | 54.5 |
| 0005 | 17 | 19.20 | 26.35 | 80 | 54.5 |
| 0010 | 19 | 20.30 | 28.80 | 80 | 56.5 |
| 0015 | 22 | 22.10 (W522) | 28.80 (W529) | 80 | 56.5 |

6115 HAZET

## Bi-hexagon socket wrench set 1"

**Design:** Tools made of GEDORE vanadium steel 31CrV3, forged, polished and chrome plated. Supplied in GEDORIT blue sheet steel case.

25,0 mm
1"

GEDORE

| Order No. | Design | 6145 GEDORE | Set contents |
|---|---|---|---|
| 0010 | 15-part<br>765 x 289<br>x 105 mm | 1021.00<br>(W522) | 1 lever wrench (Order No. 6153)<br>10 bi-hexagon socket wrench inserts (Order No. 6163)<br>36; 41; 46; 50; 55; 60; 65; 70; 75; 80 mm<br>2 extensions (Order No. 6157) 200 and 400 mm<br>1 T-handle with sliding block (Order No. 6149) |

## Bi-hexagon socket wrench set 1"

**Design:** Tools made of chrome-vanadium steel, polished and chrome plated. Supplied in metal box.

25,0 mm
1"

HAZET

| Order No. | Design | 6115 HAZET | Set contents |
|---|---|---|---|
| 0017 | 17-part<br>759 x 305<br>x 115 mm | 1586.00<br>(W529) | 1 reversible ratchet head<br>11 bi-hexagon socket wrench inserts (Order No. 6150)<br>32; 36; 41; 46; 50; 55; 60; 65; 70; 75; 80 mm<br>1 rotating rod 700 mm<br>1 sliding piece 80 mm<br>2 extensions (Order No. 6115) 200 and 400 mm<br>1 universal joint 144 mm |

## Socket wrench insert 1"

**Design:** DIN 3122 D 25 – ISO 3315, made of GEDORE vanadium steel 31CrV3, chrome plated, with security pin, oval and polished head and reversing lever, locks in middle position, **32-fold serrated,** rear swivel angle 11.25°. With plug-in handle.

25,0 mm
1"

GEDORE

| Order No. | Length mm | 6153 GEDORE |
|---|---|---|
| 0020 | 810 | 182.50<br>(W522) |

## Socket wrench insert 1"

**Design:** DIN 3122 D 25 – ISO 3315, made of chrome-vanadium steel, with locking ball and pin, oval and chrome plated head, reversing lever, **32-fold serrated**. With rotating rod, polished and chrome-plated.

25,0 mm
1"

HAZET

| Order No. | Length mm | 6115 HAZET |
|---|---|---|
| 0020 | 824 | 271.00<br>(W529) |

## Repair set for 1" ratchet

**Application:** Complete ratchet repair set, suitable for Order No. 6115 0020.

**Scope of delivery:** 1 ratchet wheel, 1 locking piece, 1 shift lever, 2 screws, 1 ball and 1 spring.

25,0 mm
1"

HAZET

| Order No. | Design | 6115 HAZET |
|---|---|---|
| 1000 | 7-part | 58.35<br>(W529) |

## Extension 1"

**Design:** DIN 3123 B 25 - ISO 3316, with security pin.

**6157** Made of GEDORE vanadium steel 31CrV3, chrome-plated.

**6115** Made of vanadium-chrome steel, polished and chrome plated.

25,0 mm
1"

6157 GEDORE

6115 HAZET

| Order No. | Length mm | 6157 GEDORE | 6115 HAZET |
|---|---|---|---|
| 0205 | 200 | 48.40 | 63.40 |
| 0405 | 400 | 67.60 (W522) | 88.05 (W529) |

## T-handle with sliding block 1"

**Design:** DIN 3122 A 25 – ISO 3315, with security pin.

**6149** Made of GEDORE vanadium steel 31CrV3, chrome-plated.

**6140** Made of vanadium-chrome steel, polished and chrome plated.

25,0 mm
1"

6149 GEDORE

6140 HAZET

| Order No. | Length mm | 6149 GEDORE | 6140 HAZET |
|---|---|---|---|
| 0010 | 700 | 74.40 (W522) | 112.30 (W529) |

## Reducer 1"

**Design:** DIN 3123 A 25 x 20 – ISO 3316, with security pin.

**6161** Made of GEDORE vanadium steel 31CrV3, chrome-plated.

**6150** Made of chrome-vanadium-steel, chrome plated.

25,0 mm
1"

6161 GEDORE

6150 HAZET

| Order No. | Design | 6161 GEDORE | 6150 HAZET |
|---|---|---|---|
| 0010 | 1" recessed square to 3/4" protruding square | 28.00 (W522) | 44.65 (W529) |

## Bi-hexagon socket wrench insert 1"

**Design:** DIN 3124 – ISO 2725-1, with locking pin and knurled handle.

**6163** Made of GEDORE vanadium steel 31CrV3, chrome-plated.

**6150** Made of vanadium-chrome steel, polished and chrome plated.

25,0 mm
1"

6163 GEDORE

6150 HAZET

| Order No. | Width of keys mm | 6163 GEDORE | 6150 HAZET | Length mm 6163 | Length mm 6150 | Outside Ø mm 6163 | Outside Ø mm 6150 |
|---|---|---|---|---|---|---|---|
| 0032 | 32* | – | 42.25 | – | 60 | – | 48.0 |
| 0036 | 36* | 32.50 | 43.65 | 70 | 67 | 53.9 | 52.0 |
| 0041 | 41 | 37.60 | 49.40 | 70 | 68 | 60.1 | 57.0 |
| 0046 | 46 | 44.00 | 54.40 | 75 | 72 | 66.4 | 62.0 |
| 0050 | 50 | 49.40 | 62.45 | 75 | 74 | 71.4 | 68.0 |
| 0055 | 55 | 59.90 | 74.05 | 80 | 78 | 77.6 | 74.0 |
| 0060 | 60 | 68.50 | 89.85 | 85 | 83 | 83.9 | 80.0 |
| 0065 | 65 | 81.10 | 111.80 | 88 | 86 | 90.1 | 88.0 |
| 0070 | 70 | 86.70 | 129.10 | 92 | 89 | 96.4 | 96.0 |
| 0075 | 75 | 98.90 | 163.10 | 95 | 92 | 102.6 | 102.0 |
| 0080 | 80 | 100.50 (W522) | 174.20 (W529) | 97 | 94 | 108.9 | 108.5 |

* Non-standard sizes.

## VDE hexagon socket wrench set 1/2"

**Design:** All tools are **VDE insulated to 1000 V, according to EN 60900/IEC 60900 : 2004.** Supplied in plastic case with foam inlay.

| Order No. | Design | 6164 GEDORE | Set contents |
|---|---|---|---|
| 0014 | 14-part<br>360 x 250 x 70 mm | 476.00 | 1 VDE reversible ratchet (Order No. 6167)<br>8 VDE socket wrench inserts (Order 6169)<br>10; 12; 13; 14; 17; 19; 22; 24 mm<br>2 VDE extensions (Order No. 6168)<br>125; 250 mm<br>1 VDE T-handle with sliding lock<br>1 VDE screwdriver 5.5 mm<br>1 angled screwdriver 2.5 mm |

(W522)

12,5 mm ½" 1000 V

GEDORE

## VDE reversible ratchet 1/2"

**Design:** Made of chromium-vanadium steel 31CrV3. Especially smooth-running and robust. Reversal occurs with 2 push buttons with "R" and "L" marking on shaft. Absolutely safe hold of bits with push button lock with ball in square drive. The ratchet is completely **VDE insulated to 1000 V, according to EN 60900/IEC 60900: 2004.**

| Order No. | Length mm | 6167 GEDORE |
|---|---|---|
| 0270 | 270 | 89.90 |

(W522)

12,5 mm ½" 1000 V

GEDORE

## VDE extension 1/2"

**Design:** Made of chromium-vanadium steel 31CrV3 with lock screw to fix socket bits. **VDE-insulated up to 1000 V in line with EN 60900/IEC 60900 : 2004.**

| Order No. | Length mm | 6168 GEDORE |
|---|---|---|
| 0125 | 125 | 25.80 |
| 0250 | 250 | 33.80 |

(W522)

12,5 mm ½" 1000 V

GEDORE

## VDE hexagon socket wrench insert 1/2"

**Design:** Made of chromium-vanadium steel 31CrV3. **VDE-insulated up to 1000 V in line with EN 60900/IEC 60900: 2004.**

| Order No. | Width of keys mm | 6169 GEDORE | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0010 | 10 | 14.70 | 54 | 19.5 |
| 0012 | 12 | 14.70 | 54 | 22.0 |
| 0013 | 13 | 14.70 | 54 | 23.2 |
| 0014 | 14 | 14.70 | 54 | 24.5 |
| 0017 | 17 | 15.20 | 56 | 28.2 |
| 0019 | 19 | 16.20 | 56 | 30.7 |
| 0022 | 22 | 17.15 | 58 | 34.5 |
| 0024 | 24 | 19.60 | 58 | 37.0 |

(W522)

12,5 mm ½" 1000 V

GEDORE

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Metal worker tool set, 56-piece

**Set contents:**

| | |
|---|---|
| 1 steel sheet toolbox | (Order no. 7358 0530) |
| 1 water pump pliers, 240 mm | (Order no. 5599 0240) |
| 1 universal pliers, 180 mm | (Order no. 5145 0180) |
| 1 side-cutting pliers, 160 mm | (Order no. 5290 0160) |
| 1 double head wrench set, 9-piece, 6–32 mm | (Order no. 5706 0010) |
| 1 double ring spanner set, 12-part, 6-32 mm | (Order no. 5748 0020) |
| 1 hexagon angled screwdriver set 8-pieces on ring, 2–10 mm | (Order no. 5847 0045) |
| 1 Screwdriver set 6-piece, with wooden handle | (Order no. 6354 0010) |
| 1 Centre punch, 120 x 12 mm | (Order no. 6874 0121) |
| 2 drift punch 3; 5 mm | (Order no. 6860) |
| 2 Fitter's hammers 500; 1000 g | (Order no. 6775) |
| 1 metal bow saw 300 mm | (Order no. 6740 0300) |
| 1 hand saw blade, HSS/bimetal 300 mm | (Order no. 2750 0010) |
| 1 carbide scriber 150 mm | (Order no. 4803 0150) |
| 1 steel wire brush, 4-row | (Order no. 7004 0004) |
| 1 workshop file, H2, flat blunt 200 mm | (Order no. 6530 0202) |
| 1 workshop file, H2, round 200 mm | (Order no. 6560 0202) |
| 2 file handles | (Order no. 6682 0110) |
| 1 flat chisel 300 mm | (Order no. 6844 0300) |
| 1 cross chisel, 200 mm | (Order no. 6842 0200) |
| 1 wooden folding rule 2 m | (Order no. 4671 0005) |
| 1 Padlock 40mm | (Order no. 7356 0041) |

**Note:** All tools in this tool set equate to the article descriptions in this catalogue. We reserve the right to change the composition of the set.

| Order No. | Design | 6165 format |
|---|---|---|
| 0054 | 56-part<br>530 x 200 x 200 mm | 235.00 |

(W533)

## Electrician tool set, 40-piece

**Set contents:**

| | |
|---|---|
| 1 steel sheet toolbox | (Order no. 7358 0530) |
| 1 radio pliers 160 mm | (Order no. 5215 0160) |
| 1 VDE radio pliers, straight 160 mm | (Order no. 5217 0160) |
| 1 VDE side-cutting pliers, 160 mm | (Order no. 5296 0160) |
| 1 double head wrench set, 9-piece, 6–32 mm | (Order no. 5706 0010) |
| 1 VDE universal pliers, 160 mm | (Order no. 5151 0160) |
| 1 hexagon angled screwdriver set 8-pieces on ring, 2–10 mm | (Order no. 5847 0045) |
| 1 Centre punch, 120 x 12 mm | (Order no. 6874 0121) |
| 1 Cable-stripping knife, 1-piece | (Order no. 5429 0195) |
| 1 universal cable-stripping knife | (Order no. 5441 0005) |
| 1 Fitter's hammer 500 g | (Order no. 6775 0500) |
| 1 voltage tester 140 mm | (Order no. 5532 0010) |
| 1 metal saw 150 mm | (Order no. 6730 0150) |
| 1 VDE screwdriver set, 6-piece | (Order no. 6354 0040) |
| 1 carbide scriber 150 mm | (Order no. 4803 0150) |
| 1 plaster mixing bowl | (Order no. 7326 0006) |
| 1 paint scraper 60 mm | (Order no. 7320 0060) |
| 1 padlock | (Order no. 7356 0041) |
| 1 voltage tester DUSPOL® expert | (Order no. 5560 0010) |
| 1 Continuity tester DUTESTpro | (Order no. 5575 0010) |

**Note:** All tools in this tool set equate to the article descriptions in this catalogue. We reserve the right to change the composition of the set.

| Order No. | Design | 6165 format |
|---|---|---|
| 0040 | 40-part<br>530 x 200 x 200 mm | 270.00 |

(W533)

## Universal tool set, 43-piece

**Set contents:**

| | |
|---|---|
| 1 ABS-plastic case | (Order no. 7395 0005) |
| 1 pocket tape measure 3 m | (Order no. 4689 0003) |
| 1 universal pliers, 180 mm | (Order no. 5148 0180) |
| 1 pointed pliers, 200 mm | (Order no. 5227 0200) |
| 1 wire-stripping pliers, 160 mm | (Order no. 5450 0160) |
| 1 side-cutting pliers, 160 mm | (Order no. 5293 0160) |
| 1 water pump pliers, 240 mm | (Order no. 5599 0240) |
| 1 gripping pliers 250 mm | (Order no. 5630 0250) |
| 1 Combi shears 190 mm | (Order no. 7087 0190) |
| 7 combination wrenches 8; 10; 11; 12; 13; 14; 17 mm | (Order no. 5720) |
| 3 Socket spanner bits 1/2" 10; 13; 17 mm | (Order no. 6111) |
| 1 extension 1/2" , 250 mm | (Order no. 6095 0250) |
| 1 lever reversible ratchet 1/2" | (Order no. 6080 0010) |
| 1 T-handle with sliding block 1/2" | (Order no. 6100 0020) |
| 1 hexagon angled screwdriver set 8-pieces 2-10 mm | (Order no. 5847 0035) |
| 1 Fitter's hammer with handle protection, 300 g | (Order no. 6777 0300) |
| 1 flat chisel 150 mm | (Order no. 6840 0150) |
| 1 soft-faced mallet, 30 mm | (Order no. 6825 0030) |
| 1 drift punch, 5 mm | (Order no. 6860 0005) |
| 1 Centre punch, 120 x 12 mm | (Order no. 6874 0121) |
| 2 Screwdriver with round blade 3.5 x 0.6; 4.0 x 0.8 mm | (Order no. 6266) |
| 2 Screwdriver with hex blade 5.5 x 1; 7 x 1.2 mm | (Order no. 6265) |
| 3 Screwdriver PH 1; 2; 3 | (Order no. 6300) |
| 1 Cable-stripping knife, 1-piece | (Order no. 5429 0195) |

**Note:** All tools in this tool set equate to the article descriptions in this catalogue. We reserve the right to change the composition of the set.

| Order No. | Design | 6165 format |
|---|---|---|
| 0043 | 43-part<br>460 x 310 x 190 mm | 415.00 |

(W533)

## Electrician tool set, 37-piece

NEW

**Set contents:**

| | |
|---|---|
| 1 VDE wire stripper, 160 mm | (Order no. 5453 0160) |
| 1 VDE universal pliers, 180 mm | (Order no. 5151 0180) |
| 1 VDE side-cutting pliers, 160 mm | (Order no. 5296 0160) |
| 1 VDE radio pliers, straight 160 mm | (Order no. 5217 0160) |
| 1 VDE pointed pliers, straight, 200 mm | (Order no. 5230 0200) |
| 1 electrician's chisel 200 x 10 mm | (Order no. 6854 0200) |
| 1 Fitter's hammer 300 g | (Order no. 6775 0300) |
| 1 Metal saw PUK®, 150 mm | (Order no. 6730 0150) |
| 4 VDE-slotted screwdriver 2.5; 4; 5.5; 6.5 mm | (Order no. 6278) |
| 2 VDE Phillips screwdrivers PH 1; 2 | (Order no. 6328) |
| 2 VDE cross-head screwdrivers PZ 1; 2 | (Order no. 6343) |
| 1 cutter knife 18 mm | (Order no. 7343 0010) |
| 1 carpenter pencil | (Order no. 9758 0240) |
| 1 Light metal spirit level, 30 cm | (Order no. 4728 0030) |
| 5 double open-end spanners 8 x 9; 10 x 11; 12 x 13; 14 x 15; 17 x 19 mm | (Order no. 5700) |
| 9 Offset screwdriver with ball head 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm | (order no. 5858 0010) |
| 1 voltage tester, MasterCheck, 2-pole | (Order no. 5571 0010) |
| 1 Cable-stripping knife, 1-piece | (Order no. 5429 0195) |
| 1 voltage tester, 1-pole, 140 mm | (Order no. 5532 0004) |
| 1 Plastic folding rule, 2 m | (Order no. 4673 0002) |

**Note:** All tools in this tool set equate to the article descriptions in this catalogue. We reserve the right to change the composition of the set.

6165 0037

6165 0039

6165 0038

| Order No. | Design | 6165 format | Supplied in |
|---|---|---|---|
| 0037 | 37-part | 218.00 | – |
| 0038 | 37-part<br>470 x 200 x 360 mm | 410.00 | Case<br>(Order no. 7390 0005) |
| 0039 | 37-part<br>442 x 151 x 357 mm | 320.00 | L-Boxx, with tool card |

(W533)

## Plumbing tool set, 50 pc

NEW

format professional quality

**Set contents:**

| | |
|---|---|
| 1 pliers spanner 250 mm | (Order no. 7156 0250) |
| 2 double open-end spanners 10 x 13; 17 x 19 mm | (Order no. 5700) |
| 3 tubular box spanners 10 x 11; 12 x 13; 17 x 19 mm | (Order no. 5772) |
| 1 UNI valve gradated wrench with ratchet, 3/8" –1" | (Order no. 7181 0500) |
| 1 installation spanner 17 x 19 mm; M10 | (Order no. 7167 0005) |
| 1 Sanitary wheel wrench 3/8" ; 1/2" ; 3/4" ; 1" | (Order no. 7173 0005) |
| 9 Offset screwdriver with ball head 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm | (order no. 5858 0010) |
| 1 Lever reversible ratchet 1/2" , 60-teeth | (Order no. 6080 0015) |
| 1 extension 1/2" , 125 mm | (Order no. 6095 0125) |
| 3 hexagon socket wrench inserts 1/2" , 10 ; 13; 17 mm | (Order no. 6111) |
| 1 Elbow pipe wrench 1" , 320 mm | (Order no. 7152 0010) |
| 1 Pipe cutter Mini 1/8–5/8" | (Order no. 7200 0005) |
| 1 Pipe cutter Kompakt 1/8–1.3/8" | (Order no. 7208 0006) |
| 1 adjustable basin nut spanner | (Order no. 7162 0235) |
| 1 water pump pliers, 240 mm | (Order no. 5599 0240) |
| 1 electrician's chisel 250 x 10 mm | (Order no. 6854 0250) |
| 1 Fitter's hammer 300 g | (Order no. 6775 0300) |
| 1 Workshop file, half-round pointed, H1, 250 mm | (Order no. 6554 0251) |
| 1 2K-file handle for 300–350mm | (Order no. 6687 0030) |
| 1 wire hand brush, stainless, smooth, 4-rows | (Order no. 7006 0004) |
| 1 Metal saw PUK®, 150 mm | (Order no. 6730 0150) |
| 1 voltage tester, 1-pole, 140 mm | (Order no. 5532 0004) |
| 3 VDE slotted screwdrivers 3.5, 5.5, 6.5 mm | (Order no. 6278) |
| 2 VDE Phillips screwdrivers PH 1; 2 | (Order no. 6328) |
| 1 carpenter pencil | (Order no. 9758 0240) |
| 1 wooden folding rule 2 m | (Order no. 4671 0020) |
| 1 Light metal spirit level, 30 cm | (Order no. 4727 0030) |
| 1 cutter knife 18 mm | (Order no. 7343 0010) |
| 1 Paintbrush, mixed bristles, 2" | (Order no. 7048 0041) |
| 1 VDE side-cutting pliers, 160 mm | (Order no. 5296 0160) |
| 1 VDE universal pliers, 180 mm | (Order no. 5151 0180) |
| 1 VDE pointed pliers, straight, 200 mm | (Order no. 5230 0200) |
| 1 paint scraper 50 mm | (Order no. 7320 0050) |
| 1 Ideal tin snips, lever transmission, right-hand cutting, 260 mm | (Order no. 7082 0260) |

**Note:** All tools in this tool set equate to the article descriptions in this catalogue. We reserve the right to change the composition of the set.

**6165 0050**

**6165 0051**

**6165 0052**

| Order No. | Design | 6165 format | Supplied in |
|---|---|---|---|
| 0050 | 50-part | 444.00 | – |
| 0051 | 50-part 470 x 200 x 360 mm | 640.00 | Case |
| 0052 | 50-part 442 x 151 x 357 | 550.00 | L-Boxx, with tool card |

(W533)

## Craftsman tool assortment

NEW

GEDORE

**Set contents:**

1 reversible ratchet 1/2" 270 mm
1 extension 1/2" 250 mm
1 Universal joint 1/2" 73.5 mm
13 hexagon socket spanner bits 1/2"
10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24 mm
1 open jaw spanner 8" , adjustable 205 mm
1 water pump pliers 10" , 15x adjustable 260 mm
1 Power side-cutting pliers 160 mm
1 multi-purpose pliers 180 mm
1 locksmith hammer Rotband-Plus 500 g
1 bricklayer's chisel, octagonal, 250 mm
10 angled screwdrivers 1.3; 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm
8 angled screwdrivers T 9; T 10; T 15; T 20; T 25; T 27; T 30; T 40
4 VDE slot screwdrivers 2.5; 4; 5.5; 6.5 mm
3 VDE cross-head screwdrivers PH 0; PH 1; PH 2
1 voltage tester 3.0 mm
1 switchboard spanner
1 folding wooden ruler 2 m
1 mini LED light with jointed base
6 key files, flat blunt; triangular; round; half-round; square
1 cable-stripping knife 200 mm

| Order No. | Design | 616B GEDORE |
|---|---|---|
| 0005 | 58-part<br>442 x 357 x 151 mm | 599.50 |

(W522)

## Electrician tool assortment

NEW

GEDORE

**Set contents:**

10 angled screwdrivers 1.3; 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm
4 VDE slot screwdrivers 2.5; 4; 5.5; 6.5 mm
3 VDE cross-head screwdrivers PH 0; PH 1; PH 2
1 voltage tester 1-pole
1 voltage tester 2-pole
1 bricklayer's chisel, octagonal, 250 mm
1 electrician's chisel, square, 250 mm
1 locksmith hammer Rotband-Plus 500 g
1 open jaw spanner 8" , adjustable 205
1 water pump pliers 10" , 15x adjustable 260 mm
1 automatic wire-stripping pliers, 200 mm
1 multi-purpose pliers 180 mm
1 VDE side-cutting pliers 160 mm
1 VDE flat-round pliers 200 mm
1 VDE wire stripper 160 mm
1 VDE flat-round pliers, bent 200 mm
1 VDE cable shears 200 mm
1 cable-stripping knife 170 mm
1 electrical cabinet key
1 electrical insulation tape 10 m
1 folding wooden ruler 2 m
1 scraper 60 mm

| Order No. | Design | 616B GEDORE |
|---|---|---|
| 0010 | 36-part<br>442 x 357 x 151 mm | 627.50 |

(W522)

## Sanitary tool assortment

NEW

GEDORE

**Set contents:**
5 open-end spanners with ring ratchet 10; 13; 17; 19; 24 mm
1 elbow pipe spanner elbow Schwede-snap® 1.1/2"
1 water pump pliers 10" , 15x adjustable 255 mm
1 switchboard spanner
1 locksmith hammer Rotband-Plus 500 g
1 bricklayer's chisel, octagonal, 250 mm
8 angled screwdrivers T 9; T 10; T 15; T 20; T 25; T 27; T 30; T 40
1 fitting spanner 260 mm
1 pipe milling cutter 4–32 m
1 pipe cutter 6–35 mm
1 voltage tester, 2-pole
4 VDE slot screwdrivers 2.5; 4; 5.5; 6.5 mm
3 VDE cross-head screwdrivers PH 0; PH 1; PH 2
10 angled screwdrivers 1.3; 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm
1 folding wooden ruler 2 m
1 pipe cutter 4–16 mm
1 compression-fittings spanner
1 step spanner with 5 graduations 3/8" –1"
1 adjustable basin nut spanner 235 mm

| Order No. | Design | 616B GEDORE |
|---|---|---|
| 0015 | 44-part<br>442 x 357 x 151 mm | 849.00<br>(W522) |

## Trainee tool assortment

NEW

GEDORE

**Set contents:**
9 combination spanners SW 10; 12; 13; 14; 15; 16; 17; 18; 19
1 cable-stripping knife
1 folding wooden ruler 2 m
1 hand saw 250 mm
1 locksmith hammer 500 g
1 flat chisel 250 mm
1 multifunction pliers 180 mm
1 Power side-cutting pliers 180 mm
1 water pump pliers 255 mm
3 slot screwdriver 4; 4.5; 6.5 mm
2 cross-head screwdrivers PH 1; PH 2
1 voltage tester

| Order No. | Design | 616B GEDORE |
|---|---|---|
| 0020 | 23-part<br>442 x 357 x 151 mm | 349.50<br>(W522) |

## Tool set Kraftform Compakt SH 1 for heating/sanitary

NEW

Wera Zyklop

**Set contents:**
1 Zyklop Speed ratchet 1/4" (Order no. 6000 0015)
2 ring/open-end spanner Joker 10; 13 mm (Order no. 5727)
3 hex socket spanner bit 1/4" 7; 10; 13 mm
1 adapter 1/4" hex to square (Order no. 6000 0030)
6 bits for recessed TORX® screws, 50 mm long, with holding function T 10; T 15; T 20; T 25; T 30; T 40
2 bits for cross-head screws, 89 mm long PH 1; PH 2
4 bits for hex socket screws Hex-Plus 3; 4; 5; 6 mm
1 VDE slot screwdriver, with reduced blade diameter 3.5 x 100 mm (Order no. 6281 0035)
1 VDE slot screwdriver 5.5 x 125 mm (Order no. 6282 0055)
1 single-pole voltage tester
1 slot screwdriver (chisel driver) 7 x 125 mm
1 socket spanner 10 x 90; 13 x 90 mm
1 screwdriver with hollow shaft

| Order No. | Design | 616A Wera |
|---|---|---|
| 0005 | 25-part | 159.00 (W545) |

## Tool set Kraftform compact M 1 for metal

NEW

Wera Zyklop

**Set contents:**
1 Zyklop ratchet 1/4" (Order no. 6000 0015)
7 hexagon socket wrench inserts 5.5, 6.0, 7.0, 8.0, 10.0, 12.0, 13.0 mm
1 Bit, 89 mm long, slot 5.5 mm
3 bits, 89 mm long, Phillips PH bits 1; 2; 3
4 Bits, 89 mm long, Allen bits 3.0; 4.0; 5.0; 6.0 mm
5 Bits 89 mm long, recessed TORX® T 10; 15; 20; 25; 30
6 combination tap extension bits 2.5; 3.3; 4.2; 5.0; 6.8; 8.5 mm
6 HSS metal spiral drill bits 3.0; 4.0; 5.0; 6.0; 8.0; 10.0 mm
1 bit hand holder
2 extensions 1/4" 56.0; 150.0 mm
1 bit adapter for 1/4" bits (Order no. 6000 0030)
1 screw claw 4.5–6.0 mm (Order no. 6877 0015)
1 single-pole voltage tester

| Order No. | Design | 616A Wera |
|---|---|---|
| 0010 | 39-part | 167.00 (W545) |

## Tool set Kraftform compact W 1 for maintenance

NEW

Wera Zyklop

**Set contents:**
1 Cyclops ratchet 1/4" (Order no. 6000 0015)
8 hexagon socket wrench inserts 5.5; 6.0; 7.0; 8.0; 10.0; 11.0; 12.0; 13.0 mm
2 Phillips PZ bits 1; 2 (Order no. 6443)
4 Allen bits 3.0; 4.0; 5.0; 6.0 mm (Order no. 6429)
1 Bit recess TORX® T 25 (Order no. 6355 0170)
1 bit-holder
1 VDE interchangeable blade for slotted screws 2.5 mm (Order no. 6355 0100)
3 VDE interchangeable blades, reduced blade diameter for slotted screws 3.5; 4.0; 5.5 mm
2 VDE interchangeable blades, reduced blade diameter for Phillips screws PH 1; 2
2 VDE interchangeable blades, reduced blade diameter for Phillips screws PZ 1; 2
1 VDE interchangeable blade for recessed TORX®T 10
3 VDE interchangeable blades, reduced blade diameter, recess TORX® T 15; 20; 25
1 VDE bit hand holder (Order no. 6355 0010)
1 screw claw 4.5–6.0 mm
1 single-pole voltage tester
1 double open-end spanner 10 x 13 mm
1 Bit adapter for 1/4" bits (Order no. 6000 0030)
1 extension 1/4" 75.0 mm

| Order No. | Design | 616A Wera |
|---|---|---|
| 0015 | 35-part | 139.00 (W545) |

## Tool set Kraftform Kompakt H 1 for wood

NEW

Wera Zyklop

**Set contents:**

7 hexagon socket wrench inserts
5.5, 6.0, 7.0, 8.0, 10.0, 12.0, 13.0 mm
4 Bits, 89 mm long, Allen bits
3.0; 4.0; 5.0; 6.0 mm
1 Bit, 25 mm long, slot 5.5 mm
1 Bit, 89 mm long, slot 5.5 mm (Order no. 6441)
3 bits, 89 mm long, Phillips PH bits 1; 2; 3 (Order no. 6443)
3 bits, 25 mm long, Phillips PZ 1; 2; 3 (Order no. 642G)
3 bits, 89 mm long, Phillips PZ 1; 2; 3 (Order no. 6445)
2 Bits 25 mm long, recessed TORX® T 20; 25 (Order no. 644A)
5 bits, 89 mm long, recessed TORX®
with hole T 10; 15; 20; 25; 30 (Order no. 6455)
5 HSS wood spiral drill bits
3.0; 4.0; 5.0; 6.0; 8.0 mm
1 bit-holder
1 screw claw 4.5–6.0 mm (Order no. 6877 0015)
1 single-pole voltage tester
1 ratchet screwdriver
1 bit ratchet (Order no. 6398 0142)
1 extension 75.0 mm
1 bit adapter for 1/4" bits

| Order No. | Design | 616A Wera |
|---|---|---|
| 0020 | 41-part | 135.00 (W545) |

## Tool set Touring No. 1000, 47-piece in case

GEDORE

**Design:** The perfect set of tools for any job. Selected and compiled for the practice. The tools are well sorted and held in place. Polypropylene case with snap closures and folding handle, impact resistant, resistant to oil and acid, resistant to weather and temperature influences, with foam insert. The robust companion for car, boat or plane.

**Scope of delivery:**

1 plastic case
11 combination wrenches 6; 7; 8; 10; 11; 12; 13; 14; 15; 17; 19 mm
3 Slot screwdriver 4; 5.5; 6.5 mm
2 Phillips screwdrivers PH 1; 2
1 Slot screwdriver, insulated 3 mm
1 Angled screwdriver set, 8-part 2; 2.5; 3; 4; 5; 6; 8; 10 mm
1 reversible ratchet 1/2"
2 extensions 1/2" 125; 250 mm
1 universal joint 1/2"
1 T-handle with sliding block 1/2"
1 Spark plug socket set, 20.8 mm
9 hexagon socket spanner inserts 1/2"
10; 11; 12; 13; 14; 15; 17; 19; 22 mm
1 universal pliers, 180 mm
1 side-cutting pliers, 160 mm
1 water pump pliers, 250 mm
1 voltage tester
1 Cable-stripping knife, 1-piece
1 Fitter's hammer 300 g
1 Small parts box

| Order No. | Design | 6166 GEDORE |
|---|---|---|
| 0047 | 47-part<br>480 x 410 x 210 mm | 486.50 (W522) |

## Electrician tool assortment No. 1090, 90-piece in case

**Design:** The perfect set of tools for the electrician or maintenance man. Suitable for the on-site job. Housed in a solid hard-shell case made of impact-resistant plastic. Aluminium frame, three metal hinges, four bottom studs and screwed handles with integrated locks.

**Scope of delivery:**

1 Hard-shell case
12 Double open-end wrench, small
4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm
4 Double open-end spanners 14 x 17; 18 x 19; 21 x 23; 22 x 24 mm
1 Angled screwdriver set, 9-part 2; 2.5; 3; 4; 5; 6; 7; 8; 10 mm
4 VDE slot screwdrivers 3.5; 4; 5.5; 6.5 mm
2 VDE cross-head screwdrivers PH 1; PH 2
1 slot screwdriver, short 5.5 mm
1 Cross-head screwdriver, short PH 1
2 cross-head screwdrivers PZ 1; PZ 2
1 Offset screwdriver for slot screws 5.5; 8 mm
1 Offset screwdriver Phillips screws PH 1; PH 2
1 VDE universal pliers, 180 mm
1 VDE side-cutting pliers, 200 mm
1 VDE flat-round pliers, bent 160 mm
1 VDE wire stripper, 160 mm
1 VDE flat pliers, 160 mm
1 water pump pliers, 245 mm
11 Hexagonal socket wrench inserts 1/4"
4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 13 mm
1 reversible ratchet 1/4"
1 T-handle with sliding block 1/4"
1 extension 1/4" , 97 mm
1 universal joint 1/4"
1 Square handle 1/4"
1 open jaw spanner, adjustable to 30 mm
1 small universl scissors, 140 mm
1 cable-stripping knife
1 metal saw 350 mm
10 Spare saw blades, 200 mm
1 square awl
1 Tape measure, 3 m
1 Scriber, angled
1 voltage tester
1 Glazier's hammer, 100 g
1 Fitter's hammer 300 g
1 flat chisel 175 mm
2 drift punch 2; 4 mm
1 Autom. centre punch, 4 mm
1 Electrician splitting chisel, 200 mm
1 Electrician chisel octagonal shaft, 250 mm
1 Soldering iron, 60 Watt
1 Tin solder HS 10
1 tin of solder grease, 50 g
1 Ammonium stone, 64 x 45 x 40 mm

| Order No. | Design | 6166 GEDORE |
|---|---|---|
| 0090 | 90-part<br>460 x 380 x 200 mm | 876.50<br>(W522) |

## Tool cabinet 100-piece No. 1400 G

GEDORE

**Scope of delivery:**

8 double ended ring wrench 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22 mm
10 Double open-end spanners 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22; 21 x 23; 24 x 27 mm
19 hexagon socket wrench inserts 1/2" 10; 11; 12; 13, 14; 15; 16; 17; 18; 19; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm
7 screwdriver bits for Allen screws 1/2" for Allen screws 6; 7; 8; 9; 10; 12; 14 mm
1 reversible ratchet 1/2"
2 extensions 1/2" 125; 250 mm
1 universal joint 1/2"
1 T-handle with sliding block 1/2"
6 Socket wrenches w. handle 5.5; 6; 7; 8; 9; 10 mm
10 angled screwdrivers 1.3; 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm
1 open jaw spanner, adjustable to 25 mm
1 gripping pliers 240 mm
1 water pump pliers, 250 mm
4 Slotted screwdrivers 4; 4.5; 6.5; 8 mm
2 Phillips screwdrivers PH 1; 2
1 centre punch 5 mm
1 drift punch, 5 mm
1 flat chisel 250 mm
1 cross chisel, 5 mm
3 pin punches 1.5; 3; 4 mm
1 Metal hacksaw
1 Hobby saw
1 Flat blunt file, cut 2, 150 mm
1 triangular file, cut 2, 150 mm
1 round file, cut 2, 150 mm
1 Warding file set 6-part
1 Triangular wood scraper, 150 mm
1 Power universal pliers, 180 mm
1 power side-cutter, 160 mm
1 needle nose pliers 160 mm
2 Fitter's hammers 300; 500 g
1 soft-faced mallet, 40 mm ∅
1 Lever tin snips, 250 mm
1 Steel cabinet

| Order No. | Design | 6166 GEDORE |
|---|---|---|
| 0092 | 100-part<br>970 x 650 x 250 mm | 1815.00 |

(W522)

## Mechanic tool assortment 175-piece No. S 1007 M

GEDORE

**Scope of delivery:**

12 Double end ring spanners 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22; 21 x 23; 24 x 27; 25 x 28; 30 x 32 mm
12 Double end ring spanners 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22; 21 x 23; 24 x 27; 25 x 28; 30 x 32 mm
20 Hexagon socket wrench set 1/2" 8; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm
1 reversible ratchet 1/2"
2 extensions 1/2" 125; 250 mm
1 universal joint 1/2"
1 T-handle with sliding block 1/2"
11 hexagon socket spanner inserts 1/4" 4; 4.5; 5; 5.5; 6; 7; 8; 9; 10; 11; 13 mm
1 reversible ratchet 1/4"
1 T-handle with sliding block 1/4"
1 extension 1/4" , 97 mm
1 universal joint 1/4"
1 Square handle 1/4"
9 Recess hex socket spanner bits 5; 6; 7; 8; 9; 10; 12; 14; 17 mm
1 Screwdriver
1 Adapter for bits, square 1/2" to hex 5/16"
1 Adapter for bits, square 1/4" to hex 5/16"
4 Bits for slot screws 7; 8; 9; 12 mm
4 Bits for Allen screws 5; 6; 8; 10 mm
3 Bits for Phillips screws PH 2; 3; 4
1 Set angled screwdrivers, 8-part 2; 2.5; 3; 4; 5; 6; 8; 10 mm
1 Mechanic's pliers, 175 mm
1 Universal pliers, 248 mm
1 Pipe pliers, 1.1/2"
1 gripping pliers 240 mm
2 Circlip pliers for protruding rings, straight jaws A 1; A 2
2 Circlip pliers for protruding rings, angled jaws A 11; A 21
2 Circlip pliers for recessed rings, straight jaws J 1; J 2
2 Circlip pliers for recessed rings, angled jaws J 11; J 21
1 Power universal pliers, 180 mm
1 power side-cutter, 160 mm
1 Power end cutter, 160 mm
1 needle nose pliers, straight 160 mm
1 needle nose pliers, angled 160 mm
3 Slotted screwdrivers with drive hex 6.5; 8; 10 mm
3 Slotted screwdrivers 3; 4; 5.5 mm
3 Phillips screwdrivers PH 1; 2; 3
2 Phillips screwdrivers PZ 1; 2
1 Slotted screwdriver, short, 6.5 mm
2 Phillips screwdrivers, short PH 1; 2
6 pin punches 2; 3; 4; 5; 6; 8 mm
1 Centre punch, 4 x 120 mm
2 drift punch 3; 5 mm
3 Flat chisels 125; 150; 200 mm
1 cross chisel, 125 mm
1 Lever tin snips, 250 mm
1 open jaw spanner, adjustable to 28 mm
1 Small metal saw PUK®, 290 mm
1 Metal hacksaw, 520 mm
1 Jigsaw, 380 mm
1 Flat blunt file, 200 mm cut 2
1 Triangular file, 200 mm, cut 2
1 Round file, 200 mm, cut 2
1 Half round file, 200 mm, cut 2
1 Warding file set 6-part
1 Thread file
1 Cable and electrician knife, 195 mm
1 locksmith hammer Rotband-Plus 500 g
1 Desmopan soft-face mallet, 40 mm ∅
1 Triangular wood scraper, 200 mm
1 square awl
1 Pry bar, 400 mm
1 Magnetic lifter, 1800 g
1 Screw extractor set, 8-part
1 Oil spray can, 0.3 l
1 Measuring tape, 3 m
1 scriber, 250 mm
1 Pocket calipers, 140 mm

| Order No. | Design | 6166 GEDORE |
|---|---|---|
| 0175 | 175-part | 1799.00 (W522) |

## Tool trolley

**Design:** Sturdy sheet steel construction, drawers with ball rack guide, middle and end catches as well as single lock against accidental opening while driving. The rear wall and the side walls have square perforations. **Centrally closed by a cylinder lock.** Work top with 10 mm thick foam inlay. High stability through enhanced wide-track rear axle, 2 large solid rubber wheels and 2 swivel casters on both sides with roll-rotation brake (total stop). Surface scratch resistant powder-coated, body in red, drawers in black.

Drawers pull out 100%

**6172 0110** With 7 pull-out drawers on one side (5 x 75; 2 x 150 mm high) with space for 3 1/3 module.

**6172 0115** With 7 pull-out drawers on one side (5 x 75; 2 x 150 mm high) with space for 4 1/3 module.

6172 0110



6172 0115

| Order No. | Dimensions L x W x H mm | 6172 format | Drawer dimensions L x W mm | Drawer pullout mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|
| 0110 | 727 x 460 x 1005 | 695.00 | 565 x 395 | 395 | 40 | 450 | 57 |
| 0115 | 910 x 460 x 1005 | 875.00 | 752 x 395 | 395 | 40 | 800 | 81 |

(W536)

## Rolling workbench

NEW

**Design:** Sturdy sheet steel construction with 2 sliding handles, 7 drawers on front and 3 drawers on the side (all individually dividable). Drawers are guided on ball bearings and have a single lock against accidental opening while driving. Centrally closed by means of a cylinder lock. Spacious compartment with door and 2 shelves at the side, 1 large compartment with 2 shelves, with lockable roller shutter on the back, perforated side wall. 56 mm strong MDF workbench (protrusion per side 5 cm). With 2 lockable casters and 2 fixed rollers. Delivery includes 4 keys (suitable for drawers and roller shutters).

| Order No. | Dimensions L x W x H mm | 6172 format | Drawer dimensions L x W x H mm | Drawer pullout mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|
| 0125 | 1123 x 791 x 844 | 965.00 | 568 x 398 x 75; 568 x 398 x 154; 283 x 398 x 75; 283 x 398 x 154; 283 x 398 x 233 | 380 | 40 | 550 | 110 |

(W536)

## Accessories for workshop trolley

NEW

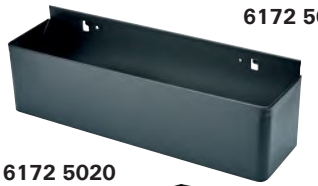
**Design:** With hooks to hang on perforated wall.

**Note:** For 9 x 9 mm holes.

6172 5000

| Order No. | Design | 6172 | Suitable for |
|---|---|---|---|
| 5000 | Key blanc | 6.30 | Workshop trolley (Order No. 6172 0110 and 6172 0115) |
| 5010 | Drawer organiser, 23-part | 47.10 | Workshop trolley (Order No. 6172 0110) |
| 5015 | Paper roll holder | 16.60 | For 9 x 9 mm holes with hooks to hang on perforated wall. |
| 5020 | Can holder | 15.90 | For 9 x 9 mm holes with hooks to hang on perforated wall. |
| 5025 | Shelf tablet | 38.90 | For 9 x 9 mm holes with hooks to hang on perforated wall. |
| 5030 | Indiv. hook | 2.90 | For 9 x 9 mm holes with hooks to hang on perforated wall. |
| 5035 | Document holder | 15.60 | For 9 x 9 mm holes with hooks to hang on perforated wall. |

(W533)



6172 5020

6172 5035

## Tool module

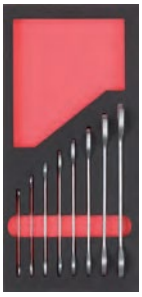
**Design:** 2-colour foam inlay, so that missing tools are recognised immediately.
1/3 module = 188.0 x 395 mm
2/3 module = 376.5 x 395 mm

**Note:** Suitable for tool trolley (Order no. 6172 0110 and 6172 0115) and roller workbench (Order no. 6172 0125).

| Order No. | Design | 6175 format | Set contents | Module |
|---|---|---|---|---|
| 0005 | 8-part | 39.00 | 8 double open ended wrenches (5700) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22 mm | 1/3 |
| 0010 | 10-part | 56.00 | 10 combination wrenches (5720) 10; 11; 13; 14; 17; 19; 22; 24; 27; 30 mm | 1/3 |
| 0015 | 9-part | 83.00 | 5 open ended wrenches with ring ratchet (5731) 8; 10; 13; 17; 19 mm<br>4 adapters for holding bits and socket wrench inserts | 1/3 |
| 0085 | 14-part | 210.00 | 10 Ratchet spanners (5731) 8; 10; 13; 15; 16; 17; 18; 19; 22; 24 mm<br>3 box spanner adapters 1/4" ; 3/8" ; 1/2"<br>1 Adapter for 1/4" bits | 2/3 |
| 0090 | 9-part | 110.00 | 5 Articul.ratchet key (5783) 8; 10; 13; 17; 19<br>3 box spanner adapters 1/4" ; 3/8" ; 1/2"<br>1 Adapter for 1/4" bits | 1/3 |
| 0045 | 9-part | 70.00 | 9 double end ring spanners (5739) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 17 x 19; 19 x 22; 24 x 27; 30 x 32 mm | 2/3 |
| 0095 | 31-part | 145.00 | 1 socket wrench insert 1/4" (6018 0010)<br>11 socket spanner bits 1/4" (6039) 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>4 x Allen 1/4" screwdriver bits (6044) 3; 4; 5; 6 mm<br>2 x 1/4" slot screwdriver bits (6047) 4; 5.5 mm<br>2 x 1/4" Phillips screwdriver bits (6049) PH 1; 2<br>6 x 1/4" recessed TORX® screwdriver bits T 10; 15; 20; 25; 27; 30<br>1 T-handle with slide block 1/4" (6020 0010)<br>2 extensions 1/4" (6015) 50; 105 mm<br>1 universal joint 1/4" (6033 0020)<br>1 drive handle 1/4" (6027 0020) | 1/3 |
| 0100 | 24-part | 135.00 | 1 socket wrench insert 3/8" (6058 0010)<br>14 hexagon socket wrench inserts 3/8" (6070) 6; 7; 8; 9; 10; 11; 13; 14; 15; 16; 17; 18; 19; 22 mm<br>5 Screwdriver bits 3/8" (6070) 4; 5; 6; 8; 10 mm<br>1 T-handle with slide block 3/8" (6062 0010)<br>2 extensions 3/8" (6060) 125; 250 mm<br>1 universal joint 3/8" (6064 0010) | 1/3 |
| 0105 | 22-part | 150.00 | 1 socket wrench insert 1/2" (6080 0010)<br>15 socket spanner bits 1/2" (6111) 10; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32; 36 mm<br>4 hexagon socket wrench inserts 1/2" , long (6118) 10; 13; 17; 19 mm<br>1 extension 1/2" (6095 0125) 125 mm<br>1 universal joint 1/2" (6103 0010) | 1/3 |
| 0065 | 49-part | 245.00 | 1 socket wrench insert 1/4" (6018 0010)<br>11 socket spanner bits 1/4" (6039) 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>4 x Allen 1/4" screwdriver bits (6044) 3; 4; 5; 6 mm<br>2 x 1/4" slot screwdriver bits (6047) 4; 5.5 mm<br>2 x 1/4" Phillips screwdriver bits (6049) PH 1; 2<br>6 x 1/4" recessed TORX® screwdriver bits (6053) T 10; 15; 20; 25; 27; 30<br>1 T-handle with slide block 1/4" (6020 0010)<br>1 extension 1/4" (6015)<br>1 universal joint 1/4" (6033 0020)<br>1 drive handle 1/4" (6027 0020)<br>1 socket wrench insert 1/2" (6080 0010)<br>15 socket spanner bits 1/2" (6111) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 22; 24; 27; 30; 32 mm<br>1 T-handle with slide block 1/2" (6100 0020)<br>1 extension 1/2" (6095)<br>1 universal joint 1/2" (6103 0010) | 2/3 |

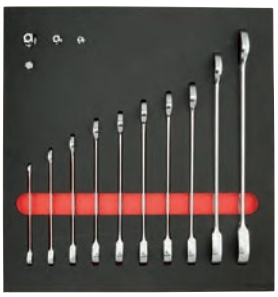
(W533)

Continued overleaf


6175 0005

6175 0010

6175 0015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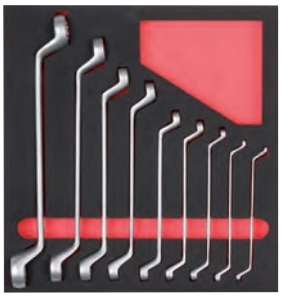
6175 0090
NEW


6175 0045

6175 0095
NEW

6175 0100
NEW

6175 0105
NEW

6175 0065

## Tool module

Continued

| Order No. | Design | 6175 format | Set contents | Module |
|---|---|---|---|---|
| 0110 | 6-part | 62.00 | 6 Hexagonal box spanner screwdriver with T-handle (5806) 6; 7; 8; 10; 13; 17 mm | 2/3 |
| 0115 | 7-part | 35.00 | 3 Slot screwdriver (6266) 3.0 x 75; 3.5 x 125; 4.0 x 100 mm<br>3 Phillips screwdrivers (6300) PH 0; 1; 2<br>1 carburetor Phillips screwdriver (6290 0002) PH 02 | 1/3 |
| 0020 | 6-part | 48.00 | 4 slot screwdrivers with impact cap (6261) 3.5x80; 4.5x90; 5.5x100; 7x125 mm<br>2 Phillips screwdrivers with impact cap (6285) PH 1; 2 | 1/3 |
| 0035 | 7-part | 119.00 | 1 pocket calliper, 150 mm (4001 0150)<br>1 micrometer, 0–25 mm mm (4100 0025)<br>1 Precision bevelled square, 100 x 70 mm (4621 1000)<br>1 straightedge, 100 mm (4761 0100)<br>1 Steel scale, flexible 150 mm, (4751 0150)<br>1 Precision pair of compasses 150 mm (4813 0150)<br>1 Tape measure, 3 m (4685 0003) | 1/3 |
| 0075 | 11-part | 82.00 | 2 Fitter's hammer with handle protection (6777) 300; 500 g<br>1 non-rebound soft-faced mallet (6825 0040) Kopf-Ø 40 mm<br>6 Pin punches (6863) 2; 3; 4; 5; 6; 8 mm<br>1 Cenre punch, 12 x 120 mm (6874 0120)<br>1 Flat chisel, 100 mm (6840 0100) | 2/3 |
| 0120 | 7-part | 43.00 | 7 recessed screwdrivers-TORX® (5883) T 8; 9; 10; 15; 20; 25; 30 | 1/3 |
| 0025 | 6-part | 37.00 | 3 VDE-slot screwdrivers (6278) 4 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 VDE-Phillips screwdrivers (6328) PH 1; 2<br>1 voltage tester (5532 0004) | 1/3 |
| 0070 | 8-part | 55.00 | 1 Flat blunt file, cut 2, 200 mm (6530 0202)<br>1 triangular file, cut 2, 200 mm (6542 0202)<br>1 square file, cut 2, 200 mm (6548 0202)<br>1 Half round file, cut 2, 200 mm, (6554 0202)<br>1 round file, cut 2, 200 mm (6560 0202)<br>2 file handles, 110 mm (6687)<br>1 File brush 115 x 40 mm (7002 0001) | 2/3 |
| 0080 | 7-part | 93.00 | 1 Universal scissors, 190 mm (7100 0190)<br>1 cutter knife 18 mm (7343 0010)<br>1 dispenser cutter blades, 18 mm (7345 0005)<br>1 Scriber with carbide tip (4803 0150)<br>1 Permanent-magnetic lifter, 460 mm (3972 0012)<br>1 Inspection mirror, 270 mm (6527 0010)<br>1 Flashlight Mini MAGLITE® | 2/3 |
| 0050 | 8-part | 60.00 | 7 Hexagon screwdrivers with T-handle (5850) 2; 2.5; 3; 4; 5; 6; 8 mm<br>1 hexagon angled screwdriver set (5858 0005) 2; 2.5; 3; 4; 5; 6; 8; 10 mm | 2/3 |
| 0060 | 7-part | 58.00 | 7 TORX® screwdrivers with T-handle (5880) T 9; 10; 15; 20; 25; 27; 30 | 2/3 |
| 0055 | 6-part | 105.00 | 1 water pump pliers, 240 mm (5599 0240)<br>1 side-cutting pliers, 160 mm ( 5292 0160)<br>1 leverage side cutters, 160 mm (5317 0160)<br>1 Multi-purpose pliers straight,, 160 mm (5197 0160)<br>1 multi-purpose pliers, angled, 160 mm (Order No. 5199 0160)<br>1 universal pliers, 180 mm | 2/3 |
| 0030 | 3-part | 68.00 | 1 VDE side-cutting pliers, 160 mm (Order No. 5296 0160)<br>1 VDE combination pliers, 180 mm (Order 5151 0180)<br>1 VDE pantograph pliers, 200 mm (Order 5230 0200) | 1/3 |
| 0040 | 4-part | 51.00 | 2 circlip pliers for recessed rings (5617) J 1; J 2<br>2 circlip pliers for protruding rings (5620) A 1; A 2 | 1/3 |
| 0125 | 3-part | 60.00 | 2 Gripping pliers (5630) 180; 250 mm<br>1 Clamping gripping pliers (5648 0280) 280 mm | 2/3 |
| 0130 | 4-part | 160.00 | 2 Universal extractor, 2 armed (6904) 100; 160 mm<br>1 socket wrench insert 1/4" (6080 0010)<br>1 Hexagon socket wrench insert (6111 0170) 17 mm | 2/3 |

(W533)

6175 0110
NEW

6175 0115
NEW

6175 0020

6175 0035

6175 0075

6175 0120
NEW

6175 0025

6175 0070

6175 0080

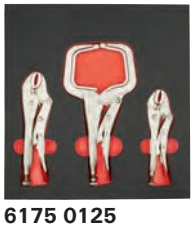
6175 0050

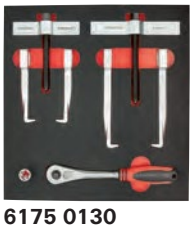
6175 0060

6175 0055

6175 0030

6175 0040


6175 0125
NEW


6175 0130
NEW

## Tool module, empty

NEW

**Design:** 1/3 module = 188.0 x 395 mm.

**Note:** Suitable for tool trolley (Order no. 6172 0110 and 6172 0115) and roller workbench (Order no. 6172 0125).

| Order No. | Design | 6175 | Module |
|---|---|---|---|
| 0135 | 5 compartments | 12.40 | 1/3 |
| 0140 | 1 compartment | 12.40 (W533) | 1/3 |

6175 0135

6175 0140

## Telescope tool trolley

**Design:** With swing-columns, which can also be used as handles. **Centrally closed by means of a padlock.** With spacious bottom compartment for bulky tools, two intermediate levels including four variable single partitions per level. Worktop with corrugated plastic surface and rubber strips to protect the edges. Particularly stable due to 4 solid rubber wheels, double ball bearings, including 2 lockable castors. Surface with red, scratch resistant powder coating.

**Note:** Padlock see (Order No. 7356).

| Order No. | Dimensions L x W x H mm | 6172 format | Static loading capacity kg | Weight kg |
|---|---|---|---|---|
| 0060 | 680 x 350 x 965 (465) | 539.00 (W536) | 300 | 24.5 |

## Tool trolley

**Design:** Sturdy sheet steel construction with **4 pull-out drawers on both sides, (4 x 45 mm high)** ball rack guide as well as middle and end catches. With a large bottom compartment for bulky tools as well as double-sided sliding doors made of metal to secure the entire interior. The side walls have square perforations. (10 x 10 mm). **Centrally closed by means of a padlock.** Work top with corrugated plastic surface and soft rubber strips to protect the edges. High stability through enhanced wide-track rear axle and 2 large, laterally projecting solid rubber wheels and 2 castors, one side with rolling swivel brake (total stop). In addition, the workshop trolley has a circumferential soft rubber profile strip as edge protection. Surface powder-coated scratch resistant.

**Note:** Padlock see (Order No. 7356).

6172 0100

6127 0101

| Order No. | Dimensions L x W x H mm | 6172 format | Colour | Drawer dimensions L x W mm | Drawer pullout mm | Drawer distance mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|---|---|
| 0100 | 625 x 400 x 930 | 359.00 | red/black | 478 x 325 | 215 | 55 | 20 | 300 | 38 |
| 0101 | 625 x 400 x 930 | 359.00 (W536) | blue/grey | 478 x 325 | 215 | 55 | 20 | 300 | 38 |

## Tool trolley type 1580

**Design:** Sturdy sheet steel construction with **4 pull-out drawers on both sides** (4 x 45 mm high, all can be individually partitioned) ball rack guide as well as middle and end catches. The basic equipment includes 8 longitudinal and 2 cross dividers. With a large bottom compartment for bulky tools as well as double-sided sliding doors made of metal to secure the entire interior. **Centrally closed by means of a cylinder lock.** Work top with corrugated plastic coating and soft rubber strips to protect the edges. High stability due to the enhanced wide-track rear axle with 2 large, laterally projecting high-performance wheels and 2 castors, one side with rolling swivel brake (total stop). In addition, the workshop trolley has 3 circumferential soft rubber moldings as edge protection. Head end with square performation 9 x 33 mm.
Surface scratch resistant powder coated, body and sliding doors in GEDORIT blue, drawers in GEDORIT silver.

| Order No. | Dimensions L x W x H mm | 6170 GEDORE | Drawer dimensions L x W mm | Drawer pullout mm | Drawer distance mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 0040 | 625 x 400 x 930 | 582.50 (W535) | 480 x 325 | 215 | 55 | 22 | 300 | 40 |

## Tool trolley workster smartline

NEW

**Design:** Sturdy sheet steel construction, **with 7 pull-out drawers on one side** (5 x 80; 2 x 162.5 mm high all can be partitioned individually), can be fully extended, ball bearing guide rails and one-hand safety lock. Both sides with square perforations (10 x 38 mm) for mounting various accessories. **Centrally closed by a cylinder lock.** Worktop made of polypropylene with small parts compartments, front flat area and roll protection edge 2 internal easy rollers as well as 2 casters with roller break on one side (total stop). Surface scratch resistant powder-coated.

| Order No. | Dimensions L x W x H mm | 6170 GEDORE | Drawer dimensions L x W mm | Drawer pullout mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|
| 0150 | 785 x 510 x 1045 | 710.00 (W535) | 640 x 400 | 390 | 20 | 400 | 77.0 |

## Tool trolley type 2005

**Design:** Sturdy sheet steel construction, **multifunctional, with 7 pull-out drawers on one side** (5 x 67; 1 x 137; 1 x 207 mm all can be individually partitioned), with full extension, single security and shutter aperture, stable and removable. The basic equipment includes 10 longitudinal and 2 cross dividers. Both sides with square perforations 9 x 33 mm for mounting various accessories. **Centrally closed by means of a cylinder lock.** Comfortable and large work platform made of ABS plastic, with raised, wide edge and 3 compartments for small parts. High stability, directional reliability and maneuverability due to the heavy-duty chassis with 2 large, laterally projecting high-performance wheels and 2 castors, one side with total lock. In addition, the workshop trolley has a circumferential room protection buffer with heel protection.
Surface scratch resistant powder coated, body in GEDORIT blue, drawers in GEDORIT silver.

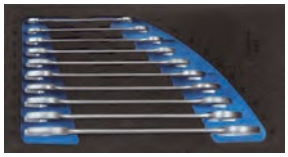
| Order No. | Dimensions L x W x H mm | 6170 GEDORE | Drawer dimensions L x W mm | Drawer pullout mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|
| 0140 | 775 x 435 x 985 | 1415.00 (W535) | 640 x 400 | 390 | 40* | 500 | 93 |

*** Drawer height 207 mm, drawer load 60 kg.**

## Tool module

6173 0006

6173 0011



6173 0016

| Order No. | Design | 6173 GEDORE | Set contents | Module |
|---|---|---|---|---|
| 0006 | 25-part | 200.50 | 17 combination wrenches (5735) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22 mm<br>8 angled screwdriver 2; 2.5; 3; 4; 5; 6; 8; 10 mm | 2/3 |
| 0011 | 8-part | 92.00 | 8 double ended ring spanners (5742) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22 mm | 1/3 |
| 0016 | 10-part | 75.60 | 10 double head wrenches (5703) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22; 21 x 23; 24 x 27 mm | 1/3 |
| 0021 | 25-part | 170.00 | 17 combination wrenches (5723) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22 mm<br>8 angled screwdriver 2; 2.5; 3; 4; 5; 6; 8; 10 mm | 2/3 |
| 0027 | 10-part | 162.00 | 10 open ended wrenches with ring ratchet (combination ratchet spanner® 5721) 8; 10; 12; 13; 14; 15; 16; 17; 18; 19 mm | 1/3 |
| 0031 | 26-part | 199.50 | 19 hexagon socket wrench inserts 1/2" (6113) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm<br>7 Allen screwdriver bits 1/2" (6124) 6; 7; 8; 9; 10; 12; 14 mm | 1/3 |
| 0036 | 26-part | 201.50 | 19 bi-hexagon socket wrench inserts 1/2" (6114) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm<br>7 Allen screwdriver bits 1/2" (6124) 6; 7; 8; 9; 10; 12; 14 mm | 1/3 |
| 0042 | 24-part | 239.50 | 1 socket wrench insert 3/8" (6059 0010)<br>14 hexagon socket wrench inserts 3/8" (6071) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm<br>5 Allen screwdriver bits 3/8" (6071) 4; 5; 6; 8; 10 mm<br>1 universal joint 3/8" (6065 0010)<br>1 T-handle with slide block 3/8" (6063 0010)<br>2 extensions 3/8" (6061) 125; 250 mm | 1/3 |
| 0046 | 5-part | 128.50 | 1 socket wrench insert 1/2" (6083 0020)<br>1 universal joint 1/2" (6104 0020)<br>1 T-handle with sliding block 1/2" (6101 0010)<br>2 extensions 1/2" (6096) 125; 250 mm | 1/3 |
| 0051 | 15-part | 138.00 | 9 Allen screwdriver bits 1/2" (6124) 5; 6; 7; 8; 9; 10; 12; 14; 17 mm<br>6 Allen screwdriver bits 1/2" long (6124) 5 x 90; 6 x 90; 8 x 90; 10 x 140; 12 x 140; 14 x 140 mm | 1/3 |
| 0056 | 19-part | 239.50 | 9 recessed TORX® screwdriver bits 1/2" 55 mm long, (6130) T 20; 25; 27; 30; 40; 45; 50; 55; 60<br>9 recessed TORX® screwdriver bits 1/2" 100 mm long, (6130) T 20; 25; 27; 30; 40; 45; 50; 55; 60<br>1 TORX® screw gauge | 1/3 |
| 0061 | 37-part | 271.00 | 1 reversible ratchet 1/4" (6023 0010)<br>12 hexagon socket wrench inserts 1/4" (6040) 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver bits 1/4" (6045) 3; 4; 5; 6; 8 mm<br>6 protruding TORX® socket wrench inserts 1/4" (6046) E 4; 5; 6; 7; 8; 10<br>9 recessed TORX® screwdriver bits 1/4" (6054) T 8; 9; 10; 15; 20; 25; 27; 30; 40<br>1 T-handle with slide block 1/4" (6021 0010)<br>1 extension 1/4" (6016 0100) 97 mm<br>1 universal joint 1/4" (6034 0010)<br>1 screwdriver handle 1/4" (6028 0010) | 1/3 |

(W522)

GEDORE

**Design:** Check-Tool insert made of 2-coloured foam.
1/3 module = 157.5 x 310 mm
2/3 module = 315.0 x 310 mm

**Note:** Suitable for tool trolleys (Order no. 6170 0040, 6170 0150 and 6170 0410). Suitable for Gedore rolling workbench (Order No. 6170 0011, 6170 0015 and 6170 0020).

6173 0021

6173 0027

6173 0031

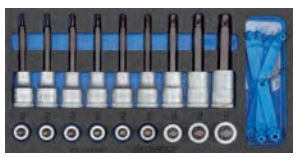
6173 0036

6173 0042

6173 0046

6173 0051

6173 0056



6173 0061

## Distance tin module, empty

NEW

GEDORE

**Design:** Steel sheet

**Note:** Suitable for tool trolleys (Order no. 6170 0150)

| Order No. | Design | 6173 GEDORE | Dimensions L x W x H mm |
|---|---|---|---|
| 0070 | Blank module | 9.00 (W522) | 625 x 77 x 40 |

## Tool trolley workster smartline, with 147-piece assortment

NEW

GEDORE

**Scope of delivery:**

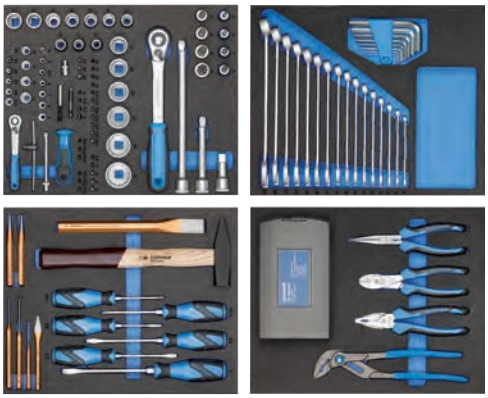
1 Tool trolley workster smartline (Order no. 6170 0150), with 7 drawers on the side (5 x 80; 2 x 162.5 mm high)

1 tool module socket wrenches 81-pieces consisting of:
- 1 reversible ratchet 1/4" (6022 0010)
- 11 Bihexagon socket wrench inserts 1/4" 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12, 13 mm
- 6 protruding TORX® socket wrench inserts 1/4" T 4; 5; 6; 7; 8; 10
- 4 slot screwdriver bits (Bits) 1/4" 4; 5.5; 6.5; 8 mm
- 5 Allen screwdriver bits 1/4" 2.5; 3; 4; 5; 6 mm
- 3 Screwdriver inserts (Bits) 1/4" recessed serration M5; 6; 8
- 11 Screwdriver inserts (Bits) 1/4" recessed TORX® T 6; 7; 8; 9; 10; 15; 20; 25; 27; 30; 40
- 3 Phillips screwdriver bits 1/4" PH 1; 2; 3
- 3 Phillips screwdriver bits 1/4" PZ 1; 2; 3
- 1 T-handle with sliding block 1/4"
- 1 Universal extension 1/4" 97 mm
- 1 Tool shank 1/4"
- 1 bit adapter 1/4"
- 1 Multi-grip 1/4"
- 1 bit holder 1/4"
- 1 reversible ratchet 1/2" (6083 0020)
- 16 bi-hexagon socket wrench inserts 1/2" (Order No. 6114) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm
- 8 Allen screwdriver bits 1/2" (Order No. 6124) 5; 6; 7; 8; 9; 10; 12; 14mm
- 1 Extension 1/2" (Order no.6096 0063)
- 2 Universal extensions 1/2" (Order no. 6099) 125; 250 mm

1 Tool module combination wrench, 24-piece, consisting of:
- 16 combination wrenches (5723) 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 24 mm
- 1 angled screwdriver set inner hexagon 2; 2.5; 3; 4; 5; 6; 8; 10 mm

1 tool module hand tools 14-pieces consisting of:
- 4 slotted screwdrivers with impact cap 3.5; 5.5; 6.5; 8
- 2 Phillips screwdrivers with impact cap PH 1; 2
- 1 locksmith hammer 500 g
- 1 Centre punch 120 x 12 x 5 mm
- 3 Splint drivers 1.5; 3; 4 mm
- 1 Flat chisel octagonal 250 x 24 mm
- 1 cross chisel octagonal 125 x 10 x 5 mm
- 1 drift punch octagonal 120 x 12 x 5 mm

1 tool module pliers 28-pieces consisting of:
- 1 Universal pliers 10"
- 1 Power universal pliers, 200 mm
- 1 Multi-purpose flat round nose pliers 200 mm
- 1 Power side-cutting pliers 180 mm
- 1 Spiral drill cassette 24-piece



| Order No. | Dimensions L x W x H mm | 6170 GEDORE | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0147 | 785 x 510 x 1045 | 1325.00 (W535) | 640 x 400 | 20 | 400 | 90.9 |

## Rolling workbench type 1504

**Design:** Rigid steel body, with **7 pull-out drawers on one side** (5 x 67; 1 x 137; 1 x 207 mm high, all can be individually partitioned) with full extension, ball rack guide, middle and end catches as well as single lock against accidental opening while driving. The basic equipment includes 10 longitudinal and 2 cross dividers as well as 2 distancing boxes. **Centrally closed by means of a cylinder lock.** Behind a lockable metal door there is a large area that can be divided by a shelf. Work top: made of Multiplex, 30 mm thick. High stability through enhanced wide-track rear axle and 2 large, laterally projecting high-performance wheels and 2 castor wheels on both sides with roll-rotation brake (total stop) for perfect balance in all directions.
Surface scratch resistant powder coated, body and cabinet door in GEDORIT blue, drawers in GEDORIT silver.

**Note:** Padlock see (Order No. 7356).

GEDORE

| Order No. | Dimensions L x W x H mm | 6170 GEDORE | Drawer dimensions L x W mm | Drawer pullout mm | Drawer load kg | Static/mobile loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|
| 0015 | 1100 x 550 x 985 | 1340.00 (W535) | 480 x 400 | 390 | 40* | 700/500 | 100 |

* Drawer height 207 mm, drawer load 60 kg.

## Rolling workbench type 1506 XL

**Design:** Rigid steel body, with **14 pull-out drawers on one side** (10 x 67; 2 x 137; 2 x 207 mm high, all can be individually partitioned) with full extension, ball rack guide, middle and end catches as well as single lock against accidental opening while driving. The basic equipment includes 20 longitudinal and 4 cross dividers as well as 4 distancing boxes. Each block of drawers **centrally closed by a cylinder lock.** Work top made of 30 mm thick multiplex beech plywood, surface additionally protected by linseed oil varnish. High stability through enhanced wide-track rear axle and 2 large, laterally projecting high-performance wheels and 2 castor wheels on both sides with roll-rotation brake (total stop) for perfect balance in all directions.
Surface scratch resistant powder coated, body in GEDORIT blue, drawers in GEDORIT silver.

**Note:** Padlock see (Order No. 7356).

GEDORE

| Order No. | Dimensions L x W x H mm | 6170 GEDORE | Drawer dimensions L x W mm | Drawer pullout mm | Drawer load kg | Static/mobile loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|
| 0011 | 1250 x 550 x 985 | 2116.00 (W535) | 480 x 400 | 400 | 40* | 700/500 | 140 |

* Drawer height 207 mm, drawer load 60 kg.

## Rolling workbench type 1505

**Design:** Rigid steel body, **with 5 pull-out drawers on one side** (3 x 67; 1 x 137; 1 x 207 mm high, 3 of which can be partitioned individually), with ball rack guide, middle and end catches as well as single lock against accidental opening while driving. The basic equipment includes 9 longitudinal and 9 cross dividers as well as 2 distancing boxes. **Centrally closed by means of a cylinder lock.** Has a large, lockable side panel with storage shelf. Worktop made of 40 mm thick multiplex beech plywood. Surface also protected with linseed oil Solid, **extendable** 4-wheel independent suspension with **hydraulically damped lift mechanism,** triggered by raising or lowering the pull handle. Surface scratch resistant powder coated, body and door in GEDORIT blue, drawers in GEDORIT silver.

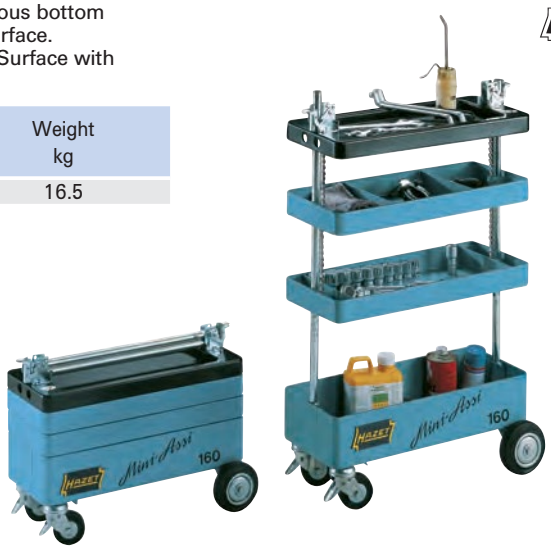
GEDORE

| Order No. | Dimensions L x W x H mm | 6170 GEDORE | Drawer dimensions L x W mm | Drawer load kg | Drawer pullout mm | Stroke mm | Static/mobile loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 0020 | 1100 x 652 x 900 | 2327.00 (W535) | 480 x 550 | 40 | 505 | 40 | 1000/500 | 138 |

## Workshop trolley Type 160ST

**Design:** With swing-columns, which can also be used as handles. With spacious bottom compartment for bulky tools, two intermediate levels. Worktop with plastic surface. Particularly stable due to 4 solid rubber wheels, including 2 lockable castors. Surface with Hazet blue, scratch resistant powder coating.

| Order No. | Dimensions L x W x H mm | 7089 HAZET | Weight kg |
|---|---|---|---|
| 2705 | 590 x 345 x 950 (435) | 505.00 (W529) | 16.5 |




## Tool trolley type 162

**Design:** With pillars that can also be used as a handle. **Centrally closed by means of a padlock.** With spacious bottom compartment for bulky tools, two intermediate levels including two variable single partitions each level. Worktop has plastic surface with integrated, replaceable beech plate. Particularly stable due to 4 solid rubber wheels, including 2 lockable castors. Surface with Hazet blue, scratch resistant powder coating.

**Delivery:** Including padlock with 2 keys.

**7089 2805** With rigid pillars.

**7089 2905** With swing-away pillars.

| Order No. | Dimensions L x W x H mm | 7089 HAZET | Weight kg |
|---|---|---|---|
| 2805 | 725 x 398 x 1099 | 711.00 | 25.6 |
| 2905 | 725 x 398 x 1002 (647) | 813.00 (W529) | 27.6 |

## Tool trolley type 177

**Design:** Sturdy sheet steel construction, drawers with roller guide, middle and end catches as well as single lock against accidental opening while driving. The basic equipment includes a divider in each drawer. The side walls have square perforations, the attachments are protected from damage by indented side walls mounted inside the trolley dimensions. **Centrally closed by means of a cylinder lock.** Worktop made of solvent-resistant plastic, with 2 integrated storage compartments. With large, highly-duty ball bearing rollers (Ø 100 mm), 2 swivel castors, one sided with roll-spinning brake (total stop) for firm footing in all directions. All wheels are equipped with thread protection, which protects the bearings against dirt and threads. Edge protectors above and below on all four sides of the vehicle. Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

**6306 0006** **With 6 pull-out drawers on one side (4 x 80; 2 x 165 mm high).**

**6306 0007** **With 7 pull-out drawers on one side (6 x 80; 1 x 165 mm high).**

6306 0006

| Order No. | Dimensions L x W x H mm | 6306 HAZET | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0006 | 778 x 496 x 913 | 649.00 | 527 x 348 | 20 | 300 | 62.8 |
| 0007 | 778 x 496 x 913 | 685.00 (W529) | 527 x 348 | 20 | 300 | 64.8 |

## Tool trolley Typ 178N

NEW

**Design:** Sturdy sheet steel construction, **with 7 drawers on one side (5 x 80; 2 x 165 mm high)**, with roller guide, middle and end catches as well as single lock against accidental opening while driving. The basic equipment includes a divider per drawer. The side walls have square perforations. **Centrally closed by means of a cylinder lock.** Worktop made of solvent-resistant plastic, with compartments for sundries. With large, highly-duty ball bearing rollers (Ø 125 mm), 2 swivel castors, with roll-spinning brake (total stop) for firm footing in all directions. All wheels are equipped with thread protection, which protects the bearings against dirt and threads. Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

| Order No. | Dimensions L x W x H mm | 6307 | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0107 | 780 x 498 x 1035 | 772.00 (W529) | 527 x 348 | 20 | 480 | 74.1 |

## Attachment case type 178NK-3

NEW

**Design:** Sturdy sheet steel construction, **with 3 drawers on one side (3 x 80 mm high)**, with roller guide, middle and end catches as well as single lock against accidental opening while driving. **Centrally closed by means of a cylinder lock.** Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

| Order No. | Dimensions L x W x H mm | 6307 | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0103 | 706 x 380 x 498 | 460.00 (W529) | 527 x 348 | 20 | 145 | 40 |

## Tool trolley type 179

**Design:** Sturdy sheet steel construction, drawers with ball rack guide, middle and end catches as well as single lock against accidental opening while driving. The side walls have square perforations, the attachments are protected from damage by indented side walls mounted inside the trolley dimensions. **Centrally closed by means of a cylinder lock.** Worktop made of solvent-resistant plastic, with compartments for sundries and labelling area. With large, highly-duty ball bearing rollers (Ø 125 mm), 2 swivel castors, both sides with roll-spinning brake (total stop) for firm footing in all directions. All wheels are equipped with thread protection, which protects the bearings against dirt and threads. Corner protectors continuous on all four sides of the vehicle. Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

**6308 0006** — **With 6 pull-out drawers on one side (3 x 80; 3 x 165 mm high).**

**6308 0007** — **With 7 pull-out drawers on one side (5 x 80; 2 x 165 mm high).**

**6308 0008** — **With 8 pull-out drawers on one side (7 x 80; 1 x 165 mm high).**

**6308 0010** — **With 10 pull-out drawers on one side (8 x 80; 2 x 165 mm).**

6308 0007

| Order No. | Dimensions L x W x H mm | 6308 | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0006 | 817 x 502 x 1040 | 1029.00 ◊ | 527 x 398 | 25 | 300 | 88 |
| 0007 | 817 x 502 x 1040 | 1081.00 | 527 x 398 | 25 | 300 | 90 |
| 0008 | 817 x 502 x 1040 | 1122.00 | 527 x 398 | 25 | 300 | 92 |
| 0010 | 739 x 502 x 1324 | 1483.00 ◊ (W529) | 527 x 398 | 25 | 415 | 113 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Workshop trolley Type 179XL

**Design:** Sturdy sheet steel construction, drawers with ball rack guide, middle and end catches, integrated self-retraction as well as single lock against accidental opening while driving. The side walls have square perforations, the attachments are protected from damage by indented side walls mounted inside the trolley dimensions. **Centrally closed by means of a cylinder lock.** Worktop made of stainless steel, solvent-resistant plastic lid elements with compartments for sundries. With large, highly-duty precision ball bearing rollers (Ø 125 mm), 2 swivel castors, both sides with roll-spinning brake (total stop) for firm footing in all directions. Vertical, continuous corner protectors on all four sides of the vehicle. Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

**6308 0106** **With 6 pull-out drawers on one side (3 x 80; 3 x 165 mm high).**

**6308 0107** **With 7 pull-out drawers on one side (5 x 80; 2 x 165 mm high).**

**6308 0108** **With 8 pull-out drawers on one side (7 x 80; 1 x 165 mm high).**

| Order No. | Dimensions L x W x H mm | 6308 | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0106 | 980 x 503 x 1027 | 1595.00 ◊ | 694 x 398 | 40 | 1000 | 95.0 |
| 0107 | 980 x 503 x 1027 | 1673.00 ◊ | 694 x 398 | 40 | 1000 | 101.0 |
| 0108 | 980 x 503 x 1027 | 1750.00 ◊ | 694 x 398 | 40 | 1000 | 106.5 |
| | | (W529) | | | | |

6308 0107

## Tool trolley Type 179XXL

**Design:** Sturdy sheet steel construction, drawers with ball rack guide, middle and end catches, integrated self-retraction as well as single lock against accidental opening while driving. The side walls have square perforations, the attachments are protected from damage by indented side walls mounted inside the trolley dimensions. **Centrally closed by means of a cylinder lock.** Worktop made of stainless steel, solvent-resistant plastic lid elements with compartments for sundries. With large, highly-duty precision ball bearing rollers (Ø 125 mm), 2 swivel castors, both sides with roll-spinning brake (total stop) for firm footing in all directions. Vertical, continuous corner protectors on all four sides of the vehicle. Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

**6308 0207** **With 7 pull-out drawers on one side (5 x 80; 2 x 165 mm high).**

**6308 0208** **With 8 pull-out drawers on one side (7 x 80; 1 x 165 mm high).**

| Order No. | Dimensions L x W x H mm | 6308 | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0207 | 1154 x 503 x 1027 | 2057.00 ◊ | 871 x 398 | 40 | 1000 | 138.3 |
| 0208 | 1154 x 503 x 1027 | 2174.00 | 871 x 398 | 40 | 1000 | 141 |
| | | (W529) | | | | |

6308 0207

## Accessories

**Design:** Suitable for Hazet workshop trolleys.

| Order No. | Design | 6309 | Suitable for |
|---|---|---|---|
| 0005 | All purpose terminal strip, 440 mm | 21.45 | Type 177; 178N; 179; 179XL; 179XXL |
| 0010 | All purpose terminal strip, 150 mm | 11.95 | Type 177; 178N; 179; 179XL; 179XXL |
| 0015 | Paper roll holder | 58.05 | Type 177; 178N; 179; 179XL; 179XXL |
| 0020 | Can holder, suitable for 3 cans | 33.95 | Type 177; 178N; 179; 179XL, 179XXL |
| 0025 | Attachm.box | 34.20 | Type 177; 178N; 179; 179XL, 179XXL |
| 0030 | Side door, 80 x 785 mm | 143.30 | Type 179 (Order no. 6308 0006 + 0007 + 0008) |
| 0035 | Side door, 80 x 770 mm | 130.60 | Type 179XL, 179XXL |
| 0040 | Perforated board, including holder assortment | 100.40 | Type 179 |
| 0045 | Perforated board, including holder assortment | 111.90 | Type 179XL |
| 0050 | Document holder | 20.60 (W529) | Type 177; 178; 179; 179XL; 179XXL |

6309 0045

## Tool module

**Design:** 2-colour foam inlay, so that missing tools are recognised immediately.
1/3 module = 172 x 348 mm
2/3 module = 344 x 348 mm
3/3 module = 519 x 348 mm

**Note:** Suitable for Hazet workshop trolley, for model 179 using a spacer module (Order No. 6310 0015), see 📖 6/87. Suitable for Hazet rolling workbench (Order No. 6311 0006, 6311 0007, 6312 0006 and 6312 0007).

6310 0120

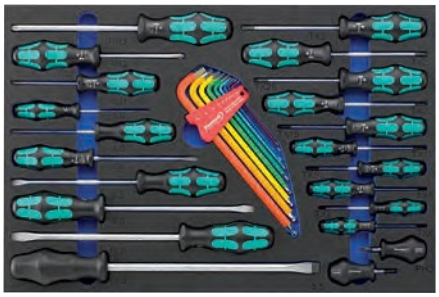
6310 0125

| Order No. | Design | 6310 | Set contents | Module |
|---|---|---|---|---|
| 0120 | 3-part | 73.00 | 1 water pump pliers, 250 mm (5608 0250)<br>1 leverage side cutters, 160 mm (5322 0160)<br>1 radio pliers, polished, 160 mm (5221 0160) | 1/3 |
| 0125 | 4-part | 63.00 | 1 Lock pliers for external rings, straight (5631 0002) A 2<br>1 circlip pliers for outer rings, curved (5631 0021) A 11<br>1 fuse pliers for outer rings, curved (5614 0002) J 2<br>1 circlip pliers for recessed ring, bent (5615 0021) J 21 | 1/3 |
| 0075 | 18-part | 140.00 | 3 slotted screwdrivers with impact cap (6264) 4.5 x 90; 5.5 x 100; 7.0 x 125 mm<br>4 slot screwdrivers (6270) 3.0 x 80; 4.0 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips screwdrivers with impact cap (6286) PH 1; 2<br>2 Phillips screwdrivers (6304) PH 1; 2<br>6 TORX® screwdrivers (5886) T 10; 15; 20; 25; 27; 30<br>1 hexagon angled screwdriver set with ball head easy colour (5853 1000) 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm | 2/3 |
| 0005 | 23-part | 189.00 | 7 slot screwdrivers (6270) 3.5 x 100; 4.0 x 100; 5.5 x 125; 6.5 x 150; 8.0 x 175; 10 x 200; 12 x 250 mm<br>3 Phillips screwdrivers (6304) PH 1; 2; 3<br>10 TORX® screwdrivers (5886) T 6; 7; 8; 9; 10; 15; 20; 25; 27; 30<br>1 carburetor slot screwdriver (6268 0055) 5.5 x 25 mm<br>1 carburetor Phillips screwdriver (6290 0002) PH 02<br>1 hexagon angled screwdriver set with ball head, long (5853 1000) 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm | 3/3 |
| 0010 | 23-piece* | 222.00 | 1 peen hammer with handle protection (6754 0400) 400 g<br>1 water pump pliers, 250 mm (5608 0250)<br>1 leverage side cutters, 160 mm (5322 0160)<br>1 radio pliers, polished, 160 mm (5221 0160)<br>1 pin punch set (6864 0010) 2; 3; 4; 5; 6; 8 mm<br>1 hexagon angled screwdriver set with ball head easy colour (5858 0010) 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm<br>3 slotted screwdrivers with impact cap (6264) 4.5 x 90; 5.5 x 100; 7.0 x 125 mm<br>4 slot screwdrivers (6270) 3.0 x 80; 4.0 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips screwdrivers with impact cap (6286) PH 1; 2<br>2 Phillips screwdrivers (6304) PH 1; 2<br>6 TORX® screwdrivers (5886) T 10; 15; 20; 25; 27; 30 | 3/3 |

(W533)

* Drawer height min. 80 mm.

6310 0075



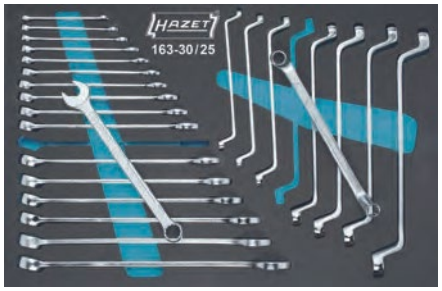
6310 0005

6310 0010

## Tool module

**Design:** 2-colour foam inlay, so that missing tools are recognised immediately.
1/3 module = 172 x 342 mm
2/3 module = 344 x 342 mm
3/3 module = 519 x 342 mm

**Note:** Suitable for Hazet workshop trolley (Order No. 6308 0006 to 6308 0208), for model 179 using a spacer module (Order No. 6310 0015), see 📖 6/87. Suitable for Hazet rolling workbench (Order No. 6311 0006, 6311 0007, 6312 0006 and 6312 0007).




6310 0030
TiN

6310 0035

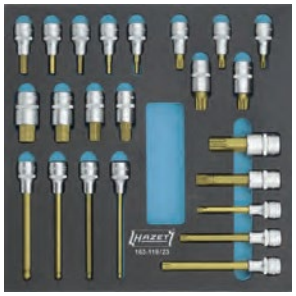
| Order No. | Design | 6310 HAZET | Set contents | Module |
|---|---|---|---|---|
| 0030 | 25-part | 367.50 | 17 combination wrenches (5707) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24 mm<br>8 Double ring wrench (5795) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 21 x 22 mm | 3/3 |
| 0035 | 56-part | 588.00 | 1 reversible ratchet 1/4" (6011 0030)<br>12 hexagon socket wrench inserts 1/4" (6837) 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm<br>5 Allen screwdriver bits 1/4" (6843) 3; 4; 5; 6; 8 mm<br>3 slot screwdriver bits 1/4" (6845) 3.5; 5.5; 8 mm<br>2 Phillips screwdriver bits 1/4" (6849) PH 1; 2<br>2 Phillips screwdriver bits 1/4" (6853) PZ 1; 2<br>1 T-handle with sliding block 1/4"<br>2 extensions 1/4" (6831) 55; 147 mm<br>1 universal joint 1/4" (6835 0015)<br>1 drive handle 1/4" (6835 0005)<br>1 reversible ratchet 1/2" (6954 0010)<br>21 hexagon socket wrench inserts 1/2" (6957) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 26; 27; 28; 30; 32; 34 mm<br>1 T-handle with slide block 1/2" (6955 0030)<br>2 extensions 1/2" (6955) 123; 248 mm<br>1 universal joint 1/2" (6955 0015) | 3/3 |
| 0040 | 57-part | 442.50 | 1 reversible ratchet 1/4" (6011 0030)<br>9 hexagon socket wrench inserts 1/4" (6837) 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm<br>5 Allen screwdriver bits 1/4" 3; 4; 5; 6; 8 mm<br>3 slot screwdriver bits 1/4" 4.5; 6; 6.5 mm<br>2 Phillips screwdriver bits 1/4" PH 1; 3<br>2 Phillips screwdriver bits 1/4" PZ 1; 2<br>4 Screwdriver inserts (Bits) 1/4" recessed TORX® T 15; 20; 25; 30<br>2 extensions 1/4" (6831) 55; 147 mm<br>1 universal joint 1/4" (6835 0015)<br>1 bit hand holder 1/4"<br>1 reversible ratchet 1/2" (6954 0010)<br>20 hexagon socket wrench inserts 1/2" (6957) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 26; 27; 28; 30; 32 mm<br>1 T-handle with slide block 1/2" (6955 0030)<br>2 extensions 1/2" (6955) 123; 248 mm<br>1 universal joint 1/2" (6955 0015)<br>1 Adapter 1/4" recessed square to 1/4" recessed hexagonal<br>1 bit adapter 1/4" | 2/3 |
| 0045 | 26-part | 331.40 | 1 reversible ratchet 1/2" (6954 0010)<br>21 hexagon socket wrench inserts 1/2" (6957) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 26; 27; 28; 30; 32; 34 mm<br>1 T-handle with slide block 1/2" (6955 0030)<br>2 extensions 1/2" (6955) 123; 248 mm<br>1 universal joint 1/2" (6955 0015) | 2/3 |

(W529)

Continued overleaf

6310 0040

6310 0045



6310 0050

6310 0055

6310 0060

## Tool module

Continued

| Order No. | Design | 6310 HAZET | Set contents | Module |
|---|---|---|---|---|
| 0050 | 23-part | 369.50 | 9 Allen screwdriver bits 1/2" (6984) 5; 6; 7; 8; 10; 12; 14; 17; 19 mm<br>4 Allen screwdriver bits 1/2" , with ball head (6990) 6; 7; 8; 10 mm<br>6 screwdriver bits 1/2" recessed serration XZN 8; 10; 12; 14; 16; 18 mm<br>2 screwdriver bits 1/2" recessed serration XZN, long 8; 14 mm<br>2 screwdriver bits 1/2" recessed serration XZN, extra long 10; 12 mm | 2/3 |
| 0055 | 17-part | 250.00 | 17 combination wrenches (5707) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24 mm | 2/3 |
| 0060 | 18-part | 251.50 | 18 combination wrenches, offset (5710) 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27 mm | 2/3 |
| 0065 | 16-part | 326.20 | 12 open ended wrench with ring ratchet (5794) 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19 mm<br>3 Adapters 10 mm external hexagonal to 1/4" external square; 13 mm external hexagon to 3/8" external square; 19 mm external hexagonal to 1/2" external square<br>1 bit adapter 1/4" | 2/3 |
| 0070 | 9-part | 150.40 | 9 double ended ring wrenches (5795) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 20 x 22; 21 x 23 mm | 2/3 |
| 0085 | 17-part | 218.20 | 1 reversible ratchet 3/8" (6870 0010)<br>12 hexagon socket wrench inserts 3/8" (6875) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22 mm<br>3 extensions 3/8" (6871) 74; 150; 254 mm<br>1 universal joint 3/8" (6872 0005) | 1/3 |
| 0090 | 18-part | 256.30 | 1 reversible ratchet 1/2" (6954 0010)<br>14 hexagon socket wrench inserts 1/2" (6957) 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27 mm<br>2 extensions 1/2" (6955) 123; 248 mm<br>1 universal joint 1/2" (6955 0015) | 1/3 |
| 0130 | 13-part | 151.00 | 9 Allen screwdriver bits 1/2" (6984) 5; 6; 7; 8; 10; 12; 14; 17; 19 mm<br>4 Allen screwdriver bits 1/2" , with ball head (6990) 6; 7; 8; 10 mm | 1/3 |
| 0095 | 6-part | 154.70 | 6 open ended wrenches with ring ratchet (5794) 8; 10; 12; 13; 17; 19 mm | 1/3 |
| 0100 | 8-part | 64.15 | 8 double open ended wrenches (5701) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 21 x 22 mm | 1/3 |
| 0105 | 8-part | 104.90 | 8 combination wrenches (5707) 10; 11; 13; 14; 15; 17; 19; 22 mm | 1/3 |
| 0115 | 7-part | 107.70 | 7 double ended ring wrenches (5795) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 17 x 19; 21 x 22 mm | 1/3 |
| | | (W529) | | |

6310 0065

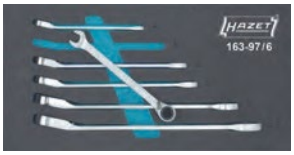
6310 0070

6310 0085

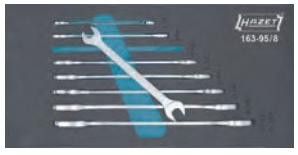
6310 0090

6310 0130

6310 0095



6310 0100



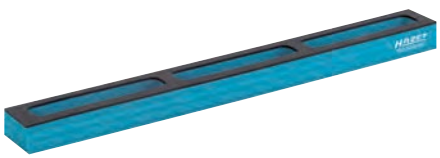
6310 0105

6310 0115

## Flexible foam insert, empty

**Design:** 2-colour foam insert.

**Note:** For Hazet tool trolley.



6310 0025

| Order No. | Design | 6310 HAZET | Dimensions L x W x H mm |
|---|---|---|---|
| 0015 | Empty module 1/3 | 36.10 | 172 x 342 x 35 |
| 0020 | Distance module with 1 small parts tray for tool trolley Type 179 and workbench Type 179 W | 8.70 | 172 x 50 x 35 |
| 0025 | Distance module with 3 small parts tray for tool trolley Type 179 and workbench Type 179 W | 15.75 (W529) | 522 x 50 x 35 |

## Rolling workbench Type 177 W

**Design:** Rigid steel body, drawers with roller guides, middle and end catches and single lock against accidental opening while driving. The basic equipment includes 1 divider per drawer. A side wall has a square perforation, the attachments are protected from damage by indented side walls mounted inside the trolley dimensions. **Centrally closed by means of a cylinder lock.** Side panel with storage shelf. Worktop made of 30 mm thick multiplex birch plywood. With ball bearing rollers, 2 swivel castors, both sides with roll-spinning brake (total stop) for firm footing in all directions. All wheels are equipped with thread protection, which protects the bearings against dirt and threads. Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

**6311 0006** **With 6 pull-out drawers on one side (4 x 80; 2 x 165 mm high).**

**6311 0007** **With 7 pull-out drawers on one side (6 x 80; 1 x 165 mm).**

6311 0006

| Order No. | Dimensions L x W x H mm | 6311 | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0006 | 1040 x 520 x 934 | 1028.00 ◊ | 527 x 348 | 20 | 700 | 85 |
| 0007 | 1040 x 520 x 934 | 1060.00 ◊ (W529) | 527 x 348 | 20 | 700 | 85 |

## Rolling workbench Type 179 W

**Design:** Rigid steel body, drawers with ball rack guides, middle and end catches and single lock against accidental opening while driving. The basic equipment includes 1 divider per drawer. A side wall has a square perforation, the attachments are protected from damage by indented side walls mounted inside the trolley dimensions. **Centrally closed by means of a cylinder lock.** Side panel with storage shelf. Worktop made of 30 mm thick multiplex birch plywood, oiled. With ball bearing rollers, 2 swivel castors, both sides with roll-spinning brake (total stop) for firm footing in all directions. Continuous edge protection on all four vehicle sides. Surface scratch resistant powder-coated, body in Hazet blue, drawers in black.

**6312 0006** **With 5 pull-out drawers on one side (2 x 80; 3 x 165 mm high).**

**6312 0007** **With 7 pull-out drawers on one side (6 x 80; 1 x 165 mm high).**

| Order No. | Dimensions L x W x H mm | 6312 | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0006 | 1150 x 600 x 965 | 1542.00 ◊ | 527 x 398 | 25 | 750 | 123.5 |
| 0007 | 1150 x 600 x 965 | 1522.00 (W529) | 527 x 398 | 25 | 750 | 130.1 |

## Tool trolley Type 177, with 121-piece assortment

**Scope of delivery:**
1 Tool trolley type 177-6 (Order no. 6306 0006),
with 6 drawers on the side (4 x 80; 2 x 165 mm high)
1 tool module double open ended spanners 8-pieces
(Order No. 6310 0100) 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15;
16 x 17; 18 x 19; 21 x 22 mm
1 tool module combination wrench 8-pieces (Order No. 6310 0105)
10; 11; 13; 14; 15; 17; 19; 22 mm
1 tool module screwdriver 6-pieces 3.0 x 80; 4.0 x 100;
5.5 x 125; 6.5 x 150 mm; PH 1; 2
1 tool module TORX® screwdriver 6-pieces
T 10; 15; 20; 25; 27; 30
1 tool module actuating tools 1/2" and 1/4" 57-pieces
(Order No. 6310 0040)
1 bit set 1/4" 36-piece consisting of:
3 slot 0.6 x 4.5; 0.8 x 5.5; 1.0 x 6.0 mm
7 Phillips PH 1 (3 pieces); 2 (3 pieces); 3
7 Phillips PZ 1 (3 pieces); 2 (3 pieces); 3
4 Allen 3; 4; 5; 6 mm
12 TORX® T 10; 15 (2 pieces); 20 (2 pieces); 25 (2 pieces);
27; 30 (2 pieces); 40 (2 pieces)
2 TORX® with hole T 20; T 30

| Order No. | Dimensions L x W x H mm | 6306 HAZET | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 6121 | 778 x 496 x 913 | 1390.00 (W529) | 527 x 348 | 20 | 30 | 78 |

## Tool trolley Type 178, with 141-piece assortment

NEW

**Scope of delivery:**
1 Tool trolley type 178N-7 (Order no. 6307 0107),
with 7 drawers on one side (5 x 80; 2 x 165 mm high)
1 Attachment case type 178NK-3 (Order no. 6307 0103),
with 3 drawers on one side (3 x 80 mm high)

1 tool module assortment 100-pieces consisting of:
1 Splint driver set 3; 4; 5; 6; 8 mm
1 reversible ratchet 1/4" (Order no. 6011 0030)
8 hexagon socket bits 1/4" (Order No. 6837) 6; 7; 8; 9; 10; 11; 12; 13 mm
1 extension 1/4" (6831 0055) 55 mm
1 reversible ratchet 3/8" (Order No. 6870 0010)
7 hexagon socket bits 3/8" (Order no. 6875) 10; 12; 13; 14; 16; 17; 19 mm
1 extension 3/8" (6871 0250) 254 mm
1 reversible ratchet 1/2" (Order No. 6954 0010)
13 hexagon socket wrench inserts 1/2" (Order No. 6957) 13; 14; 15; 16; 17; 18; 19; 21;
22; 24; 27; 30; 32 mm
1 extension 1/2" (6955 0125) 123 mm
1 Set angled screwdrivers, coloured, 9-part 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm
1 bit set 1/4" 51-piece consisting of:
6 Recessed hexagon 2; 2.5; 3; 4; 5; 6 mm
4 slot 0.5 x 4; 0.6 x 4.5; 0.8 x 5.5; 1.0 x 6.0 mm
3 cross recess PH 1; 2; 3
3 cross-head PZ 1; 2; 3
11 Recessed TORX® T 6; 7; 8; 9; 10; 15; 20; 25; 27; 30; 40
6 Recessed TORX® with hole T 10; 15; 20; 25; 27; 30
1 Bit adapter for 1/4" bits
1 Adapter 1/4"

1 tool module screwdrivers 25-pieces (Order No. 6310 0030)
1 tool module assortment 16-pieces consisting of:
1 Screwdriver set 0.5 x 3.0; 0.8 x 4.0; 1.0 x 5.5; 1.2 x 6.5 mm, PH 1; 2
1 recessed screwdrivers-TORX® T 10; 15; 20; 25; 27; 30
1 Pliers set universal pliers, power wire cutter, flat round pliers
1 Machinist's hammer

| Order No. | Dimensions L x W x H mm | 6307 HAZET | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 0141 | 780 x 498 x 1410 | 2089.00 (W529) | 527 x 348 | 20 | 480 | 124 |

## Tool trolley Type 179-7, with 141-piece assortment

NEW

HAZET

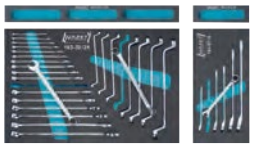
**Scope of delivery:**
1 Tool trolley type 179-7 (Order no. 6308 0007),
with 7 drawers on the side (5 x 80; 2 x 165 mm high)
1 tool module assortment 100-pieces consisting of:
1 Splint driver set 3; 4; 5; 6; 8 mm
1 reversible ratchet 1/4" (Order No. 6011 0030)
8 hexagon socket bits 1/4" (Order No. 6837)
6; 7; 8; 9; 10; 11; 12; 13 mm
1 extension 1/4" (6831 0055) 55 mm
1 reversible ratchet 3/8" (Order No. 6870 0010)
7 hexagon socket bits 3/8" (Order no. 6875)
10; 12; 13; 14; 16; 17; 19 mm
1 extension 3/8" (6871 0250) 254 mm
1 reversible ratchet 1/2" (Order No. 6954 0010)
13 hexagon socket wrench inserts 1/2" (Order No. 6957)
13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm
1 extension 1/2" (6955 0125) 123 mm
1 Set angled screwdrivers, coloured, 9-part
1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm
1 bit set 1/4" 51-piece consisting of:
6 Recessed hexagon 2; 2.5; 3; 4; 5; 6 mm
4 slot 0.5 x 4; 0.6 x 4.5; 0.8 x 5.5; 1.0 x 6.0 mm
3 cross recess PH 1; 2; 3
3 cross-head PZ 1; 2; 3
11 Recessed TORX® T 6; 7; 8; 9; 10; 15; 20; 25; 27; 30; 40
6 Recessed TORX® with hole T 10; 15; 20; 25; 27; 30
1 Bit adapter for 1/4" bits
1 Adapter 1/4"
1 tool module screwdrivers 25-pieces
(Order No. 6310 0030)
1 tool module assortment 16-pieces consisting of:
1 Screwdriver set 0.5 x 3.0; 0.8 x 4.0; 1.0 x 5.5; 1.2 x 6.5 mm,
PH 1; 2
1 recessed screwdrivers-TORX®
T 10; 15; 20; 25; 27; 30
1 Pliers set universal pliers,
power wire cutter, flat round pliers
1 Machinist's hammer

| Order No. | Dimensions L x W x H mm | 6309 HAZET | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 7141 | 817 x 502 x 1040 | 1956.00 (W529) | 527 x 398 | 25 | 440 | 98 |

## Tool trolley Type 179XL-7, with 232-piece assortment

HAZET

**Scope of delivery:**
1 Tool trolley type 179XL-7 (Order no. 6308 0107),
with 7 drawers on the side (5 x 80; 2 x 165 mm high)
1 tool module ratchet combination wrenches 6-pieces (Order No. 6310 0095)
1 tool module screwdrivers 31-pieces consisting of:
7 slot screwdriver 3.5 x 80; 4 x 100; 5.5 x 125; 6.5 x 150; 8 x 150; 10 x 175;
12 x 200 mm
3 Phillips PH screwdrivers 1; 2; 3
10 TORX® screwdrivers T 6; 7; 8; 9; 10; 15; 20; 25; 27; 30
1 slot screwdriver, short 5.5 x 25 mm
1 Phillips screwdriver, short PH 2
1 hexagon angled screwdriver set 9-pieces 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm
1 tool module screwdrivers 25-pieces (Order No. 6310 0030)
1 tool module actuating tools 57-pieces (Order No. 6310 0040)
1 tool module actuating tools 17-pieces (Order No. 6310 0085)
1 tool module socket wrenches 24-pieces consisting of:
7 recessed TORX® screwdriver bits 1/4" T 10; 15; 20; 25; 27; 30; 40
5 recessed TORX® screwdriver bits 1/2" T 30; 40; 45; 50; 55
5 Socket spanner bits TORX® 1/4" 5; 6; 7; 8; 10
5 Socket spanner bits TORX® 1/2" 12; 14; 16; 18; 20
1 TORX®-angled screwdriver set 7-pieces T 8; 10; 15; 20; 25; 30; 40
1 tool module pliers 3-pieces water pump pliers 260 mm;
power side cutter 180 mm; flat round pliers 165 mm
1 Distance module socket wrenches 8-pieces consisting of:
2 hexagon power socket wrench inserts 1/2" 17; 19 mm
3 enlargers 1/2" recessed square to 3/4" protruding square; 1/4" recessed square
to 3/8" protruding square; 3/8" recessed square to 1/2" protruding square
3 reducer 3/4" recessed square to 1/2" protruding square; 3/8" recessed square
to 1/4" protruding square; 1/2" recessed square to 3/8" protruding square
3 distance modules with 1 sundries compartment (Order No. 6310 0020)
2 distance modules with 3 sundries compartments (Order No. 6310 0025)
1 twist drill set 25-pieces Ø 1–13 mm in 0.5 mm increments
1 bit set 1/4" 36-piece consisting of:
3 slot 0.6 x 4.5; 0.8 x 5.5; 1.0 x 6.0 mm
7 Phillips PH 1 (3 pieces); 2 (3 pieces); 3
7 Phillips PZ 1 (3 pieces); 2 (3 pieces); 3
4 Allen 3; 4; 5; 6 mm
12 TORX® T 10; 15 (2 pieces); 20 (2 pieces); 25 (2 pieces); 27; 30 (2 pieces); 40 (2 pieces)
2 TORX® with hole T 20; T 30



| Order No. | Dimensions L x W x H mm | 6309 HAZET | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 7232 | 980 x 503 x 1027 | 3225.00 (W529) | 694 x 398 | 40 | 1000 | 131 |

## Tool trolley Type 179-7, with 220-piece assortment

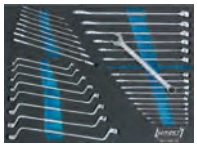
**Scope of delivery:**
1 Tool trolley type 179-7 (Order no. 6308 0007), with 7 drawers on the side (5 x 80; 2 x 165 mm high)
1 tool module screwdrivers 31-pieces consisting of:
- 7 slot screwdriver 3.5 x 80; 4 x 100; 5.5 x 125; 6.5 x 150; 8 x 150; 10 x 175; 12 x 200 mm
- 3 Phillips PH screwdrivers 1; 2; 3
- 10 TORX® screwdrivers T 6; 7; 8; 9; 10; 15; 20; 25; 27; 30
- 1 slot screwdriver, short 5.5 x 25 mm
- 1 Phillips screwdriver, short PH 2
- 1 hexagon angled screwdriver set 9-pieces 1.5; 2; 2.5; 3; 4; 5; 6; 8; 10 mm

1 tool module actuating tools 77-pieces consisting of:
- 12 hexagon socket wrench inserts 1/4" 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13; 14 mm
- 11 hexagon socket wrench inserts long 1/4" 4; 5; 5.5; 6; 7; 8; 9; 10; 11; 12; 13 mm
- 5 Allen screwdriver bits 1/4" TiN-coated 3; 4; 5; 6; 8 mm
- 3 slot screwdriver bits 1/4" TiN-coated 3.5 x 0.6; 5.5 x 1.0; 8.0 x 1.2 mm
- 2 Phillips screwdriver bits 1/4" TiN-coated PH 1; 2
- 2 Phillips screwdriver bits 1/4" TiN-coated PZ 1; 2
- 1 reversible ratchet 1/4" 115 mm
- 1 enlarger 1/4" recessed square to 3/8" protruding square
- 1 T-handle with sliding block 1/4"
- 2 extensions 1/4" 55; 147 mm
- 1 universal joint 1/4"
- 1 drive handle 1/4" 134 mm
- 17 hexagon socket wrench inserts 1/2" 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 24; 27; 30; 32 mm
- 2 hexagon power socket wrench inserts 1/2" 17; 19 mm
- 8 screwdriver bits 1/2" TiN-coated Allen 5; 6; 7; 8; 10; 12; 14; 17 mm
- 1 reversible ratchet 1/2" 275 mm
- 1 enlarger 1/2" recessed square to 3/4" protruding square
- 1 reducer 1/2" recessed square to 3/8" protruding square
- 1 T-handle with sliding block 1/2"
- 2 extensions 1/2" 123; 248 mm
- 1 Cardan extension 1/2" 46 mm
- 1 universal joint 1/2"

1 tool module wrenches 33-pieces consisting of:
- 8 double open ended wrench 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 21 x 22 mm
- 17 combination wrench 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24 mm
- 8 double ended ring wrench 6 x 7; 8 x 9; 10 x 11; 12 x 13; 14 x 15; 16 x 17; 18 x 19; 21 x 22 mm

1 tool module hand tools 17-pieces consisting of:
- 2 hexagon socket wrench with flexible shaft 190 mm protruding hexagon 6; 7
- 1 open double ended ring spanner 10 x 11 mm
- 1 granules 10 x 120 mm
- 2 flat chisel 150; 200 mm
- 5 pin punches Ø 3; 4; 5; 6; 8 x 150 mm
- 1 flat scraper 23 x 150 mm
- 1 locksmith hammer 400 g
- 1 tape measure 3 m
- 1 brake caliper brush 225 mm
- 1 tester for automotive electricity and electronics 156 mm

1 twist drill set 25-pieces Ø 1–13 mm in 0.5 mm increments
1 bit set 1/4" 36-piece consisting of:
- 3 slot 0.6 x 4.5; 0.8 x 5.5; 1.0 x 6.0 mm
- 7 Phillips PH 1 (3 pieces); 2 (3 pieces); 3
- 7 Phillips PZ 1 (3 pieces); 2 (3 pieces); 3
- 4 Allen 3; 4; 5; 6 mm
- 12 TORX® T 10; 15 (2 pieces); 20 (2 pieces); 25 (2 pieces); 27; 30 (2 pieces); 40 (2 pieces)
- 2 TORX® with hole T 20; T 30



| Order No. | Dimensions L x W x H mm | 6309 HAZET | Drawer dimensions L x W mm | Drawer load kg | Static loading capacity kg | Weight kg |
|---|---|---|---|---|---|---|
| 7220 | 817 x 502 x 1040 | 2573.00 (W529) | 527 x 398 | 25 | 300 | 112 |

## Folding workbench

**Design:** Base made of sturdy steel pipe (38 x 2 mm) affixed to the worktop with strong hinges. Worktop made of 30 mm thick beach plywood, water proof glued, varnished with linseed oil and surrounded by angle iron frame. The setup is executed with split tension bars. All metal parts are painted ocean blue.

**Application:** For mobile and stationary use.

| Order No. | Dimensions L x W x H mm | 6174 format |
|---|---|---|
| 1000 | 1000 x 700 x 850 | 214.50 |
| 1200 | 1200 x 700 x 850 | 234.00 (W536) |

## Power socket spanner bit 1/4"

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6176 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0006 | 6 | 4.07 | 23 | 10.0 | 13 |
| 0007 | 7 | 4.07 | 23 | 11.3 | 13 |
| 0008 | 8 | 4.07 (W604) | 23 | 12.5 | 13 |

| Order No. | Width of keys mm | 6176 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0010 | 10 | 4.07 | 23 | 15.0 | 13 |
| 0013 | 13 | 4.24 (W604) | 23 | 18.8 | 13 |

## Power socket spanner bit 1/4" , magnetic

**Design:** DIN 3129, made of special tool steel, hardened and sandblasted, with strong spring magnet.

| Order No. | Width of keys mm | 6176 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 1007 | 7 | 5.70 | 23 | 11.3 | 13 |
| 1008 | 8 | 5.70 (W604) | 23 | 12.5 | 13 |

| Order No. | Width of keys mm | 6176 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 1010 | 10 | 5.80 | 23 | 15.0 | 13 |
| 1013 | 13 | 6.10 (W604) | 23 | 18.8 | 13 |

## Power socket spanner bit 1/4" , magnetic, long

**Design:** DIN 3129, made of special tool steel, hardened and sandblasted, with strong permanent magnets.

| Order No. | Width of keys mm | 6176 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 2007 | 7 | 17.10 | 50 | 11.3 | 13 |
| 2008 | 8 | 17.10 (W604) | 50 | 12.5 | 13 |

| Order No. | Width of keys mm | 6176 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 2010 | 10 | 17.10 | 50 | 15.0 | 13 |
| 2013 | 13 | 19.30 (W604) | 50 | 18.8 | 13 |

## Power quick-change chuck 1/4"

**Design:** Made of tempered special tool steel, hardened and sandblasted. With spring-loaded ball to hold the power socket wrench inserts.

| Order No. | Length mm | 6177 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 35 | 52.90 (W604) | 13 |

## Power angle extension 1/4"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted. With spring-loaded ball to hold the power socket wrench inserts and swivel angle of max. 15° on the output square.

| Order No. | Length mm | 6217 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0010 | 50 | 12.30 (W604) | 13 |

## Power extension 1/4"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6177 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0010 | 50 | 8.85 | 13 |
| 0015 | 150 | 10.20 (W604) | 13 |

## Power socket extension 1/4"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Design | 6177 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 0020 | 1/4" to 3/8" | 10.20 (W604) | 26 | 13 |

## Power security pin/rubber ring 1/4"

**Application:** For fixing the bits on the output square.

| Order No. | For outside-Ø input mm | 6178 ASW | 6177 ASW |
|---|---|---|---|
| 0025 | 13 | 0.57 (W604) | 1.31 (W604) |

6178

6177

## Power socket spanner bit 3/8"

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6179 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0010 | 10 | 4.48 | 30 | 16.0 | 19 |
| 0012 | 12 | 4.56 | 30 | 19.0 | 19 |
| 0013 | 13 | 4.56 | 30 | 20.0 | 22 |
| 0014 | 14 | 4.64 | 30 | 21.0 | 22 |
| 0015 | 15 | 4.64 | 30 | 22.0 | 22 |
| 0017 | 17 | 4.64 | 30 | 25.0 | 22 |
| 0019 | 19 | 4.64 (W604) | 30 | 27.5 | 22 |

## Power socket spanner bit 3/8", magnetic, long

**Design:** DIN 3129, made of special tool steel, hardened and sandblasted, with strong permanent magnets.

| Order No. | Width of keys mm | 6179 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 3010 | 10 | 17.90 | 55 | 15.8 | 19 |
| 3013 | 13 | 18.35 (W604) | 55 | 19.5 | 22 |

## Power socket spanner bit 3/8", magnetic

**Design:** DIN 3129, made of special tool steel, hardened and sandblasted, with strong permanent magnets.

| Order No. | Width of keys mm | 6179 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 1008 | 8 | 7.35 | 30 | 14.0 | 19 |
| 1010 | 10 | 7.35 | 30 | 16.0 | 19 |
| 1013 | 13 | 7.80 | 30 | 20.0 | 22 |
| 1015 | 15 | 7.80 | 30 | 22.0 | 22 |
| 1017 | 17 | 8.05 (W604) | 30 | 25.0 | 22 |

## Power screwdriver bit 3/8" for recessed hexagon screws

**Design:** Made of tempered special tool steel, hardened and sandblasted.

| Order No. | Size mm | 6179 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 4050 | 5 | 8.05 | 50 | 19 |
| 4060 | 6 | 8.05 | 50 | 19 |
| 4080 | 8 | 8.05 | 50 | 19 |
| 4100 | 10 | 8.45 (W604) | 50 | 19 |

## Power socket spanner bit 3/8", long

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6179 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 2010 | 10 | 6.45 | 50 | 15.8 | 19 |
| 2013 | 13 | 6.60 | 50 | 19.5 | 22 |
| 2015 | 15 | 6.60 | 50 | 21.9 | 22 |
| 2017 | 17 | 6.75 (W604) | 50 | 24.4 | 22 |

## Power screwdriver bit 3/8" for recessed TORX® head screws

**Design:** Made of tempered special tool steel, hardened and sandblasted.

| Order No. | Size | 6179 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 5030 | T 30 | 8.55 | 50 | 19 |
| 5040 | T 40 | 8.55 (W604) | 50 | 19 |

## Power quick-change chuck 3/8"

**Design:** Made of tempered special tool steel, hardened and sandblasted. With spring-loaded ball to hold the power socket wrench inserts.

| Order No. | Length mm | 6181 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 46 | 56.20 (W604) | 20 |

## Power extension 3/8"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6183 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0075 | 50 | 10.50 | 19 |
| 0150 | 150 | 11.30 (W604) | 19 |

## Power angle extension 3/8"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole. With spring-loaded ball to hold the power socket wrench inserts and swivel angle of max. 15° on the output square.

| Order No. | Length mm | 6217 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0075 | 75 | 14.20 | 19 |
| 0150 | 150 | 15.30 (W604) | 19 |

## Power ball joint 3/8"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6185 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 60 | 20.70 (W604) | 22 |

## Power connection part 3/8"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

6186 0015

| Order No. | Design | 6186 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 0010 | Reducer 3/8" to 1/4" | 11.00 | 32 | 19 |
| 0015 | Enlarger 3/8" to 1/2" | 11.00 (W604) | 36 | 22 |

## Power security pin/rubber ring 3/8"

**Application:** For fixing the bits on the output square.

6187

6188

| Order No. | For outside-Ø input mm | 6187 ASW | 6188 ASW |
|---|---|---|---|
| 0015 | 19 | 0.41 | 1.22 |
| 0020 | 22 | 0.49 (W604) | 1.31 (W604) |

## Power socket spanner bit 1/2"

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6193 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0010 | 10 | 4.89 | 38 | 17.0 | 25 |
| 0012 | 12 | 4.89 | 38 | 19.5 | 25 |
| 0013 | 13 | 4.89 | 38 | 21.0 | 25 |
| 0014 | 14 | 4.89 | 38 | 22.0 | 25 |
| 0015 | 15 | 5.15 | 38 | 23.5 | 30 |
| 0016 | 16 | 5.15 | 38 | 25.0 | 30 |
| 0017 | 17 | 5.15 (W604) | 38 | 26.0 | 30 |

| Order No. | Width of keys mm | 6193 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0018 | 18 | 5.15 | 38 | 27.0 | 30 |
| 0019 | 19 | 5.15 | 38 | 28.0 | 30 |
| 0021 | 21 | 5.55 | 38 | 31.0 | 30 |
| 0022 | 22 | 5.55 | 38 | 32.5 | 30 |
| 0024 | 24 | 6.10 | 45 | 35.0 | 30 |
| 0027 | 27 | 6.10 | 50 | 39.0 | 30 |
| 0030 | 30 | 7.35 (W604) | 50 | 42.0 | 30 |

## Power socket spanner bit 1/2", long

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6193 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 1010 | 10 | 7.25 | 78 | 17.5 | 25 |
| 1013 | 13 | 7.25 | 78 | 21.0 | 25 |
| 1014 | 14 | 7.25 | 78 | 22.5 | 25 |
| 1015 | 15 | 7.50 | 78 | 23.5 | 30 |
| 1016 | 16 | 7.50 | 78 | 25.0 | 30 |
| 1017 | 17 | 7.50 (W604) | 78 | 26.0 | 30 |

| Order No. | Width of keys mm | 6193 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 1018 | 18 | 7.50 | 78 | 27.5 | 30 |
| 1019 | 19 | 7.50 | 78 | 28.7 | 30 |
| 1021 | 21 | 7.75 | 78 | 31.0 | 30 |
| 1022 | 22 | 7.75 | 78 | 32.0 | 30 |
| 1024 | 24 | 7.90 | 78 | 35.0 | 30 |
| 1027 | 27 | 8.05 (W604) | 78 | 38.5 | 30 |

## Power socket spanner bit set 1/2"

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole. Supplied in plastic box.

6193 0000

6193 5005

| Order No. | Design | 6193 ASW | Set contents |
|---|---|---|---|
| 0000 | 12-part | 92.80 | 10 hex Kraft socket spanner bits 9; 10; 11; 13; 14; 17; 19; 22; 24; 27 mm<br>1 Kraft ball joint<br>1 Kraft extension, 175 mm |
| 5005 | 15-part | 95.10 NEW (W604) | 15 hex Kraft socket spanner bits<br>10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30 mm |

## Power socket wrench insert 1/2" with plastic cover

**Design:** Made of tempered special tool steel, hardened and sandblasted, covered with plastic for protection of sensitive parts. Colour anodised for finding the right size easily.

**Application:** For the controlled tightening of wheel bolts when mounting light metal rims.

6191 1785

6191 1985

6191 2185

| Order No. | Width of keys mm | 6191 ASW | | Length mm |
|---|---|---|---|---|
| 1785 | 17 | 10.70 | ■ | 85 |
| 1985 | 19 | 10.70 | ■ | 85 |
| 2185 | 21 | 10.70 (W604) | ■ | 85 |

## Power socket wrench insert set 1/2" with plastic cover

**Design:** Supplied in grey plastic box.

| Order No. | Design | 6191 ASW | Set contents mm |
|---|---|---|---|
| 3000 | 3-part | 33.60 (W604) | 17; 19; 21 |

## Power screwdriver bit 1/2" for recessed hexagon screws

**Design:** Made of tempered special tool steel, hardened and sandblasted.

| Order No. | Width of keys mm | 6193 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 3050 | 5 | 8.30 | 55 | 25 |
| 3060 | 6 | 8.30 | 55 | 25 |
| 3070 | 7 | 8.30 | 55 | 25 |
| 3080 | 8 | 8.30 | 55 | 25 |
| 3100 | 10 | 8.30 | 55 | 25 |
| 3120 | 12 | 8.30 (W604) | 55 | 25 |

## Power screwdriver bit set 1/2" for Allen screws NEW

**Design:** Supplied in a plastic box.

| Order No. | Design | 6193 ASW | Set contents mm |
|---|---|---|---|
| 5010 | 9-part | 77.90 (W604) | 4; 5; 6; 8; 10; 12; 14; 17; 19 |

## Power screwdriver bit 1/2" for recessed TORX® head screws

**Design:** Made of tempered special tool steel, hardened and sandblasted.

| Order No. | Size | 6193 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 4030 | T 30 | 10.25 | 55 | 25 |
| 4040 | T 40 | 10.25 | 55 | 25 |
| 4050 | T 50 | 10.50 | 55 | 25 |
| 4055 | T 55 | 11.15 (W604) | 55 | 25 |

## Power socket spanner bit 1/2" for protruding TORX®-head screws

**Design:** Made of tempered special tool steel, hardened and sandblasted.

| Order No. | Size | 6193 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 2014 | E 14 | 5.30 | 38 | 25 |
| 2016 | E 16 | 5.55 | 38 | 25 |
| 2018 | E 18 | 5.55 (W604) | 38 | 25 |

## Power socket spanner bit set 1/2" for protruding TORX®-head screws NEW

**Design:** Made of tempered special tool steel, hardened and sandblasted. Supplied in plastic box.

| Order No. | Design | 6193 ASW | Set contents |
|---|---|---|---|
| 5015 | 16-part | 94.00 (W604) | 7 P'ower recessed TORX® screwdriver bits 1/2" (Order no. 6193) T 40; 45; 47; 50, 55; 60; 70<br>9 Power protruding TORX screwdriver bits® 1/2" (Order No. 6193) E 10; 11; 12; 14; 16, 18; 20; 22; 24 |

## Power quick-change chuck 1/2"

**Design:** Made of tempered special tool steel, hardened and sandblasted. With spring-loaded ball to hold the power socket wrench inserts.

| Order No. | Length mm | 6195 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 60 | 72.50 (W604) | 25 |

## Power extension 1/2"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6197 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0075 | 75 | 12.15 | 25 |
| 0125 | 125 | 12.20 | 25 |
| 0250 | 250 | 18.75 (W604) | 25 |

## Power angle extension 1/2"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole. With spring-loaded ball to hold the power socket wrench inserts and swivel angle of max. 15° on the output square.

| Order No. | Length mm | 6221 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0075 | 75 | 16.40 | 25 |
| 0125 | 125 | 16.70 | 25 |
| 0250 | 150 | 19.60 (W604) | 25 |

## Power ball joint 1/2"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6203 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 74 | 24.80 (W604) | 25 |

## Power connection part 1/2"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

6199 0010

6213 0015

| Order No. | Design | 6199 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 0010 | Reducer 1/2" to 3/8" | 11.80 | 38 | 25 |
| 0015 | Enlarger 1/2" to 3/4" | 15.05 (W604) | 48 | 30 |

## Power security pin/rubber ring 1/2"

**Application:** For fixing the bits on the output square.

6201

6202

| Order No. | For outside-Ø input mm | 6201 ASW | 6202 ASW |
|---|---|---|---|
| 0015 | 25 | 0.49 | 1.39 |
| 0020 | 30 | 0.57 (W604) | 1.39 (W604) |

## Power socket spanner bit 3/4"

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6205 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0017 | 17 | 12.15 | 50 | 31 | 44 |
| 0019 | 19 | 12.15 | 50 | 33 | 44 |
| 0022 | 22 | 12.60 | 50 | 37 | 44 |
| 0024 | 24 | 12.60 | 50 | 39 | 44 |
| 0027 | 27 | 12.60 (W604) | 54 | 43 | 44 |

| Order No. | Width of keys mm | 6205 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0030 | 30 | 12.70 | 54 | 47 | 44 |
| 0032 | 32 | 12.85 | 56 | 49 | 44 |
| 0036 | 36 | 13.75 | 56 | 54 | 44 |
| 0041 | 41 | 16.05 | 58 | 60 | 44 |
| 0046 | 46 | 21.30 (W604) | 63 | 67 | 44 |

## Power socket spanner bit 3/4", long

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6205 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 1017 | 17 | 21.70 | 95 | 31 | 44 |
| 1019 | 19 | 21.70 | 95 | 33 | 44 |
| 1022 | 22 | 21.70 | 95 | 37 | 44 |
| 1024 | 24 | 21.70 | 95 | 39 | 44 |
| 1027 | 27 | 21.70 | 95 | 43 | 44 |
| 1030 | 30 | 24.30 | 95 | 47 | 44 |
| 1032 | 32 | 24.30 | 95 | 49 | 44 |
| 1036 | 36 | 26.40 | 95 | 54 | 44 |
| 1041 | 41 | 36.30 (W604) | 95 | 60 | 44 |

## Power screwdriver bit 3/4" for recessed hexagon screws

**Design:** Made of tempered special tool steel, hardened and sandblasted.

| Order No. | Width of keys mm | 6205 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 2014 | 14 | 38.70 | 62 | 44 |
| 2017 | 17 | 38.70 | 62 | 44 |
| 2019 | 19 | 38.70 | 62 | 44 |
| 2022 | 22 | 38.70 | 62 | 44 |
| 2024 | 24 | 38.70 | 62 | 44 |
| 2027 | 27 | 38.70 (W604) | 62 | 44 |

## Power quick-change chuck 3/4"

**Design:** Made of tempered special tool steel, hardened and sandblasted. With spring-loaded ball to hold the power socket wrench inserts.

| Order No. | Length mm | 6209 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 78 | 80.60 (W604) | 44 |

## Power extension 3/4"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6211 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0175 | 175 | 28.10 | 44 |
| 0250 | 250 | 35.40 (W604) | 44 |

## Power ball joint 3/4"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6207 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 90 | 56.40 (W604) | 44 |

## Power connection part 3/4"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

6213 0015

| Order No. | Design | 6213 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 0010 | Reducer 3/4" to 1/2" | 20.30 | 57 | 44 |
| 0015 | Enlarger 3/4" to 1" | 22.40 (W604) | 63 | 44 |

## Power security pin/rubber ring 3/4"

**Application:** For fixing the bits on the output square.

6216

6215

| Order No. | For outside-Ø input mm | 6215 ASW | 6216 ASW |
|---|---|---|---|
| 0010 | 44 | 0.65 (W604) | 1.47 (W604) |

## Power socket spanner bit 1"

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6219 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 0027 | 27 | 18.80 | 58 | 46.0 | 54 |
| 0030 | 30 | 19.45 | 60 | 50.0 | 54 |
| 0032 | 32 | 19.45 | 60 | 52.0 | 54 |
| 0036 | 36 | 20.60 | 65 | 56.0 | 54 |
| 0041 | 41 | 23.90 | 67 | 63.0 | 54 |
| 0046 | 46 | 26.30 | 74 | 69.5 | 54 |
| 0050 | 50 | 30.80 | 80 | 74.0 | 54 |
| 0055 | 55 | 32.30 | 84 | 81.0 | 54 |
| 0060 | 60 | 37.50 (W604) | 87 | 87.0 | 54 |

## Power socket spanner bit 1", long

**Design:** DIN 3129, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Width of keys mm | 6219 ASW | Length mm | External Ø output mm | Outside-Ø input mm |
|---|---|---|---|---|---|
| 1027 | 27 | 29.10 | 100 | 46.0 | 54 |
| 1030 | 30 | 29.10 | 100 | 50.0 | 54 |
| 1032 | 32 | 29.10 | 100 | 52.0 | 54 |
| 1036 | 36 | 31.10 | 100 | 57.0 | 54 |
| 1041 | 41 | 40.00 | 100 | 64.0 | 54 |
| 1046 | 46 | 47.10 (W604) | 100 | 69.5 | 54 |

## Power extension 1"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6223 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0175 | 175 | 47.20 | 54 |
| 0250 | 250 | 59.40 (W604) | 54 |

## Power ball joint 1"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Length mm | 6225 ASW | Outside-Ø input mm |
|---|---|---|---|
| 0005 | 110 | 95.50 (W604) | 54 |

## Power reducer 1"

**Design:** DIN 3121, made of tempered special tool steel, hardened and sandblasted, with through pin hole.

| Order No. | Design | 6226 ASW | Length mm | Outside-Ø input mm |
|---|---|---|---|---|
| 0010 | 1" to 3/4" | 30.50 (W604) | 75 | 54 |

## Power security pin/rubber ring 1"

**Application:** For fixing the bits on the output square.

6227

6228

| Order No. | For outside-Ø input mm | 6227 ASW | 6228 ASW |
|---|---|---|---|
| 0010 | 54 | 0.82 (W604) | 1.51 (W604) |

## Overview - torque wrenches

| Product | Torque range N•m | Output | Signal | Scale | Adjustable | Order no. | Page |
|---|---|---|---|---|---|---|---|
| **Torque screwdrivers** | 0,6–3 | 1/4" | audible | | ● | 6255 0070–0095 | 6/101 |
| | 0,4–6 | 1/4" | audio and sensor | | ● | 6255 0005–0015 | 6/101 |
| | 0,1–8 | 1/4" | audible | | ● | 6255 0020–0035 | 6/101 |
| | 0,6–3 | 1/4" | audio and sensor | | ● | 6255 0040–0065 | 6/102 |
| | 2–8 | 1/4" | audible | | ● | 626A | 6/103 |
| | 2–25 | 3/8" | audio and sensor | ● | ● | 622A | 6/104 |
| | 0,05–6 | 1/4" | | ● | ● | 6230 | 6/105 |
| **Torque wrenches** | 2,5–12 | 1/4" | audio and sensor | ● | ● | 6232 | 6/106 |
| | 6–3000 | 1/4"; 3/8"; 1/2"; 3/4"; 1"; 1.1/2" | audio and sensor | ● | ● | 6234 | 6/106 |
| | 2–750 | 1/4"; 3/8"; 1/2"; 3/4" | audio and sensor | ● | ● | 6238 | 6/107 |
| | 1–850 | 1/4"; 3/8"; 1/2"; 3/4" | audio and sensor | ● | ● | 6241 0007–0049 | 6/108 |
| | 20–850 | 1/2"; 3/4" | audio and sensor | ● | ● | 6241 0021–0048 | 6/108 |
| | 140–750 | 3/4" | audio and sensor | ● | ● | 6240 | 6/109 |
| | 20–300 | 1/2" | audio and sensor | ● | ● | 6241 0051–0071 | 6/109 |
| | 2,5–320 | 1/4"; 3/8"; 1/2" | audio and sensor | ● | ● | 6263 | 6/109 |
| | 20–320 | 1/2" | audio and sensor | ● | ● | 6262 | 6/110 |
| | 1–800 | 1/4"; 3/4" | audio and sensor | ● | ● | 6267 0005–0055 | 6/110 |
| | 5–320 | 3/8"; 1/2" | audio, sensor and visual | ● | ● | 6267 0020–0040 | 6/110 |
| | 400–2000 | 3/4"; 1" | audio and sensor | ● | ● | 6267 0060–0070 | 6/110 |
| **Digital torque wrenches** | 10–200 | 14 x 18 mm | audio, sensor and visual | | ● | 6269 | 6/111 |
| | 10–400 | 9 x 12 mm; 14 x 18 mm | audio, sensor and visual | | ● | 6271 | 6/111 |
| **Torque wrenches for insert tools** | 2–400 | 9 x 12 mm; 14 x 18 mm | audio and sensor | ● | ● | 6242 0011–0040 | 6/111 |
| | 20–400 | 9 x 12 mm; 14 x 18 mm | audio and sensor | ● | ● | 6242 0021–0041 | 6/112 |
| | 2–40 | 9 x 12 mm | audio and sensor | ● | ● | 6272 0005–0010 | 6/112 |
| | 5–13 | 9 x 12 mm | audio and sensor | ● | ● | 6273 0015 | 6/112 |
| | 5–320 | 9 x 12 mm; 14 x 18 mm | audio and sensor | ● | ● | 6272 0020–0040 | 6/112 |
| | 100–500 | 14 x 18 mm | audio and sensor | ● | ● | 6272 0045–0050 | 6/112 |
| **Torque-multiplication devices** | 250–2800 | 1/2"; 3/4" | | | ● | 6252 | 6/115 |
| | 1400–2800 | 3/4" | | | ● | 6253 | 6/115 |
| **Torque testing devices** | 0,9–3150 | 1/4"; 3/8"; 1/2"; 3/4"; 1" | | ● | ● | 6254 | 6/116 |
| | 1–1000 | 1/4"; 3/8"; 1/2" | | ● | ● | 6269 | 6/116 |

## Torque screwdriver handle TorqueFix®-Key

**Design:** With ergonomic handle. **Acoustic** signals announce when the torque is achieved. The opening moment is about 30% higher than the specified torque. Supplied in plastic box.

**Application:** For screwing with preset torque.

**Scope of delivery:** Torque screwdriver with test certificate DIN EN ISO 6789, BS EN 26789, ASME B107.14M.

Certificate

wiha Tools that work for you

| Order No. | Scale range N•m | 6255 wiha | Actuation accuracy % | Length mm |
|---|---|---|---|---|
| 0070 | 0.6 | 47.80 | ± 6 | 68 |
| 0075 | 0.9 | 47.80 | ± 6 | 68 |
| 0080 | 1.2 | 47.80 (W538) | ± 6 | 68 |

| Order No. | Scale range N•m | 6255 wiha | Actuation accuracy % | Length mm |
|---|---|---|---|---|
| 0085 | 1.4 | 47.80 | ± 6 | 68 |
| 0090 | 2.0 | 47.80 | ± 6 | 68 |
| 0095 | 3.0 | 47.80 (W538) | ± 6 | 68 |

## TorqueFix®-key interchangeable blades

**Design:** Made of chromium-vanadium steel, galvanised. Hexagon shaft, 4 mm.

**6257** For recessed TORX®-head screws

**6258** For recessed TORX PLUS® head screws

6257

6258

| Order No. | Size | 6257 wiha | Max. torque N•m |
|---|---|---|---|
| 1006 | T 6 | 3.51 | 0.6 |
| 1007 | T 7 | 3.51 | 0.9 |
| 1008 | T 8 | 3.51 | 1.3 |
| 1009 | T 9 | 3.51 | 2.5 |
| 1010 | T 10 | 3.51 | 3.8 |
| 1015 | T 15 | 3.51 | 5.5 |
| 1020 | T 20 | 3.51 | 8.0 |
| 1025 | T 25 | 3.51 (W538) | 8.0 |

| Order No. | Size | 6258 wiha | Max. torque N•m |
|---|---|---|---|
| 1006 | 6 IP | 3.51 | 0.8 |
| 1007 | 7 IP | 3.51 | 1.3 |
| 1008 | 8 IP | 3.51 | 2.0 |
| 1009 | 9 IP | 3.51 | 3.0 |
| 1010 | 10 IP | 3.51 | 4.5 |
| 1015 | 15 IP | 3.51 | 6.6 |
| 1020 | 20 IP | 3.51 | 8.0 |
| 1025 | 25 IP | 3.51 (W538) | 8.0 |

## Torque screwdriver handle iTorque®

**Design:** With ergonomic plastic-metal composite handle. Simple and accurate value setting due to a turning knob integrated in the handle. With digital display for easy, continuous adjustment of the torque value. The set values are fixed automatically. Units switchable between N•m and in. lbs or N•cm and in. oz. A built-in counter records every setting and a calibration alarm sounds after 5000 uses. **Acoustic and tactile** signals announce when the torque is achieved. For use with 1/4" bits and torque interchangeable blades with hexagonal shaft (4 mm). Delivery in folding box.

**Application:** For screwing with preset torque.

**Scope of delivery:** Torque screwdriver with test certificate DIN EN ISO 6789, BS EN 26789, ASME B107.14M, interchangeable blade with bit holder 1/4" .

Certificate

wiha Tools that work for you

| Order No. | Scale range N•m | 6255 wiha | Actuation accuracy % | Length mm |
|---|---|---|---|---|
| 0005 | 0.4–1.5 | 176.50 | ± 6 | 134 |
| 0010 | 0.8–3.0 | 176.50 | ± 6 | 134 |
| 0015 | 1.0–5.0 | 181.50 (W547) | ± 6 | 134 |

## Torque screwdriver handle TorqueVario®-S

**Design:** With ergonomic multi-component handle, very handy thanks to light and compact design with integrated window scale. Torque continuously adjustable with Torque-Setter setting tool. The set values are fixed automatically. **Acoustic** signals announce when the torque is achieved. Supplied in a plastic box.

**Application:** For screwing with preset torque.

**Scope of delivery:** Torque screwdriver with test certificate DIN EN ISO 6789, BS EN 26789, ASME B107.14M and torque setter adjustment tool.

Certificate

wiha Tools that work for you

| Order No. | Scale range N•m | 6255 wiha | Actuation accuracy % | Length mm |
|---|---|---|---|---|
| 0020 | 0.1–0.6 | 91.50 | ± 10 | 127 |
| 0025 | 0.4–1.0 | 91.50 | ± 6 | 127 |
| 0030 | 0.8–5.0 | 104.00 | ± 6 | 138 |
| 0035 | 2.0–7.0 | 112.00 (W538) | ± 6 | 142 |

## Torque screwdriver handle easyTorque

**Design:** With ergonomic, multi-component handle. Torque continuously adjustable with Torque-Setter setting tool. The set values are fixed automatically. **Acoustic** signals announce when the torque is achieved. Supplied in folding box

**Application:** For screwing with preset torque.

Certificate

wiha Tools that work for you

| Order No. | Scale range N•m | 6255 wiha | Actuation accuracy % | Length mm |
|---|---|---|---|---|
| 0040 | 0.6 | 32.60 | ± 10 | 130 |
| 0045 | 0.9 | 32.60 | ± 10 | 130 |
| 0050 | 1.2 | 32.60 | ± 10 | 130 |
| 0055 | 1.4 | 32.60 | ± 10 | 130 |
| 0060 | 2.0 | 34.40 | ± 10 | 130 |
| 0065 | 3.0 | 34.40 (W538) | ± 10 | 130 |

## Interchangeable torque blades

**Design:** Made of chrome-vanadium-molybdenum steel, matte chrome plated, blade tips Wiha ChromTop®. Hexagon shaft, 4 mm.

wiha Tools that work for you

**6255 0100** **With 1/4" bit-adapter.** Sleeve in rustproof steel, plastic coated.

**6255 0200** **For socket spanner bits 1/4"** With ball lock.

| Order No. | Output inch | 6255 wiha |
|---|---|---|
| 0100 | 1/4 | 12.35 (W538) |

| Order No. | Output inch | 6255 wiha |
|---|---|---|
| 0200 | 1/4 | 6.95 (W538) |

**6257** **For recessed TORX®-head screws.**

**6258** **For recessed TORX PLUS® head screws, without spring lock.**

| Order No. | Size | 6257 wiha | Max. torque N•m |
|---|---|---|---|
| 0004 | T 4 | 4.44 | 0.25 |
| 0005 | T 5 | 4.44 | 0.4 |
| 0006 | T 6 | 4.44 | 0.6 |
| 0007 | T 7 | 4.44 | 0.9 |
| 0008 | T 8 | 4.44 | 1.3 |
| 0009 | T 9 | 4.44 | 2.5 |
| 0010 | T 10 | 4.44 | 3.8 |
| 0015 | T 15 | 4.44 | 5.5 |
| 0020 | T 20 | 4.44 | 8.0 |
| 0025 | T 25 | 4.44 (W538) | 8.0 |

| Order No. | Size | 6258 wiha | Max. torque N•m |
|---|---|---|---|
| 0005 | 5 IP | 4.52 | 0.5 |
| 0006 | 6 IP | 4.52 | 0.8 |
| 0007 | 7 IP | 4.52 | 1.3 |
| 0008 | 8 IP | 4.52 | 2.0 |
| 0009 | 9 IP | 4.52 | 3.0 |
| 0010 | 10 IP | 4.52 | 4.5 |
| 0015 | 15 IP | 4.52 | 6.6 |
| 0020 | 20 IP | 4.52 | 8.0 |
| 0025 | 25 IP | 4.52 (W538) | 8.0 |

## Torque screwdriver handle TorqueVario®-S TR

NEW

wiha Tools that work for you

**Design:** With ergonomic multi-component pistol grip. Torque continuously adjustable with Torque-Setter setting tool (integrated in handle). The set values are fixed automatically. **Acoustic** signals announce when the torque is achieved. Supplied in a plastic box.

**Application:** For controlled screwing with specified torque. Opening moment approx. +30 % higher than the specified torque.

Certificate

| Order No. | Scale range N•m | 626A wiha | Actuation accuracy % | Length mm |
|---|---|---|---|---|
| 0005 | 2–8 | 148.00 (W538) | 6 | 110 |

## Torque TR interchangeable blades

NEW

wiha Tools that work for you

**Design:** Made of chromium-vanadium steel.

**626B 0005** **With 1/4" bit-adapter.**

**626B 0010 + 0015** **For socket spanner bits.** With ball lock.

626B 0010

| Order No. | Output inch | 626B wiha |
|---|---|---|
| 0005 | 1/4 | 9.50 (W538) |

| Order No. | Output inch | 626B wiha |
|---|---|---|
| 0010 | 1/4 | 9.50 |
| 0015 | 3/8 | 9.50 (W538) |

## Torque Tplus interchangeable blades

NEW

wiha Tools that work for you

**Design:** Made of chromium-vanadium steel, matt chrome-plated. Hexagon shaft, 6 mm.

**626B 0105–0120** **For recessed hexagon screws.**

**626B 0205–0230** **For recessed TORX®-head screws.**

**626B 0305–0330** **For recessed TORX PLUS® head screws, without spring lock.**

| Order No. | Width of keys mm | 626B wiha | Max. torque N•m |
|---|---|---|---|
| 0105 | 3.0 | 6.45 | 5.5 |
| 0110 | 4.0 | 6.45 | 15 |
| 0115 | 5.0 | 6.45 | 15 |
| 0120 | 6.0 | 6.45 (W538) | 15 |

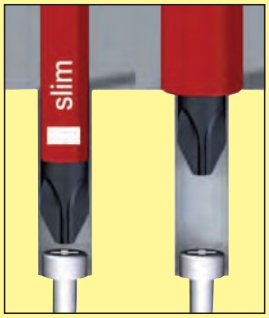
| Order No. | Size | 626B wiha | Max. torque N•m |
|---|---|---|---|
| 0205 | T 15 | 6.55 | 5.5 |
| 0210 | T 20 | 6.55 | 10 |
| 0215 | T 25 | 6.55 | 15 |
| 0220 | T 27 | 6.55 (W538) | 15 |

| Order No. | Size | 626B wiha | Max. torque N•m |
|---|---|---|---|
| 0225 | T 30 | 6.55 | 15 |
| 0230 | T 40 | 6.55 (W538) | 15 |

| Order No. | Size | 626B wiha | Max. torque N•m |
|---|---|---|---|
| 0305 | 15 IP | 6.70 | 6.6 |
| 0310 | 20 IP | 6.70 | 13.0 |
| 0315 | 25 IP | 6.70 | 15.0 |
| 0320 | 27 IP | 6.70 | 15.0 |
| 0325 | 30 IP | 6.70 | 15.0 |
| 0330 | 40 IP | 6.70 (W538) | 15.0 |

## VDE interchangeable blades

TorqueVario®-S VDE with integrated scale in combination with the slimTorque VDE bit holder and slimBits offer controlled tightening of the screw as well as safety in electrical applications. The three components (handle, bit holder, bits) offer safety up to 1000V AC/1500 V DC.
The achievement of the torque is heard and felt, the tripping accuracy is ± 6 %. The torque wrench meets the accuracy requirements of EN ISO 6789, BS EN 26789, ASME B107.14M. Due to the **slim** technology, low-lying fastening/spring elements are easily reached.



## VDE interchangeable blade set slimSelection

**Design:** Insulated to 1000 V AC and 1500 V DC, according to IEC 60900 : 2004. ClickFix quick-change holder for 6 mm slimBits. Torque continuously adjusted. For safe screwing of electrical components according to manufacturer's specifications. Effortless access to low-lying screw terminals. Supplied in a case.

1000 V

wiha Tools that work for you

| Order No. | Design | 6255 wiha | Set contents |
|---|---|---|---|
| 0620 | 11-part | 173.50 | 1 TorqueVario®-S VDE torque screwdriver 0.6–2.0 N·m<br>1 SoftFinish® electric slimVario bit holder<br>1 slimTorque VDE bit holder<br>1 Torque-Setter<br>2 interchangeable slot blades 4; 5.5 mm<br>2 interchangeable Phillips blades PH 1; 2<br>2 interchangeable Phillips blades PZ 1; 2<br>1 interchangeable blade Plus-Minus SL/PZ 2 |
| 1050 | 10-part | 168.50 | 1 TorqueVario®-S VDE torque screwdriver 1.0–5.0 N · m<br>1 SoftFinish® electric slimVario bit holder<br>1 slimTorque VDE bit holder<br>1 Torque-Setter<br>2 interchangeable slot blades 4; 5.5 mm<br>2 interchangeable Phillips blades PH 1; 2<br>2 interchangeable Phillips blades PZ 1; 2 |
| | | (W538) | |

6255 0620

6255 1050

## VDE-Torque wrench

NEW

**Design:** Insulated to 1000 V AC and 1500 V DC, according to IEC 60900. Slim design without protruding parts. **Right/left tighten** due plug-in square, **with acoustic and tactile signal.** Locks against unwanted altering of setting values. Ergonomic handle with clear calibration nut. The new calibration does not require new 1000 V check.

**Application:** For safe screwing of electrical components.

1000 V

HAZET

| Order No. | Scale range N•m | 622A HAZET | Scale graduation N•m | Actuation accuracy % | Square drive inch | Length mm | Weight kg |
|---|---|---|---|---|---|---|---|
| 0005 | 2–10 | 355.10 | 0.2 | 6 | 3/8 | 275 | 0.59 |
| 0010 | 5–25 | 365.30 (W529) | 0.5 | 4 | 3/8 | 305 | 0.64 |

## VDE extension 3/8"

NEW

**Design:** Insulated to 1000 V AC and 1500 V DC, according to IEC 60900.

**Application:** For safe screwing of electrical components.

1000 V

| Order No. | Length mm | 622B HAZET |
|---|---|---|
| 0090 | 90 | 28.55 |
| 0142 | 142 | 30.30 |
| | | (W529) |

## VDE socket spanner bit 3/8"

NEW

**Design:** Insulated to 1000 V AC and 1500 V DC, according to IEC 60900.

**Application:** For safe screwing of electrical components.

1000 V

| Order No. | Width of keys mm | 622C HAZET | Length mm | Outside Ø mm |
|---|---|---|---|---|
| 0006 | 6 | 17.25 | 40.0 | 12.0 |
| 0007 | 7 | 17.25 | 40.0 | 13.0 |
| 0008 | 8 | 17.25 | 40.0 | 14.1 |
| 0009 | 9 | 17.25 | 40.0 | 15.4 |
| 0010 | 10 | 17.25 | 41.0 | 16.6 |
| 0011 | 11 | 17.25 | 42.0 | 18.0 |
| 0012 | 12 | 17.25 | 43.0 | 19.0 |
| 0013 | 13 | 17.50 | 43.5 | 20.5 |
| 0014 | 14 | 17.50 | 45.5 | 22.0 |
| 0016 | 16 | 18.35 | 45.5 | 24.2 |
| 0017 | 17 | 18.35 | 45.5 | 25.4 |
| 0018 | 18 | 19.00 | 47.5 | 26.7 |
| 0019 | 19 | 19.00 | 47.5 | 28.0 |
| 0020 | 20 | 19.85 | 47.5 | 29.0 |
| 0022 | 22 | 19.85 | 50.0 | 32.0 |
| | | (W529) | | |

## Torque screwdriver No. 756

Certificate

GEDORE

**Design:** With ergonomic and anti-slip rubber handle. Simple and exact value setting with the micrometre scale ring. The set values are automatically fixed by the adjustment guard "Positiv-Lock" . With precision circulation ball coupling for controlled **right and left tightening.** When the set value is reached, the **slip mechanism is triggered automatically and clearly noticeable**. Suitable for use with 1/4" bits, or with adapter pieces for 1/4" sockets.

**Application:** In the fields of electrical and electronics industry, equipment construction industry. For the application in electro-statically sensitive tasks (EPA-compliant). Quick and controlled screw tightening enables application in series production and quality control.

**Scope of delivery:** Torque screwdriver with test certificate according to DIN EN ISO 6789, 1/4" adapter drive piece and operating instructions.

**6230 0035 + 6230 0040**

**6230 0050 with T-handle**

| Order No. | Scale range | 6230 GEDORE | Scale graduation | Actuation accuracy % | Colour | Length mm |
|---|---|---|---|---|---|---|
| 0035 | 8– 40 cNm | 367.50 | 1.0 cN•m | ± 6 | silver | 159 |
| 0040 | 20–120 cNm | 337.50 | 1.0 cN•m | ± 6 | blue | 183 |
| 0050 | 1– 6 N m* | 361.00 | 0.1 N• m | ± 6 | red | 196 |
| | | (W522) | | | | |

* Supplied with T-handle and sliding block.

## Torque wrench DREMOMETER MINI

Certificate

GEDORE

**Design:** Lightweight plastic housing made of high-quality, fibreglass-reinforced high-tech nylon with soft components in the handle area. **1/4" square drive with ball lock** DIN 3120 – A 6.3 ISO 1174, for controlled clockwise tightening with automatic close-gap, **audible and tactile signal.** Dual scale with a scale graduation of 0.5 N•m and 5 lbf·in, micrometer scale with scale division of 0.05 N•m. In addition, the torque wrench has a viewing window with magnifying effect. Safe locking in of set torque with adjustment button locking in place. Supplied in plastic box, including test certificate according to DIN EN ISO 6789: 2003 Type II Class A and operator manual.

**Application:** For controlled screw tightening in the area of 2-12 N·m for almost all industrial manufacturing areas.

| Order No. | Scale range | 6232 GEDORE | Scale range. lbf·in | Scale graduation | Square drive inch | Actuation accuracy % | Length mm | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 0011 | 2.5–12 | 260.00 (W522) | 18–106 | 0.5 N m/5 lbf in | 1/4 | ± 3 | 211 | 0.320 |

## Torque Wrench DREMOMETER

Certificate

GEDORE

**Design:** Extremely high accuracy and durability, also in the application of extension pipes. With direct torque transfer to the lever mechanism. A double scale is used for reading and shows both Newton meter (N · m) and all major British or U.S. measurement units (lbf · in or lbf · ft). The housing is made of high strength aluminium alloy, all stressed parts are made of steel. **For controlled clockwise tightening with** automatic gap release, **with audible and tactile signal.** Delivery includes test certificate DIN EN ISO 6789 and bilingual user manual, from Order No. 6234 0026 in plastic box to Order No. 6234 0027 in carton.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

| Order No. | Scale range | 6234 GEDORE | Scale range. | Scale graduation | Actuation accuracy % | Square drive inch | Length mm | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 0005 | 6– 30 | 302.50 | 50–270 lbf in | 1 N m/10 lbf•in | ± 3 | 1/4 | 265 | 0.58 |
| 0010 | 8– 40 | 352.00 | 70–350 lbf in | 5 N m/50 lbf•in | ± 3 | 3/8 | 340 | 1.00 |
| 0015 | 25– 120 | 390.50 | 15– 90 lbf ft | 5 N m/ 5 lbf•ft | ± 3 | 1/2 | 463 | 1.50 |
| 0020 | 40– 200 | 428.00 | 30–150 lbf ft | 5 N m/ 5 lbf•ft | ± 3 | 1/2 | 553 | 1.40 |
| 0025 | 60– 300 | 491.00 | 35–220 lbf ft | 5 N m/ 5 lbf•ft | ± 3 | 1/2 | 618 | 2.00 |
| 0026 | 80– 360 | 661.00 | 60–260 lbf ft | 5 N m/ 5 lbf•ft | ± 3 | 3/4 | 718 | 2.40 |
| 0027 | 110– 550 | 874.00 | 80–405 lbf ft | 10 N m/10 lbf•ft | ± 3 | 3/4 | 812 | 2.90 |
| 0030 | 155– 760 | 926.00 | 105–560 lbf ft | 10 N m/10 lbf•ft | ± 3 | 3/4 | 812 | 3.20 |
| 0035 | 155– 760 | 1011.00 * | 105–560 lbf ft | 10 N m/10 lbf•ft | ± 3 | 3/4 | 800–1400 | 5.00 |
| 0040 | 520–1000 | 1133.00 * | 380–730 lbf ft | 10 N m/10 lbf•ft | ± 3 | 3/4 | 800–1400 | 5.60 |
| 0045 | 750–2000 | 1954.00 * | – | 50 N•m | ± 3 | 1 | 1078–1998 | 11.60 |
| 0050 | 1500–3000 | 2234.00 * (W522) | – | 50 N•m | ± 3 | 1.1/2 | 1423–2343 | 13.20 |

* Supplied with socket extension tubes.

## Socket extension tube NEW

**Application:** Facilitates the achievement of high torque due to lever extension.

**Note:** For suitable torque wrench see (Order No. 6234).

**6236 0100–0110** Made from aluminium, with anodised clamping nut.

6236 0100–0110

**6236 0115** Made of galvanised steel.

6236 0115

| Order No. | Length mm | 6236 GEDORE |
|---|---|---|
| 0100 | 350 | 57.90 |
| 0105 | 700 | 65.10 |
| 0110 | 762 | 83.90 |
| 0115 | 925 | 63.40 (W522) |

## Plug-in ratchet

**Design:** Made of chrome-vanadium steel, very robust and finely continuous. **Clockwise.**

**Application:** In connection with torque wrenches for controlled tightening of screws.

**Note:** For suitable torque wrench see (Order No. 6232 and Order No. 6234).
Attachable ratchets for counterclockwise operation upon request.

| Order No. | Square drive inch | 6236 GEDORE | Height mm | Ø mm | Pivoting angle |
|---|---|---|---|---|---|
| 0005 | 1/4 | 70.00 | 21 | 24 | 18.0° |
| 0010 | 3/8 | 73.20 | 28 | 35 | 20.0° |
| 0015 | 1/2 | 94.40 | 35 | 46 | 7.5° |
| 0020 | 3/4 | 139.00 | 53 | 65 | 10.0° |
| 0025 | 1 | 361.00 (W522) | 63 | 73 | 10.0° |

## Torque wrench

**Design:** Utmost precision also in constant use. Adjustable torque wrench with square drive and **integrated ratchet function** for controlled **clockwise and counterclockwise tightening.** Robust steel pipe construction, powder coated, with galvanised ratchet. **Articulated mechanism with a slide roller guarantees acoustic and tactile trigger signal.** Light and comfortable scale setting by turning the handle and locking on push knob, extremely high accuracy due to micrometer scale ring.
Delivery includes test certificate according to DIN EN ISO 6789.

Certificate

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

**6238 0100–0120** **With mushroom head.** Supplied in plastic box.

**6238 0100–0120**

**6238 0125 + 0130** **With square push-through.** Delivered in box.

**6238 0125–0130**

| Order No. | Scale range N•m | 6238 format | Scale graduation N•m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|
| 0100 | 5– 25 | 123.00 | 0.10 | ± 3 | 1/4 | 285 |
| 0105 | 10– 50 | 123.00 | 0.25 | ± 3 | 3/8 | 335 |
| 0110 | 20–100 | 113.50 | 0.50 | ± 3 | 1/2 | 395 |
| 0115 | 40–200 | 114.50 | 1.00 | ± 3 | 1/2 | 485 |
| 0120 | 60–300 | 149.00 NEW | 1.00 | ± 3 | 1/2 | 607 |
| 0125 | 80–400 | 187.50 NEW | 1.00 | ± 3 | 3/4 | 716 |
| 0130 | 150–750 | 528.00 (W541) | 1.00 | ± 3 | 3/4 | 1240 |

## Torque wrench TORCOFIX K

Certificate

GEDORE

**Design:** Slim design. Double scale for reading (N·m) as well as (lbf·ft) below a window, with magnifying effect. Robust, satin matte chrome-plated tubular steel design with chrome plated ratchet, including ergonomic fibreglass reinforced plastic handle with notches as handling or calibration tool. Through the integrated **ratchet function, controlled clockwise and counterclockwise tightening is guaranteed.** Articulated mechanism with a slide roller guarantees **acoustic and tactile trigger signal.** Light and comfortable scale setting by turning the handle and locking on push knob, extremely high accuracy due to micrometer scale ring. Supplied with test certificate DIN EN ISO 6789 and two-language operator manual.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

**6241 0007–0030** **With mushroom head plug-in square.** Supplied in plastic box.

**6241 0035–0049** **With square push-through.** Supplied in a box.

6241 0007–0030

6241 0035–0049

| Order No. | Scale range N·m | 6241 GEDORE | Scale range lbf·ft | Scale graduation N·m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|---|
| 0007 | 1– 5 | 167.50 | 0.75– 3.7 | 0.025 | ± 3 | 1/4 | 221 |
| 0011 | 5– 25 | 178.50 | 3.7,0– 18.0 | 0.100 | ± 3 | 1/4 | 285 |
| 0016 | 10– 50 | 184.00 | 7.5– 37.0 | 0.250 | ± 3 | 3/8 | 335 |
| 0020 | 20–100 | 172.50 | 15.0– 75.0 | 0.500 | ± 3 | 1/2 | 395 |
| 0025 | 40–200 | 185.00 | 30.0–150.0 | 1.000 | ± 3 | 1/2 | 485 |
| 0030 | 60–300 | 212.50 | 45.0–220.0 | 1.000 | ± 3 | 1/2 | 575 |
| 0035 | 80–400 | 351.00 | 60.0–300.0 | 1.000 | ± 3 | 3/4 | 665 |
| 0040 | 110–550 | 555.50 | 80.0–405.0 | 1.000 | ± 3 | 3/4 | 960 |
| 0045 | 150–750 | 629.00 | 110.0–550.0 | 1.000 | ± 3 | 3/4 | 1240 |
| 0049 | 250–850 | 687.50 (W522) | 185.0–630.0 | 1.000 | ± 3 | 3/4 | 1390 |

## Torque wrench DREMASTER K

Certificate

GEDORE

**Design:** Very robust yet finely continuous. Switchable scale (N·m/lbf·ft) below a window, with magnifying effect. Satin matte chrome-plated tubular steel design, including ergonomic multi-component plastic handle with notches as handling or calibration tool. Through the integrated **ratchet function, controlled clockwise and counterclockwise tightening is guaranteed.** Articulated mechanism with a slide roller guarantees **acoustic and tactile trigger signal.** Light and comfortable scale setting by turning the handle and locking on push knob, extremely high accuracy due to micrometer scale ring. Quick adjustment with angled screwdriver or hexagon pin wrench possible.
Supplied in stable plastic box, including test certificate DIN EN ISO 6789 and two-language operator manual.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

**6241 0021–0031** **With mushroom head plug-in square.** Supplied in plastic box.

**6241 0036–0048** **Supplied with push-through square.** Supplied in a box.

6241 0021–0031

6241 0036–0048

| Order No. | Scale range N·m | 6241 GEDORE | Scale range lbf·ft | Scale graduation N·m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|---|
| 0021 | 20–100 | 194.50 | 15– 75 | 0.5 | ± 3 | 1/2 | 424 |
| 0026 | 40–200 | 210.00 | 30–150 | 1.0 | ± 3 | 1/2 | 515 |
| 0031 | 60–300 | 241.50 | 45–220 | 1.0 | ± 3 | 1/2 | 607 |
| 0036 | 80–400 | 398.50 | 60–300 | 1.0 | ± 3 | 3/4 | 716 |
| 0041 | 110–550 | 631.00 | 80–405 | 1.0 | ± 3 | 3/4 | 954 |
| 0046 | 150–750 | 714.50 | 110–550 | 1.0 | ± 3 | 3/4 | 1229 |
| 0048 | 250–850 | 780.50 (W522) | 185–630 | 1.0 | ± 3 | 3/4 | 1376 |

## Torque wrench

NEW

**Design:** Utmost precision also in constant use. Adjustable torque wrench with square drive and **integrated lever reverse ratchet function** for controlled **clockwise and counterclockwise tightening.** Robust steel pipe construction, with galvanised ratchet. **Articulated mechanism with a slide roller guarantees acoustic and tactile trigger signal.** Light and comfortable scale setting by turning the handle and locking on push knob, extremely high accuracy due to micrometer scale ring.
Delivery in plastic box, includes test certificate DIN EN ISO 6789.

Certificate

format professional quality

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

| Order No. | Scale range N•m | 6240 format | Scale range lbf·ft | Scale graduation N•m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|---|
| 0110 | 20–100 | 152.00 | 15– 75 | 0.5 | ± 3 | 1/2 | 404 |
| 0115 | 40–200 | 158.00 | 30–150 | 0.5 | ± 3 | 1/2 | 409 |
| 0120 | 60–300 | 190.00 (W541) | 45–220 | 1.0 | ± 3 | 1/2 | 591 |

## Torque wrench DREMASTER UK

**Design:** Very robust yet fine action. Switchable scale (N·m/lbf·ft) below a window, with magnifying effect. Satin matte chrome-plated tubular steel design, including ergonomic multi-component plastic handle with notches as handling or calibration tool. Through the integrated **lever ratchet function,** controlled **clockwise tightening is guaranteed.** Articulated mechanism with a slide roller guarantees **acoustic and tactile trigger signal.** Light and comfortable scale setting by turning the handle and locking on push knob, extremely high accuracy due to micrometer scale ring. Quick adjustment with angled screwdriver or hexagon pin wrench possible.
Supplied in stable plastic box, including test certificate DIN EN ISO 6789 and two-language operator manual.

Certificate

GEDORE

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

| Order No. | Scale range | 6241 GEDORE | Scale range lbf·ft | Scale graduation N•m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|---|
| 0051 | 20–100 | 269.00 | 15– 75 | 0.5 | ± 3 | 1/2 | 438 |
| 0061 | 40–200 | 280.50 | 30–150 | 1.0 | ± 3 | 1/2 | 529 |
| 0071 | 60–300 | 307.00 (W522) | 45–220 | 1.0 | ± 3 | 1/2 | 620 |

## Torque wrench SYSTEM 5000-2 CLT

**Design:** Robust and resilient steel construction with ergonomic plastic handle. Setting the desired torque value quickly and safely by turning the handle. Due to the **integrated lever reversible ratchet function** the controlled **clockwise tightening is guaranteed. Tactile and acoustic trigger signals.** High accuracy due to fine scale division.
Delivery includes test certificate DIN EN ISO 6789.

Certificate

HAZET

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

**6263 0012–0030** Supplied in a plastic box.

6263 0012

**6263 0035 + 0040** Supplied in a box.

6263 0040

| Order No. | Scale range N•m | 6263 HAZET | Scale graduation N•m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|
| 0012 | 2.5– 25 | 172.70 | 0.25 | ± 4 | 1/4 | 232 |
| 0022 | 10 – 60 | 183.30 | 0.5 | ± 4 | 3/8 | 320 |
| 0025 | 10 – 60 | 187.50 | 0.5 | ± 4 | 1/2 | 320 |
| 0030 | 20 –120 | 210.80 | 1.0 | ± 4 | 1/2 | 408 |
| 0035 | 40 –200 | 224.60 | 1.0 | ± 4 | 1/2 | 513 |
| 0040 | 60 –320 | 246.80 (W529) | 2.0 | ± 4 | 1/2 | 632 |

## Torque wrench SYSTEM 5000-2 CLT

**Design:** Slim design. Large, curved display window (interchangeable) with three-digit, big figures for reading the torque value. Robust and resistant, hard chrome plated tubular steel construction, ergonomic handle with collar that reduces slipping-off and injury. Setting the desired torque value quickly and safely by turning the handle. Due to the **integrated lever reversible ratchet function** the controlled **clockwise tightening is guaranteed.**
**Tactile and acoustic trigger signals.**
Delivery in Safe-Box including test certificate DIN EN ISO 6789.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

Certificate

| Order No. | Scale range N•m | 6262 HAZET | Scale graduation N•m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|
| 0030 | 20–120 | 264.80 | 1.0 | 4 | 1/2 | 435 |
| 0035 | 40–200 | 278.10 | 1.0 | 4 | 1/2 | 545 |
| 0040 | 60–320 | 315.60 (W529) | 2.0 | 4 | 1/2 | 660 |

## Torque wrench SYSTEM 6000 CT

**Design:** Robust and resistant, hard chrome plated tubular steel construction, ergonomic handle with collar, which reduces slipping-off and injury. Setting the desired torque value quickly and safely by turning the handle. Due to the **integrated lever reversible ratchet function** the controlled **clockwise tightening is guaranteed. Tactile and acoustic trigger signals.** High accuracy due to fine scale division.
Delivery includes test certificate DIN EN ISO 6789.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

Certificate

**6267 0005–0055** Supplied in a plastic box.

**Without signal button.**

**6267 0020–0040** In addition, with **optical trigger signal** (signal button). Supplied in a plastic box.

**With signal button.**

**6267 0060–0070** 2-piece, detachable, with removable ratchet head. Delivered in a protective bag with release tool.

**2-piece, detachable.**

| Order No. | Scale range N•m | 6267 HAZET | Scale graduation N•m | Actuation accuracy % | Square drive inch | Length mm |
|---|---|---|---|---|---|---|
| 0005 | 1– 6 | 255.20 | 0.1 | 4 | 1/4 | 197 |
| 0010 | 2– 10 | 263.30 | 0.2 | 2 | 1/4 | 198 |
| 0015 | 4– 40 | 287.00 | 0.4 | 2 | 1/4 | 256 |
| 0045 | 100– 400 | 670.00 * | 2.5 | 2 | 3/4 | 802 |
| 0050 | 200– 500 | 893.00 * | 2.5 | 2 | 3/4 | 1046 |
| 0055 | 300– 800 | 936.00 * | 2.5 | 2 | 3/4 | 1283 |
| 0020 | 5– 60 | 330.50 | 0.5 | 2 | 3/8 | 335 |
| 0025 | 20– 120 | 330.50 | 1.0 | 2 | 3/8 | 389 |
| 0030 | 20– 120 | 333.60 | 1.0 | 2 | 1/2 | 435 |
| 0035 | 40– 200 | 373.40 | 1.0 | 2 | 1/2 | 543 |
| 0040 | 60– 320 | 470.20 | 2.0 | 2 | 1/2 | 659 |
| 0060 | 400–1000 | 1233.00 * | 5.0 | 3 | 3/4 | 1789 |
| 0065 | 600–1600 | 1487.00 * | 5.0 | 3 | 1 | 2455 |
| 0070 | 800–2000 | 2085.00 *° (W529) | 6.0 | 4 | 1 | 3033 |

* With 2-component handle.
° 3-piece, detachable.

## Torque/angle wrench SYSTEM 7000 eTAC

Certificate

HAZET

**Design:** Torque and angle wrench have highest precision. 2-component handle made of fibreglass reinforced, impact resistant plastic and soft gripping elements. 3 time signaling the tightening curve by means of **acoustic signal (buzzer), vibration** and all around, from any location, visible **360° LED display** with "traffic light" function. Large, easily readable display, turns 180° Measured value display in 13 mm font size, including pass/fail Screw-driving application rating Simple, clearly structured menu, in readable plain text in font size 5 mm in German and English. Menu-lock function prevents unauthorized adjustment of settings with self-selectable four-digit code. Memory and battery indicator. Safety on and off function (pressing 2 buttons) as well as automatic, time-dependent and energy-saving stand-by function. The effective length is adjustable/programmable for other plug-in tools. Delivery includes manual, 4 AA batteries (AA/LR06, 1.5 V) and test certificate DIN EN ISO 6789.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

**6269** **Protection class IP 40.** Simple operation due to fast menu navigation (torque/angle in just 2 clicks), reduced menu structure due to solid default entries, such as tolerance, N•m unit. Simple, clearly structured menu, with pictograms. Rotation angle range (adding) 5 ° to 995 °. Delivery in HEXA-Pack including reversible ratchet insert 1/2" .

6269

**6271** Switchable torque units N·m and lbf·ft. Rotary angle range (adding) to 999°. Delivery in an aluminium frame case with foam insert including plug-in ratchet 1/2" .

6271

| Order No. | Scale range N•m | 6269 HAZET | 6271 HAZET | Actuation accuracy | Actuation accuracy angle of rotation | Drive mm | Length mm |
|---|---|---|---|---|---|---|---|
| 0005 | 10–100 | – | 1361.00 | ± 2 %/± 1 Digit | ± 2 %/± 1° | 9 x 12 | 380.5 |
| 0010 | 10–200 | 1297.00 | – | ± 2 %/± 1 Digit | ± 2 %/± 1° | 14 x 18 | 518.0 |
| 0010 | 20–200 | – | 1404.00 | ± 2 %/± 1 Digit | ± 2 %/± 1° | 14 x 18 | 518.0 |
| 0015 | 40–400 | – (W529) | 1715.00 (W529) | ± 2 %/± 1 Digit | ± 2 %/± 1° | 14 x 18 | 942.5 |

## Torque wrench TORCOFIX SE

Certificate

GEDORE

**Design:** Very robust yet finely continuous. Double scale for reading (N·m) as well as (lbf·ft) below a window, with magnifying effect. Robust, satin matte chrome-plated tubular steel design, including ergonomic fibreglass reinforced plastic handle with notches as handling or calibration tool. Head with intake for plug-in tools. **For controlled clockwise and counterclockwise tightening.** Articulated mechanism with a slide roller guarantees **acoustic and tactile trigger signal.** Light and comfortable scale setting by turning the handle and locking on push knob, extremely high accuracy due to micrometer scale ring. Supplied with test certificate DIN EN ISO 6789 and two-language operator manual.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas. Ideal for hard to reach fittings.

**Note:** For plug-in tools see 📖 6/113 to 📖 6/114.

**6242 0011–0035** Supplied in a plastic box.

**6242 0040** Supplied in a box.

| Order No. | Scale range N•m | 6242 GEDORE | Scale range lbf·ft | Scale graduation N•m | Actuation accuracy % | Square drive mm | Length mm |
|---|---|---|---|---|---|---|---|
| 0011 | 5– 25 | 129.00 | 3.7– 18 | 0.10 | ± 3 | 9 x 12 | 285 |
| 0016 | 10– 50 | 135.50 | 7.5– 37 | 0.25 | ± 3 | 9 x 12 | 325 |
| 0020 | 20–100 | 142.50 | 15.0– 75 | 0.50 | ± 3 | 9 x 12 | 375 |
| 0026 | 30–150 | 159.50 | 22.0–110 | 1.00 | ± 3 | 9 x 12 | 461 |
| 0030 | 40–200 | 163.50 | 30.0–150 | 1.00 | ± 3 | 14 x 18 | 475 |
| 0035 | 60–300 | 186.50 | 45.0–220 | 1.00 | ± 3 | 14 x 18 | 565 |
| 0040 | 80–400 | 277.50 (W522) | 60.0–300 | 1.00 | ± 3 | 14 x 18 | 650 |

## Torque wrench DREMASTER SE

Certificate

GEDORE

**Design:** Very robust yet finely continuous. Switchable scale (N·m/lbf·ft) below a window, with magnifying effect. Satin matte chrome-plated tubular steel design, including ergonomic multi-component plastic handle with notches as handling or calibration tool. Head with intake for plug-in tools. **For controlled clockwise and counterclockwise tightening.** Bending mechanism with castor guarantees **tactile and acoustic trigger signals.** Light and comfortable scale setting by turning the handle and locking on push knob, extremely high accuracy due to micrometer scale ring. Quick adjustment with angled screwdriver or hexagon pin wrench possible.
Supplied in stable plastic box, including test certificate DIN EN ISO 6789 and two-language operator manual.

**Application:** For controlled screw tightening in the corresponding torque range for all industrial manufacturing areas.

**Note:** For plug-in tools see 📖 6/113 to 📖 6/114.

**6242 0021–0036** Supplied in sturdy plastic box.

**6242 0041** Supplied in a box.

| Order No. | Scale range N•m | 6242 GEDORE | Scale range lbf·ft | Scale graduation N•m | Actuation accuracy % | Square drive mm | Length mm |
|---|---|---|---|---|---|---|---|
| 0021 | 20–100 | 161.50 | 15– 75 | 0.5 | ± 3 | 9 x 12 | 398.5 |
| 0027 | 30–150 | 181.00 | 22–110 | 1.0 | ± 3 | 9 x 12 | 489.5 |
| 0031 | 40–200 | 185.00 | 30–150 | 1.0 | ± 3 | 14 x 18 | 499.5 |
| 0036 | 60–300 | 212.00 | 45–220 | 1.0 | ± 3 | 14 x 18 | 590.5 |
| 0041 | 80–400 | 314.50 (W522) | 60–300 | 1.0 | ± 3 | 14 x 18 | 677.5 |

## Torque wrench SYSTEM 6000 CT

Design: DIN EN ISO 6789, with plug connection for receiving plug-in tools.

HAZET

**6272 0005 + 0010** Supplied in a box.

6272 0005–0010

**6273** Supplied in a box.

6273 0015

**6272 0020–0040** With **optical trigger signal** (signal button). Supplied in Safe-Box.

6272 0020–0040

**6272 0045 + 0050** Supplied in Safe-Box.

6272 0045–0050

| Order No. | Scale range N•m | 6272 HAZET | 6273 HAZET | Scale graduation | Actuation accuracy % | Drive mm | Length mm |
|---|---|---|---|---|---|---|---|
| 0005 | 2– 10 | 215.00 | – | 0.2 | ± 2 | 9 x 12 | 180 |
| 0010 | 4– 40 | 234.10 | – | 0.4 | ± 2 | 9 x 12 | 240 |
| 0015 | 5– 13 | – | 220.40 | 0.2 | ± 4 | 9 x 12 | 125.4 |
| 0020 | 5– 60 | 282.30 | – | 0.5 | 2 | 9 x 12 | 305 |
| 0030 | 20–120 | 289.20 | – | 1.0 | 2 | 14 x 18 | 400 |
| 0025 | 20–120 | 282.30 | – | 1.0 | 2 | 9 x 12 | 388 |
| 0035 | 40–200 | 329.40 | – | 1.0 | 2 | 14 x 18 | 510 |
| 0040 | 60–320 | 425.70 | – | 2.0 | 2 | 14 x 18 | 620 |
| 0045 | 100–400 | 601.00 | – | 2.5 | 2 | 14 x 18 | 715 |
| 0050 | 200–500 | 957.00 (W529) | – (W529) | 2.5 | 2 | 14 x 18 | 962 |

Suitable for all wrenches with respective tool receptacle Please observe that different manufacturers use different pitches, which are aligned with there respective wenches. When using different brands of wrenches and plug-in tools, the pitch has to be checked and the setting adjusted, if necessary.

## Torque tool set

NEW

HAZET

**Design:** Tools made of chrome-vanadium steel, matt chrome plated.

| Order No. | Design | 6272 HAZET | Set contents |
|---|---|---|---|
| 1035 | 28-part | 1594.00 (W529) | 1 Torque wrench (Order no. 6272 0035) 14 x 18 mm<br>1 Reversible ratchet 1/2" (Order no. 6247 1412) 14 x 18 mm<br>13 Plug-in open-end spanners (Order no. 6243) 14 x 18 mm, 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm<br>13 Plug-in ring wrench (Order no. 6245) 14 x 18 mm, 13; 14; 15; 16; 17; 18; 19; 21; 22; 24; 27; 30; 32 mm |

## Plug-in jaw/ring wrench

HAZET

**Design:** Made of chromium-vanadium steel, chrome-plated.

**6243** Plug-in open-end wrench.

**6244** Open plug-in ring wrench.

**6245** Plug-in ring wrench.

6243

6244

6245

| Order No. | Width of keys mm | 6243 HAZET | 6244 HAZET | 6245 HAZET | Shaft mm | Spacing mm 6243 | Spacing mm 6244/6245 |
|---|---|---|---|---|---|---|---|
| 0907 | 7 | 31.80 | – | 33.65 | 9 x 12 | 17.5 | 17.5 |
| 0908 | 8 | 31.80 | – | 33.65 | 9 x 12 | 17.5 | 17.5 |
| 0909 | 9 | 31.80 | – | – | 9 x 12 | 17.5 | – |
| 0910 | 10 | 31.80 | 35.35 | 33.65 | 9 x 12 | 17.5 | 17.5 |
| 0911 | 11 | 31.80 | 35.35 | 33.65 | 9 x 12 | 17.5 | 17.5 |
| 0912 | 12 | 31.80 | 35.35 | 33.65 | 9 x 12 | 17.5 | 17.5 |
| 0913 | 13 | 31.80 | 35.35 | 33.65 | 9 x 12 | 17.5 | 17.5 |
| 0914 | 14 | 31.80 | 35.35 | 33.65 | 9 x 12 | 20.0 | 17.5 |
| 0915 | 15 | 31.80 | – | 33.65 | 9 x 12 | 20.0 | 17.5 |
| 0916 | 16 | 31.80 | 35.35 | 33.65 | 9 x 12 | 20.0 | 17.5 |
| 0917 | 17 | 31.80 | 35.35 | 33.65 | 9 x 12 | 20.0 | 17.5 |
| 0918 | 18 | 31.80 | 35.35 | 33.65 | 9 x 12 | 20.0 | 17.5 |
| 0919 | 19 | 31.80 | 35.35 | 33.65 | 9 x 12 | 20.0 | 17.5 |
| 0921 | 21 | – | – | 33.65 | 9 x 12 | – | 17.5 |
| 0922 | 22 | – | 35.35 | 33.65 | 9 x 12 | – | 17.5 |
| 1413 | 13 | 36.40 | – | 37.10 | 14 x 18 | 25.0 | 25.0 |
| 1414 | 14 | 36.40 | – | 37.10 | 14 x 18 | 25.0 | 25.0 |
| 1415 | 15 | 36.40 | – | 37.10 | 14 x 18 | 25.0 | 25.0 |
| 1416 | 16 | 36.40 | – | 37.10 | 14 x 18 | 25.0 | 25.0 |
| 1417 | 17 | 36.40 | – | 37.10 | 14 x 18 | 25.0 | 25.0 |
| 1418 | 18 | 36.40 | – | 37.10 | 14 x 18 | 25.0 | 25.0 |
| 1419 | 19 | 36.40 | – | 37.10 | 14 x 18 | 25.0 | 25.0 |
| 1421 | 21 | 43.55 | – | 44.45 | 14 x 18 | 25.0 | 25.0 |
| 1422 | 22 | 43.55 | – | 44.45 | 14 x 18 | 25.0 | 25.0 |
| 1424 | 24 | 43.55 | – | 44.45 | 14 x 18 | 25.0 | 25.0 |
| 1427 | 27 | 43.55 | – | 44.45 | 14 x 18 | 32.5 | 31.0 |
| 1430 | 30 | 53.00 | – | 50.00 | 14 x 18 | 32.5 | 31.0 |
| 1432 | 32 | 53.00 | – | 50.00 | 14 x 18 | 32.5 | 31.0 |
| 1434 | 34 | 53.00 | – | 50.00 | 14 x 18 | 32.5 | 31.0 |
| 1436 | 36 | 56.55 | – | 50.00 | 14 x 18 | 32.5 | 31.0 |
| 1441 | 41 | 58.35 (W529) | – (W529) | 50.00 (W529) | 14 x 18 | 40.0 | 31.0 |

## Plug-in ring ratchet wrench

HAZET

**Design:** Strongly bent shape, made of chrome-vanadium steel, chrome plated. 40-fold serrated, max. torque 320 N•m.

| Order No. | Width of keys mm | 6246 HAZET | Shaft mm | Spacing mm |
|---|---|---|---|---|
| 1416 | 16 | 82.35 | 14 x 18 | 36 |
| 1417 | 17 | 82.35 | 14 x 18 | 36 |
| 1418 | 18 | 83.45 | 14 x 18 | 36 |
| 1419 | 19 | 85.15 | 14 x 18 | 36 |
| 1421 | 21 | 86.35 (W529) | 14 x 18 | 36 |

## Plug-in reversible ratchet

**Design:** Made of chromium-vanadium steel, chrome-plated.

| Order No. | Square drive inch | 6247 | Tooth design | Max. torque N•m | Shaft mm | Spacing mm |
|---|---|---|---|---|---|---|
| 0914 | 1/4 | 70.40 | 20-fold | 40 | 9 x 12 | 19.5 |
| 0938 | 3/8 | 88.75 | 30-fold | 120 | 9 x 12 | 30.0 |
| 0912 | 1/2 | 91.85 | 32-fold | 120 | 9 x 12 | 38.5 |
| 1412 | 1/2 | 94.90 (W529) | 32-fold | 300 | 14 x 18 | 38.5 |

## Plug-in reversible ratchet

**Design:** Made of chromium-vanadium steel, chrome-plated. 40-fold serrated.

| Order No. | Square drive inch | 6248 | Max. torque N•m | Shaft mm | Spacing mm |
|---|---|---|---|---|---|
| 1438 | 3/8 | 89.75 | 200 | 14 x 18 | 36 |
| 1412 | 1/2 | 95.90 (W529) | 320 | 14 x 18 | 36 |

## Plug-in reversible ratchet

**Design:** Made of chromium-vanadium steel, chrome-plated. 72-fold serrated, swivel angle 5°.

| Order No. | Square drive inch | 6249 | Shaft mm | Spacing mm |
|---|---|---|---|---|
| 0914 | 1/4 | 74.35 | 9 x 12 | 17.5 |
| 0938 | 3/8 | 69.25 | 9 x 12 | 26.0 |
| 0912 | 1/2 | 73.70 | 9 x 12 | 26.0 |
| 1412 | 1/2 | 77.40 | 14 x 18 | 27.0 |
| 1434 | 3/4 | 121.10 (W529) | 14 x 18 | 44.0 |

## Input square

**Design:** Made of chromium-vanadium steel, chrome-plated.

| Order No. | Square drive inch | 6250 | Shaft mm | Spacing mm |
|---|---|---|---|---|
| 0012 | 1/2 | 32.20 | 14 x 18 | 25 |
| 0034 | 3/4 | 55.90 (W529) | 14 x 18 | 25 |

## Plug-in weld piece

**Design:** Made of chromium-vanadium steel, chrome-plated.
Delivery includes spring, pin and cover.

| Order No. | Shaft mm | 6250 | Length mm |
|---|---|---|---|
| 0912 | 9 x 12 | 26.45 | 25 |
| 1418 | 14 x 18 | 31.45 (W529) | 38 |

## Slip-on ring spanner

NEW

**Design:** Made of chromium-vanadium steel, chrome-plated.

**Note:** To operate with torque wrench Order no. 6267 0055
(after removal of plug-in reversible ratchet).

| Order No. | Width of keys mm | 6251 | Shaft mm | Length mm |
|---|---|---|---|---|
| 2132 | 32 | 108.00 | 21 | 134.0 |
| 2134 | 34 | 108.00 | 21 | 135.0 |
| 2136 | 36 | 108.00 | 21 | 136.0 |
| 2138 | 38 | 108.00 | 21 | 137.0 |
| 2141 | 41 | 108.00 | 21 | 138.5 |
| 2146 | 46 | 118.90 (W529) | 21 | 141.0 |

## GEDORE torque multiplier DREMOPLUS ALU

**Benefits:**
- Slim and light design allows comfortable and safe working also in particularly tight spots.
- Repeat accuracy, precise results
- High durability and longevity due to low-backlash planetary gear heads with ceramic PTFE coating
- Casing more than 30% lighter compared to steel casing due to high-performance aluminium
- Each torque multiplier is checked for torque range and equipped with an individual test certificate
- High-quality finish - made in Germany

**Selecting the correct reaction arm:**

**Z-Form**
Cranked shape to support on neighbouring screws, walls, machine parts or other stable resistance. Ideal where space is limited.

**L-Form**
Straight shape with adjustable reaction arm. Ideal for screw joints, provides a larger radius for the support than the Z form. Can also be supported at points that are higher than the screw plane, but this reduces the maximum permissible torque by 20%.

### Torque multiplier DREMOPLUS ALU

**Design:** Housing made of high-performance aluminium, reaction arm forged from chrome-vanadium steel for safe interception of the counter forces. High precision, single-stage planetary gearbox for high durability and exact torque transfer. The guaranteed accuracy is better than ± 3% tolerance. Square drive with bore for receiving power wrench inserts with locking pin and rubber ring.

**Application:** For controlled tightening of screws and loosening fittings with a torque wrench. Ideal for bridge, ship, aircraft, railway as well as machine and plant engineering in industry, refineries, commercial vehicles, automotive engineering and construction sites.

**Scope of delivery:** Torque multiplier with integrated reaction arm, manufacturer's test certificate, adjustment table and sturdy transport case with foam insert.

**Note:** Power screwdriver bits from 📖 6/92.

Certificate

GEDORE

6252 1300

**6252 1300** **Overload protection by means of sun gear.** If the drive is overloaded by excessive forces, the sun gear is damaged and not the entire motor. After replacing the sun gear, the torque multiplier is ready for use again.

**6252 2800 + 2801** **Overload protection by means of shearing square.** If the motor is overloaded by excessive forces, the output square turns off. The motor won't be damaged. After replacing the square drive, the torque multiplier is ready for use again.

6252 2800

| Order No. | Initial torque N•m | 6252 GEDORE | Reaction arm | Transmission ratio | Square drive inch | Square drive inch | Maximum input torque N•m | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 1300 | 250–1300 | 1282.00 | Z-Form | 1:5.0 | 1/2 | 3/4 | 270 | 1.9 |
| 2800 | 500–2800 | 2085.00 | L-Form | 1:5.5 | 3/4 | 1 | 550 | 3.4 |
| 2801 | 500–2800 | 1670.00 (W522) | Z-Form | 1:5.5 | 3/4 | 1 | 550 | 3.9 |

### Torque multiplier

**Design:** Aluminium housing, with a backstop. High precision of ± 5 %.

**Application:** For controlled tightening of screws and loosening fittings with a torque wrench. Ideal for ship, machine and plant engineering in industry and automotive engineering.

**Note:** Power screwdriver bits from 📖 6/92.

HAZET

| Order No. | Max. initial torque N•m | 6253 HAZET | Reaction arm | Transmission ratio | Square drive inch | Square drive inch | Maximum input torque N•m | Weight kg |
|---|---|---|---|---|---|---|---|---|
| 1400 | 1400 | 1084.00 | Z-Form | 1:3.5 | 3/4 | 1 | 420 | 3.77 |
| 1401 | 1400 | 1236.00 | Z-Form | 1:3.5 | 3/4 | 1 | 420 | 4.65 |
| 2801 | 2800 | 2127.00 (W529) | Z-Form | 1:11 | 3/4 | 1 | 254 | 7.26 |

## Electronic torque testing device DREMOTEST E

RS232 Certificate

GEDORE

**Design:** Robust construction with integrated torsion transducer (DMS). The tester has 4 holes for attaching. Mounting the test torque wrench occurs by means of square or hexagonal shank. In addition, the devices are equipped with square adapter (see table for sizes). First peak detection (first peak/sticking point detection), accuracy ±1 % tolerance for all readings, ±1 digit. Switches between N·m and lbf·ft. Moreover, the device has an RS232 serial interface. Delivery includes power adapter with Euro plug, operator manual in 3 languages and test certificate.

**Application:** To check or adjust clockwise direction torque wrench. Through simple operation and rugged construction suitable for workshop, industrial and quality assurance.

6254 0240

6254 0100–0200

| Order No. | Testing range N·m | 6254 GEDORE | Testing range lbf ft | Width of keys mm | Wrench size inch | Square adapter inch | Weight kg |
|---|---|---|---|---|---|---|---|
| 0100 | 0.9– 55 | 970.50 | 0.7– 40.6 | 10 | 3/8 | 1/4 and 3/8 | 3.0 |
| 0150 | 9.0– 320 | 970.50 | 7.0– 236.0 | 17 | – | 3/8 and 1/2 | 3.0 |
| 0200 | 90.0–1100 | 1360.00 | 66.0– 811.0 | 36 | – | 1/2 and 3/4 | 10.0 |
| 0240 | 500.0–3150 | 2054.00 (W522) | 369.0–2323.0 | 40 | 1.1/2 | 1 | 26.0 |

## Electronic torque testing device 7900 E

RS232 Certificate

HAZET

**Design:** Robust construction, with 4 holes for attaching. Mounting the test torque wrench occurs by means of square or hexagonal shank. In addition, the devices are equipped with square adapter (see table for sizes). With 3 application modes - concurrent display (track), inflection point detection (first peak) and peak indicator (final peak), accuracy ± 1% tolerance for all readings. Large LED display with 3 LEDs for easily recognizable status indication. Switches between N·m, lbf·ft and lbf·in. In addition, the device has a serial RS 232 interface Delivery in plastic case including power supply unit with Euro plug, RS-232C connection cable, operator manual and test certificate.

**Application:** To check or adjust clockwise direction torque wrench. Through simple operation and rugged construction suitable for workshop, industrial and quality assurance.

6269 0025

6269 0350

6269 1000

| Order No. | Testing range N·m | 6269 HAZET | Width of keys | Wrench size inch | Square adapter inch | Weight kg |
|---|---|---|---|---|---|---|
| 0025 | 1– 25 | 1233.00 | – | 1/4 | 1/4 and 3/8 | 3.28 |
| 0350 | 10– 350 | 1230.00 | – | 1/2 | – | 3.28 |
| 1000 | 100–1000 | 1720.00 (W529) | 27 | – | – | 3.28 |

## Slot screwdriver with wooden handle

**Design:** Made of high-alloy special steel. Round, solid blade with hexagon wrench for strengthening with open jawed or ring spanners and special coating for more torque and fit. Handle made of beech wood and leather cap to protect against chipping from hammer blows.

format professional quality

| Order No. | Blade width mm | 6260 format | Blade thickness mm | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|---|
| 0035 | 3.5 | 1.93 | 0.6 | 75 | 170 | 6 |
| 0045 | 4.5 | 2.05 | 0.8 | 90 | 185 | 6 |
| 0055 | 5.5 | 2.50 | 1.0 | 100 | 200 | 8 |
| 0070 | 7.0 | 2.91 | 1.2 | 125 | 235 | 10 |
| 0090 | 9.0 | 3.78 | 1.4 | 150 | 270 | 12 |
| 0100 | 10.0 | 4.45 | 1.6 | 175 | 300 | 12 |
| 0120 | 12.0 | 5.90 | 2.0 | 200 | 330 | 13 |
| 0140 | 14.0 | 7.55 | 2.5 | 250 | 390 | 17 |
| | | (W542) | | | | |

## Slot screwdriver with impact cap

**For screwing, chiseling and stemming.**
**Design:** Made of high-alloy special steel with solid hexagon blade and hexagon wrench for strengthening with open jawed or ring spanners.

**Application:** For the hard screwdriver bit, to loosen and remove screw clamps and use as a chisel for opening wall slots.

**6261** With special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft zones, anti-roll protection and **impact cap.**

6261 format professional quality

**6264** **Screw chisel**
Blade with Black Point coating for more torque and fit, high corrosion protection. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip, roll-off protection and **impact cap.** From blade width 12 mm with Kraftform handle without soft areas.

6264 Wera

| Order No. | Blade width mm | 6261 format | 6264 Wera | Blade thickness mm | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|---|---|
| 0035 | 3.5* | 4.11 | 4.54 | 0.6 | 80 | 161 | 4 |
| 0045 | 4.5 | 4.59 | 5.20 | 0.8 | 90 | 188 | 5 + 8 |
| 0055 | 5.5 | 5.75 | 6.85 | 1.0 | 100 | 205 | 6 + 10 |
| 0070 | 7.0 | 6.80 | 8.35 | 1.2 | 125 | 230 | 6 + 10 |
| 0090 | 9.0 | – | 11.10 | 1.6 | 150 | 262 | 8 + 13 |
| 0100 | 10.0 | – | 13.65 | 1.6 | 175 | 287 | 8 + 13 |
| 0120 | 12.0 | – | 17.80 | 2.0 | 200 | 317 | 10 + 16 |
| 0140 | 14.0 | – | 22.70 | 2.5 | 250 | 367 | 10 + 16 |
| | | (W542) | (W543) | | | | |

* Without impact cap.

## Slot carburetor screwdriver

**Design:** Made of high-alloy special steel. Round blade with specially coated surface. Plastic handle with roll-off protection.

format professional quality

| Order No. | Blade width mm | 6268 format | Blade thickness mm | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0040 | 4.0 | 2.93 | 0.8 | 25 | 79 |
| 0055 | 5.5 | 3.14 | 1.0 | 25 | 79 |
| 0065 | 6.5 | 4.03 | 1.2 | 25 | 79 |
| | | (W542) | | | |

## Slot screwdriver

**Design:** With high-alloy special steel **round electrician blade.** In addition, the screwdriver head is embossed with output symbol and size.

**6266** Blade coated with special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6270** Blade with **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

Lasertip

| Order No. | Blade width mm | 6266 format | 6270 Wera | Blade thickness mm | Blade length mm 6266 | Blade length mm 6270 | Total length mm 6266 | Total length mm 6270 |
|---|---|---|---|---|---|---|---|---|
| 0015 | 2.0 | – | 2.28 * | 0.4 | – | 60 | – | 130 |
| 0020 | 2.5 | – | 2.28 * | 0.4 | – | 60 | – | 130 |
| 0025 | 2.5 | 1.89 | 2.35 * | 0.4 | 75 | 75 | 159 | 145 |
| 0030 | 3.0 | 1.91 | 2.76 * | 0.5 | 75 | 80 | 159 | 161 |
| 0032 | 3.0 | – | 3.50 * | 0.5 | – | 150 | – | 248 |
| 0034 | 3.0 | – | 4.11 * | 0.5 | – | 200 | – | 281 |
| 0035 | 3.5 | 2.07 | 3.07 | 0.6 | 125 | 100 | 209 | 181 |
| 0037 | 3.5 | – | 3.29 | 0.6 | – | 125 | – | – |
| 0038 | 3.5 | – | 5.05 | 0.6 | – | 200 | – | 281 |
| 0040 | 4.0 | 2.35 | 3.48 | 0.8 | 100 | 100 | 184 | 198 |
| 0041 | 4.0 | – | 4.55 | 0.8 | – | 150 | – | 248 |
| 0045 | 4.0 | – | 5.65 | 0.8 | – | 200 | – | 298 |
| 0048 | 4.0 | – | 7.45 | 0.8 | – | 300 | – | 398 |
| 0050 | 5.0 | – | 4.66 | 0.8 | – | 100 | – | 198 |
| 0056 | 5.5 | 2.47 | – | 1.0 | 125 | – | 198 | – |
| 0055 | 5.5 | – | 5.45 | 1.0 | – | 125 | – | 223 |
| 0058 | 5.5 | – | 6.25 | 1.0 | – | 150 | – | 248 |
| 0060 | 5.5 | – | 6.65 | 1.0 | – | 200 | – | 298 |
| 0063 | 5.5 | – | 8.45 | 1.0 | – | 300 | – | 398 |
| 0064 | 6.0 | – | 6.75 | 1.0 | – | 125 | – | 223 |
| 0066 | 6.0 | – | 5.50 | 1.2 | – | 100 | – | 198 |
| 0065 | 6.5 | – | 7.50 | 1.2 | – | 150 | – | 255 |
| 0068 | 6.5 | – | 7.40 | 1.2 | – | 200 | – | 298 |
| 0080 | 8.0 | – | 8.80 | 1.2 | – | 175 | – | 287 |
| 0090 | 8.0 | – | 8.30 | 1.6 | – | 175 | – | 287 |
| 0100 | 10.0 | – | 10.50 | 1.6 | – | 200 | – | 312 |
| 0120 | 12.0 | – | 14.25 | 2.0 | – | 250 | – | 367 |
| | | (W542) | (W543) | | | | | |

* Without laser tip.

## Slot screwdriver

**Design:** Made of high-alloy special steel with **hexagon workshop blade** and hexagon wrench for strengthening with open jawed or ring spanners. In addition, the screwdrivers have a head embossing with output symbol and size.

**6265** Blade coated with special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6275** Blade with **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

Lasertip

| Order No. | Blade width mm | 6265 format | 6275 Wera | Blade thickness mm | Blade length mm 6265 | Blade length mm 6275 | Total length mm 6265 | Total length mm 6275 | Hexagonal mm |
|---|---|---|---|---|---|---|---|---|---|
| 0035 | 3.5* | 2.56 | 4.02 | 0.6 | 75 | 75 | 156 | 156 | 4 |
| 0045 | 4.5 | 2.95 | 4.84 | 0.8 | 90 | 90 | 188 | 188 | 5 + 8 |
| 0055 | 5.5 | 3.22 | 6.15 | 1.0 | 100 | 100 | 198 | 198 | 5 + 8 |
| 0060 | 6.5 | – | 7.50 | 1.2 | – | 125 | – | 230 | 6 + 10 |
| 0070 | 7.0 | 3.89 | 10.70 | 1.2 | 130 | 125 | 233 | 230 | 6 + 10 |
| 0090 | 9.0 | 4.11 | – | 1.6 | 160 | – | 258 | – | 8 + 13 |
| 0091 | 9.0 | – | 10.10 | 1.6 | – | 150 | – | 262 | 8 + 13 |
| 0100 | 10.0 | 5.70 | 11.25 | 1.6 | 185 | 175 | 283 | 287 | 8 + 13 |
| 0120 | 12.0 | 9.10 | – | 2.0 | 200 | – | 308 | – | 10 + 13 |
| | | (W542) | (W543) | | | | | | |

* Without hexagon wrench.

## Stainless steel tool (Stainless) for rust prevention

What is rust?

If stainless steel parts (e.g. screws) are machined with a normal tool, this tool leaves behind steel particles that firmly adhere to the stainless steel. These steel particles can rust only in combination with oxygen and thus produce unsightly rust on the actually non-rusting stainless steel.

How is rust prevented?

Through the use of tools, which are also made of stainless steel and are used solely for the processing of stainless steel parts. Due to the vacuum ice-hardening, these tools have the necessary hardness and strength, also use without restrictions is possible.

## Stainless slot screwdriver

**Design: Made of stainless steel.** Round blade, tough (54 HRC), with **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. Due to **vacuum ice-hardening** the blade has a hardness requirement comparable to that of conventional tools and is therefore **100% workshop fit and wear-resistant.** With 3-component Kraftform-Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossing with output symbol and size.

**Application:** Special product for preventing rust in the processing of stainless steel screws.

INOX Lasertip

| Order No. | Blade width mm | 6277 Wera | Blade thickness mm | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0030 | 3.0 | 5.25 * | 0.5 | 80 | 161 |
| 0035 | 3.5 | 5.50 | 0.6 | 100 | 181 |
| 0040 | 4.0 | 5.80 | 0.8 | 100 | 198 |
| 0055 | 5.5 | 7.70 | 1.0 | 125 | 223 |
| 0065 | 6.5 | 9.40 | 1.2 | 150 | 255 |
| 0080 | 8.0 | 12.40 | 1.2 | 175 | 287 |
| | | (W584) | | | |

* Without laser tip.

## VDE slot screwdriver

**Design:** Made of high-alloy special steel. With round, insulated blade **Handle and blade insulated to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.** In addition, the screwdriver head is embossed with output symbol and size.

1000 V

**6278** Special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6282** With **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

Lasertip

**6281** **Reduced blade diameter** for turning deep screws and spring clips. With 3-component Kraftform Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection.

| Order No. | Blade width mm | 6278 format | 6282 Wera | 6281 Wera | Blade thickness mm | Blade length mm | Total length mm 6278 | Total length mm 6282/6281 |
|---|---|---|---|---|---|---|---|---|
| 0025 | 2.5 | 2.20 | 4.05 * | – | 0.4 | 80 | 161 | 161 |
| 0030 | 3.0 | 2.23 | 4.16 * | – | 0.5 | 100 | 181 | 181 |
| 0035 | 3.5 | 2.38 | 4.40 | 6.60 | 0.6 | 100 | 181 | 181 |
| 0040 | 4.0 | 2.87 | 5.25 | 7.85 | 0.8 | 100 | 198 | 198 |
| 0045 | 4.0 | – | 6.00 | – | 0.8 | 150 | – | 248 |
| 0055 | 5.5 | 3.32 | 5.85 | 8.90 | 1.0 | 125 | 223 | 223 |
| 0060 | 5.5 | – | 6.50 | – | 1.0 | 200 | – | 298 |
| 0065 | 6.5 | 4.20 | 7.90 | – | 1.2 | 150 | 248 | 255 |
| 0070 | 6.5 | – | 8.70 | – | 1.2 | 200 | – | 305 |
| 0080 | 8.0 | 5.65 | 8.65 | – | 1.2 | 175 | 283 | 287 |
| 0081 | 8.0 | – | 8.65 | – | 1.6 | 200 | – | 312 |
| 0100 | 10.0 | – | 10.95 | – | 1.6 | 200 | – | 312 |
| | | (W542) | (W543) | (W543) | | | | |

* Without laser tip.

## Philips screwdriver with wooden handle

**Design:** Made of high-alloy special steel. Round, solid blade with hexagon wrench for strengthening with open jawed or ring spanners and special coating for more torque and fit. Handle made of beech wood and leather cap to protect against chipping from hammer blows.

| Order No. | Size | 6292 format | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|
| 0001 | PH 1 | 2.54 | 80 | 175 | 6 |
| 0002 | PH 2 | 3.22 (W542) | 100 | 210 | 10 |

| Order No. | Size | 6292 format | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|
| 0003 | PH 3 | 4.48 | 150 | 270 | 12 |
| 0004 | PH 4 | 8.15 (W542) | 200 | 340 | 17 |

## VDE Phillips screwdriver Phillips with screw chisel

**For screwing, chiseling and stemming.**

**Design:** Made of high-alloy special steel with solid hexagon blade and hexagon wrench for strengthening with open jawed or ring spanners.

**Application:** For the hard screwdriver bit, to loosen and remove screw clamps and use as a chisel for opening wall slots.

**6285** With special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft zones, anti-roll protection and **impact cap.**

**6286** **Screw chisel**
Blade with Black Point coating for more torque and fit. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip, roll-off protection and **impact cap.**

| Order No. | Size | 6285 format | 6286 Wera | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|---|
| 0001 | PH 1 | 4.84 | 5.65 | 80 | 178 | 5 + 8 |
| 0002 | PH 2 | 6.50 | 8.05 | 100 | 205 | 6 + 10 |
| 0003 | PH 3 | – | 12.10 | 150 | 262 | 8 + 13 |
| 0004 | PH 4* | – (W542) | 17.60 (W543) | 200 | 317 | 10 + 16 |

* Kraftform handle without soft areas.

## Phillips carburetor screwdriver Phillips

**Design:** Made of high-alloy special steel. Round blade with specially coated surface. Plastic handle with roll-off protection.

| Order No. | Size | 6290 format | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0001 | PH 01 | 2.40 | 25 | 79 |
| 0002 | PH 02 | 2.62 (W542) | 25 | 79 |

## Phillips screwdriver

**Design:** Made of high-alloy special steel. With **round blade.** In addition, the screwdriver head is embossed with output symbol and size.

**6300** With special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6304** With **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

Lasertip

| Order No. | Size | 6300 format | 6304 Wera | Blade length mm | Total length mm 6300 | Total length mm 6304 |
|---|---|---|---|---|---|---|
| 0000 | PH 0 | 2.40 | 3.78 * | 60 | 154 | 141 |
| 0005 | PH 0 | – | 3.93 * | 100 | – | 181 |
| 0001 | PH 1 | 2.53 | 4.84 | 80 | 164 | 178 |
| 0010 | PH 1 | – (W542) | 6.70 * (W543) | 300 | – | 398 |

| Order No. | Size | 6300 format | 6304 Wera | Blade length mm | Total length mm 6300 | Total length mm 6304 |
|---|---|---|---|---|---|---|
| 0002 | PH 2 | 3.23 | 6.50 | 100 | 198 | 205 |
| 0020 | PH 2 | – | 8.90 * | 300 | – | 398 |
| 0003 | PH 3 | 4.07 (W542) | 9.60 (W543) | 150 | 258 | 262 |

* Without laser tip.

## Phillips screwdriver

**Design:** Made of high-alloy special steel with **hexagon blade** from size PH 1 additionally with hexagon wrench for strengthening with open jawed or ring spanners. In addition, the screwdrivers have a head embossed with output symbol and size.

**6301** With special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6325** With **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

| Order No. | Size | 6301 format | 6325 Wera | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|---|
| 0000 | PH 0 | – | 4.56 * | 60 | 141 | 4 |
| 0001 | PH 1 | 4.42 | 5.70 | 80 | 178 | 5 + 8 |
| 0002 | PH 2 | 5.75 | 8.40 | 100 | 205 | 6 + 10 |
| 0003 | PH 3 | 9.40 (W542) | 12.05 (W543) | 150 | 262 | 8 + 13 |

* Without laser tip.

## Phillips screwdriver Phillips Stainless

**Design: Made of stainless steel.** Round blade, tough (54 HRC), with **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. Due to **vacuum ice-hardening** the blade has a hardness requirement comparable to that of conventional tools and is therefore **100% workshop fit and wear-resistant.** With 3-component Kraftform-Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossing with output symbol and size.

**Application:** Special product for preventing rust in the processing of stainless steel screws.

| Order No. | Size | 6327 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0000 | PH 0 | 5.60 * | 60 | 141 |
| 0001 | PH 1 | 6.50 (W584) | 80 | 178 |

| Order No. | Size | 6327 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0002 | PH 2 | 8.70 (W584) | 100 | 205 |

* Without laser tip.

## VDE Phillips screwdriver Phillips

**Design:** Made of high-alloy special steel with round, insulated blade. **Handle and blade insulated to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.** In addition, the screwdriver head is embossed with output symbol and size.

**6328** With special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6332** With **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

**6326** **Reduced blade diameter** for turning deep screws and spring clips. With integrated insulation. With 3-component Kraftform-Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection.

| Order No. | Size | 6328 format | 6332 Wera | 6326 Wera | Blade length mm | Total length mm 6328 | Total length mm 6332/6326 |
|---|---|---|---|---|---|---|---|
| 0000 | PH 0 | 2.60 | 4.79 * | – | 80 | 161 | 161 |
| 0001 | PH 1 | 2.84 | 5.70 | 8.40 | 80 | 178 | 178 |
| 0002 | PH 2 | 3.57 | 8.00 | 11.75 | 100 | 198 | 205 |
| 0003 | PH 3 | 5.20 (W542) | 10.20 (W543) | – (W543) | 150 | 262 | 262 |

* Without laser tip.

## VDE PlusMinus screwdriver Phillips/slot

**Design: Combination profile Phillips/slot.** Made of high-alloy special steel. Round, insulated blade **Handle and blade insulated to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.** In addition, the screwdriver head is embossed with output symbol and size.

1000 V

**Application:** Specially designed for use with terminal blocks, fuse boxes, switches, relays, etc.

**6333** With multi-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection.

6333

**6334** Reduced blade diameter for turning deep screws and spring clips. With integrated insulation. With multi-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection.

6334

| Order No. | Size | 6333 Wera | 6334 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0001 | PH/S 1 | 8.15 | 11.85 | 80 | 178 |
| 0002 | PH/S 2 | 10.40 (W543) | – (W543) | 100 | 205 |

## Phillips screwdriver Pozidriv with wooden handle

**Design:** Made of high-alloy special steel. Round, solid blade with hexagon wrench for strengthening with open jawed or ring spanners and special coating for more torque and fit. Handle made of beech wood and leather cap to protect against chipping from hammer blows.

| Order No. | Size | 6330 format | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|
| 0101 | PZ 1 | 2.54 | 80 | 175 | 6 |
| 0102 | PZ 2 | 3.22 | 100 | 210 | 10 |
| 0103 | PZ 3 | 4.48 (W542) | 150 | 270 | 12 |

## Phillips screwdriver Pozidriv with impact cap (screw chisel)

**For screwing, chiseling and stemming.**

**Design:** Made of high-quality bit material, tough-hard tempered Continuous hexagon blade with hexagon wrench to help strengthen force with open-end or ring wrenches. Black Point coating for more torque and fit. With 3-component Kraftform handle, ergonomic, with integrated soft areas for better grip, hard zones for high speed, roll-off protection, **impact cap.**

**Application:** For the hard screwdriver bit, to loosen and remove screw clamps and use as a chisel for opening wall slots.

| Order No. | Größe | 6287 Wera | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|
| 0005 | PZ 1 | 5.75 | 80 | 178 | 5 + 8 |
| 0010 | PZ 2 | 8.25 | 100 | 205 | 6 + 10 |
| 0015 | PZ 3 | 12.45 (W543) | 150 | 262 | 8 + 13 |

## Phillips carburetor screwdriver Pozidriv

**Design:** Made of high-alloy special steel. Round blade with specially coated surface. Plastic handle with roll-off protection.

| Order No. | Size | 6331 format | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0001 | PZ 01 | 2.37 | 25 | 79 |
| 0002 | PZ 02 | 2.62 (W542) | 25 | 79 |

## Phillips screwdriver Pozidriv

**Design:** Made of high-alloy special steel. With **round blade.** In addition, the screwdriver head is embossed with output symbol and size.

**6336** With special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6340** With **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With multi-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection.

Lasertip

| Order No. | Size | 6336 format | 6340 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0000 | PZ 0 | 3.88 | 4.64 * | 60 | 141 |
| 0001 | PZ 1 | 2.81 | 5.65 | 80 | 178 |
| 0011 | PZ 1 | – | 6.45 | 200 | 298 |
| 0021 | PZ 1 | – | 7.00 * | 300 | 398 |
| 0002 | PZ 2 | 3.29 (W542) | 7.55 (W543) | 100 | 205 |

| Order No. | Size | 6336 format | 6340 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0022 | PZ 2 | – | 8.55 | 200 | 305 |
| 0032 | PZ 2 | – | 9.45 * | 300 | 405 |
| 0003 | PZ 3 | 4.25 | 10.45 | 150 | 262 |
| 0004 | PZ 4 | – (W542) | 13.50 * (W543) | 200 | 312 |

* Without laser tip.

## Phillips screwdriver Pozidriv

**Design:** Made of high-alloy special steel. With **hexagon wrench,** from size PZ 1 additionally with hexagon wrench for strengthening with open jawed or ring spanners. In addition, the screwdrivers have a head embossed with output symbol and size.

**6305** With special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

**6337** With **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With multi-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection.

Lasertip

| Order No. | Size | 6305 format | 6337 Wera | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|---|
| 0000 | PZ 0 | – | 5.85 * | 60 | 141 | 4 |
| 0001 | PZ 1 | 4.62 (W542) | 6.80 (W543) | 80 | 178 | 5 + 8 |

| Order No. | Size | 6305 format | 6337 Wera | Blade length mm | Total length mm | Hexagonal mm |
|---|---|---|---|---|---|---|
| 0002 | PZ 2 | 6.05 | 9.30 | 100 | 205 | 6 + 10 |
| 0003 | PZ 3 | – (W542) | 14.40 (W543) | 150 | 262 | 8 + 13 |

* Without laser tip.

## Phillips screwdriver Pozidriv Stainless

**Design: Made of stainless steel.** Round blade, tough (54 HRC), with **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. Due to **vacuum ice-hardening** the blade has a hardness requirement comparable to that of conventional tools and is therefore **100% workshop fit and wear-resistant.** With multi-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossing with output symbol and size.

**Application:** Special product for preventing rust in the processing of stainless steel screws.

INOX Lasertip

| Order No. | Size | 6341 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0000 | PZ 0 | 6.55 * | 60 | 141 |
| 0001 | PZ 1 | 7.60 (W584) | 80 | 178 |

| Order No. | Size | 6341 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0002 | PZ 2 | 10.50 | 100 | 205 |
| 0003 | PZ 3 | 16.10 (W584) | 150 | 262 |

* Without laser tip.

## VDE Phillips screwdriver Pozidriv

**Design:** Made of high-alloy special steel. With round, insulated blade. **Handle and blade insulated to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.** In addition, the screwdriver head is embossed with output symbol and size.

1000 V

**6343** Special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

6343 format professional quality

**6344** With **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

Lasertip

6344 Wera

**6346** **Reduced blade diameter** for turning deep screws and spring clips. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

6346 Wera

| Order No. | Size | 6343 format | 6344 Wera | 6346 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|---|
| 0000 | PZ 0 | – | 6.25 * | – | 60 | 161 |
| 0001 | PZ 1 | 2.73 | 5.75 | 9.65 | 80 | 178 |
| 0002 | PZ 2 | 3.44 | 8.05 | 13.80 | 100 | 205 |
| 0003 | PZ 3 | 5.10 | 9.90 | – | 150 | 262 |
| | | (W542) | (W543) | (W543) | | |

* Without laser tip.

## VDE PlusMinus screwdriver Pozidriv/slot

**Design: Combination profile Pozidriv/slot.** Made of high-alloy special steel. Round, insulated blade. **Handle and blade insulated to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/ Part 201.** In addition, the screwdriver head is embossed with output symbol and size.

1000 V

**Application:** Specially designed for use with terminal blocks, fuse boxes, switches, relays, etc.

Wera

**6345** With 3-component Kraftform-Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection.

6345

**6347** **Reduced blade diameter** for turning deep screws and spring clips. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection.

6347

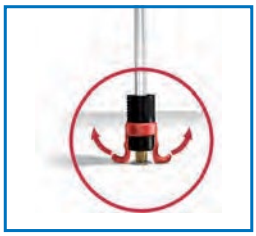
| Order No. | Size | 6345 Wera | 6347 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0001 | PZ/S 1 | 8.80 | – | 80 | 178 |
| 0002 | PZ/S 2 | 11.60 | 16.15 | 100 | 205 |
| | | (W543) | (W543) | | |

## The screw claw in practice

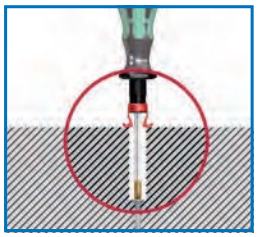
Slide claw screw to the blade until the tip emerges.

Set screw and fix the claw.

Continue pushing claw screw until the slightly spread arms touch the screw head.



The arms are spread apart on surfaces and thus release the screw again.



In deep fittings, the screw claw moves the blade up.

## Scre claw

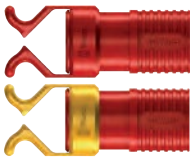
**Design:** Elastomer-plastic, with free-run sleeve for easy guide of screwdriver. Supplied in SB packaging.

**Application:** For holding screws on screwdrivers, long bits and angle wrenches, round and hexagon blade. The screw claw releases the screw automatically after the screwing process due to special geometry, yet screwing in blind holes is still easily possible.

**6877 0015** **For standard screwdriver.**

**6877 0020** **VDE claw screw set**
**For screwdrivers with insulated blade.**
Set consists of a red and a red/yellow claw screw.

6877 0015



6877 0020

| Order No. | For blades Ø mm | 6877 Wera |
|---|---|---|
| 0015 | 4.5 -6 (PH/PZ 1 + 2) | 4.65 |
| 0020 | 1 x 4.5–6 (PH/PZ 1)/1 x 6.5–8 (PH/PZ 2) | 9.25 (W543) |

## Magnetising device

**Application:** To magnetise and de-magnetise tools.

| Order No. | Dimensions L x W x H mm | 6382 Wera |
|---|---|---|
| 0006 | 48 x 48 x 20 | 7.60 (W543) |

## Awl/reamer

**Design:** Made of chrome-vanadium steel, throughout, with impact cap and wooden handle.

**6882** **Awl** with round blade.

6882

**6883** **Reamer,** with square blade.

6883

| Order No. | Blade length mm | 6882 format | 6883 format | Total length mm | Ø mm |
|---|---|---|---|---|---|
| 0005 | 105 | 4.51 | – | 195 | 6 |
| 0010 | 105 | – (W542) | 4.93 (W542) | 195 | 6 |

## Screwdriver set with wooden handle

**Design:** Made of high-alloy special steel. **Round, solid blade** with hexagon wrench for strengthening with open jawed or ring spanners and special coating for more torque and fit. Handle made of beech wood and leather cap to protect against chipping from hammer blows.

format professional quality

| Order No. | Design | 6354 format | Set contents |
|---|---|---|---|
| 0110 | 6-part | 16.55 | 4 slot screwdrivers (Order 6260) 3.5 x 75; 4.5 x 90; 5.5 x 100; 7 x 125 mm<br>2 Phillips PZ screwdrivers (Order No. 6330) 1; 2 |
| 0010 | 6-part | 16.55 | 4 slot screwdrivers (Order 6260) 3.5 x 75; 4.5 x 90; 5.5 x 100; 7 x 125 mm<br>2 Phillips screwdrivers (6292) PH 1; 2 |

(W542)

## Screwdriver set with impact cap

**Design:** Made of high-alloy special steel with solid **hexagon blade** and hexagon wrench for strengthening with open jawed or ring spanners. Blade with special coating for more torque and fit. Ergonomic 2-component Kraftform Plus handle with integrated soft areas for better grip, roll-off protection and **impact cap.**

**Application:** For the hard screwdriver bit, to loosen and remove screw clamps and use as a chisel for opening wall slots.

format professional quality

| Order No. | Design | 6354 format | Set contents |
|---|---|---|---|
| 0160 | 6-part | 29.00 | 4 slot screwdrivers (Order 6261) 3.5 x 80*; 4.5 x 90; 5.5 x 100; 7 x 125 mm<br>2 Phillips screwdrivers (6285) PH 1; 2 |

(W542) * Without impact cap.

## Screwdriver set with impact cap (chisel driver)

**For screwing, chiseling and stemming.**

Wera Be a Tool Rebel

**Design:** Made of high-quality bit material, tough-hard tempered. Solid **hexagon blade** with hexagon wrench for strengthening with open jawed or ring spanners. Black Point coating for more torque and fit. With 3-component Kraftform-Plus handle, ergonomic, with integrated soft areas for better grip, hard zones for high speed, impact cap and roll-off protection.

**Application:** For the hard screwdriver bit, to loosen and remove screw clamps and use as a chisel for opening wall slots.

**6350 0010** With impact cap.

**6350 0110** With impact cap.

**6350 0115** With impact cap and recessed square in handle.

| Order No. | Design | 6350 Wera | Set contents |
|---|---|---|---|
| 0110 | 7-part | 34.50 | 4 slot screwdrivers (Order 6264) 3.5 x 80*; 4.5 x 90; 5.5 x 100; 7 x 125 mm<br>2 Phillips PZ screwdrivers (Order No. 6287) 1; 2<br>1 rack for wall mounting |
| 0010 | 7-part | 34.50 | 4 slot screwdrivers (Order 6264) 3.5 x 80*; 4.5 x 90; 5.5 x 100; 7 x 125 mm<br>2 Phillips screwdrivers (Order no. 6286) PH 1; 2<br>1 rack for wall mounting |
| 0115 | 7-part | 43.60 | 4 Slot screwdrivers 3.5 x 80*; 4.5 x 100; 5.5 x 103; 7 x 138 mm<br>2 Phillips PH screwdrivers 1; 2<br>1 rack for wall mounting |

(W543) * Without impact cap.

## Screwdriver set

**Design:** Made of high-alloy special steel. Blade with special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

format professional quality

**6354 0121** **With round blade.**

**6354 0131** **With round blade.**

**6354 0031** **With hexagon blade.**

**6354 0036** **With hexagon blade.**

| Order No. | Design | 6354 format | Set contents |
|---|---|---|---|
| 0121 | 6-part | 17.25 | 4 slot screwdrivers (Order 6266) 2.5 x 75; 3 x 75; 4 x 100; 5.5 x 125 mm<br>2 Phillips screwdrivers (Order no. 6300) PH 1; 2 |
| 0131 | 6-part | 17.25 | 4 slot screwdrivers (Order 6266) 2.5 x 75; 3 x 75; 4 x 100; 5.5 x 125 mm<br>2 Phillips PZ screwdrivers (Order No. 6336) 1; 2 |
| 0031 | 6-part | 23.60 | 4 slot screwdrivers (Order 6265) 4.5 x 90; 5.5 x 100; 7 x 125; 8 x 150 mm<br>2 Phillips screwdrivers (Order no. 6301) PH 1; 2 |
| 0036 | 6-part | 23.60 | 4 slot screwdrivers (Order 6265) 4.5 x 90; 5.5 x 100; 7 x 125; 8 x 150 mm<br>2 Phillips PZ screwdrivers (Order No. 6305) 1; 2 |
| | | (W542) | |

## Screwdriver set

**Design:** Made of high-alloy special steel. **Round blade** with special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.

format professional quality

| Order No. | Design | 6354 format | Set contents |
|---|---|---|---|
| 0100 | 10-part | 25.50 | 1 slot screwdriver (Order No. 6266) 3 x 75 mm<br>4 slot screwdrivers* (Order 6265) 4.5 x 90; 5.5 x 100 (2 part); 7 x 130 mm<br>3 Phillips screwdrivers (Order no. 6300) PH 1; 2 (2 part)<br>2 Phillips PZ screwdrivers (Order No. 6336) 1; 2 |
| | | (W542) | * Hexagon blade. |

## Slot screwdriver set

**Design:** Made of high-alloy special steel.

**6354** **Hexagon blade** with hexagon wrench and special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.
Set consisting of screwdriver Order No. 6275. 3 x 80; 3.5 x 125 mm with round blade.

**6350** **Round blade with laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossed with output symbol and size.
Set consisting of screwdriver Order No. 6270. 3 x 80 mm without laser tip

6354 format professional quality

6350 Wera

Lasertip

| Order No. | Design | 6354 format | 6350 Wera | Set contents |
|---|---|---|---|---|
| 0090 | 7-part | 21.20 | 36.90 | 7 slot screwdrivers 3 x 80; 3.5 x 125; 4.5 x 90; 5.5 x 100; 7 x 125; 9 x 150; 10 x 175 mm |
| | | (W542) | (W543) | |

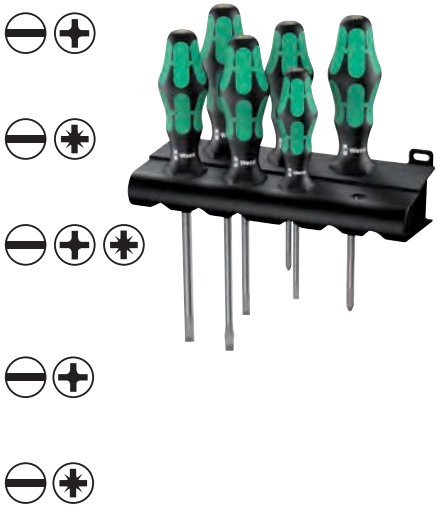
## Screwdriver set

**Design:** Made of high-alloy special steel. **Blade with laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection. In addition, the screwdrivers have a head embossing with output symbol and size.

Lasertip

Wera

| Order No. | Design | 6350 Wera | Set contents |
|---|---|---|---|
| 0020 | 7-part, round blade | 25.60 | 4 slot screwdrivers (Order 6270) 3 x 80*; 4 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips screwdrivers (6304) PH 1; 2<br>1 rack for wall mounting |
| 0030 | 7-part, round blade | 25.60 | 4 slot screwdrivers (Order 6270) 3 x 80*; 4 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips PZ screwdrivers (Order No. 6340) 1; 2<br>1 rack for wall mounting |
| 0100 | 7-part, round blade | 28.00 | 2 slot screwdrivers (Order No. 6270) 4 x 100; 5.5 x 125 mm<br>2 Phillips screwdrivers (6304) PH 1; 2<br>2 Phillips PZ screwdrivers (Order No. 6340) 1; 2<br>1 rack for wall mounting |
| 0160 | 7-part, hexagonal blade | 31.00 | 4 slot screwdrivers (Order 6275) 3.5 x 75; 4 x 90; 5.5 x 100; 6.5 x 125 mm<br>2 Phillips screwdrivers (Order no. 6325) PH 1; 2<br>1 rack for wall mounting |
| 0165 | 7-part, hexagonal blade | 31.00 | 4 slot screwdrivers (Order 6275) 3.5 x 75; 4 x 90; 5.5 x 100; 6.5 x 125 mm<br>2 Phillips PZ screwdrivers (Order No. 6337) 1; 2<br>1 rack for wall mounting |
| | | (W543) | * Without laser tip. |



## Phillips screwdriver set

**Design:** Made of high-alloy special steel.

**6354** **Round blade** with special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection.
Set consists of Phillips screwdriver PH Order No. 6300 or PZ Order No. 6336.

**6350** **Round blade with laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. With 3-component Kraftform Plus handle, ergonomic, with integrated soft areas for better grip and hexagon roll-off protection. In addition, the screwdrivers have a head embossing with output symbol and size.
Set consists of Phillips screwdriver PH Order No. 6304 or PZ Order No. 6340.

| Order No. | Design | 6354 format | 6350 Wera | Set contents |
|---|---|---|---|---|
| 0070 | 3-part | 9.95 | 19.90 | 3 Phillips PH screwdrivers 1; 2; 3 |
| 0080 | 3-part | 9.95 | 19.90 | 3 Phillips screwdrivers PZ 1; 2; 3 |
| | | (W542) | (W543) | * Without laser tip. |

## Screwdriver set Stainless

**Design: Made of stainless steel. Round blade,** tough (54 HRC), with **laser tip** and micro rough surface. This reduces the contact force and prevents the screw head from sliding out. Due to **vacuum ice-hardening** the blade has a hardness requirement comparable to that of conventional tools and is therefore **100% workshop fit and wear-resistant.** With 3-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossing with output symbol and size.

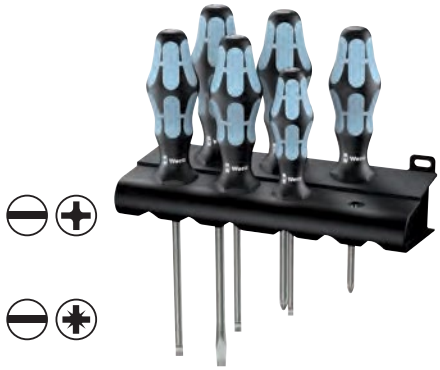
**Application:** Special product for preventing rust in the processing of stainless steel screws.

INOX

Lasertip

Wera

| Order No. | Design | 6352 Wera | Set contents |
|---|---|---|---|
| 0015 | 7-part | 37.30 | 4 slot screwdrivers (Order 6277) 3 x 80*; 4 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips PZ screwdrivers (Order No. 6341) 1; 2<br>1 rack for wall mounting |
| 0010 | 7-part | 37.30 | 4 slot screwdrivers (Order 6277) 3 x 80*; 4 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips screwdrivers (Order no. 6327) PH 1; 2<br>1 rack for wall mounting |
| | | (W584) | * Without laser tip. |



## VDE screwdriver set

**Design:** Made of high-alloy special steel. **Round, insulated blade** with special coating for more torque and fit. With 2-component handle, ergonomic, with integrated soft areas and roll-off protection. **Handle and blade insulated to 1000 V, according to IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

1000 V

format professional quality

| Order No. | Design | 6354 format | Set contents |
|---|---|---|---|
| 0040 | 6-part | 18.70 | 4 slot screwdrivers (Order 6278) 2.5 x 80; 3 x 100; 3.5 x 100; 4 x 100 mm<br>2 Phillips screwdrivers (Order no. 6328) PH 0; 1 |
| 0050 | 6-part | 22.60 | 3 slot screwdrivers (Order No. 6278) 4 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips screwdrivers (Order no. 6238) PH 1; 2<br>1 voltage tester, single pole |
| 0055 | 6-part | 23.20 | 3 slot screwdrivers (Order No. 6278) 4 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips PZ screwdrivers (Order No. 6343) 1; 2<br>1 voltage tester, single pole |

(W542)

## VDE screwdriver set

**Design:** Made of high-alloy special steel. With 3-component Kraftform Plus handle, ergonomic, with integrated soft zones for better grip, hard zones for high speed and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossed with output symbol and size.

1000 V

Wera

**6350 0140** **Round blade with laser tip** and micro rough surface.

**6350 0150** **Round blade with laser tip** and micro rough surface.

**6350 0170** **Round blade with reduced blade diameter** for turning deep screws and spring clip.

| Order No. | Design | 6350 Wera | Set contents |
|---|---|---|---|
| 0140 | 8-part | 33.10 | 4 slot screwdrivers (Order 6282) 2.5 x 80* mm, 3.5 x 100; 4 x 100; 5.5 x 125 mm<br>2 Phillips screwdrivers (Order no. 6332) PH 1; 2<br>1 voltage tester, single pole<br>1 rack for wall mounting |
| 0150 | 8-part | 33.10 | 4 slot screwdrivers (Order 6282) 2.5 x 80* mm, 3.5 x 100; 4 x 100; 5.5 x 125 mm<br>2 Phillips PZ screwdrivers (Order No. 6344) 1; 2<br>1 voltage tester, single pole<br>1 rack for wall mounting |
| 0170 | 8-part | 40.20 | 3 slot screwdrivers (Order No. 6281) 3.5 x 100; 4 x 100; 5.5 x 125 mm<br>2 Phillips screwdrivers (Order no. 6326) PH 1; 2<br>1 PlusMinus screwdrivers (Order No. 6347) PZ/S 2<br>1 voltage tester, single pole<br>1 rack for wall mounting |

(W543)

* Without laser tip.

6350 0140

Lasertip

6350 0170

## Screwdriver set XXL

**Design:** Comprehensive set with the most common profiles and sizes. Made of high-alloy steel. With 3-component Kraftform Plus handle, ergonomic, with integrated soft zones for a better grip and hexagonal anti-roll protection. In addition, the screwdrivers have a head embossing with output symbol and size.

1000 V

Lasertip

Wera

| Order No. | Design | 6350 Wera | Set contents |
|---|---|---|---|
| 0175 | 14-part | 45.80 | 2 slot screwdrivers with impact cap (Order No. 6264) 5.5 x 100; 7.0 x 125 mm<br>3 slot screwdrivers (Order No. 6270) 4.0 x 100; 5.5 x 125; 6.5 x 150 mm<br>2 Phillips screwdrivers (6304) PH 1; 2<br>2 Phillips PZ screwdrivers (Order No. 6340) 1; 2<br>2 VDE slot screwdrivers (Order No. 6282) 2.5 x 80; 3.5 x 100 mm<br>1 voltage tester, single pole<br>2 racks for wall mounting |

(W543)

## VDE hand holder for interchangeable blades

**Design:** 3-component Kraftform handle with integrated soft areas for better grip and roll-off protection, **insulated to 1000 V according to IEC 60900, EN 60900, VDE 0682/part 201, individually tested at 10000 V.**

**Application:** Adapter for interchangeable blades.

1000 V

| Order No. | Length mm | 6355 Wera |
|---|---|---|
| 0010 | 102 | 15.05 (W543) |

## VDE interchangeable blade

**6355** **For slot screws.**
**0100–0125**

| Order No. | Blade width mm | 6355 Wera | Blade thickness mm | Blade length mm |
|---|---|---|---|---|
| 0100 | 2.5 | 2.34 | 0.4 | 154 |
| 0105 | 3.0 | 2.47 | 0.5 | 154 |
| 0110 | 3.5 | 2.56 | 0.6 | 154 |
| 0115 | 4.0 | 3.06 | 0.8 | 154 |
| 0120 | 5.5 | 3.15 | 1.0 | 154 |
| 0125 | 6.5 | 4.71 (W543) | 1.2 | 154 |

**6355** **For Phillips screws.**
**0130 + 0135**

| Order No. | Size | 6355 Wera | Blade length mm |
|---|---|---|---|
| 0130 | PH 1 | 2.66 | 154 |
| 0135 | PH 2 | 3.63 (W543) | 154 |

**6355** **For Pozidriv Phillips screws.** (W543)
**0140 + 0145**

| Order No. | Size | 6355 Wera | Blade length mm |
|---|---|---|---|
| 0140 | PZ 1 | 3.17 | 154 |
| 0145 | PZ 2 | 4.35 (W543) | 154 |

**6355** **For recessed TORX®-head screws.**
**0152–0170**

| Order No. | Size | 6355 Wera | Blade length mm |
|---|---|---|---|
| 0152 | T 9 | 3.48 | 154 |
| 0155 | T 10 | 3.42 | 154 |
| 0160 | T 15 | 3.42 | 154 |
| 0165 | T 20 | 3.53 | 154 |
| 0170 | T 25 | 3.63 (W543) | 154 |

**6355** **For outer square screws.**
**0180 + 0190**

| Order No. | Width of keys mm | 6355 Wera | Blade length mm |
|---|---|---|---|
| 0180 | 6.3 (1/4") | 4.43 | 89 |
| 0190 | 8.1 | 4.43 (W543) | 89 |

**6355** **For protruding triangle screws.**
**0200**

| Order No. | Width of keys mm | 6355 Wera | Blade length mm |
|---|---|---|---|
| 0200 | 9 | 4.43 (W543) | 89 |

**6355** **For double-ended bit screws**
**0210**

| Order No. | Width of keys mm | 6355 Wera | Blade length mm |
|---|---|---|---|
| 0210 | 14 | 4.43 (W543) | 89 |

## VDE Kraftform Kompakt interchangeable blade set

**Design:** Blade burnished and insulated. With 3-component Kraftform handle with integrated soft areas for better grip, hard zones for high speed and roll-off protection, **isolated to 1000 V according to IEC 60900, EN 60900, VDE 0682/part 201, individually tested at 10000 V. Supplied in convenient belt pouch.**

VDE 1000 V

| Order No. | Design | 6355 Wera | Set contents |
|---|---|---|---|
| 0000 | 16-part | 56.50 | 1 hand holder<br>blades:<br>4 x slot 2.5 x 0.4; 3.5 x 0.6; 4.0 x 0.8; 5.5 x 1.0 mm<br>2 x Phillips PH 1; 2<br>2 x Phillips PZ 1; 2<br>2 x PlusMinus PZ/S 1; 2<br>4 x recessed TORX® T 10; 15; 20; 25<br>1 voltage tester |
| 0005 | 18-part | 65.30 | 1 hand holder<br>blades:<br>4 x slot 2.5 x 0.4; 3.5 x 0.6; 4.0 x 0.8; 5.5 x 1.0 mm<br>2 x Phillips PH 1; 2<br>2 x Phillips PZ 1; 2<br>2 x PlusMinus PH/S 1; 2<br>2 x PlusMinus PZ/S 1; 2<br>2 x protruding square 6.3; 8.1 mm<br>1 x protruding triangle<br>1 x double ended head<br>1 voltage tester |

(W543)

6355 0000

6355 0005

## Offset screwdriver for slot screws

**Design:** Blade made of high-alloy special steel, nicromatt, with 90° and 180° twisted tips and black laser and black plastic handle (polypropylene).

| Order No. | Blade width mm | 6360 Wera | Total length mm |
|---|---|---|---|
| 4040 | 4 + 4 | 4.55 | 100 |
| 5555 | 5.5 + 5.5 | 5.35 | 125 |
| 8080 | 8 + 84 + 48 + 8 | 6.65 | 150 |

(W543)

## Offset screwdriver for Phillips screws Phillips

**Design:** Blade made of high-alloy special steel, nicromatt, with black plastic handle (polypropylene).

| Order No. | Size | 6362 Wera | Total length mm |
|---|---|---|---|
| 0102 | PH 1 + 2 | 5.15 | 125 |

(W543)

## Offset screwdriver for Pozidriv Phillips screws

**Design:** Blade made of high-alloy special steel, BlackLaser and black plastic handle (polypropylene).

| Order No. | Size | 6363 Wera | Total length mm |
|---|---|---|---|
| 0102 | PZ 1 + 2 | 6.25 | 125 |

(W543)

Lasertip

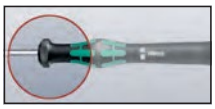
## Electronic screwdriver

**Design:** With round, chromed blade made of high-alloy special steel and Black Point tip for more torque and fit. Has 2 component Kraftform Micro handle with integrated soft areas, roll-off protection and rotating cap for lightning quick twirl. With **three mode concept** (precision, power and quick turn zone) for ergonomically better handling.

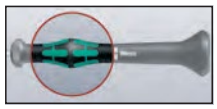
**Application:** Suitable for accurate, efficient and time-saving screwing. Ideal for sensitive adjustments, e.g. in electronic sector.

**Note:** For ESD protected electrician's screwdrivers see from 6/134.

Wera



Precision mode



Power mode

Quick turn mode

## Electronic slot screwdriver

| Order No. | Blade width mm | 6366 Wera | Blade thickness mm | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0008 | 0.8 | 4.14 | 0.16 | 40 | 137 |
| 0010 | 1.0 | 3.70 | 0.18 | 40 | 137 |
| 0012 | 1.2 | 3.39 | 0.25 | 40 | 137 |
| 0015 | 1.5 | 3.13 | 0.23 | 40 | 137 |
| 0018 | 1.8 | 3.13 | 0.30 | 60 | 157 |
| 0020 | 2.0 | 2.79 (W543) | 0.40 | 60 | 157 |
| 0021 | 2.0 | 2.74 | 0.40 | 100 | 217 |
| 0025 | 2.5 | 2.79 | 0.40 | 80 | 177 |
| 0030 | 3.0 | 2.84 | 0.50 | 80 | 177 |
| 0035 | 3.5 | 2.76 | 0.60 | 80 | 177 |
| 0040 | 4.0 | 3.12 (W543) | 0.80 | 80 | 177 |

## Electronic Phillips screwdriver Phillips

| Order No. | Size | 6368 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0005 | PH 00 | 3.72 | 60 | 157 |
| 0010 | PH 0 | 3.06 (W543) | 60 | 157 |
| 0015 | PH 1 | 3.40 (W543) | 80 | 177 |

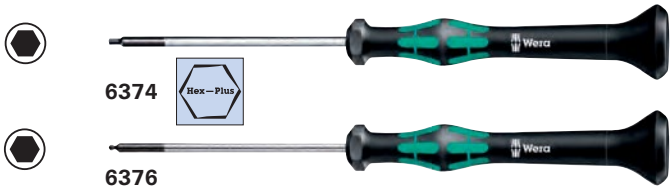
## Electronic Phillips screwdriver Pozidriv

| Order No. | Size | 6370 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0000 | PZ 0 | 3.26 | 60 | 157 |
| 0001 | PZ 1 | 3.68 (W543) | 80 | 177 |

## Electronic Allen screwdriver

**6374** With Hex-Plus geometry, therefore 20% more static torque and protection of the Allen screw.

**6376** **With ball** head allows a greater holding force of the screw when working at an angle of 20°.




| Order No. | Width of keys mm | 6374 Wera | 6376 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0007 | 0.7 | 4.33 | – | 40 | 137 |
| 0009 | 0.9 | 3.69 | – | 40 | 137 |
| 0013 | 1.3 | 3.23 | – | 40 | 137 |
| 0015 | 1.5 | 3.10 (W543) | 4.70 (W543) | 60 | 157 |
| 0020 | 2.0 | 2.85 | 4.28 | 60 | 157 |
| 0025 | 2.5 | 2.85 | 4.00 | 60 | 157 |
| 0030 | 3.0 | 2.62 (W543) | 3.88 (W543) | 60 | 157 |

## Electronic recessed TORX® screwdriver

**6372** Up to size T 6 without hole, **from size T 7 with hole.**

**6373** With holding function.

| Order No. | Size | 6372 Wera | 6373 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0001 | T 1 | 5.30 | – | 40 | 137 |
| 0002 | T 2 | 5.30 | – | 40 | 137 |
| 0003 | T 3 | 5.30 | – | 40 | 137 |
| 0004 | T 4 | 5.30 | – | 40 | 137 |
| 0005 | T 5 | 5.10 | – | 40 | 137 |
| 0006 | T 6 | 4.28 (W543) | – (W543) | 40 | 137 |
| 0007 | T 7 | 4.51 * | – | 60 | 157 |
| 0008 | T 8 | 4.51 * | 4.45 | 60 | 157 |
| 0009 | T 9 | 4.59 * | 4.64 | 60 | 157 |
| 0010 | T 10 | 4.59 * | 4.64 | 60 | 157 |
| 0015 | T 15 | 4.86 * | – | 60 | 157 |
| 0020 | T 20 | 4.86 * (W543) | – (W543) | 60 | 157 |

* With hole

## Electronic hexagon head screwdriver

| Order No. | Width of keys mm | 6378 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0020 | 2.0 | 5.95 | 60 | 157 |
| 0025 | 2.5 | 5.20 | 60 | 157 |
| 0030 | 3.0 | 5.20 | 60 | 157 |
| 0032 | 3.2 | 5.20 | 60 | 157 |
| 0035 | 3.5 | 5.55 | 60 | 157 |
| 0040 | 4.0 | 5.55 | 60 | 157 |
| 0045 | 4.5 | 5.80 | 60 | 157 |
| 0050 | 5.0 | 5.80 | 60 | 157 |
| 0055 | 5.5 | 5.80 | 60 | 157 |
| | | (W543) | | |

## Electronic lifter

**Application:** To lift off firmly fitting electronic components on circuit boards. Also suitable to position small screws.

| Order No. | Blade width mm | 6379 Wera |
|---|---|---|
| 0005 | 3.5 x 1 | 4.81 |
| | | (W543) |

## Electronic screwdriver set

**Design:** Blade made of high quality steel, with 2-component handle with rotating cap for fast, twirling work. Supplied in plastic case.

| Order No. | Design | 6351 format | Set contents |
|---|---|---|---|
| 0700 | 7-part | 18.35 | 4 slot screwdrivers 1.6; 2; 2.4; 3 mm<br>3 Phillips PH screwdrivers 00; 0; 1 |
| 0705 | 7-part | 19.10 | 7 recessed screwdrivers-TORX® T 6; 7; 8; 9; 10; 15; 20 |
| | | (W542) | |

6351 0700

6351 0705
NEW

## Electronic screwdriver set

6380 0005

6381 0005

6381 0010

| Order No. | Design | 6380 Wera | 6381 Wera | Set contents 6380 | Set contents 6381 |
|---|---|---|---|---|---|
| 0005 | 7-part | 20.50 | 28.40 | 4 slot screwdrivers (Order No. 6366) 1.8 x 0.3; 2 x 0.4; 3 x 0.5 mm<br>2 Phillips screwdrivers (Order no. 6368) PH 00; 0<br>1 Rack | 6 recessed TORX® T screwdrivers with hole (Order No. 6372) T 7; 8; 9; 10; 15; 20<br>1 Rack |
| 0010 | 12-part | – | 43.50 | – | 5 slot screwdrivers (Order No. 6366) 1.5; 1.8; 2; 2.5; 3 mm<br>2 Phillips screwdrivers (Order no. 6368) PH 00; 0<br>3 Allen screwdrivers (Order No. 6374) 0.9; 1.5; 2 mm<br>2 recessed TORX® T screwdrivers (Order 6373) 5; 6<br>Supplied in folding bag for fastening on a belt |
| | | (W543) | (W543) | | |

**General notes ESD:** When using tools on components that are vulnerable to electronic discharge (ESD - electrostatic discharge), a controlled removal of electric charges through the handles of such tools is required by the relevant standards and regulations (e.g. IEC TR 61340-5, DIN EN 61340-5, SP Method 2472).

## ESD Electronic screwdriver

**Design:** With round, chromed blade made of high-alloy special steel and Black Point tip for more torque and fit. Has 2 component Kraftform Micro handle with integrated soft areas, roll-off protection and rotating cap for lightning quick twirl. With three mode concept (precision, power and quick turn zone) for ergonomically better handling.

**Application:** Suitable for accurate, efficient and time-saving screwing. Ideal for sensitive adjustments, e.g. in electronic sector and wherever ESD screwdrivers are required.

## ESD Electronic slot screwdriver

| Order No. | Blade width mm | 6369 Wera | Blade thickness mm | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0012 | 1.2 | 4.25 | 0.25 | 40 | 137 |
| 0015 | 1.5 | 4.25 | 0.23 | 40 | 137 |
| 0018 | 1.8 | 3.79 | 0.30 | 60 | 157 |
| 0020 | 2.0 | 3.79 | 0.40 | 60 | 157 |
| | | (W543) | | | |

| Order No. | Blade width mm | 6369 Wera | Blade thickness mm | Blade length mm | Total length mm |
|---|---|---|---|---|---|
| 0025 | 2.5 | 3.55 | 0.40 | 80 | 177 |
| 0030 | 3.0 | 3.62 | 0.50 | 80 | 177 |
| 0035 | 3.5 | 4.27 | 0.60 | 80 | 177 |
| 0040 | 4.0 | 4.73 | 0.80 | 80 | 177 |
| | | (W543) | | | |

## ESD electronic Phillips screwdriver

| Order No. | Size | 6371 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0005 | PH 00 | 5.30 | 60 | 157 |
| 0010 | PH 0 | 4.58 | 60 | 157 |
| 0015 | PH 1 | 5.05 | 80 | 177 |
| | | (W543) | | |

## ESD electronic Phillips screwdriver Pozidriv

| Order No. | Size | 6373 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0000 | PZ 0 | 5.45 | 60 | 157 |
| 0001 | PZ 1 | 5.90 | 80 | 177 |
| | | (W543) | | |

## ESD electronic TORX® screwdriver

| Order No. | Size | 6375 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0004 | T 4 | 7.20 | 40 | 137 |
| 0005 | T 5 | 6.90 | 40 | 137 |
| 0006 | T 6 | 6.00 | 40 | 137 |
| | | (W543) | | |

## ESD electronic hexagon head screwdriver

| Order No. | Width of keys mm | 6377 Wera | Blade length mm | Total length mm |
|---|---|---|---|---|
| 0050 | 5.0 | 8.65 | 60 | 157 |
| 0055 | 5.5 | 8.65 | 60 | 157 |
| | | (W543) | | |

## ESD Electronic screwdriver set

| Order No. | Design | 6383 Wera | Set contents |
|---|---|---|---|
| 0005 | 7-part | 28.30 | 4 slot screwdrivers (Order No. 6396) 1.2 x 0.25; 1.5 x 0.23; 1.8 x 0.3; 2.5 x 0.4 mm<br>2 Phillips screwdrivers (Order no. 6371) PH 0; 1<br>1 Rack |
| | | (W543) | |

## Watchmaker's screwdriver set

**Design:** Made of chrome vanadium steel, handles made of metal with **rotating hexagon head.** Supplied in plastic case.

**Application:** For precise work.

| Order No. | Design | 6385 | Set contents |
|---|---|---|---|
| 0006 | 6-part | 8.30 | 4 slot screwdrivers 1.4; 2; 2.4; 3 mm<br>2 Phillips PH screwdrivers 0; 1 |
| 0016 | 16-part | 21.40 | 6 slot screwdrivers 1; 1.4; 2; 2.4; 3; 3.5 mm<br>3 Phillips PH screwdrivers 00; 0; 1<br>1 Phillips screwdriver PZ 1<br>3 Screwdrivers recess hexagon 1.5; 2; 2.5 mm<br>3 Screwdrivers hexagon head 3; 4; 5 mm |
| | | (W516) | |

6385 0006

6385 0016

## Watchmaker's screwdriver set

**Design:** Blade made of chrome-vanadium steel, induction hardened. With nickel-coated fluted brass shaft and **swivelling hexagon head at end of handle.** Supplied in wooden case.

**Application:** For precise work.

| Order No. | Design | 6384 TURNUS | Set contents |
|---|---|---|---|
| 0010 | 6-part | 27.80 | 4 slot screwdrivers 1; 1.5; 2; 3 mm<br>2 Phillips PH screwdrivers 2.5; 3 |
| | | (W527) | |

## Hand screwdriver with ratchet set

NEW

**Design:** With interchangeable bits. **Torque 90 N•m.** Reversible for clockwise or anti-clockwise turning. Particularly powerful due to double cam design. Delivery in fabric box.

**Application:** For loosening and tightening tight screws without the use of machinery.

| Order No. | Design | 6387 Wera | Set contents |
|---|---|---|---|
| 0017 | 17-part | 158.50 | 1 Impact screwdriver (Order no. 6387 0000)<br>1 slot bit 2.0 x 12.0 mm<br>3 Phillips PH bits 2; 3; 4<br>5 Allen bits 5, 6, 7, 8, 10 mm<br>5 recessed TORX® bits T 30; 40; 45; 50; 55<br>2 Socket-spanner adapters 3/8" ; 1/2" |
| | | (W543) | |

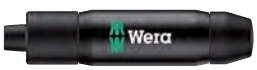
## Hand screwdriver with ratchet

NEW

**Design: Torque 90 Nm.** Reversible for clockwise or anti-clockwise turning. Particularly powerful due to double cam design.

**Application:** For loosening and tightening tight screws without the use of machinery.

| Order No. | Hexagon shank intake inch | 6387 Wera | Length mm |
|---|---|---|---|
| 0000 | 5/16 | 127.00 (W543) | 142 |



## Hand screwdriver with ratchet set

NEW

**Design:** Impact driver with interchangeable bits. **Torque 80 N•m.** Supplied in SmartCase with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

**Application:** For loosening and tightening tight screws without the use of machinery.

| Order No. | Design | 6388 HAZET | Set contents |
|---|---|---|---|
| 0017 | 17-part | 127.10 | 1 Impact driver<br>5 slot bits 0.8 x 5.5; 1.0 x 5.5; 1.2 x 6.5; 1.6 x 8.0; 2.0 x 12.0 mm<br>3 Phillips PH bits 2; 3; 4<br>4 Allen bits 5; 6; 8; 10 mm<br>4 recessed TORX® bits T 30; 40; 45; 50 |
| | | (W529) | |

## Hand bit holder

**Design:** With quick change chuck, strong permanent magnet, 2-component handle, integrated soft areas and roll-off protection.

| Order No. | Total length mm | 6392 format |
|---|---|---|
| 0005 | 100 | 11.15 (W546) |

## Hand bit holder

**Design:** Blade made of special tool-steel with intake for 1/4" bits. With strong permanent magnet and 2-component handle, integrated soft areas and roll-off protection.

| Order No. | Total length mm | 6389 format |
|---|---|---|
| 0005 | 212 | 6.85 (W546) |

## Hand bit holder

**Design:** Blade made of high-alloy special tool-steel with intake for 1/4" bits. With strong permanent magnet and 3-component Kraftform-Plus handle, impact resistant plastic with integrated soft areas for better grip, hard zones for high speed, impact cap and roll-off protection.

| Order No. | Total length mm | 6391 Wera |
|---|---|---|
| 0232 | 232 | 12.70 (W545) |

## Bit hand holder with flexible shaft

**Design:** With round and flexible blades made of polypropylene **with Wera quick-release nut for 1/4" bits.** With strong permanent magnet, 3-component Kraftform-Plus handle, impact resistant plastic with integrated soft areas for better grip, hard zones for high speed, impact cap and roll-off protection. All slide-on parts are compressed.

**Application:** For working in hard-to-access places.

| Order No. | Total length mm | 6396 Wera |
|---|---|---|
| 0275 | 275 | 18.55 (W545) |

## Hand bit holder, short version

**Design:** With extra short 1-component Kraftform handle made of Weralit II plastic and strong permanent magnet.

**Application:** For working in hard-to-access places.

| Order No. | Total length mm | 6390 Wera |
|---|---|---|
| 0005 | 54 | 9.55 (W545) |

## Bit-hand holder with ratchet

**Design:** With Rapidaptor quick change chuck for 1/4" bits. Kraftform Plus handle made of impact resistant plastic with integrated soft areas for better grip, roll-off protection as well as **ratchet function with 24 teeth and recovery angle 15°.**

| Order No. | Total length mm | 6398 Wera |
|---|---|---|
| 0142 | 142 | 31.60 (W545) |

## Kraftform Kompakt screwdriver

**Design:** The ergonomic multi-component Kraftform handle with roll-off protection serves as magazine holder for 6 bits and can be opened toward the top at the push of a button. This allows for easy removing of bits.

### KRAFTKOMPAKT 28

**Design:** With retractable and removable bayonet blade with **magnetic stainless steel holder.**

| Order No. | Set contents | 6397 Wera |
|---|---|---|
| 0028 | 2 slot bits 1.0 x 5.5; 1.2 x 6.5 mm<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2 | 26.90 |

(W545)

### KRAFTKOMPAKT 20

**Design:** With retractable and removable bayonet blade with **Rapidaptor quick change chuck** for quick and easy bit changes. **Supplied in belt bag.**

| Order No. | Set contents | 6393 Wera |
|---|---|---|
| 0020 | 2 slot bits 1.0 x 5.5; 1.2 x 6.5 mm<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2 | 41.00 |

(W545)

### KRAFTKOMPAKT 22

**Design:** With retractable and removable bayonet blade with **Rapidaptor quick change chuck** for quick and easy bit changes. **Supplied in belt bag.**

| Order No. | Set contents | 6394 Wera |
|---|---|---|
| 0022 | 3 Phillips PZ bits 1; 2 (2 pieces)<br>3 recessed TORX® bits T 15; 20; 25 | 41.00 |

(W545)

### Kraftform Kompakt 27 RA 1

**Design:** With ratchet function, **24 teeth and reset angle 15°,** reverse ring and magnetic stainless steel holder. The ratchet achieves max. torque of 50 Nm.

| Order No. | Set contents | 6400 Wera |
|---|---|---|
| 0005 | 2 slot bits 1.0 x 5.5; 1.2 x 6.5 mm<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2 | 39.10 |

(W545)

## Connection part/bit adapter

**Design:** Made from chromium-vanadium steel, **with circlip.**

**Application:** For machine screwdrivers, for connecting socket bits with the respective operating tool.

| Order No. | Bit holder inch | 6403 Wera | Square receptacle inch | Length mm |
|---|---|---|---|---|
| 0005 | 1/4 | 8.55 | 1/4 | 25 |
| 0010 | 1/4 | 9.45 | 3/8 | 30 |
| 0015 | 1/4 | 10.40 | 1/2 | 35 |
| 0020 | 5/16 | 10.40 | 1/2 | 35 |
| | | (W545) | | |

6403 0005

6403 0010–0020

## Connection part/bit adapter

**Design:** Made from chromium-vanadium steel, **with quick-change chuck.**

**Application:** For machine screwdrivers, for connecting socket bits with the respective operating tool.

| Order No. | Bit holder inch | 6405 Wera | Square receptacle inch | Length mm |
|---|---|---|---|---|
| 0005 | 1/4 | 12.00 | 1/4 | 30 |
| 0010 | 1/4 | 13.55 | 3/8 | 43 |
| 0020 | 1/4 | 17.50 | 1/2 | 50 |
| 0025 | 5/16 | 13.75 | 1/2 | 50 |
| | | (W545) | | |

6405 0005

6405 0010–0025

## Connector/tool shaft

**Design:** Made of chromium-vanadium steel, **with safety pin.**

**Application:** For machine screwdrivers, for connecting socket bits with the respective operating tool.

| Order No. | Tool holder inch | 6407 format | Machine mount | Length mm |
|---|---|---|---|---|
| 0005 | 1/4 | 5.05 | 1/4", hexagon | 50 |
| | | (W546) | | |

1/4" 1/4"

6407 0005

## Connector/tool shaft

**Design:** Made of chromium-vanadium steel, **with safety pin.**

**Application:** For machine screwdrivers, for connecting socket bits with the respective operating tool.

| Order No. | Tool holder inch | 6408 Wera | Machine mount | Length mm |
|---|---|---|---|---|
| 0003 | 1/4 | 5.90 | 1/4", hexagon | 50 |
| 0004 | 1/4 | 6.50 NEW | 1/4", hexagon | 100 |
| 0005 | 3/8 | 8.15 | 1/4", hexagon | 50 |
| 0010 | 1/4 | 11.80 | SDS-plus | 70 |
| | | (W545) | | |

1/4" 1/4"

6408 0003 + 6408 0004

3/8" 1/4"

6408 0005

1/4" SDS plus

6408 0010

## Connection parts set

**Design:** Made of chromium-vanadium steel, **with safety pin.**

**Application:** For machine screwdrivers, for connecting socket bits with the respective operating tool.

| Order No. | Set contents | 6408 Wera |
|---|---|---|
| 0300 | 1 x 1/4" square to 1/4" hexagon<br>1 x 3/8" square to 1/4" hexagon<br>1 x 1/2" square to 7/16" hexagon | 13.95 |
| | | (W545) |

1/4" 1/4"

3/8" 1/4"

1/2" 7/16"

## Characteristics of bit holders

**Permanent magnet**
Holds the screws and makes it easier to set the screws.

**Circlip**
The tool is held safely and securely in the bit holder.
Particularly robust construction e.g. for assembly lines.

**Ring magnet**
Floating, free-range magnetic sleeve holds long, heavy screws.

**Quick-change chuck**
The bit can be inserted or removed when the sleeve is pushed forward. The bit is pushed back and held safely and securely. In contrast to the lock, through a circlip the bit change here requires no effort and can easily be accomplished even with oily fingers.

**Rapidaptor quick-change chuck**

**Rapid-in** and **self-lock:** The bit can simply be plugged in without moving the sleeve. Locking is automatic when screw is attached.

**Rapid-out:** To remove the bit, sleeve is pushed forward; this lifts the bit which can now be removed easily.

**Rapid-spin:** The freewheeling sleeve allows the guide on the bit holder to provide easy attachment and avoid slipping.

**Chuck-all:** Allows acceptance of 1/4" bits according to both DIN 3126 C 6.3 and DIN 3126 E 6.3.

**Single-hand:** The use of the adapter can be carried out completely with just one hand.

## Universal bit holder 1/4"

**Design: DIN 3126 E 6.3.**

**Application:** To connect bits with the respective operating tools.

**6409** With strong **permanent magnet** and **circlip.**

1/4" 1/4"

**641A** NEW With strong **permanent magnet** and **circlip.**

1/4" 1/4"

**641B** NEW With **quick change chuck.**

1/4" 1/4"

**6413** With strong **permanent magnet** and **quick change chuck.**

1/4" 1/4"

| Order No. | Bit holder inch | 6409 format | 641A Wera | 641B Wera | 6413 format | Machine mount inch | Length mm 6409 | 641A | 641B | 6413 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0003 | 1/4 | – | – | 13.50 | – | 1/4 | – | – | 152 | – |
| 0005 | 1/4 | 3.63 | 5.40 | – | 12.90 | 1/4 | 50 | 50 | – | 77 |
| 0010 | 1/4 | 5.25 | 7.15 | – | – | 1/4 | 75 | 75 | – | – |
| 0015 | 1/4 | – (W546) | 18.60 (W545) | – (W545) | – (W546) | 1/4 | – | 100 | – | – |

## Universal bit holder 1/4"

**Design: DIN 3126 G7.** With strong **permanent magnet** and **circlip.**

**Application:** To connect bits with the respective operating tools.

1/4" ∅ 7

| Order No. | Bit holder inch | 6411 | Machine mount | Length mm |
|---|---|---|---|---|
| 0005 | 1/4 | 5.55 (W545) | 7 mm, round | – |

## Universal bit holder 1/4"

**Design: DIN 3126 E 6.3.**

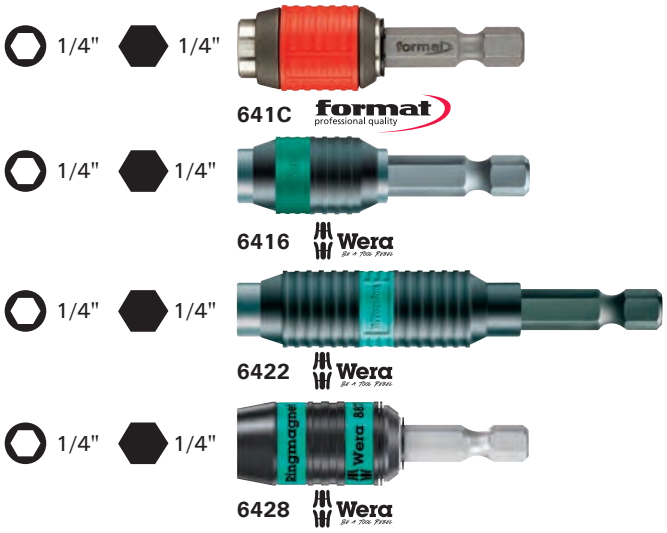
**Application:** To connect bits with the respective operating tools.

**641C** NEW — With strong **permanent magnet** and **quick change chuck.**

**6416** — Rapidaptor with rapid-in and self-lock, rapid-out, rapid-spin, chuck-all and one-hand.

**6422** — **Rapidaptor BiTorsion.** Peak loads are safely cushioned. This extends the life of the bit. With rapid-in and self-lock, rapid-out, rapid-spin, chuck-all and one-hand.

**6428** — **Ring magnet Rapidaptor.** With rapid-in and self-lock, rapid-out, rapid-spin, chuck-all and one-hand.




| Order No. | Bit holder inch | 641C format | 6416 Wera | 6422 Wera | 6428 Wera | Machine mount inch | Length mm 641C | 6416 | 6422 | 6428 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | 1/4 | 9.95 (W546) | 11.90 (W545) | 16.55 (W545) | 16.55 (W545) | 1/4 | 77 | 50 | 75 | 57 |

## Universal bit holder 1/4" Impaktor

**Design:** DIN 3216 E 6.3.
Through the two coupled, sequentially acting torsion areas, even extreme peak loads as they occur in the processing of impact screws are safely cushioned and the service life of bits is increased.

**Application:** Especially well suited for use with impact screwdrivers. To connect bits with the respective operating tools. In connection with Impaktor bits, up to 10 times longer product life compared to standard or torsion bit holder systems.

**6428 0015** — Holder made of stainless steel, with strong **permanent magnet** and **circlip.**

**6428 0020** — With strong **ring magnet** and **circlip.** The magnet can be pushed back and turned off thereby.

| Order No. | Bit holder inch | 6428 Wera Impaktor | 6428 Wera Impaktor | Machine mount inch | Length mm |
|---|---|---|---|---|---|
| 0015 | 1/4 | 15.90 | – | 1/4 | 75 |
| 0020 | 1/4 | – (W545) | 19.20 (W545) | 1/4 | 75 |

## Universal bit holder 1/4" Rapidaptor Stainless

**Design: Made of stainless steel,** DIN 3126 E 6.3.
With rapid-in and self-lock, rapid-out, rapid-spin, chuck-all and one-hand.

**Application:** To connect stainless steel bits with the respective operating tools. Special product for preventing rust in the processing of stainless steel screws.

INOX

| Order No. | Bit holder inch | 6428 Wera | Machine mount inch | Length mm |
|---|---|---|---|---|
| 0010 | 1/4 | 16.60 (W584) | 1/4 | 50 |

## Universal bit holder 1/4"

**Design:** With strong permanent magnet and quick change chuck.

**Application:** To connect bits with the respective operating tools.

| Order No. | Bit holder inch | 6419 Wera | Machine mount | Length mm |
|---|---|---|---|---|
| 0005 | 1/4 | 23.70 (W545) | SDS-plus | 81 |

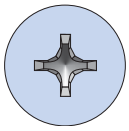
## Phillips or Pozidriv screws? It's the cross-head that matters.

Screws with cross head are indispensable for installation works in trade and industry. They are deployed in various designs. Differentiation is made between the classic Phillips screw (PH) and the subsequently developed Pozidriv screw (PZ).

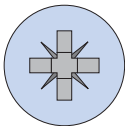
The first glance shows a different design: contrary to the PH screw, the PZ screw is provided with additional star lines from its recessed corners. PZ screw heads also have parallel-running deep flanks, not in conical shape as in case of the PH screw.

The different construction results in different characteristics: while both screw types allow excellent centring, the PZ screw furthermore provides greater side stability due to the parallel flanks. This reduces the risk that the screwdriver slips to the side. Compared to the longitudinal slot screws, screws with a cross slot principally have higher torque.

When using the incorrect screwdriver, you not only loose the advantages of the profile, you also damage the screw and the tool.



**Phillips screw**



**Pozidriv screw**

## Everything for the correct twist: The world of bits.

**As variable as the work of screwdriver applications, as variable is also the selection of bits. To obtain a general idea, here is an overview of the different systems and designs.**

**Extra hard.** Extra hard bits are primarily suited for the soft driving into wood. They prevent premature breaking.

**Tough hard.** Tough hard bits are designed for universal use. They prevent premature breaking.

**Torsion.** This technique cushions torque peaks in the torsion zone of the bit during the screw action. This prevents premature wear and prolongs the life of the tool.

**BiTorsion.** In this bit design, the torsion zone exhibits more than 20% reduced hardness compared to the shaft. This cushions high torque peaks and protects the bit to prolong its life.

**Diamond coated.** Bits with diamond coating live long and allow universal use: their surface particles bite into the screw head and ensure the secure fit of the tool.

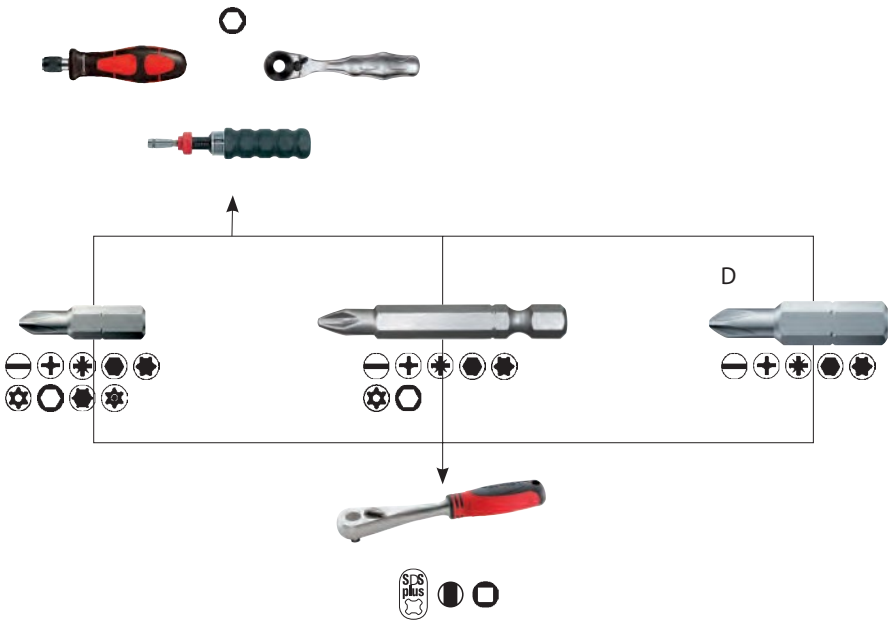
**Impaktor.** The bits of the Impaktor series by Wera are designed for the work with impact drivers. They are respectively more robust concerning their geometry and material.
With different torsion zones, they automatically react to torque peaks and adapt to the screw joint. Added to this is a diamond coat for a firm position in the screw head.

INOX **Stainless steel.** If stainless steel screws are used the application of tools made of the same material is recommended: this prevents extraneous rust - i.e. from steel particles of conventional bits. Stainless steel bits are vacuum ice-tempered and comply with workshop requirements.

Hex–Plus **Hex-Plus geometry.** Hex-Plus tools by Wera reduce the risk of recess hexagon screws being "rounded" over time due to sharp edges. This is achieved with a greater contact surface in the screw head. It reduces grooving and wear and allows the transmission of greater torque.

**Holding function** (generally non-magnetic). Screwing tools with mechanical holding functions have three advantages: they provide secure hold in the screw and thus prevent that it is lost during the action. This is added by a better positioning of the applied tool during work. Furthermore, the mechanical holding function also works in case of non-magnetic screws and in areas where magnetism is not wanted.

**"Take it easy" tool finder.** With the "tool finder" system (at the 5 standard drives), Wera facilitates the selection of the suitable tool sizes by way of colours. The tool finder allows the quick allocation also in case of bad lighting conditions and helps in keeping the equipment complete. The ring as well as the print are petrol and oil resistant.



## Bit for slot screws 1/4" DIN 3126 C 6.3

**6421** **Tough hard** with torsion zone.

**642A** NEW **Tough hard.**

**642B** NEW **Tough hard with torsion zone.**

25 mm

| Order No. | Blade width mm | 6421 format | 642A Wera | 642B Wera | PU | Blade thickness mm | Length mm |
|---|---|---|---|---|---|---|---|
| 0003 | 3.0 | – | 0.62 | – | 10 | 0.5 | 25 |
| 0005 | 4.0 | 0.55 | – | – | 10 | 0.5 | 25 |
| 0007 | 4.5 | – | 0.62 | 0.82 | 10 | 0.6 | 25 |
| 0010 | 5.5 | 0.55 | 0.62 | 0.82 | 10 | 0.8 | 25 |
| 0015 | 5.5 | 0.55 | – | – | 10 | 1.0 | 25 |
| 0020 | 6.5 | 0.55 | 0.62 | 0.82 | 10 | 1.2 | 25 |
| 0025 | 8.0 | – | 0.80 | – | 10 | 1.2 | 25 |
| 0030 | 8.0 | – | 0.80 | 0.82 | 10 | 1.6 | 25 |
| | | (W546) | (W545) | (W545) | | | |

## Bit for slot screws 1/4" DIN 3126 C 6.3

**Design: tough-hard.**

39 mm

| Order No. | Blade width mm | 6423 Wera | PU | Blade thickness mm | Length mm |
|---|---|---|---|---|---|
| 0005 | 3.0 | 1.67 | 10 | 0.5 | 39 |
| 0010 | 3.5 | 1.67 | 10 | 0.6 | 39 |
| 0015 | 4.0 | 1.67 | 10 | 0.8 | 39 |
| 0020 | 5.5 | 1.67 | 10 | 1.0 | 39 |
| 0025 | 6.5 | 1.67 | 10 | 1.2 | 39 |
| 0030 | 8.0 | 1.67 | 10 | 1.2 | 39 |
| 0035 | 8.0 | 1.67 | 10 | 1.6 | 39 |
| | | (W545) | | | |

## Bit for slot screws 1/4" DIN 3126 E 6.3

**Design: tough-hard.**

50 mm

| Order No. | Blade width mm | 6441 Wera | PU | Blade thickness mm | Length mm |
|---|---|---|---|---|---|
| 0005 | 3.0 | 2.09 | 10 | 0.5 | 50 |
| 0010 | 3.5 | 2.09 | 10 | 0.6 | 50 |
| 0015 | 4.0 | 2.09 | 10 | 0.8 | 50 |
| 0025 | 5.5 | 2.09 | 10 | 0.8 | 50 |
| 0035 | 6.5 | 2.09 | 10 | 1.2 | 50 |
| 0040 | 8.0 | 2.09 | 10 | 1.2 | 50 |
| | | (W545) | | | |

## Bit for slot screws 1/4" DIN 3126 E 6.3

**Design: tough-hard.**

89 mm

| Order No. | Blade width mm | 6467 format | 6441 Wera | PU | Blade thickness mm | Length mm |
|---|---|---|---|---|---|---|
| 0020 | 4.0 | 2.38 | 3.05 | 10 | 0.8 | 89 |
| 0030 | 5.5 | 2.38 | 3.05 | 10 | 1.0 | 89 |
| 0036 | 6.5 | – | 3.05 | 10 | 1.2 | 89 |
| 0045 | 8.0 | – | 3.05 | 10 | 1.2 | 89 |
| | | (W546) | (W545) | | | |

## Bit for Phillips screws 1/4" DIN 3126 C 6.3

25 mm

**6424** Tough hard.

**642C** NEW Tough hard.

**6425** Extra-hard with torsion zone.

**642D** NEW Extra-hard with torsion zone.

**642E** NEW Tough hard with torsion zone.

**642F** NEW Extra hard, with bi-torsion zone.

**6406** Drive diamond coated.

**6437** Drive diamond coated, with bi-torsion zone.

**6432** Stainless steel design, with torsion zone.

INOX

**6410** Impaktor design.

| Order No. | Size | 6424 format | 642C Wera | 6425 format | 642D Wera | 642E Wera | 642F Wera | 6406 format | 6437 Wera | 6432 Wera | 6410 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | PH 0 | – | 0.76 | – | – | – | – | – | – | – | – | 10 | 25 |
| 0000 | PH 1 | – | – | – | – | 0.77 | – | – | – | – | – | 10 | 25 |
| 0005 | PH 1 | 0.28 | 0.33 | 0.64 | 0.75 | – | 1.73 | 1.10 | 2.36 | 2.58 | – | 10 | 25 |
| 0010 | PH 2 | 0.28 | 0.33 | 0.64 | 0.75 | 0.77 | 1.73 | 1.10 | 2.36 | 2.58 | 2.93 | 10 | 25 |
| 0015 | PH 3 | 0.28 | 0.33 | 0.64 | 0.75 | 0.77 | 1.73 | 1.10 | 2.36 | 2.58 | 2.93 | 10 | 25 |
| 0020 | PH 4 | – | 2.48 | – | – | – | – | – | – | – | – | 10 | 32 |
| | | (W546) | (W545) | (W546) | (W545) | (W545) | (W545) | (W546) | (W545) | (W584) | (W545) | | |

## For Phillips screws Phillips 1/4" DIN 3126 E 6.3

50 mm

**6447** Tough hard with torsion zone.

**643A** NEW Tough hard with torsion zone.

**643B** NEW Extra-hard with torsion zone.

**6456** Drive diamond coated, with bi-torsion zone.

**6491** Impaktor design.

| Order No. | Size | 6447 format | 643A Wera | 643B Wera | 6456 Wera | 6491 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|---|---|---|
| 0005 | PH 1 | 1.24 | 1.52 | 1.52 | 4.68 | – | 10 | 50 |
| 0010 | PH 2 | 1.24 | 1.52 | 1.52 | 4.68 | 4.66 | 10 | 50 |
| 0015 | PH 3 | 1.24 | 1.52 | 1.58 | 4.68 | 4.66 | 10 | 50 |
| | | (W546) | (W545) | (W545) | (W545) | (W545) | | |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## For Phillips screws Phillips 1/4" DIN 3126 E 6.3

**Design: tough-hard.**

70 mm

| Order No. | Size | 6443 Wera | PU | Length mm |
|---|---|---|---|---|
| 0005 | PH 1 | 2.73 | 10 | 70 |
| 0015 | PH 2 | 2.73 | 10 | 70 |
| 0025 | PH 3 | 2.73 (W545) | 10 | 70 |

## For Phillips screws Phillips 1/4" DIN 3126 E 6.3

**Design: tough-hard.**

89 mm

| Order No. | Size | 6469 format | 6443 Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0010 | PH 1 | 2.33 | 3.16 | 10 | 89 |
| 0020 | PH 2 | 2.33 | 3.16 | 10 | 89 |
| 0030 | PH 3 | 2.33 (W546) | 3.16 (W545) | 10 | 89 |

6469 format professional quality

6443 Wera

## For Phillips screws Phillips 1/4" DIN 3126 E 6.3

**Design: tough-hard.**

152 mm

| Order No. | Size | 6443 Wera | PU | Length mm |
|---|---|---|---|---|
| 0012 | PH 1 | 4.78 | 10 | 152 |
| 0022 | PH 2 | 4.78 | 10 | 152 |
| 0032 | PH 3 | 4.78 (W545) | 10 | 152 |

## Bit for Phillips screws Pozidriv 1/4" DIN 3126 C 6.3

25 mm

**6426** Tough hard.

6426 format professional quality

**642K** NEW Extra-hard with torsion zone.

642K Wera

**642G** NEW Tough hard.

642G Wera

**6404** Drive diamond coated.

6404 format professional quality

**6427** Extra-hard with torsion zone.

6427 format professional quality

**6439** Drive diamond coated with bi-torsion zone.

6439 Wera

**642H** NEW Extra-hard with torsion zone.

642H Wera

**6434** Stainless steel with torsion zone

INOX

6434 Wera

**642J** NEW Extra-hard with torsion zone.

642J Wera

**6414** Impaktor design.

6414 Wera Impaktor

| Order No. | Size | 6426 format | 642G Wera | 6427 format | 642H Wera | 642J Wera | 642K Wera | 6404 format | 6439 Wera | 6434 Wera | 6414 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | PZ 0 | – | 0.81 | – | – | – | – | – | – | – | – | 10 | 25 |
| 0005 | PZ 1 | 0.28 | 0.33 | 0.66 | 0.81 | 0.82 | 1.70 | 1.10 | 2.36 | 2.58 | – | 10 | 25 |
| 0010 | PZ 2 | 0.28 | 0.33 | 0.66 | 0.81 | 0.82 | 1.70 | 1.10 | 2.36 | 2.58 | 2.93 | 10 | 25 |
| 0015 | PZ 3 | 0.28 | 0.33 | 0.66 | 0.81 | 0.82 | 1.70 | 1.10 | 2.36 | 2.58 | 2.93 | 10 | 25 |
| 0020 | PZ 4 | – (W546) | 2.38 (W545) | – (W546) | – (W545) | – (W545) | – (W545) | – (W546) | – (W545) | – (W584) | – (W545) | 10 | 32 |

## Bit for Phillips screws Pozidriv 1/4" DIN 3126 E 6.3

**6448** Tough hard with torsion zone.

6448 format professional quality

**6458** Diamond, with bi-torsion zone.

50 mm

6458 Wera

**643C** NEW Tough hard with torsion zone.

643C Wera

**6493** Impaktor design.

6493 Wera Impaktor

**643D** NEW Extra-hard with torsion zone.

643D Wera

| Order No. | Size | 6448 format | 643C Wera | 643D Wera | 6458 Wera | 6493 Wera | PU | Length mm |
|---|---|---|---|---|---|---|---|---|
| 0005 | PZ 1 | 1.24 | 1.52 | 1.52 | 4.68 | – | 10 | 50 |
| 0010 | PZ 2 | 1.24 | 1.52 | 1.52 | 4.68 | 4.66 | 10 | 50 |
| 0015 | PZ 3 | 1.24 | 1.52 | 1.52 | 4.68 | 4.66 | 10 | 50 |
| | | (W546) | (W545) | (W545) | (W545) | (W545) | | |

## Bit for Phillips screws Pozidriv PZ 1/4" DIN 3126 E 6.3

**Design:** Tough-hard.

70 mm

| Order No. | Size | 6445 Wera | PU | Length mm |
|---|---|---|---|---|
| 0005 | PZ 1 | 2.73 | 10 | 70 |
| 0015 | PZ 2 | 2.73 | 10 | 70 |
| 0025 | PZ 3 | 2.73 | 10 | 70 |
| | | (W545) | | |

## Bit for Phillips screws Pozidriv PZ 1/4" DIN 3126 E 6.3

**Design:** Tough-hard.

89 mm

| Order No. | Size | 6471 format | 6445 Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0010 | PZ 1 | 2.33 | 3.16 | 10 | 89 |
| 0020 | PZ 2 | 2.33 | 3.16 | 10 | 89 |
| 0030 | PZ 3 | – | 3.16 | 10 | 89 |
| | | (W546) | (W545) | | |

6471 format professional quality

6445 Wera

## Bit for Allen screws 1/4" DIN 3126 C 6.3

**6463** Tough hard.

6463 format professional quality

**6429** Tough hard with HEX-Plus geometry.

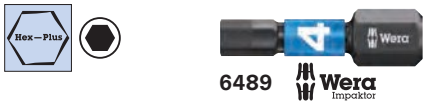
6429 Wera

**6457** Stainless steel with torsion zone and Hex-Plus geometry.

25 mm

6457 Wera

**6489** Impaktor design.



6489 Wera Impaktor

| Order No. | Width of keys mm | 6463 format | 6429 Wera | 6457 Wera | 6489 Wera | PU | Length mm |
|---|---|---|---|---|---|---|---|
| 0000 | 1.5 | – | – | 2.55 | – | 10 | 25 |
| 0005 | 2.0 | 1.08 | 1.28 | 2.55 | – | 10 | 25 |
| 0010 | 2.5 | 1.08 | 1.28 | 2.55 | – | 10 | 25 |
| 0015 | 3.0 | 1.08 | 1.28 | 2.55 | – | 10 | 25 |
| 0020 | 4.0 | 1.08 | 1.28 | 2.55 | 3.53 | 10 | 25 |
| 0025 | 5.0 | 1.08 | 1.28 | 2.55 | 3.53 | 10 | 25 |
| 0030 | 6.0 | 1.08 | 1.28 | 2.55 * | 3.53 | 10 | 25 |
| 0035 | 8.0 | 1.44 | 1.78 | – | – | 10 | 25 |
| | | (W546) | (W545) | (W584) | (W545) | | |

* Without "Take it easy" tool finder.

## Bit for Allen screws 1/4" DIN 3126 E 6.3

**6450** Tough hard with HEX-Plus geometry.

| Order No. | Width of keys mm | 6450 Wera | 6497 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|
| 0005 | 2.0 | 2.50 | – | 10 | 50 |
| 0010 | 2.5 | 2.50 | – | 10 | 50 |
| 0015 | 3.0 | 2.50 | – | 10 | 50 |
| 0020 | 4.0 | 2.50 (W545) | 5.35 (W545) | 10 | 50 |

**6497** Impaktor design.

For Impaktor bit holder see (Order No. 6428 0015 and 0020) 📖 6/140).

50 mm

Hex-Plus

| Order No. | Width of keys mm | 6450 Wera | 6497 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|
| 0025 | 5.0 | 2.50 | 5.35 | 10 | 50 |
| 0030 | 6.0 | 2.50 | 5.35 | 10 | 50 |
| 0035 | 8.0 | 4.24 (W545) | – (W545) | 10 | 50 |

## Bit for Allen screws 1/4" DIN 3126 E 6.3

**Design: Tough-hard.**

| Order No. | Width of keys mm | 6475 format | PU | Length mm |
|---|---|---|---|---|
| 0015 | 3 | 2.40 | 10 | 89 |
| 0020 | 4 | 2.40 | 10 | 89 |
| 0025 | 5 | 2.40 | 10 | 89 |
| 0030 | 6 | 2.40 (W546) | 10 | 89 |

89 mm

format professional quality

## Bit for recessed TORX® screws 1/4" DIN 3126 C 6.3

**6433** Tough hard.

**644A** NEW Tough hard.

**6353** Tough hard with torsion zone.

**644B** NEW Tough hard with torsion zone.

**644C** NEW Tough hard with bi-torsion zone.

**6465** Drive diamond coated.

25 mm

**6442** Drive diamond coated, with bi-torsion zone.

**6444** Stainless steel with torsion zone

INOX

**6453** Impaktor design.

| Order No. | Size | 6433 format | 644A Wera | 6353 format | 644B Wera | 644C Wera | 6465 format | 6442 Wera | 6444 Wera | 6453 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0000 | T 5 | – | 0.80 | – | – | – | – | – | – | – | 10 | 25 |
| 0001 | T 6 | 0.68 | 0.80 | 1.13 | 1.90 | – | – | – | – | – | 10 | 25 |
| 0002 | T 7 | 0.68 | 0.80 | 1.13 | 1.90 | – | – | – | – | – | 10 | 25 |
| 0003 | T 8 | 0.68 | 0.80 | 1.13 | 1.90 | – | – | – | 3.14 | – | 10 | 25 |
| 0004 | T 9 | 0.68 | 0.80 | 1.13 | 1.90 | – | – | – | 3.14 | – | 10 | 25 |
| 0005 | T 10 | 0.68 | 0.80 | 1.13 | 1.90 | 3.14 | 1.48 | 3.08 | 3.14 | – | 10 | 25 |
| 0010 | T 15 | 0.68 | 0.80 | 1.13 | 1.90 | 3.14 | 1.48 | 3.08 | 3.14 | – | 10 | 25 |
| 0015 | T 20 | 0.68 | 0.80 | 1.13 | 1.90 | 3.14 | 1.51 | 3.08 | 3.14 | 3.63 | 10 | 25 |
| 0020 | T 25 | 0.68 | 0.80 | 1.13 | 1.90 | 3.14 | 1.51 | 3.08 | 3.14 | 3.53 | 10 | 25 |
| 0025 | T 27 | 0.68 | – | 1.13 | 1.90 | – | – | – | – | – | 10 | 25 |
| 0030 | T 30 | 0.68 | 0.80 | 1.13 | 1.90 | 3.14 | 1.51 | 3.08 | 3.14 | 3.53 | 10 | 25 |
| 0035 | T 40 | 0.68 | 0.80 | 1.13 | 1.90 | 3.14 * | 1.51 | 3.08 * | 3.14 * | 3.53 | 10 | 25 |
| 0040 | T 45 | – | 2.05 | – | – | – | – | – | – | – | 10 | 25 |
| 0045 | T 50 | – | 2.05 | – | – | – | – | – | – | – | 10 | 25 |
| 0050 | T 55 | – | 4.29 | – | – | – | – | – | – | – | 10 | 25 |
| | | (W546) | (W545) | (W546) | (W545) | (W545) | (W546) | (W545) | (W584) | (W545) | | |

* Without "Take it easy" tool finder.

## Bit for recessed TORX® screws 1/4" DIN 3126 E 6.3

50 mm

**6452** **Tough hard.**

**645A** **Tough hard.**
NEW

**6498** **Impaktor design.**

For Impaktor bit holder see
(Order No. 6428 0015 and 0020) 📖 6/140).

| Order No. | Size | 6452 format | 645A Wera | 6498 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|---|
| 0006 | T 6 | – | 2.26 | – | 10 | 50 |
| 0008 | T 8 | 2.00 | 2.26 | – | 10 | 50 |
| 0010 | T 10 | 2.00 | 2.26 | – | 10 | 50 |
| 0015 | T 15 | 2.00 | 2.26 | – | 10 | 50 |
| 0020 | T 20 | 2.00 (W546) | 2.26 (W545) | 5.50 (W545) | 10 | 50 |

| Order No. | Size | 6452 format | 645A Wera | 6498 Wera Impaktor | PU | Length mm |
|---|---|---|---|---|---|---|
| 0025 | T 25 | 2.00 | 2.26 | 5.35 | 10 | 50 |
| 0027 | T 27 | 2.00 | 2.26 | – | 10 | 50 |
| 0030 | T 30 | 2.00 | 2.26 | 5.35 | 10 | 50 |
| 0040 | T 40 | 2.00 (W546) | 2.26 (W545) | 5.35 (W545) | 10 | 50 |

## Bit for recessed TORX® screws 1/4" DIN 3126 E 6.3

**Design: Tough-hard.**

70 mm

| Order No. | Size | 6454 Wera | PU | Length mm |
|---|---|---|---|---|
| 0010 | T 10 | 3.17 | 10 | 70 |
| 0015 | T 15 | 3.17 | 10 | 70 |
| 0020 | T 20 | 3.17 | 10 | 70 |
| 0025 | T 25 | 3.17 (W545) | 10 | 70 |

| Order No. | Size | 6454 Wera | PU | Length mm |
|---|---|---|---|---|
| 0027 | T 27 | 3.17 | 10 | 70 |
| 0030 | T 30 | 3.17 | 10 | 70 |
| 0040 | T 40 | 3.17 (W545) | 10 | 70 |

## Bit for recessed TORX® screws 1/4" DIN 3126 E 6.3

**Design: Tough-hard.**

89 mm

| Order No. | Size | 6473 format | 6455 Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0010 | T 10 | 2.40 | 4.28 | 10 | 89 |
| 0015 | T 15 | 2.40 | 4.28 | 10 | 89 |
| 0020 | T 20 | 2.40 (W546) | 4.28 (W545) | 10 | 89 |

| Order No. | Size | 6473 format | 6455 Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0025 | T 25 | 2.40 | 4.28 | 10 | 89 |
| 0030 | T 30 | 2.40 | 4.28 | 10 | 89 |
| 0040 | T 40 | – (W546) | 4.28 (W545) | 10 | 89 |

## Bit for recessed TORX® screws 1/4" DIN 3126 C 6.3, with holding function

**Design:** Tough-hard, with holding function.

25 mm

| Order No. | Size | 6449 Wera | PU | Length mm |
|---|---|---|---|---|
| 0003 | T 8 | 1.09 | 10 | 25 |
| 0004 | T 9 | 1.09 | 10 | 25 |
| 0005 | T 10 | 1.09 | 10 | 25 |
| 0010 | T 15 | 1.09 | 10 | 25 |
| 0015 | T 20 | 1.09 (W545) | 10 | 25 |

| Order No. | Size | 6449 Wera | PU | Length mm |
|---|---|---|---|---|
| 0020 | T 25 | 1.09 | 10 | 25 |
| 0025 | T 27 | 1.09 | 10 | 25 |
| 0030 | T 30 | 1.09 | 10 | 25 |
| 0035 | T 40 | 1.09 (W545) | 10 | 25 |

## Bit for recessed TORX® screws 1/4" DIN 3126 E 6.3, with holding function

**Design:** Tough-hard, with holding function.

50 mm

| Order No. | Size | 6451 Wera | PU | Length mm |
|---|---|---|---|---|
| 0003 | T 8 | 2.62 | 10 | 50 |
| 0005 | T 10 | 2.62 | 10 | 50 |
| 0010 | T 15 | 2.62 | 10 | 50 |
| 0015 | T 20 | 2.62 (W545) | 10 | 50 |

| Order No. | Size | 6451 Wera | PU | Length mm |
|---|---|---|---|---|
| 0020 | T 25 | 2.62 | 10 | 50 |
| 0025 | T 27 | 2.62 | 10 | 50 |
| 0030 | T 30 | 2.62 | 10 | 50 |
| 0035 | T 40 | 2.62 (W545) | 10 | 50 |

## Bit for recessed TORX® head screws 1/4", with locking pin DIN 3126 C 6.3

**Design:** Tough-hard.

25 mm

6435 format professional quality

645B NEW Wera

| Order No. | Size | 6435 format | 645B Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0002 | T 7 | 1.86 | – | 10 | 25 |
| 0003 | T 8 | 1.86 | – | 10 | 25 |
| 0004 | T 9 | 1.86 | – | 10 | 25 |
| 0005 | T 10 | 1.86 | 2.08 | 10 | 25 |
| 0010 | T 15 | 1.86 (W546) | 2.08 (W545) | 10 | 25 |

| Order No. | Size | 6435 format | 645B Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0015 | T 20 | 1.86 | 2.08 | 10 | 25 |
| 0020 | T 25 | 1.86 | 2.08 | 10 | 25 |
| 0025 | T 27 | 1.86 | 2.08 | 10 | 25 |
| 0030 | T 30 | 1.86 | 2.08 | 10 | 25 |
| 0035 | T 40 | 1.86 (W546) | 2.08 (W545) | 10 | 25 |

## Bit for recessed TORX® head screws 1/4", with locking pin DIN 3126 E 6.3

**Design:** Tough-hard.

89 mm

| Order No. | Size | 6459 Wera | PU | Length mm |
|---|---|---|---|---|
| 0008 | T 8 | 6.05 | 10 | 89 |
| 0010 | T 10 | 6.05 | 10 | 89 |
| 0015 | T 15 | 6.05 | 10 | 89 |
| 0020 | T 20 | 6.05 (W545) | 10 | 89 |

| Order No. | Size | 6459 Wera | PU | Length mm |
|---|---|---|---|---|
| 0025 | T 25 | 6.05 | 10 | 89 |
| 0030 | T 30 | 6.05 | 10 | 89 |
| 0040 | T 40 | 6.05 (W545) | 10 | 89 |

## Bit for recessed TORX PLUS® screws 1/4" DIN 3126 C 6.3

**Design:** Tough-hard.

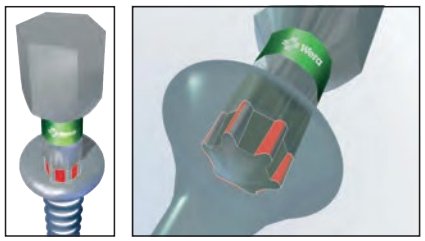
25 mm

| Order No. | Size | 6438 Wera | PU | Length mm |
|---|---|---|---|---|
| 0010 | 10 IP | 2.30 | 10 | 25 |
| 0015 | 15 IP | 2.30 | 10 | 25 |
| 0020 | 20 IP | 2.30 | 10 | 25 |
| | | (W545) | | |

| Order No. | Size | 6438 Wera | PU | Length mm |
|---|---|---|---|---|
| 0025 | 25 IP | 2.30 | 10 | 25 |
| 0030 | 30 IP | 2.30 | 10 | 25 |
| 0040 | 40 IP | 2.30 | 10 | 25 |
| | | (W545) | | |

## Bit for ASSY®, pias screws 1/4" DIN 3126 C 6.3

**Design:** Tough-hard.



25 mm

| Order No. | Size | 6440 Wera | PU | Length mm |
|---|---|---|---|---|
| 0010 | SIT® 10 | 1.30 | 10 | 25 |
| 0020 | SIT® 20 | 1.30 | 10 | 25 |
| | | (W545) | | |

| Order No. | Size | 6440 Wera | PU | Length mm |
|---|---|---|---|---|
| 0025 | SIT® 25 | 1.30 | 10 | 25 |
| 0030 | SIT® 30 | 1.30 | 10 | 25 |
| | | (W545) | | |

## Bit for recessed TORX® screws with ABC TORX® profile 1/4" DIN 3126 C 6.3

**Design: Tough-hard.**

25 mm

| Order No. | Size | 6446 Wera | PU | Length mm |
|---|---|---|---|---|
| 0005 | T 10 | 0.86 | 10 | 25 |
| 0010 | T 15 | 0.86 | 10 | 25 |
| 0015 | T 20 | 0.86 | 10 | 25 |
| | | (W545) | | |

| Order No. | Size | 6446 Wera | PU | Length mm |
|---|---|---|---|---|
| 0020 | T 25 | 0.86 | 10 | 25 |
| 0030 | T 30 | 0.86 | 10 | 25 |
| 0035 | T 40 | 0.86 | 10 | 25 |
| | | (W545) | | |

## Bit for TRI-WING®-head screws 1/4" DIN 3126 C 6.3

NEW

**Design: Tough-hard.**

25 mm

| Order No. | Size | 645C Wera | PU | Length mm |
|---|---|---|---|---|
| 0001 | 1 | 4.35 | 10 | 25 |
| 0002 | 2 | 4.35 | 10 | 25 |
| | | (W545) | | |

| Order No. | Size | 645C Wera | PU | Length mm |
|---|---|---|---|---|
| 0003 | 3 | 4.35 | 10 | 25 |
| 0004 | 4 | 4.35 | 10 | 25 |
| | | (W545) | | |

## Bit for multiple tooth screws 1/4" DIN 3126 C 6.3

NEW

**Design:** Tough-hard.

25 mm

| Order No. | Size | 645D Wera | PU | Length mm |
|---|---|---|---|---|
| 0004 | M4 | 2.55 | 10 | 25 |
| 0005 | M5 | 2.55 | 10 | 25 |
| | | (W545) | | |

| Order No. | Size | 645D Wera | PU | Length mm |
|---|---|---|---|---|
| 0006 | M6 | 2.55 | 10 | 25 |
| 0008 | M8 | 3.17 | 10 | 25 |
| | | (W545) | | |

## Socket wrench insert for hexagon head screws 1/4" DIN 3126 E 6.3

| Order No. | Width of keys mm | 645F format | 6460 Wera | Length mm 645F | Length mm 6460 |
|---|---|---|---|---|---|
| 0006 | 5.5 | 2.60 | 3.36 | 65 | 50 |
| 0011 | 6.0 | 2.60 | 3.36 | 65 | 50 |
| 0016 | 7.0 | 2.60 | 3.36 | 65 | 50 |
| 0021 | 8.0 | 2.60 | 3.36 | 65 | 50 |
| 0026 | 9.0 | – | 3.36 | – | 50 |
| 0031 | 10.0 | – | 3.36 | – | 50 |
| 0032 | 10.0 | 2.78 | – | 65 | – |
| 0036 | 12.0 | – | 4.05 | – | 50 |
| 0041 | 13.0 | 3.36 (W546) | 4.05 (W545) | 65 | 50 |

65 mm

645F NEW format professional quality

50 mm

6460 Wera

## Socket wrench insert st for hexagon head screws 1/4" DIN 3126 E 6.3 NEW

**Design:** With strong permanent magnet. Supplied in belt bag.

| Order No. | Design | 645F format | Set contents mm |
|---|---|---|---|
| 0500 | 5-part | 18.00 (W546) | 6; 7; 8; 10; 13 |

## Socket wrench insert for hexagon head screws 1/4" DIN 3126 E 6.3

50 mm | American inch sizes

Wera

| Order No. | Width of keys inch | 6460 Wera | Length mm |
|---|---|---|---|
| 0046 | 1/4 | 3.50 | 50 |
| 0051 | 5/16 | 3.93 | 50 |
| 0056 | 3/8 | 3.93 (W545) | 50 |

## Socket wrench insert assortment 1/4" DIN 3126 E 6.3

**Design:** With strong permanent magnet. Supplied in belt bag.

| Order No. | Design | 6460 Wera | Set contents |
|---|---|---|---|
| 0500 | 8-part | 35.10 (W545) | 7; 8; 10; 12; 13 mm; 1/4" ; 5/16" ; 3/8" |

## Stainless socket wrench insert 1/4" DIN 3126 E 6.3

**Design: Made of stainless steel,** non-magnetic with retaining spring.

50 mm | INOX

Wera

| Order No. | Width of keys mm | 6461 Wera | Length mm |
|---|---|---|---|
| 0015 | 7.0 | 8.00 | 50 |
| 0020 | 8.0 | 8.55 | 50 |
| 0025 | 10.0 | 9.35 | 50 |
| 0030 | 13.0 | 12.80 (W584) | 50 |

| Order No. | Width of keys inch | 6461 Wera | Length mm |
|---|---|---|---|
| 0045 | 3/8 | 9.35 (W584) | 50 |

American inch sizes

## Bit bulk pack 1/4" DIN 3126 C 6.3

**Design: Tough hard. 30 bits** in practical, closable plastic box.

25 mm

format professional quality

### 6424 For Phillips screws.

| Order No. | Size | 6424 format | Length mm |
|---|---|---|---|
| 1005 | PH 1 | 9.10 | 25 |
| 1010 | PH 2 | 9.10 | 25 |
| | | (W546) | |

### 6426 For Pozidriv Phillips screws.

| Order No. | Size | 6426 format | Length mm |
|---|---|---|---|
| 1005 | PZ 1 | 9.10 | 25 |
| 1010 | PZ 2 | 9.10 | 25 |
| | | (W546) | |

### 6433 For recessed TORX®-head screws.

| Order No. | Size | 6433 format | Length mm |
|---|---|---|---|
| 1010 | T 15 | 14.30 | 25 |
| 1015 | T 20 | 14.30 | 25 |
| 1020 | T 25 | 14.30 | 25 |
| 1030 | T 30 | 14.30 | 25 |
| 1035 | T 40 | 14.30 | 25 |
| | | (W546) | |

## Bit bulk pack 1/4" DIN 3126 C 6.3

**Design: Tough-hard. 100 bits** in practical plastic box.

25 mm

Wera Be a Tool Rebel

### 6477 For Phillips screws.

| Order No. | Size | 6477 Wera | Length mm |
|---|---|---|---|
| 1005 | PH 1 | 31.50 | 25 |
| 1010 | PH 2 | 31.50 | 25 |
| | | (W545) | |

### 6479 For Pozidriv Phillips screws.

| Order No. | Size | 6479 Wera | Length mm |
|---|---|---|---|
| 1005 | PZ 1 | 31.50 | 25 |
| 1010 | PZ 2 | 31.50 | 25 |
| | | (W545) | |

### 6481 For recessed TORX®-head screws.

| Order No. | Size | 6481 Wera | Length mm |
|---|---|---|---|
| 1005 | T 10 | 55.20 | 25 |
| 1010 | T 15 | 55.20 | 25 |
| 1015 | T 20 | 55.20 | 25 |
| 1020 | T 25 | 55.20 | 25 |
| 1030 | T 30 | 55.20 | 25 |
| 1035 | T 40 | 55.20 | 25 |
| | | (W545) | |

## Bit bulk pack 1/4" DIN 3126 E 6.3

**Design: Tough-hard. 10 bits** in practical, closable plastic box.

50 mm

format professional quality

### 6447 For Phillips screws.

| Order No. | Size | 6447 format | Length mm |
|---|---|---|---|
| 1010 | PH 2 | 11.85 | 50 |
| | | (W546) | |

### 6448 For Pozidriv Phillips screws.

| Order No. | Size | 6448 format | Length mm |
|---|---|---|---|
| 1010 | PZ 2 | 11.85 | 50 |
| | | (W546) | |

### 6452 For recessed TORX®-head screws

| Order No. | Size | 6452 format | Length mm |
|---|---|---|---|
| 1020 | T 20 | 19.05 | 50 |
| 1025 | T 25 | 19.05 | 50 |
| 1030 | T 30 | 19.05 | 50 |
| | | (W546) | |

## Universal bit holder 5/16"

NEW

**Design: DIN 1173 F 11.2.** with circlip.

**Application:** To connect bits with the respective operating tools.

65 mm

| Order No. | Total length mm | 6462 Wera |
|---|---|---|
| 0000 | 65 | 19.95 (W545) |

## Bit for slot screws 5/16" DIN 3126 C 8

**Design:** Tough-hard.

41 mm

| Order No. | Blade width mm | 6462 Wera | PU | Blade thickness mm | Length mm |
|---|---|---|---|---|---|
| 0005 | 5.5 | 2.28 | 10 | 1.0 | 41 |
| 0010 | 6.5 | 2.28 | 10 | 1.2 | 41 |
| 0015 | 8.0 | 2.28 (W545) | 10 | 1.2 | 41 |

| Order No. | Blade width mm | 6462 Wera | PU | Blade thickness mm | Length mm |
|---|---|---|---|---|---|
| 0020 | 10.0 | 4.66 | 10 | 1.6 | 41 |
| 0025 | 12.0 | 4.66 | 10 | 2.0 | 41 |
| 0030 | 14.0 | 5.30 (W545) | 10 | 2.5 | 41 |

## Bit for Phillips screws Phillips/Pozidriv 5/16" DIN 3126 C 8

**Design:** Tough-hard.

**6464** **Phillips (PH).**

**6466** **Pozidriv (PZ).**

32 mm

6464

6466

| Order No. | Size | 6464 Wera | 6466 Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0005 | 1 | 1.56 | 1.56 | 10 | 32 |
| 0010 | 2 | 1.56 (W545) | 1.56 (W545) | 10 | 32 |

| Order No. | Size | 6464 Wera | 6466 Wera | PU | Length mm |
|---|---|---|---|---|---|
| 0015 | 3 | 1.56 | 1.56 | 10 | 32 |
| 0020 | 4 | 1.56 (W545) | 1.56 (W545) | 10 | 32 |

## Bit for Allen screws 5/16" DIN 3126 C 8

**Design: Tough-hard,** with Hex-Plus geometry.

30 mm

| Order No. | Width of keys mm | 6468 Wera | PU | Length mm |
|---|---|---|---|---|
| 0005 | 3 | 2.20 | 10 | 30 |
| 0010 | 4 | 2.20 | 10 | 30 |
| 0015 | 5 | 2.20 (W545) | 10 | 30 |

| Order No. | Width of keys mm | 6468 Wera | PU | Length mm |
|---|---|---|---|---|
| 0020 | 6 | 2.20 | 10 | 30 |
| 0025 | 8 | 2.20 (W545) | 10 | 30 |

## Bit for recessed TORX® screws 5/16" DIN 3126 C 8

**Design:** Tough-hard.

35 mm

| Order No. | Size | 6470 Wera | PU | Length mm |
|---|---|---|---|---|
| 0005 | T 20 | 2.55 | 10 | 35 |
| 0010 | T 25 | 2.55 | 10 | 35 |
| 0015 | T 27 | 2.55 | 10 | 35 |
| 0020 | T 30 | 2.55 (W545) | 10 | 35 |

| Order No. | Size | 6470 Wera | PU | Length mm |
|---|---|---|---|---|
| 0025 | T 40 | 2.55 | 10 | 35 |
| 0030 | T 45 | 2.55 | 10 | 35 |
| 0035 | T 50 | 2.55 | 10 | 35 |
| 0040 | T 55 | 2.55 (W545) | 10 | 35 |

## Twist Drill Bit with 1/4" bit Shank DIN 3126

**Design:** HSS, spiral fluted.

**Application:** For drilling soft materials. For use in hand drills

HSS

1/4"

1038 format professional quality

1041 VÖLKEL THREADING SOLUTIONS

| Order No. | Ø mm | 1038 format | 1041 VÖLKEL | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 0100 | 1.0 | 2.85 | 3.47 | 7 | 32 |
| 0150 | 1.5 | 2.85 | 3.47 | 10 | 32 |
| 0200 | 2.0 | 2.85 | 3.47 | 12 | 34 |
| 0250 | 2.5 | 2.85 | 3.47 | 14 | 36 |
| 0300 | 3.0 | 3.12 | 3.47 | 16 | 38 |
| 0330 | 3.3 | 3.12 | 3.47 | 18 | 40 |
| 0350 | 3.5 | 3.12 | 3.47 | 18 | 40 |
| 0400 | 4.0 | 3.12 | 3.47 | 20 | 44 |
| 0420 | 4.2 | 3.12 | 3.47 | 20 | 45 |
| 0450 | 4.5 | 3.12 | 3.47 | 24 | 46 |
| 0500 | 5.0 | 3.12 | 3.47 | 26 | 50 |
| 0550 | 5.5 | 3.12 (W134) | 3.59 (W161) | 26 | 50 |

| Order No. | Ø mm | 1038 format | 1041 VÖLKEL | Spiral length mm | Total length mm |
|---|---|---|---|---|---|
| 0600 | 6.0 | 3.12 | 3.59 | 26 | 50 |
| 0650 | 6.5 | 3.12 | 3.59 | 30 | 50 |
| 0680 | 6.8 | 3.12 | 3.59 | 30 | 50 |
| 0700 | 7.0 | 3.24 | 3.59 | 30 | 50 |
| 0750 | 7.5 | 3.24 | 4.21 | 32 | 51 |
| 0800 | 8.0 | 3.24 | 4.21 | 32 | 51 |
| 0850 | 8.5 | 3.24 | 4.83 | 33 | 53 |
| 0900 | 9.0 | 4.02 | 4.83 | 33 | 53 |
| 0950 | 9.5 | 4.02 | 5.40 | 38 | 54 |
| 1000 | 10.0 | 4.02 | 5.40 | 38 | 54 |
| 1020 | 10.2 | 4.02 (W134) | 5.40 (W161) | 38 | 54 |

## Twist drill bit with 1/4" bit Shank

**1038** Set consisting of (order no. 1038).

**1041** Set consisting of (order no. 1041).

| Order No. | Set contents mm | 1038 format | 1041 VÖLKEL |
|---|---|---|---|
| 0007 | 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 8.0 | 27.90 | – |
| 0019 | 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5; 5.0; 5.5; 6.0; 6.5; 7.0; 7.5; 8.0; 8.5; 9.0; 9.5; 10.0 | 70.90 | – |
| 0019 | 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0;4.5; 5.0; 5.5; 6.0; 6.5; 7.0; 7.5;8.0; 8.5; 9.0; 9.5; 10.0 | – | 59.80 |
| | | (W134) | (W161) |

1038 format professional quality

1041 VÖLKEL THREADING SOLUTIONS

## Universal stepped drill bit 1/4"

**Design:** HSS, spiral fluted. 1/4" bit drive (6.35 mm), shank length 27 mm.

**Application:** For burr-free drilling and reaming of sheets, pipes and profiles.

HSS

format professional quality

1/4"

| Order No. | Ø mm | 1322 format | Step length mm | Total length mm |
|---|---|---|---|---|
| 0010 | 4–12 | 29.70 | 5 | 72 |
| 0015 | 4–20 | 37.90 | 4 | 81 |
| 0030 | 4–30 | 60.30 (W134) | 4 | 105 |

## Universal stepped drill 1/4" bit set

**Design:** Supplied in a robust, high quality plastic cassette with automatic drill setup function when opened.

| Order No. | Set contents mm | 1322 format |
|---|---|---|
| 0100 | 4–12; 4–20; 4–30 | 123.00 (W134) |

## Countersink bit 90° with 1/4" hexagonal shank

**Design:** HSS, DIN 335-C. 90° countersink angle. Radial taper-ground, bright surface, with straight clamping slots and drilling spaces ground from full pieces. Also provided with cutting and clearance angles for the most common materials.
The hexagonal shank (1/4" bit shank according to DIN 2126) causes a 100 % power transfer, thus in every bushing the countersink is extremely slip-free.

**Application:** Suitable for universal chatter and burr-free drilling, countersinking, milling and deburring work. The countersink bit can also be used as hand deburring together with the corresponding activation tools such as grips, toggles or ratchets with a 1/4" hexagon mount.

**Note:** Sufficient supply of coolant is essential.

| HSS | DIN 335-C | Z 3 |
|---|---|---|

format professional quality

| Order No. | Nominal Ø mm | 1420 format | Smallest Ø mm | Total length mm | For countersink screws |
|---|---|---|---|---|---|
| 0630 | 6.3 | 4.86 | 1.5 | 31 | M3 |
| 0830 | 8.3 | 5.75 | 2.0 | 31 | M4 |
| 1040 | 10.4 | 6.60 | 2.5 | 34 | M5 |
| | | (W134) | | | |

| Order No. | Nominal Ø mm | 1420 format | Smallest Ø mm | Total length mm | For countersink screws |
|---|---|---|---|---|---|
| 1240 | 12.4 | 8.90 | 2.8 | 35 | M6 |
| 1650 | 16.5 | 9.95 | 3.2 | 40 | M8 |
| 2050 | 20.5 | 11.75 | 3.5 | 41 | M10 |
| | | (W134) | | | |

## Countersink bit set 90° with hexagonal shaft

**Design:** Supplied in a robust, high quality plastic cassette with automatic countersink setup function when opened incl. universal holder with 1/4" allen mount and drilling paste.

| Order No. | Design | 1422 format | Nominal Ø mm |
|---|---|---|---|
| 0005 | 9-part | 70.40 | 6.3–20.5 |
| | | (W134) | |

## Cutting tap 1/4" bit DIN 3126

**Design:** Tap bit, 1/4" hexagon mount for metric ISO thread according to DIN 13.

**Application:** Cutting tap bits are designed for thread tapping with cordless screw drills and handheld drills with left and right motion. However, they are also suitable for tapping by hand and on stationary drilling machines. Your cordless screw drill should have a minimum power of 7.5 Volt. Make sure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil.
rpm: lowest settings (0–450 $min^{-1}$),
torque: maximum setting.

| DIN 13 | M | HSS |
|---|---|---|

VÖLKEL THREADING SOLUTIONS

| Order No. | Nominal Ø mm | 1649 VÖLKEL | Total length mm | Cutting edge length mm | Width of keys mm |
|---|---|---|---|---|---|
| 0030 | M3 | 3.45 | 33 | 11 | 6.35 |
| 0040 | M4 | 3.45 | 35 | 12 | 6.35 |
| 0050 | M5 | 4.26 | 36 | 15 | 6.35 |
| | | (W161) | | | |

| Order No. | Nominal Ø mm | 1649 VÖLKEL | Total length mm | Cutting edge length mm | Width of keys mm |
|---|---|---|---|---|---|
| 0060 | M6 | 4.26 | 39 | 18 | 6.35 |
| 0080 | M8 | 6.20 | 40 | 19 | 6.35 |
| 0100 | M10 | 7.25 | 41 | 21 | 6.35 |
| | | (W161) | | | |

## Cutting tap 1/4" bit set DIN 3126

**Design:** Supplied in a plastic box.

| Order No. | Size | 1649 VÖLKEL | Set contents |
|---|---|---|---|
| 0105 | M3–M10 | 27.30 | **6 tap bits** M3; 4; 5; 6; 8; 10 |
| 0110 | M3–M10 | 43.90 | **1 bit-holder**<br>**6 tap bits,** M3; 4; 5; 6; 8; 10<br>**6 core hole drill bits,**<br>Ø 2.5; 3.3; 4.2; 5.0; 6.8; 8.5 |
| | | (W161) | |

1649 0110

## Combi-bit 1/4" DIN 3126

**Design:** HSS, bright surface. With 1/4" hexagon shaft.

**Application:** For drilling core holes, thread tapping and deburring in one step, for regular metric threads according to ISO DIN 13. Combi-bits are designed for thread tapping with cordless drills and handheld drills with left and right motion. However, they are also suitable for tapping by hand and on stationary drilling machines. Only through-holes with up to a maximum thread depth of 1 x D can be produced. Particularly suitable for assembly work and small batches. Make sure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil (order no. 9829).

| Order No. | Thread | 1651 VÖLKEL | Gradient mm | Drill Ø mm | Total length mm |
|---|---|---|---|---|---|
| 0001 | M3 | 6.65 | 0.50 | 2.5 | 36 |
| 0003 | M4 | 6.65 | 0.70 | 3.3 | 39 |
| 0005 | M5 | 6.65 | 0.80 | 4.2 | 41 |
| 0007 | M6 | 6.65 | 1.00 | 5.0 | 44 |
| 0009 | M8 | 9.20 | 1.25 | 6.8 | 50 |
| 0011 | M10 | 11.00 (W161) | 1.50 | 8.5 | 59 |

## Combi-bit set 1/4" DIN 3126

**Design:** Supplied in a plastic box.

| Order No. | Size | 1651 VÖLKEL | Set contents |
|---|---|---|---|
| 0020 | M3–M10 | 47.70 (W161) | **1 bit-holder**<br>**6 combi-bits** M3; 4; 5; 6; 8; 10 |

## Cutting tap bit

Please check out our complete range of cutting taps from 📖 1/164.

## Combi-bit SGE 1/4" DIN 3126

**Design:** With cross-grinding and 1/4" hexagon shaft.

**Application:** For drilling core holes, thread tapping and deburring in one step. Combi-bits are designed for thread tapping with cordless drills and handheld drills with left and right motion. However, they are also suitable for tapping on stationary drilling machines. Material thickness not more than nominal thread Ø (M6 = 6 mm material thickness). Particularly suitable for assembly work and small batches. Please ensure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil (order no. 9829).

**Note:** The heat-treated induction zone allows for increased bending elasticity, thus significantly reducing the risk of fracture, thereby up to **50% longer life**.

M | HSS | HSS-E | 60° | ≤ 1xd

format professional quality

1/4"

**1656** HSS
**1657** HSS-E

| Order No. | Thread | 1656 format | 1657 format | Gradient mm | Drill Ø mm | Total length mm |
|---|---|---|---|---|---|---|
| 0001 | M3 | 5.65 | 8.90 | 0.50 | 2.5 | 36 |
| 0003 | M4 | 5.65 | 8.90 | 0.70 | 3.3 | 39 |
| 0005 | M5 | 5.65 | 8.90 | 0.80 | 4.2 | 41 |
| 0007 | M6 | 5.65 (W161) | 8.90 (W161) | 1.00 | 5.0 | 44 |
| 0009 | M8 | 7.70 | 10.25 | 1.25 | 6.8 | 50 |
| 0011 | M10 | 9.40 | 12.25 | 1.50 | 8.5 | 59 |
| 0013 | M12 | 14.45 (W161) | 23.20 (W161) | 1.75 | 10.2 | 66 |

## Combi-Bit-SGE set 1/4" DIN 3126

**Design:** Supplied in a plastic box.

HSS
HSS-E

**1656** HSS
**1657** HSS-E

| Order No. | Size | 1656 format | 1657 format | Set contents |
|---|---|---|---|---|
| 0020 | M3–M10 | 43.60 (W161) | 61.90 (W161) | **1 Bit holder with adapter**<br>**6 combi-bits**<br>M3; 4; 5; 6; 8; 10 |

## Cutting tap bit HexTap S

**Design:** Tap and die bit, 1/4" hexagonal drive for pipe threads according to DIN ISO 228.

**Application:** Cutting tap bits are designed for thread tapping with cordless screw drills and handheld drills with left and right motion. However, they are also suitable for tapping by hand and on stationary drilling machines. Your cordless screw drill should have a minimum power of 7.5 Volt. Make sure that the tool axis and hole axis are precisely aligned and use appropriate cutting oil.

DIN ISO 228 | G | HSS

VÖLKEL THREADING SOLUTIONS

1/4"

| Order No. | Nominal Ø inch | 1649 VÖLKEL | Total length mm | Cutting edge length mm | Width of keys mm |
|---|---|---|---|---|---|
| 0250 | G 1/8 | 6.90 (W161) | 40.5 | 17 | 6.35 |

## Bit assortment, semi-rigid

**Design: With tough bits** in plastic container with folding function. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Tough viscous bits, especially suitable for turning screws in metal and sheet metal.

25 mm

format professional quality

| Order No. | Design | 6480 format | Set contents |
|---|---|---|---|
| 0003 | 7-part | 8.45 | 1 universal holder with permanent magnet and snap ring (Order No. 6409)<br>2 slot bits 4.5 x 0.6; 5.5 x 0.8 mm<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2 |
| 0014 | 7-part | 8.80 | 1 universal holder with permanent magnet and snap ring (Order No. 6409)<br>6 recessed TORX® bits T 10, 15, 20, 25 , 30, 40 |

(W546)

6480 0003

6480 0014

## Bit assortment, semi-rigid

NEW

**Design: With tough bits and torsion zone.** In plastic container with folding function. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

25 mm

format professional quality

| Order No. | Design | 6480 format | Set contents |
|---|---|---|---|
| 0009 | 10-part | 15.25 | 1 Universal holder (Order no. 641C 0005)<br>3 Bits Phillips PH 1; 2; 3 (Order no. 6424)<br>2 Bits Phillips PZ 1; 2 (Order no. 6426)<br>4 Bits recess TORX® T 10; 15; 20; 25 (Order no. 6433) |

(W546)

## Bit assortment, semi-rigid

**Design: With tough bits** in a plastic box. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Suitable for universal applications.

25 mm

format professional quality

6480 0030

6480 0035

6480 0045

50 mm

6480 0060

| Order No. | Design | 6480 format | Set contents |
|---|---|---|---|
| 0030 | 31-part | 19.80 | 1 universal holder with permanent magnet and snap ring (Order No. 6409)<br>3 slot bits 4.5 x 0.6; 5.5 x 1.0; 6.5 x 1.2 mm<br>9 Phillips bits PH 1 (3 pieces); 2 (3 pieces); 3 (3 pieces)<br>9 Phillips bits PZ 1 (3 pieces); 2 (3 pieces); 3 (3 pieces)<br>3 Allen bits 4; 5; 6 mm<br>6 recessed TORX® bits T 10, 15, 20, 25 , 30, 40 |
| 0035 | 31-part | 16.15 | 1 universal holder with permanent magnet and snap ring (Order No. 6409)<br>8 Phillips bits PH 1 (2 pieces); 2 (4 pieces); 3 (2 pieces)<br>3 Phillips PZ bits 2 (3 pieces)<br>3 Allen bits 3; 4; 5 mm<br>16 recessed TORX® T bits 10 (2 pieces); 15 (2 pieces); 20 (4 pieces); 25 (4 pieces); 30 (2 pieces); 40 (2 pieces) |
| 0045 | 61-part | 24.90 | 1 universal holder with permanent magnet and snap ring (Order No. 6409)<br>35 Phillips PH bits 1 (10 items); 2 (20); 3<br>3 Phillips PZ bits 2<br>22 recessed TORX® T bits 10 (3 pieces); 15 (5 pieces); 20 (5 pieces); 25 (5 pieces); 30 (2 pieces); 40 (2 pieces) |
| 0060 | 37-part | 19.80 | 1 universal holder with permanent magnet and snap ring (Order No. 6409)<br>1 Phillips PH bit, 25 mm, 2<br>1 Phillips PH bit, 50 mm, 2<br>9 Phillips PZ bits, 25 mm, 1 (2 pieces); 2 (5 pieces); 3 (2 pieces)<br>2 Phillips PZ bits, 50 mm, 1; 2<br>20 recessed TORX® T bits, 25 mm, 10 (3 pieces); 15 (4 pieces); 20 (4 pieces); 25 (4 pieces); 30 (4 pieces); 40<br>3 recessed TORX® T bits, 50 mm, 20; 25; 30 |

(W546)

## Bit assortment, semi-rigid and extra hard

**Design: With tough and extra hard bits** in a plastic box. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Tough viscous bits, especially suitable for turning screws in metal and sheet metal. Extra-hard bits suitable for screwing in wood.

25 mm

format professional quality

| Order No. | Design | 6480 format | Set contents |
|---|---|---|---|
| 0050 | 61-part | 47.40 | 1 universal holder with permanent magnet and circlip (Order No. 6413 0005)<br>18 Phillips bits PH 1 (5 pieces); 2 (10 pieces); 3 (3 pieces)<br>9 Phillips bits PZ 1 (2 pieces); 2 (5 pieces); 3 (2 pieces)<br>9 Allen bits 3 (3 pieces); 4 (3 pieces); 5 (3 pieces) mm<br>18 recessed TORX® T bits 10 (2 pieces); 15 (3 pieces); 20 (4 pieces); 25 (4 pieces); 30 (3 pieces); 40 (2 pieces)<br>6 recessed TORX® T bits with hole; 10; 15; 20; 25; 30; 40 |
| | | (W546) | |

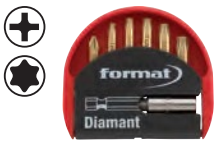
## Bit assortment, diamond coated

**Design: With diamond-coated bits** in a plastic box. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically. Due to the diamond coating, "cam-out forces" which require high contact pressure during the screwing process, are reduced.

**Application:** Diamond coated bits for screwing in **sensitive materials and high quality finishes.**

25 mm

format professional quality




| Order No. | Design | 6480 format | Set contents |
|---|---|---|---|
| 0017 | 7-part | 10.75 | 1 universal holder with permanent magnet and snap ring (Order No. 6409)<br>1 Phillips PH bit 2<br>5 recessed TORX® bits T 10; 15; 20; 25; 30 |
| | | (W546) | |

## Bit assortment, semi-rigid

**Design: With tough bits** in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Suitable for universal applications.

50 mm

Wera BE A TOOL REBEL

6482 0305

6482 0315

6482 0310

6482 0320

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0305 | 6-part | 7.05 | 2 slot bits 5.5 x 1.0; 6.5 x 1.2 mm<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2 |
| 0315 | 6-part | 7.45 | 6 Phillips PZ bits 1 (2 pieces); 2 (3 pieces); 3 |
| 0310 | 6-part | 8.60 | 1 Phillips PH bit 2<br>2 Phillips PZ bits 1; 2<br>3 recessed TORX® bits T 15; 20; 25 |
| 0320 | 6-part | 10.15 (W545) | 6 recessed TORX® bits T 10, 15, 20, 25 , 30, 40 |

## Bit assortment Bit-Check, semi-rigid

NEW

**Design: With tough bits** in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Suitable for universal applications.

25 mm

6482 0370

6482 0380

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0370 | 12-part | 14.35 | 1 Universal bit holder with permanent magnet and circlip (Order no. 641A 0005)<br>1 Phillips PH bit 2<br>4 Phillips bits PZ 1, 2 (2 pieces), 3<br>6 recessed TORX® bits T 10, 15, 20, 25 , 30, 40 |
| 0380 | 12-part | 14.35 | 1 Universal bit holder with permanent magnet and circlip (Order no. 641A 0005)<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2<br>3 Allen bits 3; 4; 5 mm<br>4 recessed TORX® bits T 15; 20; 25; 30 |

(W545)

## Bit assortment Bit-Check, semi-rigid

NEW

**Design: With tough bits** in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Suitable for universal applications.

25 mm

6482 0335

6482 0340

6482 0345

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0335 | 30-part | 19.60 | 1 Universal bit holder with permanent magnet and circlip (Order no. 641A 0005)<br>1 Phillips PH bit 2<br>9 Phillips bits PZ 1 (2 pieces); 2 (5 pieces); 3 (2 pieces)<br>19 bits recessed TORX® T 10 (3 pieces); 15 (4 pieces); 20 (4 pieces); 25 (4 pieces); 30 (3 pieces); 40 |
| 0340 | 30-part | 19.60 | 1 Universal bit holder with permanent magnet and circlip (Order no. 641A 0005)<br>3 slot bits 4.5; 5.5; 6.5 mm<br>8 Phillips bits PH 1 (3 pieces); 2 (3 pieces); 3 (2 pieces)<br>9 Phillips bits PZ 1 (3 pieces); 2 (3 pieces); 3 (3 pieces)<br>3 Allen bits 4; 5; 6 mm<br>6 recessed TORX® bits T 10, 15, 20, 25 , 30, 40 |
| 0345 | 30-part | 19.60 | 1 Universal bit holder with permanent magnet and circlip (Order no. 641A 0005)<br>29 recessed TORX® T bits 10 (3 pieces); 15 (5 pieces); 20 (8 pieces); 25 (7 pieces); 30 (4 pieces); 40 (2 pieces) (Order no. 644A) |

(W545)

## Bit assortment Bit-Check, semi-rigid

**Design: With tough bits** in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Suitable for universal applications.

25 mm

6482 0240

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0240 | 10-part | 19.50 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>9 recessed TORX® bits T 6; 8; 9; 10; 15; 20; 25; 30; 40 |

(W545)

## Bit assortment Bit-Safe, semi-rigid

**Design: With tough bits** in textile box. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Suitable for universal applications.

25 mm
50 mm

6482 0085
NEW

25 mm

6482 0100

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0085 | 43-part | 45.00 | 1 Universal bit holder with permanent magnet and circlip (Order no. 641A 0005)<br>1 Phillips PH bit, 25 mm, 2<br>3 Phillips bits, 50 mm, PH 1; 2 (2 pieces)<br>9 Phillips PZ bits, 25 mm, 1 (2 pieces); 2 (5 pieces); 3 (2 pieces)<br>3 Phillips bits, 50 mm, PZ 1; 2 (2 pieces)<br>20 recessed TORX® T bits, 25 mm, 10 (3 pieces); 15 (4 pieces); 20 (4 pieces); 25 (4 pieces); 30 (4 pieces); 40<br>6 Bits recess-TORX®, 50 mm, T 10; 15; 20; 25; 30; 40 |
| 0100 | 61-part | 36.80 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>3 slot bits 0.6 x 4.5; 1.0 x 5.5; 1.2 x 6.5 mm<br>15 Phillips bits PH 1 (3 pieces); 2 (10 pieces); 3 (2 pieces)<br>15 Phillips bits PZ 1 (3 pieces); 2 (10 pieces); 3 (2 pieces)<br>11 Bits recess hexagon 2.5 (3 pc.); 3 (3 pc.); 4 (3 pc.); 5 mm (2 pc.)<br>16 recessed TORX® 10 (2 pieces); 15 (3 pieces); 20 (3 pieces); 25 (3 pieces); 30 (3 pieces); 40 (2 pieces) |

(W545)

## Bit assortment Bit-Check, semi-rigid

NEW

**Design: With tough bits** with bi-torsion zone in plastic container.

**Application:** Suitable for universal applications.

25 mm

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0365 | 12-part | 26.70 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>3 Phillips PH bits 1; 2 (2 pieces)<br>3 Phillips PZ bits 1; 2 (2 pieces)<br>5 recessed TORX® bits T 10; 15; 20; 25; 30 |
| 0350 | 30-part | 45.00 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>9 Phillips bits PH 1 (2 pieces); 2 (5 pieces); 3 (2 pieces)<br>10 Phillips bits PZ 1 (2 pieces); 2 (6 pieces); 3 (2 pieces)<br>10 bits recessed TORX® T 10; 15 (2 pieces); 20 (2 pieces); 25 (2 pieces); 30 (2 pieces); 40 |

(W545)

## Bit assortment, semi-rigid and extra hard

**Design: With semi-rigid and extra hard bits** with torsion area, in plastic container Bit-Check. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

25 mm

Wera

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0075 | 30-part | 32.50 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>1 slot bit 5.5 x 1.0 mm<br>6 semi-rigid bits Phillips PH 1 (2 pieces), 2 (3 pieces); 3<br>6 extra hard Phillips bits PZ 1 (2 pieces); 2 (3 pieces); 3<br>5 semi-rigid Allen bits 3; 4; 5; 6; 8 mm<br>6 semi-rigid bits TORX ® T 10; 15; 20; 25; 30; 40<br>5 semi-rigid recessed TORX® T bits with hole; 10; 15; 20; 25; 30 |
| 0375 | 30-part | 44.10 | 1 Rapidaptor bit holder with ring magnet (Order No. 6428 0005)<br>3 tough bits Phillips PH 2 (2 pieces), 3<br>11 Phillips PZ bits 1 (3 pieces); 2 (6 items); 3 (2 pieces)<br>15 recessed TORX® T bits 10 (2 pieces); 15 (2 pieces); 20 (4 pieces); 25 (4 pieces); 30 (2 pieces); 40 |

(W545)

6482 0075

6482 0375

NEW

## Bit assortment Bit-Safe, semi-rigid and extra hard

NEW

**Design: With tough bits and extra tough bits** in textile box. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Suitable for universal applications.

25 mm

Wera

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0360 | 61-part | 69.50 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>3 diamond-coated bits slot 0.8 x 5.5; 1.0 x 5.5; 1.2 x 6.5 mm<br>11 semi-rigid bits Phillips PH 1 (2 pieces), 2 (8 pieces); 3<br>4 diamond-coated bits Phillips PH 1; 2 (2 pieces); 3<br>11 semi-rigid bits Phillips PZ 1 (2 pieces), 2 (8 pieces); 3<br>4 diamond-coated bits Phillips PZ 1; 2 (2 pieces); 3<br>11 tough-hard bits recess hexagon 2.5 (3 pc.); 3 (3 pc.); 4 (3 pc.); 5 (2 pc.)<br>16 recessed TORX® T bits 10 (3 pieces); 15 (2 pieces); 20 (4 pieces); 25 (4 pieces); 30 (2 pieces); 40 |

(W545)

6 Hand Tools

## Bit hand holder

Please find our complet program of bit holders from 📖 6/136.

## Bit assortment Tool-Check with bit ratchet, semi-rigid and extra hard

**Design: With semi-rigid and extra hard bits and hexagon socket wrench inserts** in plastic container Tool-Check. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

**Application:** Tough viscous bits, especially suitable for turning screws in metal and sheet metal.

25 mm

Wera

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0325 | 38-part | 62.70 | 1 bit ratchet 1/4" (Order No. 6402 0005)<br>1 Rapidaptor bit holder (Order No. 6416 0005)<br>1 adapter 1/4" Allen screw to 1/4" square drive<br>1 semi-rigid slot 5.5 x 1.0 mm<br>6 semi-rigid bits Phillips PH 1 (2 pieces), 2 (3 pieces); 3<br>5 extra hard bits Phillips PZ 1; 2 (3 pieces); 3<br>5 semi-rigid Allen bits 3; 4; 5; 6; 8 mm<br>6 semi-rigid bits TORX ® T 10; 15; 20; 25; 30; 40<br>5 semi-rigid recessed TORX® T bits with hole; 10; 15; 20; 25; 30<br>7 hexagon socket wrench inserts 5.5, 6, 7, 8, 10, 12, 13 mm |
| 0330 | 39-part | 73.20 | 1 bit hand holder<br>1 bit ratchet 1/4" (Order No. 6402 0005)<br>1 Rapidaptor bit holder (Order No. 6416 0005)<br>1 adapter 1/4" Allen screw to 1/4" square drive<br>1 semi-rigid slot 5.5 x 1.0 mm<br>6 semi-rigid bits Phillips PH 1 (2 pieces), 2 (3 pieces); 3<br>5 extra hard bits Phillips PZ 1; 2 (3 pieces); 3<br>5 semi-rigid Allen bits 3; 4; 5; 6; 8 mm<br>6 semi-rigid bits TORX ® T 10; 15; 20; 25; 30; 40<br>5 semi-rigid recessed TORX® T bits with hole; 10; 15; 20; 25; 30<br>7 hexagon socket wrench inserts 5.5, 6, 7, 8, 10, 12, 13 mm |
| | | (W545) | |

6482 0325

6482 0330

## Bit ratchet

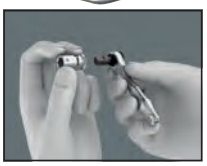
**Design:** Made from special steel, drop forged, with reversing lever and thumb wheel. The bit is received directly in the ratchet head

**640A** NEW — Made of vanadium-chrome steel with 2-component handle. **72-fold serrated**, rear swivel angle 5°.

**6402** — Made of special steel, drop-forged Kraftform handle ergonomically shaped. **60-fold serrated,** rear swivel angle 6°. Supplied including adapter for 1/4" sockets.

640A format professional quality

6402 Wera Zyklop



| Order No. | Bit holder inch | 640A format | 6402 Wera | Length mm 640A | Length mm 6402 |
|---|---|---|---|---|---|
| 0005 | 1/4 | 19.50 (W546) | 29.50 (W545) | 90 | 87 |

## Bit assortment, Bit-Check, diamond coated

NEW

**Design: With diamond-coated bits** in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically. Due to the diamond coating, "cam-out forces," which require high contact pressure during the screwing process, are reduced.

**Application:** For screwing in sensitive materials and high quality finishes.

50 mm

Wera

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0095 | 6-part | 18.65 | 6 Phillips PH bits 1 (2 pieces); 2 (3 pieces); 3 |
| 0105 | 6-part | 18.65 (W545) | 6 Phillips PZ bits 1 (2 pieces); 2 (3 pieces); 3 |

6482 0095

6482 0105

## Bit assortment, Bit-Check, diamond coated

NEW

**Design: With diamond-coated bits** in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically. Due to the diamond coating, "cam-out forces," which require high contact pressure during the screwing process, are reduced.

25 mm

Wera

**Application:** For screwing in sensitive materials and high quality finishes.

6482 0115

6482 0125

6482 0135

6482 0355

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0115 | 7-part | 28.10 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>6 Phillips PZ bits 1 (2 pieces); 2 (3 pieces); 3 |
| 0125 | 7-part | 31.00 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>6 recessed TORX® bits T 10, 15, 20, 25 , 30, 40 |
| 0135 | 12-part | 35.60 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>3 Bits for Phillips PH bits 1; 2 (2 pieces)<br>3 Bits for Phillips PZ bits 1; 2 (2 pieces)<br>5 recessed TORX® bits T 10; 15; 20; 25; 30 |
| 0355 | 30-part | 56.30 | 1 Rapidaptor bit holder (Order No. 6416 0005)<br>3 bits for slots 0.8 x 5.5; 1.0 x 5.5; 1.2 x 6.5 mm<br>7 Phillips PH bits 1 (2 items); 2 (4); 3<br>7 Bits for Phillips PZ 1 (2 items); 2 (4); 3<br>12 bits for recessed TORX® T 10 ( 2 pieces); 15 (2 pieces); 20 (3 pieces); 25 (3 pieces); 30; 40 |

(W545)

## Bit assortment Bit-Check, stainless steel

**Design: Stainless bits** in plastic container Bit-Check. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically.

25 mm | INOX

Wera

**Application:** Special product for preventing rust in the processing of stainless steel screws.

6482 0200

6482 0205
NEW

6482 0215
NEW

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0200 | 10-part | 33.40 | 1 Rapidaptor Stainless bit holder (Order No. 6428 0010)<br>1 Phillips PH bit 2<br>3 Phillips PZ bits 1; 2 (2 pieces)<br>5 recessed TORX® bits T 10; 15; 20; 25; 30 |
| 0205 | 12-part | 37.50 | 1 Rapidaptor Stainless bit holder (Order No. 6428 0010)<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2<br>3 Allen bits 3; 4; 5 mm<br>4 recessed TORX® bits T 15; 20; 25; 30 |
| 0215 | 30-part | 62.20 | 1 Rapidaptor Stainless bit holder (Order No. 6428 0010)<br>5 Phillips PH bits 1; 2 (3 pieces), 3<br>6 Phillips PZ bits 1 (2 pieces); 2 (3 pieces); 3<br>5 Allen bits 2.5, 3, 4, 5, 5.5 mm<br>13 bits recessed TORX® T 10 (2 pieces); 15 (2 pieces); 20 (3 pieces); 25 (3 pieces); 30 (2 pieces); 40 |

(W584)

## Bit assort. Impaktor

**Design:** With Impaktor bits in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically. Due to the diamond coating, "cam-out forces" which require high contact pressure during the screwing process, are reduced. With Impaktor technology up to 5 times longer product life compared to standard or torsion bits.

50 mm

Wera Impaktor

**Application:** Especially well suited for use with commercial impact screwdrivers.

6482 0300

6482 0295

| Order No. | Design | 6482 Wera Impaktor | Set contents |
|---|---|---|---|
| 0300 | 6-part | 21.20 | 2 Phillips PH bits 2; 3<br>2 Phillips PZ bits 2; 3<br>2 bits recessed TORX® T 25, 30 |
| 0295 | 6-part | 23.20 (W545) | 6 Bits recess TORX® T 20 (2 pieces); 25 (2 pieces); 30; 40 |

## Bit assort. Impaktor

**Design:** With Impactor bits in plastic container. The bits are clearly housed in a space-saving manner and can be removed quickly and specifically. Due to the diamond coating, "cam-out forces" which require high contact pressure during the screwing process, are reduced. With Impaktor technology up to 5 times longer product life compared to standard or torsion bits.

25 mm

Wera Impaktor

**Application:** Especially well suited for use with commercial impact screwdrivers.

6482 0280

6482 0285

| Order No. | Design | 6482 Wera Impaktor | Set contents |
|---|---|---|---|
| 0280 | 10-part | 41.20 | 1 Impaktor bit holder (Order No. 6428 0020)<br>2 Phillips PH bits 2; 3<br>2 Phillips PZ bits 2; 3<br>2 Allen bits 4; 5 mm<br>3 recessed TORX® bits T 20; 25; 30 |
| 0285 | 30-part | 58.70 (W545) | 1 Impaktor bit holder (Order No. 6428 0020)<br>7 Impaktor bits Phillips PH 1 (2 pieces); 2 (3 pieces); 3 (2 pieces)<br>7 Impaktor bits Phillips PZ 1 (2 pieces); 2 (3 pieces); 3 (2 pieces)<br>4 Impaktor Allen bits 3; 4; 5; 6 mm<br>11 Impaktor bits recessed TORX® T 10; 15; 20 (2 pieces); 25 (3 pieces); 30 (2 pieces); 40 (2 pieces) |

## Bit assortment Kraftform compact, tough-hard, extra hard and Impaktor

NEW

Wera

**Design: With tough bits and extra tough bits and Impaktor bits** in textile box. The Kraftform Plus handle made of impact resistant plastic with integrated soft areas for better grip and roll-off protection has a Rapidaptor quick change chuck. Thus, the bits are firmly and wobble-free connected with handle, yet can be changed quickly. With freewheel sleeve for easy holding while machine screwing. The bits and the handle are clearly laid out in a plastic box.

**Application:** Suitable for universal applications. Suitable for turning screws by hand and machine.

25 mm

50 mm

| Order No. | Design | 6483 Wera | Set contents |
|---|---|---|---|
| 0030 | 52-part | 80.20 | 1 Kraftform Plus handle with Rapidaptor<br>1 Rapidaptor bit holder (Order No. 6416 0005)<br>2 tough bits slot, 25 mm, 0.8 x 5.5; 1.0 x 5.5 mm<br>8 tough bits Phillips 25 mm,<br>PH 1, (2 pieces), 2 (4 pieces); 3 (2 pieces)<br>3 Impaktor bits, 50 mm, PH 2 (2 pieces) 3<br>8 tough bits Phillips 25 mm,<br>PZ 1, (2 pieces), 2 (4 pieces); 3 (2 pieces)<br>3 Impaktor bits, 50 mm, PZ 2 (2 pieces) 3<br>3 Impaktor Allen bits, 50 mm, 4; 5; 6 mm<br>12 tough bits recessed TORX®, 25 mm, T 10 (2 pieces);<br>15 (2 pieces); 20 (3 pieces); 25 (2 pieces); 30 (2 pieces); 40<br>3 Impaktor recessed TORX® T bits, 50 mm, 25; 30; 40<br>8 hexagon angled screwdrivers<br>1.5; 2; 2.5; 3; 4; 5; 6; 8 mm |

(W545)

Hex–Plus

## Bit assortment Kraftform Kompakt in plastic box, semi-rigid

Wera

**Design: With tough bits.** The Kraftform Plus handle made of impact resistant plastic with integrated soft areas for better grip and roll-off protection has a Rapidaptor quick change chuck. Thus, the bits are firmly and wobble-free connected with handle, yet can be changed quickly. With freewheel sleeve for easy holding while machine screwing. The bits and the handle are clearly laid out in a plastic box.

**Application:** Tough viscous bits, especially suitable for turning screws in metal and sheet metal. Suitable for turning screws by hand and machine.

25 mm

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0040 | 32-part | 51.60 | 1 Kraftform Plus handle with Rapidaptor<br>1 Rapidaptor bit holder (Order No. 6416 0005)<br>3 slotted screw bits 4.5 x 0.6; 5.5 x 1.0; 6.5 x 1.2 mm<br>9 Phillips bits PH 1 (3 pieces); 2 (3 pieces); 3 (3 pieces)<br>9 Phillips bits PZ 1 (3 pieces); 2 (3 pieces); 3 (3 pieces)<br>3 Allen bits 4; 5; 6 mm<br>6 recessed TORX® T bits with hole; 10; 15; 20; 25; 30; 40 |
| 0045 | 32-part | 75.40 | 1 Kraftform Plus handle with Rapidaptor<br>1 Rapidaptor bit holder (Order No. 6416 0005)<br>6 hexagon bits with hole 2; 2.5; 3; 4; 5; 6 mm<br>9 recessed TORX® T bits with hole<br>7; 8; 9; 10; 15; 20; 25; 30; 40<br>4 TORQ-SET® bits 6; 8; 10 mm; 1/4"<br>3 TRI-WING® bits 1, 2, 3<br>4 spanner bits 4, 6, 8, 10 mm<br>4 recessed square drive bits 0, 1, 2, 3 |

(W545)

6482 0040

6482 0045

## Bit assortment in folding bag, semi-rigid

**Design: With tough bits.** The ergonomic multi-component handle made of impact resistant plastic with integrated soft areas has a quick change chuck. Thus, the bits are firmly and wobble-free connected with handle, yet can be changed easily. The bits and the handle are clearly laid out in a nylon folding bag.

**Application:** Tough viscous bits, especially suitable for turning screws in metal and sheet metal. Suitable for turning screws by hand and machine.

89 mm

format professional quality

6487 0015

| Order No. | Design | 6487 format | Set contents |
|---|---|---|---|
| 0015 | 17-part | 43.70 | 1 multi-component handle with quick change chuck<br>2 slot bits 4.0 x 0.8; 5.5 x 1 mm<br>3 Phillips PH bits 1; 2; 3<br>2 Phillips PZ bits 1; 2<br>4 Allen bits 3; 4; 5; 6 mm<br>5 recessed TORX® bits T 10; 15; 20; 25; 30 |

(W546)

## Bit assortment Kraftform Kompakt in folding bag, semi-rigid

**Design: With tough bits.** The ergonomic multi-component handle made of impact resistant plastic with integrated soft areas has a quick change chuck. Thus, the bits are firmly and wobble-free connected with handle, yet can be changed easily. The bits and the handle are clearly laid out in a nylon folding bag.

**Application:** Suitable for universal applications. Suitable for turning screws by hand and machine.

89 mm

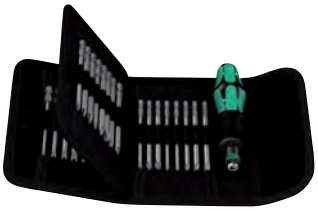
6496 0005 Wera

6496 0010 Wera

6496 0015 Wera

6496 0035 NEW Wera

6496 0030 Wera



6496 0025 Wera

| Order No. | Design | 6496 Wera | Set contents |
|---|---|---|---|
| 0005 | 7-part | 29.00 | 1 Kraftform Plus handle with Rapidaptor<br>2 slot bits 5.5 x 1; 6.5 x 1.2 mm<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2 |
| 0010 | 11-part | 37.50 | 1 Kraftform Plus handle with Rapidaptor<br>3 Phillips PH bits 1; 2; 3<br>3 Phillips PZ bits 1; 2; 3<br>4 recessed TORX® T bits with hole; 15; 20; 25; 30 |
| 0015 | 17-part | 50.90 | 1 Kraftform Plus handle with Rapidaptor<br>1 slot bit 5.5 x 1 mm<br>3 Phillips PH bits 1; 2; 3<br>3 Phillips PZ bits 1; 2; 3<br>4 Allen bits 3; 4; 5; 6 mm<br>5 recessed TORX® T bits with hole; 10; 15; 20; 25; 30 |
| 0035 | 17-part | 62.10 | 1 Kraftform Plus handle with Rapidaptor<br>3 Phillips PH bits 1; 2; 3<br>3 Phillips PZ bits 1; 2; 3<br>4 Bits recess hexagon, with ball head, 3; 4; 5; 6 mm<br>6 Bits recess TORX®, with ball head, T 10; 15; 20; 25; 30; 40 |
| 0030 | 17-part | 82.70 | 1 Kraftform Plus handle with ratchet function<br>1 slot bit 5.5 x 1 mm<br>3 Phillips PH bits 1; 2; 3<br>3 Phillips PZ bits 1; 2; 3<br>4 Allen bits 3; 4; 5; 6 mm<br>5 recessed TORX® T bits with hole; 10; 15; 20; 25; 30 |
| 0025 | 33-part | 83.90 | 1 Kraftform Plus handle with Rapidaptor<br>1 slot bit 6.5 x 1.2 mm<br>3 Phillips PH bits 1; 2; 3<br>3 Phillips PZ bits 1; 2; 3<br>6 hexagon bits with hole 2; 2.5; 3; 4; 5; 6 mm<br>8 recessed TORX® T bits with hole 8; 10; 15; 20; 25; 27; 30; 40<br>3 TORQ-SET® bits 6; 8; 10 mm<br>4 TRI-WING® bits 1; 2; 3; 4<br>4 spanner bits 4, 6, 8, 10 mm |

(W545)

## Bit assortment Kraftform Kompakt in folding bag, semi-rigid made of stainless steel

**Design: With tough bits made of stainless steel.** The ergonomic multi-component handle made of impact resistant plastic with integrated soft areas has a quick change chuck. Thus, the bits are firmly and wobble-free connected with handle, yet can be changed easily. The bits and the handle are clearly laid out in a nylon folding bag.

**Application:** For the prevention of rust in the processing of stainless steel screws.

89 mm | INOX

Wera

| Order No. | Design | 6482 Wera | Set contents |
|---|---|---|---|
| 0230 | 17-part | 66.30 | 1 Kraftform Plus handle with Rapidaptor<br>1 slot bit 1 x 5.5 mm<br>3 Phillips PH bits 1; 2; 3<br>3 Phillips PZ bits 1; 2; 3<br>4 Allen bits 3; 4; 5; 6 mm<br>5 recessed TORX® T bits with hole; 10; 15; 20; 25; 30 |

(W584)

6482 0230

## Bit assortment Kraftform Kompakt Zyklop Speed, semi-rigid

**Design:** With tough bits. The Zyklop ratchet has a Kraftform Plus handle and a free-wheel sleeve as well as a turntable for change. The ratchet head pivots freely and can be locked by the slide switch mounted on both sides with 5 positions (90°, 75° in both directions and 0°). **72-fold serrated, rear swivel angle 5°.** Allows screwing bits and nuts with just one tool. The bits, sockets and ratchets are clearly laid out in a folding bag.

**Application:** Tough viscous bits, especially suitable for turning screws in metal and sheet metal. Suitable for turning screws by hand and machine.

50 mm

Wera Zyklop

| Order No. | Design | 6483 Wera | Set contents |
|---|---|---|---|
| 0025 | 26-part | 90.20 | 1 Zyklop ratchet 1/4"<br>1 extension with freewheel sleeve<br>1 bit adapter<br>1 slot bit 5.5 x 1.0 mm<br>3 Phillips PH bits 1; 2; 3<br>2 Phillips PZ bits 1; 2<br>4 Allen bits 3; 4; 5; 6 mm<br>6 recessed TORX® bits T 10; 15; 20; 25; 27 30<br>7 hexagon socket wrench inserts 5.5, 6, 7, 8, 10, 12, 13 mm |

(W545)

## Zyklop Socket wrench sets

such as the 1/4" + 1/2" combined Zyklop Speed set as well as our complete program of socket wrench sets can be found from 📖 6/2

**Zyklop Speed 1/4" + 1/2"**
📖 6/38

**Zyklop Hybrid 1/2"**
📖 6/35

## Bit assortment Kraftform Kompakt Zyklop Mini 2, semi-rigid

NEW

25 mm

Wera Zyklop

**Design:** With tough bits. Ratchet suitable for wrench inserts with hexagon Socket spanner is received directly in the ratchet head. With Kraftform handle and thumb wheel for fast screwing

**Application:** Tough bits suitable for universal applications.

| Order No. | Design | 6402 Wera | Set contents |
|---|---|---|---|
| 0020 | 27-part | 88.10 | 1 Bit ratchet cyclops Mini 1<br>1 Nut ratchet Zyklop Mini 2 ratchet (Order no. 6402 0010)<br>9 Socket spanner bits with 1/4" and hexagon drive 4; 5; 5.5; 6; 7; 8; 10; 12; 13 mm<br>2 Phillips PH bits 1; 2<br>2 Phillips PZ bits 1; 2<br>4 Allen bits 3; 4; 5; 6 mm<br>6 recessed TORX® bits T 10, 15, 20, 25 , 30, 40<br>1 bit hand holder<br>1 Bit adapter for socket spanner bits |
| | | (W545) | |

## Bit ratchet cyclops Mini 2

NEW

**Design:** Made from full metal, drop forged, with reversing lever. Ergonomically shaped Kraftform handle. Socket spanner is received directly in the ratchet head 60-fold serrated, rear swivel angle 6°.

**Note:** Suitable for wrench inserts with hexagon (Order no. 6402).

| Order No. | Length mm | 6402 Wera |
|---|---|---|
| 0010 | 107 | 35.60 (W545) |

## Push-through insert ZYKLOP 1/4"

NEW

**Design:** Made of chrome-vanadium steel, chrome plated, with ball retaining groove Minimal height, ideal for tight construction areas. With recessed square drive and external hexagon (wrench width 11 mm).

**Note:** Fits all 1/4" ratchets and Zyklop Mini 2.

| Order No. | Width of keys mm | 6402 Wera | Length mm |
|---|---|---|---|
| 0040 | 4.0 | 3.96 | 18.0 |
| 0045 | 4.5 | 3.96 | 18.0 |
| 0050 | 5.0 | 3.96 | 18.0 |
| 0055 | 5.5 | 3.96 | 18.0 |
| 0060 | 6.0 | 3.96 | 18.0 |
| 0080 | 8.0 | 3.96 | 18.0 |
| 0100 | 10.0 | 4.12 | 18.0 |
| 0130 | 13.0 | 4.24 (W545) | 18.0 |

## Vario handle

**Design:** With 6 mm external hexagon to take on Vario blades and adapter.

Wera Be a Tool Rebel

**6484 0005** Kraftform Plus handle made of impact resistant plastic with integrated soft areas for better grip, roll-off protection as well as with Allen wrench for strengthening with open-jawed or ring spanner.

**6484 0006** Kraftform Plus handle made of impact resistant plastic with integrated soft areas for better grip, roll-off protection as well as ratchet function with 24 teeth and recovery angle 8°.

**6485** Weralit II plastic T-handle.

6484 0005

6484 0006

6485 0010

| Order No. | Length mm | 6484 Wera | 6485 Wera |
|---|---|---|---|
| 0005 | 98 | 8.10 | – |
| 0006 | 115 | 20.00 | – |
| 0010 | 56 | – (W545) | 8.90 (W545) |

## Vario extension

**Design:** With 6 mm hexagon blade made of high-alloyed special steel with 6 mm external hexagon to take on Vario blades and adapter.

| Order No. | Length mm | 6488 Wera |
|---|---|---|
| 0005 | 175 | 11.70 (W545) |

## Vario adapter blade

**Design:** 6 mm hexagon blades made of high-alloy special steel.

**6490** With strong permanent magnet and quick-change chuck with 1/4" external hexagon for solid and wobble-free connection between holder and bit. For accepting 1/4" screw inserts DIN 3126 C 6.3.

**6492** With 1/4" recessed square. To take on 1/4" -socket inserts according to DIN 3120.

| Order No. | Length mm | 6490 Wera | 6492 Wera |
|---|---|---|---|
| 0005 | 165 | 15.45 | – |
| 0005 | 175 | – (W545) | 9.90 (W545) |

6490

6492

## Vario combi blade

**Design:** 6 mm hexagon blades made of high-alloy special steel.

| Order No. | Design | 6494 Wera | Size | Length mm |
|---|---|---|---|---|
| 0005 | Slot/slot | 5.55 | 4 x 0.6/6 x 1 mm | 175 |
| 0010 | Slot/slot | 5.55 | 5 x 0.8/7 x 1.2 mm | 175 |
| 0015 | Phillips/slot | 5.55 | PH 1/4 x 0.6 mm | 175 |
| 0020 | Phillips/slot | 5.55 | PH 2/6 x 1 mm | 175 |
| 0025 | Phillips/slot | 5.55 | PH 3/7 x 1.2 mm | 175 |
| 0030 | Phillips/cross head | 5.55 | PH 1/PH 2 | 175 |
| 0035 | Phillips/cross head | 5.55 | PZ 1/PZ 2 | 175 |
| 0040 | Ball head/hexagon | 5.55 | SW 2.5/SW 2.5 | 175 |
| 0045 | Ball head/hexagon | 5.55 | SW 3/SW 3 | 175 |
| 0050 | Ball head/hexagon | 5.55 | SW 4/SW 4 | 175 |
| 0055 | Ball head/hexagon | 5.55 | SW 5/SW 5 | 175 |
| 0060 | Ball head/hexagon | 5.55 | SW 6/SW 6 | 175 |
| 0065 | TORX®/TORX® | 5.55 | T 6/T 8 | 175 |
| 0070 | TORX®/TORX® | 5.55 | T 7/T 9 | 175 |
| 0075 | TORX®/TORX® | 5.55 | T 10/T 15 | 175 |
| 0080 | TORX®/TORX® | 5.55 | T 20/T 25 | 175 |
| 0085 | TORX®/TORX® | 5.55 (W545) | T 30/T 40 | 175 |

6494 0005–0010

6494 0015–0025

6494 0030

6494 0035

6494 0040–0060

6494 0065–0085

## Vario set

**Design:** With hexagon blades made of high-alloy special steel. Kraftform Plus handle made of impact resistant plastic with integrated soft areas for better grip, roll-off protection. Supplied in folding bag.

| Order No. | Design | 6495 Wera | Set contents |
|---|---|---|---|
| 0010 | 7-part | 47.80 | 1 Kraftform Plus handle with **ratchet function,** 24 teeth, recovery angle 15°<br>1 slot blade 4 x 0.6 / 6 x 1.0 mm<br>1 Phillips PH blade 1/2<br>1 Phillips PZ blade 1/2<br>2 Allen blades 4/4; 5/5 mm<br>1 recessed TORX® T blade 10/15 |
| 0005 | 11-part | 69.50 | 1 Kraftform-Plus handle with **Hexagon wrench**<br>2 blades slot 4 x 0.6/6 x 1.0; 5 x 0.8/7 x 1.2 mm<br>1 Phillips PH blade 1/2<br>1 Phillips PZ blade 1/2<br>3 Allen blades 4/4; 5/5; 6/6 mm<br>3 recessed TORX® T 10/15; 20/25; 30/40 |
| | | (W545) | |

6495 0010

6495 0005

## Precision tweezers, pointed shape

**Design:** With especially narrow tips and smooth gripping surfaces.

**Application:** For fine assembly work

**6499** Made of **stainless, anti-magnetic** and **acid resistant** stainless steel. With special tip for secure grip, polished.

**6501 0005** Made of **stainless** and **anti-magnetic** chrome nickel steel. Anti-glare matte. With matte gripping surfaces for optimum hold.

**6501 0010** Made of **stainless** and **anti-magnetic** chrome nickel steel. Anti-glare matte. With matte gripping surfaces for optimum hold.

**6501 0015** Made of **stainless** and **anti-magnetic** chrome nickel steel. Anti-glare matte.

**6501 0020** Made of **stainless, anti-magnetic, acid resistant** and very light **TITAN.** Glare-free matte and electrically conductive.

**6501 0025** High-gloss nickel plated and polished.

| Order No. | Length mm | 6499 format | 6501 KNIPEX |
|---|---|---|---|
| 0005 | 130 | 7.80 | 10.90 |
| 0010 | 120 | – | 10.90 |
| 0015 | 115 | – | 12.15 |
| 0020 | 120 | – | 20.70 |
| 0025 | 120 | – | 7.05 |
| | | (W610) | (W525) |

6499 format professional quality

6501 0005 KNIPEX

6501 0010 KNIPEX

6501 0015 KNIPEX

6501 0020 KNIPEX

6501 0025 KNIPEX

## Precision tweezers, needle tip shape

**Design:** With extra fine tips and smooth gripping surfaces. Anti-glare matte.

**Application:** For ultra fine assembly work.

**6503 0005** **Stainless and anti-magnetic. Straight shape.**

**6503 0010** **Stainless,** and **anti-magnetic and acid resistant.** Robust, American shape, **straight.**

**6503 0015** Made of **stainless steel** and **anti-magnetic** as well as acid resistant tempered chrome-nickel steel. With matte gripping surfaces for optimum hold. **Crescent shape.**

**6503 0020** **Stainless and anti-magnetic. Bent shape, angled tips.**

| Order No. | Length mm | 6503 KNIPEX |
|---|---|---|
| 0005 | 105 | 13.90 |
| 0010 | 135 | 14.00 |
| 0015 | 120 | 15.00 |
| 0020 | 105 | 14.75 |
| | | (W525) |

KNIPEX

6503 0005

6503 0010

6503 0015

6503 0020

## Precision tweezers, insulated

**Design:** Made of spring steel, nickel plated. **Dip insulated to 1000 V, accoding to IEC 60900, DIN EN 60900.**

**Application:** For fine assembly work up to 1000 volts.

**6507 0005** With **matte gripping surfaces** for optimum hold and **extra fine tips.**

**6507 0010** With **finely serrated gripping surfaces** and **fine tips.**

**6507 0015** With **finely serrated gripping surfaces** and **angled tips.**

**6507 0020** With **serrated gripping surfaces** and **round, ca. 3 mm wide tips.**

| Order No. | Length mm | 6507 KNIPEX |
|---|---|---|
| 0005 | 130 | 17.70 |
| 0010 | 150 | 17.70 |
| 0015 | 150 | 18.05 |
| 0020 | 145 | 17.65 |
| | | (W525) |

1000 V

KNIPEX

6507 0005

6507 0010

6507 0015

6507 0020

## ESD tweezers

**Design:** Made of **stainless steel** and **anti-magnetic** chrome-nickel steel. With matte gripping surfaces for optimum grip and glare-free black ESD coating with a surface resistance of $10^5$ ohms. With glare free brushed tips.

**Application:** For fine assembly work in electrostatic protected area (EPA).

**6505 0005** With **smooth gripping surfaces** and **angled tips.** Suitable for SMD technology.

**6505 0010** With **smooth gripping surfaces** and **strong tips.**

**6505 0015** With **smooth gripping surfaces** and knurled handles as well as **contoured tips.** For gripping cylindrical components with ∅ **1.0 mm.**

**6505 0020** With **smooth gripping surfaces** and **fine tips.**

**6505 0025** With **smooth gripping surfaces** and **needle fine tips.**

**6505 0030** With **smooth gripping surfaces** and **long tips.** Robust, American shape.

**6505 0035** With **smooth gripping surfaces** and **crescent shaped tips.**

**6505 0040** With **smooth gripping surfaces** and **round, ca. 2 mm wide tips.**

**6505 0045** With **serrated** gripping surfaces and knurled handles as well as **round, ca. 3.5 mm wide tips**.

**6505 0050** With **fine serrated** gripping surfaces and **angular, about 0.9 mm wide tips.**

| Order No. | Length mm | 6505 KNIPEX |
|---|---|---|
| 0005 | 120 | 18.30 |
| 0010 | 120 | 15.85 |
| 0015 | 130 | 9.60 |
| 0020 | 110 | 13.25 |
| 0025 | 110 | 14.40 |
| 0030 | 135 | 14.00 |
| 0035 | 120 | 15.75 |
| 0040 | 120 | 13.25 |
| 0045 | 145 | 13.05 |
| 0050 | 130 | 11.95 |

(W525)

6505 0005

6505 0010

6505 0015

6505 0020

6505 0025

6505 0030

6505 0035

6505 0040

6505 0045

6505 0050

## Plastic tweezers

**Design:** Made of polyamide, fibreglass reinforced plastic with **serrated grip zones** and **ribbed gripping zones** as well as **trapeze-shaped, approx. 3.5 mm wide tip.**
**Withstands temperatures up to 130° C.**

| Order No. | Length mm | 6509 KNIPEX |
|---|---|---|
| 0005 | 130 | 1.91 |

(W525)

## Precise tweezers right angel clipped shape

**Design:** Made of spring steel, nickel plated. With **fine serrated gripping surfaces** and **angular, about 0.9 mm wide tips.**

| Order No. | Length mm | 6511 KNIPEX |
|---|---|---|
| 0005 | 125 | 8.65 |

(W525)

## Precision tweezers, slim-round shape

**Design:** Made of **stainless** and **anti-magnetic** as well as **acid resistant** chrome nickel steel. With smooth gripping surfaces and **round, about 2.0 mm wide tips..**

| Order No. | Length mm | 6511 KNIPEX |
|---|---|---|
| 0010 | 120 | 12.35 |

(W525)

## Precision tweezers, blunt shape

**Design:** With **round wide tips.**

**Application:** For universal precision work.

**6512** Nickel-plated. Blunt-wide, serrated tips, robust.

**6511 0015** Nickel-plated. With **fine, cross-serrated gripping surfaces** as well as **round, about 2.0 mm wide tips.**

**6511 0020** Nickel-plated. With **fine serrated gripping surfaces** and **round, about 3.0 mm wide tips.**

**6511 0025** Nickel-plated. With **fine serrated gripping surfaces** and **round, about 3.5 mm wide tips.**

**6511 0030** With **fine serrated gripping surfaces** and **round, about 3.5 mm wide tips.** Non-glare black finish.

**6511 0035** **Stainless, anti-magnetic** and **acid resistant.** With **serrated gripping surfaces** and **round, about 3.5 mm wide tips.** Anti-glare matte

| Order No. | Length mm | 6512 format | 6511 KNIPEX |
|---|---|---|---|
| 0015 | 140 | – | 7.60 |
| 0020 | 120 | – | 6.10 |
| 0025 | 145 | 6.10 | 6.75 |
| 0026 | 200 | 18.95 | – |
| 0028 | 300 | 21.30 | – |
| 0030 | 145 | – | 7.00 |
| 0035 | 145 | – (W610) | 12.50 (W525) |

6512 0025–0028 format professional quality

6511 0015 KNIPEX

6511 0020 KNIPEX

6511 0025 KNIPEX

6511 0030 KNIPEX

6511 0035 KNIPEX

## Precision tweezers, pointed shape, with guide pin

**Design:** With **finely serrated gripping zones** and **ribbed gripping areas** as well as **narrow tips. With guide pin** for a more precise result.

**Application:** For universal precision work.

**6516** Nickel-plated. Narrow, serrated tips, robust, curved.

**6513 0005** **Stainless steel, anti-magnetic** and **acid resistant**. With **fine tips.**

**6513 0010** Nickel-plated. With **fine tips.**

**6513 0015** Nickel-plated. With **angled tips.**

**6513 0020** With **angled tips.** Non-glare black finish.

| Order No. | Length mm | 6516 format | 6513 KNIPEX |
|---|---|---|---|
| 0005 | 155 | – | 12.40 |
| 0010 | 155 | – | 8.65 |
| 0015 | 155 | 7.60 | 10.65 |
| 0020 | 155 | – (W610) | 8.95 (W525) |

6516 0015 format professional quality

6513 0005 KNIPEX

6513 0010 KNIPEX

6513 0015 KNIPEX

6513 0020 KNIPEX

## Cross tweezers

**Design:** Made of spring steel, nickel plated and high-strength. Clamps very well. With **finely toothed** gripping surfaces and **fluted** handle areas.

**Application:** For universal precision work.

**6517 0005** With **trapezoidal tips.**

**6517 0010** With handle and **narrow tips.**

**6517 0015** With handle cover and **narrow, bent tips.**

| Order No. | Length mm | 6517 KNIPEX |
|---|---|---|
| 0005 | 160 | 12.60 |
| 0010 | 160 | 14.80 |
| 0015 | 160 | 14.80 (W525) |

KNIPEX

6517 0005

6517 0010

6517 0015

## Placement tweezers

**Design:** With **smooth** gripping zones. Anti-glare matte.

**Application:** For universal precision work.

**6515 0005** Made of **stainless** and **anti-magnetic** chrome nickel steel. With matte gripping surfaces for optimum hold and **bent, about 1 mm wide tips.** Suitable for SMD technology.

**6515 0010** Made of **stainless** and **anti-magnetic** chrome-nickel steel. With matte gripping surfaces for optimum hold and **bent, about 1 mm wide tips.** Suitable for SMD technology. For gripping cylindrical components with ∅ **0.6 mm**.

**6515 0015** **Stainless, anti-magnetic and acid resistant.** With matt gripping surfaces for optimum hold and knurled handle areas as well as **about 3.5 mm wide tips** for gripping cylindrical components with ∅ **0.8 mm.**

**6515 0020** **Stainless and anti-magnetic.** With smooth gripping surfaces and **extra strong, bent tips.**

6515 0005

6515 0010

6515 0015

6515 0020

| Order No. | Length mm | 6515 KNIPEX |
|---|---|---|
| 0005 | 120 | 17.15 |
| 0010 | 120 | 17.95 |
| 0015 | 115 | 13.45 |
| 0020 | 120 | 14.40 |

(W525)

## Precision tweezers set

**Design:** Nickel plated. Supplied in plastic bag.

**Application:** Suitable for universal applications.

| Order No. | Design | 6519 format | Set contents |
|---|---|---|---|
| 0005 | 3-part | 20.40 | 1 College tweezers, 155 mm, curved, with guide shaft, narrow serrated tip<br>1 universal tweezers, 130 mm, pointy<br>1 universal tweezers, 145 mm, blunt |

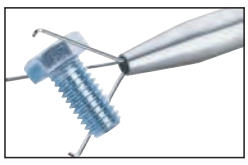
(W610)

## Claw gripper

**Design:** With 3 jaws which independently hold parts with spring pressure. Claws open up to maximum 15 mm. **With flexible shaft.**

| Order No. | Length mm | 6525 |
|---|---|---|
| 0011 | 465 | 19.20 |
| 0016 | 750 | 21.80 |

(W516)



## Magnetic lifter with flexible shaft

**Design:** Chrome-plated, flexible shaft, recessed steel spindle and comfort plastic handle.

**Application:** To remove steel chips, screws and other parts.

3972 0012

3972 0015

| Order No. | Magnet-∅ mm | 3972 format | Overall dia. mm | Total length mm | Adhesive force N |
|---|---|---|---|---|---|
| 0012 | 12 | 14.35 | 20 | 460 | 10 |
| 0015 | 15 | 18.85 | 30 | 520 | 18 |

(W516)

## Magnetic lifter with flexible shaft

**Design:** Made of chrome-vanadium steel, with flexible shaft and ergonomic plastic handle.

| Order No. | Magnet-Ø mm | 6523 | Overall dia. mm | Total length mm | Adhesive force N |
|---|---|---|---|---|---|
| 0009 | 8 | 35.05 | 11 | 475 | 11.0 |
| 0018 | 15 | 39.15 (W529) | 18 | 545 | 44.1 |

## Telescope magnetic lifter

**Design:** Made of steel, chrome plated, equipped with telescopic shaft, marking spike and protective cap.

| Order No. | Length mm | 6526 | Magnet-Ø mm | Outside Ø mm | Adhesive force g |
|---|---|---|---|---|---|
| 0011 | 150–660 | 4.62 (W516) | 6 | 8 | 500 |

## Telescope magnetic lifter with inspection mirror

NEW

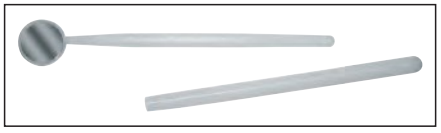
**Design:** Made of steel, chrome plated, equipped with telescopic shaft, and round mirror (Ø 40 mm).

| Order No. | Length mm | 6526 | Magnet-Ø mm | Outside Ø mm | Adhesive force g |
|---|---|---|---|---|---|
| 0020 | 190–540 | 9.50 (W516) | 6 | 8 | 500 |

## Inspection mirror

**Design:** Mirror casing and 2-part handle made of light grey plastic.

| Order No. | Length mm | 6527 | Mirror Ø mm |
|---|---|---|---|
| 0005 | 260 | 9.20 (W516) | 24 |



## Inspection mirror

**Design:** Mirror case made of stainless steel with metal trim and chrome-plated telescope shaft as well as 2-part hexagon aluminium handle.

| Order No. | Length mm | 6527 | Mirror Ø mm |
|---|---|---|---|
| 0010 | 260 | 10.30 (W516) | 24 |

## Telescope inspection mirror

**Design:** Mirror case made of steel with metal trim, chrome-plated telescope shaft and comfortable plastic handle.

| Order No. | Mirror mm | 6527 | Length mm |
|---|---|---|---|
| 0020 | Round, Ø 30 | 16.80 | 240–680 |
| 0022 | Round, Ø 50 | 18.40 | 240–680 |
| 0025 | Rectangular, 65 x 43 | 19.70 (W516) | 240–680 |

6527 0020 + 0022

6527 0025

## Inspection tool set

**Design:** Supplied in nylon bag.

| Order No. | Design | 6527 | Set contents |
|---|---|---|---|
| 0600 | 6-part | 64.50 (W523) | 1 claw (Order No. 6525 0011)<br>1 magnetic lifter with flexible shaft, length 440 mm<br>1 telescopic inspection mirror, round, Ø 50 mm (Order No. 6527 0022)<br>1 rectangular mirror for telescopic search mirror, 43 x 65 mm<br>1 LED pen light with 2 batteries micro AAA/LR03 (Order No. 9061 0008)<br>1 telescopic magnetic lifter, length 150-660 mm (Order No. 6526 0011) |

## LED inspection lamp

**Design:** Made from solid aluminium, with flexible shaft. The LED light generates a white light and spray-water resistant. The head also possesses a break-resistible stainless steel. Supply includes batteries.

IP 67

**6527 0027** Magnet firmly connected to lamp head.

6527 0027

**6527 0030** Magnet can be unscrewed.

6527 0030



| Order No. | Length mm | 6527 | Handle Ø mm | Round mirror Ø mm | Rectangular mirror mm | Lighting duration h | Luminosity lm | Battery |
|---|---|---|---|---|---|---|---|---|
| 0027 | 500 | 47.70 | 22 | 30 | – | 150 | 15 | 2 x Mignon AA/LR6 |
| 0030 | 560 | 63.40 (W523) | 22 | 30 | 65 x 43 | 150 | 15 | 2 x Mignon AA/LR6 |

## General information:

An appropriate steel microstructure, essential for uniform hardness. Type and angle of the cut are determined by the particular application, whereby one differentiates between **cut 1 - for rough machining, cut 2 - half smooth/universal** and **cut 3 - finishing.** Ideal tooth geometry for each application. The length of the file is measured without the tang from the tip to the attachment.

## Flat blunt file

**Design: DIN 7261, Form A,** rectangular and hewn on 3 sides.

**Application:** Suitable for processing rectangular geometries and deburring. Can also be used for surface machining.

**6530** With tang

**6533** With ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.

6530 format professional quality

6533 PFERD

| Order No. | Length mm | 6530 format | 6533 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0101 | 100 | 2.30 | – | 1 | 12 x 2.5 |
| 0102 | 100 | 2.42 | – | 2 | 12 x 2.5 |
| 0103 | 100 | 2.46 | – | 3 | 12 x 2.5 |
| 0151 | 150 | 2.48 | 4.60 | 1 | 16 x 4.0 |
| 0152 | 150 | 2.54 | 4.66 | 2 | 16 x 4.0 |
| 0153 | 150 | 2.70 | 4.88 | 3 | 16 x 4.0 |
| 0201 | 200 | 2.96 | 5.65 | 1 | 20 x 5.0 |
| 0202 | 200 | 3.16 | 5.90 | 2 | 20 x 5.0 |
| 0203 | 200 | 3.32 (W548) | 6.10 (W551) | 3 | 20 x 5.0 |

| Order No. | Length mm | 6530 format | 6533 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0251 | 250 | 4.02 | 7.05 | 1 | 25 x 6.0 |
| 0252 | 250 | 4.18 | 7.30 | 2 | 25 x 6.0 |
| 0253 | 250 | 4.62 | 7.85 | 3 | 25 x 6.0 |
| 0301 | 300 | 5.35 | – | 1 | 30 x 6.5 |
| 0302 | 300 | 5.70 | – | 2 | 30 x 6.5 |
| 0303 | 300 | 6.10 | – | 3 | 30 x 6.5 |
| 0351 | 350 | 7.40 | – | 1 | 35 x 7.5 |
| 0352 | 350 | 7.70 | – | 2 | 35 x 7.5 |
| 0353 | 350 | 8.10 (W548) | – (W551) | 3 | 35 x 7.5 |

## Flat pointed file

**Design: DIN 7261, Form B**, rectangular, tapering point and hewn on 4 sides. With ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.

**Application:** Suitable for processing rectangular geometries, deburring as well as filing perforations. Can also be used for surface machining.

PFERD

| Order No. | Length mm | 6535 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|
| 0201 | 200 | 5.80 | 1 | 20 x 5 |
| 0202 | 200 | 5.90 | 2 | 20 x 5 |
| 0205 | 200 | 6.15 (W551) | 3 | 20 x 5 |

| Order No. | Length mm | 6535 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|
| 0251 | 250 | 6.85 | 1 | 25 x 6 |
| 0252 | 250 | 7.00 | 2 | 25 x 6 |
| 0253 | 250 | 7.40 (W551) | 3 | 25 x 6 |

## Three edge file

**Design: DIN 7261, Form C**, triangular, tapering point and hewn on 3 sides.

**Application:** Suitable for deburring as well as filing perforations. Can also be used for surface machining.

**6542** With tang.

**6545** With ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.

6542 format professional quality

6545 PFERD

| Order No. | Length mm | 6542 format | 6545 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0101 | 100 | 2.74 | – | 1 | 8.0 |
| 0102 | 100 | 2.96 | – | 2 | 8.0 |
| 0103 | 100 | 3.22 | – | 3 | 8.0 |
| 0151 | 150 | 3.22 | 5.60 | 1 | 11.0 |
| 0152 | 150 | 3.34 | 5.75 | 2 | 11.0 |
| 0153 | 150 | 3.46 | 5.90 | 3 | 11.0 |
| 0201 | 200 | 3.92 | 6.90 | 1 | 15.0 |
| 0202 | 200 | 4.02 (W548) | 7.05 (W551) | 2 | 15.0 |

| Order No. | Length mm | 6542 format | 6545 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0203 | 200 | 4.24 | 7.35 | 3 | 15.0 |
| 0251 | 250 | 5.50 | – | 1 | 17.5 |
| 0252 | 250 | 5.80 | – | 2 | 17.5 |
| 0253 | 250 | 6.40 | – | 3 | 17.5 |
| 0301 | 300 | 8.05 | – | 1 | 20.0 |
| 0302 | 300 | 8.30 | – | 2 | 20.0 |
| 0303 | 300 | 8.60 (W548) | – (W551) | 3 | 20.0 |

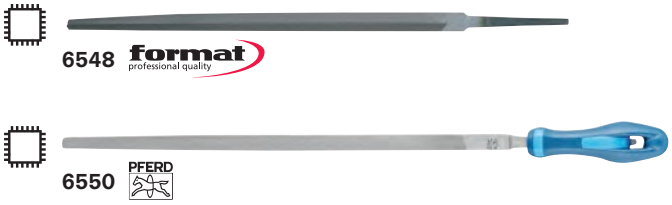
## Four edge file

**Design: DIN 7261, Form D**, rectangular and tapering point as well as hewn on 4 sides.

**Application:** For filing profiles.

**6548** With tang.

**6550** With ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.




| Order No. | Length mm | 6548 format | 6550 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0151 | 150 | 2.64 | 4.86 | 1 | 6 |
| 0152 | 150 | 2.86 | 5.15 | 2 | 6 |
| 0153 | 150 | 3.16 | – | 3 | 6 |
| 0201 | 200 | 3.18 | 5.95 | 1 | 8 |
| 0202 | 200 | 3.38 | 6.20 | 2 | 8 |
| 0203 | 200 | 3.58 (W548) | – (W551) | 3 | 8 |

| Order No. | Length mm | 6548 format | 6550 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0251 | 250 | 4.12 | – | 1 | 10 |
| 0252 | 250 | 4.34 | – | 2 | 10 |
| 0253 | 250 | 4.66 | – | 3 | 10 |
| 0301 | 300 | 6.10 | – | 1 | 12 |
| 0302 | 300 | 6.40 | – | 2 | 12 |
| 0303 | 300 | 6.70 (W548) | – (W551) | 3 | 12 |

## Half round file

**Design: DIN 7261, Form E,** half round and hewn on 2 sides.

**Application:** Suitable for processing radii, deburring as well as filing perforations. Can also be used for surface machining.

**6554** **Tapering point,** with tang.

**6559** **Tapering point,** with ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.

**6557** **Straight shape,** with ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.

| Order No. | Length mm | 6554 format | 6559 PFERD | 6557 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|---|
| 0151 | 150 | 4.32 | 7.05 | 6.40 | 1 | 16 x 4.5 |
| 0152 | 150 | 4.46 | 7.20 | 6.55 | 2 | 16 x 4.5 |
| 0153 | 150 | 4.58 | 7.40 | 6.75 | 3 | 16 x 4.5 |
| 0201 | 200 | 5.00 | 8.25 | 7.60 | 1 | 20 x 6.0 |
| 0202 | 200 | 5.25 | 8.50 | 7.80 | 2 | 20 x 6.0 |
| 0203 | 200 | 5.55 (W548) | 9.05 (W551) | 8.40 (W551) | 3 | 20 x 6.0 |

| Order No. | Length mm | 6554 format | 6559 PFERD | 6557 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|---|
| 0251 | 250 | 6.85 | 10.75 | 9.95 | 1 | 25 x 7.0 |
| 0252 | 250 | 7.10 | 11.05 | 10.20 | 2 | 25 x 7.0 |
| 0253 | 250 | 7.45 | 11.55 | 10.60 | 3 | 25 x 7.0 |
| 0301 | 300 | 8.90 | – | – | 1 | 30 x 8.5 |
| 0302 | 300 | 9.25 | – | – | 2 | 30 x 8.5 |
| 0303 | 300 | 9.70 (W548) | – (W551) | – (W551) | 3 | 30 x 8.5 |

## Round file

**Design: DIN 7261, Form F,** round and hewn all around.

**Application:** Suitable for processing radii, deburring as well as filing perforations.

**6560** With tang.

**6563** With ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.

| Order No. | Length mm | 6560 format | 6563 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0101 | 100 | 2.30 | – | 1 | 4.0 |
| 0102 | 100 | 2.54 | – | 2 | 4.0 |
| 0103 | 100 | 2.74 | – | 3 | 4.0 |
| 0151 | 150 | 2.30 | 4.39 | 1 | 6.0 |
| 0152 | 150 | 2.54 | 4.66 | 2 | 6.0 |
| 0153 | 150 | 2.74 | 4.93 | 3 | 6.0 |
| 0201 | 200 | 2.74 | 5.35 | 1 | 7.5 |
| 0202 | 200 | 2.96 (W548) | 5.65 (W551) | 2 | 7.5 |

| Order No. | Length mm | 6560 format | 6563 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0203 | 200 | 3.22 | 5.95 | 3 | 7.5 |
| 0251 | 250 | 3.78 | 6.75 | 1 | 9.5 |
| 0252 | 250 | 4.02 | 7.05 | 2 | 9.5 |
| 0253 | 250 | 4.32 | 7.50 | 3 | 9.5 |
| 0301 | 300 | 4.92 | – | 1 | 12.0 |
| 0302 | 300 | 5.35 | – | 2 | 12.0 |
| 0303 | 300 | 5.80 (W548) | – (W551) | 3 | 12.0 |

## W/shop files set

**Design:** With ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole. Supplied in plastic bag.

| Order No. | Design | 6566 format | Length mm | Set contents | Cut |
|---|---|---|---|---|---|
| 0200 | 5-part | 29.40 | 200 | 1 Flat blunt file<br>1 Triangular file<br>1 Semi-round file<br>1 Round file<br>1 wood rasp (half round) | 2 |
| 0250 | 5-part | 36.60 | 250 | 1 Flat blunt file<br>1 Triangular file<br>1 Semi-round file<br>1 Round file<br>1 wood rasp (half round) | 2 |
| 0300 | 5-part | 55.80 | 300 | 1 Flat blunt file<br>1 Triangular file<br>1 Semi-round file<br>1 Round file<br>1 wood rasp (half round) | 2 |
| | | (W548) | | | |

6566

## W/shop files set

**Design:** With ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole. Supplied in PVC roll bag.

| Order No. | Design | 6568 PFERD | 6570 PFERD | Length mm | Set contents | Cut |
|---|---|---|---|---|---|---|
| 0200 | 5-part | 42.10 | – | 200 | 1 Flat blunt file (Order No. 6533)<br>1 triangular file (Order No. 6545)<br>1 half round file (Order No. 6550)<br>1 half round file, pointed (Order No. 6559)<br>1 round file (Order No. 6563) | 2 |
| 0250 | 5-part | 52.60 | – | 250 | 1 Flat blunt file (Order No. 6533)<br>1 triangular file (Order No. 6545)<br>1 half round file (Order No. 6550)<br>1 half round file, pointed (Order No. 6559)<br>1 round file (Order No. 6563) | 2 |
| 0500 | 6-part | – | 55.70 | 200/300 | 3 flat blunt files 200 mm (Order No. 6533)<br>3 flat blunt files 300 mm (Order No. 6533) | 1, 2, 3 |
| | | (W551) | (W551) | | | |

6568

6570

## Knife file

**Design: DIN 7261, Form G,** knife profile, with tang and hewn on 3 sides.

**Application:** Suitable for machining non-rectangular, narrow and very sharp geometries as well as deburring. Can also be used for surface machining.

| Order No. | Length mm | 6572 format | Cut | Cross-section mm |
|---|---|---|---|---|
| 0200 | 200 | 13.45 | 2 | 20 x 6.4 x 1.50 |
| 0250 | 250 | 15.90 (W548) | 2 | 25 x 7.9 x 1.75 |

## Lathe file

**Design: DIN 7261, Form H,** rectangular, with tang and hewn on 2 sides. With opposed cuts at front and back.

**Application:** Suitable especially for deburring rotary parts on lathes. The file runs away from the chuck and thus ensures safe working.

PFERD

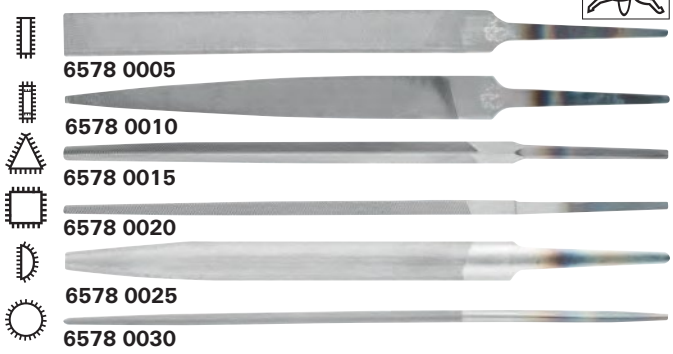
| Order No. | Length mm | 6575 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|
| 0250 | 250 | 15.95 | 1 | 25 x 6.0 |
| 0300 | 300 | 20.60 | 1 | 30 x 6.5 |
| | | (W549) | | |

## Key file

**Design: DIN 7283,** with tang.

**Application:** For light and filigree filing, particularly in tool and mould construction.

PFERD




| Order No. | Shape | 6578 PFERD | Length mm | Cut | Cross-section mm |
|---|---|---|---|---|---|
| 0005 | Flat blunt | 4.00 | 100 | 2 | 10 x 1.4 |
| 0010 | Flat point | 4.00 | 100 | 2 | 10 x 1.4 |
| 0015 | Triangular | 4.47 | 100 | 2 | 5 |
| 0020 | Square | 4.28 | 100 | 2 | 3 |
| 0025 | Semi-round | 4.85 | 100 | 2 | 9 x 3.0 |
| 0030 | Round | 4.08 | 100 | 2 | 3 |
| | | (W549) | | | |

## Key files set, 100 mm

**Design:** With wooden handle.

**Application:** For light and filigree filing, particularly in tool and mould construction.

**6581** Supplied in metal box.

**6582** 0102 NEW Supplied in metal box.

**6582** 0100 Supplied in plastic bag with key files (Order no. 6578).

| Order No. | Design | 6581 format | 6582 PFERD | Set contents | Cut |
|---|---|---|---|---|---|
| 0102 | 6-part | 9.50 | 31.30 NEW | 1 Flachstumpffeile<br>1 Flachspitzfeile<br>1 Dreikantfeile<br>1 Vierkantfeile<br>1 Halbrundfeile<br>1 Rundfeile | 2 |
| 0100 | 6-part | – | 30.90 | 1 Flat blunt file<br>1 Flat pointed file<br>1 Triangular file<br>1 Four edge file<br>1 Semi-round file<br>1 Round file | 2 |
| | | (W548) | (W549) | | |

## Contact file set

**Design: Similar to DIN 7283, Form A,** rectangular and hewn on 2 sides. With cross cut and tang Supplied in plastic bag.

**Application:** For light and filigree filing, particularly in tool and mould construction.

format professional quality

| Order No. | Design | 6584 format | Length mm | Cut |
|---|---|---|---|---|
| 0002 | 6-part | 4.73 | 150 | 2 |
| | | (W548) | | |

## Mill saw file

**Design: DIN 7262, Form E,** rectangular, with tang and hewn on 2 flat sides and **2 round edges.**

**Application:** Particularly suited for sharpening larger saws with radius at tooth discontinuation.

| Order No. | Length mm | 6590 format | Cut | Cross-section mm |
|---|---|---|---|---|
| 0250 | 250 | 9.70 (W548) | 2 | 25 x 4.5 |

## Chainsaw file

**Design:** Round, with tang as well as hewn all around. With extra spiral cut for extreme sharpness and specially high standing times.

**Application:** For the quick, gentle and groove-cleaning sharpening of saw chains.

| Order No. | Cross-section mm | 6599 format | 6601 PFERD | Length mm |
|---|---|---|---|---|
| 0150 | 3.50* | 1.34 | – | 200 |
| 0201 | 4.00 | 1.37 | 2.65 | 200 |
| 0203 | 4.80 | 1.37 | 2.65 | 200 |
| 0205 | 5.16 | – | 2.65 | 200 |
| 0204 | 5.50 | 1.37 (W548) | 2.65 (W549) | 200 * Tang cylindrical |

6599 format

6601 PFERD

## Chainsaw sharpener CHAIN SHARP®

**Application:** For filing the teeth and depth gauge by hand in a single operation. Sharpening by hand is economical and gentler than machine sharpening and ensures longevity of chain.

**Scope of delivery:** Sharpener, depth gauge file, 2 chain saw files and plastic bag.

| Order No. | For chain saw files Ø mm | 6600 PFERD |
|---|---|---|
| 0400 | 4.00 | 34.00 |
| 0480 | 4.80 | 34.00 |
| 5160 | 5.16 | 34.00 |
| 5500 | 5.50 | 34.00 (W549) |

## Depth gauge file for CHAIN SHARP®

**Design:** Rectangular, hewn on 2 sides.

| Order No. | Length mm | 6600 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|
| 0000 | 200 | 8.10 (W549) | 2 | 9 x 6 |

## Chain saw file, flat

**Design: DIN 7262, Form F,** rectangular, with tang, with two round unhewn edges and cut on two sides.

**Application:** For filing the depth gauge of saw chains.

| Order No. | Length mm | 6600 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|
| 0152 | 150 | 10.55 | 2 | 16 x 3.0 |
| 0202 | 200 | 14.05 (W549) | 2 | 20 x 3.5 |

## Deburring file

**Design: Form A,** rectangular, with tang and hewn on 3 sides. With cross cut for particularly high machining performance.

**Application:** Particularly suitable for deburring plastics.

| Order No. | Length mm | 6604 PFERD | Cut | Cross-section mm |
|---|---|---|---|---|
| 0200 | 200 | 9.40 (W549) | Cross cut | 20 x 3.5 |

## Soft metal file

**Design:** Adapted for processing of soft, greasinig materials. The special blade shape prevents the addition of a file.

**Application:** For deburring, chamfering, roughing and smoothing soft metals.

**6602** **Form A,** rectangular, with tang and hewn on 3 sides.

**6603** **Form E,** half round, with tang and hewn on 2 sides.

| Order No. | Length mm | 6602 PFERD | 6603 PFERD | Cut | Cross-section mm 6602 | 6603 |
|---|---|---|---|---|---|---|
| 0250 | 250 | 11.85 | 15.05 | 0 | 25 x 6.0 | 25 x 7.0 |
| 0300 | 300 | – (W549) | 20.70 (W549) | 0 | – | 30 x 8.5 |

6602

6603

## Wood rasp

**Design: DIN 7263,** with tang.

**6605** **Form A,** flat blunt, rectangular, and hewn on 3 sides (flat side = rasp cut; 1 edge = file pattern). Suitable for processing rectangular geometries and chamfering. Can also be used for surface machining.

**6606** **Form C,** half round and tapering point as well as hewn on 2 sides. Suitable for machining radii and chamfering as well as filing half round profiles. Can also be used for surface machining.

**6607** **Form E,** round and tapering tip as well as hewn all around. Suitable for machining radii and filing profiles with inner radii.

6605

6606

6607

| Order No. | Length mm | 6605 format | 6606 format | 6607 format | Cut 6605 | Cut 6606/6607 | Cross-section mm 6605 | Cross-section mm 6606 | Cross-section mm 6607 |
|---|---|---|---|---|---|---|---|---|---|
| 0200 | 200 | – | 8.10 | 7.00 | – | 2 | – | 21 x 7.5 | 9.5 |
| 0250 | 250 | 8.85 | 10.70 | 9.25 | 1 | 2 | 25 x 7.5 | 25 x 8.5 | 11.5 |
| 0300 | 300 | – (W548) | 13.85 (W548) | – (W548) | – | 2 | – | 30 x 10.0 | – |

## Chassis file

**Design:** Chassis file blade with positive filing angle and extraordinary sharp teeth for optimum surface quality. Excellent filing performance is achieved due to the special manufacturing process, which creates knife-like teeth. Due to the domed shape of the blade, the cutting teeth are not on a straight surface, but have in the middle their greatest and sides their least height, so as to avoid scratches on the workpiece.

**Application:** Suitable for working sheet metal of any kind, especially for the automobile and body shop. Applied everywhere where smooth, scratch-free surfaces must be achieved. These can be painted directly. No polishing needed.

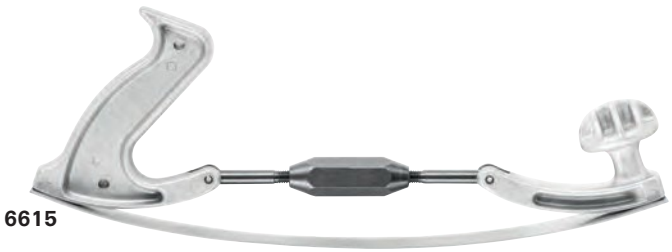
6616

| Order No. | Length mm | 6616 PFERD | Toothing | Cross-section mm |
|---|---|---|---|---|
| 0351 | 350 | 39.80 | 1 | 36 x 5.4 |
| 0352 | 350 | 42.70 | 2 | 36 x 5.4 |
| 0353 | 350 | 45.20 (W549) | 3 | 36 x 5.4 |

## Automobile body file holder

**Design:** Lightweight, strong and ergonomic file holder made of die-cast aluminium, painted silver. Due to the infinitely adjustable clamping device, the chassis file and be bent more or less convex. This allows particular adjustment to various surface shapes.

| Order No. | Suitable for file length mm | 6615 PFERD |
|---|---|---|
| 0001 | 350 | 64.70 (W549) |


6615

**General notes:** PFERD precision files meet the highest standards of dimensional accuracy, cutting performance and tool life. Precision files compared to workshop files are smaller, handier and more precise in their geometry. They are used in fixture and tool machining, especially for producing tools for punching, forming, forging, stamping series of articles, etc. One also needs precision files for installing and constructing complex devices and machines that require the highest precision.

## Initial file, flat blunt

**Design: Form A,** flat blunt, rectangular, with tang and hewn on 3 sides.

**Application:** Suitable for processing rectangular geometries and deburring. Can also be used for precision surface machining.

| Order No. | Length mm | 6620 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0101 | 100 | 11.35 | 0 | 13 x 3 |
| 0102 | 100 | 11.70 | 1 | 13 x 3 |
| 0103 | 100 | 13.00 | 3 | 13 x 3 |
| 0104 | 100 | 13.50 | 4 | 13 x 3 |
| 0150 | 150 | 11.90 | 00 | 18 x 4 |
| 0151 | 150 | 12.80 | 0 | 18 x 4 |
| 0152 | 150 | 13.20 | 1 | 18 x 4 |
| | | (W549) | | |

| Order No. | Length mm | 6620 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0153 | 150 | 14.45 | 3 | 18 x 4 |
| 0154 | 150 | 15.65 | 4 | 18 x 4 |
| 0200 | 200 | 16.40 | 00 | 22 x 5 |
| 0201 | 200 | 17.10 | 0 | 22 x 5 |
| 0202 | 200 | 18.05 | 1 | 22 x 5 |
| 0203 | 200 | 18.80 | 2 | 22 x 5 |
| 0204 | 200 | 20.40 | 4 | 22 x 5 |
| | | (W549) | | |

## Pin file, normal

**Design: Form A,** rectangular, with tang and hewn on 2 sides. Narrower design than flat-blunt initial file.

**Application:** Suitable for processing rectangular geometries, deburring as well as filing perforations. Can also be used for precision surface machining.

| Order No. | Length mm | 6623 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0150 | 150 | 12.85 | 00 | 13 x 4 |
| 0151 | 150 | 13.45 | 0 | 13 x 4 |
| 0152 | 150 | 14.80 | 2 | 13 x 4 |
| 0200 | 200 | 18.05 | 00 | 15 x 5 |
| 0201 | 200 | 18.90 | 0 | 15 x 5 |
| | | (W549) | | |

| Order No. | Length mm | 6623 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0202 | 200 | 20.70 | 2 | 15 x 5 |
| 0250 | 250 | 25.50 | 00 | 18 x 6 |
| 0251 | 250 | 26.80 | 0 | 18 x 6 |
| 0252 | 250 | 29.30 | 2 | 18 x 6 |
| | | (W549) | | |

## Pin file, narrow

**Design: Form A,** rectangular, with tang and hewn on 2 sides. **Narrow version.**

**Application:** Suitable for processing rectangular geometries and deburring as well as filing perforations. Can also be used for precision surface machining.

| Order No. | Length mm | 6626 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0150 | 150 | 14.55 | 00 | 8 x 3.5 |
| 0151 | 150 | 15.25 | 0 | 8 x 3.5 |
| 0152 | 150 | 16.95 | 2 | 8 x 3.5 |
| 0200 | 200 | 20.00 | 00 | 10 x 4.5 |
| 0201 | 200 | 21.10 | 0 | 10 x 4.5 |
| | | (W549) | | |

| Order No. | Length mm | 6626 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0202 | 200 | 23.00 | 2 | 10 x 4.5 |
| 0250 | 250 | 28.70 | 00 | 12 x 5.0 |
| 0251 | 250 | 30.20 | 0 | 12 x 5.0 |
| 0252 | 250 | 33.20 | 2 | 12 x 5.0 |
| | | (W549) | | |

## Pin file, very narrow

**Design: Form A,** rectangular, with tang and hewn on 2 sides. **Very narrow version.**

**Application:** Suitable for processing non-rectangular geometries as well as very narrow filing perforations.

| Order No. | Length mm | 6629 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0150 | 150 | 14.55 | 00 | 6 x 3.0 |
| 0151 | 150 | 15.25 | 0 | 6 x 3.0 |
| 0152 | 150 | 16.95 | 2 | 6 x 3.0 |
| | | (W549) | | |

| Order No. | Length mm | 6629 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0200 | 200 | 19.95 | 00 | 8 x 3.5 |
| 0201 | 200 | 21.10 | 0 | 8 x 3.5 |
| 0202 | 200 | 23.00 | 2 | 8 x 3.5 |
| | | (W549) | | |

## Tang file, round

**Design: Form F,** round, with tang as well as tapering point and hewn all around.

**Application:** Suitable for processing precise radii as well as deburring.

PFERD

| Order No. | Length mm | 6631 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0100 | 100 | 9.75 | 0 | 4 |
| 0102 | 100 | 10.50 | 2 | 4 |
| 0150 | 150 | 10.55 | 0 | 6 |
| 0151 | 150 | 11.10 | 1 | 6 |
| 0152 | 150 | 11.55 (W549) | 2 | 6 |

| Order No. | Length mm | 6631 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0153 | 150 | 12.15 | 3 | 6 |
| 0200 | 200 | 14.05 | 0 | 8 |
| 0201 | 200 | 14.55 | 1 | 8 |
| 0203 | 200 | 16.10 (W549) | 3 | 8 |

## Tang file, three edges

**Design: Form C,** triangular, with tang, tapering point and hewn on 3 sides.

**Application:** Suitable for processing rectangular and non-rectangular geometries, deburring as well as filing perforations. Can also be used for precision surface machining.

PFERD

| Order No. | Length mm | 6634 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0101 | 100 | 15.10 | 1 | 6 |
| 0150 | 150 | 16.10 | 0 | 10 |
| 0151 | 150 | 17.50 | 1 | 10 |
| 0152 | 150 | 17.80 (W549) | 2 | 10 |

| Order No. | Length mm | 6634 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0153 | 150 | 18.20 | 3 | 10 |
| 0200 | 200 | 20.20 | 0 | 14 |
| 0201 | 200 | 21.20 | 1 | 14 |
| 0203 | 200 | 22.80 (W549) | 3 | 14 |

## Tang file, half round

**Design: Form E,** half round, with tang, point tapered and hewn on 2 sides.

**Application:** Suitable for processing rectangular and round geometries, deburring as well as filing perforations. Also for precise surfaces or radius processing.

PFERD

| Order No. | Length mm | 6640 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0100 | 100 | 19.70 | 00 | 12 x 3.5 |
| 0101 | 100 | 20.30 | 0 | 12 x 3.5 |
| 0102 | 100 | 22.50 | 2 | 12 x 3.5 |
| 0150 | 150 | 22.80 | 00 | 16 x 4.5 |
| 0151 | 150 | 23.90 | 0 | 16 x 4.5 |
| 0152 | 150 | 25.10 | 1 | 16 x 4.5 |
| 0153 | 150 | 27.30 | 3 | 16 x 4.5 |
| 0154 | 150 | 31.90 (W549) | 4 | 16 x 4.5 |

| Order No. | Length mm | 6640 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0200 | 200 | 30.40 | 00 | 21 x 6.0 |
| 0201 | 200 | 31.70 | 0 | 21 x 6.0 |
| 0202 | 200 | 33.40 | 1 | 21 x 6.0 |
| 0203 | 200 | 36.40 | 3 | 21 x 6.0 |
| 0250 | 250 | 35.40 | 00 | 25 x 7.0 |
| 0251 | 250 | 37.20 | 0 | 25 x 7.0 |
| 0252 | 250 | 38.70 (W549) | 1 | 25 x 7.0 |

## Tang file, knife

**Design: Form G,** knife profile, triangular, with tang, tapering point and hewn on 2 sides..

**Application:** Suitable for processing non-rectangular geometries, deburring as well as filing perforations.

PFERD

| Order No. | Length mm | 6644 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0202 | 200 | 31.40 (W549) | 2 | 22 x 5 |

## Tang file, barette

**Design:** Trapezoid, with tang, point tapered and hewn on 1 side.

**Application:** Suitable for processing non-rectangular geometries as well as filing perforations. Can also be used for precision surface machining.

PFERD

| Order No. | Length mm | 6645 PFERD | Swiss stroke | Cross-section mm |
|---|---|---|---|---|
| 0150 | 150 | 19.35 | 0 | 16 x 4 |
| 0152 | 150 | 21.20 | 2 | 16 x 4 |
| | | (W549) | | |

## Precision needle file

**Design:** High quality design in common shape and dimension, each in coarse to fine cut variation. Accurate grade with high filing performance and idle time. Available in lengths of 160 mm and 200 mm. Cut length = half the file length, i.e., total length 160 mm, the carved length about 80 mm. Shaft/tang diameter 3.25 mm for total length 160 mm and 3.75 mm for total length 200 mm.

**Application:** For the finest and most precise work in machine and tool making.

PFERD

**6650 0160–0262** **Form A, flat blunt,** rectangular and hewn on 4 sides.

**6650 1160–1202** **Form E, half round** and tapering tip as well as hewn on 2 sides.

**6650 2160–2202** **Form C, triangular** and tapered tip as well as hewn on 3 sides.

**6650 3160–3202** **Form D, square** and tapering tip as well as hewn on 4 sides.

**6650 4160–4202** **Form F, round** and tapering tip as well as hewn all around.

**6650 5161 + 5162** **Form A, flat tip,** rectangular and tapering as well as hewn on 4 sides.

**6650 6160–6162** **Bird tongue, half round** as well as tapering tip and hewn on 2 sides. With two-sided radius.

**6650 7160–7162** **Barrette, leg asymmetric,** triangular and tapering tip as well as hewn on 1 side.

**6650 8160–8162** **Form G, knife profile,** triangular and tapering tip as well as hewn on 2 sides.

| Order No. | Shape | 6650 PFERD | Length mm | Swiss stroke |
|---|---|---|---|---|
| 0160 | Flat blunt | 5.80 | 160 | 0 |
| 0161 | Flat blunt | 5.80 | 160 | 1 |
| 0162 | Flat blunt | 5.80 | 160 | 2 |
| 0163 | Flat blunt | 6.15 | 160 | 3 |
| 0180 | Flat blunt | 6.55 | 180 | 00 |
| 0181 | Flat blunt | 6.55 | 180 | 1 |
| 0182 | Flat blunt | 6.55 | 180 | 2 |
| 0260 | Flat blunt | 7.45 | 200 | 0 |
| 0261 | Flat blunt | 7.45 | 200 | 1 |
| 0262 | Flat blunt | 7.45 | 200 | 2 |
| 1160 | Semi-round | 6.65 | 160 | 0 |
| 1161 | Semi-round | 6.65 | 160 | 1 |
| 1162 | Semi-round | 6.65 | 160 | 2 |
| 1163 | Semi-round | 6.90 | 160 | 3 |
| | | (W549) | | |

| Order No. | Shape | 6650 PFERD | Length mm | Swiss stroke |
|---|---|---|---|---|
| 1200 | Semi-round | 9.10 | 200 | 0 |
| 1202 | Semi-round | 9.10 | 200 | 2 |
| 2160 | Triangular | 6.20 | 160 | 0 |
| 2161 | Triangular | 6.20 | 160 | 1 |
| 2162 | Triangular | 6.20 | 160 | 2 |
| 2163 | Triangular | 6.50 | 160 | 3 |
| 2200 | Triangular | 8.35 | 200 | 00 |
| 2201 | Triangular | 8.35 | 200 | 0 |
| 2202 | Triangular | 8.35 | 200 | 2 |
| 3160 | Square | 6.20 | 160 | 0 |
| 3161 | Square | 6.20 | 160 | 1 |
| 3162 | Square | 6.20 | 160 | 2 |
| 3163 | Square | 6.50 | 160 | 3 |
| 3200 | Square | 8.35 | 200 | 00 |
| | | (W549) | | |

Continued overleaf

## Precision needle file

Continued

| Order No. | Shape | 6650 PFERD | Length mm | Swiss stroke |
|---|---|---|---|---|
| 3201 | Square | 8.35 | 200 | 0 |
| 3202 | Square | 8.35 | 200 | 2 |
| 4160 | Round | 5.80 | 160 | 0 |
| 4161 | Round | 5.80 | 160 | 1 |
| 4162 | Round | 5.80 | 160 | 2 |
| 4164 | Round | 6.15 | 160 | 4 |
| 4200 | Round | 7.45 | 200 | 00 |
| 4201 | Round | 7.45 | 200 | 0 |
| 4202 | Round | 7.45 | 200 | 1 |
| 5161 | Flat point | 6.20 | 160 | 1 |
| | | (W549) | | |

| Order No. | Shape | 6650 PFERD | Length mm | Swiss stroke |
|---|---|---|---|---|
| 5162 | Flat point | 6.20 | 160 | 2 |
| 6160 | Bird tongue | 6.65 | 160 | 0 |
| 6161 | Bird tongue | 6.65 | 160 | 1 |
| 6162 | Bird tongue | 6.65 | 160 | 2 |
| 7160 | Barette | 6.20 | 160 | 0 |
| 7161 | Barette | 6.20 | 160 | 1 |
| 7162 | Barette | 6.20 | 160 | 2 |
| 8160 | Knive | 6.65 | 160 | 0 |
| 8161 | Knive | 6.65 | 160 | 1 |
| 8162 | Knive | 6.65 | 160 | 2 |
| | | (W549) | | |

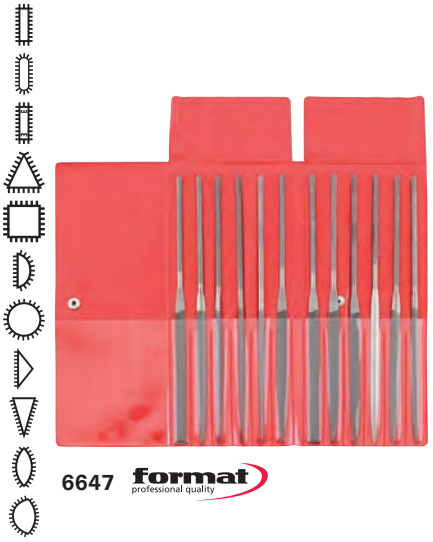
## Precision needle files set

**Design:** With round handle. Supplied in plastic bag with snap button closure.

**Application:** For the finest and most precise work in machine and tool making.

### Precision needle files set, 160 mm

| Order No. | Design | 6647 format | 6649 PFERD | Set contents | Swiss stroke |
|---|---|---|---|---|---|
| 0160 | 12-part | 62.90 | 79.80 | 1 Flat blunt needle file<br>1 Flat blunt needle file with round edges<br>1 Flat pointy needle file<br>1 Flat pointy needle file with round edges<br>1 Three-edge needle file<br>1 Four-edge needle file<br>1 Semi-round needle file<br>1 Round needle file<br>1 Barette needle file<br>1 Blade needle file<br>1 Bird tongue needle file<br>1 Bird tongue needle file round-oval | 2 |
| | | (W548) | (W549) | | |



6647 format professional quality

### Precision needle files set, 200 mm

| Order No. | Design | 6647 format | 6649 PFERD | Set contents | Swiss stroke |
|---|---|---|---|---|---|
| 0200 | 12-part | 78.90 | 102.00 | 1 Flat blunt needle file<br>1 Flat blunt needle file with round edges<br>1 Flat pointy needle file<br>1 Flat pointy needle file with round edges<br>1 Three-edge needle file<br>1 Four-edge needle file<br>1 Semi-round needle file<br>1 Round needle file<br>1 Barette needle file<br>1 Blade needle file<br>1 Bird tongue needle file<br>1 Bird tongue needle file round-oval | 0 |
| | | (W548) | (W549) | | |

6649 PFERD

## Quick mounting handle for needle, key and diamond files

**Design:** Handy file handle made of plastic with clamping jaws.

**Application:** For the quick clamping of needle, key and diamond needle files as well as smaller workshop and precision files.

PFERD

| Order No. | Length mm | 6681 PFERD | For file length mm |
|---|---|---|---|
| 0002 | 90 | 4.68 (W549) | 140–200 |

## Needle file holder

**Design:** Handy file handle made of plastic with spring collet chuck and turret for adjusting the tension.

**Application:** For safe guidance and quick clamping of needle files.

PFERD

| Order No. | Length mm | 6681 PFERD | For tang ∅ mm |
|---|---|---|---|
| 0100 | 100 | 22.10 (W549) | 3–5 |

## Thread file

**Design:** Made of chrome-vanadium steel, ISO-nickel-coated, with 8 different pitches.

**Application:** For the repair of damaged recessed and external threads.

GEDORE

**6685** **For metric threads.**

**6686** **For inch thread.**

| Order No. | For thread pitches | 6685 GEDORE | 6686 GEDORE |
|---|---|---|---|
| 0005 | 0.8 – 1 – 1.25 – 1.5 – 1.75 – 2 – 2.5 – 3 mm | 49.60 (W522) | – |
| 0005 | 24 – 20 – 18 – 16 – 14 – 13 – 12 – 11 threads | – | 49.60 (W522) |

HAZET

6/233

## Thread repair

Thread roll tools from Hazet permit the repair of threads without removing material and thus retain the fit of the screw components.

**General notes:** Due to the abrasive coating, high grip, material removal rate and profile/edge stability are achieved under light pressure. Diamond files are also suitable for very hard surfaces, plastics, hardened steel, hard metals, glass, ceramics, non-ferrous metals, super nickel alloys, armouring and ferrite.

STOP **Higher pressure does not achieve a better file outcome, but damages the file.**

## Diamond needle file

**Design:** Galvanic bound in hard-chrome-plated precision design. Total length 140 mm, diamond facing length 70 mm, shaft ∅ 3 mm. Original Swiss basic body made of ground and forged special file steel. Universal granulation size D 126 medium (according to the FEPA standard).

**Application:** For precise (re) processing workpieces/tools (e.g., punching, cutting and pressing tools) in machine and mould. In addition, for deburring and processing of GFK and related materials, of HM and ceramics prior to and after sintering, graphite, ferrite, cast HSS etc.

**Flat blunt**

**Flat blunt, round edges**

**Flat point**

**Triangular**

**Square**

**Semi-round**

**Round**

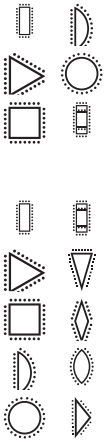
**Barette**

| Order No. | Shape | 6655 format | 6657 PFERD | Dimension mm 6655 | Dimension mm 6657 | Total length mm | Diamond trim length mm | Shaft ∅ mm |
|---|---|---|---|---|---|---|---|---|
| 0005 | Flat blunt | 13.80 | 17.40 | 5.2 x 1.6 | 5.5 x 1.6 | 140 | 70 | 3 |
| 0010 | flat blunt, round edges | 13.80 | 17.40 | 5.2 x 1.6 | 5.5 x 1.6 | 140 | 70 | 3 |
| 0015 | Flat point | 13.80 | 17.40 | 5.2 x 1.6 | 5.5 x 1.6 | 140 | 70 | 3 |
| 0020 | Triangular | 13.80 | 17.40 | 3.7 | 3.5 | 140 | 70 | 3 |
| 0025 | Square | 12.25 | 17.40 | 2.6 | 2.6 x 2.6 | 140 | 70 | 3 |
| 0030 | Semi-round | 12.25 | 17.40 | 5.4 x 2.0 | 5.5 x 1.6 | 140 | 70 | 3 |
| 0035 | Round | 12.25 | 17.40 | 3.2 | 3.2 | 140 | 70 | 3 |
| 0055 | Barette | 12.25 (W550) | 17.40 (W559) | 4.9 x 1.8 | 5.0 x 2.0 | 140 | 70 | 3 |

## Diamond needle file

**Design:** With universal granulation size D 126 medium (according to the FEPA standard).
Supplied in plastic roll-up case incl. diamond needle file (Order no. 6655).

| Order No. | Design | 6660 format | 6665 format | Set contents |
|---|---|---|---|---|
| 0140 | 6-part | 66.60 | – | 1 flat blunt<br>1 triangular<br>1 square<br>1 semi round<br>1 round<br>1 flat tip |
| 0140 | 10-part | – | 115.50 | 1 flat blunt<br>1 triangular<br>1 square<br>1 semi round<br>1 round<br>1 flat tip<br>1 knife profile<br>1 sword profile<br>1 bird tongue<br>1 barrette |
| | | (W550) | (W550) | |



**6660**

**6665**

## Diamond needle file

**Design:** With universal granulation size (according to the FEPA standard). Supplied in stable plastic case including diamond needle files.

**6658** **D 126-medium** (Order No. 6657).

**6659** **D 126-medium** (Order No. 6657).

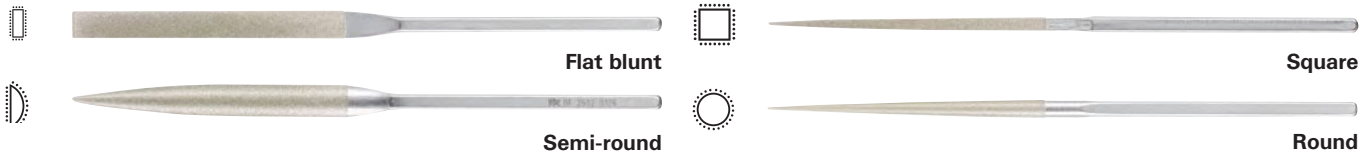
**6661** **D 91-fine.**

| Order No. | Design | 6658 PFERD | 6659 PFERD | 6661 PFERD | Set contents |
|---|---|---|---|---|---|
| 0140 | 5-part | 79.70 | – | 89.20 | 1 flat blunt<br>1 triangular<br>1 square<br>1 semi round<br>1 round |
| 0140 | 11-part | – | 175.00 | – | 1 flat blunt<br>1 flat blunt with round edges<br>1 triangular<br>1 square<br>1 semi round<br>1 round<br>1 flat tip<br>1 knife profile<br>1 sword profile<br>1 bird tongue<br>1 barrette |
| | | (W559) | (W559) | (W559) | |

## Diamond Habilis file (mobile file)

**Design:** Original Swiss basic body made of ground and forged special file steel. With universal granulation size D 126 medium (according to the FEPA standard). Galvanic bound in hard-chrome-plated precision design, with square handle.

**Application:** Particularly suitable for efficient and precise processing larger surfaces.




| Order No. | Shape | 6670 format | 6656 PFERD | Dimension mm 6670 | Dimension mm 6656 | Total length mm | Diamond trim length mm 6670 | Diamond trim length mm 6656 |
|---|---|---|---|---|---|---|---|---|
| 0005 | Flat blunt | 36.80 | 45.20 | 10 x 3 | 10.3 x 2.8 | 215 | 110 | 100 |
| 0010 | Semi-round | 39.20 | 45.20 | 13 x 4 | 12.5 x 3.8 | 215 | 110 | 100 |
| 0015 | Triangular | 42.40 | 45.20 | 10 x 10 | 10.0 x 10.0 | 215 | 110 | 100 |
| 0020 | Square | 30.10 | 39.80 | 6 x 6 | 5.5 x 5.5 | 215 | 110 | 100 |
| 0025 | Round | 27.80 | 39.80 | 6 | 6.7 | 215 | 110 | 100 |
| | | (W550) | (W559) | | | | | |

## Diamond Habilis file set (mobile file set)

**Design:** Original Swiss basic body made of ground and forged special file steel. With universal granulation size D 126 medium (according to the FEPA standard). Galvanic bound in hard-chrome-plated precision design, with square handle.

**6675** Supplied in plastic case.

**6656** Supplied in stable plastic case.

| Order No. | Design | 6675 format | 6656 PFERD | Set contents |
|---|---|---|---|---|
| 0215 | 5-part | 156.50 | 197.00 | 1 flat blunt<br>1 triangular<br>1 square<br>1 semi round<br>1 round |
| | | (W550) | (W559) | |

## Diamond sheeting

**Design:** Flexible diamond sheet, suitable for processing surfaces, with universal granulation size D 126-medium (according to the FEPA standard).

**Application:** Convex and concave contours can be worked on with relatively little effort.

| Order No. | Length mm | 6669 PFERD | Cross-section mm |
|---|---|---|---|
| 0005 | 170 | 77.90 | 0.7 x 30 |
| 0015 | 350 | 192.00 (W549) | 1.3 x 35 |

## File handle

**Design:** Moulded handle made of red beech in curved shape, surface waxed and connected solid with pressed, seamless steel pipe clamp. This prevents the cracking of the handle while inserting the file.

| Order No. | Length mm | 6682 | For file length mm |
|---|---|---|---|
| 0070 | 70 | 0.47 NEW | Key files 100-125 |
| 0080 | 80 | 0.47 | 110/113 |
| 0090 | 90 | 0.50 | 125 |
| 0100 | 100 | 0.59 | 150 |
| 0110 | 110 | 0.62 | 200 |
| 0120 | 120 | 0.72 | 250 |
| 0130 | 130 | 0.82 | 300 |
| 0140 | 140 | 0.96 | 350 |
| 0160 | 160 | 1.20 (W548) | 400/450 |

## Ergonomic file handle

**Design:** Ergonomic shaped 2-component plastic handle, roll-off protection and hanging hole.

| Order No. | Length mm | 6687 format | For file length mm | Shape |
|---|---|---|---|---|
| 0005 | 110 | 1.54 | 100–150 | Key files, very narrow tangs |
| 0010 | 110 | 1.54 | 100–150 | Normal tangs |
| 0015 | 115 | 1.91 | 200–250 | Profiles: flat blunt, flat-pointed, half-round |
| 0020 | 115 | 1.91 | 200–250 | Profiles: Triangular, square, round, special shapes |
| 0025 | 115 | 2.36 | 300–350 | Profiles: flat blunt, flat-pointed, half-round |
| 0030 | 115 | 2.36 (W548) | 300–350 | Profiles: Triangular, square, round, special shapes |

## Quick mounting handle for needle, key and diamond files

**Design:** Handy file handle made of plastic with clamping jaws.

**Application:** For the quick clamping of needle, key and diamond needle files as well as smaller workshop and precision files.

| Order No. | Length mm | 6681 PFERD | For file length mm |
|---|---|---|---|
| 0002 | 90 | 4.68 (W549) | 140–200 |

## Needle file holder

**Design:** Handy file handle made of plastic with spring collet chuck and turret for adjusting the tension.

**Application:** For safe guidance and quick clamping of needle files.

| Order No. | Length mm | 6681 PFERD | For tang ∅ mm |
|---|---|---|---|
| 0100 | 100 | 22.10 (W549) | 3–5 |

## Triangular wood scraper

**Design: DIN 8350 C.** Made of special chrome steel with triangular hollow profile blade, concave sharpening and clean enamelled surface. Highest cutting performance due to high blade hardness of 58-65 HRC on 1/3 of the blade length. With moulded wooden handle in curved shape, lacquered and with pressed, seamless steel pipe clamp.

| Order No. | Blade length mm | 6690 format | Blade width mm |
|---|---|---|---|
| 0100 | 100 | 4.44 | 14 |
| 0150 | 150 | 4.74 | 14 |
| 0200 | 200 | 5.30 | 16 |
| 0250 | 250 | 5.85 | 16 |
| | | (W552) | |

## Fine scraper

**Design:** Made of special steel with three-edge hollow profile blade and tough-elastic plastic handle made of cellulose propionate (CP) as well as protective plastic cap.

| Order No. | Blade length mm | 6692 format | Blade width mm | Total length mm |
|---|---|---|---|---|
| 0150 | 25 | 10.25 | 8 | 150 |
| | | (W552) | | |

## Triangular spoon scraper

**Design:** Made of special chrome steel with triangular hollow profile blade, concave sharpening and clean enamelled surface. Highest cutting performance due to high blade hardness of 58-65 HRC on 1/3 of the blade length. With moulded wooden handle in curved shape, lacquered and with pressed, seamless steel pipe clamp.

| Order No. | Blade length mm | 6694 format | Spoon size mm |
|---|---|---|---|
| 0200 | 200 | 5.85 | 85 x 15 |
| | | (W552) | |

## Flat scraper

**Design: DIN 8350A.** Made of special chrome steel with clean enamelled surface. Highest cutting performance due to high blade hardness of 58-65 HRC on 1/3 of the blade length. With moulded wooden handle in curved shape, lacquered and with pressed, seamless steel pipe clamp.

| Order No. | Blade length mm | 6696 format | Blade width mm |
|---|---|---|---|
| 0150 | 150 | 4.86 | 20 |
| 0200 | 200 | 5.60 | 20 |
| 0250 | 250 | 6.15 | 25 |
| 0300 | 300 | 7.20 | 25 |
| | | (W552) | |

## Hard metal flat scraper

**Design:** Made of special chromium-vanadium steel. Strong flat steel blade with a clamp for holding the removable, four-edged hard metal tip with a galvanised surface. With comfortable wooden handle.

| Order No. | Blade length | 6698 format | Blade width mm |
|---|---|---|---|
| 0010 | 340 mm | 50.70 | 25 |
| 0020 | Replacement plate | 25.00 | 25 |
| | | (W552) | |

## GASKET SCRAPER F

**Design:** Made of special chrome steel, painted red, blade forged particularly flat with stepped blade for multiple regrinding. With wooden handle.

| Order No. | Blade length mm | 6699 format | Blade width mm |
|---|---|---|---|
| 0150 | 150 | 7.85 | 22 |
| | | (W552) | |

## Window scraper blade

**Design:** Made of red ABS plastic, fitted with standard blade equipped with protective cap and hanging hole.

**Note:** Replacement blade standard (Order No. 7333 1000 📖 7/62)
Replacement blade TiN (Order No. 7333 1005 📖 7/62)

| Order No. | Blade width mm | 6701 |
|---|---|---|
| 0060 | 60 | 2.17 (W555) |

## Window scraper blade

**Design:** Made of grey ABS plastic with INOX blade for coarse preliminary work and a plastic blade for fine work.

| Order No. | Dimension mm | 6702 NT Cutter |
|---|---|---|
| 0005 | 55 x 45 | 6.55 (W575) |

## Paint scraper

**Design:** With carbide blades and ergonomic 2-component plastic handle. Complete with blade. Narrow blade receptacles for applications in tight places Design in 65 mm with double handles for increased power transmission.

**Application:** For scraping paint, glue, varnish and rust on respective surface, e.g. wood, metal, concrete.

| Order No. | Blade width mm | 6720 BAHCO |
|---|---|---|
| 0025 | 25 | 20.70 |
| 0050 | 50 | 20.30 |
| 0065 | 65 | 29.20 (W556) |

6720 0025

6720 0050

6720 0065

## Replacement blade for paint scraper

**Design:** Made from hard metal for extreme longevity.

| Order No. | Blade width mm | 6720 BAHCO |
|---|---|---|
| 1025 | 25 | 9.05 |
| 1050 | 50 | 9.40 |
| 1065 | 65 | 10.60 (W556) |

6720 1025

6720 1050

6720 1065

## Universal scraper

**Design:** Extremely strong scraper with reinforced shaft and impact cap made of cast aluminium. Interchangeable blade 18 mm. Including 3 blades.

**Application:** For precise scraper tasks and toughest chisel applications.

**Note:** For replacement blade see (Order No. 7345 and 7312) 📖 7/64)

| Order No. | Dimensions L x W x H mm | 6721 Tajima | Blade width mm |
|---|---|---|---|
| 0200 | 200 x 110 x 40 | 23.60 | 110 |
| 0300 | 300 x 110 x 40 | 24.90 | 110 |
| 0600 | 600 x 110 x 40 | 31.00 (W569) | 110 |

6721 0600 6721 0300 6721 0200

## Universal saw

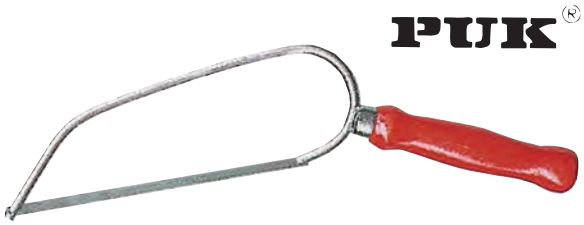
**Design:** Small and handy design with good cutting performance.
With universal saw blade.

**Design:** For fast, easy sawing in industry and crafts.

**6730** With red, fixed beech wood handle and 6 mm high-gloss galvanised round steel bracket.

**6732** With all-round adjustable beech wood handle and 5.4 mm nickel-plated square steel bracket.

| Order No. | Length mm | 6730 PUK | 6732 PUK |
|---|---|---|---|
| 0150 | 150 | 4.09 (W555) | 7.95 (W555) |



6730

6732

## Saw blade for universal saws

**Design:** Made of strip steel, hardened with hanging pins.
Length 150 mm, thickness 0.4 mm.

**6734 0005** **Finest serration**
For clean cuts of the highest quality in thin-walled metal profiles/tubes and very fine metal sheets.

6734 0005

**6734 0010** **Fine serration, wavy**
For high quality, burr-free saw cuts in metals, non-ferrous metals, stainless steels, special alloys, plexiglass and plastics.

6734 0010

**6734 0015** **Coarser serration, set crosswise**
For effortless sawing in wood, carpentry board, chipboard and hardboard as well as green wood, cardboard, hard fabric and soft plastic.

6734 0015

| Order No. | Design | 6734 PUK | PU | Teeth per cm/inch |
|---|---|---|---|---|
| 0005 | Metal fine saw blade | 0.80 | 12 Δ | 20/50 |
| 0010 | Metal saw blade | 0.37 | 12 Δ | 12/32 |
| 0015 | Wood saw blade | 0.32 (W555) | 12 Δ | 5.5/14 |

Δ Can only be supplied as a whole packaging unit.

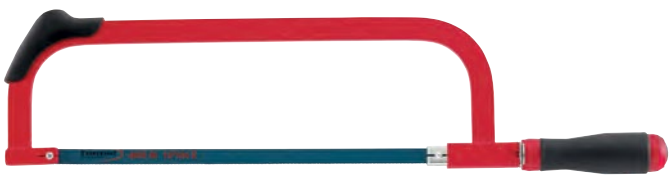
## Metal bow saws

**Design:** Stable steel bracket.

**6740** **Design: DIN 6473, Form A.** Steel bracket, painted, with wooden handle, square clamping pieces with cross slots, clamping screw and undetachable pins.

6740

**6739** Made of solid material, epoxy powder coated, 2-component turning knob, front slip protection. Supplied with bi-metal saw blade, 24 teeth per inch.



6739

| Order No. | Length mm | 6740 format | 6739 format |
|---|---|---|---|
| 0300 | 300 | 6.30 (W555) | 8.75 (W555) |

## Metal bow saws

**Design:** Robust bow made of aluminium pressure die cast, epoxy powder coated, complete hand and front grip of soft rubber, front slip protection. Blade tension by turning knob in the pistol. Supplied with HSS bi-metal saw blade, 24 teeth per inch.

| Order No. | Length mm | 6741 format |
|---|---|---|
| 0300 | 300 | 19.00 (W555) |

## Metal bow saws

**Design:** Professional metal bow saws. High blade tension for straight cuts. Lightweight 2-component frame with steel core. Alternative blade tension of 55° for flush cutting. Tensioning mechanism integrated in handle. Supplied with HSS bi-metal saw blade, 24 teeth per inch.

| Order No. | Length mm | 6743 BAHCO |
|---|---|---|
| 0300 | 300 | 22.50 (W556) |

## Metal bow saws

**Design:** Ergonomic professional metal bow saws. Extremely high blade tension for straight cuts, spring-loaded blade attachment for quick blade change. Alternative blade tension of 55° for flush cutting. Supplied with 6 bi-metal saw blades, 24 teeth per inch.

| Order No. | Length mm | 6744 BAHCO |
|---|---|---|
| 0300 | 300 | 38.10 (W556) |

## Mini bow saws

**Design:** Small, handy frame made of aluminium.
Supplied with HSS bi-metal saw blade, 24 teeth per inch.

**Application:** For working in hard-to-access places.

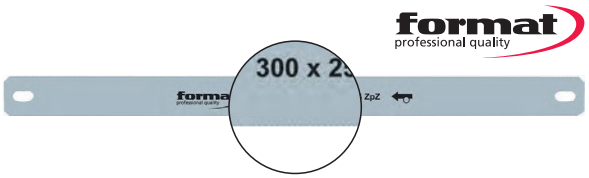
| Order No. | Length mm | 6734 BAHCO |
|---|---|---|
| 0001 | 250 | 11.60 (W556) |

## Hand saw blade, HSS

**Design:** Entirely hardened, with teeth edge made of high-speed steel.

**Application:** Is used preferably because of its edge retention.

HSS



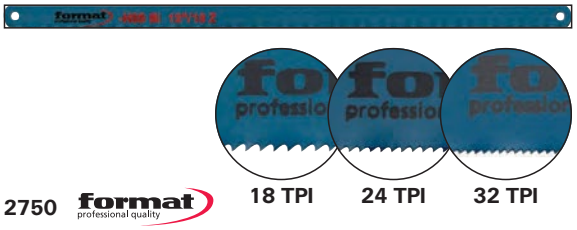

| Order No. | Length mm | 2749 format | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|
| 0020 | 300 | 2.18 (W250) | 25 | 0.70 | 24 |

## Hand saw blade, HSS/bimetal

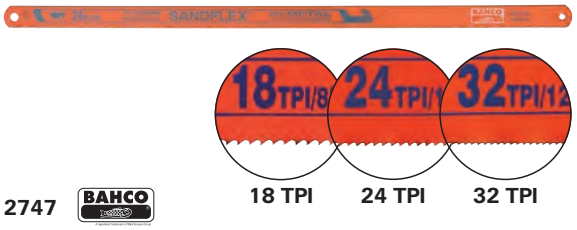
**Design:** Practically unbreakable and splinter-proof bimetal blade with precision-ground teeth for all types of metal cutting. Blade backs made of durable yet flexible spring steel and teeth edge of high-alloy super HSS steel. This blade guarantees a significantly longer operating life and longer tooth sharpness than conventional hand saw blades. The Sandflex® hand saw blade unites extremely high cutting performances and resistance with high flexibility.

**Application:** These blades combine high performance with safety against breakage and are universally applicable.

HSS Bimetal




2750 format professional quality




2747 BAHCO

| Order No. | Length mm | 2750 format | 2747 BAHCO | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0005 | 300 | 1.08 | 1.76 | 13 | 0.65 | 18 |
| 0010 | 300 | 1.08 | 1.76 | 13 | 0.65 | 24 |
| 0015 | 300 | 1.08 (W250) | 1.76 (W556) | 13 | 0.65 | 32 |

## Hand saw blade, HSS/bimetal, progressive

**Design:** Shatterproof bimetal hand saw blade with precision ground teeth edge made of high-speed steel and with **progressively extending tooth pitch,** descending from 32 to 18 teeth per inch. The teeth area is electronically welded to the flexible spring steel backing material in a vacuum. Reduced vibration for thin materials in the first cut.

**Application:** Especially efficient in all areas of application. Has a high cutting performance, even in coarse materials.

HSS Bimetal

2751 format professional quality

2747 BAHCO

| Order No. | Length mm | 2751 format | 2747 BAHCO | Width mm | Thickness mm | Teeth per inch |
|---|---|---|---|---|---|---|
| 0001 | 300 | 1.12 (W250) | 1.76 (W556) | 13 | 0.65 | 32–18 |

## Hard metal saw wire

**Design:** Tungsten coating and provided with HM particles. Suitable for all standard 300 mm bow saws.

**Application:** For cutting glass, wood, ceramic, stone, tile, metal and plastic. Also suitable for round sawing.

| Order No. | Length mm | 6742 |
|---|---|---|
| 0010 | 300 | 4.63 (W555) |

## Fitter's hammer

**Design:** DIN 1041, French form, made of tempered steel C 45, forged, hardened and annealed. Crackle finish protects against rust. Ball and peen polished smooth, edges refracted according to regulations.

**Note:** For replacement handle DIN 5111 see (Order No. 6795 📖 6/200).

**6775** With double curved hickory handle DIN 5111.

**6777** With double curved hickory handle DIN 5111 and **hardened protective handle cover.**

6775

6777

| Order No. | Weight g | 6775 format | 6777 format | Length mm |
|---|---|---|---|---|
| 0100 | 100 | 5.50 | 6.35 | 260 |
| 0200 | 200 | 6.20 | 7.10 | 280 |
| 0300 | 300 | 7.20 | 8.10 | 300 |
| 0400 | 400 | 7.55 | 8.60 | 310 |
| 0500 | 500 | 8.15 | 9.15 | 320 |
| 0600 | 600 | 9.05 | 10.35 | 330 |
| 0800 | 800 | 10.35 | 11.70 | 350 |
| 1000 | 1000 | 11.40 | 12.45 | 360 |
| 1500 | 1500 | 14.35 | 15.70 | 380 |
| 2000 | 2000 | 16.00 (W560) | 17.45 (W560) | 400 |

## Locksmith's hammer with protective handle cover

**Design:** DIN 1041, made of tempered steel C 45. Drop-forged, precisely ground, carefully hardened and tempered. Powder-coating prevents rust. Ball and peen polished clean. Edges refracted according to regulations. With double curved hickory handle nickel plated, protective handle cover.

| Order No. | Weight g | 6754 mob | Length mm |
|---|---|---|---|
| 0200 | 200 | 9.55 | 280 |
| 0300 | 300 | 10.45 | 300 |
| 0400 | 400 | 11.30 | 320 |
| 0500 | 500 | 12.30 | 320 |
| 0600 | 600 | 14.35 (W518) | 330 |

| Order No. | Weight g | 6754 mob | Length mm |
|---|---|---|---|
| 0800 | 800 | 16.05 | 350 |
| 1000 | 1000 | 18.55 | 360 |
| 1500 | 1500 | 23.60 | 380 |
| 2000 | 2000 | 30.20 (W518) | 400 |

## Replacement handle for fitter's hammer

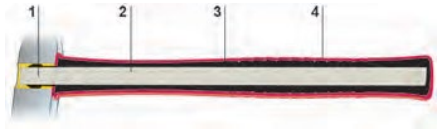
**Design:** Double curved made of painted hickory wood.

| Order No. | Weight g | 6755 mob | Length mm |
|---|---|---|---|
| 0200 | 200 | 3.49 | 280 |
| 0300 | 300 | 4.00 | 300 |
| 0500 | 400/500 | 4.73 | 320 |
| 0600 | 600 | 5.15 (W518) | 330 |

| Order No. | Weight g | 6755 mob | Length mm |
|---|---|---|---|
| 0800 | 800 | 5.35 | 350 |
| 1000 | 1000 | 6.45 | 360 |
| 1500 | 1500 | 6.85 | 380 |
| 2000 | 2000 | 7.50 (W518) | 400 |

## Locksmith's hammer with 3-component handle

**Design:** DIN 1041, French form, made of tempered steel C 45, forged, hardened and annealed. Painted with black water-based varnish. Ball and peen polished smooth, edges refracted according to regulations. With **unbreakable 3-component handle.** The handle is made of a fibreglass core, supporting layer of polypropylene to minimize vibration, grip area with non-slip rubber is inextricably linked with the hammer head.

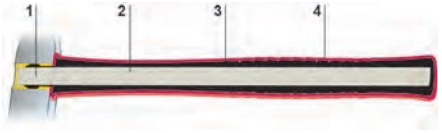



1) Firm connection of handle and head
2) Unbreakable glass-fibre core
3) Polypropylene carrier layer, ergonomically shaped
4) Non-slip elastomers

| Order No. | Weight g | 6746 format | Length mm |
|---|---|---|---|
| 0300 | 300 | 10.05 | 300 |
| 0500 | 500 | 11.45 | 320 |
| 1000 | 1000 | 17.80 | 360 |
| 1500 | 1500 | 24.60 | 360 |
| 2000 | 2000 | 29.60 (W560) | 400 |

## ULTRATEC fitter's hammer

**Design:** DIN 1041, French form, made of tempered steel C 45, forged, hardened and annealed. Ball and peen polished clean. Edges refracted according to regulations. The ULTRATEC handle is inextricably connected to the hammer body, with fibreglass core. Ergonomically designed handle, anti-slip grip layer made from elastomer.




1) Firm connection of handle and head
2) Unbreakable glass-fibre core
3) Polypropylene carrier layer, ergonomically shaped
4) Non-slip elastomers

| Order No. | Weight g | 6756 mob | Length mm |
|---|---|---|---|
| 0200 | 200 | 13.25 | 260 |
| 0300 | 300 | 14.60 | 285 |
| 0400 | 400 | 15.95 | 290 |
| 0500 | 500 | 17.25 | 315 |
| 0600 | 600 | 18.35 | 320 |
| 0800 | 800 | 23.00 | 320 |
| 1000 | 1000 | 27.20 | 325 |
| 1500 | 1500 | 34.90 NEW | 360 |
| 2000 | 2000 | 44.90 NEW | 365 |

(W518)

## Sledge/demolition hammer

NEW

**Design:** Forged from high quality steel, hardened and tempered. Track and ball inductive hardened, track with cleanly ground edge crimping. The ball-shaped impact head brings full energy to one concentrated point.

| Order No. | Weight g | 6757 ROUGHNECK | Length mm |
|---|---|---|---|
| 1800 | 1800 | 29.70 | 345 |
| 4500 | 4500 | 59.50 | 780 |

(W518)

## Sledge hammer

**Design:** DIN 1042, made of tempered steel C 45, forged, hardened and annealed. Ball and peen polished smooth, edges refracted according to regulations. With hickory handle DIN 5112.

**Note:** For replacement handle see (Order No. 6798 📖 6/200).

| Order No. | Weight kg | 6781 format | Length mm |
|---|---|---|---|
| 0003 | 3 | 20.80 | 600 |
| 0004 | 4 | 26.50 | 700 |
| 0005 | 5 | 30.90 | 800 |
| 0006 | 6 | 34.80 | 800 |
| 0008 | 8 | 44.80 | 900 |
| 0010 | 10 | 53.00 | 900 |

(W560)

## Sledge hammer

NEW

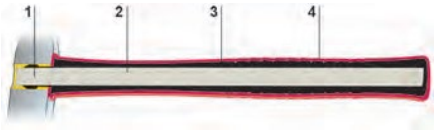
**Design:** Forged from high quality steel, hardened and tempered. 3-component handle with fibreglass core and soft-grip zone, inextricably connected to the hammer head.

| Order No. | Weight kg | 6782 ROUGHNECK | Length mm |
|---|---|---|---|
| 3000 | 3 | 35.70 | 900 |
| 4000 | 4 | 41.70 | 900 |
| 5000 | 5 | 47.60 | 900 |

(W518)

## ULTRATEC sledge hammer

**Design:** Made of tempered steel C 45, forged, hardened and annealed. ULTRATEC-handle is firmly connected to the hammer with glass-fibre core. Ergonomically designed handle, anti-slip grip layer made from elastomer.




| Order No. | Weight kg | 6759 mob | Length mm |
|---|---|---|---|
| 0003 | 3 | 52.40 | 920 |
| 0004 | 4 | 57.90 | 920 |
| 0005 | 5 | 66.20 (W518) | 920 |

1) Firm connection of handle and head
2) Unbreakable glass-fibre core
3) Polypropylene carrier layer, ergonomically shaped
4) Non-slip elastomers

## Club hammer

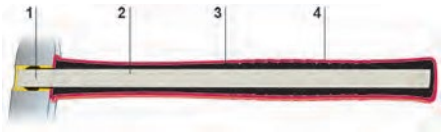
**Design:** DIN 6475, French form, made of tempered steel C 45, forged, hardened and annealed. Crackle finish protects against rust. Tracks plainly ground, edges refracted according to regulations. With curved hickory handle DIN 5135.

**Note:** For replacement handle see (Order No. 6799 📖 6/201).

| Order No. | Weight g | 6783 format | Length mm |
|---|---|---|---|
| 1000 | 1000 | 10.35 | 260 |
| 1250 | 1250 | 11.15 | 260 |
| 1500 | 1500 | 13.20 | 280 |
| 2000 | 2000 | 14.30 (W560) | 300 |

## Stone mason's hammer with 3-component handle

**Design:** DIN 6475, French form, made of tempered steel C 45, forged, hardened and annealed. Painted with black water-based varnish. Tracks plainly ground, edges refracted according to regulations. With **unbreakable 3-component handle.** The handle is made of a fibreglass core, supporting layer of polypropylene to minimize vibration, grip area with non-slip rubber is inextricably linked with the hammer head.

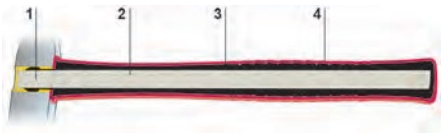



| Order No. | Weight g | 6747 format | Length mm |
|---|---|---|---|
| 1000 | 1000 | 15.70 | 260 |
| 1250 | 1250 | 16.90 | 260 |
| 1500 | 1500 | 19.15 | 280 |
| 2000 | 2000 | 26.20 (W560) | 280 |

1) Firm connection of handle and head
2) Unbreakable glass-fibre core
3) Polypropylene carrier layer, ergonomically shaped
4) Non-slip rubber

## Club hammer ULTRATEC

**Design:** DIN 6475, French form, made of tempered steel C 45, forged, hardened and annealed. Polished clean. Edges refracted according to regulations. The ULTRATEC handle is inextricably connected to the hammer body, with fibreglass core. Ergonomically designed handle, anti-slip grip layer made from elastomer.




| Order No. | Weight g | 6762 mob | Length mm |
|---|---|---|---|
| 1000 | 1000 | 21.20 | 250 |
| 1250 | 1250 | 21.40 | 260 |
| 1500 | 1500 | 23.60 | 260 |
| 2000 | 2000 | 29.90 (W518) | 265 |

1) Firm connection of handle and head
2) Unbreakable glass-fibre core
3) Polypropylene carrier layer, ergonomically shaped
4) Non-slip elastomers

## Carpenter's mallet

**Design:** DIN 5109, French form, made of tempered steel C 45, forged, hardened and annealed. Ball and peen polished clean. Edges refracted according to regulations. With curved ash handle.

| Order No. | Size mm | 6763 mob | Length mm |
|---|---|---|---|
| 0022 | 22 | 10.10 | 300 |
| 0025 | 25 | 10.55 | 300 |
| 0028 | 28 | 11.40 | 320 |
| | | (W518) | |

## Masonry hammer

**Design:** DIN 5108, Rhineland shape, made of tempered steel C 45, hardened and annealed. Smooth track. With ash handle.

| Order No. | Weight g | 6809 mob | Length mm |
|---|---|---|---|
| 0600 | 600 | 8.70 | 300 |
| | | (W518) | |

## Replacement handle for masonry hammer

**Design:** From **ash** in a straight shape.

**Note:** Suitable for masonry hammer with a round hammer eye.

| Order No. | For hammers g | 6797 | Length mm |
|---|---|---|---|
| 0600 | 600 | 0.78 | 300 |
| | | (W564) | |

## Masonry hammer

**Design:** Berliner shape, coarse track, with steel pipe handle and plastic grip, painted black.

| Order No. | Weight g | 6810 mob | Length mm |
|---|---|---|---|
| 0600 | 600 | 16.00 | 300 |
| | | (W518) | |

## Plasterer's hatchet

**Design:** Made of special tool steel. With tubular steel shaft and plastic handle. Painted black.

| Order No. | Weight g | 6792 mob | Length mm |
|---|---|---|---|
| 0700 | 700 | 18.00 | 300 |
| | | (W518) | |

## Welder's hammer (chipping hammer)

**Design:** Full steel with round pipe 20 mm.

| Order No. | Weight g | 9237 | Length mm |
|---|---|---|---|
| 0010 | 400 | 5.70 | 305 |
| | | (W945) | |

## Roofing hammer

**Design:** DIN 7239 Form C, made of special steel, hammer tone enamelled. Smooth track and nail holder. With tubular steel shaft and plastic handle cover.

**6793** Nail holder **without magnet.**

**6794** Nail holder **with magnet.**

| Order No. | Weight g | 6793 format | 6794 format | Length mm |
|---|---|---|---|---|
| 0600 | 600 | 10.70 (W560) | 10.90 (W560) | 300 |

## Roofing hammer

**Design:** In particularly balanced XSTRIKER design. Roughened track.

**6813 0005** Highly polished, with **magnetic** nail holder. Steel tube handle with reinforced steel ring for improved handle protection and plastic handle sleeve.

**6813 0010** Partially polished, with nail holder. Steel tube handle with reinforced steel ring for improved handle protection and plastic handle sleeve.

**6813 0015** Partially polished, with **magnetic** nail holder. Steel tube handle with reinforced steel ring for improved handle protection and plastic handle sleeve.

**6813 0020** Highly polished, with **magnetic** nail holder. Consistently forged from steel, with plastic handle sleeve.

**6813 0025** Highly polished, with **magnetic** nail holder. Consistently forged from steel, with leather handle.

6813 0005

6813 0010 + 0015

6813 0020

6813 0025

| Order No. | Total weight g | 6813 mob | Length mm |
|---|---|---|---|
| 0005 | 570 | 30.70 | 320 |
| 0010 | 570 | 16.10 | 320 |
| 0015 | 570 | 19.50 | 325 |
| 0020 | 950 | 41.30 | 325 |
| 0025 | 965 | 59.70 (W518) | 325 |

## Claw hammer

NEW

**Design:** With steel tube handle with reinforced pin and steel ring for improved handle protection. Head hammer blow paintwork.

| Order No. | Weight g | 6793 format |
|---|---|---|
| 0060 | 450 | 10.50 (W560) |

## Handle wedge SFIX

**Design:** Made of malleable cast iron. The ground teeth spread out when turning the handle and unwaveringly hold on the the SFIX wedge.

**Application:** To securely fix wooden handles to hammer head.

| Order No. | Size | 6800 | Width of wedge mm | For hammers g |
|---|---|---|---|---|
| 0005 | 00 | 0.28 | 13 | 100– 200 |
| 0010 | 0 | 0.39 | 16 | 250– 400 |
| 0015 | 1 | 0.43 | 20 | 500– 800 |
| 0020 | 2 | 0.55 | 23 | 500– 800 |
| 0025 | 3 | 0.79 | 26 | 1000–1500 |
| | | (W561) | | |

| Order No. | Size | 6800 | Width of wedge mm | For hammers g |
|---|---|---|---|---|
| 0030 | 4 | 0.95 | 29 | 1000– 1500 |
| 0035 | 5 | 1.13 | 32 | 1750– 2000 |
| 0040 | 5 1/2 | 1.69 | 40 | 3000– 4000 |
| 0045 | 6 | 2.12 | 50 | 3000–15000 |
| | | (W561) | | |

## Ring wedge

**Design:** Made of steel. The special wedge shape ensures a secure fit of the handle.

**Application:** For safe fastening of wooden handles on hammers.

| Order No. | Ø x length mm | 6801 | Ash application g | Hickory application g |
|---|---|---|---|---|
| 0005 | 5 x 9 | 0.32 | 50 | 50 |
| 0010 | 7 x 12 | 0.32 | 100 | 100 |
| 0015 | 8 x 15 | 0.32 | – | 200 |
| 0020 | 9 x 15 | 0.32 | 200 | – |
| 0025 | 10 x 15 | 0.41 | – | 300 |
| 0030 | 11 x 16 | 0.41 | 300 | – |
| 0035 | 12 x 18 | 0.41 | 400 | 400 |
| | | (W518) | | |

| Order No. | Ø x length mm | 6801 | Ash application g | Hickory application g |
|---|---|---|---|---|
| 0040 | 13 x 19 | 0.41 | 500 | 500 |
| 0045 | 14 x 20 | 0.41 | 600 | 600 |
| 0050 | 15 x 20 | 0.41 | 800 | 800/1000 |
| 0055 | 16 x 21 | 0.41 | 1000 | 1500 |
| 0060 | 17 x 23 | 0.55 | 1500 | 2000 |
| 0065 | 18 x 25 | 0.55 | 2000 | – |
| | | (W518) | | |

## Replacement handle for fitter's hammer

**Design:** DIN 5111, made from **hickory wood** in a curved shape. Comes without handle wedge.

**Note:** Suitable for all locksmith's hammers with oval hammer eye as well as for carpenter hammers (Order No. 6763). For handle wedges see (Order No. 6800) and ring wedges see (Order No. 6801).

| Order No. | For hammers g | 6795 | Length mm |
|---|---|---|---|
| 0101 | 100 | 1.93 | 260 |
| 0201 | 200 | 1.98 | 280 |
| 0301 | 300 | 2.16 | 300 |
| 0401 | 400 | 2.25 | 310 |
| 0501 | 500 | 2.53 | 320 |
| | | (W564) | |

| Order No. | For hammers g | 6795 | Length mm |
|---|---|---|---|
| 0601 | 600 | 2.60 | 330 |
| 0801 | 800 | 2.74 | 350 |
| 1001 | 1000 | 2.83 | 360 |
| 1501 | 1500 | 3.13 | 380 |
| 2001 | 2000 | 3.24 | 400 |
| | | (W564) | |

## Replacement handle for sledge hammer

**Design:** DIN 5112, made of **hickory wood** in a curved shape. Comes without handle wedge.

**Note:** Suitable for all sledgehammers with oval hammer eye. For handle wedges see (Order No. 6800) and ring wedges see (Order No. 6801).

| Order No. | For hammers kg | 6798 | Length mm |
|---|---|---|---|
| 0030 | 3 | 5.75 | 600 |
| 0040 | 4 | 6.60 | 700 |
| | | (W564) | |

| Order No. | For hammers kg | 6798 | Length mm |
|---|---|---|---|
| 0050 | 5 + 6 | 8.15 | 800 |
| 0080 | 8 + 10 | 9.30 | 900 |
| | | (W564) | |

## Spare handle for club hammer

**Design:** DIN 5135, made from **hickory wood** in a curved shape. Comes without handle wedge.

**Note:** Suitable for all stone mason's hammers with oval hammer eye. For handle wedges see (Order No. 6800) and ring wedges see (Order No. 6801).

| Order No. | For club hammer g | 6799 | Length mm |
|---|---|---|---|
| 0010 | 1000 + 1250 | 2.48 | 260 |
| 0015 | 1500 | 2.55 | 280 |
| 0020 | 2000 | 2.62 | 300 |
| | | (W564) | |

## Rubber composite hammer

**Design:** DIN 5128-90, made of special rubber, hard quality (90 Shore), **with ash handle**.

Form A: Both impact surfaces smooth.
Form B: One impact surface smooth, one curved.

Shape A

Form B

| Order No. | Size | 6808 format | Head Ø mm |
|---|---|---|---|
| 0005 | 0 A | 2.41 | 40 |
| 0010 | 1 A | 2.50 | 54 |
| 0015 | 2 A | 3.42 | 64 |
| 0020 | 2 B | 3.44 | 64 |
| 0025 | 3 A | 5.30 | 74 |
| 0030 | 4 A | 7.45 | 90 |
| | | (W560) | |

## Replacement handle for rubber composite hammer NEW

**Design:** Made of polished ash wood.

| Order No. | For size | 6808 | Length mm |
|---|---|---|---|
| 0260 | 0 | 1.45 | 260 |
| 0320 | 1 | 1.58 | 320 |
| 0340 | 2 | 1.65 | 340 |
| 0380 | 3 + 4 | 1.70 | 380 |
| | | (W560) | |

## Wood hammer

**Design:** DIN 7462 B, with metal mantel, hammer head made of white beech with rounded tracks. **With ash handle.**

| Order No. | Head Ø mm | 6802 format | Head length mm | Length mm | Weight g |
|---|---|---|---|---|---|
| 0060 | 60 | 13.25 | 120 | 310 | 370 |
| 0070 | 70 | 16.05 | 140 | 350 | 560 |
| 0080 | 80 | 19.75 | 160 | 360 | 810 |
| 0090 | 90 | 25.10 | 180 | 380 | 1100 |
| 0100 | 100 | 34.70 | 200 | 400 | 1500 |
| | | (W560) | | | |

## Light metal hammer

**Design:** Drawn from aluminium and cold worked. Hammer head with conical DIN-eye, round wedge for added handle assurance, with **hickory handle**.

**Application:** Use only for workpieces that are softer than the hammer head, therefore, suitable for sheet deformation, dent removal and installation work etc.

**Note:** Prices do not include valid non-ferrous metal surcharge.

| Order No. | Weight g | 6807 | Head Ø mm | Head length mm | Length mm |
|---|---|---|---|---|---|
| 0025 | 250 | 8.90 | 40 | 80 | 300 |
| 0050 | 500 | 13.30 | 50 | 100 | 320 |
| 0075 | 750 | 16.60 | 60 | 100 | 350 |
| 0100 | 1000 | 20.20 | 60 | 130 | 360 |
| 0150 | 1500 | 28.40 | 70 | 140 | 380 |
| | | (W561) | | | |

## Copper hammer

**Design:** Drawn from copper and cold-worked, similar to DIN 5130, **with hickory handle.**

**Application:** Use only for workpieces that are softer than the hammer head, therefore, suitable for alignment of shafts and work pieces and for presetting of tools, etc.

**Note:** Prices do not include valid non-ferrous metal surcharge.

| Order No. | Weight g | 6805 | Length mm |
|---|---|---|---|
| 0251 | 250 | 10.60 | 280 |
| 0501 | 500 | 17.95 | 310 |
| 0751 | 750 | 25.90 | 320 |
| 1001 | 1000 | 33.10 (W561) | 320 |

| Order No. | Weight g | 6805 | Length mm |
|---|---|---|---|
| 1501 | 1500 | 49.00 | 350 |
| 2001 | 2000 | 64.80 | 380 |
| 3001 | 3000 | 99.00 | 500 |
| 5001 | 5000 | 163.50 (W561) | 800 |

## Bumping mallet

**Design:** With permanent plastic filling material. For material-saving work without streaking. Installation tool for scratch-sensitive parts.

**Application:** For attaching trims, working on roof railing, for saddlery and upholstery work.

| Order No. | Size mm | 6803 HAZET |
|---|---|---|
| 0280 | 70 x 140 | 153.40 (W529) |

## Plastic hammer

**Design:** With interchangeable yellow inserts made from thermoplastic material, hammer housing made of galvanised cast iron. With lacquered **ash handle.**

**Application:** For gentle beating without damage to workpieces.

| Order No. | Head Ø mm | 6811 format |
|---|---|---|
| 0000 | 22 | 4.10 |
| 0005 | 27 | 4.96 |
| 0010 | 32 | 6.55 (W560) |

| Order No. | Head Ø mm | 6811 format |
|---|---|---|
| 0015 | 40 | 9.80 |
| 0020 | 50 | 14.70 (W560) |

## Replacement head for plastic hammer

**Design:** Made of cellulose-acetate, yellow.

| Order No. | Head Ø mm | 6811 |
|---|---|---|
| 1022 | 22 | 0.74 |
| 1027 | 27 | 1.08 |
| 1032 | 32 | 2.00 (W560) |

| Order No. | Head Ø mm | 6811 |
|---|---|---|
| 1040 | 40 | 2.42 |
| 1050 | 50 | 4.69 (W560) |

## Replacement handle for plastic hammer

**Design:** Made of lacquered ash wood.

| Order No. | For head-Ø mm | 6811 format |
|---|---|---|
| 0043 | 22 | 2.79 |
| 0046 | 27 | 2.94 |
| 0051 | 32 | 3.12 (W560) |

| Order No. | For head-Ø mm | 6811 format |
|---|---|---|
| 0056 | 40 | 3.54 |
| 0061 | 50 | 3.96 (W560) |

## Soft-faced mallet CA

**Design:** Base body made of zinc die-casting with handle guard. Both the impact heads as well as the handle are interchangeable. With ash handle.

**Application:** Universally applicable, for normal use.

**6824** Impact heads made of cellulose acetate, **hard, grease and oil resistant.**

**6826** Impact heads made of nylon, hard, grease and oil resistant, hard wearing, no splintering.

| Order No. | Head Ø mm | 6824 format | 6826 format | Head length mm | Total length mm |
|---|---|---|---|---|---|
| 0025 | 25 | 7.75 | 9.65 | 86 | 270 |
| 0030 | 30 | 11.20 | 13.15 | 95 | 280 |
| 0040 | 40 | 16.50 | 18.45 | 103 | 330 |
| 0050 | 50 | 22.80 (W560) | 29.00 (W560) | 117 | 340 |

6824

6826

## Replacement impact head for soft-faced mallet

**6824** **Hard,** made of red cellulose acetate, **grease and oil resistant.**

**6826** **Hard,** made of white nylon, **grease and oil resistant,** hard wearing, no splintering.

| Order No. | Head Ø mm | 6824 format | 6826 format |
|---|---|---|---|
| 1025 | 25 | 1.69 | 2.70 |
| 1030 | 30 | 1.94 | 2.84 |
| 1040 | 40 | 3.62 | 4.61 |
| 1050 | 50 | 5.45 (W560) | 8.65 (W560) |

6824

6826

## Replacement handle for soft-faced mallet

**Design:** Made of lacquered ash wood.

| Order No. | For head-Ø mm | 6831 format |
|---|---|---|
| 2530 | 25/30 | 2.57 |
| 4050 | 40/50 | 3.35 (W560) |

## Soft-faced mallet SIMPLEX

**Design:** Two-part casing made of cast steel, with impact heads and wooden handle. All parts can be replaced. Attachment via a screw.

**6812** On both sides with black, medium hard impact heads made of rubber composition.

**6815** One side with black, medium-hard impact head made of rubber composition, the other side with red, hard impact head made of plastic.

**6814** Both sides with white, hard impact heads made of nylon.

**6816** One side with black, medium-hard impact head made of rubber composition, the other side with white, hard impact head made of nylon.

6812

6815

6814

6816

| Order No. | Head Ø mm | 6812 HALDER | 6815 HALDER | 6814 HALDER | 6816 HALDER | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 1030 | 30 | 13.10 | 13.35 | 16.00 | 14.55 | 90 | 300 |
| 1040 | 40 | 16.45 | 18.00 | 22.50 | 19.45 | 110 | 330 |
| 1050 | 50 | 22.20 | 25.20 | 35.00 | 28.60 | 135 | 350 |
| 1060 | 60 | 28.80 | 32.90 | 45.40 | 37.20 | 145 | 405 |
| 1080 | 80 | 51.20 (W561) | – (W561) | 76.20 (W561) | 63.80 (W561) | 175 | 490 |

## Soft-faced Simplex sledgehammer SIMPLEX

HALDER

**Design:** Two-part casing made of cast steel, with white, medium-hard impact heads made of Superplastic and hickory handle. All parts can be replaced. Attachment via a screw.

**Note:** Spare impact heads see (Order no. 6823 1100 and 1125), spare parts see (Order no.: 6818 1100 and 1125).

| Order No. | Head Ø mm | 6816 HALDER | Head length mm | Total length mm |
|---|---|---|---|---|
| 1100 | 100 | 146.00 | 200 | 1000 |
| 1125 | 125 | 194.50 (W561) | 215 | 1040 |

## Replacement impact head for soft-faced mallet SIMPLEX

HALDER

**6819** **Medium hard** made of black **rubber composition,** damping and low in wear.
Ideal for paving, garden/landscape construction, pre-fabricated house construction, carpentry, fencing, dry construction and dent-repairs.

**6820** **Hard,** made of red **plastic, grease and oil resistant.** Ideal for automobile assembly and repair work, repair/ maintenance work, sheet metal working, dent removal, setting block stones and scaffolding.

**6821** **Hard,** made of white **nylon, grease and oil resistant, no splintering.** Ideal for scaffolding, tent/hall construction, mould construction, car repair, sheet metal, dent repair, casing assembly, assembly of sharp-edged work pieces, and joining of workpieces.

**6822** **Hard,** made of heat-sensitive, silver **light-weight metal** for high impact force.
Ideal for assembly/repair works in MV sector, straightening, chassis construction and in foundry.

**6823** **Medium hard,** made of white, wear-proof **super plastic, grease, oil and alkali resistant.** Unbreakable also at hits on edge.
Ideal for paving work, curb setting, scaffolding, tent/hall construction, gardening/landscaping, sheet metal working, dent removal, automobile assembly and repair work, car body, housing assembly, assembly of sharp-edged work pieces, fence construction and driving cleavage wedges.

| Order No. | Head Ø mm | 6819 HALDER | 6820 HALDER | 6821 HALDER | 6822 HALDER | 6823 HALDER |
|---|---|---|---|---|---|---|
| 1030 | 30 | 2.25 | 2.25 | 3.74 | 4.81 | 3.51 |
| 1040 | 40 | 2.97 | 4.34 | 5.90 | 6.95 | 5.60 |
| 1050 | 50 | 3.96 | 6.50 | 10.25 | 11.65 | 8.65 |
| 1060 | 60 | 5.75 | 9.25 | 13.95 | 15.50 | 12.00 |
| 1080 | 80 | 10.05 | – | 22.30 | 26.90 | 22.10 |
| 1100 | 100 | – | – | – | – | 33.30 |
| 1125 | 125 | – (W561) | – (W561) | – (W561) | – (W561) | 46.20 (W561) |

## Mallet housing and replacement wood handle SIMPLEX

HALDER

**6817** Separated steel cast hammer casing, noise and vibration damping´, with integrated handle protection.
Delivery includes screw, nut and spring washer.

**6818** Made of painted wood, double-painted handle.

| Order No. | For head-Ø mm | 6817 HALDER | 6818 HALDER |
|---|---|---|---|
| 1030 | 30 | 5.55 | 3.19 |
| 1040 | 40 | 7.35 | 3.37 |
| 1050 | 50 | 10.70 | 4.09 |
| 1060 | 60 | 13.45 | 4.41 |
| 1080 | 80 | 26.70 | 5.40 |
| 1100 | 100/125* | – (W561) | 22.50 (W561) |

*Not painted.

6817

6818 1030–1080

6818 1100

## Soft-faced mallet, kickback free

**Design:** Hammer body made of steel, no kick-back due to ball filling. Both the impact heads made of cadmium-free nylon as well as the handle are interchangeable. **With painted hickory handle.**

**Application:** For targeted, precisely dosed strikes in tooling, machine and gear industries.

**Note:** Spare impact heads see (Order no. 6830), spare parts see (Order no.: 6829).

| Order No. | Head Ø mm | 6825 format | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0025 | 25 | 16.80 | 105 | 305 | 300 |
| 0030 | 30 | 17.40 | 110 | 330 | 430 |
| 0035 | 35 | 18.90 (W560) | 110 | 335 | 550 |

| Order No. | Head Ø mm | 6825 format | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0040 | 40 | 22.30 | 115 | 360 | 750 |
| 0050 | 50 | 27.40 | 120 | 370 | 1000 |
| 0060 | 60 | 44.60 (W560) | 145 | 370 | 1700 |

## SUPERCRAFT soft-faced mallet, kickback free

**Design:** Hammer body made of steel, no kick-back due to ball filling. The cadmium-free nylon inserts are replaceable. **With steel tube handle** and ergonomic rubber grip.

**Application:** For targeted, precisely dosed strikes in tooling, machine and gear industries.

**Note:** Spare impact heads see (Order no. 6830).

| Order No. | Head Ø mm | 6827 HALDER | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0030 | 30 | 21.30 | 110 | 290 | 580 |
| 0035 | 35 | 22.30 | 110 | 295 | 700 |
| 0040 | 40 | 26.10 (W561) | 115 | 300 | 850 |

| Order No. | Head Ø mm | 6827 HALDER | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0050 | 50 | 32.60 | 120 | 310 | 1200 |
| 0060 | 60 | 51.90 (W561) | 145 | 325 | 1780 |

## SUPERCRAFT soft-faced mallet with 3 component handle, kickback free

**Design:** Hammer body made of steel, no kick-back due to ball filling. The cadmium-free nylon inserts are replaceable. Optimal hitting characteristics. With ergonomically designed, low-vibration and anti-slip 3-component handle (fibreglass core).

**Application:** For targeted, precisely dosed strikes in tooling, machine and gear industries.

**Note:** Spare impact heads see (Order no. 6830).

| Order No. | Head Ø mm | 6828 HALDER | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0040 | 40 | 32.00 | 116 | 370 | 780 |
| 0050 | 50 | 39.50 (W561) | 120 | 380 | 1090 |

| Order No. | Head Ø mm | 6828 HALDER | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0060 | 60 | 64.10 (W561) | 145 | 390 | 1660 |

## Soft-faced and locksmith hammer FERROPLEX

**Design:** Hammer body made of high quality tempered steel, blank carefully hardened and tempered. One side with cadmium-free nylon insert, removable, the other side made of hardened and tempered heat-treated steel. Tubular steel handle will not detach and rubber handle casing.

**Application:** For general assembly work in industry, trade and the automotive sector, maintenance and repair work.

**Note:** Spare impact heads see (Order no. 6830).

| Order No. | Head Ø mm | 6833 HALDER | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0030 | 30 | 24.80 (W561) | 104 | 290 | 600 |

| Order No. | Head Ø mm | 6833 HALDER | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0035 | 35 | 25.20 (W561) | 104 | 295 | 800 |

## Replacement impact head for soft-faced mallet

**Design:** Made of cadmium-free white nylon, hard wearing, no splintering.

**Note:** For soft-faced mallet (Order no. 6825, 6827, 6828 and 6833).

| Order No. | For head-Ø mm | 6830 format |
|---|---|---|
| 0025 | 25 | 1.94 |
| 0030 | 30 | 2.18 |
| 0035 | 35 | 2.47 |
| | | (W560) |

| Order No. | For head-Ø mm | 6830 format |
|---|---|---|
| 0040 | 40 | 3.08 |
| 0050 | 50 | 3.83 |
| 0060 | 60 | 6.45 |
| | | (W560) |

## Replacement wood handle for mallet

**Design:** Made of painted hickory wood.

**Note:** For soft-faced mallet (Order No. 6825).

| Order No. | For head-Ø mm | 6829 format |
|---|---|---|
| 0025 | 25 | 2.95 |
| 0031 | 30/35 | 3.40 |
| | | (W560) |

| Order No. | For head-Ø mm | 6829 format |
|---|---|---|
| 0041 | 40/50 | 4.10 |
| 0060 | 60 | 5.15 |
| | | (W560) |

## Secural soft-faced mallet, kickback free SECURAL

**Design:** Hammer head made of sturdy steel sheet, the exchangeable, **medium-hard impact heads** are made of cadmium-free, yellow polyurethane. Kickback free through ball filling. Handle coated with ergonomic rubber sleeve.

**Application:** Especially suitable for working in corners and sheet metal processing, in the automobile body shop, furniture, window and door industry as well as laying parquet and laminate.

| Order No. | Head size mm | 6832 HALDER | Head length mm | Total length mm | Weight g |
|---|---|---|---|---|---|
| 0006 | 30 x 40 | 27.40 (W561) | 117 | 300 | 680 |

6832 0006

## Replacement impact head for soft-faced mallet SECURAL

**Design:** Medium hard, made of cadmium-free, yellow polyurethane, rectangular.

| Order No. | For head size mm | 6832 HALDER |
|---|---|---|
| 0011 | 30 x 40 | 2.82 (W561) |

6832 0011

## Soft-faced sledgehammer, kickback free SUPERCRAFT

**Design:** Hammer head made of steel sheet, the exchangeable, **hard impact heads** are made of cadmium-free, white nylon Kickback free through ball filling. With painted hickory handle.

**Application:** For the insertion of wedges, repair, maintenance and straightening work as well as fencing, rail, tool and machine construction.

6834

| Order No. | Head Ø mm | 6834 HALDER | Head length mm | Total length mm | Weight kg |
|---|---|---|---|---|---|
| 0080 | 80 | 128.00 | 200 | 880 | 4.4 |
| 0100 | 100 | 197.00 | 210 | 1000 | 7.0 |
| 0110 | 100 | 218.50 (W561) | 300 | 1000 | 10.0 |

## Replacement impact head for SUPERCRAFT soft-faced sledgehammer

**Design:** Hard, cadmium-free white nylon.

| Order No. | For head-Ø mm | 6836 HALDER |
|---|---|---|
| 0080 | 80 | 13.40 |
| 0100 | 100 | 22.00 (W561) |

6836

## Replacement wood handle for soft-faced sledgehammer SUPERCRAFT

**Design:** Made of painted hickory wood.

| Order No. | For head-Ø mm | 6838 HALDER |
|---|---|---|
| 0080 | 80 | 12.75 |
| 0100 | 100 | 16.20 (W561) |

6838

## Crowbar

**Design:** Made of tempered steel C 45, painted black, with a round body.

**9703** **With straight blade and tip.**

**9704** **With curved blade and tip.**

**9705** **With nail claw and tip.**

9703 9704 9705

| Order No. | Length mm | 9703 format | 9704 format | 9705 format | ∅ mm | Weight g |
|---|---|---|---|---|---|---|
| 1500 | 1500 | 23.90 | 23.90 | 25.10 | 30 | 8250 |
| 2000 | 2000 | – (W987) | 51.00 (W987) | – (W987) | 30 | 11000 |

## Nail puller

**Design:** Made of quality steel, forged, with hexagonal shaft, powder coated. One side curved with wide blade, the other straight, clean nail extraction.

| Order No. | Length mm | 9708 format | ∅ mm |
|---|---|---|---|
| 0500 | 500 | 8.15 | 18 |
| 0600 | 600 | 8.45 | 18 |
| 0800 | 800 | 10.05 (W552) | 18 |

## Nail extractor Gorilla Bar

**Design:** Extremely robust nail puller with unbendable, oval shaft. One side with broad blade, the other side with curved claw. With polished working ends.

| Order No. | Length mm | 9706 mob | ∅ mm |
|---|---|---|---|
| 0350 | 350 | 11.50 | 32 |
| 0600 | 600 | 16.10 | 44 |
| 0900 | 900 | 21.00 | 44 |
| 1200 | 1200 | 26.20 (W518) | 44 |

## Nail extractor set gorilla bar

| Order No. | Design | 9706 mob | Set contents mm | Supplied in |
|---|---|---|---|---|
| 2000 | 2-part | 26.80 NEW | 350; 550 | Self-assembly |
| 3000 | 3-part | 48.60 (W518) | 350; 600; 900 | Sales box |

9706 3000

## Nail extractor beaver bar

**Design:** Extremely flat, robust nail extractor. Hardened, very tidy workmanship.

| Order No. | Length mm | 9707 mob |
|---|---|---|
| 0380 | 380 | 10.00 (W518) |

## Crow bar NEW

**Design:** From tool steel, forged, hardened (HRC 42) and ground. With beech wood handle, lacquered and with impact and handle ring.

**Application:** Suitable as impact and demolition tool and the gentle disassembly of components and to extract nails.

| Order No. | Width mm | 7280 | Thickness mm | Length mm |
|---|---|---|---|---|
| 0100 | 40 | 33.50 (W569) | 10 | 350 |

## Angle mandrel

**Design:** Made of special tool steel, round shaft, 90° bend, conically ends annealed.

**Application:** Ideally suited for the guidance with steel girders and the aligning of drill holes.

| Order No. | Length mm | 6839 RENNSTEIG | Shaft Ø mm |
|---|---|---|---|
| 0300 | 300 x 100 | 13.20 | 10 |
| 0350 | 350 x 110 | 13.40 | 12 |
| 0400 | 400 x 120 | 14.20 | 14 |
| | | (W553) | |

| Order No. | Length mm | 6839 RENNSTEIG | Shaft Ø mm |
|---|---|---|---|
| 0450 | 450 x 130 | 17.40 | 16 |
| 0500 | 500 x 150 | 21.30 | 20 |
| 0550 | 550 x 170 | 31.00 | 26 |
| | | (W553) | |

## Chisel

**Design:** Made of chrome-vanadium air hardened steel. With tempered striking head, therefore bulge formation, beading and chipping are almost excluded. Blade and shaft hardened, tempered and lacquered.

**Note:** Re-sharpening without post-curing the cutter is possible repeatedly with simple wet sanding.

## Flat chisel for metal working

DIN 6453, Shaft flat oval.

| Order No. | Length mm | 6840 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0100 | 100 | 2.85 | 15 | 14 x 9 |
| 0125 | 125 | 2.94 | 18 | 17 x 11 |
| 0150 | 150 | 3.02 | 18 | 17 x 11 |
| 0175 | 175 | 3.69 | 21 | 20 x 12 |
| | | (W552) | | |

| Order No. | Length mm | 6840 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0200 | 200 | 4.22 | 24 | 23 x 13 |
| 0250 | 250 | 4.92 | 25 | 23 x 13 |
| 0300 | 300 | 5.60 | 26 | 23 x 13 |
| | | (W552) | | |

## Cross chisel for metal working

DIN 6451, Shaft flat oval

| Order No. | Length mm | 6842 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0125 | 125 | 3.04 | 5 | 17 x 11 |
| 0150 | 150 | 3.50 | 6 | 17 x 11 |
| 0175 | 175 | 3.80 | 7 | 17 x 11 |
| | | (W552) | | |

| Order No. | Length mm | 6842 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0200 | 200 | 4.46 | 8 | 20 x 12 |
| 0250 | 250 | 5.60 | 9 | 23 x 13 |
| 0300 | 300 | 7.10 | 9 | 23 x 13 |
| | | (W552) | | |

## Flat chisel for stone working

DIN 7254 B, Shaft octagonal.

| Order No. | Length mm | 6844 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0250 | 250 | 4.79 | 23 | 16 |
| 0300 | 300 | 5.35 | 26 | 16 |
| 0400 | 400 | 6.55 | 28 | 20 |
| | | (W552) | | |

| Order No. | Length mm | 6844 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0500 | 500 | 9.05 | 30 | 20 |
| 0600 | 600 | 11.60 | 30 | 20 |
| | | (W552) | | |

## Flat chisel for stone working

DIN 7254 A, shaft flat oval.

| Order No. | Length mm | 6848 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0250 | 250 | 4.86 | 26 | 20 x 12 |
| 0300 | 300 | 5.40 | 29 | 23 x 13 |
| 0400 | 400 | 6.55 | 29 | 23 x 13 |
| | | (W552) | | |

| Order No. | Length mm | 6848 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0500 | 500 | 9.10 | 32 | 26 x 13 |
| 0600 | 600 | 14.45 | 32 | 26 x 13 |
| | | (W552) | | |

## Splitting chisel for stone working

DIN 7256, Shaft octagonal.

| Order No. | Length mm | 6846 format | Material thickness mm |
|---|---|---|---|
| 0250 | 250 | 4.43 | 16 |
| 0300 | 300 | 4.96 | 18 |
| 0400 | 400 | 6.40 | 20 |
| 0500 | 500 | 8.35 | 20 |
| | | (W552) | |

## Splitting chisel curved

Shaft flat oval, **with curved working end for ground-level work.**

| Order No. | Length mm | 6847 format | Material thickness mm |
|---|---|---|---|
| 0240 | 240 | 12.20 | 26 x 7 |
| | | (W552) | |

## Mortise and auto body chisel

Shaft flat oval.

**Application:** Due to the extremely slim-sized blade, ideal for use in automobile body construction as well as fine separating and caulking work with low breaking effect.

**Note: Not to be used as a lever, cleat or similar purpose.**

| Order No. | Design | 6850 format | Length mm | Blade width mm | Material thickness mm |
|---|---|---|---|---|---|
| 0005 | Without hand protection | 4.69 | 240 | 26 | 26 x 7 |
| 0010 | With hand protection | 6.90 | 240 | 26 | 26 x 7 |
| | | (W552) | | | |

6850 0005

6850 0010

## Joint chisel

DIN 7255, forged, hardened, shaft and working ends lacquered.

| Order No. | Blade width mm | 6852 format | Length mm | Material thickness mm |
|---|---|---|---|---|
| 1050 | 50 | 8.55 | 250 | 23 x 13 |
| 1060 | 60 | 9.05 | 250 | 26 x 13 |
| 1070 | 70 | 9.90 | 250 | 26 x 13 |
| | | (W552) | | |

## Electricians' chisel for stone working

Shaft octagonal.

| Order No. | Length mm | 6854 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0200 | 200 | 2.32 | 10 | 8 |
| 0250 | 250 | 2.66 | 10 | 8 |
| 0300 | 300 | 3.31 | 12 | 10 |
| | | (W552) | | |

## Tile chisel, flat

Shaft octagonal.

| Order No. | Length mm | 6858 format | Blade width mm | Material thickness mm |
|---|---|---|---|---|
| 0100 | 100 | 2.28 | 10 | 8 |
| | | (W552) | | |

## Grooving chisel

DIN 6455, for cleaning grooves, especially when there is severe pollution from fixed parts.

| Order No. | Blade width mm | 6855 format | Length mm | Material thickness mm |
|---|---|---|---|---|
| 0002 | 2 | 5.15 | 150 | 10 |
| 0003 | 3 | 5.15 | 150 | 10 |
| 0004 | 4 | 5.15 | 150 | 10 |
| 0005 | 5 | 5.15 | 150 | 10 |
| 0006 | 6 | 5.15 | 150 | 10 |
| | | (W552) | | |

## Parting chisel

For separating bars between holes.

| Order No. | Blade width mm | 6856 format | Length mm | Material thickness mm |
|---|---|---|---|---|
| 0002 | 2 | 6.95 | 125 | 10 |
| 0003 | 3 | 6.95 | 125 | 10 |
| | | (W552) | | |

## Universal hand protection for chiseling

**Design:** Made of special rubber, provides greater safety when working with oily hands.

**Application:** For flat-oval chisels material thickness 20 x 12 mm – 26 x 13 mm as well as octagonal chisel material thickness 16–18 mm.

| Order No. | Length mm | 6851 format |
|---|---|---|
| 0005 | 110 | 2.28 |
| | | (W552) |

## Drift punch

**Design:** DIN 6458 D, of octagonal chromium-molybdenum-vanadium air hardened steel, **conical spike shape.** With tempered striking head, therefore bulge formation, beading and chipping are almost excluded. Spike and shaft hardened, tempered and lacquered.

| Order No. | Ø mm | 6860 format | Length mm | Material thickness mm |
|---|---|---|---|---|
| 0002 | 2 | 1.27 | 120 | 12 |
| 0003 | 3 | 1.26 | 120 | 12 |
| 0004 | 4 | 1.26 | 120 | 12 |
| 0005 | 5 | 1.26 | 120 | 12 |
| 0006 | 6 | 1.26 | 120 | 12 |
| 0008 | 8 | 1.26 | 120 | 12 |
| 0010 | 10 | 1.43 | 150 | 12 |
| 0012 | 12* | 1.96 | 150 | 14 |
| | | (W552) | | * Non-standard size. |

6860

## Drift punch set

**6861 0005** Supplied in sheet steel case.

**6861 0010** Supplied in plastic container.

| Order No. | Design | 6861 format | Set contents |
|---|---|---|---|
| 0005 | 6-part | 14.95 | 5 Drift punches 2; 3; 4; 5; 6 x 120 mm (Order no. 6860)<br>1 Centre punch, 10 x 120 mm, (Order no. 6874) |
| 0010 | 6-part | 11.75 | 5 Drift punches 2; 3; 4; 5; 6 x 120 mm (Order no. 6860)<br>1 Centre punch, 10 x 120 mm, (Order no. 6874) |
| | | (W552) | |

6861 0010

6861 0005

## Pin punch

**Design:** DIN 6450 D, made of octagonal chromium-molybdenum-vanadium air hardened steel, **cylindrical spike shape.** With tempered striking head, therefore bulge formation, beading and chipping are almost excluded. Spike and shaft hardened, tempered and lacquered.

| Order No. | ∅ mm | 6863 format | Length mm | Material thickness mm |
|---|---|---|---|---|
| 0002 | 2 | 1.75 | 150 | 10 |
| 0003 | 3 | 1.66 | 150 | 10 |
| 0004 | 4 | 1.66 | 150 | 10 |
| 0005 | 5 | 1.66 | 150 | 10 |
| 0006 | 6 | 1.66 | 150 | 10 |
| 0007 | 7 | 1.75 | 150 | 12 |
| 0008 | 8 | 1.75 | 150 | 12 |
| 0009 | 9 | 1.75 | 150 | 12 |
| 0010 | 10 | 1.75 | 150 | 12 |
| 0012 | 12 | 2.00 | 150 | 14 |
| | | (W552) | | |

format professional quality

6863

## Pin punch set

**6864 0005** Supplied in sheet steel case.

**6864 0010** Supplied in plastic container.

| Order No. | Design | 6864 format | Set contents mm |
|---|---|---|---|
| 0005 | 6-part | 16.40 | 2; 3; 4; 5; 6; 8 |
| 0010 | 6-part | 13.45 | 2; 3; 4; 5; 6; 8 |
| | | (W552) | |

6864 0010

6864 0005

## Pin punch, extra hard

**Design:** Similar to DIN 6450, made of octagonal, fully tempered, high alloy tool steel (59 HRC). **Approx. 9 % harder than normal pin punches.** Chrome-plated and coloured powder-coated for easy recognition of diameter, with security impact head.

| Order No. | ∅ mm | 6862 RENNSTEIG WERKZEUGE | | Length mm | Material thickness mm |
|---|---|---|---|---|---|
| 0003 | 3 | 4.50 | | 150 | 10 |
| 0004 | 4 | 4.50 | | 150 | 10 |
| 0005 | 5 | 4.50 | | 150 | 10 |
| 0006 | 6 | 4.50 | | 150 | 10 |
| 0008 | 8 | 4.70 | | 150 | 12 |
| 0010 | 10 | 4.70 | | 150 | 12 |
| | | (W553) | | | |

RENNSTEIG WERKZEUGE

## Pin punch set, extra hard

**Design:** Supplied in sheet steel case.

| Order No. | Design | 6862 RENNSTEIG WERKZEUGE | Set contents mm |
|---|---|---|---|
| 0500 | 6-part | 30.70 | 3; 4; 5; 6; 8; 10 |
| | | (W553) | |

## Pin punch XXL

**Design:** Made of octagonal special tool steel, hardened and tempered in oil. Ground, polished and painted surface. With hand protection.

| Order No. | ∅ mm | 6858 RENNSTEIG WERKZEUGE | Length mm | Material thickness mm |
|---|---|---|---|---|
| 0008 | 8 | 10.50 | 225 | 14 |
| 0010 | 10 | 13.40 | 240 | 14 |
| 0012 | 12 | 15.45 | 260 | 14 |
| 0014 | 14 | 18.10 | 275 | 18 |
| 0016 | 16 | 20.20 | 290 | 18 |
| | | (W553) | | |

RENNSTEIG WERKZEUGE

## Pin punch set Air Grip

**Design:** Made of chrome-vanadium air hardened steel, with tempered impact head for safe working. With newly design handle for safety and comfort.

| Order No. | Ø mm | 6865 mob | Length mm | Material thickness mm |
|---|---|---|---|---|
| 0002 | 2 | 4.10 | 150 | 10 |
| 0003 | 3 | 4.10 | 150 | 10 |
| 0004 | 4 | 4.10 | 150 | 10 |
| 0005 | 5 | 4.10 | 150 | 10 |
| 0006 | 6 | 4.22 | 150 | 10 |
| 0008 | 8 | 4.22 (W518) | 150 | 12 |

## Air Grip pin punch set

**Design:** Supplied in plastic case.

| Order No. | Design | 6865 mob | Set contents mm |
|---|---|---|---|
| 0500 | 6-part | 32.90 (W518) | 2; 3; 4; 5; 6; 8 |

## Pin punch with guide sleeve

**Design:** Made of chrome-vanadium steel, zinc chromed. Knurled, slim shaft with toughened drift pin, hardened and coded, lose guide sleeve (at Ø 5.9 mm with solid guide sleeve).

**Application:** The drift tip is inserted by pushing guide sleeve forward. During work, the drift pin is supported by the movable sleeve; this extensively prevents the drift pin from breaking.

6867

| Order No. | Ø mm | 6867 format | Length mm | Material thickness mm |
|---|---|---|---|---|
| 0009 | 0.9 | 2.47 | 80 | 6 |
| 0014 | 1.4 | 2.47 | 84 | 6 |
| 0018 | 1.8 | 2.47 | 88 | 6 |
| 0024 | 2.4 | 2.47 | 92 | 8 |
| 0028 | 2.8 | 2.47 | 96 | 8 |
| 0034 | 3.4 | 2.47 | 98 | 8 |
| 0039 | 3.9 | 2.47 | 100 | 8 |
| 0059 | 5.9 | 2.47 (W552) | 102 | 8 |

6869 0005

## Pin punch set with guide sleeve

**6869 0005** Supplied in plastic stands.

**6869 0010** Supplied in plastic bag.

| Order No. | Design | 6869 format | Set contents mm |
|---|---|---|---|
| 0005 | 8-part | 26.00 | 0.9; 1.4; 1.8; 2.4; 2.8; 3.4; 3.9; 5.9 |
| 0010 | 8-part | 24.10 (W552) | 0.9; 1.4; 1.8; 2.4; 2.8; 3.4; 3.9; 5.9 |

6869 0010

## Centre punch

**Design:** Made of octagonal chromium-molybdenum-vanadium air-hardened steel. With tempered striking head, therefore bulge formations, beading and chipping are almost excluded.

**6874** DIN 7250, extra slim, conical spike shape Surface enamelled.

**6876** With soldered carbide tip, chromed surface.

| Order No. | Length mm | 6874 format | 6876 format | Material thickness mm |
|---|---|---|---|---|
| 0100 | 100 | 1.18 | – | 8 |
| 0120 | 120 | 1.25 | 9.00 | 10 |
| 0121 | 120 | 1.44 | – | 12 |
| 0130 | 130 | – | 14.30 | 14 |
| 0150 | 150 | 1.54 (W552) | – (W552) | 12 |

6874

6876

## Automatic punch

**Design:** Even-striking precision design of nickel-plated steel machines, with 2-component hand protection. Slim shaft with replaceable, hardened tips. The impact force is adjustable by turning the knurled screw.

| Order No. | Length mm | 6878 format | Shaft Ø mm | Striking force N |
|---|---|---|---|---|
| 0095 | 95 | 18.85 | 11 | 20– 50 |
| 0125 | 125 | 20.60 | 14 | 60–130 |
| 0130 | 130 | 22.80 (W552) | 17 | 180–250 |

6878 0095–0130

## Replacement point for automatic punch

| Order No. | Replacement tips-Ø mm | 6878 format | For shaft Ø mm |
|---|---|---|---|
| 0200 | 3.5 | 3.10 | 11 |
| 0205 | 4.0 | 4.29 | 14 |
| 0210 | 6.0 | 5.15 (W552) | 17 |



6878 0200–0210

## Tool set

**Design:** Made of octagonal chromium-molybdenum-vanadium steel. With tempered striking head, therefore bulge formations, beading and chipping are almost excluded. Blade and shaft hardened, tempered and lacquered. Supplied in sheet steel case.

| Order No. | Design | 6880 format | Set contents |
|---|---|---|---|
| 0005 | 6-part | 17.95 (W552) | 1 Punch 120 x 10 mm (Order no. 6874)<br>2 Pin punches 4 and 6 x 150 mm (Order no. 6863)<br>2 Drift punches 2 and 3 x 120 mm (Order no. 6860)<br>1 Flat chisel 150 mm |

## Punch/beater

**Design:** Inserts of hard, white nylon mounted on both sides.
**From head Ø 20 mm non-recoiling.**

HALDER

| Order No. | Head Ø mm | 6884 HALDER NORM+TECHNIK | Length mm |
|---|---|---|---|
| 0010 | 10 | 7.75 | 168 |
| 0012 | 12 | 9.45 | 170 |
| 0015 | 15 | 12.10 | 175 |
| 0020 | 20 | 12.80 | 150 |
| 0030 | 30 | 14.30 | 155 |
| | | (W561) | |

6884 0010–0015

6884 0020–0030

## Centre punch, adjustable

**Design:** Made of special tool steel, punch is fully special-hardened, can be re-sharpened, slotted centre sleeve and knurled screw.

**Application:** The precise and offset-free punching on workpieces is guaranteed with the even widening of the slotted centre sleeve, e.g. in the drill hole to be transferred) by way of knurled screw.

RENNSTEIG WERKZEUGE

| Order No. | Ø mm | 6879 RENNSTEIG WERKZEUGE | Length mm |
|---|---|---|---|
| 0005 | 6– 8 | 38.20 | 95 |
| 0010 | 8–11 | 39.60 | 105 |
| 0015 | 11–16 | 42.40 | 115 |
| | | (W553) | |

## Centre punch set, adjustable

**Design:** Supplied in plastic packaging.

| Order No. | Design | 6879 RENNSTEIG WERKZEUGE | Set contents mm |
|---|---|---|---|
| 0500 | 3-part | 124.00 | 6–8; 8–11; 11–16 |
| | | (W553) | |

## Rivet extractor

**Design: DIN 6434,** made of chrome-vanadium air hardened steel, octagonal. With tempered striking head, therefore bulge formations, beading and chipping are almost excluded. Surface enamelled.

RENNSTEIG WERKZEUGE

| Order No. | For rivet-Ø mm | 6889 RENNSTEIG WERKZEUGE | Hole Ø mm | Shaft Ø mm | Length mm |
|---|---|---|---|---|---|
| 0020 | 2 | 2.69 | 2.5 | 10 | 100 |
| 0030 | 3 | 2.69 | 3.5 | 10 | 100 |
| 0040 | 4 | 2.85 | 4.5 | 12 | 100 |
| 0050 | 5 | 3.98 | 6.0 | 12 | 110 |
| 0060 | 6 | 4.29 | 7.0 | 14 | 110 |
| | | (W553) | | | |

## Rivet extractor set

**Design:** Supplied in plastic container.

| Order No. | Design | 6889 RENNSTEIG WERKZEUGE | Set contents mm |
|---|---|---|---|
| 5000 | 5-part | 17.80 | 2; 3; 4; 5; 6 |
| | | (W553) | |

## Rivet setter

**Design: DIN 6435,** made of chrome-vanadium air hardened steel, octagonal. With tempered striking head, therefore bulge formations, beading and chipping are almost excluded. Surface enamelled.

RENNSTEIG WERKZEUGE

| Order No. | For rivet-Ø mm | 6890 RENNSTEIG WERKZEUGE | Hole Ø mm | Shaft Ø mm | Length mm |
|---|---|---|---|---|---|
| 0020 | 2 | 2.87 | 3.5 | 10 | 100 |
| 0030 | 3 | 2.87 | 5.2 | 10 | 100 |
| 0040 | 4 | 3.28 | 7.0 | 12 | 100 |
| 0050 | 5 | 4.47 | 8.8 | 14 | 110 |
| 0060 | 6 | 4.95 (W553) | 10.5 | 16 | 110 |

## Rivet setter set

**Design:** Supplied in plastic container.

| Order No. | Design | 6890 RENNSTEIG WERKZEUGE | Set contents mm |
|---|---|---|---|
| 5000 | 5-part | 19.55 (W553) | 2; 3; 4; 5; 6 |

## Fitter's hammers

With classic hickory handle or unbreakable 3-component handle. Our complete range of mechanic's hammers are found from 📖 6/195.

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## Special characteristics of KUKKO tools

AUTOGRIP TECHNOLOGY — Automatic self-tensioning and self-centring of the extractor hooks.

Glide&FIX TECHNOLOGY — Optimised geometry of traverse and sliders for particularly easy movement of the puller legs. At the same time, ensures a firm grip when tightening the screws.

ARMLOCK TECHNOLOGY — Novel cross hook ensures maximum stability of the suspension in slider and hooks. Changes are easy, because only one screw is necessary.

Quick adjust® TECHNOLOGY — Quick loosening and displacing the puller legs by means of hand adjusting knurl.

hydraulic TECHNOLOGY — Tools with hydraulic function.

Pullback® TECHNOLOGY — Its easy to turn back the nut splitter chisel from deformed or demolished nuts. The chisel does not get caught in the nut.

## Small part puller, two-armed

**Design: Two-armed, with T-handle. With heavy-duty, power-transmission, self-centring, slim puller legs** made of chrome alloy tool steel. **With automatic adjustment handle,** freely rotating centring tip and tempered, specially coated pressure spindle with particularly good sliding properties. Handy, space-saving model.

**Application:** Particularly suitable for small electro motors, battery clamps, small ball bearings etc. for MV electric, electrical workshops, compressed air maintenance and similar applications.

AUTOGRIP TECHNOLOGY

| Order No. | Model | 6901 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0060 | 43-1 | 28.00 | 60 | 50 |
| 0070 | 43-2 | 28.80 | 70 | 70 |
| 0080 | 43-3 | 29.50 (W562) | 80 | 80 |

## Puller, two-armed

**Design: Two-armed. With heavy-duty, power-transmission, self-centring puller legs** made of chrome alloy tool steel. **With automatic adjustment handle,** freely rotating centring tip and tempered, specially coated pressure spindle with particularly good sliding properties. Powerful model.

**Application:** Especially for pulling very tight-sitting gears, sprockets, ball bearings, belt machines etc.

AUTOGRIP TECHNOLOGY

| Order No. | Model | 6902 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0100 | 44-1 | 33.20 | 100 | 100 |
| 0120 | 44-2 | 52.40 | 120 | 120 |
| 0160 | 44-3 | 80.90 | 160 | 160 |
| 0250 | 44-4 | 112.00 | 250 | 200 |
| 0300 | 44-5 | 147.50 (W562) | 300 | 250 |

## Puller, two-armed

**Design: Two-armed. With heavy-duty, self-centring, swivelling puller legs** made of chrome alloy tool steel. **Has automatic adjustment handle** and tempered, specially coated pressure spindle with particularly good sliding properties. Robust universal model

**41-0** Particularly sturdy model with hexagon spindle
**41-1** Small, handy model with T-handle
**41-2** Small, handy model with T-handle
**41-3** Strong model, spindle with hexagon intake
**41-4** Strong model, spindle with hexagon intake
**41-5** Strong model, spindle with hexagon intake

**Application:** Particularly for the stripping of pulleys, gear wheels, ball bearings etc. for stripping in difficult to access locations. Can also be used in conjunction with separating devices.

6903 0060

6903 0080

| Order No. | Model | 6903 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0060 | 41-0 | 20.40 | 60 | 40 |
| 0065 | 41-1 | 20.40 | 65 | 65 |
| 0080 | 41-2 | 23.60 | 80 | 80 |
| 0090 | 41-3 | 45.80 | 90 | 120 |
| 0130 | 41-4 | 47.20 | 130 | 160 |
| 0180 | 41-5 | 87.80 (W562) | 180 | 200 |

## Universal puller, two-armed

**Design: Two-armed.** With one-piece self-centring, sliding, always parallel and switchable puller legs made of chrome alloy tool steel. **Traverse with holding spring against accidental slipping of hooks.** Spindle head with collar prevents slipping with the screwdriver. **Freely rotating centring tip, can be exchanged and unplugged (ball/tip).**

**Application:** Suitable as external and recessed reamer by switching arms.

| Order No. | Jaw span mm | 6904 format | Clamping depth mm |
|---|---|---|---|
| 0090 | 100 | 38.90 | 100 |
| 0120 | 150 | 43.60 | 100 |
| 0160 | 150 | 68.40 | 150 |
| 0201 | 250 | 75.90 | 150 |
| 0250 | 250 | 101.50 | 200 |
| 0350 | 350 | 129.00 | 200 |
| | | (W563) | |

## Universal puller, two-armed

**Design: Two-armed. With sliding, always parallel and switchable puller legs** made of chrome alloy tool steel and tempered, specially coated pressure spindle with especially good sliding characteristics. **Model 20-5 with adjustable clamping depths.** Powerful model.

**Application:** With switchable puller legs, also suitable as external and recessed extractor.

| Order No. | Model | 6905 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0090 | 20-1 | 54.60 | 90 | 100 |
| 0120 | 20-10 | 59.00 | 120 | 100 |
| 0160 | 20-2 | 102.50 | 160 | 150 |
| 0200 | 20-20 | 112.00 | 200 | 150 |
| 0250 | 20-3 | 187.00 | 250 | 200 |
| 0350 | 20-30 | 203.00 | 350 | 200 |
| 0520 | 20-4 | 410.00 | 520 | 200 |
| 0650 | 20-40 | 697.50 | 650 | 300 |
| 0750 | 20-5 | 1577.00 | 750 | 400–700 |
| | | (W562) | | |

## Universal puller, two-armed, with narrow puller legs

**Design: Two-armed, made of special steel. With sliding, always parallel as well as slim switchable puller legs** made of chrome alloy tool steel and tempered, specially coated pressure spindle with especially good sliding characteristics. Powerful model.

**Application:** For narrow gaps.

| Order No. | Model | 6891 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0090 | 20-1-S | 72.80 | 90 | 100 |
| 0120 | 20-10-S | 78.20 | 120 | 100 |
| 0160 | 20-2-S | 133.00 | 160 | 150 |
| 0200 | 20-20-S | 143.50 | 200 | 150 |
| 0250 | 20-3-S | 237.50 | 250 | 200 |
| | | (W562) | | |

## Universal puller, two-armed, with quick adjustment

**Design: Two-armed, with quick adjustment. With sliding, always parallel, self-centring and switchable puller legs** made of chrome alloy tool steel. **Has automatic adjustment handle,** freely rotating centring tip and tempered, specially coated pressure spindle with particularly good sliding properties. Powerful model.

**Application:** With switchable puller legs, also suitable as external and recessed extractor. For quickly loosening and displacing the puller legs without wrench.

| Order No. | Model | 6906 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0090 | 20-1+ | 64.00 | 90 | 100 |
| 0120 | 20-10+ | 68.90 | 120 | 100 |
| 0160 | 20-2+ | 116.50 | 160 | 150 |
| 0200 | 20-20+ | 131.50 | 200 | 150 |
| 0250 | 20-3+ | 212.00 | 250 | 200 |
| 0350 | 20-30+ | 227.00 | 350 | 200 |
| | | (W562) | | |

## Puller legs pair

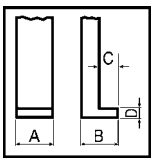
**Design:** Self-centring, switchable puller legs made of chrome alloy tool steel.

**Application:** For attaching on puller, with switchable puller legs.

**6936** Standard.

**6937** Long design.

| Order No. | Model | 6936 | 6937 | For puller model | Dimension A mm | Dimension B mm | Dimension C mm | Dimension D mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|
| 0090 | 1-90-P | 31.00 | – | 20-1; 20-10 | 20 | 31 | 15 | 3 | 100 |
| 0150 | 2-150-P | 58.10 | – | 20-2; 20-20 | 24 | 40 | 18 | 4 | 150 |
| 0200 | 3-200-P | 123.00 | – | 20-3; 20-30; 20-4; 20-40 | 35 | 67 | 37 | 4 | 200 |
| 0190 | 1-190-P | – | 57.30 | 20-1; 20-10 | 20 | 31 | 15 | 3 | 200 |
| 0250 | 1-250-P | – | 65.90 | 20-1; 20-10 | 20 | 31 | 15 | 3 | 250 |
| 0300 | 2-300-P | – | 105.00 | 20-2; 20-20 | 24 | 40 | 18 | 4 | 300 |
| 0301 | 3-300-P | – | 150.00 | 20-3; 20-30; 20-4; 20-40 | 35 | 67 | 37 | 4 | 300 |
| 0400 | 3-400-P | – | 163.50 | 20-3; 20-30; 20-4; 20-40 | 35 | 67 | 37 | 4 | 400 |
| 0500 | 3-500-P | – | 180.50 | 20-3; 20-30; 20-4; 20-40 | 35 | 67 | 37 | 4 | 500 |
| | | (W562) | (W562) | | | | | | |



6936

6937

## Pressure spindle

**Design:** Tempered and specially coated pressure spindle with particularly good sliding properties.

**Application:** For fine, quick and centric clamping of separating jaws.

| Order No. | Model | 6938 | For puller model | Thread |
|---|---|---|---|---|
| 0001 | 612130 | 20.50 | 18-0; 44-1; 45-1 | M12 x 1.5 |
| 0012 | 614160 | 26.20 | 20-1; 20-10; 44-2; 45-2; 112-20; 113-20; 205-01; 206-01; 207-01; 208-01; 209-01 | M14 x 1.5 |
| 0003 | 621210 | 45.10 | 18-2 | G 1/2" |
| 0014 | 621220 | 45.10 | 20-2; 20-20; 20-2+; 20-20+; 20-2-S; 20-20-S | G 1/2" |
| 0005 | 626300 | 61.50 | 18-3; 20-3; 20-3+; 20-3-3; 20-3-4; 20-3-5; 20-30; 20-30+; 20-30-3; 20-30-4; 20-30-5; 30-3; 30-3+; 30-3-3; 30-3-4; 30-3-5; 201-3; 201-4; 202-3; 202-4; 203-3; 203-4; 205-1; 206-1; 207-1 | G 3/4" |
| | | (W562) | | |

## Autogrip puller, two armed

**Design: Two-armed,** drop-forged. **With automatic self-tensioning, self-locking, power-transmission and self-centring puller hooks** made of oil-hardened chrome-vanadium steel. **Has automatic adjustment handle** and tempered, specially coated pressure spindle with particularly good sliding properties. Comfortable model.

**Application:** Suitable for pulling in hard to reach places due to the elastic effect and the slim design.

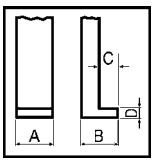
| Order No. | Model | 6907 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0150 | 482-3 | 78.70 (W562) | 150 | 150 |

## Puller with claw feet

**Design: Two-armed. With self-tensioning, pointed claw feet** made of chrome alloy tool steel, which by means of **scissor-like hook behaviour** press inextricably on the part to be removed. **With extremely wide span range** and the span depth, which can be individually selected due to the self-locking pins. Has freely rotating centring tip and tempered, specially coated pressure spindle with particularly good sliding properties.

**Application:** To strip cracks, bearings and similar part at difficult to reach locations.

| Order No. | Model | 6908 | Jaw span mm | Clamping depth mm | Dimension A mm | Dimension B mm | Dimension C mm | Dimension D mm |
|---|---|---|---|---|---|---|---|---|
| 0100 | 14-01 | 92.70 | 6–100 | 85 | 11 | 9.5 | 3.5 | 2.5 |
| 0140 | 14-03 | 138.50 | 15–140 | 160 | 12 | 11.0 | 3.5 | 3.9 |
| 1100 | 14-1 | 80.90 | 6–100 | 85 | 21 | 9.5 | 3.5 | 2.5 |
| 1140 | 14-2 | 102.00 | 10–140 | 125 | 29 | 11.0 | 3.5 | 3.9 |
| 1141 | 14-3 | 113.50 (W562) | 15–140 | 160 | 29 | 11.0 | 3.5 | 3.9 |

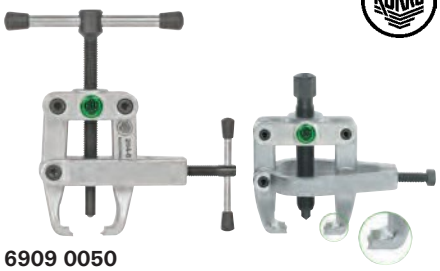


## Bearing puller

**Design: Bearing Puller with T-handle. With lateral clamp and puller legs** made of chrome alloy tool steel. Has freely rotating centring tip and tempered, specially coated pressure spindle with particularly good sliding properties.

**Application:** Suited to pull flash ball bearings, bearing rings and similar parts in fine mechanics, electrical workshops, compressed air maintenance etc.

| Order No. | Model | 6909 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0050 | 204-0 | 71.80 | 50 | 70 |
| 0090 | 204-02 | 111.00 (W562) | 90 | 100 |



6909 0050



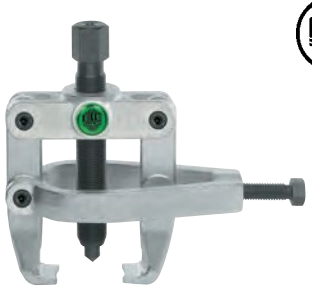
6909 0090

## Pitman arm puller

**Design: Pitman arm puller. With lateral clamp and puller legs** made of chrome alloy tool steel. Has freely rotating centring tip and tempered, specially coated pressure spindle with particularly good sliding properties.

**Application:** Suited to pull flash pitman arms, ball bearings, gear wheels, pinions and similar parts.

| Order No. | Model | 6910 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0080 | 204-1 | 80.90 | 80 | 90 |
| 0100 | 204-2 | 92.70 | 90 | 100 |
| 0150 | 204-3 | 150.50 (W562) | 150 | 140 |



## Flywheel puller

**Design: Flywheel puller** made of special steel. With swivelling hooks. The greater the necessary pulling force, the strong the grip of the pulling hocks on the part to be stripped. Particularly strong hooks, which **grip through the two or three gaps** and grab the belt of the ventilator.

**Application:** To pull off flywheels.

**6892** Two-armed.

**6893** Three-armed.

| Order No. | Model | 6892 | 6893 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|---|
| 0200 | 201-S | 65.70 | – | 200 | 200 |
| 0200 | 202-S | – (W562) | 87.80 (W562) | 200 | 200 |

6892



6893

## Hydraulic puller, three-armed

**Design: Hydraulic puller** made of special steel, robust design. With hydraulic spindle, thus suitable to release particularly stubborn parts. The greater the necessary pulling force, the strong the grip of the pulling hocks on the part to be stripped.

**Application:** Suitable for the stripping of pulleys, gear wheels, ball bearings etc.

| Order No. | Model | 6894 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0400 | 206-2-B | 397.00 (W562) | 400 | 400 |

## Separator puller

**Design: Separator puller. With lateral pressure piece and puller legs** made of chrome alloy tool steel **with conical cutting on one side and normal cutting on the other side.** Has freely rotating centring tip and specially coated pressure spindle with particularly good sliding properties.

**Application:** Suitable for use in hard to reach places due to the space-saving form. Due to conic blade, this puller is suited to pull flash axis bearings, ball bearing rings, pinions etc.

| Order No. | Model | 6911 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0090 | 210-1 | 136.00 | 95 | 170 |
| 0135 | 210-2 | 169.00 | 135 | 270 |
| 0150 | 210-3 | 194.00 | 150 | 325 |
| | | (W562) | | |

## Puller, three armed

AUTOGRIP TECHNOLOGY

**Design: Three-arm. With heavy-duty, power-transmission, self-centring puller legs** made of chrome alloy tool steel. **With automatic adjustment handle,** freely rotating centring tip and tempered, specially coated pressure spindle with particularly good sliding properties. Powerful model.

**Application:** Especially for pulling very tight-sitting gears, sprockets, ball bearings, belt machines etc.

| Order No. | Model | 6912 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0101 | 45-1 | 50.70 | 100 | 100 |
| 0120 | 45-2 | 75.80 | 120 | 120 |
| 0160 | 45-3 | 113.00 | 160 | 160 |
| 0250 | 45-4 | 160.00 | 250 | 200 |
| 0300 | 45-5 | 199.00 | 300 | 250 |
| 0375 | 45-6 | 346.00 | 375 | 275 |
| | | (W562) | | |

## Puller, three armed

**Design: Three-arm. Design: With heavy-duty, self-centring, swivelling puller legs** made of chrome alloy tool steel. **Has automatic adjustment handle** and tempered, specially coated pressure spindle with particularly good sliding properties. Robust, sturdy as well as universal model

**Application:** Particularly suitable for the stripping of pulleys, gear wheels, ball bearings etc.

| Order No. | Model | 6913 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0060 | 42-0 | 27.30 | 60 | 40 |
| 0065 | 42-1* | 27.30 | 65 | 65 |
| 0080 | 42-2* | 32.70 | 80 | 80 |
| 0090 | 42-3 | 62.70 | 90 | 120 |
| 0130 | 42-4 | 63.70 | 130 | 160 |
| 0180 | 42-5 | 113.50 | 180 | 200 |
| | | (W562) | | |

* With T-handle.

## Universal puller, three armed

Glide&FIX TECHNOLOGY

ARMLOCK TECHNOLOGY

**Design: Three-arm. With self-centring, sliding, always parallel and switchable puller legs** made of chrome alloy tool steel. **Has automatic adjustment handle** and tempered, specially coated pressure spindle with particularly good sliding properties. Robust, strong model.

**Application:** With switchable puller legs, also suitable as external and recessed extractor.

| Order No. | Model | 6915 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0090 | 30-1 | 78.50 | 90 | 100 |
| 0120 | 30-10 | 83.90 | 120 | 100 |
| 0160 | 30-2 | 146.00 | 160 | 150 |
| 0200 | 30-20 | 164.50 | 200 | 150 |
| | | (W562) | | |

## Universal puller, three armed

**Design: Three-armed, with strong traverse. Has self-centring, sliding, always parallel and switchable puller legs** made of chrome alloy tool steel. **Has automatic adjustment handle** and tempered as well as powerful, specially coated pressure spindle with particularly good sliding properties. Robust, extra strong model.

**Application:** With switchable puller legs, also suitable as external and recessed extractor.

| Order No. | Model | 6916 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0375 | 11-0-A | 573.50 | 375 | 200 |
| 0520 | 11-1-A | 750.50 | 520 | 200 |
| 0650 | 11-2-A | 829.00 (W562) | 650 | 200 |

## Three-armed puller with pre-adjustable span

**Design: Three-armed, with pre-adjustable span range With one-piece, switchable puller legs** made of chrome alloy tool steel. **With automatic adjustment handle** and tempered as well as powerful, specially coated pressure spindle with particularly good sliding properties. Powerful model.

**Application:** Suitable for the stripping of heavy ball bearings, pulleys, gear wheels, etc.

| Order No. | Model | 6917 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0100 | 12-1 | 86.30 | 100 | 100 |
| 0150 | 12-2 | 127.50 | 150 | 125 |
| 0200 | 12-3 | 185.00 | 200 | 165 |
| 0250 | 12-4 | 467.00 | 250 | 225 |
| 0350 | 12-5 | 1113.00 (W562) | 350 | 275 |

## Autogrip puller, three armed

**Design: Three-arm. With automatic self-tensioning, self-locking, power-transmission and self-centring puller hooks** made of-chrome alloy tool steel. **Has automatic adjustment handle** and tempered, specially coated pressure spindle with particularly good sliding properties. Comfortable model.

**Application:** Suitable for pulling in hard to reach places due to the elastic effect and the slim design.

| Order No. | Model | 6918 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0150 | 483-3 | 93.20 (W562) | 150 | 150 |

## Universal two- and three-armed puller set

**Design:** Made of special steel. Slim, S-hooks remain parallel also under full load, slides continuously on the cross beam. Traverse with six edge profile to counter with wrench. Spindle head with collar to prevent slipping of key.

**20-10-SP two-arms,** ideal to save space when working.
**30-10-SP three-arms,** even load distribution, thus particularly safe hold.

**Application:** By inverting the puller legs, also suitable as **external and recessed extractor.** Ideal to pull of gear wheels, bearings, pinions and synchronous bodies **at several clamping depths.** Also suitable for **pulling asymmetrical tools.**

Small puller legs

6895 0005

6895 0010

| Order No. | Model | 6895 | Jaw span mm | Clamping depth mm |
|---|---|---|---|---|
| 0005 | 20-10-SP | 213.50 | 120 | 100/200/250 |
| 0010 | 30-10-SP | 308.00 (W562) | 120 | 100/200/250 |

## Universal two-and three-arm puller set

**Design:** Basic equipment with two and three arm universal pullers and additional, long spindles. Supplied in L-Boxx, with operating instructions always visible on the lid.

| Order No. | Design | 6919 | Model | Set contents |
|---|---|---|---|---|
| 0011 | 13-part | 422.00 | K 2030-10-S | 1 crossbeam 2-armed, span 120 mm<br>1 crossbeam 3-armed, span 130 mm<br>1 spindle, length 160 mm, SW 13 mm<br>1 spindle, length 250 mm, SW 17 mm<br>3 extractor hooks, clamping depth 100 mm<br>3 extractor hooks, clamping depth 200 mm<br>3 extractor hooks, clamping depth 250 mm |

(W562)

## Recessed extractor

**Design:** With two-part clamping jaws and expanding pieces.

**Application:** For extracting ball bearings, bearing outer rings and bushings. Also bearing located very close to the rear wall are captured and quickly pulled out due to the excellent clamping effect. For use with counter support for recessed extractor (Order No. 6923).

| Order No. | Model | 6922 | For drilling mm | For counter support model No. | Length mm |
|---|---|---|---|---|---|
| 0012 | 21-01 | 39.90 | 8– 12 | 22-1 | 73 |
| 0014 | 21-02 | 39.90 | 10– 14 | 22-1 | 73 |
| 0016 | 21-1 | 39.90 | 12– 16 | 22-1 | 72 |
| 0019 | 21-2 | 39.90 | 14– 19 | 22-1 | 72 |
| 0023 | 21-3 | 39.90 | 18– 23 | 22-1; 22-2 | 89 |
| 0030 | 21-4 | 43.80 | 20– 30 | 22-1; 22-2 | 92 |
| 0040 | 21-5 | 49.20 | 28– 40 | 22-1; 22-2 | 101 |
| 0046 | 21-6 | 54.90 | 36– 46 | 22-2; 22-3 | 113 |
| 0058 | 21-7 | 73.80 | 45– 58 | 22-2; 22-3 | 135 |
| 0070 | 21-8 | 93.20 | 56– 70 | 22-2; 22-3 | 133 |
| 0100 | 21-9 | 148.00 | 70–100 | 22-2; 22-3 | 166 |

(W562)

6922



6924 0000

6924 0004

## Slide hammer device

**Design:** Space-saving, stable model, with ergonomic shaped handles.

**Application:** For use with an recessed extractor (Order No. 6922). For quick removal of ball bearings. After setting the recessed extractor slide hammer bar screw with a wedge spindle and slide hammer.

| Order No. | Model | 6924 | For recessed puller model | Weight kg | Length mm |
|---|---|---|---|---|---|
| 0000 | 22-0 | 42.10 | 21-0 to 21-2 | 0.5 | 150 |
| 0004 | 22-0-1 | 92.20 | 21-3 to 21-8 | 1.7 | 230 |

(W562)

6925 0000

## Slide hammer set

**Design:** Supplied in plastic case or in i-Boxx, with foam insert.

| Order No. | Design | 6925 | Model | Set contents | For recessed puller model |
|---|---|---|---|---|---|
| 0000 | 10-part in plastic case | 94.50 | KS-22-01 | 1 slide hammer<br>6 thread adapters M3; M4; M5; M6, M8 and M10<br>3 galvanised adapters M10; M12; 15-16G | 21-0 to 21-8 |
| 0005 | 18-part in i-Boxx | 283.00 | 28-A | 1 slide hammer<br>10 threaded adapters M3; M4; M5; M6; M8; M10; M12; M14; M16; M18<br>5 recessed extractor 21-00; 21-01 (Order No. 6922 0012); 21-02 (Order No. 6922 0014); 21-1 (Order No. 6922 0016); 21-2 (Order No. 6922 0019)<br>2 galvanised adapters M10; M12 | 21-00 to 21-2 |

(W562)

6925 0005

## Counter part for recessed extractor

**Design:** Sturdy counter support with T-handle and single extraction hook.
Delivery of 22-1 and 22-2 with screwed-in reducer and 22-3 with connection nut and screwed-in reducer.

**22-1** For recessed extractors 21-0 and 21-02, **with** reducer
For recessed extractors 21-1 and 21-5, **without** reducer.

**22-2** For recessed extractors 21-3 and 21-5, **with** reducer.
For recessed extractors 21-6 and 21-8, **without** reducer.

**22-3** For recessed extractor 21-6 and 21-8, **with** reducer via connecting nut.
For recessed extractor 21-9, **without** reducer via connecting nut.

**Application:** For use with an recessed extractor (Order No. 6922). For connecting to the recessed extractor, the spindle of the support brace is screwed into the clamping nut of the recessed extractor.

| Order No. | Model | 6923 | For recessed puller model |
|---|---|---|---|
| 0001 | 22-1 | 44.30 | 21-0 – 21-5 |
| 0002 | 22-2 | 61.50 | 21-3 – 21-8 |
| 0003 | 22-3 | 122.00 | 21-6 – 21-9 |
| | | (W562) | |

## Universal extractor set

**Design:** Supplied in L-Boxx, with constantly visible instructions on the lid.

**Application:** For recessed, external and bearing pulling of ∅ 8-48 mm.

| Order No. | Design | 6896 | Model | Set contents |
|---|---|---|---|---|
| 0005 | 21-part | 662.00 | 27-A | 1 two-armed puller 43-01<br>1 Extractor single-armed with lateral clamping device 204-01<br>1 Ball bearing extractor 69-A1, suitable for bearings: 6004; 6005; 6006; 6201; 6202; 6203<br>1 Ball bearing extractor 69-A2, suitable for bearings: 6008; 6009; 6204; 6205; 6300; 6301; 6302<br>1 Ball bearing extractor 69-A3, suitable for bearings: 6010; 6206; 6303; 6304<br>1 recessed extractor 21-01-E for bearings ∅: 9–12 mm<br>1 recessed extractor 21-1-E for bearings ∅: 12–16 mm<br>1 recessed extractor 21-2-E for bearings ∅: 14–19 mm<br>1 recessed extractor 21-3-E for bearings ∅: 18–23 mm<br>1 recessed extractor 21-4-E for bearings ∅: 24–34 mm<br>1 recessed extractor 21-5-E for bearings ∅: 34–48 mm<br>10 Slide hammers with adapter 22-01–G27-A: M3; M4; M5; M6; M8; M10; M12 and galvanised: M10; M12; 15–16G |
| | | (W562) | | |

## Ball bearing puller and extractor set

**Design:** Supplied in L-Boxx or metal case, with operating instructions always visible on the lid.

**Application:** For extracting ball bearings, bearings, gears, shoulder bearing inner rings, deep groove ball bearings as well as extracting tight-fitting ball bearings, bearing outer rings and sleeves.

| Order No. | Design | 6926 | Model | Set contents |
|---|---|---|---|---|
| 0046 | 11-part in L-Boxx | 661.00 | 24-A | 6 recessed pullers (12–46 mm) 21-1 to 21-6<br>2 counter supports 22-1; 22-2<br>1 removal chuck for groove ball bearing inner rings 23<br>1 double-armed battery clamp remover 43-1<br>1 two-armed puller 20-1 |
| 0070 | 14-part in L-Boxx | 970.50 | 24-B | 8 recessed pullers (12–70 mm) 21-1 to 21-8<br>2 counter supports 22-1; 22-2<br>1 removal chuck for groove ball bearing inner rings 23<br>1 double-armed battery clamp remover 43-1<br>2 two-armed pullers 20-1; 20-2 |
| | | (W562) | | |

Continued on next page

## Ball bearing puller and extractor set

Continued

| Order No. | Design | 6926 | Model | Set contents |
|---|---|---|---|---|
| 0110 | 15-part in metal case. | 1280.00 | 24-C | 7 recessed pullers (12–58 mm) 21-1 to 21-6<br>1 Internal extractor (65–110 mm) 21-89<br>3 counter supports 21-1; 22-2; 22-4<br>1 removal chuck for groove ball bearing inner rings 23<br>1 double-armed battery clamp remover 43-1<br>2 two-armed pullers 20-1; 20-2 |

(W562)

## Ball bearing puller set

**Design:** Supplied in L-Boxx, including 2 partial wheels, lock nuts and spindle, 7 set puller legs with ball heads, 2 guide rings for better handling of the puller legs as well as 26 different supporting rings.

**Application: For damage-free pulling** of grooved ball bearings located in a casing on a spindle and which have to be gripped between internal and external ring.

| Order No. | Design | 6339 | Model | For ball bearings |
|---|---|---|---|---|
| 0005 | 37-part | 881.00 | KS-70-A-K | 6000–6012; 6200–6212; 6300–6311; 6403–6408 |

(W562)

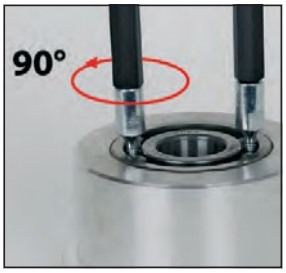
## Ball bearing puller set

**Design:** Special shape for precise fit of the pulling pieces in the ball bearing and uniform pull of the inner and the outer bearing ring. Supplied in L-Boxx.

**Application:** For pulling bearings out of blind holes without removing the shaft and other unnecessary disassembly. For a large number of repairs and service applications in many areas.

| Order No. | Design | 6897 | Model | Chucking capacity mm | For ball bearings |
|---|---|---|---|---|---|
| 0005 | 10-part | 182.00 | 69-A | 20–100 | 6004–6010; 6201–6206; 6300–6304 |
| 0010 | 18-part | 247.00 | 69-B | 40–130 | 6207–6211; 6305–6308; 6403–6405 |

(W562)



6897 0005

6897 0010

## Seal puller set

NEW

**Design:** Dismantling tools with multi-component handle cover for maximum power transfer. Supplied in plastic case.

**Application:** For extracting oil seals®, radial shaft seals, sealing sleeves, seals, bearing seals and shaft seals.

| Order No. | Design | 6899 | Model | Set contents |
|---|---|---|---|---|
| 0006 | 56-part | 208.00 (W562) | K-222-1/7 | 1 Basic device with slide hammer<br>2 extensions 100; 250 mm<br>50 Special screws SW 8<br>1 Universal-push-out lever<br>1 spare blade for push-out lever<br>1 Awl |

## Inner extractor set

**Design:** Supplied in L-Boxx, with operating instructions always visible on the lid.

| Order No. | Design | 6927 | Model | Set contents |
|---|---|---|---|---|
| 0046 | 8-part | 407.00 (W562) | 25-A | 6 recessed pullers (12–46 mm) 21-1 to 21-6<br>2 counter supports 22-1; 22-2 |
| 0070 | 10-part | 579.50 | 25-B | 8 recessed pullers (12–70 mm) 21-1 to 21-8<br>2 counter supports 22-1; 22-2 |
| 0110 | 11-part | 847.50 | 25-C | 7 recessed pullers (12–58 mm) 21-1 to 21-7<br>1 Internal extractor (56–110 mm) 21-89<br>3 counter supports 22-1; 22-2; 22-4 |

6927 0046

## Separator

**Design:** With recessed nuts.

**Application:** For extracting ball bearings, roller bearings, inner rings and other flush seated parts in the automotive area, agriculture, and industry..

**Note:** For use with matching extraction device (Order no. 6929).

| Order No. | Model | 6943 | For extractor model | Clamping range Ø mm | Side bolt distance mm |
|---|---|---|---|---|---|
| 0060 | 15-0 | 46.20 | 18-0 | 5– 60 | 60 |
| 0075 | 15-1 | 60.50 | 18-1 | 12– 75 | 70 |
| 0115 | 15-2 | 92.70 | 18-2 | 22–115 | 115 |
| 0155 | 15-3 | 150.50 | 18-3 | 25–155 | 155 |
| 0200 | 15-4 | 432.50 (W562) | 18-4 | 30–200 | 200 |

## Separator

**Design:** With quick-release chuck pressure spindle

**Application:** Coarse clamping of separating jaws by even tightening of both nuts on the side bolts. Fine, quick and centric clamping of separating jaws by pressure spindle

**Note:** For use with matching extraction device (Order no. 6929).

| Order No. | Model | 6928 | For extractor model | Clamping range Ø mm | Side bolt distance mm |
|---|---|---|---|---|---|
| 0061 | 17-0 | 69.40 | 18-0 | 5– 60 | 60 |
| 0075 | 17-1 | 89.80 | 18-1 | 12– 75 | 75 |
| 0115 | 17-2 | 131.50 | 18-2 | 22–115 | 115 |
| 0155 | 17-3 | 212.50 (W562) | 18-3 | 25–155 | 155 |

## Extractor

**Design:** Single, suitable for separator (Order No. 6928).

**Application:** For the connection with the separation devices (Order No. 6928), the tension bolts are screwed into the threaded holes of the separation jaws.

| Order No. | Model | 6929 | For separator model | Tension bolt distance mm | Tension bolt length mm |
|---|---|---|---|---|---|
| 0150 | 18-0 | 0.02 | 17-0 | 50–110 | 150 |
| 0200 | 18-1 | 0.02 | 17-1 | 60–150 | 200 |
| 0250 | 18-2 | 0.02 | 17-2 | 60–200 | 250 |
| 0300 | 18-3 | 0.02 | 17-3 | 80–300 | 300 |
| | | (999) | | | |

## Separator

**Design:** With 3 segments.

**Application:** For extracting ball bearings, roller bearings, self-aligning roller bearings, inner bearing rings and other flush seated parts.

| Order No. | Model | 6947 | for extractor model | Clamping range ∅ mm |
|---|---|---|---|---|
| 0050 | 13-TP-1 | 0.02 | Universal puller, three armed 30-10 | 12– 50 |
| 0100 | 13-TP-2 | 0.02 | 13-ME-180 | 25–100 |
| 0160 | 13-TP-3 | 0.02 | 13-ME-180 | 50–160 |
| | | (999) | | |

6947 0050

6947 0100

## Extractor

**Design:** With mechanical pressure spindle and centring piece.

**Application:** In connection with the separation devices (Order No. 6947.) the tension bolts are screwed into the threaded holes of the separation jaws.

| Order No. | Model | 6948 | For separator model | Tension bolt distance mm | Tension bolt length mm |
|---|---|---|---|---|---|
| 0300 | 13-ME-180 | 0.02 | 13-TP-2; 13-TP-3 | 80–280 | 245 |
| | | (999) | | | |

## Separator set

**Design:** Supplied in i-Boxx, L-Boxx or metal case, with operating instructions always visible on the lid.

| Order No. | Design | 6945 | Model | Set contents | Chucking capacity mm |
|---|---|---|---|---|---|
| 0060 | 3-part in i-Boxx | 0.02 | 15-K | 1 separator 15-0<br>1 puller 18-0<br>1 pair extensions to match 18-0; 18-1 | 5– 60 |
| 0075 | 3-part in i-Boxx | 0.02 | 15-A | 1 separator 15-1<br>1 puller 18-1<br>1 pair extensions to match 18-0; 18-1 | 12– 75 |
| 0115 | 3-part in L-Boxx | 0.02 | 15-B | 1 separator 15-2<br>1 puller 18-2<br>1 pair extensions to match 18-2 | 22–115 |
| 0155 | 3-part in metal case. | 0.02 | 15-C | 1 separator 15-3<br>1 puller 18-3<br>1 pair extensions to match 18-3 | 25–115 |
| 0200 | 3-part in metal case. | 0.02 | 15-D | 1 separator 15-4<br>1 puller 18-4<br>1 pair extensions to match 18-4 | 30–200 |
| | | (999) | | | |

6945 0060

6945 0115

## Bearing, separation and extraction set

**Design:** Supplied in i-Boxx, L-Boxx or metal case, with operating instructions always visible on the lid.

**Application:** For extracting ball bearings, roller bearings, inner rings and other flush seated parts.

| Order No. | Design | 6930 | Model | Set contents | Chucking capacity mm |
|---|---|---|---|---|---|
| 0060 | 3-part in i-Boxx | 0.02 | 17-K | 1 separator 17-0<br>1 puller 18-0<br>1 pair extensions to match 18-0; 18-1 | 5– 60 |
| 0075 | 3-part in i-Boxx | 0.02 | 17-A | 1 separator 17-1<br>1 puller 18-1<br>1 pair extensions to match 18-0; 18-1 | 12– 75 |
| 0115 | 3-part in L-Boxx | 0.02 | 17-B | 1 separator 17-2<br>1 puller 18-2<br>1 pair extensions to match 18-2 | 22–115 |
| 0155 | 3-part in metal case. | 0.02 | 17-C | 1 separator 17-3<br>1 puller 18-3<br>1 pair extensions to match 18-3 | 25–155 |

(999)

6930 0060

6930 0115

## Universal puller and separator set

**Design:** Universal puller set made of special steel. Sturdy, very durable quality.
Basic set of two-arm pullers plus a separator.
A variety of tools can be compiled. Delivery in 2 L-boxes

**Application:** Basic equipment for all applicable pulling work in the workshop.

| Order No. | Design | 6898 | Model | Set contents |
|---|---|---|---|---|
| 0005 | 10-part | 0.02 | K-20-15 | 1 two-armed puller 20-1+<br>1 two-armed puller 20-2+<br>1 Pair of puller legs 1-192-P, matching 20-1<br>1 Pair of puller legs 2-302-P, matching 20-2<br>1 separator 15-2<br>1 puller 18-2<br>1 long hydraulic spindle 8-01<br>1 set of pressure piece module box 600-17 |

(999)

## Hydraulic spindle

**Design:** Space-saving model with integrated, automatic reset mechanism.

**Application:** Suitable for heaviest stripping work with large pullers. To be used for removing very tight-sitting gears, sprockets, ball bearings, belt machines etc.

| Order No. | Model | 6920 | Stroke mm | Pressure | Suitable for puller model |
|---|---|---|---|---|---|
| 0015 | 8-1-B | 372.50 | 10 | 15 t/150 KN | 20-4; 20-40 |
| 0021 | 8-2-K | 451.00 (W562) | 10 | 20 t/200 KN | 11-1; 11-20 |

## Hydraulic auxiliary press

**Design:** Space-saving model Steel body with hydraulic mechanism with integrated, automatic reset mechanism.

**Application:** To protect against overload, the additional presses should only be used with extractors from size 3. This increases the pressure, allowing also tight parts to be pulled off with ease.

| Order No. | Model | 6921 | Stroke mm | Pressure |
|---|---|---|---|---|
| 0011 | 9-1 | 114.00 | 10 | 10 t/100 KN |
| 0015 | 9-2 | 141.00 (W562) | 15 | 15 t/150 KN |

hydraulic TECHNOLOGY

6920

6921

## Bearing building tool set

**Design:** Light design from impact-resistant poly-acetate with unique locking mechanism. Supplied in L-Boxx.

**Application:** For the installation of ball bearings. The plastic attachment is minimally smaller than the ball bearings, thus allowing easy insertion. Ideal for use on construction sites and in outdoor assembly.

| Order No. | Design | 6339 | Model | Set contents |
|---|---|---|---|---|
| 0010 | 17-part | 389.50 (W562) | 71-L | 1 recoilless hammer<br>13 Impact rings for bearings with drill hole Ø 10–50 mm<br>3 Impact sleeves for inner Ø 18; 32; 52 mm |

## Separating fork

**Design:** Massive, fork-shaped wedge-head made of special steel with strong holding rod and knurled handle.

**Application:** For universal separation and disassembly works. Easily deployable also in most narrow gaps due to wedge-shape. The parts to be separated, e.g. pitman arm, tie rod heads, shock absorbers and wedged ball bolt joints in conic seat etc. are driven apart by hitting the handle with a hammer.

| Order No. | Model | 6931 | Fork opening mm |
|---|---|---|---|
| 0018 | 135-1 | 30.50 | 18 |
| 0023 | 135-2 | 30.50 (W562) | 23 |

## Ball joint puller

**Design:** Sturdy body made of special steel with pressure clamp and strong spindle.

**Application:** Simple and quick pressing out of ball studs when de-installing ball joints, particularly for all MV manufacturers such as Audi, BMW, Fiat, Ford, Mercedes, Nissan-Datsun, Opel, Toyota, VW, Volvo.

| Order No. | Model | 6932 | Fork opening mm |
|---|---|---|---|
| 0020 | 129-0 | 74.80 | 20 |
| 0022 | 129-1 | 58.10 (W562) | 18–22 |

6932 0020

6932 0022

## Stay bolts remover

**Design:** Made of tempered special steel, with large clamping range.

**Application:** To twist out studs. The stud is reliably pressed securely against the inner serration due to the groove in the knurled wheel. Due to the low placement of the knurled wheel, very short stud ends can be detected.

| Order No. | Model | 6933 | Chucking capacity mm |
|---|---|---|---|
| 0019 | 52 | 79.50 (W562) | 5–19 |

## Stud bolt insertion and removal driver

**Design:** Made of chromium-vanadium steel, chrome-plated. Activation can occur by way of 21 mm ring wrench or 1/2" socket wrench

| Order No. | Model | 6939 | For bolt Ø mm |
|---|---|---|---|
| 0006 | 53-6 | 31.70 | 6 |
| 0008 | 53-8 | 31.70 | 8 |
| 0010 | 53-10 | 31.70 | 10 |
| 0012 | 53-12 | 34.20 | 12 |
| 0014 | 53-14 | 41.30 | 14 |
| 0016 | 53-16 | 41.30 (W562) | 16 |

## Stud bolt insertion and removal driver set

**Design:** Supplied in a plastic case.

| Order No. | Design | 6939 | Model | Set contents mm |
|---|---|---|---|---|
| 0400 | 4-part | 129.00 (W562) | 53 | 6; 8; 10; 12 |

## Nut splitters, mechanical

**Design:** Made of tempered special steel, with hexagonal nut for tightening the hardened chisel cutter.

**Application:** For splitting inextricably fixed or overly tightened nuts to grade 6, without damaging the thread.

**Note:** Dull, jagged or broken chisel must be replaced immediately.

| Order No. | Model | 6934 | For nut size |
|---|---|---|---|
| 0010 | 55-0 | 40.60 | SW 4–10 (M2 –M6) |
| 0018 | 55-1 | 49.20 | SW 10–18 (M6 –M12) |
| 0027 | 55-2 | 52.90 (W562) | SW 19–27 (M12–M18) |

## Nut splitters, hydraulic

**Design:** Made of tempered special steel, with hexagonal nut to tighten the hardened chisel cutter as well as anvil with spanner surface and pressure spindle.

**Application:** For splitting inextricably fixed or overly tightened nuts of grades 5; 6; 8 and 10 without damaging the thread. Can also be used in confined areas due to the double cranking action. The hydraulic system minimizes effort.

**Note:** Dull, jagged or broken chisel must be replaced immediately.

| Order No. | Model | 6935 | For stainless steel | For nut size |
|---|---|---|---|---|
| 0022 | 56-1 | 129.00 | – | SW 7–22 (M4–M14) |
| 0036 | 56-2 | 243.00 | – | SW 22–36 (M14–M24) |
| 0046 | 56-3 | 355.00 (W562) | Up to grade 10 | SW 27–36 (M18–M24) |

6935 0022

6935 0036

6935 0046

## Screw extractor

**Design:** Made of chrome-vanadium steel, annealed, with rolled thread and fine left twist. The shank is sharpened, with square for actuation with a tap wrench or tool holder.

**Application:** For removing broken screws with a right thread. Drill a central hole in the piece to be removed using the recommended size of spiral drill, insert the screw extractor and turn evenly (not with a jerk) to the left to loosen the residual piece.

| Order No. | Size | 1855 | For screws | Spiral drill ∅ mm | d1–d2 mm | Square mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0001 | 1 | 1.18 | M4 | 1.8 | 1.4– 3.6 | 2.7 | 50 |
| 0002 | 2 | 1.18 | M5–7 | 3.2 | 2.1– 4.9 | 3.8 | 57 |
| 0003 | 3 | 1.45 | M8–10 | 4.5 | 3.1– 6.5 | 4.9 | 64 |
| 0004 | 4 | 1.86 | M11–14 | 6.5 | 4.8– 8.8 | 7.0 | 71 |
| 0005 | 5 | 2.34 | M16–18 | 8.5 | 6.2–11.0 | 9.0 | 79 |
| 0006 | 6 | 3.44 | M18–24 | 12.0 | 9.4–15.0 | 12.0 | 85 |
| 0007 | 7 | 5.55 | M24–33 | 15.3 | 12.7–19.0 | 14.5 | 92 |
| 0008 | 8 | 8.25 (W176) | M33–45 | 20.0 | 17.5–24.0 | 18.0 | 100 |

## Screw extractor set

**Design:** Supplied in plastic cassette.

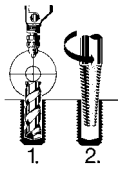
| Order No. | Set contents | 1856 | For screws |
|---|---|---|---|
| 0010 | 1–5 | 9.75 | M4–18 |
| 0005 | 1–6 | 12.95 (W176) | M4–24 |

1856 0010

## HSS drill

**Design:** Self-centring Extrac drills ensure accurate conical bore, analogous to the pitch angle of the Schröder extractor.

| Order No. | Dimension mm | 1858 mob |
|---|---|---|
| 0040 | 4.0 x 58 | 9.95 |
| 0050 | 5.0 x 63 | 10.75 |
| 0055 | 5.5 x 68 | 11.80 |
| 0075 | 7.5 x 80 | 13.10 |
| 0100 | 10.0 x 88.5 | 13.75 |
| | | (W177) |



## Screw extractor Hi-Trac TP

**Design:** High-quality screw extractor HiTrac with special coating TP, heat-treated, 54-56 HRC, with rolled thread and fine left twist. Sharpened shank, with square for actuation with a tap wrench or tool holder.
The properties have been considerably improved and the application facilitated by the new geometry. Lower loosening torque due to new cross-section geometry. Less drilling depth due to optimised thread length. Improved safety for users and component as well as a larger range of applications, time savings.

**Application:** Same as type 1855.

| Order No. | For screws | 1859 schröder | Size | Spiral drill Ø mm | d1–d2 mm | Square mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0001 | M4 | 1.96 | 1 | 1.8 | 1.8– 2.0 | 2.6 | 50 |
| 0002 | M5–7 | 2.01 | 2 | 3.2 | 3.0– 3.5 | 3.7 | 55 |
| 0003 | M8–11 | 2.31 | 3 | 4.5 | 4.0– 5.0 | 4.8 | 60 |
| 0004 | M12–14 | 3.46 | 4 | 6.5 | 6.0– 7.0 | 7.0 | 65 |
| 0005 | M16–20 | 3.92 | 5 | 8.5 | 7.5–11.0 | 9.0 | 69 |
| 0006 | M20–24 | 6.25 | 6 | 12.0 | 10.0–15.0 | 12.0 | 77 |
| | | (W177) | | | | | |

## Screw extractor set Hi-Trac TP

**Design:** Supplied in plastic cassette.

| Order No. | For screws | 1859 schröder | Set contents |
|---|---|---|---|
| 1005 | M4–20 | 14.15 | 1–5 |
| 1000 | M4–24 | 21.30 | 1–6 |
| | | (W177) | |

1859 1005

## Screw extractor set Hi-Trac TP Complete

**Design:** High-quality screw extractor Hi-Trac with special coating TP.
Supplied in plastic box.

**Application:** For screws M 4–20.

| Order No. | Quantity | 1862 mob | Set contents |
|---|---|---|---|
| 1000 | 20-part | 152.50 | 5 Screw extractors size 1–5<br>5 Conical drills size 1–5<br>7 Taps M 4; 5; 6; 8; 10; 12; 16<br>1 Tool holder<br>2 Clamping heads M 1–6; M 6–12 |
| | | (W177) | |

## Screw extractor

**Design:** Made of chromium-vanadium steel, hardened, surface burnished, cutting surface polished.
With grains function, hexagon head and double cutting for right- and left-hand thread.

**Application:** For removing screw by pre-drilling with appropriate drill bit.
Shove extractor into hole and loosen screw.
Life varies depending on the hardness of the counter material - intended for single use from a certain hardness of the reverse rotation.
Suitable for left or right thread.

| Order No. | Size | 1864 RENNSTEIG WERKZEUGE | For screws | A/F mm | Drill Ø mm |
|---|---|---|---|---|---|
| 0001 | 1 | 5.00 | M5 –6 | 6.35 | 3.2 |
| 0002 | 2 | 5.00 | M8 –10 | 9.50 | 4.8 |
| 0003 | 3 | 6.05 | M10–12 | 12.70 | 6.4 |
| 0004 | 4 | 6.45 | M12–16 | 15.90 | 9.5 |
| 0005 | 5 | 8.80 | M16–20 | 19.00 | 11.1 |
| 0006 | 6 | 13.60 | M20–24 | 22.00 | 14.3 |
| 0007 | 7 | 16.35 (W177) | M30 | 25.40 | 19.1 |

## Screw extractor set

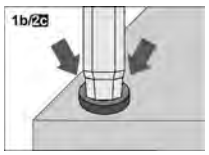
**Design:** Supplied in robust, high-quality metal cassette.

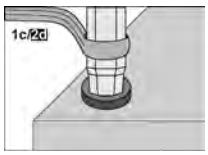
| Order No. | Set contents | 1864 RENNSTEIG WERKZEUGE | For screws |
|---|---|---|---|
| 1005 | 1–5 | 48.90 (W177) | M5–20 |

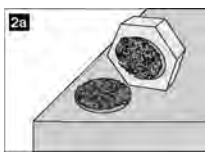
## Screw extractor set

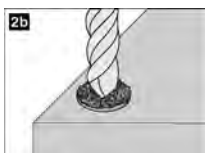
**Design:** Extractor made of chrome-vanadium-molybdenum steel, spiral drill made of HSS, bronzed.
Supplied with the corresponding spiral drill.

**Application:** For removing damaged or broken screws and especially worn inner hexagon screws. Worn hexagon socket screws (1a) are directly removed with the right screwdriver without having to drill (1b/2c). If the screw heads (2a) have broken off, a spiral drill is initially used to pre-drill (2b) and then the screw is removed with the right screw extractor (1b). For this purpose, a ring wrench is placed down onto the screw extractor and the screw can be removed without jamming (1c/2d).



| Order No. | Quantity | 1851 wiha | Set contents |
|---|---|---|---|
| 0050 | 16-part | 71.80 (W530) | Extractor (hexagon) SW 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 8.0; 10.0 mm<br>Spiral drill: Ø 2.3; 2.8; 3.4; 4.5; 5.7; 6.8; 9.0; 11.0 mm |

## Thead roll set

NEW

HAZET

**Design:** Supplied in SmartCase with carrying handle. The tools are held securely housed in a 2-colour foam insert, thus missing tools are recognised immediately.

**Application:** For non-cutting thread repair and easy repair of a defect thread without major effort; repair of components is often also possible while still installed.

6940 0016

6940 0036

6940 0060

6940 0110

| Order No. | Design | 6940 HAZET | For thread Ø mm | Set contents |
|---|---|---|---|---|
| 0016 | 8-part | 283.00 | 5– 16 | 1 Set of rolls, 1.25 mm increase, clockwise thread<br>1 Set of rolls, 1.5 mm increase, clockwise thread |
| 0036 | 9-part | 556.00 | 10– 36 | 1 Set of rolls, 1.5 mm increase, clockwise thread<br>1 Set of rolls, 2.0 mm increase, clockwise thread |
| 0060 | 9-part | 800.00 | 10– 60 | 1 Set of rolls, 1.5 mm increase, clockwise thread<br>1 Set of rolls, 2.0 mm increase, clockwise thread |
| 0110 | 9-part | 1011.00 | 50–110 | 1 Set of rolls, 1.5 mm increase, clockwise thread<br>1 Set of rolls, 1.5 mm increase, anticlockwise thread |

(W529)

Further rolls upon enquiry

## Thread finishing tap

NEW

HAZET

**Design:** Quick fixation by way of adjustment screw, automatic adjustment of blade to any thread increase.

**Application:** For all metric and non-metric threads (60° flank size). For the finishing of clockwise and anticlockwise threads (observe direction of thread!).

6941 0013

6941 0038

| Order No. | For thread Ø mm | 6941 HAZET |
|---|---|---|
| 0013 | 4–13 mm | 47.90 |
| 0038 | 5/8–1.1/2.16–38 | 175.60 |

(W529)

## Spiral nut extractor insert set

NEW

**Design:** Supplied in plastic case.

**Application:** Special profile to release nuts with rounded heads.

| Order No. | Design | 6942 | Set contents |
|---|---|---|---|
| 0010 | 10-part | 97.30 | 9 Spiral nut extractor inserts 1/2", 34 mm long, 10; 11; 12; 13; 14; 15; 16; 17; 19 mm<br>1 Taper drift |

(W529)

## Spiral nut extractor insert set

NEW

**Design:** Supplied in plastic case.

**Application:** Special profile to release nuts with rounded heads.

| Order No. | Design | 6942 | Set contents |
|---|---|---|---|
| 0020 | 7-part | 109.00 (W529) | 6 Spiral nut extractor inserts 1/2", 32 mm long, 21; 22; 24; 27; 30; 32 mm<br>1 Taper drift |

## Screw extractor set

NEW

**Design:** Made from special steel, slightly conic-tapered spiral Supplied in plastic case.

**Application:** For torn of screws and studs.

| Order No. | Design | 6942 | Set contents |
|---|---|---|---|
| 0030 | 15-part | 69.20 (W529) | 5 Extractors 1/8; 3/16; 1/4; 3/8; 1/2"<br>10 Extractors 3; 4; 5; 5.5; 6; 8; 10; 11; 12; 14 mm |

## Brake spring pliers

**Design:** Made of chromium-vanadium steel, chrome-plated. With mobile claw.

**Application:** For glued and riveted brake pads.

HAZET

| Order No. | Length mm | 6959 HAZET |
|---|---|---|
| 0330 | 317 | 67.20 (W529) |

## Spring-clip pliers

**Design:** Made of chrome-vanadium electric steel, forged and hardened in oil. Handles covered with non-slip plastic.

**Application:** For standard, space-saving and wire clamps as well as spring band rings up to 70 mm nominal size.

KNIPEX

| Order No. | Length mm | 6960 KNIPEX |
|---|---|---|
| 0250 | 250 | 46.80 (W525) |

## Hose clamp pliers

NEW

**Design:** Made of chrome-vanadium electric steel, forged and hardened in oil. Handles covered with non-slip plastic.

**Application:** To open and close click clamps.

KNIPEX

| Order No. | Length mm | 696A KNIPEX |
|---|---|---|
| 0250 | 250 | 48.80 (W525) |

## Hose clamp pliers

**Design:** Made of chromium-vanadium steel.

HAZET

**6961 0005** **Chrome plated, rotating jaws.** For simple hose clamps (e.g. on washing machines).

**6961 0010** **Jaws fixed, 90° angled.** Releasing and closing by turning the pliers 180°. For reusable CLIC type hose clips on plastic lines (e.g. on ALFA, AUDI, OPEL, PEUGEOT and VW).

**6961 0015** **Chrome plated, rotating jaws.** For spring compression hose clips (e.g. for AUDI, OPEL, VW).

**6961 0025** **Chrome-plated, jaws fixed, with locking device.** For spring compression hose clips (special for AUDI and VW).

**6961 0030** **Chrome plated, rotating jaws.** For spring band clamps whose three ends are located on the tube, e.g. to tank ventilation and fuel lines (on AUDI, SEAT and VW).

**6961 0035** **With plastic coated semi-flexible Bowden cable,** which allows working without guiding hand. Handles covered with plastic. For self-tensioning spring band and space saving clamps in the area of the cooling and heating systems.

6961 0005

6961 0010

6961 0015

6961 0025

6961 0030

6961 0035

| Order No. | Chucking capacity mm | 6961 HAZET | Length mm |
|---|---|---|---|
| 0005 | 40 | 36.80 | 206 |
| 0010 | 20 | 48.65 | 175 |
| 0015 | 6–40 | 39.50 | 210 |
| 0025 | 90 | 130.20 | 320 |
| 0030 | 27 | 57.90 | 192 |
| 0035 | 7–60 | 150.80 (W529) | 875 |

## Strap wrench

**Design:** Made of GEDORE vanadium steel 31CrV3, chrome plated and with hanging hole. With sturdy, extra wide, slip-proof and exchangeable fabric tape, 25 mm wide.

GEDORE

**Application:** Suitable to clamp round parts with a larger diameter. Particularly suitable for workpieces with chrome-plated, polished surface.

6972 0220

6972 0285

| Order No. | Design | 6972 GEDORE | Chucking capacity mm | Clamping range ∅ inch |
|---|---|---|---|---|
| 0220 | Strap wrench | 25.10 | 140 | 6 |
| 0480 | Replacement strap | 11.60 | 140 | 6 |
| 0285 | Strap wrench | 46.10 | 200 | 8 |
| 0900 | Replacement strap | 17.15 (W522) | 200 | 8 |

## Strap wrench

**Design:** Made of chromium-vanadium steel, chrome-plated. Fabric tape is made of cotton, rubber coated and non-slip.

**Application:** Especially for oil filter, generator and other round screw connections.

| Order No. | Design | 6973 | Clamping range Ø mm |
|---|---|---|---|
| 0110 | Strap wrench | 45.90 | 8–180 |
| 0500 | Replacement strap | 13.65 (W529) | 8–180 |

## Oil filter wrench

**Design:** Made of chromium-vanadium steel, nickel-plated.

**Application:** For oil filter, e.g. as mounting wrench for oil and fuel filter on MAN commercial vehicles. Steel strap adjustable.

6968 0010

6968 0005

| Order No. | Design | 6968 | Clamping range Ø mm |
|---|---|---|---|
| 0010 | With operating lever | 41.45 | 75–110 |
| 0005 | With 1/2" operating square | 38.40 (W529) | 80–110 |

## Oil filter wrench, 3-armed

**Design:** Made of special steel, forged design, galvanised. For left-handed and right-handed action, for universal use. Recessed square drive 3/8" and protruding hexagon drive 19 mm.

**Application:** For filters difficult to access

| Order No. | Clamping range Ø mm | 6968 |
|---|---|---|
| 0015 | 65–115 | 67.45 (W529) |

## Oil filter chain

NEW

**Design:** Made of special steel.

**Application:** To detach oil filters in utility vehicles with compressed air dryer. Activation of granulate cartridges on compressed air dryers.

| Order No. | Design | 6968 | Clamping range Ø mm |
|---|---|---|---|
| 0150 | With 1/2" operating square | 72.70 (W529) | 50–150 |

## Battery acid tester

**Design:** Made of plastic, black/transparent. With areometer.

**Application:** To check the acidity of the battery fluid.

| Order No. | Length mm | 6868 HAZET |
|---|---|---|
| 0280 | 280 | 15.25 (W529) |

## Magnet-tray

NEW

**Design:** Made of plastic, with magnet to affix e.g. to workshop trolleys, workshop walls and hoists.

**Application:** For storage of small parts.

| Order No. | ⌀ mm | 6868 HAZET |
|---|---|---|
| 0150 | 150 | 9.65 (W529) |

## Rolling head crowbar

**Design:** Made of chromium-vanadium steel, nickel-plated. One side tapering to a point.

**Application:** To release rusted parts, inserting and extracting bearings and bearing shells as well as installation and de-installation of springs, bolts and gears.

| Order No. | Length mm | 6974 format |
|---|---|---|
| 0001 | 400 | 15.70 (W552) |

## Bending iron

**Design:** Hexagon made of chromium-vanadium steel, 59CrV4, galvanised. In length, uniformly hardened and tempered. One side tapering to a point.

| Order No. | Length mm | 6974 format |
|---|---|---|
| 0002 | 400 | 12.60 (W552) |

## Pry bar

NEW

**Design:** Pry bar made of chromium-vanadium steel, square. Curved cutting edge, 2-component plastic handle.

**Application:** For lever work in industrial and automotive applications.

| Order No. | Length mm | 6977 mob |
|---|---|---|
| 0020 | 200 | 4.89 |
| 0030 | 300 | 7.65 |
| 0045 | 450 | 14.35 |
| 0060 | 600 | 16.75 (W518) |

## Pry bar set

**Design: Made of chromium-vanadium steel,** clean finish with slip-proof 2-component plastic handle. With hanging hole in the handle. Curved cutting edge.

**Application:** For lever work in industrial and automotive applications.

| Order No. | Design | 6977 mob | Set contents mm |
|---|---|---|---|
| 4000 | 4-part | 41.30 (W518) | 200; 300; 450; 600 |

## Roller board

**Design:** Made of skin-friendly polypropylene, resistant to oil, grease and brake fluid. Six swivel casters ensure safe rolling and steering behaviour. Comfortable and ergonomic, the deep trough shape gives the body extra support. In addition, the rolling board has two slots in optimal reach.

**Application:** For fatigue-free working with a comfortable head position on head/neck rest.

GEDORE

| Order No. | Load-bearing capacity kg | 6967 GEDORE | Dimensions L x W x H mm |
|---|---|---|---|
| 0005 | 130 | 68.20 (W522) | 1030 x 480 x 115 |

## Roller board

**Design:** Solid, one-piece construction made of high-strength plastic. Ergonomically shaped, arm areas cut for optimum freedom of movement. High lying comfort, padded, soft headrest. For comfortable working under a vehicle With practical tool trays and small parts surfaces right and left. Six large smooth-running castors and rubber treads, oil resistant and quiet, with convenient carrying handle in the foot area, easy to clean.

HAZET

| Order No. | Load-bearing capacity kg | 6970 HAZET | Dimensions L x W x H mm |
|---|---|---|---|
| 0005 | 130 | 125.20 (W529) | 1030 x 480 x 115 |

## Kneeboard

**Design:** With recessed grip.

**6969** Made from durable foam.

**6971** Made of non-absorbent foam Resistant to oil, petrol, brake cleaner.

| Order No. | Dimensions L x W x H mm | 6969 GEDORE | 6971 HAZET |
|---|---|---|---|
| 0005 | 450 x 210 x 30 | 11.70 (W522) | 17.80 (W529) |

6969 0005 GEDORE

6971 0005 HAZET

## Mechanics mat

**Design:** Made of non-absorbent foam, with handle recess. Resistant to oil, petrol, brake cleaner.

HAZET

| Order No. | Dimensions L x W x H mm | 6971 HAZET |
|---|---|---|
| 0010 | 975 x 385 x 30 | 35.65 (W529) |

## Cross wrench

**Design:** Made of special tool steel, chrome plated.

**6978 0010** Made of special steel, chrome plated.
**For cars, vans and large saloons.**

**6978 0020** Made of special steel, chrome plated.
**For cars, vans and large saloons.**

**6978 0030** Made of vanadium-chrome steel, chrome plated, heads polished.
**For commercial vehicles, tractors, agricultural and construction machines.**

**6978 0040** Made of vanadium-chrome steel, chrome plated, heads polished.
**For commercial vehicles, tractors, agricultural and construction machines.**

6978 0010

6978 0020

6978 0030

6978 0040

| Order No. | Width of keys | 6978 | Length mm |
|---|---|---|---|
| 0010 | 17 mm x 19 mm x 13/16" x 21 mm | 50.45 | 380 |
| 0020 | 17 x 19 x 22 mm x 1/2" square | 50.50 | 380 |
| 0030 | 24 (15/16" ) x 27 (1.1/16" ) x 30 x 32 (1.1/4" ) mm | 202.80 | 750 |
| 0040 | 24 (15/16" ) x 27 (1.1/16" ) x 32 (1.1/4" ) mm x 3/4" square | 202.80 (W529) | 750 |

## Assembly lever

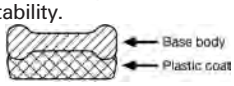
**6985** Made of GEDORE vanadium steel CrV3, chrome-plated. Solid forged in profiled shape with protective surfaces for aluminium rims.

6985 GEDORE

**6986** Made of GEDORE vanadium steel CrV3, chrome-plated. Heavy, offset shape.

6986 GEDORE

**6987** Made of chrome-vanadium-steel, chrome plated. With double T profile for high stability.



6987 0008–00024

**6988** Made of chrome-vanadium-steel, chrome plated. Without double T profile. With screwed, exchangeable plastic covering, for aluminium rims.

6988 0020

**6989** Made of chrome-vanadium-steel, chrome plated. With double T profile for high stability. Heavy, offset shape.

6989 0024

| Order No. | Nominal length mm | 6985 GEDORE | 6986 GEDORE | 6987 | 6988 | 6989 | Application |
|---|---|---|---|---|---|---|---|
| 0008 | 199 | – | – | 10.80 | – | – | For motorcycles |
| 0008 | 200 | 10.05 | – | – | – | – | For automobiles |
| 0012 | 305 | – | – | 13.15 | – | – | For cars and vans |
| 0012 | 305 | 14.25 | – | – | – | – | For automobiles |
| 0016 | 395 | – | – | 17.55 | – | – | For cars and vans |
| 0016 | 400 | 17.70 | – | – | – | – | For automobiles |
| 0020 | 500 | – | – | 25.70 | – | – | For cars and vans |
| 0020 | 500 | 26.20 | – | – | 52.20 | – | For automobiles |
| 0024 | 610 | – | 36.70 | – | – | 46.15 | For trucks |
| 0024 | 610 | – | – | 37.30 | – | – | For cars and vans |
| 0024 | 610 | 36.60 (W522) | – (W522) | – (W529) | – (W529) | – (W529) | For automobiles |

**NEW**

**All items marked with this icon have been added to our range.**

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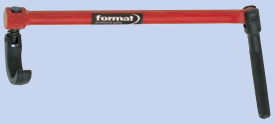
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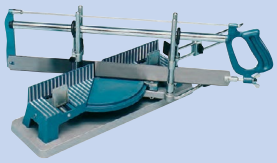
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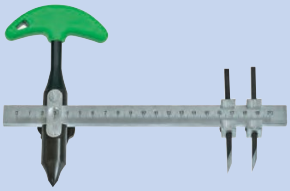
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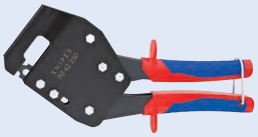
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## Spark plug brush

**Design:** Body made of beech wood, bristles made of corrugated brass wire, **wire thickness 0.2 mm.**

**Application:** In the automobile industry for cleaning spark plugs as well as for general universal application in other areas.

| Order No. | Number of rows | 7000 format | Working length mm | Total length mm |
|---|---|---|---|---|
| 0001 | 3 | 1.24 (W566) | 45 | 200 |

## File brush

**Design:** Body made of beech wood, bristles made of high-quality, glued file brush strip (scraping belt).

**Application:** To clean clogged files.

| Order No. | Fill material surface mm | 7002 format | Total length mm |
|---|---|---|---|
| 0001 | 115 x 40 | 1.95 (W566) | 235 |

## Hand wire brush

**Design:** Made of high-quality beechwood with rounded edges and pin hole.

**Application:** For all minor rust removal and cleaning work as well as paint stripping.

**7004** **Steel wire, smooth, oil-hardened, wire thickness 0.35 mm.**

**7006** **Stainless steel wire, smooth, antimagnetic, wire thickness 0.30 mm.**

**7008** **Brass wire, crimped, wire thickness 0.30 mm.**

| Order No. | Number of rows | 7004 format | 7006 format | 7008 format | Working length mm | Total length mm |
|---|---|---|---|---|---|---|
| 0002 | 2 | 0.82 | 2.09 | 1.90 | 145 | 295 |
| 0003 | 3 | 0.94 | 2.37 | 2.14 | 145 | 295 |
| 0004 | 4 | 1.10 | 2.77 | 2.54 | 145 | 295 |
| 0005 | 5 | 1.27 | 3.17 | 2.87 | 145 | 295 |
| 0006 | 6 | 1.36 (W566) | 3.48 (W566) | – (W566) | 145 | 295 |

7004

7006

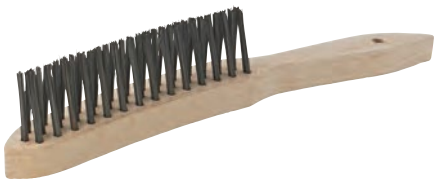
7008

## Fillet weld brush

**Design:** Made of high-quality beechwood with rounded edges and pin hole, with smooth wire.

**Application:** For minor rust removal and cleaning work.

| Order No. | Brush | 7010 format | Number of rows | Working length mm | Total length mm |
|---|---|---|---|---|---|
| 0001 | Steel wire, 0.35 mm | 3.38 | 3 | 145 | 295 |
| 0005 | Stainless steel wire, 0.3 mm | 7.05 (W566) | 3 | 145 | 295 |



## Universal hand scratch brush

**Design:** Back of brush made of heavy-duty steel rail, with ergonomic plastic handle, with crimped wire, **wire thickness 0.3 mm.**

**Application:** For all cleaning work, particularly for work in narrow spaces.

| Order No. | Brush | 7012 format | Number of rows | Working length mm | Total length mm |
|---|---|---|---|---|---|
| 0010 | Steel wire | 1.62 | 1 | 140 | 265 |
| 0020 | Stainless steel wire | 3.97 | 1 | 140 | 265 |
| 0030 | Brass wire | 3.97 (W566) | 1 | 140 | 265 |

## Copper tube brush

**Design:** Double wire core with crimped steel wire and stable plastic handle.

**Application:** To quickly clean the inside of pipes and soldering joints.

format professional quality

| Order No. | Brush Ø mm | 7013 format | Working length mm | Total length mm |
|---|---|---|---|---|
| 0013 | 13 | 5.95 | 25 | 160 |
| 0016 | 16 | 6.05 | 25 | 160 |
| 0019 | 19 | 6.40 (W566) | 28 | 160 |

| Order No. | Brush Ø mm | 7013 format | Working length mm | Total length mm |
|---|---|---|---|---|
| 0023 | 23 | 6.70 | 25 | 160 |
| 0029 | 29 | 7.05 (W566) | 32 | 160 |

## Tube brush

**Design:** Double wire core with crimped steel wire and wooden handle.

**Application:** To remove chippings and loose particles from pipes as well as for cleaning the inside of holes in steel, wood and plastic.

format professional quality

| Order No. | Brush Ø mm | 7014 format | Working length mm | Total length mm |
|---|---|---|---|---|
| 0015 | 15 | 7.40 | 100 | 280 |
| 0020 | 20 | 7.50 | 100 | 280 |
| 0025 | 25 | 7.80 (W566) | 100 | 280 |

## Tube brush

**Design:** Double wire core and loop. Trim 100 mm, overall length 300 mm.

**Application:** Ideal for cleaning, dust removal, deburring, paint removal in nozzles, glass bottles, tubes, pipes, etc.

**7017** **Steel wire, crimped**

**7019** **Brass wire, crimped**

**7021** **Nylon, smooth.**

| Order No. | Brush Ø mm | 7017 | 7019 | 7021 |
|---|---|---|---|---|
| 0005 | 4 | 6.00 | – | 1.97 |
| 0010 | 5 | 6.05 | – | 2.00 |
| 0015 | 6 | 6.15 | 6.20 | 2.09 |
| 0020 | 8 | 4.53 | 6.20 | 2.16 |
| 0025 | 10 | 4.58 (W566) | 5.85 (W566) | 2.16 (W566) |

| Order No. | Brush Ø mm | 7017 | 7019 | 7021 |
|---|---|---|---|---|
| 0030 | 12 | 4.62 | 5.85 | 2.19 |
| 0035 | 15 | 4.73 | 6.00 | 2.23 |
| 0040 | 18 | 4.86 | 6.15 | 2.33 |
| 0045 | 20 | 4.91 | 6.25 | 2.35 |
| 0050 | 25 | 4.95 (W566) | 6.35 (W566) | 2.40 (W566) |

## Honing brush

**Design:** Robust, self-centring honing tool with silicon carbide fill for a gentle grinding process. The abrasive spheres adapt to the surface with the flexible brush construction. Overall length 200 mm.

**Application:** For final finishing of surfaces an bores. Also for edge breaking and processing non-round drill holes. For the generation of fine-ground surfaces with a high contact ratio for any potential oil-film adhesion. Simple handling on handheld drills, honing machines and automatic machines.

osborn

| Order No. | Brush Ø mm | 7035 osborn K 120 | 7037 osborn K 180 | Tool Ø mm | Effective working width mm | Shaft Ø mm |
|---|---|---|---|---|---|---|
| 0008 | 8 | 19.20 | 19.20 | 9.0 | 50 | 3.6 |
| 0009 | 9 | 19.90 | 19.90 | 10.0 | 50 | 3.6 |
| 0010 | 10 | 20.30 | 20.30 | 11.0 | 60 | 3.6 |
| 0011 | 11 | 20.50 | 20.50 | 12.0 | 60 | 3.6 |
| 0012 | 12 | 21.20 | 21.20 | 13.0 | 60 | 3.6 |
| 0014 | 14 | 21.60 | 21.60 | 15.5 | 60 | 3.6 |
| 0016 | 16 | 22.80 | 22.80 | 18.0 | 60 | 4.6 |
| 0018 | 18 | 23.00 | 23.00 | 20.0 | 60 | 4.6 |
| 0020 | 20 | 23.20 | 23.20 | 22.0 | 70 | 4.6 |
| 0022 | 22 | 24.30 | 24.30 | 25.0 | 70 | 4.6 |
| 0024 | 24 | 25.50 | 25.50 | 27.0 | 70 | 5.1 |
| 0025 | 25 | 26.00 (W702) | 26.00 (W702) | 28.0 | 70 | 5.1 |

| Order No. | Brush Ø mm | 7035 osborn K 120 | 7037 osborn K 180 | Tool Ø mm | Effective working width mm | Shaft Ø mm |
|---|---|---|---|---|---|---|
| 0027 | 27 | 26.90 | 26.90 | 30.0 | 70 | 5.1 |
| 0029 | 29 | 27.60 | 27.60 | 32.0 | 70 | 5.1 |
| 0032 | 32 | 29.10 | 29.10 | 35.0 | 70 | 5.1 |
| 0035 | 35 | 30.60 | 30.60 | 38.0 | 70 | 5.7 |
| 0038 | 38 | 31.80 | 31.80 | 41.0 | 70 | 5.7 |
| 0041 | 41 | 33.40 | 33.40 | 45.0 | 70 | 5.7 |
| 0045 | 45 | 34.70 | 34.70 | 48.0 | 70 | 5.7 |
| 0048 | 48 | 36.30 | 36.30 | 51.0 | 70 | 6.5 |
| 0051 | 51 | 37.40 | 37.40 | 54.0 | 70 | 6.5 |
| 0054 | 54 | 37.60 | 37.60 | 57.0 | 70 | 6.5 |
| 0057 | 57 | 38.40 | 38.40 | 60.0 | 70 | 7.3 |
| 0060 | 60 | 38.80 (W702) | 38.80 (W702) | 64.0 | 70 | 7.3 |

## Brushes for battery-powered devices

Battery-powered devices have experienced constant improvements regarding running times and power over the past years. Devices that do not need a power socket are now indispensable; especially when working in different places, such as in the building trade or for use by fire brigades.

**Why do I need a special tool?**
People out on the road need a tool that covers lots of applications and, of course, the heavier the tool, the quicker the battery runs out. In order to optimise mobile use, alongside a high-performance device you need a tool with a low weight and the best possible flexibility in application.

**Benefits:**
- Flexible use
- Low vibration and quiet
- Low weight
- Longer battery life (up to 30 % and more is possible)
- This means fewer charging cycles

## Cup brushes for battery-powered devices

NEW

**Design:** Suitable for all standard battery-powered one-hand angle grinders. Thread M14 x 2.0.

**Note:** Observe safety recommendations.

**8805** **Brass wire, crimped.** Suitable for surface processing NF metals and soft wood.

**8806** With **nylon filaments impregnated with silicon carbide** with hard and pointed tips and very flexible working surface. No risk of breakage despite high elasticity and flexibility. This prevents clogging the trim with grinding residue to ensure constant high quality grinding. Plus the abrasive filaments are resistant against weak acids and lyes. For descaling, deburring and removal of rust and adhesive residues, as well as for preparing and cleaning weld seams. Suitable for all metals, hard and soft wood and ceramics.

| Order No. | Brush Ø mm | 8805 osborn | 8806 osborn | Effective working width mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|
| 0060 | 60 | 12.20 (W702) | 12.85 (W702) | 21 | 12500 |

8805



8806

## Conical brush for battery-powered devices

NEW

**Design:** Very robust, nylon filaments impregnated with silicon carbide with hard and pointed tips and very flexible working surface. No risk of breakage despite high elasticity and flexibility. This prevents clogging the trim with grinding residue to ensure constant high quality grinding. Plus the abrasive filaments are resistant against weak acids and lyes. Suitable for all standard battery-powered one-hand angle grinders. Thread M14 x 2.0.

**Application:** For descaling, deburring and removal of rust and adhesive residues, as well as for preparing and cleaning weld seams. Suitable for all metals, hard and soft wood and ceramics.

**Note:** Observe safety recommendations.

| Order No. | Brush Ø mm | 8807 osborn | Effective working width mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|
| 0100 | 100 | 16.65 (W702) | 20 | 12500 |

## Grinding and polishing tools for battery-powered devices

You will find more tools for mobile use in chapter 8:

Cutting disc 8/13
Diamond cutting disc 8/17
Rough grinding wheel 8/7
Abrasive mop discs 8/45
Polishing ring, Finishing ring 8/89

## Wheel brush, crimped

**Design:** Several rows, aggressive design with crimped wire. Supplied incl. the following reduction pieces:
Brushes Ø 75–125 mm contain reduction pieces 1/2" and 5/8",
Brushes-Ø 150–200 mm contain reduction pieces 13, 15, 16, 19, 20 mm as well as 7/8" and 1".

**Application:** For use in stationary machines, for roughening, deburring, stripping, descaling, matting and cleaning. Optimal for processing pieces with a large surface area.

**Note:** Observe safety recommendations.

**7016** **Hardened steel wire.**

**7053** **Brass wire.**

**7018** **Stainless steel wire (1.4310).**

7016

7053

7018

| Order No. | Brush Ø mm | 7016 format | 7053 format | 7018 format | Wire thick-ness mm | Effective working width mm | Bore Ø mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|---|---|---|
| 0075 | 75 | – | 27.10 | – | 0.3 | 22 | 20.00 | 10000 |
| 0100 | 100 | 9.55 | – | – | 0.3 | 20 | 20.00 | 8000 |
| 0125 | 125 | 11.40 | – | 23.20 | 0.3 | 22 | 20.00 | 6000 |
| 0150 | 150 | – | 32.20 | – | 0.3 | 24 | 20.00 | 6000 |
| 0150 | 150 | 14.75 | – | 32.40 | 0.3 | 30 | 31.75 | 6000 |
| 0178 | 178 | 17.35 | – | 39.40 | 0.3 | 32 | 31.75 | 6000 |
| 0200 | 200 | 21.80 (W566) | – (W566) | 44.20 (W566) | 0.3 | 30 | 31.75 | 4500 |

## Wheel brush, knotted

**Design:** Aggressive design with knotted wire. For extreme use with high peripheral speeds. Can also be used with hand machines. Bore 22.23 mm.

**Application:** For descaling, deburring and removal of rust and adhesive residues, as well as for preparing and cleaning weld seams.

**Note:** Observe safety recommendations.

**7023** **Hardened steel wire, especially narrow.**

**7020** 0115–0178 **Hardened steel wire.**

**7020** 1115–1178 **Stainless steel wire (1.4310).**

**7056** 0115 + 0125 **Hardened steel wire, knotted on left/right for even wear.**

**7056** 1115 + 1125 **Stainless steel wire (1.4310), knotted on left/right for even wear.**

7023

7020

7056

| Order No. | Brush Ø mm | 7023 format | 7020 format | 7056 format | Wire thickness mm | Effective working width mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|---|---|
| 0115 | 115 | 20.50 | – | – | 0.50 | 6 | 12500 |
| 0115 | 115 | – | 7.40 | 7.50 | 0.50 | 12 | 12500 |
| 1115 | 115 | – | – | 14.55 | 0.35 | 12 | 12500 |
| 1115 | 115 | – | 14.55 | – | 0.50 | 12 | 12500 |
| 0125 | 125 | 23.20 | – | – | 0.50 | 6 | 12500 |
| 0125 | 125 | – | 8.15 | 8.15 | 0.50 | 13 | 12500 |
| 1125 | 125 | – | – | 16.75 | 0.35 | 13 | 12500 |
| 1125 | 125 | – | 16.75 | – | 0.50 | 13 | 12500 |
| 0178 | 178 | 27.50 | – | – | 0.30 | 13 | 12000 |
| 0178 | 178 | – | 13.50 | – | 0.50 | 13 | 10000 |
| 1178 | 178 | – (W566) | 37.00 (W566) | – (W566) | 0.50 | 13 | 10000 |

## Wheel brush, silicon carbide

**Design:** Very robust, nylon filaments impregnated with silicon carbide with hard and pointed tips and very flexible working surface. No risk of breakage due to high elasticity and flexibility. This prevents clogging the trim with grinding residue to ensure constant high quality grinding. Plus the abrasive filaments are resistant against weak acids and lyes.
Supplied incl. 7-piece adapter set for various drill holes.

**Application:** For deburring precision parts with consistent grinding effect. With the new silicon carbide abrasive filaments, non-ferrous metals as well as stainless steel can be processed. Suitable for wet and dry processing. **Can be used individually or in rows on shafts.**

**Note:** Observe safety recommendations.

| Order No. | Brush Ø mm | 7055 osborn | Grain | Effective working width mm | Hole mm | Max. speed RPM min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0150 | 150 | 25.40 | 120 | 18 | 13 | 8000 |
| 0178 | 178 | 31.90 | 120 | 18 | 13 | 8000 |
| 0200 | 200 | 35.80 | 120 | 18 | 19 | 6000 |
| | | (W702) | | | | |

## Radial bristle brush

**Scotch-Brite™ Bristle brush type A**
**Design:** With straight segments, yellow, made of individual plastic segments with integrated ceramic Cubitron. The segments are connected with a flange (25.4 mm inner diameter). The unique construction of Bristle products prevents brushes from clogging and ensures long service life and unvarying performance. Due to the flexibility of the individual filaments, a constant finish is achieved, even on profiled surfaces.

**Application:** To clean heavily clogged filaments and for deburring and preparing surfaces. Ideal for use on the bench grinder, straight grinder or bendable shafts. Supplied incl. adapters for reducing the inner diameter.

**Note:** Observe safety recommendations.

| Order No. | Ø x thickness mm | 7009 3M | Grit | Number of segments | Max. speed RPM min$^{-1}$ |
|---|---|---|---|---|---|
| 0150 | 150 x 12 | 81.50 | 80 | 8 | 6000 |
| | | (W812) | | | |

## Bevel brush

**Design:** Aggressive design. Suitable for all standard one-hand angle grinders.
Thread M14 x 2.0.

**Application:** For descaling, deburring and removal of rust and adhesive residues, as well as for preparing and cleaning weld seams.

**Note:** Observe safety recommendations.

**7022 0100 + 0115** **Hardened steel wire, knotted.**

7022 0100 + 0115

**7022 1115 + 1116** **Stainless steel wire (1.4310), knotted.**

7022 1115 + 1116

**7025 0101** **Hardened steel wire, crimped.**

7025 0101

**7025 1100** **Stainless steel wire (1.4310), crimped.**

7025 1100

| Order No. | Brush Ø mm | 7022 format | 7025 format | Wire thickness mm | Effective working width mm | Max. speed RPM min$^{-1}$ |
|---|---|---|---|---|---|---|
| 1100 | 100 | – | 17.45 | 0.20 | 20 | 12500 |
| 0101 | 100 | – | 8.60 | 0.30 | 10 | 12500 |
| 0100 | 100 | 7.10 | – | 0.50 | 13 | 12500 |
| 1116 | 115 | 19.80 | – | 0.35 | 15 | 12500 |
| 0115 | 115 | 11.05 | – | 0.50 | 15 | 12500 |
| 1115 | 115 | 17.60 | – | 0.50 | 15 | 12500 |
| | | (W566) | (W566) | | | |

## Tool wheel brush

**Design:** With 6 mm mounting shaft.

**Application:** For use in drills and high-speed electrical and compressed air tools. The small diameter enables use in hard-to-reach spaces, inner spaces and grooves. Ideal for the removal of burrs, scale, rust, cinder, paint, etc.

**Note:** Observe safety recommendations.

**7024** **Steel wire, crimped**

**7026** **Stainless steel wire (1.4310), crimped.**

**7028** **Brass wire, crimped**

**7030** **Steel wire, knotted.**

7024 7026

7028 7030

| Order No. | Brush Ø mm | 7024 format | 7026 format | 7028 format | 7030 format | Wire thickness mm | Effective working width mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|---|---|---|
| 0030 | 30 | 2.99 | 3.77 | 4.28 | – | 0.2 | 9 | 20000 |
| 0040 | 40 | 3.26 | 4.67 | 4.97 | – | 0.2 | 11 | 18000 |
| 0050 | 50 | 4.46 | 6.40 | 6.50 | – | 0.2 | 17 | 15000 |
| 0060 | 60 | – | 6.85 | 7.45 | – | 0.2 | 18 | 15000 |
| 0061 | 60 | 4.61 | – | – | – | 0.3 | 18 | 15000 |
| 0070 | 70 | – | 7.50 | 7.90 | – | 0.2 | 19 | 15000 |
| 0071 | 70 | 4.84 | – | – | – | 0.3 | 18 | 15000 |
| 0075 | 75 | – | – | – | 6.15 | 0.5 | 12 | 20000 |
| 0080 | 80 | 4.97 (W566) | – (W566) | – (W566) | – (W566) | 0.3 | 19 | 12000 |

## Tool wheel brush, silicon carbide

**Design:** Very robust, nylon filaments impregnated with silicon carbide with hard and pointed tips and very flexible working surface. No risk of breakage due to high elasticity and flexibility. This prevents clogging the trim with grinding residue to ensure constant high quality grinding. Plus the abrasive filaments are resistant against weak acids and lyes.

**Application:** For deburring precision parts with consistent grinding effect. With the new silicon carbide abrasive filaments, non-ferrous metals as well as stainless steel can be processed. Suitable for wet and dry processing.

**Note:** Observe safety recommendations.

| Order No. | Brush Ø mm | 7135 osborn | Grain | Effective working width mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|
| 0050 | 50 | 11.50 | 120 | 12 | 4500 |
| 0070 | 70 | 12.95 (W702) | 120 | 12 | 4500 |

## Safety wheel brush

**Design:** Made of plastic-coated, crimped steel wire. **TÜV-inspected, with 10x longer service life.** With plastic bonding, particularly safe as **wire breakage is prevented.** Mounting shaft 6 mm.

**Application:** For use in drills and high-speed electrical and compressed air tools. The small diameter enables use in hard-to-reach spaces, inner spaces and grooves. Ideal for the removal of paint and varnish as well as for deburring and cleaning many surfaces.

**Note:** Observe safety recommendations.

| Order No. | Brush Ø mm | 7031 format | Wire thickness mm | Effective working width mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|
| 0063 | 63 | 12.90 (W566) | 0.3 | 8 | 15000 |

## Cup brush, crimped

**Design:** With crimped wire. Suitable for all standard one-hand angle grinders. Thread M14 x 2.0.

**Application:** For use for minor to moderate cleaning and for working with large surfaces. For roughing and matting and for the removal of paint, varnish, burrs, rust, scale, etc.

**Note:** Observe safety recommendations.

**7032** **Hardened steel wire.**

**7034** **Stainless steel wire (1.4310).**

**7029** **Stranded steel wire filaments** for reduced wire breaks and gentle stripping. Especially for fine, satinised surface grinding.

| Order No. | Brush Ø mm | 7032 | 7034 | 7029 | Wire thickness mm | Max. speed RPM min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0060 | 60 | 4.12 | 7.85 | 9.70 | 0.3 | 12500 |
| 0080 | 80 | 10.85 (W566) | 15.05 (W566) | 17.50 (W566) | 0.3 | 8500 |

## Cup brush, knotted

**Design:** Aggressive design with knotted wire. Suitable for all standard one-hand angle grinders, **smooth running.** Thread M14 x 2.0.

**Application:** For aggressive use during heavy-duty cleaning tasks and when working on large surfaces. For the removal of paint, burrs, cinder, rust, scale, etc.

**Note:** Observe safety recommendations.

**7036** **Hardened steel wire.**

**7038** **Stainless steel wire (1.4310).**

| Order No. | Brush Ø mm | 7036 | 7038 | Wire thickness mm | Max. speed RPM min$^{-1}$ |
|---|---|---|---|---|---|
| 0005 | 65 | 6.65 | 12.80 | 0.35 | 12500 |
| 0010 | 65 | 6.25 (W566) | 12.05 (W566) | 0.50 | 12500 |

## Cup brush, knotted, with support ring

**Design:** Aggressive design with knotted wire. With removable support ring, so that the trim can make way when speeds or loads are too high. Suitable for all standard one-hand angle grinders, **smooth running.** Thread M14 x 2.0.

**Application:** For aggressive use during heavy-duty cleaning tasks and when working on large surfaces. For the removal of paint, burrs, cinder, rust, scale, etc.

**Note:** Observe safety recommendations.

**7040** **Hardened steel wire.**

**7042** **Stainless steel wire (1.4310).**

| Order No. | Brush Ø mm | 7040 | 7042 | Wire thickness mm | Max. speed RPM min$^{-1}$ |
|---|---|---|---|---|---|
| 0080 | 80 | 14.25 | – | 0.35 | 8500 |
| 0081 | 80 | 14.00 | 29.70 | 0.50 | 8500 |
| 0082 | 80 | 13.85 | – | 0.80 | 8500 |
| 0100 | 100 | 16.55 | – | 0.35 | 8500 |
| 0101 | 100 | 16.15 | – | 0.50 | 8500 |
| 0102 | 100 | 15.85 (W566) | – (W566) | 0.80 | 8500 |

## Cup brush, knotted

**Design:** Aggressive design with knotted wire. Mounting shaft Ø 6 mm.

**Application:** For aggressive use in flat surface processing. For roughing and for the removal of paint, burrs, cinder, rust, scale, etc.

**Note:** Observe safety recommendations.

| Order No. | Brush Ø mm | 7033 | Wire thickness mm | Max. speed RPM min$^{-1}$ |
|---|---|---|---|---|
| 0065 | 65 | 9.15 (W566) | 0.5 | 6000 |

## End brush, crimped

**Design:** With crimped steel wire. For use on fast-running hand tools. Mounting shaft ∅ 6 mm.

**Application:** For the removal of rust, burr, cinder, scale, paint, excess rubber and other contaminants to hard to access areas and inner areas.

**Note:** Observe safety recommendations.

**7044** **Hardened steel wire.**

**7046** **Stainless steel wire (1.4310).**

| Order No. | Brush ∅ mm | 7044 format | 7046 format | Wire thickness mm | Working length mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|---|
| 0010 | 10 | 2.17 | 3.04 | 0.30 | 20 | 20000 |
| 0017 | 17 | 2.24 | 3.59 | 0.30 | 25 | 18000 |
| 0025 | 25 | 2.91 | 4.59 | 0.30 | 25 | 18000 |
| 0030 | 30 | 3.77 (W566) | 5.60 (W566) | 0.30 | 25 | 15000 |

## De-carb brush, knotted

**Design:** With knotted wire. High cleaning efficiency and particular flexibility; the centrifugal force during operation opens and closes the brush. For use on fast-running hand tools. Mounting shaft ∅ 6 mm.

**Application:** For the removal of rust, burr, cinder, scale, paint, excess rubber and other contaminants to hard to access areas and inner areas. Particularly suitable for inside cleaning of cylindrical drill holes and pipes.

**Note:** Observe safety recommendations.

**7045** **Hardened steel wire.**

**7047** **Stainless steel wire (1.4310).**

| Order No. | Brush ∅ mm | 7045 format | 7047 format | Wire thickness mm | Working length mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|---|
| 0020 | 20 | – | 16.25 | 0.26 | 29 | 20000 |
| 0020 | 20 | 11.10 | – | 0.35 | 29 | 20000 |
| 0023 | 23 | – | 16.85 | 0.26 | 29 | 20000 |
| 0023 | 23 | 11.50 (W566) | – (W566) | 0.35 | 29 | 20000 |

## De-carb brush, knotted

**Design:** Knotting opposite to running direction. Mounting shaft ∅ 6 mm.

**Application:** Particularly flexible single-knot brush, primarily for the processing of inner corners.

**Note:** Observe safety recommendations.

**7136** **Hardened steel wire.**

**7137** **Stainless steel wire (1.4310).**

| Order No. | Brush ∅ mm | 7136 format | 7137 format | Wire thickness mm | Working length mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|---|
| 0005 | 10 | 7.35 | 8.35 | 0.25 | 26 | 15000 |
| 0010 | 10 | 7.25 | 8.05 | 0.35 | 25 | 15000 |
| 0015 | 10 | 7.10 (W566) | 7.95 (W566) | 0.50 | 25 | 15000 |

## Safety De-carb brush

**Design:** Made of plastic-coated, crimped steel wire. **TÜV-inspected, with 10x longer service life.** With plastic bonding, particularly safe as **wire breakage is prevented.** Mounting shaft ∅ 6 mm.

**Application:** For the removal of rust, burr, cinder, scale, paint, excess rubber and other contaminants to hard to access areas and inner areas.

**Note:** Observe safety recommendations.

| Order No. | Brush ∅ mm | 7043 format | Working length mm | Wire thickness mm | Max. speed RPM $min^{-1}$ |
|---|---|---|---|---|---|
| 0024 | 24 | 12.85 (W566) | 23 | 0.3 | 15000 |

## Cutting qualities of tin snips

| | HSS min. 65 HRC | INOX min. 61 HRC | INOX min. 59 HRC | steel min. 56 HRC |
|---|---|---|---|---|
| Quality | | | | |
| Blade service life | •••• | ••• | •• | • |

## Berlin shape tin shears

**Design:** Made of stainless steel, dropped forged. Cutting edges induction hardened (min. 59 HRC), handles in lacquer finish.

**Application:** For straight cuts, in metal sheets up to 1.0 mm and stainless steel sheets up to 0.8 mm.

INOX min. 59 HRC

format professional quality

| Order No. | Length mm | 7060 format Right-hand cutting | Cutting edge length mm |
|---|---|---|---|
| 0250 | 250 | 13.10 | 60 |
| 0300 | 300 | 16.30 (W568) | 79 |

## Pelican tin snips

**Design:** Made of stainless steel, dropped forged. Cutting edges induction hardened (min. 59 HRC), handles in lacquer finish.

**Application:** For long, straight and continuous cuts, in metal sheets up to 1.0 mm and stainless steel sheets up to 0.8 mm.

INOX min. 59 HRC

format professional quality

| Order No. | Length mm | 7066 format Right-hand cutting | Cutting edge length mm |
|---|---|---|---|
| 0300 | 300 | 21.90 | 62 |
| 0350 | 350 | 25.90 (W568) | 65 |

## Punch tin snips

**Design:** Made of stainless steel, dropped forged. Cutting edges induction hardened (min. 59 HRC), handles in lacquer finish.

**Application:** For short, straight cuts as well as figure cuts, in metal sheets up to 1.0 mm and stainless steel sheets up to 0.8 mm.

INOX min. 59 HRC

format professional quality

| Order No. | Length mm | 7073 format Right-hand cutting | 7075 format Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0250 | 250 | 14.50 | 14.50 | 42 |
| 0275 | 275 | 15.60 | 15.60 | 42 |
| 0300 | 300 | 17.45 (W568) | 17.45 (W568) | 47 |

## Punch tin snips, HSS

**Design:** Made of stainless steel, cutting edges made of HSS steel for longer service life, drop forged and tempered, cutting edges additionally induction hardened (min. 65 HRC), handles in lacquer finish.

**Application:** For short, straight cuts as well as figure cuts, in metal sheet and stainless steel sheets up to 1.0 mm.

HSS min. 65 HRC

Erdi

| Order No. | Length mm | 7058 Erdi Right-hand cutting | 7059 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0275 | 275 | 80.00 (W565) | 80.00 (W565) | 42 |

## Ideal tin snips

**Design:** Made of stainless steel, dropped forged. Cutting edges induction hardened (min. 59 HRC), handles in lacquer finish.

**Application:** For straight and continuous cuts as well as figure cuts with large radii as well as for notching in metal sheets up to 1.0 mm and stainless steel sheets up to 0.8 mm.

INOX min. 59 HRC

format professional quality

| Order No. | Length mm | 7062 format Right-hand cutting | 7064 format Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0260 | 260 | 20.00 | 20.00 | 30 |
| 0280 | 280 | 22.50 (W568) | 22.50 (W568) | 34 |

## Ideal tin snips, HSS

**Design:** Made of stainless steel, cutting edges made of HSS steel for longer service life, drop forged and tempered, cutting edges additionally induction hardened (min. 65 HRC), handles in lacquer finish.

**Application:** For straight and continuous cuts as well as figure cuts, in metal sheets and stainless steel sheets up to 1.0 mm.

HSS min. 65 HRC

Erdi

| Order No. | Length mm | 7063 Erdi Right-hand cutting | 7065 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0280 | 280 | 105.50 (W565) | 105.50 (W565) | 34 |

## Figure tin snips, with lever transmission

**Design:** Made of stainless steel, drop-forged and fully tempered cutter head, cutting edges additionally induction hardened (min. 59 HRC), with micro-serration. With stable, ergonomically shaped steel handle, plastic coated and slip guard incl.

**Application:** For short, straight cuts as well as figure cuts with small radii, in metal sheets up to 1.2 mm and stainless steel sheets up to 0.8 mm.

INOX min. 59 HRC

format professional quality

| Order No. | Length mm | 7068 format Right-hand cutting | 7070 format Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0260 | 260 | 24.30 (W568) | 24.30 (W568) | 40 |

## Ideal tin snips, with lever transmission

**Design:** Stainless steel, drop-forged and fully tempered cutter head, cutting edges additionally induction hardened (min. 59 HRC), with micro-serration. Handles with ergonomic plastic coating, slip guards and suspension eye.

**Application:** For straight and continuous cuts as well as figure cuts with small radii in metal sheets up to 1.2 mm and stainless steel sheets up to 0.8 mm.

INOX min. 59 HRC

format professional quality

| Order No. | Length mm | 7082 format Right-hand cutting | 7084 format Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0260 | 260 | 24.40 (W568) | 24.40 (W568) | 32 |

## Ideal tin snips, HSS

**Design:** Stainless steel, cutting edges made of HSS steel for longer service life, drop forged and tempered, cutting edges additionally induction hardened (min. 65 HRC). Handles with ergonomic multi-component plastic handles, slip guards and suspension eye.

**Application:** For straight and continuous cuts as well as figure cuts, in metal sheets and stainless steel sheets up to 1.2 mm.

HSS min. 65 HRC

Erdi

| Order No. | Length mm | 7067 Erdi Right-hand cutting | 7069 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0260 | 260 | 116.50 (W565) | 116.50 (W565) | 33 |

## Ideal tin snips, with lever transmission

**Design: Particularly robust,** stainless steel cutter head, drop-forged and fully tempered, cutting edges induction hardened (min. 59 HRC), with micro-serration. Handles in lacquer finish.

**Application:** For straight and continuous cuts as well as figure cuts with small radii in metal sheets up to 1.5 mm and stainless steel sheets up to 1.0 mm.

INOX min. 59 HRC

format professional quality

| Order No. | Length mm | 7077 format Right-hand cutting | 7079 format Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0240 | 240 | 33.70 (W568) | 33.70 (W568) | 24 |

## Ideal tin snips, with lever transmission, special stainless steel

**Design: Particularly robust,** stainless steel cutter head, drop-forged and fully tempered, cutting edges induction hardened (min. 61 HRC), with micro-serration. Handles in lacquer finish.

**Application:** For short, straight and continuous cuts as well as figure cuts with small radii in metal sheets up to 1.5 mm and stainless steel sheets up to 1.2 mm.

| Order No. | Length mm | 7078 format Right-hand cutting | 7080 format Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0240 | 240 | 38.00 (W568) | 38.00 (W568) | 24 |

## Ideal tin snips, with lever transmission, compact

**Design: Particularly robust and flexible,** cutter head made of special stainless steel, drop-forged and fully tempered, cutting edges additionally induction hardened (min. 61 HRC), **25 % reduced effort** thanks to optimised leverage and cutting edge shape. Handles with ergonomic plastic coating, soft cushion insert and slip guard.

**Application:** For straight and continuous cuts as well as figure cuts, in copper sheets up to 1.2 mm, galvanized steel sheets up to 1.0 mm and stainless steel sheets up to 0.8 mm.

| Order No. | Length mm | 7071 Erdi Right-hand cutting | 7072 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0150 | 180 | 19.40 (W565) | 19.40 (W565) | 20 |

## Ideal tin snips, with lever transmission

**Design:** Cutter head made of special stainless steel, drop-forged, cutting edges additionally induction hardened (min. 61 HRC), **25 % reduced effort** through optimised leverage and cutting edge shape. Handles with ergonomic plastic coating, soft cushion insert and slip guard.

**Application:** For straight and continuous cuts as well as figure cuts, in metal sheets up to 1.2 mm and stainless steel sheets up to 1.0 mm.

| Order No. | Length mm | 7087 Erdi Right-hand cutting | 7089 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0261 | 260 | 36.30 (W565) | 36.30 (W565) | 33 |

## Ideal tin snips, with double lever transmission

NEW

**Design:** Especially robust and compact. Cutter head made of special stainless steel, drop-forged, cutting edges additionally induction hardened (min. 61 HRC), **25 % reduced effort** through optimised leverage and cutting edge shape. The more compact head allows **improved manoeuvrability** and the centrally attached locking bar allows left and right-handed users to operate it easily without changing position. **Better handling** with reduced handle opening angle with almost the same cutting edge length. Furthermore, the studs and the sintered steel insert provide a **robust and smooth joint.** Handles with ergonomic plastic coating, soft cushion insert and slip guard.

**Application:** For straight and continuous cuts as well as figure cuts, in metal sheets up to 1.2 mm and stainless steel sheets up to 1.0 mm. Ideal for use in heating and climate technology and in dry construction.

| Order No. | Length mm | 7061 Erdi Right-hand cutting | 7061 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0230 | 230 | 56.30 | – | 30 |
| 0231 | 230 | – (W565) | 56.30 (W565) | 30 |

## Universal traverse snips Multisnip Master

**Design:** Cutting edges and all metal parts made of stainless steel. With side offset adjustable blades, joint, safety catch, inner, integrated steel spring for automatic blade opening. The fibre-glass reinforced plastic handles are ergonomically shaped, with gentle soft cushion insert, slip guard and suspension eye.

**Application:** For long and straight continuous cuts and in large radii. Cuts various kinds of materials, such as aluminium sheet up to 0.75 mm, copper sheet up to 0.6 mm, steel sheet up to 0.6 mm as well as stainless steel sheet up to 0.4 mm. Also cuts plastics, leather and cardboard effortlessly.

INOX min. 61 HRC

Erdi

| Order No. | Length mm | 7090 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|
| 0235 | 235 | 14.45 (W565) | 50 |

## Traverse tin snips with lever transmission Multisnip Longstyle

**Design:** Cutter head made of stainless steel, dropped forged. With offset, side cutting edges, additionally induction hardened (min. 59 HRC). Bolted joints, secure lock, inner and integrated steel spring for automatic blade opening. Handles with ergonomic plastic coating, soft cushion insert, slip guard and suspension eye.

**Application:** For long and straight continuous cuts and in large radii. For cutting aluminium sheets up to 1.2 mm, copper sheets up to 1.2 mm, and steel hseets and stainless steel sheets up to 1.0 mm. Also cuts thick and tough materials such as leather and plastic.

INOX min. 59 HRC

Erdi

| Order No. | Length mm | 7081 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|
| 0281 | 280 | 32.80 (W565) | 64 |

## Ideal tin snips, with lever transmission

**Design:** Cutter head made of stainless steel, dropped forged and fully tempered. Cutting edges additionally induction hardened (min. 59 HRC), with micro-serration. The extra flat scissors head permits the cutting of small radii.

**Application:** For straight continuous cuts as well as figure cuts, in metal sheets up to 1.2 mm and stainless steel sheets up to 1.0 mm.

INOX min. 59 HRC

Erdi

| Order No. | Length mm | 7086 Erdi Right-hand cutting | 7086 Erdi Left-hand cutting | Cutting edge length mm |
|---|---|---|---|---|
| 0210 | 230 | 26.10 | – | 27 |
| 0211 | 230 | – (W565) | 26.10 (W565) | 27 |

## Steel strip shears

**Design:** Made of high-quality steel, dropped forged. Blades additionaly induction hardened (min 54 HRC). The holder prevents the strip ends from springing up. Handle lacquer finish, with spring and slip guard.

**Application:** For package steel strips up to max. 0.6 mm and 25 mm strip width, easy insertion of the flat bottom part under the crate belt.

steel min. 56 HRC

format professional quality

| Order No. | Length mm | 7088 format Left-hand cutting | Cutting edge length mm |
|---|---|---|---|
| 0225 | 225 | 16.60 (W568) | 31 |

## Steel strip shears

**Design:** Precision cast-iron cutter. Cutting edges induction hardened (min. 56 HRC). The holder made of polymer material holds down the strip and prevents it from springing up when cutting, Twice the leverage for reduced effort and better cutting performance. Ergonomic handles with soft insert and plastic coating.

**Application:** For package steel strips up to max. 1 mm and 32 mm strip width, easy insertion of the flat bottom part under the crate belt.

Erdi

| Order No. | Length mm | 7074 Erdi | Cutting edge length mm |
|---|---|---|---|
| 0260 | 260 | 76.00 (W565) | 38 |

## Combination shears

**Design:** Blades made of stainless steel. Left-hand cutting. The lower cutting edge is serrated, the upper cutting edge is smooth. With spring for automatic opening and locking bar.

**Application:** For cutting paper, cardboard, fabric, sheet metal, leather, rope, etc.

**7087** **Handles with plastic sleeves.**

**7091** **Handles with ergonomic 2-component-coating.**

| Order No. | Cutting edge | 7087 format | 7091 Erdi | Length mm | Cutting edge length mm 7087 | 7091 |
|---|---|---|---|---|---|---|
| 0190 | Straight | 7.60 | 8.90 | 190 | 42 | 42 |
| 0191 | Angled | 8.05 (W568) | 9.45 (W565) | 190 | 38 | 36 |

INOX

7087 0190 format professional quality

7087 0191

7091 0190 Erdi

7091 0191

## Universal shears

**Design:** Blades made of stainless steel, lower cutting edge with wire guide, upper cutting edge smooth, with wire stripping blade, spring for automatic opening and locking bar. Handles with ergonomic plastic coating and soft fabric inserts.

**Application:** For cutting all materials up to thin sheet metal made of copper and aluminium as well as flower wire in the wire guide. For stripping cables 1.0 mm² and 1.5 mm². Not for steel, hardened or naturally hard materials.

| Order No. | Length mm | 7100 format | Cutting edge length mm |
|---|---|---|---|
| 0190 | 190 | 12.05 (W568) | 40 |

INOX

format professional quality

## Scissors for thin sheets

**Design:** Made of high-quality steel, nickel-plated.

**Application:** For cutting sheet metal.

Erdi

| Order No. | Design | 7101 Erdi | Length mm |
|---|---|---|---|
| 0006 | Straight cutting edges, open grip | 6.40 | 180 |
| 0016 | Straight cutting edges, with grips | 6.90 | 180 |
| 0021 | Curved cutting edges, with grips | 7.25 (W565) | 175 |

7101 0006

7101 0016

7101 0021

## Paper scissors

NEW

**Design:** Made of stainless steel with smooth cutting edges. Handles with one long and one round handle eye, as well as plastic sleeves.

| Order No. | Length mm | 708A | Cutting edge length mm |
|---|---|---|---|
| 0200 | 200 | 9.05 (W568) | 105 |

INOX

## Solid steel work shears

**Design:** Robust design with polished, straight edges. Handles with one long and one round handle eye, painted black.

| Order No. | Length mm | 7094 format | Cutting edge length mm |
|---|---|---|---|
| 0200 | 200 | 9.35 | 80 |
| 0250 | 250 | 13.00 (W568) | 90 |

format professional quality

## Work shears with plastic handle

**Design:** Robust, made of stainless steel with polished cutting edges. Handles with plastic covers.

INOX

**7093** 0110 + 0155 NEW — **Smooth edge, without two round handle eyes.**

7093 0110+0155

**7093** 0215–0265 — **Smooth-cutting, with one round and one long handle eye.**

7093 0215–0265

**7093** 0200 — **Serrated edge, with one round and one long handle eye.**

7093 0200

| Order No. | Length mm | 7093 | Cutting edge length mm |
|---|---|---|---|
| 0110 | 110 | 6.30 | 45 |
| 0155 | 155 | 8.35 | 85 |
| 0215 | 215 | 10.50 | 75 |
| 0240 | 245 | 12.85 | 100 |
| 0265 | 265 | 15.60 | 120 |
| 0200 | 215 | 10.40 (W568) | 75 |

## Work shears for aramid fibres

**Design:** Robust design with hardened, fine-ground cutting edges (62 HRC) and screwed joint. Handles with one long and one round handle eye, as well as shockproof plastic sleeves.

**Application:** Especially for cutting aramid fibres such as KEVLAR®.

| Order No. | Length mm | 7092 | Cutting edge length mm |
|---|---|---|---|
| 0240 | 240 | 32.70 (W568) | 100 |

## Multi-purpose shears

**Design:** Stainless steel cutting edges. Screw head and nut drop-forged, so no annoying protrusions. The screws are adjustable and can be secured by means of a lock-nut. Handle eyes with ergonomic soft fabric inserts.

INOX

Erdi

**7107** — **With two round grips.**

7107

**7106** — **With one long and one round handle eye.**

7106

| Order No. | Length mm | 7107 Erdi | 7106 Erdi | Cutting edge length mm |
|---|---|---|---|---|
| 0160 | 160 | 5.50 | – | 70 |
| 0180 | 180 | 6.45 | – | 80 |
| 0200 | 200 | – | 7.35 | 80 |
| 0250 | 250 | – (W565) | 9.95 (W565) | 105 |

## Telephone and cable shears

**Design:** Hardened cutting edges made of stainless steel (56 HRC), with two round grips. Grips with ergonomic soft fabric inserts.

**Application:** For the cutting of fine-wired conductors up to 16 mm².

INOX

| Order No. | Length mm | 7131 | Cutting edge length mm |
|---|---|---|---|
| 0140 | 140 | 9.90 (W568) | 45 |

## Multi-purpose shears

**Design:** Robust design with nickel-plated, straight edges. Nickel-plated handles.

**7098** 0155 — **With two round grips.**

7098 0155

**7098** 0180 — **With one long and one round handle eye.**

7098 0180

| Order No. | Length mm | 7098 | Cutting edge length mm |
|---|---|---|---|
| 0155 | 150 | 7.55 | 70 |
| 0180 | 180 | 8.60 (W573) | 80 |

## Universal shears

NEW

**Design:** Replacable stainless steel cutting edges. Handles with plastic covers, spring clip and lock bar.

| Order No. | Length mm | 7113 |
|---|---|---|
| 0210 | 210 | 27.70 (W568) |

## Universal shears

**Design:** Body made of sheet metal, chrome plated, blades made of special steel, CNC ground, anti-corrosion and non-stick coating, anvil made of zinc die casting. The original Löwe principle stands for a straight cut against a fixed anvil. Extreme resilience maintained even in sub-zero temperatures. Handles plastic-coated, slip guard.

**Application:** For cutting wood, plastic, rubber, hoses, etc.

| Order No. | Length mm | 7097 ORIGINAL LÖWE | 7097 ORIGINAL LÖWE | Cutting length mm |
|---|---|---|---|---|
| 0005 | 200 | 30.70 | – | 40 |
| 0100 | Spare blade | – (W573) | 11.40 (W573) | – |

## Mitre shears

**Design:** Body made of sheet metal, chrome plated, blades made of special steel, CNC ground, non-corrosive and non-stick coating, with **two end stops made of zinc die casting of 45° and markings for 15°, 30° and 90°.** The original Löwe principle stands for a straight cut against a fixed anvil. Handles plastic coated and slip guard.

**Application:** For angle cutting of strips and profiles made of plastic, rubber, wood, etc.

| Order No. | Length mm | 7098 ORIGINAL LÖWE | 7098 ORIGINAL LÖWE | Cutting length mm |
|---|---|---|---|---|
| 0005 | 210 | 34.20 | – | 50 |
| 0100 | Spare blade | – (W573) | 11.75 (W573) | – |

## Cable canal shears

**Design:** Body made of sheet metal, chrome-plated, blades made of special steel, CNC ground, non-corrosive and non-stick coating, with **two adjustable and removable end stops made of zinc die casting of 90°.** The original Löwe principle stands for a straight cut against a fixed anvil. Handles plastic coated and slip guard.

**Application:** For right-angled cutting in hard, flat materials made of plastic, e.g. cable and wiring channels, as well as facade, window construction and general profiles

| Order No. | Length mm | 7098 ORIGINAL LÖWE | 7098 ORIGINAL LÖWE | Cutting length mm |
|---|---|---|---|---|
| 0010 | 245 | 52.20 | – | 75 |
| 0110 | Spare blade | – (W573) | 12.85 (W573) | – |

format professional quality

Tube shears

Tube and pipe shears

## Tube and pipe shears

For efficient and clean cutting of hoses and plastic pipes.
You will find our selected range from 📖 7/33.

## Profile shears

**Design:** Body made of sheet metal, chrome plated, blades made of special steel, CNC ground, anti-corrosion and non-stick coating, anvil made of zinc die casting. The original Löwe principle stands for a straight cut against a fixed anvil. Handles plastic-coated, slip guard.

**Application:** For easy and clean cutting of plastic profiles, hoses and tubes.

| Order No. | Length mm | 7099 LÖWE | 7098 LÖWE | 7099 LÖWE | Plastic profiles mm | Pipe ∅ mm |
|---|---|---|---|---|---|---|
| 0010 | 175 | 25.80 | – | – | 15 x 15 | 15 |
| 0100 | Spare blade 175 | – | 11.75 | – | – | – |
| 0005 | 215 | 36.10 | – | – | 25 x 45 | 32 |
| 0100 | Spare blade 215 | – (W573) | – (W573) | 7.85 (W573) | – | – |

## Guillotine

**Design:** Robust frame made of steel, lacquered, blades made of special steel, CNC ground, anti-corrosion and non-stick coating, with a 45° and a 90° pair of stops, securely lockable. Lever with ergonomically shaped handle and plastic handle covers.

**Application:** For quiet, burr-free and dust-free cutting of large strips made of wood, plastic, rubber etc.

| Order No. | Length mm | 7099 LÖWE | 7099 LÖWE | Cutting length mm |
|---|---|---|---|---|
| 0015 | 580 | 183.00 | – | 125 |
| 0110 | Spare blade | – (W573) | 52.90 (W573) | – |

## Revolving hole punch

**Design:** Pliers body made of high-strength special steel with revolving wheel and locking function. The six exchangeable tubes are mounted in the wheel.

**Application:** For punching soft materials such as leather, cardboard, rubber, material, etc.

**7102** **Nickel-plated.**

7102 format professional quality

**7127** **Red powder-coated.**

7127 KNIPEX

| Order No. | Hole punch ∅ mm | 7102 format | 7127 KNIPEX | Length mm |
|---|---|---|---|---|
| 0225 | 2; 2.5; 3; 3.5; 4; 4.5 | 9.10 | – | 225 |
| 0220 | 2; 2.5; 3; 3.5; 4; 5 | – (W568) | 12.95 (W525) | 220 |

## Lever revolving hole punch

**Design:** Pliers body made of high-strength special steel, nickel-plated, with revolving wheel and locking function. With hole diameter indicator and ergonomically shaped plastic handles. The six exchangeable tubes are mounted in the wheel.

**Application:** For punching soft materials such as leather, cardboard, rubber, material, etc.

| Order No. | Hole punch ∅ mm | 7108 format | Length mm |
|---|---|---|---|
| 0250 | 2; 2.5; 3; 3.5; 4; 4.5 | 19.75 (W568) | 250 |

## Sheet metal and round steel shears

**Design:** Body made of high quality steel with hardened insert blades, adjustable hold-down clamp for precise cutting. The easy sheet feed facilitates cutting and edging of sheets in unlimited lengths. With hand lever protection and ergonomic handle for optimum use to protect against accidents. Secure fixing with perforated feet possible: Hole spacing 72 mm, hole Ø 12 mm.

**Application:** For cutting and seaming sheet, flat and round steel, especially for use in assembly work and in training shops, metalworking shops and installations.

| Order No. | Knife length mm | 7110 format | Cutting capacity for sheet steel up to mm | Cutting capacity flat steel up to mm | Cutting capacity round steel up to mm | Weight kg |
|---|---|---|---|---|---|---|
| 0120 | 120 | 127.00 | 4 | 50 x 4 | 11 | 8 |
| 0150 | 150 | 145.00 | 5 | 50 x 5 | 11 | 10 |
| 0180 | 180 | 204.50 | 6 | 70 x 6 | 13 | 18 |
| 0300 | 300 | 436.00 | 5 | 70 x 5 | 13 | 25 |

(W568)

## Spare parts for sheet metal and round steel scissors

| Order No. | Design | 7115 |
|---|---|---|
| 0006 | Upper blade 120 mm | 41.80 |
| 0011 | Lower blade 120 mm | 25.50 |
| 0016 | Circular blade 120 mm | 9.05 |
| 0021 | Torsion spring for 120 mm tin snips | 9.05 |
| 0026 | Hand lever for 120 – 150 mm tin snips | 23.60 |
| 0031 | Upper blade 150 mm | 53.50 |
| 0036 | Lower blade 150 mm | 30.90 |
| 0041 | Circular blade 150 mm | 9.05 |
| 0046 | Torsion spring for 150 mm tin snips | 10.05 |
| 0051 | Upper blade 180 mm | 65.40 |

(W568)

| Order No. | Design | 7115 |
|---|---|---|
| 0056 | Lower blade 180 mm | 34.60 |
| 0061 | Circular blade 180 mm | 10.85 |
| 0066 | Torsion spring for 180 mm tin snips | 16.35 |
| 0071 | Hand lever for 180–300 mm tin snips | 34.60 |
| 0076 | Upper blade 300 mm | 94.60 |
| 0081 | Lower blade 300 mm | 50.90 |
| 0086 | Circular blade 300 mm | 30.90 |
| 0091 | Torsion spring for 300 mm tin snips | 14.10 |
| 0096 | Wing screw for 120–300 mm tin snips | 7.40 |

(W568)

## Hand-lever press

**Design:** Spindle hardened and ground, with long bar. T-groove acc. to DIN 650 milled in the centre, adjustable working height. Hand lever with spring return.

**Hand presses with gear racks:** Constant pressure during the work process, lift height adjustment with stop screw.

**Hand presses with knee lever:** Max. pressure with extended knee lever.

**Application:** For efficient pressing, riveting, pushing, punching, etc.

| Order No. | | 0150 | 0250 | 0500 | 0800 | 1701 | 2601 |
|---|---|---|---|---|---|---|---|
| **Power transmission** | | **Gear rack** | **Gear rack** | **Knee lever** | **Knee lever** | **Knee lever** | **Knee lever** |
| **7114** BERG & SCHMID PRESSENTECHNIK | | **281.00** | **384.00** | **269.50** | **367.00** | **807.50** | **1208.00** |
| Model | | HZ 150 | HZ 250 | HK 500 | HK 800 | HK 1700 | HK 2600 |
| Pressure | kN | 1.5 | 2.5 | 5 | 8 | 17 | 26 |
| Working height | mm | 75–170 | 80–220 | 60–150 | 50–200 | 75–180 | 70–250 |
| Stroke | mm | 40 | 45 | 40 | 40 | 60 | 60 |
| Jaw protection | mm | 70 | 90 | 73 | 90 | 105 | 110 |
| Spindle Ø | mm | 20 | 20 | 20 | 24 | 25 | 30 |
| Spindle hole | mm | 10 H 7 | 10 H 7 | 10 H 7 | 10 H 7 | 10 H 7 | 10 H 7 |
| Spindle guide | mm | 50 | 90 | 50 | 75 | 110 | 120 |
| Slot width | mm | 10 | 12 | 10 | 12 | 14 | 14 |
| Stand height | mm | 290 | 390 | 290 | 410 | 415 | 475 |
| Table size | mm | 115 x 70 | 120 x 160 | 115 x 70 | 120 x 160 | 170 x 130 | 190 x 140 |
| Area | mm | 115 x 175 | 160 x 230 | 115 x 175 | 160 x 230 | 260 x 130 | 310 x 140 |
| Weight | kg | 9.5 | 22 | 10 | 22 | 35 | 46 |

(W571)

## Screw hole punch

**Design:** Made of special tool steel. Activated via spanner or hydraulic tools. Supplied incl. die, stamp, pressure screw.

**Application:** For punching holes in various materials such as stainless steel, copper, brass, aluminium and sheet iron as well as plastic. Particularly suitable for working in difficult to reach areas, such as switching cabinets, instruments panels, etc.

**Note:** Lubricate pressure screw and die before working. The predrilled hole must be ca. 1 mm larger than the pressure screw.

format professional quality

**7116** Without ball bearings.

**7117** With ball bearing.

7116

7117

| Order No. | Punch diameter mm | 7116 format | 7117 format | Punch diameter PG mm | Screw size mm | Sheet thickness max. mm |
|---|---|---|---|---|---|---|
| 0012 | 12.7 | 13.20 | 20.90 | 7.0 | M6 x 30 | 1.5 |
| 0015 | 15.2 | 13.60 | 21.10 | 9.0 | M8 x 1 x 35 | 1.5 |
| 0016 | 16.0 | 13.70 | 18.65 | – | M10 x 1 x 45 | 2.0 |
| 0018 | 18.6 | 14.90 | 20.00 | 11.0 | M10 x 1 x 45 | 2.0 |
| 0020 | 20.0 | 15.70 | 21.30 | – | M10 x 1 x 45 | 2.0 |
| 0021 | 20.4 | 16.00 | 20.80 | 13.5 | M10 x 1 x 45 | 2.0 |
| 0022 | 22.0 | 17.20 | 21.00 | – | M10 x 1 x 45 | 2.0 |
| 0023 | 22.5 | 17.40 | 21.80 | 16.0 | M10 x 1 x 45 | 2.0 |
| 0025 | 25.0 | 19.90 | 23.90 | – | M10 x 1 x 45 | 2.0 |
| 0028 | 28.0 | 20.40 | 23.90 | – | M10 x 1 x 55 | 2.0 |
| 0029 | 28.3 | 20.40 | 23.70 | 21.0 | M10 x 1 x 55 | 2.0 |
| 0030 | 30.0 | 20.60 | 23.90 | – | M10 x 1 x 55 | 2.0 |
| 0032 | 32.0 | 20.70 | 23.90 | – | M10 x 1 x 55 | 2.0 |
| 0035 | 35.0 | 23.80 | 26.70 | – | M10 x 1 x 55 | 2.0 |
| 0037 | 37.0 | 26.50 | 29.70 | 29.0 | M10 x 1 x 55 | 2.0 |
| 0038 | 38.0 | 27.00 | 29.00 | – | M10 x 1 x 55 | 2.0 |
| 0040 | 40.0 | 35.80 | 36.10 | – | M12 x 1.5 x 70 | 2.0 |
| 0047 | 47.0 | 39.90 | 42.20 | 36.0 | M12 x 1.5 x 70 | 2.0 |
| 0051 | 51.0 | 47.40 | 49.10 | – | M16 x 1.5 x 80 | 3.0 |
| 0054 | 54.0 | 52.40 | 52.10 | 42.0 | M16 x 1.5 x 80 | 3.0 |
| 0060 | 60.0 | 60.90 (W570) | 63.30 (W570) | 48.0 | M16 x 1.5 x 80 | 3.0 |

## Screw for screw for hole punch NEW

**7118** 0600–1600 Without ball bearing.

| Order No. | Screw size mm | 7118 format |
|---|---|---|
| 0600 | M8 x 1.0 x 40 | 1.16 |
| 0800 | M10 x 1.0 x 45 | 1.16 |
| 1003 | M12 x 1.5 x 55 | 1.88 |
| 1600 | M16 x 1.5 x 60 | 4.52 (W570) |

**7118** 1000–1603 With ball bearing.

| Order No. | Screw size mm | 7118 format |
|---|---|---|
| 1000 | M10 x 1.0 x 50 | 9.85 |
| 1200 | M12 x 1.5 x 60 | 11.00 |
| 1603 | M16 x 1.5 x 70 | 14.10 (W570) |

## Screw hole punch set (hole puncher) NEW

format professional quality

**Design:** Supplied in plastic cassette.

| Order No. | Design | 7117 format | Set contents |
|---|---|---|---|
| 1000 | 4-piece | 92.40 (W570) | Screw hole punch Ø 28.3; 32; 35 mm<br>TiAlN sheet drill bit 1/4" Ø 4–20 mm |

## Wad punches

**Design:** DIN 7200 A, made of special tool steel, drop-forged, with finely polished tip and powder-coated shaft. Hardened and tempered cutting edge, slightly conical interior for simple removal of cut-out.

**Application:** For producing seals and sealing rings made of card, leather and rubber, etc.

format professional quality

| Order No. | Ø mm | 7120 format |
|---|---|---|
| 0002 | 2 | 3.43 |
| 0003 | 3 | 3.43 |
| 0004 | 4 | 3.43 |
| 0005 | 5 | 3.43 |
| 0006 | 6 | 3.43 |
| 0007 | 7 | 3.54 |
| 0008 | 8 | 3.54 |
| 0009 | 9 | 3.66 |
| 0010 | 10 | 4.08 |
| 0011 | 11 | 4.52 |
| 0012 | 12 | 4.83 |
| 0013 | 13 | 5.70 |
| 0014 | 14 | 5.90 |
| 0015 | 15 | 6.40 |

(W572)

| Order No. | Ø mm | 7120 format |
|---|---|---|
| 0016 | 16 | 7.10 |
| 0017 | 17 | 7.45 |
| 0018 | 18 | 7.90 |
| 0019 | 19 | 8.30 |
| 0020 | 20 | 9.25 |
| 0022 | 22 | 10.50 |
| 0024 | 24 | 12.60 |
| 0025 | 25 | 13.45 |
| 0026 | 26 | 14.45 |
| 0028 | 28 | 14.95 |
| 0030 | 30 | 16.70 |
| 0032 | 32 | 20.40 |
| 0035 | 35 | 21.50 |
| 0040 | 40 | 30.10 |

(W572)

## Wad punch set

**Design:** Supplied in roll-up case.

| Order No. | Set content Ø mm | 7121 format | Number of hole punches Piece | Increasing mm |
|---|---|---|---|---|
| 0010 | 2–20 | 97.70 | 19 | 1 |
| 0020 | 2–30 | 118.00 | 15 | 2 |

(W572)

## Hole punch set

**Design:** Made of high-strength special steel, ground and finely polished hole punch inserts. For cutting soft materials (rubber, leather, felt, foam). Reinforced materials (metal sheet, glass fibre) up to 0.3 can also be punched. In sturdy metal case.

mob PEDDINGHAUS

| Order No. | Design | 7126 mob | Set contents |
|---|---|---|---|
| 0020 | 11-piece | 68.60 | Punch from 3 to 20 mm:<br>Thread inserts 3; 4; 6; 8; 10 mm<br>Stick-on inserts 12; 14; 16; 18; 20 mm<br>Holder |
| 0030 | 16-piece | 105.00 | Punch from 3 to 30 mm:<br>Thread inserts 3; 4; 6; 8; 10 mm<br>Stick-on inserts 12; 14; 16; 18; 20; 22; 24; 26; 28; 30 mm<br>Holder |
| 0040 | 21-piece | 170.50 | Punch from 3 to 40 mm:<br>Thread inserts 3; 4; 6; 8; 10 mm<br>Stick-on inserts 12; 14; 16; 18; 20; 22; 24; 26; 28; 30, 32; 34; 36; 38; 40 mm<br>Block holders |
| 0050 | 26-piece | 225.00 | Punch from 3 to 50 mm:<br>Thread inserts 3; 4; 6; 8; 10 mm<br>Stick-on inserts 12; 14; 16; 18; 20; 22; 24; 26; 28; 30, 32; 34; 36; 38; 40; 42; 44; 46; 48; 50 mm<br>Block holders |
| 0060 | 33-piece | 396.00 | Punch from 3 to 60 mm:<br>Thread inserts 3; 4; 6; 8; 10 mm<br>Stick-on inserts 12; 14; 16; 18; 20; 22; 24; 26; 28; 30; 32; 34; 36; 38; 40, 42; 44; 46; 48; 50; 52; 54; 56; 58; 60 mm<br>Block holders 11 to 60 mm<br>Holders 3 to 30 mm<br>Circle cutter 500 mm |

(W518)

7126 0020

7126 0030

7126 0040

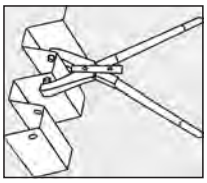
7126 0050

7126 0060

## Trapezoidal sheet punch plier

**Design:** With replaceable, tempered punch with pressed-on ejector spring. The depth stop can be adjusted in the 35 to 105 mm range.

**Application:** For quick and easy punching of trapezoidal metal sheet up to 1.2 mm thick.



| Order No. | Length mm | 7111 ALARM | Hole Ø mm | Cut width mm |
|---|---|---|---|---|
| 0700 | 700 | 296.50 (W508) | 10 | 10–100 |

## Disc cutter

**Design:** With plastic handles and millimetre scale.

**Application:** For cutting discs and sealing rings made of rubber, leather and paper.

| Order No. | For disc Ø up to | 7123 | Number of blades |
|---|---|---|---|
| 0200 | 200 mm | 46.90 | 2 |
| 0400 | 400 mm | 52.70 | 2 |
| 0600 | 600 mm | 60.70 | 2 |
| 1000 | Spare blade | 10.60 | – |
| 1010 | Spare blade holder without blade | 10.15 (W508) | – |

## Welting pliers

**Design:** Made of high-quality steel, dropped forged, trade, fully black powder-coated.

| Order No. | Shape | 7124 format | Jaw width mm | Length mm |
|---|---|---|---|---|
| 0005 | Straight | 32.00 | 60 | 270 |
| 0010 | 45° bent | 36.10 | 60 | 270 |
| 0015 | 90° bent | 39.00 (W572) | 60 | 270 |

7124 0005

7124 0010

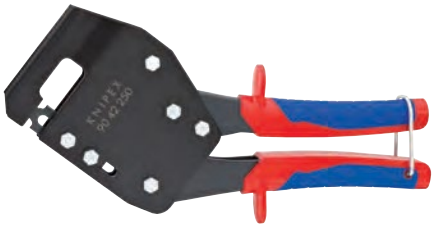
7124 0015

## Profile compound pliers for single-handed use

**Design:** Made of special steel, rolled, oil hardened and tempered, **head bronzed,** handles coated with multi-component plastic.

**Application:** For creating fixed connections of all profile sheets used for partition walls and suspended ceilings, such as U- and C-profiles.

| Order No. | Capacity mm | 7125 KNIPEX | Length mm |
|---|---|---|---|
| 0250 | Max. 1.2 (2 x 0.6) | 88.90 (W525) | 250 |



## Pipe pliers

**Design: DIN 5234, model A.** Swedish model, made of chrome-vanadium steel, dropped forged. With undetachable adjusting nut.

**7140** Head angled at 90°, induction hardened in the jaw area. Powder-coated, open end ground.

**7141** Head angled by 85°, self-locking thanks to toothing set in direction of rotation. Fully tempered, toothing additionally flame hardened. Enamelled.

| Order No. | For pipes inch | 7140 format | 7141 GEDORE | Length mm | Jaw span mm |
|---|---|---|---|---|---|
| 0010 | 1 | 19.20 | 43.10 | 320 | 44 |
| 0015 | 1.1/2 | 25.30 | 65.00 | 430 | 62 |
| 0020 | 2 | 39.00 | 99.60 | 580 | 76 |
| 0030 | 3 | 77.10 | 128.00 | 670 | 105 |
| 0040 | 4 | – (W512) | 196.50 (W522) | 760 | 130 |

7140 format professional quality

7141 GEDORE WERKZEUGE FÜRS LEBEN

## Elbow pipe pliers

**Design: DIN 5234, model B,** made of chrome-vanadium steel, dropped forged. With undetachable adjusting nut.

**7148** Head angled at 45°, induction hardened in the jaw area. Powder-coated, open end ground.

**7145** Head angled by 52°, self-locking thanks to toothing set in direction of rotation. Fully tempered, toothing additionally flame hardened. Enamelled.

| Order No. | For pipes inch | 7148 format | 7145 GEDORE | Length mm | Jaw span mm |
|---|---|---|---|---|---|
| 0010 | 1 | 19.20 | 44.50 | 320 | 44 |
| 0015 | 1.1/2 | 25.30 | 63.40 | 430 | 62 |
| 0020 | 2 | 39.00 (W512) | 93.10 (W522) | 580 | 76 |

7148 format professional quality

7145 GEDORE WERKZEUGE FÜRS LEBEN

## Elbow pipe pliers

**Design: DIN 5234, model C,** made of chrome-vanadium steel, dropped forged, ground open end. Because of the special jaw shape, the workpiece is firmly held from three sides simultaneously. With undetachable adjusting nut.

**7152** Induction hardened in the jaw area. Powder-coated.

**7153** **Eck-Schwede-snap® 100.** Self-locking thanks to toothing set in direction of rotation. Fully tempered, toothing additionally flame hardened. Enamelled.

| Order No. | For pipes inch | 7152 format | 7153 GEDORE | Length mm | Jaw span mm |
|---|---|---|---|---|---|
| 0005 | 1/2 | – | 43.80 | 245 | 35 |
| 0010 | 1 | 19.10 | 60.00 | 320 | 48 |
| 0015 | 1.1/2 | 24.00 | 75.30 | 420 | 60 |
| 0020 | 2 | 37.40 | 106.00 | 550 | 80 |
| 0030 | 3 | 62.90 (W512) | 161.50 (W522) | 630 | 110 |

7152 format professional quality

7153 GEDORE WERKZEUGE FÜRS LEBEN

## Elbow pipe wrench set

**Design: DIN 5234, model C,** made of chrome-vanadium steel, dropped forged, induction hardened in jaw area. Ground jaw. Because of the special jaw shape, the workpiece is firmly held from three sides simultaneously. With undetachable adjusting nut.

| Order No. | Design | 7152 format | Set contents inch |
|---|---|---|---|
| 0500 | 3-piece | 78.80 (W512) | 1; 1.1/2; 2 |

format professional quality

## Chain pipe wrench

**Design:** Made of chrome-vanadium steel, drop-forged and durable epoxy powder coating. Head polished with special serration, chain made of special steel.

**Application:** Ideal for large screw connections. With double-sided tooth surfaces that can also be used in both directions without having to replug.

ROTHENBERGER

| Order No. | For pipes mm | 7143 ROTHENBERGER | Length mm |
|---|---|---|---|
| 0005 | 115 | 67.95 (W593) | 300 |

## Heavy duty chain pipe wrench

**Design:** Robust design for heavy-duty assembly work. Made of chrome-vanadium steel, drop-forged and durable epoxy powder coating. **Chain made of tempered special steel.**

**Application:** Proven for use in pipeline construction, double-sided locking for ratchet-style working in both directions, quick opening.

ROTHENBERGER

| Order No. | For pipes mm | 7143 ROTHENBERGER | Length mm |
|---|---|---|---|
| 0510 | 73 | 200.95 | 690 |
| 0515 | 114 | 259.95 | 940 |
| 0520 | 168 | 369.95 | 1120 |
| 0525 | 220 | 510.00 (W593) | 1280 |

## Strap and fitting wrench

**Design:** Made of special aluminium alloy, with exchangeable nylon strap.

**Application:** For gentle work on chrome fittings.

ROTHENBERGER

| Order No. | For pipes mm | 7147 ROTHENBERGER | Length mm |
|---|---|---|---|
| 0007 | 220 | 67.95 | 300 |
| 0012 | Spare strap | 25.45 (W592) | – |

## Fitting wrench

**Design:** Full metal forged and bronzed, **with roll adjustment,** lever transmission and smooth jaws to protect fittings and sensitive surfaces.

ROTHENBERGER

| Order No. | Jaw span mm | 7155 ROTHENBERGER | Clamping depth mm | Length mm |
|---|---|---|---|---|
| 0005 | 65 | 56.95 (W597) | 45 | 275 |

## Waterpump pliers

**Design: DIN ISO 5743.** Made of chromium-vanadium electric steel, hardened and tempered in oil. **Chrome-plated head,** parallel guided, smooth gripping jaws, set using the button, can be adjusted using one hand. Work using the ratchet principle with extremely high clamping force, **10 times stronger than hand force.**

**Application:** Ideally suited to gripping, holding, pressing and bending items, also suitable for the gentle assembly of fine-surface fittings thanks to the play-free surface pressing, also suitable for breaking tiles.

KNIPEX

**7156** **Plastic-covered handles.**

**7157** **Handles with multi-component plastic covers.**

7156

7157

| Order No. | Length mm | 7156 KNIPEX | 7157 KNIPEX | Fine adjustment | For nuts mm | For pipes inch |
|---|---|---|---|---|---|---|
| 0125 | 125 | 34.50 | – | 11-fold | 23 | 7/8 |
| 0150 | 150 | 38.90 | 41.90 | 14-fold | 27 | 1 |
| 0180 | 180 | 39.90 | 42.30 | 13-fold | 35 | 1.3/8 |
| 0250 | 250 | 45.70 | 49.00 | 17-fold | 46 | 1.3/4 |
| 0300 | 300 | 55.20 | – | 22-fold | 60 | 2.3/8 |
| 0400 | 400 | 98.40 (W525) | – (W525) | 25-fold | 85 | 3.3/8 |

format professional quality

📖 5/91

📖 5/90

## Water pump pliers

Handles with slim plastic coating or comfortable multi-component plastic covers, with quick adjustment, extra slim head or in extra large design: The appropriate water pump pliers can be found from 📖 5/90.



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## VDE waterpump pliers

**Design:** Made of chrome-vanadium electric steel, oil hardened and tempered. **Nickel-plated head,** parallel guided, smooth gripping jaws. With scale for setting the gripping area away from the workpiece. Work using the ratchet principle with extremely high clamping force, **10 times stronger than hand force.** Handles **dip-insulated up to 1000 V, in acc. with IEC 60900, DIN EN 60900, VDE 0682/Part 201.**

**Application:** Exceptionally well suited for gripping, holding, pressing and bending of workpieces, with scale for setting the gripping area away from the workpiece.

1000 V

KNIPEX

| Order No. | Length mm | 7145 KNIPEX | For nuts mm | For pipes inch |
|---|---|---|---|---|
| 0250 | 250 | 57.60 (W525) | 46 | 1.3/4 |

## Siphon gripping tongs

NEW

KNIPEX

**Design:** Made of chrome-vanadium steel, chrome-plated, joint 4-fold adjustable, with replaceable plastic jaws.

**Application:** For safe and gentle gripping of valuable fittings without damaging polished surfaces.

**716A** **With serrated gripping surfaces.**

**716B** **With replaceable plastic jaws.**

**0250**

**716A**

**716B**

| Order No. | Capacity mm | 716A KNIPEX | 716B KNIPEX | Fine adjustment | Length mm |
|---|---|---|---|---|---|
| 0250 | 25–80 | 29.10 | – | 25-fold | 250 |
| 0250 | 10–75 | – | 40.30 | 25-fold | 250 |
| 1000 | Spare pair of jaws | – (W525) | 9.50 (W525) | – | – |

## Adjustable basin nut spanner

**Design:** Made of chrome-vanadium steel, drop-forged and durable epoxy powder coating. With swivel claw for right and left-hand use.

format professional quality

| Order No. | Length mm | 7162 format | For nuts mm |
|---|---|---|---|
| 0235 | 235 | 25.40 (W574) | Up to 32 |

## Service wrench for jet controller

NEW

NEOPERL flow, stop and go

**Design:** Robust, made of metal.

**Application:** For connecting and unscrewing jet controllers in sizes M18 x 1; M22 x 1; M24 x 1; M28 x 1 and CACHÉ® jet controllers in sizes TT; TJ, JR; STD without causing damage.

| Order No. | Dimensions mm | 7186 NEOPERL |
|---|---|---|
| 0005 | 92 x 92 | 10.80 (W523) |

## Installation wrench

ROTHENBERGER

**Design:** Made of chrome-vanadium steel, chrome plated, centre piece with inner thread for for hanger bolts M10. The integrated valve seat ensures easy removal of the spanner from the hanger screw.

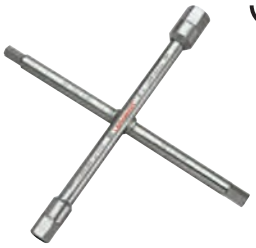
**Application:** For express and hanger bolts, for sink attachment and corner valve assembly.

| Order No. | Wrench size mm | 7167 ROTHENBERGER | Length mm |
|---|---|---|---|
| 0005 | 17 x 19 | 24.95 (W592) | 220 |

## Sanitary wheel wrench

**Design:** Made of chrome-vanadium steel, with external hex 3/8" ; 1/2" ; 3/4" and 1" for extension piece as well as inner thread M10 and M6 for hanger bolts.

**Application:** For the assembly and disassembly of heater valves and lockshield as well as for metal washbasins.



ROTHENBERGER

| Order No. | Dimensions mm | 7173 ROTHENBERGER |
|---|---|---|
| 0005 | 200 x 200 | 33.45 (W591) |

## Tap re-seating tool

**Design:** Thread mount with adjustable milling pressure by means of spring and setting screw. The milling cutters are replaceable.

**Application:** For the precise remilling of the valve seat in leaking water taps.

**Supplied:** Cylindrical graduated mounting thread for tap valve 3/8"; 1/2"; 3/4" and 1", 3 seals depending on size and steel sheet cassette.

ROTHENBERGER

| Order No. | 7189 ROTHENBERGER |
|---|---|
| 0005 | 111.95 (W592) |

## Valve gradated wrench

**Design:** Made of chrome-vanadium steel, hardened and nickel-plated, with cam hexagon socket and bi-hexagonal locking, square drive 1/2" .

ROTHENBERGER

**7181** Size 3/8" ; 1/2" ; 3/4" and 1" and other intermediate sizes.
For the assembly and disassembly of heater valve nipples and lockshields as well as for short extension pieces.

**7183** Size 1/2" ; 3/4" and 1" and other intermediate sizes.
Light and easy assembly of screw connections of the gas fittings.

**7181 gradated drive wrench**

**7183 gradated drive wrench**

**Ratchet (contained in set)**

| Order No. | Design | 7181 ROTHENBERGER | 7183 ROTHENBERGER |
|---|---|---|---|
| 0005 | Gradated drive wrench | 31.95 | 41.45 |
| 0500 | Set: Gradated drive wrench with ratchet, changeable R/L | 41.95 (W592) | 56.45 (W592) |

## Inspection camera VideoFlex G3

NEW

**Design:** 3.5" TFT colour display, resolution 320 x 240 pixels with integrated multilingual menu navigation. The image can be rotated manually by 180° and shown in mirror image. Replaceable, waterproof camera head with LED lighting, 10 adjustable brightness levels. Recordings can be stored as photos (JPEG) or videos (AVI). The memory can be extended to max. 8 GB. Data can be transferred to a computer via SD card reader or USB cable (mini-USB).

**Application:** For the inspection of pipes, cavities and channels, and the like. Very small camera head is ideal for spaces that are difficult to reach. Plus the camera can be connected to a computer and used as a webcam.

**Supplied:** Inspection camera, attachment set (hook, mirror, magnet), guide sleeve, li-ion battery, network/charger with international adapters, software, USB cable, 4 GB micro-SD card, video link cable.

IP 68

Laserliner Innovation in Tools

| Order No. | | 0006 | 0012 |
|---|---|---|---|
| Camera head Ø | mm | 6 | 9 |
| 7129 Laserliner Innovation in Tools | | 342.50 | 249.00 |
| Camera focus | cm | 1–6 | 1–6 |
| Cable length | m | 1.5 | 1.5 |
| Zoom | | 1.5-fold | 1.5-fold |
| Service life | h | 4 | 4 |
| Interface | | Mini-USB | Mini-USB |
| Power supply | | Li-ion battery 3.7 V, 1.7 Ah | Li-ion battery 3.7 V, 1.7 Ah |

(W465)

## Accessories for inspection camera VideoFlex G3

NEW

| Order No. | Design | 7129 Laserliner Innovation in Tools |
|---|---|---|
| 0016 | Camera head Ø 9 mm with 10 m cable | 207.00 (W465) |

## Inspection camera ROLLER VisioCam

**Design:** Compact operating unit with 3.5" LCD colour display, resolution 320 x 240 pixels. Waterproof camera head with LED lighting, adjustable brightness. Photos or videos can be stored on the SD card. Photos can be easily stored while recording a video. The recording can be rendered on an external monitor via the video output. The camera can be operated via mains connection or via the integrated 3.7 V/2.5 Ah lithium-ion battery (approx. 2 hours).

**Application:** For the inspection of pipes and channels up to 150 mm, flues, cavities and the like.

**Supplied:** Operating unit, spiral connection cable, network cable, 4 GB SD card, transport case, USB cable, video cable and charger.

| Order No. | | 0015 | 0010 |
|---|---|---|---|
| **Camera head Ø** | **mm** | **25** | **25** |
| **7130 ROLLER** | | **on request ◊** | **on request ◊** |
| Cable length | m | 10 | 30 |
| Cable Ø | mm | 4.5 | 5.4 |
| Zoom | | 2-fold | 2-fold |
| Cable rewind | | Cable basket | Reel with meter counters |
| Interface | | USB, SD slot | USB, SD slot |

(999)

## Accessories for inspection camera ROLLER VisioCam

| Order No. | Design | 7130 ROLLER | Camera head Ø mm | Cable length m |
|---|---|---|---|---|
| 0020 | **Camera cable for pipes from Ø 40 mm, in cable tray** | **on request ◊** | 25 | 10 |
| 0030 | **Guide cylinder pair, Ø 62 mm** | **on request ◊** | – | – |
| 0040 | **Guide cylinder pair, with coil spring Ø 100 mm** | **on request ◊** | – | – |
| 0050 | **Protective cover with mineral glass plate, sealing ring** | **on request ◊** | – | – |

(999)

7130 0020

7130 0030

7130 0040

7130 0050

## Inspection camera ROLLER CamView

**Design:** Camera head with LED lighting, adjustable brightness. Recordings can be stored as photos or videos. The recording can be rendered on an external monitor via the video output. The camera can be operated via mains connection or via the integrated 3.7 V/1.2 Ah lithium-ion battery (approx. 2 hours).

**Application:** Ideal for the inspection and damage analysis of spaces that are difficult to reach, such as cavities, shafts and pipes.

**Supplied:** Inspection camera, 1 m gooseneck cable with 16 mm camera head, mirror, hook and magnet attachment, network cable, MicroSD card 2 GB, transport case, USB cable, video cable, 4 mignon cells AA/LR6 for the handheld device and charger.

| Order No. | | 0030 | 0005 | 0020 |
|---|---|---|---|---|
| **Model** | | **CamView WiFi** | **CamView** | **CamView S** |
| **7311 ROLLER** | | **212.00** | **319.50** | **401.00** |
| Removable keypad | | – | Yes | Yes |
| Display | | – | 3.5" colour, LCD | 3.5" colour, LCD |
| Resolution | Pixel | – | 320 x 240 | 320 x 240 |
| Camera head Ø | mm | 16 | 16 | 16 |
| Cable length | m | 1.0 | 1.0 | 1.0 |
| Audio recording | | Yes | – | Yes |
| Zoom | | 3-fold | – | 3-fold |
| Interface | | USB, MicroSD slot, WiFi | USB, MicroSD slot | USB, MicroSD slot |

(W001)

## Accessories for inspection camera ROLLER CamView

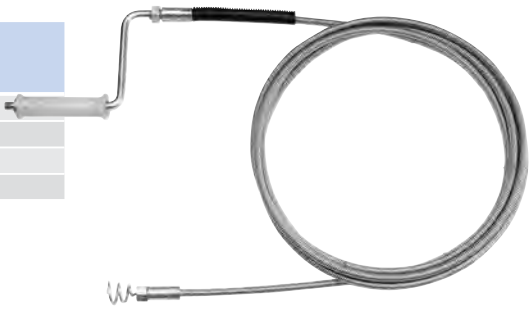
| Order No. | Design | 7311 ROLLER | Camera head Ø mm | Cable length m |
|---|---|---|---|---|
| 0025 | **Gooseneck cable with colour camera** | **184.90** | 4.5 | 1.0 |
| 0010 | **Gooseneck cable with colour camera** | **127.90** | 9.0 | 1.0 |
| 0015 | **Gooseneck cable, attachable up to 4.5 m** | **36.90** | – | 0.9 |

(W621)

## Drain snake for pipes

**Design:** High-quality, double layer cable made of galvanized spring steel. For professional use with reverse-wound inner core. With drill head (mud auger, Order No. 7267) and crank with wooden handle, replaceable and extendable with 1/2" -WW thread connectors (Order No. 7268).

| Order No. | Hole Ø mm | 7261 E+R | Length m |
|---|---|---|---|
| 0020 | 10 | 37.00 | 5.0 |
| 0025 | 10 | 50.00 | 7.5 |
| 0030 | 10 | 61.20 | 10.0 |
| 0040 | 12 | 74.10 (W576) | 10.0 |



## Tools for pipe cleaning cable

**Design:** With 1/2" -WW thread.

| Order No. | Ø mm | 7265 E+R Claw head | 7267 E+R Drill head (mud auger) |
|---|---|---|---|
| 0005 | 30 | – | 11.35 |
| 0010 | 40 | 11.80 | 13.10 |
| 0015 | 50 | 13.20 (W576) | 15.10 (W576) |

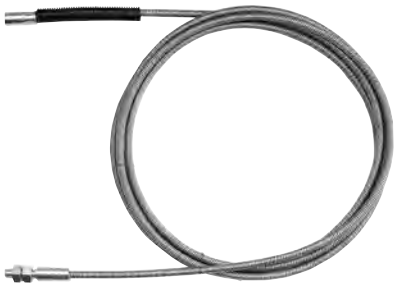
7265

7267

## Extension for drain snake pipe

**Design:** With 1/2" -WW thread connectors.

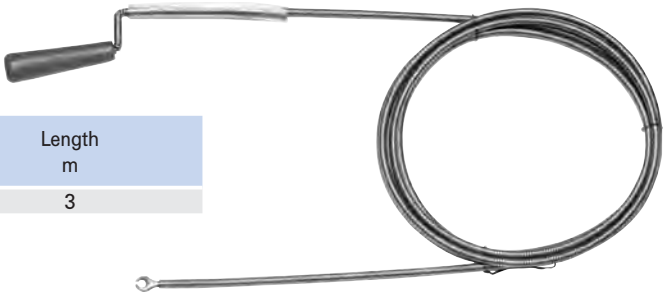
| Order No. | Hole Ø mm | 7268 E+R | Length m |
|---|---|---|---|
| 0005 | 10 | 26.80 | 5 |
| 0010 | 12 | 30.70 (W576) | 5 |



## Household drain snake for pipes

**Design:** Galvanized spring steel with fixed claw and plastic handle.

| Order No. | Hole Ø mm | 7268 E+R | Length m |
|---|---|---|---|
| 0500 | 6 | 2.74 (W576) | 3 |



## Pipe cleaning device ROLLER Easy-Clean

**Design:** Robust force pump cleaner, with adjustable frontal handle for high contact pressure.

**Application:** For quick and easy removal of pipe obstructions in basins, bowls, tubs, toilets etc.

**Supplied:**
1 short rubber adapter for sinks, showers and baths.
1 long rubber adapter for toilets.

| Order No. | 7192 ROLLER |
|---|---|
| 0015 | 80.20 (W001) |

## Pipe cleaning device ROLLER Mini- Ortem

**Design:** Handy, robust device with quick-action chuck for easy locking of coil, for pipes from ∅ 20 to 50 (75) mm, for coils ∅ 6, 8 and 10 mm.

**Application:** For easy manual or electrical use with standard slow-running drill with infinitely variable motorised drive or with cordless screwdriver. Ideal for sink drains and tight pipe elbows. Spiral also fits through strainers in sinks.

**Supplied:** Coil with bulb auger.

| Order No. | Cable ∅ mm | 7192 ROLLER | Spiral length m |
|---|---|---|---|
| 0020 | 8 | 114.50 (W001) | 7.5 |

## Electric pipe cleaning device ROLLER Mini-Ortem A

**Design:** With automatic spiral feed and return for pipes up to ∅ 50 (75) mm, for spirals ∅ 8 and 10 mm.

**Application:** For quick and simple cleaning of pipes etc., ideal for sink drains and tight pipe elbows. Spiral also fits through strainers in sinks.

**Supplied:** Machine, coil with bulb auger.

| Order No. | Cable ∅ mm | 7192 ROLLER | Spiral length m | Rated power W | Voltage V | RPM $min^{-1}$ | Weight for engine kg |
|---|---|---|---|---|---|---|---|
| 0005 | 8 | on request ◊ (999) | 7.5 | 600 | 230 | 0–550 | 5.2 |

## Pipe cleaning spiral for ROLLER Mini-Ortem/Mini-Ortem A

**Design:** Highly flexible and specially hardened for easy propulsion, also for tight elbow pipes, with bulb auger.

**Application:** Ideal for sink drains and tight pipe elbows. Spiral also fits through strainers in sinks.

| Order No. | Design | 7192 ROLLER | Cable ∅ mm | Spiral length m |
|---|---|---|---|---|
| 0060 | Without core (for Mini-Ortem) | 42.80 | 8 | 7.5 |
| 0065 | With core (for Mini-Ortem A) | 61.00 (W620) | 8 | 7.5 |

## Pipe cleaning machine ROLLER Ortem 22

**Design:** Compact, triued-and-tested, universal pipe cleaning machine, for pipe ∅ 20–150 mm. Continuous, undivided drive spindle and clamping jaws outside the casing, fully sealing the motor space off to protect against water and dirt. Highly flexible, specially hardened pipe cleaning spiral for light propulsion, also for hard-to-reach places. Pipe cleaning spiral drive ∅ 16 and 22 mm made directly without any change of jaw. Variable spiral lengths through quick-coupling partial spirals, no unnecessary turning of long pipe cleaning spirals. Manual feed for sensitive work. Stable, centered pressing lever for central power transmission and high stability. Pressing lever also acts as handle. Guide hose prevents excess spiral rotation and pollution of the environment. Right/left-hand rotation.

**Supplied:** Drive machine, guide hose.
**Order No. 7192 0010** also with 5 sub-spirals ∅ 16 mm x 2.3 m and ∅ 22 mm x 4.5 m in the spiral basket, straight auger ∅ 16 and 22 mm, toothed blade auger 16/25 mm, funnel auger 22 mm, retrieval auger 22 mm, serrated cross-blade borer 22/35 mm, 1 pair of guide gloves, spiral separating rods 16/5 and 22/32 mm plus steel sheet box for every tool set.

| Order No. | Design | 7192 ROLLER | Rated power W | Voltage V | RPM $min^{-1}$ | Weight for engine kg |
|---|---|---|---|---|---|---|
| 0001 | Power tool | on request ◊ | 750 | 230 | 740 | 19.0 |
| 0010 | Power tool with tool set | on request ◊ (999) | 750 | 230 | 740 | 19.0 |

## Pipe cleaning spirals for ROLLER Ortem 22

**Design:** Highly flexible and specially hardened for easy propulsion, also for tight elbow pipes, can be coupled.

| Order No. | Cable ∅ mm | 7192 ROLLER | Spiral length m |
|---|---|---|---|
| 0110 | 16 | 47.50 | 2.3 |
| 0115 | 22 | 75.40 (W620) | 4.5 |

## Tools for pipe cleaning machine ROLLER Ortem 22

**7192 0120 + 0125** For boring through major blockages as well as for removing samples to determine the cause of the blockage.

**7192 0130 + 0135** For minor congestions such as by paper and textile, ideal for tight curves.

**7192 0140 + 0145** To retrieve spirals left in the tube, e.g. when pipe cleaning spirals break in the tube.

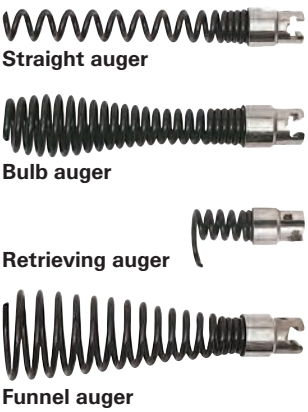
**7192 0150 + 0155** For minor blockages such as from paper and textile, ideal for large pipe diameters.

**7192 0160–0230** Used to bore out greasy or heavily silted pipes.

**7192 0170–0225** Ideal for incrustation and obstructions of all kinds, e.g. limescale deposits.

**7192 0185** For severe grease accumulation and minor to severe silting.

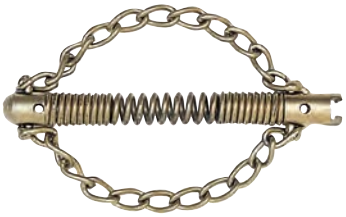
**7192 0190 + 0195** For final cleaning, to remove accumulation of sludge and incrustation. Particularly suitable for sensitive pipes, such as plastic pipes.



Blade borer

Cross-blade borer

Fork cutter


Chain flail head

| Order No. | Design | 7192 ROLLER | Coupling mm |
|---|---|---|---|
| 0120 | Straight auger | 24.20 | 16 |
| 0125 | Straight auger | 28.40 | 22 |
| 0130 | Bulb auger | 24.20 | 16 |
| 0135 | Bulb auger | 31.60 | 22 |
| 0140 | Retrieving auger | 24.20 | 16 |
| 0145 | Retrieving auger | 34.10 | 22 |
| 0150 | Funnel auger | 26.70 | 16 |
| 0155 | Funnel auger | 30.90 | 22 |
| 0160 | Blade borer, serrated, 25 mm | 22.50 | 16 |
| 0230 | Blade borer, serrated, 35 mm | 32.60 | 22 |
| 0165 | Blade borer, serrated, 45 mm | 40.70 | 22 |
| 0220 | Cross-blade borer, serrated, 25 mm | 42.70 | 16 |
| 0175 | Cross-blade borer, serrated, 35 mm | 48.10 | 16 |
| 0225 | Cross-blade borer, serrated, 35 mm | 51.80 | 22 |
| 0180 | Cross-blade borer, serrated, 45 mm | 57.50 | 22 |
| 0170 | Cross-blade borer, serrated, 65 mm | 61.70 | 22 |
| 0185 | Fork cutter, serrated, 65 mm | 67.90 | 22 |
| 0190 | Chain flail head, smooth, 2 chains | 81.40 | 16 |
| 0195 | Chain flail head, smooth, 2 chains | 96.20 (W620) | 22 |

## Spiral guide glove

**Design:** Made of cowhide.

**Application:** To securely hold and guide cleaning spirals.

**7192 0235** Rubberised.

**7192 0200 + 0205** Inside surface with metal studs.

7192 0235

7192 0200 + 0205

| Order No. | Design | 7192 ROLLER |
|---|---|---|
| 0235 | Pair | 17.50 |
| 0200 | Right | 36.00 |
| 0205 | Left | 36.00 (W620) |

## Spiral divider wrench

**Application:** To loosen spirals and spiral tools.

| Order No. | For cable Ø mm | 7192 ROLLER |
|---|---|---|
| 0210 | 16 | 2.60 |
| 0215 | 22/32 | 2.90 (W620) |

## Overview material pipe cutter

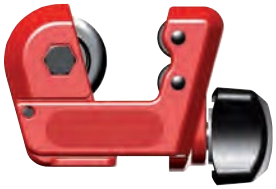
| Material to be processed | | | | | | Order no. | Page |
|---|---|---|---|---|---|---|---|
| Steel | Copper | Brass | Inox | Aluminium | Plastic and composites | | |
| – | 1/8–5/8" | – | 1/8–5/8" | 1/8–5/8" | – | 7200 0005 | 7/30 |
| – | 1/8–1.1/8" | – | 1/8–1.1/8" | 1/8–1.1/8" | – | 7200 0010 | 7/30 |
| – | 1/8–5/8" | – | 1/8–5/8" | – | – | 7201 0001 | 7/30 |
| – | 1/8–1.1/8" | – | 1/8–1.1/8" | – | – | 7201 0010 | 7/30 |
| – | 1/8–1.1/8" | – | 1/8–1.1/8" | – | – | 7201 0020 | 7/31 |
| – | 1/8–1.3/8" | – | 1/8–1.3/8" | – | – | 7201 0030 | 7/31 |
| – | 1/4–1.5/8" | – | 1/4–1.5/8" | – | – | 7201 0040 | 7/31 |
| – | 1/4–2.1/2" | – | 1/4–2.1/2" | – | – | 7201 0050 | 7/31 |
| – | 2.1/2–4.5/8" | – | 2.1/2–4.5/8" | – | – | 7201 0060 | 7/31 |
| 1/8–2" | – | – | – | – | – | 7201 0070 | 7/32 |
| – | 1/8–2.1/2" | – | 1/8–2.1/2" | – | – | 7201 0150 | 7/32 |
| – | 1/8–1.3/8" | – | – | – | – | 7201 0170 | 7/32 |
| 1.1/4–4" | – | – | – | – | – | 7201 0190 | 7/32 |
| – | – | – | 1/8–1.3/8" | – | – | 7202 1010 | 7/31 |
| 1/8–1.1/8" | 1/8–1.1/8" | 1/8–1.1/8" | – | 1/8–1.1/8" | – | 7204 0005 | 7/30 |
| 1/8–2" | – | – | – | – | – | 7206 0005 | 7/32 |
| 1/8–1.3/8" | 1/8–1.3/8" | 1/8–1.3/8" | – | 1/8–1.3/8" | – | 7208 0006 | 7/31 |
| – | – | – | – | – | 1/8–2.1/8" | 7214 0020 | 7/32 |
| – | – | – | – | – | 2–4.3/8" | 7214 0030 | 7/32 |
| – | – | – | – | – | 4.3/8–6.1/4" | 7214 0040 | 7/32 |

## Pipe cutter Mini

**Design:** Body made of zinc die casting, cutting wheel made of high-alloy, hardened steel, interchangeable without the use of tools. 2 guide rolls with recess for cutting close to flange. Pressure regulated via steel-loaded spindle with ergonomic ball grip screw.

**Application:** For cutting small pipes in spaces that are hard to reach as well as parallel pipes. For copper and lightweight metal pipes.

| Order No. | For pipe Ø | 7200 format | 7209 format |
|---|---|---|---|
| 0005 | 1/8–5/8" (3–16 mm) | 11.70 | – |
| 0010 | 1/8–1.1/8" (3–28 mm) | 16.95 | – |
| 0001 | Spare cutting wheel | – (W574) | 1.85 (W574) |



7200 0005

7209 0001

## Pipe cutter ROLLER Corso Cu/INOX Mini

**Design:** Spare cutting wheel made of robust special steel. 2 hardened guide rolls. Pressure regulated via stable spindle.

**Application:** For cutting small pipes in spaces that are hard to reach as well as parallel pipes. For thin-walled copper, stainless steel and C steel pipes.

| Order No. | For pipe Ø | 7201 ROLLER | 7201 ROLLER |
|---|---|---|---|
| 0001 | 1/8–5/8" (3–16 mm) | 16.75 | – |
| 0010 | 1/8–1.1/8" (3–28 mm) | 25.30 | – |
| 1000 | Spare cutting wheel | – (W622) | 8.10 (W622) |

7201 0001–0010

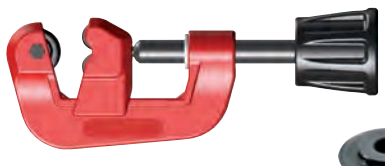
7201 1000

## Pipe cutter

**Design:** Body made of zinc die casting, cutting wheel made of high-alloy, hardened steel, interchangeable without the use of tools. 2 guide rolls with recess for cutting close to flange. Pressure regulated via steel-loaded, smooth-running spindle.

**Application:** For clean cutting of copper, brass and lightweight metal pipes as well as thin-walled steel pipes.

| Order No. | For pipe Ø | 7204 format | 7209 format |
|---|---|---|---|
| 0005 | 1/8–1.1/8" (3–28 mm) | 15.50 | – |
| 0001 | Spare cutting wheel | – (W574) | 1.85 (W574) |



7204 0005

7209 0001

## Pipe cutter ROLLER Corso Cu/INOX

**Design:** Spare cutting wheel made of robust special steel. 2 hardened guide rolls. Pressure regulated via stable spindle.

**Application:** For clean cutting of thin-walled, stainless steel and copper pipes, and others with a wall thickness up to 4 mm.

| Order No. | For pipe Ø | 7201 ROLLER | 7201 ROLLER |
|---|---|---|---|
| 0020 | 1/8–1.1/8" (3–28 mm) | 19.35 | – |
| 1000 | Spare cutting wheel | – (W622) | 8.10 (W622) |

7201 0020 7201 1000

## Pipe cutter Kompakt

**Design:** Body made of magnesium die casting, cutting wheel made of high-alloy, hardened steel, interchangeable without the use of tools. 4 guide rolls with recess for cutting close to flange prevent loosening or slipping off. Pressure regulated via steel-loaded, smooth-running spindle. Plus the pipe cutter is also equipped with a retractable deburrer blade. Large metal handle with extra cutting wheel (included in delivery).

**Application:** For the precise cutting of copper, brass and aluminium pipes as well as thin-walled steel pipes.

| Order No. | For pipe Ø | 7208 format | 7209 format |
|---|---|---|---|
| 0006 | 1/8–1.3/8" (3–35 mm) | 31.50 | – |
| 0001 | Spare cutting wheel | – (W574) | 1.85 (W574) |

7208 0006 7209 0001

## Pipe cutter compact INOX

**Design:** Body made of magnesium die casting, needle-bearing cutting wheel made of stainless steel, with special cutting geometry for stainless steel pipes, interchangeable without the use of tools. 4 needle-bearing stainless steel guide rolls. Pressure regulated via steel-loaded, smooth-running spindle. Plus the pipe cutter is also equipped with a retractable deburrer blade. Large metal handle with extra cutting wheel (included in delivery).

**Application:** For precise cutting of constant, narrow, working radii of stainless steel pipes.

| Order No. | For pipe Ø | 7202 format | 7202 format |
|---|---|---|---|
| 1010 | 1/8–1.3/8" (3–35 mm) | 42.30 | – |
| 1015 | Spare cutting wheel | – (W574) | 3.33 (W574) |

7202 1010 7202 1015

## Pipe cutter ROLLER Corso Cu/INOX

**Design:** Spare cutting wheel made of robust special steel. 4 hardened guide rolls and integrated deburring tool. Pressure regulated via space-saving, especially smooth-running telescopic spindle.

**Application:** For clean cutting of thin-walled, stainless steel and copper pipes, and others with a wall thickness up to 4 mm.

| Order No. | For pipe Ø | 7201 ROLLER | 7201 ROLLER |
|---|---|---|---|
| 0030 | 1/8–1.3/8" (3–35 mm) | 29.90 | – |
| 1000 | Spare cutting wheel | – (W622) | 8.10 (W622) |

7201 0030 7201 1000

## Pipe cutter ROLLER Corso Cu/INOX

**Design:** Spare cutting wheel made of robust special steel. 4 hardened guide rolls. Pressure regulated by the stable, length-guided telescopic spindle.

**Application:** For clean cutting of thin-walled, stainless steel and copper pipes, and others with a wall thickness up to 4 mm.

| Order No. | For pipe Ø | 7201 ROLLER | 7201 ROLLER |
|---|---|---|---|
| 0040 | 1/4–1.5/8" (6–42 mm) | 92.30 | – |
| 0050 | 1/4–2.1/2" (6–64 mm) | 107.50 | – |
| 0060 | 2.1/2–4.5/8" (64–120 mm) | 197.00 | – |
| 1000 | Spare cutting wheel | – (W622,W001) | 8.10 (W622) |

7201 0040–0060 7201 1000

## Pipe cutter ROLLER Corso Cu/INOX S

**Design:** Spare cutting wheel made of robust special steel, needle-bearing mounted. 4 hardened, needle-bearing guide rolls. Pressure regulated by the stable, length-guided telescopic spindle.

**Application:** For clean cutting of thin-walled, stainless steel and copper pipes, and others with a wall thickness up to 4 mm.

| Order No. | For pipe Ø mm | 7201 ROLLER | 7201 ROLLER |
|---|---|---|---|
| 0150 | 1/8–2.1/2" (8–64 mm) | 112.50 | – |
| 0160 | Spare cutting wheel | – (W001) | 14.40 (W622) |

7201 0150

7201 0160

## Pipe cutter ROLLER Corso Cu

**Design:** Spare cutting wheel made of robust special steel. 4 hardened guide rolls with groove for cutting close to flange and integrated deburring tool. Pressure regulated via space-saving, specially smooth-running telescopic spindle.

**Application:** For clean cutting of copper pipes with a wall thickness of up to 3 mm.

| Order No. | For pipe Ø mm | 7201 ROLLER | 7201 ROLLER |
|---|---|---|---|
| 0170 | 1/8–1.3/8" (3–35 mm) | 29.30 | – |
| 0180 | Spare cutting wheel | – (W001) | 7.00 (W622) |

7201 0170

7201 0180

## Pipe cutter for steel pipes up to 2"

**Design:** Steel-forged body with guide blocks made of zinc die casting, cutting wheel made of high-alloy, hardened steel, interchangeable without the use of tools. 2 broad guide rolls for secure guiding of the cutting wheel at the pipe. With spring pressure system for improved cutting and higher service life of cutting wheel. Pressure regulated via smooth-running spindles. T-handle for highest power transmission.

**Application:** For clean and right-angled cutting of steel pipes.
**After cutting, the thread can be cut directly.**

| Order No. | For pipe Ø | 7206 format | 7206 format |
|---|---|---|---|
| 0005 | 1/8–2" (10–60 mm) | 76.00 | – |
| 0010 | Spare cutting wheel | – (W574) | 5.30 (W574) |

7206 0005

7206 0010

## Pipe cutter ROLLER Corso St

**Design:** Body made of forged steel, cutting wheel made of robust special steel, protection by limiting infeed before contact to guide rolls. 2 hardened guide rolls. Pressure regulated by the broad and ergonomic handle via the stable, long spindle.

**Application:** For clean cutting of steel pipes with a wall thickness of up to 12.5 mm.

| Order No. | For pipe Ø | 7201 ROLLER | 7201 ROLLER |
|---|---|---|---|
| 0070 | 1/8–2" (10–60 mm) | 126.00 | – |
| 0080 | Spare cutting wheel (10–60 mm, S 8 mm) | – | 10.50 |
| 0190 | 1.1/4–4" (30–115 mm) | 250.50 | – |
| 0200 | Spare cutting wheel (30–115 mm, S 12 mm) | – (W622) | 24.50 (W622) |

7201 0070 + 0190

7201 0080 + 0200

## Pipe cutter ROLLER Corso P

**Design:** Spare cutting wheel made of robust special steel. 4 hardened guide rolls. Pressure regulated via stable, length-guided spindle.

**Application:** For clean cutting of plastic and composite pipes with a wall thickness of up to 19 mm.

| Order No. | For pipe Ø mm | 7214 ROLLER | 7214 ROLLER |
|---|---|---|---|
| 0020 | 1/8–2.1/8" (10–63 mm) | 95.90 | – |
| 1010 | Spare cutting wheel (10–63 mm, S 7 mm) | – | 13.40 |
| 0030 | 2–4.3/8" (50–110 mm) | 134.50 | – |
| 0040 | 4.3/8–6.1/4" (110–160 mm) | 169.50 | – |
| 1020 | Spare cutting wheel (50–315 mm, S 11 mm) | – | 16.20 |
| 1030 | Spare cutting wheel (50–315 mm, S 16 mm) | – | 19.40 |
| 1040 | Spare cutting wheel (50–315 mm, S 19 mm) | – (W001) | 31.50 (W622) |

7214 0020–0040

7214 1010–1040

## Tube and pipe shears

NEW

**Design:** Blade with pointed cutting edge for low-effort penetration into the material. With opening spring and one-hand locking lever.

**Application:** For precise, single-handed cutting of tubes, including with textile reinforcement e.g. aramid fibres

**7138 0022** Die-cast magnesium body, blade PTFE coated.

**7138 0028** Die-cast magnesium body, blade PTFE coated. The joint is made of a steel mounted axle with needle bearing. Handles with impact-absorbing soft inserts. Also cuts soft plastic pipes e.g. PEX, PE, PB, etc. as well as thin-walled plastic armoured pipes.

**722A 0185** Body made of glass fibre reinforced plastic, blade made of special tool steel, oil-hardened.
Also cuts soft plastic pipes e.g. PEX, PE, PB, etc. as well as thin-walled plastic armoured pipes.

| Order No. | For pipe Ø mm | 7138 format | 722A KNIPEX |
|---|---|---|---|
| 0022 | 0–22 | 21.60 | – |
| 1022 | Spare blade for 0–22 mm | 10.65 | – |
| 0028 | 0–28 | 31.40 | – |
| 1028 | Spare blade for 0–28 mm | 11.95 | – |
| 0185 | 0–25 | – | 36.20 |
| 1185 | Spare blade for 0–25 mm | – | 12.40 |
| | | (W574) | (W525) |

7138 0022 format professional quality

7138 0028 format professional quality

722A KNIPEX

## Plastic pipe shears

format professional quality

**Design:** Blade made from stainless steel with optimum cutting geometry and PTFE coating, can be replaced quickly without tools. To protect the blade and reduce the risk of injury, it is housed in casing. Body made of magnesium die casting with one-handed quick retraction of blades and ergonomic soft plastic inlays.

**Application:** For precise one-handed cutting, for the quick, low-force separation of plastic and composite pipes with tooth-guided feed.

| Order No. | For pipe Ø | 7217 format |
|---|---|---|
| 0110 | 0–1.5/8" (0–42 mm) | 41.90 |
| 0120 | Stainless steel spare blade 0–1.5/8" (0–42 mm) | 17.15 |
| | | (W574) |

## Plastic pipe shears ROLLER Picco

ROLLER WERKZEUGE UND MASCHINEN

**Design** Blade hardened, specially ground and interchangeable. Broad pipe contact surface for a precise burr-free cut.

**Application: For the precision one-handed cut,** for quick and easy separation of plastic and multi-layer pipe in one cut.

**7201 0090** Blade with PTFE coating. Body made of especially lightweight, robust magnesium.

**7201 0111** Body made of particularly robust aluminium, with special ratchet and fast rewind.

**7201 0131** Body made of particularly robust steel, handles with plastic sleeves, with special ratchet.

| Order No. | For pipe Ø | 7201 ROLLER |
|---|---|---|
| 0090 | 0–1.1/4" (0–26 mm) | 31.40 |
| 0111 | 0–1.5/8" (0–42 mm) | 48.60 |
| 0131 | 0–3" (0–75 mm) | 249.90 |
| | | (W622,W001) |

| Order No. | For pipe Ø | 7201 ROLLER |
|---|---|---|
| 0100 | Spare blade 0–1.1/4" (0–26 mm) | 15.90 |
| 0120 | Spare blade 0–1.5/8" (0–42 mm) | 30.00 |
| 0141 | Spare blade 0–3" (0–75 mm) | 100.00 |
| | | (W623) |

7201 0090

7201 0111

7201 0131

## Plastic pipe shears ROCUT® TC

ROTHENBERGER

**Design:** Stainless steel blade with V-cut with broad pipe contact surface for precision pin-point cutting. With the ideally serrated cutting curve, even larger wall thicknesses can be cut with minimum effort. The opening handle enables controlled opening of the blade at the push of a button. Handle with rubberised grip provides a secure hold when cutting.

**Application: For the precise one-handed cut,** for non-fatiguing separating and cutting of PE-, PE-X-, PP-, VPE-, PB- and PVDF pipes. **Item 7212 0160 specially suited for PVC pipes.**

7212 0100

7212 0150

7212 0170

7212 0160

7212 0190

| Order No. | For pipe ∅ | 7212 ROTHENBERGER |
|---|---|---|
| 0100 | 0–1.1/4" (0–26 mm) | 29.95 |
| 0150 | 0–1.5/8" (0–42 mm) | 59.95 |
| 0305 | Spare blade 0–1.5/8" (0–42 mm) | 39.95 |
| 0170 | 0–2" (0–50 mm) | 72.95 |
| 0175 | Spare blade 0–2" (0–50 mm) | 45.95 |
| 0160 | 0–2.1/2" (0–63 mm) | 135.95 |
| 0165 | Spare blade 0–2.1/2" (0–63 mm) | 50.95 |
| 0190 | 0–3" (0–75 mm) | 189.95 |
| 0195 | Spare blade 0–3" (0–75 mm) | 90.95 |

(W592)

## Plastic pipe shears ROCUT® PS

ROTHENBERGER

**Design:** Stainless steel blade with V-cut with broad pipe contact surface for precision pin-point cutting. With the ratchet mechanism, even larger wall thicknesses can be cut with minimum effort. The opening handle enables controlled opening of the blade at the push of a button. Ergonomic pistol grip.

**Application: For the precise one-handed cut,** for non-fatiguing separating and cutting of PE-, PE-X-, PP-, VPE-, PB- and PVDF pipes.

| Order No. | For pipe ∅ | 7212 ROTHENBERGER |
|---|---|---|
| 0250 | 1/4–1.3/8" (6–35 mm) | 48.95 |
| 0300 | Stainless steel spare blade 1/4–1.3/8" (6–35 mm) | 20.95 |

(W592)

## Plastic pipe shears ROCUT®

ROTHENBERGER

**Design:** Stainless steel blade with V-cut with broad pipe contact surface for precision pin-point cutting. With the ideally serrated cutting curve, even larger wall thicknesses can be cut with minimum effort.

**Application: For the precise one-handed cut,** for non-fatiguing separating and cutting of PE-, PP-, VPE-, PB- and PVDF pipes. Particularly suitable in preparation for socket welding.

| Order No. | For pipe ∅ | 7212 ROTHENBERGER |
|---|---|---|
| 0180 | 0–1.1/4" (0–32 mm) | 34.95 |
| 0182 | Stainless steel spare blade 0–1.1/4" (0–32 mm) | 25.95 |
| 0185 | 0–1.5/8" (0–42 mm) | 51.95 |
| 0187 | Stainless steel spare blade 0–1.5/8" (0–42 mm) | 34.45 |
| 0200 | 0–2.1/2" (0–63 mm) | 139.95 |
| 0210 | Stainless steel spare blade 0–2.1/2" (0–63 mm) | 65.95 |

(W592)

## Plastic pipe cutting and chamfering tool

**Design:** Robust body made of metal, with the continuously adjustable pipe clamping pressure, plastic jaws can be used on various pipe diameters. Clamping jaws with compensating springs ensure centric clamping of pipes. Carbide metal blades with optimum cutting edge geometry for precise cutting and long service life.

**Application:** For right-angled and flat cutting and chamfering (15°) of plastic pipes made of ABS, PB, PE, PE-HD, PE-X, PVC and PVDF.

**Supplied:** Quick clamping unit ∅ 110 mm, 2 clamping inserts 50; 75 mm, cutting and chamfering device and case.

| Order No. | Design | 7225 ROLLER |
|---|---|---|
| 0010 | Cutting and chamfering tool, for pipe ∅ 40–110 mm | 279.00 |
| 0020 | Carbide cutting and chamfering tool for pipe wall thicknesses up to 11.0 mm | 30.20 |
| 0030 | Carbide cutting and chamfering tool for pipe wall thicknesses up to 15.5 mm | 126.50 |

(W001)

## Inner and outer deburrer

**Design:** Robust, impact-resistant plastic casing, with specially sharpened and hardened blades for vibration-free cutting.

**Application:** For quick deburring of copper, brass, aluminium and plastic pipes.

7212 0030

7212 0020–0025 + 0035

| Order No. | For pipe ∅ mm | 7212 ROLLER | Operation mode |
|---|---|---|---|
| 0030 | 3–35 | 13.70 | Manual |
| 0035 | 8–35 | 37.20 | Manual |
| 0025 | 10–54 | 42.50 | Manual |
| 0020 | 10–54 | 79.70 | Manual, automatic |

(W001,W622)

## Pipe widening pliers

**Design:** Torsion-resistant pliers, with force transfer and hexagonal enlargement punch for even, concentric widening. Enlargement head with long, stable segments for pipe fittings in line with ARCR and application for calibrating of pipe ends.

**Application:** For the even, concentric enlargement of soft metal pipes with wall thicknesses of up to 1 mm.

7218 1000

| Order No. | Design | 7218 ROLLER | Set contents |
|---|---|---|---|
| 1000 | Set, 5-piece | 429.50 | 1 expanding pliers<br>4 enlargement heads ∅ 12; 15; 18; 22 mm |
| 1005 | Tube expanding pliers | 167.00 | – |
| 1012 | Expander head ∅ 12 mm | 68.00 | – |
| 1015 | Expander head ∅ 15 mm | 68.00 | – |
| 1018 | Expander head ∅ 18 mm | 68.00 | – |
| 1022 | Expander head ∅ 22 mm | 68.00 | – |
| 1028 | Expander head ∅ 28 mm | 78.00 | – |

(W623,W001)

7218 1005

7218 1012–1028

## Electrical radial press ROLLER Uni-Press ACC Basic Pack

**Design:** Robust, compact electric radial press with forced return for radial press joints from ∅ 10–108 mm.
Only one universal drive for ROLLER pressing tongs and pressing rings and pressing tongs/pressing slings from various other manufacturers/providers.
**Automatic return (forced return) after pressing has completed.** With robust, powerful, electrohydraulic drive.

**Supplied:** Machine with forced return, case.

| Order No. | Rated power W | 7222 ROLLER | Voltage V | Weight kg |
|---|---|---|---|---|
| 0015 | 450 | on request ◊ (999) | 230 | 4.7 |

## Hybrid radial press ROLLER Multi-Press ACC Basic Pack

**Design:** Robust, compact hybrid radial press (cordless and mains operation) with forced return for radial press joints Ø 10–108 mm and electronic charge status control. Only one universal drive for ROLLER pressing tongs and pressing rings and pressing tongs/pressing slings from various other manufacturers/providers.
**Automatic return (forced return) after pressing has completed.** With powerful, electrohydraulic drive.

**Supplied:** Hybrid-radial press Multi-Press ACC, Li-ion battery 14.4 V, quick charger, case.

| Order No. | Battery voltage V | 7222 ROLLER | Battery capacity Ah | Weight kg |
|---|---|---|---|---|
| 0026 | 14.4 | on request ◊ (999) | 3.2 | 4.8 |

## Accessories for the hybrid radial press Multi-Press ACC

| Order No. | Design | 7222 ROLLER | Battery capacity Ah |
|---|---|---|---|
| 1002 | Li-ion battery, 14.4 V | on request ◊ | 3.2 |
| 1011 | Quick charger for Li-ion battery 14.4 V | on request ◊ | – |
| 1006 | Power supply 230 V | on request ◊ (999) | – |

7222 1002

7222 1006

## Pressing tongs/clamping ring

**Note:** Driven by all ROLLER radial presses (with the exception of ROLLER Multi-Press Mini ACC) and with suitable drives of other makes.

**7176** **Pressing tongs model M**
For Geberit Mapress carbon steel, stainless steel, copper (stainless steel and copper in gas installation 15–35 mm).

**7164** **Clamping ring model M**
For Geberit Mapress carbon steel, stainless steel, copper, stainless steel and copper in gas installation. Adapter tongs Z2 are necessary for driving (Order No. 7168 0003).

**7170** **Pressing ring model M, offset 45°,** for working in difficult to reach places
For Geberit Mapress carbon steel, stainless steel, copper, stainless steel and copper in gas installation. Adapter tongs Z1 are necessary for driving (Order No. 7168 0001).

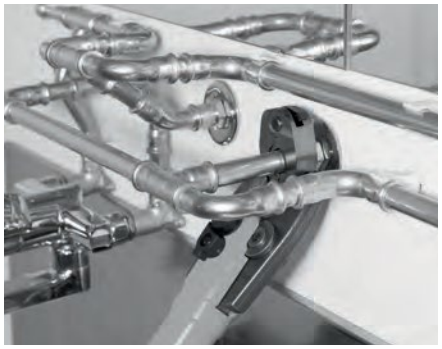
**7177** **Pressing tongs model V**
For System Viega (Prestabo, Profipress, Profipress G, Profipress THERM, Sanpress, Sanpress INOX, Sanpress INOX G).

**7172** **Pressing ring model V, offset 45°,** for working in difficult to reach places
For System Viega (Prestabo, Profipress, Profipress G, Profipress THERM, Sanpress, Sanpress INOX, Sanpress INOX G). Adapter tongs Z1 are necessary for driving (Order No. 7168 0001).

**7178** **Pressing tongs model UP** (U Ø 40-50 mm)
For System Uponor MLC, MLC-D, MLC-G.

**7179** **Pressing tongs model G**
For Geberit Mepla.

**7180** **Pressing tongs model VP**
For System Viega (Sanfix Fosta, Sanfix P, Sanfix Plus, Viegatherm P).



**Pressing, 45° offset (7170 + 7172) for hard-to-reach places.**

| Order No. | Nominal width DN | 7176 ROLLER | 7164 ROLLER | 7170 ROLLER | 7177 ROLLER | 7172 ROLLER | 7178 ROLLER | 7179 ROLLER | 7180 ROLLER |
|---|---|---|---|---|---|---|---|---|---|
| 0012 | 12 | on request ◊ | – | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0014 | 14 | – | – | – | – | – | – | – | on request ◊ |
| 0015 | 15 | on request ◊ | – | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0016 | 16 | – | – | – | – | – | on request ◊ | on request ◊ | on request ◊ |
| 0018 | 18 | on request ◊ | – | on request ◊ | on request ◊ | on request ◊ | on request ◊ | – | – |
| 0020 | 20 | – | – | – | – | – | on request ◊ | on request ◊ | on request ◊ |
| 0022 | 22 | on request ◊ | – | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0025 | 25 | – | – | – | – | – | on request ◊ | – | on request ◊ |
| 0026 | 26 | – | – | – | – | – | – | on request ◊ | – |
| 0028 | 28 | on request ◊ | – | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0032 | 32 | – | – | – | – | – | on request ◊ | on request ◊ | on request ◊ |
| 0035 | 35 | on request ◊ | – | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0040 | 40 | – | – | – | – | – | on request ◊ | on request ◊ | – |
| 0042 | 42 | – | on request ◊ | – | – | – | – | – | – |
| 0042 | 42 (4G) | on request ◊ | – | – | on request ◊ | – | – | – | – |
| 0050 | 50 | – | – | – | – | – | on request ◊ | on request ◊ | – |
| 0054 | 54 | – | on request ◊ | – | – | – | – | – | – |
| 0054 | 54 (4G) | on request ◊ (999) | – (999) | – (999) | on request ◊ (999) | – (999) | – (999) | – (999) | – (999) |

## Adapter tongs

**Application:** For driving pressing rings.

| Order No. | Model | 7168 ROLLER |
|---|---|---|
| 0001 | Z1 | on request ◊ |
| 0003 | Z2 | on request ◊ (999) |

## Cropping tongs M

**Application:** For the burr-free cutting of threaded rods made of steel, stainless steel up to strength grade 4.8 (400 N/mm²).

**Note:** Driven by all ROLLER radial presses (with the exception of ROLLER Multi-Press Mini ACC) and with suitable drives of other makes.

| Order No. | Design | 7185 ROLLER |
|---|---|---|
| 0008 | M8 | on request ◊ |
| 0010 | M10 | on request ◊ (999) |

## Hybrid radial press ROLLER Multi-Press Mini ACC

**Design:** Automatic pressing process including automatic return. Electrohydraulic drive and electronic charge status control with deep discharge protection.

**Supplied:** Hybrid-radial press Multi-Press Mini ACC, Li-ion battery 14.4 V, quick charger, case.

7222 0033

| Order No. | Battery voltage V | 7222 ROLLER | Battery capacity Ah | Crimping connections mm | Weight kg |
|---|---|---|---|---|---|
| 0031 | 14.4 | on request ◊ | 1.6 | 10–40 | 2.3 |
| 0033 | 21.6 | 992.50 ◊ NEW (W621,999) | 1.5 | 10–40 | 2.5 |

## Accessories for the hybrid radial press Multi-Press Mini ACC

7222 1002

7222 1011

7222 1100 + 1105

7222 1006

| Order No. | Design | 7222 ROLLER | Battery capacity Ah |
|---|---|---|---|
| 1002 | Li-ion battery, 14.4 V | on request ◊ | 3.2 |
| 1011 | Quick charger for Li-ion battery 14.4 V | on request ◊ | – |
| 1100 | Li-ion battery, 21.6 V | on request ◊ NEW | 1.5 |
| 1105 | Li-ion battery, 21.6 V | on request ◊ NEW | 2.5 |
| 1006 | Power supply 230 V | on request ◊ (999) | – |

## Pressing tongs/clamping ring Mini

**Note:** Drive with hybrid radial press Multi-Press Mini ACC (Order No. 7222 0031).

**7175** **Pressing tongs model M**
For Geberit Mapress carbon steel, stainless steel, copper, stainless steel, gas and copper, gas.

**7170** **Pressing ring model M, offset 45°,** for working in difficult to reach places
For Geberit Mapress carbon steel, stainless steel, copper, stainless steel and copper in gas installation. Adapter tongs Z1 are necessary for driving (Order No. 7191 0001).

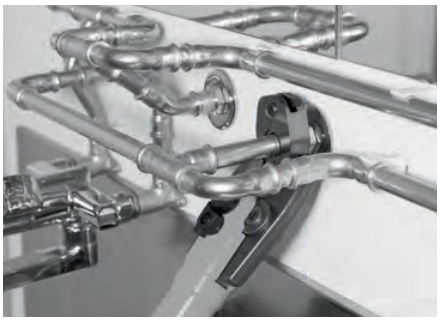
**7182** **Pressing tongs model V**
For System Viega (Prestabo, Profipress, Profipress G, Profipress THERM, Sanpress, Sanpress INOX, Sanpress INOX G).

**7172** **Pressing ring model V, offset 45°,** for working in difficult to reach places
For System Viega (Prestabo, Profipress, Profipress G, Profipress THERM, Sanpress, Sanpress INOX, Sanpress INOX G). Adapter tongs Z1 are necessary for driving (Order No. 7191 0001).

**7184** **Pressing tongs model UP (U ∅ 40 mm)**
For System Uponor MLC, MLC-D, MLC-G.

**7188** **Pressing tongs model G**
For Geberit Mepla.

**7190** **Pressing tongs model VP**
For System Viega (Sanfix Fosta, Sanfix P, Sanfix Plus, Viegatherm P).



**Pressing, 45° offset (7170 + 7172) for hard-to-reach places.**

| Order No. | Nominal width DN | 7175 ROLLER | 7170 ROLLER | 7182 ROLLER | 7172 ROLLER | 7184 ROLLER | 7188 ROLLER | 7190 ROLLER |
|---|---|---|---|---|---|---|---|---|
| 0012 | 12 | on request ◊ | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0014 | 14 | – | – | – | – | – | – | on request ◊ |
| 0015 | 15 | on request ◊ | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0016 | 16 | – | – | – | – | on request ◊ | on request ◊ | on request ◊ |
| 0018 | 18 | on request ◊ | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0020 | 20 | – | – | – | – | on request ◊ | on request ◊ | on request ◊ |
| 0022 | 22 | on request ◊ | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0025 | 25 | – | – | – | – | on request ◊ | – | on request ◊ |
| 0026 | 26 | – | – | – | – | – | on request ◊ | – |
| 0028 | 28 | on request ◊ | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0032 | 32 | – | – | – | – | on request ◊ | on request ◊ | on request ◊ |
| 0035 | 35 | on request ◊ | on request ◊ | on request ◊ | on request ◊ | – | – | – |
| 0040 | 40 | – (999) | – (999) | – (999) | – (999) | on request ◊ (999) | on request ◊ (999) | – (999) |

## Adapter tongs mini

**Application:** For driving pressing rings with Hybrid radial press ROLLER Multi-Press Mini ACC.

| Order No. | Model | 7191 ROLLER |
|---|---|---|
| 0001 | Z1 | on request ◊ (999) |

## Pipe cutting machine

**Design:** Stable, torsion-resistant construction with 4 prism-shaped, bearing-mounted track rollers, robust and maintenance-free transmission and high-torque 1.2 kW motor with safety foot switch, cutting speed 115 $min^{-1}$.

**Application:** For the right-angled, non-cutting and welding-orientated separating without outer burr of pipes of press-fitting systems, without damaging the O-ring with lubricants made of stainless steel, copper, carbon steel, steel, cast (SML), plastic and composite materials.

**7174 0005** Delivery includes tube support, without cutting wheel.

**7174 0015** With undercarriage for easy transport. Delivery includes 2 height-adjustable tube supports for Ø 100–225 mm, without cutting wheel.

| Order No. | Model | 7174 ROLLER | For pipe Ø mm | Weight kg |
|---|---|---|---|---|
| 0005 | Disc 100 | on request ◊ | Up to 100 | 16.8 |
| 0015 | Disc 225 | on request ◊ | Up to 225 | 37.0 |

(999)

7174 0015

## Sub-frame for pipe cutting machine

| Order No. | Weight kg | 7174 ROLLER |
|---|---|---|
| 2000 | 10.5 | on request ◊ |

(999)

7174 2000

## Spare cutting wheel for pipe cutting machine

| Order No. | Area of application | 7174 ROLLER | For model |
|---|---|---|---|
| 1000 | For pipes from the press-fitting systems made of copper | on request ◊ | Disc 100 and 225 |
| 1005 | For pipes from the press-fitting systems made of stainless steel, copper, carbon steel | on request ◊ | Disc 100 and 225 |
| 0101 | For steel pipes, cast-iron pipes (SML) | on request ◊ | Disc 100 and 225 |
| 1015 | For plastic and multilayer composite pipes (wall thickness of up to 10 mm) | on request ◊ | Disc 100 and 225 |
| 1010 | For plastic and multilayer composite pipes (wall thickness of up to 21 mm) | on request ◊ | Disc 225 |
| 1020 | For pipes from the press-fitting systems made of carbon steel, with chamfer | on request ◊ | Disc 100 |

(999)

7174 0101 + 1000–1020

## Internal deburrer for pipe cutting machine

**Design:** With sharpened and hardened steel blades for rattle-free working.

**Application:** For quick deburring on pipe cutting machine Disc 100 (Order No. 7174 0005) of copper, brass, aluminium and plastic pipes.

| Order No. | For pipe Ø mm | 7133 ROLLER |
|---|---|---|
| 0005 | 28–108 | on request ◊ |

(999)

7133

## Pipe cutter, electric

**Design:** Stabile, torsion-free aluminium construction for right-angled cutting. Handy, mobile and ultra-light-weight, easy to use, no adjustment needed. Robust, maintenance-free precision ball and needle transmission. Stable, **specially arranged back-pressure rollers made of hardened, precision steel pipe,** for low-friction feed of pipes as well as cutting wheels with special cutting shapes.

**Application:** For easy and quick cutting without outer burr of pipes of press-fitting systems made of stainless steel, carbon steel, copper and multi-layer composite pipes.

| Order No. | Design | 7174 ROLLER | Rated power W | RPM at full capacity $min^{-1}$ | Cutting capacity mm | Weight without cable kg |
|---|---|---|---|---|---|---|
| 5000 | With network cable | on request ◊ | 200 | 130 | 12–28/12–35/ 12–40 | 1.9 |
| 6000 | Incl. Li-ion batteries, 10.8 V, 1.3 Ah | on request ◊ | 270 | 130 | 12–28/12–35/ 12–40 | 2.1 |
| 5005 | Cutting wheel for copper, stainless steel and carbon steel | on request ◊ | – | – | 12–28/12–35 | – |
| 5010 | Cutting wheel for multilayer composite pipes | on request ◊ | – | – | 12–40 | – |

(999)

7174 5000

7174 6000

## Tube benders

**Design:** Lightweight construction with one fixed and one moving bending arm. Bending radius display with degree scale of 0–180° in steps of 30° and clamping device to hold the pipe better. Moveable bending arm with plastic handle.

**Application:** For dimensionally accurate two-handed bending up to 180° of soft copper, aluminium, soft steel and brass pipe. Also suitable for bending very short pipes.

ROTHENBERGER

| Order No. | Nominal dimension mm | 7228 ROTHENBERGER | Radius r mm | Length mm |
|---|---|---|---|---|
| 0095 | 12 | 96.45 | 36 | 390 |
| 0100 | 15 | 115.95 (W592) | 54 | 450 |

## Tube benders

**Design:** Compact, torsion-resistant construction. Bending radius display with scale division 45°; 90°; 135° and 180° in 15° increments, 3 pipe sizes with tight radii can be bent with one device.

**Application:** Refrigeration and air-conditioning technology, oil supply, automotive, hydraulics and compressed air technology, for precise two-handed bending of soft steel, brass and copper pipes up to 180°.

ROTHENBERGER

| Order No. | For pipe Ø mm | 7228 ROTHENBERGER |
|---|---|---|
| 0110 | 6; 8; 10 | 66.95 (W592) |

## Single-hand pipe bender, with ratchet feed

**Design:** With mechanical ratchet feed and ergonomic handle. Bending segments can be easily changed with the bayonet lock.

**Application:** For accurate one-handed bending of soft copper and aluminium pipes, soft, coated copper pipe as well as soft precision steel up to 90°. For the production of U-bends, counter-bends, swan-neck bends and connecting bends at all levels.

**Supplied:** Plastic case, basic device, backing plate, backing segment and 4 bending segments.

ROTHENBERGER

| Order No. | For pipe Ø mm | 7224 ROTHENBERGER |
|---|---|---|
| 0111 | 6; 8; 10; 12 | 259.95 (W591) |

## Hand pipe bender

**Design:** Made of hardened steel. Stable design and pressure, high-sliding bending elements and sliding pieces made of high-strength, fibre-reinforced polyamide.

**Application:** For cold bending by hand or stationary in parallel vice up to 180° of e.g.:

| | |
|---|---|
| Hard, semi-hard, soft copper pipes (also thin-walled) | Ø 10–22 mm |
| Soft, coated copper pipes (also thin-walled) | Ø 10–18 mm |
| Stainless steel pipes of the press-fitting systems | Ø 12–18 mm |
| C-steel pipes of Pressfitting systems (also coated up to Ø 18 mm) | Ø 12–22 mm |
| Soft precision pipes | Ø 10–20 mm |
| Electrical installation pipes DIN EN 50086 | Ø 16–20 mm |
| Multilayer composite pipes | Ø 14–32 mm |

**Supplied:** Bending drive, locking pins, bending segments with sliding block, bending spray and steel case.

ROLLER WERKZEUGE UND MASCHINEN

| Order No. | For pipe Ø mm | 7249 ROLLER |
|---|---|---|
| 0010 | 12; 15; 18; 22 | 496.00 (W621) |

## Pipe bender, electric

**Design:** Tried-and-tested, high-torque universal motor with 30 % power increase using automatic carbon brush adjustment. Maintenance-free, robust transmission. Rotational speed continuously adjustable, no setting work.

**Application:** For bending up to 180° of e. g.:

| | |
|---|---|
| Hard, semi-hard, soft copper pipes (also thin-walled) | Ø 10–35 mm |
| Soft, coated copper pipes (also thin-walled) | Ø 10–18 mm |
| Stainless steel pipes of the press-fitting systems | Ø 12–28 mm |
| Carbon steel pipes of the Pressfitting systems (also uncoated) | Ø 12–28 mm |
| Soft precision pipes | Ø 10–28 mm |
| Steel pipes DIN 2440 | Ø 1/4–3/4" |
| Electrical installation pipes DIN EN 50086 | Ø 16–32 mm |
| Multilayer composite pipes | Ø 14–40 mm |

**Supplied:** Electric pipe bender, locking pins, bending segments, sliding pieces and sheet steel case.

| Order No. | For pipe Ø mm | 7249 ROLLER | Rated power W | Voltage V | Machine weight kg |
|---|---|---|---|---|---|
| 0005 | 15; 18; 22; 28 | on request ◊ (999) | 1000 | 230 | 8.0 |

## Bending segment with sliding block

**Design:** Made of high-strength, glass-fibre-reinforced polyamide, great gliding quality and resistant to compression, with angle scale. Suitable for electric pipe benders (Order No. 7249 0005) and pipe bending pliers (Order No. 7249 0010).

| Order No. | For pipe Ø mm | 7249 ROLLER |
|---|---|---|
| 1005 | 10 | 183.90 |
| 1010 | 12 | 118.00 |
| 1015 | 15 | 132.50 |
| 1020 | 18 | 132.50 |
| 1025 | 22 | 163.50 (W623) |

## Single-hand pipe bender, with quick feed

**Design:** Robust beinding device **with mechanical feed,** making single-handed use possible. Stable design and pressure, high-sliding bending elements and sliding pieces made of high-strength, fibre-reinforced polyamide.

**Application:** For single-handed bending up to 180° of e. g.:

| | |
|---|---|
| Soft copper pipes (also thin-walled) | Ø 10–22 mm |
| Soft, coated copper pipes (also thin-walled) | Ø 10–18 mm |
| Coated carbon steel pipes of the press-fitting systems | Ø 12–18 mm |
| Soft precision pipes | Ø 10–18 mm |
| Multilayer composite pipes | Ø 14–32 mm |

**Supplied:** Bender drive, bending segments 1 cross bar with sliding piece and sheet steel case.

| Order No. | For pipe Ø mm | 7249 ROLLER |
|---|---|---|
| 0015 | 12; 15; 18; 22 | 212.00 (W001) |

## Eccentric angular bender

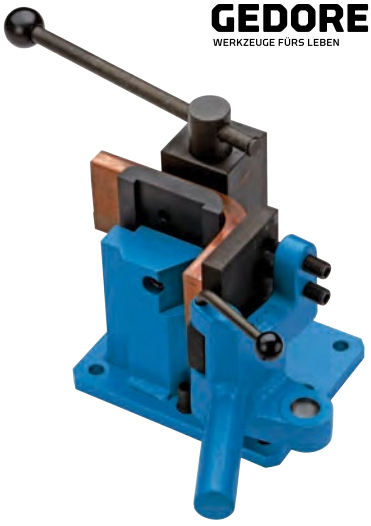
**Design:** With 2 bending tools, one sharp-edged with a 4 mm radius and one with radii of 15 and 25 mm. The angle and length stops can be continuously adjusted. With bending lever extension for **mounting on a workbench.**

**Application:** For bending flat, rectangular, round and angled material made of steel, copper and aluminium up to 90°.

| **Max. bending rate:** | **Cold mm** | **Warm mm** |
|---|---|---|
| Flat steel EN 10058 (DIN 1017) | 100 x 10 | 100 x 20 |
| | 80 x 12 | 80 x 25 |
| | 50 x 15 | – |
| Rectangular steel EN 10059 (DIN 1014) | 22 | 30 |
| Round steel EN 10060 (DIN 1013) | 25 | 30 |
| Angle steel EN 10056-1 (DIN 1028) | 100 x 10 | 100 x 12 |

Max. bending capacity related to the dimension of the materials ST 37 up to material strength 370 N/mm².

**Note:** Special bending tool as accessory on request.



| Order No. | Working height mm | 7234 GEDORE |
|---|---|---|
| 0001 | 100 | 1257.00 (W522) |

## Pipe bender, hydraulic

**Design:** Manually or electrohydraulically operated, with open bending frame. To mount to workbench or sub-frame (Order No. 7241)

**Application:** For bending gas and water pipes DIN 2440/41 up to 90°.

**Note:** Bending segments and counter supports for other types of pipe upon request.

| Order No. | Design | 7237 GEDORE | Size inch | Number of segments |
|---|---|---|---|---|
| 0100 | Manual hydraulic | 1848.00 | 1.1/4 | 5 for gas and water pipes |
| 0200 | Manual hydraulic | 2373.00 | 2 | 7 for gas and water pipes |
| 0300 | Electrohydraulic 230 V | 3622.00 ◊ (W522) | 2 | 7 for gas and water pipes |

7237 0100 + 0200

## Grey cast iron bending segments up to 90°

**Design:** For gas and water pipes EN 10255 (DIN 2440/2441), black lacquered.

| Order No. | Bending segment inch | 7239 GEDORE | Bending radius mm |
|---|---|---|---|
| 0025 | 3/8 | 25.60 | 45 |
| 0050 | 1/2 | 29.40 | 50 |
| 0075 | 3/4 | 33.20 | 75 |
| 0100 | 1 | 40.30 | 100 |
| 0125 | 1.1/4 | 52.30 | 115 |
| 0150 | 1.1/2 | 102.50 | 150 |
| 0200 | 2 | 171.00 (W522) | 200 |

## Sub-frame for pipe bending tool, rotating

**Design:** Lacquered blue.

| Order No. | Height mm | 7241 GEDORE | Design |
|---|---|---|---|
| 0480 | 480 | 199.00 | For hand bender 1.1/4" –2" |
| 0680 | 680 | 298.50 ◊ (W522) | For E-benders |

## Thread cutter, electric

**Design:** Robust, maintenance-free gearbox, designed especially for ideal power transmission with clockwise/anti-clockwise rotation, thermal overload protection and safety tip switch. Self-reinforcing clamping effect via slanted tensioning spindles. Stable counter-holder to support the torque in both directions of rotation. Easy and quick change of cutter heads. Unique locking of die head in the ratchet level ensure secure grip when cutting. Delivery includes Central die heads and case.

| Order No. | For pipe threads inch | 7247 ROLLER | For bolt threads mm | Die heads inch |
|---|---|---|---|---|
| 0005 | 1/8–1.1/4 | 719.50 | 10–30 | R 1/2; 3/4; 1; 1.1/4 |
| 0010 | 1/8–2 | 1136.00 (W001) | 10–39 | R 1/2; 3/4; 1; 1.1/4; 1.1/2–2 |

## Cutting oil

**7246 1000 + 1005** **Rubinol 2000**
Synthetic thread cutting material specially for drinking water supply pipes. For all materials. Fully water soluble, dyed red for washout control, according to regulations. Specially for drinking water pipes, tested in acc. with DVGW, ÖVGW, SVGW.

**7246 2000 + 2005** **Smaragdol**
High-alloyed, mineral-based thread cutting material for all materials. Can be washed out with water. Do not use for drinking water.

| Order No. | Design | 7246 ROLLER | PU |
|---|---|---|---|
| 1005 | 600 ml spray can | on request ◊ (999) | 12 Δ |
| 1000 | 5 l canister | on request ◊ | 4 Δ |
| 2005 | 600 ml spray can | on request ◊ | 12 Δ |
| 2000 | 5 l canister | on request ◊ | 4 Δ |

ΔCan only be supplied as a whole packaging unit.

7246 1005

7246 2005

## Die stock set

**Design:** Very slim design of ratchet head for working in difficult to reach areas. Dividable tubular arms for short ratchet travel and reduced lever length for working areas with restricted space. Easy and quick change of cutter heads. Unique locking of die head in the ratchet level ensure secure grip when cutting.

**Supplied:** 1 Ratchet lever, steel sheet case.

**7247** **With quick-change Central die heads.**

**7252** **With quick-change die heads S, narrow design** for work in hard-to-reach places.

| Order No. | For pipe threads inch | 7247 ROLLER | 7252 ROLLER | Die heads inch | Ratchet lever inch |
|---|---|---|---|---|---|
| 0052 | 1/2–1.1/4 | 296.50 | – | R 1/2; 3/4; 1; 1.1/4 | 1/8–1.1/4 |
| 0055 | 1/2–2 | 486.00 | – | R 1/2; 3/4; 1; 1.1/4; 1.1/2; 2 | 1/8–1.1/4; 1.1/2–2 |
| 0050 | 3/8–1.1/4 | 334.00 | – | R 3/8; 1/2; 3/4; 1; 1.1/4 | 1/8–1.1/4 |
| 0040 | 3/8–3/4 | – | 413.00 | R 3/8; 1/2; 3/4 | 1/8–1.1/4 |
| 0045 | 1/2–1 | – (W001) | 501.00 (W001) | R 1/2; 3/4; 1 | 1/8–1.1/4 |

## Ratchet dietstock

**Design:** Suitable for quick-change Central and S die heads, dividable tubular arms for short ratchet travel and reduced lever length for working areas with restricted space.

| Order No. | For die heads inch | 7246 ROLLER |
|---|---|---|
| 0005 | 1/8–1.1/4 | 109.00 |
| 0010 | 1.1/2–2 | 118.00 (W623) |

## Extension for S die heads

| Order No. | Length mm | 7252 ROLLER |
|---|---|---|
| 0300 | 300 | 117.90 (W623) |

## Die head/cutting flange

**7247** **Quick-change Central die heads** for hand die stock Central and S, and electric die stock King.

**7252** **Quick-change die heads S, narrow design** for work in hard to reach places. For hand die stock Central and S, and electric die stock King.

**7246** **Cutting dies,** made of robust special steel for extremely long service life. For hand die stock Central and S, and electric die stock King.

7247 0100–0130

7252 0100–0120

7246 0100–0130

| Order No. | For pipe threads inch | 7247 ROLLER | 7252 ROLLER | 7246 ROLLER |
|---|---|---|---|---|
| 0100 | R 3/8 | 103.00 | 119.00 | 68.00 |
| 0105 | R 1/2 | 103.00 | 133.00 | 68.00 |
| 0110 | R 3/4 | 106.00 | 137.00 | 74.00 |
| 0115 | R 1 | 121.00 | 158.00 | 74.00 |
| 0120 | R 1.1/4 | 129.00 | 168.00 | 74.00 |
| 0125 | R 1.1/2 | 173.00 | – | 104.00 |
| 0130 | R 2 | 184.00 (W623) | – (W623) | 104.00 (W623) |

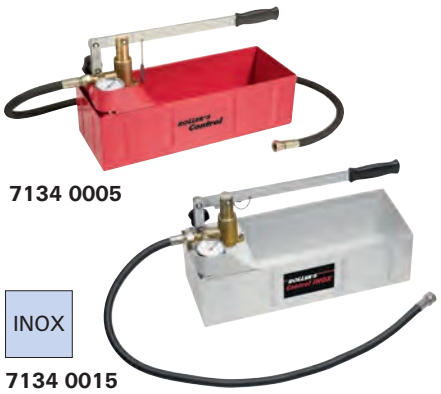
## Testing pump, manual

**Design:** With low-wearing, torsion-resistant piston made of brass. Dual-valve system with stainless steel balls. Ergonomic operating lever, locked to be used as a handle.

**Application:** For precise and quick pressure and leakage testing of pipeline systems in sanitary, heating and sprinkler installations, for compressed air, steam and cooling systems, oil installations in boiler and pressurised vessel construction.

**7134 0005** Container made of corrosion-resistant sheet steel, powder-coated.

**7134 0015** Container made of stainless steel.



7134 0005

INOX



7134 0015

| Order No. | Control and pressure range | 7134 ROLLER | Container volume l | Connection inch | Performance kW |
|---|---|---|---|---|---|
| 0005 | 0–6 MPa/0–60 bar/0–870 psi | 154.50 | 12 | 1/2 | 1.75 |
| 0015 | 0–6 MPa/0–60 bar/0–870 psi | 202.00 (W001) | 12 | 1/2 | 1.75 |

## Testing pump, electric

**Design:** Self-priming electric testing pump with high-performance piston pump with low-wearing pressure piston made of stainless steel for high capacity and long service life. Intake hose with filter to suction from containers or to connect a tube valve. Muted, glycerine-filled pressure gauge and high-pressure hose with fabric insert to reduce measurement errors.

**Application:** Pressure and leakage testing (in accordance with DIN 1988) with water, water solutions and emulsions. For liquids with a pH value 7–12, temperature –30 °C to 60 °C and viscosity ≤ 1.5 mPa. For the simple and quick testing of pipe systems, also suitable for large systems.

| Order No. | Control and pressure range | 7134 ROLLER | Suction volume l/min | Connection inch | Performance kW |
|---|---|---|---|---|---|
| 0050 | 6 MPa/60 bar/870 psi | on request ◊ (999) | 7 | 1/2 | 1.75 |

## Manometer for testing pump

**Design:** With connector piece and shut-off valve. Suitable for manual and electric testing pumps (Order No. 7134 0005–0050).

**Application:** For pressure checks, including after removal of testing pump. For several test bodies and anti-theft protection.

| Order No. | Control and pressure range | 7134 ROLLER |
|---|---|---|
| 0105 | 6 MPa/60 bar/870 psi | on request ◊ (999) |

## Leak detector for gas and water lines ROTEST H® GW 150/4

**Design:** The measurement equipment is permanently mounted in sturdy steel sheet boxes. Self-testing pressure pump, with check valve and pressure gauge (Ø 60 mm), 0–4 bar, detailed scaling, accuracy 0.1 bar increments.

**Application:**
For leakage testing of gas lines and devices with operating pressures of up to 150 mbar.
Tightness test for drinking water house installations in line with DIN 1988 (TRWI) of 3 bar/150 bar.
Load test in line with DVGW-TRGI 96 7.1.2 with test pressure of 1.0 bar.
Tightness test for water column in line with DVGW-TRI 96 7.1.3 with test pressure of 150 mbar.
Setting of atmopsheric burners and forced-air burner from 0–30 mbar.
Liquid gas test (lower pressure) with test pressure of 40–60 mbar in acc. with TRF 96 9.4.
Liquid gas test for propane/butane with test pressure of 150 mbar in acc. with TRF 96 9.4.

**Supplied:** 4-bar pressure pump, pressure container, rubber blow, test hose, 4 connector tubes, 5 gas test plugs size 0–2 conical and 1–2 cylindrical as well as a supply end cap.

| Order No. | 7273 ROTHENBERGER |
|---|---|
| 0006 | 569.95 (W591) |

## Coil and test pressure unit with compressor

**Design:** Oil-free reciprocating piston compressor with crankshaft drive, condensing motor and personal protection switch. Control unit with 3" LCD display, 128 x 64 pixel resolution, over 10 programmes in 26 languages. Maximum operating pressure 0.8 MPa/8 bar/116 psi, suction power 230 Nl/min, motor power 1.5 kW.

**Application:** For seal testing with compressed air up to 0.4 MPa/4 bar/58 psi and with water up to 1.8 MPa/18 bar/261 psi as well as for rinsing pipes with air/water mixture up to Ø 2" and with water up to 4" . Rinsing/pressure testing in line with EN 806-4 and ZVSHK codes of practice T82-2011/T84-2004. Also for cleaning, disinfecting and preserving pipe systems.

**Supplied:** Flushing compressor, 2 suction/pressure hoses 1" x 1.5 m, 1 compressed air hose 8 mm x 1.5 m. **Order No. 7135 0010** also with hydro-pneumatic water pump and 1 high-pressure hose 1/2" x 1.5 m.

| Order No. | Model | 7135 ROLLER |
|---|---|---|
| 0005 | Multi Control SL | on request ◊ |
| 0010 | Multi Control SLW | on request ◊ (999) |

## Manometer/feed unit

**7135 1005** Fine scale up to 1.6 MPa/16 bar/232 psi. For reading of changes in pressure of 0.01 MPa/0.1 bar/1.45 psi and for tightness test in line with DIN 1988.

7135 1005

**7135 1010** For the constant feeding of cleaning and preservatives into the system to be cleaned.

7135 1010

| Order No. | Design | 7135 ROLLER |
|---|---|---|
| 1010 | Feed unit | on request ◊ |
| 1005 | Pressure gauge | on request ◊ (999) |

## Cleaning agents and preservatives for coil and pressure units

**Application:** For use with coil and pressure unit with compressor and feed unit. One bottle is enough for 100 l system content.

**7135 1015** **Disinfectant for drinking water lines.** Does not leave any residues in the disinfected system.

**7135 1020** **Cleaning agent for radiator systems.** For cleaning **encrusted debris** and **deposits**, suitable for all standard raw materials. Does not leave any residues in the disinfected system.

**7135 1025** **Cleaning agent for surface radiator systems.** For cleaning **sludge** and **biofilms**, suitable for all standard raw materials. Does not leave any residues in the disinfected system.

**7135 1030** **Preservatives for radiators and surface heating systems.** Keeps clean and protects the system.

| Order No. | Design | 7135 ROLLER | PU |
|---|---|---|---|
| 1015 | Disinfectant | on request ◊ | 6 Δ |
| 1020 | Cleaning agent radiator heating systems | on request ◊ | 6 Δ |
| 1025 | Cleaning agent surface heating systems | on request ◊ | 6 Δ |
| 1030 | Preservatives | on request ◊ | 6 Δ |

ΔCan only be supplied as a whole packaging unit. (999)

## Filling and rinsing unit

**Design:** Stable, removable 30 l plastic container with large opening, screw top, shut-off valve and return connection with immersion pipe. A high-temperature resistant hose connects the container and the pump. The suction line contains a fine filter with a large inspection window. This makes air and any soiling visible in the circuit, such as chipping, soldering or welding residue. Powerful, quiet capacitor motor with thermal motor protection.

**Application:** Quick and easy filling, flushing and ventilating of closed systems.
**Ideal for solar systems.**

**7132 0060** With self-priming centrifugal pump, suitable for heat transfer fluid, anti-freeze, water, aqueous solutions. Suction and pressure hoses 1/2", 3 m long, two-sided connections 3/4", temperature-resistant up to 60 °C.

**7132 0080** With dry self-priming impeller pump with special NBR impellers, suitable for heat transfer fluid, anti-freeze, water, aqueous solutions, mineral and vegetable oils, emulsions and cleaning agent. Suction and pressure hoses 1/2", 3 m long, two-sided connections 3/4", high temperature resistant up to 100 °C.

| Order No. | 0060 | 0080 |
|---|---|---|
| **Model** | **K 60** | **I 80** |
| **7132 ROLLER** | **on request ◊** | **on request ◊** |
| Temperature of liquid | ≤ 60 °C | ≤ 80 °C |
| pH value of liquid | 7–8 | 7–8 |
| Motor power | 860 W | 1000 W |
| Flow rate | 36 l/min | 27 l/min |
| Outlet pressure | 0.55 MPa/5.5 bar/80 psi | 0.65 MPa/6.50 bar/94 psi |

(999)

7132 0060

7132 0080

## Accessory for filling and flushing Solar Control unit

**Application:** To flush under-floor and wall heating as well as for the removal of silting.

| Order No. | Design | 7132 ROLLER |
|---|---|---|
| 0100 | **Fine filter with fine filter bag 70 µm** | **on request ◊** |
| 0110 | **Fin filter bag 70 µm (10-piece pack)** | **on request ◊** |
| 0120 | **Changeover valve flow direction with fabric hose** | **on request ◊** |

(999)

7132 0100

7132 0110

7132 0120

## Pipe freezing system, electrical

**Application:** Universal, robust, compact electrical pipe freezing device for repairs to non-emptied pipes, for pipes Ø 1/8" –2", 10–60 mm. No emptying, no filling, no venting. Quick freezing due to very high cooling performance. Only one device of 1/8" –2". Particularly narrow freezing heads. Particularly robust, flexible coolant tubes made of synthetic rubber. Very quiet. Closed coolant circuit for enironmentally friendly working processes.

**Supplied:** Freezing device, equipment for Ø 1/4" –1.1/4", Ø 15–42 mm, 2 coolant hoses, 2 tension bands, 2 LCD digital thermometers, water spray bottle, in robust steel enclosure.

| Order No. | Design | 7248 ROLLER | Rated power W | Voltage V | Weight kg |
|---|---|---|---|---|---|
| 0005 | **Pipe freezer with equipment for 1/4-1.1/4"** | **on request ◊** | 430 | 230 | 23.0 |
| 0015 | **Upgrade kit 1.1/2" -2" to extend working range** | **on request ◊** | – | – | – |

(999)

## Fretsaw

**Design:** Stable fretsaw pipe elbow, with painted wooden handle.

| Order No. | Length mm | 7245 | Jaw protection mm |
|---|---|---|---|
| 0301 | 130 | 3.65 (W555) | 300 |

## Fretsaw blade for metal

**Design:** With round back, hardened, black. Pack of 12 blades.

**Application:** For greatest precision on all types of metal.

| Order No. | Size | 7243 | Teeth/inch | Length mm | Useable length mm |
|---|---|---|---|---|---|
| 0011 | 1 | 2.55 | 46 | 130 | 83 |
| 0012 | 2 | 2.55 | 41 | 130 | 83 |
| 0013 | 3 | 2.55 | 41 | 130 | 83 |
| 0014 | 4 | 2.55 | 33 | 130 | 83 |
| 0015 | 5 | 2.90 | 33 | 130 | 83 |
| 0017 | 7 | 3.59 (W555) | 28 | 130 | 83 |

## Floorboard saw

**Design:** Fine shear teeth/universal teeth. Extra hardened teeth and additional toothed rim on the curved back of the saw blade to saw slits and grooves. With 2-component plastic handle.

**Application:** For sawing hardwood, timber and chipboard.

| Order No. | Length mm | 7305 format | 726A BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|---|
| 0300 | 300 | – | 19.35 NEW | 11 | 0.7 |
| 0320 | 320 | 11.10 (W555) | – (W556) | 12 | 0.7 |

format professional quality

BAHCO

## Hand saw with 2-component handle

**Design:** Extra hardened teeth. With 2-component comfort handle.

format professional quality

**7299** Fine shear teeth/universal teeth. For sawing hardwood and timber, plastic/PVC and NF metals.

**7301** Coarse shear teeth/universal teeth. For sawing chipboard and worktops, timber as well as plastic/PVC.

**7303** Fine, three-sided sharpened high-speed cut teeth. For sawing timber and laminate, as well as plastic/PVC.

| Order No. | Length mm | 7299 format | 7301 format | 7303 format | Teeth/ inch | Blade thickness mm |
|---|---|---|---|---|---|---|
| 0350 | 350 | 12.85 | – | – | 12 | 0.8 |
| 0400 | 400 | – | – | 16.90 | 11 | 0.9 |
| 0450 | 450 | – (W555) | 14.90 (W555) | – (W555) | 7 | 0.9 |

## Hand saw, wooden handle

**Design:** Made of cold-rolled stainless steel strip with precision set and cross sharpened as well as induction hardened teeth for push. With double riveted, high-quality and closed hardwood handle.

format professional quality

**Application:** For sawing wood, chipboard, plasterboard, Eternit, hard plastics, etc.

| Order No. | Length mm | 7250 format | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0350 | 350 | 11.95 | 7 | 0.8 |
| 0450 | 450 | 12.90 (W555) | 7 | 0.8 |

## Back saw

NEW

**Design:** Universal serration. Hardened teeth and heavy, stabilising steel back. With 2-component plastic handle.

**Application:** For sawing timber, plywood and chipboard.

| Order No. | Length mm | 726B BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0300 | 300 | 21.95 (W556) | 11 | 0.75 |

## Hand saw

NEW

**Design:** With 2-component plastic handle.

**Application:** For sawing dry wood.

**726C** Three-sided polished GT serration Hardened tooth tips.

**726D** Universal serration. Teeth unhardened, resharpenable

| Order No. | Length mm | 726C BAHCO | 726D BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|---|
| 0400 | 400 | – | 17.50 | 7 | 0.83 |
| 0475 | 475 | 16.75 (W556) | 18.50 (W556) | 7 | 0.83 |

**726C**

**726D**

## Precision mitre saw

NEW

**Design:** Universal serration. Hardened teeth and particularly sturdy blade shape to suit the back saw. With 2-component plastic handle.

**Application:** For sawing hard wood and thin profiles, ideal for use with mitre boxes.

| Order No. | Length mm | 726E BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0500 | 500 | 27.20 (W556) | 9 | 0.93 |

## Hand saw, coated

NEW

**Design:** The special coating reduces friction and protects the blade against rust. Reinforced blade for vibration-free sawing. Hardened teeth. With 3-component plastic handle.

**726F 0400** XT serration for high precision. For sawing hard wood and thin profiles as well as dry wood.

**726F 0475** NXT serration for maximum precision and fast cutting. For sawing timber and pressed wood as well as wet and dry wood.

| Order No. | Length mm | 726F BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0400 | 400 | 31.20 | 11 | 1.03 |
| 0475 | 475 | 32.35 (W556) | 9 | 1.03 |

**726F 0400**

**726F 0475**

## Keyhole saw

**Design:** Made of alloyed tool steel, with straight set and sharpened teeth. With double riveted, open hardwood handle.

**Application:** For all types of dry natural wood, such as chipboard, plywood and blockboard.

| Order No. | Length mm | 7258 format | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0300 | 300 | 7.55 (W555) | 7 | 0.6 |

## Keyhole saw

NEW

**Design:** XT serration for high precision. Hardened teeth. With screw-connected 2-component pistol handle.

**Application:** For all types of woods and plastics.

| Order No. | Length mm | 726G BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0300 | 300 | 15.65 (W556) | 9 | 1.03 |

## Plasterboard jig saw

NEW

**Design:** 3-way cut teeth. Particularly sharp blade tip to hit into the material.

**Application:** For sawing recesses in plasterboard.

| Order No. | Length mm | 726H BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0160 | 160 | 11.65 (W556) | 8 | 1.6 |

## Fine saw

**Design:** Made of alloyed tool steel, with reinforced back and fine, straight set and hardened teeth. With lacquered beechwood handle.

| Order No. | Length mm | 7260 format | Design | Teeth/inch |
|---|---|---|---|---|
| 0005 | 250 | 3.67 | Straight | 13 |
| 0010 | 250 | 4.76 (W555) | Bent | 13 |

7260 0005

7260 0010

## Trim saw

**Design:** 3-sided toothing with cross-sharpened with inductively hardened teeth. Simple switching of saw blade through bending of saw handle.

**7415** With pistol handle made of plastic.

**7416** With straight, rubber handle.

| Order No. | Design | 7415 TAJIMA | 7416 TAJIMA | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|---|
| 0265 | Trim saw 265 mm | 20.50 | 24.90 | 16 | 0.6 |
| 1250 | Spare saw blade, 250 mm | 8.60 | – | 19 | 0.5 |
| 1265 | Spare saw blade, 265 mm | 9.10 | – | 16 | 0.6 |
| 1300 | Spare saw blade, 300 mm | 9.55 (W569) | – (W569) | 13 | 0.7 |

7415

7416

## Trim saw

NEW

**Design:** Fine JT serration ground on three sides with hardened teeth on one side and progressive, rough serration on the other side. The thin and flexible blade makes a clean cut with low effort, also level to the surface.

**Application:** For quick and precise pull-stroke when sawing, wood, plasterboard, laminated board and PVC. Ideal for smooth cuts.

| Order No. | Length mm | 726K BAHCO | Teeth/inch | Blade thickness mm |
|---|---|---|---|---|
| 0240 | 240 | 27.65 (W556) | 6–8.5/16 | 0.5 |

## Bow saw

**Design:** Bracket made of lacquered steel tube with ergonomic 2-component handle and simple blade swapping and tension system. Supplied with wood saw blade with plane serration, for 300 mm bow saw, a metal saw blade is also included.

| Order No. | Length mm | 7417 format |
|---|---|---|
| 0300 | 300 | 11.05 |
| 0610 | 610 | 13.00 |
| 0762 | 762 | 13.45 (W555) |

7417 0300

7417 0610 + 0762

## Bow saw blade

**Design:** Cross-ground, hardened teeth.

**7417** **Plane toothed.** Suitable for dry natural woods and timber, especially green wood.

**7418** **Fine toothed.** Suitable for dry natural woods and timber.

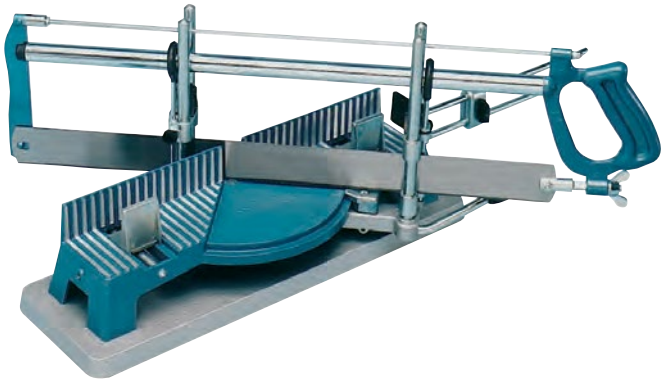
| Order No. | Length mm | 7417 format | 7418 format |
|---|---|---|---|
| 1300 | 300 | 1.68 | 1.80 |
| 1610 | 610 | 2.08 | 2.30 |
| 1762 | 762 | 2.33 (W555) | 2.60 (W555) |

7417

7418

## Precision mitre saw

**Design:** Base plate made of die-cast aluminium with roughened surface, non-slip rubber feet and 2 material clamps as well as 4 guide rods for precise and solid guidance of the saw frame. With end stop for both side for serial cuts, cutting depth adjustment as well as automatic locking function at 90°, 45°, 36°, 30°, and 22.5°. Angle infinitely adjustable left and right. The hacksaw can be easily hung on the guide rods with the double sheet spring. Plus the tensioning screw and tensioning wire give the saw frame double tension. With strong, closed bow handle. Supplied with universal saw blade with hardened teeth for wood, light metal and plastic.



| Order No. | Type | 7264 KÜPPER | Cutting width 45°/90° mm | Cutting height mm | Table length mm | Blade size mm | Weight kg |
|---|---|---|---|---|---|---|---|
| 0010 | P III | 115.50 (W555) | 100/160 | 120 | 400 | 550 x 40 | 7.5 |

## Mitre saw blade

**Design:** Made of alloyed tool steel, with inductively hardened teeth. Suitable for precision mitre saw P III.

| Order No. | Design | 7264 | Dimensions mm | Teeth/inch |
|---|---|---|---|---|
| 0020 | For wood, set serration | 11.00 | 550 x 45 | 1.8 |
| 0030 | For iron, crimped serration | 13.25 | 550 x 45 | 1.0 |
| 0040 | For aluminium, set serration | 16.55 (W555) | 550 x 45 | 1.5 |

## Mitre box

**Design:** Made of steamed red beechwood, finely lacquered. With two 45° mitre cuts and one 90° angle cut.

| Order No. | Inside dimensions mm | 7266 ECE | Design |
|---|---|---|---|
| 0300 | 300 x 62 x 37 | 14.75 | Toothed glued |
| 0400 | 400 x 80 x 60 | 41.70 (W577) | Screw-connected |

## Scraper blades

**Design:** Made of hardened and polished steel, angular shape.

| Order No. | Dimensions mm | 7280 |
|---|---|---|
| 0008 | 150 x 60 x 0.8 | 2.49 (W586) |

## Planes

**Design:** Made of steamed beechwood, lacquered, with strong, glued white beech base as well as white beech wedge. With hand guard, knob and ready-to-use plane iron. The integrated wedge counterbearing prevents the plane body from splitting even with excessive wedging.

**7288 0005** With 45° cutting angle for planing and smoothing of pre-planed surfaces.

**7288 0010** With 50° cutting angle to neighbouring planed surfaces.

7288 0005

7288 0010

| Order No. | Iron width mm | 7288 | Design | Cut angle | Length mm |
|---|---|---|---|---|---|
| 0005 | 48 | 76.40 | Double plane | 45° | 240 |
| 0010 | 48 | 76.40 | Smoothing plane | 50° | 220 |
| 0015 | 48 | 28.10 (W577) | Spare plane iron with flap | – | – |

## One-handed plane

**Design:** Made of steamed beechwood, lacquered, with Vera pockwood base as well as ready-to-use plane iron. Chip thickness can be finely adjusted with a hand wheel. With 50° cutting angle to neighbouring planed surfaces.

| Order No. | Iron width mm | 7290 | Cut angle | Length mm |
|---|---|---|---|---|
| 0050 | 39 | 75.00 (W577) | 50° | 150 |

## Double rabbet plane

**Design:** Made of white beech, lacquered, with adjustable base as well as ready-to-use plane iron. With 50° cutting angle.

| Order No. | Iron width mm | 7290 | Cut angle | Length mm |
|---|---|---|---|---|
| 0005 | 30 | 76.90 (W577) | 50° | 270 |

## Hand plane RALI 220 EVOLUTION

**Design:** Non-wearing plane base made of metal. No need to sharpen and extract the plane iron. No time-consuming setting work required for the plane iron. Continuous regulation of chip removal. Can be used as a smoothing, fore and scrub plane. Supplied with 4 spare blades.

| Order No. | Effective working width mm | 7289 | Cut angle | Length mm |
|---|---|---|---|---|
| 0006 | 48 | 127.00 (W577) | 45° | 220 |

## Reversible blades

| Order No. | Width mm | 7289 | PU | Design |
|---|---|---|---|---|
| 0100 | 48 | 28.20 | 2 Δ | HW (carbide) |
| 0105 | 48 | 3.84 (W577) | 10 Δ | HSS |

ΔCan only be supplied as a whole packaging unit.

## Surform plane

**Design:** Made of metal, lacquered black No grinding, aligning or stripping of blade necessary. Blade with chisel arranged perfectly in the cutting angle. Supplied with standard blade (Order No. 7294 0005).

**Application:** For shaping, grating, planing, levelling and filing of virtually any materials.

**7291** With **adjustable** plastic handle. With erected handle, can be used as plane or with folded handle as file.

**7292** With **fixed** plastic handle.

**7294** For wood, softwoods, vinyl, rubber, plaster, plasterboard, fibreglass, polyester plate, nylon, linoleum etc.

7291

7292

7294

| Order No. | Design | 7291 STANLEY | 7292 STANLEY | 7294 STANLEY |
|---|---|---|---|---|
| 0005 | Combination planer | 18.55 | – | – |
| 0005 | Standard plane | – | 17.20 | – |
| 0005 | Standard blade, 42 x 250 mm | – | – | 4.73 |
| 0010 | Half-round blade, 39 x 250 mm | – | – | 5.50 |
| | | (W581) | (W581) | (W581) |

## Block plane Surform

**Design:** Body made of one piece of metal, complete with interchangeable fine cutting blade.

**Application:** For processing corners and small spaces, one-handed or two-handed.

| Order No. | Design | 7293 STANLEY |
|---|---|---|
| 0005 | Ingot planer | 11.15 |
| 0010 | Fine cutting blade, 42 x 140 mm | 3.95 |
| | | (W581) |

## Wood chisel with two blades

**Design:** made of chrome-vanadium steel (61 HRC), forged. With **additional long blade** and hardening blade back for use with a wood or plastic hammer. Flattened 2-component handle with impact head. Blade can be reground. Supplied with microfibre holster to protect the blades and fix to the belt.

**Application:** Front cutting edge for pressing and leveraging, the vertical side for cutting, scraping, stripping, notching, marking etc.

| Order No. | Cutting edge width mm | 7281 | Cutting edge length mm |
|---|---|---|---|
| 1000 | 26 | 28.20 (W704) | 90 |

## Wood chisel

**Design: DIN 5139.** Blade made of chrome-vanadium steel (61 HRC) forged, with bevelled edges. Flattened white beech handle (Ulmer form) with knob. Blade can be reground.

**7282** Surface subject to **finest grinding.**

**7281** Surface **polished.**

7282 format professional quality

7281

| Order No. | Cutting edge width mm | 7282 format | 7281 |
|---|---|---|---|
| 0004 | 4 | 7.80 | 15.60 |
| 0006 | 6 | 7.80 | 15.60 |
| 0008 | 8 | 7.80 | 15.60 |
| 0010 | 10 | 8.20 | 15.60 |
| 0012 | 12 | 8.20 | 15.60 |
| 0014 | 14 | 8.45 | 15.60 |
| 0016 | 16 | 8.60 | 15.60 |
| 0018 | 18 | 9.05 | 17.95 |
| 0020 | 20 | 9.80 | 17.95 |
| 0022 | 22 | 10.70 (W578) | 20.40 (W704) |

| Order No. | Cutting edge width mm | 7282 format | 7281 |
|---|---|---|---|
| 0024 | 24 | 10.90 | 20.40 |
| 0026 | 26 | 11.40 | 20.40 |
| 0028 | 28 | 11.70 | 23.30 |
| 0030 | 30 | 11.95 | 23.30 |
| 0032 | 32 | 12.25 | 27.60 |
| 0035 | 35 | – | 29.80 NEW |
| 0040 | 40 | – | 32.30 NEW |
| 0045 | 45 | – | 38.20 NEW |
| 0050 | 50 | – (W578) | 45.50 NEW (W704) |

## Chisel set

**7283** Supplied in a carton.

**7285** Supplied in display box.

7283 format professional quality

7285

| Order No. | Design | 7283 format professional quality | 7285 | Set contents mm |
|---|---|---|---|---|
| 0060 | 6-piece | 54.00 (W578) | 101.00 (W704) | 6; 10; 12; 16; 20; 26 |

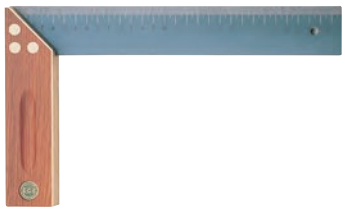
## Smoothing oil

**Design:** Chemical composition tailored to different whetstones. The oil prevents stone clogging while sharpening.

| Order No. | Content ml | 7450 |
|---|---|---|
| 0005 | 120 | 9.10 (W704) |

## Precision carpenter's square

**Design:** Triple riveted, elastic-hard blue steel rail and laser scale. With rosewood stock and groove for very easy handling. Double in-set brass fittings with mitre.



| Order No. | Stock length mm | 4641 |
|---|---|---|
| 0200 | 200 | 45.40 |
| 0250 | 250 | 51.40 |
| 0300 | 300 | 57.50 (W458) |

## Precision bevel

**Design:** Flexible-hard blue steel rail with rosewood stock and groove for very easy handling, with fitted U-profile fitting made of brass. Slotted steel latch for internal measurements. The steel rail is locked by the wing nut.

| Order No. | Rail length mm | 4643 |
|---|---|---|
| 0250 | 250 | 44.60 |
| 0300 | 300 | 50.80 (W458) |

## Scratch gauge

**Design:** With two individually adjustable marking sticks, slim steel marker needles, inserted, legible mm scale.

**4644** Made of white beechwood.

**4645** Made of white beechwood, with Vera pock wood overlay .

4644

4645

| Order No. | Measurement range mm | 4644 | 4645 |
|---|---|---|---|
| 0005 | 0–150 | 32.20 (W458) | 38.10 (W458) |

## Carpenter set

**Design:** Blades made of stainless steel, handles made of walnut with brass fittings. Joiner's angle with double-sided, etched millimetre scale, the accuracy of the right angle is equivalent to 0.01 mm per 1 cm.

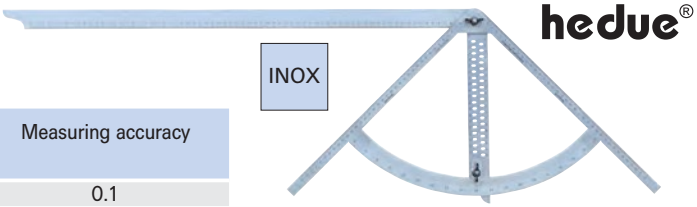
INOX

| Order No. | Design | 7460 hedue® | Set contents |
|---|---|---|---|
| 0005 | 3-piece | 49.00 (W458) | Angle 300 mm, adjustable bevel, miter |

## Marking device

**Design:** Made of stainless steel, each with etched measuring scales. Angle and quadrat seamlessly welded.

**Application:** Quick marking of all joinery work. Precision marking of shifters, rafters and straight steps as well as double offsets.




| Order No. | Dimension mm | 4646 hedue® | Graduation | Measuring accuracy |
|---|---|---|---|---|
| 0005 | 430 x 795 | 70.40 (W705) | 0.5 | 0.1 |

## Marking tool set

NEW

**Supplied:**
**Marking device 430 x 795 mm**
Made of stainless steel, each with etched measuring scales. Angle and quadrat seamlessly welded. Quick marking of all joinery work. Precision marking of shifters, rafters and straight steps as well as double offsets.

**Bevel 500 x 45 x 30 mm**
Made of beech wood, legs with groove, slotted tongue. The tongue is locked by the wing nut.

**Joiner's square 800 x 320 x 1.2 mm**
Made of stainless steel, elastic. With mm gradation and marking holes.

| Order No. | Design | 4646 hedue® |
|---|---|---|
| 0010 | 3-piece | 88.00 (W705) |

## Joiner's mallet

**Design:** Mallet head made of durable, steamed beechwood, mallet handle made of handy profiled ash.

**7284 0105** Mallet head and stem connected with glued in wedge.

**7284 0160** Mallet head and stem connected with glued in wedge and anchored by a cotter.

| Order No. | Mallet head length mm | 7284 |
|---|---|---|
| 0105 | 105 | 21.50 |
| 0160 | 160 | 34.70 (W577) |

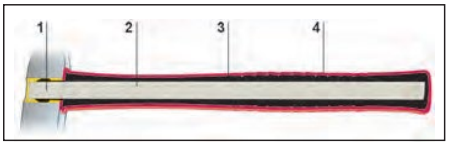
## Forest axe

**Design:** Blade is ready for use and finely polished, ash handle in cow-foot shape, yellow lacquered.

| Order No. | Weight g | 7296 | 7297 | Cutting edge width mm | Handle length mm | Head weight g |
|---|---|---|---|---|---|---|
| 0600 | – | 31.40 | – | 105 | 360 | 600 |
| 0800 | – | 34.20 | – | 110 | 380 | 800 |
| 1000 | – | 40.20 | – | 125 | 410 | 1100 |
| 1250 | 1250 | – | 51.60 | 120 | 700 | – |
| 1400 | 1400 | – | 60.40 | 130 | 800 | – |
| 1600 | 1600 | – (W583) | 67.60 (W583) | 130 | 800 | – |

## Woodsplitting axe ULTRATEC

**Design:** From steel grade C 45/DIN 17200, ground path and blade edge. ULTRATEC-handle is firmly connected to the axe with glass-fibre core. 3-component handle with unbreakable quality glass-fibre core, non-slip grip made of elastomers.




| Order No. | Weight g | 7298 mab | Length mm |
|---|---|---|---|
| 3000 | 3000 | 46.40 (W518) | 920 |

1) Firm connection of handle and head
2) Unbreakable glass-fibre core
3) Polypropylene carrier layer, ergonomically shaped
4) non-slip elastomers

## Bricklayer's bucket trowel (Tyrol plasterer trowel)

**Design:** Made of flexible, hardened steel or stainless steel, with gooseneck and galvanised ferrule and lacquered wooden handle made of beechwood.

INOX

format professional quality

| Order No. | Length mm | 7300 format | Design |
|---|---|---|---|
| 0160 | 160 | 5.70 | Steel |
| 0161 | 160 | 6.80 | Stainless steel, non-corrosive |
| 0180 | 180 | 6.00 | Steel |
| 0181 | 180 | 5.90 | Stainless steel, non-corrosive |
| | | (W580) | |

## Bern plasterers bucket trowel

**Design:** Made of flexible, hardened steel or stainless steel, with straight neck and galvanised ferrule and lacquered wooden handle made of beechwood.

format professional quality

| Order No. | Length mm | 7302 format | Design |
|---|---|---|---|
| 0140 | 140 | 4.73 | Steel |
| 0141 | 140 | 3.81 | Stainless steel, non-corrosive |
| | | (W580) | |

## Plasterer's bucket trowel

**Design:** Made of flexible, hardened steel or stainless steel, with straight neck and galvanised ferrule and lacquered wooden handle made of beechwood.

format professional quality

| Order No. | Width mm | 7304 format | Design |
|---|---|---|---|
| 0040 | 40 | 4.53 | Steel |
| 0041 | 40 | 4.58 | Stainless steel, non-corrosive |
| 0060 | 60 | 4.75 | Steel |
| 0061 | 60 | 4.79 | Stainless steel, non-corrosive |
| 0080 | 80 | 4.88 | Steel |
| 0081 | 80 | 4.31 | Stainless steel, non-corrosive |
| | | (W580) | |

## Berlin brick trowel

**Design:** Made of flexible, hardened steel, with gooseneck and galvanised ferrule and lacquered wooden handle made of beechwood.

format professional quality

| Order No. | Length mm | 7306 format | Width max. mm |
|---|---|---|---|
| 2200 | 220 | 10.55 | 200 |
| | | (W580) | |

## Hamburg edging trowel

**Design:** DIN 6441D. Made of flexible, hardened steel, with straight, flat neck and galvanised ferrule as well as lacquered wooden handle made of beechwood.

format professional quality

| Order No. | Width mm | 7308 format | Length mm |
|---|---|---|---|
| 0080 | 8 | 2.82 | 180 |
| 0100 | 10 | 2.73 | 180 |
| 0120 | 12 | 2.73 | 180 |
| | | (W580) | |

## Leaf and square trowel

**Design:** Made of flexible, hardened steel with a pointed oval and a flat side. Plastic-coated handle.

format professional quality

| Order No. | Width mm | 7309 format | Length mm |
|---|---|---|---|
| 0100 | 10 | 1.38 | 215 |
| 0160 | 16 | 1.38 | 215 |
| 0200 | 20 | 1.38 | 235 |
| | | (W580) | |

## Smoothing trowel

**Design:** Blade made of hardened steel. With curved, lacquered wooden handle made of beechwood.

format professional quality

**7310** **Blade non-toothed.**

**7312** **Blade serrated on both sides, teeth 6 x 6 mm.**

7310

7312

| Order No. | Dimension mm | 7310 format | 7312 format | Blade thickness mm | Design |
|---|---|---|---|---|---|
| 0281 | 280 x 130 | 6.45 | 6.75 | 0.7 | Stainless steel, non-corrosive |
| 0280 | 280 x 130 | 4.73 (W580) | 5.30 (W580) | 0.7 | Steel |

## Plasterer's float

**Design:** Light and easy-to-grip model.

KRONEN HANSA

**7314** Made of **rigid foam,** lightly stable and distortion-free.

**7316** Made of 7-times glued **ply wood,** lime resistant, distortion-free with ground edges and glued as well as stapled ergonomically shaped handle.

7314

7316

| Order No. | Dimension mm | 7314 KRONEN HANSA | 7316 KRONEN HANSA |
|---|---|---|---|
| 0141 | 280 x 140 | 2.71 | 4.99 |
| 0181 | 320 x 180 | 3.52 (W580) | – (W580) |

## Paint scrapers

**Design:** Made of one piece of hardened stainless steel with large impact cap as well as ergonomically shaped impact-resistant and non-slip multi-component handle.

TAJIMA

**7317 0235 + 0255** Classic blade form.

**7317 0250** Extra wide blade form

**7317 0240** **Multifunctional blade:** Flat scraper edge, eye for removing nails and pins, rounding for tubes and round surfaces.

7317 0235

7317 0250

7317 0240

| Order No. | Width mm | 7317 TAJIMA |
|---|---|---|
| 0235 | 50 | 12.95 |
| 0255 | 75 | 12.95 NEW |
| 0250 | 90 | 12.95 |
| 0240 | 75 | 12.95 (W569) |

## Painter's spatula

**Design:** Spade made of steel, flexible, with flat, oval-shaped, lacquered wooden handle with hanging hole.

format professional quality

| Order No. | Width mm | 7320 format |
|---|---|---|
| 0020 | 20 | 1.35 |
| 0030 | 30 | 1.39 |
| 0040 | 40 | 1.43 |
| 0050 | 50 | 1.58 |
| 0060 | 60 | 1.61 |
| 0080 | 80 | 1.89 |
| 0100 | 100 | 2.43 (W580) |

## Paint stripper, through tang

**Design:** Blade made of non-corrosive stainless steel, continuous blade, conically ground, with triple riveted rosewood grip.

INOX

format professional quality

| Order No. | Width mm | 7330 format | |
|---|---|---|---|
| 0025 | 25 | 3.68 | |
| 0040 | 40 | 3.89 | |
| 0060 | 60 | 4.13 | |
| 0080 | 80 | 4.54 | |
| 0100 | 100 | 5.01 | |
| | | (W580) | |

## Paint scraper, rustproof

**Design:** Blade made of non-corrosive stainless steel, conically ground, high-gloss polishing, with black plastic handle.

INOX

format professional quality

| Order No. | Width mm | 7321 format | |
|---|---|---|---|
| 0040 | 40 | 1.79 | |
| 0060 | 60 | 2.05 | |
| 0080 | 80 | 2.49 | |
| 0100 | 100 | 3.05 | |
| | | (W580) | |

## Paint scraper, PTFE coated

**Design:** Blade made of non-corrosive stainless steel with PFTE coating, conically ground, with ergonomic 2-component handle.

INOX

format professional quality

| Order No. | Width mm | 7313 format | |
|---|---|---|---|
| 0025 | 25 | 6.20 | |
| 0040 | 40 | 6.80 | |
| 0060 | 60 | 7.40 | |
| 0075 | 75 | 8.05 | |
| 0080 | 80 | 8.10 | |
| 0100 | 100 | 9.00 | |
| | | (W580) | |

## Paint scraper, non-sparking

**Design:** Blade made of copper beryllium, non-sparking, with flat oval wooden handle.

„PARIERE"

| Order No. | Width mm | 5986 „PARIERE" | |
|---|---|---|---|
| 0040 | 40 | 29.40 | |
| 0060 | 60 | 37.80 | |
| 0080 | 80 | 56.00 | |
| | | (W586) | |

## Stripping spreader

**Design:** Blade trapezoidal shape with wooden back and suspension eye.

format professional quality

| Order No. | Width mm | 7322 format | Toothing |
|---|---|---|---|
| 0018 | 180 | 1.80 (W580) | B2, fine |

## Japan spatula set

**Design:** Made of spring steel strip, medium hard, with nitrate-resistant plastic back.

| Order No. | Design | 7324 | Set contents mm |
|---|---|---|---|
| 0005 | 4-piece | 1.83 (W586) | 50; 80; 100; 120 |

## Plaster bucket

**Design:** Made of rubber, red, conical shape, very flexible.

| Order No. | Dimension mm | 7326 |
|---|---|---|
| 0007 | 130 x 95 | 1.78 (W580) |

## Plumb bob

**Design:** Made of iron, blank twisted, pear shaped with unscrewable brass head.

| Order No. | Weight g | 7328 |
|---|---|---|
| 0006 | 300 | 7.45 (W580) |

## Plumb bob with automatic feeding-in

**Design:** Plumb bob with integrated lateral bumpers and removable rubber cap on the top, **quickly stabilising** within 6 seconds. Plastic casing with automatic feeding-in and magnet, fixing nail, hook and hanging bar for fixing on lots of surfaces and objects, e.g. masonry and beam constructions etc.

| Order No. | Weight g | 7328 TAJIMA |
|---|---|---|
| 0008 | 400 | 29.20 (W569) |

TAJIMA

## Bricklayer's cord

**Design:** Colour red, on handy plastic coil, round braided, light stabilised, insensitive to moisture and soiling, flame-retardant, rot-resistant, with parallel winding and a strength of 15 kg.

| Order No. | Thickness mm | 7328 OVERMANN | Length m |
|---|---|---|---|
| 0012 | 1 | 1.44 | 50 |
| 0016 | 2 | 3.70 (W580) | 100 |

OVERMANN

## Chalk line

**Design:** Light, robust **casing made of die-cast magnesium with anti-slip epoxy powder coating,** crank and axle made of die-cast zinc, **transmission ratio 5:1.** Polyester cord with double pronged, hardened hook. The prongs are bent so that the hook can be nailed to edges. The PUSH system prevents cranks from turning when force is applied to the axle and when pulling out the cord. Greater inner colour power capacity, mount for hook integrated in the body. Steel safety eye for cord outlet and belt clip made of non-corrosive stainless steel.

| Order No. | Length m | 7329 format |
|---|---|---|
| 1006 | 30 | 14.00 (W580) |

format professional quality

## Chalk line

**Design:** Durable **aluminium casing** with robust, very hardwearing nylon/polyester cord with large hook, **transmission ratio 6:1.** The chalk line marker has a chalk crusher that crushes up the chalk before entry and therefore prevents failure due to the coil tilting. The transmission, which can be released, prevents the metal crank handle from turning as well when pulling the cord out. Refill cap for quick and easy refilling, it also serves as a secure lock.

| Order No. | Length m | 7327 IRWIN |
|---|---|---|
| 0100 | 30 | 17.40 (W252) |

IRWIN TOOLS

## Chalk line

**Design:** Durable **plastic casing** with robust, very hardwearing nylon/polyester cord with large hook, **transmission ratio 3.5:1.** The chalk line marker has a chalk crusher that crushes up the chalk before entry and therefore prevents failure due to the coil tilting. The transmission, which can be released, prevents the metal crank handle from turning as well when pulling the cord out. Refill cap for quick and easy refilling, it also serves as a secure lock.

| Order No. | Length m | 7327 IRWIN |
|---|---|---|
| 0200 | 30 | 13.30 (W252) |

## Chalk powder

NEW

**Design:** Very good adhesion, not water soluble. In a handy, space-saving plastic bottle. Base material: Calcium carbonate with natural colour pigments.

**Note:** Colour red: very waterproof.

733A 733B

| Order No. | Content g | 733A Blue | 733B Red |
|---|---|---|---|
| 0250 | 250 | 3.62 | 3.62 |
| 0500 | 500 | 5.35 (W580) | 5.35 (W580) |

## Chalk powder

**Design:** Very good adhesion, not water soluble. In plastic container, rectangular shape to prevent from rolling away. Reclosable with tip seal to prevent moisture from entering. Base material: Calcium carbonate with natural colour pigments.

**Colour blue:** For interior and exterior use, remains visible for up to 1 week.

**Colour red:** For exterior use, remains visible for up to 2 months.

| Order No. | Colour | 7327 IRWIN | Content g |
|---|---|---|---|
| 0500 | Blue | 2.14 | 113 |
| 0505 | Red | 2.14 | 113 |
| 0510 | Blue | 2.78 | 227 |
| 0515 | Red | 2.78 | 227 |
| 0520 | Blue | 9.70 (W252) | 1100 |

## Glass cutter

**Design:** Exchangeable, hardened cutting wheel, with sharpened carbide wheel Ø 5 mm, nickel-plated upper part and flat wooden handle. Lineal distance 2.5 mm.

**Application:** Particularly suited for thick and hard glass types as well as tiles.

| Order No. | Design | 7346 Silberschnitt |
|---|---|---|
| 0005 | Glass cutter | 17.25 |
| 0011 | Carbide wheels Ø 5 mm (pack of 10) | 8.15 (W579) |

## Safety box opener

**Design:** Handle made of red ABS plastic, ergonomically shaped. The blade is in a metal bracket, which protects the contents of the box from accidental damage. The blade is exchanged by means of a screw, blade magazine in the handle. Supplied with a spare blade.

**Application:** For the removal of packet clips and to separate strapping from tools.

| Order No. | Design | 7344 NT Cutter |
|---|---|---|
| 0100 | Safety box opener, 195 mm | 18.55 |
| 0105 | Trapezoidal blade 37 x 12.5 x 0.6 mm (pack of 10) | 6.30 (W575) |

## Safety knife, covered lying blade

**Design:** Handle made of fibreglass reinforced plastic, with hanging hole and tape cutter, suitable for right and left-handed users. Blade nose for piercing and safe guiding along the material to be cut. Covered lying blades for **the best safety.**

**Application:** For the safe cutting of wrapping, stretch and shrink foil, sacks, plastic strapping, adhesive tape, fabric and cord.

**7419 0005** **SECUMAX COMBI**
4-fold use blade, exchangeable with safety chuck key. Up to 3 mm cutting depth.

**7419 0070** NEW **SECUMAX 350**
Double use blade, can be replaced without tools. With a spare blade head in the handle. Up to 6 mm cutting depth. Also suitable for cutting up to 2-layered boxes.

| Order No. | Design | 7419 martor |
|---|---|---|
| 0005 | SECUMAX COMBI | 7.20 |
| 0010 | Industrial blade 43 x 22 x 0.4 mm (pack of 10) | 6.10 |
| 0070 | SECUMAX 350 | 10.90 |
| 0075 | Blade head 0.30 mm (pack of 10) | 7.95 NEW |

(W599)

ENJOY SAFETY MADE IN SOLINGEN martor

7419 0005

7419 0070

## Safety knife, automatic blade return

**Design:** Automatic blade return, for **high safety levels.** Blade can be replaced without tools.

**Application:** For the safe cutting of all standard cutting materials such as wrap, stretch and heat-shrinking foil, plastic strapping, adhesive tape and paper webs.

**Note:** During the cutting process, always release the slide plate, otherwise the automatic blade retraction is not possible and the risk of injury will increase.

ENJOY SAFETY MADE IN SOLINGEN martor

**7419 0015** **SECUNORM PROFI**
Handle made of aluminium, with hanging hole, suitable for right-handed users. Double use blade. Up to 20 mm cutting depth, blade extends to max. 21 mm. Also suitable for cutting up to 3-layered boxes as well as adhesive tape, fabric and cord.

7419 0015

**7419 0080** NEW **SECUNORM PROFI LIGHT**
Handle made of fibreglass reinforced plastic, with hanging hole, suitable for right and left-handed users. Double use blade. Up to 16 mm cutting depth, blade extends to max. 17 mm. Also suitable for cutting up to 2-layered boxes as well as adhesive tape, fabric and cord.

7419 0080

**7419 0085** NEW **SECUNORM PROFI25**
Aluminium handle, suitable for right-handed and left-handed users. Double use blade. Up to 21 mm cutting depth, blade extends to max. 25 mm. Also suitable for cutting up to 3-layered boxes as well as adhesive tape, fabric and cord.

7419 0085

**7419 0025** **SECUNORM PROFI40**
Aluminium handle, suitable for right-handed and left-handed users. Long, break-proof blade Up to 36 mm cutting depth, blade extends max. 40 mm. Also suitable for cutting up to 3-layered boxes as well as fabric, cord, felt, non-wovens, PVC and foam.

7419 0025

**7419 0090** NEW **SECUNORM 380**
Handle made of fibreglass reinforced plastic, suitable for right and left-handed users. Long, flexible blade. Up to 73 mm cutting depth, blade extends max. 78 mm. Also suitable for cutting up to 4-layered boxes as well as felt, non-wovens, PVC, foam, coated and laminated foils.

7419 0090

| Order No. | Design | 7419 martor |
|---|---|---|
| 0015 | SECUNORM PROFI | 10.15 |
| 0080 | SECUNORM PROFI LIGHT | 8.35 |
| 0020 | Trapezoidal blade 53 x 19 x 0.63 mm (pack of 10) | 4.10 |
| 0085 | SECUNORM PROFI25 | 10.80 |
| 0040 | Trapezoidal blade 60 x 19 x 0.63 mm (pack of 10) | 4.32 |
| 0025 | SECUNORM PROFI40 | 11.90 |
| 0030 | Break-proof blade 71.2 x 18 x 0.5 mm (pack of 10) | 5.55 |
| 0090 | SECUNORM 380 | 14.75 |
| 0095 | Break-proof blade 109.5 x 17.9 x 0.5 mm (pack of 10) | 5.05 NEW |

(W599)

## Safety knife, fully automatic blade return

**Design:** Aluminium handle, suitable for right-handed and left-handed users. Fully automatic blade return after the cut, even when the release is still held down, for **very high safety levels.** Blade can be replaced without tools.

**Application:** For the safe cutting of all standard cutting materials such as wrap, stretch and heat-shrinking foil, plastic strapping, paper webs and PVC.

**7419 0035** **SECUPRO MEGASAFE**
Double use blade. Up to 20 mm cutting depth, blade extends to max. 23 mm. Also suitable for cutting up to 3-layered boxes as well as adhesive tape, cord, felt, non-wovens and rubber and suitable for cutting off rolled goods.

**7419 0045** **SECUPRO MARTEGO**
Handle backs with anti-clip Soft-Grip. Safeguard prevents accidental deployment of the 4-fold use blade. Up to 9 mm cutting depth, blade extends to max. 12 mm. Also suitable for cutting up to 2-layered boxes as well as adhesive tape, fabric and cord.

**7419 0100** NEW **SECUPRO 625**
Handle backs with anti-clip Soft-Grip. Safeguard prevents accidental deployment of the 2-fold use blade. Up to 21 mm cutting depth, blade extends to max. 25 mm. Also suitable for cutting up to 3-layered boxes as well as fabric, felt, leather, rubber and carpeting and suitable for cutting off rolled goods.

| Order No. | Design | 7419 martor |
|---|---|---|
| 0035 | SECUPRO MEGASAFE | 21.30 |
| 0040 | Trapezoidal blade 60 x 19 x 0.63 mm (pack of 10) | 4.32 |
| 0045 | SECUPRO MARTEGO | 24.40 |
| 0050 | Industrial blade 26 x 18.5 x 0.4 mm (pack of 10) | 4.50 |
| 0100 | SECUPRO 625 | 30.70 |
| 0105 | Trapezoidal blade, rounded, 55.5 x 19 x 0.63 mm (pack of 10) | 4.56 NEW |

(W599)

ENJOY SAFETY MADE IN SOLINGEN martor

7419 0035

7419 0045

7419 0100

## Used blade container

NEW

ENJOY SAFETY MADE IN SOLINGEN martor

**Design:** Made of plastic.

**Application:** For safe collection of used blades. Once the container is full, it is permanently sealed by twisting the lid and fully disposed of.

| Order No. | Dimensions mm | 7419 martor |
|---|---|---|
| 0110 | 107 x 105 x 200 | 12.10 |

(W599)

## Universal knife, fixed blade

STANLEY

**Design:** Casing made of die-cast zinc, **profiled,** grey, with pin hole and blade magazine in handle. Patented InterLock™ connection of the handles for secure grip of the blade. The blade is fixed. Supplied with 3 spare trapezoidal blades.

| Order No. | Length mm | 7333 STANLEY |
|---|---|---|
| 0005 | 140 | 5.40 |

(W581)

## Universal knives, adjustable blade

STANLEY

**Design:** Casing made of die-cast zinc, grey, with pin hole and blade magazine in handle. Patented InterLock™ connection of the handles for secure grip of the blade. The blades can be fixed in 5 positions with a wheel. Supplied with 3 spare trapezoidal blades.

| Order No. | Length mm | 7333 STANLEY |
|---|---|---|
| 0010 | 155 | 6.20 |

(W581)

## Professional knives

STANLEY

**Design:** Casing made of die-cast zinc with soft, **non-slip plastic inserts,** hanging hole and blade magazine in handle. Patented InterLock™ connection of the handles for secure grip of the blade. Fast and safe **blade change without tools.** The blades can be fixed in 5 positions with a wheel. The **integrated cord cutter** can be used with the blade retracted. Supplied with 3 spare trapezoidal blades.

| Order No. | Length mm | 7335 STANLEY |
|---|---|---|
| 0005 | 180 | 13.95 |

(W581)

## Universal knife, foldable

**Design:** Plastic black/red casing with belt clip and blade magazine in handle. Fast and safe **blade change without tools.** The **thumb pad on the back of the blade enables maximum contact pressure.** The blade is fixed and can be folded up, together with the retainer system, like a conventional pocket knife. Supplied with 5 spare trapezoidal blades.

Erdi

| Order No. | Length mm | 7336 Erdi |
|---|---|---|
| 0160 | 160 | 18.00 (W565) |

## Blade for universal knife

**Design:** Supplied in a dispenser containing 10 pieces.

**Application:** For general and heavy-duty cutting work in cardboard, paper, leather, carpet, vinyl and other materials.

LUTZ BLADES exactly

7333 1025

7333 1000

7333 1005

| Order No. | Dimensions mm | 7333 LUTZ BLADES exactly | Coating |
|---|---|---|---|
| 1025 | 50.8 x 18.7 x 0.65 | 2.28 | – |
| 1000 | 61.0 x 18.7 x 0.65 | 2.58 | – |
| 1005 | 61.0 x 18.7 x 0.65 | 4.00 (W598) | TiN |

7333 1015

7333 1030

| Order No. | Dimensions mm | 7333 LUTZ BLADES exactly | Coating |
|---|---|---|---|
| 1015 | 48.2 x 18.7 x 0.65 | 5.35 | TiN |
| 1030 | 60.0 x 18.7 x 0.65 | 6.20 (W598) | TiN |

7333 1020

| Order No. | Dimensions mm | 7333 LUTZ BLADES exactly | Coating |
|---|---|---|---|
| 1020 | 58.9 x 18.7 x 0.65 | 5.85 (W598) | TiN |

## Slim knife

**Design:** With round metal handle and stop mechanism. Supplied with 2 spare blades.

**Application:** For very exact cutting work.

STANLEY

| Order No. | Design | 7348 STANLEY |
|---|---|---|
| 0010 | Utility knife, 110 mm | 8.90 |
| 0100 | Blade, straight, 60 mm, dispenser with 3 pieces | 2.83 |
| 0110 | Blade, straight, 60 mm, plastic box with 50 pieces | 30.20 (W581) |

## Snap-off knife

NEW

**Design:** Plastic casing made of 2-component plastic with metal blade guide, blade depot and removable end cap as a snap-off aid. Fixing of blade by means of pushbutton. Supplied with 3 snap-off blades.

format professional quality

| Order No. | Blade width mm | 7451 format |
|---|---|---|
| 0018 | 18 | 2.65 (W578) |

## Snap-off knife

**Design:** Plastic casing with metal blade guide. Fixing of blade by means of pushbutton, with Auto-Lock mechanism. Supplied with 1 snap-off blade.

| Order No. | Blade width mm | 7343 format |
|---|---|---|
| 0005 | 9 | 2.96 |
| 0010 | 18 | 4.48 |
| | | (W578) |

7343 0005

7343 0010

## Snap-off knife

**Design:** Plastic casing with plastic blade guide and removable end cap as a snap-off aid. Fixing of blade by means of pushbutton. Delivery with 1 snap-off blade.

| Order No. | Blade width mm | 7341 STANLEY |
|---|---|---|
| 0005 | 9 | 2.00 |
| 0010 | 18 | 3.10 |
| | | (W581) |

7341 0005

7341 0010

## Snap-off knife

**Design:** Plastic casing with metal blade guide and blade depot. Fixing of blade by means of pushbutton and additional locking wheel. Supplied with 2 snap-off blades.

| Order No. | Blade width mm | 7354 format |
|---|---|---|
| 0018 | 18 | 10.30 |
| | | (W578) |

## Snap-off knife

**Design:** Plastic casing with metal blade guide. Fixing of blade by means of pushbutton. Supplied with 3 snap-off blades.

| Order No. | Blade width mm | 7424 TAJIMA |
|---|---|---|
| 0018 | 18 | 5.20 |
| | | (W569) |

## Snap-off knife

NEW

**Design:** Die-cast zinc casing with rubber insert, metal blade guide and blade depot. Fixing of blade by means of pushbutton. Supplied with 1 snap-off blade.

| Order No. | Blade width mm | 7452 format |
|---|---|---|
| 0009 | 9 | 2.55 |
| 0018 | 18 | 4.45 |
| 0025 | 25 | 7.00 |
| | | (W578) |

7452

**7452 0025** with additional locking wheel

## Snap-off knife

**Design:** Metal casing with metal blade guide. Fixing of blade by means of pushbutton, with Auto-Lock. Supplied with 1 snap-off blade.

| Order No. | Blade width mm | 7347 NT Cutter |
|---|---|---|
| 0009 | 9 | 5.70 |
| 0018 | 18 | 10.75 |
| | | (W575) |

7347 0009

7347 0018

## Snap-off knife

**Design:** With metal blade guide. Fixing of blade by means of locking wheel.

**7354** **Plastic casing.** Supplied with 3 snap-off blades.

**7347** **Metal body.** Supplied with 1 snap-off blade.

**7424** **Plastic casing.** Supplied with 2 snap-off blades.

| Order No. | Blade width mm | 7354 format | 7347 NT Cutter | 7424 Tajima |
|---|---|---|---|---|
| 0218 | 18 | 6.95 | 10.75 | – |
| 0025 | 25 | – (W578) | – (W575) | 8.40 (W569) |

7354 format professional quality

7347 NT Cutter

7424 Tajima

## Cutter knife

NEW

**Design:** Die-cast zinc casing with rubber insert, metal blade guide and blade depot with automatic blade supply. Fixing of blade by means of pushbutton.

**7453** 0009 Delivery with 5 snap-off blades.

**7453** 0018 With additional locking wheel. Delivery with 6 snap-off blades.

| Order No. | Blade width mm | 7453 format |
|---|---|---|
| 0009 | 9 | 5.15 |
| 0018 | 18 | 8.30 (W578) |

format professional quality

7453 0018
with additional locking wheel

## Snap-off knife with spare blade magazine

**Design:** Metal casing with metal blade guide, push-button mechanism, fixing wheel and spare blade magazine. Supplied with 2 snap-off blades.

NT Cutter

| Order No. | Blade width mm | 7347 NT Cutter |
|---|---|---|
| 0318 | 18 | 26.90 (W575) |

## Snap-off blade

**Design:** Suitable for all standard cutter knives.

**7345** Made of steel.

**7315** 0000–0030 Made of carbon steel.

**7315** 0020 + 0025 NEW Made of carbon steel, black, extra **fine, sharp blade** for very precise cutting work.

**7315** 0010 + 0015 Made of carbon steel, with TiN-coating for longer durability and **heavy-duty cutting work.**

| Order No. | Blade width mm | 7345 format | 7315 LUTZ BLADES | Coating | Content Piece |
|---|---|---|---|---|---|
| 0000 | 9 | 1.60 | 2.27 | – | Dispenser with 10 |
| 0020 | 9 | – | 3.18 | Black | Dispenser with 10 |
| 0010 | 9 | – | 3.62 | TiN | Dispenser with 10 |
| 0005 | 18 | 2.44 | 3.20 | – | Dispenser with 10 |
| 0030 | 18 | – | 14.35 NEW | – | Dispenser with 50 |
| 0025 | 18 | – | 4.10 | Black | Dispenser with 10 |
| 0015 | 18 | – | 4.67 | TiN | Dispenser with 10 |
| 0007 | 25 | 3.27 NEW (W578) | – (W598) | – | Dispenser with 5 |

7345 format professional quality

7315 0000 LUTZ BLADES exactly

7315 0030

7315 0020 LUTZ BLADES exactly

7315 0010 LUTZ BLADES exactly

## Scalpel

**Design:** Plastic handle, black. Blade ground 45°. With turning mechanism to easily change the blades. Supplied with 5 blades.

NT Cutter

| Order No. | Design | 7318 NT Cutter |
|---|---|---|
| 0132 | Scalpel, 132 mm | 5.95 |
| 1132 | Scalpel blade 21 x 4 mm (pack of 40) | 6.75 (W575) |

## Belt strap knife/gypsum knife

**Design:** Curved blade made of carbon steel, ground and polished, with studded wooden handle and ring.

| Order No. | Blade length mm | 7319 | Length closed/open mm |
|---|---|---|---|
| 0180 | 77 | 6.45 (W706) | 108/185 |

## Work knife

**Design:** Made of stainless steel, lockable, can be released via push mechanism on top, with black plastic handle cover.

**5437** Blade with two finishes (smooth/serrated).

**7325** Blade in pike shape with smooth cutting edge.

| Order No. | Blade length mm | 5437 format | 7325 OTTER® 1887 | Length closed/open mm |
|---|---|---|---|---|
| 0195 | 78 | 9.45 | – | 112/190 |
| 0010 | 90 | – (W512) | 9.60 (W706) | 110/200 |

INOX

5437 format professional quality

7325 OTTER®- Messer

## Pocket knife

**Design:** Blade made of carbon steel, pointed tip, lockable, iron case painted black with fixing ring.

| Order No. | Blade length mm | 7325 OTTER® 1887 | Length closed/open mm |
|---|---|---|---|
| 0020 | 90 | 21.40 (W706) | 110/200 |

OTTER®- Messer

## Tradesmen's knife

**Design:** With 2-component handle and a holster for attachment to buttons on workwear.

| Order No. | Blade material | 7425 | Blade length mm |
|---|---|---|---|
| 0005 | Carbon steel (58–60 HRC) | 10.05 | 93 |
| 0010 | Stainless steel (57–59 HRC) | 12.60 (W706) | 93 |

INOX

7425 0005

7425 0010

## Penknife

**Design:** Blade made of stainless steel, pike shape, lockable with rustproof jaws, wood cover, with leather case and sharpening steel.

**Application:** For universal use.

| Order No. | Blade length mm | 7325 OTTER® 1887 | Length closed/open mm |
|---|---|---|---|
| 0030 | 75 | 22.60 | 100/175 |
| 0040 | 95 | 22.60 (W706) | 125/220 |

INOX

OTTER®- Messer

7325 0030

7325 0040

## Industrial knife

**Design:** Blade made of stainless steel, thrust shape with plastic safety grip.

**Application:** For universal use in industry.

INOX

OTTER®- Messer

| Order No. | Blade length mm | 7325 OTTER® 1887 |
|---|---|---|
| 0060 | 175 | 14.50 (W706) |

## Insulation knife

**Design:** Blade made of stainless steel, saw blade for dense and hard material, serrated blade for soft and light material, symmetric tip of blade suitable for making holes.

**Application:** For clean and fast cutting of various kinds of insulating materials.

INOX

OTTER®- Messer

| Order No. | Blade length mm | 7325 |
|---|---|---|
| 0090 | 280 | 15.65 (W706) |

## Insulation knife

**Design:** With replaceable blade and ergonomic handle.

**Application:** For clean cutting of insulating materials of various kinds.

format professional quality

| Order No. | Blade length mm | 7349 |
|---|---|---|
| 0140 | 140 | 8.55 |
| 0150 | Spare blade 140 x 19 x 0.9 (pack of 2) | 6.70 (W578) |

## Insulat. material saw

NEW

**Design:** Blade with serration. With 2-component plastic handle. Delivery incl. cover to protect the blade against rust.

**Application:** For cutting insulation materials such as mineral wool, foamed (EPS) and pressed (XPS) polystyrene.

BAHCO

| Order No. | Length mm | 726J |
|---|---|---|
| 0550 | 550 | 20.90 (W556) |

## Deburring knife

**Design:** Slim knife made of aluminium, with 1 blade, protective cap and hanging hole.

**Application:** Suitable for deburring plastic parts and for precision work.

MOZART TECHNIK DER SCHÄRFE

| Order No. | Design | 7340 |
|---|---|---|
| 0005 | Deburring knife | 3.83 |
| 0500 | Blade, 32 mm, plastic box with 100 pieces | 14.55 (W578) |

## Deburring/carving knife

**Design: Blade made of cast steel.** Bechwood handle, natural and fine milled.

**Application:** To cut off sprues, etc.

OTTER®- Messer

| Order No. | Blade length mm | 7325 |
|---|---|---|
| 0100 | 35 | 8.10 (W706) |

## Deburring knife

**Design: Blade made of carbon steel,** straight, natural beechwood handle, riveted.

**Application:** For deburring soft material.

OTTER®- Messer

| Order No. | Blade length mm | 7325 |
|---|---|---|
| 0110 | 75 | 5.25 (W706) |

## Multi-function tool DBST

**Design:** Tools and handles made of rustproof stainless steel, handles covered with 2-component plastic. **The tool contains:** Scissors, knife, saw, file, slotted screwdriver (small, large), and Phillips screwdriver. Supplied with nylon holster.

INOX

Erdi

| Order No. | Functions | 7406 Erdi | Length closed mm |
|---|---|---|---|
| 0005 | 7 | 25.10 (W565) | 100 |

## Multifunctional tool Wave

**Design:** Tools and handles are made of rustproof stainless steel, the blades accessible from the outside can be opened with one hand, tools and blades are lockable. **The tool contains:** Long-nose pliers, hard wire cutter, straight blade knife, serrated blade knife, scissors, saw, diamond file, wood/metal file, large and smaller bit holder, large slotted screwdriver, ruler (cm/in), wire cutter, can/bottle opener, hanging hole. Supplied with 2 double bits (small Phillips screwdriver and watchmaker's screwdriver, screwdriver PH 1; 2, slot 5 mm) and leather holster.

INOX

LEATHERMAN

| Order No. | Functions | 7407 LEATHERMAN | Length closed mm |
|---|---|---|---|
| 0005 | 17 | 121.00 (W707) | 102 |

## Multi-function tool Supertool 300

**Design:** Tools made of rustproof stainless steel, handles made of aluminium, tools and blades are lockable. **The tool contains:** Long-nose pliers, changeable wire cutter, changeable hard wire cutter, cable cutter, crimping pliers, straight blade knife, serrated blade knife, wood/metal file, saw, slotted screwdrivers (small, medium, large), Phillips screwdriver PH, awl with eye, ruler (cm/in.), can/bottle opener, stripping blade, hanging hole.Supplied with nylon holster.

INOX

LEATHERMAN

| Order No. | Functions | 7407 LEATHERMAN | Length closed mm |
|---|---|---|---|
| 0010 | 19 | 102.00 (W707) | 115 |

## Multifunctional tool Micra

**Design:** Tools and handles made of rustproof stainless steel. **The tool contains:** Scissors with release spring, straight blade knife, nail file/cleaner, tweezers, bottle opener, watchmaker's screwdriver, flat Phillips screwdriver, small slotted screwdriver, key ring.

INOX

LEATHERMAN

| Order No. | Functions | 7407 LEATHERMAN | Length closed mm |
|---|---|---|---|
| 0015 | 10 | 36.10 (W707) | 64 |

## Multifunctional tool Wingman

**Design:** Tools and handles made of rustproof stainless steel. **The tool contains:** Long-nose pliers with opening spring, normal pliers with opening spring, wire cutters with opening spring, scissors with opening spring, straight/serrated blade, wood/metal file, slotted screwdriver (small, medium), Phillips screwdriver PH, ruler (cm/in), can/bottle opener, stripping blade, package opener. Supplied with removable belt clip.

INOX

LEATHERMAN

| Order No. | Functions | 7407 LEATHERMAN | Length closed mm |
|---|---|---|---|
| 0020 | 14 | 42.50 (W707) | 97 |

## Brass padlock

**Design:** Strong, solid brass body with hardened, chrome-plated shackle, double bolted. Non-corrosive precision lock enabling high picking protection. Supplied with 2 keys, different keyed.

| Order No. | Size | 7356 format | Thickness mm | Shackle height inner mm |
|---|---|---|---|---|
| 0031 | 30 | 4.10 | 5 | 16.0 |
| 0041 | 40 | 5.80 | 6 | 22.0 |
| 0051 | 50 | 8.25 | 7 | 26.0 |
| | | (W587) | | |

## Aluminium padlock

**Design:** Robust lock body made of aluminium alloy, with hardened, corrosion-protected shackle, double bolted. Precision lock for greater protection against picking. Supplied with 2 keys, different keyed.

| Order No. | Size | 7502 format | Thickness mm | Shackle height inner mm |
|---|---|---|---|---|
| 0031 | 30 | 4.24 | 5 | 17.0 |
| 0041 | 40 | 5.80 | 6 | 23.0 |
| 0051 | 50 | 8.80 | 8 | 29.0 |
| | | (W587) | | |

## TITALIUM™ padlock 80Ti

**Design:** Solid lock body made of **light-weight, highly durable TITALIUM™ aluminium alloy** with hardened steel shackle, double bolted and increased corrosion resistance with nano technology. 6-pin precision cylinder with with paracentric keyway for increased protection against manipulation. Supplied with 2 keys, different keyed.

| Order No. | Size | 7501 ABUS | Thickness mm | Shackle height inner mm |
|---|---|---|---|---|
| 0040 | 40 | 10.65 | 7 | 25.5 |
| 0050 | 50 | 14.30 | 10 | 35.0 |
| | | (W603) | | |

## Brass padlock 45

**Design:** Solid brass body with hardened shackle, double bolted. Rustproof inner parts, precision pin cylinder with mushroom head pins and paracentric key profile for increased manipulation protection. Supplied with 2 keys, different keyed. **(Order No. 7504 0041) with 5 keys.**

| Order No. | Size | 7504 ABUS | Thickness mm | Shackle height inner mm |
|---|---|---|---|---|
| 0030 | 30 | 5.60 | 5.0 | 13.0 |
| 0040 | 40 | 7.55 | 6.5 | 21.0 |
| 0041 | 40 | 11.90 | 6.5 | 21.0 |
| 0050 | 50 | 10.75 | 7.5 | 24.0 |
| | | (W603) | | |

## Brass padlock set 45

**Design:** Solid brass body with hardened shackle, double bolted. Rustproof inner parts, precision pin cylinder with mushroom head pins and paracentric key profile for increased manipulation protection. **One key locks all locks in the set.**

| Order No. | Size | 7507 ABUS | Thickness mm | Shackle height inner mm | Number of keys Piece |
|---|---|---|---|---|---|
| 0005 | 40, set of 2 | 14.75 | 6.5 | 21.0 | 3 |
| 0010 | 40, set of 3 | 22.40 | 6.5 | 21.0 | 4 |
| 0015 | 40, set of 4 | 29.60 | 6.5 | 21.0 | 5 |
| | | (W603) | | | |

## Brass padlock 85

**Design:** Solid brass body with hardened, chrome-plated bar, double bolted and increased corrosion resistance with nano technology. Rustproof inner parts, precision pin cylinder with mushroom head pins and paracentric key profile for increased manipulation protection. Supplied with 2 keys, different keyed.

| Order No. | Size | 7510 ABUS | Thickness mm | Shackle height inner mm |
|---|---|---|---|---|
| 0030 | 30 | 10.85 | 5.0 | 16.5 |
| 0130 | 40 | 13.05 | 6.5 | 22.5 |
| 0040 | 50 | 17.30 | 8.0 | 28.5 |
| 0140 | 30 | 12.90 | 5.0 | 23.5 |
| 0050 | 40 | 16.65 (W603) | 6.5 | 62.5 |

## Brass combination padlock 165

**Design:** Solid brass lock body, shackle made of steel. With individually-adjustable digit combination.

| Order No. | Size | 7513 ABUS | Thickness mm | Shackle height inner mm | Number wheels |
|---|---|---|---|---|---|
| 0030 | 30 | 9.00 | 5.0 | 24.5 | 3 |
| 0040 | 40 | 13.65 (W603) | 6.0 | 26.0 | 4 |

## TITALIUM™ padlock 90RK

INOX

**Design:** Solid lock body made of **light-weight, highly durable TITALIUM™ aluminium alloy** with **stainless steel** shackle, double bolted for high resistance against pulling and torsion. The integrated **shackle guard** makes bolt cutter attacks difficult. Interchangeable precision pin cylinder, locking with just one key, key cannot be removed when lock is open. Supplied with 2 keys, different keyed.

| Order No. | Size | 7516 ABUS | Thickness mm | Shackle height inner mm |
|---|---|---|---|---|
| 0040 | 50 | 28.40 (W603) | 9.5 | 22.5 |

## Brass padlock Combi Lock 80

NEW

**Design:** Solid brass lock body. With individually-adjustable digit combination.

| Order No. | Size | 7512 BURG WÄCHTER | Thickness mm | Shackle height inner mm | Number wheels |
|---|---|---|---|---|---|
| 0030 | 30 | 7.85 | 5.0 | 27.0 | 3 |
| 0040 | 40 | 11.70 (W603) | 6.5 | 32.5 | 4 |

## Toolboxes, plastic tote tray

**Design:** Made of polypropylene, with raised cm and inch scales on the open compartments. Handle made of aluminium.

| Order No. | Dimensions mm | 7351 format | |
|---|---|---|---|
| 1001 | 395 x 295 x 215 | 8.70 (W587) | |

## Toolbox, steel sheet

**Design:** Made of steel sheet, internal and external lacquered in hammer-finish blue, with handle that folds down and automatic locking function when pulling up the handle. Can be folded apart thanks to the heavy-duty rivet hinges. **5-piece,** can be locked with padlock (not supplied).

**Note:** Padlocks see from 📖 7/68.

| Order No. | Dimensions mm | 7358 format | Sheet thickness mm |
|---|---|---|---|
| 0430 | 430 x 200 x 200 | 30.10 | 0.6 |
| 0530 | 530 x 200 x 200 | 34.20 | 0.6 |
| 0600 | 600 x 200 x 200 | 39.00 (W587) | 0.7 |

## Sheet steel case

**Design:** Made of sheet steel, blue powder-coated inside and out, splash-proof and weather resistant. With 2 large handles on the side for easy transporting. The integrated small parts compartment can be removed, the drawing compartment in the lid is perforated. Inner walls are lined with special fibreboard panels. Can be locked with padlock (not supplied).

**Note:** Padlocks see from 📖 7/68.

| Order No. | Volume approx. l | 7360 format | Internal dimensions L x W x H mm | External dimensions L x W x H mm | Weight kg |
|---|---|---|---|---|---|
| 0005 | 59 | 128.00 | 678 x 350 x 247 | 690 x 360 x 312 | 15 |
| 0020 | 79 | 149.50 | 975 x 347 x 236 | 985 x 360 x 302 | 19 |
| 0010 | 99 | 155.00 | 822 x 432 x 278 | 833 x 440 x 343 | 20 |
| 0015 | 172 | 183.50 (W587) | 900 x 520 x 368 | 910 x 532 x 432 | 25 |

## Aluminium box

**Design:** Made of **1 mm** aluminium, with all-round rubber seal in the lid, splash-proof and weather-resistant. With 2 large handles on the side for easy transporting. With robust and durable hinges and straps for latching. Easy to stack wtih the special case corners and floor profiles. 2 snap closures and additional locking function with padlock (not supplied). The basic dimensions are based on pallet sizes.

**Note:** Padlocks see from 📖 7/68.

| Order No. | Volume approx. l | 7362 | Internal dimensions L x W x H mm | External dimensions L x W x H mm | Weight kg |
|---|---|---|---|---|---|
| 0029 | 29 | 103.00 | 400 x 300 x 245 | 432 x 335 x 277 | 3.25 |
| 0047 | 47 | 133.50 | 550 x 350 x 245 | 582 x 385 x 277 | 4.50 |
| 0076 | 76 | 196.00 | 560 x 350 x 380 | 592 x 385 x 409 | 5.30 |
| 0091 | 91 | 212.00 | 750 x 350 x 350 | 782 x 385 x 379 | 6.10 |
| 0140 | 140 | 273.50 | 870 x 460 x 350 | 902 x 495 x 379 | 8.00 |
| 0157 | 157 | 316.50 | 750 x 550 x 380 | 782 x 585 x 412 | 8.20 |
| 0163 | 163 | 327.00 | 1150 x 350 x 380 | 1182 x 385 x 412 | 9.50 |
| 0240 | 240 | 340.00 | 750 x 550 x 590 | 782 x 585 x 622 | 10.00 |
| 0415 | 415 | 431.00 (W712) | 1160 x 755 x 485 | 1192 x 790 x 515 | 16.00 |

## Tool case with small parts organiser

NEW

**Design:** Made of plastic. Bottom tray with foam rubber insert, lid with integrated small parts magazine with 16 compartments. Delivery without content.

| Order No. | External dimensions L x W x H mm | 7410 format | Weight kg |
|---|---|---|---|
| 0005 | 390 x 360 x 150 | 23.80 (W589) | 1.6 |

## Toolbox

NEW

**Design:** Made of shockproof polypropylene, resistant to acids and alkalis, with detachable tool carrier.

**7529 0020** Delivery incl. 6 removable compartment inserts for the tool carrier.

**7529 0027** With two drawers for small parts. Delivery incl. 6 removable compartment inserts for the tool carrier.

**7529 0047** With two drawers for small parts. Delivery incl. 7 removable compartment inserts for the tool carrier as well as two transverse and one lengthways partition to sub-divide the inside of the case. With additional carrying handles at the sides.

**7529 0062** With four drawers for small parts. Delivery incl. 10 removable compartment inserts for the tool carrier as well as one lengthways partition to sub-divide the inside of the case. With additional carrying handles at the sides.

7529 0062

7529 0020

7529 0027

7529 0047

| Order No. | Volume approx. l | 7529 raaco | External dimensions L x W x H mm | Max. loading capacity kg |
|---|---|---|---|---|
| 0020 | 20 | 28.70 | 474 x 239 x 190 | 30 |
| 0027 | 27 | 36.40 | 474 x 239 x 248 | 30 |
| 0047 | 47 | 71.80 | 540 x 296 x 292 | 40 |
| 0062 | 62 | 121.50 (W588) | 621 x 311 x 322 | 50 |

## Small parts box

NEW

**Design:** Made of shockproof polypropylene, resistant to acids and alkalis, with transparent lid. With sliding lock.

**7518** With **fixed compartments** and smooth lid.

**7519** With **fixed compartments** and **safeguard profiles** in the lid to prevent the contents from slipping.

**7520** With **removable compartment inserts** and **safeguard profiles** in the lid to prevent the contents from slipping. With folding carrying handle.

7518 0018

7519 0032

7520 0015

| Order No. | Number of shelves | 7518 raaco 240 x 195 x 43 mm | 7519 raaco 338 x 260 x 57 mm | 7520 raaco 338 x 261 x 57 mm | Shelves |
|---|---|---|---|---|---|
| 0009 | 9 | 6.20 | – | – | 36 x 52 mm (4 pieces)<br>73 x 52 mm (2 pieces)<br>36 x 105 mm (2 pieces)<br>223 x 52 mm (1 pieces) |
| 0015 | 15 | – | 11.25 * | – | 38 x 54 mm (8 pieces)<br>78 x 54 mm (3 pieces)<br>118 x 54 mm (2 pieces)<br>238 x 54 mm (1 pieces)<br>78 x 166 mm (1 pieces) |
| 0015 | 15 | – | – | 16.85 | 55 x 39 x 47 mm (5 pcs)<br>109 x 39 x 47 mm (2 pcs)<br>163 x 39 x 47 mm (1 pcs)<br>218 x 39 x 47 mm (1 pcs)<br>79 x 55 x 47 mm (4 pcs)<br>157 x 55 x 47 mm (1 pcs)<br>109 x 79 x 47 mm (1 pcs) |
| 0017 | 17 | – | – | 16.85 | 55 x 39 x 47 mm (4 pcs)<br>109 x 39 x 47 mm (4 pcs)<br>79 x 55 x 47 mm (8 pcs)<br>109 x 79 x 47 mm (1 pcs) |
| 0018 | 18 | 6.20 | – | – | 36 x 52 mm (18 pieces) |
| 0032 | 32 | – (W588) | 11.25 (W588) | – (W588) | 38 x 54 mm (32 pieces) |

* Can only be supplied as a whole packaging unit. 7 pcs.

## Small parts box carrier

NEW

raaco

**Design:** Made of shockproof polypropylene, resistant to acids and alkalis. The supplied small parts boxes click in securely using a side profile. The carriers can be connected to each other e.g. for vehicle or workshop equipment.

**Equipped with:**
1 small parts box with 15 removable compartment inserts (Order No. 7520 0015)
1 small parts box with 17 removable compartment inserts (Order No. 7520 0017)

| Order No. | External dimensions L x W x H mm | 7521 raaco | Small parts boxes dimensions mm |
|---|---|---|---|
| 0004 | 376 x 265 x 310 | 90.60 (W588) | 338 x 261 x 57 |

## Small parts box

NEW

raaco

**Design:** Double walled bottom tray made of shockproof polypropylene, resistant to acids and alkalis, with transparent lid made of break-proof polycarbonate. With **removable compartment inserts** and **safeguard profiles** in the lid to prevent the contents from slipping. One-handed operation of fastener, carrying handle with safety lock. Delivery incl. replaceable ID labels (yellow, green, grey).

| Order No. | Number of shelves | 7523 raaco 298 x 284 x 55 mm | 7524 raaco 354 x 323 x 55 mm | 7525 raaco 421 x 361 x 55 mm | 7526 raaco 421 x 361 x 78 mm | 7527 raaco 465 x 401 x 78 mm | Shelves |
|---|---|---|---|---|---|---|---|
| 0012 | 12 | – | 38.70 | – | – | – | 55 x 39 x 47 mm (4 pcs), 109 x 39 x 47 mm (2 pcs) 157 x 55 x 47 mm (1 pc), 109 x 79 x 47 mm (4 pcs) 218 x 79 x 47 mm (1 pcs) |
| 0013 | 13 | 30.30 | – | – | – | – | 55 x 39 x 47 mm (5 pcs), 109 x 39 x 47 mm (2 pcs) 218 x 39 x 47 mm (2 pcs), 79 x 55 x 47 mm (4 pcs) |
| 0014 | 14 | – | 38.70 | – | – | – | 55 x 39 x 47 mm (6 pcs), 218 x 39 x 47 mm (2 pcs) 79 x 55 x 47 mm (3 pcs), 109 x 79 x 47 mm (2 pcs) 157 x 109 x 47 mm (1 pcs) |
| 0014 | 14 | – | – | – | 59.30 | – | 79 x 55 x 69 mm (6 pcs), 157 x 55 x 69 mm (2 pc) 235 x 55 x 69 mm (1 pc), 109 x 79 x 69 mm (4 pcs) 218 x 79 x 69 mm (1 pc) |
| 0015 | 15 | 30.30 | – | – | – | – | 55 x 39 x 47 mm (8 pcs), 109 x 39 x 47 mm (1 pc) 163 x 39 x 47 mm (1 pc), 79 x 55 x 47 mm (4 pcs) 109 x 79 x 47 mm (1 pcs) |
| 0018 | 18 | – | – | – | – | 75.70 | 79 x 55 x 69 mm (8 pcs), 157 x 55 x 69 mm (2 pcs) 235 x 55 x 69 mm (2 pcs), 109 x 79 x 69 mm (5 pcs) 218 x 79 x 69 mm (1 pc) |
| 0020 | 20 | – | – | – | – | 75.70 | 79 x 55 x 69 mm (14 pcs), 157 x 55 x 69 mm (1 pcs) 235 x 55 x 69 mm (2 pc), 109 x 79 x 69 mm (1 pcs) 157 x 109 x 69 mm (2 pcs) |
| 0020 | 20 | – | – | – | 59.30 | – | 79 x 55 x 69 mm (15 pcs), 109 x 79 x 69 mm (5 pcs) |
| 0025 | 25 | – | – | 52.70 | – | – | 79 x 55 x 47 mm (25 pcs) |
| 0045 | 45 | – (W588) | – (W588) | 52.70 (W588) | – (W588) | – (W588) | 55 x 39 x 47 mm (40 pcs), 79 x 55 x 47 mm (5 pcs) |

## Small parts case carrier

NEW

**Design:** Made of shockproof polypropylene, resistant to acids and alkalis. The supplied small parts cases click in securely using a side profile. With folding carrying handle.

**Equipped with:**
4 small parts cases with 15 removable compartment inserts (Order No. 7523 0015)

| Order No. | External dimensions L x W x H mm | 7528 raaco | Small parts boxes dimensions mm |
|---|---|---|---|
| 0004 | 347 x 342 x 305 | 161.00 (W588) | 298 x 284 x 55 |

## Small parts box

NEW

raaco

**Design:** Bottom tray made of shockproof polypropylene, resistant to acids and alkalis, with transparent lid made of break-proof polycarbonate. With **8 partitions** for individual sub-division and **safeguard profiles** in the lid to prevent the contents from slipping. With folding carrying handle and sliding locks.

| Order No. | External dimensions L x W x H mm | 7522 raaco |
|---|---|---|
| 0009 | 413 x 330 x 147 | 55.10 (W588) |

## Tool shoulder bag

**Design:** Made of tearproof nylon fabric, black, with silver reflective strips, base with water-resistant coating and 2 floor gliders. With removable, adjustable carry strap, with adjustable shoulder pad and a padded carry handle. Can be closed using velcro strips. Delivery without content.

**Equipped with:**
3 tool strips for tools up to ∅ 20 mm on the front and rear wall
1 large stowage compartment
2 side compartments each with one small parts box
1 business card pocket on the back

| Order No. | Inside dimensions mm | 7413 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 200 x 300 x 100 | 50.90 (W589) | 6 | 1300 |

## Tool bag

**Design:** Made of strong cowhide, black with 2 ring caps and removable, adjustable carry strap made of leather, black with 2 snap hooks. Very stable and with protective, integrated floor gliders. Lockable with 1 key lock. Delivery without content.

**Equipped with:**
17 push-in compartments on front, centre and rear wall
1 transparent keep-safe compartment in the lid

| Order No. | Inside dimensions mm | 7369 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 220 x 140 x 250 | 79.20 (W589) | 8 | 1200 |

## Universal bag

**Design:** Bottom tray and side elements made of shockproof, moisture-resistant HDPE plastic, lid made of strong, structured cowhide, black, with durable walls made of special plastic to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also with ergonomically shaped handle. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Delivery without content.

| Order No. | Inside dimensions mm | 7369 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0010 | 360 x 110 x 170 | 27.80 (W589) | 7 | 600 |

## Tool and assembly bag

**Design:** Made of strong structured cowhide, black, with 2 ring caps. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Delivery without content.

**Equipped with:**
10 adjustable loops on the rear wall.

**Note:** Carrying strap see (Order No. 7375 0005).

| Order No. | Inside dimensions mm | 7364 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 370 x 110 x 250 | 62.30 (W589) | 10 | 1400 |

## Tool and assembly bag

**Design:** Bottom tray and side elements made of impact-resistant, moisture-resistant HDPE plastic, main part made of strong, structured cowhide, black, with 2 ring caps, aluminium-edge-reinforced bag body, handle. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Delivery without content.

**Equipped with:**
9 fixed loops on the partial fold-out front wall
11 fixed loops on an extruded loop holder on the rear wall
1 front pocket

**Note:** Carrying strap see (Order No. 7375 0005).

| Order No. | Inside dimensions mm | 7367 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 420 x 160 x 250 | 97.00 (W589) | 17 | 2600 |

## Tool and assembly bag

**Design:** Bottom tray and side elements made of shockproof, moisture-resistant HDPE plastic, main part made of strong, structured cowhide, black, with 2 ring caps, aluminium-edge-reinforced bag body as well as an ergonomically shaped handle. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Delivery without content.

**Equipped with:**
8 adjustable loops on the fold-out front wall
8 adjustable loops on the rear wall

**Note:** Carrying strap see (Order No. 7375 0005).

| Order No. | Inside dimensions mm | 7368 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 440 x 185 x 300 | 128.50 (W589) | 24 | 2900 |

## Tool and assembly bag

**Design:** Bottom tray and side elements made of shockproof, moisture-resistant HDPE plastic, main part made of strong, structured cowhide, black, with 2 ring caps, aluminium-edge-reinforced bag body as well as an ergonomically shaped handle. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks **and 2 locking bars.** Delivery without content.

**Equipped with:**
9 adjustable loops on the fold-out front wall
19 adjustable loops on the fixed centre wall
11 fixed loops on the partial fold-out rear wall

**Note:** Carrying strap see (Order No. 7375 0005).

| Order No. | Inside dimensions mm | 7370 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 460 x 210 x 340 | 161.50 (W589) | 33 | 4400 |

## Carrying strap for tool and assembly bag

**Design:** Made of polyester, black, with 2 snap hooks and shoulder protection. Straps are adjustable in length.

| Order No. | Dimension mm | 7375 format |
|---|---|---|
| 0005 | 1120 x 20 | 12.40 (W589) |

## Tool and assembly bag

**Design: Bottom tray made of steel sheet, galvanised,** bag and lid made of strong cowhide, black, with handle. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Delivery without content.

**Equipped with:**
8 adjustable loops on the fold-out front wall
1 small parts pocket on the fold-out front wall
1 push-in compartment on the fold-out front wall
11 loops on the removable centre wall
1 keep-safe compartment on the removable centre wall
9 fixed loops on the rear wall

| Order No. | Inside dimensions mm | 7374 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 400 x 140 x 280 | 107.00 (W589) | 16 | 3000 |

## Tool and assembly bag

**Design:** Side elements and bottom tray made of impact-resistant, moisture-resistant HDPE plastic, lid made of strong, structured cowhide, with handle and finger hole. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Delivery without content.

**Equipped with:**
8 push-in compartments on fold-out front wall
13 adjustable loops on the rear wall
5 adjustable loops on each side wall

| Order No. | Inside dimensions mm | 7377 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 390 x 185 x 310 | 93.40 (W589) | 22 | 1900 |

## Universal bag NEW CLASSIC

**Design:** Bottom tray and side elements made of wear-resistant, moisture-resistant ABS plastic, flap made of embossed cowhide, with an ergonomically shaped handle. With durable walls made of **Con-Pearl**® for scratch resistance, dimensional stability and resistance against moisture, grease and chemicals. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Supplied without content.

**7363 0005** With durable walls made of **Con-Pearl**® for scratch resistance, dimensional stability and resistance against moisture, grease and chemicals.

**7363 0010** With robust walls made from cowhide.

| Order No. | Inside dimensions mm | 7363 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 360 x 110 x 170 | 29.60 | 7 | 600 |
| 0010 | 390 x 170 x 230 | 57.40 (W590) | 15 | 1300 |

7363 0005

7363 0010

## Installer's bag NEW CLASSIC, extra long

**Design:** Flap made of structured industrial leather, with **plastic-reinforced bag bodies** and ergonomic carry handle. With durable walls made of **Con-Pearl**® for scratch resistance, dimensional stability and resistance against moisture, grease and chemicals. Very stable and with protective, integrated floor gliders. Lockable with 2 key locks. Delivery without content.

**Equipped with:**
20 fixed loops on the front and rear
8 pockets on the rear
2 holding loops for spirit levels on the cover

| Order No. | Inside dimensions mm | 7414 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 635 x 185 x 270 | 123.00 (W590) | 32 | 2700 |

## Tool bag TOP-LINE

**Design:** Lid with extra-thick, structured cowhide, black, with durable walls made of **Con-Pearl**® for scratch resistance, dimensional stability and resistance against moisture, grease and chemicals, with **aluminium-reinforced bag bodies,** 2 ring caps and removable, adjustable carrying strap made of polyester, black, with 2 snap hooks and shoulder protection. Very stable and with protective, integrated floor gliders. Lockable with 1 key lock. Supplied without content.

**Equipped with:**
17 push-in compartments on front, centre and rear wall
1 transparent keep-safe compartment in the lid

| Order No. | Inside dimensions mm | 7378 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 220 x 140 x 250 | 89.70 (W590) | 8 | 1200 |

## Tool bag TOP-LINE

**Design:** Lid with extra-thick, structured cowhide, black, with durable walls made of **Con-Pearl**® for scratch resistance, dimensional stability and resistance against moisture, grease and chemicals, with **aluminium-reinforced bag bodies,** 2 ring caps and removable, adjustable carrying strap made of polyester, black, with 2 snap hooks and shoulder protection. Very stable and with protective, integrated floor gliders. Lockable with **magnetic lock PARALOCK**® for easy one-handed operation. Supplied without content.

**Equipped with:**
17 push-in compartments on front, centre and rear wall
1 transparent keep-safe compartment in the lid

| Order No. | Inside dimensions mm | 7378 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0010 | 230 x 140 x 300 | 98.20 (W590) | 10 | 1500 |

## Tool bag TOP-LINE

**Design: Base tray made of sheet metal,** galvanised, side elements made of moisture-resistant ABS plastic, lid made of strong, structured cowhide, black, with durable walls made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, with **aluminium-reinforced bag bodies** and also with ergonomically shaped handle and **padded handle grips.** Very stable and with protective, integrated floor gliders. Lockable with 2 variable locks. Supplied without content.

**Features:**
4 push-in compartments on foldable front wall
1 small parts pocket on the fold-out front wall
1 keep-safe compartment on the fold-out front wall
1CP-7 tool holder Ø 11 mm and Ø 15 mm, on the middle wall
1 CP-7 tool holder, Ø 26 mm, on the rear wall

| Order No. | Inside dimensions mm | 7379 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 415 x 165 x 275 | 183.00 (W590) | 19 | 3300 |

## Tool bag TOP-LINE

**Design:** Bottom tray and side elements made of moisture-resistant ABS plastic, lid made of strong, structured cowhide, black, with durable walls made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also **aluminium-reinforced bag bodies** and ergonomically shaped handle and **padded handle grip**. Very stable and with protective, integrated floor gliders. Lockable with 2 variable locks. Supplied without content.

**Equipped with:**
8 push-in compartments on semi-fold-out front and rear wall
1CP-7 tool holder Ø 11 mm, on the middle wall
1CP-7 tool holder Ø 26 mm, on the middle wall

| Order No. | Inside dimensions mm | 7381 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 420 x 185 x 315 | 150.00 (W590) | 24 | 3100 |

## Tool bag TOP-LINE

**Design:** Lid made of extra-thick structured cowhide, black, with durable walls made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also **aluminium-reinforced bag bodies** and ergonomically shaped handle and **padded handle grip** and handle hole. With 2 ring caps. Very stable and with protective, integrated floor gliders. Lockable with 2 variable locks. Supplied without content.

**Equipped with:**
1 CP-7 tool holder, Ø 26 mm, on the semi-fold-out front wall
1CP-7 tool holder Ø 11 mm, on the middle wall
1 CP-7 tool holder, Ø 15 mm, on the middle wall
1 CP-7 tool holder, Ø 15 mm, on the semi-fold-out rear wall

| Order No. | Inside dimensions mm | 7365 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 460 x 210 x 340 | 202.50 (W590) | 33 | 4500 |

## Tool bag TOP-LINE

**Design:** Made of extra-thick structured cowhide, black, with durable walls made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also **aluminium-reinforced bag bodies** and ergonomically shaped handle and **padded handle grip** with handle hole. Very stable and with protective, integrated floor gliders. Lockable with 2 variable locks. Supplied without content.

**Equipped with:**
1 CP-7 tool holder, Ø 15 mm, on semi-fold-out front wall
1 chisel holder, 8-piece, for 6–35 mm and 1 CP-7 tool holder, Ø 15 mm, on the middle wall
1 CP-7 tool holder, Ø 26 mm, on the semi-fold-out rear wall
1 front pocket
1 plastic compartment with cover in the bottom

| Order No. | Inside dimensions mm | 7383 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 460 x 210 x 340 | 246.00 (W590) | 33 | 5400 |

## Tool bag with drawer TOP-LINE

**Design:** Lid made of extra-thick structured cowhide, black, with durable walls made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, with fold-out front wall, **aluminium-reinforced bag bodies** and ergonomically shaped handle and **padded handle grip.** Very stable and with protective, integrated floor gliders. Lockable with 2 variable locks. Supplied without content.

**Equipped with:**
4 drawers
1 CP-7 tool holder, Ø 15 mm, on the middle wall
1 CP-7 tool holder, Ø 26 mm, on the semi-fold-out rear wall
1 carrying insert
1 compartment for small parts

| Order No. | Inside dimensions mm | 7385 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 410 x 190 x 280 | 199.00 (W590) | 22 | 4600 |

## Tool bag with drawer TOP-LINE

**Design:** Lid made of extra-thick structured cowhide, black, with durable walls made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, with fold-out front wall, **aluminium-reinforced bag bodies** and ergonomically shaped handle and **padded handle grip.** Very stable and with protective, integrated floor gliders. Lockable with 2 variable locks. Supplied without content.

**Features:**
5 drawers
1 90 mm intermediate compartment behind the drawers
1 carrying insert
1 compartment for small parts
1 CP-7 tool holder, Ø 15 mm, on the rear wall

| Order No. | Inside dimensions mm | 7373 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 410 x 220 x 310 | 207.00 (W590) | 28 | 4900 |

## PARACURV tool carrier

**Design:** Made of black ABS plastic and silver CURV®, an innovative composite material which combines the benefits of 100% thermoplastic and fibre-reinforced materials in terms of versatility and durability. **Really lightweight yet robust** and extremely shockproof. With continuous carry rod made of powder-coated aluminium and durable walls made of Con-Pearl® for scratch resistance, dimensional stability and resistance against moisture, grease and chemicals. Removable, adjustable shoulder strap and integrated floor gliders. Supplied without content.

**7385 0010**
**Equipped with:**
9 fixed loops on the front side
11 fixed loops and 2 can holders on the rear side

**7385 0015**
**Equipped with:**
7 push-in compartments on the front wall
1 CP-7 tool holder Ø 11 mm, on the middle panel
1 CP-7 tool holder, Ø 26 mm, on the middle panel
13 pockets on the rear side

| Order No. | Inside dimensions mm | 7385 PARAT | Weight g |
|---|---|---|---|
| 0010 | 495 x 210 x 395 | 140.00 | 1500 |
| 0015 | 495 x 250 x 395 | 170.00 (W590) | 2200 |

## Roll-up case BASIC

**Design:** Made of artificial leather, black, with strap catch. Supplied without content.

| Order No. | External dimensions mm | 7387 PARAT | Number compartments | Weight g |
|---|---|---|---|---|
| 0000 | 540 x 330 | 8.90 | 12 | 240 |
| 0003 | 670 x 330 | 10.65 | 15 | 300 |
| 0005 | 770 x 330 | 12.65 (W590) | 20 | 340 |

## Tool wallet BASIC

**Design:** Made of high-quality artificial leather, black, foldable. Supplied without content.

**7354 0100** With all-round zipper. Features 25 rubber loops.

**7354 0200** With handle and key lock. Equipped with 13 push-in compartments and 2 fold-over caps.

| Order No. | Inside dimensions mm | 7354 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0100 | 480 x 20 x 225 | 26.40 | 3 | 400 |
| 0200 | 320 x 50 x 250 | 28.70 (W590) | 4 | 500 |

7354 0100

7354 0200

## Tool backpack

**Design:** Made of robust, coated nylon fabric, black/grey, reinforced by all-round plastic frame, with 4 floor gliders and outer-cushion back. 3 adjustable restriction straps, an adjustable chest strap as well as 2 adjustable carrying straps for optimum carrying comfort. Supplied without content.

**Equipped with:**
16 push-in compartments
5 rubber loops
2 keep-safe compartments for documents
1 large stowage space
1 applied compartment for small parts, pens, business cards, etc.

| Order No. | Inside dimensions mm | 7350 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 300 x 170 x 450 | 82.70 (W590) | 23 | 1900 |

## Tool shoulder bag

**Design:** Made of polyester, with handle, loop and adjustable carrying strap. Equipped with 1 padded pocket for sensitive devices and 2 pockets with zipper. Supplied without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0005 | 240 x 50 x 180 | 17.25 (W590) | 132 |

## Tool belt pouches

**Design:** Made of polyester, with handle and adjustable belt. Equipped with inside and outside pockets in various sizes and 1 lockable document compartment. Supplied without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0010 | 300 x 150 x 160 | 22.40 (W590) | 437 |

## Service folder

**Design:** Made of polyester, with handle. Equipped with various push-in compartments in different sizes for storage of tools, elastic bands for precision measurement devices, 1 large outer compartment for documents or handbooks, 1 push-in compartment for note blocks and ring binder mechanism for filing A4 sheets. Supplied without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0015 | 420 x 290 x 100 | 30.50 (W590) | 995 |

## Tool/laptop case

**Design:** Made of polyester, with handle and adjustable carrying strap. Equipped with 10 inside and outside pockets, 1 large compartment for documents and 1 reinforced padded compartment e.g. for laptops. Supplied without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0020 | 400 x 130 x 320 | 42.70 (W590) | 1600 |

## Tool backpack

**Design:** Made of polyester, with handle, adjustable shoulder straps and rubber feet. Equipped with various push-in compartments in the inner compartment, double bottom with box for small parts and an outer compartment for long objects, e.g. spirit levels. Supplied without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0025 | 320 x 200 x 400 | 58.50 (W590) | 1900 |

## Tool belt

**Design:** Made of polyester, adjustable, with quick fastener.

**Application:** To attach belt pouches with the appropriate belt loop.

| Order No. | Length mm | 7404 PLANO | Width mm |
|---|---|---|---|
| 0030 | 900–1500 | 7.00 (W590) | 70 |

## Tool belt pouch, small

**Design:** Made of reinforced polyester, with wide Velcro fastener, belt loop and clip. Equipped with 3 push-in compartments and 1 snap hook. Delivery without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0035 | 100 x 50 x 170 | 11.00 (W590) | 86 |

## Plier/knife pouch NEW

**Design:** Made of reinforced polyester, with belt clip. Equipped with 1 push-in compartment. Delivery without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0037 | 220 x 40 x 100 | 8.80 (W590) | 71.5 |

## Nail pocket

**Design:** Made of reinforced polyester, with integrated belt loop. Equipped with 1 large compartment. Supplied without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0040 | 190 x 40 x 250 | 7.95 (W590) | 152 |

## Belt pouch for battery-powered devices

**Design:** Made of reinforced polyester, with integrated belt loop. Equipped with 1 large and 4 small push-in compartments. Supplied without content.

| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0045 | 250 x 23 x 260 | 9.65 (W590) | 135 |

## Tool belt pouches with hammer holder, large

**Design:** Made of reinforced polyester, with integrated belt loop. Equipped with various push-in compartments and 1 hammer holder. Supplied without content.

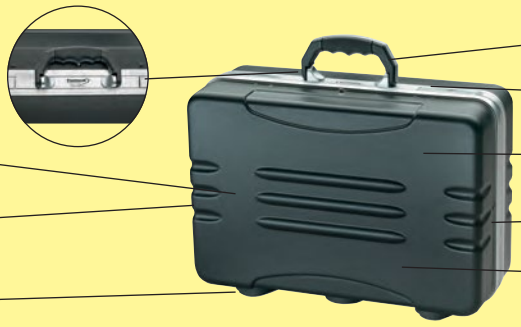
| Order No. | Dimensions L x W x H mm | 7404 PLANO | Weight g |
|---|---|---|---|
| 0050 | 290 x 30 x 250 | 13.20 (W590) | 269 |

## Tool belt with pockets NEW

**Design:** Made of polyester, adjustable, with quick fastener. With pocket for battery-powered devices, tool bag with 15 push-in compartments and hammer holder and pocket for measuring tapes. Delivery without content.

| Order No. | Length mm | 7404 PLANO | Width mm |
|---|---|---|---|
| 0055 | 900–1200 | 28.20 (W590) | 70 |

## FORMAT tool case – high quality for commercial use



- Good scratch resistance
- Resistant against mist oils and fats
- Protective, integrated floor gliders
- Ergonomically shaped handle
- Barrel locks
- Very durable
- Ratchet hinges
- Retains all material properties in the temperature range –30 °C to +85 °C

## Tool cases

**Design:** Made of wear-resistant moisture-proof ABS plastic, black, with durable tool boards made of special plastic to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals and stable handle grip. Bottom tray height 58 mm, variable subdivision. With galvanised metal hinges, case can carry up to 20 kg, all-round frame made of aluminium. Very stable and with floor gliders. Lockable with 2 barrel locks. Delivery without content.

**Equipped with:**
21 push-in compartments in the tool board
1 keep-safe compartment, 400 mm, on the tool board
6 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate

| Order No. | Inside dimensions mm | 7393 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 465 x 170 x 310 | 142.00 (W589) | 25 | 3700 |

## Tool cases

**Design:** Made of wear-resistant, moisture-proof ABS plastic, black, with durable walls made of special plastic to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also with stable ergonomically shaped handle grips. Bottom tray height 58 mm, variable subdivision. With ratchet hinges, the case can carry up to 30 kg, double frame made of aluminium. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. Delivery without content.

**Equipped with:**
25 push-in compartments on the 2-sided tool board
1 keep-safe compartment, 400 mm, on the 2-sided tool board
10 push-in compartments each on the 1-sided tool board
15 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate
1 document compartment in lid

| Order No. | Inside dimensions mm | 7395 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 460 x 190 x 310 | 195.50 (W589) | 27 | 5100 |

## Tool cases

**Design:** Made of wear-resistant, moisture-proof ABS plastic, black, with durable tool boards made of special plastic to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also with stable ergonomically shaped handle grips. Bottom tray height 88 mm, variable subdivision. With ratchet hinges, the case can carry up to 30 kg, inner double frame made of aluminium. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. Delivery without content.

**Equipped with:**
1 tool strip for tools up to Ø 11 mm
1 tool strip for tools up to Ø 15 mm
1 tool strip for tools up to Ø 26 mm
1 bottom tray with cover plate
1 keep-safe compartment for documents in the lid

| Order No. | Inside dimensions mm | 7388 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 470 x 205 x 355 | 195.50 (W589) | 34 | 5700 |

## Tool cases

**Design:** Made of wear-resistant, moisture-proof ABS plastic, black, with durable tool boards made of special plastic to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also with stable ergonomically shaped handle grips. Bottom tray height 88 mm, variable subdivision. With ratchet hinges, the case can carry up to 30 kg, inner double frame made of aluminium. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. Delivery without content.

**Equipped with:**
25 push-in compartments on the 2-sided tool board
1 keep-safe compartment, 400 mm, on the 2-sided tool board
15 push-in compartments on the cover plate and
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate
1 keep-safe compartment for documents in the lid

| Order No. | Inside dimensions mm | 7390 format | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 470 x 200 x 360 | 195.50 (W589) | 34 | 5000 |

## Roller case

NEW

**Design:** Made of wear-resistant moisture-proof ABS plastic, black, with durable tool boards made of special plastic to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals as well as a sturdy, powder-coated 4-fold telescopic extension and extra-wide, rubberised wheels. Bottom tray height 88 mm, variable subdivision. With ratchet hinges, the case can carry up to 30 kg, inner double frame made of aluminium. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks.

**Equipped with:**
25 push-in compartments on the 2-sided tool board
1 keep-safe compartment, 400 mm, on the 2-sided tool board
15 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate
1 keep-safe compartment for documents in the lid

| Order No. | Inside dimensions mm | 7384 format | Weight g |
|---|---|---|---|
| 0005 | 470 x 210 x 360 | 279.50 (W589) | 6800 |

## Tool case SILVER

**Design:** Made of wear-resistant moisture-proof ABS plastic, black, with durable tool boards made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, lid holder and stable handle grip. Bottom tray height 58 mm, variable subdivision.
With galvanised metal hinges, and an all-round aluminium frame that can bear a load of up to 20 kg. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. Delivery without content.

**7371 0005** — **Equipped with:**
13 push-in compartments in the tool board
15 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate
1 document compartment in lid

**7371 0010** — **Equipped with:**
25 push-in compartments on the tool board
1 keep-safe compartment, 400 mm, on the tool board
10 push-in compartments in the tool board
15 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate
1 document compartment in lid

7371 0005

7371 0010

| Order No. | Inside dimensions mm | 7371 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 465 x 130 x 310 | 165.00 | 17 | 3900 |
| 0010 | 465 x 170 x 310 | 169.00 (W590) | 25 | 4000 |

## Tool case CLASSIC made of aluminium

**Design:** Made of stable, anodised aluminium with durable tool boards made of **Con-Pearl**® to protect against scratches, provide dimensional stability and resistance against moisture, grease and chemicals, also with stable ergonomically shaped handle grips. Bottom tray height 58 mm, variable subdivision. With galvanised and locked metal hinges, case can bear a load of up to 30 kg, all-round double frame made of aluminium. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. **Airline-ready model.** Supplied without content.

**Equipped with:**
25 push-in compartments on the tool board
1 keep-safe compartment, 400 mm, on the tool board
10 push-in compartments in the tool board
15 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate
1 document compartment in lid

| Order No. | Inside dimensions mm | 7376 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 460 x 170 x 310 | 298.50 (W590) | 24 | 5100 |

## Tool case CLASSIC

**Design:** Made of robust, temperature-resistant, scratch-proof and unbreakable X-ABS plastic, black with durable tool boards made of **Con-Pearl**® for scratch-resistance, dimensional stability and resistance against moisture, grease and chemicals as well as stable handle with ergonomically shaped handle grips. Bottom tray height 58 mm, variable subdivision. With galvanised and locked metal hinges, case can bear a load of up to 30 kg, all-round double frame made of aluminium. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. **Airline-ready model.** Supplied without content.

**Equipped with:**
13 push-in compartments in the tool board
15 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate
1 document compartment in lid

| Order No. | Inside dimensions mm | 7380 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 460 x 130 x 310 | 198.00 (W590) | 17 | 4100 |

## Roller case CARGO

**Design:** Made of robust, temperature-resistant, scratch-proof and unbreakable X-ABS plastic, black with durable tool boards made of **Con-Pearl**® for scratch-resistance, dimensional stability and resistance against moisture, grease and chemicals as well as stable powder-coated 4-fold telescopic extension and extra-wide, rubberised wheels. Bottom tray height 88 mm, variable subdivision. With galvanised and locked metal hinges and an inner double frame made of aluminium that can bear a load of up to 40 kg. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. **Airline-ready model.** Supplied without content.

**Equipped with:**
2 CP-7 tool holders, Ø 11 mm
1 CP-7 tool holder, Ø 15 mm
1 CP-7 tool holder, Ø 26 mm
1 bottom tray with cover plate
1 document compartment in lid

| Order No. | Inside dimensions mm | 7396 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 470 x 210 x 355 | 355.00 (W590) | 35 | 7800 |

## Roller case CLASSIC

**Design:** Made of robust, temperature-resistant, scratch-proof and unbreakable X-ABS plastic, black with durable tool boards made of **Con-Pearl**® for scratch-resistance, dimensional stability and resistance against moisture, grease and chemicals as well as stable powder-coated 4-fold telescopic extension and extra-wide, rubberised wheels. Very sturdy due to wide wheelbase. With galvanised and locked metal hinges, case can bear a load of up to 40 kg, all-round double frame made of aluminium. Lockable with 2 barrel locks. **Airline-ready model.** Supplied without content.

PARAT

**7392 0005**

**Equipped with:**
25 push-in compartments on the 2-sided tool board
1 keep-safe compartment, 400 mm, on the 2-sided tool board
10 push-in compartments on the 1-sided tool board
15 push-in compartments on the cover plate
1 keep-safe compartment, 400 mm, on the cover plate
1 bottom tray with cover plate, height 88 mm, variable subdivision
1 document compartment in lid

**7392 0010**

**Equipped with:**
31 push-in compartments on the 2-sided tool board
12 push-in compartments on the 2-sided tool board
19 push-in compartments on the cover plate
1 keep-safe compartment, 530 mm, on the cover plate
1 sub-dividable compartment, 560 x 90 (67) x 223 mm, in the bottom tray
1 fixed compartment, 540 x 57 x 140 mm, in the bottom tray
2 holding loops for spirit level
1 document compartment in lid

**7392 0015**

**Features:**
1 CP-7 tool holder, Ø 11 mm, on the 1-sided tool board
2 holding loops for tools on the 1-sided tool board
2 CP-7 tool holders, Ø 15 mm, on the 2-sided tool board
2 holding loops for tools on the 2-sided tool board
2 CP-7 tool holders, Ø 26 mm, on the cover plate
1 sub-dividable compartment, 540 x 88 (63) x 223 mm, in the bottom tray
1 fixed compartment, 540 x 63 x 137 mm, in the bottom tray
2 holding loops for spirit levels on the cover
1 document compartment in lid

| Order No. | Inside dimensions mm | 7392 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 470 x 200 x 360 | 316.50 | 35 | 7400 |
| 0010 | 575 x 220 x 425 | 438.50 | 54 | 9400 |
| 0015 | 575 x 220 x 425 | 450.50 (W590) | 54 | 9700 |

## Roller case EVOLUTION 45

**Design:** Made of robust, temperature-resistant, scratch-proof and unbreakable **PX-ABS plastic, with fibreglass reinforced polyurethane backing foam** for additional strength, black/silver with durable tool boards made of **Con-Pearl**® for scratch-resistance, dimensional stability and resistance against moisture, grease and chemicals as well as stable powder-coated 4-fold telescopic extension made of aluminium, which also enables **movement when the case** is open. Extra-wide rubberised and ball bearing mounted rollers and a handle which can be **recessed into the lid.** With screwed on and easily exchangeable hinges, grips, lock and wheels. Very stable and with protective, integrated floor gliders. Lockable with 2 barrel locks. Supplied without content.

PARAT

**7403 0005**

**Equipped with:**
61 push-in compartments on the tool boards
3 keep-safe compartments, 400 mm
1 large stowage compartment behind the middle wall
1 cable holder in the lid

**7403 0010**

**Equipped with:**
2 CP-7 tool holders, Ø 11 mm
1 CP-7 tool holder, Ø 15 mm
2 CP-7 tool holders, Ø 26 mm
1 large stowage compartment behind the middle wall
1 cable holder in the lid

| Order No. | Inside dimensions mm | 7403 PARAT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0005 | 450 x 260 x 385 | 544.00 | 45 | 7700 |
| 0010 | 450 x 260 x 385 | 546.50 (W590) | 45 | 7700 |

## Roller case Pivot

NEW

**Design:** Made of impact-resistant HDPE plastic, black, with durable, removable tool boards as well as a stable handle, retractable telescopic handle and large, rotating smooth-running transport rollers. Bottom tray height 151 mm. Case can carry up to 25 kg. Very stable, stackable, and with protective rubber feet. Lockable with two TSA snap locks. **Airline-ready model.** Delivery without content.

**Equipped with:**
8 push-in compartments on the 1-sided tool board
1 large pocket with flap on the 1-sided tool board
8 push-in compartments on the cover plate
1 bottom tray with cover plate
2 small parts boxes
1 stretch net to fix tools
1 keep-safe compartment for documents in the lid

| Order No. | Inside dimensions mm | 7382 GT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0010 | 417 x 274 x 323 | 395.00 (W606) | 37 | 7300 |

## Tool trolley Atomik Wheels

NEW

**Design:** Made of impact-resistant polypropylene plastic, black, with durable, removable tool boards as well as a stable handle, retractable ergonomic telescopic handle and smooth-running transport rollers. Bottom tray height 160 mm, variable subdivision. Case can carry up to 25 kg, double frame made of aluminium. Very stable and with protective, integrated rubber feet. Lockable with two barrel locks. **Airline-ready model.** Delivery without content.

**Equipped with:**
24 push-in compartments on the 2-sided tool board
12 rubber straps on the 2-sided tool board
1 large pocket with flap on the 2-sided tool board
6 push-in compartments on the cover plate
9 rubber straps on the cover plate
1 bottom tray with cover plate
1 keep-safe compartment for documents in the lid

| Order No. | Inside dimensions mm | 7382 GT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0020 | 465 x 255 x 352 | 199.00 (W606) | 42 | 5500 |

## Roller case Rock Turtle

NEW

**Design:** Made of impact-resistant HDPE plastic, black, with durable, removable tool boards as well as a stable handle, retractable telescopic handle and large smooth-running transport rollers. Bottom tray height 210 mm. Case can carry up to 30 kg, double frame made of aluminium. Very stable, stackable, and with protective rubber feet. Lockable with two TSA snap locks. **Airline-ready model.** Delivery without content.

**Equipped with:**
24 push-in compartments on the 2-sided tool board
1 large pocket with flap on the 2-sided tool board
6 push-in compartments on the cover plate
1 bottom tray with cover plate
1 keep-safe compartment for documents in the lid

| Order No. | Inside dimensions mm | 7382 GT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0030 | 470 x 320 x 390 | 389.00 (W606) | 59 | 9000 |

## Drawer roller case ALL.IN.ONE

NEW

**Design:** Made of impact-resistant and weather-resistant polypropylene, black, with sturdy handles, retractable ergonomic telescopic handle and large, smooth-running self-lubricating transport rollers. The drawers can be fully removed, but are also protected against unintentionally falling out. Very stable, stackable, and with protective feet. Can be locked with 4 snap closures, one central lock and padlock (not included in the delivery).
**Airline-ready model.** Delivery without content.

**Equipped with:**
1 removable strap
1 drawer, 30 mm high, with pre-cut 2-coloured foam
1 drawer, 60 mm high, with 23 individually removable small parts compartments
1 drawer, 60 mm high, with pre-cut 2-coloured foam
1 drawer, 95 mm high, with 5 small part boxes: 2 x with 6 compartments, 2 x with 13 compartments, 1 x with 10 compartments

| Order No. | External dimensions mm | 7382 GT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0040 | 581 x 455 x 381 | 395.00 (W606) | 100 | 14000 |

Figure with optional accessories.

## Protective tool case Waterproof, watertight

NEW

IP 67

**Design:** Made of durable polypropylene, black, shatterproof and impact resistant, sand and dust-tight as well as waterproof to 10 m and temperature resistant from -33 °C to 90 °C. Closes air-tight, with pressure balancing valve. With durable tool boards as well as a stable rubberised handle. Bottom tray height 143 mm. Case can carry up to 25 kg. Extremely stable and robust. Lockable with two barrel locks. **Airline-ready model.** Delivery without content.

**Equipped with:**
11 push-in compartments on the tool board
1 large pocket with flap on the tool board
13 push-in compartments on the cover plate
12 rubber straps on the cover plate
1 bottom tray with cover plate
1 keep-safe compartment for documents in the lid

| Order No. | External dimensions mm | 7405 GT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0100 | 445 x 190 x 345 | 222.00 (W606) | 29 | 6500 |

## Protective tool roller case Waterproof, watertight

NEW

IP 67

**Design:** Made of durable polypropylene, black, shatterproof and impact resistant, sand and dust-tight as well as waterproof to 10 m and temperature resistant from -33 °C to 90 °C. Closes air-tight, with pressure balancing valve. With durable tool boards as well as a stable rubberised handle, retractable telescopic handle and smooth-running transport rollers. Bottom tray height 167 mm. Case can carry up to 25 kg. Extremely stable and robust. Lockable with two barrel locks. **Airline-ready model.** Delivery without content.

**Equipped with:**
7 push-in compartments on the tool board
7 push-in compartments on the cover plate
1 bottom tray with cover plate
1 keep-safe compartment for documents in the lid

| Order No. | External dimensions mm | 7405 GT | Volume approx. l | Weight g |
|---|---|---|---|---|
| 0200 | 517 x 217 x 277 | 239.00 (W606) | 31 | 7500 |

## Tool case Premium

NEW

**Design:** Made of wear-resistant, moisture-resistant ABS plastic with durable tool boards and a sturdy handle with soft zone. With gas pressure cylinders for easy opening and closing, can take a load up to **35 kg.** Solid frame made of single die-cast aluminium with additional aluminium supports. Very stable and with screw-connected high feet. **Airline-ready model.**

**L-67, equipped with:**
38 push-in compartments on the 2-sided tool board
19 push-in compartments on the 2-sided tool board
1 document compartment on the 2-sided tool board
10 push-in compartments on the cover plate
1 bottom shell with cover plate and 5 removable compartment inserts

**XL-79, equipped with:**
45 push-in compartments on the 2-sided tool board
23 push-in compartments on the 2-sided tool board
1 document compartment on the 2-sided tool board
11 push-in compartments on the cover plate
1 bottom shell with cover plate and 5 removable compartment inserts

**XLT-79:**
Same equipment as XL-79, but with **additional 4-fold retractable telescopic handle and smooth-running, suspended transport rollers.**

**7400 0300 + 7401 0300**
**Roller case**

| Order No. | Model | 7400 raaco Cylinder locks | 7401 raaco TSA locks | External dimensions mm | Volume approx. l | Weight g |
|---|---|---|---|---|---|---|
| 0100 | L-67 | 232.00 | 248.00 ◊ | 475 x 200 x 360 | 34 | 6800 |
| 0200 | XL-79 | 253.00 | 269.00 ◊ | 485 x 215 x 410 | 43 | 7500 |
| 0300 | XLT-79 trolley | 346.00 (W588) | 362.00 ◊ (W588) | 485 x 250 x 410 | 43 | 9300 |

## Tool case Superior

NEW

**Design:** Made of wear-resistant, moisture-resistant ABS plastic with durable tool boards and a sturdy handle with soft zone. With gas pressure cylinders for easy opening and closing, can take a load up to **45 kg.** Solid frame made of single die-cast aluminium with additional aluminium supports. Very stable and with screw-connected high feet. **Airline-ready model.**

**L-57/2F, equipped with:**
38 push-in compartments on the 2-sided tool board
19 push-in compartments on the 2-sided tool board
1 document compartment on the 2-sided tool board
2 Open ToolFix tool holders with rubberised push-in slats on the cover plate
1 bottom shell with cover plate and 5 removable compartment inserts

**XLT-23/6F, equipped with:**
**Additional 4-fold retractable telescopic handle and smooth-running, suspended transport rollers**
4 Open ToolFix tool holders with rubberised push-in slats on the 2-sided tool board
23 push-in compartments on the 2-sided tool board
1 document compartment on the 2-sided tool board
2 Open ToolFix tool holders with rubberised push-in slats on the cover plate
1 bottom shell with cover plate and 5 removable compartment inserts

**XLT-34/4F, equipped with:**
**Additional 4-fold retractable telescopic handle and smooth-running, suspended transport rollers**
4 Open ToolFix tool holders with rubberised push-in slats on the 2-sided tool board
23 push-in compartments on the 2-sided tool board
1 document compartment on the 2-sided tool board
11 push-in compartments on the cover plate
1 bottom shell with cover plate and 5 removable compartment inserts

**Model XLT-34/4F with Open ToolFix tool holders and push-in compartments**

**7400 0500–0600 + 7401 0500–0600**
**Roller case**

| Order No. | Model | 7400 raaco Cylinder locks | 7401 raaco TSA locks | External dimensions mm | Volume approx. l | Weight g |
|---|---|---|---|---|---|---|
| 0400 | L-57/2F | 243.00 | 258.00 ◊ | 475 x 200 x 360 | 34 | 6900 |
| 0500 | XLT-23/6F | 367.00 | 382.00 ◊ | 485 x 250 x 410 | 43 | 8200 |
| 0600 | XLT-34/4F | 362.00 (W588) | 377.00 ◊ (W588) | 485 x 250 x 410 | 43 | 8000 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

# Content – Abrasives

**NEW**

**All items marked with this icon have been added to our range.**

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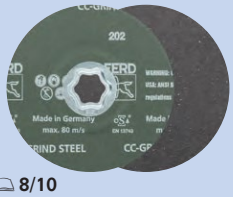


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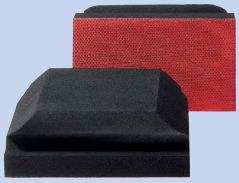

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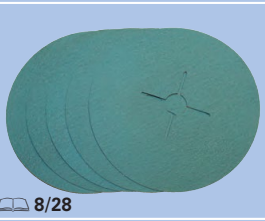

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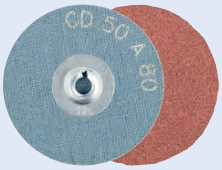


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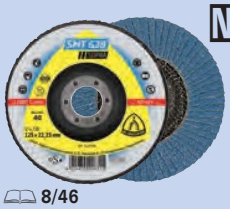


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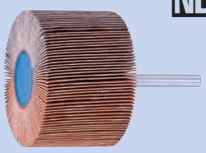

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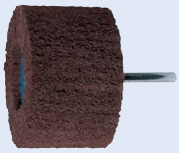

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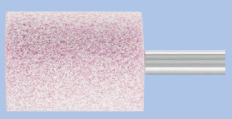

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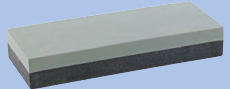

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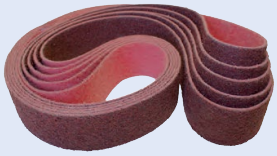
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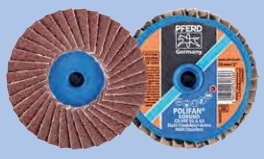
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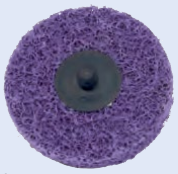
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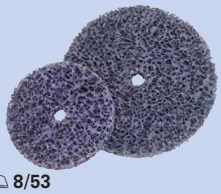
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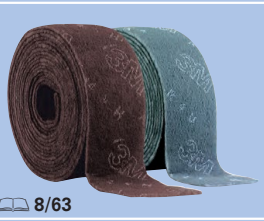
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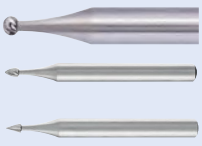
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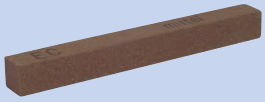
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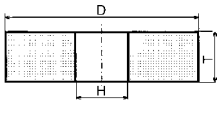
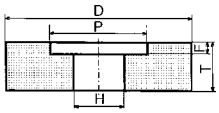
## Grinding wheel

**Design:** RPM with recess 30 m/s, rpm without recess 35 m/s.

**Note:** Reducing bush see (Order No. 8013).




Without recess



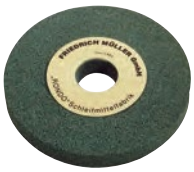

With recess

**8006** **Made of ordinary aluminium oxide,** grey. For simple grinding, roughing of iron and light steel, cast steel and crucible cast steel as well as grinding hardened steel.

**8009** **Made of silicon-carbide,** green. For hand sanding short or non-cutting material (brittle material, non-metals such as stone, porcelain, plastic), for tough and lubricating material such as rubber, brass, carbon, and particularly for hard material such as tungsten carbide and hard cast.

**8012** **Made of high-grade aluminium oxide,** pink. For hand grinding long-machined materials such as alloy steel, high speed steel (HSS) and high-performance, high speed steel (HSS).

8006



8009

8012

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8006 | | ● | | | ● | | | |
| 8009 | ● | | ● | | ● | ● | ● | |
| 8012 | | ● | | ● | | | | |

| Order No. | Dimensions D x T x H mm | 8006 | 8009 | 8012 | Grit 8006 | Grit 8009 | Grit 8012 | Hardness 8006 | Hardness 8009 | Hardness 8012 | Recess P x F mm 8006 | Recess P x F mm 8009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 150 x 20 x 32/20** | 13.25 | 17.35 | 14.25 | 36 | 80 | 60 | P | J | M | – | – |
| 0020 | 150 x 20 x 32/20** | 13.25 | – | – | 60 | – | – | M | – | – | – | – |
| 0030 | 175 x 25 x 32/20** | 19.55 | – | – | 36 | – | – | P | – | – | – | – |
| 0040 | 175 x 25 x 32/20** | 19.55 | – | – | 60 | – | – | M | – | – | – | – |
| 0020 | 175 x 25 x 32/20** | – | 25.20 | 21.00 | – | 80 | 60 | – | J | M | – | – |
| 0030 | 175 x 25 x 51 | – | – | 21.00 | – | – | 60 | – | – | M | – | – |
| 0050 | 175 x 25 x 51/20** | 19.55 | – | – | 36 | – | – | P | – | – | – | – |
| 0060 | 175 x 25 x 51/20* | 19.55 | – | – | 60 | – | – | M | – | – | – | – |
| 0030 | 175 x 32 x 32 | – | 29.10 | – | – | 80 | – | – | J | – | – | – |
| 0070 | 200 x 25 x 32/20** | 24.70 | – | – | 36 | – | – | P | – | – | – | – |
| 0090 | 200 x 25 x 32/20** | 25.30 | – | – | 60 | – | – | M | – | – | – | – |
| 0040 | 200 x 25 x 32/20** | – | 32.20 | – | – | 80 | – | – | J | – | – | – |
| 0050 | 200 x 25 x 32/20** | – | – | 28.60 | – | – | 60 | – | – | M | – | – |
| 0100 | 200 x 25 x 51 | 24.70 | – | – | 36 | – | – | P | – | – | – | – |
| 0110 | 200 x 25 x 51 | 24.70 | – | – | 60 | – | – | M | – | – | – | – |
| 0050 | 200 x 25 x 51 | – | 32.20 | – | – | 80 | – | – | J | – | – | – |
| 0060 | 200 x 25 x 51 | – | – | 28.60 | – | – | 60 | – | – | M | – | – |
| 0120 | 200 x 32 x 32/20** | 28.40 | – | – | 36 | – | – | P | – | – | – | – |
| 0130 | 200 x 32 x 32/20** | 28.40 | – | – | 60 | – | – | M | – | – | – | – |
| 0060 | 200 x 32 x 32/20** | – | 36.50 | – | – | 80 | – | – | J | – | – | – |
| 0080 | 200 x 32 x 51 | 28.40 | – | – | 36 | – | – | P | – | – | – | – |
| 0140 | 200 x 32 x 51 | 28.40 | – | – | 60 | – | – | M | – | – | – | – |
| 0070 | 200 x 32 x 51 | – | 36.50 | 31.40 | – | 80 | 60 | – | J | M | – | – |
| 0150 | 250 x 32 x 51 | 46.00 | – | – | 36 | – | – | P | – | – | – | – |
| 0160 | 250 x 32 x 51 | 46.00 | – | – | 60 | – | – | M | – | – | – | – |
| 0080 | 250 x 32 x 51 | – | 54.80 | 51.80 | – | 80 | 60 | – | J | M | – | – |
| 0170 | 300 x 40 x 76 | 63.20 | – | – | 36 | – | – | P | – | – | – | – |
| 0180 | 300 x 40 x 76 | 63.20 | – | – | 60 | – | – | M | – | – | – | – |
| 0090 | 300 x 40 x 76 | – | 82.20 | 79.50 | – | 80 | 60 | – | J | M | – | – |
| 0190 | 300 x 40 x 76 | 80.50 | – | – | 36 | – | – | P | – | – | 125 x 19 | – |
| 0200 | 300 x 40 x 76 | 80.50 | – | – | 60 | – | – | M | – | – | 125 x 19 | – |
| 0100 | 300 x 40 x 76 | – | 101.00 | – | – | 80 | – | – | J | – | – | 125 x 19 |
| | | (W810) | (W810) | (W810) | | | | | | | | |

* Delivered withReducing bush.

## Reducing bush pair for grinding wheels

**Design:** Made of plastic. Supplied in a plastic bag, packed in pairs.

**Application:** For reducing the bore-Ø of grinding wheels for any compatibility.

| Order No. | Outer Ø mm | 8013 | Inner diameter mm |
|---|---|---|---|
| 2012 | 20 | 1.32 | 12 |
| 2013 | 20 | 1.32 | 13 |
| 2016 | 20 | 1.32 | 16 |
| 3216 | 32 | 1.38 | 16 |
| | | (W810) | |

| Order No. | Outer Ø mm | 8013 | Inner diameter mm |
|---|---|---|---|
| 3220 | 32 | 1.38 | 20 |
| 3225 | 32 | 1.38 | 25 |
| 5132 | 51 | 1.65 | 32 |
| 7651 | 76 | 2.40 | 51 |
| | | (W810) | |

## Diamond-cup wheel

**Application:** Resin-bonded diamond grinding wheels can be used for grinding carbide blanks and tools. Thanks to a special resin bond, these wheels can be used for both dry and wet grinding and achieve maximum removal.

**8023** Resin bond type 11V9.

**8025** Resin bond type 12A2.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8023/8025 | | ● | ● | | | | | |

| Order No. | Outer Ø mm | 8023 format | 8025 format | Surface thickness X mm 8023 | Surface thickness X mm 8025 | Surface width mm | Cup height mm 8023 | Cup height mm 8025 | Hole Ø mm | Concentration % | Grit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0020 | 100 | 165.50 | 181.50 | 2 | 3 | 10 | 40 | 32 | 20 | 100 | D 126 |
| 0010 | 100 | 165.50 | 181.50 | 2 | 3 | 10 | 40 | 32 | 20 | 100 | D 76 |
| 0030 | 125 | – | 248.00 | – | 3 | 10 | – | 40 | 32 | 75 | D 126 |
| 0040 | 150 | – | 282.00 | – | 3 | 10 | – | 40 | 32 | 75 | D 126 |
| | | (W815) | (W815) | | | | | | | | |

## Cup wheel

**Application:** For sharpening engravers on a grinding machine with edge hardening on the periphery. An edge-hardener is fitted to the working part, whereby a very good edge is required for the grinding wheel so the part being machined is guided steadily over the edges of the grinding wheels. On the edge to be protected, a thin resin layer similar to the binding of the synthetic resin-bonded wheels can be applied.

**8015** **High-grade aluminium oxide,** with recess 80 x 40 mm.

**8021** **Silicon-Carbide, green,** with recess 80 x 40 mm.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8015 | | ● | | ● | | | | |
| 8021 | ● | ● | ● | | | ● | ● | |

| Order No. | Outer Ø mm | 8015 | 8021 | Cup height mm | Hole Ø mm | Grit | Hardness |
|---|---|---|---|---|---|---|---|
| 0010 | 100 | 20.60 (W810) | 21.80 (W810) | 50 | 20 | 80 | K |

## Grinding wheel dressing stone

**Design:** Rectangular, coarse-grained silicon carbide block.

**Application:** To sharpen grinding wheels or for coarse grinding of steel, iron, granite and engineered stone.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8501 | | ● | | | | ● | ● | |

| Order No. | Dimensions mm | 8501 | Grit |
|---|---|---|---|
| 0150 | 150 x 50 x 25 | 5.95 | 16 |
| 0200 | 200 x 50 x 25 | 7.50 (W861) | 16 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Grinding wheel dressing stone for diamond and CBN wheels

**Design:** Rectangular.

**Application:** For sharpening diamond and CBN grinding wheels. By resetting the bond the grinding wheels are sleek again.

**8505** Grit 120. **8508** Grit 240.

| Order No. | Dimensions mm | 8505 | 8508 |
|---|---|---|---|
| 0100 | 24 x 13 x 100 | 1.66 | 1.66 |
| 0200 | 50 x 25 x 200 | 11.15 (W861) | 11.15 (W861) |

## Diamond dressing tool

**Design:** Plastic sleeve filled entirely with silicon-carbide.

**Application:** For detailed honing, sharpening and defining grinding wheels.

| Order No. | Length x Ø mm | 8502 |
|---|---|---|
| 0005 | 400 x 25 | 13.65 (W861) |

## Tetrabor® grinding wheel dressing tool

**Design:** Tetrabor® honer made from pure, sintered boron carbide. Only the extreme hardness (approx. 35,000 N/mm²) and resistance of boron carbide gives an efficient edge to grinding wheels. The grain does not slip on bonding, rather cuts it smoothly. For grinding wheel honers up to 300 mm Ø.

**Note:** Only use the edge to hone, not the flat surface.

| Order No. | Design | 8504 | Dimensions mm |
|---|---|---|---|
| 0005 | Honing tool | 50.40 | 75 x 12 x 6 |
| 0010 | Handle without honing tool | 34.40 (W861) | 230 |

## Grinding wheel dressing tool

**Application:** For honing clogged grinding wheels. The sharp hand-held roller and hardened steel axle brushes the grain of the material on the wheel just enough to give a perfect turn and optimum traction to the surface.

**8493** Sharpener incl. roller **8496** Replacement roller

| Order No. | Roll width x roll Ø mm | 8493 | 8496 | Holding fixture mm |
|---|---|---|---|---|
| 0005 | 12 x 36 | 34.40 | 13.65 | 8 |
| 0010 | 24 x 55 | 47.40 | 21.60 | 10 |
| 0015 | 50 x 55 | 66.00 (W861) | 34.10 (W861) | 12 |

8496

8493

## Rondor grinding wheel dressing tool

**Design:** Sturdy steel hand grip with rotating ball-head dresser-honer made of silicon carbide.

**Application:** For precisely turning, defining and sharpening grinding wheel tools.

**8507** Sharpener incl. rotary top **8510** Replacement rotary head

| Order No. | Size | 8507 | 8510 | For grinding wheel Ø to mm | Rotary-polishing head Ø mm | Holding fixture |
|---|---|---|---|---|---|---|
| 0005 | 00 | 85.70 | 14.40 | 200 | 35 | M6 |
| 0010 | 0 | 94.00 | 24.20 | 250 | 45 | M10 left |
| 0015 | 1 | 105.50 (W861) | 28.80 (W861) | 300 | 55 | Cone with screw |

8510

8507

## Diamond multi-grain dressing tool

**Design:** Single-sintered, high-concentrate (2.5 carat) diamond grain, universal type, with synthetic handle.

| Order No. | Diamond inset Ø mm | 8531 format | Total length mm |
|---|---|---|---|
| 0005 | 10 | 62.40 (W859) | 200 |

## Diamond grinding wheel dressing tool

**Design:** With approx. 48 single, set diamonds of approx. 3.5 carats in 4 rows, firmly embedded in the working surface, with plastic handle.

**Application:** Defining and honing aluminium oxide grinding wheels by hand. Suitable for dry use.

**8533** Diamond-studded head 180°

**8536** Diamond-studded head 90°.

8533

8536

| Order No. | Abrasive surface mm | 8533 format | 8536 format | Total length mm |
|---|---|---|---|---|
| 0005 | 40 x 10 | 94.50 (W859) | 94.50 (W859) | 220 |

## Diamond single point dressing tool

**Design:** Shaft mounted single- or one-stone abrasive diamond block, solid-shaped crystal with few occlusions or irregular cracking, no crevices.

**Application:** For profiling e.g. abrasives for all ceramic-bonded grinding wheels. The abrasive is always clamped so that the angle to the middle of the grinding wheel is between 5° and 15°. Dressing work with diamonds is better wet and with plenty of ventilation as they are sensitive to shock and temperature. As the diamond becomes progressively blunt it should be twisted 90°.

**Note:** The choice of the right diamond size depends on the ∅ of the grinding wheel, e.g. the wheel width. Worn diamond abrasives should be regularly replaced.

**From 1.5 carats with remote head**

| Order No. | Diamond size/ carat weight | 8512 format | Design | For grinding wheel ∅ to mm |
|---|---|---|---|---|
| 0025 | 0.25 | 34.30 | MK0 | 150 |
| 0050 | 0.50 | 60.10 | MK0 | 300 |
| 0075 | 0.75 | 97.70 | MK0 | 400 |
| 0100 | 1.00 | 141.50 | MK0 | 500 |
| 1025 | 0.25 | 34.30 | MK1 | 150 |
| 1050 | 0.50 | 60.10 | MK1 | 300 |
| 1075 | 0.75 | 97.70 (W859) | MK1 | 400 |

| Order No. | Diamond size/ carat weight | 8512 format | Design | For grinding wheel ∅ to mm |
|---|---|---|---|---|
| 1100 | 1.00 | 141.50 | MK1 | 500 |
| 1150 | 1.50 | 198.00 | MK1 | 750 |
| 2025 | 0.25 | 34.30 * | Shaft cyl. ∅ 8 x 80 mm | 150 |
| 2050 | 0.50 | 60.10 * | Shaft cyl. ∅ 8 x 80 mm | 300 |
| 2075 | 0.75 | 97.70 * | Shaft cyl. ∅ 8 x 80 mm | 400 |
| 2100 | 1.00 | 141.50 * | Shaft cyl. ∅ 8 x 80 mm | 500 |
| 2150 | 1.50 | 198.00 * (W859) | Shaft cyl. ∅ 8 x 80 mm | 750 |

* Other sizes available upon request.

## Diamond multi-point dressing tool

**Design:** 5 diamonds, in a special sintered binding, so that they can be used right to the end without changing.

**Application:** The diamond multi-point dressing tool is a practical dressing tool for coarse grinding with wheels of all diameters up to 100 grit.

**Note:** To prolong the life of this sharpener, continuous cooling should be used during the dressing process.

**8515** MK0. Total length 40 mm.

**8518** MK1. Total length 57 mm.

**8521** Shaft cyl. ∅ 8 x 80 mm.

8515

8518

8521

| Order No. | Diamond content/ carat weight approx. | 8515 format | 8518 format | 8521 format |
|---|---|---|---|---|
| 0005 | 1.00 | 107.50 (W859) | 107.50 (W859) | 107.50 * (W859) |

* Other sizes and shapes available upon request.

## Diamond multi-point dressing tool

**Design:** Single-sintered, high-concentrate (2.5 carat) diamond grain. Diamond cylinder set in the shaft (so no loss of diamonds), universal type.

**Application:** Because of the multiple working points on an efficient diamond tool sharpener, it is only for straight grinding wheel surfaces (flat and peripheral edge). These abrasives have no gradient, so the whole of the diamond grit is employed. This type is not resettable, it is durable and can be used until worn. Not suitable for detail work. For use with disc wheel 36-120.

**Note:** Adequate cooling before and during the dressing process maximises its life span.

**8524** MK0. Total length 40 mm.

**8527** MK1. Total length 57 mm.

**8530** Shaft cyl. ∅ 10 x 80 mm.

8524

8527

8530

| Order No. | Diamond content/ carat weight approx. | 8524 format | 8527 format | 8530 format | Diamond inset ∅ mm |
|---|---|---|---|---|---|
| 0005 | 2.50 | 63.90 (W859) | 63.90 (W859) | 63.90 * (W859) | 8 |

* Other sizes and shapes available upon request.

## Rough grinding discs product line

**FORMAT**
High quality product with very good durability and cutting performance, optimised for a given application in industry and crafts.

**PFERD universal line PS-FORTE**
For universal work in industry and hand tooling.
**PFERD performance line SG-ELASTIC**
For professional use in industry and hand tooling.
**PFERD special high performance line SG-PLUS**
For use in special jobs in industry.

## Rough grinding disc for steel

**Design:** Aluminium oxide (A24), hard, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** For universal use in metal processing.

format professional quality

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8027 | | ● | | | ○ | | | |

| Order No. | Ø x thickness mm | 8027 format | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0115 | 115 x 6 | 1.54 | 10 | Offset | 13300 |
| 0125 | 125 x 6 | 1.66 | 10 | Offset | 12200 |
| 0180 | 180 x 6 | 2.77 | 10 | Offset | 8500 |
| 0181 | 180 x 8 | 3.21 | 10 | Offset | 8500 |
| 0230 | 230 x 8 | 4.83 (W820) | 10 | Offset | 6600 |

## Rough grinding disc for steel

**Design:** With fibre-reinforced resin bond for long life and grinding performance. Ideal for **surface grinding,** welding work, chamfering, deburring and seam welding work. Standard bore 22.23 mm.

PFERD

**8035** **PS-FORTE**
Aluminium oxide (A30), medium-hard, for steel and cast work. For universal work in industry and crafts.

**8038** **SG-ELASTIC**
Aluminium oxide (A24), hard, for universal steel work. Ideal for grouting. For professional use in industry and crafts.

8035

8038

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8035/8038 | | ● | | | ○ | | | |

| Order No. | Ø x thickness mm | 8035 PFERD | 8038 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0113 | 115 x 4.1 | – | 3.09 | 10 | Offset | 13300 |
| 0115 | 115 x 7.2 | 2.05 | 3.11 | 10 | Offset | 13300 |
| 0123 | 125 x 4.1 | – | 4.19 | 10 | Offset | 12200 |
| 0125 | 125 x 7.2 | 2.64 | 4.18 | 10 | Offset | 12200 |
| 0178 | 178 x 7.2 | 3.42 | 5.15 | 10 | Offset | 8600 |
| 0179 | 178 x 8.3 | 4.28 | 5.95 | 10 | Offset | 8600 |
| 0230 | 230 x 8.3 | 7.25 (W825) | 8.95 (W825) | 10 | Offset | 6600 |

## Important note for working with stainless steel:

For **working with stainless steel** generally only **iron and sulphur-free tools are recommended.** A tool should never be used for stainless steel after processing ordinary steel. Residue from ordinary steel can be left on the tool. These residues destroy any stainless steel alloy and lead to the formation of rust on the machined stainless steel. Even sparks from machining ordinary steel can damage stainless steel alloys.

## Rough grinding wheel for battery-powered devices

NEW

**A 546 AC ACCU**
**Design:** Aluminium oxide (A40R), hard, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** For universal stainless steel work.

**Note**: Detailed information about battery-powered tools is found on page 8/67.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8801 | ● | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8801 | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0115 | 115 x 2 | 1.97 | 10 | Offset | 13300 |
| 0125 | 125 x 2 | 2.27 (W850) | 10 | Offset | 12200 |

## Rough grinding disc for stainless steel

**Design:** Aluminium oxide (A24), soft, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** For universal stainless steel work.

8041 format professional quality

8042 NEW

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8041/8042 | | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8041 format professional quality | 8042 A 24 Extra | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0115 | 115 x 6 | 1.91 | 1.57 | 10 | Offset | 13300 |
| 0125 | 125 x 6 | 2.08 (W830) | 1.79 (W850) | 10 | Offset | 12200 |

## Rough grinding disc for stainless steel

**Design:** Soft, with fibre-reinforced resin bond for long life and grinding performance. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** For universal stainless steel work. Ideal for surface grinding, fillet seams, chamfering, deburring and seam welding work.

**8050** **PS-FORTE**
Aluminium oxide (A30). For universal work in industry and crafts.

**8053** **SG-ELASTIC**
Special aluminium oxide (A30). For professional use in industry and crafts.

8050

8053

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8050/8053 | | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8050 PFERD | 8053 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0115 | 115 x 7.2 | 2.30 | 3.45 | 10 | Offset | 13300 |
| 0124 | 125 x 4.1 | – | 4.61 | 10 | Offset | 12200 |
| 0125 | 125 x 7.2 | 2.96 | 4.63 | 10 | Offset | 12200 |
| 0180 | 178 x 7.2 | 3.80 | 5.65 | 10 | Offset | 8600 |
| 0231 | 230 x 8.3 | 8.10 (W825) | 9.85 (W825) | 10 | Offset | 6600 |

## Rough grinding disc for stainless steel

NEW

**SG-ELASTIC CERAMIC**
**Design:** Ceramic grain (CO24), soft, with fibre-reinforced resin bond for very long life and grinding performance. The tool retains its high grinding performance over the full service life thanks to the self-sharpening effect of the high-performance ceramic grain abrasive, in conjunction with a special bond technology. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** For universal stainless steel work. Ideal for surface grinding, fillet seams, chamfering, deburring and seam welding work.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8055 | | ● | | ● | | | | |

| Order No. | Ø x thickness mm | 8055 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0115 | 115 x 7.2 | 5.70 | 10 | Offset | 13300 |
| 0125 | 125 x 7.2 | 6.10 (W825) | 10 | Offset | 12200 |

## Rough grinding wheel for stainless steel

**Cubitron™ II**
**Design:** Ceramic grain. Cool grinding for a very long service life and fastest grinding processes. Reduces expenditure of energy by up to 70% with the same removal as other premium products. Standard bore 22.23 mm.

**Application:** For universal stainless steel work. Ideal for surface grinding, weld processing, chamfering and cleaning.

**Note:** For effortless and low-vibration work.

CUBITRON II 3M

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8028 | | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8028 3M | PU | Design | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0115 | 115 x 7 | 6.15 | 10 | Offset | 13300 |
| 0125 | 125 x 7 | 6.60 | 10 | Offset | 12200 |
| | | (W812) | | | |

## Green Corps rough grinding disc

**Design:** Flexible rough grinding disc with ceramic Cubitron™-grit and special toughened abrasive surface for longer life and higher removal rates with lower vibration and noise. Standard bore 22.23 mm. Delivery incl. 2 backing pads per PU.

**Application:** For stainless steel work, iron and non-ferrous metals and aluminium.

**Note:** Only for use with backing pads (Order No. 8051 0500).

3M

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8051 | ● | ● | ● | ● | ○ | | | |

| Order No. | Ø x thickness mm | 8051 3M | PU | Grain | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0115 | 115 x 3 | 4.40 | 20 Δ | 36 | 13300 |
| 0125 | 125 x 3 | 5.45 | 20 Δ | 36 | 12200 |
| | | (W812) | | | |

ΔCan only be supplied as a whole packaging unit.

## Backing pads for Green Corps rough grinding wheel

Backing pads for Green Corps rough grinding wheels 115 and 125 mm.

| Order No. | Ø x bore mm | 8051 3M | PU |
|---|---|---|---|
| 0500 | 86 x 22.23 | 2.57 | 5 |
| | | (W812) | |

## Rough grinding wheels for steel and cast processing

**SG-ELASTIC**
**Design:** Zirconia alumina/aluminium oxide (ZA30), hard, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** ideal for use with heavy-duty angle grinders. For surface grinding, seam welding, chamfering, deburring and join finishing. Best results with air grinders and powerful, high-frequency and electric angle grinders.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8052 | | ● | | | ● | | | |

| Order No. | Ø x thickness mm | 8052 PFERD | PU | Design | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0178 | 178 x 7.2 | 7.10 | 10 | Offset | 8600 |
| | | (W825) | | | |

## Rough grinding disc for aluminium

**SG-ELASTIC**
**Design:** Aluminium oxide (A24), soft, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** For aluminium work. Non-tool clogging even with soft, lubricating substances.

**Note:** Contains no fillers that leave unwanted residue on the tool. So the surface is immediately ready for welding.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8056 | ● | | | | | | | |

| Order No. | Ø x thickness mm | 8056 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0115 | 115 x 7.2 | 3.62 | 10 | Offset | 13300 |
| 0125 | 125 x 7.2 | 5.00 | 10 | Offset | 12200 |
| 0178 | 178 x 7.2 | 6.05 (W825) | 10 | Offset | 8600 |

## Grinding wheel CC-GRIND®

**Design:** Resin bonded corundum scattering (A) on rip resistant, strong vulcanised fibre substrate. Tough, flexible grinding with high removal rate, **lasts up to 30% longer** and has a temperature up to 30% lower.

**Note:** Not suitable for peripheral grinding. Avoid using on sharp edges.

**8017** **SG-ELASTIC CC-GRIND STEEL**
For the surface processing of steel.

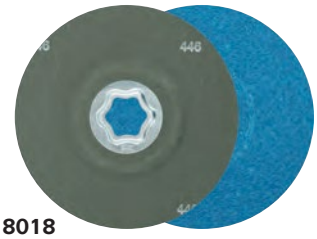
**Note:** Only for use with backing pads (Order No. 8017 1000).

**8018** **SG-ELASTIC CC-GRIND INOX**
For the surface processing of stainless steel.
**With cooling properties due to grinding-activated additive coating.**

**Note:** Only for use with backing pads (Order No. 8018 1000).

PFERD

8017




8018

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8017 | | ● | | | | | | |
| 8018 | | | | ● | | | | |

| Order No. | Ø mm | 8017 PFERD | 8018 PFERD | PU | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0115 | 115 | 3.46 | 3.46 | 25 | 13300 |
| 0125 | 125 | 3.71 (W840) | 3.71 (W840) | 25 | 12200 |

## Backing pads for CC-GRIND®

**Design:** With a patented quick-clamping device for quick and tool-free replacement of the grinding wheel, optimised cooling vent geometry for high air flow and M14 thread.

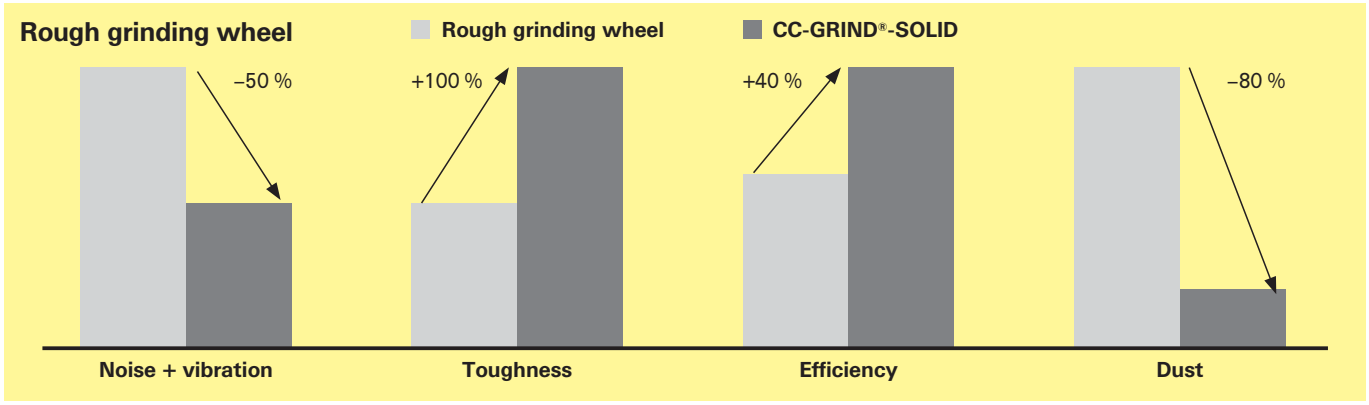
**Application:** For mounting CC-GRIND® grinding wheels on all standard angle grinders at max. 80 m/s peripheral speed.

**8017** For mounting CC-GRIND® STEEL backing pads.
**8018** For mounting CC-GRIND® INOX backing pads.

| Order No. | Ø mm | 8017 PFERD | 8018 PFERD |
|---|---|---|---|
| 1000 | 115/125 | 26.01 (W840) | 26.01 (W840) |

8017

8018




## Grinding wheel CC-GRIND®-SOLID

**Design:** Resin-bonded aluminium oxide grain (A) on tear-proof, thick, vulcanised fibre backing material uniform and light, open. The innovative high-strength layer structure of the fibre supporting plate ensures rugged and safe use as with a rough grinding wheel. Noise and vibration are reduced by 50%, dust by 80%.

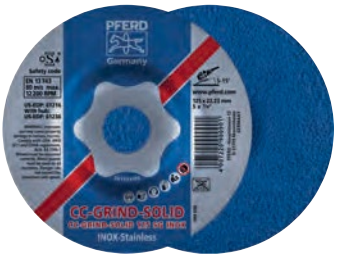
**Application:** For surface grinding, welding seams, chamfering, deburring, edge grinding and combustion flash processing. **Especially for tough and coarse grinding.**

**Note:** Not suitable for peripheral grinding. **Only for use with spanner flange set (Order Nos. 8024 1000 and 1005).**

**8022** **SG-ELASTIC CC-GRIND®-SOLID STEEL**
For steel processing.

**8024** **Grinding wheel SG-ELASTIC CC-GRIND® SOLID INOX**
For stainless steel work.
**With cooling properties due to grinding-activated additive coating.**

8022



8024

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8022 | | ● | | | | | | |
| 8024 | | | | ● | | | | |

| Order No. | ∅ mm | 8022 PFERD | 8024 PFERD | PU | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0115 | 115 | 4.18 | 4.59 | 10 | 13300 |
| 0125 | 125 | 4.64 | 5.10 | 10 | 12200 |
| 0180 | 180 | 8.49 (W840) | 9.34 (W840) | 10 | 8500 |

## Spanner flange set for cutting disc CC-GRIND® SOLID

**Design:** Optimised cooling vent geometry for high air flow and M14 thread.

**Application:** For mounting CC-GRIND® SOLID grinding wheels on all standard angle grinders at max. 80 m/s peripheral speed.

| Order No. | ∅ mm | 8024 PFERD |
|---|---|---|
| 1000 | 115/125 | 5.64 |
| 1005 | 180 | 5.64 (W840) |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Cutting discs product line

**FORMAT**
High quality product with very good durability and cutting performance, optimised for a given application in industry and crafts.

**PFERD universal line PS-FORTE**
For universal work in industry and hand tooling.
**PFERD performance line SG-ELASTIC**
For professional use in industry and hand tooling.
**PFERD special high performance line SG-PLUS**
For use in special jobs in industry.

## Small detachable disc for steel and stainless steel working

**SG-ELASTIC**
**Design:** Aluminium oxide (A46, A60), semi-hard, with fibre-reinforced resin bond for long life and grinding performance. **Not made with iron, sulphur and chlorine fillers.**

**Application:** For cool work with steel, INOX, high-temperature-resistant steel, cast iron, non-ferrous metals and nickel-based alloys with electric and pneumatic straight grinders. Ideal for use in confined spaces.

**Note:** Please order detachable disc holder separately.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8109 | ● | ● | | ● | ● | | | |

| Order No. | Ø x thickness mm | 8109 PFERD | PU | Hole mm | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 3014 | 30 x 1.4 | 1.52 | 50 | 6 | Straight | 51000 |
| 4011 | 40 x 1.1 | 1.60 | 50 | 6 | Straight | 38200 |
| 4021 | 40 x 2.1 | 1.60 | 50 | 6 | Straight | 38200 |
| 5008 | 50 x 0.8 | 1.90 | 50 | 6 | Straight | 30600 |
| 5011 | 50 x 1.1 | 1.90 | 50 | 6 | Straight | 30600 |
| 5014 | 50 x 1.4 | 1.90 | 50 | 6 | Straight | 30600 |
| 5021 | 50 x 2.1 | 1.90 | 50 | 6 | Straight | 30600 |
| 6508 | 65 x 0.8 | 1.94 (W835) | 50 | 6 | Straight | 23500 |

| Order No. | Ø x thickness mm | 8109 PFERD | PU | Hole mm | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 6511 | 65 x 1.1 | 1.94 | 50 | 6 | Straight | 23500 |
| 6530 | 65 x 3.0 | 1.94 | 50 | 10 | Straight | 23500 |
| 7030 | 70 x 3.0 | 2.18 | 50 | 10 | Straight | 21800 |
| 7608 | 76 x 0.8 | 2.32 | 50 | 6 | Straight | 20100 |
| 7609 | 76 x 0.8 | 2.32 | 50 | 10 | Straight | 20100 |
| 7611 | 76 x 1.1 | 2.32 | 50 | 6 | Straight | 20100 |
| 7621 | 76 x 2.1 | 2.32 (W835) | 50 | 10 | Straight | 20100 |

## Holder for small cutting disc

**Design:** Sturdy with high safety, anti-shaft breakage.

**Application:** For clamping small detachable discs.

**Note:** Critical to bear the max. torque speed in mind according to the package information.

| Order No. | Tool-bore Ø mm | 8109 PFERD | Shaft Ø mm | Chucking capacity mm |
|---|---|---|---|---|
| 0606 | 6 | 8.00 (W868) | 6 | 0–4 |

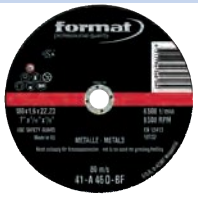
| Order No. | Tool-bore Ø mm | 8109 PFERD | Shaft Ø mm | Chucking capacity mm |
|---|---|---|---|---|
| 0610 | 10 | 8.00 (W868) | 6 | 0–4 |

## Cutting disc for steel

**Design:** Aluminium oxide (A60 1.0 mm thick), tough, aluminium oxide (A46 from 1.6–1.9 mm thick), tough and aluminium oxide (A24 from 2.5–3.0 mm thick), tough, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** For universal use in all areas of metal work. The thin detachable discs (1.0 mm thick) are ideal for fast, convenient cutting and edging, 1.6 and 1.9 mm thickness for universal cutting tasks and 2.5 to 3.0 mm for maximum tool life with high lateral stability.

**Note:** For more safety and higher lateral stability when working with cutting discs from 178 mm Ø, we recommend using a spanner flange, see (Order No. 8110 0010 📖 8/17).




8059 format professional quality

8061 A 24 Extra NEW

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8059/8061 | | ● | | | ○ | | | |

| Order No. | Ø x thickness mm | 8059 format | 8061 A 24 Extra | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0113 | 115 x 1.0 | 0.95 | – | 25 | Straight | 13300 |
| 0114 | 115 x 1.6 | 1.09 | – | 25 | Straight | 13300 |
| 0115 | 115 x 2.5 | 0.86 | 0.88 | 25 | Offset | 13300 |
| 0123 | 125 x 1.0 | 0.95 | – | 25 | Straight | 12200 |
| 0124 | 125 x 1.6 | 1.24 (W820) | – (W850) | 25 | Straight | 12200 |

| Order No. | Ø x thickness mm | 8059 format | 8061 A 24 Extra | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0125 | 125 x 2.5 | 0.95 | 1.00 | 25 | Offset | 12200 |
| 0179 | 180 x 1.6 | 1.90 | – | 25 | Straight | 8500 |
| 0180 | 180 x 3.0 | 1.39 | – | 25 | Straight | 8500 |
| 0229 | 230 x 1.9 | 2.67 | – | 25 | Straight | 6600 |
| 0230 | 230 x 3.0 | 1.86 (W820) | 1.93 (W850) | 25 | Straight | 6600 |

## Important note for working with stainless steel:

For **working with stainless steel** generally only **iron and sulphur-free tools are recommended.** A tool should never be used for stainless steel after processing ordinary steel. Residue from ordinary steel can be left on the tool. These residues destroy any stainless steel alloy and lead to the formation of rust on the machined stainless steel. Even sparks from machining ordinary steel can damage stainless steel alloys.

## Cutting disc for steel

PFERD

**Design:** Aluminium oxide (A24, A30, A46, A60), with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** Ideal for steel, cutting, profiling of sheet and solid metal. Thin cutting discs (1.0-1.9 mm thick) are ideal for fast and convenient de-burring, 2.4 mm for universal cutting jobs and 3.0 to 3.2 mm for maximum tool life with high lateral stability.

**Note:** For more safety and higher lateral stability when working with cutting discs from 178 mm Ø, we recommend using a spanner flange, see (Order No. 8110 0010 📖 8/17).

**8065** **PS-FORTE**
Medium-hard design. For universal work in industry and crafts.

**8071** **SG-ELASTIC**
Hard design. For professional use in industry and crafts.

8065

8071

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8065/8071 | | ● | | | ○ | | | |

| Order No. | Ø x thickness mm | 8065 PFERD | PU | Design | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0114 | 115 x 1.0 | 1.17 | 25 | Straight | 13300 |
| 0115 | 115 x 1.6 | 1.19 | 25 | Straight | 13300 |
| 0116 | 115 x 2.4 | 1.18 | 25 | Offset | 13300 |
| 0124 | 125 x 1.0 | 1.31 | 25 | Straight | 12200 |
| 0125 | 125 x 1.6 | 1.32 | 25 | Straight | 12200 |
| 0126 | 125 x 2.4 | 1.35 | 25 | Offset | 12200 |
| 0177 | 178 x 1.6 | 1.92 | 25 | Straight | 8600 |
| 0178 | 178 x 3.0 | 1.65 | 25 | Straight | 8600 |
| 0229 | 230 x 1.9 | 2.90 | 25 | Straight | 6600 |
| 0230 | 230 x 3.0 | 2.32 (W835) | 25 | Straight | 6600 |

| Order No. | Ø x thickness mm | 8071 PFERD | PU | Design | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0115 | 115 x 1.0 | 1.96 | 25 | Straight | 13300 |
| 0117 | 115 x 1.6 | 2.03 | 25 | Straight | 13300 |
| 0118 | 115 x 2.4 | 2.04 | 25 | Straight | 13300 |
| 0116 | 115 x 2.4 | 2.04 | 25 | Offset | 13300 |
| 0125 | 125 x 1.0 | 2.26 | 25 | Straight | 12200 |
| 0127 | 125 x 1.6 | 2.33 | 25 | Straight | 12200 |
| 0128 | 125 x 2.4 | 2.37 | 25 | Straight | 12200 |
| 0126 | 125 x 2.4 | 2.37 | 25 | Offset | 12200 |
| 0177 | 178 x 1.6 | 2.88 | 25 | Straight | 8600 |
| 0178 | 178 x 3.2 | 3.82 | 25 | Straight | 8600 |
| 0229 | 230 x 1.9 | 4.28 | 25 | Straight | 6600 |
| 0230 | 230 x 3.2 | 5.65 (W835) | 25 | Straight | 6600 |

## Cutting disc for battery-powered devices

NEW

KLINGSPOR

**A 560 AC ACCU**
**Design:** Aluminium oxide (A60T), hard, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** For universal stainless steel work.

**Note**: Detailed information about battery-powered tools is found on page 8/67.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8800 | ● | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8800 | PU | Design | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0115 | 115 x 1 | 1.51 | 25 | Straight | 13300 |
| 0125 | 125 x 1 | 1.71 (W850) | 25 | Straight | 12200 |

## Cutting disc for stainless steel

**Design:** Aluminium oxide (A46, A60), hard, with fibre-reinforced resin bond for long life and grinding performance. **Made without iron, sulphur and chloride fillers.** Standard bore 22.23 mm.

**Application:** Ideal for cutting thin sheet metal as well as thin-walled stainless steel sections and tubes. Very cut-friendly and power-saving, low burring and low material consumption.

**Note:** For more safety and higher lateral stability when working with cutting discs from 178 mm Ø, we recommend using a spanner flange, see (Order No. 8110 0010 📖 8/17).

8085 format professional quality

8062 NEW

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8085/8062 | | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8085 format professional quality | 8062 A 60 TZ SPECIAL | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|---|
| 0115 | 115 x 1.0 | 1.10 | 1.30 | 25 | Straight | 13300 |
| 0116 | 115 x 1.6 | 1.19 | – | 25 | Straight | 13300 |
| 0125 | 125 x 1.0 | 1.22 | 1.47 | 25 | Straight | 12200 |
| 0126 | 125 x 1.6 | 1.31 | – | 25 | Straight | 12200 |
| 0180 | 180 x 1.6 | 1.98 | – | 25 | Straight | 8500 |
| 0230 | 230 x 1.9 | 2.79 (W830) | 2.80 (W850) | 25 | Straight | 6600 |

## Cutting disc for stainless steel – extra-fine

**SG-PLUS X-SLIM®**
**Design:** Aluminium oxide (A60), hard, with fibre-reinforced resin bond for maximum cutting performance, outstanding service life with a cold cut. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** For stainless steel work. Especially for cold and burr-free cutting of thin sheet metal, profiles, tubes and solid material. For a narrow cut only gentle pressure is necessary.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8097 | | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8097 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0116 | 115 x 0.8 | 2.97 | 25 | Straight | 13300 |
| 0126 | 125 x 0.8 | 3.22 (W835) | 25 | Straight | 12200 |

## Cutting disc for stainless steel

**Design:** Aluminium oxide (A24, A46, A60), with fibre-reinforced resin bond for long life and grinding performance. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Ideal for cutting sheet and solid metal and profiling in steel and stainless steel. The thin cutting discs (1.0-1.9 mm thick) are ideal for fast, convenient and burr-free cutting and 2.4 and 2.5 mm thickness for universal cutting tasks.

**Note:** For more safety and higher lateral stability when working with cutting discs from 178 mm Ø, we recommend using a spanner flange, see (Order No. 8110 0010 📖 8/17).

PFERD

8090

8096

**8090** **PS-FORTE**
Medium-hard design.

**8096** **SG-ELASTIC**
Hard design.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8090/8096 | | ○ | | ● | | | | |

| Order No. | Ø x thickness mm | 8090 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0114 | 115 x 1.0 | 1.22 | 25 | Straight | 13300 |
| 0115 | 115 x 1.6 | 1.22 | 25 | Straight | 13300 |
| 0116 | 115 x 2.4 | 1.26 | 25 | Straight | 13300 |
| 0124 | 125 x 1.0 | 1.36 | 25 | Straight | 12200 |
| 0125 | 125 x 1.6 | 1.39 | 25 | Straight | 12200 |
| 0126 | 125 x 2.4 | 1.44 | 25 | Straight | 12200 |
| 0177 | 178 x 1.6 | 2.01 | 25 | Straight | 8600 |
| 0178 | 178 x 2.5 | 1.80 | 25 | Straight | 8600 |
| 0229 | 230 x 1.9 | 3.00 | 25 | Straight | 6600 |
| 0230 | 230 x 2.5 | 2.49 | 25 | Straight | 6600 |
| | | (W835) | | | |

| Order No. | Ø x thickness mm | 8096 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0115 | 115 x 1.0 | 2.03 | 25 | Straight | 13300 |
| 0116 | 115 x 1.6 | 2.08 | 25 | Straight | 13300 |
| 0117 | 115 x 2.4 | 2.15 | 25 | Offset | 13300 |
| 0125 | 125 x 1.0 | 2.33 | 25 | Straight | 12200 |
| 0126 | 125 x 1.6 | 2.38 | 25 | Straight | 12200 |
| 0118 | 125 x 2.4 | 2.45 | 25 | Straight | 12200 |
| 0127 | 125 x 2.4 | 2.45 | 25 | Offset | 12200 |
| 1177 | 178 x 1.6 | 2.94 * | 25 | Straight | 8600 |
| 0178 | 178 x 2.5 | 3.92 | 25 | Straight | 8600 |
| 1229 | 230 x 2.0 | 4.48 * | 25 | Straight | 6600 |
| 0230 | 230 x 2.5 | 5.75 | 25 | Straight | 6600 |
| | | (W835) | | | |

* Medium-hard design.

## Cutting disc for stainless steel

**Cubitron™ II**
**Design:** Heavy-duty precision grain Cubitron™ II (grit size 60+). Cool cut for high quality and fast sanding results. Longer service life compared to conventional cutting discs. Reduces expenditure of energy up to 70% with the same removal as other premium products. 1.0 variant with inside label for added side roughness. Standard bore 22.23 mm.

**Application:** Ideal for use on stainless steel, construction steel and non-ferrous metals. For cutting profiles, rods and sheet metals.

CUBITRON II 3M

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8064 | ● | ● | | ● | | | | |

| Order No. | Ø x thickness mm | 8064 3M | PU | Design |
|---|---|---|---|---|
| 0115 | 115 x 1.0 | 2.87 | 50 | Straight |
| 0116 | 115 x 1.6 | 3.19 NEW | 50 | Straight |
| 0125 | 125 x 1.0 | 3.19 | 50 | Straight |
| 0126 | 125 x 1.6 | 3.51 NEW | 50 | Straight |
| 0180 | 180 x 1.6 | 6.40 | 50 | Straight |
| | | (W812) | | |

## Cutting disc for stainless steel and cast work

**SG-ELASTIC**
**Design:** Aluminium oxide (A24), semi-hard, with fibre-reinforced resin bond for maximum cutting performance, outstanding service life with a cold cut. **Not made with added iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** For stainless steel and cast steel work. Especially for cutting solid material. Ideal for pneumatic turbine grinders and powerful, high frequency and electric angle grinders.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8098 | | ○ | | ● | ● | | | |

| Order No. | Ø x thickness mm | 8098 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0231 | 230 x 2.9 | 6.00 (W835) | 25 | Straight | 6600 |

## Cutting disc for aluminium work

**SG-ELASTIC**
**Design:** Aluminium oxide (A24, A30, A46, A60), soft, with fibre-reinforced resin bond for long life and grinding performance. **Contains no fillers that leave unwanted residue on the work surface.** Standard bore 22.23 mm.

**Application:** Ideal for cutting sheets, profiles and solid material made from tough and hard aluminium and other soft non-ferrous metals. Non-clogging of tools.

**Note:** For more safety and higher lateral stability when working with cutting discs from 178 mm Ø, we recommend using a spanner flange, see (Order No. 8110 0010 📖 8/17).

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8111 | ● | | | | | | | |

| Order No. | Ø x thickness mm | 8111 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0114 | 115 x 1.0 | 2.02 | 25 | Straight | 13300 |
| 0115 | 115 x 2.4 | 2.15 | 25 | Offset | 13300 |
| 0124 | 125 x 1.0 | 2.32 | 25 | Straight | 12200 |
| 0126 | 125 x 1.6 | 2.38 NEW (W835) | 25 | Straight | 12200 |

| Order No. | Ø x thickness mm | 8111 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0125 | 125 x 2.4 | 2.45 | 25 | Offset | 12200 |
| 0177 | 178 x 1.6 | 2.94 | 25 | Straight | 8600 |
| 0178 | 178 x 2.9 | 3.97 | 25 | Straight | 8600 |
| 0230 | 230 x 2.9 | 5.75 (W835) | 25 | Straight | 6600 |

## Cutting disc for stone

**SG-ELASTIC**
**Design:** Silicon carbide (C24, C30), hard, with fibre-reinforced resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** Ideal for cutting natural and artificial stone, heat-resistant stone, cast iron and non-ferrous metals.

**Note:** For more safety and higher lateral stability when working with cutting discs from 178 mm Ø, we recommend using a spanner flange, see (Order No. 8110 0010 📖 8/17).

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8108 | ○ | | | | ○ | | ● | |

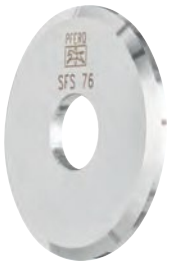
| Order No. | Ø x thickness mm | 8108 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0115 | 115 x 2.4 | 2.09 | 25 | Offset | 13300 |
| 0125 | 125 x 2.4 | 2.39 (W835) | 25 | Offset | 12200 |

| Order No. | Ø x thickness mm | 8108 PFERD | PU | Design | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 0178 | 178 x 3.2 | 3.84 | 25 | Straight | 8600 |
| 0230 | 230 x 3.2 | 5.70 (W835) | 25 | Straight | 6600 |

## Spanner flange set for thin detachable cutting disc

**Design:** Made of high quality tool steel, for drive spindles M14.

**Application:** Increases lateral stability and ensures precise cutting disc guidance, especially for straight, thin cutting discs with Ø 178/180 and 230 mm.




| Order No. | Outer Ø mm | 8110 PFERD |
|---|---|---|
| 0010 | 76 | 33.10 (W835) |

## Cup wheel

**SG-ELASTIC**
**Design:** Semi-hard design, with resin bond for long life and grinding performance. Standard bore 22.23 mm.

**Application:** For all angle grinders with max. 50 m/s peripheral speed.

**8126** Aluminium oxide (A16), **For steel and cast work. Not made with iron, sulphur and chlorine fillers.** Suitable for surface machining and with a slight angle for machining weld seams.

**8129** Silicon carbide (C16), **for stone and natural stone work** in wet and dry grinding and cast iron work.

8126

8129

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8126 | | ● | | | ○ | | | |
| 8129 | | | | | ● | | ● | |

| Order No. | Largest Ø mm | 8126 PFERD | 8129 PFERD | Smallest Ø mm | Cup height mm | Wall thickness mm | Max. rpm $min^{-1}$ |
|---|---|---|---|---|---|---|---|
| 0110 | 110 | 12.37 (W840) | 13.12 (W840) | 90 | 55 | 20 | 8600 |

## Diamond cutting disc for battery-powered devices

NEW

**DT 500 AC ACCU**
**Design:** With turbo tooth system for clean and breakout-free edges, with closed cutting edge. **Segment height 10 mm.**

**Application:** For cutting concrete and building site materials.

**Note**: Detailed information about battery-powered tools is found on page 8/67.

| Order No. | Ø mm | 8804 | Segment width mm | Hole Ø mm |
|---|---|---|---|---|
| 0115 | 115 | 10.05 | 1.9 | 22.23 |
| 0125 | 125 | 11.20 (W850) | 1.9 | 22.23 |

## Diamond cutting disc

**Design:** Steel blades made of quality steel, segmented.

**8115** **EC-18**
**With sintered segments.**
For cutting concrete and concrete roof tiles.
Suitable for use with washed concrete, brick, natural and artificial stone.
**Segment height 10 mm.**

**8113** **EC-21.2**
**With laser-welded segments.**
For cutting concrete, washed and reinforced concrete, concrete roof tiles, brick, natural and artificial stone, basalt and slate. Also suitable for granite and fire-resistant material.
**Segment height 12 mm.**

**8124** NEW **EC-31**
**With laser welded segments.**
For cutting asphalt, sand-lime brick and other abrasive materials.
**Segment height 10 mm.**

8115

8113

8124

| Order No. | Ø mm | 8115 | 8113 | 8124 | Segment width mm 8115 | 8113 | 8124 | Hole Ø mm |
|---|---|---|---|---|---|---|---|---|
| 0115 | 115 | 8.25 | 18.15 | – | 1.9 | 2.1 | – | 22.23 |
| 0125 | 125 | 9.05 | 20.90 | 26.30 | 1.9 | 2.1 | 2.1 | 22.23 |
| 0180 | 180 | 12.70 | 35.40 | – | 2.2 | 2.3 | – | 22.23 |
| 0230 | 230 | 17.25 | 39.90 | 49.00 | 2.4 | 2.4 | 2.4 | 22.23 |
| 0300 | 300 | – | 68.40 | – | – | 2.8 | – | 20.00 |
| 0305 | 300 | – | 68.40 * | – | – | 2.8 | – | 25.40 |
| 0350 | 350 | – | 89.80 | 129.00 | – | 3.2 | 3.2 | 20.00 |
| 0355 | 350 | – | 89.80 * | 129.00 * | – | 3.2 | 3.2 | 25.40 |
| | | (W839) | (W839) | (W839) | | | | |

* With reduction to 20 mm.

## Diamond cutting disc NEW

**EC-23**
**With turbo segments.**
**Design:** Steel blades made of quality steel, segmented. The special segmented shape allows extremely fast cutting.

**Application:** For cutting reinforced concrete, concrete products, artificial and natural stone, general building materials and soft to medium-hard granite.

| Order No. | Ø mm | 8125 | Segment width mm | Hole Ø mm |
|---|---|---|---|---|
| 0115 | 115 | 22.70 | 2.1 | 22.23 |
| 0125 | 125 | 25.40 | 2.2 | 22.23 |
| 0150 | 150 | 30.00 | 2.2 | 22.23 |
| 0230 | 230 | 49.90 | 2.4 | 22.23 |
| | | (W839) | | |

## Diamond cutting disc, extra-fine

**EC-45.1 Turbo "extra-fine"**
**Design:** Segmented, quality steel blade, with closed cutting edge. High feed rate with very good edge quality. **Segment height 10 mm.**

**Application:** For heat-resistant material, bricks, ceramics, natural and artificial stone, fibreglass plastics, plasterboard, and profiled sheets. Suitable for tiles and porcelain tiles. Suitable for wet and dry cutting.

| Order No. | Ø mm | 8119 | Segment width mm | Hole Ø mm |
|---|---|---|---|---|
| 0115 | 115 | 22.40 | 1.2 | 22.23 |
| 0125 | 125 | 23.40 | 1.2 | 22.23 |
| 0181 | 180 | 38.40 | 1.6 | 22.23 |
| 0230 | 230 | 58.60 | 1.8 | 22.23 |
| | | (W839) | | |

## Diamond cutting disc

**Design:** Segmented, quality steel blade, with closed, sintered cutting edge.

**8121** **EC-42.1 Turbo**
For cutting concrete and washed concrete, concrete roof tiles, brick, soft natural stone, basalt and slate. Also suitable for reinforced concrete, clay pipe, hard natural stone and granite.
**Segment height 10 mm.**

**8122** **EC-110 Tile**
Thanks to good quality cutting edge, ideal for cutting tiles and slabs.
**Segment height 7 mm.**

8121

8122

| Order No. | Ø mm | 8121 | 8122 | Segment width mm 8121 | Segment width mm 8122 | Hole Ø mm |
|---|---|---|---|---|---|---|
| 0115 | 115 | 9.40 | 10.80 | 2.3 | 1.5 | 22.23 |
| 0125 | 125 | 10.55 | 12.95 | 2.3 | 1.5 | 22.23 |
| 0181 | 180 | 15.40 | – | 2.4 | – | 22.23 |
| 0230 | 230 | 21.40 (W839) | – (W839) | 3.0 | – | 22.23 |

## Diamond sanding disc

NEW

**EC-74**
**Design:** Extremely solid segment fixing by means of plasma welding.

**Application:** Ideal for grinding concrete, brick, screed, artificial and natural stone.

| Order No. | Ø mm | 8130 | Segment width mm | Hole Ø mm |
|---|---|---|---|---|
| 0125 | 125 | 45.40 (W839) | 7.5 x 5.0 | 22.23 |

## Diamond sanding disc

NEW

**EC-73**
**Design:** With 2 segment layers and long service life.

**Application:** For grinding and smoothing concrete, brick, artificial and natural stone.

| Order No. | Ø mm | 8131 | Segment width mm | Hole Ø mm |
|---|---|---|---|---|
| 0125 | 125 | 80.80 (W839) | 7.0 x 6.5 | 22.23 |

## Diamond sanding disc

NEW

**CST-Saturn abrasive**
**Design:** With 2 segment layers and very long service life.

**Application:** For grinding and smoothing screed and other abrasive surfaces.

| Order No. | Ø mm | 8132 | Number of segments | Hole Ø mm |
|---|---|---|---|---|
| 0125 | 125 | 71.70 (W839) | 20 | 22.23 |

## Hand sanding block

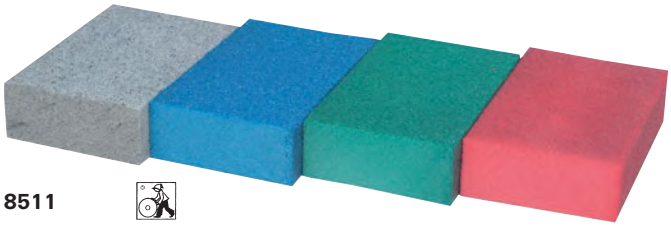
**Design:** Plastic-bonded silicon carbide (SiC), soft.

**Application:** For polishing and matt-finishing all kinds of surfaces (paint, stone, wood, plastics, all metals, etc.) as well as for cleaning and maintenance.

**Note:** Increased effectiveness through adding water, soap, paste, or petrol.

**8511** NEW — Soak-dyed, colour does not rub off

8443 format professional quality



8511

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8443/8511 | ○ | ● | | ● | ● | ● | ● | ● |

| Order No. | Grit | 8443 format professional quality | 8511 | Dimensions L x W x H mm |
|---|---|---|---|---|
| 0030 | 30 | – | 3.67 | 80 x 50 x 20 |
| 0060 | 60 | 2.86 | 3.99 | 80 x 50 x 20 |
| 0120 | 120 | 2.86 | 3.99 | 80 x 50 x 20 |
| 0240 | 240 | 2.86 (W842,W861) | 3.99 (W842,W861) | 80 x 50 x 20 |

## Sanding sponge

**Design:** Resin-bonded abrasive grain, polyurethane sponge.

**8134** **Aluminium oxide (A), one-sided coating, 90 x 100 x 5 mm,** For working on profiling pieces.

**8136** **Aluminium oxide (A), 4-sided coating, 100 x 68 x 26 mm,** strong edge for surface polishing.

**8138** **Silicon carbide (SiC), 2-sided coating, 125 x 98 x 13 mm,** For contours and profile polishing.

3M

8134

8136

8138

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8134/8136/8138 | | | | | | ● | | ● |

| Order No. | Grit | 8134 3M | 8136 3M | 8138 3M | PU |
|---|---|---|---|---|---|
| 0060 | 60 | 0.82 | 0.52 | 0.47 | 100 |
| 0100 | 100 | 0.82 | 0.52 | 0.47 | 100 |
| 0180 | 180 | – | – | 0.47 | 100 |
| 0220 | 220 | 0.82 (W812) | – (W812) | – (W812) | 100 |

## Velcro-backed sandpaper

**PS 22 K**
**Design:** Resin-bonded aluminium oxide grain (A) on 250 g/m² paper, smooth and half open. Excellent grit friction, long life, minimal pressure and good flexibility. **Sheet size 70 x 125 mm.**

**Application:** Universal product for hand or machine work with wood or metal, especially for hardwood.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8133 | | ● | | | | ● | | |

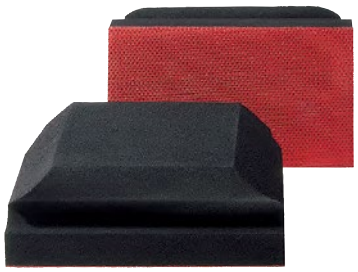
| Order No. | Grit | 8133 | PU |
|---|---|---|---|
| 0080 | 80 | 18.60 | 100 |
| 0100 | 100 | 17.40 | 100 |
| 0120 | 120 | 17.40 | 100 |
| Price per 100 pieces | | (W852) | |

| Order No. | Grit | 8133 | PU |
|---|---|---|---|
| 0150 | 150 | 17.40 | 100 |
| 0180 | 180 | 17.40 | 100 |
| | | (W852) | |

## Velcro-backed hand sanding block

**Design:** Foam rubber, hand-moulded. Underside with tough Velcro surfaces

**Application:** For use with Velcro-backed sandpaper. Ideal for hand-sanding surfaces



| Order No. | Dimension W x L x H mm | 8133 |
|---|---|---|
| 1000 | 68 x 118 x 40 | 4.81 (W852) |

## Sanding block, cork

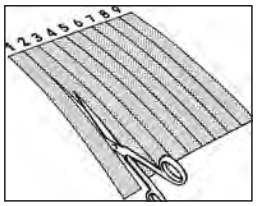
**Design:** Composite cork, rectangular, rounded top edges.

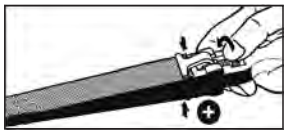
| Order No. | Length mm | 8165 Nölle PROFI BRUSH | Width mm | Height mm |
|---|---|---|---|---|
| 0002 | 120 | 1.73 (W843) | 60 | 35 |

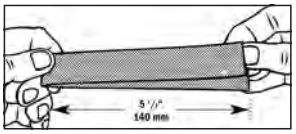
## Emery file

**Design:** Robust plastic. With quick-release device for quick and easy abrasive change.

**Application:** Ideal for sanding in hard to reach places. Suitable for metal and wood working.







| Order No. | Effective working width mm | 8166 | Length mm |
|---|---|---|---|
| 0001 | 25 | 7.10 (W854) | 120 |

## Waterproof paper

**Design:** Silicon carbide grain (SiC) on **waterproof paper,** smooth and dense. **Sheet size 230 x 280 mm.**

**Application:** For dry and wet processing of paints, varnishes and filler.

**Note:** For hand cork sanding blocks see (Order No. 8165), for emery files see (Order No. 8166) 📖 8/21.

**8141** Also suitable for processing steel.

**8142** Also suitable for processing rubber, plastic and mineral materials.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8141 | | ● | | | | | | ● |
| 8142 | | | | | | ● | | ● |

| Order No. | Grit | 8141 format | 8142 AVSM CP918 | PU |
|---|---|---|---|---|
| 0120 | 120 | 38.20 | 56.60 | 50 |
| 0150 | 150 | 38.20 | 53.30 | 50 |
| 0180 | 180 | 38.20 | 50.00 | 50 |
| 0240 | 240 | 38.20 | 49.20 | 50 |
| 0320 | 320 | 38.20 | 49.20 | 50 |
| Price per 100 pieces | | (W842) | (W837) | |

| Order No. | Grit | 8141 format | 8142 AVSM CP918 | PU |
|---|---|---|---|---|
| 0400 | 400 | 38.20 | 49.20 | 50 |
| 0600 | 600 | 38.20 | 49.20 | 50 |
| 0800 | 800 | 38.20 | 49.20 | 50 |
| 1000 | 1000 | 38.20 | 49.20 | 50 |
| | | (W842) | (W837) | |

## Abrasive fabric, blue emery cloth

**Design:** Resin-bonded aluminium oxide grain (A) on very flexible blue fabric, smooth and light, open. Excellent grit friction, long life, minimal pressure and good flexibility. **Sheet size 230 x 280 mm.**

**Application:** Universal product for working with non-alloy steel and non-ferrous metals.

**Note:** For hand cork sanding blocks see (Order No. 8165), for emery files see (Order No. 8166) 📖 8/21.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8144 | | ● | | | ● | | | |

| Order No. | Grit | 8144 AVSM KK24 | PU |
|---|---|---|---|
| 0040 | 40 | 67.60 | 50 |
| 0060 | 60 | 59.80 | 50 |
| 0080 | 80 | 56.30 | 50 |
| 0100 | 100 | 53.60 | 50 |
| 0120 | 120 | 53.60 | 50 |
| Price per 100 pieces | | (W836) | |

| Order No. | Grit | 8144 AVSM KK24 | PU |
|---|---|---|---|
| 0150 | 150 | 53.60 | 50 |
| 0180 | 180 | 53.60 | 50 |
| 0240 | 240 | 53.60 | 50 |
| 0320 | 320 | 53.60 | 50 |
| 0400 | 400 | 53.60 | 50 |
| | | (W836) | |

## Abrasive fabric, brown

**Design:** Resin-bonded aluminium oxide grain (A), scattered evenly and **lightly loose,** on very flexible brown cotton fabric. With excellent grit adhesion, long life, minimal pressure and very good adaptability. **Sheet size 230 x 280 mm.**

**Application:** For high-use needs, anti-rip and non-fraying. Ideal for working with wood, metal and steel, also suitable for stainless steel and synthetics.

**Note:** For hand cork sanding blocks see (Order No. 8165), for emery files see (Order No. 8166) 📖 8/21.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8146/8147 | | ● | | ○ | ○ | ○ | | |

| Order No. | Grit | 8146 format | 8147 AVSM KK114F | PU |
|---|---|---|---|---|
| 0040 | 40 | 61.30 | 94.90 | 50 |
| 0060 | 60 | 61.30 | 86.20 | 50 |
| 0080 | 80 | 61.30 | 84.90 | 50 |
| 0100 | 100 | 61.30 | 83.70 | 50 |
| 0120 | 120 | 61.30 | 83.70 | 50 |
| 0150 | 150 | 61.30 | 83.70 | 50 |
| 0180 | 180 | 61.30 | 83.70 | 50 |
| Price per 100 pieces | | (W842) | (W836) | |

| Order No. | Grit | 8146 format | 8147 AVSM KK114F | PU |
|---|---|---|---|---|
| 0240 | 240 | 61.30 | 83.70 | 50 |
| 0280 | 280 | – | 83.70 | 50 |
| 0320 | 320 | 61.30 | 83.70 | 50 |
| 0360 | 360 | – | 83.70 | 50 |
| 0400 | 400 | 61.30 | 83.70 | 50 |
| 0999 | 999 | – | 83.70 | 50 |
| | | (W842) | (W836) | |

## Abrasive fabric - economy roll

**Design:** Resin-bonded aluminium oxide grain (A) on very flexible fabric (brown), evenly and slightly loose. Excellent grit friction, long life, minimal pressure and good flexibility. **Roll length 50 metres.**

**Application:** For clean hand-sanding even with extremely high loads, anti-rip and non-fraying. **Oil and petrol resistant,** For work with alloyed and non-alloyed steel and non-ferrous metals. Ideal for working with fixtures, containers, cast and forged parts and body parts etc.

format professional quality

VSM WE KNOW ABRASIVES

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8150/8151/8153/8154/8157 | | ● | | ● | ○ | ○ | | |

| Order No. | | 0040 | 0060 | 0080 | 0100 | 0120 | 0150 | 0180 | 0240 | 0320 | 0400 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | 100 | 120 | 150 | 180 | 240 | 320 | 400 |
| 8150 format (W842) | Width 40 mm | 28.90 | 27.40 | 25.70 | 25.80 | 23.80 | 23.80 | 23.80 | 23.80 | 23.80 | 23.80 |
| 8151 VSM (W837) | KK114F Width 40 mm | 39.80 | 38.00 | 36.20 | 35.30 | 35.30 | 35.10 | 35.30 | 35.30 | 35.30 | 35.30 |
| 8153 format (W842) | Width 50 mm | 39.40 | 32.20 | 30.10 | 29.40 | 29.40 | 29.40 | 29.40 | 29.40 | 29.40 | 29.40 |
| 8154 VSM (W837) | KK114F Width 50 mm | 49.50 | 46.80 | 45.10 | 44.20 | 44.20 | 43.90 | 44.20 | 44.20 | 44.20 | 44.20 |
| 8157 VSM (W837) | KK114F Width 115 mm | 99.00 | 91.90 | 87.50 | 85.70 | 85.70 | 85.20 | 85.70 | 85.70 | 85.70 | 85.70 |

## Economy roll-holder

**Design:** Robust metal construction, hammered finish, with tear-off for economy rolls of 25 to 50 mm wide and max. 50 m long. Delivery incl. mounting, without abrasive.

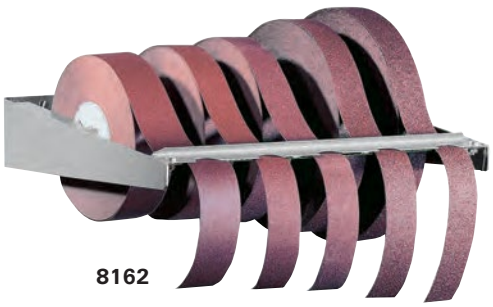
**8159** **For 1 Roll.**

**8162** **For max. 5 rolls.**

| Order No. | 8159 VSM | 8162 VSM |
|---|---|---|
| 0010 | 29.50 | – |
| 0050 | – (W836) | 97.50 (W836) |

VSM WE KNOW ABRASIVES

8159



8162

## Abrasive paper economy roll

NEW

**Design:** Stearate coating on highly flexible polyurethane foam. Paper backing with latex flexibility and invisible punching, does not leave marks when grinding. With very good grain bond, **does not lose grain even when bent. Roll length 25 metres.**

**Application:** For clean hand-sanding even with extremely high loads. High flexibility due to adaptation to all surfaces, perfectly suitable for edges.

format professional quality

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8745 | | ● | | | | ● | | ● |

| Order No. | Grit | 8745 format | Hand pad sizes mm |
|---|---|---|---|
| 0060 | 60 | 43.10 | 115 x 125 |
| 0080 | 80 | 43.10 | 115 x 125 |
| 0120 | 120 | 43.10 | 115 x 125 |
| 0180 | 180 | 43.10 (W842) | 115 x 125 |

| Order No. | Grit | 8745 format | Hand pad sizes mm |
|---|---|---|---|
| 0240 | 240 | 43.10 | 115 x 125 |
| 0320 | 320 | 43.10 | 115 x 125 |
| 0400 | 400 | 43.10 (W842) | 115 x 125 |

## Abrasive fabric band, aluminium oxide, for wood working

**KK711X**
**Design:** Resin-bonded aluminium oxide grain (A) on flexible fabric, evenly and slightly loose. With improved chip removal, excellent grit friction, long life, minimal pressure and good flexibility.

**Application:** Universal product for **work with wood** on belt sanders, also suitable for metal work.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8727/8728/8729/8730/8731/8732/8733 | | ○ | | | | | | |

| Order No. | | 0040 | 0060 | 0080 | 0100 | 0120 | 0150 | 0240 | PU |
|---|---|---|---|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | 100 | 120 | 150 | 240 | |
| 8727 | 9 x 533 mm | 84.30 | 82.10 | 81.00 | – | 80.40 | – | – | 10 |
| 8728 | 75 x 533 mm | 178.50 | 165.00 | 158.50 | 155.00 | 155.00 | 155.00 | 155.00 | 10 |
| 8729 | 100 x 560 mm | 223.50 | 205.50 | 197.50 | 191.50 | 191.50 | 191.50 | 191.50 | 10 |
| 8730 | 100 x 620 mm | 242.00 | 222.00 | 212.00 | 206.00 | 206.00 | 206.00 | 206.00 | 10 |
| 8731 | 100 x 950 mm | 314.00 | 282.50 | 267.00 | – | – | – | – | 10 |
| 8732 | 50 x 1000 mm | 195.50 | 179.00 | 171.50 | 166.50 | 166.50 | 166.50 | 166.50 | 10 |
| 8733 | 100 x 1000 mm | 327.00 | 293.00 | 277.00 | – | 267.00 | – | – | 10 |

**Price per 100 pieces** (W837)

## Abrasive fabric band, aluminium oxide, for metal working

**KK711X**
**Design:** Resin-bonded aluminium oxide grain (A) on flexible fabric, evenly and slightly loose. Excellent grit friction, long life, minimal pressure and good flexibility. **Oil, wax and grease resistant.**

**Application:** Universal product for **work with alloyed and non-alloyed steel and non-ferrous metals** on belt sanders. Ideal for working with fixtures, containers, etc.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8702/8703/8704/8706/8705/8707/8708/8738/8709/8710/8711/8712/8713/8714/8715/8716/8717/8718/8719/8720/8739/8721/8722/8723/8725/8726 | ○ | ● | | ● | ○ | ○ | | |

| Order No. | | 0040 | 0060 | 0080 | 0100 | 0120 | 0150 | 0240 | PU |
|---|---|---|---|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | 100 | 120 | 150 | 240 | |
| 8702 | 6 x 520 mm | 58.90 | 58.90 | 58.90 | – | 58.90 | – | – | 100 |
| 8703 | 6 x 610 mm | 58.90 | 58.90 | 58.90 | – | 58.90 | – | – | 100 |
| 8704 | 8 x 300 mm | 78.30 | 77.00 | 76.30 | – | 75.90 | – | – | 100 |
| 8706 | 10 x 305 mm | 78.30 | 77.00 | 76.30 | – | 75.90 | – | – | 100 |
| 8705 | 10 x 330 mm | 78.30 | 77.00 | 76.30 | – | 75.90 | – | – | 100 |
| 8707 | 12 x 320 mm | 78.30 | 77.00 | 76.30 | – | 75.90 | – | – | 100 |
| 8708 | 12 x 330 mm | 78.30 | 77.00 | 76.30 | – | 75.90 | – | – | 100 |
| 8738 | 12 x 520 mm | 58.90 | 58.90 | 58.90 | – | 58.90 | – | – | 100 |
| 8709 | 13 x 305 mm | 79.20 | 77.70 | 77.00 | – | 76.60 | – | – | 100 |
| 8710 | 13 x 457 mm | 86.10 | 83.40 | 82.20 | – | 81.60 | – | – | 100 |
| 8711 | 13 x 610 mm | 58.90 | 58.90 | 58.90 | – | 58.90 | – | – | 100 |
| 8712 | 15 x 330 mm | 80.80 | 79.10 | 78.30 | – | 77.80 | – | – | 100 |
| 8713 | 16 x 520 mm | 94.50 | 91.10 | 89.50 | – | 88.60 | – | – | 100 |
| 8714 | 20 x 480 mm | 92.80 | 89.50 | 87.80 | – | 87.00 | – | – | 100 |
| 8715 | 20 x 520 mm | 94.50 | 91.10 | 89.50 | – | 88.60 | – | – | 100 |
| 8716 | 25 x 480 mm | 106.00 | 101.50 | 99.60 | – | 98.70 | – | – | 100 |
| 8717 | 25 x 533 mm | 110.50 | 105.00 | 103.00 | – | 101.50 | – | – | 100 |
| 8718 | 28 x 533 mm | 118.00 | 112.00 | 109.50 | – | 108.00 | – | – | 20 |

**Price per 100 pieces** (W837)

Continued overleaf

## Abrasive fabric band, aluminium oxide, for metal working

Continued

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 8719 AVSM | 30 x 533 mm | 117.50 | 111.00 | 108.50 | – | 107.00 | – | – | 20 |
| 8720 AVSM | 35 x 450 mm | 116.00 | 110.50 | 107.50 | – | 106.00 | – | – | 20 |
| 8739 AVSM | 40 x 815 mm | 146.50 | 135.50 | 127.00 | – | 127.00 | 127.00 | – | 10 |
| 8721 AVSM | 50 x 450 mm | 125.50 | 117.00 | 113.50 | – | 111.00 | – | – | 10 |
| 8722 AVSM | 100 x 1000 mm | 332.00 | 298.50 | 282.00 | – | 271.50 | – | – | 10 |
| 8723 AVSM | 50 x 2000 mm | 359.00 | 321.00 | 303.50 | 292.50 | 292.50 | 292.50 | 292.50 | 10 |
| 8725 AVSM | 75 x 2000 mm | 515.50 | 461.00 | 435.50 | 419.50 | 419.50 | 419.50 | 419.50 | 10 |
| 8726 AVSM | 150 x 2000 mm | 939.50 | 832.00 | 780.50 | 748.50 | 748.50 | 748.50 | 748.50 | 10 |

Price per 100 pieces (W837)

## Abrasive fabric band, zirconia alumina

**ZK713X**
**Design:** Full resin bonded zirconia alumina grain (ZA) on robust and flexible fabric, evenly and slightly loose. Excellent grit friction, long life, minimal pressure and good flexibility. **Oil, grease, wax, water and emulsion-resistant.**

**Application:** Special product for working on alloyed and non-alloyed steel as well as non-ferrous metals and stainless steel with on belt sanders. Ideal for working with containers, cast and forged parts, piping, metal ware etc.

AVSM WE KNOW ABRASIVES

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8734/8735/8736/8737 | | ● | | ● | ○ | | | |

| Order No. | | 0036 | 0040 | 0060 | 0080 | 0100 | 0120 | PU |
|---|---|---|---|---|---|---|---|---|
| Grit | | 36 | 40 | 60 | 80 | 100 | 120 | |
| 8734 AVSM | 30 x 533 mm | – | 114.50 | 103.50 | 100.00 | – | 100.00 | 10 |
| 8735 AVSM | 50 x 1000 mm | 218.50 | 208.50 | 190.00 | 181.50 | 176.00 | 176.00 | 10 |
| 8736 AVSM | 75 x 2000 mm | 572.50 | 541.00 | 483.50 | 456.00 | 439.00 | – | 10 |
| 8737 AVSM | 150 x 2000 mm | 1056.00 | 994.50 | 878.00 | 823.50 | 789.00 | – | 10 |

Price per 100 pieces (W836)

## Abrasive fabric band, ceramic grain

**XK870F**
**Design:** Full resin-bonded, self-sharpening ceramic grit (CER) **on robust and very flexible fabric, scattered evenly and slightly loose.** With cooling properties due to grinding-activated additive coating, evenly scattered and slightly loose. With excellent grit friction, **extra-long life,** low to medium pressure and very good flexibility. **Oil, grease, wax, water and emulsion-resistant.**

**Application: For tough and cooled grinding** of high-alloy steel, titanium and nickel-based alloys. Thanks to its extreme hardness it is best suited for working with very hard surfaces. **Grinding-activated additives make cool sanding possible, thereby significantly increasing performance. This also ensures extended service life and reduces discolouration of surfaces.** Suitable for both dry working and working with cooling agents.

AVSM WE KNOW ABRASIVES

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8645/8646/8647/8648 | | ● | ● | ● | ● | | | |

| Order No. | | 0080 | 0120 | PU |
|---|---|---|---|---|
| Grit | | 80 | 120 | |
| 8645 AVSM | 50 x 2000 mm | 451.00 | 432.00 | 10 |
| 8646 AVSM | 50 x 3500 mm | 767.00 | 734.00 | 10 |
| 8647 AVSM | 75 x 2000 mm | 667.50 | 639.00 | 10 |
| 8648 AVSM | 150 x 2000 mm | 1249.00 | 1193.00 | 10 |

Price per 100 pieces (W846)

## Abrasive fabric band, ceramic grain

**XK870**

**Design:** Full resin-bonded, self-sharpening ceramic grit (CER) **on robust fabric.** With cooling properties due to grinding-activated additive coating, evenly scattered and slightly loose. With excellent grit friction, **extra-long life,** low to medium pressure and very good flexibility. **Oil, grease, wax, water and emulsion-resistant.**

**Application: For tough and cooled grinding** of high-alloy steel, titanium and nickel-based alloys. Thanks to its extreme hardness it is best suited for working with very hard surfaces. **Grinding-activated additives make cool sanding possible, thereby significantly increasing performance. This also ensures extended service life and reduces discolouration of surfaces.** Suitable for both dry working and working with cooling agents.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8620/8621/8622/8623/8624/8625/8626/8627/8628/8629/8630/8631/8632/8633/8634/8635/8636/8637/8638/8639/8640/8641/8642/8643/8644/8200/8189/8201 | | ● | ● | ● | ● | | | |

| Order No. | | 0036 | 0040 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|---|---|
| Grit | | 36 | 40 | 60 | 80 | 120 | |
| 8620 | 6 x 520 mm | – | 108.00 | 97.80 | 94.20 | 93.40 | 10 |
| 8621 | 6 x 610 mm | – | 114.50 | 102.00 | 98.60 | 96.90 | 10 |
| 8622 | 8 x 300 mm | – | 94.40 | 87.70 | 85.40 | 84.70 | 10 |
| 8623 | 10 x 330 mm | – | 94.40 | 87.70 | 85.40 | 84.70 | 10 |
| 8624 | 12 x 305 mm | – | 94.40 | 87.70 | 85.40 | 84.70 | 10 |
| 8625 | 12 x 320 mm | – | 95.10 | 88.30 | 85.40 | 84.70 | 10 |
| 8626 | 12 x 330 mm | – | 94.40 | 88.30 | 85.40 | 84.70 | 10 |
| 8627 | 13 x 305 mm | – | 97.00 | 89.20 | 89.20 | 88.30 | 10 |
| 8628 | 13 x 457 mm | – | 112.50 | 100.50 | 97.00 | 95.20 | 10 |
| 8629 | 13 x 610 mm | – | 125.50 | 110.00 | 105.50 | 104.00 | 10 |
| 8630 | 15 x 330 mm | – | 100.50 | 92.60 | 89.20 | 88.30 | 10 |
| 8631 | 16 x 520 mm | – | 133.50 | 116.00 | 110.00 | 108.00 | 10 |
| 8632 | 20 x 480 mm | – | 128.00 | 112.50 | 106.50 | 105.00 | 10 |
| 8633 | 20 x 520 mm | – | 133.50 | 116.00 | 110.00 | 108.00 | 10 |
| 8634 | 25 x 480 mm | – | – | 123.00 | 116.00 | 113.50 | 10 |
| 8635 | 25 x 533 mm | – | – | 129.00 | 121.00 | 118.50 | 10 |
| 8636 | 25 x 760 mm | – | – | 152.50 | 142.00 | 138.50 | 10 |
| 8637 | 28 x 533 mm | – | – | 140.00 | 131.50 | 128.00 | 10 |
| 8638 | 30 x 533 mm | – | – | 140.00 | 131.50 | 128.00 | 10 |
| 8639 | 35 x 450 mm | – | – | 138.50 | 130.00 | 127.50 | 10 |
| 8640 | 50 x 450 mm | – | – | 168.00 | 155.00 | 150.50 | 10 |
| 8641 | 50 x 1000 mm | – | – | 285.50 | 258.00 | 248.50 | 10 |
| 8642 | 75 x 533 mm | – | – | 251.00 | 228.50 | 221.00 | 10 |
| 8643 | 100 x 1000 mm | – | – | 514.50 | 458.00 | 440.00 | 10 |
| 8644 | 50 x 2000 mm | 750.00 | 675.50 | 506.50 | 451.00 | – | 10 |
| 8200 | 50 x 3500 mm | 1290.00 | 1159.00 | 639.00 | 766.50 | – | 10 |
| 8189 | 75 x 2000 mm | 1116.00 | 1003.00 | 751.00 | 667.50 | – | 10 |
| 8201 | 150 x 2000 mm | 2145.00 | 1921.00 | 1417.00 | 1249.00 | – | 10 |

Price per 100 pieces

(W846)

## Applications of grit types

Among the main requirements of an abrasive grit are ultra-hardness, ultra-durability, heat resistance and thermal conductivity Applications differ according to the characteristics of individual properties. These can be influenced by the type of bond, the abrasive backing and additives. Different types of grit can be for general use, however, the following options hold true:

**Aluminium oxide:** Suitable for roughing, cutting, freehand grinding, belt grinding, cleaning and deburring of unalloyed and low-alloy steel, cast iron and non-ferrous metal.

**Zirconia alumina:** Suitable for roughing, cutting, freehand grinding, high-performance belt grinding, cleaning and deburring of steel and cast iron.

**Silicon carbide, black:** Suitable for roughing, cutting, freehand grinding and belt grinding grey iron, aluminium, wood and paint.

**Silicon carbide, green:** Suitable for all grinding on grey cast iron, hard metal, stone, titanium alloys, synthetics and ceramics.

## Fleece abrasive band

**KV707X**
**Design:** Resin-bonded fleece with aluminium oxide grain (A), on flexible fabric. Excellent grit friction, long life, minimal pressure and good flexibility. **Water and emulsion-resistant.**

**Application:** For work with alloyed and non-alloyed steel and non-ferrous metals on belt sanders. Ideal for removing rust and old paint as well as for finishing surfaces.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8750/8751/8752/8753/8754/8755/8756/8757 | | ● | | ● | ● | ○ | | ● |

| Order No. | | 0100 | 0180 | 0240 | PU |
|---|---|---|---|---|---|
| Grit | | 100 | 180 | 240 | |
| 8750 | 6 x 520 mm | 202.00 | 190.50 | 198.50 | 10 |
| 8751 | 6 x 610 mm | 235.50 | 222.00 | 234.50 | 10 |
| 8752 | 12 x 520 mm | 278.00 | 263.00 | 266.50 | 10 |
| 8753 | 13 x 610 mm | 240.00 | 226.50 | 228.00 | 10 |
| 8754 | 20 x 815 mm | 468.00 | 436.50 | 436.50 | 10 |
| 8755 | 28 x 533 mm | 428.00 | 399.00 | 425.50 | 10 |
| 8756 | 30 x 533 mm | 463.50 | 432.00 | 432.00 | 10 |
| 8757 | 40 x 618 mm | 666.00 | 617.00 | 617.00 | 10 |

Price per 100 pieces (W836)

## Fibre grinding wheel, aluminium oxide

**KF787**
**Design:** Resin-bonded aluminium oxide grain (A) on tear-proof, thick, vulcanised fibre backing material uniform and light, open. Excellent grit friction, long life, minimal pressure and good flexibility. With centre hole (standard bore 22.23 mm) and cross slots.

**Application:** Universal product for work with non-alloyed steel and non-ferrous metals on angle and disc grinders and abrasive heads on flexible shafts. For all angle grinders with backing pads of max. 80 m/s peripheral speed. Ideal for working with containers, cast parts, body parts etc.

**Note:** For rubber backing discs see 📖 8/30.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8760/8761/8762 | | ● | | | ○ | | | ● |

| Order No. | | 0016 | 0024 | 0036 | 0040 | 0050 | 0060 | 0080 | 0100 | 0120 | PU |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grit | | 16 | 24 | 36 | 40 | 50 | 60 | 80 | 100 | 120 | |
| 8760 | ⌀ 115 mm | 58.80 | 43.00 | 35.90 | 33.20 | 32.30 | 31.40 | 30.20 | 30.20 | 30.20 | 25 |
| 8761 | ⌀ 125 mm | 59.50 | 51.50 | 46.50 | 42.70 | 42.10 | 39.30 | 37.00 | 37.00 | 37.00 | 25 |
| 8762 | ⌀ 180 mm | 125.00 | 94.00 | 84.70 | 81.80 | 78.90 | 68.90 | 68.10 | 68.10 | 68.10 | 25 |

Price per 100 pieces (W836)

## Fibre grinding wheel, aluminium oxide, for stainless steel and aluminium work

**KF808**

**Design:** Resin-bonded aluminium oxide grain (A) on tear-proof, thick, vulcanised fibre backing material uniform and slightly loose. Excellent grit friction, long life, minimal pressure and good flexibility. **An active additive in the coating slows disc-clogging during use on soft metals (aluminium, stainless steel, etc.). In addition, the coating acts as a coolant during grinding.** With centre hole (standard bore 22.23 mm) and cross slots.

**Application:** Special product for hard machining, steel alloys and non-ferrous metals with angle and disc grinders as well as abrasive heads on flexible shafts. For all angle grinders with backing pads of max. 80 m/s peripheral speed. Ideal for working with containers, cast parts, body parts etc.

**Note:** For rubber backing discs see 📖 8/30.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8763/8764 | ● | ○ | | ● | ○ | | | |

| Order No. | | 0036 | 0050 | 0060 | 0080 | 0100 | 0120 | PU |
|---|---|---|---|---|---|---|---|---|
| Grit | | 36 | 50 | 60 | 80 | 100 | 120 | |
| 8763 | Ø 115 mm | 45.20 | 37.40 | 36.50 | 34.90 | 34.90 | 34.90 | 25 |
| 8764 | Ø 125 mm | 58.00 | 52.60 | 49.90 | 47.00 | 47.00 | 47.00 | 25 |

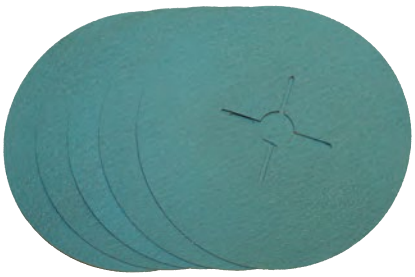
Price per 100 pieces (W836)

## Fibre grinding wheel, aluminium oxide

**ZF714**

**Design:** Resin-bonded zirconia alumina grain (ZA) on tear-proof, thick, vulcanised fibre backing material, evenly and slightly loose. Excellent grit friction, long life, minimal pressure and good flexibility. **Self-sharpening and cooled grinding, thus optimum machining performance.** With centre hole (standard bore 22.23 mm) and cross slots.

**Application:** Special product for working with steel alloys and non-ferrous metals with angle and disc grinders as well as abrasive heads on flexible shafts. For all angle grinders with backing pads of max. 80 m/s peripheral speed. Ideal for working with containers, cast parts, body parts etc.



**Note:** For rubber backing discs see 📖 8/30.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8765/8766 | ○ | ● | | ● | ○ | | | |

| Order No. | | 0024 | 0036 | 0050 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|---|---|---|
| Grit | | 24 | 36 | 50 | 60 | 80 | 120 | |
| 8765 | Ø 115 mm | 73.40 | 65.40 | 51.60 | 43.70 | 39.80 | 39.80 | 25 |
| 8766 | Ø 125 mm | 81.50 | 72.70 | 57.30 | 48.50 | 44.10 | 44.10 | 25 |

Price per 100 pieces (W836)

## Fibre grinding wheel, ceramic grit with zirconia alumina admixture

**XF850**

**Design:** Full resin-bonded, **self-sharpening ceramic grit (CER) with zirconia alumina (ZA) admixture, with cooling properties due to grinding-activated additive coating,** on robust and very flexible fabric, scattered evenly and slightly loose. With excellent grit friction, **extra-long life,** low to medium pressure and very good flexibility. **Oil, grease, wax, water and emulsion-resistant.** With centre hole (standard bore 22.23 mm) and cross slots.

**Application: For tough and cooled grinding** of high-alloy steel, titanium and nickel-based alloys. Thanks to its extreme hardness it is best suited for working with very hard surfaces. **Grinding-activated additives make cool sanding possible, thereby significantly increasing performance. This also ensures extended service life and reduces discolouration of surfaces.** Suitable for both dry working and working with cooling agents.

**Note:** For rubber backing discs see 📖 8/30.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8651 | | ● | ● | ● | ● | | | |

| Order No. | | 0036 | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|---|
| Grit | | 36 | 40 | 60 | 80 | |
| 8651 | Ø 125 mm | 128.00 | 108.50 | 85.20 | 77.40 | 50 |

Price per 100 pieces (W846)

## Fibre grinding wheel, ceramic grain

**XF870**

**Design:** Full resin-bonded, **self-sharpening ceramic grit (CER) with cooling properties thanks to its grinding-activated additive coating,** on robust and very flexible fabric, scattered evenly and slightly loose. With excellent grit friction, **extra-long life,** low to medium pressure and very good flexibility. **Oil, grease, wax, water and emulsion-resistant.** With centre hole (standard bore 22.23 mm) and cross slots.

**Application: For tough and cooled grinding** of high-alloy steel, titanium and nickel-based alloys. Thanks to its extreme hardness it is best suited for working with very hard surfaces. **Grinding-activated additives make cool sanding possible, thereby significantly increasing performance. This also ensures extended service life and reduces discolouration of surfaces.** Suitable for both dry working and working with cooling agents.

**Note:** For rubber backing discs see 📖 8/30.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8203/8204/8206 | | ● | ● | ● | ● | | | |

| Order No. | | 0024 | 0036 | 0040 | 0060 | 0080 | 0100 | 0120 | PU |
|---|---|---|---|---|---|---|---|---|---|
| Grit | | 24 | 36 | 40 | 60 | 80 | 100 | 120 | |
| 8203 AVSM | ⌀ 115 mm | 138.00 | 129.50 | 110.00 | 86.20 | 78.40 | 78.40 | 78.40 | 50 |
| 8204 AVSM | ⌀ 125 mm | 153.50 | 144.00 | 122.50 | 95.80 | 87.10 | 87.10 | 87.10 | 50 |
| 8206 AVSM | ⌀ 180 mm | 323.00 | 288.00 | 244.50 | 192.50 | 166.00 | 166.50 | 166.50 | 50 |

Price per 100 pieces (W846)

## Fibre grinding wheel, ceramic grain Plus

NEW

**XF885**

**Design:** Full resin-bonded, **improved self-sharpening ceramic grit (CER Plus) with cooling properties thanks to its grinding-activated additive coating,** on robust and very flexible fabric, scattered evenly and slightly loose. With excellent grit friction, **extra-long life,** low to medium pressure and very good flexibility. **Oil, grease, wax, water and emulsion-resistant.** With centre hole (standard bore 22.23 mm) and cross slots.

**Application: For tough and cooled grinding** of high-alloy steel, titanium and nickel-based alloys. Thanks to its extreme hardness it is best suited for working with very hard surfaces. **Grinding-activated additives make cool sanding possible, thereby significantly increasing performance. This also ensures extended service life and reduces discolouration of surfaces.** Suitable for both dry working and working with cooling agents.

**Note:** For rubber backing discs see 📖 8/30.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8207/8183 | | ● | ● | ● | ● | | | |

| Order No. | | 0020 | 0024 | 0036 | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|---|---|---|
| Grit | | 20 | 24 | 36 | 40 | 60 | 80 | |
| 8207 AVSM | ⌀ 115 mm | 141.00 | 137.50 | 123.00 | 104.00 | 81.70 | 74.70 | 25 |
| 8183 AVSM | ⌀ 125 mm | 156.50 | 153.00 | 136.00 | 116.00 | 90.80 | 82.40 | 25 |

Price per 100 pieces (W846)

## Rubber backing pad

**Design:** Made of flexible rubber, complete with M14-thread.

**Application:** For all fibre grinding discs with standard bore 22.23 mm for angle grinders with max. 80 m/s peripheral speed.

| Order No. | Ø mm | 8250 format |
|---|---|---|
| 0115 | 115 | 4.28 |
| 0125 | 125 | 5.50 |
| 0180 | 180 | 9.25 |
| | | (W842) |

## Backing pad

**Design:** Completely made of rubber, with cooling ribs.

**Application:** For use on medium to high speed angle grinders for high operational stress. Fan-shaped ribs stiffen the backing pad and supply air circulation together with additional holes, which reduces the amount of heat during the grinding process. Due to cooler grinding, longer service life of fibre discs is achieved.

| Order No. | Ø mm | 8653 VSM |
|---|---|---|
| 0115 | 115 | 6.30 |
| 0125 | 125 | 7.35 |
| 0180 | 180 | 12.55 |
| | | (W836) |

## Holder for fibre grinding wheels

**Design:** Made of impact resistant plastic with quick-adjusting mechanism and fixing holes at the bottom. For safe and snug-fit storage of fibre discs up to Ø 230 mm. The holder can be placed horizontally as well as screwed on walls by means of holes located on the bottom.

| Order No. | Ø x height mm | 8251 |
|---|---|---|
| 0010 | 180 x 300 | 21.70 |
| | | (W836) |

9/130

9/135

9/132

## Work protection

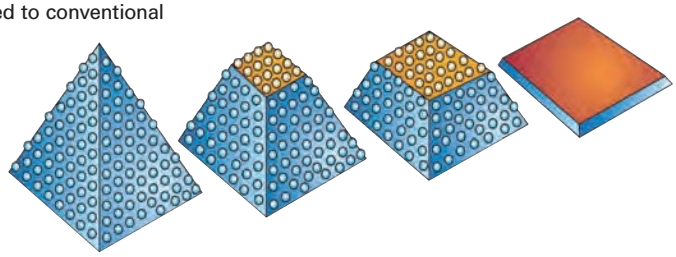
Work protection products can be found from 9/127.

## Trizact™

The abrasive grain consists of a precisely arranged, three-dimensional structure of tiny mineral particles. New abrasive particle layers are exposed continuously. Once the tape is half used, about 85% of the abrasive particles are still available.

This produces a smooth, reproducible surface.
Trizact™ abrasives are therefore perfectly suited to finishing and, compared to conventional abrasives, have a much longer life and are more economical.

**Products with Trizact™ abrasive grain**:
Abrasive sleeves for burnishing machines 📖 8/65

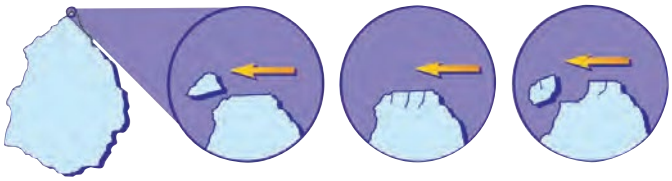


## Cubitron™

During the grinding process, small corners of the ceramic sintered grain break off. The resulting micro-breaks in the grain produce sharp edges. This process repeats itself during the entire grinding process.

This self-sharpening effect increases its life span considerably. Even with high temperatures and strain generated during the grinding process, the Cubitron™ microstructure retains its hardness and cutting action. It is therefore ideal for grinding stainless steel, titanium and heat-sensitive nickel alloys.

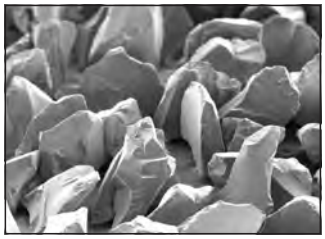
**Products with Cubitron™-abrasive grain:**
Hookit™ Velcro-grinding disks 📖 8/36
ROLOC™ grinding disks from 📖 8/41
Bristle discs page 📖 8/43 and 📖 8/54
Abrasive sleeves for burnishing machines 📖 8/65



## Cubitron™ II

The individual grains of ceramic Cubitron ™ II abrasives are precisely shaped, uniform in size and arranged at right angles in the form of small triangles. Naturally Cubitron™ II has the self-sharpening effect of Cubitron™.

**Conventional ceramic grain**



Different in size and shape as well as unevenly distributed. The result is the abrasive's shorter life span as well as stress fractures and discolouration of the material:

**Cubitron™ II-abrasive grain**

Precisely shaped, uniform grinding grains, evenly distributed and symmetrically aligned. The result is maximum removal rate, a perfect surface finish, a quicker, cooler grind as well as less material distortion:

The higher deburring of Cubitron™ II-abrasives benefit all metal-working operations such as steel construction, container construction, welding companies, foundries and forges using angle grinders and belt sanders for more removal.

**Typical applications are:**
- Weld preparation/deburring, cast machining
  Quicker deburring and a finish, which often needs no further machining and shortens processing time.
- Chamfering before welding
  Quicker grinding processes compared to conventional grinding products and a longer life span.
- General removal work
  Universal on steel, tool steel and non-ferrous metals:
  All removal work is faster, easier and provides a smoother finish.

**Your advantages:**
- Greater, smoother removal
- Up to 40% time saving potential
- 2 to 7 times longer life (depending on the application process)
- Shorter tooling time due to savings on disk changes
- Less pressure means greater comfort for the user
- Less dust and heat development

**Products with Cubitron™-abrasive grain:**
Fibre grinding disks for steel and stainless steel 📖 8/32
ROLOC™ grinding disks 📖 8/42
Abrasive flap wheels 📖 8/51
Abrasive sleeves for machine burnishing machines 📖 8/65

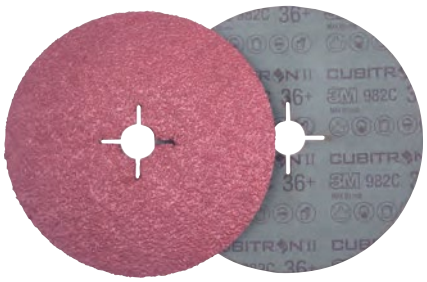
## Fibre grinding wheel for steel working, Cubitron™ II

**982C**

**Design:** Fully resin-bonded precision grit (Cubitron™ II) on vulcanised fibre backing material, scattered evenly and semi-loose. The individual grains of the ceramic Cubitron™ II abrasives are small, precisely-shaped triangles, perpendicular in arrangement, and uniform in size. They are uniformly distributed but randomly spread, so that each triangle grain can form two chips. Tough, cool grinding with high removal rate, **lasts up to 3 times longer** and over **30% faster removal.**

**Application:** In all metal-working industries, where high removal rates combined with very good surface finishes need to be achieved. Ideal for surface grinding, cast iron work, flame-torch work on engineering steel and non-ferrous metals.

**Note:** For backing discs with grain sizes 36+ and 60+ see (Order No. 8239), for grain size 80+ see (Order No. 8240). Detailed information about Cubitron™ II is found on 8/31.



| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8218/8219/8221 | ● | ● | | | ○ | | | |

| Order No. | | 0036 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 36+ | 60+ | 80+ | |
| 8218 3M | 13200 min⁻¹ Ø 115 mm | 2.33 | 2.01 | 1.92 | 25 |
| 8219 3M | 12000 min⁻¹ Ø 125 mm | 2.44 | 2.15 | 2.05 | 25 |
| 8221 3M | 8500 min⁻¹ Ø 180 mm | 4.50 | 4.05 | 3.94 | 25 |

(W812)

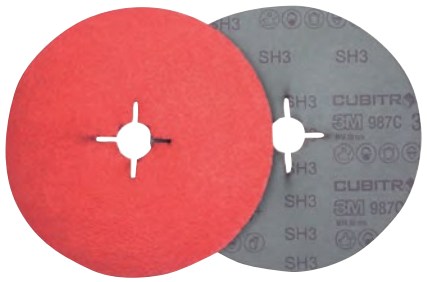
## Fibre grinding grinding wheel for stainless steel work, Cubitron™ II

**987C**

**Design:** Fully resin-bonded precision grit (Cubitron™ II) on vulcanised fibre backing material, scattered evenly and semi-loose. The individual grains of the ceramic Cubitron™ II abrasives are small, precisely-shaped triangles, perpendicular in arrangement, and uniform in size. They are uniformly distributed but randomly spread, so that each triangle grain can form two chips. Tough grinding with highest removal rate, **lasts up to 3 times longer** and **40% faster removal.** Grinding-activated coating prevents clogging and makes for cooler grinding.

**Application:** In all metal-processing industries, where high removal rates combined with very good surface finishes need to be achieved. For use with backing bad on all angle grinders. Ideal for surface grinding, pre- and post-welding work on stainless steel, aluminium, titanium and nickel alloys.

**Note:** For backing discs with grain sizes 36+ see (Order No. 8239), for grain size 60+ and 80+ see (Order No. 8240). Detailed information about Cubitron™ II is found on 8/31.



| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8224/8225/8231 | ● | ○ | | ● | ○ | | | |

| Order No. | | 0036 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 36+ | 60+ | 80+ | |
| 8224 3M | 13200 min⁻¹ Ø 115 mm | 2.56 | 2.20 | 2.11 | 25 |
| 8225 3M | 12000 min⁻¹ Ø 125 mm | 2.69 | 2.36 | 2.24 | 25 |
| 8231 3M | 8500 min⁻¹ Ø 180 mm | 4.97 | 4.35 | 4.22 | 25 |

(W812)

## Backing pad for fibre grinding wheel, Cubitron™ II

**Design:** With M14 thread. Removal performance of the Cubitron™ fibre grinding wheel can be doubled by the specially designed backing pad construction, depending on the application process.

**8240** **Flat, soft.**

**8239** **Ribbed, very hard.**

| Order No. | Ø mm | 8240 3M | 8239 3M |
|---|---|---|---|
| 0115 | 115 | 13.60 | 17.05 |
| 0125 | 125 | 13.95 (W812) | 17.65 (W812) |

| Order No. | Ø mm | 8240 3M | 8239 3M |
|---|---|---|---|
| 0178 | 180 | 23.50 | – |
| 0178 | 180 | – (W812) | 26.30 (W812) |

## COMBICLICK® fibre grinding wheel, ceramic grain

**CC-FS**
**Design:** Abrasive ceramic grain (CO-COOL). High-powered grinding with highest removal performance. Grinding-activated additives in the surface give a clear, visible improvement in removal, prevents clogging and makes for cooler grinding.

**Application:** Suitable for grinding alloyed and non-alloyed steel, cast iron and hard metal laminates.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8251/8284 | ● | ● | | ● | ● | | | |

| Order No. | | 0020 | 0036 | 0050 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|---|---|---|
| Grit | | 24 | 36 | 50 | 60 | 80 | 120 | |
| 8251 PFERD | 13300 min⁻¹ Ø 115 mm | 3.78 | 3.34 | 2.66 | 2.21 | 2.00 | 2.00 | 25 |
| 8284 PFERD | 12200 min⁻¹ Ø 125 mm | 4.08 | 3.58 | 2.84 | 2.42 | 2.20 | 2.20 | 25 |

(W855)

## COMBICLICK® backing pad

**Design:** Flexible design, complete with M14-thread.

**Application:** For mounting COMBICLICK® fibre grinding wheels on all angle grinders with max. 80 m/s peripheral speed.

| Order No. | Ø mm | 8251 PFERD |
|---|---|---|
| 1000 | 115–125 | 27.20 |

(W855)

## Deburring disc, perforated

format professional quality

**Design:** Resin-bonded aluminium oxide grain (A) on paper, smooth and semi-open grained. Excellent grit friction, long life, minimal pressure and good flexibility. With perforations for suction of grinding dust, backed with durable Velcro.

**Application:** Universal product, suitable for **wood, stainless steel, metal and filler working** on angle grinders with backing pads to max. 40 m/s peripheral speed. Ideal for working on wooden parts and car body parts.

**8260** **With 8 extraction holes Ø 10 mm,** hole circle Ø 65 mm. For electric tools made by AEG, Atlas Copco, Black & Decker, Bosch, DeWalt, ELU, Festool, Hitachi, Kress, Makita, Metabo and Skil.

**8263** **With 6 extraction holes Ø 10 mm,** hole circle Ø 80 mm. For electric tools made by Bosch, DeWalt, ELU, Hitachi, and Metabo.

**8237** **With 8 suction perforations, diameter 10 mm and centre hole diameter 17 mm,** hole-diameter 120 mm. For electric tools made by Festool, Holz Her, Mafell and Makita.

8260

8263

8237

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8260/8263/8237 | | ● | | ● | | ● | | ○ |

| Order No. | | 0040 | 0060 | 0080 | 0100 | 0120 | 0180 | 0240 | 0320 | PU |
|---|---|---|---|---|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | 100 | 120 | 180 | 240 | 320 | |
| 8260 format | Ø 125 mm | 47.60 | 39.80 | 35.60 | 32.60 | 32.60 | 32.60 | 32.60 | 32.60 | 50 |
| 8263 format | Ø 150 mm | 62.50 | 50.90 | 44.90 | 41.30 | 41.30 | 41.30 | 41.30 | 41.30 | 50 |
| 8237 format | Ø 150 mm | 62.50 | 50.90 | 45.40 | 41.30 | 41.30 | 41.30 | 41.30 | 41.30 | 50 |

Price per 100 pieces

(W842)

## Velcro grinding wheel, aluminium oxide

**KP508K**
**Design:** Resin-bonded aluminium oxide grain (A) on heavy-duty paper, scattered evenly and slightly loose. Excellent grit friction, long life, minimal pressure and good flexibility. Backed with durable Velcro

**Application:** Universal product, suitable for working with wood, also for metal and filler work with angle grinders with backing pads to max. 40 m/s peripheral speed. Ideal for working on wooden parts and car body parts.

**Note:** Velcro backing discs see (Order No. 8259).

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8767/8768 | | ● | | ○ | ○ | ● | | ○ |

| Order No. | | 0040 | 0060 | 0080 | 0100 | 0120 | PU |
|---|---|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | 100 | 120 | |
| 8767 | Ø 115 mm | 34.90 | 31.20 | 29.40 | 28.30 | 28.30 | 50 |
| 8768 | Ø 125 mm | 40.20 | 35.80 | 33.70 | 32.40 | 32.40 | 50 |

Price per 100 pieces (W836)

## Velcro grinding wheel, zirconia alumina

**ZK713K**
**Design:** Resin-bonded zirconia alumina grain (ZA) on fabric, electrostatically closed. Excellent grit friction, long life, minimal pressure and good flexibility. **Thanks to the active substance in the surface-binding it causes hardly any discolouration and gives optimum cutting performance.** Backed with durable Velcro

**Application:** Special product for treating tough machinable and alloyed steel, non-ferrous metals and titanium, for all angle grinders with backing pads and max. 40 m/s peripheral speed. Ideal for working with containers, cast parts, body parts etc.

**Note:** Velcro backing discs see (Order No. 8259).

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8769 | | ● | ● | ● | ○ | | | |

| Order No. | | 0036 | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|---|
| Grit | | 36 | 40 | 60 | 80 | |
| 8769 | Ø 125 mm | 76.80 | 68.30 | 58.10 | 54.70 | 50 |

Price per 100 pieces (W837)

## Velcro-fleece grinding wheel, aluminium oxide

**KV701K**
**Design:** Resin-bonded fleece with aluminium oxide grain (A), on flexible fabric. Excellent grit friction, long life, minimal pressure and good flexibility. Backed with durable Velcro

**Application:** For processing alloyed and non-alloyed steel as well as non-ferrous metals and wood, for all angle grinders with backing pads and max. 40 m/s peripheral speed. Ideal for removing rust and old paint, for finishing surfaces as well as working with wood.

**Note:** Velcro backing discs see (Order No. 8259).

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8770/8771/8772 | ● | ● | | ● | ○ | ● | | ○ |

| Order No. | | 0100 | 0180 | 0280 | PU |
|---|---|---|---|---|---|
| Grit | | 100 | 180 | 280 | |
| 8770 | Ø 115 mm | 325.00 | 302.00 | 289.00 | 25 |
| 8771 | Ø 125 mm | 476.50 | 404.00 | 351.00 | 25 |
| 8772 | Ø 150 mm | 507.50 | 429.50 | 429.50 | 25 |

Price per 100 pieces (W836)

## Velcro backing pad

**Design:** Made of flexible rubber, complete with M14-thread.

**Application:** For mounting all Velcro grinding wheels on all standard angle grinders at max. 40 m/s peripheral speed.

| Order No. | | 1115 | 1125 | 1150 |
|---|---|---|---|---|
| Ø | mm | 115 | 125 | 150 |
| 8259 VSM | | 7.05 | 8.30 | 9.75 |

(W836)

## Velcro-fleece discs with centring

**Scotch-Brite™ SL-DH**
**Design:** Resin-bonded fleece-fibre with aluminium oxide grain (A) on fabric back. The open weave prevents clogging With centring for an even better friction grip and exact positioning with the Velcro disc on the backing pad. Thus achieving approx. 50% reduction in vibration. The disc is much harder and tougher.

**Application:** For cleaning large surface areas and removing thin and spot welds, for use on angle grinders with adhesive backing pads (Order No. 8275).

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8272/8273 | ● | ● | ○ | ● | ○ | | | |

| Order No. | | 0050 | PU |
|---|---|---|---|
| Fineness grade | | Extra coarse | |
| 8272 3M | Ø 115 x 22 mm | 3.28 | 20 |
| 8273 3M | Ø 125 x 22 mm | 3.84 | 20 |
| Grit | | 50 | |
| Colour | | Black | |

(W812)

## Standard Velcro-fleece discs with centring

**Scotch-Brite™ SC-DH**
**Design:** Resin-bonded fleece-fibre with aluminium oxide grain (A) on tear-proof fabric. The open weave prevents clogging With centring for an even better friction grip and exact positioning with the Velcro disc on the backing pad. Thus achieving approx. 50% reduction in vibration.

**Application:** For cleaning and finishing work, for use on angle grinders with adhesive backing pads (Order-No. 8275).

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8269/8270 | ● | ● | ○ | ● | ● | ○ | | ● |

| Order No. | | 0005 | 0015 | 0010 | PU |
|---|---|---|---|---|---|
| Fineness grade | | Coarse | Fine | Medium | |
| 8269 3M | Ø 115 x 22 mm | 3.56 | 4.15 | 3.28 | 20 |
| 8270 3M | Ø 125 x 22 mm | 3.44 | 4.48 | 3.44 | 20 |
| Grit | | 100 | 280 | 180 | |
| Colour | | Brown | Blue | Red | |

(W812)

## Adhesive backing pads with centring

**Design:** Adhesive backing pads with centring and M14-mounting.

**Application:** For mounting Velcro-fleece discs (Order Nos. 8269, 8270, 8272, 8273).

| Order No. | | 0115 | 0125 | PU |
|---|---|---|---|---|
| Ø x ID | mm | 115 x 22 | 125 x 22 | |
| 8275 3M | | 15.75 | 20.20 | 5 |

(W812)

## Hookit™-Velcro grinding wheel, perforated

**Design:** Resin-bonded abrasive grain (A) on paper, smooth and open grained. Dust-repellant Fre-Cut™ coating and the hole structure in conjunction with Hookit™-adhesive backing pads prevents premature clogging and clearly increases life span and removal performance.

**Application:** Universal abrasive suitable for any coarse, medium and fine grinding on all hard and soft wood, synthetic and metal surfaces as well as for paint and filler sanding.

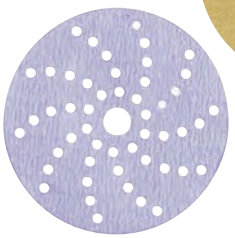
**Note:** Adhesive backing discs see (Order No. 8212).
Detailed information about Cubitron™ is found on 8/31.

**8657** **236U**
Mit **21 suction holes** and **aluminium oxide** -abrasive grain.

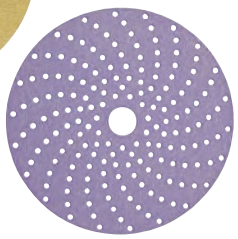
**8658** **734U/334U**
With **multi-perforation** and **Direct Flow™ extraction system.** Up to 180 grain with **Cubitron™** abrasive grain and coarse perforations, from 220 grain with **aluminium oxide** abrasive grain and fine perforations.

Cubitron™ Abrasive Grain 3M

8657



Cubitron™, coarse-holed
8658



Aluminium oxide, fine perforations
8658

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8657/8658 | ● | ● | | ● | | ● | | ● |

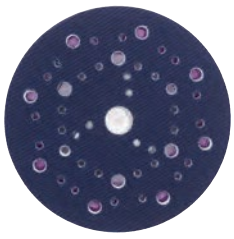
| Order No. | | 0080 | 0120 | 0150 | 0180 | 0220 | 0240 | 0320 | 0400 | 0500 | PU |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grit | | 80 | 120 | 150 | 180 | 220 | 240 | 320 | 400 | 600 | |
| 8657 3M | ∅ 150 mm | 45.10 | 45.10 | 45.10 | 45.10 | 45.10 | – | – | 45.10 | 45.10 | 100 |
| 8658 3M | ∅ 150 mm | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | 80.00 | – | 100 |

Price per 100 pieces (W812)

## Hookit™ adhesive backing pads

**Design:** With Direct Flow™ technology for direct dust removal.

**Application:** For mounting Velcro-fleece discs (Order Nos. 8657 and 8658).



| Order No. | Holding fixture | 8212 3M | Type |
|---|---|---|---|
| 0005 | 5/16" | 75.50 | Standard |
| 0010 | 5/16" | 75.50 | Soft |
| 0015 | M8 | 75.50 | Standard |
| 0020 | M8 | 75.50 | Soft |

(W812)

## Hookit™ interface pad

**Design:** Soft foam interface with multi-perforations.

**Application:** The interface-pad is attached to the adhesive backing pad before the abrasive paper, for working on critical areas to prevent looping. Creates a really fine surface finish.

| Order No. | Thickness mm | 8213 3M | ∅ mm |
|---|---|---|---|
| 0005 | 5 | 13.65 | 150 |
| 0010 | 10 | 13.65 | 150 |

(W812)

## Hookit™ Hand sanding discs

**Application:** For mounting Velcro-fleece discs (Order Nos. 8657 and 8658). Specially for working with profiled surfaces, hand rails for example. The semi-circular form is suitable for working on edges and hard-to-reach surfaces.

| Order No. | Design | 8215 3M |
|---|---|---|
| 0005 | Round | 14.40 |
| 0010 | Half-round | 12.60 |

(W812)

**Design:** Holders and tools with heavy-duty metal screws, which guarantee a quick tool change even with rough use and strong heat development.

**Benefits:** Easy to use, fast tool change, no sticking, no slippage, vibration-free rotation.

**Application area:** Work tools and mould construction, model building, machine construction, car construction, ventilation and design technology, engines and repairs, containers and plant construction.

**Note:** Further COMBIDISC® design features upon request.

## COMBIDISC® holder

**Application:** For mounting COMBIDISC® sanding sheets, COMBIDISC® fleece discs and POLICLEAN® discs. Shaft Ø 6 mm.

PFERD

| Order No. | Design | 8773 PFERD Ø 25 mm | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm |
|---|---|---|---|---|
| 3005 | Soft | – | 21.70 | 25.90 |
| 3010 | Medium-hard | 15.00 NEW | 19.00 | 22.10 |
| 3015 | Hard | – | 24.30 | 28.10 |
| | | (W849) | (W849) | (W849) |

Soft design

Medium-hard design

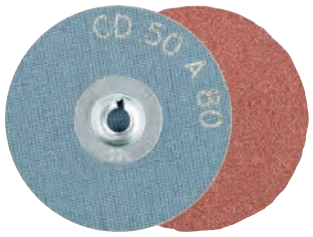
Hard design

## COMBIDISC® sanding sheet, aluminium oxide A

**CD**
**Design:** Resin-bonded aluminium oxide grain (A) on tear-resistant, thick, fabric backing, evenly and slightly loose. With very good grit friction and long life.

**Application:** Suitable for universal sanding work on metals and other materials.

PFERD




| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8773/8258/8255 | ○ | ● | ○ | ○ | ○ | ○ | | |

| Order No. | Grit | 8773 PFERD Ø 25 mm | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU 8773 | PU 8258 | PU 8255 |
|---|---|---|---|---|---|---|---|
| 4060 | 60 | 0.59 NEW | 1.04 | 1.41 | 100 | 100 | 50 |
| 4080 | 80 | 0.59 NEW | 1.04 | 1.41 | 100 | 100 | 50 |
| 4120 | 120 | 0.59 NEW | 1.04 | 1.41 | 100 | 100 | 50 |
| | | (W849) | (W849) | (W849) | | | |

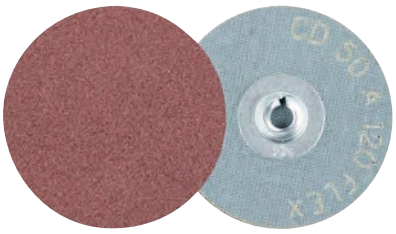
## COMBIDISC® sanding sheet, aluminium oxide A-FLEX

**CD**
**Design:** Resin-bonded aluminium oxide grain (A-FLEX) on tear-resistant, flexible fabric backing, evenly and slightly loose. Excellent grit friction, long life, and very good flexibility.

**Application:** Especially for sanding work with seamless transitions on contours and concave and convex metal surfaces. Ideal for construction and moulding.

**Note:** We recommend a soft sheet holder, so as not to damage the flexibility of the sanding sheets.

PFERD




| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258/8255 | | ● | | ● | ○ | ○ | | |

| Order No. | Grit | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU 8258 | PU 8255 |
|---|---|---|---|---|---|
| 5060 | 60 | 1.04 | 1.41 | 100 | 50 |
| 5080 | 80 | 1.04 | 1.41 | 100 | 50 |
| 5120 | 120 | 1.04 | 1.41 | 100 | 50 |
| | | (W849) | (W849) | | |

## COMBIDISC® sanding sheet, aluminium oxide A-FORTE

**CD**
**Design:** Resin-bonded aluminium oxide grain (A-FORTE) on tear-resistant, thick, fabric backing, evenly and slightly loose. Excellent grit friction, long life, and good flexibility.

**Application:** For universal sanding work on all metals. Aluminium oxide A-Forte guarantees long life and cooler cutting.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258/8255 | ○ | ● | ○ | ○ | ○ | ○ | | |

| Order No. | Grit | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU 8258 | PU 8255 |
|---|---|---|---|---|---|
| 6060 | 60 | 1.07 | 1.49 | 100 | 50 |
| 6080 | 80 | 1.07 | 1.49 | 100 | 50 |
| 6120 | 120 | 1.07 (W849) | 1.49 (W849) | 100 | 50 |

## COMBIDISC® sanding sheets, aluminium oxide A-COOL

**CD**
**Design:** Resin-bonded aluminium oxide grain (A-COOL) on tear-resistant, thick, fabric backing, evenly and slightly loose. With excellent grit friction, long life, and good flexibility. Grinding-activated additives in the surface give a clear, visible improvement in deburring, prevents clogging and make for cooler grinding.

**Application:** For sanding hard-to-machine materials like stainless steel, Hastelloy, Inconel etc.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258/8255 | | ● | | ● | ○ | | | |

| Order No. | Grit | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU 8258 | PU 8255 |
|---|---|---|---|---|---|
| 0060 | 60 | 1.13 | 1.67 | 100 | 50 |
| 0080 | 80 | 1.13 (W849) | 1.67 (W849) | 100 | 50 |

## COMBIDISC® sanding sheet, zirconia alumina Z

**CD**
**Design:** Resin-bonded zirconia alumina grain (Z) on tear-resistant, thick, fabric backing, evenly and slightly loose. Excellent grit friction, long life, and good flexibility.

**Application:** For sanding high-temperature materials like nickel and cobalt alloys as well as stainless steel.

**Note:** Here we recommend the use of hard or medium-hard sheet holders for optimum application.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258/8255 | ○ | ● | ○ | ● | ○ | | | |

| Order No. | Grit | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU 8258 | PU 8255 |
|---|---|---|---|---|---|
| 1060 | 60 | 1.30 | 1.88 | 100 | 50 |
| 1080 | 80 | 1.30 (W849) | 1.88 (W849) | 100 | 50 |

## COMBIDISC® sanding sheet, ceramic grain CO-COOL

**CD**
**Design:** Abrasive ceramic grain (CO-COOL). High-powered grinding with highest removal performance. Grinding-activated additives in the surface give a clear, visible improvement in removal, prevents clogging and makes for cooler grinding.

**Application:** Suitable for grinding alloyed and non-alloyed steel, cast iron and hard metal laminates.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258/8255 | ○ | ● | ○ | ○ | ○ | ○ | | |

| Order No. | Grit | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU 8258 | PU 8255 |
|---|---|---|---|---|---|
| 8024 | 24 | 1.74 | 2.32 | 100 | 50 |
| 8036 | 36 | 1.67 | 2.24 | 100 | 50 |
| 8060 | 60 | 1.45 | 2.05 | 100 | 50 |
| 8080 | 80 | 1.41 | – | 100 | – |
| 8120 | 120 | 1.41 (W849) | – (W849) | 100 | – |

## COMBIDISC® fleece disc, hard design

NEW

**CD**
**Design:** Resin-bonded hard fleece with aluminium oxide grain (A). With excellent grit friction, very open structure, long life, and very good flexibility.

**Application:** For surface treatment of metals. Elimination of pre-grinding marks, removal of oxidation and light deburring work. The addition of oil or water when grinding gives even finer surfaces, cooler grinding and longer life. The disc's flexibility for surface grinding is determined by the holder's degree of hardness.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258 | ○ | ● | ○ | ○ | ○ | ○ | | |

| Order No. | Fineness grade | 8258 PFERD Ø 50 mm | PU | Grit |
|---|---|---|---|---|
| A060 | Coarse | 1.52 | 50 | 100 |
| A080 | Medium | 1.52 | 50 | 180 |
| A180 | Fine | 1.52 (W849) | 50 | 240 |

## COMBIDISC® fleece disc, soft design

**CD**
**Design:** Resin-bonded soft fleece with aluminium oxide grain (A). With excellent grit friction, very open structure, long life, and very good flexibility.

**Application:** For sanding finishes on flat surfaces, contours and for cleaning work on metal and paint. On grinding the addition of oil or water gives even finer surfaces, cooler grinding and longer life. The discs' flexibilty for surface grinding will be determined by the holder's degree of hardness.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258/8255 | ○ | ● | ○ | ○ | ○ | | | ● |

| Order No. | Fineness grade | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU 8258 | PU 8255 | Grit |
|---|---|---|---|---|---|---|
| 2010 | Medium | 1.77 | 2.90 | 50 | 25 | 100 |
| 2005 | Fine | 1.72 (W849) | 2.60 (W849) | 50 | 25 | 180 |

## COMBIDISC®-POLICLEAN® disc

**CD**
**Design:** POLICLEAN® discs are coarse-structured cleaning fleeces, made from a special combination of synthetic fibre and abrasive grain.

**Application:** For coarse cleaning work, for removal of paint, scale, discolouration, rust and glue residue in surface grinding.

**Note:** We recommend hard or medium-hard sanding sheet holders for optimum application.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8258/8255 | ○ | ● | | ● | ○ | ● | | ● |

| Order No. | Fineness grade | 8258 PFERD Ø 50 mm | 8255 PFERD Ø 75 mm | PU | Grit |
|---|---|---|---|---|---|
| 2015 | Coarse | 6.10 (W847) | 8.70 (W847) | 10 | 80–100 |

## Tool holders for COMBIDISC®-Mini-POLIFAN®

**Design:** Tool holders for COMBIDISC®-Mini-POLIFAN®

**Note:** Safe top speed 50 m/s.

PFERD

| Order No. | Shaft Ø x length mm | 8252 PFERD |
|---|---|---|
| 0000 | 6 x 40 | 3.85 (W849) |

## COMBIDISC®-Mini-POLIFAN® aluminium oxide A

**CD PFF**
**Design:** Aluminium oxide layers (A). Multiple usage and better removal compared to sanding sheets. For max. 50 m/s tolerance.

**Application:** COMBIDISC®-Mini-POLIFAN® are suitable for universal, coarse grinding on different materials with good machining performance Ideal for sanding in hard to reach places.

**Note:** Tool holders (Order No. 8252 0000).

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8252 | | ● | | | | | | |

| Order No. | Grit | 8252 PFERD | PU |
|---|---|---|---|
| 1040 | 40 | 4.13 | 10 |
| 1060 | 60 | 4.13 | 10 |
| 1080 | 80 | 4.13 (W849) | 10 |

## COMBIDISC®-Mini-POLIFAN® zirconia alumina Z

**CD PFF**
**Design:** Zirconia alumina layers (Z). Multiple usage and better removal compared to sanding sheets. For max. 50 m/s tolerance.

**Application:** COMBIDISC®-Mini-POLIFAN® is suitable for universal tasks with highest machining performance. Especially good for sanding in hard to reach places.

**Note:** Tool holders (Order No. 8252 0000).

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8252 | | ● | | ● | | | | |

| Order No. | Grit | 8252 PFERD | PU |
|---|---|---|---|
| 2040 | 40 | 4.29 | 10 |
| 2060 | 60 | 4.29 | 10 |
| 2080 | 80 | 4.29 (W849) | 10 |

## ROLOC™-quick release system

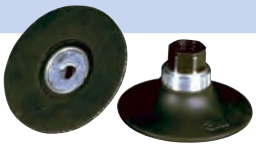
Ideal for frequently changing tasks.
ROLOC™ is a fast repair system for smaller or small-area repairs.

The necessary abrasive can be easily changed by simply rotating. The wide range of abrasives covers almost every application from deburring to grinding to finishing. For quick and safe selection of the right grain all ROLOC™ grinding wheels are colour-coded.

## ROLOC™ backing pad

**Design:** Fits ROLOC™-grinding wheels.

**Note:** Backing pad ∅ 25.4 mm and 38.1 mm only for compact discs (Order Nos. 8242 8005–8010 and 8243 8005–8025), for edging and profiling.



3M

| Order No. | ∅ mm | 8245 3M | PU | Design | Holding fixture |
|---|---|---|---|---|---|
| 0070 | 25.4 | 13.30 | 5 | Medium | 1/4" |
| 0075 | 38.1 | 15.70 | 5 | Medium | 1/4" |
| 0080 | 38.1 | 15.70 | 5 | Hard | 1/4" |
| 0050 | 50.8 | 15.70 | 5 | Soft | 1/4" |
| 0045 | 50.8 | 15.70 | 5 | Medium | 1/4" |
| 0025 | 50.8 | 15.70 | 5 | Hard | 1/4" |

(W812)

| Order No. | ∅ mm | 8245 3M | PU | Design | Holding fixture |
|---|---|---|---|---|---|
| 0030 | 76.2 | 23.60 | 5 | Soft | 1/4" |
| 0020 | 76.2 | 23.60 | 5 | Soft | M14 |
| 0035 | 76.2 | 23.60 | 5 | Medium | 1/4" |
| 0015 | 76.2 | 23.60 | 5 | Medium | M14 |
| 0060 | 76.2 | 23.60 | 5 | Hard | 1/4" |
| 0010 | 76.2 | 23.60 | 5 | Hard | M14 |

(W812)

## ROLOC™ centre pin

**Design:** Fits ROLOC™-grinding wheels with 1/4" mount.

| Order No. | Shaft ∅ mm | 8245 3M |
|---|---|---|
| 0065 | 6 | 1.54 |

(W812)

## ROLOC™ grinding wheel

**3M™ 361F**
**Design:** Resin-bonded aluminium oxide grain on hard Y-polyester fabric, closed scattering, waterproof.

**Application:** Ideal for machining low-alloy, low-carbon steels and other materials. For example for welded seam removal, surface defects improved, edges rounded, etc.

**Note:** ROLOC™ backing pad see (Order No. 8245)

3M

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | | ● | | | | ● | | |

| Order No. | | 0050 | 0060 | 0080 | 0100 | 0120 | PU |
|---|---|---|---|---|---|---|---|
| Grit | | 50 | 60 | 80 | 100 | 120 | |
| 8242 3M | 20000 min⁻¹ ∅ 50.8 mm | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 50 |
| 8243 3M | 20000 min⁻¹ ∅ 76.2 mm | 1.17 | 1.07 | 1.07 | 0.97 | 0.97 | 50 |

(W812)

## ROLOC™ grinding wheel Cubitron™

**777F**
**Design:** Resin-bonded Cubitron™/aluminium oxide grain mix on hard Y-polyester fabric, half-closed scattering, waterproof. With cooling grinding aid for outstanding life and to avoid heat discolouration on the work surface.

**Application:** Best suited for working on stainless steel with medium pressure, as well as high-alloy steel with low thermal conductivity, aluminium and titanium.

**Note:** ROLOC™ backing pad see (Order No. 8245)
Detailed information about Cubitron™ is found on 📖 8/31.

3M

Cubitron™ Abrasive Grain

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | ● | ● | | | | |

| Order No. | | 1050 | 1060 | 1080 | 1120 | PU |
|---|---|---|---|---|---|---|
| Grit | | 50 | 60 | 80 | 120 | |
| 8242 3M | 25000 min⁻¹ ∅ 50.8 mm | 1.42 | 1.42 | 1.42 | 1.42 | 50 |
| 8243 3M | 20000 min⁻¹ ∅ 76.2 mm | 1.25 | 2.50 | 2.33 | 2.24 | 50 |

(W812)

## ROLOC™ grinding wheel Cubitron™/Cubitron™ II

**Design:** Resin-bonded grain on hard Y-polyester fabric, closed scattering, waterproof. With cooling grinding aid for outstanding life and to avoid heat discolouration on the work surface.

**Application:** Best suited for working on high-alloy and high-strength steel with medium and high pressure.

**Note:** ROLOC™ backing pad see (Order No. 8245)
Detailed information about Cubitron™ is found on 8/31.

CUBITRON II

Cubitron™ Abrasive Grain

3M

**8242** **977F**
Cubitron™ Ø 50.8 mm

**8243** **977F**
Cubitron™ Ø 76.2 mm

**8660** **984F**
Cubitron™ Ø 76.2 mm

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | | ● | | ● | ● | | | |
| 8660 | ● | ● | | ● | | ● | | ● |

| Order No. | | 2036 | 2060 | 2080 | 0036 | 0060 | 0080 | PU |
|---|---|---|---|---|---|---|---|---|
| Grit | | 36 | 60 | 80 | 36+ | 60+ | 80+ | |
| 8242 3M | 23000 min⁻¹ Ø 50.8 mm | 1.47 | 1.16 | 1.16 | – | – | – | 50 |
| 8243 3M | 18000 min⁻¹ Ø 76.2 mm | 1.92 | 1.26 | 1.26 | – | – | – | 50 |
| 8660 3M | 20000 min⁻¹ Ø 76.2 mm | – | – | – | 2.07 | 1.92 | 1.85 | 50 |

(W812)

## ROLOC™Fleece discs

**SC-DR**
**Design:** Fibre fleece with resin-bonded abrasive. The open, resistant fleece construction prevents clogging, thereby extending its life.

**Application:** Especially suited to cleaning and finishing, for example, grinding and smoothing weld seams, removing paint and rust, refining milled surfaces and removing coatings e.g. heat discolouration, varnish, paint and sealant residue.

**Note:** ROLOC™ backing pad see (Order No. 8245)

3M

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | | ● | | ● | | ● |

| Order No. | | 4005 | 4010 | 4015 | 4020 | PU |
|---|---|---|---|---|---|---|
| Fineness grade | | Coarse | Medium | Very fine | Super fine | |
| 8242 3M | 23000 min⁻¹ Ø 50.8 mm | 1.38 | 1.33 | 1.33 | 1.33 | 50 |
| 8243 3M | 18000 min⁻¹ Ø 76.2 mm | 2.56 | 2.48 | 2.48 | 2.48 | 25 |
| Grit | | 100 | 180 | 400 | 600 | |

(W812)

## ROLOC™ fleece disc Cubitron™

**Scotch-Brite™ GB-DR**
**Design:** Fibre fleece with resin-bonded Cubitron™. The open, resistant construction of the fleece prevents clogging, thereby extending its life. The associated cooler grind prevents temperature changes to the workpiece.

**Application:** Ideal removal of weld seams and spot welds, for surface cleaning rounding and deburring.

**Note:** ROLOC™ backing pad see (Order No. 8245)
Detailed information about Cubitron™ is found on 8/31.

3M

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | | ● | | ● | | ● |

| Order No. | | 5010 | 5005 | PU |
|---|---|---|---|---|
| Fineness grade | | Extra coarse | Coarse | |
| 8242 3M | 23000 min⁻¹ Ø 50.8 mm | 1.52 | 1.52 | 50 |
| 8243 3M | 18000 min⁻¹ Ø 76.2 mm | 2.82 | 2.82 | 25 |
| Grit | | 50 | 80 | |

(W812)

## ROLOC™ cleaning disc

**Scotch-Brite™ BF-DR**
**Design:** Nylon fibre fleece with resin-bonded silicon carbide. The durable fleece ensures longer life and edge stability and minimises damage to the underside loops. The coarse fleece fibre construction ensures longer life even with coarse-grinding uses.

**Application:** Ideal for deburring corrosion, old coatings, sealant residue, tarnish and colours on sheet metal as well as cleaning metal surfaces and weld seams. Cleaning and deburring with a perfect finish in one operation.

**Note:** ROLOC™ backing pad see (Order No. 8245)

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | | ● | | | | ● |

| Order No. | | 6005 | PU |
|---|---|---|---|
| **Fineness grade** | | **Medium** | |
| 8242 3M | 18000 min⁻¹ Ø 50.8 mm | 1.59 | 50 |
| 8243 3M | 15000 min⁻¹ Ø 76.2 mm | 3.08 | 25 |
| Grit | | 180 | |

(W812)

## ROLOC™ high-performance cleaning abrasive bristle disc

**Scotch-Brite™ RD-ZB**
**Design:** Plastic brush with interspersed Cubitron™ abrasive grain. Mould-cast for long life and consistent material removal. No clogging, minimal contact pressure.

**Application:** Especially suited for easy and simple removal of paints, residues, glue, discolouration, rust, thick oxide film and other surface sediment.

**Note:** The ROLOC™ backing pad with M14 thread makes use on all standard hand-held angle grinders possible, see (Order No. 8245). Detailed information about Cubitron™ is found on 8/31.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | | ● | | | | ● |

| Order No. | | 7036 | 7050 | 7080 | 7120 | PU |
|---|---|---|---|---|---|---|
| **Grit** | | **36** | **50** | **80** | **120** | |
| 8242 3M | 25000 min⁻¹ Ø 50.8 mm | 7.10 * | 7.10 | 7.10 | 7.10 | 10 |
| 8243 3M | 18000 min⁻¹ Ø 76.2 mm | – | 11.30 | 11.30 | 11.30 | 5 |

*PU = 4 pieces

(W812)

## ROLOC™ compact disc

**XL-DR**
**Design:** Pressed fibre fleece disc with resin-bonded abrasive for a quiet, smooth run. Long cutting life, tough edges and durable.

**Application:** Particularly suited to deburring and reducing surface roughness and gives a smooth, fine finish.

**Note:** ROLOC™ backing pad see (Order No. 8245)

**Note:** Backing pad Ø 25.4 mm and 38.1 mm for edging and profiling compact discs.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | ● | ● | | | | |

| Order No. | | 8005 | 8010 | 8015 | 8020 | 8025 | PU |
|---|---|---|---|---|---|---|---|
| **Hardness/fineness** | | **2/medium** | **2/fine** | **6/medium** | **6/coarse** | **8/medium** | |
| 8242 3M | 22100 min⁻¹ Ø 50.8 mm | 4.99 | 4.99 | – | – | – | 15 |
| 8243 3M | 15100 min⁻¹ Ø 76.2 mm | 7.45 | 7.45 | 8.60 | 9.75 | 9.75 | 10 |
| Grit | | 180 | 280 | 180 | 100 | 180 | |

(W812)

## ROLOC™ coarse cleaning discs

**CX-DR**
**Design:** Nylon fibre fleece with resin-bonded silicon carbide and fibreglass underlay, for longest life, edge stability and cleaning performance.

**Application:** Ideally suited to removing corrosion and old coatings, as well as cleaning metal surfaces and weld seams.

**Note:** ROLOC™ backing pad see (Order No. 8245)

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | | ● | | | | ● |

| Order No. | | 9010 | PU |
|---|---|---|---|
| **Fineness grade** | | **Extra coarse** | |
| **8242** 3M | 18000 min⁻¹ ∅ 50.8 mm | **4.23** | 10 |
| **8243** 3M | 15000 min⁻¹ ∅ 76.2 mm | **7.70** | 10 |
| Grit | | 50 | |

(W812)

## ROLOC™ cleaning disc

**CR-DR**
**Design:** Nylon-fibre fleece with resin-bonded silicon carbide. Flexible design, open construction, free from corrosive metals and non-clogging.

**Application:** Ideal for removing corrosion, old coatings, sealant residue, tarnish and paints on sheet metal parts.

**Note:** ROLOC™ backing pad see (Order No. 8245)

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8242/8243 | ● | ● | | ● | | | | ● |

| Order No. | | 9005 | PU |
|---|---|---|---|
| **Fineness grade** | | **Extra coarse** | |
| **8242** 3M | 18000 min⁻¹ ∅ 50.8 mm | **3.67** | 10 |
| **8243** 3M | 15000 min⁻¹ ∅ 76.2 mm | **6.70** | 10 |
| Grit | | 50 | |

(W812)

## Abrasive mop discs for battery-powered devices

NEW

**SMT 524 AC ACCU**
**Design:** Zirconia alumina layers (ZA). Aggressive design, resin-bonded, high strength with a **12° curved** fibre glass disc attached. **Not made with iron, sulphur and chlorine additives.** Standard bore 22.23 mm.

**Application:** Universal product for steel and stainless steel work. Ideal for edges and weld seams thanks to the curvature.

**Note:** Detailed information about battery-powered tools is found on page 8/67.

**8802** ∅ 115 mm, curved
**8803** ∅ 125 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8802/8803 | | ● | | ● | ○ | | | |

| Order No. | | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | |
| 8802 | 13300 min⁻¹ ∅ 115 mm | 2.17 | 2.17 | 2.17 | 10 |
| 8803 | 12200 min⁻¹ ∅ 125 mm | 2.56 | 2.56 | 2.56 | 10 |

(W852)

## Abrasive mop discs, zirconia alumina

**Design:** Zirconia alumina layers (ZA). Aggressive design, resin-bonded, high strength with a **12° curved** fibre glass disc attached. **Not made with iron, sulphur and chlorine additives.** Standard bore 22.23 mm.

**Application:** Universal product for metal processing, ideal for edge cutting.

**∅ 125 mm, curved**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8273 | | ● | | ● | | | | |

| Order No. | | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | |
| 8273 | 12200 min⁻¹ ∅ 125 mm | 2.35 | 2.35 | 2.35 | 10 |

(W845)

## Abrasive mop discs, zirconia alumina

**Design:** Zirconia alumina layers (ZA). Aggressive design, resin-bonded, high strength with a **12° curved** fibre glass disc attached. **Not made with iron, sulphur and chlorine additives.** Standard bore 22.23 mm.

**Application:** Universal product for steel and stainless steel work. Ideal for edges and weld seams thanks to the curvature.

**8261** ∅ 115 mm, curved
**8264** ∅ 125 mm, curved
**8780** NEW SMT 624 SUPRA ∅ 125 mm, curved

8261 + 8264

8780

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8261/8264/8780 | | ● | | ● | ○ | | | |

| Order No. | | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | |
| 8261 (W845) | 13300 min⁻¹ ∅ 115 mm | 2.45 | 2.46 | 2.46 | 10 |
| 8264 (W845) | 12200 min⁻¹ ∅ 125 mm | 2.75 | 2.75 | 2.75 | 10 |
| 8780 (W852) | 12200 min⁻¹ ∅ 125 mm | 2.91 | 2.91 | 2.91 | 10 |

## Abrasive mop discs, zirconia alumina

**Design:** Zirconia alumina layers (ZA). Tough design, resin-bonded, high strength with **straight** fibreglass disc attached. **Not made with iron, sulphur and chlorine additives.** Standard bore 22.23 mm.

**Application:** Universal product for steel and stainless steel work. Thanks to the exact design, ideally suited to plane and surface cutting.

**8262** Ø 115 mm, straight
**8265** Ø 125 mm, straight
**8781** NEW SMT 628 SUPRA Ø 125 mm, straight
**8268** Ø 180 mm, straight

8262 + 8265 + 8268

8781

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8262/8265/8781/8268 | | ● | | ● | ○ | | | |

| Order No. | 0040 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|
| Grit | 40 | 60 | 80 | 120 | |
| 8262 format (W845) 13300 min⁻¹ Ø 115 mm | 2.58 | 2.58 | 2.58 | 2.58 | 10 |
| 8265 format (W845) 12200 min⁻¹ Ø 125 mm | 2.86 | 2.86 | 2.86 | 2.86 | 10 |
| 8781 (W852) 12200 min⁻¹ Ø 125 mm | 3.14 | 3.14 | 3.14 | – | 10 |
| 8268 format (W845) 8500 min⁻¹ Ø 180 mm | 6.90 | 6.90 | 6.90 | – | 10 |

## Abrasive mop discs, zirconia alumina

**Design:** Zirconia alumina layers (ZA). Tough design, resin-bonded, high strength with a **6° curved** fibreglass disc attached. **Not made with added iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Universal product for steel and stainless steel work. Ideal for edges and weld seams thanks to the curvature. also suitable for planing and surface grinding.

**8271** Ø 115 mm, curved
**8274** Ø 125 mm, curved
**8277** Ø 180 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8271/8274/8277 | | ● | | ● | ○ | | | |

| Order No. | 0040 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|
| Grit | 40 | 60 | 80 | 120 | |
| 8271 format 13300 min⁻¹ Ø 115 mm | 2.67 | 2.67 | 2.67 | 2.67 | 10 |
| 8274 format 12200 min⁻¹ Ø 125 mm | 2.90 | 2.90 | 2.90 | 2.90 | 10 |
| 8277 format 8500 min⁻¹ Ø 180 mm | 6.25 | 6.30 | 6.30 | – | 10 |

(W845)

## Abrasive mop discs for stainless steel work, zirconia alumina

**Design:** Zirconia alumina layers (ZA) with multi-bonding Tough design, resin-bonded, high strength with a **6° curved** fibreglass disc attached. **Not made with iron, sulphur and chlorine additives.** Standard bore 22.23 mm.

**Application:** Special product for stainless steel, also suitable for steel to some extent. Ideally suited to edges and weld seams, cool grinding.

**8286** Ø 115 mm, curved
**8289** Ø 125 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8286/8289 | | ○ | | ● | ○ | | | |

| Order No. | 0040 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|
| Grit | 40 | 60 | 80 | 120 | |
| 8286 format 13300 min⁻¹ Ø 115 mm | 3.75 | 3.75 | 3.75 | 3.75 | 10 |
| 8289 format 12200 min⁻¹ Ø 125 mm | 4.30 | 4.30 | 4.30 | 4.30 | 10 |

(W845)

## Abrasive mop discs for stainless steel work, ceramic grain

**Design:** Ceramic grain with multi-bonding. Tough design, resin-bonded, high strength with a **6° curved** fibreglass disc attached. **Not made with iron, sulphur and chlorine additives.** Standard bore 22.23 mm.

**Application:** Special product for stainless steel work. Ideally suited to edges and weld seam working.

**8278** Ø 115 mm, curved
**8279** Ø 125 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8278/8279 | | | | ● | | | | |

| Order No. | | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | |
| 8278 | 13300 min⁻¹ Ø 115 mm | 3.98 | 3.98 | 3.98 | 10 |
| 8279 | 13300 min⁻¹ Ø 125 mm | 4.23 | 4.23 | 4.23 | 10 |

(W845)

## Combi abrasive mop discs for stainless steel work

**SMT 850 plus**
**Design:** High-quality sheets with a combination of abrasive fleece and abrasives. Tough design, resin-bonded, high strength with a **6° curved** fibreglass disc attached. **Not made with added iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Special product for stainless steel work. Ideal for weld seams as well as surface appearance due to the curvature. **Deburring and finishing in one operation.** Grit 60 can also be used for light deburring work.

**Ø 125 mm, curved**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8276 | | | | ● | | | | |

| Order No. | | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|
| Grit | | 60 | 80 | 120 | |
| 8276 | 12200 min⁻¹ Ø 125 mm | 11.80 | 11.80 | 11.80 | 5 |

(W852)

## POLIFAN® flap grinding wheels, aluminium oxide

**SG A**
**Design:** Aluminium oxide layers (A). Tough design, resin-bonded, high strength with fibreglass disc attached. This gives better machining performance and outstanding life. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Universal product for steel and stainless steel work, also means it is suitable for wood and synthetics work. Ideally suited to edges and weld seam working.

**8292** Ø 115 mm, straight
**8295** Ø 125 mm, straight
**8301** Ø 115 mm, curved
**8304** Ø 125 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8292/8295/8301/8304 | | ● | | ● | | ○ | | |

| Order No. | | 0040 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | 120 | |
| 8292 | 13300 min⁻¹ Ø 115 mm | 4.05 | 4.05 | 4.05 | 4.05 | 10 |
| 8295 | 12200 min⁻¹ Ø 125 mm | 4.37 | 4.37 | 4.37 | 4.37 | 10 |
| 8301 | 13300 min⁻¹ Ø 115 mm | 4.05 | 4.05 | 4.05 | 4.05 | 10 |
| 8304 | 12200 min⁻¹ Ø 125 mm | 4.37 | 4.37 | 4.37 | 4.37 | 10 |

(W848)

## POLIFAN® flap grinding wheels, zirconia alumina

**Design:** Zirconia alumina layers (Z). Tough design, resin-bonded, high strength with fibreglass disc attached. This gives better machining performance and outstanding life. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Universal product for steel and stainless steel work. Ideally suited to weld seam working, chamfering edges on steel.

**8310** **Z SG**
**Ø 115 mm, straight**

**8313** **Z SG**
**Ø 125 mm, straight**

**8319** **Z SG-POWER**
Up to 236 % increased removal than previously. **Ø 115 mm, curved**

**8322** **Z SG-POWER**
Up to 236 % increased removal than previously.
**Ø 125 mm, curved**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8310/8313/8319/8322 | | ● | | ● | ○ | | | |

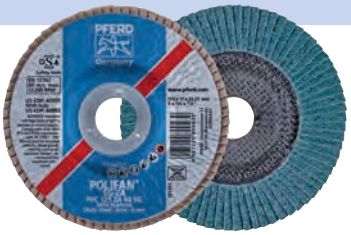
| Order No. | | 0040 | 0060 | PU |
|---|---|---|---|---|
| Grit | | 40 | 60 | |
| 8310 | 13300 min⁻¹ Ø 115 mm | 4.40 | 4.40 | 10 |
| 8313 | 12200 min⁻¹ Ø 125 mm | 4.80 | 4.80 | 10 |
| 8319 | 13300 min⁻¹ Ø 115 mm | 4.40 | 4.40 | 10 |
| 8322 | 12200 min⁻¹ Ø 125 mm | 4.80 | 4.80 | 10 |

(W848)

## POLIFAN® flap grinding wheels, zirconia alumina

**SG ZA**
**Design:** With zirconia alumina layers (ZA). Tough design, resin-bonded, high performance with fibreglass discs attached. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Special product for stainless steel. Specially suited to edges and weld seam processing.



**8323** **Ø 115 mm, curved**

**8324** **Ø 125 mm, curved**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8323/8324 | | | | ● | | | | |

| Order No. | | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | |
| 8323 | 13300 min⁻¹ Ø 115 mm | 4.60 | 4.60 | 4.60 | 10 |
| 8324 | 12200 min⁻¹ Ø 125 mm | 5.05 | 5.05 | 5.05 | 10 |

(W848)

## POLIFAN® flap grinding wheels, aluminium oxide COOL

**SG A-COOL**
**Design:** With aluminium oxide layers (A) and coolant. Tough design, resin-bonded, high strength with fibreglass discs attached. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Special product for steel, stainless steel, aluminium and non-ferrous metal work. **With specially cool cut due to the cooling coating.** A cooler cut is achieved even with minimal pressure on adjustable angle grinders. So particularly suited for work on sheet metal and thin-walled sections.

**8294** **Ø 115 mm, straight**

**8296** **Ø 125 mm, straight**

**8297** **Ø 115 mm, curved**

**8299** **Ø 125 mm, curved**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8294/8296/8297/8299 | ● | ● | | ● | | | | |

| Order No. | | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | |
| 8294 | 13300 min⁻¹ Ø 115 mm | 4.60 | 4.60 | 4.60 | 10 |
| 8296 | 12200 min⁻¹ Ø 125 mm | 5.05 | 5.05 | 5.05 | 10 |
| 8297 | 13300 min⁻¹ Ø 115 mm | 4.60 | 4.60 | 4.60 | 10 |
| 8299 | 12200 min⁻¹ Ø 125 mm | 5.05 | 5.05 | 5.05 | 10 |

(W848)

## POLIFAN® flap grinding wheels, ceramic grain-COOL for stainless steel work

**SGP CO-COOL**
**Design:** With ceramic grain layers (CO) and coolant. Tough design, resin-bonded, high strength with fibreglass discs attached. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Special product for high-alloy and rust-proof steel, nickel-based alloys, titanium alloys, aluminium and non-ferrous metals. **With specially cool cut due to the ceramic grain fins.** A cooler cut is achieved even with minimal pressure on adjustable angle grinders. So particularly suited for work on sheet metal and thin-walled sections.

**8300** Ø 115 mm, straight
**8302** Ø 125 mm, straight
**8303** Ø 115 mm, curved
**8305** Ø 125 mm, curved

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8300/8302/8303/8305 | ● | ● | | ● | | | | |

| Order No. | | 0040 | PU |
|---|---|---|---|
| Grit | | 40 | |
| 8300 PFERD | 13300 min⁻¹ Ø 115 mm | 5.60 | 10 |
| 8302 PFERD | 12200 min⁻¹ Ø 125 mm | 6.05 | 10 |
| 8303 PFERD | 13300 min⁻¹ Ø 115 mm | 5.60 | 10 |
| 8305 PFERD | 12200 min⁻¹ Ø 125 mm | 6.05 | 10 |

(W848)

## POLIFAN® flap grinding wheels, zirconia alumina COMPACT

**SG ZIRKON COMPACT**
**Design:** With zirconia alumina layers (Z). Tough design, resin-bonded, high strength with fibreglass discs attached. This gives better machining performance and outstanding life. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Special product for processing steel, stainless steel, seam welding, chamfering and deburring. The high performance zirconia alumina cutting surface has the best impact on high-powered angle grinders.

PFERD

**Ø 125 mm, curved**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8308 | | ● | | ● | | | | |

| Order No. | | 0040 | 0060 | PU |
|---|---|---|---|---|
| Grit | | 40 | 60 | |
| 8308 PFERD | 12200 min⁻¹ Ø 125 mm | 4.80 | 4.80 | 10 |

(W848)

## POLIFAN® flap grinding wheels, zirconia alumina STRONG

**SGP ZIRKON STRONG**
**Design:** With zirconia alumina layers (Z), consistent tough design, resin-bonded, high strength with fibreglass discs attached. This gives maximum residue removal rate and extremely long life. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Special product for steel work.
**Grain size 36** is optimum for coarse steel work, for example weld seam processing. **Grain size 50** is optimum for edging work, for example chamfering, deburring. The high performance zirconia alumina cutting surface has the best impact on high-powered angle grinders.

PFERD

**8314** Ø 115 mm, curved
**8315** Ø 125 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8314/8315 | | ● | | | | | | |

| Order No. | | 0036 | 0050 | PU |
|---|---|---|---|---|
| Grit | | 36 | 50 | |
| 8314 PFERD | 13300 min⁻¹ Ø 115 mm | 9.35 | 9.35 | 10 |
| 8315 PFERD | 12200 min⁻¹ Ø 125 mm | 9.65 | 9.65 | 10 |

(W848)

## POLIFAN® flap grinding wheels, ceramic grain STRONG

**SGP STRONG FREEZE**
**Design:** With ceramic grain layers (CO) and coolant. Consistent tough design, resin-bonded, high strength with fibreglass discs attached. The highly effective fillers form a shiny film on the cooling layers, thus enabling **up to 30% cooler grinding,** maximum residue removal rate and extremely long life. **Not made with iron, sulphur and chlorine additives. Low vibration, noise and dust.**
Standard bore 22.23 mm.

**Application:** Special product for processing poor heat conducting materials, such as stainless steel. Specially suited to edges and weld seam working.

**Ø 125 mm, curved**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8311 | | | | ● | | | | |

| Order No. | | 0036 | 0050 | PU |
|---|---|---|---|---|
| Grit | | 36 | 50 | |
| 8311 PFERD | 12200 min⁻¹ Ø 125 mm | 10.45 | 10.45 | 10 |

(W848)

## POLIFAN® flap grinding wheels, zirconia alumina CURVE

**SGP ZIRKON CURVE**
**Design:** With zirconia alumina layers (Z), consistent tough design, resin-bonded, high strength with fibreglass discs attached. This gives maximum residue removal rate and extremely long life. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Ideal for steel and stainless steel work. Due to the special radial construction the flap wheels **are suited to working on fillet seams** as well as chamfering and deburring.

**8317** **Ø 115 mm, radial**
**8318** **Ø 125 mm, radial**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8317/8318 | | ● | | ○ | | | | |

| Order No. | | 0040 | 0041 | PU |
|---|---|---|---|---|
| Grit | | 40 | 40 | |
| 8317 PFERD | 13300 min⁻¹ Ø 115 mm | 8.40 | 8.80 | 10 |
| 8318 PFERD | 12200 min⁻¹ Ø 125 mm | 8.45 | 8.85 | 10 |
| For fillet seams | mm | 5 | 8 | |

(W848)

## POLIFAN® flap grinding disc, ceramic grain, CURVE

**SGP-CO-CURVE**
**Design:** With ceramic grit (CO) for an ultra-cool grind on poor heat conducting materials, in resin bonded, high-strength attached to a fibreglass disc. Therefore, highest material removal with exceptional life span. **Not made with iron, sulphur and chlorine fillers.** Standard bore 22.23 mm.

**Application:** Ideal for processing stainless steel and poor heat conducting materials. Due to the special radial construction the flap grinding wheel is suited to working on fillet seams as well as chamfering and deburring.

**Ø 125 mm, radial**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8320 | | ○ | | ● | | | | |

| Order No. | | 0060 | 0061 | PU |
|---|---|---|---|---|
| Grit | | 60 | 60 | |
| 8320 PFERD | 12200 min⁻¹ Ø 125 mm | 9.75 | 10.10 | 10 |
| For fillet seams | mm | 5 | 8 | |

(W848)

## Flap grinding wheel Cubitron™ II

**967A**
**Design:** Precision formed ceramic grain (Cubitron™ II), in high-strength synthetic resin bonding connected to the curved fibreglass disc. The individual grains of the ceramic Cubitron™ II abrasives are small, precisely-shaped triangles, perpendicular in arrangement, and uniform in size. Tough grinding with highest removal rate, with up to **30% faster removal.** Grinding-activated additives prevent clogging and make for cooler grinding. Standard bore 22.23 mm.

**Application:** In all metal-working industries, where high removal rates combined with very good surface finishes need to be achieved.

3M CUBITRON II

**8291** ∅ 115 mm, curved
**8309** ∅ 125 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8291/8309 | | | | ● | | | | |

| Order No. | | 0040 | 0060 | 0080 | PU |
|---|---|---|---|---|---|
| Grit | | 40+ | 60+ | 80+ | |
| 8291 3M | ∅ 115 mm | 4.57 | 4.57 | 4.57 | 10 |
| 8309 3M | ∅ 125 mm | 5.00 | 5.00 | 5.00 | 10 |

(W812)

## Fillet weld fleece grinding wheel Cubitron™ II

**Scotch-Brite™ RC-UW**
**Design:** Compressed fibre fleece construction with Cubitron™ II abrasive grain. Precision molded ceramic grit, uniform grain distribution, no clogging.

**Application:** For removing and finishing fillet welds and small welded seams, heavy deburring and light removal grinding in a single step.

3M CUBITRON II

**8350** ∅ 125, straight
**8351** ∅ 150, straight

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8350 | | ○ | | ● | | | | |
| 8351 | | ○ | | ◐ | | | | |

| Order No. | | 0036 | 0036 | 0060 | 0060 | PU |
|---|---|---|---|---|---|---|
| Fineness grade | | Extra coarse + | Extra coarse + | Coarse + | Coarse + | |
| 8350 3M | 11000 min⁻¹ ∅ 125 mm | 19.55 | – | 19.55 | – | 10 |
| 8351 3M | 11000 min⁻¹ ∅ 150 mm | – | 28.20 | – | 29.00 | 10 |
| Grit | | 36+ | 36+ | 60+ | 60+ | |
| Thickness | mm | 6 | 3 | 6 | 3 | |

(W812)

## Clamping flange for filet weld fleece grinding wheel

**Application:** For mounting Scotch-Brite™ filet weld fleece grinding wheel (Order No. 8350 and 8351).

| Order No. | ∅ x bore mm | 8342 3M |
|---|---|---|
| 0005 | 64 x 12 | 68.00 |

(W812)

## Angle grinder mop

**WSM 617**
**Design:** With aluminium oxide layers (A) in resin bond. With M14 connection thread. The fan-shaped radial layout is outstanding and particularly adapted to the contours of the workpiece.

**Application:** For working with steel, stainless steel, colours, synthetics and wood **with angle grinders.** Especially for deburring, whereby edges can be rounded. No secondary burr is formed. Also outstanding for deburring surface laminates. As a rule, second sanding is omitted prior to re-coating.

KLINGSPOR

**∅ 125 mm**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8438 | | ● | | ● | ● | ● | | ● |

| Order No. | | 0040 | 0060 | 0080 | 0120 | PU |
|---|---|---|---|---|---|---|
| Grit | | 40 | 60 | 80 | 120 | |
| 8438 ◊ | 12200 min⁻¹ ∅ 125 mm | 9.45 | 9.45 | 10.05 | 10.05 | 10 |
| Width | mm | 20 | 20 | 20 | 20 | |

(W852)

## Fleece flap wheels

**Scotch-Brite™ SC-FD**
**Design:** With aluminium oxide fleece segments (A). Because the layers have been directly applied to a fibreglass underlay they can be used on angle grinders without additional backing pads.

**Application:** The discs deliver the best results on steel, stainless steel, aluminium and non-ferrous metals. For de-rusting and cleaning on flat metal parts, surface preparation for laminates and paints as well as for creating a decorative finish.

**8433** Ø 115 mm, curved
**8439** Ø 125 mm, curved

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8433/8439 | ● | ● | | ● | | | | ● |

| Order No. | | 0005 | 0010 | 0015 | PU |
|---|---|---|---|---|---|
| Fineness grade | | Coarse | Medium | Very fine | |
| 8433 3M | 13280 min⁻¹ Ø 115 mm | 6.80 | 6.80 | 6.80 | 10 |
| 8439 3M | 12200 min⁻¹ Ø 125 mm | 8.00 | 8.00 | 8.00 | 10 |
| Grit | | 100 | 180 | 400 | |

(W812)

## Coarse cleaning discs with fibreglass underlay

**Scotch-Brite™ XT-RD**
**Design:** Resin-bonded Nylon-fibre fleece with silicon carbide grain on reinforced fibreglass underlay. The powerful XT Clean & Strip design enables highest service life for all applications Standard bore 22.23 mm.

**Application:** For use on angle grinders without backing pads. For cleaning weld seams and all stubborn stains, free from corrosive metals, replaces wire brushes and other cleaning tools. Removes light scale, paint, varnish and rust.

Ø 115 mm

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8447 | | ● | | ● | ● | ● | | ● |

| Order No. | | 0115 | PU |
|---|---|---|---|
| Fineness grade | | Extra coarse | |
| 8447 3M | 11000 min⁻¹ Ø 115 mm | 12.90 | 10 |
| Grit | | 50 | |
| Thickness | mm | 14 | |

(W812)

## Coarse cleaning discs with fibreglass underlay

**8330** Coarse cleaning discs in fibre fleece with bonded silicon-carbide abrasive with fibreglass underlay. Standard bore 22.23 mm.

**8329** **PCLD**
POLICLEAN® fleece on fibreglass disc. Excellent long life, low pressure and very good flexibility. Standard bore 22.23 mm.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8330/8329 | | ● | | ● | ● | ● | ○ | |

| Order No. | Ø mm | 8330 format | 8329 PFERD | PU 8330 | PU 8329 | Fineness grade | Grit | Thickness mm | Max. rpm min⁻¹ |
|---|---|---|---|---|---|---|---|---|---|
| 0115 | 115 | 5.40 | 11.05 | 10 | 5 | Extra coarse | 40–50 | 13 | 10000 |
| 0125 | 125 | 6.50 (W845) | 12.10 (W847) | 10 | 5 | Extra coarse | 40–50 | 13 | 10000 |

## POLINOX® compact grinding wheel

**CC-PNER**
**Design:** Multi-layer pressed fleece in special grain-resin bond on a fibreglass pad. High residue removal and good service life with good surface quality. Standard bore 22.23 mm.

**Application:** For use in surface grinding with variable speed angle grinders. Especially suited for working on large, stainless steel surfaces. Optimum cutting speed 35 m/s.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8461 | | | | ● | | | | |

| Order No. | Design | 8461 PFERD | PU | Ø mm | Fineness grade | Grit | Thickness mm | Max. rpm $min^{-1}$ |
|---|---|---|---|---|---|---|---|---|
| 0005 | Soft | 25.40 | 5 | 125 | Fine | 180–220 | 13 | 10000 |
| 0010 | Medium-soft | 28.50 | 5 | 125 | Fine | 180–220 | 13 | 10000 |
| 0015 | Medium-hard | 30.00 (W847) | 5 | 125 | Fine | 180–220 | 13 | 10000 |

## Coarse cleaning discs

**Design:** Resin-bonded nylon fibre fleece with silicon-carbide grain, extra coarse. Open, flexible weave prevents the coarse-cleaning disc clogging. Bore 13 mm.

**Application:** For use on straight grinders and flexible axles. For efficient removal of rust, corrosion, old laminates and discolouration, cleaning of metal surfaces and weld seams. For use with mandrel (Order No. 8336).

**8333** **Scotch-Brite™ XT-RD**
Reinforced fibre fleece for longest life, purple.

**8335** **CG-DC**
Adapted to especially flexible workpieces, with long life span, blue.

3M

8333

8335

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8333/8335 | | ● | | ● | ● | ● | | ● |

| Order No. | Ø mm | 8333 3M | 8335 3M | PU | Fineness grade | Grit | Thickness mm | Max. rpm $min^{-1}$ |
|---|---|---|---|---|---|---|---|---|
| 0100 | 100 | 7.25 | 6.30 | 2 | Extra coarse | 50 | 14 | 6000 |
| 0150 | 150 | 11.75 (W812) | 10.20 (W812) | 2 | Extra coarse | 50 | 14 | 4000 |

## Mandrel for coarse cleaning discs

**Application:** For mounting Scotch-Brite™ coarse cleaning discs (Order Nos. 8333 and 8335).

| Order No. | Chucking capacity mm | 8336 3M | Mounted discs Piece | Shaft Ø mm |
|---|---|---|---|---|
| 0006 | 19 | 9.05 | 1 | 6 |
| 0008 | 25 | 12.45 (W812) | 2 | 8 |

## Coarse cleaning disc POLICLEAN®

**PCLS**
**Design:** Coarse-structured cleaning fleece made from a combination of synthetic fibres and abrasive grain. Open, flexible design with long life, low pressure and very good flexibility. Bore 6 mm.

**Application:** For use on straight grinders and flexible axles. For coarse cleaning work, for removal of paint, scale, discolouration, rust and glue residues in perimeter grinding in conjunction with spindles (Order No. 8332). Vibration-free run, easy handling and quick disc change.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8332 | | ● | | ● | ● | ● | ○ | |

| Order No. | Ø mm | 8332 PFERD | PU | Fineness grade | Grit | Thickness mm | Max. rpm min⁻¹ |
|---|---|---|---|---|---|---|---|
| 0075 | 75 | 3.02 (W847) | 6 | Coarse | 80–100 | 13 | 10000 |

## Spindles for coarse cleaning discs

**Application:** For mounting POLICLEAN® coarse cleaning discs (Order No. 8332). Considerably reduces set-up time, as the spindle does not have to come out of the drive clamp during disc changes.

| Order No. | Chucking capacity mm | 8332 PFERD | Mounted discs Piece | Shaft Ø mm |
|---|---|---|---|---|
| 1013 | 13 | 6.90 | 1 | 6 |
| 1026 | 26 | 7.45 | 2 | 6 |
| 1039 | 39 | 8.05 (W847) | 3 | 6 |

## High-performance Cleaning Abrasive Bristle disc

**Scotch-Brite™ BD-ZB**
**Design:** Plastic brush with interspersed Cubitron™ abrasive grain. Mould-cast for long life and consistent material removal. No clogging, minimal contact pressure. With M14 connection thread and reinforced back for use on angle grinders without extra backing pads.

**Application:** Universal disc for quick and easy deburring of colour, glue, residue, rust and other surface cleaning. The disc needs only minimal pressure and ensures an efficient result without damaging the surface.

**Note**: Detailed information about Cubitron™ is found on page 8/31.

**Ø 115 mm**

3M

Cubitron™ Abrasive Grain

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8312 | ● | ● | ● | ● | ○ | ● | | ● |

| Order No. | 0050 | 0080 | 0120 | PU |
|---|---|---|---|---|
| Grit | 50 | 80 | 120 | |
| 8312 3M 12000 min⁻¹ Ø 115 mm | 35.80 | 35.80 | 35.80 | 5 |
| Colour | Green | Yellow | White | |

(W812)

## Rubber bodies for abrasive bands, cylindrical

**Design:** Slotted rubber bodies with 6 mm clamp shaft.

| Order No. | Ø x height mm | 8380 PFERD Cylindrical | 8381 PFERD Conical | PU | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 1530 | 15 x 30 | 10.95 | – | 5 | 36000 |
| 2220 | 22 x 20 | 9.10 | – | 5 | 26000 |
| 3020 | 30 x 20 | 9.95 | – | 5 | 19100 |
| 3030 | 30 x 30 | 10.95 | – | 5 | 19100 |
| 4530 | 45 x 30 | 12.55 | – | 5 | 12700 |
| 6030 | 60 x 30 | 16.15 (W849) | – (W849) | 5 | 9500 |

8380 cylindrical

8381 conical

PFERD

| Order No. | Ø x height mm | 8380 PFERD Cylindrical | 8381 PFERD Conical | PU | Max. rpm min$^{-1}$ |
|---|---|---|---|---|---|
| 2063 | 20/14 x 63 | – | 14.20 | 5 | 26000 |
| 2930 | 29/22 x 30 | – (W849) | 9.35 (W849) | 5 | 19100 |

## Abrasive bands, aluminium oxide

**Design:** Resin-bonded aluminium (A), thick-lined. Excellent grit friction, long life, minimal pressure and good flexibility.

**Application:** For steel, plastic, GRP and wood. Also limited suitability for cast. For working processing chamfers, radii, and bores with flexible long-pitch corrugations, for example drilling machines.

PFERD

| Order No. | | 1530 | 2220 | 3020 | 3030 | 4530 | 6030 | 2063 | 2930 | PU |
|---|---|---|---|---|---|---|---|---|---|---|
| Ø x height | mm | 15 x 30 | 22 x 20 | 30 x 20 | 30 x 30 | 45 x 30 | 60 x 30 | 20/14 x 63 | 29/22 x 30 | |
| 8382 PFERD | K 50, cylindrical | 0.55 | 0.39 | – | 0.63 | 0.84 | 1.08 | – | – | 10 |
| 8383 PFERD | K 60, cylindrical | – | – | 0.44 | – | – | – | – | – | 10 |
| 8384 PFERD | K 80, cylindrical | 0.55 | 0.39 | 0.44 | 0.63 | 0.84 | 1.08 | – | – | 10 |
| 8385 PFERD | K 150, cylindrical | 0.55 | 0.39 | 0.44 | 0.63 | 0.84 | 1.08 | – | – | 10 |
| 8386 PFERD | K 40, conical | – | – | – | – | – | – | 1.91 | 1.60 | 10 |
| 8387 PFERD | K 80, conical | – | – | – | – | – | – | 1.91 | 1.60 | 10 |
| 8389 PFERD | K 150, conical | – | – | – | – | – | – | 1.91 | 1.60 | 10 |

(W849)

## Abrasive bands, zirconia alumina

**Design:** Resin-bonded zirconia alumina sprinkling (Z-COOL). **Design:** Extremely powerful cutting ability is effective at high pressure and provides excellent material removal. **Cooler cutting, non-clogging of tools** Highest residue removal with longer life span.

**Application:** For INOX. For working processing chamfers, radii, and bores with flexible shafts or drilling machines.

PFERD

| Order No. | | 1530 | 2220 | 3030 | 4530 | 6030 | 2063 | 2930 | PU |
|---|---|---|---|---|---|---|---|---|---|
| Ø x height | mm | 15 x 30 | 22 x 20 | 30 x 30 | 45 x 30 | 60 x 30 | 20/14 x 63 | 29/22 x 30 | |
| 8338 PFERD | K 50, cylindrical | 0.68 | 0.44 | 0.77 | 1.02 | 1.29 | – | – | 10 |
| 8339 PFERD | K 80, cylindrical | 0.68 | 0.44 | 0.77 | 1.02 | 1.29 | – | – | 10 |
| 8341 PFERD | K 150, cylindrical | 0.68 | 0.44 | 0.77 | 1.02 | 1.29 | – | – | 10 |
| 8390 PFERD | K 50, conical | – | – | – | – | – | 1.85 | 1.56 | 10 |
| 8392 PFERD | K 80, conical | – | – | – | – | – | 1.85 | 1.56 | 10 |
| 8393 PFERD | K 120, conical | – | – | – | – | – | 1.85 | 1.56 | 10 |

(W849)

## Abrasive bands, ceramic

**Design:** Resin-bonded ceramic sprinkling (CO-COOL). Extremely powerful cutting ability is effective at high pressure and provides excellent material removal. **Cooler cutting, non-clogging of tools** Highest residue removal with longer life span.

**Application:** For aluminium, steel and INOX. For tough grinding with maximum removal on hard, tough and poor heat conducting materials.

PFERD

| Order No. | | 3030 | 4530 | 6030 | 2063 | 2930 | PU |
|---|---|---|---|---|---|---|---|
| Ø x height | mm | 30 x 30 | 45 x 30 | 60 x 30 | 20/14 x 63 | 29/22 x 30 | |
| 8395 PFERD | K 36, cylindrical | 0.89 | 1.17 | 1.53 | – | – | 10 |
| 8396 PFERD | K 60, cylindrical | 0.89 | 1.17 | 1.53 | – | – | 10 |
| 8398 PFERD | K 80, cylindrical | 0.89 | 1.17 | 1.53 | – | – | 10 |
| 8399 PFERD | K 120, cylindrical | 0.89 | 1.17 | 1.53 | – | – | 10 |
| 8401 PFERD | K 36, conical | – | – | – | 2.75 | 2.31 | 10 |
| 8402 PFERD | K 60, conical | – | – | – | 2.75 | 2.31 | 10 |
| 8404 PFERD | K 80, conical | – | – | – | 2.75 | 2.31 | 10 |
| 8405 PFERD | K 120, conical | – | – | – | 2.75 | 2.31 | 10 |

(W849)

## Application tip for abrasive caps

- When removing and refitting the abrasive cap a slight right turn should be made.
- Changing is easier when the abrasive cap is clamped in the drive machine.
- Abrasive caps perform best at cutting speeds of 10–20 m/s.
- **The maximum peripheral speed is 25 m/s.**
- **The specified maximum speed should not be exceeded for safety reasons.**

## POLIROLL® grinding roll

NEW

PFERD

**Design:** Resin-bonded aluminium oxide grain (A) on a spiral-shaped wound fabric carrier. Fresh grain is used in successive layers as the outer coated abrasive wears off. With very good machining performance. Always grind with the tip and not the surface, otherwise the bond can become damaged by the heat.

**Application:** For steel and casting. For processing drill holes, fillet weld seams and deburring work on cast parts.

| Order No. | Ø x height mm | 8410 PFERD K 80 | 8411 PFERD K 150 | PU |
|---|---|---|---|---|
| 0635 | 6 x 35 | 0.81 | 0.81 | 50 |
| 0935 | 9 x 35 | 1.05 | 1.05 | 50 |
| 1235 | 12 x 35 | 1.23 (W849) | 1.23 (W849) | 50 |

## POLIROLL® grinding roll holder

NEW

**Application:** For mounting spiral-shaped wound grinding rolls. The conical self-clamping holds the grinding rolls in place during working.

| Order No. | Shaft Ø mm | 8410 PFERD |
|---|---|---|
| 0005 | 6 | 9.50 (W849) |

## POLICAP® abrasive cap holder

PFERD

**Design:** Slotted rubber bodies with 3 mm or 6 mm shaft. When removing and refitting the abrasive cap a slight right turn should be made. Changing is easier when the abrasive cap is clamped in the drive machine. Abrasive caps perform best at cutting speeds of 10–20 m/s.

**Application:** To accommodate moulded, seamless abrasive caps. Centrifugal force holds the caps in place during working.

**Note:** The maximum peripheral speed is 25 m/s. The specified maximum speed should not be exceeded for safety reasons.

**8340 0510** Maximum rpm 95000 min$^{-1}$

**8340 1015** Maximum rpm 45000 min$^{-1}$

**8343 0713** Maximum rpm 65000 min$^{-1}$

**8346 0511** Maximum rpm 95000 min$^{-1}$

**8349 0515** Maximum rpm 95000 min$^{-1}$

**8340 0712** Maximum rpm 65000 min$^{-1}$

**8343 0511** Maximum rpm 95000 min$^{-1}$

**8343 1015** Maximum rpm 45000 min$^{-1}$

**8346 0713** Maximum rpm 65000 min$^{-1}$

**8349 1125** Maximum rpm 40000 min$^{-1}$

| Order No. | Shaft Ø mm | 8340 PFERD Shape A 5 x 10 | 8340 PFERD Shape A 7 x 12 | 8340 PFERD Shape A 10 x 15 | 8343 PFERD Shape C 5 x 11 | 8343 PFERD Shape C 7 x 13 | 8343 PFERD Shape C 10 x 15 | 8346 PFERD Shape G 5 x 11 | 8346 PFERD Shape G 7 x 13 | 8349 PFERD Shape L 5 x 15 | 8349 PFERD Shape L 11 x 25 | PU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0510 | 3 | 4.46 | – | – | – | – | – | – | – | – | – | 5 |
| 0511 | 3 | – | – | – | 4.46 | – | – | 4.39 | – | – | – | 5 |
| 1015 | 3 | – | – | 4.89 | – | – | 4.89 | – | – | – | – | 5 |
| 0712 | 3 | – | 4.81 | – | – | – | – | – | – | – | – | 5 |
| 0713 | 3 | – | – | – | – | 4.81 | – | – | 4.81 | – | – | 5 |
| 0515 | 6 | – | – | – | – | – | – | – | – | 5.95 | – | 5 |
| 1125 | 6 | – (W849) | – (W849) | – (W849) | – (W849) | – (W849) | – (W849) | – (W849) | – (W849) | – (W849) | 6.15 (W849) | 5 |

## POLICAP® abrasive cap

**Design:** Resin-bonded aluminium oxide grain (A). With very good grit friction and long life.

**Application:** For tool manufacturing finishing work in hard-to-reach places. For working with chamfers, radii, and bores with flexible shafts, and even straight grinders.

PFERD

**8352** Maximum rpm 40000 min$^{-1}$

**8358** Maximum rpm 20000 min$^{-1}$

**8364** Maximum rpm 30000 min$^{-1}$

**8367** Maximum rpm 40000 min$^{-1}$

**8371** Maximum rpm 40000 min$^{-1}$

**8355** Maximum rpm 30000 min$^{-1}$

**8361** Maximum rpm 40000 min$^{-1}$

**8365** Maximum rpm 30000 min$^{-1}$

**8370** Maximum rpm 30000 min$^{-1}$

**8373** Maximum rpm 20,000 min$^{-1}$

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8352/8355/8358/8361/8364/ 8365/8367/8370/8371/8373 | | ● | | | ○ | ○ | | |

| Order No. | Grit | 8352 PFERD Shape A 5 x 10 | 8355 PFERD Shape A 7 x 12 | 8358 PFERD Shape A 10 x 15 | 8361 PFERD Shape C 5 x 11 | 8364 PFERD Shape C 7 x 13 | 8365 PFERD Shape C 10 x 15 | 8367 PFERD Shape G 5 x 11 | 8370 PFERD Shape G 7 x 13 | 8371 PFERD Shape L 5 x 15 | 8373 PFERD Shape L 11 x 25 | PU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0060 | 60 | – | 0.61 | 0.64 | – | 0.61 | – | – | 0.61 | – | 0.85 | 50 |
| 0080 | 80 | 0.56 | – | – | 0.56 | – | – | 0.56 | – | 0.71 | – | 50 |
| 0150 | 150 | 0.56 (W849) | 0.61 (W849) | 0.64 (W849) | 0.56 (W849) | 0.61 (W849) | 0.64 (W849) | 0.56 (W849) | 0.61 (W849) | 0.71 (W849) | 0.85 (W849) | 50 |

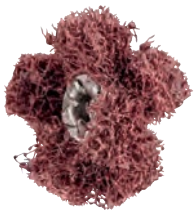
## POLINOX® sanding star

**PNST**

**Design:** Fleece with aluminium oxide grain (A). The fleece is arranged in several offset layers.

**Application:** For processing ordinary steel, stainless steel and aluminium. Ideal for cleaning, deburring and fine grinding internal surfaces and contours. Specially designed for hard-to-reach places.

PFERD



**8362** Recommended rpm 15000 min$^{-1}$, maximum rpm 25100 min$^{-1}$.

**8363** Recommended rpm 10000 min$^{-1}$, maximum rpm 19100 min$^{-1}$.

**8366** Recommended rpm 7500 min$^{-1}$, maximum rpm 12600 min$^{-1}$.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8362/8363/8366 | ● | ● | | ● | | | | |

| Order No. | Grit | 8362 PFERD Ø 19 mm | 8363 PFERD Ø 25 mm | 8366 PFERD Ø 38 mm | PU | Number of layers 8362 | 8363 | 8366 |
|---|---|---|---|---|---|---|---|---|
| 0100 | 80 | – | 4.22 | 8.45 | 20 | – | 2 | 3 |
| 0180 | 100 | 3.68 | 2.90 | 7.65 | 20 | 2 | 2 | 3 |
| 0280 | 280 | 3.33 (W849) | 3.38 (W849) | 6.95 (W849) | 20 | 2 | 2 | 3 |

## Tool holder

**Design:** With different lengths, whereby holes or openings of different depths can be achieved.

**Application:** For mounting POLINOX® sanding stars.

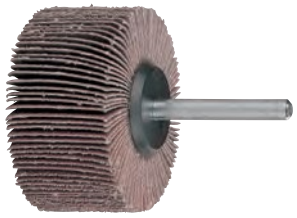
| Order No. | Shaft Ø x length mm | 8368 PFERD |
|---|---|---|
| 6075 | 6 x 75 | 6.25 |
| 6125 | 6 x 125 | 7.10 (W849) |

## Flap wheels for steel, wood and synthetics work

**Design:** Aluminium oxide layers (A). Tough design, resin-bonded, heavy duty connected to 6 mm claw shaft.

**Application:** Universal product for steel working, also suitable for use on wood and synthetics. Ideal for moulding and modelling construction as well as for containers and equipment.

**8388** Recommended rpm 15500 min$^{-1}$, maximum rpm 25500 min$^{-1}$.
**8391** Recommended rpm 15500 min$^{-1}$, maximum rpm 25500 min$^{-1}$.
**8394** Recommended rpm 12000 min$^{-1}$, maximum rpm 19100 min$^{-1}$.
**8397** Recommended rpm 12000 min$^{-1}$, maximum rpm 19100 min$^{-1}$.
**8400** Recommended rpm 8000 min$^{-1}$, maximum rpm 15300 min$^{-1}$.
**8406** Recommended rpm 8000 min$^{-1}$, maximum rpm 12700 min$^{-1}$.
**8409** Recommended rpm 8000 min$^{-1}$, maximum rpm 12700 min$^{-1}$.
**8412** Recommended rpm 6000 min$^{-1}$, maximum rpm 9600 min$^{-1}$.



| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8388/8391/8394/8397/8400/8406/8409/8412 | ○ | ● | | | ○ | ○ | | |

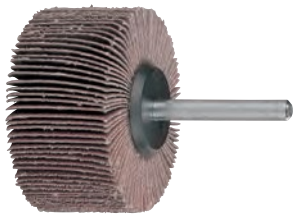
| Order No. | Grit | 8388 30 x 10 | 8391 30 x 15 | 8394 40 x 15 | 8397 40 x 20 | 8400 50 x 20 | 8406 60 x 30 | 8409 60 x 50 | 8412 80 x 40 | PU |
|---|---|---|---|---|---|---|---|---|---|---|
| 0040 | 40 | 1.87 | 1.94 | 2.03 | 2.07 | 2.63 | 3.33 | 4.73 | 5.85 | 10 |
| 0060 | 60 | 1.87 | 1.94 | 2.03 | 2.09 | 2.63 | 3.33 | 4.73 | 5.85 | 10 |
| 0080 | 80 | 1.87 | 1.94 | 2.03 | 2.09 | 2.63 | 3.33 | 4.73 | 5.85 | 10 |
| 0120 | 120 | 1.87 | 1.94 | 2.03 | 2.09 | 2.63 | 3.38 | 4.73 | 5.85 | 10 |
| 0150 | 150 | 1.87 | 1.94 | 2.03 | 2.09 | 2.63 | 3.38 | – | – | 10 |
| 0180 | 180 | 1.87 | 1.94 | 2.03 | 2.09 | 2.63 | 3.38 | – | – | 10 |
| 0240 | 240 | 1.87 | 1.94 | 2.03 | 2.09 | 2.63 | 3.38 | – | – | 10 |
| 0320 | 320 | 1.87 | 1.94 | 2.03 | 2.09 | 2.63 | 3.38 | – | – | 10 |
| | | (W851) | (W851) | (W851) | (W851) | (W851) | (W851) | (W851) | (W851) | |

## Flap wheels for stainless steel work

**Design:** Aluminium oxide layers (A). Tough design, resin-bonded, heavy duty connected to 6 mm claw shaft.

**Application:** Special product for stainless steel work, also suitable for other types of steel. Ideal for moulding and modelling construction as well as for containers and equipment.

**8413** Recommended rpm 15500 min$^{-1}$, maximum rpm 25500 min$^{-1}$.
**8414** Recommended rpm 12000 min$^{-1}$, maximum rpm 19100 min$^{-1}$.
**8416** Recommended rpm 8000 min$^{-1}$, maximum rpm 15300 min$^{-1}$.
**8417** Recommended rpm 8000 min$^{-1}$, maximum rpm 12700 min$^{-1}$.
**8419** Recommended rpm 6000 min$^{-1}$, maximum rpm 9600 min$^{-1}$.



| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8413/8414/8416/8417/8419 | | ○ | | ● | | | | |

| Order No. | Grit | 8413 30 x 10 | 8414 40 x 20 | 8416 50 x 20 | 8417 60 x 30 | 8419 80 x 40 | PU |
|---|---|---|---|---|---|---|---|
| 0040 | 40 | 2.42 | 2.75 | 3.34 | 3.77 | 7.45 | 10 |
| 0060 | 60 | 2.42 | 2.75 | 3.34 | 3.77 | 7.45 | 10 |
| 0080 | 80 | 2.42 | 2.75 | 3.34 | 3.77 | 7.45 | 10 |
| 0120 | 120 | 2.42 | 2.75 | 3.34 | 3.77 | 7.45 | 10 |
| 0180 | 180 | 2.42 | 2.75 | 3.34 | 3.77 | 7.45 | 10 |
| | | (W851) | (W851) | (W851) | (W851) | (W851) | |

## Flap wheels, ceramic

NEW

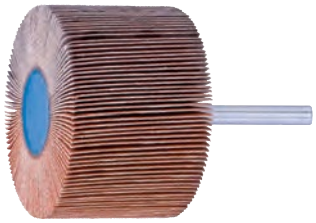
PFERD

**Design:** Resin-bonded ceramic sprinkling (CO-COOL). Extremely powerful cutting ability is effective at high pressure and provides excellent material removal. **Cooler cutting, non-clogging of tools** Highest residue removal with longer life span. With 6-mm claw shaft.

**Application:** For aluminium, steel and INOX. For tough grinding with maximum removal on hard, tough and poor heat conducting materials.

**8374** Recommended rpm 7000 min$^{-1}$, maximum rpm 15200 min$^{-1}$.

**8375** Recommended rpm 6300 min$^{-1}$, maximum rpm 12700 min$^{-1}$.



| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8374/8375 | ● | ● | | ● | | | | |

| Order No. | Grit | 8374 PFERD 50 x 30 | 8375 PFERD 60 x 30 | PU |
|---|---|---|---|---|
| 0040 | 40 | 7.35 | 7.80 | 10 |
| 0060 | 60 | 7.35 | 7.80 | 10 |
| 0080 | 80 | 7.35 | 7.80 | 10 |
| 0120 | 120 | 7.35 | 7.80 | 10 |
| | | (W848) | (W848) | |

## Non-woven Flap brush

format professional quality

**Design:** Aluminium oxide flaps (A), made from 240 grain silicon-carbide layers (SiC). Fleece-mop pins with abrasive fleece and aluminium oxide body layers are arranged in a 1:1 ratio around a radial core. With 6 mm claw shaft.

**Application:** For ordinary steel, stainless steel, aluminium and synthetics work. Ideal for achieving distinctive surfaces.

**8415** Maximum rpm 12000 min$^{-1}$

**8418** Maximum rpm 10000 min$^{-1}$

**8422** Maximum rpm 8000 min$^{-1}$

**8425** Maximum rpm 6000 min$^{-1}$

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8415/8418/8422/8425 | ● | ● | | ● | | ● | | |

| Order No. | Grit | 8415 format 50 x 30 | 8418 format 60 x 30 | 8422 format 80 x 50 | 8425 format 100 x 50 | PU |
|---|---|---|---|---|---|---|
| 0060 | 60 | 4.88 | 6.40 | 9.40 | 12.90 | 10 |
| 0100 | 100 | 4.88 | 6.40 | 9.50 | 12.90 | 10 |
| 0150 | 150 | 4.88 | 6.40 | 9.50 | 12.90 | 10 |
| 0240 | 240 | 4.88 | 6.40 | 9.50 | 12.90 | 10 |
| | | (W853) | (W853) | (W853) | (W853) | |

## Flap brushes

**Scotch-Brite™ CB-ZS**
**Design:** With aluminium oxide layers (A), strong-bonded to Nylon-fibre fleece, with 6 mm cast shaft.

**Application:** For removing surface defects and aligning surface gradation. Applicable for straight grinders, drilling machines and flexible shafts.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8420 | ● | ● | | ● | | | | |

| Order No. | | 0080 | 0120 | PU |
|---|---|---|---|---|
| **Grit** | | **80** | **120** | |
| **8420** | | **14.40** | **14.40** | 10 |
| Ø x height | mm | 75 x 45 | 75 x 45 | |
| Max. rpm | $min^{-1}$ | 7500 | 7500 | |

(W812)

## Flap brushes

**Scotch-Brite™ FF-ZS**
**Design:** Aluminium oxide layers (A), type fine with silicon-carbide layers (SiC), resin bonded to Nylon fibre fleece, with 6 mm cast shaft.

**Application:** For adjusting previously processed points, such as welds, oxide removal and tarnish as well as for light deburring, cleaning and finishing work. Applicable for straight grinders, drilling machines and flexible axles.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8421 | ● | | | ● | | | | |

| Order No. | | 0005 | 0011 | 0016 | PU |
|---|---|---|---|---|---|
| **Fineness grade** | | **Coarse** | **Fine** | **Very fine** | |
| **8421** | | **15.05** | **15.00** | **15.05** | 10 |
| Grit | | 100 | 280 | 400 | |
| Ø x height | mm | 75 x 45 | 75 x 45 | 75 x 45 | |
| Max. rpm | $min^{-1}$ | 8500 | 8500 | 8500 | |

(W812)

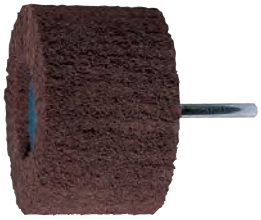
With POLINOX® fine honing tools almost all materials can be machined. The tools are mainly used to achieve special surface effects and for cleaning.

**Application:** For matt- and satin-finishing of metal, for cleaning oxidised non-ferrous metals, for seamless blending of rust-free steels, for roughening synthetics in preparation for glue as well as surface adjustment of welded joints.

## POLINOX® Non-woven flap brush

**PNL**
**Design:** Fleece with aluminium oxide grain (A). The abrasive fleece is arranged in radial layers The layers are very densely packed, for the longest possible life. With 6-mm claw shaft.

**Application:** For ordinary steel, stainless steel, aluminium and synthetics work. Ideal for work on flat surfaces.



**8440** Recommended rpm 7500 min$^{-1}$, maximum rpm 15000 min$^{-1}$.

**8441** Recommended rpm 6000 min$^{-1}$, maximum rpm 12000 min$^{-1}$.

**8442** Recommended rpm 5000 min$^{-1}$, maximum rpm 10000 min$^{-1}$.

**8443** Recommended rpm 4000 min$^{-1}$, maximum rpm 7500 min$^{-1}$.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8440/8441/8442/8443 | ● | ● | | ● | | ● | | |

| Order No. | Grit | 8440 PFERD 40 x 20 | 8441 PFERD 50 x 30 | 8442 PFERD 60 x 50 | 8443 PFERD 80 x 50 | PU |
|---|---|---|---|---|---|---|
| 0100 | 100 | 5.60 | 7.15 | 8.60 | 10.85 | 10 |
| 0180 | 180 | 5.60 | 7.15 | 8.60 | 10.85 | 10 |
| 0280 | 280 | 5.60 (W847) | 7.15 (W847) | 8.60 (W847) | 10.85 (W847) | 10 |

## POLINOX® Non-woven flap brush

**PNG**
**Design:** Fleece with aluminium oxide grain (A). Several strips of abrasive fleece are wrapped around a core. With 6 mm claw shaft.

**Application:** For ordinary steel, stainless steel, aluminium and synthetics work. Ideal for blending surfaces seamlessly

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8444 | ● | ● | | ● | | ● | | |

| Order No. | | 0100 | 0180 | 0280 | PU |
|---|---|---|---|---|---|
| Grit | | 100 | 180 | 280 | |
| 8444 PFERD | | 27.20 | 27.20 | 27.20 | 5 |
| Ø x height | mm | 100 x 50 | 100 x 50 | 100 x 50 | |
| rec. RPM | min$^{-1}$ | 3000 | 3000 | 3000 | |
| Max. rpm | min$^{-1}$ | 6000 | 6000 | 6000 | |

(W847)

## Handpads

**Design:** Resin-bonded aluminium oxide abrasive grain (from Order No. 0020 silicon carbide) on fabric fleece, flexible adjustment to the shape of the workpiece.

**Application:** For cleaning, deburring, finishing and grinding surfaces, in the metal, wood, synthetics sectors, and others in industry and trade. Can be used wet and dry. Can be used with hand blocks (Order No. 8451 1000).

**8451** **Scotch-Brite™ CP-HP, CF-HP, WR-SH**
Evenly scattered abrasive grain.
**Measurements (L x B) 224 x 158 mm.**

**8463** **Scotch-Brite™ MX-HP**
Evenly scattered, thick abrasive grain.
**Measurements (L x B) 228 x 115 mm.**

**8466** NEW **Scotch-Brite™ CF-HP PRO**
Evenly scattered, extra thick abrasive grain.
**Measurements (L x B) 228 x 115 mm.**

8451

8463

8466

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8451/8463/8466 | ● | ○ | ● | ● | ○ | ● | | ● |

| Order No. | Fineness grade | 8451 3M | 8463 3M | 8466 3M | PU | Grit |
|---|---|---|---|---|---|---|
| 0005 | Medium | 3.05 | – | – | 10 | 100–180 |
| 0010 | Fine | 1.46 | – | – | 10 | 180–220 |
| 0015 | Very fine | 1.46 | 1.10 * | – | 10 | 220–400 |
| 0015 | Very fine | – | – | 29.30 | 10 | 400–600 |
| 0020 | Super fine | – | 1.10 * | – | 10 | 400–600 |
| 0025 | Super fine | 1.46 | – | – | 10 | 400–600 |
| 0020 | Ultra fine | 1.46 (W812) | – (W812) | 29.30 (W812) | 10 | 600–800 |

* PU = 25 pieces.

## Hand block

**Scotch-Brite™ PH961**
**Design:** The base is equipped with hooks that hold the fleece securely.

**Application:** Can be used for hand pads (Order No. 8451) and fleece parts (Order No. 8454).

| Order No. | Dimension mm | 8451 3M |
|---|---|---|
| 1000 | 80 x 120 | 9.40 (W812) |

## Non-woven abrasive rolls

**Design:** Very flexible abrasive fleece. **Roll length 10 m.**

**Application:** For all metalwork. Ideal for finishing and polishing surfaces. Can be used wet and dry.

**8435** **Aluminium oxide A**

**8436** **Silicon-carbide (SiC)**

8436

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8435 | ● | ● | | ○ | | ● | | |
| 8436 | ● | ● | | ● | | ● | | |

| Order No. | Fineness grade | 8435 format | Grit | Roll width mm |
|---|---|---|---|---|
| 0120 | Medium | 34.10 | 100–180 | 115 |
| 0180 | Fine | 31.30 | 180–220 | 115 |
| 0320 | Very fine | 31.30 (W844) | 220–400 | 115 |

| Order No. | Fineness grade | 8436 format | Grit | Roll width mm |
|---|---|---|---|---|
| 0240 | Very fine | 29.60 NEW | 220–400 | 115 |
| 0320 | Extremely fine | 31.30 (W844) | 600–800 | 115 |

## Non-woven abrasive rolls

**Scotch-Brite™ CF-RL**
**Design:** Fibre fleece with resin-bonded abrasive. Cut-friendly, flexible and durable cleaning fleece to achieve a smooth matt finish. **Roll length 10 m.**

**Application:** For deburring dirt, corrosion and contamination as well as for matt-finishing and polishing surfaces, and for light deburring. Can be used manually or on orbital sanders.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8454 | ● | ○ | ● | ● | ○ | ● | | ● |

| Order No. | Fineness grade | 8454 3M | Grit | Colour | Roll width mm |
|---|---|---|---|---|---|
| 0005 | Very fine | 45.60 | 220–400 | Red | 100 |
| 0010 | Ultra fine | 45.60 (W812) | 600–800 | Grey | 100 |

## Non-woven abrasive rolls

**Scotch-Brite™ WR-RL**
**Design: Reinforced** Fibre fleece with resin-bonded abrasive. Cut-friendly, flexible and durable cleaning fleece. **Roll length 10 m.**

**Application:** For deburring dirt, corrosion and contamination as well as for matt-finishing and polishing surfaces, and for light deburring. Can be used manually or on orbital sanders.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8454 | ● | ○ | ● | ● | ○ | ● | | ● |

| Order No. | Fineness grade | 8454 3M | Grit | Colour | Roll width mm |
|---|---|---|---|---|---|
| 0015 | Medium | 76.40 | 100–180 | Red | 100 |
| 0020 | Fine | 52.70 (W812) | 180–220 | Red | 100 |

## Non-woven abrasive rolls

**Scotch-Brite™ CP-RL**
**Design:** Flexible, durable fibre fleece with resin-bonded abrasive, evenly scattered. High cutting performance and dense gradation for a smooth finish. **Roll length 5 m.**

**Application:** For deburring dirt, corrosion as well as for matt-finishing metal surfaces. For deburring wood fibre before and after priming, and for planing wood surfaces.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8454 | ● | ○ | ● | ● | ○ | ● | | ● |

| Order No. | Fineness grade | 8454 3M | Grit | Colour | Roll lengths mm |
|---|---|---|---|---|---|
| 0025 | Medium | 33.80 (W812) | 100–180 | Brown | 50 |

## Non-woven abrasive rolls, perforated

**Scotch-Brite™ MX-SR**
**Design:** Fibre fleece with resin-bonded abrasive. Cut-friendly, flexible and highly durable cleaning fleece, practical, pre-perforated rolls with economical hand pad sizes.

**Application:** Universal fleece for cleaning work and to achieve a smooth, fine finish. Cutting perforated sheets is easy and economical thanks to practical, tear-off rolls.

**Illustration similar**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8460 | ● | ○ | ● | ● | ○ | ○ | | ● |

| Order No. | Hand pad sizes mm | 8460 3M | Fineness grade | Grit | Colour | Number of pads |
|---|---|---|---|---|---|---|
| 0010 | 100 x 200 | 45.30 (W812) | Very fine | 220–400 | Purple | 60 |

## Flap brushes, coarse

**Scotch-Brite™ CS-MB**
**Design:** Flap brushes made from a very solid and flexible Clean & Strip fleece for coarse cleaning and finishing work. With 19 mm mounting.

**Application:** For cleaning weld seams. For removing oxide, rust and paint. For overlaying and veneering scratches. For removing wood fibres.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8457 | ● | ● | ● | | ○ | ○ | | ● |

| Order No. | Ø x height mm | 8457 3M | Fineness grade | Grit | Max. rpm $min^{-1}$ |
|---|---|---|---|---|---|
| 0005 | 100 x 100 | 113.50 (W812) | Coarse | 100 | 4000 |

## Receiver roller

**3M™ MA-AC**
**Design:** With 19 mm mounting.

**Application:** For use on burnishing machines. For mounting 3M™ abrasive sleeves (Order No. 8458 📖 8/65).

**Note:** The hard drum is not suitable for Order No. 8458 0100–0115!

8458 1005

8458 1000

8458 1010

| Order No. | Design | 8458 3M |
|---|---|---|
| 1000 | Pneumatic | 91.60 |
| 1005 | Hard | 91.60 |
| 1010 | Soft | 123.00 (W812) |

## Cubitron™/Cibitron™ II abrasive sleeves

**Design:** Full resin-bonded Cubitron™ ceramic-aluminium oxide mix on very hard and very tear-resistant Polyester backing for very long life. Closed scattering, with cutting additives for a cooler cut. **Measurements (L x W x ∅) 289 x 100 x 90 mm.**

**Application:** For use on burnishing machines using mounting drums within the Match and Finish systems. Especially used for medium-pressure application in stainless steel machining.

**Note:** Mounting drum, pneumatic (Order No. 8458 1000)
Mounting drum, hard (Order No. 8458 1005)
Mounting drum, soft (Order No. 8458 1010)
Detailed information about Cubitron™ is found on page 8/31.

**8458** 3M™ 777F Cubitron™ **8513** NEW 3M™ 947A Cubitron™ II

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8458/8513 | | ● | | ● | ○ | | | |

| Order No. | Grit 8458 | 8458 3M | 8513 3M | Grit 8513 |
|---|---|---|---|---|
| 0005 | P040 | 6.10 | 9.65 | 40+ |
| 0010 | P060 | 5.70 (W812) | 9.05 (W812) | 60+ |
| 0015 | P080 | 5.50 | 8.75 | 80+ |
| 0020 | P120 | 5.40 (W812) | 8.60 (W812) | 120+ |

## Trizact™ abrasive sleeves

**3M™ 237AA**
**Design:** Full resin-bonded aluminium oxide grain on heavy, tear-resistant, semi-flexible cloth backing for long service life. Uniform structure of the abrasive grain (pyramidal structure of the grinding surface) for finishing touches, constant roughness, with grinding aid for a cool touch. **Measurements (L x W x ∅) 289 x 100 x 90 mm.**

**Application:** For use on burnishing machines using mounting drums within the Match and Finish systems. For uniform, surface-finish quality with smooth patina in fewer operations.

**Note:** Mounting drum, pneumatic (Order No. 8458 1000)
Mounting drum, soft (Order No. 8458 1010)
Detailed information about Trizact™ can be found on page 8/31.

**Not suitable for application with hard mounting drums!**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8458 | ● | ● | ● | | ○ | | | |

| Order No. | Grit | 8458 3M | Grit according to US standard |
|---|---|---|---|
| 0100 | A160 | 8.10 | A160 |
| 0105 | A080 | 8.10 | A 80 |
| 0110 | A065 | 8.10 | A 65 |
| 0115 | A030 | 8.10 (W812) | A 30 |

## Non-woven abrasive sleeves

**Scotch-Brite™ SC-BF**
**Design:** Nylon-fibre fleece with resin-bonded aluminium oxide grain on a film underlay, very tear-resistant and slightly elastic, with grinding aid additives.
**Measurements (L x W x ∅) 289 x 100 x 90 mm.**

**Application:** For use on burnishing machines using mounting drums within the Match and Finish systems. Ideal for finishing and panel work.

**Note:** Mounting drum, pneumatic (Order No. 8458 1000)
Mounting drum, hard (Order No. 8458 1005)
Mounting drum, soft (Order No. 8458 1010)

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8458 | ● | ● | ● | | ○ | | | |

| Order No. | Fineness grade | 8458 3M | Grit |
|---|---|---|---|
| 0200 | Coarse | 14.80 | 80–100 |
| 0205 | Medium | 12.85 | 100–180 |
| 0210 | Very fine | 12.85 (W812) | 220–400 |

## Grinder mop wheel

**SM 611**

**100 x 100 mm**
**Design:** A many-sided tool for surface finishing. Aluminium oxide layers (A) on hardwearing fabric. The fan-shaped, radial layout is outstanding and particularly adapted to the contours of the workpiece. **Hole ∅ 19 mm.**

**Application:** For use on metal, wood, synthetics, colour, paint, filler etc. For use with all popular burnishing machines.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8446 | | ● | | | | ● | | ● |

| Order No. | Grit | 8446 | Max. rpm $min^{-1}$ |
|---|---|---|---|
| 0040 | 40 | 30.00 | 3700 |
| 0060 | 60 | 30.00 | 3700 |
| 0080 | 80 | 32.90 | 3700 |
| 0120 | 120 | 32.90 | 3700 |
| 0180 | 180 | 35.90 | 3700 |
| 0240 | 240 | 40.70 | 3700 |
| | | (W852) | |

## Non-woven polishing mop wheels

**NCW 600**

**100 x 100 mm**
**Design:** Abrasive fabric of aluminium oxide (A) grain-fleece combination. **Hole ∅ 19 mm.**

**Application:** For a very fine ground finish in metal and stainless steel work. Also suitable for synthetics. For use with all popular burnishing machines.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8424 | | ● | | ● | | ○ | | |

| Order No. | Grit | 8424 | Max. rpm $min^{-1}$ |
|---|---|---|---|
| 0080 | 80 | 20.70 | 3700 |
| 0100 | 100 | 20.70 | 3700 |
| 0150 | 150 | 20.70 | 3700 |
| 0180 | 180 | 20.70 | 3700 |
| | | (W852) | |

## Non-woven wheel

**NFW 600**

**100 x 100 mm**
**Design:** Fleece with aluminium oxide grain (A). **Hole ∅ 19 mm.**

**Application:** Especially suited to matt and satin finishing and for end-cutting metal. For use with all popular burnishing machines.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8427 | | ● | | ● | | | | |

| Order No. | Fineness grade | 8427 | Grit | Max. rpm $min^{-1}$ |
|---|---|---|---|---|
| 0010 | Coarse | 19.40 | 80–100 | 3700 |
| 0020 | Medium | 19.40 | 100–180 | 3700 |
| 0030 | Very fine | 19.40 | 220–400 | 3700 |
| | | (W852) | | |

## Cordless is best

Last year, battery running times and the performance of devices made huge progress. This makes them increasingly interesting to users. Devices without electrical connection have since become indispensable, especially in the building trade and for sanitary and heating installation and for use by janitors, fire brigades, emergency services and other mobile helpers. In order to work flexibly and cordlessly, the right tool is required alongside a high-performance device. Tools for conventional, power-operated devices are only suitable to some extent for cutting, roughing, grinding, brushing, cleaning, polishing or satin-finish.

They are too heavy and often not suitable for several applications in one work step. Users won't get far without a specially developed tool in mobile application, where speed and precision are crucial. The performance of the batteries is impaired due to conventional tools, the battery power is quickly depleted and has to be charged repeatedly. In addition, the tool change between different application consumes valuable time.

In order to prevent this, we have added a range of respective tools to our range, which ensure flexibility in application, low weight, easy handling and maximum precision to allow you to get the most from your battery powered device.

**Your advantages at a glance:**
- Low weight
- Precise working
- Flexible application
- Easy handling
- Low in vibration and smooth running
- Increase in battery power (more than 30 %)
- Less charging cycles

**8800** 8/13

**8801** 8/7

**8802** 8/45

The optimal coordination of the bond to the used grain type ensures higher abrasive action, thus allowing faster separation and removal of material. In turn, shorter processing times allow longer work with one battery charge.

With only 2 mm, the grinding disk has an extremely low design, which saves additional weight.

**8804** 8/17

Due to the turbo edge, the diamond cutting disk has a particularly aggressive cut and was optimised in weight. It is suitable for universal use.

**8805** 7/4

**8806** 7/4

**8807** 7/4

Brushes with silicon-carbide threads are universally applicable, lighter than steel wire brushes (up to 60% weight reduction), exhibit less risk of breaking and flexibly adapt to the surface. In addition, the brushes, polishing and satin-finishing disks for battery-operated devices are characterised by a lighter casing construction. All these factors contribute to a longer battery operating time.

**8808** 8/89

**8809** 8/89

**8810** 8/89

## Tungsten carbide burr (rotor-cutter) DIN 8032/8033 – 6 mm shaft ∅

**Application recommendations:**

- Use high turning speeds, if possible. Please observe our turning/cutting speed recommendations. With stationary use or countersunk jobs with 360°-wraps, this burr can be used at speeds below 3000 min$^{-1}$ as an exception.
- Only use with rigid clamping systems/drives; tool beat and rattle leads to premature wear.
- The contact surface of the burr to the workpiece should not exceed one third of the circumference during processing. An excessively large wrap angle of > 1/3 leads to uneven milling behaviour. This leads to tooth breakage.
- For poor heat conductors such as stainless steel, titanium alloys etc., we recommend a significant reduction in turning speed to avoid damaging the tool. Blue staining to the shank and tool should be avoided.
- For heavily lubricating materials it is sensible to use lubricants (grease, petroleum, chalk or other) to prevent the tooth system clogging.

**Carbide burrs can generally be reground. Re-grinding of small and miniature burrs is not advisable due to economic reasons.**

**Tooth system C/3 PLUS (according to DIN MX)**

**Tooth system 3 (according to DIN MY)**

**Tooth system 4 (according to DIN MX)**

**Tooth system 5 (according to DIN F)**

**Aluminium tooth system**

**Tooth system Special Alu**

**Tooth system INOX Reduced vibration and less noise**

**Tooth system STEEL 50 % higher cutting performance compared to conventional cross cutters**

| Material groups | | | Processing | Tooth system | Cutting speed |
|---|---|---|---|---|---|
| Steel, cast steel | Unhardened, non-tempered steels up to 1200 N/mm² (< 38 HRC) | Construction steels, carbon steels, tool steels, unalloyed steels, case-hardened steels, cast steel | Coarse machining = more material removal | 3 | 450– 600 m/min |
| | | | | C/3 PLUS | |
| | | | Fine machining = less material removal | 3 | 500– 600 m/min |
| | Hardened, tempered steels above 1200 N/mm² (> 38 HRC) | Tool steels, tempering steels, alloyed steels, cast steel | Coarse machining = more material removal | 3 | 250– 350 m/min |
| | | | | C/3 PLUS | |
| | | | | 4 | |
| | | | Fine machining = less material removal | 5 | 350– 450 m/min |
| | | | Coarse machining = more material removal | STEEL | 450– 750 m/min |
| Stainless steel INOX | Rust and acid resistant steels | Austenitic and ferritic stainless steels | Coarse machining = more material removal | 3 | 250– 350 m/min |
| | | | | C/3 PLUS | |
| | | | | 4 | |
| | | | | INOX | 450– 600 m/min |
| | | | Fine machining = less material removal | 5 | 350– 450 m/min |
| Non-ferrous metals | Soft NF metals, NF metals | Alu alloys, brass, copper, zinc | Coarse machining = more material removal | Alu | 600–1100 m/min |
| | | | | Special Alu | 400– 500 m/min |
| | | | Fine machining = less material removal | Alu | 800–1100 m/min |
| | Hard NF metals | Bronze, titanium/titanium alloys, hard Alu alloys (higher Si content) | Coarse machining = more material removal | 3 | 250– 350 m/min |
| | | | | 4 | |
| | | | Fine machining = less material removal | 3 | 350– 450 m/min |
| | | | Coarse machining = more material removal | Alu | 600–1150 m/min |
| | | | | Special Alu | 400– 500 m/min |
| | | | Fine machining = less material removal | Alu | 900–1100 m/min |
| | Heat-resistant materials | Nickel-based and cobalt-based alloys (engine and turbine construction) | Coarse machining = more material removal | C/3 PLUS | 300– 450 m/min |
| | | | | 4 | |
| | | | Fine machining = less material removal | 5 | 350– 500 m/min |
| Cast iron | grey cast iron, white cast iron | Cast iron with lamellar graphite EN-GJL (GG), with nodular graphite/ductile iron EN-GJS (GGS), white malleable EN-GJMVV (GTW), black malleable EN-GJMB (GTS) | Coarse machining = more material removal | 3 | 450– 600 m/min |
| | | | | C/3 PLUS | |
| | | | Fine machining = less material removal | 3 | 500– 600 m/min |
| Synthetics, other materials | Fibre-reinforced plastics (GFP/CFP), thermoplastic synthetics, hard rubber | | Coarse machining = more material removal | Alu | 500–1100 m/min |
| | | | | Special Alu | 500– 900 m/min |
| | | | Fine machining = less material removal | Alu | 500–1100 m/min |

**Safety recommendations:**

**Please observe the recommended revolutions!**

**Example:**
HM burr, tooth system 3 PLUS, ∅ 12 mm. Coarse machining of non-hardened, non-tempered steels. Cutting speed: 450–600 m/min.
**Revolution range: 12000–16000 min-1.**

HM burr, tooth system alu, ∅ 12 mm. Coarse machining of hard NF metals.
Cutting speed: 600–1100 m/min.
**Revolution range: 16000–30000 min-1.**

| | Cutting speeds m/min | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 900 |
| Burr ∅ mm | Revolutions min$^{-1}$ | | | | | | | |
| 2 | 40000 | 48000 | 56000 | 64000 | 72000 | 80000 | 95000 | 143000 |
| 3 | 27000 | 32000 | 37000 | 42000 | 48000 | 53000 | 64000 | 95000 |
| 4 | 20000 | 24000 | 28000 | 32000 | 36000 | 40000 | 48000 | 72000 |
| 6 | 13000 | 16000 | 19000 | 21000 | 24000 | 27000 | 32000 | 48000 |
| 8 | 10000 | 12000 | 14000 | 16000 | 18000 | 20000 | 24000 | 36000 |
| 10 | 8000 | 10000 | 11000 | 13000 | 14000 | 16000 | 19000 | 29000 |
| 12 | 7000 | 8000 | 9000 | 11000 | 12000 | 13000 | 16000 | 24000 |
| 16 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 | 12000 | 18000 |
| 20 | 4000 | 5000 | 6000 | 6000 | 7000 | 8000 | 10000 | 14000 |

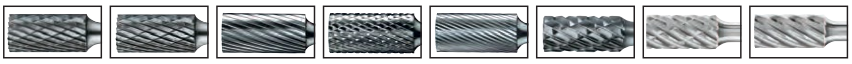
| | Cutting speed only for Alu/Special Alu m/min | | | | |
|---|---|---|---|---|---|
| | 400 | 500 | 600 | 900 | 1100 |
| Burr ∅ mm | Revolutions min$^{-1}$ | | | | |
| 3 | 42000 | 53000 | 64000 | 95000 | 117000 |
| 6 | 21000 | 27000 | 32000 | 48000 | 59000 |
| 8 | 16000 | 20000 | 24000 | 36000 | 44000 |
| 10 | 13000 | 16000 | 19000 | 29000 | 35000 |
| 12 | 11000 | 13000 | 16000 | 24000 | 30000 |
| 16 | 8000 | 10000 | 12000 | 18000 | 22000 |

## Tungsten carbide burr (rotor-cutter) DIN 8032/8033 – 6 mm shaft ∅

format professional quality PFERD

### Cylindrical ZYA, without end-tooth system

INOX



| Order No. | Shape | 2500 format C tooth system | 2501 PFERD Tooth system 3 PLUS | 2502 PFERD Tooth system 3 | 2504 PFERD Tooth system 4 | 2506 PFERD Tooth system 5 | 2508 format Tooth system ALU-Special | 2507 PFERD Serration STEEL | 2509 PFERD INOX tooth system | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | ZYA 0413 | 15.05 | 21.60 | – | 24.80 | 21.60 | – | – | – | 4 | 13 | 55 |
| 0010 | ZYA 0616 | 15.05 | 22.40 | 22.40 | 25.80 | 22.40 | 17.10 | – | 26.90 | 6 | 16 | 55 |
| 0015 | ZYA 0820 | 19.55 | 30.00 | 30.00 | 34.50 | 30.00 | – | 33.00 ** | 36.00 | 8 | 20 | 60 |
| 0020 | ZYA 1013 | 20.40 | 31.40 | – | 31.50 | 27.40 | – | – | – | 10 | 13 | 53 |
| 0025 | ZYA 1020 | 18.75 | 34.10 | 34.10 | 39.20 | 34.10 | – | 37.50 ** | 41.00 | 10 | 20 | 60 |
| 0030 | ZYA 1225 | 32.90 | 43.70 | 43.70 | 50.20 | 43.70 | 31.70 * | 48.00 ** | 52.30 | 12 | 25 | 65 |
| 0035 | ZYA 1625 | 41.40 (W230) | 55.70 (W234) | 55.70 (W234) | 64.10 (W234) | – (W234) | – (W230) | – (W234) | – (W234) | 16 | 25 | 65 |

* Shaft ∅ 8 mm.
** Burrs cannot be re-sharpened.

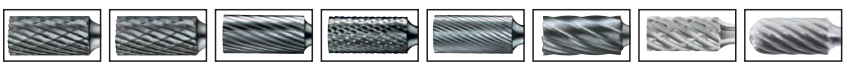
### Cylindrical ZYA-S, with end-tooth system

| Order No. | Shape | 2510 format C tooth system | 2511 PFERD Tooth system 3 PLUS | 2512 PFERD Tooth system 3 | 2514 PFERD Tooth system 4 | 2516 PFERD Tooth system 5 | 2518 format Aluminium tooth system | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | ZYA-S 0413 | 16.35 | 24.50 | – | 28.20 | 24.50 | – | 4 | 13 | 55 |
| 0010 | ZYA-S 0616 | 16.35 | 24.50 | 24.50 | 28.20 | 24.50 | 17.10 | 6 | 16 | 55 |
| 0015 | ZYA-S 0820 | 21.60 | 33.00 | 33.00 | 37.90 | 33.00 | – | 8 | 20 | 60 |
| 0020 | ZYA-S 1013 | 22.40 | – | – | – | – | – | 10 | 13 | 53 |
| 0025 | ZYA-S 1020 | 23.20 | 37.50 | 37.50 | 43.20 | 37.50 | 24.70 * | 10 | 20 | 60 |
| 0027 | ZYA-S 1025 | – | 42.80 | – | – | – | – | 10 | 25 | 65 |
| 0030 | ZYA-S 1225 | 36.20 | 48.00 | 48.00 | 55.20 | 48.00 | 31.60 * | 12 | 25 | 65 |
| 0035 | ZYA-S 1625 | 45.50 (W230) | 61.30 (W234) | 61.30 (W234) | 70.50 (W234) | 62.40 (W234) | – (W230) | 16 | 25 | 65 |

* Shaft ∅ 8 mm.

### Cylindrical drum WRC

INOX



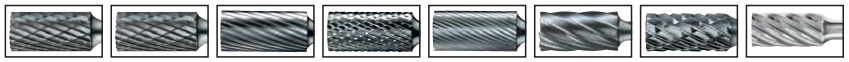
| Order No. | Shape | 2520 format C tooth system | 2521 PFERD Tooth system 3 PLUS | 2522 PFERD Tooth system 3 | 2524 PFERD Tooth system 4 | 2526 PFERD Tooth system 5 | 2528 format Alumini-um tooth system | 2527 PFERD Serration STEEL | 2529 PFERD INOX tooth system | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | WRC 0413 | 17.40 | 25.50 | – | 29.30 | – | – | – | – | 4 | 13 | 55 |
| 0010 | WRC 0616 | 17.40 | 24.90 | 24.90 | 28.70 | 24.90 | 19.90 | – | 29.90 | 6 | 16 | 55 |
| 0015 | WRC 0820 | 21.40 | 35.00 | 35.00 | 40.30 | 35.00 | – | 38.60 ** | 42.00 | 8 | 20 | 60 |
| 0020 | WRC 1020 | 23.40 | 39.60 | 39.60 | 45.50 | 39.60 | – | 43.60 ** | 47.50 | 10 | 20 | 60 |
| 0025 | WRC 1025 | 31.10 | 44.70 | 44.70 | 51.40 | – | – | – | – | 10 | 25 | 65 |
| 0030 | WRC 1225 | 36.90 | 53.70 | 53.70 | 61.80 | 53.70 | 26.90 * | 59.10 ** | 64.40 | 12 | 25 | 65 |
| 0035 | WRC 1625 | 46.40 (W230) | 64.30 (W234) | 64.30 (W234) | 74.00 (W234) | – (W234) | – (W230) | – (W234) | – (W234) | 16 | 25 | 65 |

* Shaft ∅ 8 mm.
** Burrs cannot be re-sharpened.
**Technical description see page 8/68.**

## Tungsten carbide burr (rotor-cutter) DIN 8032/8033 – 6 mm shaft ∅

### Ball shape KUD

INOX



| Order No. | Shape | 2530 format C tooth system | 2531 PFERD Tooth system 3 PLUS | 2532 PFERD Tooth system 3 | 2534 PFERD Tooth system 4 | 2536 PFERD Tooth system 5 | 2538 format Alumini-um tooth system | 2540 format Tooth system ALU-Special | 2541 PFERD INOX tooth system | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | KUD 0403 | 16.10 | 22.10 | – | – | 22.10 | – | – | – | 4 | 3.6 | 45 |
| 0010 | KUD 0605 | 16.10 | 21.00 | 21.00 | 24.10 | 21.00 | – | – | 25.20 | 6 | 5.4 | 45 |
| 0015 | KUD 0807 | 17.30 | 24.00 | 24.00 | 27.60 | 24.00 | – | 14.50 | 28.80 | 8 | 7.0 | 47 |
| 0020 | KUD 1009 | 19.25 | 27.40 | 27.40 | 31.60 | 27.40 | – | – | 32.90 | 10 | 9.0 | 49 |
| 0025 | KUD 1210 | 26.00 | 34.10 | 34.10 | 39.20 | 34.10 | 19.25 * | – | – | 12 | 10.8 | 50 |
| 0025 | KUD 1210 | – | – | – | – | – | – | – | 40.90 | 12 | 10.8 | 51 |
| 0030 | KUD 1614 | 32.10 | 45.60 | – | 52.50 | 45.60 | – | – | – | 16 | 14.3 | 54 |
| 0035 | KUD 2018 | 38.00 (W230) | 64.40 (W234) | 64.40 (W234) | – (W234) | – (W234) | – (W230) | – (W230) | – (W234) | 20 | 18.0 | 58 |

* Shaft ∅ 8 mm.

### Pointed tree shape SPG

| Order No. | Shape | 2542 format C tooth system | 2543 PFERD Tooth system 3 PLUS | 2544 PFERD Tooth system 3 | 2546 PFERD Tooth system 4 | 2548 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | SPG 0618 | 18.25 | 24.00 | 24.00 | 27.60 | 24.00 | 6 | 18 | 55 |
| 0010 | SPG 1020 | 24.50 | 39.60 | 39.60 | 45.50 | 39.60 | 10 | 20 | 60 |
| 0015 | SPG 1225 | 33.30 | 45.70 | 45.70 | 52.50 | 45.70 | 12 | 25 | 65 |
| 0020 | SPG 1230 | 37.50 | 50.60 | 50.60 | 58.20 | 50.60 | 12 | 30 | 70 |
| 0025 | SPG 1630 | 46.40 (W230) | 62.80 (W234) | 62.80 (W234) | 72.20 (W234) | – (W234) | 16 | 30 | 70 |

### Drop shape TRE

| Order No. | Shape | 2550 format C tooth system | 2552 PFERD Tooth system 3 | 2554 PFERD Tooth system 4 | 2558 format Tooth system ALU-Special | Head ∅ mm | Head length mm | Radius mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | TRE 0610 | 19.55 | – | – | 19.90 | 6 | 10 | 2.8 | 50 |
| 0010 | TRE 0813 | 21.50 | – | 40.40 | – | 8 | 13 | 3.7 | 53 |
| 0015 | TRE 1016 | 23.40 | – | 46.10 | – | 10 | 16 | 4.0 | 56 |
| 0020 | TRE 1220 | 34.40 | 41.50 | 47.80 | 28.40 * | 12 | 20 | 5.0 | 60 |
| 0025 | TRE 1625 | 47.70 (W230) | – (W234) | 70.00 (W234) | – (W230) | 16 | 25 | 6.5 | 65 |

* Shaft ∅ 8 mm.

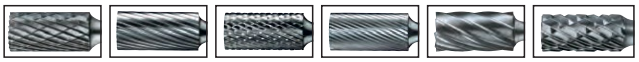
### Conical, pointed SKM

| Order No. | Shape | 2560 format C tooth system | 2562 PFERD Tooth system 3 | 2564 PFERD Tooth system 4 | 2566 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Angle | Total length mm |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | SKM 0618 | 18.65 | 24.00 | 27.60 | 24.00 | 6 | 18 | 18° | 55 |
| 0010 | SKM 1020 | 29.40 | 29.20 | 37.00 | 32.20 | 10 | 20 | 28° | 60 |
| 0015 | SKM 1225 | 36.90 (W230) | 44.70 (W234) | 51.40 (W234) | 44.70 (W234) | 12 | 25 | 26° | 65 |

Technical description see page 8/68.

## Tungsten carbide burr (rotor-cutter) DIN 8032/8033 – 6 mm shaft ∅

### Conical shape with radius end KEL



| Order No. | Shape | 2568 format C tooth system | 2570 PFERD Tooth system 3 | 2572 PFERD Tooth system 4 | 2574 PFERD Tooth system 5 | 2576 format Alumini-um tooth system | 2578 format Tooth system ALU-Special | Head ∅ mm | Head length mm | Angle | Radius mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | KEL 1020 | 29.30 | 39.60 | 45.60 | – | – | 29.40 | 10 | 20 | 14° | 2.9 | 60 |
| 0010 | KEL 1225 | 32.60 | 55.40 | 63.70 | – | – | – | 12 | 25 | 14° | 3.3 | 65 |
| 0015 | KEL 1230 | 35.80 | 60.40 | 69.40 | 60.40 | 28.80 * | – | 12 | 30 | 14° | 2.6 | 70 |
| 0020 | KEL 1630 | 64.60 (W230) | – (W234) | 75.10 (W234) | – (W234) | – (W230) | – (W230) | 16 | 30 | 14° | 4.8 | 70 |

* Shaft ∅ 8 mm.

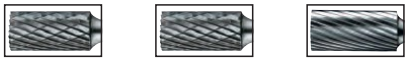
### Round arch shape RBF

INOX

| Order No. | Shape | 2580 format C tooth system | 2582 PFERD Tooth system 3 | 2584 PFERD Tooth system 4 | 2586 PFERD Tooth system 5 | 2588 format Alumini-um tooth system | 2587 PFERD Serration STEEL | 2589 PFERD INOX tooth system | Head ∅ mm | Head length mm | Radius mm | Total length mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0005 | RBF 0618 | 18.25 | 24.80 | 28.50 | 24.80 | 25.30 | – | 29.70 | 6 | 18 | 1.5 | 55 |
| 0010 | RBF 0820 | 20.60 | 35.00 | 40.30 | – | – | 38.50 ** | 42.00 | 8 | 20 | 1.2 | 60 |
| 0015 | RBF 1020 | 22.90 | 40.60 | 46.60 | 40.60 | – | 44.60 ** | 48.70 | 10 | 20 | 2.5 | 60 |
| 0020 | RBF 1225 | 34.00 | 47.00 | 54.10 | 47.00 | 24.00 * | 51.80 ** | 56.40 | 12 | 25 | 2.5 | 65 |
| 0025 | RBF 1630 | 46.80 (W230) | 64.70 (W234) | 74.40 (W234) | – (W234) | – (W230) | – (W234) | – (W234) | 16 | 30 | 3.6 | 70 |

* Shaft ∅ 8 mm.
** Burrs cannot be re-sharpened.

### Flame shape B



| Order No. | Shape | 2590 format C tooth system | 2591 PFERD Tooth system 3 PLUS | 2592 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0005 | B 0820 | 21.30 | 39.20 | 39.20 | 8 | 20 | 60 |
| 0010 | B 1230 | 49.10 | 51.50 | 51.50 | 12 | 30 | 70 |
| 0015 | B 1635 | 67.70 (W230) | – (W234) | – (W234) | 16 | 35 | 75 |

### Angle shape WKN

**Without end-tooth system**

| Order No. | Shape | 2598 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Angle | Total length mm |
|---|---|---|---|---|---|---|
| 0005 | WKN 1013 | 44.80 | 10 | 13 | 10° | 53 |
| 0010 | WKN 1213 | 49.10 | 12 | 13 | 20° | 53 |
| 0015 | WKN 1613 | 59.40 (W234) | 16 | 13 | 20° | 53 |

Technical description see page 8/68.

## Plastic box, empty

NEW

format professional quality

**Design:** With foam insert for burrs.

| Order No. | For shaft ∅ mm | 2600 format |
|---|---|---|
| 0000 | 6 | 14.65 (W230) |

## Tungsten-carbide burr set

format professional quality

**Design:** Tooth system C, **shaft diameter 6 mm.**
Supplied in plastic box with foam insert.

| Order No. | Design | 2600 format | Set contents |
|---|---|---|---|
| 0010 | 10-piece | 245.00 (W230) | 2 cylindrical ZYA 0820, ZYA 1020<br>2 cylindrical with ball end WRC 0820, WRC 1020<br>2 ball shape KUD 0807, KUD 1009<br>2 bullet shape SPG 1020, SPG 1225<br>1 conical with round end KEL 1020<br>1 round arch shape RBF 0820 |

## Small tungsten-carbide burr (rotor-cutter) DIN 8032/8033 - 3 mm shaft ∅

format professional quality PFERD

## Cylindrical ZYA, without end-tooth system

| Order No. | Shape | 2602 format C tooth system | 2604 PFERD Tooth system 4 | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0005 | ZYA 0210 | 9.35 | 13.90 | 12.10 | 2 | 10 | 40 |
| 0010 | ZYA 0313 | 9.35 | 13.90 | 12.10 | 3 | 13 | 43 |
| 0015 | ZYA 0607 | 14.20 | – | 13.30 | 6 | 7 | 37 |
| 0020 | ZYA 0613 | 14.20 (W230) | – (W234) | 13.30 (W234) | 6 | 13 | 43 |

Technical description see page 8/68.

## Small tungsten-carbide burr (rotor-cutter) DIN 8032/8033 - 3 mm shaft ∅

format professional quality PFERD

### Cylindrical ZYA-S, with end-tooth system

| Order No. | Shape | 2602 format C tooth system | 2604 PFERD Tooth system 4 | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0025 | ZYA-S 0607 | 14.20 | – | 16.00 | 6 | 7 | 37 |
| 0020 | ZYA-S 0613 | – (W230) | 18.40 (W234) | – (W234) | 6 | 13 | 43 |

### Cylindrical drum WRC

| Order No. | Shape | 2602 format C tooth system | 2604 PFERD Tooth system 4 | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0030 | WRC 0210 | 9.35 | 14.75 | 13.45 | 2 | 10 | 40 |
| 0035 | WRC 0313 | 9.60 | 14.75 | 13.45 | 3 | 13 | 43 |
| 0040 | WRC 0613 | 14.20 (W230) | 17.85 (W234) | 16.20 (W234) | 6 | 13 | 43 |

### Ball shape KUD

| Order No. | Shape | 2602 format C tooth system | 2604 PFERD Tooth system 4 | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0045 | KUD 0302 | 9.60 | 15.45 | 13.45 | 3 | 2 | 33 |
| 0050 | KUD 0403 | – | 18.65 | 16.20 | 4 | 3 | 34 |
| 0055 | KUD 0605 | 14.20 (W230) | 18.65 (W234) | 16.20 (W234) | 6 | 5 | 35 |

### Angle shape WKN

**Without end-tooth system**

| Order No. | Shape | 2602 format C tooth system | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Angle | Total length mm |
|---|---|---|---|---|---|---|---|
| 0060 | WKN 0307 | 10.80 | 12.75 | 3 | 7 | 8° | 37 |
| 0065 | WKN 0607 | 14.20 (W230) | 14.95 (W234) | 6 | 7 | 10° | 37 |

### Drop shape TRE

| Order No. | Shape | 2602 format C tooth system | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Radius mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0070 | TRE 0307 | 9.60 | 13.45 | 3 | 7 | 1.2 | 37 |
| 0075 | TRE 0610 | 14.20 (W230) | 14.80 (W234) | 6 | 10 | 2.8 | 40 |

Technical description see page 8/68.

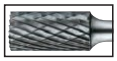


Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Small tungsten-carbide burr (rotor-cutter) DIN 8032/8033 - 3 mm shaft ∅

format professional quality PFERD

### Flame shape B



| Order No. | Shape | 2602 format C tooth system | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Radius mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0080 | B 0307 | 9.60 | 13.45 | 3 | 7 | 0.8 | 37 |
| 0085 | B 0613 | 21.00 (W230) | 16.20 (W234) | 6 | 13 | 1.0 | 43 |

### Conical, pointed SKM

| Order No. | Shape | 2602 format C tooth system | 2604 PFERD Tooth system 4 | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Angle | Total length mm |
|---|---|---|---|---|---|---|---|---|
| 0090 | SKM 0307 | 9.60 | – | 13.45 | 3 | 7 | 21° | 37 |
| 0095 | SKM 0311 | 9.60 | 14.75 | 13.45 | 3 | 11 | 14° | 41 |
| 0100 | SKM 0613 | 14.20 (W230) | – (W234) | 14.80 (W234) | 6 | 13 | 25° | 43 |

### Round arch shape RBF

| Order No. | Shape | 2602 format C tooth system | 2604 PFERD Tooth system 4 | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Radius mm | Total length mm |
|---|---|---|---|---|---|---|---|---|
| 0105 | RBF 0307 | 9.60 | – | 13.45 | 3 | 7 | 0.75 | 37 |
| 0110 | RBF 0613 | 14.20 (W230) | 17.00 (W234) | 14.80 (W234) | 6 | 13 | 1.50 | 43 |

### Pointed tree shape SPG

| Order No. | Shape | 2602 format C tooth system | 2604 PFERD Tooth system 4 | 2606 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0115 | SPG 0307 | 9.60 | 13.45 | 13.45 | 3 | 7 | 37 |
| 0120 | SPG 0313 | 9.60 | 13.45 | 14.75 | 3 | 13 | 43 |
| 0125 | SPG 0613 | 14.20 (W230) | 16.30 (W234) | 14.80 (W234) | 6 | 13 | 43 |

Technical description see page 8/68.

## Plastic box, empty

NEW

**Design:** With foam insert for burrs.

| Order No. | For shaft ∅ mm | 2601 format professional quality |
|---|---|---|
| 0000 | 3 | 14.65 (W230) |

## Small tungsten-carbide burr set

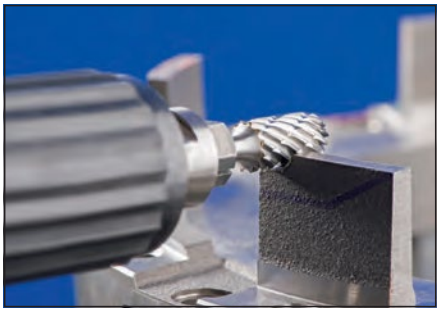
**Design:** Tooth system C, **shaft ∅ 3 mm.** Supplied in plastic box with foam insert.

| Order No. | Design | 2601 format professional quality | Set contents |
|---|---|---|---|
| 0008 | 8-piece | 120.50 NEW | 1 cylindrical shape ZYA 0313<br>1 ball cylinder shape WRC 0313<br>2 ball shape KUD 0302, KUD 0605<br>1 flame shape 3B 0307<br>2 conical pointed shape SKM 0307, SKM 0613<br>1 bullet shape SPG 0313 |
| 0015 | 15-piece | 201.50 | 4 cylindrical ZYA 0210, ZYA 0313, ZYA 0607, ZYA 0613<br>2 cylindrical with ball end WRC 0210, WRC 0313<br>1 ball shape KUD 0605<br>1 angle shape WKN 0307<br>2 drop shape TRE 0307, TRE 0610<br>1 flame shape 3B 0307<br>1 conical pointed SKM 0613<br>2 round arch shape RBF 0307, RBF 0613<br>1 bullet shape SPG 0307 |

(W230)

2601 0008

2601 0015



Technical description see page 8/68.

## HSS burr

**Application recommendations:**

1. HSS burrs, thanks to their special tooth geometry and high production quality, particularly suitable for deburring, chamfering, cast-iron fettling and processing aluminium. They can also be used cost-effectively with low-power machines in the low turning rate range.
2. HSS burrs should be used with low-revolution machines, compared to hard-metal burrs.
3. They are not available for applications where there are high revolution rates.
4. The toughness of high-speed steel (HSS) provides greater stability of tooth cutting.

PFERD

**Tooth system 1 without chip deflector.**

**Tooth system 3 with chip deflector.**

**Tooth system 5 without chip deflector.**

**Observe safety recommendations:**

**Please observe the recommended revolutions!**

| Material groups | | | Processing | Tooth system | Cutting speed |
|---|---|---|---|---|---|
| Steel, cast steel | Uncured, non-tempered steel up to 1200 N/mm² (< 38 HRC) | Construction steels, carbon steels, tool steels, unalloyed steels, case-hardened steels, cast steel | Coarse machining = more material removal | 3 | 60– 80 m/min |
| | | | Fine machining = lower material removal | 3 | 80–100 m/min |
| | | | | 5 | 60– 80 m/min |
| Stainless steel INOX | Rust and acid-resistant steels | austenitic and ferritic stainless steels | Coarse machining = more material removal | 1 | 60– 80 m/min |
| | | | Fine machining = lower material removal | 1 | 80–100 m/min |
| Non-ferrous metals | Soft NF metals | Alu alloys, brass, copper, zinc | Coarse machining = more material removal | 1 | 200–300 m/min |
| | | | Fine machining = lower material removal | | |
| Cast iron | Grey cast iron, white cast iron | Cast iron with lamellar graphite EN-GJL (GG), with nodular graphite/ductile iron EN-GJS (GGS), white malleable EN-GJMVV (GTW), black malleable EN-GJMB (GTS) | Coarse machining = more material removal | 3 | 60– 80 m/min |
| | | | Fine machining = lower material removal | 3 | 80–100 m/min |
| | | | | 5 | 80–100 m/min |
| Synthetics, other materials | Fibre-reinforced, thermoplastic and duro-plastic synthetics, hard rubber, wood | | Coarse machining = more material removal | 1 | 200–300 m/min |
| | | | Fine machining = lower material removal | 1 | 250–300 m/min |

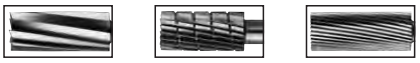
| | Cutting speeds m/min | | | | | |
|---|---|---|---|---|---|---|
| | 60 | 80 | 100 | 200 | 250 | 300 |
| Burr ∅ mm | Revolutions $min^{-1}$ | | | | | |
| 2,3 | 8400 | 11100 | 13900 | 27700 | 34600 | 41600 |
| 3,2 | 6000 | 8000 | 10000 | 19900 | 24900 | 29900 |
| 4 | 4800 | 6400 | 8000 | 16000 | 19900 | 23900 |
| 5 | 3900 | 5100 | 6400 | 12800 | 16000 | 19100 |
| 6 | 3200 | 4300 | 5400 | 10700 | 13300 | 16000 |
| 7 | 2800 | 3700 | 4600 | 9100 | 11400 | 13700 |
| 8 | 2400 | 3200 | 4000 | 8000 | 10000 | 12000 |
| 10 | 2000 | 2600 | 3200 | 6400 | 8000 | 9600 |
| 12 | 1600 | 2200 | 2700 | 5400 | 6700 | 8000 |
| 14 | 1400 | 1900 | 2300 | 4600 | 5700 | 6900 |
| 16 | 1200 | 1600 | 2000 | 4000 | 5000 | 6000 |

**Example:**
HM burr, tooth system 1, ∅ 12 mm. Coarse machining of soft NF metals. Cutting speed: 200–300 m/min.
**Revolution range: 5400–8000 $min^{-1}$.**

## HSS burr - 6 mm shaft ∅

PFERD

### Cylindrical shape A, with end-tooth system

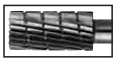


| Order No. | Shape | 2610 PFERD Tooth system 1 | 2612 PFERD Tooth system 3 | 2614 PFERD Tooth system 5 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0005 | A 0413 ST | – | 9.00 | – | 4 | 13 | 60 |
| 0010 | A 0616 ST | 9.20 | 9.20 | 9.20 | 6 | 16 | 60 |
| 0015 | A 0820 ST | – | 10.25 | – | 8 | 20 | 60 |
| 0020 | A 1013 ST | – | 14.25 | – | 10 | 13 | 53 |
| 0025 | A 1020 ST | – | 16.00 | – | 10 | 20 | 60 |
| 0030 | A 1225 ST | 18.50 | 18.50 | 18.90 | 12 | 25 | 65 |
| 0035 | A 1625 ST | – | 24.20 | – | 16 | 25 | 65 |
| | | (W236) | (W236) | (W236) | | | |

### Drum shape C

| Order No. | Shape | 2616 PFERD Tooth system 1 | 2618 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|
| 0005 | C 0616 | 8.80 | 8.80 | 6 | 16 | 60 |
| 0010 | C 0820 | – | 10.00 | 8 | 20 | 60 |
| 0015 | C 1020 | – | 16.10 | 10 | 20 | 60 |
| 0020 | C 1225 | – | 18.45 | 12 | 25 | 65 |
| | | (W236) | (W236) | | | |

### Pointed tree shape K



| Order No. | Shape | 2622 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|
| 0005 | K 0618 | 8.60 | 6 | 18 | 60 |
| 0010 | K 1020 | 16.60 | 10 | 20 | 60 |
| 0015 | K 1225 | 17.65 | 12 | 25 | 65 |
| 0020 | K 1630 | 25.80 | 16 | 30 | 70 |
| | | (W236) | | | |

### Conical shape with radius end L

| Order No. | Shape | 2624 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Angle | Radius mm | Total length mm |
|---|---|---|---|---|---|---|---|
| 0000 | L 1020 | 15.65 NEW | 10 | 20 | 14° | 2.9 | 60 |
| 0005 | L 1230 | 18.45 | 12 | 30 | 14° | 2.6 | 70 |
| 0010 | L 1630 | 23.70 | 16 | 30 | 14° | 4.8 | 70 |
| | | (W236) | | | | | |

Technical description see page 8/76.

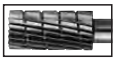


Articles marked ◊ are not held in stock, procurement is effected at short notice.

## HSS burr - 6 mm shaft ∅

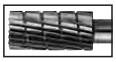
PFERD

### Drop shape O



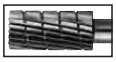
| Order No. | Shape | 2626 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Radius mm | Total length mm |
|---|---|---|---|---|---|---|
| 0005 | O 1220 | 16.60 | 12 | 20 | 5.0 | 60 |
| 0010 | O 1625 | 23.70 (W236) | 16 | 25 | 6.5 | 65 |

### Ball shape F



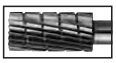
| Order No. | Shape | 2628 PFERD Tooth system 1 | 2630 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|---|
| 0005 | F 0403 | – | 8.80 | 4 | 3.6 | 55 |
| 0010 | F 0605 | – | 9.10 | 6 | 5.4 | 55 |
| 0015 | F 0807 | 14.25 | 14.25 | 8 | 7.0 | 55 |
| 0020 | F 1009 | – | 16.60 | 10 | 9.0 | 49 |
| 0025 | F 1210 | – | 19.90 | 12 | 10.8 | 51 |
| 0030 | F 1614 | – (W236) | 23.70 (W236) | 16 | 14.3 | 54 |

### Conical, pointed G



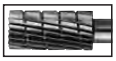
| Order No. | Shape | 2634 PFERD Tooth system 1 | 2636 PFERD Tooth system 3 | Head ∅ mm | Head length mm | Angle | Total length mm |
|---|---|---|---|---|---|---|---|
| 0005 | G 0618 | – | 8.55 | 6 | 18 | 14° | 60 |
| 0010 | G 1020 | 14.25 | 14.25 | 10 | 20 | 28° | 60 |
| 0015 | G 1225 | – (W236) | 18.45 (W236) | 12 | 25 | 27° | 65 |

### Club shape HSS 64



| Order No. | Description | 2640 PFERD Tooth system 3 | Largest head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|
| 0005 | HSS 64 | 20.10 (W236) | 12 | 30 | 70 |

### Angle shape HSS 63



**With end-tooth system**

| Order No. | Description | 2641 PFERD Tooth system 3 | Largest head ∅ mm | Smallest head ∅ mm | Head length mm | Angle | Total length mm |
|---|---|---|---|---|---|---|---|
| 0005 | HSS 63 | 18.90 (W236) | 12 | 8 | 30 | 7° | 70 |

Technical description see page 8/76.

## HSS burr set

**2652** **Design:** Tooth system 3, **shaft ∅ 6 mm.**
Supplied in plastic box with tool fixings.

**2653** **Design:** Tooth system 3, **shaft ∅ 6 mm.**
Supplied in plastic box with foam insert.

| Order No. | Design | 2652 PFERD | Set contents |
|---|---|---|---|
| 0010 | 10-piece | 204.00 | 2 cylindrical shape A 1013 ST, A 1625 ST<br>1 ball shape F 1614<br>1 conical, pointed G 1020<br>1 arch shape, pointed K 1630<br>2 conical, round-end shape L 1020, L 1630<br>1 drop shape O 1625<br>1 conical, blunt-end shape W 1220<br>1 special shape HSS 45 |
| | | (W236) | |

| Order No. | Design | 2653 PFERD | Set contents |
|---|---|---|---|
| 0018 | 18-piece | 265.50 | 2 cylindrical A 0616 ST, A 1225 ST<br>2 cylindrical with round end C 0616, C 1225<br>4 ball shape F 0403, F 0807, F 1210, F 1614<br>2 conical, pointed G 0618, G 1225<br>3 arch shape, pointed K 0618, K 1225, K 1230<br>2 drop shape O 0610, O 1220<br>1 special shape HSS 55<br>1 special shape HSS 63<br>1 special shape HSS 64 |
| | | (W236) | |

2652

2653

## HSS Light metal burr

**Design:** With special tooth system and female thread M10, suitable for spindle with **shaft ∅ 6 mm or 8 mm** (Order No. 2644).

**Application:** For deburring light, cast steel parts.

| Order No. | Description | 2642 PFERD | Head ∅ mm | Head length mm | Total length mm |
|---|---|---|---|---|---|
| 0005 | HSS 119 | 38.60 | 20 | 53 | 62 |
| 0010 | HSS 120 | 36.10 * | 20 | 45 | 54 |
| | | (W236) | | | * With chip deflector. |

HSS 119

HSS 120 with chip deflector

## Spindles

**Application:** For light metal burrs (Order No. 2642) with female thread.

| Order No. | Description | 2644 PFERD | Shaft ∅ mm | Length mm | Thread |
|---|---|---|---|---|---|
| 0006 | 6/10 | 5.40 | 6 | 40 | M10 |
| 0008 | 8/10 | 8.20 | 8 | 40 | M10 |
| | | (W236) | | | |

## HSS engraving point

**Design:** With special tooth system, **shaft ∅ 6 mm.**

| Order No. | Description | 2650 PFERD | Head ∅ mm | Head length mm | Angle | Shaft length mm |
|---|---|---|---|---|---|---|
| 0010 | 305 | 9.30 | 3 | 4.5 | – | 40 |
| 0013 | 306 | 9.30 | 3 | 4.5 | 34° | 40 |
| 0019 | 311 | 8.70 | 6 | 5.6 | – | 40 |
| | | (W236) | | | | Technical description see page 8/76. |

305

306

311

## High-grade aluminium oxide mounted point

**Design:** High-grade aluminium oxide pink (AR, hardness O) or high-grade aluminium oxide mixture dark red/white (ADW, hardness M), ceramic binding 5 V, universally applicable, inherently stable and firm-edged.

**Application:** For steel, cast steel, weld seams.

Recommended peripheral speed: AR 25–40 m/s
Recommended peripheral speed: ADW 30–50 m/s

**Grain type AR**

**Grain type ADW**

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8481/8462/8483/8482/8485/8484/8487/8459 | | ● | | ○ | ○ | | | |

## Cylinder pin ZY - 3 mm shaft diameter, grit fine

| Order No. | | 0205 | 0306 | 0408 | 0510 | 0613 | 0810 | 0816 |
|---|---|---|---|---|---|---|---|---|
| Type | | ZY 0205 | ZY 0306 | ZY 0408 | ZY 0510 | ZY 0613 | ZY 0810 | ZY 0816 |
| 8481 PFERD | | 1.68 | 1.48 | 1.48 | 1.48 | 1.56 | 1.48 | 1.50 |
| Head Ø x height | mm | 2 x 5 | 3 x 6 | 4 x 8 | 5 x 10 | 6 x 13 | 8 x 10 | 8 x 16 |
| Grit type | | ADW | ADW | ADW | ADW | ADW | ADW | ADW |
| Grit size | | 100 | 100 | 100 | 100 | 100 | 80 | 80 |
| Max. rpm | $min^{-1}$ | 201800 | 206100 | 175100 | 130700 | 93600 | 87600 | 61000 |

(W855)

## Pointed arch SP - 3 mm shaft diameter, grit fine

| Order No. | | 0306 | 0510 |
|---|---|---|---|
| Type | | SP 0306 | SP 0510 |
| 8462 PFERD | | 1.70 | 1.80 |
| Head Ø x height | mm | 3 x 6 | 5 x 10 |
| Grit type | | AR | AR |
| Grit size | | 100 | 100 |
| Max. rpm | $min^{-1}$ | 252000 | 149500 |

(W855)

## Cylinder pin ZY - 6 mm shaft Ø, grit fine

| Order No. | | 0510 | 0613 | 0816 | 1020 | 1032 | 1325 | 1632 | 2025 | 2532 |
|---|---|---|---|---|---|---|---|---|---|---|
| Type | | ZY 0510 | ZY 0613 | ZY 0816 | ZY 1020 | ZY 1032 | ZY 1325 | ZY 1632 | ZY 2025 | ZY 2532 |
| 8483 PFERD | | 1.48 | 1.56 | 1.50 | 1.70 | 2.08 | 1.95 | 2.08 | 1.99 | 2.54 |
| Head Ø x height | mm | 5 x 10 | 6 x 10 | 8 x 16 | 10 x 20 | 10 x 32 | 13 x 25 | 16 x 32 | 20 x 25 | 25 x 32 |
| Grit type | | AR | ADW | ADW | ADW | ADW | ADW | ADW | ADW | AR |
| Grit size | | 100 | 100 | 80 | 80 | 80 | 80 | 60 | 60 | 60 |
| Max. rpm | $min^{-1}$ | 157800 | 131500 | 119300 | 95400 | 83200 | 66000 | 51200 | 47700 | 32900 |

(W855)

## Cylinder pin ZY - 6 mm shaft Ø, grit coarse

| Order No. | | 0510 | 0613 | 0816 | 1020 | 1032 | 1325 | 1604 | 1632 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|
| Type | | ZY 0510 | ZY 0613 | ZY 0816 | ZY 1020 | ZY 1032 | ZY 1325 | ZY 1604 | ZY 1632 | ZY 2006 |
| 8482 PFERD | | 1.48 | 1.56 | 1.50 | 1.70 | 2.08 | 1.95 | 1.53 | 2.08 | 1.80 |
| Head Ø x height | mm | 5 x 10 | 6 x 13 | 8 x 16 | 10 x 20 | 10 x 32 | 13 x 25 | 16 x 4 | 16 x 32 | 20 x 6 |
| Grit type | | ADW | ADW | ADW | ADW | ADW | ADW | ADW | ADW | ADW |
| Grit size | | 60 | 60 | 46 | 46 | 46 | 46 | 46 | 30 | 46 |
| Max. rpm | $min^{-1}$ | 157800 | 131500 | 119300 | 95400 | 83200 | 66000 | 59600 | 51200 | 47700 |

(W855)

| Order No. | | 2025 | 2040 | 2513 | 2532 | 3216 | 3232 | 4020 | 5025 |
|---|---|---|---|---|---|---|---|---|---|
| Type | | ZY 2025 | ZY 2040 | ZY 2513 | ZY 2532 | ZY 3216 | ZY 3232 | ZY 4020 | ZY 5025 |
| 8482 PFERD | | 1.99 | 2.63 | 1.99 | 2.54 | 2.31 | 2.82 | 2.68 | 3.45 * |
| Head Ø x height | mm | 20 x 25 | 20 x 40 | 25 x 13 | 25 x 32 | 32 x 16 | 32 x 32 | 40 x 20 | 50 x 25 |
| Grit type | | ADW | ADW | AR | ADW | ADW | ADW | ADW | ADW |
| Grit size | | 30 | 30 | 30 | 30 | 24 | 24 | 24 | 24 |
| Max. rpm | $min^{-1}$ | 47700 | 32400 | 32900 | 32900 | 29800 | 25700 | 23800 | 19000 |

* shaft Ø 8 mm.

(999)

## High-grade aluminium oxide mounted point

**Design:** High-grade aluminium oxide pink (AR, hardness O) or high-grade aluminium oxide mixture dark red/white (ADW, hardness M), ceramic binding 5 V, universally applicable, inherently stable and firm-edged.

**Application:** For steel, cast steel, weld seams.

Recommended peripheral speed: AR 25–40 m/s
Recommended peripheral speed: ADW 30–50 m/s

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8481/8462/8483/8482/8485/8484/8487/8459 | | ● | | ○ | ○ | | | |

## Ball pin KU - 6 mm shaft diameter, coarse grit

| Order No. | | 0808 | 1616 | 2020 |
|---|---|---|---|---|
| **Type** | | **KU 08** | **KU 16** | **KU 20** |
| **8485** | | **1.81** | **2.28** | **2.59** |
| Head ∅ | mm | 8 | 16 | 20 |
| Grit type | | AR | ADW | ADW |
| Grit size | | 46 | 30 | 30 |
| Max. rpm | $min^{-1}$ | 116200 | 59600 | 47700 |

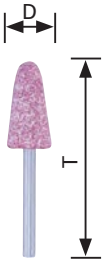
(W855)

## Pointed arch pin SP – 6 mm shaft ∅, coarse grit

| Order No. | | 0510 | 0816 | 1320 | 2032 |
|---|---|---|---|---|---|
| **Type** | | **SP 0510** | **SP 0816** | **SP 1320** | **SP 2032** |
| **8484** | | **1.80** | **1.82** | **2.19** | **3.01** |
| Head ∅ x height | mm | 5 x 10 | 8 x 16 | 13 x 20 | 20 x 32 |
| Grit type | | AR | ADW | ADW | ADW |
| Grit size | | 60 | 46 | 46 | 30 |
| Max. rpm | $min^{-1}$ | 190900 | 119300 | 73400 | 47700 |

(W855)

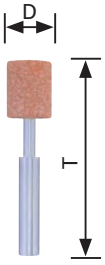
## Conical pin KE - 6 mm shaft diameter, coarse grit




| Order No. | | 1025 | 1645 | 2032 |
|---|---|---|---|---|
| **Type** | | **KE 1025** | **KE 1645** | **KE 2032** |
| **8487** | | **2.28** | **3.46** | **2.75** |
| Head ∅ x height | mm | 10 x 25 | 16 x 45 | 20 x 32 |
| Grit type | | ADW | ADW | ADW |
| Grit size | | 46 | 46 | 30 |
| Max. rpm | $min^{-1}$ | 95400 | 52000 | 47700 |

(W855)

## Mounted grinding pins for tools - 6 mm shaft ∅, grit coarse




| Order No. | | 0703 | 0705 | 0706 | 0708 |
|---|---|---|---|---|---|
| **Type** | | **703** | **705** | **706** | **708** |
| **8459** | | **1.74** | **1.74** | **1.74** | **1.74** |
| Head ∅ x height | mm | 3 x 8 | 5 x 8 | 6 x 10 | 8 x12 |
| Grit type | | AR | AR | AR | AR |
| Grit size | | 100 | 80 | 80 | 80 |
| Max. rpm | $min^{-1}$ | 152500 | 190900 | 159100 | 119300 |

(W855)

## High-grade aluminium oxide mounted point set

**Design:** High-grade aluminium oxide, pink, AR, hardness O (medium), ceramic bonding 5 V, universally applicable, inherently stable and firm-edged.

PFERD

**8474** Grit size fine. Shaft ∅ 3 mm.

**8477** Grit size coarse. Shaft diameter 6 mm

8474

8477

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8474/8477 | | ● | | ○ | ○ | | | |

| Order No. | Set contents | 8474 PFERD |
|---|---|---|
| 0001 | 11 cylindrical ZY 0510 (each 2 pieces), ZY 0810 (each 2 pieces), ZY 1604 (each 2 pieces), ZY 0408, ZY 0613, ZY 0802, ZY 1013, ZY 1303<br>1 cylindrical with round end WR 0510<br>1 ball shape KU 05<br>2 arch shape, pointed SP 0306, SP 0816 | 27.00 |

(W855)

| Order No. | Set contents | 8477 PFERD |
|---|---|---|
| 0001 | 5 cylindrical ZY 1013, ZY 1320, ZY 2006, ZY 2013, ZY 2025<br>1 cylindrical with round end WR 2025<br>1 ball shape KU 16<br>1 arch shape, pointed SP 1320<br>2 conical KE 2020, KE 2032 | 23.70 |

(W855)

## High-grade aluminium oxide/ceramic grain mounted point – 3 mm shaft ∅

NEW

**Design:** High-grade aluminium oxide/ceramic grain AWCO, hardness J, ceramic bond blue/white. **Cylindrical.**

**Application:** For post-processing turbine blades during airplane maintenance. For regrinding repair welds in tool and mould making.

Recommended peripheral speed 35–50 m/s.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8478 | ● | ● | | | | | | |

| Order No. | | 0105 | 0208 | 0205 | 0306 | 0408 | 0510 | 0613 | 0614 | 0816 |
|---|---|---|---|---|---|---|---|---|---|---|
| Type | | ZY 0105 | ZY 1.508 | ZY 0205 | ZY 0306 | ZY 0408 | ZY 0510 | ZY 0613 | ZY 0613 | ZY 0816 |
| 8478 PFERD | | 2.92 | 2.92 | 1.87 | 1.66 | 1.66 | 1.66 | 1.76 | 1.76 | 1.68 |
| Head ∅ x height | mm | 1 x 5 | 1.5 x 8 | 2 x 5 | 3 x 6 | 4 x 8 | 5 x 10 | 6 x 13 | 6 x 13 | 8 x 16 |
| Grit size | | 320 | 320 | 100 | 60 | 100 | 60 | 60 | 100 | 60 |
| Max. rpm | $min^{-1}$ | 104200 | 104700 | 201800 | 206100 | 175100 | 130700 | 93600 | 93600 | 61000 |

(W855)

## Ordinary aluminium oxide mounted point for stainless steel work - 6 mm shaft ∅

**Design:** Ordinary aluminium oxide AN, hardness N, resin-bonded, brown. **Cylindrical.**

**Application:** For steel and cast, especially for rust and acid-resistant stainless steel.

Recommended peripheral speed 35–50 m/s.

PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8480 | ○ | ● | | ● | ● | | | |

| Order No. | | 1020 | 1032 | 1325 | 1632 | 2025 | 2040 | 3216 | 3240 | 4010 | 4020 | 5013 | 5025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | | ZY 1020 | ZY 1032 | ZY 1325 | ZY 1632 | ZY 2025 | ZY 2040 | ZY 3216 | ZY 3240 | ZY 4010 | ZY 4020 | ZY 5013 | ZY 5025 |
| 8480 PFERD | | 2.01 | 2.28 | 2.15 | 2.29 | 2.23 | 2.84 | 2.53 | 3.47 | 2.48 | 2.90 | 2.97 | 3.90 |
| Head ∅ x height | mm | 10 x 20 | 10 x 32 | 13 x 25 | 16 x 32 | 20 x 25 | 20 x 40 | 32 x 16 | 32 x 40 | 40 x 10 | 40 x 20 | 50 x 13 | 50 x 25 |
| Grit size | | 46 | 46 | 46 | 30 | 30 | 30 | 24 | 24 | 30 | 24 | 30 | 24 |
| Max. rpm | $min^{-1}$ | 95400 | 83200 | 66000 | 51200 | 47700 | 32400 | 29800 | 20300 | 23800 | 23800 | 19000 | 19000 |

(W855)

## High-grade aluminium oxide mounted point for stainless steel

**Design:** High-grade aluminium oxide ADW, hardness L, resin bonding brown. **Cylindrical.**

**Application:** For steel, especially for rust and acid-resistant stainless steel and hard non-ferrous metals like bronze and titanium.

Recommended peripheral speed 35–50 m/s.

PFERD

**8488** **Shaft ∅ 6 mm.**

**8491** **Shaft ∅ 8 mm.**

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8488 | ○ | ● | | ● | ○ | | | |
| 8491 | ○ | ○ | ● | ● | ○ | | | |

| Order No. | | 1020 | 1032 | 1632 | 2025 | 2040 | 2525 | 3216 | 3240 | 3240 | 4010 | 4020 | 5013 | 5025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | | ZY 1020 | ZY 1032 | ZY 1632 | ZY 2025 | ZY 2040 | ZY 2525 | ZY 3216 | ZY 3240 | ZY 3240 | ZY 4010 | ZY 4020 | ZY 5013 | ZY 5025 |
| 8488 PFERD | | 2.01 | 2.28 | 2.29 | 2.23 | 2.84 | 2.63 | 2.53 | 3.47 | – | 2.48 | 2.90 | 2.97 | 3.90 |
| 8491 PFERD | | – | – | – | – | – | – | – | – | 3.47 | – | – | – | – |
| Head ∅ x height | mm | 10 x 20 | 10 x 32 | 16 x 32 | 20 x 25 | 20 x 40 | 25 x 25 | 32 x 16 | 32 x 40 | 50 x 25 | 40 x 10 | 40 x 20 | 50 x 13 | 50 x 25 |
| Grit size | | 46 | 46 | 30 | 30 | 30 | 30 | 24 | 24 | 24 | 30 | 24 | 30 | 24 |
| Max. rpm | $min^{-1}$ | 95400 | 62800 | 51200 | 47700 | 32400 | 38100 | 29800 | 20300 | 29800 | 23800 | 23800 | 19000 | 19000 |

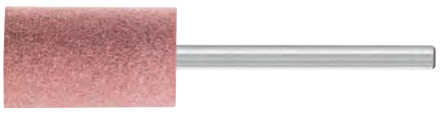
(W855)

## POLIFLEX® fine mounted point

**Design:** High-grade aluminium oxide K 120. High surface quality with good service life. **Cylindrical.**

**Note:**The fine grinding tools can easily be profiled with dressing tools.

PFERD



8464

**8464** NEW

Grit type AR, soft, colour: pink. Recommended peripheral speed 10–12 m/s.

**Application:** Suitable for fine grinding component surfaces made from unhardened steel, stainless steel (INOX) and non-ferrous metals.

8440

**8440**

Grit type AW, hard, colour: yellow-brown. Recommended peripheral speed 15–20 m/s.

**Application:** Suitable for fine grinding component surfaces and roundings made from hardened and annealed steel and titanium.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8464 | ● | ● | ○ | ● | | | | |
| 8440 | ● | ● | ○ | ○ | | | | |

| Order No. | | 0408 | 0610 | 0610 | 0812 | 0812 | 1010 | 1015 | 1220 | 1220 | 1530 | 1530 | 2030 | 2030 | PU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | | PF ZY 0408 | PF ZY 0610 | PF ZY 0610 | PF ZY 0812 | PF ZY 0812 | PF ZY 1010 | PF ZY 1015 | PF ZY 1220 | PF ZY 1220 | PF ZY 1530 | PF ZY 1530 | PF ZY 2030 | PF ZY 2030 | |
| 8464 PFERD | | 3.02 | 3.02 | – | 3.18 | – | 3.18 | – | 3.18 | – | 3.88 | – | 4.34 | – | 10 |
| 8440 PFERD | | – | – | 3.02 | – | 3.18 | – | 3.18 | – | 3.18 | – | 3.88 | – | 4.34 | 10 |
| Head ∅ x height | mm | 4 x 8 | 6 x 10 | 6 x 10 | 8 x 12 | 8 x 12 | 10 x 10 | 10 x 15 | 12 x 20 | 12 x 20 | 15 x 30 | 15 x 30 | 20 x 30 | 20 x 30 | |
| Shaft ∅ | mm | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 6 | |
| Max. rpm | $min^{-1}$ | 71600 | 47700 | 95400 | 35800 | 71600 | 19000 | 57200 | 23800 | 33700 | 19000 | 38100 | 14300 | 28600 | |

(W847)

## Diamond mounted point

**Design:** Especially suited to quick removal on galvanised coatings. Universal grain: D 126 – medium (to FEPA standard).

**Application:** For tool and production grinding of hard materials such as tungsten carbide, ceramics - pre- and finish sintered - glass as well as some non-ferrous metals.

**Note:** To avoid fringe heat damage to the workpiece and to increase the life of the tool we recommend the use of coolant lubricants.

## Cylindrical shape

8486 format professional quality

8467 PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8486/8467 | | | ● | | ● | ● | ○ | |

| Order No. | Ø x height mm | 8486 format | 8467 PFERD | Total length mm 8486 | Total length mm 8467 | Shaft Ø mm 8486 | Shaft Ø mm 8467 |
|---|---|---|---|---|---|---|---|
| 0010 | 1 x 4 | 7.15 | 9.30 | 45 | 40 | 3 | 3 |
| 0014 | 1.4 x 4 | – | 8.57 | – | 40 | – | 3 |
| 0020 | 2 x 5 | 7.50 | – | 45 | – | 3 | – |
| 0019 | 2 x 4 | – | 9.80 | – | 40 | – | 3 |
| 0030 | 3 x 5 | 7.50 | – | 45 | – | 3 | – |
| 0029 | 3 x 4 | – | 10.65 | – | 40 | – | 3 |
| 0040 | 4 x 5 | 8.85 | 10.85 | 45 | 50 | 3 | 3 |
| 0049 | 5 x 5 | – | 12.96 | – | 50 | – | 3 |
| 0050 | 5 x 6 | 10.15 | – | 45 | – | 3 | – |
| 0060 | 6 x 6 | 11.10 | 14.71 | 45 | 60 | 3 | 6 |
| 0069 | 8 x 8 | – | 19.05 | – | 60 | – | 6 |
| 0080 | 8 x 10 | 15.05 | – | 70 | – | 6 | – |
| 0090 | 10 x 8 | – | 21.82 | – | 60 | – | 6 |
| 0100 | 10 x 10 | 17.05 | – | 70 | – | 6 | – |
| 0120 | 12 x 10 | 19.75 | – | 70 | – | 6 | – |
| 0110 | 12 x 8 | – (W858,W857) | 25.79 (W858,W857) | – | 60 | – | 6 |

## Ball shape

8489 format professional quality

8490 PFERD

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8489/8490 | | | ● | | ● | ● | ○ | |

| Order No. | Ø mm | 8489 format | 8490 PFERD | Total length mm 8489 | Total length mm 8490 | Shaft Ø mm 8489 | Shaft Ø mm 8490 |
|---|---|---|---|---|---|---|---|
| 0010 | 1 | – | 10.50 | – | 45 | – | 3 |
| 0020 | 2 | 9.05 | 12.87 | 45 | 45 | 3 | 3 |
| 0030 | 3 | 9.45 | 12.70 | 45 | 45 | 3 | 3 |
| 0040 | 4 | 9.45 | 14.21 | 45 | 45 | 3 | 3 |
| 0050 | 5 | 9.45 | 18.30 | 45 | 45 | 3 | 3 |
| 0060 | 6 | 15.80 | 22.03 | 70 | 45 | 6 | 3 |
| 0080 | 8 | 18.15 | 27.15 | 70 | 60 | 6 | 6 |
| 0100 | 10 | 22.20 | 35.08 | 70 | 60 | 6 | 6 |
| 0120 | 12 | 27.60 (W858,W857) | 44.14 (W858,W857) | 70 | 60 | 6 | 6 |

## File, high-grade aluminium oxide

**Design:** Aluminium oxide in ceramic bonding.

**Application:** For machining and filing different tools, precision measuring instruments, templates and similar objects.

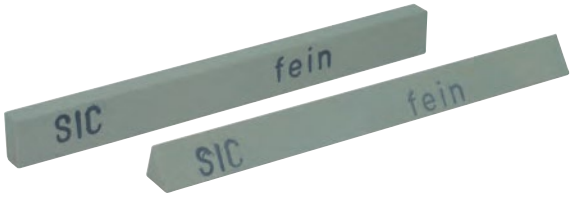
| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8546/8549/8552/8555/8567/8558 | | ● | | | ● | | | |

| Order No. | Dimensions mm | 8546 | 8549 | 8552 | 8555 | 8567 | 8558 | Grit |
|---|---|---|---|---|---|---|---|---|
| 0035 | 10 x 100 | 4.51 | 5.70 | – | – | – | 4.10 | 120 (coarse) |
| 0050 | 13 x 150 | – | 7.25 | – | – | – | – | 120 (coarse) |
| 0065 | 16 x 150 | 6.65 | – | – | – | – | – | 120 (coarse) |
| 0065 | 16 x 150 | – | 7.70 | – | – | – | – | 120 (medium) |
| 0010 | 6 x 100 | – | 5.15 | – | – | – | 3.65 | 220 (medium) |
| 0025 | 8 x 100 | 4.51 | 5.70 | 6.35 | – | – | – | 220 (medium) |
| 0040 | 10 x 100 | 4.51 | 5.70 | 6.35 | 5.70 | – | 4.10 | 220 (medium) |
| 0055 | 13 x 150 | 6.10 | 7.25 | – | 7.25 | – | – | 220 (medium) |
| 0070 | 16 x 150 | 6.65 | 7.70 | – | – | – | 5.90 | 220 (medium) |
| 0100 | 25 x 3/1 x 100 | – | – | – | – | 5.60 | – | 220 (medium) |
| 0015 | 6 x 100 | 4.10 | 5.15 | – | – | – | – | 360 (fine) |
| 0030 | 8 x 100 | – | 5.70 | 6.35 | – | – | – | 360 (fine) |
| 0045 | 10 x 100 | 4.51 | 5.70 | 6.35 | 5.70 | – | 4.10 | 360 (fine) |
| 0060 | 13 x 150 | 6.10 | 7.25 | – | – | – | – | 360 (fine) |
| 0075 | 16 x 150 | 6.65 | 7.70 | – | – | – | 5.90 | 360 (fine) |
| 0105 | 25 x 3/1 x 100 | – (W865) | – (W865) | – (W865) | – (W865) | 5.60 (W865) | – (W865) | 360 (fine) |

## File, silicon-carbide

**Design:** Silicon-carbide in ceramic bonding.

**Application:** For working with hard-metal tools and for working with aluminium, bronze, glass, stone, grey cast iron and similar materials. Use dry, with water or oil.




| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8573/8576/8579/8582/8588/8585 | ● | ○ | ● | | ● | ● | ● | |

| Order No. | Dimensions mm | 8573 | 8576 | 8579 | 8582 | 8588 | 8585 | Grit |
|---|---|---|---|---|---|---|---|---|
| 0035 | 10 x 100 | – | 6.15 | – | – | – | – | 120 (coarse) |
| 0050 | 13 x 150 | – | 7.75 | – | – | – | – | 120 (coarse) |
| 0065 | 16 x 150 | – | 8.15 | – | – | – | – | 120 (coarse) |
| 0010 | 6 x 100 | – | 5.45 | – | – | – | 3.86 | 220 (medium) |
| 0025 | 8 x 100 | 4.78 | 6.05 | 6.70 | – | – | – | 220 (medium) |
| 0040 | 10 x 100 | 4.78 | 6.15 | 6.85 | 6.05 | – | 4.27 | 220 (medium) |
| 0055 | 13 x 150 | 6.50 | 7.75 | – | – | – | – | 220 (medium) |
| 0070 | 16 x 150 | 7.00 | 8.15 | – | – | – | 6.20 | 220 (medium) |
| 0015 | 6 x 100 | – | 5.45 | – | – | – | 3.86 | 360 (fine) |
| 0030 | 8 x 100 | – | 6.05 | – | – | – | – | 360 (fine) |
| 0045 | 10 x 100 | 4.78 | 6.15 | 6.85 | – | – | 4.27 | 360 (fine) |
| 0060 | 13 x 150 | 6.50 | 7.75 | – | 7.75 | – | – | 360 (fine) |
| 0075 | 16 x 150 | 7.00 | 8.15 | – | – | – | 6.20 | 360 (fine) |
| 0105 | 25 x 3/1 x 100 | – (W865) | – (W865) | – (W865) | – (W865) | 5.85 (W865) | – (W865) | 360 (fine) |

## File, hard Arkansas

**Design:** Original Arkansas natural stone with a particularly smooth structure, ultra-fine and hard for a gentle and precise cutting action with low abrasion.

**Application:** For very fine and delicate cuts. Optimum results with the application of runny oil or petrol.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8574/8577/8580/8583/8589/8586 | ● | ○ | ● | | ● | ● | ● | |

| Order No. | Dimensions mm | 8574 | 8577 | 8580 | 8583 | 8589 | 8586 |
|---|---|---|---|---|---|---|---|
| 0005 | 6 x 100 | 6.90 | 8.70 | 11.85 | – | – | 7.70 |
| 0010 | 10 x 100 | 12.00 | 12.80 | 19.50 | 15.00 | – | 9.85 |
| 0015 | 13 x 100 | 15.00 | 15.00 | 24.00 | – | – | 11.10 |
| 0020 | 13 x 150 | 20.10 | – | – | – | – | – |
| 0025 | 16 x 150 | 31.30 | 28.60 | – | – | – | – |
| 0070 | 25 x 3/1 x 100 | – | – | – | – | 17.70 | – |
| | | (W865) | (W865) | (W865) | (W865) | (W865) | (W865) |

## Sharpening stone, Degussit

**Design:** Oxide ceramic polishing tool consisting of a mixed crystal (aluminium oxide) of high fineness and extreme hardness. For gentle and exact cutting effect, with excellent edge and profile strength with low wear and tear.

**Application:** For precision work to achieve excellent surface quality and form accuracy. For grinding, deburring, fine grinding and forming work. Optimum results with the application of runny oil or petrol.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8595/8598/8601 | ● | ● | ● | ● | ● | ● | ○ | |

| Order No. | Dimensions mm | 8595 | 8598 | 8601 |
|---|---|---|---|---|
| 0005 | 6 x 100 | 37.50 | 31.10 | – |
| 0010 | 10 x 100 | 49.90 | 53.90 | – |
| 0005 | 3 x 6 x 100 | – | – | 24.90 |
| | | (W861) | (W861) | (W861) |

## Sharpening stone assortment

**Design:** Assortment of commonly used abrasive files (10 x 100 mm) from coarse to fine sanding. Supplied in a wooden box.

| Order No. | Set contents | 8592 |
|---|---|---|
| 0005 | 3 high-grade aluminium oxide triangular files, coarse, medium and fine<br>1 high-grade aluminium oxide round, medium<br>1 hard Arkansas triangular file. | 36.10 |
| | | (W865) |

## Super Arkansas Block Whetstone

**Design:** Double-sided use.

**Application:** For sharpening joinery tools and all general cutting tools.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8570 | | ● | ● | ○ | | | | |

| Order No. | Dimensions L x W x H mm | 8570 | Type/fineness |
|---|---|---|---|
| 0005 | 100 x 50 x 20 | 6.80 | Extra fiine/coarse |
| 0010 | 115 x 60 x 20 | 9.10 | Extra fiine/coarse |
| 0015 | 125 x 50 x 20 | 8.85 (W865) | Extra fiine/coarse |

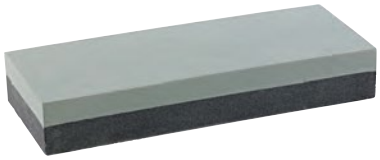
| Order No. | Dimensions L x W x H mm | 8570 | Type/fineness |
|---|---|---|---|
| 0020 | 130 x 70 x 20 | 8.95 | Extra fiine/coarse |
| 0025 | 150 x 50 x 20 | 10.40 | Extra fiine/coarse |
| 0030 | 200 x 50 x 20 | 14.65 (W865) | Extra fiine/coarse |

## Silicon-carbide whetstone

**Design:** Double-sided use.

**Application:** Universal use with wet and dry cutting.

**Note:** After wet sharpening with oil or petrol not suitable for dry sharpening.



| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8571 | | ● | ● | ○ | | | | |

| Order No. | Dimensions L x W x H mm | 8571 | Type/fineness |
|---|---|---|---|
| 0015 | 125 x 50 x 25 | 9.50 | Extra fine 400/coarse 150 |
| 0025 | 150 x 50 x 25 | 11.90 (W865) | Extra fine 400/coarse 150 |

| Order No. | Dimensions L x W x H mm | 8571 | Type/fineness |
|---|---|---|---|
| 0030 | 200 x 50 x 25 | 13.80 (W865) | Extra fine 400/coarse 150 |

## Original hard Arkansas Natural Stone

**Design:** Natural stone with a particularly smooth structure, ultra-fine and hard. Supplied in a wooden box.

**Application:** For super-fine finishing of tools.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8591 | | ● | ● | ○ | | | | |

| Order No. | Dimension mm | 8591 |
|---|---|---|
| 0005 | 100 x 40 | 17.15 (W865) |

| Order No. | Dimension mm | 8591 |
|---|---|---|
| 0010 | 175 x 50 | 53.40 (W865) |

## Whetstone Japanese type

**Design:** Double-sided use. Supplied in a wooden box.

**Application:** For sharpening knives and all general cutting tools.

**Note:** The stone should be watered 3 to 10 minutes before use until no more air bubbles rise.

8581 0035

8581 0040

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8581 | | ● | ● | ○ | | | | |

| Order No. | Dimensions L x W x H mm | 8581 | Type/fineness |
|---|---|---|---|
| 0035 | 200 x 60 x 30 | 33.20 (W865) | Coarse 400/medium 1000 |

| Order No. | Dimensions L x W x H mm | 8581 | Type/fineness |
|---|---|---|---|
| 0040 | 200 x 60 x 30 | 39.60 (W865) | Medium 1000/fine 3000 |

## Diamond whetstone

**Design:** 3M™ Diamond Whetstone on aluminium base. Diamond grain in nickel bonding (N Type). Water and emulsion-resistant.

**Application:** For sharpening and honing iron, chisels and blades on tools For breaking cut edges on glass, stone and all hard materials.

| Order No. | Dimension mm | 8594 3M | PU | Grit |
|---|---|---|---|---|
| 0005 | 25 x 100 | 23.20 | 5 | N 20 |
| 0010 | 25 x 100 | 23.20 (W812) | 5 | N 40 |

| Order No. | Dimension mm | 8594 3M | PU | Grit |
|---|---|---|---|---|
| 0015 | 50 x 150 | 53.50 | 5 | N 20 |
| 0020 | 50 x 150 | 53.50 (W812) | 5 | N 40 |

## Felt point - 6 mm shaft ∅

**Design:** In robust felt with metal shaft.

**Application:** For working with pre-sanded parts. For polishing surfaces, hollow parts and profiling workpieces.

**Note:** We recommend using grinding and polishing paste (Order No. 8611+8811) or grinding compound (Order No. 8608) for optimum polishing results.

ZYA ZYA SPK WRC TRE KEL KEL KEL

| Order No. | | 0010 | 0020 | 0030 | 0040 | 0050 | 0060 | 0070 | 0080 |
|---|---|---|---|---|---|---|---|---|---|
| Type | | ZYA | ZYA | SPK | WRC | TRE | KEL | KEL | KEL |
| 8602 PFERD | | 2.79 | 5.25 | 3.72 | 4.79 | 3.06 | 5.35 | 6.70 | 8.15 |
| ∅ | mm | 10 | 20 | 15 | 20 | 10 | 20 | 25 | 30 |
| Width | mm | 15 | 25 | 20 | 25 | 14 | 25 | 30 | 35 |
| Shaft length | mm | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |

(W868)

## Felt disc

**Design:** Made from robust felt.

**Application:** For use with bolt clamp (Order No. 8600) for polishing surfaces with pre-sanded parts.

**Note:** We recommend using grinding and polishing paste (Order No. 8611+8811) or grinding compound (Order No. 8608) for optimum polishing results.

| Order No. | ∅ mm | 8599 PFERD | Width mm | Hole mm |
|---|---|---|---|---|
| 0080 | 80 | 7.40 | 10 | 10 |
| 0100 | 100 | 21.70 | 20 | 10 |
| 0125 | 125 | 29.90 (W868) | 20 | 20 |

| Order No. | ∅ mm | 8599 PFERD | Width mm | Hole mm |
|---|---|---|---|---|
| 0150 | 150 | 44.90 | 25 | 20 |
| 0200 | 200 | 91.50 (W868) | 30 | 20 |

## Polishing mop

**Design:** Corrugated cloth of varying hardness fixed in a metal ring.

**Application:** For working with pre-sanded parts. For use with bolt clamp (Order No. 8600) for polishing surfaces, hollow parts and profiled workpieces.

**Note:** We recommend using grinding and polishing paste (Order No. 8611+8811) or grinding compound (Order No. 8608) for optimum polishing results.

**8597** **Hard design.**
For **pre-polishing** steel and rust-free steel, aluminium, brass and non-ferrous metals.

**8596** **Soft design.**
For **high-gloss finishes** on all metals and synthetics.

8597

8596

| Order No. | ∅ mm | 8597 PFERD | 8596 PFERD | Width mm | Hole mm |
|---|---|---|---|---|---|
| 0080 | 80 | 3.40 | 2.84 | 10 | 10 |
| 0100 | 100 | 3.80 | 3.14 | 10 | 10 |
| 0125 | 125 | 4.83 (W868) | 4.11 (W868) | 10 | 20 |
| 0150 | 150 | 6.80 | 4.83 | 10 | 20 |
| 0200 | 200 | 11.90 (W868) | 8.75 (W868) | 10 | 20 |

## Spindles

**Application:** For mounting felt discs (Order No. 8599) and cloth rings (Order No. 8596 and 8597).

| Order No. | Shaft ∅ mm | 8600 PFERD | Hole mm |
|---|---|---|---|
| 0010 | 8 | 11.55 | 10 |
| 0020 | 12 | 30.70 | 20 |
| 0030 | MK1 | 37.10 (W868) | 20 |

## Polishing ring for battery-powered devices

NEW

**Design:** Made of crimped cloth, M14 x 2.0 thread.

**Note**: Detailed information about battery-powered tools is found on page 8/67.

**8808** **Sisal**
For pre-polishing and removing defects and scratches. We recommend the use of white polishing paste (Order No. 8811 0005) for steel and stainless steel and brown polishing paste (Order No. 8811 0010) for brass.

**8809** **Notiflex Soft**
For buffing and producing a high-shine surface. We recommend the use of blue polishing paste (Order No. 8811 0015) for steel, stainless steel, brass, copper and aluminium.

8808

8809

| Order No. | ∅ mm | 8808 osborn | 8809 osborn | Width mm | Max. rpm min⁻¹ |
|---|---|---|---|---|---|
| 0100 | 100 | 10.90 (W702) | 10.70 (W702) | 10 | 9000 |

## Finishing ring for battery-powered devices

NEW

**Design:** Sanding fleece disc, M14 x 2.0 thread.

**Application:** For finishing, deoxidising, light grinding/deburring, smoothing and fine grinding. The result is a fine, matt surface finish. The ring can be used for dry and wet application.

**Note:** Detailed information about battery-powered tools is found on page 8/67.

| Order No. | ∅ mm | 8810 osborn | Width mm | Fineness grade | Grit | Max. rpm min⁻¹ |
|---|---|---|---|---|---|---|
| 0100 | 100 | 8.85 (W702) | 10 | Fine | 180–220 | 9000 |

## Finishing and deburring discs

**Design:** Twisted-fibre fleece disc with resin-bonded silicon carbide.

**8016 0005** **Scotch-Brite™ FS-WL**
Open weave for a smooth surface without chatter marks.
For achieving distinctive line effects and deburring light grooves on stainless steel profiling and for almost all other **finishing work.**

**8016 0010** **Scotch-Brite™ DB-WL**
Solid construction for higher edge resistance, grit performance and life.
Universally used for **deburring.** Easy for working with contoured workpieces.

**8019** **Scotch-Brite™ XP-WL**
Very strong construction for very high edge strength, cutting performance and service life.
Universally used for **deburring.** Easy for working with contoured workpieces.

8016 0005

8016 0010

8019 0010

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8016/8019 | ● | | | ● | | ● | | |

| Order No. | Hardness/fineness | 8016 3M | 8019 3M | Grit | Dia. x width x bore mm | Max. rpm $min^{-1}$ |
|---|---|---|---|---|---|---|
| 0005 | 6/fine | 87.90 | – | 180–220 | 152 x 25.4 x 25.4 | 6000 |
| 0010 | 9/fine | 80.60 | – | 180–220 | 152 x 25.4 x 25.4 | 6000 |
| 0010 | 11/fine | – (W812) | 126.00 (W812) | 180–220 | 152 x 25.4 x 25.4 | 6000 |

## Hand pads

**Design:** With a plastic handle in 4 different colours. Total length 125 mm, pad size 60 x 20 x 10 mm.

**Application:** For cleaning cutting edges, to remove build-up on edges and to extend the tool's life. The cutting edges are drawn off at an angle of 25 ° to 40 °. Ideal for lapping chamfers on free- and angle-ground surfaces, for breaking hard metal and HSS cutting edges after cutting and for re-lapping cutting inserts, punching tools, milling tools, cutter heads, reamers etc.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8593 | | ● | ● | ○ | | | | |

| Order No. | Grit | 8593 | Colour | | Grain µm | Use |
|---|---|---|---|---|---|---|
| 0180 | 180 (yellow) | 46.00 | Yellow | | 130 | For carbide and hardened steel / coarse cut |
| 0220 | 220 (blue) | 46.00 | Blue | | 100 | For carbide and hardened steel / medium cut |
| 0360 | 360 (red) | 46.00 | Red | | 50 | For carbide and hardened steel / fine cut |
| 0500 | 500 (green) | 49.00 (W867) | Green | | 25 | For carbide and hardened steel / fine cut |

## Lapping and grinding pastes

**Design:** Supplied in 100 g tubes.

**Application:** For machine and manual lapping. For use in ratios 1:5 to 1:100 diluted with oil, turpentine or benzene. For working with hard work pieces a coarser grain (80 to 500) is needed and with softer pieces a finer grain (750 to 2000).

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8605 | | ● | ● | ● | | | | |

| Order No. | Grit | 8605 | Grit size µm |
|---|---|---|---|
| 0120 | 120 | 37.30 | 180 |
| 0180 | 180 | 37.30 | 130 |
| 0220 | 220 | 38.90 | 100 |
| 0360 | 360 | 40.00 | 50 |
| 0500 | 500 | 41.70 (W867) | 25 |

| Order No. | Grit | 8605 | Grit size µm |
|---|---|---|---|
| 0750 | 750 | 44.80 | 10 |
| 1000 | 1000 | 45.70 | 5 |
| 1500 | 1500 | 47.90 | 3 |
| 2000 | 2000 | 52.10 (W867) | 1 |

## Grinding compound, oil-soluble

**Design:** Supplied in 220 ml cans.

**Application:** For grinding steel, non-ferrous metals and synthetics.
The paste can be used thinned with oil, or without.

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8608 | ○ | ● | ● | ○ | | | | |

| Order No. | Description | 8608 | Grit size |
|---|---|---|---|
| 0001 | No. 1 | 18.90 | Coarse (for pre-sanding) |
| 0002 | No. 2 | 18.90 (W869) | Medium |

| Order No. | Description | 8608 | Grit size |
|---|---|---|---|
| 0003 | No. 3 | 18.90 (W869) | Fine (for post-sanding) |

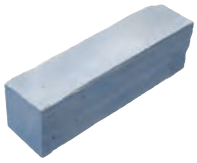
## Grinding and polishing paste

NEW

**Application:** For application on felt or fleece discs as well as brushes.

8811 0005

8811 0010


8811 0015

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8811 | ● | ● | | ● | | | | |

| Order No. | Material | 8811 | Content g |
|---|---|---|---|
| 0005 | White polishing composition for pre-polishing (steel and stainless steel) and polishing (steel, stainless steel, aluminium) | 2.20 | 110 |
| 0010 | Brown polishing composition for pre-polishing (aluminium) and polishing (aluminium, brass, copper) | 2.55 | 110 |
| 0015 | Blue polishing composition for buffing aluminium, steel and stainless steel, brass, copper | 2.33 (W702) | 110 |

## Grinding and polishing compound

**Application:** For application on felt or fleece discs as well as brushes.

8611 0001

8611 0002

8611 0003

| Order No. | Aluminium | Steel | Carbide | INOX | Cast | Plastic FRP wood | Stone | Paint |
|---|---|---|---|---|---|---|---|---|
| 8611 | ○ | ● | ● | ○ | | ● | | |

| Order No. | Material | 8611 | Content g |
|---|---|---|---|
| 0001 | White-beige polishing compound for stainless and soft metals, pressed synthetics. | 16.90 | 700 |
| 0002 | Blue polishing compound For VA-steels | 17.70 | 800 |
| 0003 | Supra-white polishing composition for finest quality for acrylic, plastic, steel, stainless steel and soft metals | 17.50 (W869) | 900 |

# Content – Soldering/welding/workshop equipment

**NEW**

**All items marked with this icon have been added to our range.**

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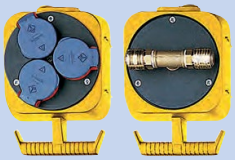
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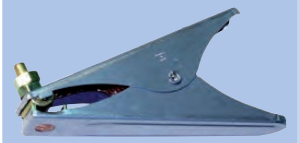
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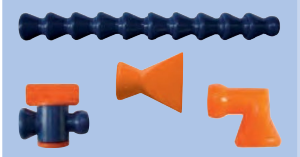
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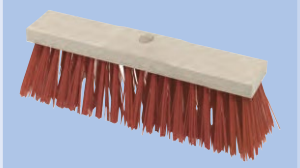
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## Short description for cable qualities

H 05 V V -F 3 G 1.5
1 2 3 4 5 6 7 8

**1 Regulation**
**H** = harmonised line
**A** = nationally approved line

**2 Nominal voltage V**
**03** = 300/300 V
**05** = 300/500 V
**07** = 450/750 V

**3 Insulation sleeves**
**V** = PVC
**R** = natural or synthetic rubber
**S** = silicon rubber
**B** = synthetic rubber

**4 Sheaves**
**V** = PVC
**R** = natural or synthetic rubber
**N** = neoprene rubber
**J** = glass fibre braid
**T** = textile braid
**Q** = polyurethane

**5 Conductor type**
**U** = round, 1-strand conductor
**R** = round, multi-strand conductor
**K** = fine wired for fixed installation
**F** = fine wired for moving lines
**F** = finest wired for moving lines
**Y** = Lan stranded conductor

**6 Number of strands**

**7 Protective conductor**
**G** = with green/yellow strand
**X** = without green/yellow strand

**8 Conductor cross-section**

## Cable box, plastic

**Design:** Robust model **made from impact-proof, special plastic with 4 grounded sockets** and overheating protection. The sockets are equipped with child protection. Furthermore, the cable box offers good stability with its firm double legs and has an ergonomically shaped handle.

**Application:** For use indoors.

format professional quality

| Order No. | Cable type | 9003 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0005 | Plastic H05 VV-F 3G1.5 | 22.60 (W903) | 10 | 225 |

## Cable drum, sheet steel

**Design:** Very robust model made of corrosion-proof, galvanised sheet steel and stable supporting frame **with 3 grounded sockets,** splash-proof and self-closing lids. The cable drum is equipped with overheating protection. The control lamp reacts to overheating and overloading. The **cable guide on the handle** allows safe winding and unwinding.

**Application:** For indoor use and short-term outdoor use.

IP 44

format professional quality

| Order No. | Cable type | 9005 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0010 | Rubber H05 RR-F 3G1.5 | 54.70 | 25 | 240 |
| 0015 | Rubber H05 RR-F 3G1.5 | 88.30 (W903) | 50 | 290 |

## Cable drum, sheet steel

**Design:** Very robust model made of corrosion-proof, galvanised sheet steel and stable supporting frame **with 3 grounded sockets,** splash-proof and self-closing lids. The cable drum is equipped with overheating protection. The control lamp reacts to overheating and overloading. The **cable guide on the handle** allows safe winding and unwinding.

**Application:** For indoor use and short-term outdoor use.

IP 44

format professional quality

| Order No. | Cable type | 9008 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0005 | Neoprene H07 RN-F 3G1.5 | 85.00 | 40 | 290 |
| 0010 | Neoprene H07 RN-F 3G2.5 | 84.10 (W903) | 25 | 290 |

## Cable drum, plastic

**Design:** Very robust model made of high-strength special plastic on stable, galvanised sheet steel **with 3 safety sockets,** splash-proof and self-closing lids. The cable drum is equipped with overheating protection. The control lamp reacts to overheating and overloading. The **cable guide on the handle** allows safe winding and unwinding.

**Application:** For indoor use and short-term outdoor use.

IP 44

format professional quality

| Order No. | Cable type | 9011 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0005 | Rubber H05 RR-F 3G1.5 | 79.90 (W903) | 50 | 290 |

## Cable drum, plastic

**Design:** Very robust model made of high-strength special plastic on stable, galvanised sheet steel **with 3 safety sockets,** splash-proof and self-closing lids. The cable drum is equipped with overheating protection. The control lamp reacts to overheating and overloading. The cable is approved for severe conditions in line with VDE 0100 Part 704. The **cable guide on the handle** allows safe winding and unwinding.

**Application:** Suitable for use indoors, permanent use outdoors and on industrial construction sites in line with BGI.

IP 44 | BGI 608

format professional quality

| Order No. | Cable type | 9006 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0005 | Neoprene H07 RN-F 3G1.5 | 79.40 | 40 | 290 |
| 0010 | Neoprene H07 RN-F 3G2.5 | 78.20 | 25 | 290 |
| 0015 | Neoprene H07 RN-F 3G2.5 | 117.00 (W903) | 40 | 320 |

## Cable drum, plastic

**Design:** Very robust model made of high-strength special plastic on stable, galvanised sheet steel **with 3 safety sockets,** splash-proof and self-closing lids. The cable drum is equipped with overheating protection. The control lamp reacts to overheating and overloading. Due to the **additional rotary contact technology**, the cable drum rotates without the socket unit; this prevents the connected cable from twisting. The **cable guide on the handle** allows safe winding and unwinding.

**Application:** For indoor use and short-term outdoor use.

IP 44

format professional quality

| Order No. | Cable type | 9012 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0005 | Rubber H05 RR-F 3G1.5 | 52.40 | 25 | 240 |
| 0010 | Rubber H05 RR-F 3G1.5 | 82.20 (W903) | 50 | 290 |

## Cable drum, sheet steel with FI plug

**Design:** Very robust model of corrosion-proof, galvanised sheet steel and stable supporting frame **with 3 grounded sockets,** splash-proof and self-closing lids. The cable drum is equipped with overheating protection. The control lamp reacts to overheating and overloading. The cable is approved for severe conditions in line with VDE 0100 Part 704. Due to the **additional rotary contact technology**, the cable drum rotates without the socket unit; this prevents the connected cable from twisting. In addition, this cable drum is equipped with a **FI plug 30 mA as protection against electrocution**. The **cable guide on the handle** allows safe winding and unwinding.

**Application:** For indoor and outdoor use.

IP 44

format professional quality

| Order No. | Cable type | 9019 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0040 | Neoprene H07 RN-F 3G1.5 | 114.00 (W903) | 40 | 290 |

## CEE cable drum, plastic

IP 44 | BGI 608

**Design:** Very robust model, drum body made of special plastic on galvanised supporting frame with **2 grounded sockets 230 V** on separate phases, splash-proof and self-closing lids as well as **1 CEE socket 400 V/16 A** and **CEE plug 400 V/16 A,** 5-pin.
Furthermore, the cable drum has a **3-pin safety shut-off** and overheating protection. The **cable guide on the handle** allows safe winding and unwinding. The cable is approved for severe conditions according to VDE 0100 Part 704.

**Application:** Suitable for use indoors, permanent use outdoors and on industrial construction sites in line with BGI.

| Order No. | Cable type | 9014 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0005 | Neoprene H07 RN-F 5G1.5 | 116.50 (W903) | 30 | 290 |

## CEE cable drum, plastic, suitable for construction sites

IP 44 | BGI 608

**Design:** Very robust model, drum body made of special plastic on galvanised supporting frame with **2 grounded sockets 230 V** on separate phases, splash-proof and self-closing lids as well as **1 CEE socket 400 V/16 A** and **CEE plug 400 V/16 A,** 5-pin. **In accordance with EN 61316.** Furthermore, the cable drum has **3-pin safety shut-off** and overheating protection. The **cable guide on the handle** allows safe winding and unwinding. The cable is approved for severe conditions according to VDE 0100 Part 704.

**Application:** Suitable for use indoors, permanent use outdoors and on industrial construction sites in line with BGI.

| Order No. | Cable type | 9015 format | Cable length m | Drum Ø mm |
|---|---|---|---|---|
| 0005 | Neoprene H07 RN-F 5G2.5 | 170.50 (W903) | 30 | 320 |

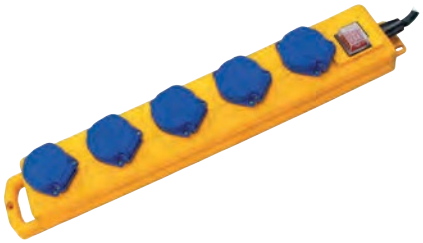
## Power strip

IP 44

**Design:** Particularly robust model made of high-quality, impact-resistant and unbreakable plastic with large, wide contact surface. The sockets have larger distances, are provided in a practical 45° arrangement and have a sealing ring. Furthermore, the power strip has an illuminated on/off switch and a sturdy bracket for hanging or attaching.

**Application:** Suitable for use indoors, outdoors, and on industrial construction sites.

**9013 0005** **5 grounded sockets** with splash-proof and self-closing lids.



**9013 0005**

**9013 0010** **5 grounded sockets** with splash-proof and self-closing lids and **FI plug 30 mA as protection against electrocution accidents.**

**9013 0010**

| Order No. | Cable type | 9013 brennenstuhl | Cable length m | Length mm |
|---|---|---|---|---|
| 0005 | Neoprene H07 RN-F 3G1.5 | 15.15 | 2 | 520 |
| 0010 | Neoprene H07 RN-F 3G1.5 | 35.90 (W910) | 5 | 520 |

## Power distributor

**Design:** Particularly robust, portable model made of sturdy, impact-resistant and splash-proof plastic. The cable is oil resistant.

**Application:** Suitable for use indoors, permanent use outdoors and on industrial construction sites.

IP 44

brennenstuhl®

**9017** With zinc-plated steel tube frame. **4 grounded sockets 230 V/16 A** distributed on all 3 phases with splash-proof and self-closing lids as well as **2 CEE sockets 400 V/16 A**, and **1 CEE plug 400 V/16 A, 5-pin**.

9017

**9020** With plastic-coated steel tube frame. **4 grounded sockets 230 V/16 A** distributed on 2 phases each with splash-proof and self-closing lids and **2 CEE sockets 400 V/16 A**, as well as **1 CEE socket 400 V/32 A and 1 CEE plug 400 V/32 A, 5-pin.** Protection by means of **FI personal protective circuit breaker 30 mA,** 4-pin, 1 LS circuit breaker 16 A/400 V and 2 LS circuit breakers 16 A/230 V.
The protective covers for the fuses are lockable.

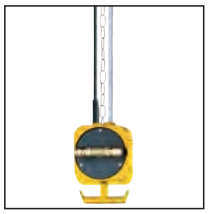
9020

| Order No. | Cable type | 9017 brennenstuhl® | 9020 brennenstuhl® | Cable length m |
|---|---|---|---|---|
| 0015 | Neoprene H07 RN-F 5G1.5 | 68.80 | – | 2 |
| 0015 | Neoprene H07 RN-F 5G4.0 | – (W910) | 285.50 (W910) | 2 |

## Suspended distributor

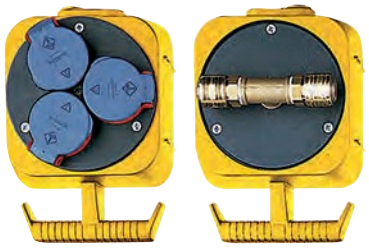
**Design:** Particularly robust model made of special plastic, impact resistant **with 3 grounded sockets** splash-proof and self-closing lids as well as **compressed air supply** with 2 single-handed pneumatic couplings. 5 m compressed air hose Ø 6/12 mm. Versatile connection options. The distributor can be hung with the stable, 3 m long steel link chain directly above the workstation at the desired height.

**Application:** For indoor use and short-term outdoor use.



IP 44

brennenstuhl®



| Order No. | Cable type | 9021 brennenstuhl® | Cable length m |
|---|---|---|---|
| 0010 | Neoprene H07 RN-F 3G1.5 | 56.90 (W910) | 5 |

## Extension cable

**9023** **Cable Type rubber H05 RR-F 3G,** with safety plug and coupling including closure cap. Suitable for use indoors as well as for short-term use outdoors.

**9026** **Cable Type neoprene H07 RN-F 3G,** with safety plug and coupling including closure cap. Suitable for use indoors, permanent use outdoors and on industrial construction sites.

**9022** **Cable type polyurethane H07 BQ-F 3G,** with safety plug and coupling including closure cap 250 V/10-16 A. Safety plug **with LED light** as voltage display. Suitable for use indoors, permanent use outdoors and on industrial construction sites.

**Note:** Polyurethane cable for very high mechanical loads, notch-resistant.

IP 44

9023 + 9026

9022

| Order No. | Conductor cross-section mm | 9023 | 9026 | 9022 | Cable length m |
|---|---|---|---|---|---|
| 0100 | 1.5 | 20.40 | 22.30 | 45.40 | 10 |
| 0250 | 1.5 | – | 43.80 | 68.30 | 25 |
| 1100 | 2.5 | – | – | 47.00 | 10 |
| 1250 | 2.5 | – (W909) | – (W909) | 91.50 (W909) | 25 |

## CEE extension cable

**Cable type neoprene H07 RN-F 5G,** with CEE plug and coupling including closure cap 400 V, 5-pin. Suitable for use indoors, permanent use outdoors and on industrial construction sites.

IP 44

| Order No. | Conductor cross-section mm | 9029 | Cable length m | Current A |
|---|---|---|---|---|
| 0100 | 1.5 | 35.50 | 10 | 16 |
| 0250 | 1.5 | 69.40 | 25 | 16 |
| 1100 | 2.5 | 46.60 | 10 | 16 |
| 1250 | 2.5 | 96.80 | 25 | 16 |
| 2100 | 4.0 | 66.30 | 10 | 32 |
| 2250 | 4.0 | 138.50 (W909) | 25 | 32 |

## Charger

NEW

SKROSS ADAPT TO THE WORLD

**Design:** With 2 x USB ports.

**Application:** The dual USB port means that you can charge two USB devices simultaneously. Modular with all SKROSS world travel adapters.

| Order No. | Input voltage V | 9024 SKROSS | Output voltage V | Output current A |
|---|---|---|---|---|
| 0005 | 100–250 | 15.00 (W523) | 5 | 2.4 |

## USB adapter cable 2 in 1 Charge'n Sync Micro

NEW

SKROSS ADAPT TO THE WORLD

**Design:** Cable is fully certified by Apple.

**Application:** Charges and syncs all devices via Micro USB or Lightning Connector.

| Order No. | Output current (Micro USB) A | 9024 SKROSS | Output current (Lightning Connector) A | Input voltage V | Output voltage V | Length m |
|---|---|---|---|---|---|---|
| 0010 | 2.1 | 22.00 (W523) | 2.4 | 5 | 5 | 1 |

## Mobile battery

NEW

SKROSS ADAPT TO THE WORLD

**Design:** With LED capacity display. Charges tablets once or smartphones up to two times.

**Application:** Powerbank for USB devices, that needs charging.

**Delivery:** With Micro USB cable 1 m and instructions.

IP 20

| Order No. | Battery type | 9024 SKROSS | Capacity (battery pack) mA | Voltage (battery pack) V | Charging time (max.) min |
|---|---|---|---|---|---|
| 0015 | Li-Ion | 39.00 (W523) | 5000 | 3.7 | 240 |

## Car charger MidgetPLUS

NEW

SKROSS ADAPT TO THE WORLD

**Design:** An additional device can be charged simultaneously using the extra USB port.

**Application:** USB charger for the car, motorbike, HGV, camper van and boat.

| Order No. | Type of connector | 9024 SKROSS | Output voltage V | Input voltage V | Cable length m |
|---|---|---|---|---|---|
| 0020 | Micro USB | 13.00 | 5 | 16 | 1.2 |
| 0025 | Lightning Connector | 24.00 (W523) | 5 | 16 | 1.2 |

## Travel adapter PRO

NEW

SKROSS ADAPT TO THE WORLD

**Design:** Compact 3-pin world travel adapter; connects devices from all countries with a standard safety socket, e.g. Germany, France, Belgium and Egypt.

**Application:** Suitable for all grounded and non-grounded devices (2- and 3-pin), plug socket for Europe (safety plug and 2-pin European plug), sliding plug: Italy/Switzerland, Australia/China, UK, USA.

| Order No. | Input voltage V | 9024 SKROSS |
|---|---|---|
| 0000 | 100–250 | 22.00 (W523) |

## ATEX torches

In potentially explosive areas appropriately protected lamps must be used in order not to trigger an explosion, for example, from the spark when turning on the lamp.

Therefore the ATEX directives define the following zones:

**Zone 2:** Areas where there is **rarely and briefly** a risk of explosion.

**Zone 1:** Areas, in which there is **occasionally** a risk of explosion.

**Zone 0:** Areas, in which there is a risk of explosion **continually or frequently and over a long time period**.

On each torch there should be a code, which provides information about the application area:

| | |
|---|---|
| **II** | Devices in group II may not be used in mining. |
| **1/2/3** | Specifies the category, this **corresponds to the zone +1.** |
| **G/D** | Suitable for gases/vapours (G) or dust (D). |
| **Ex** | For use in potentially explosive areas. |
| **ia/ib** | Protection class intrinsic safety. |
| **e** | Ignition protection: increased safety. |
| **IIx** | Gas group (IIA = propane, IIB = ethylene, IIC = acetylene/hydrogen). |
| **IIIx** | Dust group (IIIA = combustible suspended matter, IIIB = non-conductive dust, IIIC = conductive dust). |
| **Tx** | Temperature class, specifies the maximum allowable surface temperature. (T6 = 85 °C, T5 = 100 °C, T4 = 135 °C, T3 = 200 °C, T2 = 300 °C, T1 = 450 °C) |

## LED torch PX2

**Design:** Certified gas-, dust- and waterproof safety lamp made of highly resilient and impact-resistant polycarbonate with clip, non-conductive. The rubberised rear switch for single-hand operation is hermetically sealed against the penetration of water and dust. There is also protection against short circuit and incorrectly inserted batteries. ATEX Zone 1, certified, II 2G Ex ib e IIB T4 Gb, working temperature -20 °C to +40 °C. Delivery with 2 micro batteries AAA/LR03.

Ex ATEX Zone 1 IP 68 PARAT

| Order No. | Luminosity lm | 9054 PARAT | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0201 | 30 | 24.50 (W596) | ca. 10 | 35 | 142 x 22 | 40 |

## LED torch PX1

**Design:** Certified gas-, dust- and waterproof safety lamp made of highly resilient and impact-resistant polycarbonate, non-conductive. The rubberised rear switch for single-hand operation is hermetically sealed against the penetration of water and dust. There is also protection against short circuit, **the batteries can be inserted regardless of their polarity.** ATEX Zone 1, certified, II 2G Ex ib IIB T4 Gb II 2D Ex ib IIIC T 105 °C Db IP 68, working temperature -20 °C to +40 °C. Delivery with 4 Mignon batteries AA/LR06

**Note:** Compatible with popular headbands and PARASNAP©.

Ex ATEX Zone 1 IP 68 PARAT

| Order No. | Luminosity lm | 9056 PARAT | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0201 | 120 | 45.10 (W596) | 50 | 150 | 167 x 39 | 200 |

## LED torch PX3

**Design:** Waterproof safety lamp made of highly resilient and impact-resistant polycarbonate with clip, non-conductive. The rubberised rear switch for single-hand operation is hermetically sealed against the penetration of water and dust. There is also protection against short circuit and incorrectly inserted batteries. ATEX Zone 2, conforms to II 3G Ex nA IIC T4. Delivery with 2 Mignon batteries AA/LR06

Ex ATEX Zone 2 IP 68 PARAT

| Order No. | Luminosity lm | 9059 PARAT | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0051 | 60 | 25.50 (W596) | 50 | 100 | 152 x 23 | 80 |

## LED torch PX0

**Design:** Certified gas-, dust- and waterproof safety lamp made of highly resilient and impact-resistant XAG plastic, conductive at high impedance. Additional protection against electrostatic discharge (ESD), electromagnetic interference (EMI) and radio frequency interference (RFI). The rubberised rear switch for single-hand operation is hermetically sealed against the penetration of water and dust. There is also protection against short circuit, **the batteries can be inserted regardless of their polarity.** ATEX Zone 0, certified, II 1G Ex ia IIC T4 Ga II 2D Ex ib IIIC T 105°C Db IP 68, working temperature -20 °C to +40 °C. Delivery with 4 Mignon batteries AA/LR06

**Note:** Compatible with popular headbands and PARASNAP©.

Ex ATEX Zone 0 IP 68 PARAT

| Order No. | Luminosity lm | 9059 PARAT | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 1000 | 120 | 59.10 (W596) | 50 | 150 | 167 x 39 | 200 |

## LED head light

**Design:** Certified gas-, dust- and waterproof safety lamp made of highly resilient and impact-resistant polycarbonate, non-conductive. The rubberised switch for single-hand operation is hermetically sealed against the penetration of water and dust. Fixed focused beam of light. There is also protection against short circuit and incorrectly inserted batteries. ATEX Zone 1, certified, II 2G Ex ib IIB T4 Gb, working temperature - 20 °C to +40 °C . Delivery with 4 micro batteries AAA/LR03.

Ex ATEX Zone 1 | IP 68 | PARAT

| Order No. | Luminosity lm | 9059 PARAT | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0060 | 120 | 59.20 (W596) | 50 | 150 | 70 x 65 x 65 | 160 |

## LED torch X2

**Design:** Dust- and waterproof high-power lamp made of highly resilient and impact-resistant polycarbonate with clip, non-conductive. The rubberised rear switch for single-hand operation is hermetically sealed against the penetration of water and dust. There is also protection against short circuit and incorrectly inserted batteries. Delivery with 2 micro batteries AAA/LR03.

IP 68 | PARAT

| Order No. | Luminosity lm | 9054 PARAT | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0500 | 45 | 25.30 (W596) | 4 | 50 | 147 x 22 | 40 |

## LED torch X1

**Design:** Dust- and waterproof high-power lamp made of highly resilient and impact-resistant polycarbonate with clip, non-conductive. The rubberised rear switch for single-hand operation is hermetically sealed against the penetration of water and dust, and contains a light-strength switch 100%/15%. There is also protection against short circuit, **the batteries can be inserted regardless of their polarity.** Delivery with 4 Mignon batteries AA/LR06

IP 68 | PARAT

**Note:** Compatible with popular headbands and PARASNAP©.

| Order No. | Luminosity lm | 9056 PARAT | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0500 | 170 | 46.00 (W596) | Min. 6 - max. 50 | 200 | 167 x 39 | 200 |

## Accessories for torches

PARAT

**9059 0010** **Fibre optics attachment**
254 mm long. For spot-on illumination in hard-to-reach places.

9059 0010

**9059 2000** **Belt holder**
Made from cowhide, with base support. For belts up to 55 mm wide. Bulb holder (Order No. 9059 2005) is required for the attachment of torches to the belt holder.

9059 2000

**9059 2005** **Bulb holder**
Made from fibreglass-reinforced polyamide, with magnetic holder for affixing torches to the belt holder.

9059 2005

| Order No. | Design | 9059 PARAT | For model |
|---|---|---|---|
| 0010 | Fibre optics attachment | 8.30 | PX2, PX3, X2 |
| 2000 | Belt holder | 20.60 | – |
| 2005 | Bulb holder | 6.90 (W596) | PX0, PX1, X1 |

## LED pen light TOUGH™

**Design:** Shell made of aluminium, splash-proof. With push-button switch and practical clip. Delivery with 2 micro batteries AAA/LR03.

IP 44

DURACELL FLASHLIGHTS

| Order No. | Luminosity lm | 9246 DURACELL FLASHLIGHTS | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|
| 0005 | 5 | 5.60 (W911) | 9 | 142 x 12 | 15 |

## LED torch

**Design:** LED torch with robust plastic case and ring holder for fastening. Delivery without batteries.

| Order No. | Luminosity lm | 9061 | Battery type | Dimensions mm | Weight g |
|---|---|---|---|---|---|
| 0013 | 55 | 9.90 | 2 x Mignon AA/LR06 | 165 x 49 | 123 |
| 0018 | 80 | 11.80 (W596) | 2 x Mono D/LR20 | 195 x 66 | 422 |

## LED torch

**Design:** Shell made of aluminium, splash-proof, with white LED. Delivery with 3 micro batteries AAA/LR03.

IP 44

format professional quality

| Order No. | Luminosity lm | 9062 format | Dimensions mm | Weight g |
|---|---|---|---|---|
| 0005 | 120 | 29.50 (W596) | 140 x 30 | 170 |

## LED torch

**Design:** Shell made of aluminium, with white CREE X-PGR-4 LED and 3-step switch (full/half/off). Delivery with 3 Mignon batteries AA/LR06.

format professional quality

| Order No. | Luminosity lm | 9062 format | Dimensions mm | Weight g |
|---|---|---|---|---|
| 0010 | 450 | 50.50 (W596) | 212 x 54 | 376 |

## LED torch TOUGH™

NEW

**Design:** Shell made of aluminium, splash-proof.

IP 44

DURACELL FLASHLIGHTS

**9246 0010** **CMP-9**
**0010** Delivery with 3 micro batteries AAA/LR03 and carry loop.

**9246 0015** **FCS-1**
**0015** With focusing lens for ultra-bright light and steplessly adjustable light beam from floodlight to spotlight. Delivery with 2 Mignon batteries AA/LR06

**9246 0020** **FCS-10**
**0020** With focusing lens for ultra-bright light and steplessly adjustable light beam from floodlight to spotlight. Delivery without 2 baby batteries C/LR14

**9246 0025** **FCS-100**
**0025** With focusing lens for ultra-bright light and steplessly adjustable light beam from floodlight to spotlight. Delivery without 2 mono batteries D/LR20.

| Order No. | Luminosity lm | 9246 DURACELL FLASHLIGHTS | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0010 | 70 | 8.45 | 6.00 | 88 | 99 x 34 | 150 |
| 0015 | 127 | 15.20 | 0.46 | 117 | 175 x 37 | 115 |
| 0020 | 134 | 17.80 | 2.00 | 159 | 190 x 47 | 190 |
| 0025 | 160 | 25.60 (W911) | 4.15 | 209 | 225 x 56 | 315 |

## LED torch

NEW

**Design:** Shell made of aluminium, with non-slip, resilient surface. With white CREE LED and focusing function for stepless adjustment of the light beam from floodlight to spotlight.

IP 54

format professional quality

**9247 0005** Delivery with 2 micro batteries AAA/LR03, belt bag and carry loop.

**9247 0010** 3 power settings (25/50/100%) with flashing function and SOS; Delivery with 2 Mignon batteries AA/LR06, belt bag and carry loop.

**9247 0015** 3 power settings (25/50/100%) with stroboscope and SOS. Delivery with 2 baby batteries C/LR14, belt bag and carry loop.

| Order No. | Luminosity lm | 9247 format | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0005 | 120 | 21.70 | 5.0 | 80 | 147 x 16.0 | 37 |
| 0010 | 150 | 27.90 | 2.5 | 100 | 166 x 18.5 | 73 |
| 0015 | 200 | 31.20 (W911) | 3.0 | 200 | 183 x 45.0 | 217 |

9247 0005

9247 0010

9247 0015

## LED torch

NEW

**Design:** Shell made of aluminium, with non-slip, resilient surface. With extremely bright CREE LED and focusing function for stepless adjustment of the light beam from floodlight to spotlight. 2 power settings (25/100%), with flashing light and green card reading function. Back control light **with magnet**, connection **with PowerBank function**. Delivery with battery, USB charger, 2 USB cables, USB car charger and belt bag.

**Note:** Charging cable for use with PowerBank function not included. See Order No. 9024 0010 for matching USB charging cable, 📖 9/6.

IP 54 | USB

format professional quality

| Order No. | Luminosity lm | 9247 format | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0020 | 800 | 43.70 (W911) | 3 | 45 | 154 x 37.0 | 214 |

## LED torch FLASH series

**Design:** Waterproof, robust and high-power LED torch, with focus feature for bunched illumination between 10° and 70°. Working temperature from -10 °C to +40 °C

IP 54

SCANGRIP INNOVATION FROM DENMARK

**9039 0094** **FLASH MINI**
Delivery with 3 micro batteries AAA/LR03 and key ring.

**9039 0148** **FLASH PEN**
Delivery with 2 micro batteries AAA/LR03 and clip.

**9039 0111** **FLASH 100**
CREE XP-G LED for very high luminosity. Delivery with 3 micro batteries AAA/LR03, belt bag and carry loop.

**9039 0165** **FLASH 200**
CREE XP-G LED for very high luminosity. Delivery with 2 baby batteries C/LR14, belt bag and carry loop.

**9039 0216** **FLASH 300**
CREE XP-G LED for very high luminosity. Delivery with 3 baby batteries C/LR14, belt bag and carry loop.

**9039 0300** **FLASH R**
CREE XP-G2 LED for very high luminosity. 2-level operation: maximum light/saver mode. Delivery with **battery charging station** with rubber base for a secure stand, suitable for wall mounting and **lithium-ion battery 7.4 V/1400 mAh.**

| Order No. | Luminosity lm | 9039 SCANGRIP | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0094 | 25 | 6.10 | 10 | 10 | 93.5 x 28 | 71 |
| 0148 | 100 | 21.50 | 6 | 75 | 148.0 x 16 | 56 |
| 0111 | 130 | 26.90 | 7 | 125 | 111.0 x 32 | 130 |
| 0165 | 200 | 40.70 | 3 | 180 | 165.0 x 40 | 335 |
| 0216 | 300 | 46.10 | 9 | 210 | 216.0 x 42 | 446 |
| 0300 | 300 | 65.40 (W913) | Min. 2 - max. 4 | 210 | 300.0 x 100 | 446 |

9039 0094

9039 0148

9039 0111

9039 0165

9039 0216

9039 0300

## LED lamps from the Q and V ranges

Hyperfocus™ for steplessly adjustable light beam from floodlight to spotlight.
The various light modes are controlled using ILC (Intelligent Light Control).
**Boost** = Maximum output, depending on battery and LED
**Dimmer** = Dims your light to the desired effect.
**High** = Bright lighting for long-term use
**Medium** = Medium output, medium longevity
**Memory** = Remembers the last light setting
**Low** = Long-lasting low lighting
**SOS** = SOS function
**Stroboscope function** = Blinking strobe light, frequency 10 Hz

## LED torch Q series

**Design:** Made of anodised aluminium, splash-proof. With gold-coated contacts.
Working temperature from -20 °C to +50 °C.

IP 44

suprabeam®

**9038 0100** **Q1mini**
With Hyperfocus™, high and low function.
Delivery with 1 micro battery AAA/LR03 and clip.

9038 0100

**9038 0105** NEW **Q1prime**
With fix focus, beam angle 20°.
Delivery with 1 micro battery AAA/LR03.

9038 0105

**9038 0110** **Q1**
With Hyperfocus™, high and low function.
Delivery with 2 micro batteries AAA/LR03 and clip.

9038 0110

**9038 0120** **Q2**
With Hyperfocus™, high and low function.
Delivery with 1 Mignon battery AA/LR06.

9038 0120

**9038 0130** **Q3**
With Hyperfocus™, boost, high, low and stroboscope function.
Delivery with 3 micro batteries AAA/LR03.

9038 0130

IP 68

**9038 0135** NEW **Q3defend**
With fix focus, beam angle 5° and waterproof.
Delivery with 3 micro batteries AAA/LR03.

9038 0135

**9038 0150** **Q7compact**
With Hyperfocus™, boost, high, low and stroboscope function.
Delivery with 4 micro batteries AAA/LR03 and belt bag.

9038 0150

| Order No. | Luminosity lm | 9038 suprabeam | Lighting duration h | Light range m | Dimensions mm | Weight g |
|---|---|---|---|---|---|---|
| 0100 | 80 | 29.90 | 5.0 | 60 | 98.0 x 15.0 | 38 |
| 0105 | 90 | 23.80 | 0.5 | 60 | 75.8 x 14.6 | 30 |
| 0110 | 100 | 36.30 | 8.0 | 70 | 141.5 x 15.0 | 56 |
| 0120 | 170 | 45.80 | 6.0 | 150 | 116.0 x 26.0 | 80 |
| 0130 | 320 | 64.00 | 50.0 | 230 | 115.3 x 26.5 | 100 |
| 0135 | 280 | 84.50 | 20.0 | 210 | 124.0 x 27.0 | 99 |
| 0150 | 350 | 72.30 (W709) | 33.0 | 220 | 134.0 x 39.0 | 196 |

## Helmet holder for torches NEW

**Application:** The holder fits all safety helmets with a side mounting slot.

| Order No. | For model | 9038 suprabeam |
|---|---|---|
| 0155 | Q3, Q3defend, Q7compact | 9.20 (W709) |

## LED head light V series

**Design:** Shell made of high-quality plastic composite and anodised aluminium, splash-proof. With 4-level pressure switch and gold-plated contacts. Hyperfocus™ for steplessly adjustable light beam from floodlight to spotlight. Adjustable, removable and washable headband. Working temperature -30 °C to +60 °C.

IP 44

suprabeam®

9038 0175

9038 0180

**9038 0160** — **V3pro**
Delivery with 3 Mignon batteries AA/LR06, headband and belt bag.

**9038 0175** — **V3air**
Delivery with 3 micro batteries AAA/LR03, headband and belt bag.

**9038 0180** NEW — **V4pro rechargeable**
Delivery with Li-Ion battery 3.7 V/2800 mAh, 100–240 VAC adapter with USB cable, headband and belt bag.

| Order No. | Luminosity lm | 9038 suprabeam | Lighting duration h | Light range m | Tape length mm | Weight g |
|---|---|---|---|---|---|---|
| 0160 | 6/250/380 | 70.70 | 100/10/6.00 | 210 | 500–700 | 204 |
| 0175 | 5/150/250 | 53.20 | 100/ 5/1.25 | 195 | 500–700 | 140 |
| 0180 | 12/400/800 | 165.00 (W709) | 100/ 2/1.75 | 250 | 500–700 | 195 |

## Battery/rechargeable battery

VARTA DIE BATTERIE-EXPERTEN

**9041** — **High Energy**
Alkaline battery, ideally suited for devices with high energy consumption.

**9939 0015 + 0020** — **Max Tech**
Alkaline battery, for digital devices and high-power devices. Ideal for large fluctuation ranges with extreme energy peaks.

**9941** — **Professional Lithium**
For energy-intensive areas of application - such as digital cameras, GPS devices and smoke alarms.

**9939 1015–1025** NEW — **Industrial**
For permanent or pulse operation with high currents. Extended storage capability of up to 10 years.

**9042** — **Power Accu**
Ni-Mh rechargeable battery; suitable for low and high current uses depending on capacity. For all standard chargers. Rechargeable without memory effect. With Ready To Use technology, these rechargeable batteries are ready to use without pre-charging.

Mono D/LR20

Baby C/LR14

Micro AAA/LR03

Mignon AA/LR06

E-Block/6LR61

| Order No. | Design | 9041 VARTA | 9939 VARTA | 9941 VARTA | 9042 VARTA | Voltage V | Content |
|---|---|---|---|---|---|---|---|
| 0007 | Mono D/LR20 | 3.35 | – | – | – | 1.5 | Blister pack with 2 pieces |
| 0010 | Baby C/LR14 | – | – | – | 13.40 | 1.2 | Blister pack with 2 pieces |
| 0012 | Baby C/LR14 | 2.87 | – | – | – | 1.5 | Blister pack with 2 pieces |
| 0017 | Mignon AA/LR06 | – | – | – | 10.00 | 1.2 | Blister pack with 2 pieces |
| 0015 | Mignon AA/LR06 | – | 4.31 | 14.90 | – | 1.5 | Blister pack with 4 pieces |
| 0018 | Mignon AA/LR06 | 2.88 | – | – | – | 1.5 | Blister pack with 4 pieces |
| 1015 | Mignon AA/LR06 | – | 78.00 | – | – | 1.5 | Box with 200 pieces |
| 0022 | Micro AAA/LR03 | – | – | – | 10.40 | 1.2 | Blister pack with 4 pieces |
| 0020 | Micro AAA/LR03 | – | 4.31 | 14.00 | – | 1.5 | Blister pack with 4 pieces |
| 0023 | Micro AAA/LR03 | 2.88 | – | – | – | 1.5 | Blister pack with 4 pieces |
| 1020 | Micro AAA/LR03 | – | 78.00 | – | – | 1.5 | Box with 200 pieces |
| 0025 | E-Block/6LR61 | 2.61 | – | 14.00 | 12.30 | 9.0 | Blister pack with 1 piece |
| 1025 | E-Block/6LR61 | – (W710) | 424.50 (W710) | – (W710) | – (W710) | 9.0 | Box with 272 pieces |

## Button cell

VARTA DIE BATTERIE-EXPERTEN

**Design:** Lithium and silver cells.

**Application:** For a range of electronic applications, like car keys, pocket calculators, cameras and remote controls.

| Order No. | Type | 4026 VARTA | Voltage V | Design |
|---|---|---|---|---|
| 0357 | V13GS/V357 | 2.70 | 1.5 | Silver (ZN/AG20) |
| 2025 | CR2025 | 2.15 | 3.0 | Lithium (Li/Mn02) |
| 2032 | CR2032 | 2.15 (W710) | 3.0 | Lithium (Li/Mn02) |

## LED hand lamp EXPLORER™

NEW

**Design:** Shell made of plastic, splash-proof, with main light and spotlight. **The lamp head can be set in 7 different positions.** A rotating suspension hook is located on the back. Two magnets are located on the back and the base for optimal mounting. Delivery with 3 Mignon batteries AA/LR06.

IP 44

DURACELL FLASHLIGHTS

| Order No. | Luminosity lm | 9246 DURACELL FLASHLIGHTS | Lighting duration h | Light range m | Length mm |
|---|---|---|---|---|---|
| 0050 | 235 | 14.25 (W911) | 7 | 8 | 225 |

## Rechargeable LED hand lamp FLEX2

**Design:** Shell made of plastic, with main light and upper spotlight. **The lamp head swivels 120°.** A large, rotating suspension hook is located on the back and a magnet for optimal mounting is attached to the bottom of the lamp. Working temperature from -10 °C to +40 °C Delivery with Li-Ion 3.7 V/1300 mAh and 230 VAC battery charging device.

IP 20

SCANGRIP INNOVATION FROM DENMARK

| Order No. | Luminosity lm | 9043 SCANGRIP | Burning life hours main light/spot light | Length mm |
|---|---|---|---|---|
| 0011 | 125/50 | 31.90 (W913) | 4/10 | 210 |

## Rechargeable LED hand lamp MAG

**Design:** Shell made of plastic, with main light and upper spotlight. **The lamp head swivels 180°.** The lamp back features two retractable hanging hooks and two well-integrated holding magnets, as well as a holding magnet for optimal mounting on the base. Working temperature from -10 °C to +40 °C.

**9043 0021** **MAG**
Delivery with Li-Ion battery 3.7 V/1800 mAh.

**9043 0028** **MAG 3**
Delivery with Li-Ion battery 3.7 V/2200 mAh.

IP 20

SCANGRIP INNOVATION FROM DENMARK

| Order No. | Luminosity lm | 9043 SCANGRIP | Burning life hours main light/spot light | Length mm |
|---|---|---|---|---|
| 0021 | 120/50 | 39.90 | 4/4 | 270 |
| 0028 | 250/150 | 47.90 (W913) | 3/3 | 270 |

9043 0021

9043 0028

## LED pen light 1 W

NEW

**Design:** Shell made of plastic, with COB LED, magnetic clip with 180° rotation. Delivery with 3 micro batteries AAA/LR03 and carry loop.

format professional quality

| Order No. | Luminosity lm | 9247 format professional quality | Lighting duration h | Light range m | Length mm |
|---|---|---|---|---|---|
| 0025 | 100 | 6.85 (W911) | 5 | 30 | 165 |

## LED hand lamp 3 W

NEW

**Design:** Shell made of plastic, with rubberised surface. With COB LED main light and SMD LED spotlight. 2-level luminosity (30/100 %), with flashing function. **The lamp head swivels 180°.** A suspension hook and a magnet can be found on the back of the lamp. Delivery with 4 Mignon batteries AA/LR06.

IP 54

format professional quality

| Order No. | Luminosity lm | 9247 format professional quality | Lighting duration h | Light range m | Length mm |
|---|---|---|---|---|---|
| 0030 | 200 | 13.40 (W911) | 7 | 20 | 155 |

## Rechargeable LED pen light UNIPEN

NEW

**Design:** Shell made of plastic, with main light and upper spotlight. **The lamp head swivels 180°.** A clip and a magnet can be found on the back of the lamp. Working temperature from -10 °C to +40 °C Delivery with Li-Ion battery 3.7 V/700 mAh and USB cable.

IP 65

SCANGRIP INNOVATION FROM DENMARK

| Order No. | Luminosity lm | 9043 SCANGRIP | Burning life hours main light/spot light | Length mm |
|---|---|---|---|---|
| 0042 | 100/50 | 35.90 (W913) | 2.5/2.5 | 155 |

## Rechargeable LED work lamp MINIFORM/MIDIFORM/UNIFORM

**Design:** Shell made of plastic with rubber coating. Powerful, rechargeable COB LED work lamp for uniform illumination. **The lamp head swivels 180°.** On the back of the lamp is a large, suspension hook and a magnet for optimal mounting. The magnetic base can be swivelled. The handle has a frame that can be used as a stand. Working temperature from -10 °C to +40 °C

IP 65

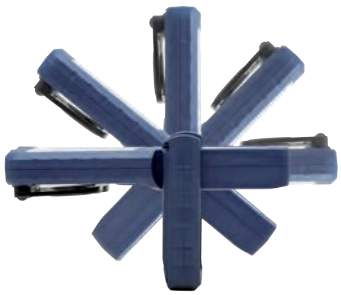
SCANGRIP INNOVATION FROM DENMARK

**9043 0044** **MINIFORM**
Especially slim (13 mm), ideal for shirt and trouser pockets.
Delivery with Li-Ion battery 3.7 V/1000 mAh.

**9043 0048** NEW **MIDIFORM**
With upper spotlight.
Delivery with Li-Ion battery 3.7 V/1600 mAh.

**9043 0047** **UNIFORM**
With upper spotlight.
Delivery with Li-Ion rechargeable battery 3.7 V/2200 mAh and 230 VAC battery charging station.

9043 0044 9043 0048 9043 0047



| Order No. | Luminosity lm | 9043 SCANGRIP | Lighting duration h | Length mm |
|---|---|---|---|---|
| 0044 | 55/125 | 43.90 | 5/2.5 | 120 |
| 0048 | 75/180 | 51.90 | 3/3.0 | 157 |
| 0047 | 150/300 | 67.90 (W913) | 6/3.0 | 190 |

## LED inspection lamp STARLINE

NEW

**Design:** Shell made of plastic with removable hanging hook. Bright illumination of the work area Working temperature from -10 °C to +40 °C.

IP 40

SCANGRIP INNOVATION FROM DENMARK

| Order No. | Luminosity lm | 9043 SCANGRIP | Cable type | Cable length m | Cable quality |
|---|---|---|---|---|---|
| 0110 | 300 | 31.90 (W913) | H05 RN-F 2G1 | 5 | Rubber |

## Rechargeable LED inspection lamp LINE LIGHT R/C+R

**Design:** Very slim shell made of plastic, splash-proof, with additional spotlight and integrated battery. Focused light angle of 75° for strong illumination of the work area. Working temperature from -10 °C to +40 °C Delivery with clip holder with magnet and hook for flexible application.

IP 54

SCANGRIP INNOVATION FROM DENMARK

| Order No. | Luminosity lm | 9043 SCANGRIP | | Burning life hours main light/spot light h | Operation mode | Battery type | Cable length m | Ø x length mm |
|---|---|---|---|---|---|---|---|---|
| 1000 | 220/80 | 79.90 | | 4/6 | Battery | Li-ion battery 7.4 V/1400 mAh | – | 25 x 488 |
| 1003 | 220/80 | 79.90 (W913) | NEW | 4/6 | Mains power and battery | Li-ion battery 7.4 V/1400 mAh | 5 | 25 x 488 |

## LINE LIGHT inspection lamp modular system

**Design:** Especially slim inspection lamps with splash-proof plastic shell. Focused light angle of 75° for strong illumination of the work area. Working temperature from -10 °C to +40 °C.

**Application:** To meet individual requirements when it comes to illuminating in industry and trade. Choice of inspection lamps in desired lengths, power supply measured using required wattage per lamp or group of lamps, power cord to connect the individual elements and socket.

IP 67

SCANGRIP INNOVATION FROM DENMARK

**9043 1005–9043 1015**

| Order No. | Design | 9043 SCANGRIP | LEDs Piece | Luminosity lm | Ø x length mm |
|---|---|---|---|---|---|
| 1005 | Inspection lamp 75, 8 W | 95.90 | 96 | 490 | 25 x 838 |
| 1010 | Inspection lamp 120, 13 W | 160.00 | 156 | 800 | 25 x 1234 |
| 1015 | Inspection lamp 160, 18 W | 184.00 | 216 | 1100 | 25 x 1630 |
| 1032 | Power adapter, 25 W | 23.90 | – | – | – |
| 1027 | Power adapter, 80 W | 41.50 | – | – | – |
| 1035 | Power cable 8m | 6.30 (W913) | – | – | – |

**9043 1032**

**9043 1027**

## Accessories for LINE LIGHT inspection lamps

**Design:** Holder for attaching lamps to walls or objects.

**9043 1040** **9043 1045**

| Order No. | Design | 9043 SCANGRIP | Dimensions mm |
|---|---|---|---|
| 1040 | Clip holder for suspension | 5.00 | 35 x 107 x 28 |
| 0070 | Clip holder with magnet | 23.90 | 66 x 281 |
| 0075 | Clip holder with suction base | 19.90 | 66 x 270 |
| 1045 | Magnetic holder | 11.90 (W913) | 31 x 38 |

**9043 0070**

**9043 0075**

## LED construction spotlight

NEW

**Design:** Shell made of die-cast aluminium, chip LED for expansive lighting. Beam angle 100° to 120°. Working temperature -20 °C to +50 °C.

**9050 0005** — **30 W**
WIthout on/off switch.

**9050 0010** — **20 W**
With on/off switch and stand with magnet. Delivery with Li-Ion battery 7.4 V/4400 mAh and charge adapter.

**9050 0015** — **20 W Pro**
With on/off switch and removable battery. 3-level luminosity (25/50/100 %), with flashing function. Delivery with 1 Li-Ion battery 7.4 V/4400 mAh and charge adapter.

9050 0005

9050 0010

9050 0015

| Order No. | Luminosity lm | 9050 format | Performance W | Lighting duration h | Light range m | Operation mode | Battery type | Cable type | Cable length m |
|---|---|---|---|---|---|---|---|---|---|
| 0005 | 2400 | 53.80 | 30 | – | 5 | Mains power | – | H05 RN-F 3G1.0 | 1.8 |
| 0010 | 1400 | 64.80 | 20 | 2.5 | 5 | Battery | Li-ion battery 7.4 V/4400 mAh | – | – |
| 0015 | 1400 | 71.00 | 20 | 2.5 | 5 | Battery | Li-ion battery 7.4 V/4400 mAh | – | – |
| | | (W911) | | | | | | | |

## Battery for battery LED construction light

NEW

**Application:** Can be used with battery LED construction light 20 W Pro (Order No. 9050 0015).

| Order No. | Design | 9050 format |
|---|---|---|
| 0020 | Li-ion battery 7.4 V/4400 mAh | 34.40 (W911) |

## LED work lamp

NEW

**Design:** Two built-in safety plugs with safety caps on the rear, with on/off switch. Beam angle 100° to 120°. Working temperature -20 °C to +50 °C.

| Order No. | Luminosity lm | 9050 format | Performance W | Light range m | Operation mode | Cable type | Cable length m |
|---|---|---|---|---|---|---|---|
| 0025 | 4000 | 112.00 | 50 | 5 | Mains power | H07 RN-F 3G1.5 | 3 |
| 0030 | 6800 | 130.00 (W911) | 80 | 5 | Mains power | H07 RN-F 3G1.5 | 3 |

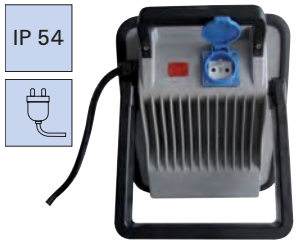
## LED work lamp

NEW

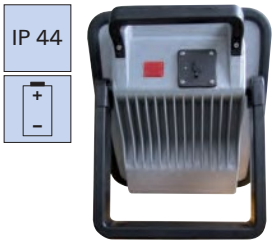
**Design:** With on/off switch, beam angle 100° to 120°, working temperature -20 °C to +50 °C.

**9050 0035** — Built-in safety plug with safety cap on the rear.

**9050 0040** — Delivery with 4400 mAh lithium-ion battery 7.4 V and charge adapter.



9050 0035



9050 0040

| Order No. | Luminosity lm | 9050 format | Performance W | Lighting duration h | Light range m | Operation mode | Battery type | Cable type | Cable length m |
|---|---|---|---|---|---|---|---|---|---|
| 0035 | 2400 | 81.80 | 36 | – | 5 | Mains power | – | H07 RN-F 3G1.5 | 5 |
| 0040 | 1400 | 88.20 | 20 | 2.5 | 5 | Battery | Li-ion battery 7.4 V/4400 mAh | – | – |
| | | (W911) | | | | | | | |

## LED work lamp NOVA

**Design: Super-slim and** unbreakable, impact resistant and waterproof aluminium shell with rubber coating. Special COB LED for even and expansive lighting, as well as 10-times greater service life than conventional LEDs. Dimming function offers 5 different light levels. Because the stand is adjustable at any angle, it can also be used for hanging. Beam angle 100° to 120°, working temperature from -10 °C to +40 °C.

IP 67

SCANGRIP INNOVATION FROM DENMARK

| Order No. | Luminosity lm | 9043 SCANGRIP | Performance W | Lighting duration h | Operation mode | Battery type | Cable type | Cable length m |
|---|---|---|---|---|---|---|---|---|
| 0120 | 300/750/1500/2250/3000 | 120.00 | 26 | – | Mains power | – | H05 RN-F 3G1.00 | 5 |
| 0125 | 300/750/1500/2250/3000 | 160.00 * NEW | 26 | 14 | Mains power and battery | Li-ion battery 11.1 V/4400 mAh | H05 RN-F 2G0.75 | 5 |
| 0130 | 500/1250/2500/3750/5000 | 144.00 | 42 | – | Mains power | – | H05 RN-F 3G1.00 | 5 |
| 0135 | 500/1250/2500/3750/5000 | 224.00 * NEW | 42 | 12 | Mains power and battery | Li-ion battery 11.1 V/5200 mAh | H05 RN-F 2G0.75 | 5 |

(W913)

* With battery capacity display and remaining operating time.

9043 0120 + 0130

9043 0125 + 0135

9043 0125 + 0135

## Accessories for LED work lamp NOVA

**9043 0140** **Tripod**
Height adjustable from 1 to 3 m.

**9043 0145** **Dual fitting**
Holder for stand and wall attachment.

9043 0140

9043 0145

| Order No. | Design | 9043 SCANGRIP |
|---|---|---|
| 0140 | Tripod | 71.90 |
| 0145 | Dual fitting | 19.90 |

(W913)

## LED work lamp Prolyx

NEW

**Design:** With a 500 mm long, flexible light arm. Lamp head made from aluminium with protective glass lens in front of the LED light chip. On/off switch **directly on the lamp head.**

IP 63

**9046 0010** With magnetic base for direct assembly on the machine.

**9046 0020** With screw clamp for direct assembly on the machine.

| Order No. | Design | 9046 less more | Luminosity lm | Performance W | Cable length m |
|---|---|---|---|---|---|
| 0010 | Magnetic base | 191.00 | 600 | 9 | 1.8 |
| 0020 | Screw clamp | 213.50 | 600 | 9 | 1.8 |

(W523)

## Machine and work lamps

**Design:** With a 500 mm long, flexible light arm. On/off switch on lamp body. Delivery with 20 Watt halogen bulb and screw clamp.

**Application:** Suitable for mounting on machines, tables, walls or ceilings For use indoors.

**Note:** For holding magnet see (Order No. 9049 0027).

IP 20

| Order No. | Design | 9049 | Performance W | Supply voltage V | Cable length m |
|---|---|---|---|---|---|
| 0007 | Wide-angle beam | 79.10 | 20 | 230 | 1.8 |
| 0012 | Spotlight | 81.30 | 20 | 230 | 1.8 |
| 0017 | Light bulb wide beam | 10.70 | 20 | – | – |
| 0022 | Light bulb spot beam | 11.05 (W920) | 20 | – | – |

## LED work lamp

**Design:** With a 500 mm long, flexible light arm. Lamp head made of aluminium, with on and off switch on the lamp base. For even lighting with low shadow ratio. Controller to adjust the light output from 10 % to 100 %.

**Application:** For assembly, workshop and office applications.

**Note:** For holding magnet see (Order No. 9049 0027).

IP 50

| Order No. | Design | 9052 | Luminosity lm | Performance W | Cable length m |
|---|---|---|---|---|---|
| 0008 | Work lamp | 117.00 | 1872 | 14 | 1.8 |
| 0013 | LED light bulbs | 30.70 | 1872 | 14 | – |
| 0017 | Screw clamp | 14.00 (W920) | – | – | – |

## Holding magnet (without image)

**Design:** Strong holding magnet. Suitable for (Order No. 9049 and 9052).

**Application:** For attachment to metal surfaces.

| Order No. | 9049 |
|---|---|
| 0027 | 21.40 (W920) |

## LED light tubes

NEW

OSRAM

**Design:** Immediate start without flickering, free from quick silver and compliant with RoHS, energy-efficiency class A.

IP 20

| Order No. | Luminosity lm | 9051 OSRAM | PU | Performance W | Base |
|---|---|---|---|---|---|
| 0090 | 800 | 19.20 | 8 Δ | 9.0 | G13 |
| 0190 | 1700 | 22.70 | 8 Δ | 19.0 | G13 |
| 0215 | 2100 | 32.90 (W711) | 8 Δ | 21.5 | G13 |

Δ Can only be supplied as a whole packaging unit.

## LED light bulbs

NEW

OSRAM

**Design:** Immediate start without warm-up period, free from quick silver, no UV and near IR in the light beam, energy-efficiency class A+.

**Application:** For household and general lighting.

**Note:** Only suitable for outdoor use in outdoor lights with IP 65 and above.

9051 0220 + 0225

9051 0230

| Order No. | Luminosity lm | 9051 OSRAM | Performance W | Base |
|---|---|---|---|---|
| 0220 | 806 | 11.15 | 8 | E27 |
| 0225 | 806 | 14.10 | 9 | E27 |
| 0230 | 350 | 10.40 (W711) | 5 | GU10 |

## Paint brush

**Design:** Flat shape with varnished wooden handle.

**Application:** Solvent-based paints and varnishes.

**7048** Black **bristle mix** with tin plate ferrule. Also suitable for dispersion/ wall paint and wall paint.

**7049** Black **bristle mix** with nickel ferrule, **extra full.**

**7057** NEW Light **bristle mix** with brass ferrule, **extra full.**

7048

7049

7057

| Order No. | Size inch | 7048 Nölle PROFI BRUSH | 7049 Nölle PROFI BRUSH | 7057 Nölle PROFI BRUSH | Brush width mm 7048 | 7049 | 7057 |
|---|---|---|---|---|---|---|---|
| 0011 | 3/4 | 0.53 | – | – | 20 | – | – |
| 0021 | 1 | 0.60 | 2.16 | – | 25 | 25 | – |
| 0025 | 1 | – | – | 2.57 | – | – | 30 |
| 0031 | 1.1/2 | 0.74 | 3.00 | 3.55 | 40 | 40 | 40 |
| 0041 | 2 | 1.06 | 4.27 | 4.68 | 50 | 50 | 50 |
| 0061 | 2.1/2 | 1.34 | 5.70 | 6.45 | 60 | 60 | 60 |
| 0081 | 3 | – (W567) | – (W567) | 9.40 (W567) | – | – | 80 |

## Round sash brush

**Design:** Round shape, in nickel ring, with unpainted wooden handle.

**Application:** Dispersion and wall paints, as well as solvent-based paints and varnishes.

**7050** Pure, black **China bristle,** with double plastic plastic support band.

**704A** NEW Pure, bright **China bristles,** with double thread tape.

7050

704A

| Order No. | Size | 7050 Nölle PROFI BRUSH | 704A Nölle PROFI BRUSH | Brush Ø mm 7050 | 704A |
|---|---|---|---|---|---|
| 0002 | 2 | 0.94 | 3.58 | 20 | 20 |
| 0012 | 4 | 1.06 | 4.44 | 25 | 25 |
| 0022 | 6 | 1.68 | 5.95 | 30 | 30 |
| 0032 | 8 | 2.09 | 7.00 | 35 | 35 |
| 0042 | 10 | 2.74 | 8.90 | 40 | 40 |
| 0051 | 12 | 4.34 | – | 45 | – |
| 0052 | 12 | – (W567) | 10.15 (W567) | – | 45 |

## Enamel paintbrush

**Design:** Low profile, pure, bright **China bristles** in tin ferrule, **extra full**. With non-varnished wooden handle.

**Application:** Dispersion and wall paints, lacquers that can be thinned with water, as well as solvent-based paints and varnishes.

| Order No. | Size | 704B Nölle PROFI BRUSH | Brush width mm |
|---|---|---|---|
| 0011 | 0 | 0.33 | 10 |
| 0021 | 1 | 0.35 | 11 |
| 0031 | 2 | 0.40 | 13 |
| 0041 | 3 | 0.43 | 14 |
| 0051 | 4 | 0.53 (W567) | 16 |

## Radiator paint brush

**Design:** Flat design.

**7054** Pure, grey **China bristles** in curved tin plate ferrule, with long, unpainted wooden handle.

**704C** NEW Black **bristle mix** in curved nickel ferrule with long, unpainted wooden handle.

**704D** NEW Pure, light **China bristles, metal-free**, in curved plastic ferrule, with long plastic handle. Suitable for sensitive surfaces.

7054

704C

704D

| Order No. | Size inch | 7054 Nölle PROFI BRUSH | 704C Nölle PROFI BRUSH | 704D Nölle PROFI BRUSH | Brush width mm |
|---|---|---|---|---|---|
| 0022 | 1.1/2 | 0.90 | 2.38 | 2.38 | 40 |
| 0012 | 1 | 0.71 | 1.85 | 1.94 | 25 |
| 0042 | 2.1/2 | 1.52 | 3.86 | 4.27 | 60 |
| 0032 | 2 | 1.22 | 3.02 | 2.86 | 50 |
| 0052 | 3 | – (W567) | 4.54 (W567) | – (W567) | 70 |

## Frame for paint rollers

**Design:** Small, ergonomic handle, zinc-plated 6 mm wire.

| Order No. | For roller width mm | 7434 Nölle PROFI BRUSH | Length mm |
|---|---|---|---|
| 0028 | 100 | 0.93 | 280 |
| 0040 | 100 | 0.95 (W567) | 400 |

## Paint rollers

**Design:** For 6 mm stirrup.

**7430** Raised pile, extra-short pile, thermo-fusioned, solvent-resistant, for high-quality painting, 2 pieces in SB packaging.

**7431** Foam, bulk density 56 kg/m³, rounded on frame side, for high-quality and seamless painting with solvent-based paints, 2 pieces in SB packaging.

**7432** Polyacrylic, **31 mm core,** thermo-fusioned, high paint retention and spread, durable.

**7433** Polyacrylic, thermo-fusioned, high paint retention and spread, durable, ideal for window reveals, 2 pieces in SB packaging.

7430

7431

7432

7433

| Order No. | Roller width mm | 7430 Nölle PROFI BRUSH | 7431 Nölle PROFI BRUSH | 7432 Nölle PROFI BRUSH | 7433 Nölle PROFI BRUSH |
|---|---|---|---|---|---|
| 0010 | 100 | 1.98 (W567) | 1.98 (W567) | 1.73 (W567) | 2.03 (W567) |

## Frame for paint rollers

**Design:** Ergonomic handle, zinc-plated 8 mm wire.
Suitable for placing on telescopic rods.

| Order No. | For roller width mm | 7438 Nölle PROFI BRUSH |
|---|---|---|
| 0018 | 180 | 1.60 |
| 0025 | 250 | 1.78 (W567) |

## Paint rollers

**Design:** Suitable for 8 mm insert stirrup.

**7435** Lamb plush, polyacrylic, pile height 18 mm, heavily padded, rolled on corners, suitable for coarsely structured substrates both indoors and out, high paint retention and spread, durable.

**7436** 100% polyamide, pile height 14 mm, with blue fibre, solvent resistant, non-padded, suitable for smooth substrates, for coatings, especially durable.

**7437** Polyacrylic, pile height 18 mm, thermo-fusioned, non-padded, suitable for smooth substrates indoors, very good paint retention and spread, durable, with thick core for high square metre capacity.

7435

7436

7437

| Order No. | Roller width mm | 7435 Nölle PROFI BRUSH | 7436 Nölle PROFI BRUSH | 7437 Nölle PROFI BRUSH |
|---|---|---|---|---|
| 0018 | 180 | 5.80 | 4.15 | 3.33 |
| 0025 | 250 | 7.20 (W567) | 4.88 (W567) | 4.40 (W567) |

## Telescopic rod for paint roller

**Design:** Powder-coated metal tube, plastic coatings, with cone for paint roller handles.

| Order No. | Length m | 7438 Nölle PROFI BRUSH |
|---|---|---|
| 0200 | 2 | 5.10 (W567) |

## Paint tray

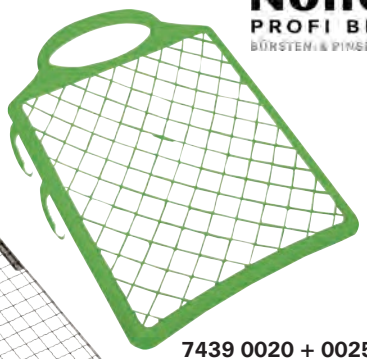
**Design:** Made from polypropylene, solvent resistant, unbreakable, with wiper grooves.

| Order No. | Dimensions mm | 7439 Nölle PROFI BRUSH |
|---|---|---|
| 0005 | 160 x 310 | 0.78 |
| 0010 | 210 x 220 | 0.80 |
| 0015 | 270 x 360 | 1.50 (W567) |

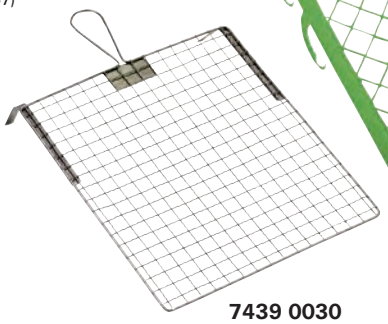
## Paint grate

**Design:** With handle and bucket hook.

| Order No. | Design | 7439 Nölle PROFI BRUSH | Dimensions mm |
|---|---|---|---|
| 0020 | 100% polypropylene, solvent resistant, unbreakable | 0.75 | 230 x 270 |
| 0025 | 100% polypropylene, solvent resistant, unbreakable | 0.98 | 280 x 320 |
| 0030 | Metal, galvanised | 2.48 (W567) | 260 x 300 |



7439 0020 + 0025



7439 0030

## Whitewash brush

NEW

**Design:** Light **bristle mix,** with white tin plate ferrule. Plastic body and plastic handle with pail hooks.

| Order No. | Dimensions mm | 7439 Nölle PROFI BRUSH |
|---|---|---|
| 0035 | 100 x 30 | 2.05 |
| 0040 | 120 x 30 | 2.23 (W567) |

## Ceiling brushes

NEW

**Design: Synthetic bristles,** pressed, extra full. Plastic body and plastic handle with pail hooks.

| Order No. | Dimensions mm | 7439 Nölle PROFI BRUSH |
|---|---|---|
| 0045 | 170 x 75 | 3.00 (W567) |

## Paint bucket

NEW

**Design:** Made of plastic, with measuring scale and wiper grooves.

| Order No. | Content l | 7439 Nölle PROFI BRUSH |
|---|---|---|
| 0050 | 14 | 5.60 (W567) |

## Yard broom

For handle ∅ 24 mm.

**7441** **Arenga**
Moisture-resistant, saddle wood with handle hole (width 40 to 60 cm), flat wood with metal handle holder (width 80 cm).

**7442** **Arenga/Elaston**
Strong, moisture-resistant industrial broom, ideal for heavy-duty use. Flat wood with unbreakable plastic handle holder. For coarse and fine dirt.

**7443** **Elaston**
Moisture-resistant industrial room, red synthetic bristles. Flat wood with unbreakable plastic handle holder (width 40 to 60 cm). Flat wood with screwed on metal handle holder (width 80 to 100 cm).

**7444** **Mixed quality**
Industrial broom, fully set, for smooth floors and fine dirt, not moisture-resistant. Saddle wood with handle hole (width 40 to 60 cm), flat wood with screwed on metal handle holder (width 80 cm).

| Order No. | Width cm | 7441 Nölle PROFI BRUSH | 7442 Nölle PROFI BRUSH | 7443 Nölle PROFI BRUSH | 7444 Nölle PROFI BRUSH |
|---|---|---|---|---|---|
| 0040 | 40 | 6.15 | 8.95 | 4.46 | 4.64 |
| 0060 | 60 | 8.15 | 11.95 | 6.65 | 7.45 |
| 0080 | 80 | 15.55 | – | 12.20 | 13.05 |
| 0100 | 100 | – (W567) | – (W567) | 14.10 (W567) | – (W567) |

7441

7442

7443

7444

## Street broom

**Design:** Elaston, strong design, long material sections, saddle wood with handle hole.
For handle ∅ 28 mm with cone.

| Order No. | Width cm | 7445 Nölle PROFI BRUSH |
|---|---|---|
| 0040 | 40 | 6.50 |
| 0060 | 60 | 10.40 (W567) |

## Equipment/broom handles

**Design:** Made of wood.

| Order No. | Design | 7446 Nölle PROFI BRUSH | ∅ mm | Length cm |
|---|---|---|---|---|
| 0160 | with cone | 6.55 | 28 | 160 |
| 0180 | with cone | 7.85 | 28 | 180 |
| 0140 | with round head | 3.64 (W567) | 24 | 140 |

## Metal handle holder

**Design:** Slotted for brooms with wing screws, handle ∅ 24 mm.

| Order No. | 7446 Nölle PROFI BRUSH |
|---|---|
| 1024 | 1.68 (W567) |

## Hand brush

**Design:** Made of wood.

**7447** With coconut bristles, non-coated, not moisture-resistant, for fine dust indoors.

7447 0028

**7448** With Arenga bristles, non-coated, strong, moisture-resistant, for coarse dirt.

| Order No. | Handle length cm | 7447 Nölle PROFI BRUSH | 7448 Nölle PROFI BRUSH |
|---|---|---|---|
| 0028 | 28 | 1.35 | 2.43 |
| 0045 | 45 | 2.55 (W567) | 3.41 (W567) |

7448 0028

## Dustpan

**7449 0005** Stainless steel, non-corrosive, with rubber lip and socket handle.

7449 0005

**7449 0010** Metal, assorted colours, with rubber lip and welded on metal handle.

7449 0010

**7449 0015** Galvanised metal, with wooden handle.

| Order No. | Scoop length mm | 7449 Nölle PROFI BRUSH | Scoop width mm |
|---|---|---|---|
| 0005 | 380 | 10.85 | 240 |
| 0010 | 380 | 5.05 | 240 |
| 0015 | 440 | 4.63 (W567) | 220 |

7449 0015

## Construction pail

NEW

**Design:** Made of galvanised sheet steel with wooden handle.

| Order No. | Material thickness mm | 7455 | 7456 | Content l |
|---|---|---|---|---|
| 0012 | approx. 0.35 | 7.75 | – | 12 |
| 0012 | approx. 0.45 | – (W983) | 11.95 (W983) | 12 |

## Soft soldering set Classic

**9055** **Portable.**

**9058** **Delivery in steel case,** with hinged lock and carry handle.

| Order No. | Design | 9055 GCE propaline | 9058 GCE propaline | Set contents |
|---|---|---|---|---|
| 0011 | 4 pcs | on request | – | 1 propane soft-soldering iron (9065 0010)<br>1 high pressure hose 2 m, G 3/8" anti-clockwise (9112 0021)<br>1 small knob 1.5 bar, fixed (9061 0041)<br>1 small bottle of propane, 425 g (9061 0011) |
| 0011 | 10 pcs | – | on request | 1 propane soft-soldering iron (9065 0010)<br>2 spot torches 5; 7 mm (9079 0051; 9079 0071)<br>1 wide torch 40 mm<br>1 high pressure hose 2 m, G 3/8" anti-clockwise (9112 0021)<br>1 small knob 1.5 bar, fixed (9061 0041)<br>1 small bottle of propane, 425 g (9061 0011)<br>1 transfer filling pipe (9064 0031)<br>1 gas lighter (9199)<br>1 fork wrench |
| | | (999) | (999) | |

GCE propaline Security in action

9055

9058

## Small propane bottle

**Design:** Welded, valve with pressure relief and cap, connection G 3/8" anti-clockwise, can be refilled, base with type approval (§ 14 of the Die Casting Regulation, 82 D 168 B), hanging hook.

**Note:** This small propane gas cylinder may only be equipped with a suitable micro-propane cylinder valve with overpressure protection.

| Order No. | Design | 9061 GCE propaline |
|---|---|---|
| 0011 | Small bottle, 425 g | on request |
| 0031 | Small cylinder valve with overpressure relief valve | on request |
| 0041 | SMall regulator, 1.5 bar fixed | on request |
| | | (999) |

GCE propaline Security in action

9061 0011

9061 0031

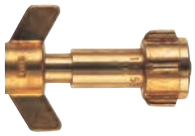
9061 0041

## Propane filling arm

**Design:** Solid brass, connection according to DIN 477, with certification mark 01 D 65 B, with guide pin and wing nut G 3/8" anti-clockwise.

**Application:** For connecting to the small propane cylinder with cylinder valve.

| Order No. | For bottles kg | 9064 GCE propaline | Connection type |
|---|---|---|---|
| 0011 | 5–11 | on request | Profile nut W 21.8 mm x 1/14" anti-clockwise, with guide pin |
| 0031 | 5–33 | on request | Hexagon nut W 21.8 x 1/14" anti-clockwise |
| | | (999) | |



9064 0011

9064 0031

## Propane soft-soldering iron

**Design:** Hammer shape, offset, with fine-regulating spindle. Thanks to the ideally designed air rotary valve, you can adjust an extremely soft and small flame. With wind guard and copper piece 350 g.

GCE propaline Security in action

| Order No. | Gas pressure bar | 9065 GCE propaline | Gas consumption g/h | Hose connection |
|---|---|---|---|---|
| 0010 | 1.5 | on request | max. 65 | G 3/8" anti-clockwise |
| | | (999) | | |

## Propane handle

**Design:** Good insulating, ergonomic wood handle with finely regulating spindle for adjusting gas made of stainless steel, rotary air vane. In addition, the flame adjustment can be regulated, and the tube connection rotated in the respective position.

GCE propaline Security in action

| Order No. | Gas pressure bar | 9067 GCE propaline | Gas consumption g/h | Hose connection | Connection for torch heads |
|---|---|---|---|---|---|
| 0011 | 1.5 | on request | max. 65 | G 3/8" anti-clockwise | M15 x 1 internal |
| | | (999) | | | |

## Propane soldering insert

**Design:** Torch nozzle 4.5 mm with screwed piston holder, stainless steel mouthpiece and handing hook.

| Order No. | Gas pressure bar | 9070 GCE propaline | Gas consumption g/h | Handle component connection |
|---|---|---|---|---|
| 0011 | 1.5 | on request (999) | max. 65 | M15 x 1 outside |

## Copper piece

**Design:** With steel pin ∅ 7 mm.

| Order No. | Design | 9076 GCE propaline | Pin length mm | Weight g |
|---|---|---|---|---|
| 0011 | Hammer shape, offset | on request | 90 | 350 |
| 0021 | Hammer shape, offset | on request | 90 | 500 |
| 0031 | Hammer shape, straight | on request (999) | 90 | 250 |

## Wind guard

**Design:** With locking screw. Suitable for all copper pieces with steel pin ∅ 7 mm.

| Order No. | 9073 GCE propaline |
|---|---|
| 0011 | on request (999) |

## Propane spot torch soldering

**Design:** Model made of brass, bent 40°, with removable steel mouthpiece. Suitable for (Order No. 9067 0011).

**Application:** For brazing work, e.g. with silver solder L-Ag 40 on copper pipe.

| Order No. | ∅ mm | 9079 GCE propaline | Gas pressure bar | Performance kW/h | Gas consumption g/h | For copper pipes ∅ mm | Handle component connection |
|---|---|---|---|---|---|---|---|
| 0051 | 5 | on request | 1.5 | 1.54 | max. 120 | 12 x 1 | M15 x 1 outside |
| 0071 | 7 | on request (999) | 1.5 | 2.58 | max. 200 | 22 x 1 | M15 x 1 outside |

## Hard- and soft-soldering set

**Design:** Supplied in sheet steel case with carry handle.

**9085 0005** **For brazing and heating.**

**9085 0011** **For soft- and hard-soldering, as well as for heating.**

| Order No. | Design | 9085 GCE propaline | Set contents |
|---|---|---|---|
| 0005 | 9 pcs | on request | 1 handle<br>4 turbo burners ∅ 12; 14; 17 and 20 mm (9094)<br>1 high pressure hose 2 m, G 3/8" anti-clockwise (9112 0021)<br>1 small knob 2.0 bar fixed, for 5 and 11 kg bottles<br>1 gas lighter (9199)<br>1 fork wrench |
| 0011 | 11 pcs | on request (999) | 1 soldering iron with handle, soldering inserts with piston holder (9088 0011)<br>1 wind guard (9073 0011)<br>1 copper piece 350 g, hammer shape offset (9076 0011)<br>4 turbo burners ∅ 12; 14; 17 and 20 mm (9094)<br>1 high pressure hose 2 m, G 3/8" anti-clockwise (9112 0021)<br>1 small knob 2.0 bar fixed, for 5 and 11 kg bottles<br>1 gas lighter (9199)<br>1 fork wrench |

9085 0005

9085 0011

## Propane torch handle universal

**Design:** Robust, well-insulated plastic handle in block shape, with long torque lever, pre-settable pilot flame and combined main shut-off and control valve.

**Application:** For soft and hard soldering, heating, burning, shrinking and lots more.

| Order No. | Gas pressure bar | 9088 | Gas consumption g/h | Hose connection | Connection for torch heads |
|---|---|---|---|---|---|
| 0011 | 0–4 | on request (999) | max. 12000 | G 3/8" anti-clockwise | M14 x 1 outside |

## Propane spot torch soldering

**Design:** Model made of brass, with union nut and removable, chrome-plated stainless steel mouthpiece, for max. 4 bar overpressure. The flame is pointed focused and the air automatically sucked in.

**Application:** For hard and soft soldering work.

| Order No. | Ø mm | 9091 | Gas pressure bar | Performance kW/h | Gas consumption at P = 1.5 bar g/h | For copper pipes Ø mm | Handle component connection |
|---|---|---|---|---|---|---|---|
| 0052 | 5 | on request (999) | 1.5–2.5 | 1.55 | 120 | 12 x 1 | M14 x 1 internal |

## Propane turbo hard soldering insert

**Design:** Model made of brass, with vortex torch head, union nut and screw-off, chromed stainless steel mouthpiece, for max. 2.5 bar overpressure. The air is automatically sucked in.

**Application:** Especially for brazing of copper pipes.

| Order No. | Ø mm | 9094 | Gas pressure bar | Performance at P = 1.5 bar kW/h | Gas consumption at P = 1.5 bar g/h | For copper pipes Ø mm | Handle component connection |
|---|---|---|---|---|---|---|---|
| 0013 | 12 | on request | 1.5–2.0 | 1.93 | 150 | 12 | M14 x 1 internal |
| 0015 | 14 | on request | 1.5–2.0 | 3.22 | 250 | 18 | M14 x 1 internal |
| 0018 | 17 | on request | 1.5–2.0 | 4.06 | 315 | 22 | M14 x 1 internal |
| 0021 | 20 | on request (999) | 1.5–2.0 | 5.66 | 440 | 28 | M14 x 1 internal |

## Propane torch head wide

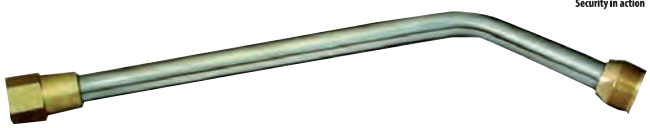
**Design:** Model made of brass, with chromed stainless steel mouthpiece and union nut.

**Application:** For processing plastic foils or laying panels. Especially good for removing layers of paint. The flame warms the paint until bubbles form. The paint can be removed with a spatula or other tool.

| Order No. | Flame width mm | 9097 | Gas pressure bar | Performance kW/h | Gas consumption at P = 1.5 bar g/h | Handle component connection |
|---|---|---|---|---|---|---|
| 0041 | 40 | on request (999) | 1.5–2.0 | 2.83 | 220 | M14 x 1 internal |

## Connection pipe

**Design:** Model made of stainless steel, bent 60°.



| Order No. | Length mm | 9100 | Handle component connection | Torch head connection |
|---|---|---|---|---|
| 0014 | 130 | on request | M14 x 1 internal | M20 x 1 outside |
| 0037 | 350 | on request NEW | M14 x 1 internal | M20 x 1 outside |
| 0051 | 500 | on request | M14 x 1 internal | M20 x 1 outside |
| 0061 | 600 | on request | M14 x 1 internal | M20 x 1 outside |
| 0076 | 750 | on request (999) | M14 x 1 internal | M20 x 1 outside |

## Propane high-performance torch head

**Design:** Model made of stainless steel, flame length larger than 150 mm.

**Application:** For heating, burning and singeing for tar and roof insulation work.

| Order No. | Torch head Ø mm | 9103 | Performance at P = 1.5 bar kW/h | Gas consumption at P = 1.5 bar g/h | Torch head connection |
|---|---|---|---|---|---|
| 0031 | 30 | on request | 15.5 | 1200 | M20 x 1 internal |
| 0041 | 40 | on request | 27.0 | 2100 | M20 x 1 internal |
| 0046 | 45 | on request | 37.9 | 2500 | M20 x 1 internal |
| 0051 | 50 | on request | 47.6 | 3700 | M20 x 1 internal |
| 0061 | 60 | on request | 70.8 | 5500 | M20 x 1 internal |
| | | (999) | | | |

## Heating torch set

**Scope of delivery:**
1 Propane torch handle with long torque lever
1 Burner insert with air adjustment Ø 60 mm
1 Small controller 0.5–4 bar with combination connection for 5 to 33-kg bottles
1 Hose rupture protection
1 HP hose 5 m, 3/8" anti-clockwise

| Order No. | Performance kJ/h | 9104 | Gas consumption at P = 4 bar g/h |
|---|---|---|---|
| 0005 | 35260 | on request | 7600 |
| | | (999) | |

## Hose rupture protection

**Application:** For liquid gas DVGW No. 92.02 e 868.
Prevents the emission of gas in case of damage or loosening of the hose line. Closes the gas passage when the prescribed operating quantity is exceeded by 10%. Re-opening by hand

| Order No. | Gas pressure bar | 9106 | Capacity at qn (g/h) 4 bar | Hose connection input | Hose connection output |
|---|---|---|---|---|---|
| 0011 | 1.5 | on request | 2200 | G 3/8" anti-clockwise inside | G 3/8" anti-clockwise outside |
| 0021 | 4.0 | on request | 6000 | G 3/8" anti-clockwise inside | G 3/8" anti-clockwise outside |
| | | (999) | | | |

## Propane regulator

**Design:** DIN-DVGW certified. Suitable for 5, 11 and 33 kg cylinders.

**9109** **With manometer and variable outlet pressure.** Gas consumption 12000 g/h.

**9110** **With scale and hose rupture protection.** Gas consumption 6100-14000 g/h.

| Order No. | Gas pressure bar | 9109 | 9110 | Hose connection input | Hose connection output |
|---|---|---|---|---|---|
| 0011 | 0.5–4.0 | on request | on request | W 21.8 x 1/14" anti-clockwise | G 3/8" anti-clockwise |
| | | (999) | (999) | | |

9109

9110

## High pressure hose

**Design:** DIN 4815, DIN EN 1763-1, pressure class 30. Completely reinforced, 4 x 4 mm.

| Order No. | Version with terminals | 9112 | Length m |
|---|---|---|---|
| 0021 | both sides G 3/8" anti-clockwise | on request | 2 |
| 0031 | both sides G 3/8" anti-clockwise | on request | 3 |
| 0051 | both sides G 3/8" anti-clockwise | on request | 5 |
| | | (999) | |

## Multi-purpose blowtorch

**Design:** The extremely shockproof device features a very fine adjustment on the gas feed. Use with cartridge C 206 GLS, which is protected by a steel bell. Due to the polypropylene handle, the device feels good in the hand and can be operated easily with just one hand. Delivery without cartridge.

**Application:** Suitable for soft and hard soldering and for other trade and DIY jobs. Perfect multi-purpose blowtorch for a versatile use.

**Note:** For replacement cartridge see (Order No. 9121 0011).

**9115** **Soudogaz X 2000, with burner X 1550.**

**9118** **Soudogaz X 2000 PZ, with burner X 1700 and piezo electric ignition.**

| Order No. | Gas consumption g/h | 9115 CAMPINGAZ | 9118 CAMPINGAZ |
|---|---|---|---|
| 0011 | 120 | 39.40 (W936) | 45.00 (W936) |

9115

9118

## Burners and accessories

**Design:** Suitable for multi-purpose blow torches X 2000 and X 2000 PZ.

**9124 0011** **Fine solder burner X 1650**
Flame with **extra fine tip.** For soldering with tin or for classic soldering of small pieces, which only need to be heated in a small area: e.g. jewellery, loosening of screws, etc.

| Order No. | Description | 9124 CAMPINGAZ | Gas consumption g/h |
|---|---|---|---|
| 0011 | Fine solder burner X 1650 | 19.70 (W936) | 30 |

**9124 0031** **Flat burner XP 1650**
With **broad, flat flame.** For uniform heating of surfaces, burning of paint, singeing wood or tin plating large surfaces.

| Order No. | Description | 9124 CAMPINGAZ | Gas consumption g/h |
|---|---|---|---|
| 0031 | Flat burner XP 1650 | 19.70 (W936) | 140 |

## Bunsen burner

**Design:** Compact Bunsen burner with replacement cartridge. The security assembly system allows the cartridge to be exchanged only when it is fully emptied.

**Application:** For heating of solutions in flasks and test tubes, paint drying, glue cooking, smoke blackening and heating prior to bending, for example, glass tubes.

**Note:** For replacement cartridge see (Order No. 9121 0011).

| Order No. | Gas consumption g/h | 9124 CAMPINGAZ |
|---|---|---|
| 0051 | 55 | 69.00 (W936) |

## Disposable cartridge C 206 GLS

**Design:** Plug-in cartridge with butane/propane gas mixture at a ratio of 80/20. With gas-lock system, fulfils the new EN 417:2012 and is compatible with older consumer devices. Largely withholds the gas when separated from the device. Suitable for multi-purpose blowtorches (Order No. 9115 0011, 9118 0011) and Bunsen burners (Order No. 9124 0051).

| Order No. | Net weight g | 9121 CAMPINGAZ | PU | Content ml |
|---|---|---|---|---|
| 0011 | 190 | 2.75 (W936) | 36 | 314 |

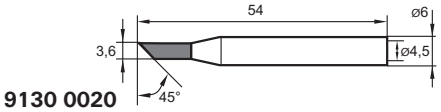
## Fine soldering iron type 260 BD

kurtz ersa

**Design:** Light, handy model with interchangeable, pencil-point ERSADUR permanent soldering tip 1.1 mm. The internally heated tip together with the PTC heating element provide excellent efficiency with minimum energy consumption.

**Application:** Due to the slim construction, particularly useful in hard to reach places, such as inside devices. Suitable for modern electronics.

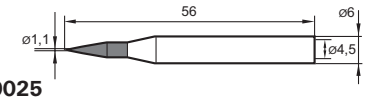
| Order No. | Performance W | 9130 kurtz ersa | Preheating time approx. min | Soldering tip temperature °C | Supply voltage V | Weight g |
|---|---|---|---|---|---|---|
| 0016 | 16 | 35.20 (W933) | 1 | 350 | 230 | 232 |



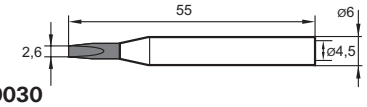

9130 0020

### Replacement soldering tips

| Order No. | Form | 9130 kurtz ersa | For soldering irons W | Type |
|---|---|---|---|---|
| 0020 | Bevelled, 3.6 mm | 7.55 | 16 | LD |
| 0025 | pencil point, 1.1 mm Ø | 7.55 | 16 | BD |
| 0030 | chisel-shaped, 2.6 mm | 7.55 (W933) | 16 | KD |




9130 0025




9130 0030

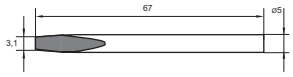
## Universal soldering iron type 30 S

kurtz ersa

**Design:** Lightweight, handy model with removable, chisel-shaped, straight ERSADUR permanent soldering tip 3.1 mm.

**Application:** Can be used in radio and TV technology, in electronics, in the laboratory and amongst non-professionals.

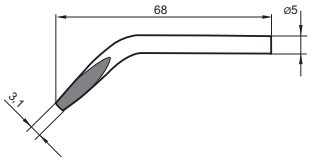
| Order No. | Performance W | 9133 kurtz ersa | Preheating time approx. min | Soldering tip temperature °C | Supply voltage V | Weight g |
|---|---|---|---|---|---|---|
| 0030 | 30 | 32.00 | 2 | 380 | 230 | 285 |
| 0045 | 40 | 33.50 (W933) | 2 | 420 | 230 | 285 |




9133 0035

### Replacement soldering tips

| Order No. | Form | 9133 kurtz ersa | For soldering irons W | Type |
|---|---|---|---|---|
| 0035 | chisel-shaped, straight 3.1 mm | 6.10 | 30/40 | KD |
| 0040 | chisel-shaped, angled, 3.1 mm | 6.10 (W933) | 30/40 | JD |




9133 0040

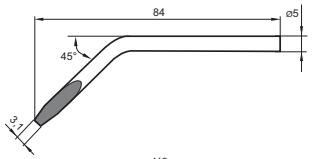
## Universal soldering iron type S

kurtz ersa

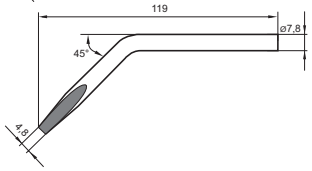
**Design:** Lightweight, handy model with removable, chisel-shaped, angled ERSADUR permanent soldering tip.

**Application:** For soldering with higher heat demand, e.g. on copper conductors with cross-sections of 2.5 - 6 mm².

| Order No. | Performance W | 9136 kurtz ersa | Preheating time approx. min | Soldering tip temperature °C | Supply voltage V | Weight g |
|---|---|---|---|---|---|---|
| 1050 | 50 | 56.90 | 3 | 400 | 230 | 420 |
| 1080 | 80 | 67.70 | 3 | 410 | 230 | 490 |
| 1150 | 150 | 74.80 (W933) | 3 | 450 | 230 | 539 |



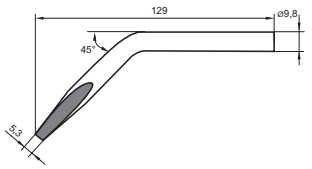

9136 0051



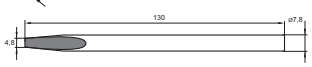

9136 0081

### Replacement soldering tips

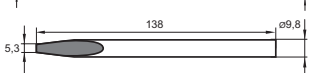
| Order No. | Form | 9136 kurtz ersa | For soldering irons W | Type |
|---|---|---|---|---|
| 0051 | chisel-shaped, angled, 3.1 mm | 6.70 | 50 | JD |
| 0081 | Chisel-shaped, angled, 4.8 mm | 11.85 | 80 | JD |
| 0151 | Chisel-shaped, angled, 5.3 mm | 16.20 | 150 | JD |
| 0083 | Chisel-shaped, straight 4.8 mm | 11.85 | 80 | KD |
| 0158 | Chisel-shaped, straight 5.3 mm | 16.20 (W933) | 150 | KD |




9136 0151




9136 0083




9136 0158

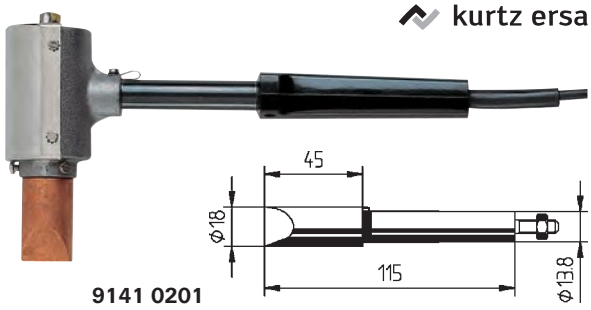
## Hammer soldering iron type MZ

**Design:** With a chisel-shaped tip with a nickel-plated shank to prevent scaling around the heating element.

**Application:** Particularly suitable for soldering on copper panels and rails as well as for sheet metal processing, installation work, body work and stained glass.

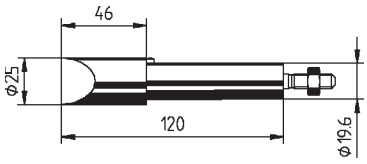
| Order No. | Performance W | 9140 kurtz ersa | Preheating time approx. min | Soldering tip temperature °C | Supply voltage V | Weight g |
|---|---|---|---|---|---|---|
| 0200 | 200 | 153.00 | 5 | 470 | 230 | 1184 |
| 0300 | 300 | 184.50 | 5 | 470 | 230 | 1490 |
| 0550 | 550 | 309.00 (W933) | 7 | 600 | 230 | 2392 |

kurtz ersa

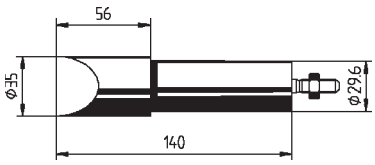





9141 0201




9141 0301




9141 0551

## Replacement soldering tips

| Order No. | Form | 9141 kurtz ersa | For soldering irons W | Type |
|---|---|---|---|---|
| 0201 | chisel-shaped, 18 mm | 42.00 | 200 | MZ |
| 0301 | chisel-shaped, 25 mm | 63.90 | 300 | MZ |
| 0551 | chisel-shaped, 35 mm | 103.00 (W933) | 550 | MZ |

## Soldering pistol Multi-Sprint 960 ED

**Design:** Ultra light, model without a transformer and with chisel-shaped LF-ERSADUR permanent soldering tip 3.2 mm. The internally heated tip together with the PTC heating element provide excellent efficiency with minimum energy consumption. By periodically pressing the button, the heat feed can be regulated, because the tip heats only as long as the button is pressed. Max. soldering tip temperature depends on the switch-on period.

**Application:** Especially because of its very short heat-up time, it is ideally suited to fast individual soldering, such as in the service and repair area. Due to the large range of soldering tips for this device, a wide range of applications can be processed (see next page).

kurtz ersa

| Order No. | Performance W | 9143 kurtz ersa | Preheating time approx. s | Supply voltage V | Weight g |
|---|---|---|---|---|---|
| 0075 | 75 | 54.20 (W933) | 20 | 230 | 230 |

## Soldering station Analog

**Design:** Electronic continuously controlled soldering station with chisel-shaped LF-ERSADUR permanent soldering tip 2.2 mm. The internally heated tip together with the PTC heating element provide excellent efficiency with minimum energy consumption. Furthermore, the soldering iron has a highly flexible, heat-resistant connection cable. The high impedance of the compensating bushing connected with the soldering tip on the front of the device ensures structural integrity. In addition, the device has new tip twist protection and a multifunctional soldering iron stand with cleaning sponge and swivelling sponge container for right and left handed people.

The device has Ersa RESISTRONIC temperature regulation technology in which the PTC heating element assumes the temperature sensor task.

**Application:** Especially suitable for smaller and medium-sized soldering spots. Due to the large range of soldering tips for this device, a wide range of applications can be processed (see next page).

kurtz ersa

| Order No. | | 0060 |
|---|---|---|
| **Type** | | **ANALOG 60** |
| **9146** kurtz ersa | | **189.50** |
| Primary voltage | V | 230 |
| Control technology | | RESISTRONIC |
| Secondary voltage | V | 24 |
| Performance | W | 60 |
| Temperature range | °C | 150–450 |
| Soldering iron | | BASIC TOOL 60 |
| Voltage | V | 24 |
| Performance (350 °C) | W | 60 |
| Preheating power | W | 190 |
| Preheating time (280 °C) | s | approx. 60 |
| Weight | g | 126 |

(W933)

## Digital soldering

**Design:** Electronic continuously controlled soldering station with chisel-shaped ERSADUR permanent soldering tip 2.2 mm. The internally heated tip together with the PTC heating element provide excellent efficiency with minimum energy consumption. Furthermore, the soldering iron has a centre-fed PVC connection cable. The high impedance of the compensating bushing connected with the soldering tip on the front of the device ensures structural integrity. In addition to the free choice of temperature within the permissible temperature range, **3 fixed temperatures or 2 fixed temperatures and a standby temperature can be programmed.** Moreover, the device has a **power bar graph display,** a **calibration and a power-off function.**

Furthermore, it offers new tip twist protection and a multifunctional soldering iron stand with cleaning sponge and swivelling sponge container for right and left handed people.
The device has Ersa RESISTRONIC temperature regulation technology in which the PTC heating element assumes the temperature sensor task.

**Application:** Especially suitable for smaller and medium-sized soldering spots. Due to the large range of soldering tips for this device, a wide range of applications can be processed.

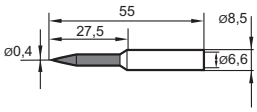
| Order No. | | 0080 |
|---|---|---|
| **Type** | | **RDS 80** |
| **9147** kurtz ersa | | **180.00** |
| Primary voltage | V | 230 |
| Control technology | | RESISTRONIC |
| Secondary voltage | V | 24 |
| Performance | W | 80 |
| Temperature range | °C | 150–450 |
| Soldering iron | | RT 80 |
| Voltage | V | 24 |
| Performance (350 °C) | W | 80 |
| Preheating power | W | 290 |
| Preheating time (280 °C) | s | approx. 40 |
| Weight | g | 130 |

(W933)

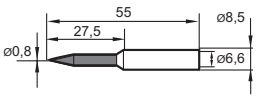
## Replacement soldering tips

**Design:** The new ERSADUR permanent soldering tips with LF-coating have three times the service life of conventional ERSADUR permanent soldering tips.

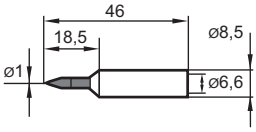
**Note:** Suitable for (Order No. 9143 0075, 9146 0060 and 9147 0080).



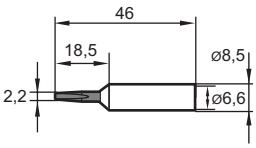

**9150 0011**



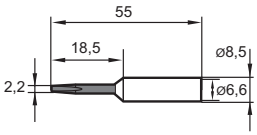

**9150 0021**



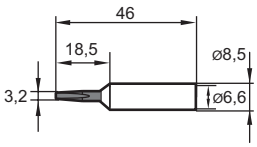

**9150 0031**



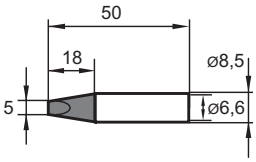

**9150 0041**




**9150 0051**




**9150 0061**

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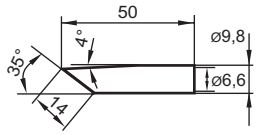
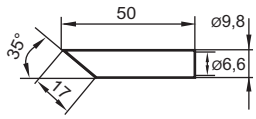
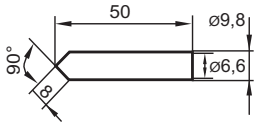



**9150 0081**




**9150 0091**




**9150 0101**

| Order No. | Form | 9150 kurtz ersa | Type |
|---|---|---|---|
| 0011 | pencil point, extended 0.4 mm ∅ | 9.70 | UD LF |
| 0021 | pencil point, extended 0.8 mm ∅ | 9.40 | SD LF |
| 0031 | pencil point, 1.0 mm ∅ | 9.40 | BD LF |
| 0041 | chisel-shaped, 2.2 mm | 9.40 | CD LF |
| 0051 | chisel-shaped, extended 2.2 mm | 9.40 | KD LF |
| 0061 | chisel-shaped, 3.2 mm | 9.40 | ED LF |
| 0071 | chisel-shaped, 5.0 mm | 14.55 | VD LF |
| 0081 | bevelled, 14 mm, 35° angle | 16.00 | GD LF |
| 0091 | bevelled, 17 mm, 35° angle | 16.00 | LD LF |
| 0101 | both sides bevelled, 8 mm | 16.00 | MD LF |

(W933)

## Gas soldering set Independent

**Design:** Ergonomically shaped, anti-static gas soldering iron with immediate ignition at the touch of a button thanks to the built-in piezo ignition and stepless power setting function. Operation is performed with commercial purified butane lighter gas.

**Application:** Ideal for service, installation, repair and maintenance work, especially when there is no electricity. Due to the large range of soldering tips for this device, a wide range of applications can be processed.

**9153** **Type 75**
1 gas soldering iron, 2 chisel-shaped soldering irons 1.0 and 2.4 mm, 1 tool rest, 1 cleaning sponge, 1 sponge holder, 1 plastic case.

**9156** **Type 130**
1 gas soldering iron, 2 chisel-shaped soldering irons 1.0 and 2.4 mm, 1 cleaning sponge, 1 sponge holder, 1 plastic case.

| Order No. | Performance W | 9153 kurtz ersa | 9156 kurtz ersa | Preheating time (280 °C) s | Soldering tip temperature °C | Weight g |
|---|---|---|---|---|---|---|
| 0011 | 15– 75 | 69.70 | – | 46 | max. 580 | 273 |
| 0011 | 25–130 | – (W933) | 95.00 (W933) | 50 | max. 580 | 478 |

kurtz ersa

9153 0011

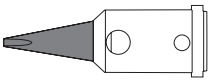
9156 0011

## Replacement soldering tips for Independent 75 and 130

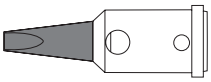
**9153** **Suitable for type 75.**

**9156** **Suitable for type 130.**

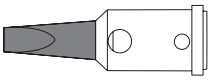
| Order No. | Form | 9153 kurtz ersa | 9156 kurtz ersa | Type |
|---|---|---|---|---|
| 0100 | chisel-shaped, straight, nickel-plated 1.0 mm | 14.15 | 14.55 | CN |
| 0105 | chisel-shaped, straight, nickel-plated 2.4 mm | 14.15 | 14.55 | KN |
| 0110 | chisel-shaped, straight, nickel-plated 3.2 mm | 14.15 | 14.55 | AN |
| 0115 | chisel-shaped, straight, nickel-plated 4.8 mm | 14.15 (W933) | 14.55 (W933) | VN |



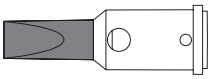
9153 0100



9153 0105



9153 0110



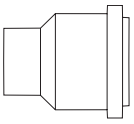
9153 0115

## Replacement nozzles for Independent 75 and 130

**9153** **Suitable for type 75.**

**9156** **Suitable for type 130.**

| Order No. | Form | 9153 kurtz ersa | 9156 kurtz ersa | Type |
|---|---|---|---|---|
| 0120 | Flame nozzle, straight, nickel-plated | 14.15 | 14.55 | BE |
| 0125 | Hot gas nozzle, straight, nickel-plated | 14.15 (W933) | 14.55 (W933) | HE |



9153 0120

9153 0125

## De-soldering pump VAC X

**Design:** Shell made of anti-static plastic, ergonomically shaped. Long, slim de-soldering tip for working on crowded printed circuit boards. The special design simplifies the cleaning of the pump and replacement of the de-soldering tip.

kurtz ersa

| Order No. | Design | 9157 kurtz ersa |
|---|---|---|
| 0005 | De-soldering pump, 11.3 cm³ | 11.65 |
| 0100 | De-soldering tip (pack of 2) | 4.75 (W933) |

## Solder

STANNOL

**9163** **Soldering wire**
Soldering wire S 321 ISO 9453:2006 S-Pb60Sn40 IEC 61190-1-3 ORH1/2.1.2.A. For soldering on metal, except aluminium, e.g. cans, brass cans, copper boilers, batteries and lots more. **Not suitable for soldering in electronics and electrical engineering.** If possible, flow medium residue should be removed after soldering.

9163

**9166** **Tin solder**
Solder wire HS 10 2510, with activated resin flux, non-corrosive on non-ferrous metals, fast flowing. ISO 9453:2006 S-Pb60Sn40 IEC 61190-1-3 ROM1/1.1.2.B. With 2.5% flux content. For soldering in electrical engineering, electronics, electrical assembly and automotive technology; for soldering copper, brass, silver and surfaces made of silver, cadmium, nickel and tin.

9166

**9169** **Electronics solder**
Solder wire HF 32, **with halogen-free activated rosin flux.** The flux residues are transparent, dry, hard and non-corrosive. ISO 9453:2006 S-Sn60 Pb39Cu1 IEC 61190-1-3 ROLO/1.1.3.B. With 3.5% flux content. For soldering, especially in electronics, electrical engineering, telecommunications and miniature art.

9169

**9173** **Fittings solder, solid**
DVGW GW 2, ISO 9453:2006 S-Sn97Cu3/TC300. Melting range 230 to 250 °C. For soldering in cold and hot water installations, on heaters to 110 °C, fuel oil lines, in the food industry, for refrigeration and air conditioning technology. Applicable with fittings paste (Order No. 9176 0025).

9173

| Order No. | Design | 9163 STANNOL Soldering wire, Ø 2 mm | 9166 STANNOL Tin solder, Ø 2 mm | 9169 STANNOL Electronics solder, Ø 1 mm | 9173 STANNOL Fittings solder, Ø 3 mm |
|---|---|---|---|---|---|
| 0010 | 100 g spool | 6.05 | 6.05 | 7.10 | – |
| 0025 | 250 g spool | 13.05 | 13.05 | 15.55 | 20.00 |
| 0050 | 500 g spool | 24.60 (W939) | – (W939) | – (W939) | – (W939) |

## Tin solder

STANNOL

**Design:** According to ISO 9453:2006 S-Pb60Sn40, extruded, triangular rod.
Tin content: 40%

**Application:** For general soldering and tinning works.

| Order No. | Dimensions approx. mm | 9180 STANNOL | PU | Weight per rod g |
|---|---|---|---|---|
| 0010 | 11 x 440 | 11.75 (W939) | 4 | approx. 250 |

## Fitting paste

STANNOL

**Design:** S-Sn97Cu3. Metal content 60%. According to ISO 9453:2006, DVGW Reg. No. FL 019 with flux filling DIN EN 29454-1 3.1.1.C, DVGW GW 7 2.1.2, grain size 75 µm. Applicable with fittings solder (Order No. 9173 0025).

**Application:** For soldering in cold and hot water installations, on heaters to 110 °C, fuel oil lines, in the food industry, for refrigeration and air conditioning technology.

**Note:** Contains zinc chloride, irritating.

| Order No. | Design | 9176 STANNOL |
|---|---|---|
| 0025 | 250 g can | 23.90 (W939) |

## Soldering grease

**Design:** According to DIN EN 29454-1 3.1.1.C.

**Application:** For soft soldering tin plate and leaded panels and for tinning copper and brass. Not suitable for soldering in electronics and electrical engineering.

**Note:** Contains zinc chloride, irritating.

STANNOL

| Order No. | Design | 9183 STANNOL |
|---|---|---|
| 0005 | 50 g can | 2.34 |
| 0010 | 100 g can | 3.18 |
| | | (W939) |

## Soldering grease

**Design:** According to DIN EN 29454-1 3.1.2.C. Applicable with fittings solder (Order No. 9173 0025).

**Application:** For soft soldering copper pipe installation and for general soldering.

**Note:** Contains zinc chloride, irritating.

STANNOL

| Order No. | Design | 9186 STANNOL |
|---|---|---|
| 0007 | 70 ml tube | 4.20 |
| | | (W939) |

## Soldering flux

**Design:** According to DIN EN 29454-1 3.1.1.A.

**Application:** For soft-soldering of iron, steel, copper, brass and for general soldering work.

**Note:** Contains zinc chloride, irritating.

STANNOL

| Order No. | Design | 9189 STANNOL |
|---|---|---|
| 0005 | 50 ml bottle | 3.81 |
| 0500 | 500 ml bottle | 15.25 |
| | | (W939) |

## Salmiak solder stone

**Design:** Supplied in a can.

**Application:** For cleaning soldering tips.

STANNOL

| Order No. | Dimensions mm | 9195 STANNOL |
|---|---|---|
| 0020 | 100 x 45 x 25 | 7.85 |
| | | (W939) |

## Soldering fluid brush

**Design:** Flat in tin plate, natural bristles, width 9 mm.

**Application:** Ideal for applying solder flux, welding paste, hydrochloric acids, drilling and grinding oil, soapy water and lots more.

STANNOL

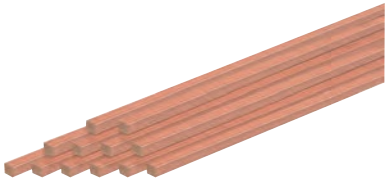
| Order No. | Width mm | 9192 STANNOL | Content Piece |
|---|---|---|---|
| 0011 | 9 | 0.66 | 1 |
| 0050 | 9 | 9.25 | 10 |
| | | (W939) | |

## Brazing solder (copper-phosphorus solder)

**Design:** Without silver, according to DIN EN 1044-CP203 L-CuP6, melting range 710 °C, working temperature 730 °C. 93.8 % Cu, 6.2 % P, DVGW GW2 4.3.2. Delivered in a 1 kg carton.

**Application:** For copper, cold and warm water installations and gas installations. Only with soldering flux in conjunction with brass or red brass.

STANNOL



| Order No. | Dimensions mm | 9197 STANNOL |
|---|---|---|
| 0005 | 2 x 500 | 51.30 |
| | | (W939) |

## Silver solder

**Design:** According to DIN 8513, L-AG45Sn DVGW GW 2 3.2 + 4.3.2, round rods, approx. 8 g.

**Application:** For copper, cold and hot water as well as gas installations.

STANNOL

| Order No. | Dimensions mm | 9198 STANNOL | PU | Operating temperature °C |
|---|---|---|---|---|
| 0015 | 1.5 x 500 | 20.70 (W939) | 25 Δ | 670 |

Δ Supply only possible as a whole packaging unit.

## Cleaning fleece

**Design:** Metal-free, solvent-resistant and elastic. Supplied in sleeve of 10 pcs.

**Application:** For the fast, scratch-free cleaning of soldering spots on copper solder. Wet and dry operation for the removal of oxide layers, corrosion, surface dirt as well as grease and oily residues.

ROTHENBERGER

| Order No. | Dimensions mm | 9917 ROTHENBERGER | Weight g |
|---|---|---|---|
| 0010 | 60 x 130 | 5.95 (W592) | 80 |

## Flame protection mat

**Design:** Very flexible, asbestos-free mat with protection up to 1000 °C for soldering torch and welding heat.

**Application:** For avoiding fire risk and protecting wall coverings, cables, carpets and other flammable materials, including over long working period. Being flexible, the mat can be formes and used almost anywhere.

ROTHENBERGER

| Order No. | Dimensions mm | 9119 ROTHENBERGER | Weight g |
|---|---|---|---|
| 0010 | 330 x 500 x 1.4 | 39.95 (W592) | 300 |

## Gas lighter

**Design:** According to DIN 3017. Made of galvanised steel.

| Order No. | Design | 9199 |
|---|---|---|
| 0005 | Gas lighter with flat rasp | 5.10 |
| 0010 | Gas lighter with roller rasp | 3.73 |
| 0015 | Flint 3 x 20 mm (pack of 50) | 23.00 (W942) |

## Pole screw clamp

**Design:** Made of malleable cast iron, with wing screw.

**Application:** To connect the grounding cable.

| Order No. | Projection mm | 9245 | For stress to A |
|---|---|---|---|
| 0005 | 80 | 16.45 | 400 |
| 0010 | 80 | 19.05 (W945) | 600 |

## Earth terminal

| Order No. | Stress at 35% ED/60% ED | 9234 | Design |
|---|---|---|---|
| 0040 | To 400 A/300 A | 7.45 | Brass tape |
| 0060 | To 600 A/500 A | 8.00 (W942) | Copper band |

## Electrode holder

**Design:** Upper and lower part made of brass, insulation sleeve made from thermoset.

| Order No. | For stress to A | 9231 |
|---|---|---|
| 0020 | 200 | 8.75 |
| 0030 | 300 | 12.15 |
| 0040 | 400 | 13.70 |
| 0060 | 600 | 15.10 (W942) |

## Grounding cable

**Design:** Supplied with earth terminal and plug.

| Order No. | For stress to A | 9233 | Cable cross section mm² | Plug for cable mm² | Pin Ø mm | Cable length m |
|---|---|---|---|---|---|---|
| 0005 | 200 | 22.90 | 16 | 10–25 | 9 | 5 |
| 0010 | 200 | 30.30 | 25 | 10–25 | 9 | 5 |
| 0015 | 200 | 33.40 | 25 | 35–50 | 13 | 5 |
| 0020 | 400 | 48.30 (W942) | 35 | 35–50 | 13 | 5 |

## Welding cable

**Design:** Supplied with electrode holder and plug.

| Order No. | For stress to A | 9235 | Cable cross section mm² | Plug for cable mm² | Pin Ø mm | Cable length m |
|---|---|---|---|---|---|---|
| 0005 | 200 | 25.20 | 16 | 10–25 | 9 | 5 |
| 0010 | 200 | 34.10 | 25 | 10–25 | 9 | 5 |
| 0015 | 200 | 36.30 | 25 | 35–50 | 13 | 5 |
| 0020 | 400 | 49.90 (W942) | 35 | 35–50 | 13 | 5 |

## Welder's chipping hammer

**Design:** Full steel with round tube 20 mm.

| Order No. | Weight g | 9237 | Length mm |
|---|---|---|---|
| 0010 | 400 | 5.70 (W945) | 305 |

## Multifunctional welder's tongs FIX CO2

**Application:** For loosening and affixing gas sleeves and power nozzles, to clean gas sleeves and to cut welding wire.

| Order No. | For nozzles mm | 9238 | Length mm |
|---|---|---|---|
| 1215 | 12–15 | 34.00 | 180 |
| 1518 | 15–18 | 34.00 (W945) | 210 |

## Welding protective mask solarmatic comfort

NEW

optrel swiss made

**Design:** With automatic protection levels from protection level 4 to protection levels 9–13. By means of a potentiometer knob on the outside, continuous adjustment can also be set manually between protection level 9 and 13. In addition, the device has a delay switch. In that case, the switching time is adjustable between dark/light. The energy is supplied by solar cells, so there is no need to replace batteries. In addition, the mask has a comfortable headband that can be adjusted externally in all directions. The protection panes and glare protection cassette can be replaced quickly and easily.

**Application:** Suitable for electrodes, metal inert gas, high performance, cored wire, TIG, plasma and micro-plasma welding as well as plasma cutting.

**Note:** Not suitable for gas and laser welding.

| Order No. | Switching time light-dark ms | 9206 optrel | Weight g |
|---|---|---|---|
| 0005 | 0.1–0.35 | 288.00 (W946) | 490 |

### Accessories

| Order No. | Design | 9206 optrel |
|---|---|---|
| 0010 | Protection pane, external (pack of 10) | 21.40 NEW |
| 0015 | Viewing pane, outside (pack of 5) | 7.40 NEW |
| 0020 | Forehead sweat band, cotton, with velcro fastener (pack of 2) | 5.40 (W946) |

## Welding protection helmet e650

optrel swiss made

**Design:** Ideal work instrument for most welding work. In addition to the infinitely variable DIN 9-13 blackness values, the helmet also offers infinitely variable sensitivity adjustment and delayed opening. All features can be selected and adjusted from the outside, and thus guarantee maximum comfort and efficiency. The built-in grinding function allows turning off the LCD by pressing a button, thus allowing for flawless sanding. The energy is supplied by solar cells and supported with replacement batteries. In addition, the mask has a comfortable headband that can be adjusted from the outside in all directions. The viewing pane can be replaced quickly and easily.

**Application:** Suitable for electrodes, metal inert gas, high performance, cored wire, TIG, plasma and micro-plasma welding as well as plasma cutting.

**Note:** Not suitable for gas and laser welding.

| Order No. | Switching time light-dark ms | 9206 optrel | Weight g |
|---|---|---|---|
| 0006 | 0.12–0.17 | 288.00 (W946) | 490 |

### Accessories

| Order No. | Design | 9206 optrel |
|---|---|---|
| 0011 | Viewing pane, outside (pack of 5) | 26.80 |
| 0035 | Viewing pane, inside (pack of 5) | 7.40 |
| 0025 | Headband with fastener | 27.80 |
| 0020 | Forehead sweat band, cotton, with velcro fastener (pack of 2) | 5.40 |
| 0012 | Bib, leather | 44.90 |
| 0030 | Protective cap, leather, with neck protection | 72.80 |
| 0040 | Magnification pane inside, 1.00 diopters | 30.00 |
| 0043 | Magnification pane inside, 1.50 diopters | 30.00 |
| 0045 | Magnification pane inside, 2.00 diopters | 30.00 (W946) |

## Welding glare shield weldcap

NEW

**Design:** Lightweight, comfortable welding glare shield with large field of vision, automatic darkening filter from protection levels 9-12 and integrated bump protection. Hard shell offers exact fit for everyone (56-64 cm). Grinding mode operation and battery warning LED. Tough plastic facial protection and flame-retardant fabric in line with EN ISO 11611 (Class 1) and EN ISO 11612 (Class A/B1/C1/E3/F1).

| Order No. | Switching time light-dark ms | 9205 optrel | Weight g |
|---|---|---|---|
| 0005 | 0.1–0.4 | 148.00 (W946) | 420 |

### Accessories

NEW

| Order No. | Design | 9205 optrel |
|---|---|---|
| 0050 | Viewing pane, outside (pack of 5) | 21.70 |
| 0055 | Viewing pane, inside (pack of 5) | 8.60 |
| | | (W946) |

| Order No. | Design | 9205 optrel |
|---|---|---|
| 0060 | Nose pad | 8.60 |
| 0065 | Head/facial protection | 64.30 |
| 0070 | Battery lid | 7.50 |
| 0075 | Belt hook | 19.30 |
| | | (W946) |

## Welding protection helmet Solar Protect

**Design:** The entry-level model with modern filter technology for high security (certified according to EN 379 and EN 175). With a viewing area of 38 x 94 mm, the user always has the best view of the work surface. Automatic protection stages of light level DIN 4 in 0.2 ms intervals to dark level DIN 9-13. The gradation of the dark level can be set manually inside the helmet. UV/IR protection adjusts continuously to stage DIN 16 The energy is supplied by solar cells.

**Application:** Suitable for MMA, MIG-MAG and TIG applications, TIG suitable from 50 amps.

**Note:** For outside panes see (Order No. 9223).

| Order No. | Design | 9208 |
|---|---|---|
| 0005 | Safety helmet | 131.00 |
| 0010 | Forehead sweat band (pack of 2) | 2.52 |
| | | (W947) |

## Welding protection helmet with breathing protection system

NEW

**Design:** Welding protection helmet; the entry-level model with modern filter technology for high security (certified according to EN 379 and EN 175). With a viewing area of 38 x 94 mm, the user always has the best view of the work surface. Automatic protection stages of light level DIN 4 in 0.2 ms intervals to dark level DIN 9-13. The gradation of the dark level can be set manually inside the helmet. UV/IR protection adjusts continuously to stage DIN 16 The energy is supplied by solar cells.
**Breathing protection system,** the ideal addition to the welding protection helmet. This new breathing protection system regulates the flow of air in 8 levels from 170 l/min to 240 l/min. The air flow is displayed using easy-to-read LEDs; the operating elements are well protected from dust and dirt by the sealed keypad. The electronic control (AIR FLOW system) automatically regulates the air flow to the preset volume of air. The lightweight high-performance Li-Ion battery supplies at least 8 h (9 h at 180 l/min) of energy. The battery can be charged inside and outside the breathing unit using the charger (included). Low battery status is indicated by the visual and acoustic warning signals. A vibrating alarm also informs the user of a saturated filter. The TH3PSL filter (with pre-filter) offers the best protection. The lightweight shell is made from durable plastic, whilst the padded band offers great comfort for the wearer. The air tube is protected by a flame-retardant sleeve. Delivery: Welding protection helmet is delivered fully assembled with the breathing protection system.

**Application:** Suitable for MMA, MIG-MAG and TIG applications, TIG suitable from 50 amps.

**Note:** For outside panes see (Order No. 9223).

| Order No. | Design | 9208 |
|---|---|---|
| 0015 | Protection helmet Solar Protect with breathing protection system | 862.00 (W947) |

### Accessories

| Order No. | Design | 9208 |
|---|---|---|
| 0010 | Forehead sweat band (pack of 2) | 2.52 |
| 0020 | Pre-filter (10 pcs) | 25.20 NEW (W947) |

| Order No. | Design | 9208 |
|---|---|---|
| 0025 | P3 filter | 29.30 NEW |
| 0030 | Li-Ion battery | 166.00 NEW |
| 0035 | Charger | 52.50 NEW (W947) |

## Handheld protection shield

**Design:** Made of fibreglass-reinforced plastic, bent shape, with plastic handle. Delivery without lenses.

**Note:** For welding protection lens 90 x 110 mm see (Order 9216 or 9219).
For attachment lens 90 x 110 mm see (Order No. 9222, 9223 or 9224).

| Order No. | 9207 |
|---|---|
| 0010 | 19.10 (W942) |

## Handheld free vision shield

**Design:** Made of fibreglass-reinforced plastic, bent shape, with fully insulated plastic handle. Delivery without lenses.

**Note:** For welding protection lens 90 x 110 mm see (Order 9216 or 9219).
For attachment lens 90 x 110 mm see (Order No. 9222, 9223 or 9224).
For attachment lens 40 x 110 mm see (Order No. 9222).

| Order No. | 9210 |
|---|---|
| 0010 | 22.10 (W942) |

## Head protection shield

**Design:** Made of fibreglass-reinforced plastic, with adjustable headband. Delivery without lenses.

**Note:** For welding protection lens 90 x 110 mm see (Order 9216 or 9219).
For attachment lens 90 x 110 mm see (Order No. 9222 or 9223).

| Order No. | 9213 |
|---|---|
| 0010 | 26.00 (W942) |

format professional quality

9/135

9/137

9/133

## Welding Safely

Work protection products for welders can be found from 9/133.

## Welder's protection lens

**Design:** According to DIN 4646 and 4647.

**Note:** Suitable for Order No. 9207, 9210 and 9213.

**9216** Non-reflecting

**9219** Reflecting

| Order No. | Dimensions mm | 9216 | 9219 | PU | DIN protection level |
|---|---|---|---|---|---|
| 0009 | 90 x 110 | 1.47 | 6.10 | 10 | 9 |
| 0010 | 90 x 110 | 1.47 | 6.10 | 10 | 10 |
| 0011 | 90 x 110 | 1.47 | 6.10 | 10 | 11 |
| 0012 | 90 x 110 | 1.47 | 6.10 | 10 | 12 |
| 0013 | 90 x 110 | 1.47 (W945) | 6.10 (W945) | 10 | 13 |

## Attachment lens, clear

**Design:** With DIN stamp.

**Application:** For protective shields.

**Note:** Suitable for (Order No. 9207, 9210 and 9213).

| Order No. | Dimensions mm | 9222 | PU |
|---|---|---|---|
| 0010 | 90 x 110 | 0.22 | 10 |
| 0015 | 40 x 110 | 0.17 (W945) | 10 |

## Attachment lens, yellow

**Design:** Splashproof, heat-resistant, with long operating time.

**Application:** For protective shields.

**Note:** Suitable for (Order No. 9207, 9210 and 9213).

| Order No. | Dimensions mm | 9224 | PU |
|---|---|---|---|
| 0005 | 90 x 110 | 0.75 (W945) | 10 |

## Plastic lens

**Design:** Splashproof, with very long operating time.

**Application:** For protective shields.

**Note:** Suitable for (Order No. 9207, 9208, 9210 and 9213.

| Order No. | Dimensions mm | 9223 | PU |
|---|---|---|---|
| 0005 | 90 x 110 | 1.22 (W945) | 10 |

## Welding mirror

**Design:** With rectangular, nickel-plated steel mirror on self-adhesive all-round swivel joint for easy alignment.

**9225** **With magnetic holder** and profile-guided, screwed mild steel pole shoe and flexible shaft.

**9228** **With chrome-plated handle.**

| Order No. | Dimension mm | 9225 | 9228 | Length mm 9225 | Length mm 9228 |
|---|---|---|---|---|---|
| 0010 | 80 x 70 x 1.0 | 15.35 (W945) | 6.60 (W945) | 500 | 470 |

## Replacement mirror for welding mirror

| Order No. | Design | 9228 |
|---|---|---|
| 0020 | Replacement mirror | 2.27 (W945) |

## Hand riveter NTH

**Design:** Made of high quality die-cast aluminium with forged pliers jaws made of steel. In addition, the hand riveter has a handy cuff handle, opening spring for automatic mandrel ejection and optimal one hand operation as well as a retaining clip.

**Application:** For aluminium to ∅ 5 mm.

**Scope of delivery:** hand riveter NTH, 1 installation wrench and 4 nosepieces 10/18, 10/24, 10/27 und 10/32.

**Nosepiece attachment:**

| Rivet ∅ | Rivet material | nosepiece |
|---|---|---|
| 2.4 | Aluminium | 10/18 |
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu/Alu, PG-Alu, PG-steel | 10/24 |
| 4 | Aluminium, Cu | 10/24 |
| 4 | steel, CAP-Alu, CAP-Cu, Alu/Alu, PG-Alu | 10/27 |
| 4.8 and 5 | Aluminium, PG-aluminium | 10/32 |

| Order No. | Equipment lift mm | 9304 | Length mm | Weight g |
|---|---|---|---|---|
| 0005 | 8 | 16.15 (W960) | 260 | 570 |

## Hand riveter NTS

GESIPA®

**Design:** Made of high quality die-cast aluminium with forged pliers jaws made of steel. The slim pliers head also enables work in hard to reach places. In addition, the hand riveter has a handy cuff handle, opening spring for automatic mandrel ejection and a retaining clip.

**Application:** For aluminium up to ∅ 5 mm as well as steel and stainless steel up to ∅ 4 mm.

**Scope of delivery:** Hand riveter NTS, 4 nosepieces 10/18, 10/24, 10/27 and 10/32.

**Nosepiece attachment:**

| Rivet ∅ | Rivet material | Nosepiece |
|---|---|---|
| 2.4 | Aluminium | 10/18 |
| 3.2 | CAP-aluminium, CAP-Cu | 10/18 |
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu/Alu, PG-Alu, PG steel | 10/24 |
| 4 | Aluminium, Cu | 10/24 |
| 4 | steel, CAP-Alu, CAP-Cu, Alu/Alu, PG-Alu | 10/27 |
| 4 | Stainless steel, Stinox, PG-steel | 10/29 |
| 4.8 | CAP-aluminium, CAP-Cu | 10/29 |
| 4.8 and 5 | Aluminium, PG-aluminium | 10/32 |

| Order No. | Equipment lift mm | 9305 GESIPA | Length mm | Weight g |
|---|---|---|---|---|
| 0005 | 8 | 38.70 (W960) | 275 | 480 |

## Hand riveter NTX/NTX-F

GESIPA®

**Design:** Made of high quality die-cast aluminium with forceps jaws made of forged chrome vanadium steel. The slim pliers head also enables work in hard to reach places. The intermediary lever system reduces effort and causes demolition damping. In addition, the hand riveter has a handy cuff handle and a retaining chain.

**Application:** For aluminium up to ∅ 5 mm as well as steel and stainless steel up to ∅ 4 mm.

**Nosepiece attachment:**

| Rivet ∅ | Rivet material | Nosepiece |
|---|---|---|
| 2.4 | Aluminium | 10/18 |
| 3.2 | CAP-aluminium, CAP-Cu | 10/18 |
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu/Alu, PG-Alu, PG-steel | 10/24 |
| 4 | Aluminium, Cu | 10/24 |
| 4 | steel, CAP-Alu, CAP-Cu, Alu/Alu, PG-Alu | 10/27 |
| 4 | Stainless steel, Stinox, PG-steel | 10/29 |
| 4.8 | CAP-aluminium, CAP-Cu | 10/29 |
| 4.8 and 5 | Aluminium, PG-aluminium | 10/32 |

**9300 0010** **NTX** Without opening spring.
Delivery with riveting tongs NTX, 3 nosepieces 10/18, 10/24, 10/32.

**9300 0015** **NTX-F** With opening spring for automatic mandrel ejection.
Delivery with riveting tongs NTX-F, 3 nosepieces 10/24, 10/27, 10/32.

| Order No. | Equipment lift mm | 9300 GESIPA | Length mm | Weight g |
|---|---|---|---|---|
| 0010 | 8 | 59.60 | 260 | 575 |
| 0015 | 8 | 60.10 (W960) | 260 | 575 |

## Hand riveter Flipper®

**Design:** Made of die-cast aluminium with forged pliers jaws made of high-quality steel. The required **hand strength** is reduced by 40% **after repeated actuation.** The hinge pin is mounted to prevent turning. With plug-on mandrel-collecting vessel, a spring reset for automatic mandrel ejection and an opening spring.

**Application:** For aluminium up to Ø 5 mm, steel and stainless steel up to Ø 4 mm.

**Scope of delivery:** Hand riveter Flipper®, 1 assembly key and 3 mouthpieces 10/18, 10/24, 10/29.

**Nosepiece attachment:**

| Rivet Ø | Rivet material | Nosepiece |
|---|---|---|
| 2.4 | Aluminium | 10/18 |
| 3.2 | CAP-aluminium, CAP-Cu | 10/18 |
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu/Alu, PG-Alu, PG-steel | 10/24 |
| 4 | Aluminium, Cu | 10/24 |
| 4 | steel, CAP-Alu, CAP-Cu, Alu/Alu, PG-Alu | 10/27 |
| 4 | Stainless steel, Stinox, PG-steel | 10/29 |
| 4.8 | CAP-aluminium, CAP-Cu | 10/29 |
| 4.8 and 5 | Aluminium, PG-aluminium | 10/32 |

| Order No. | Equipment lift mm | 9306 GESIPA | Length mm | Weight g |
|---|---|---|---|---|
| 0006 | 16.2 | 71.40 (W960) | 212 | 750 |

## Blind rivet set

**9302** Delivery in plastic case.

**9303** Supplied in sheet steel case.

| Order No. | Design | 9302 GESIPA | 9303 GESIPA | Set contents |
|---|---|---|---|---|
| 0005 | 136 pcs | 59.40 | – | 1 hand riveter NTS (Order No. 9305)<br>40 alu/steel blind rivets 4 x 6<br>per 30 alu/steel blind rivet 4 x 8, 4 x 12<br>33 washers 4.1 mm<br>1 special drill<br>1 installation wrench 10 mm |
| 0010 | 941 pcs | – | 130.00 | 1 hand riveter NTX (Order No. 9300)<br>per 100 alu/steel blind rivets 3 x 5; 3 x 7<br>80 alu/steel blind rivets 3 x 8; 3 x 10; 4 x 5; 4 x 6<br>per 70 alu/steel blind rivets 3 x 12; 4 x 8<br>per 60 alu/steel blind rivets 4 x 10; 4 x 12<br>90 copper/steel blind rivets 3 x 6<br>70 copper/steel blind rivets 4 x 6 |
| | | (W960) | (W960) | |

9302

9303

## Rivet gun HN 2

**Design:** Made of high-quality die-cast aluminium, with closed shell, which adds stability and offers protection from dirt. The tooth segment transmission with favourable lever arm arrangement reduces the force required and dampens the tear-off effect. Repeated re-engagement very easy, even on workpiece. The hinge pin is mounted to prevent turning and features internal axial securing. In addition, the hand riveter features a plug-in and pivotable riveting mandrel container as well as handy handles.

**Application:** For all materials from Ø 3.0 to 6.4 mm, except PolyGrip® and G-Bulb® blind rivets with Ø 6.4 mm made of stainless steel.

**Scope of delivery:** Hand riveter HN 2, 5 nosepieces 16/29, 16/32, 16/36, 16/40, 16/45.

**Nosepiece attachment:**

| Rivet Ø | Rivet material | Nosepiece |
|---|---|---|
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu/Alu, PG-Alu, PG-steel | 16/24 |
| 4 | Aluminium, Cu | 16/24 |
| 4 | steel, CAP-Alu, CAP-Cu, Alu/Alu, PG-Alu | 16/27 |
| 4 | Stainless steel, Stinox, PG-steel | 16/29 |
| 4.8 | CAP-aluminium, CAP-Cu | 16/29 |
| 4.8 and 5 | Aluminium, PG-aluminium | 16/29 |
| 4.8 and 5 | Steel, aluminium/aluminium | 16/32 |
| 4.8 and 5 | Stainless steel, Stinox, PG-steel | 16/36 |
| 6 | Aluminium | 16/36 |
| 6 | Steel | 16/40 |
| 6.4 | Aluminium, PG-aluminium | 16/40 |
| 6.4 | Steel, aluminium/aluminium | 16/45 |

| Order No. | Equipment lift mm | 9309 GESIPA | Length mm | Weight g |
|---|---|---|---|---|
| 0005 | 10 | 202.00 (W960) | 570 | 1850 |

## Lazy-tong rivet punch SN 2

**Design:** Made of high-quality die-cast aluminium, with closed shell, which adds stability and offers protection from dirt. The device is equipped with a galvanised scissors system made of high-strength steel. The slim housing also enables work in hard to reach places. The favourable leverage with 4-way slide block bearings considerably reduces the hand strength required.

**Application:** For all materials from ∅ 3.0 to 6.4 mm.

**Scope of delivery:** Scissors riveter SN 2, 5 nosepieces for ∅ 3.2 mm, 4.0 mm, 4.8 mm, 6.0 mm and 6.4 mm, 1 installation wrench.

**Nosepiece attachment:**

| Rivet ∅ | Rivet material | Nosepiece |
|---|---|---|
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu, PG-Alu, PG steel | 17/24 |
| 4 | Aluminium, Cu | 17/24 |
| 4 | steel, CAP-Alu, CAP-Cu, Aluminium, PG-aluminium | 17/27 |
| 4 | Stainless steel, Stinox, PG-steel | 17/29 |
| 4.8 | CAP-aluminium, CAP-Cu | 17/29 |
| 5 and 4.8 | Aluminium, PG-aluminium | 17/29 |
| 5 and 4.8 | Steel, aluminium/aluminium | 17/32 |
| 5 and 4.8 | Stainless steel, Stinox, PG-steel | 17/36 |
| 6 | Aluminium | 17/36 |
| 6 | Steel | 17/40 |
| 6.4 | Aluminium, PG-aluminium | 17/40 |
| 6.4 | steel, Alu | 17/45 |

| Order No. | Equipment lift mm | 9312 GESIPA | Open length mm | Closed length mm | Weight g |
|---|---|---|---|---|---|
| 0005 | 10.5 | 202.00 (W960) | 810 | 310 | 1930 |

## Blind rivet gun PH 2 pneumatic-hydraulic

**Design:** The hydraulic head adjustable by 360° is made of aluminium and is equipped with a wear-resistant cylindrical surface. The pneumatic cylinder is made of die-cast aluminium with smooth-running, wear-resistant and hard-chromed piston made of hardened steel. The wear-resistant compact seal has a large wiping action and a long service life. With quick-action ventilating valve for high working results. Favourable centre of gravity for fatigue-free operation, low noise pneumatic circuit. With mandrel-collection container and a user-friendly handle.

**Application:** For all materials from ∅ 3 to 5 mm, and for blind rivets ∅ 2.4 mm with small feed unit. Not suitable for CAP-blind rivets made of stainless steel.

**Scope of delivery:** Blind rivet pistol PH 2, 5 nosepieces 16/24, 16/27, 16/29, 16/32, 16/36, 1 set chuck jaws, 1 receptacle, 2 installation wrenches MSU and MSZ.

**Nosepiece attachment:**

| Rivet ∅ | Rivet material | Nosepiece |
|---|---|---|
| 2.4 | Aluminium | 10/18 |
| 3.2 | CAP-Alu, Cap-Cu | 10/18 |
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu/Alu, PG-Alu, PG-steel | 10/24 |
| 4 | Aluminium, Cu, CAP-aluminium, CAP-Cu | 16/24 |
| 4 | Steel, aluminium/aluminium, PG aluminium | 16/27 |
| 4 | Stainless steel, Stinox, PG-steel | 16/29 |
| 5 and 4.8 | Alu, CAP-Alu, CAP-Cu, PG-Alu | 16/29 |
| 4.8 and 5 | Steel, aluminium/aluminium | 16/32 |
| 4.8 and 5 | Stainless steel, Stinox, PG-steel | 16/36 |

| Order No. | Equipment lift mm | 9315 GESIPA | Air consumption per rivet l | Setting force N | Weight g |
|---|---|---|---|---|---|
| 0005 | 15 | 561.00 (W963) | 1.2–1.8 | 7375 | 1300 |

## Blind rivet gun TAURUS® series pneumatic-hydraulic

**Design:** With integrated protection device against mandrels flying out. The receptacles for the alternate mouthpieces are located in the bottom of the device. The compressed air used for the setting process is also used to suck up the rest of the mandrel. The new gripper jaw system increases the service life many times over. The trailing port prevents being affected by the hose. The rivet suction can only be switched on by lifting the machine. Retractable suspension bracket on the head. Coordinated device lift for quick work sequences with removable mandrel-collecting container.

**Nosepiece attachment:**

| Rivet Ø | Rivet material | Nosepiece |
|---|---|---|
| 2.4 | Aluminium | 17/18 |
| 3.2 | CAP-Alu, Cap-Cu | 17/18 |
| 3 | Alu/Cu | 17/20 |
| 3 and 3.2 | Alu, Cu, steel, stainless steel, Stinox, Alu/Alu, PG-Alu, PG-steel | 17/24 |
| 4 | Aluminium, Cu, CAP-aluminium, CAP-Cu | 17/24 |
| 4 | Steel, aluminium/aluminium, PG aluminium | 17/27 |
| 4 | Stainless steel, Stinox, PG-steel | 17/29 |
| 4.8 and 5 | Alu, CAP-Alu, CAP-Cu, PG-Alu | 17/29 |
| 4.8 and 5 | Steel, aluminium/aluminium | 17/32 |
| 4.8 and 5 | Stainless steel, Stinox, PG-steel, G-bulb | 17/36 |
| 6 | Aluminium | 17/36 |
| 6 | Steel | 17/40 |
| 6.4 | Aluminium | 17/40 |
| 6.4 | Steel, aluminium/aluminium | 17/45 |
| 8 | Aluminium | 17/45 |

**Scope of delivery**: Blind rivet pistol, assembly key SW 12/14, 14/17, 1 bottle hydraulic oil 100 ml, 1 oil refill container.

**9316 0003** NEW
**TAURUS® 1**
For all materials up to Ø 3.2 mm and aluminium/steel up to Ø 4 mm (max. mandrel Ø 2.5 mm). Delivery with 3 nosepieces 17/18, 17/20, 17/22.

**9316 0005**
**TAURUS® 2**
For all materials up to Ø 5 mm and aluminium/steel up to Ø 6 mm (max. mandrel Ø 3.2 mm). Delivery with 4 nosepieces 17/24, 17/27, 17/29, 17/32.

**9316 0007**
**TAURUS® 3**
For all materials up to Ø 6.4 mm (maximum mandrel Ø 4.5 mm). Delivery with 3 nosepieces 17/36, 17/40, 17/45.

**9316 0009** NEW
**TAURUS® 4**
For all materials up to Ø 6.4 mm and aluminium up to Ø 8 mm (max. mandrel Ø 4.5 mm). Delivery with 3 nosepieces 17/36, 17/40, 17/45.

| Order No. | Equipment lift mm | 9316 GESIPA | Air consumption per rivet l | Setting force N | Weight g |
|---|---|---|---|---|---|
| 0003 | 15 | 726.00 | 1.0 | 4200 | 1300 |
| 0005 | 18 | 750.00 | 2.3 | 9000 | 1600 |
| 0007 | 25 | 991.00 | 4.8 | 14000 | 1900 |
| 0009 | 19 | 1075.00 (W963) | 4.8 | 20000 | 2000 |

## Accessories for pneumatic-hydraulic blind rivet pistols NEW

| Order No. | Design | 9316 GESIPA | Suitable for |
|---|---|---|---|
| 0300 | Chuck jaws, 3 pcs | 18.70 (W966) | TAURUS® series |

## Rechargeable riveter AccuBird® series

**Design:** Compact, shock-resistant shell with the same forward and reverse speed of the jaw mechanism. Immediate reset to the starting position after the riveting process. High reliability is achieved by the electronic controller. Furthermore, the device has electronic temperature and overload protection. The hanger is attached to the retractable head. The device also has a a favourable centre of gravity for fatigue-free operation, hand protection, removable mandrel collection holder and user-friendly handle.

**Application:** For all materials up to Ø 5 mm, alu up to Ø 6 mm, G-Bulb all materials up to Ø 4.8 mm, Bulb-Tite® all materials up to Ø 4 mm, steel and alu up to Ø 5.2 mm.

**Nosepiece attachment:**

| Rivet Ø | Rivet material | piece/accu charger | Nosepiece |
|---|---|---|---|
| 2.4 | Aluminium | 1500 | 17/18 |
| 3.2 | CAP-aluminium, CAP-Cu | 1000 | 17/18 |
| 3 and 3.2 | Aluminium | 800 | 17/24 |
| 3 and 3.2 | Steel | 800 | 17/24 |
| 3 and 3.2 | Stainless steel | 800 | 17/24 |
| 4 | Aluminium | 800 | 17/24 |
| 4 | Steel | 700 | 17/27 |
| 4 | Stainless steel | 640 | 17/29 |
| 4.8 and 5 | Aluminium | 550 | 17/29 |
| 4.8 and 5 | Steel | 420 | 17/32 |
| 4.8 and 5 | Stainless steel | 320 | 17/36 |

**Note:** For replacement quick-change rechargeable battery see (Order No. 9321 0007 and 9319 0006), rapid charger see (Order No. 9322 0006).

**9320 0005**
**AccuBird®**
**Scope of delivery:** Riveter AccuBird®, 4 nosepieces 17/24, 17/27, 17/29, 17/32, 1 installation wrench, 1 quick-change rechargeable battery 14.4 V/1.3 Ah, 1 quick charger 14.4 V, 1 sheet steel case.

**9320 0007** NEW
**AccuBird® with 2nd battery**
**Scope of delivery:** Riveter AccuBird®, 4 nosepieces 17/24, 17/27, 17/29, 17/32, 1 installation wrench, 2 quick-change rechargeable battery 14.4 V/1.3 Ah, 1 quick charger 14.4 V, 1 sheet steel case.

| Order No. | Equipment lift mm | 9320 GESIPA | Setting force N | Weight g |
|---|---|---|---|---|
| 0005 | 20 | 669.00 | 10000 | 2000 |
| 0007 | 20 | 772.50 (W964) | 10000 | 2000 |

with 2nd battery

## Rechargeable riveter PowerBird® range

**Design:** Compact, shock-resistant shell with the same forward and reverse speed of the jaw mechanism. Immediate reset to the starting position after the riveting process. High reliability is achieved by the electronic controller. Furthermore, the device has electronic temperature and overload protection. The device also has a favourable centre of gravity for fatigue-free operation, hand protection, removable mandrel collection holder and user-friendly handle.

**9318 0005**

**PowerBird®**
The hanger is attached to the retractable head. For all materials from Ø 4.8 mm to Ø 6.4 mm, aluminium to Ø 8 mm, G-Bulb all materials up to Ø 6.4 mm, Bulb-Tite® all materials up to Ø 7.7 mm, Mega-Grip® all materials up to Ø 6.4 mm. Supplied with 4 nosepieces 17/32, 17/36, 17/40, 17/45, 1 installation wrench, 1 quick-change rechargeable battery 14.4 V/2.6 Ah, 1 quick charger 14.4 V, 1 sheet steel case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9319 0006). For quick charger see (Order No. 9322 0006).

**9318 0007** NEW

**PowerBird® with 2nd battery**
The hanger is attached to the retractable head. For all materials from Ø 4.8 mm to Ø 6.4 mm, aluminium to Ø 8 mm, G-Bulb all materials up to Ø 6.4 mm, Bulb-Tite® all materials up to Ø 7.7 mm, Mega-Grip® all materials up to Ø 6.4 mm. Supplied with 4 nosepieces 17/32, 17/36, 17/40, 17/45, 1 installation wrench, 2 quick-change rechargeable battery 14.4 V/2.6 Ah, 1 quick charger 14.4 V, 1 sheet steel case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9319 0006). For quick charger see (Order No. 9322 0006).

**9314 0005** NEW

**PowerBird® Pro**
Up to 4 times faster than comparable riveters thanks to the autoreverse function. For all materials from Ø 4.8 mm to Ø 6.4 mm, aluminium to Ø 8 mm, G-Bulb all materials up to Ø 6.4 mm, Bulb-Tite® all materials up to Ø 7.7 mm, Mega-Grip® all materials up to Ø 6.4 mm. Delivery with 4 nosepieces 17/32, 17/36, 17/40, 17/45, 1 installation wrench, 1 quick-change rechargeable battery 18.0 V/2.1 Ah, 1 quick charger 21.0 V, 1 sheet steel case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9319 0010). For quick charger see (Order No. 9322 0010).

**9314 0007** NEW

**PowerBird® Pro with 2nd battery**
Up to 4 times faster than comparable riveters thanks to the autoreverse function. For all materials from Ø 4.8 mm to Ø 6.4 mm, aluminium to Ø 8 mm, G-Bulb all materials up to Ø 6.4 mm, Bulb-Tite® all materials up to Ø 7.7 mm, Mega-Grip® all materials up to Ø 6.4 mm. Delivery with 4 nosepieces 17/32, 17/36, 17/40, 17/45, 1 installation wrench, 1 quick-change rechargeable battery 18.0 V/2.1 Ah, 1 quick charger 21.0 V, 1 sheet steel case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9319 0010). For quick charger see (Order No. 9322 0010).

**9318 0010**

**PowerBird® Pro Gold Edition**
With low-wear, brushless motor for greater efficiency, a long life span, fast setting frequency and a particularly smooth running. Variable setting position lighting in the setting collar. For all materials from Ø 4.8 mm to Ø 6.4 mm, aluminium to Ø 8 mm, Bulb-Tite® all materials up to Ø 7.7 mm, Mega-Grip® all materials up to Ø 6.4 mm. Delivery with 4 mouthpieces 17/32, 17/36, 17/40, 17/45, 1 installation wrench, 1 Li-Ion quick-change rechargeable battery 18.0 V, 1 quick charger, 1 plastic case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9319 0010). For quick charger see (Order No. 9322 0010).

| Order No. | Equipment lift mm | 9318 GESIPA | 9314 GESIPA | Setting force N | Weight g |
|---|---|---|---|---|---|
| 0005 | 20 | 864.00 | – | 14000 | 2000 |
| 0007 | 20 | 1017.00 | – | 14000 | 2400 |
| 0005 | 25 | – | 1042.00 | 15000 | 2000 |
| 0007 | 25 | – | 1183.00 | 15000 | 2400 |
| 0010 | 25 | 1246.00 (W964) | – (W964) | 20000 | 2000 |

## Accessories for rechargeable riveters

| Order No. | Design | 9321 GESIPA | 9319 GESIPA | 9322 GESIPA | Suitable for |
|---|---|---|---|---|---|
| 0007 | Li-ion plug-in rechargeable battery 14.4 V/1.3 Ah | 122.50 | – | – | AccuBird®, FireBird® |
| 0006 | Li-ion plug-in rechargeable battery 14.4 V/2.6 Ah | – | 168.00 | – | AccuBird®, PowerBird®, FireBird®, FireBird® Gold Edition |
| 0010 | Li-ion slide-in rechargeable battery, 18.5 V/2.1 Ah | – | 178.00 | – | PowerBird® Pro, AccuBird® Pro |
| 0006 | Rapid charger, 14.4 V | – | – | 92.40 | Plug-in battery |
| 0010 | Rapid charger, 21 V | – | – | 102.00 | Slide-in battery |
| 0020 | Chuck jaw set | – (W966) | – (W966) | 9.70 NEW (W966) | AccuBird® |

GESIPA®

**Nosepiece attachment:**

| Rivet Ø | Rivet material | piece/accu charger | Nose-piece |
|---|---|---|---|
| 4.8 and 5 | Steel | 700 | 17/32 |
| 4.8 and 5 | Stainless steel | 560 | 17/36 |
| 6 | Aluminium | 560 | 17/36 |
| 6 | Steel | 300 | 17/40 |
| 6.4 | Alu/PG-Alu | 420 | 17/45 |
| 6.4 | Steel | 250 | 17/45 |
| 8 | Aluminium | 350 | 17/45 |

with 2nd battery

with 2nd battery

**9318 0005 + 0007**

**9314 0005 + 0007**

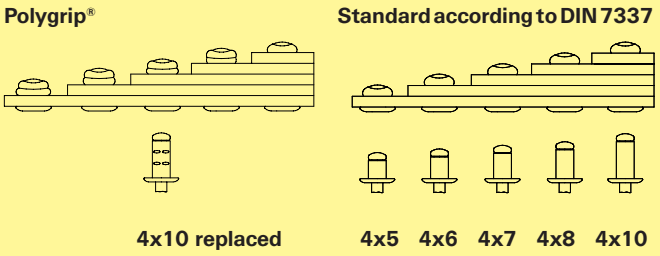
**9319 0010**

**9322 0010**

## PolyGrip® multiple range blind rivet

Particularly suitable when the material thickness of the material to be riveted changes frequently.

- Type style restriction due to large clamping range
- Reduction of type style diversity in the warehouse
- Fewer errors in processing by reducing the risk of confusion
- Best hole fill, even with larger hole tolerances
- Reliable rivet mandrel lock
- Clean closure head formation and high-strength riveted joint



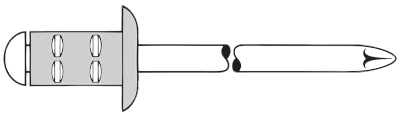

## PolyGrip® multiple range blind rivet Alu/steel standard, domehead

**Design:** Hollow rivet made of aluminium AlMg 2.5, rivet mandrel made of galvanised steel.

Hollow rivet: Alu AlMg 2,5 | Mandrel: Galvanised steel

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9327 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 3208 | 3.2 x 8.0 | 33.00 | 1000 Δ | 0.5– 5.0 | 3.3 |
| 3295 | 3.2 x 9.5 | 34.90 | 1000 Δ | 1.5– 6.5 | 3.3 |
| 0410 | 4.0 x 10.0 | 40.60 | 500 Δ | 0.5– 6.5 | 4.1 |
| 0413 | 4.0 x 13.0 | 48.40 | 500 Δ | 3.5– 9.5 | 4.1 |
| 0417 | 4.0 x 17.0 | 59.50 | 500 Δ | 7.0–13.0 | 4.1 |
| 4810 | 4.8 x 10.0ETA | 51.30 | 500 Δ | 0.5– 6.5 | 4.9 |
| 4815 | 4.8 x 15.0ETA | 67.40 | 500 Δ | 4.5–11.0 | 4.9 |
| 4817 | 4.8 x 17.0ETA | 76.70 | 500 Δ | 6.5–13.0 | 4.9 |
| | | (W962) | | | |



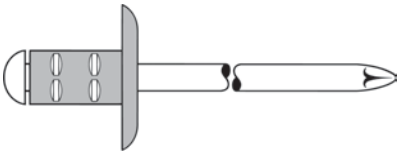
## PolyGrip® multiple range blind rivet aluminium/steel, large head

**Design:** Hollow rivet made of aluminium 2.5, rivet mandrel made of galvanised steel.

Hollow rivet: Alu AlMg 2,5 | Mandrel: Galvanised steel

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9329 GESIPA | PU | Head Ø | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|---|
| 0410 | 4.0 x 10.0 | 61.00 | 500 Δ | K 12 | 0.5– 6.5 | 4.1 |
| 0413 | 4.0 x 13.0 | 67.40 | 500 Δ | K 12 | 3.5– 9.5 | 4.1 |
| 4810 | 4.8 x 10.0ETA | 76.20 | 250 Δ | K 16 | 0.5– 6.5 | 4.9 |
| 4815 | 4.8 x 15.0ETA | 93.30 | 250 Δ | K 16 | 4.5–11.0 | 4.9 |
| 4817 | 4.8 x 17.0ETA | 98.40 | 250 Δ | K 16 | 6.5–13.0 | 4.9 |
| 4825 | 4.8 x 25.0ETA | 128.00 | 100 Δ | K 16 | 11.0–19.5 | 4.9 |
| | | (W962) | | | | |



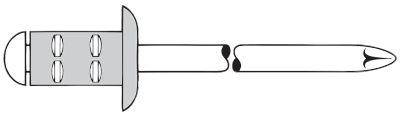
## PolyGrip® multiple range blind rivet aluminium/stainless steel, domehead

**Design:** Hollow rivet made of aluminium AlMg 2.5, rivet mandrel made of stainless steel A2 (1.4541).

Hollow rivet: Alu AlMg 2,5 | Mandrel: Stainless steel A2

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9331 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0410 | 4.0 x 10.0ETA | 65.40 | 500 Δ | 0.5– 6.5 | 4.1 |
| 0413 | 4.0 x 13.0ETA | 75.20 | 500 Δ | 3.5– 9.5 | 4.1 |
| 4810 | 4.8 x 10.0ETA | 97.40 | 500 Δ | 0.5– 6.5 | 4.9 |
| 4815 | 4.8 x 15.0ETA | 110.50 | 500 Δ | 4.5–11.0 | 4.9 |
| | | (W962) | | | |



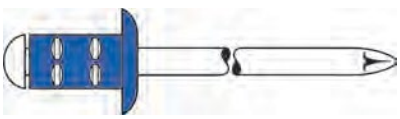
## PolyGrip® multiple range blind rivet steel/steel standard, domehead

**Design:** Hollow rivet and rivet mandrel made of galvanised steel.

Hollow rivet: Galvanised steel | Mandrel: Galvanised steel

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9333 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0410 | 4.0 x 10.0 | 62.70 | 500 Δ | 1.5– 6.5 | 4.1 |
| 0413 | 4.0 x 13.0 | 77.90 | 500 Δ | 4.5– 9.0 | 4.1 |
| 4815 | 4.8 x 15.0 | 99.50 | 500 Δ | 6.0–11.0 | 4.9 |
| 4817 | 4.8 x 17.0 | 109.00 | 500 Δ | 8.5–13.0 | 4.9 |
| | | (W962) | | | |



## PolyGrip® multiple range blind rivet steel/steel, large head

**Design:** Hollow rivet and rivet mandrel made of galvanised steel.

Hollow rivet: Galvanised steel | Mandrel: Galvanised steel

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9334 GESIPA | PU | Head Ø | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|---|
| 0413 | 4.0 x 13.0 | 93.40 | 500 Δ | K 12 | 4.5–9.0 | 4.1 |
| Price per 1000 pcs | | (W962) | Δ Supply only possible as a whole packaging unit. | | | |

## Why should it be a GESIPA® blind riveter?

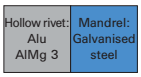
1. Predetermined breaking points to suit the sleeve length on the mandrels. This does not need to be followed up several times for longer rivets.
2. Carefully selected materials and a complex geometry ensure a high-quality and visually appealing connection.
3. Each blind rivet is washed, heat-treated and has a bright galvanised mandrel. This ensures clean working and longer service life of the riveter.
4. 100% routine test by modern infrared technology.
5. Special designs for special applications on request.
6. Made in Germany.

**GESIPA® blind rivets exceed the requirements of DIN EN ISO 14 589 with respect to tolerance of the rivet and bore hole diameter, minimum shear and tensile strength as well as clamping length and material combination.**

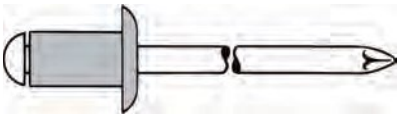
**ETA approval in line with EU Construction Products Regulation No. 305/2011**
Blind rivets that meet the requirements of EU Construction Products Regulation No. 305/2011 and that meet the test specifications of the European Technical Approval (ETA) requirements, **can be identified by the ETA key behind the riveting shaft.**

## Blind rivet aluminium/steel, standard domehead

**Design:** Hollow rivet made of aluminium AlMg 3, mandrel made of galvanised steel.




GESIPA®



| Order No. | Rivet shaft Ø x length mm | 9324 GESIPA | PU | Rivetable material thickness mm | Bore-hole Ø mm |
|---|---|---|---|---|---|
| 2404 | 2.4 x 4.0 | 27.00 | 1000 Δ | 0.5– 1.5 | 2.5 |
| 2406 | 2.4 x 6.0 | 29.70 | 1000 Δ | 1.5– 3.5 | 2.5 |
| 2408 | 2.4 x 8.0 | 32.40 | 1000 Δ | 3.5– 5.0 | 2.5 |
| 0304 | 3.0 x 4.0 | 27.00 | 500 Δ | 0.5– 1.5 | 3.1 |
| 0305 | 3.0 x 5.0 | 27.10 | 500 Δ | 1.5– 2.5 | 3.1 |
| 0306 | 3.0 x 6.0 | 27.20 | 500 Δ | 2.5– 3.5 | 3.1 |
| 0307 | 3.0 x 7.0 | 27.90 | 500 Δ | 3.5– 4.5 | 3.1 |
| 0308 | 3.0 x 8.0 | 30.40 | 500 Δ | 4.5– 5.0 | 3.1 |
| 0310 | 3.0 x 10.0 | 32.80 | 500 Δ | 5.0– 7.0 | 3.1 |
| 0312 | 3.0 x 12.0 | 36.30 | 500 Δ | 7.0– 9.0 | 3.1 |
| 0314 | 3.0 x 14.0 | 41.90 | 500 Δ | 9.0–11.0 | 3.1 |
| 0316 | 3.0 x 16.0 | 48.60 | 500 Δ | 11.0–13.0 | 3.1 |
| 0320 | 3.0 x 20.0 | 61.40 | 250 Δ | 15.0–17.0 | 3.1 |
| 3204 | 3.2 x 4.0 | 27.50 | 500 Δ | 0.5– 1.5 | 3.3 |
| 3206 | 3.2 x 6.0 | 27.90 | 500 Δ | 1.5– 3.5 | 3.3 |
| 3208 | 3.2 x 8.0 | 31.10 | 500 Δ | 3.5– 5.0 | 3.3 |
| 3210 | 3.2 x 10.0 | 33.50 | 500 Δ | 5.0– 7.0 | 3.3 |
| 3212 | 3.2 x 12.0 | 38.90 | 500 Δ | 7.0– 9.0 | 3.3 |
| 3214 | 3.2 x 14.0 | 44.00 | 500 Δ | 9.0–11.0 | 3.3 |
| 3216 | 3.2 x 16.0 | 51.30 | 500 Δ | 11.0–13.0 | 3.3 |
| 0405 | 4.0 x 5.0 | 31.10 | 500 Δ | 0.5– 1.5 | 4.1 |
| 0406 | 4.0 x 6.0 | 31.10 | 500 Δ | 1.5– 3.0 | 4.1 |
| 0407 | 4.0 x 7.0 | 32.30 | 500 Δ | 3.0– 4.0 | 4.1 |
| 0408 | 4.0 x 8.0 | 33.50 | 500 Δ | 4.0– 5.0 | 4.1 |
| 0410 | 4.0 x 10.0 | 37.90 | 500 Δ | 5.0– 6.5 | 4.1 |
| 0412 | 4.0 x 12.0 | 42.30 | 500 Δ | 6.5– 8.5 | 4.1 |
| 0414 | 4.0 x 14.0 | 48.10 | 500 Δ | 8.5–10.5 | 4.1 |
| 0416 | 4.0 x 16.0 | 53.30 | 500 Δ | 10.5–12.5 | 4.1 |
| 0418 | 4.0 x 18.0 | 57.90 | 500 Δ | 12.5–14.5 | 4.1 |
| 0420 | 4.0 x 20.0 | 63.20 | 500 Δ | 14.5–16.5 | 4.1 |
| 0425 | 4.0 x 25.0 | 76.90 | 500 Δ | 16.5–21.5 | 4.1 |
| 0430 | 4.0 x 30.0 | 98.70 | 250 Δ | 21.5–26.0 | 4.1 |
| 0435 | 4.0 x 35.0 | 130.00 | 250 Δ | 26.0–30.0 | 4.1 |
| 0440 | 4.0 x 40.0 | 161.00 | 250 Δ | 30.0–35.0 | 4.1 |

**Price per 1000 pcs** (W962)

| Order No. | Rivet shaft Ø x length mm | 9324 GESIPA | PU | Rivetable material thickness mm | Bore-hole Ø mm |
|---|---|---|---|---|---|
| 4808 | 4.8 x 8.0 | 45.90 | 500 Δ | 2.5– 4.5 | 4.9 |
| 4810 | 4.8 x 10.0 | 48.40 | 500 Δ | 4.5– 6.0 | 4.9 |
| 4812 | 4.8 x 12.0 | 54.70 | 500 Δ | 6.0– 8.0 | 4.9 |
| 4814 | 4.8 x 14.0 | 60.00 | 500 Δ | 8.0–10.0 | 4.9 |
| 4816 | 4.8 x 16.0 | 67.00 | 500 Δ | 10.0–12.0 | 4.9 |
| 4818 | 4.8 x 18.0 | 81.00 | 500 Δ | 12.0–14.0 | 4.9 |
| 4820 | 4.8 x 20.0 | 91.10 | 250 Δ | 14.0–15.0 | 4.9 |
| 4825 | 4.8 x 25.0 | 100.50 | 250 Δ | 15.0–20.0 | 4.9 |
| 4830 | 4.8 x 30.0 | 115.00 | 100 Δ | 20.0–25.0 | 4.9 |
| 0508 | 5.0 x 8.0 ETA | 48.90 | 500 Δ | 2.5– 4.5 | 5.1 |
| 0510 | 5.0 x 10.0 ETA | 51.30 | 500 Δ | 4.5– 6.0 | 5.1 |
| 0512 | 5.0 x 12.0 ETA | 55.00 | 500 Δ | 6.0– 8.0 | 5.1 |
| 0514 | 5.0 x 14.0 ETA | 61.00 | 500 Δ | 8.0–10.0 | 5.1 |
| 0516 | 5.0 x 16.0 ETA | 67.60 | 500 Δ | 10.0–12.0 | 5.1 |
| 0518 | 5.0 x 18.0 ETA | 82.30 | 500 Δ | 12.0–14.0 | 5.1 |
| 0520 | 5.0 x 20.0 ETA | 92.80 | 250 Δ | 14.0–15.0 | 5.1 |
| 0525 | 5.0 x 25.0 ETA | 104.00 | 250 Δ | 15.0–20.0 | 5.1 |
| 0530 | 5.0 x 30.0 ETA | 119.50 | 100 Δ | 20.0–25.0 | 5.1 |
| 0535 | 5.0 x 35.0 ETA | 139.50 | 100 Δ | 25.0–30.0 | 5.1 |
| 0540 | 5.0 x 40.0 ETA | 159.50 | 100 Δ | 30.0–35.0 | 5.1 |
| 0545 | 5.0 x 45.0 ETA | 189.00 | 100 Δ | 35.0–40.0 | 5.1 |
| 0550 | 5.0 x 50.0 ETA | 206.50 | 100 Δ | 40.0–45.0 | 5.1 |
| 0560 | 5.0 x 60.0 ETA | 267.00 | 100 Δ | 48.0–52.0 | 5.1 |
| 0570 | 5.0 x 70.0 ETA | 335.00 | 100 Δ | 57.0–62.0 | 5.1 |
| 0580 | 5.0 x 80.0 ETA | 404.50 | 100 Δ | 62.0–72.0 | 5.1 |
| 0608 | 6.0 x 8.0 | 70.80 | 250 Δ | 2.0– 3.0 | 6.1 |
| 0610 | 6.0 x 10.0 | 75.60 | 250 Δ | 3.0– 5.0 | 6.1 |
| 0612 | 6.0 x 12.0 | 80.20 | 250 Δ | 5.0– 7.0 | 6.1 |
| 0616 | 6.0 x 16.0 | 91.40 | 250 Δ | 7.0–11.0 | 6.1 |
| 0618 | 6.0 x 18.0 | 96.00 | 250 Δ | 11.0–13.0 | 6.1 |
| 0620 | 6.0 x 20.0 | 102.00 | 250 Δ | 13.0–15.0 | 6.1 |
| 0625 | 6.0 x 25.0 | 126.50 | 200 Δ | 15.0–20.0 | 6.1 |
| 0630 | 6.0 x 30.0 | 151.00 | 200 Δ | 20.0–24.0 | 6.1 |

(W962)

**Δ Supply only possible as a whole packaging unit.**

## Blind rivet Alu/steel countersunk head 120°

**Design:** Hollow rivet made of aluminium 3, rivet mandrel made of galvanised steel.

| Order No. | Rivet shaft Ø x length mm | 9325 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0306 | 3.0 x 6.0 | 28.50 | 500 Δ | 1.5– 3.5 | 3.1 |
| 0308 | 3.0 x 8.0 | 31.60 | 500 Δ | 3.5– 5.0 | 3.1 |
| 0310 | 3.0 x 10.0 | 34.10 | 500 Δ | 5.0– 7.0 | 3.1 |
| 0312 | 3.0 x 12.0 | 37.90 | 500 Δ | 7.0– 9.0 | 3.1 |
| 0316 | 3.0 x 16.0 | 49.20 | 500 Δ | 9.0–13.0 | 3.1 |
| 0406 | 4.0 x 6.0 | 31.90 | 500 Δ | 1.5– 3.0 | 4.1 |
| 0408 | 4.0 x 8.0 | 34.50 | 500 Δ | 3.0– 5.0 | 4.1 |
| 0410 | 4.0 x 10.0 | 38.90 | 500 Δ | 5.0– 6.5 | 4.1 |
| | | (W962) | | | |

| Order No. | Rivet shaft Ø x length mm | 9325 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0412 | 4.0 x 12.0 | 43.50 | 500 Δ | 6.5– 8.5 | 4.1 |
| 0416 | 4.0 x 16.0 | 54.90 | 500 Δ | 10.5–12.5 | 4.1 |
| 0510 | 5.0 x 10.0 | 52.00 | 500 Δ | 4.5– 6.0 | 5.1 |
| 0512 | 5.0 x 12.0 | 56.20 | 500 Δ | 6.0– 8.0 | 5.1 |
| 0516 | 5.0 x 16.0 | 69.70 | 500 Δ | 8.0–12.0 | 5.1 |
| 0520 | 5.0 x 20.0 | 93.80 | 250 Δ | 14.0–15.0 | 5.1 |
| 0525 | 5.0 x 25.0 | 105.00 | 250 Δ | 15.0–20.0 | 5.1 |
| 0530 | 5.0 x 30.0 | 120.00 | 100 Δ | 20.0–25.0 | 5.1 |
| | | (W962) | | | |

## Blind rivet aluminium/steel, large head

**Design:** Hollow rivet made of aluminium AlMg 3, mandrel made of galvanised steel.

| Order No. | Rivet shaft Ø x length mm | 9362 GESIPA K 11 | 9360 GESIPA K 12 | 9363 GESIPA K 14 | 9361 GESIPA K 16 | PU 9362 | PU 9360/9363/9361 | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|---|---|---|---|
| 0406 | 4.0 x 6.0 | – | 46.60 | – | – | – | 500 Δ | 1.5– 3.0 | 4.1 |
| 0408 | 4.0 x 8.0 | – | 51.80 | – | – | – | 500 Δ | 3.0– 5.0 | 4.1 |
| 0410 | 4.0 x 10.0 | – | 57.10 | – | – | – | 500 Δ | 5.0– 6.5 | 4.1 |
| 0412 | 4.0 x 12.0 | – | 60.60 | – | – | – | 500 Δ | 6.5– 8.5 | 4.1 |
| 0416 | 4.0 x 16.0 | – | 71.50 | – | – | – | 500 Δ | 8.5–12.5 | 4.1 |
| 0420 | 4.0 x 20.0 | – | 81.60 | – | – | – | 250 Δ | 12.5–16.5 | 4.1 |
| 4808 | 4.8 x 8.0 | – | – | – | 67.60 | – | 250 Δ | 2.5– 4.5 | 4.9 |
| 4810 | 4.8 x 10.0 | – | – | – | 73.10 | – | 250 Δ | 4.5– 6.0 | 4.9 |
| 4812 | 4.8 x 12.0 | – | – | – | 79.90 | – | 250 Δ | 6.0– 8.0 | 4.9 |
| 4816 | 4.8 x 16.0 | – | – | – | 90.40 | – | 250 Δ | 8.0–12.0 | 4.9 |
| 4820 | 4.8 x 20.0 | – | – | – | 105.50 | – | 250 Δ | 12.0–15.0 | 4.9 |
| 4825 | 4.8 x 25.0 | – | – | – | 123.00 | – | 250 Δ | 15.0–20.0 | 4.9 |
| 0508 | 5.0 x 8.0 ETA | – | – | 59.70 | – | – | 250 Δ | 2.5– 4.5 | 5.1 |
| 0510 | 5.0 x 10.0 ETA | 52.50 | – | 65.20 | – | 500 Δ | 250 Δ | 4.5– 6.0 | 5.1 |
| 0512 | 5.0 x 12.0 ETA | 56.40 | – | 71.80 | – | 500 Δ | 250 Δ | 6.0– 8.0 | 5.1 |
| 0514 | 5.0 x 14.0 ETA | – | – | 75.50 | – | – | 250 Δ | 8.0–10.0 | 5.1 |
| 0516 | 5.0 x 16.0 ETA | 70.90 | – | 81.80 | – | 500 Δ | 250 Δ | 10.0–12.0 | 5.1 |
| 0518 | 5.0 x 18.0 ETA | – | – | 89.50 | – | – | 250 Δ | 12.0–14.0 | 5.1 |
| 0520 | 5.0 x 20.0 ETA | – | – | 99.80 | – | – | 250 Δ | 14.0–15.0 | 5.1 |
| 0525 | 5.0 x 25.0 ETA | – | – | 120.00 | – | – | 250 Δ | 15.0–20.0 | 5.1 |
| 0530 | 5.0 x 30.0 ETA | – | – | 132.50 | – | – | 100 Δ | 20.0–25.0 | 5.1 |
| | | (W962) | (W962) | (W962) | (W962) | | | | |

## Blind rivet aluminium/stainless steel standard, domehead

**Design:** Hollow rivet made of aluminium AlMg 3, rivet mandrel made of stainless steel A2 (1.4541).

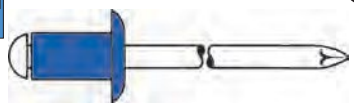
| Order No. | Rivet shaft Ø x length mm | 9364 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0306 | 3.0 x 6.0 | 46.20 | 500 Δ | 1.5– 3.5 | 3.1 |
| 0308 | 3.0 x 8.0 | 48.90 | 500 Δ | 3.5– 5.0 | 3.1 |
| 0310 | 3.0 x 10.0 | 50.60 | 500 Δ | 5.0– 7.0 | 3.1 |
| 0406 | 4.0 x 6.0 ETA | 54.60 | 500 Δ | 1.5– 3.0 | 4.1 |
| 0408 | 4.0 x 8.0 ETA | 56.70 | 500 Δ | 3.0– 5.0 | 4.1 |
| 0410 | 4.0 x 10.0 ETA | 61.30 | 500 Δ | 5.0– 6.5 | 4.1 |
| 0412 | 4.0 x 12.0 ETA | 66.80 | 500 Δ | 6.5– 8.5 | 4.1 |
| 0414 | 4.0 x 14.0 ETA | 72.20 | 500 Δ | 8.5–10.5 | 4.1 |
| 0416 | 4.0 x 16.0 ETA | 77.40 | 500 Δ | 10.5–12.5 | 4.1 |
| Price per 1000 pcs | | (W962) | | | |

| Order No. | Rivet shaft Ø x length mm | 9364 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0420 | 4.0 x 20.0 ETA | 90.00 | 500 Δ | 14.5–16.5 | 4.1 |
| 0508 | 5.0 x 8.0 ETA | 88.00 | 500 Δ | 2.5– 4.5 | 5.1 |
| 0510 | 5.0 x 10.0 ETA | 91.20 | 500 Δ | 4.5– 6.0 | 5.1 |
| 0512 | 5.0 x 12.0 ETA | 98.30 | 500 Δ | 6.0– 8.0 | 5.1 |
| 0516 | 5.0 x 16.0 ETA | 106.00 | 500 Δ | 10.0–12.0 | 5.1 |
| 0520 | 5.0 x 20.0 ETA | 140.00 | 250 Δ | 14.0–15.0 | 5.1 |
| 0525 | 5.0 x 25.0 ETA | 162.00 | 250 Δ | 15.0–20.0 | 5.1 |
| 0530 | 5.0 x 30.0 ETA | 175.50 | 100 Δ | 20.0–25.0 | 5.1 |
| 0535 | 5.0 x 35.0 ETA | 202.00 | 100 Δ | 25.0–30.0 | 5.1 |
| | | (W962) | Δ Supply only possible as a whole packaging unit. | | |

## Blind rivet steel/steel, standard, truss head

**Design:** Hollow rivet made of galvanised steel, rivet mandrel made of galvanised steel.

Hollow rivet: Galvanised steel | Mandrel: Galvanised steel



GESIPA®

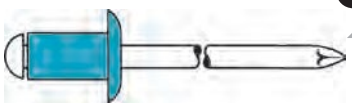
| Order No. | Rivet shaft Ø x length mm | 9365 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0305 | 3.0 x 5.0 | 35.80 | 500 Δ | 0.5–2.0 | 3.1 |
| 0306 | 3.0 x 6.0 | 37.90 | 500 Δ | 2.0–3.0 | 3.1 |
| 0308 | 3.0 x 8.0 | 43.70 | 500 Δ | 3.0–5.0 | 3.1 |
| 0310 | 3.0 x 10.0 | 53.50 | 500 Δ | 5.0–6.5 | 3.1 |
| 3206 | 3.2 x 6.0 | 38.00 | 500 Δ | 0.5–3.0 | 3.3 |
| 3208 | 3.2 x 8.0 | 44.20 | 500 Δ | 3.0–5.0 | 3.3 |
| 3210 | 3.2 x 10.0 | 55.80 | 500 Δ | 5.0–6.5 | 3.3 |
| 3212 | 3.2 x 12.0 | 63.10 | 500 Δ | 6.5–8.5 | 3.3 |
| 0406 | 4.0 x 6.0 | 47.10 | 500 Δ | 0.5–2.5 | 4.1 |
| 0408 | 4.0 x 8.0 | 51.10 | 500 Δ | 2.5–4.5 | 4.1 |
| 0410 | 4.0 x 10.0 | 61.50 | 500 Δ | 4.5–6.5 | 4.1 |
| 0412 | 4.0 x 12.0 | 71.10 | 500 Δ | 6.5–8.5 | 4.1 |
| | | (W962) | | | |

| Order No. | Rivet shaft Ø x length mm | 9365 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 4810 | 4.8 x 10.0 | 76.70 | 500 Δ | 4.0– 6.0 | 4.9 |
| 4812 | 4.8 x 12.0 | 84.10 | 500 Δ | 6.0– 8.0 | 4.9 |
| 4816 | 4.8 x 16.0 | 102.00 | 500 Δ | 8.0–11.0 | 4.9 |
| 4820 | 4.8 x 20.0 | 121.50 | 250 Δ | 11.0–15.0 | 4.9 |
| 4825 | 4.8 x 25.0 | 149.50 | 250 Δ | 15.0–20.0 | 4.9 |
| 0508 | 5.0 x 8.0 | 67.20 | 500 Δ | 2.0– 4.0 | 5.1 |
| 0510 | 5.0 x 10.0 | 78.60 | 500 Δ | 4.0– 6.0 | 5.1 |
| 0512 | 5.0 x 12.0 | 88.00 | 500 Δ | 6.0– 8.0 | 5.1 |
| 0516 | 5.0 x 16.0 | 105.50 | 500 Δ | 9.5–11.0 | 5.1 |
| 0520 | 5.0 x 20.0 | 125.50 | 250 Δ | 13.0–15.0 | 5.1 |
| 0525 | 5.0 x 25.0 | 152.00 | 250 Δ | 15.0–20.0 | 5.1 |
| | | (W962) | | | |

## Blind rivet stainless steel/stainless steel standard, domehead

**Design:** Hollow rivet made of stainless steel A2 (1.4567) and rivet mandrel made of stainless steel A2 (1.4541).

Hollow rivet: Stainless steel A2 | Mandrel: Stainless steel A2



GESIPA®

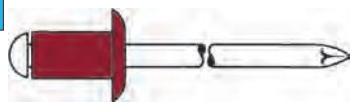
| Order No. | Rivet shaft Ø x length mm | 9335 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0306 | 3.0 x 6.0 | 84.80 | 500 Δ | 1.0– 3.0 | 3.1 |
| 0308 | 3.0 x 8.0 | 93.40 | 500 Δ | 3.0– 5.0 | 3.1 |
| 0310 | 3.0 x 10.0 | 106.50 | 500 Δ | 5.0– 6.5 | 3.1 |
| 0312 | 3.0 x 12.0 | 137.00 | 500 Δ | 6.5– 8.5 | 3.1 |
| 0316 | 3.0 x 16.0 | 156.00 | 500 Δ | 10.5–12.5 | 3.1 |
| 3206 | 3.2 x 6.0 | 86.70 | 500 Δ | 1.0– 3.0 | 3.3 |
| 3208 | 3.2 x 8.0 | 95.20 | 500 Δ | 3.0– 5.0 | 3.3 |
| 3210 | 3.2 x 10.0 | 110.00 | 500 Δ | 5.0– 6.5 | 3.3 |
| 0406 | 4.0 x 6.0 ETA | 112.50 | 500 Δ | 1.0– 2.5 | 4.1 |
| 0408 | 4.0 x 8.0 ETA | 126.00 | 500 Δ | 2.5– 4.5 | 4.1 |
| 0410 | 4.0 x 10.0 ETA | 137.00 | 500 Δ | 4.5– 6.5 | 4.1 |
| 0412 | 4.0 x 12.0 ETA | 152.50 | 500 Δ | 6.5– 8.5 | 4.1 |
| 0414 | 4.0 x 14.0 ETA | 171.00 | 500 Δ | 8.5–10.5 | 4.1 |
| 0416 | 4.0 x 16.0 ETA | 191.50 | 500 Δ | 10.5–12.0 | 4.1 |
| | | (W962) | | | |

| Order No. | Rivet shaft Ø x length mm | 9335 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0420 | 4.0 x 20.0 ETA | 239.00 | 500 Δ | 12.0–16.0 | 4.1 |
| 0425 | 4.0 x 25.0 ETA | 299.50 | 500 Δ | 16.0–21.0 | 4.1 |
| 4808 | 4.8 x 8.0 ETA | 188.00 | 500 Δ | 2.0– 4.0 | 4.9 |
| 4810 | 4.8 x 10.0 ETA | 200.00 | 500 Δ | 4.0– 6.0 | 4.9 |
| 4812 | 4.8 x 12.0 ETA | 220.00 | 500 Δ | 6.0– 8.0 | 4.9 |
| 4814 | 4.8 x 14.0 ETA | 233.50 | 500 Δ | 8.0– 9.5 | 4.9 |
| 0508 | 5.0 x 8.0 | 194.50 | 500 Δ | 2.0– 4.0 | 5.1 |
| 0510 | 5.0 x 10.0 | 206.00 | 500 Δ | 4.0– 6.0 | 5.1 |
| 0512 | 5.0 x 12.0 | 224.00 | 500 Δ | 6.0– 8.0 | 5.1 |
| 0514 | 5.0 x 14.0 | 236.50 | 500 Δ | 8.0– 9.5 | 5.1 |
| 0516 | 5.0 x 16.0 | 249.50 | 500 Δ | 9.5–11.0 | 5.1 |
| 0520 | 5.0 x 20.0 | 292.00 | 250 Δ | 11.0–15.0 | 5.1 |
| 0525 | 5.0 x 25.0 | 342.00 | 250 Δ | 15.0–20.0 | 5.1 |
| 0530 | 5.0 x 30.0 | 388.00 | 100 Δ | 20.0–25.0 | 5.1 |
| | | (W962) | | | |

## Blind rivet Monel®/ stainless steel standard, domehead

**Design:** Hollow rivet made of Monel® (nickel-copper alloy 2.4360), rivet mandrel made of stainless steel A2 (1.4541).

Hollow rivet: NiCu | Mandrel: Stainless steel A2



GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9366 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0406 | 4.0 x 6.0 | 139.50 | 500 Δ | 1.5– 2.5 | 4.1 |
| 0408 | 4.0 x 8.0 | 150.50 | 500 Δ | 2.5– 4.5 | 4.1 |
| 0410 | 4.0 x 10.0 | 166.00 | 500 Δ | 4.5– 6.5 | 4.1 |
| 0412 | 4.0 x 12.0 | 183.00 | 500 Δ | 6.5– 8.5 | 4.1 |
| 0414 | 4.0 x 14.0 | 200.00 | 500 Δ | 8.5–10.5 | 4.1 |
| 0416 | 4.0 x 16.0 | 227.50 | 500 Δ | 10.5–12.0 | 4.1 |
| 4806 | 4.8 x 6.0 | 221.50 | 500 Δ | 1.5– 3.0 | 4.9 |
| 4808 | 4.8 x 8.0 | 234.50 | 500 Δ | 2.0– 4.0 | 4.9 |

Price per 1000 pcs (W962)

| Order No. | Rivet shaft Ø x length mm | 9366 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 4810 | 4.8 x 10.0 | 255.50 | 500 Δ | 4.0– 6.0 | 4.9 |
| 4812 | 4.8 x 12.0 | 289.00 | 500 Δ | 6.0– 8.0 | 4.9 |
| 4814 | 4.8 x 14.0 | 292.50 | 500 Δ | 8.0– 9.0 | 4.9 |
| 4816 | 4.8 x 16.0 | 299.00 | 500 Δ | 9.5–11.0 | 4.9 |
| 4820 | 4.8 x 20.0 | 366.00 | 250 Δ | 11.0–15.0 | 4.9 |
| 4825 | 4.8 x 25.0 | 428.50 | 250 Δ | 15.0–20.0 | 4.9 |
| 4830 | 4.8 x 30.0 | 482.00 | 100 Δ | 20.0–25.0 | 4.9 |
| 4835 | 4.8 x 35.0 | 500.50 | 100 Δ | 25.0–30.0 | 4.9 |

(W962) Δ Supply only possible as a whole packaging unit.

## Blind rivet Monel®/stainless steel, countersunk head 120°

**Design:** Hollow rivet made of Monel® (nickel-copper alloy 2.4360), rivet mandrel made of stainless steel A2 (1.4541).

Hollow rivet: NiCu | Mandrel: Stainless steel A2

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9367 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0408 | 4.0 x 8.0 | 132.00 | 500 Δ | 1.5–4.5 | 4.1 |
| 0410 | 4.0 x 10.0 | 147.00 | 500 Δ | 4.5–6.5 | 4.1 |
| 0412 | 4.0 x 12.0 | 163.50 | 500 Δ | 6.5–8.5 | 4.1 |
| 4808 | 4.8 x 8.0 | 205.00 | 500 Δ | 2.5–4.0 | 4.9 |
| 4810 | 4.8 x 10.0 | 226.00 | 500 Δ | 4.0–6.0 | 4.9 |
| 4812 | 4.8 x 12.0 | 258.00 | 500 Δ | 6.0–8.0 | 4.9 |
| | | (W962) | | | |

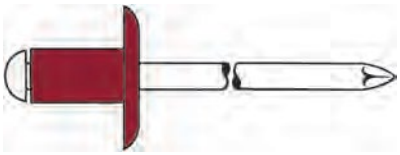
## Blind rivet Monel®/stainless steel, large head K 15

**Design:** Hollow rivet made of Monel® (nickel-copper alloy 2.4360), rivet mandrel made of stainless steel A2 (1.4541).

Hollow rivet: NiCu | Mandrel: Stainless steel A2

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9368 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 4814 | 4.8 x 14.0 | 405.00 | 250 Δ | 8.0– 9.5 | 4.9 |
| 4816 | 4.8 x 16.0 | 411.50 | 250 Δ | 9.5–11.0 | 4.9 |
| 4820 | 4.8 x 20.0 | 434.50 | 250 Δ | 11.0–15.0 | 4.9 |
| 4825 | 4.8 x 25.0 | 477.50 | 200 Δ | 15.0–20.0 | 4.9 |
| 4830 | 4.8 x 30.0 | 527.00 | 100 Δ | 20.0–25.0 | 4.9 |
| 4835 | 4.8 x 35.0 | 571.50 | 100 Δ | 25.0–30.0 | 4.9 |
| | | (W962) | | | |



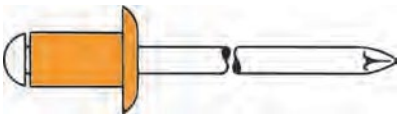
## Blind rivet copper/bronze standard, domehead

**Design:** Hollow rivet made of copper, rivet mandrel made of bronze.

Hollow rivet: Copper | Mandrel: Bronze

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9336 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 0308 | 3.0 x 8.0 | 105.00 | 500 Δ | 3.0–5.0 | 3.1 |
| | | (W962) | | | |



## CAP blind rivet Alu/steel standard, air and water tight

**Design:** Hollow rivet made of Alu AlMg 5, rivet mandrel made of phosphated steel.

Hollow rivet: Alu AlMg 5 | Mandrel: Steel-phosphate

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9330 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 3265 | 3.2 x 6.5 | 47.10 | 500 Δ | 0.5–2.0 | 3.3 |
| 3208 | 3.2 x 8.0 | 47.90 | 500 Δ | 2.0–3.5 | 3.3 |
| 3295 | 3.2 x 9.5 | 48.20 | 500 Δ | 3.5–5.0 | 3.3 |
| 0408 | 4.0 x 8.0 | 57.40 | 500 Δ | 0.5–3.5 | 4.1 |
| 0495 | 4.0 x 9.5 | 58.80 | 500 Δ | 3.5–5.0 | 4.1 |
| 0411 | 4.0 x 11.0 | 63.30 | 500 Δ | 5.0–6.5 | 4.1 |
| 0412 | 4.0 x 12.5 | 66.00 | 500 Δ | 6.5–8.0 | 4.1 |
| 4895 | 4.8 x 9.5 ETA | 67.50 | 500 Δ | 3.5–5.0 | 4.9 |
| 4811 | 4.8 x 11.0 ETA | 69.10 | 500 Δ | 5.0–6.5 | 4.9 |
| 4812 | 4.8 x 12.5 ETA | 69.80 | 500 Δ | 6.5–8.0 | 4.9 |
| 4814 | 4.8 x 14.0 ETA | 75.10 | 500 Δ | 8.0–9.5 | 4.9 |
| | | (W962) | | | |

Price per 1000 pcs

Δ Supply only possible as a whole packaging unit.

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## CAP blind rivet aluminium/stainless steel standard, air-tight and waterproof

**Design:** Hollow rivet made of Alu AlMg 5, rivet mandrel made of stainless steel.

| Hollow rivet: Alu AlMg 5 | Mandrel: Nirosta |
|---|---|

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9332 GESIPA | PU | Rivetable material thickness mm | Borehole Ø mm |
|---|---|---|---|---|---|
| 3265 | 3.2 x 6.5 | 76.80 | 500 Δ | 0.5–2.0 | 3.3 |
| 3208 | 3.2 x 8.0 | 79.20 | 500 Δ | 2.0–3.5 | 3.3 |
| 3295 | 3.2 x 9.5 | 81.00 | 500 Δ | 3.5–5.0 | 3.3 |
| 0408 | 4.0 x 8.0 | 107.50 | 500 Δ | 0.5–3.5 | 4.1 |
| 0495 | 4.0 x 9.5 | 110.50 | 500 Δ | 3.5–5.0 | 4.1 |
| 0411 | 4.0 x 11.0 | 112.50 | 500 Δ | 5.0–6.5 | 4.1 |
| 0412 | 4.0 x 12.5 | 113.00 | 500 Δ | 6.5–8.0 | 4.1 |
| 4895 | 4.8 x 9.5 ETA | 123.50 | 500 Δ | 3.5–5.0 | 4.9 |
| 4811 | 4.8 x 11.0 ETA | 131.50 | 500 Δ | 5.0–6.5 | 4.9 |
| 4812 | 4.8 x 12.5 ETA | 135.50 | 500 Δ | 6.5–8.0 | 4.9 |
| Price per 1000 pcs | | (W962) | | Δ Supply only possible as a whole packaging unit. | |

## Blind rivet minipack

**9354** **Aluminium/steel standard, domehead**
Hollow rivet made of aluminium AlMg 3, rivet mandrel made of galvanised steel.

**9355** **Steel/steel standard, domehead**
Hollow rivet made of galvanised steel, rivet mandrel made of galvanised steel.

**9356** **PolyGrip® aluminium/steel standard, truss head**
Hollow rivet made of aluminium AlMg 2.5, rivet mandrel made of galvanised steel.

**9357** **PolyGrip® aluminium/steel, large head K 16**
Hollow rivet made of aluminium AlMg 2.5, rivet mandrel made of galvanised steel.

**9358** **Copper/bronze standard, truss head**
Hollow rivet made of copper, rivet mandrel made of bronze.

| Hollow rivet: Alu AlMg 3 | Mandrel: Galvanised steel |
|---|---|
| Hollow rivet: Galvanised steel | Mandrel: Galvanised steel |
| Hollow rivet: Alu AlMg 2,5 | Mandrel: Galvanised steel |
| Hollow rivet: Alu AlMg 2,5 | Mandrel: Galvanised steel |
| Hollow rivet: Copper | Mandrel: Bronze |

GESIPA®

| Order No. | Rivet shaft Ø x length mm | 9354 GESIPA | 9355 GESIPA | 9356 GESIPA | 9357 GESIPA | 9358 GESIPA | Rivetable material thickness mm | Content Piece |
|---|---|---|---|---|---|---|---|---|
| 0306 | 3.0 x 6.0 | 3.74 | 4.47 | – | – | – | 1.0– 3.0 | 100 |
| 0308 | 3.0 x 8.0 | 3.98 | – | – | – | – | 3.0– 6.0 | 100 |
| 0310 | 3.0 x 10.0 | – | 6.20 | – | – | – | 3.0– 6.0 | 100 |
| 0312 | 3.0 x 12.0 | 4.23 | 7.00 | – | – | – | 6.0– 9.0 | 100 |
| 3208 | 3.2 x 8.0 | – | – | 4.15 | – | – | 0.5– 5.0 | 100 |
| 3211 | 3.2 x 11.0 | – | – | 4.39 | – | – | 3.0– 8.0 | 100 |
| 0406 | 4.0 x 6.0 | 4.07 | 5.75 | – | – | – | 1.0– 3.0 | 100 |
| 0406 | 4.0 x 6.0 | – | – | – | – | 8.85 | 1.0– 3.0 | 50 |
| 0408 | 4.0 x 8.0 | 4.23 | – | – | – | – | 3.0– 6.0 | 100 |
| 0410 | 4.0 x 10.0 | – | – | 4.87 | – | – | 0.5– 6.5 | 100 |
| 0410 | 4.0 x 10.0 | – | 7.05 | – | – | – | 3.0– 6.0 | 100 |
| 0410 | 4.0 x 10.0 | – | – | – | – | 9.60 | 3.0– 6.0 | 50 |
| 0412 | 4.0 x 12.0 | 5.05 | 8.05 | – | – | – | 6.0– 9.0 | 100 |
| 0412 | 4.0 x 12.0 | – | – | – | – | 9.85 | 6.0– 9.0 | 50 |
| 0417 | 4.0 x 17.0 | – | – | 3.25 | – | – | 7.0–13.0 | 50 |
| 4810 | 4.8 x 10.0 | – | – | – | 2.76 | – | 0.5– 6.5 | 25 |
| 4810 | 4.8 x 10.0 | – | – | 3.82 | – | – | 0.5– 6.5 | 50 |
| 4817 | 4.8 x 17.0 | – | – | – | 3.01 | – | 6.5–13.0 | 25 |
| 4817 | 4.8 x 17.0 | – | – | 4.15 | – | – | 6.5–13.0 | 50 |
| 0506 | 5.0 x 6.0 | 3.49 | – | – | – | – | 1.0– 3.0 | 50 |
| 0510 | 5.0 x 10.0 | 3.74 | – | – | – | – | 3.0– 6.0 | 50 |
| 0512 | 5.0 x 12.0 | 3.98 | – | – | – | – | 6.0– 9.0 | 50 |
| | | (W962) | (W962) | (W962) | (W962) | (W962) | | |

## Hand-held blind rivet nut gun GBM 10

**Design:** Made of high quality die-cast aluminium with forged pliers jaws of steel chrome-vanadium steel. A simple stroke adjustment by knurled nut with stroke scale ensures safe and complete setting of the insert. The threaded mandrels can be changed quickly and easily without tools. In addition, the hand riveter has a handy cuff handle and an opening spring for simple operation
Delivery with threaded mandrel M5.

**Application:** For blind rivet nuts made of aluminium to M6, made of steel and brass as well as stainless steel to M5.

| Order No. | Design | 9338 GESIPA | Length mm | Weight g |
|---|---|---|---|---|
| 0010 | M5 | 59.70 | 260 | 600 |
| 0015 | M6 | 59.70 | 260 | 600 |
| | | (W967) | | |

## Accessories for hand-held blind rivet nut gun GBM 10

| Order No. | Design | 9338 GESIPA |
|---|---|---|
| 0105 | Replacement threaded mandrel M5 | 9.35 |
| 0106 | Replacement threaded mandrel M6 | 9.35 |
| 0205 | Replacement nosepiece M5 | 6.95 |
| 0206 | Replacement nosepiece M6 | 6.95 |
| | | (W966) |

## Hand-held blind rivet nut gun GBM 30

**Design:** Enclosures and radial bearings made of forged steel with galvanised steel tube lever arms. A simple stroke adjustment by adjustment ring with stroke scale ensures safe and complete setting of the insert. The threaded mandrels can be changed quickly and easily without tools. The device also features a quick-twisting device that allows quick and easy entry and drilling the mandrel out. In addition, the hand riveter has a favourable ratio with minimum effort, even with large blind rivet nuts and plastic-coated grip pieces.

**Application:** For blind rivet nuts made of aluminium and steel from M3 to M10 as well as brass and stainless steel to M8.

| Order No. | Design | 9339 GESIPA | Length mm | Weight g |
|---|---|---|---|---|
| 0010 | M5 | 365.50 | 470 | 1800 |
| 0015 | M6 | 365.50 | 470 | 1800 |
| 0020 | M8 | 365.50 | 470 | 1800 |
| 0025 | M10 | 365.50 | 470 | 1800 |
| | | (W967) | | |

## Accessories for hand-held blind rivet nut gun GBM 30

| Order No. | Design | 9339 GESIPA |
|---|---|---|
| 0105 | Replacement threaded mandrel M5 | 32.90 |
| 0106 | Replacement threaded mandrel M6 | 32.90 |
| 0108 | Replacement threaded mandrel M8 | 32.90 |
| 0110 | Replacement threaded mandrel M10 | 32.90 |
| 0205 | Replacement nosepiece M5 | 19.85 |
| 0206 | Replacement nosepiece M6 | 19.85 |
| 0208 | Replacement nosepiece M8 | 19.85 |
| 0210 | Replacement nosepiece M10 | 19.85 |
| | | (W966) |

## Blind rivet nut set

**Design:** Supplied in sheet steel case.

| Order No. | Design | 9328 GESIPA | Set contents |
|---|---|---|---|
| 0500 | 195 pcs | 130.00 | 1 hand-held blind rivet nut gun GBM 10<br>50 blind rivet nuts Alu M4 x 6 x 11; M5 x 7 x 11.5; M5 x 7 x 13.5<br>40 blind rivet nuts Alu M6 x 9 x 15.5<br>1 threaded mandrel M4; M6<br>1 nosepiece M4; M6 |
| | | (W967) | |

## Battery-operated blind rivet nut gun FireBird® range

**Design:** Compact, shock-resistant housing. A high reliability is achieved by the electronic controller. Triggering the setting process is separate from the widening drill process The electronic control monitors the setting stroke. The threaded mandrels and the stroke settings can be changed quickly and easily without tools. Furthermore, the devices have electronic temperature and overload protection. The hanger is attached to the retractable head. Hand protection, a favourable centre of gravity for fatigue-free operation, removable mandrel collection holder and user-friendly handle.

**9340 0005** **FireBird®**
For steel to M8, for aluminium to M10 and for M6 stainless steel. Delivery with 3 threaded mandrels M4; M5; M6, 3 nosepieces M4; M5; M6, Allen wrench, double open-ended spanner SW 24/27 mm, 1 quick-change rechargeable battery 14.4 V/1.3 Ah, 1 rapid charger, 1 steel sheet case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9321 0007).
For quick charger see (Order No. 9322 0006).

**9340 0007 NEW** **FireBird® with 2nd battery**
For steel up to M8, for aluminium up to M10 as well as M6 made of stainless steel. Delivery with 3 threaded mandrels M4; M5; M6, 3 nosepieces M4; M5; M6, Allen wrench, double open-ended spanner SW 24/27 mm, 2 quick-change rechargeable batteries 14.4 V/1.3 Ah, 1 rapid charger, 1 steel sheet case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9321 0007).
For quick charger see (Order No. 9322 0006).

**9340 0010** **FireBird® Gold**
For aluminium up to M10, all materials up to M8. Delivery with 3 threaded mandrels M6; M8; M10, 3 nosepieces M6; M8; M10, Allen wrench, double open-ended spanner SW 24/27 mm, 1 quick-change rechargeable battery 14.4 V/2.6 Ah, 1 rapid charger, 1 steel sheet case.

**Note:** For replacement quick-change rechargeable battery see (Order No. 9321 0007 and 9319 0006).
For quick charger see (Order No. 9322 0006).

| Order No. | Setting force N | 9340 GESIPA | Weight g |
|---|---|---|---|
| 0005 | 13000 | 981.00 | 2100 |
| 0007 | 13000 | 1079.00 | 2450 |
| 0010 | 18000 | 1656.00 (W964) | 2200 |

## Accessories for rechargeable riveters

| Order No. | Design | 9321 GESIPA | 9319 GESIPA | 9322 GESIPA | Suitable for |
|---|---|---|---|---|---|
| 0007 | Li-ion plug-in rechargeable battery 14.4 V/1.3 Ah | 122.50 | – | – | AccuBird®, FireBird® |
| 0006 | Li-ion plug-in rechargeable battery 14.4 V/2.6 Ah | – | 168.00 | – | AccuBird®, PowerBird®, FireBird®, FireBird® Gold Edition |
| 0006 | Rapid charger, 14.4 V | – (W966) | – (W966) | 92.40 (W966) | Plug-in battery |

9319

9322

## Blind rivet nut gun FireFox® range, pneumatic-hydraulic

**Design:** Compact, shock-resistant shell. The control protects the thread of the blind rivet nut and ensures a secure anchoring in the workpiece.

**Scope of delivery:** 1 blind rivet nut pistol, 2 double open-ended spanners 24/27 mm, 1 Allen screwdriver 4 mm, 1 refill bottle with hydraulic oil 100 ml, 1 oil refill container.

**9341 0001** **FireFox® 1**
Controlled via the force setting. With rubber base for better stability.
For aluminium up to M6 and M3–M5 for all other materials.

**9341 0005** **FireFox® 2**
Controlled either via lift or force setting.
For all materials from M3 to M10 as well as for aluminium and steel to M12. Delivery with 1 threaded mandrel M6 and 1 mouthpiece M6.

| Order No. | Equipment lift mm | 9341 GESIPA | Air consumption per rivet l | Setting force N | Weight g |
|---|---|---|---|---|---|
| 0001 | 7.5 | 1165.00 | 2 | 12000 | 1960 |
| 0005 | 10.0 | 1549.00 (W956) | 2–4 | 18500 | 2400 |

## Threaded mandrel/nosepiece

**9340** Suitable for battery-operated blind rivet nut gun FireBird® range.

**9341** Suitable for battery-operated blind rivet nut gun FireFox® range.

| Order No. | Design | 9340 GESIPA | 9341 GESIPA |
|---|---|---|---|
| 1003 | Threaded mandrel M3 | 6.95 | 11.20 |
| 1004 | Threaded mandrel M4 | 6.95 | 11.20 |
| 1005 | Threaded mandrel M5 | 6.95 | 11.20 |
| 1006 | Threaded mandrel M6 | 6.95 | 11.35 |
| 1008 | Threaded mandrel M8 | 6.95 | 11.50 |
| 1010 | Threaded mandrel M10 | 6.95 | 11.60 |
| 1012 | Threaded mandrel M12 | – (W966) | 12.05 (W966) |

| Order No. | Design | 9340 GESIPA | 9341 GESIPA |
|---|---|---|---|
| 2003 | Nosepiece M3 | 8.50 | 13.85 |
| 2004 | Nosepiece M4 | 8.50 | 13.85 |
| 2005 | Nosepiece M5 | 8.50 | 13.85 |
| 2006 | Nosepiece M6 | 8.50 | 13.85 |
| 2008 | Nosepiece M8 | 8.50 | 13.85 |
| 2010 | Nosepiece M10 | 8.50 | 13.85 |
| 2012 | Nosepiece M12 | – (W966) | 13.85 (W966) |

## Threaded rod and nosepiece set for blind rivet nut pistol FireFox®

**Scope of delivery:** 1 threaded mandrel and 1 nosepiece for each of M3; M4; M5; M6; M8; M10; M12.

| Order No. | Design | 9341 GESIPA |
|---|---|---|
| 3005 | metric | 156.00 (W966) |

## Blind rivet nut, domehead

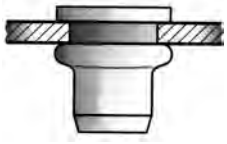
**9344** Aluminium AlMg 3.

**9346** Steel, galvanised, knurled.

**9371** Stainless steel A2 (1.4567).

Alu AlMg 3 | Galvanised steel | Stainless steel

GESIPA®



| Order No. | Internal thread | 9344 GESIPA | 9346 GESIPA | 9371 GESIPA | PU | Rivet shaft Ø x length mm | Drilling Ø mm | Rivetable material thickness mm |
|---|---|---|---|---|---|---|---|---|
| 0010 | M4 x 0.70 | 85.00 | – | 222.00 | 500 Δ | 6 x 11.0 | 6.1 | 0.25–3.0 |
| 0020 | M4 x 0.70 | 90.20 | – | 224.50 | 500 Δ | 6 x 13.0 | 6.1 | 2.50–4.5 |
| 0030 | M5 x 0.80 | 95.50 | 152.00 | 234.00 | 500 Δ | 7 x 11.5 | 7.1 | 0.25–3.0 |
| 0040 | M5 x 0.80 | 100.50 | 164.50 | 238.00 | 500 Δ | 7 x 13.5 | 7.1 | 2.50–5.0 |
| 0050 | M6 x 1.00 | 154.50 | 215.50 | 308.00 | 250 Δ | 9 x 15.5 | 9.1 | 0.25–3.5 |
| 0055 | M6 x 1.00 | – | – | 309.00 | 250 Δ | 9 x 18.0 | 9.1 | 3.00–5.5 |
| 0065 | M8 x 1.25 | 200.50 | 286.00 | 386.00 | 100 Δ | 11 x 17.0 | 11.1 | 0.25–3.5 |
| 0070 | M8 x 1.25 | – | 301.00 | 396.50 | 100 Δ | 11 x 20.0 | 11.1 | 3.00–6.0 |
| Price per 1000 pcs | | (W968) | (W968) | (W968) | | | | |

Δ Supply only possible as a whole packaging unit.

## Blind rivet nut, countersunk head 90°

**9345** Aluminium AlMg 3.

**9347** Steel, galvanised, knurled.

**9372** Stainless steel A2 (1.4567).

Alu AlMg 3 | Galvanised steel | Stainless steel

GESIPA®

| Order No. | Internal thread | 9345 GESIPA | 9347 GESIPA | 9372 GESIPA | PU | Rivet shaft Ø x length mm | Drilling Ø mm | Rivetable material thickness mm |
|---|---|---|---|---|---|---|---|---|
| 0010 | M4 x 0.70 | – | – | 223.00 | 500 Δ | 6 x 12.0 | 6.1 | 1.5–3.0 |
| 0020 | M4 x 0.70 | – | – | 224.50 | 500 Δ | 6 x 13.0 | 6.1 | 2.5–4.0 |
| 0030 | M5 x 0.80 | 99.20 | 156.50 | 235.00 | 500 Δ | 7 x 13.5 | 7.1 | 1.5–4.0 |
| 0040 | M5 x 0.80 | – | – | 240.00 | 500 Δ | 7 x 15.5 | 7.1 | 3.5–6.0 |
| 0050 | M6 x 1.00 | 157.50 | 218.50 | 301.00 | 250 Δ | 9 x 17.0 | 9.1 | 1.5–4.5 |
| 0060 | M6 x 1.00 | – | – | 306.00 | 250 Δ | 9 x 18.5 | 9.1 | 4.0–6.0 |
| 0065 | M8 x 1.25 | 204.50 | 275.00 | 375.50 | 100 Δ | 11 x 18.5 | 11.1 | 1.5–4.5 |
| 0070 | M8 x 1.25 | – | – | 378.50 | 100 Δ | 11 x 20.0 | 11.1 | 4.0–6.0 |
| Price per 1000 pcs | | (W968) | (W968) | (W968) | | | | |

Δ Supply only possible as a whole packaging unit.

## Blind rivet nut minipack aluminium

| Order No. | Internal thread | 9370 GESIPA | Rivetable material thickness mm | Content Piece |
|---|---|---|---|---|
| 0010 | M4 short | 5.10 | 0.25–3.0 | 20 |
| 0020 | M4 medium | 5.10 | 2.50–4.5 | 20 |
| 0030 | M5 short | 5.10 | 0.25–3.0 | 15 |
| 0040 | M5 medium | 5.10 | 2.50–5.0 | 15 |
| 0050 | M6 short | 5.10 | 0.25–3.5 | 8 |
| 0055 | M6 medium | 5.10 | 3.00–5.5 | 7 |
| | | (W968) | | |

Alu AlMg 3

GESIPA®

## Hand stapler R23/R33

**Design:** Made of steel, easy to use and blow-back proof with under-loading magazine for ease of use. The handle lock prevents unintentional activation. Magazine capacity: 156 clips.

**9348 0023** **Fixed impact strength.** Suitable e.g. for light fabrics and paper.

**9348 0033** **With 3-level hitting force adjustment, up to 40 % less force input.** Suitable e.g. for heavy fabrics, card.

| Order No. | Clip type | 9348 Rapid | Weight g |
|---|---|---|---|
| 0023 | 13/37 (4–8 mm) | 27.40 | 530 |
| 0033 | 13/37 (6–14 mm) | 43.00 (W957) | 820 |

9348 0023

9348 0033

## Hammer stapler R19

**Design:** Made of steel, with ergonomic handle. Magazine capacity: 156 clips.

**Application:** Suitable e.g. for posters, films, and other lightweight materials.

| Order No. | Clip type | 9348 Rapid | Weight g |
|---|---|---|---|
| 0019 | 13/37 (4–6 mm) | 25.10 (W957) | 360 |

## Hammer stapler R311

**Design:** Made of steel, with simple and reliable charging system. The staple driver can be rotated and thereby a double life can be achieved. A large protective plate prevents damage to the material. Magazine capacity: 150 clips.

**Application:** Suitable e.g. for roofing felt, carpets and insulation.

| Order No. | Clip type | 9348 Rapid | Weight g |
|---|---|---|---|
| 0311 | 140/6–12 mm | 58.50 (W957) | 998 |

## Staples type 37

**Design:** Made of steel, the back width 10.6 mm, box of 5000 pieces.

**Note:** Suitable for hand stapler R23 (Order No. 9348 0023), R33 (Order No. 9348 0033).

| Order No. | Staple length mm | 9349 Rapid |
|---|---|---|
| 0006 | 6 | 6.00 |
| 0008 | 8 | 7.60 |
| 0010 | 10 | 7.60 |
| 0014 | 14 | 8.05 (W957) |

## Staples type 13

**Note:** Suitable for hand stapler R23 (Order No. 9348 0023), R33 (Order No. 9348 0033) and hammer stapler R19 (Order No. 9348 0019).

**9350** **Made of high-quality steel,** with high tensile strength, the back width 10.6 mm, box of 5000 pieces.

**9351** **Design:** Made of stainless steel, the back width 10.6 mm, box of 2500 pieces.

| Order No. | Staple length mm | 9350 Rapid | 9351 Rapid |
|---|---|---|---|
| 0006 | 6 | 11.30 | 34.40 |
| 0008 | 8 | 18.80 (W957) | – (W957) |

## Staples type 140

**Note:** Suitable for hammer stapler R311 (Order No. 9348 0311).

**9352** **Made of high-quality steel,** with high tensile strength, the back width 10.6 mm, box of 5000 pieces.

**9353** **Made of stainless steel,** back width 10.6 mm, blister pack of 650 pieces.

| Order No. | Staple length mm | 9352 Rapid | 9353 Rapid |
|---|---|---|---|
| 0008 | 8 | 17.70 | – |
| 0010 | 10 | 18.95 (W957) | 16.05 (W957) |

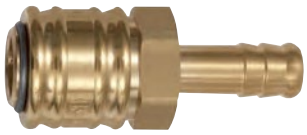
## Quick coupling NW 7.2

**Design:** Made of brass, with oil- and heat-resistant nitrile (Perbunan) seals. Shut-off on one side, self-sealing when coupled. In addition, it prevents contamination of internal parts by the closed locking sleeve. When using steel nipples, this coupling can also be used for compressed air tools thanks to the hardened locking rods. Operating pressure: 0-35 bar.

**Note:** For coupling plug see Order No. 9433.

**9430 0100–0110** **With hose nozzle.**

| Order No. | Hose internal Ø mm | 9430 RIEGLER | Length mm |
|---|---|---|---|
| 0100 | 6 | 3.35 | 58 |
| 0105 | 9 | 3.27 | 63 |
| 0110 | 13 | 3.35 (W971) | 63 |



Hose jet

**9430 0120–0130** **With external thread.**

| Order No. | Connection inch | 9430 RIEGLER | Length mm | A/F mm |
|---|---|---|---|---|
| 0120 | G 1/4 | 3.47 | 39 | 22 |
| 0125 | G 3/8 | 3.35 | 41 | 22 |
| 0130 | G 1/2 | 3.27 (W971) | 44 | 22 |

External thread

**9430 0140–0150** **With internal thread.**

| Order No. | Connection inch | 9430 RIEGLER | Length mm | A/F mm |
|---|---|---|---|---|
| 0140 | G 1/4 | 3.35 | 41 | 22 |
| 0145 | G 3/8 | 3.35 | 41 | 22 |
| 0150 | G 1/2 | 3.35 (W971) | 44 | 24 |

Internal thread

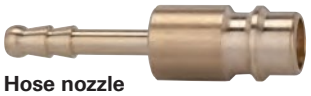
## Coupling plug NW 7.2

**Design:** Made of brass.

**Note:** For couplings see Order No. 9430.

**9433 0100–0110** **With hose nozzle.**

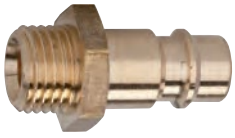
| Order No. | Hose internal Ø mm | 9433 RIEGLER |
|---|---|---|
| 0100 | 6 | 0.87 |
| 0105 | 9 | 0.87 |
| 0110 | 13 | 1.22 (W971) |



Hose nozzle

**9433 0115–0130** **With external thread.**

| Order No. | Connection inch | 9433 RIEGLER | A/F mm |
|---|---|---|---|
| 0115 | G 1/8 | 1.08 | 14 |
| 0120 | G 1/4 | 1.05 | 17 |
| 0125 | G 3/8 | 1.11 | 19 |
| 0130 | G 1/2 | 1.86 (W971) | 24 |



External thread

**9433 0135–0150** **With internal thread.**

| Order No. | Connection inch | 9433 RIEGLER | A/F mm |
|---|---|---|---|
| 0135 | G 1/8 | 1.08 | 14 |
| 0140 | G 1/4 | 1.08 | 17 |
| 0145 | G 3/8 | 1.17 | 19 |
| 0150 | G 1/2 | 1.76 (W971) | 24 |

Internal thread.

## Safety coupling NW 7.4

**Design: Push-button version.** The shell is made of aluminium with oil- and heat-resistant nitrile (Perbunan) seals, button and valve are made from galvanised hardened steel; the inner parts are made of stainless steel, and the thread is made of nickel-plated brass. The flow rate at 6 bar is 1800 l/min (Δp=1 bar). These couplings conform to ISO Standard 4414.

**Technique:** Press in the plug to couple. After the plug snaps audibly, the clutch is locked. To detach, press the push-button twice. On first press the coupling is vented, however, the plug remains secured in the coupling. Pushing the second time releases the plug.

**Note:** Operating pressure max. 12 bar. For coupling plug see Order No. 9448.

**9434 0170–0180** **With hose nozzle.**

| Order No. | Hose internal Ø mm | 9434 RIEGLER | Length mm | A/F mm |
|---|---|---|---|---|
| 0170 | 6 | 17.55 | 88.5 | 21 |
| 0175 | 9 | 17.55 | 88.5 | 21 |
| 0180 | 13 | 18.50 (W971) | 88.5 | 21 |

Hose nozzle

**9434 0155–0165** **With external thread, rotatable.**

| Order No. | Connection inch | 9434 RIEGLER | Length mm | A/F mm |
|---|---|---|---|---|
| 0155 | G 1/4 | 17.55 | 76.0 | 20 |
| 0160 | G 3/8 | 17.55 | 76.0 | 20 |
| 0165 | G 1/2 | 17.55 (W971) | 81.0 | 20 |

External thread, rotatable

**9434 0185–0195** **With internal thread.**

| Order No. | Connection inch | 9434 RIEGLER | Length mm | A/F mm |
|---|---|---|---|---|
| 0185 | 1/4 | 17.55 | 71.5 | 21 |
| 0190 | 3/8 | 17.55 | 75.5 | 21 |
| 0195 | 1/2 | 18.50 (W971) | 77.5 | 24 |

Internal thread

## Coupling plug NW 7.2

**Design:** Steel hardened and galvanised.

**Note:** For couplings see Order No. 9434.

**9448 0400–0420** **With hose nozzle.**

| Order No. | Hose internal Ø mm | 9448 RIEGLER |
|---|---|---|
| 0400 | 6 | 1.74 |
| 0405 | 8 | 1.83 |
| 0410 | 9 | 1.76 (W969) |

| Order No. | Hose internal Ø mm | 9448 RIEGLER |
|---|---|---|
| 0415 | 10 | 2.08 |
| 0420 | 13 | 1.96 (W969) |

Hose nozzle

**9448 0425–0440** **With external thread.**

| Order No. | Connection inch | 9448 RIEGLER | A/F mm |
|---|---|---|---|
| 0425 | G 1/8 | 2.08 | 14 |
| 0430 | G 1/4 | 2.14 (W969) | 17 |

| Order No. | Connection inch | 9448 RIEGLER | A/F mm |
|---|---|---|---|
| 0435 | G 3/8 | 2.14 | 19 |
| 0440 | G 1/2 | 2.86 (W969) | 24 |

External thread

**9448 0445–0460** **With internal thread.**

| Order No. | Connection inch | 9448 RIEGLER | A/F mm |
|---|---|---|---|
| 0445 | G 1/8 | 2.08 | 14 |
| 0450 | G 1/4 | 2.14 (W969) | 17 |

| Order No. | Connection inch | 9448 RIEGLER | A/F mm |
|---|---|---|---|
| 0455 | G 3/8 | 2.14 | 19 |
| 0460 | G 1/2 | 2.38 (W969) | 24 |

Internal thread

## Compressed air distributor

**Design:** Made of brass, with external (AG) and internal (IG) threads as well as two outlets **with quick connect couplings** NW 7.2.

**Note:** For coupling plug see Order No. 9433.

RIEGLER

**9414** 0120–0130 **With external thread.**

| Order No. | Connection inch | 9414 RIEGLER | Design |
|---|---|---|---|
| 0120 | G 1/4 AG | 12.45 | with 2 outlets |
| 0125 | G 3/8 AG | 12.45 | with 2 outlets |
| 0130 | G 1/2 AG | 16.25 (W971) | with 2 outlets |

External thread

**9414** 0140–0150 **With internal thread.**

| Order No. | Connection inch | 9414 RIEGLER | Design |
|---|---|---|---|
| 0140 | G 1/4 IG | 10.95 | with 2 outlets |
| 0145 | G 3/8 IG | 10.95 | with 2 outlets |
| 0150 | G 1/2 IG | 11.05 (W971) | with 2 outlets |

Internal thread

## Compressed air distributor

**Design:** Made of brass, with internal thread, and 2 or 3 outlets without **quick couplings**.

RIEGLER

**9415** 0100 + 0105 **With 2 outlets.**

| Order No. | Connection inch | 9415 RIEGLER | Design |
|---|---|---|---|
| 0100 | G 3/8 IG | 3.73 | with 2 internal threads |
| 0105 | G 1/2 IG | 5.30 (W971) | with 2 internal threads |

**9415** 0110 + 0115 **With 3 outlets.**

| Order No. | Connection inch | 9415 RIEGLER | Design |
|---|---|---|---|
| 0110 | G 3/8 IG | 5.80 | with 3 internal threads |
| 0115 | G 1/2 IG | 10.05 (W971) | with 3 internal threads |

## Junction box

**Design:** For universal compressed air applications, up to max. 15 bar. Made of high-strength, fibreglass-reinforced plastic. With robust brass threaded insert for high torque ranges.

RIEGLER

| Order No. | Design | 9453 RIEGLER | Connection inch |
|---|---|---|---|
| 0007 | Internal thread G 1/2" | 24.70 | 3x G 1/2 |
| 0012 | Internal and through thread G 3/4" | 35.30 (W971) | 3x G 1/2 |

## Union nut for hose nozzle

**Design:** Made of brass, clockwise version.

RIEGLER

| Order No. | Connection inch | 9416 RIEGLER | For nozzle size | Length mm | A/F mm |
|---|---|---|---|---|---|
| 0500 | G 1/4 | 0.56 | LW 4, LW 6 | 15 | 17 |
| 0505 | G 3/8 | 0.74 | LW 4, LW 6, LW 9 | 15 | 19 |
| 0510 | G 3/8 | 1.14 * | LW 4, LW 6, LW 9 | 15 | 19 |
| 0515 | G 1/2 | 1.02 (W971) | LW 6, LW 9 | 16 | 24 |

* Anti-clockwise version.

## Hose jet

**Design:** Made of brass, with ball nipple.

RIEGLER

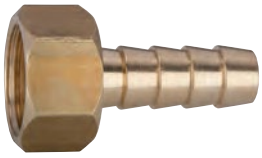
| Order No. | Hose internal Ø mm | 9416 RIEGLER | Design | For hose | Length mm |
|---|---|---|---|---|---|
| 0520 | 6 | 0.70 | for union nut G 1/4 | LW 6 | 47.0 |
| 0525 | 6 | 0.96 | for union nut G 3/8 | LW 6 | 48.5 |
| 0530 | 9 | 0.94 | for union nut G 3/8 | LW 9 | 48.5 |
| | | (W971) | | | |

## Screw on hose nozzle with internal thread

**Design:** Made of brass.

RIEGLER

| Order No. | Connection inch | 9416 RIEGLER | Hose connection mm | A/F mm |
|---|---|---|---|---|
| 0535 | G 1/8 | 1.46 | 6 | 12 |
| 0540 | G 1/4 | 1.74 | 6 | 15 |
| 0545 | G 3/8 | 2.57 | 6 | 19 |
| 0550 | G 1/4 | 2.48 | 8 | 15 |
| 0555 | G 3/8 | 2.74 | 8 | 19 |
| 0560 | G 1/2 | 3.11 | 8 | 23 |
| 0565 | G 3/8 | 2.60 | 13 | 19 |
| 0570 | G 1/2 | 2.58 | 13 | 23 |
| 0575 | G 3/4 | 2.54 | 13 | 30 |
| 0580 | G 3/4 | 2.84 | 16 | 30 |
| 0585 | G 3/4 | 3.12 | 19 | 30 |
| | | (W971) | | |

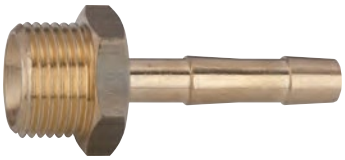


## Screw in hose nozzle with external thread

**Design:** Made of brass.

RIEGLER

| Order No. | Connection inch | 9416 RIEGLER | Hose connection mm | A/F mm |
|---|---|---|---|---|
| 0590 | G 1/8 | 1.30 | 6 | 14 |
| 0595 | G 1/4 | 1.58 | 6 | 17 |
| 0600 | G 3/8 | 1.66 | 6 | 19 |
| 0605 | G 1/4 | 1.45 | 9 | 17 |
| 0610 | G 3/8 | 1.62 | 9 | 19 |
| 0615 | G 1/2 | 2.54 | 9 | 24 |
| 0620 | G 3/8 | 1.88 | 13 | 19 |
| 0625 | G 1/2 | 2.59 | 13 | 24 |
| 0630 | G 3/4 | 4.12 | 13 | 27 |
| 0635 | G 3/4 | 3.83 | 16 | 32 |
| 0640 | G 3/4 | 3.05 | 19 | 27 |
| | | (W971) | | |



## Double hose nozzle

**Design:** Made of brass.

RIEGLER

| Order No. | Hose internal Ø mm | 9416 RIEGLER | Length mm |
|---|---|---|---|
| 0645 | 6 | 1.13 | 72 |
| 0650 | 9 | 1.31 | 72 |
| 0655 | 13 | 1.89 | 72 |
| | | (W971) | |

## Double nipple with external thread

**Design:** Made of brass.

RIEGLER

| Order No. | Connection inch | 9416 RIEGLER | A/F mm |
|---|---|---|---|
| 0660 | G 1/8 x G 1/8 | 0.70 | 14 |
| 0665 | G 1/4 x G 1/4 | 0.83 | 17 |
| 0670 | G 3/8 x G 3/8 | 0.96 | 19 |
| 0675 | G 1/2 x G 1/2 | 1.79 | 24 |
| 0680 | G 3/4 x G 3/4 | 3.98 | 32 |
| 0685 | G 1/8 x G 1/4 | 0.88 | 17 |
| 0690 | G 1/4 x G 3/8 | 1.05 | 19 |
| 0695 | G 3/8 x G 1/2 | 2.00 | 24 |
| 0700 | G 1/2 x G 3/4 | 3.93 | 32 |
| | | (W971) | |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Socket with internal thread

**Design:** Made of brass with continuous thread.

RIEGLER

| Order No. | Connection inch | 9416 RIEGLER | A/F mm | Length mm |
|---|---|---|---|---|
| 0710 | G 1/8 | 0.80 | 14 | 22 |
| 0715 | G 1/4 | 1.15 | 17 | 26 |
| 0720 | G 3/8 | 1.51 | 22 | 26 |
| 0725 | G 1/2 | 2.24 | 27 | 30 |
| 0730 | G 3/4 | 3.60 | 32 | 36 |
| | | (W971) | | |

## T-piece

**Design:** Made of brass, with external (AG) and internal thread (IG). The internal thread is cylindrical in accordance with DIN EN ISO 228-1 and the external thread conical in accordance with DIN 2999.

RIEGLER

**9416 0735–0745** **With external thread.**

| Order No. | Connection inch | 9416 RIEGLER | A/F mm | Max. operating pressure bar |
|---|---|---|---|---|
| 0735 | R 1/4 AG | 2.91 | 13 | 60 |
| 0740 | R 3/8 AG | 4.28 | 17 | 60 |
| 0745 | R 1/2 AG | 5.85 | 21 | 60 |
| | | (W971) | | |

External thread

**9416 0750–0760** **With internal thread.**

| Order No. | Connection inch | 9416 RIEGLER | A/F mm | Max. operating pressure bar |
|---|---|---|---|---|
| 0750 | G 1/4 IG | 3.33 | 13 | 60 |
| 0755 | G 3/8 IG | 4.65 | 17 | 60 |
| 0760 | G 1/2 IG | 6.20 | 21 | 60 |
| | | (W971) | | |

Internal thread

## Elbow piece

**Design:** Made of brass, with external (AG) and internal thread (IG). The internal thread is cylindrical in accordance with DIN EN ISO 228-1 and the external thread conical in accordance with DIN 2999.

RIEGLER

**9416 0765–0775** **With external thread.**

| Order No. | Connection inch | 9416 RIEGLER | A/F mm | Max. operating pressure bar |
|---|---|---|---|---|
| 0765 | R 1/4 AG | 1.93 | 13 | 60 |
| 0770 | R 3/8 AG | 2.74 | 17 | 60 |
| 0775 | R 1/2 AG | 4.45 | 21 | 60 |
| | | (W971) | | |

External thread

**9416 0780–0790** **With internal thread.**

| Order No. | Connection inch | 9416 RIEGLER | A/F mm | Max. operating pressure bar |
|---|---|---|---|---|
| 0780 | G 1/4 IG | 2.32 | 13 | 60 |
| 0785 | G 3/8 IG | 3.39 | 17 | 60 |
| 0790 | G 1/2 IG | 5.30 | 21 | 60 |
| | | (W971) | | |

Internal thread

## Reducing nipple

**Design:** Made of brass, short design.

RIEGLER

| Order No. | Connection inch | 9416 RIEGLER | A/F mm |
|---|---|---|---|
| 0795 | G 1/4 AG x G 1/8 IG | 0.71 | 17 |
| 0800 | G 3/8 AG x G 1/8 IG | 1.25 | 19 |
| 0805 | G 3/8 AG x G 1/4 IG | 0.73 | 19 |
| 0810 | G 1/2 AG x G 1/4 IG | 1.30 | 22 |
| | | (W971) | |

| Order No. | Connection inch | 9416 RIEGLER | A/F mm |
|---|---|---|---|
| 0815 | G 1/2 AG x G 3/8 IG | 0.90 | 22 |
| 0820 | G 3/4 AG x G 3/8 IG | 2.35 | 32 |
| 0825 | G 3/4 AG x G 1/2 IG | 2.02 | 32 |
| | | (W971) | |

## Spiral hose made of nylon with swivel fitting

**Design:** Both sides fully integrated **with anti-kink spring.** Due to Nylon 12 (PA), this spiral hose has a very high re-rolling force, saves space through small turns and is easy to use. The hose has good vibration absorption, excellent abrasion resistance and good compression performance.

**Application:** Operating temperature from –40 °C to +100 °C. Maximum operating pressure at 23 °C is 13 bar with hose Ø 6.3 x 7.9 mm and 11 bar with hose Ø 9.5 x 11.8 mm.

RIEGLER

For safe and effective flow of gaseous and liquid media, such as compressed air, oils, gases, greases, fuels, organic and inorganic substances.

| Order No. | Inner diameter mm | 9440 RIEGLER | Outside Ø mm | Length m | Connection inch | Cable Ø mm |
|---|---|---|---|---|---|---|
| 0100 | 6.3 | 22.40 | 7.9 | 5.0 | R 1/4 | 75 |
| 0105 | 6.3 | 29.30 | 7.9 | 7.5 | R 1/4 | 75 |
| 0110 | 9.5 | 48.10 | 11.8 | 5.0 | R 3/8 | 140 |
| 0115 | 9.5 | 61.70 (W961) | 11.8 | 7.5 | R 3/8 | 140 |

## Nylon spiral hose with swivel fitting, with sealing coupling and plug

**Design:** Due to nylon 12 (PA), this spiral hose has a very high re-rolling force, saves space through small turns and is easy to use. The hose has good vibration absorption, excellent abrasion resistance and good compression performance. Both sides integrated with **anti-kink spring as well as quick-release coupling and coupling plug NW 7.2**.

**Application:** Operating temperature from –40 °C to +100 °C. Maximum operating pressure at 23 °C is 13 bar with hose Ø 6.3 x 7.9 mm and 11 bar with hose Ø 9.5 x 11.8 mm.

RIEGLER

For safe and effective flow of gaseous and liquid media, such as compressed air, oils, gases, greases, fuels, organic and inorganic substances.

| Order No. | Inner diameter mm | 9440 RIEGLER | Outside Ø mm | Length m | Cable Ø mm |
|---|---|---|---|---|---|
| 0120 | 6.3 | 31.40 | 7.9 | 5.0 | 75 |
| 0125 | 6.3 | 38.00 | 7.9 | 7.5 | 75 |
| 0130 | 9.5 | 52.50 | 11.8 | 5.0 | 140 |
| 0135 | 9.5 | 66.00 (W961) | 11.8 | 7.5 | 140 |

## PU spiral hose with swivel fitting and kink-protection spring

**Design:** Both sides fully integrated **with anti-kink spring.** The elastic polyurethane hose has a very high re-rolling force, saves space through small turns and is easy to use. The hose has good vibration absorption and excellent abrasion resistance.

**Application:** Operating temperature from –40 °C to +74 °C. Maximum operating pressure at 23 °C is 10 bar with hose Ø 6.3 x 9.5 mm and 9 bar with hose Ø 8.0 x 12.0 mm.
For safe and effective flow of gaseous and liquid media, such as compressed air, oils, gases, greases, fuels, organic and inorganic substances.

RIEGLER

| Order No. | Inner diameter mm | 9440 RIEGLER | Outside Ø mm | Length m | Connection inch | Cable Ø mm |
|---|---|---|---|---|---|---|
| 0140 | 6.3 | 35.20 | 9.5 | 6.0 | G 1/4 | 60 |
| 0145 | 6.3 | 37.00 | 9.5 | 7.5 | G 1/4 | 60 |
| 0150 | 6.3 | 58.70 | 9.5 | 10.0 | G 1/4 | 60 |
| 0155 | 8.0 | 56.50 | 12.0 | 6.0 | G 3/8 | 80 |
| 0160 | 8.0 | 60.10 | 12.0 | 7.5 | G 3/8 | 80 |
| 0165 | 8.0 | 85.50 (W961) | 12.0 | 10.0 | G 3/8 | 80 |

## PU spiral hose with swivel fitting, with sealing coupling and plug

**Design:** The elastic polyurethane hose has a very high re-rolling force, saves space through small turns and is easy to use. The hose has good vibration absorption and excellent abrasion resistance. Both sides integrated with **anti-kink spring as well as quick-release coupling and coupling plug NW 7.2.**

**Application:** Operating temperature from –40 °C to +74 °C. Maximum operating pressure at 23 °C is 10 bar with hose Ø 6.3 x 9.5 mm and 9 bar with hose Ø 8.0 x 12.0 mm.
For safe and effective flow of gaseous and liquid media, such as compressed air, oils, gases, greases, fuels, organic and inorganic substances.

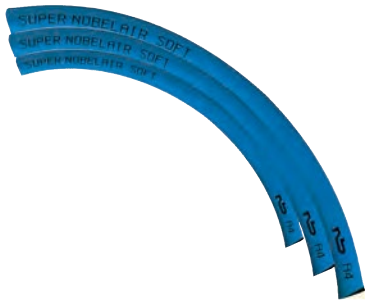
RIEGLER

| Order No. | Inner diameter mm | 9440 RIEGLER | Outside Ø mm | Length m | Cable Ø mm |
|---|---|---|---|---|---|
| 0170 | 6.3 | 39.50 | 9.5 | 6.0 | 60 |
| 0175 | 6.3 | 40.40 | 9.5 | 7.5 | 60 |
| 0180 | 6.3 | 62.20 | 9.5 | 10.0 | 60 |
| 0185 | 8.0 | 58.80 | 12.0 | 6.0 | 80 |
| 0190 | 8.0 | 62.70 | 12.0 | 7.5 | 80 |
| 0195 | 8.0 | 92.10 (W961) | 12.0 | 10.0 | 80 |

## PVC compressed-air hose

**Design:** 3-level construction with core made of soft PVC, pressure-retainer made of polyester and cover made of soft PVC, highly flexible and high tear resistance. For use with standard couplings and connectors. Highly resistant to ozone, temperature range from –20 °C to +60 °C.

**Application:** Suitable for compressed air inlet for pneumatic tools, equipping assembly stations as well as fixed or mobile rewinders for compressors.




| Order No. | Inner diameter mm | 9445 TRICOFLEX | Wall thickness mm | Outside Ø mm | Operating pressure bar | Length m |
|---|---|---|---|---|---|---|
| 0300 | 6.3 | 37.60 | 2.35 | 11.0 | 15 | 25 |
| 0305 | 6.3 | 66.50 | 2.35 | 11.0 | 15 | 50 |
| 0310 | 9.0 | 45.90 | 2.75 | 14.5 | 15 | 25 |
| 0315 | 9.0 | 81.20 | 2.75 | 14.5 | 15 | 50 |
| 0320 | 12.7 | 73.30 | 3.15 | 19.0 | 15 | 25 |
| 0325 | 12.7 | 130.00 (W961) | 3.15 | 19.0 | 15 | 50 |

## PVC compressed-air hose, with safety coupling and connector

**Design:** 3-level construction with core made of soft PVC, pressure-retainer made of polyester and cover made of soft PVC, highly flexible and high tear resistance. **Integrated with safety coupling and connector plug NW 7.2.** Highly resistant to ozone, temperature range from –20 °C to +60 °C.

**Application:** Suitable for compressed air inlet for pneumatic tools.

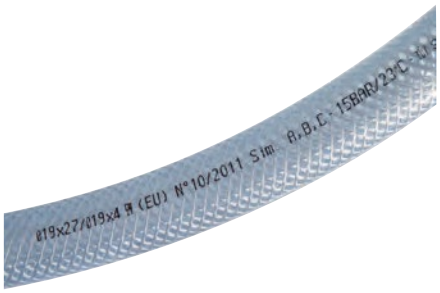
| Order No. | Inner diameter mm | 9445 RIEGLER | Wall thickness mm | Outside Ø mm | Operating pressure bar | Length m |
|---|---|---|---|---|---|---|
| 0400 | 6.3 | 42.00 | 2.35 | 11.0 | 12 | 10 |
| 0405 | 6.3 | 55.70 | 2.35 | 11.0 | 12 | 20 |
| 0410 | 9.0 | 42.90 | 2.75 | 14.5 | 12 | 10 |
| 0415 | 9.0 | 58.30 | 2.75 | 14.5 | 12 | 20 |
| 0420 | 12.7 | 68.00 | 3.65 | 20.0 | 12 | 10 |
| 0425 | 12.7 | 99.80 (W961) | 3.65 | 20.0 | 12 | 20 |

## PVC braided hose, transparent

**Design:** 3-level construction with core made of soft PVC, pressure-retainer made of polyester and cover made of soft PVC. For use with standard couplings and connectors, taking the conveying media, the operating pressure and the temperature into account. Temperature range: -15°C to +60°C

**Application:** Suitable for food, drink and alcoholic liquids in line with the EU Regulation for Contact with Foodstuffs No. 10/2011/EU (simulants A, B, C) as well as compressed air and chemical substances (resistance chart available on request).

**Note:** Hydrocarbons have a negative effect on flexibility and can lead to the hose material breaking.



| Order No. | Inner diameter mm | 9445 TRICOFLEX | Wall thickness mm | Outside Ø mm | Operating pressure bar | Length m |
|---|---|---|---|---|---|---|
| 0105 | 6.0 | 8.85 | 3.00 | 12 | 20 | 10 |
| 0110 | 6.0 | 22.20 | 3.00 | 12 | 20 | 25 |
| 0100 | 6.0 | 44.30 | 3.00 | 12 | 20 | 50 |
| 0120 | 9.0 | 11.15 | 3.00 | 15 | 20 | 10 |
| 0125 | 9.0 | 27.90 | 3.00 | 15 | 20 | 25 |
| 0115 | 9.0 | 55.80 | 3.00 | 15 | 20 | 50 |
| 0140 | 12.5 | 15.60 | 2.75 | 18 | 13 | 10 |
| 0135 | 12.5 | 38.90 | 2.75 | 18 | 13 | 25 |
| 0130 | 12.5 | 77.90 (W972) | 2.75 | 18 | 13 | 50 |

## Water hose

NEW

**Design:** 5-layer construction with core made of soft PVC, intermediate layer made of soft PVC, jersey fabric, intermediate layer made of soft PVC and cover made of soft PVC, flexible and comfortable to use. Non Torsion Technology (TNT), UV- and weatherproof, temperature resistance: -15 °C to +60 °C.

| Order No. | Inner diameter inch | 9445 TRICOFLEX | Wall thickness mm | Operating pressure bar | Length m |
|---|---|---|---|---|---|
| 0150 | 1/2 | 27.30 | 2.30 | 9 | 25 |
| 0155 | 1/2 | 54.50 | 2.30 | 9 | 50 |
| 0160 | 3/4 | 43.20 | 2.85 | 8 | 25 |
| 0165 | 3/4 | 86.30 (W972) | 2.85 | 8 | 50 |

## Water hose with coupling

NEW

TRICOFLEX

**Design:** 5-layer construction with core made of soft PVC, intermediate layer made of soft PVC, jersey fabric, intermediate layer made of soft PVC and cover made of soft PVC, flexible and comfortable to use. Non Torsion Technology (TNT), UV- and weatherproof, temperature resistance: -15 °C to +60 °C.

**Note:** Couplings compatible with GEKA® system.

| Order No. | Inner diameter inch | 9445 TRICOFLEX | Wall thickness mm | Operating pressure bar | Length m |
|---|---|---|---|---|---|
| 0170 | 1/2 | 34.30 | 2.30 | 9 | 25 |
| 0175 | 1/2 | 61.60 | 2.30 | 9 | 50 |
| 0180 | 3/4 | 50.20 | 2.85 | 8 | 25 |
| 0185 | 3/4 | 93.40 (W972) | 2.85 | 8 | 50 |

## GEKA® with quick coupling

NEW

GEKA

**Design:** Made of brass with form seal NBR. Clip distance standard at 40 mm, compatible with all GEKA® models. Temperature range from -5 °C to +100 °C.

**Application:** For inserting clamps and press sleeves. Suitable for water, industry, suction and pressure hose.

| Order No. | Connection inch | 9423 GEKA | Max. operating pressure bar |
|---|---|---|---|
| 0200 | 1/2 | 3.43 | 40 |
| 0205 | 3/4 | 3.59 (W972) | 40 |

## GEKA® plus thread piece

NEW

GEKA

**Design:** Made of brass, with external (AG) and internal thread (IG), with NBR flat seal ring on thread side. Clip distance standard at 40 mm, compatible with all GEKA® models. Temperature range from -5 °C to +100 °C.

**9423 0220 + 0225** **With external thread**

External thread

| Order No. | Connection inch | 9423 GEKA | Max. operating pressure bar |
|---|---|---|---|
| 0220 | 1/2 | 3.40 | 40 |
| 0225 | 3/4 | 3.40 (W972) | 40 |

**9423 0210 + 0215** **With internal thread.**

Internal thread

| Order No. | Connection inch | 9423 GEKA | Max. operating pressure bar |
|---|---|---|---|
| 0210 | 1/2 | 3.66 | 40 |
| 0215 | 3/4 | 3.66 (W972) | 40 |

## GEKA® plus blind coupling

NEW

GEKA

**Design:** Made of brass with form seal NBR. Clip distance standard at 40 mm, compatible with all GEKA® models. Temperature range from -5 °C to +100 °C.

| Order No. | Design | 9423 GEKA | Max. operating pressure bar |
|---|---|---|---|
| 0230 | With borehole for attaching small chains | 3.75 (W972) | 40 |

## Hose holder

RIEGLER

**Design:** Made of aluminium for easy wall mounting with variable hole pattern. Sunken boreholes ensure a smooth surface. The option of placing a small hose holder below a larger one creates additional storage capacity with almost the same use of space due to the curved shape of the holder.

| Order No. | Size | 9445 RIEGLER | Length mm | Width mm | Height mm |
|---|---|---|---|---|---|
| 0245 | Small (35–40 m with NW 6 mm) | 18.90 | 186 | 57 | 85 |
| 0250 | Medium (45–50 m with NW 9 mm) | 38.80 | 248 | 97 | 118 |
| 0255 | Large (45–50 m with NW 13 mm) | 45.80 (W961) | 336 | 132 | 152 |

## IDEAL® hose clip

**Design: DIN 3017.** With embossed inside of band, rounded edges and strong steel strip for safe guidance of the screw and the belt for transmitting higher forces.

**Application:** Suitable for cooling water connections, non-pressurised and pressurised fuel pipes and vents, oil lines, lines in the household appliance industry, hose connections in the commercial vehicle industry as well as connections of pipes in plumbing and mechanical engineering.

**9423** **Material W1,** band, housing and screw made of **bright-galvanised steel.** Slotted hex bolt wrench size 7 mm, with integrated Phillips.

**9426** **Material W4,** band, housing and screw made of **non-corrosive chrome-nickel steel (1.4301)**. Slotted hex bolt wrench size 7 mm.

| Order No. | Chucking capacity mm | 9423 | 9426 | PU | Tape width x tape thickness mm |
|---|---|---|---|---|---|
| 0005 | 08–12 | 43.40 | 120.00 | 100 | 9 x 0.7 |
| 0010 | 10–16 | 43.40 | 120.00 | 100 | 9 x 0.7 |
| 0015 | 12–20 | 48.20 | – | 100 | 9 x 0.7 |
| 0055 | 12–20 | 50.90 | 134.00 | 100 | 12 x 0.8 |
| 0020 | 16–25 | 51.60 | – | 100 | 9 x 0.7 |
| 0060 | 16–25 | 54.20 | 138.00 | 100 | 12 x 0.8 |
| 0065 | 16–27 | 57.50 | – | 100 | 12 x 0.8 |
| 0025 | 20–32 | 56.40 | – | 100 | 9 x 0.7 |
| 0070 | 20–32 | 59.60 | 141.50 | 100 | 12 x 0.8 |
| 0030 | 25–40 | 57.70 | – | 100 | 9 x 0.7 |
| 0075 | 25–40 | 60.30 | 159.50 | 100 | 12 x 0.8 |
| 0035 | 32–50 | 66.80 | – | 50 | 9 x 0.8 |
| 0080 | 32–50 | 69.10 (W959) | 164.50 (W959) | 50 | 12 x 1.0 |

| Order No. | Chucking capacity mm | 9423 | 9426 | PU | Tape width x tape thickness mm |
|---|---|---|---|---|---|
| 0040 | 40– 60 | 67.20 | – | 50 | 9 x 0.8 |
| 0085 | 40– 60 | 70.50 | 175.00 | 50 | 12 x 1.0 |
| 0045 | 50– 70 | 69.70 | – | 50 | 9 x 0.8 |
| 0090 | 50– 70 | 73.20 | 183.50 | 50 | 12 x 1.0 |
| 0095 | 60– 80 | 75.20 | 187.00 | 50 | 12 x 1.0 |
| 0050 | 70– 90 | 73.40 | – | 50 | 9 x 0.8 |
| 0100 | 70– 90 | 77.30 | 190.50 | 50 | 12 x 1.0 |
| 0105 | 80–100 | 79.60 | – | 50 | 12 x 1.0 |
| 0110 | 90–110 | 82.00 | 205.00 | 50 | 12 x 1.0 |
| 0115 | 100–120 | 90.10 | 229.00 | 50 | 12 x 1.0 |
| 0120 | 110–130 | 98.30 | 251.00 | 50 | 12 x 1.0 |
| 0125 | 130–150 | 113.50 (W959) | 333.00 (W959) | 50 | 12 x 1.0 |

## IDEAL® 2-ear hose clamp W1

**Design:** Unbreakable special steel, galvanised, easy to assemble.

**Application:** Long-term sealing of pipes conveying air and liquid.

| Order No. | Chucking capacity mm | 9432 | PU |
|---|---|---|---|
| 1005 | 5– 7 | 13.60 | 100 |
| 1010 | 7– 9 | 12.45 | 100 |
| 1015 | 9–11 | 13.00 | 100 |
| 1020 | 11–13 | 13.00 | 100 |
| 1025 | 13–15 | 14.75 | 100 |
| 1030 | 15–18 | 17.60 (W959) | 100 |

| Order No. | Chucking capacity mm | 9432 | PU |
|---|---|---|---|
| 1035 | 17–20 | 18.85 | 100 |
| 1040 | 20–23 | 28.30 | 100 |
| 1045 | 21–25 | 28.30 | 100 |
| 1050 | 25–28 | 31.20 | 100 |
| 1055 | 28–31 | 34.20 (W959) | 100 |

KNIPEX

## Hose clamp pliers

You can find our complete range of hose clamp pliers from 📖 6/234.

## Plastic compressed-air hose reel

**Design:** Particularly robust model made of high-strength special plastic with high-quality fabric-reinforced hose and DIN fitting. Shell made of galvanised steel pipe. The reel can be wound and unwound during operation thanks to the axial port. Delivery with metal one-handed quick couplings, connector hose and wall mount.

| Order No. | Hose length m | 9443 format | Inner diameter mm | Outside Ø mm | Operating pressure bar |
|---|---|---|---|---|---|
| 0020 | 20 | 53.40 (W903) | 9 | 15 | 15 |

## Automatic hose reel

**Design:** Compact, rugged, shock-resistant and pivoting housing for wall or ceiling mounting. With blocking means for securing the compressed air hose against reverse flow, can be turned off if necessary. The return springs are made from special steel and ensure a complete and even return of the compressed air tube. Delivery with compressed air hose made from polyurethane with coupling and plug.

**Application:** For organisation and safety at the workplace. The avoidance of tripping hazards is an important contribution to accident prevention.
Ideal for commercial businesses and industry.

9429 0009

9429 0012

| Order No. | Hose length m | 9429 | Inner diameter mm | Outside Ø mm | Operating pressure bar | Dimension mm | Weight kg |
|---|---|---|---|---|---|---|---|
| 0009 | 9 | 163.50 | 8 | 12 | 10 | 325 x 275 x 185 | 3.4 |
| 0012 | 12 | 190.50 (W972) | 8 | 12 | 10 | 355 x 315 x 190 | 4.5 |

## Automatic hose reel SA 300

**Design:** Compact, rugged metal Shell for wall or ceiling mounting. Arrest and reel by simply pulling. Delivery with compressed air hose made of polyurethane with quick-attachment coupling 1/4" and plug nipple 1/4" .

**Application:** For organisation and safety at the workplace. The avoidance of tripping hazards is an important contribution to accident prevention.
Ideal for commercial businesses and industry.

| Order No. | Hose length m | 9459 metabo | Inner diameter mm | Outside Ø mm | Operating pressure bar | Weight kg |
|---|---|---|---|---|---|---|
| 0015 | 15 | 142.50 (W972) | 8 | 12 | 12 | 8.57 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Filter, multifix range

**Design:** Centrifugal separator with sintering filter element. With semi-automatic discharge valve and die cast zinc Shell.

**Application:** To clean compressed air from pneumatic tools, cylinders, valves and lots more.

RIEGLER

| Order No. | Connection thread inch | 9401 RIEGLER | Flow quantity at 6 bar m³/h | Nominal width DN | Height mm | Max. operating pressure bar | Operating temperature °C |
|---|---|---|---|---|---|---|---|
| 0005 | G 1/4 | 25.30 | 2100 | 6 | 152.1 | 16 | 60 |
| 0010 | G 3/8 | 25.30 | 2100 | 10 | 152.1 | 16 | 60 |
| 0015 | G 1/2 | 46.70 | 4000 | 15 | 181.8 | 16 | 60 |
| 0020 | G 3/4 | 47.90 | 4000 | 20 | 181.8 | 16 | 60 |
| 0025 | G 1 | 144.50 (W970) | 8000 | 25 | 305.8 | 16 | 60 |

## Pressure regulator with manometer, multi-fix range

**Design**: Reversible diaphragm pressure regulator independent of supply pressure with secondary ventilation. The pressure can be adjusted by pushing in the hand wheel.

**Application:** Reduces the fluctuating fuel line pressure on compressed air systems to the desired operating pressure to keep it constant.

**Note:** Flow rate measurement: at P1 = 8 bar.

RIEGLER

| Order No. | Connection thread inch | 9402 RIEGLER | Flow rate l/min | Nominal width DN | Height mm | Max. operating pressure bar | Operating temperature °C |
|---|---|---|---|---|---|---|---|
| 0005 | G 1/4 | 36.40 | 1500 | 6 | 94.8 | 10.0 | 60 |
| 0010 | G 3/8 | 36.40 | 1500 | 10 | 94.8 | 10.0 | 60 |
| 0015 | G 1/2 | 54.40 | 6000 | 15 | 134.1 | 10.0 | 60 |
| 0020 | G 3/4 | 57.40 | 6000 | 20 | 134.1 | 10.0 | 60 |
| 0025 | G 1 | 140.00 (W970) | 12500 | 25 | 179.5 | 10.0 | 60 |

## Filter regulator, multifix range

**Design:** With polycarbonate container and manometer. Reversible diaphragm pressure regulator independent of supply pressure with secondary ventilation, combined with a centrifugal separator. The pressure can be adjusted by pushing in the hand wheel.

**Application:** To clean and regulate compressed air from pneumatic tools, cylinders, valves and lots more.

**Note:** Flow rate measurement: at P1 = 8 bar.

RIEGLER

| Order No. | Connection thread inch | 9404 RIEGLER | Flow rate l/min | Nominal width DN | Height mm | Max. operating pressure bar | Operating temperature °C |
|---|---|---|---|---|---|---|---|
| 0005 | G 1/4 | 54.00 | 1500 | 6 | 192.1 | 10.0 | 60 |
| 0010 | G 3/8 | 53.00 | 1500 | 10 | 192.1 | 10.0 | 60 |
| 0015 | G 1/2 | 83.30 | 3500 | 15 | 246.3 | 10.0 | 60 |
| 0020 | G 3/4 | 83.00 (W970) | 3500 | 20 | 246.3 | 10.0 | 60 |

## Maintenance unit, two-piece, multi-fix range

**Design:** Two-part maintenance unit. Comprising a reversible diaphragm pressure regulator independent of supply pressure with secondary ventilation, combined with a centrifugal separator and a proportional lubricator. Shell made of zinc die casting.

**Application:** To clean, regulate and oil compressed air from pneumatic tools, cylinders, valves and lots more.

**Note:** Flow rate measurement: at P1 = 8 bar.

RIEGLER

| Order No. | Connection thread inch | 9405 RIEGLER | Nominal width DN | Flow rate l/min | Height mm | Width mm | Max. operating pressure bar | Operating temperature °C |
|---|---|---|---|---|---|---|---|---|
| 0005 | G 1/4 | 76.50 | 6 | 1100 | 192.1 | 92.8 | 10 | 60 |
| 0010 | G 3/8 | 83.60 | 10 | 1100 | 192.1 | 92.8 | 10 | 60 |
| 0015 | G 1/2 | 137.50 | 15 | 3500 | 246.3 | 134.8 | 10 | 60 |
| 0020 | G 3/4 | 141.00 (W970) | 20 | 3500 | 246.3 | 134.8 | 10 | 60 |

## Mist lubricator, multifix

**Design:** Proportional lubricator, with die-cast zinc Shell and manual discharge valve. Lubricant can be filled under pressure.

**Application:** To enrich the compressed air with oil mist for a reliable lubrication of pneumatic compressed air tools, cylinders, valves and lots more.

**Note:** Minimum operating pressure 0.5 bar.

| Order No. | Connection thread inch | 9408 RIEGLER | Flow quantity at 6 bar m³/h | Nominal width DN | Height mm | Max. operating pressure bar | Operating temperature °C |
|---|---|---|---|---|---|---|---|
| 0005 | G 1/4 | 33.00 | 1900 | 6 | 167.8 | 16 | 60 |
| 0010 | G 3/8 | 33.40 | 1900 | 10 | 167.8 | 16 | 60 |
| 0015 | G 1/2 | 53.50 | 5000 | 15 | 198.2 | 16 | 60 |
| 0020 | G 3/4 | 53.50 (W970) | 5000 | 20 | 198.2 | 16 | 60 |

## Holding bracket with 2 screws for multi-fix range

| Order No. | Connection thread inch | 9410 RIEGLER |
|---|---|---|
| 0005 | G 1/4; G 1/8 | 4.08 |
| 0010 | G 1/2; G 3/4 | 5.60 (W970) |

## Holding bracket with nut

| Order No. | Connection thread inch | 9411 RIEGLER |
|---|---|---|
| 0005 | G 1/4; G 3/8 | 5.65 |
| 0010 | G 1/2; G 3/4 | 5.85 (W970) |

## Coupling packet

**Design:** To interlock several components with connection thread.

| Order No. | Connection thread inch | 9413 RIEGLER |
|---|---|---|
| 0005 | G 1/4; G 1/8 | 2.20 |
| 0010 | G 1/2; G 3/4 | 2.26 |
| 0015 | G 1 | 8.30 (W970) |

## Filter element for multi-fix range

**Design:** For filters, filter regulators and maintenance units with connection thread.

| Order No. | Filter element µm | 9417 RIEGLER | Connection thread inch |
|---|---|---|---|
| 0005 | 5 | 11.85 | G 1/2–G 3/4 |
| 0010 | 8 | 20.70 | G 1/2–G 3/4 |
| 0015 | 40 | 17.90 (W970) | G 1 |

## Mini mist lubricator

**Design:** Oil container made of polycarbonate.

**Application:** For mounting on striking pneumatic tools (nail guns, staplers, pneumatic screwdrivers) with burst rhythm. Also suitable for tools with continuous compressed air requirements, such as grinding and polishing machines.

**Note:** Fixed oil dosage, approx. 0.4 $cm^3$ per 100 working cycles. One filling represents 3000 working cycles.

| Order No. | Connection thread inch | 9425 RIEGLER | Nominal width DN | Max. operating pressure bar | Operating temperature °C |
|---|---|---|---|---|---|
| 0005 | G 3/8 | 20.30 (W970) | 8 | 2 | 50 |

## Pressure gauge

**Design:** Standard Bourbon gauge, with plastic housing and simple scale in bar, in accordance with EN 837-1. Accuracy class 1.6.

**Application:** For gaseous, liquid, non-high-viscosity and non-crystallising fluids to be measured, that do not corrode copper alloys.

**9431** Lower connection.

**9457** Connection concentric rear.

9431

9457

| Order No. | Nominal size Ø mm | 9431 RIEGLER | 9457 RIEGLER | Display range bar | Thread inch |
|---|---|---|---|---|---|
| 0015 | 40 | 7.50 | – | 0–10.0 | G 1/8 |
| 0005 | 40 | – | 7.25 | 0– 4.0 | G 1/8 |
| 0010 | 40 | – | 7.25 | 0– 6.0 | G 1/8 |
| 0015 | 40 | – | 7.25 | 0–10.0 | G 1/8 |
| 0030 | 50 | 7.70 | – | 0–10.0 | G 1/4 |
| 0020 | 50 | – | 7.40 | 0– 4.0 | G 1/4 |
| 0025 | 50 | – | 7.40 | 0– 6.0 | G 1/4 |
| 0030 | 50 | – | 7.40 | 0–10.0 | G 1/4 |
| 0045 | 63 | 7.70 | – | 0–10.0 | G 1/4 |
| 0035 | 63 | – | 7.60 | 0– 4.0 | G 1/4 |
| 0040 | 63 | – | 7.60 | 0– 6.0 | G 1/4 |
| 0045 | 63 | – (W971) | 7.60 (W971) | 0–10.0 | G 1/4 |

## Ball valve, mini

**Design:** Sand-blasted, Shell and ball made of nickel-plated brass. With rotary handle made of plastic, ball seal made of PTFE, spindle seal made of NBR.

**Application:** For mounting on compressed air, water and fuel lines.

| Order No. | Size inch | 9461 RIEGLER | Nominal width mm | Pressure bar | Length mm |
|---|---|---|---|---|---|
| 0005 | 1/4 inside | 4.05 | 8 | 10 | 42.0 |
| 0010 | 3/8 inside | 4.18 | 8 | 10 | 42.0 |
| 0015 | 1/2 inside | 4.30 (W971) | 10 | 10 | 45.5 |

## Ball valve

**Design:** Shell and ball made of nickel-plated brass. Ball seal made of PTFE, spindle seal made of NBR. Steel lever (1.0038) with blue PVC coating. G-thread according to DIN EN ISO 228-1, temperature range: –20 °C to +100 °C.

**Application:** All common areas of use.

| Order No. | Size inch | 9463 RIEGLER | Nominal width mm | Pressure bar | Length mm |
|---|---|---|---|---|---|
| 0005 | 1/4 | 3.62 | 8.0 | 25 | 40 |
| 0010 | 3/8 | 3.62 | 10.0 | 25 | 40 |
| 0015 | 1/2 | 4.24 | 14.5 | 25 | 50 |
| 0020 | 3/4 | 5.60 | 19.0 | 25 | 55 |
| 0025 | 1 | 8.95 | 24.5 | 25 | 63 |
| 0030 | 1.1/4 | 13.90 | 30.5 | 25 | 73 |
| 0035 | 1.1/2 | 20.10 (W971) | 37.0 | 25 | 83 |

## Spray gun

**Design:** With plastic bowl, approx. 0.7 l capacity, matt, matt translucent. The spray range can be adjusted as required using the nozzle.

**Note:** Recommended working pressure ca. 2 to 6 bar.

| Order No. | Design | 9427 RIEGLER | Max. operating pressure bar | Connection |
|---|---|---|---|---|
| 0007 | with straight nozzle | 63.60 | 10 | Coupling plug NW 7.2 |
| 0017 | with swivel nozzle | 87.50 (W970) | 10 | Hose nozzle LW 6 |

9427 0007

9427 0017

## Manual tyre pressure gauge

**Design:** With torque plug and fully rubberised protective sleeve, WIKA pressure gauge with bar and psi display and brass plug nipple. Hose length 75 cm.

**Application:** For tyre valves with valve threads VG 8, such as automobiles, construction equipment, tractors, motorcycles, mountain bikes and lots more.

| Order No. | Operating pressure bar | 9444 RIEGLER calibrated | 9446 RIEGLER uncalibrated | Connection |
|---|---|---|---|---|
| 0012 | 0–12 | 83.70 (W970) | 69.10 (W970) | Coupling plug NW 7.2-7.8 |

9444

9446

## Manual tyre pressure gauge

**Design:** With car valve lever connector, pressure gauge with bar and psi display and brass plug nipple. Hose length 75 cm.

**Application:** For tyre valves with valve threads VG 8, such as automobiles, construction equipment, tractors, motorcycles, mountain bikes and lots more.

| Order No. | Operating pressure bar | 9446 RIEGLER uncalibrated | Connection |
|---|---|---|---|
| 0112 | 0–12 | 40.80 (W970) | Coupling plug NW 7.2-7.8 |

## Plastic blow gun

**Design:** Shell made of durable polyamide. Removable nozzle.

**Application:** For blowing out and cleaning machines, motors and supports, sliding surfaces, boreholes of all kinds, hollow items and shapes.

**9480** With short nozzle.

**9483** With extension tube 105 mm.

**9482** With extension tube 105 mm and protective cap.

**9481** With extension tube 105 mm, protective cap and **noise-reducing nozzle.**

9480 0072 | 9483 0072 | 9482 0014 | 9481 0072

| Order No. | Connection | 9480 RIEGLER | 9483 RIEGLER | 9482 RIEGLER | 9481 RIEGLER |
|---|---|---|---|---|---|
| 0072 | Coupling plug DN 7.2 | 8.40 | 9.35 | 9.55 | 12.20 |
| 0014 | Internal thread G 1/4" | 7.95 (W970) | – (W970) | 10.30 (W970) | 11.65 (W970) |

## Aluminium blow gun

**Design:** Shell made of nickel-plated die-cast aluminium, with standard nozzle.

**Application:** For blowing out and cleaning machines, motors and supports, sliding surfaces, boreholes of all kinds, hollow items and shapes.

| Order No. | Connection | 9484 RIEGLER | Nozzle bore mm |
|---|---|---|---|
| 0060 | Hose nozzle LW 6 | 10.55 | 1.5 |
| 0090 | Hose nozzle LW 9 | 10.55 | 1.5 |
| 0072 | Coupling plug DN 7.2 | 10.55 | 1.5 |
| 0014 | Internal thread G 1/4" | 9.65 (W970) | 1.5 |

## Extension nozzle for blow gun

**Design:** Made of nickel-plated brass.

**Application:** For targeting blowing out in hard-to-access places.

**9487** **Straight.**

**9488** **Curved.**

| Order No. | Length mm | 9487 RIEGLER | 9488 RIEGLER |
|---|---|---|---|
| 0150 | 150 | 6.20 | 6.20 |
| 0250 | 250 | – | 6.60 |
| 0400 | 400 | 9.70 (W970) | – (W970) |

9487

9488

## High-power blow gun, metered

**Design:** Infinitely adjustable, lightweight high-power blow gun with extremely strong blow power. Light and secure to hold, even under full pressure application.

**Note:** Extension tubes are available for blowing out in hard-to-access places.

| Order No. | Connection | 9485 RIEGLER |
|---|---|---|
| 0072 | Coupling plug DN 7.2 | 36.10 (W970) |

## Blow gun with noise-dampening nozzle

**Design:** Made of aluminium, blue-anodised.

**Application:** For blowing out and cleaning machines, tools, boreholes, hollow items and lots more.

| Order No. | Connection | 9486 RIEGLER |
|---|---|---|
| 0072 | Coupling plug DN 7.2 | 8.75 (W970) |

## Coolant high pressure nozzle

**Design:** Shell made of high-quality plastic granules. The nozzle can be rotated 360° for precise coolant distribution. The nozzle can be adjusted using an Allen key or the adjustment key included (Order No. 9600 0500) and stays in its position without a locking nut.

**Application:** Fast processing during machining with high rotation speeds through high-pressure cooling up to 70 bar.

**Type CD:** Compact model for use in narrow spaces.
**Type XW:** Model with especially large swing range.

### Type CD, 1/8"

| Order No. | Ø x length mm | 9610 LOC-LINE blue-orange | 9612 LOC-LINE black | 9614 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 1600 | 1.6 x 0 | 33.00 | 33.00 | 33.00 | 72 |
| 1664 | 1.6 x 6.4 | 33.60 | 33.60 | 33.60 | 72 |
| 1613 | 1.6 x 12.7 | 34.20 | 34.20 | 34.20 | 72 |
| 1632 | 1.6 x 31.8 | 36.40 | 36.40 | 36.40 | 72 |
| 2200 | 2.2 x 0 | 33.00 | 33.00 | 33.00 | 72 |
| 2264 | 2.2 x 6.4 | 33.60 | 33.60 | 33.60 | 72 |
| 2213 | 2.2 x 12.7 | 34.20 | 34.20 | 34.20 | 72 |
| 2232 | 2.2 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 72 |

| Order No. | Ø x length mm | 9610 LOC-LINE blue-orange | 9612 LOC-LINE black | 9614 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 3000 | 3.0 x 0 | 33.00 | 33.00 | 33.00 | 72 |
| 3064 | 3.0 x 6.4 | 33.60 | 33.60 | 33.60 | 72 |
| 3013 | 3.0 x 12.7 | 34.20 | 34.20 | 34.20 | 72 |
| 3032 | 3.0 x 31.8 | 36.40 | 36.40 | 36.40 | 72 |
| 4100 | 4.1 x 0 | 33.00 | 33.00 | 33.00 | 70 |
| 4164 | 4.1 x 6.4 | 33.60 | 33.60 | 33.60 | 70 |
| 4113 | 4.1 x 12.7 | 34.20 | 34.20 | 34.20 | 70 |
| 4132 | 4.1 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 70 |

### Type XW, 1/8"

| Order No. | Ø x length mm | 9616 LOC-LINE blue-orange | 9618 LOC-LINE black | 9620 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 1600 | 1.6 x 0 | 33.00 | 33.00 | 33.00 | 110 |
| 1664 | 1.6 x 6.4 | 33.60 | 33.60 | 33.60 | 110 |
| 1613 | 1.6 x 12.7 | 34.20 | 34.20 | 34.20 | 110 |
| 1632 | 1.6 x 31.8 | 36.40 | 36.40 | 36.40 | 110 |
| 2200 | 2.2 x 0 | 33.00 | 33.00 | 33.00 | 110 |
| 2264 | 2.2 x 6.4 | 33.60 | 33.60 | 33.60 | 110 |
| 2213 | 2.2 x 12.7 | 34.20 | 34.20 | 34.20 | 110 |
| 2232 | 2.2 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 110 |

| Order No. | Ø x length mm | 9616 LOC-LINE blue-orange | 9618 LOC-LINE black | 9620 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 3000 | 3.0 x 0 | 33.00 | 33.00 | 33.00 | 110 |
| 3064 | 3.0 x 6.4 | 33.60 | 33.60 | 33.60 | 110 |
| 3013 | 3.0 x 12.7 | 34.20 | 34.20 | 34.20 | 110 |
| 3032 | 3.0 x 31.8 | 36.40 | 36.40 | 36.40 | 110 |
| 4100 | 4.1 x 0 | 33.00 | 33.00 | 33.00 | 102 |
| 4164 | 4.1 x 6.4 | 33.60 | 33.60 | 33.60 | 102 |
| 4113 | 4.1 x 12.7 | 34.20 | 34.20 | 34.20 | 102 |
| 4132 | 4.1 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 102 |

### Type CD, 1/4"

| Order No. | Ø x length mm | 9622 LOC-LINE blue-orange | 9624 LOC-LINE black | 9626 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 1600 | 1.6 x 0 | 33.00 | 33.00 | 33.00 | 72 |
| 1664 | 1.6 x 6.4 | 33.60 | 33.60 | 33.60 | 72 |
| 1613 | 1.6 x 12.7 | 34.20 | 34.20 | 34.20 | 72 |
| 1632 | 1.6 x 31.8 | 36.40 | 36.40 | 36.40 | 72 |
| 2200 | 2.2 x 0 | 33.00 | 33.00 | 33.00 | 72 |
| 2264 | 2.2 x 6.4 | 33.60 | 33.60 | 33.60 | 72 |
| 2213 | 2.2 x 12.7 | 34.20 | 34.20 | 34.20 | 72 |
| 2232 | 2.2 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 72 |

| Order No. | Ø x length mm | 9622 LOC-LINE blue-orange | 9624 LOC-LINE black | 9626 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 3000 | 3.0 x 0 | 33.00 | 33.00 | 33.00 | 72 |
| 3064 | 3.0 x 6.4 | 33.60 | 33.60 | 33.60 | 72 |
| 3013 | 3.0 x 12.7 | 34.20 | 34.20 | 34.20 | 72 |
| 3032 | 3.0 x 31.8 | 36.40 | 36.40 | 36.40 | 72 |
| 4100 | 4.1 x 0 | 33.00 | 33.00 | 33.00 | 70 |
| 4164 | 4.1 x 6.4 | 33.60 | 33.60 | 33.60 | 70 |
| 4113 | 4.1 x 12.7 | 34.20 | 34.20 | 34.20 | 70 |
| 4132 | 4.1 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 70 |

### Type XW, 1/4"

| Order No. | Ø x length mm | 9628 LOC-LINE blue-orange | 9630 LOC-LINE black | 9632 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 1600 | 1.6 x 0 | 33.00 | 33.00 | 33.00 | 110 |
| 1664 | 1.6 x 6.4 | 33.60 | 33.60 | 33.60 | 110 |
| 1613 | 1.6 x 12.7 | 34.20 | 34.20 | 34.20 | 110 |
| 1632 | 1.6 x 31.8 | 36.40 | 36.40 | 36.40 | 110 |
| 2200 | 2.2 x 0 | 33.00 | 33.00 | 33.00 | 110 |
| 2264 | 2.2 x 6.4 | 33.60 | 33.60 | 33.60 | 110 |
| 2213 | 2.2 x 12.7 | 34.20 | 34.20 | 34.20 | 110 |
| 2232 | 2.2 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 110 |

| Order No. | Ø x length mm | 9628 LOC-LINE blue-orange | 9630 LOC-LINE black | 9632 LOC-LINE grey | Swivel range ° |
|---|---|---|---|---|---|
| 3000 | 3.0 x 0 | 33.00 | 33.00 | 33.00 | 110 |
| 3064 | 3.0 x 6.4 | 33.60 | 33.60 | 33.60 | 110 |
| 3013 | 3.0 x 12.7 | 34.20 | 34.20 | 34.20 | 110 |
| 3032 | 3.0 x 31.8 | 36.40 | 36.40 | 36.40 | 110 |
| 4100 | 4.1 x 0 | 33.00 | 33.00 | 33.00 | 102 |
| 4164 | 4.1 x 6.4 | 33.60 | 33.60 | 33.60 | 102 |
| 4113 | 4.1 x 12.7 | 34.20 | 34.20 | 34.20 | 102 |
| 4132 | 4.1 x 31.8 | 36.40 (W991) | 36.40 (W991) | 36.40 (W991) | 102 |

## Coolant high pressure nozzle

**Application:** To adjust the angle of high pressure nozzles from the CD and XW series.

| Order No. | 9600 LOC-LINE |
|---|---|
| 0500 | 5.00 (W991) |

## Coolant hose set 1/4"

LOC-LINE®

**Design:** Flexible line system made of high-quality plastic granules. The system has a high compatibility with other systems.

**Application:** For cooling workpieces and tools on all machine tools, such as drilling, milling, turning, grinding, EDM and lots more.

| Order No. | Design | 9600 LOC-LINE | Set contents |
|---|---|---|---|
| 0002 | 8 pcs | 11.00 | 2 Segment hoses, 147 mm<br>1 flat nozzle, 24 mm wide<br>3 round nozzles, Ø 1.5; 3.0; 6.0 mm<br>2 connection nipples, R 1/8" und 1/4" |

(W991)

## Coolant hose set 1/4" Flexi Box

LOC-LINE®

**Design:** Flexible line system made of high-quality plastic granules.
The system has a high compatibility with other systems.
Supplied in stable plastic crate.

**Application:** For cooling workpieces and tools on all machine tools, such as drilling, milling, turning, grinding, EDM and lots more.

| Order No. | Design | 9600 LOC-LINE | Set contents |
|---|---|---|---|
| 0004 | 27 pcs | 90.70 | 6 7-hose elements à 105 mm<br>2 NPT thread connections, 1/8"<br>2 NPT thread connections, 1/4"<br>2 round nozzles, Ø 1.5 mm<br>2 round nozzles, Ø 3.0 mm<br>2 round nozzles, Ø 6.0 mm<br>1 wide nozzle, 25 mm<br>1 5-hole nozzle, Ø 1.5 mm<br>1 7-hole nozzle, Ø 1.0 mm<br>1 flat nozzle, 12 x 1.0 mm<br>1 flat nozzle, 12 x 1.5 mm<br>1 joint shower nozzle, 16 holes Ø 1.0 mm<br>1 clamp ring with screw<br>1 Y-junction<br>1 non-return valve, 1/4"<br>1 stopcock with segment connection<br>1 assembly pliers |

(W991)

## 90° hose elbows set 1/4"

LOC-LINE®

**Design:** Line system made of high-quality plastic granules. The system has a high compatibility with other systems.

**Application:** For cooling workpieces and tools on all machine tools, such as drilling, milling, turning, grinding, EDM and lots more.

| Order No. | Design | 9600 LOC-LINE | Set contents |
|---|---|---|---|
| 0100 | 8 pcs | 30.60 | 4 90° hose elbows<br>4 clamping rings |
| 0103 | 13 pcs | 40.60 | 2 90° hose elbows<br>4 clamping rings<br>2 extensions<br>1 NPT thread connection, 1/8"<br>1 NPT thread connection, 1/4"<br>1 round nozzle, Ø 1.5 mm<br>1 round nozzle, Ø 3.0 mm<br>1 round nozzle, Ø 6.0 mm |
| 0106 | 13 pcs | 40.60 | 4 90° hose elbows<br>4 clamping rings<br>1 NPT thread connection, 1/8"<br>1 NPT thread connection, 1/4"<br>1 round nozzle, Ø 1.5 mm<br>1 round nozzle, Ø 3.0 mm<br>1 round nozzle, Ø 6.0 mm |

(W991)

9600 0100

9600 0103

9600 0106

## Individual and supplementary components 1/4"

LOC-LINE®

| Order No. | Design | 9600 LOC-LINE | Dimensions | Packaging Piece | |
|---|---|---|---|---|---|
| 0006 | Segment hose (10 joint pieces) | 9.00 | 147 mm | 2 | |
| 0007 | Segment hose | 42.00 | 1.5 m | 1 | |
| 0008 | Hose elbows 90° | 19.45 | 70 mm | 4 | |
| 0009 | Ring system (15 segments + 1 screw cap) | 38.10 | 446 mm | 1 | |
| 0011 | Round nozzle | 5.95 | Ø 1.5 mm | 4 | |
| 0016 | Round nozzle | 5.95 | Ø 3.0 mm | 4 | |
| 0021 | Round nozzle | 5.95 | Ø 6.0 mm | 4 | |
| 0026 | Flat nozzle | 8.95 | 25 mm | 2 | |
| 0031 | Grinding nozzle | 9.10 | 25 mm | 2 | |
| 0037 | Swivel nozzle | 18.60 | 16 holes Ø 1.0 mm | 2 | |
| 0038 | Swivel nozzle | 18.60 | 16 holes Ø 1.5 mm | 2 | |
| 0039 | Swivel nozzle | 20.50 | 20 holes Ø 2.0 mm | 2 | |
| 0036 | Connection nipple | 5.95 | R 1/8" | 4 | |
| 0041 | Connection nipple | 5.95 | R 1/4" | 4 | |
| 0046 | Y-junction | 8.95 | 1/4" | 2 | |
| 0051 | Joint hose stopcock | 14.75 | 1/4" | 2 | |
| 0056 | Stopcock with outside thread | 14.75 | 1/4" | 2 | |
| 0061 | Stopcock with internal thread | 14.75 | 1/4" | 2 | |
| 0066 | Non-return valve | 14.75 | 1/4" | 2 | |
| 0071 | Angle connection | 8.35 | 1/4" | 2 | |
| 0076 | T-connection | 9.60 | 1/4" | 2 | |
| 0088 | Clamping ring | 13.65 | 1/4" | 4 | |
| 0081 | Assembly pliers | 16.90 | 1/4" | 1 | |

(W991)

## Coolant hose set 1/2"

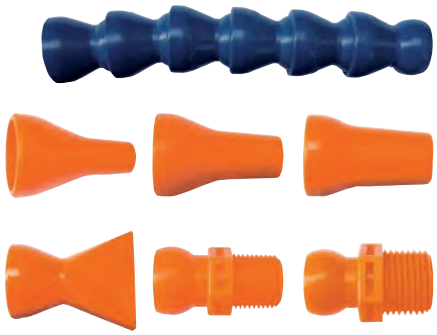
LOC-LINE

**Design:** Flexible line system made of high-quality plastic granules. The system has a high compatibility with other systems.

**Application:** For cooling workpieces and tools on all machine tools, such as drilling, milling, turning, grinding, EDM and lots more.

| Order No. | Design | 9605 LOC-LINE | Set contents |
|---|---|---|---|
| 0002 | 8 pcs | 13.25 | 2 segment hoses (each with 6 joints), 138 mm<br>1 flat nozzle, 32 mm wide<br>3 round nozzles, Ø 6.0; 9.0; 12.0 mm<br>2 connection nipples, R 3/8" und 1/2" |

(W991)



## Coolant hose set 1/2" Flexi Box

LOC-LINE

**Design:** Flexible line system made of high-quality plastic granules. The system has a high compatibility with other systems.
Supplied in stable plastic crate.

**Application:** For cooling workpieces and tools on all machine tools, such as drilling, milling, turning, grinding, EDM and lots more.

| Order No. | Design | 9605 LOC-LINE | Set contents |
|---|---|---|---|
| 0003 | 27 pcs | 127.00 | 6 segment hoses (each with 6 joints), 138 mm<br>2 NPT thread connectors , 3/8"<br>2 NPT thread connectors, 1/2"<br>2 round nozzles, Ø 6.0 mm<br>2 round nozzles, Ø 9.0 mm<br>2 round nozzles, Ø 12.0 mm<br>1 wide nozzle, 32 mm<br>1 wide nozzle, 63 mm<br>1 5-hole nozzle, Ø 3.2 mm<br>1 7-hole nozzle, Ø 2.0 mm<br>1 flat nozzle, 18 x 2.0 mm<br>1 flat nozzle, 18 x 3.2 mm<br>1 joint shower nozzle, 20 holes Ø 2.0 mm Ø<br>1 Y-junction<br>1 non-return valve, 1/2"<br>1 stopcock with segment connection<br>1 assembly pliers |

(W991)

## 90° hose elbows set 1/2"

LOC-LINE

**Design:** Line system made of high-quality plastic granules. The system has a high compatibility with other systems.

**Application:** For cooling workpieces and tools on all machine tools, such as drilling, milling, turning, grinding, EDM and lots more.

| Order No. | Design | 9605 LOC-LINE | Set contents |
|---|---|---|---|
| 0100 | 8 pcs | 39.10 | 4 90° hose elbows<br>4 clamping rings |
| 0103 | 13 pcs | 47.50 | 2 90° hose elbows<br>4 clamping rings<br>2 extensions<br>1 NPT thread connection, 3/8"<br>1 NPT thread connection, 1/2"<br>1 round nozzle, Ø 6.0 mm<br>1 round nozzle, Ø 9.0 mm<br>1 round nozzle, Ø 12.0 mm |
| 0106 | 13 pcs | 47.50 | 4 90° hose elbows<br>4 clamping rings<br>1 NPT thread connection, 3/8"<br>1 NPT thread connection, 1/2"<br>1 round nozzle, Ø 6.0 mm<br>1 round nozzle, Ø 9.0 mm<br>1 round nozzle, Ø 12.0 mm |

(W991)

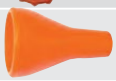
9605 0100

9605 0103

9605 0106

## Individual and supplementary components 1/2"

LOC-LINE®

| Order No. | Description | 9605 LOC-LINE | Dimensions | Packaging Piece | |
|---|---|---|---|---|---|
| 0006 | Segment hose (6 joint pieces) | 11.30 | 138 mm | 2 | |
| 0007 | Segment hose | 54.50 | 1.5 m | 1 | |
| 0008 | Hose elbows 90° | 23.70 | 70 mm | 4 | |
| 0009 | Ring system (15 segments + 1 screw cap) | 45.70 | 619 mm | 1 | |
| 0011 | Round nozzle | 7.00 | Ø 6.0 mm | 4 |  |
| 0016 | Round nozzle | 7.00 | Ø 9.0 mm | 4 | |
| 0021 | Round nozzle | 7.00 | Ø 12.0 mm | 4 | |
| 0026 | Flat nozzle | 10.85 | 32 mm | 2 | |
| 0036 | Flat nozzle | 10.90 | 63 mm | 2 | |
| 0031 | Grinding nozzle | 12.15 | 42 mm | 2 | |
| 0038 | Swivel nozzle | 23.10 | 20 holes Ø 2.0 mm | 2 | |
| 0041 | Connection nipple | 7.00 | R 3/8" | 4 | |
| 0046 | Connection nipple | 7.00 | R 1/2" | 4 | |
| 0051 | Y-junction (reduction) | 10.85 | 1/2" to 1/4" | 2 | |
| 0056 | Y-junction | 10.85 | 1/2" | 2 | |
| 0061 | Reducer | 7.55 | 1/2" to 1/4" | 2 | |
| 0066 | Joint hose stopcock | 20.00 | 1/2" | 2 | |
| 0071 | Stopcock with outside thread | 20.00 | 1/2" | 2 | |
| 0076 | Stopcock with internal thread | 20.00 | 1/2" | 2 | |
| 0078 | Non-return valve | 28.40 | 1/2" | 2 | |
| 0081 | Angle connection | 10.25 | 1/2" | 2 | |
| 0086 | T-connection | 11.50 | 1/2" | 2 | |
| 0088 | Clamping ring with TORX® screw | 17.30 | 1/2" | 4 | |
| 0091 | Assembly pliers | 18.10 | 1/2" | 1 | |

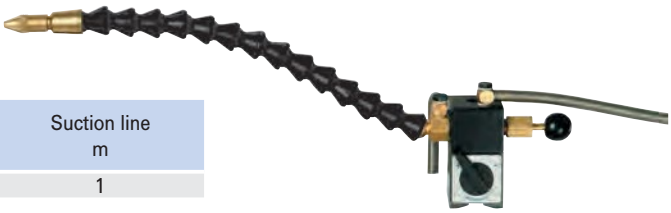
(W991)

## Simple spray system Jetspray

**Design:** Coolant spray system with LOC-LINE segment hose, compressed air line, suction line for coolant, control valve and a strong magnetic clamp, which can be deactivated, with V-shaped base for affixing to surfaces, including uneven surfaces. Via the control unit, the amount of refrigerant and air supply can be set separately. This allows for maximum lubrication and extended tool life with minimal coolant needed. Supplied in 3 l canister with screw top

**Application:** For cooling workpieces and tools on all machine tools, such as drilling, milling, turning, grinding, EDM and lots more.

JETSPRAY Minimalmengen-Schmier-System



| Order No. | Segment hose mm | 9600 JETSPRAY | Compressed air hose m | Suction line m |
|---|---|---|---|---|
| 1200 | 203 | 249.00 (W991) | 1 | 1 |

## Swarfhook

**Design:** Ergonomic 2-component handle with fixed shield and an angled tip.

**Application:** To remove long swarf. The negative angle allows for the safe removal of shavings.

HOOKY Spänehaken

| Order No. | Length mm | 9608 HOOKY Spänehaken |
|---|---|---|
| 0301 | 300 | 18.10 |
| 0501 | 500 | 19.60 (W991) |

## Swarfhook set

**Design:** Ergonomic 2-component handle with fixed shield, angled tip, and shavings slider.

**Application:** To remove long swarf. The swarf hook is available with a shavings slider. The version makes it possible to remove chips, tools and lots more from the workspace without risk of injury.

HOOKY VERSAL

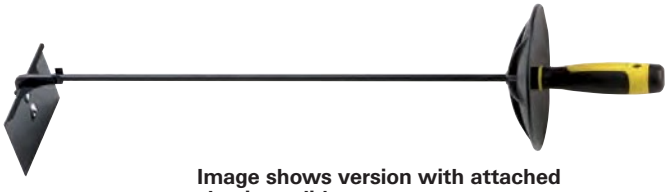


**Image shows version with attached shavings slider.**

| Order No. | Design | 9608 HOOKY VERSAL | Set contents |
|---|---|---|---|
| 1000 | 4 pcs | 27.10 (W991) | 1 handle, 100 mm<br>1 chip hook, 200 mm<br>1 extension, 200 mm<br>1 shavings slider |

## Magnetic swarf lifter

**Design:** Strong, moveable magnet as a rust-free round bar.

**Application:** For the safe and thorough removal of metal shavings.

ALFRA

| Order No. | Length mm | 9608 ALFRA |
|---|---|---|
| 0100 | 400 | 45.30 (W100) |

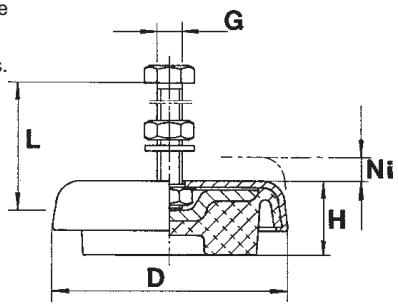
## Machine positioning element LEVEL-MOUNT®

**Design:** Elastomer body of synthetic rubber, oil and ageing resistant, outer cap of metal, yellow powder coated, pressure plate made of ductile iron, screw made of galvanised steel.

**Application:** For the flexible and anchor-free set-up of machines and presses.

**Note:** The load values listed in the table are reference values , which were determined from the viewpoint of good stability and anchor free installation of machines.

**Selecting the right element:**
Determine load per element (machine weight: attachment points),
determine type of machine,
select elements according to the table below,
compare screw size with receiving hole.



| Order No. | | 0600 | 2000 | 4000 | 5500 | 8000 |
|---|---|---|---|---|---|---|
| **Load per element** | kg | **220–600** | **420–2000** | **1000–4000** | **2000–5500** | **3000–8000** |
| **9650** EFFBE | | **28.80** | **55.30** | **81.90** | **148.50** | **245.00** |
| Model | | LM 1-11 | LM 3-33 | LM 5-55 | LM 6-66 | LM 7-77 |
| Ø D | mm | 80 | 120 | 160 | 185 | 241 |
| Height H | mm | 25 | 32 | 35 | 39 | 54 |
| Thread Ø G | | M10 | M12 | M16 x 1.5 | M20 x 1.5 | M24 x 1.5 |
| Standard screw length L | mm | 80 | 90 | 100 | 120 | 140 |
| Levelling height Ni | mm | 15 | 20 | 20 | 20 | 20 |
| Max. machine foot thickness | mm | 43 | 44 | 44 | 58 | 70 |
| Weight | kg | 0.4 | 1.1 | 2.2 | 4.0 | 8.0 |

(W986)

**Load per element:**

| | | | | | |
|---|---|---|---|---|---|
| presses in general to stroke rate 110/min | 450 kg | 1000 kg | 2000 kg | 3500 kg | 6500 kg |
| Lathes | 220 kg | 420 kg | 1000 kg | 2000 kg | 3000 kg |
| Milling machines | 300 kg | 600 kg | 1500 kg | 2800 kg | 3600 kg |
| Surface grinders | 220 kg | 420 kg | 1000 kg | 2000 kg | 3000 kg |
| General machinery | 480 kg | 1200 kg | 3000 kg | 4000 kg | 7200 kg |
| static minimum load | 600 kg | 2000 kg | 4000 kg | 5500 kg | 8000 kg |

## EPA insulating boards LEVEL-MOUNT®

NEW

**Design:** Elastomer mould plate made of nitrile butadiene rubber, resistant to oil and ageing. Non-slip, positioning with stop rods.

**Application:** Anchor-free installation of machines and devices without fastening possibilities.

| Order No. | Model | 9651 EFFBE | Dimension mm | Load per element kg |
|---|---|---|---|---|
| 0750 | EPA 7 | 15.30 | 70 x 70 x 13 | 750 |
| 1500 | EPA 10 | 21.10 | 100 x 100 x 13 | 1500 |
| | | (W986) | | |

## High-pressure push pump

**Design:** Made of steel with special surface finish and removable tube. Delivery with pointed and hollow mouthpiece, M10 x 1.

**Application:** Suitable for fat.

| Order No. | Nominal content ml | 9540 PRESSOL |
|---|---|---|
| 0080 | 80 | 8.60 |
| 0150 | 150 | 10.60 |
| 0300 | 300 | 11.75 |
| | | (W983) |

## Suction and pressure sprayer

**Design:** Made of steel, galvanised, with zinc cover Delivery with transparent PVC flex hose 350 mm.

**Application:** For oils up to SAE 90, petroleum, heating oil and diesel.

| Order No. | Nominal content ml | 9542 PRESSOL |
|---|---|---|
| 0500 | 500 | 11.10 |
| | | (W983) |

## Hand lever grease gun easyFILL 400

NEW

PRESSOL

**Design:** Similar to DIN 1283. Made of steel, galvanised, for use in harsh environments, wall thickness 1 mm. Pump piston with precision fit to the cylinder (no lubrication). Suitable for 400 g grease cartridge, in line with DIN 1284, grease filler valve (Order No. 9582), or loose grease. Processes greases up to min. 10 °C. Delivery with armoured hose M10 x 1, 11 x 300 mm and mouthpiece, 4 BA, M10 x 1 and 10 grease follower pistons.

**Note:** No spring mechanism required. Simply push the cartridge in, start the grease follower pistons and begin. The vacuum in the grease press button causes the pistons to move upwards independently. The variable stroke principle means that the grease gun requires minimum movement of the lever. For multi-purpose grease see (Order No. 9814 or 9816).

| Order No. | Nominal content ml | 9550 PRESSOL | Suitable for consistency class NLGI | Dimensions L x W x H mm | Pressure capacity bar |
|---|---|---|---|---|---|
| 0400 | 400 | 29.40 (W983) | 2 | 330 x 140 x 66 | 400 |

## Accessories for hand lever grease gun easyFILL 400

NEW

| Order No. | Design | 9550 PRESSOL |
|---|---|---|
| 0405 | Grease follower piston for 400 g cartridges | 0.28 |
| 0410 | Adapter for filling 400 g cartridges | 13.45 (W983) |

9550 0405

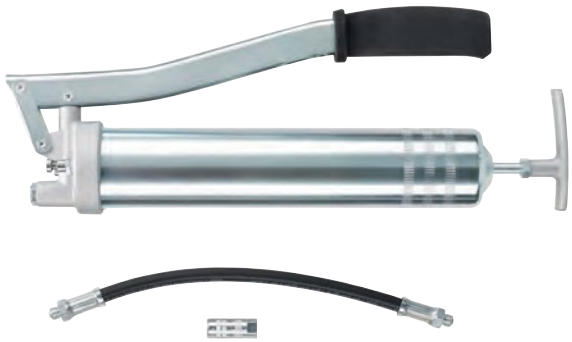
9550 0410

## Hand lever grease gun PRELIxx PRO

PRESSOL

**Design:** DIN 1283. Made of steel, galvanised, for use in harsh environments, wall thickness 1 mm. Push rod actuation via T-handle. Cuff with tight fit for loose grease or cartridge. Pump piston with precision fit to the cylinder (no lubrication). Suitable for 400 g grease cartridge, DIN 1284, grease filler valve (Order No. 9582), or loose grease. Delivery with armoured hose M10 x 1, 11 x 300 mm and mouthpiece, 4 BA, M10 x 1.

**Note:** For multi-purpose grease see (order no. 9814 or 9816).



| Order No. | Nominal content ml | 9550 PRESSOL | Suitable for consistency class NLGI | Dimensions L x W x H mm | Pressure capacity bar |
|---|---|---|---|---|---|
| 0500 | 500 | 43.50 (W983) | 000–3 | 395 x 140 x 66 | 600 |

## Hand lever grease gun

format professional quality

**Design:** DIN 1283. Made of steel, galvanised, for use in harsh environments, wall thickness 1 mm. Push rod actuation via L-handle. Cuff with tight fit for loose grease or cartridge. Pump piston with precision fit to the cylinder (no lubrication). Suitable for 400 g grease cartridge, DIN 1284, grease filler valve (Order No. 9582), or loose grease. Delivery with armoured hose M10 x 1, 11 x 300 mm and mouthpiece, 4 BA, M10 x 1.

**Note:** For multi-purpose grease see (order no. 9814 or 9816).

| Order No. | Nominal content ml | 9543 format | Suitable for consistency class NLGI | Dimensions L x W x H mm | Pressure capacity bar |
|---|---|---|---|---|---|
| 0500 | 500 | 26.30 (W982) | 000–3 | 395 x 140 x 66 | 600 |

## Accessories for hand lever grease gun

9549 0010

9549 0015

9549 0020

9549 0005 + 9549 0008

| Order No. | Design | 9549 format | |
|---|---|---|---|
| 0005 | Reinforced hose M10 x 1, 300 mm, rupture pressure 900 bar, DIN 1283 | 4.40 | |
| 0008 | Reinforced hose M10 x 1, 500 mm, rupture pressure 900 bar, DIN 1283 | 4.54 | |
| 0010 | Hydraulic connector M10 x 1, SW 13, Ø 15 mm | 1.48 | |
| 0015 | Sliding coupling M10 x 1 for flat grease nipple 16 mm | 3.74 | |
| 0020 | Sliding coupling M10 x 1 for flat grease nipple 22 mm | 12.20 | |
| 0025 | Nozzle tube M10 x 1, curved, with hollow mouthpiece | 1.52 | |
| 0030 | Nozzle tube M10 x 1, curved, with pointed mouthpiece | 1.40 | (W982) |

9549 0025

9549 0030

## Hand pump 750 DW

**Design:** The shell is made of aluminium and, due to the use of special slip rings, this hand pump is very smooth and highly absorbent. It has a suction hose with fabric Ø 16 x 10 mm and a clear outlet hose Ø 21 x 16 mm.

**Application:** This hand pump is doubly effective, because each stroke sucks and fills. It is suitable for heating oil, mineral, synthetic and biological oils, coolants, antifreeze, petroleum and lots more.

| Order No. | Content ml | 9537 reilang | Shell Ø mm | Weight g |
|---|---|---|---|---|
| 0720 | 720 | 74.70 (W958) | 60 | 882 |

## Universal hand pump 750 UV

**Design:** The shell is made of aluminium, and due to the use of special slip rings this hand pump is very smooth and absorbent. Intake pipes can be installed by choice.

**Application:** With this hand pump a complete emptying is possible. Suitable for all Suitable for all liquids which do not attack aluminium and brass.

| Order No. | Content ml | 9538 reilang | Shell Ø mm | Weight g |
|---|---|---|---|---|
| 0720 | 720 | 50.00 (W958) | 60 | 630 |

## Straight tubes for universal hand pump 750 UV

**Design:** Straight aluminium tube with wing nut and gasket.

| Order No. | Length mm | 9538 reilang | Outside Ø mm |
|---|---|---|---|
| 0005 | 200 | 6.05 | 12 |
| 0010 | 300 | 6.15 (W958) | 12 |

Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Flelxible tubes for universal hand pump 750 UV

**Design:** Flexible metal hose with spout Ø 10 x 15 mm, wing nut and gasket.

| Order No. | Length mm | 9538 |
|---|---|---|
| 0015 | 250 | 10.70 |
| 0020 | 600 | 24.50 |
| | | (W958) |

## Angled tube for universal hand pump 750 UV

**Design:** 45° angled aluminium tube with wing nut and gasket.

| Order No. | Length mm | 9538 | Outside Ø mm |
|---|---|---|---|
| 0025 | 250 | 4.46 (W958) | 10 |

## Tool bag oiler

**Design:** Canister made of polyethylene, with brass spray wand and twist lock at the top.

**Application:** Suitable for oil, acid and fuels.

| Order No. | Nominal content ml | 9551 | Tube length mm |
|---|---|---|---|
| 0010 | 50 | 3.54 (W983) | 48 |

## Plastic oiler

**Design:** Canister made of polyethylene, with **removable** brass spray wand and twist lock at the top.

**Application:** Suitable for oil, acid and fuels.

| Order No. | Nominal content ml | 9553 | Tube length mm |
|---|---|---|---|
| 0125 | 125 | 2.88 | 115 |
| 0250 | 250 | 3.08 | 145 |
| 0500 | 500 | 3.13 (W983) | 180 |

## Oil spray can

**Design:** Slight raising of the lever releases drops of oil. The gravity-guided, ball-bearing-supported suction lance offers almost complete emptying of the container.

**Application:** Suitable for high and low viscose oils and synthetic lubricants. Not suitable for aggressive oils.

**9555** Container made of polyethylene, with simple-acting brass pressure pump.

**9552** Container made of die-cast zinc. It is possible to oil in almost any position thanks to the double-acting brass pressure pump.

| Order No. | Nominal content ml | 9555 | 9552 | Tube length mm |
|---|---|---|---|---|
| 0003 | 200 | 9.65 | 16.90 | 135 |
| 0002 | 300 | 9.95 | 17.60 | 165 |
| 0001 | 500 | 11.80 (W982) | 19.40 (W982) | 165 |

9555 9552

## Mercury oiler

**Design:** Double pump comprises one main pump and one pump head. It is possible to oil in almost any position thanks to the double-acting brass pressure pump. The gravity-guided, rotating suction pad provides a residue-free emptying of the tank. The pump head offers complete oiling when used head-first.

**Application:** Suitable for high and low viscose oils and synthetic lubricants. Not suitable for aggressive oils.

**9544** Container made of polyethylene.

**9539** Container made of aluminium.

| Order No. | Nominal content ml | 9544 | 9539 | Tube length mm |
|---|---|---|---|---|
| 0003 | 200 | 21.60 | 28.40 | 130 |
| 0002 | 300 | 23.50 | 30.20 | 130 |
| 0001 | 500 | 27.50 (W958) | 35.90 (W958) | 130 |

9544 9539

## Liquid sprayer

**Design:** The high pressure of 50 bar and the precision nozzle allow for a uniform spray pattern, with simple-acting brass pressure pump. Unlike with spray nozzles, the liquid sprayer does not use propellant or pressurised air.

**Applications:** Suitable for liquids that are compatible with aluminium, polyethylene and brass.

**9547** Container made of polyethylene.

**9545** Container made of aluminium.

| Order No. | Nominal content ml | 9547 | 9545 | Tube length mm |
|---|---|---|---|---|
| 0002 | 300 | 21.60 (W958) | 28.40 (W958) | 80 |

9547 9545

## Industrial atomiser

**Design:** Due to the nickel-plated precision pump and stainless steel ball valve this micro-atomiser is very resistant. The spray angle is adjustable from spray mist to a needle jet. With simple-acting brass pressure pump. Unlike with spray nozzles, the liquid sprayer does not use propellant or pressurised air.

**Applications:** Suitable for liquids that are compatible with aluminium, polyethylene and brass.

**9554** Container made of polyethylene.

**9548** Container made of aluminium.

**9559** Container made of aluminium, **especially for brake cleaners.**

| Order No. | Nominal content ml | 9554 | 9548 | 9559 | Tube length mm |
|---|---|---|---|---|---|
| 0002 | 300 | 28.30 | 34.90 | – | 80 |
| 0005 | 500 | – (W958) | – (W958) | 39.20 (W958) | 80 |

9554 9548 9559

## Brush oiler plastic

NEW

**Design:** Canister made of oil polyethylene. Trapped oiler with O-ring seal and simple brass dip tube.

**Application:** Suitable for oils, for cooling drills and lubricating chains.

| Order No. | Nominal content ml | 9556 | Brush Ø mm | Tube length mm |
|---|---|---|---|---|
| 0001 | 250 | 8.20 (W958) | 10 | 130 |

## Brush oiler plastic

**Design:** Container made of polyethylene, with simple-acting brass pressure pump.

**Application:** The brush allows for the even lubrication of surfaces and chains. Suitable for all high and low viscose oils and chain lubricants.

| Order No. | Design | 9556 | Nominal content ml | Brush Ø mm | Tube length mm |
|---|---|---|---|---|---|
| 0002 | Brush oiler | 23.70 | 300 | 20 | 130 |
| 1000 | Brush with plastic fitting | 7.70 (W958) | – | 20 | – |

## Industrial atomiser

**Design:** Container made of polyethylene, with an adjustable plastic nozzle. The spray angle is adjustable from spray mist to a needle jet.

**Application:** For chemicals, detergents, solvents and cleaning agents. Not suitable for acetone, glycol, ammonia, brake cleaner and acids, e.g. formic and acetic acid.

**Note:** For industry atomiser see (Order No. 9802 or 9804).

| Order No. | Nominal content ml | 9561 |
|---|---|---|
| 0750 | 750 | 7.35 (W983) |

## Industrial atomiser

NEW

**Design:** Container made of polyethylene, with an adjustable plastic nozzle. The spray angle is adjustable from spray mist to a needle jet. Atomiser head with double stroke, **press once, spray twice.** Flexible suction hose allows almost residue-free emptying at an angle of 0° to 180°.

**Application:** For chemicals, detergents, solvents and cleaning agents.

| Order No. | Nominal content ml | 9561 | Colour |
|---|---|---|---|
| 1750 | 750 | 13.25 | red |
| 2750 | 750 | 13.25 (W983) | black |

## Industrial atomiser

**Design:** Container made of polyethylene, with an adjustable plastic nozzle. The spray angle is adjustable from spray mist to a needle jet. Suction and spray system allows almost residue-free emptying at an angle of 0° to 360°.

**Application:** Suitable for aggressive liquids in industrial use.

| Order No. | Content ml | 9557 |
|---|---|---|
| 0500 | 500 | 9.70 (W958) |

## Spray bottle

NEW

**Design:** Container made of aluminium, two-part construction for easy cleaning. With viton seal and safety valve. Easy filling through bottle neck or low part. The valve in the base is solely for filling with compressed air, max. 8 bar. Unlike with spray nozzles, the liquid sprayer does not use propellant. Delivery with short spray nozzle for spray mist and longer spray nozzle for needle jet.

**Application:** For use with multi-functional sprays, e.g. penetrating oil, rust solvent and wheel rim and brake cleaner.

| Order No. | Content ml | 9571 |
|---|---|---|
| 0200 | 200 | 62.55 (W529) |

## Industrial atomiser SPRAYFIxx

NEW

PRESSOL

**Design:** Canister made of polyethylene with scale, viton® FKM seal and INOX springs. Manual pressurising with combined over-pressure and bleed valve. **Colour-coding on canister and press button makes it easier to use the right media.**

**9560 0005** Regulating nozzle with plastic adjustment nut.
Suitable for solvents (acetone-free), brake cleaners (acetone-free), rust protection, impregnation, mould oils, parting agents, wallpaper stripper and water.

**9560 0010** With jet spray nozzle 110°.
Suitable for low-viscose mineral oils, rust protection, corrosion protection, impregnation, contact spray, mould oil, parting agents and water.

**9560 0015** With jet spray nozzle 110°.
Suitable for diluted acids and detergents (PH value 1–7) and water.

| Order No. | Content ml | 9560 PRESSOL | 9560 PRESSOL | 9560 PRESSOL | Colour system | |
|---|---|---|---|---|---|---|
| 0005 | 1500 | 26.40 | – | – | black | ■ |
| 0010 | 1500 | – | 23.70 | – | grey | ■ |
| 0015 | 1500 | – | – | 25.50 | red | ■ |
| | | (W983) | (W983) | (W983) | | |

## Oil storage can tin plate

PRESSOL

**Design:** Made of tin plate, with hinged lid, non-detachable tube closure, strong carrying handle, double flanged bottom and welded seams.

| Order No. | Nominal content l | 9564 PRESSOL |
|---|---|---|
| 0003 | 3 | 30.40 |
| 0005 | 5 | 32.10 |
| 0010 | 10 | 33.00 (W983) |

## Plastic fuel canister

hünersdorff

**Design:** Sturdy and impact-insensitive canisters made of polyethylene. *With child safety lock and spout integrated into canister body. **TÜV-tested, with UN approval in line with ADR/GGVSEB.** Delivery with spout.

**Application:** For all liquid fuels (only for packing group 2 of the ADR/RID).

9565 0015

9565 0500

9565 1000

| Order No. | Nominal content l | 9565 hünersdorff | Dimensions mm | Empty weight g |
|---|---|---|---|---|
| 0500 | 5 | 7.80 | 265 x 147 x 247 | 565 |
| 1000 | 10 | 14.85 | 350 x 165 x 310 | 750 |
| 2000 | 20 | 20.70 | 350 x 165 x 495 | 1250 |
| 0015 | Outlet pipe for diesel | 3.34 (W983) | – | 27 |

9565 2000

## Sheet steel fuel canister

**Design:** Sturdy canister with bayonet connection, made of powder-coated sheet steel, with inner coating resistant to petrol. Spout with integrated vent. **TÜV tested, with UN/BAM approval.**

**Application:** For liquid fuels of all types

9563 0005 + 0015

9563 0010

9563 2000

| Order No. | Design | 9563 | Content l |
|---|---|---|---|
| 0500 | Steel sheet canister | 19.55 NEW | 5 |
| 1000 | Steel sheet canister | 22.10 NEW | 10 |
| 2000 | Steel sheet canister | 26.00 | 20 |
| 0005 | Spare seal for 10/20 l canister | 1.60 | – |
| 0010 | Pouring spout, flexible | 10.25 | – |
| 0015 | Spare seal for pouring spout | 1.60 (W995) | – |

## Adhesive label for petrol and diesel fuel

NEW

**Design:** All fuel canisters must be labelled by the end user to comply with GHS/CLP regulation. Delivery with labels for petrol and diesel fuel, flame and environment danger symbols.

**Application:** For labelling hazardous goods containers, with safety information and danger symbols.

| Order No. | Label dimensions mm | 9563 hünersdorff |
|---|---|---|
| 0020 | 100 x 100 | 2.12 (W983) |

## Measuring jug plastic

**Design:** Canister made of polyethylene, with lid, spout funnel and scale.

**Application:** Suitable for oil, acid and fuels.

| Order No. | Nominal content l | 9566 PRESSOL |
|---|---|---|
| 0010 | 1 | 9.40 |
| 0020 | 2 | 10.75 |
| 0030 | 3 | 13.40 |
| 0050 | 5 | 18.10 (W983) |

## Measuring jug plastic

**Design:** Made of polyethylene, food safe, transparent and with stamped scale. With overflow brim for safe pouring.

**Application:** Suitable for oils and acids.

| Order No. | Nominal content l | 9562 PRESSOL |
|---|---|---|
| 0010 | 1 | 4.14 |
| 0020 | 2 | 7.70 |
| 0030 | 3 | 10.40 |
| 0050 | 5 | 15.40 (W983) |

## Measuring jug tin plate

**Design:** Made of tin plate, stable, with high overflow edge for safe pouring.

**9568** Rigid spout.

**9569** Flexible spout.

| Order No. | Nominal content l | 9568 PRESSOL | 9569 PRESSOL |
|---|---|---|---|
| 0005 | 0.5 | 5.70 | – |
| 0010 | 1 | 6.95 | 12.55 |
| 0020 | 2 | 8.85 (W983) | 13.60 (W983) |

9569



9568

## Multi-purpose tub

**Design:** Made of polyethylene with all-round overflow edge, output tap for the safe and clean pouring of the liquid, and three handles for easy carrying and pouring.

**Application:** For changing oil and for cleaning parts.

| Order No. | Nominal content l | 9571 HAZET |
|---|---|---|
| 0016 | 16 | 35.75 (W529) |

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## Plastic funnel

**Design:** Made of polyethylene, high density.

**Application:** Suitable for oils, acids and fuels.

**9570** 0050–0260 With rigid, straight spout.

**9570** 0160 With rigid, straight spout, high overflow edge, handle and thread.

**9570** 0200 + 0250 With rigid, straight spout, high overflow edge, with replaceable fine sieve made of brass.

**9579** With flexible spout and handle, suitable for CAT automobiles.

**9580** With angled, rigid spout, the tube tip can be cut off, with replaceable fine sieve made of brass.

PRESSOL

| Order No. | Ø mm | 9570 PRESSOL | 9579 PRESSOL | 9580 PRESSOL | Nominal content l |
|---|---|---|---|---|---|
| 0050 | 50 | 0.64 | – | – | 0.05 |
| 0075 | 75 | 0.74 | – | – | 0.09 |
| 0100 | 100 | 0.74 | – | – | 0.25 |
| 0120 | 120 | 0.88 | – | – | 0.27 |
| 0150 | 150 | 1.48 | – | – | 0.70 |
| 0160 | 160 | 4.30 | 4.63 | 9.80 | 1.30 |
| 0200 | 200 | 3.85 | – | – | 2.90 |
| 0250 | 250 | 5.35 | – | – | 3.20 |
| 0260 | 50; 75; 100; 120 | 2.50 (W983) | – (W983) | – (W983) | 0.05; 0.09; 0.25; 0.27 |

## Funnel

**Design:** Made of tin plate with plastic tube, easy-grip handle, replacement sieve, high top edge and air grooves.

**Application:** Suitable for oils and diesel fuels.

PRESSOL

| Order No. | Ø mm | 9573 PRESSOL | Nominal content l |
|---|---|---|---|
| 0160 | 160 | 7.20 | 1.2 |
| 0200 | 200 | 12.35 (W983) | 3.2 |

## Flexible spout

**Design:** Made of metal and polyethylene.

**Application:** Suitable for oil, acid and fuels.

PRESSOL

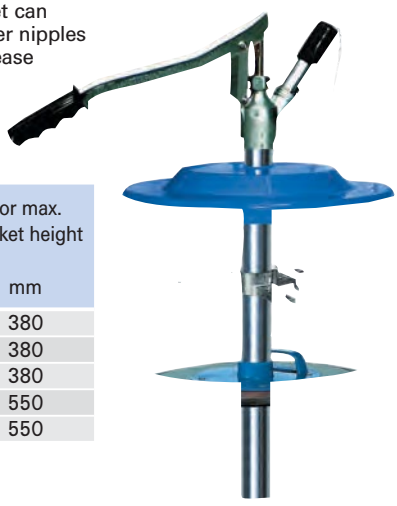
| Order No. | Length mm | 9576 PRESSOL |
|---|---|---|
| 0300 | 300 | 6.05 (W983) |

## Grease filler pump

**Design:** Due to the high sliding cover, the amount of grease which is still in the bucket can always be checked. The filling attachment is offset so that grease guns with offset filler nipples can be filled without issue. The large handles allows for convenient removal of the grease follower piston. Delivery with suction pipe, filler nipple M10 x 1 for converting grease guns by other manufacturers, and dust cap on the filling nozzle secured with a chain.

**Application:** For filling grease guns and pneumatic presses.

PRESSOL



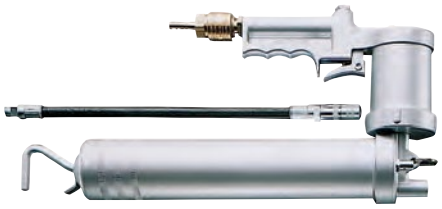
| Order No. | Suitable for bucket approx. kg | 9582 PRESSOL | Suitable for consistency class NLGI | For bucket inside Ø mm | For max. bucket height mm |
|---|---|---|---|---|---|
| 0005 | 5 | 99.30 | 000–2 | 180–210 | 380 |
| 0010 | 10 | 99.30 | 000–2 | 210–240 | 380 |
| 0015 | 15 | 101.50 | 000–2 | 240–270 | 380 |
| 0025 | 25 | 132.00 | 000–2 | 310–335 | 550 |
| 0050 | 50 | 139.00 (W990) | 000–2 | 365–385 | 550 |

## Compressed air grease

**Design:** Painted steel pipe press body, grease delivery at any opening angle of the hand lever. To fill with loose grease, 400 g grease cartridge according to DIN 1284 or grease filler valve (Order No. 9582). Connection thread M10 x 1, delivery with armoured hose 4-jaw connector.

**Note:** For multi-purpose grease see (order no. 9814 or 9816).

PRESSOL



| Order No. | Nominal content g | 9585 PRESSOL | Suitable for consistency class NLGI | Pressure transmission | rec. operating pressure bar |
|---|---|---|---|---|---|
| 0500 | 500 | 50.20 (W990) | 000–2 | 50:1 | 6 |

## Compressed air grease gun, automatic

**Design:** Painted steel pipe press body, continual grease delivery by means of compressed air motor. To fill with 400 g grease cartridge according to DIN 1284, grease filler valve (order no. 9582) or loose grease. Connecting thread M10 x 1. Delivery with armoured hose 11 x 500 mm, straight nozzle 150 mm and precision connector 4 BA, M10 x 1.

**Note:** For multi-purpose grease see (order no. 9814 or 9816).

PRESSOL

| Order No. | Nominal content g | 9586 PRESSOL | Suitable for consistency class NLGI | Pressure transmission | rec. operating pressure bar |
|---|---|---|---|---|---|
| 0500 | 500 | 93.40 (W990) | 000–2 | 50:1 | 6 |

## Grease pump

**Design:** With hand pump (pump length 530 mm), removable one-hand gun, sequencer piston and 1.5 m hose. One-hand gun 125 cc with nozzle and 4-jaw hydraulic connector with ball valve. The flow rate is 0.4 ccm per stroke. Connection thread M10 x 1.

PRESSOL

| Order No. | Suitable for bucket approx. kg | 9588 PRESSOL | Suitable for consistency class NLGI | For bucket inside Ø mm | For max. bucket height mm |
|---|---|---|---|---|---|
| 0005 | 5 | 143.50 | 000–2 | 180–210 | 380 |
| 0010 | 10 | 149.50 | 000–2 | 210–240 | 380 |
| 0015 | 15 | 151.00 (W990) | 000–2 | 240–270 | 380 |

## Compressed air lubricating equipment

**Design:** Mobile with trolley, with air motor and pump, removable grease gun, grease follower piston and 2 m high-pressure hose. Grease gun with nozzle tube and 4-jaw connector and Z-swivel joint, ball-bearing mounted. The pressure transmission is 50:1. Compressed air connection with plug nipple for Rectus coupling type 26, NW 7.2, flow rate 1100 g/min, 99 % container emptying.

**Application:** For use with compressors with 80 l/min and more with a recommended air pressure of 8 bar.

PRESSOL

| Order No. | Suitable for bucket approx. kg | 9591 PRESSOL | Suitable for consistency class NLGI | For bucket inside Ø mm | For max. bucket height mm |
|---|---|---|---|---|---|
| 0010 | 10 | 662.00 ◊ | 000–2 | 210–240 | 380 |
| 0015 | 15 | 675.00 ◊ | 000–2 | 240–270 | 380 |
| 0025 | 25 | 809.50 ◊ (W990) | 000–2 | 310–335 | 640 |



Articles marked ◊ are not held in stock, procurement is effected at short notice.

## Number punch

**Design: 9-piece set (0-9).** Made of high-quality special tool steel, **typeface according to DIN 1451.** Delivered as a set in a plastic box.

**Application:** For labelling and marking workpieces.

**9720** Satin matt, with **strength 600-800 N/mm².**

**9722** **Design according to DIN 7353.** With a strong shaft, **nickel-plated,** impact head induction hardened, with **strength up to 1200 N/mm².**

| Order No. | Font size mm | 9720 format | 9722 TURNUS |
|---|---|---|---|
| 0002 | 2 | 9.40 | 10.85 |
| 0003 | 3 | 9.60 | 11.55 |
| 0004 | 4 | 10.10 | 11.90 |
| 0005 | 5 | 11.15 | 13.05 |
| 0006 | 6 | 12.05 | 14.40 |
| 0008 | 8 | 16.60 | 19.70 |
| 0010 | 10 | 21.90 | 26.10 |
| 0012 | 12 | – | 31.40 |
| | | (W988) | (W985) |

9720 format professional quality

9722 TURNUS

## Letter punch

**Design: 27 pcs (A-Z in uppercase).** Made of high-quality special tool steel, **typeface according to DIN 1451.** Delivered as a set in a plastic box.

**Application:** For labelling and marking workpieces.

**9721** Satin matt, with **strength 600-800 N/mm².**

**9723** **Design according to DIN 7353.** With a strong shaft, **nickel-plated,** impact head induction hardened, with **strength up to 1200 N/mm².**

| Order No. | Font size mm | 9721 format | 9723 TURNUS |
|---|---|---|---|
| 0002 | 2 | 29.00 | 32.10 |
| 0003 | 3 | 29.70 | 34.20 |
| 0004 | 4 | 31.10 | 35.30 |
| 0005 | 5 | 34.50 | 38.60 |
| 0006 | 6 | 37.20 | 42.40 |
| 0008 | 8 | 51.30 | 58.90 |
| 0010 | 10 | 67.50 | 78.20 |
| 0012 | 12 | – | 93.80 |
| | | (W988) | (W985) |

9721 format professional quality

9723 TURNUS

## Interchangeable punch set

**Design:** Interchangeable numeral and letter punch (type styles), normal script 0-9 and A-Z. **Strength up to 1200 N/mm²** - depending on the number of types! With holder and precisely milled stamp-type mount. In the holder, several type styles can be used side by side.

**Application:** For labelling and marking workpieces.

**Scope of delivery:** AAA BB CC DD EEEE FF GG HH III JJ KK LLL MM NNN OOO PP Q RRR SSS TT UUU V WW XX Y Z & // – .. ,, 1111 2222 333 4444 555 666 777 888 999 00 ++ 10 x empty type styles, 1 x type style bracket, 1 x tweezers.

TURNUS

| Order No. | Font size mm | 9728 TURNUS | Design | Types/holder Piece |
|---|---|---|---|---|
| 0030 | 3 | 369.00 | 115 pcs | 10 |
| 0040 | 4 | 369.00 | 115 pcs | 10 |
| 0050 | 5* | 369.00 | 113 pcs | 8 |
| | | (W985) | | * With 8 empty type styles. |

## Engraver Vibroscript

**Design:** Maintenance-free and double-insulated, 230 V/50 Hz power consumption 9 W, short-range 15 min, 6000 rpm stylus vibrations. The engraving depth can be adjusted with the setting screw and are therefore tailored to the hardness of the material. Delivery with 2 m cable and hard metal stylus.

**Application:** For engraving on iron, steel, non-ferrous metals, stone, ceramics, glass, wood and lots more.

**Note:** When engraving in very hard materials or for larger engravings, we recommend using the diamond tip (Order No. 9724 0015).

| Order No. | Description | 9724 |
|---|---|---|
| 0005 | Engraving device complete | 108.50 |
| 0010 | Hard metal tip | 7.25 (W989) |

| Order No. | Description | 9724 |
|---|---|---|
| 0015 | Diamond tip | 72.60 |
| 0020 | Power cable, 2 m | 7.25 (W989) |

## Marking machine LabelManager 280

**Design:** Hand device with QWERTY keyboard. Easy operation, automatic tape cutter and firmer. Large, two-line graphics display, which also shows text effects used. 3 fonts, 7 font styles, 6 font sizes, 9-label memory, special characters, can print up to 10 copies of a label (DYMO® D1 labels with the widths 6, 9 and 12 mm in several colours). Simple text processing with the help of quick-access buttons. Can be connected to a PC or Mac® (compatible with Windows Vista®, Windows® 8, Windows® XP and Mac OS® v.10.5 or higher - only Intel®) via USB for individual design. Power supply via a li-ion battery.

**Scope of delivery:** Label maker, D1 tape, black on white, 12 mm, li-ion rechargeable battery and power cable.

| Order No. | Dimensions mm | 9729 DYMO |
|---|---|---|
| 0012 | 107.5 x 206 x 46.5 | 84.20 (W992) |

## Label maker DYMO LM 500TS

**Design:** Touch screen label maker, fast text input via computer-like **QWERTY keyboard**, easy operation, automatic tape cutter. Large, coloured touch screen with print preview for displaying and editing labels (DYMO® D1 labels with a width of 6, 9, 12, 19 and 24 mm). Can save settings and data for up to five different users and with memory for the last 15 printed labels, the 10 most often printed labels and for 10 label templates. 10 fonts, 32 font styles, 25 font sizes, 5 frames, 1 underline. Prints up to 5 lines of text (on 19 and 24 mm label width). With barcode print (UPC-E, Code-39, Code-128, EAN 13, EAN 8, UPC-A, QR Code) Can be connected to a PC or Mac® (compatible with Windows Vista®, Windows® 8, Windows® XP and Mac OS® v.10.5.8 or higher - only Intel) for individual design. Power supply via a li-ion battery.

**Scope of delivery:** Label maker, tape 24 mm (Order No. 9741 0020), software CD, manual and cable for USB connection, rechargeable battery pack.

| Order No. | 9734 DYMO |
|---|---|
| 0050 | 277.00 (W992) |

## Tape for script DYMO D1

**Design:** Tape cassette with self-adhesive, durable lettering tape. Tape length 7 m.

**Note:** Suitable for labelling machines LM 260 P (Order No. 9729) and LM 500TS (Order No. 9734).

**9735** **Tape width 12 mm.**

**9738** **Tape width 19 mm.**

**9741** **Tape width 24 mm.**

| Order No. | Script colour | 9735 DYMO | 9738 DYMO | 9741 DYMO | Tape colour |
|---|---|---|---|---|---|
| 0005 | black | 16.05 | – | – | transparent |
| 0010 | blue | 16.05 | – | – | transparent |
| 0015 | red | 16.05 | – | – | transparent |
| 0020 | black | 16.05 | – | – | white |
| 0025 | blue | 16.05 | – | – | white |
| 0030 | red | 16.05 (W992) | – (W992) | – (W992) | white |

| Order No. | Script colour | 9735 DYMO | 9738 DYMO | 9741 DYMO | Tape colour |
|---|---|---|---|---|---|
| 0035 | black | 16.05 | – | – | blue |
| 0040 | black | 16.05 | – | – | red |
| 0045 | black | 16.05 | – | – | yellow |
| 0050 | black | 16.05 | – | – | green |
| 0020 | black | – (W992) | 20.50 (W992) | 22.50 (W992) | white |

## Tool checks

**Design:** Made of brass, perforated, with beaded rim, without lettering.

| Order No. | Size ∅ mm | 9755 |
|---|---|---|
| 0005 | 27 | 1.69 (W996) |

Other materials, shapes and sizes with lettering available upon request.

## Carpenter's pencil

**Design:** Non-sharpened oval version, painted red and polished.

LYRA Germany

| Order No. | Length mm | 9758 LYRA Germany |
|---|---|---|
| 0180 | 180 | 0.99 |
| 0240 | 240 | 1.19 |
| 0300 | 300 | 1.41 (W996) |

## Chalk holder

**Design:** Octagonal plastic Shell with metal push mechanism.

**Application:** To hold chalks ∅ 11–12 mm.

LYRA Germany

| Order No. | 9759 LYRA Germany |
|---|---|
| 0005 | 9.90 (W996) |

## Marking chalk

**Design:** Hexagon and papered. Supplied in a carton à 12 pieces.

**Application:** For labelling wood, iron, rubber, cardboard, stone, fabric and lots more.

LYRA Germany

| Order No. | Colour | 9761 LYRA Germany | Dimension mm |
|---|---|---|---|
| 0006 | yellow | 10.00 | 120 x 12 |
| 0011 | red | 10.00 | 120 x 12 |
| 0016 | blue | 10.00 | 120 x 12 |
| 0021 | white | 10.00 (W996) | 120 x 12 |

## Blackboard chalk

**Design:** Square with paper and no point. Supplied in a carton à 12 pieces.

**Application:** For temporary marking of almost all materials, easy to remove.

LYRA Germany

| Order No. | Colour | 9764 LYRA Germany | Dimension mm |
|---|---|---|---|
| 0006 | white | 1.44 (W996) | 90 x 12 |

## Engineers chalk

**Design:** Square with neither paper nor point. Supplied in a carton à 100 pieces.

**Application:** For marking wood, steel, cast iron and rough surfaces, easy to remove.

LYRA Germany

| Order No. | Colour | 9767 LYRA Germany | Dimension mm |
|---|---|---|---|
| 0006 | white | 21.50 (W996) | 100 x 20 |



## Soapstone chalk

**Design:** Square with neither paper nor point. **Fireproof.** Supplied in a carton à 50 pieces.

**Application:** For writing on glowing iron, sheet and steel.

LYRA Germany

| Order No. | Dimension mm | 9770 LYRA Germany |
|---|---|---|
| 0006 | 100 x 10 | 14.25 (W996) |

## Deep-hole marker Pica-Dry®

**Design:** Removable graphite lead with tip Ø 2.8 mm, push mechanism for automatic lead replacement in the stainless steel tube, fail-safe and easy-to-hold grip softener with special fixing clip for one-handed use, integrated sharpener in the protector.

**Application:** For marking and writing on almost all material surfaces, whether dry or wet, smooth or coarse, dusty or oily.

| Order No. | Design | 9756 Pica | Colour |
|---|---|---|---|
| 0005 | Deep-hole marker | 9.25 | Graphite |
| 1005 | Replacement lead set, can be wiped clean (moist) | 5.40 | Graphite, yellow, red |
| 1010 | Replacement leads, waterproof | 5.40 | White, green, blue |
| 1015 | Replacement lead set, can be wiped clean (moist) | 6.95 | Graphite |
| 1020 | Replacement leads, waterproof | 6.95 NEW | white |
| | | (W996) | |

9756 0005

9756 1015

9756 1005

9756 1010

## Permanent marker edding

**Design:** Fast-drying, permanent, low-odour ink with no added toluene/xylene, smudge-proof and waterproof, lightproof and **refillable.**

**Application:** For marking on almost all materials including metal, glass and plastic.

**9762** **No. 1**
Replaceable wedge tip with aluminium shaft.

9762 0005

**9751** NEW **400**
Interchangeable round tip with plastic shaft.

9751 0005

**9763** **3000**
Interchangeable round tip with aluminium shaft.

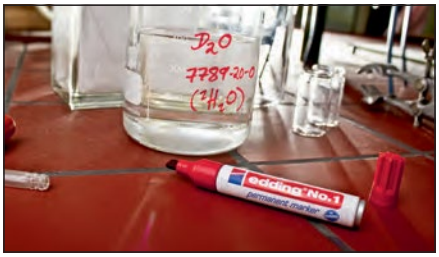
9763 0005

**9765** **retract 11**
Interchangeable round tip with plastic shaft. Push-button mechanism for one-handed operation. Delivery without lid, the special locking technology prevents drying of the market if the tip is retracted.

9765 0005

**9760** **800**
Replaceable wedge tip with aluminium shaft.

9760 0005




| Order No. | Colour | 9762 edding 1.0-1.5 mm | 9751 edding 1.0 mm | 9763 edding 1.5-3.0 mm | 9765 edding 1.5-3.0 mm | 9760 edding 4.0-12.0 mm | |
|---|---|---|---|---|---|---|---|
| 0005 | black | 1.81 | 2.05 | 2.09 | 2.68 | 5.15 | ■ |
| 0010 | red | 1.81 | 2.05 | 2.09 | 2.68 | 5.15 | ■ |
| 0015 | blue | 1.81 (W996) | 2.05 (W996) | 2.09 (W996) | – (W996) | – (W996) | ■ |

## Paint marker edding 950

**Design:** Highly permanent and opaque colour paste, fade resistant, smudge-proof and waterproof after drying. Heat resistant up to 300 °C. Lid with rotary mechanism.

**Application:** Especially suited to marking **rought surfaces, dirty materials** and **rusty metals,** even writes **underwater.**

| Order No. | Colour | 9766 edding 10.0 mm | |
|---|---|---|---|
| 0010 | red | 4.29 | |
| 0020 | yellow | 4.29 | |
| 0025 | white | 4.29 | |
| | | (W996) | |

## Borehole marker, edding 8850

**Design:** Very narrow nozzle, transparent cap, special permanent ink.

**Application:** For marking drill holes and other hard-to-reach places.

| Order No. | Colour | 9768 edding 0.7-1.0 mm | |
|---|---|---|---|
| 0006 | black | 3.77 | |
| | | (W996) | |

## Deep-hole marker Pica-Ink®

**Design:** Readjusting telescopic tip, up to **3-times** more writing thanks to abrasion protection on 7 mm of the fibre tip. Practical grip softener with special clip for one-handed use. Permanent ink can be removed with alcohol/spirit.

**Application:** For marking hard-to-reach places, writes on all dry surfaces.

9777 0005

| Order No. | Colour | 9777 Pica 1.5 mm | |
|---|---|---|---|
| 0005 | black | 5.45 | |
| 0010 | red | 5.45 | |
| | | (W996) | |

## UV marker edding 8280

**Design:** Round tip with aluminium shaft. Fast-drying, **special permanent ink that is only visible under UV light,** smudge- and waterproof.

**Application:** Particularly suitable for **covert identification and labelling** on almost all materials including metal, glass and plastic.

9751 0005

| Order No. | Colour | 9769 edding 1.5–3.0 mm |
|---|---|---|
| 0050 | clear | 4.22 |
| | | (W996) |

## Industrial permanent marker edding 8300

**Design:** Round tip with aluminium shaft. Fast-drying, highly permanent ink, smudge-, water-, light-proof.

**Application:** Ideal for writing on **slightly oily** and **dusty surfaces.**

| Order No. | Colour | 9771 edding 1.5-3.0 mm | |
|---|---|---|---|
| 0005 | black | 2.74 | |
| 0010 | red | 2.74 | |
| | | (W996) | |

## Cable marker set edding 8407

**Design:** A very fine round tip. Permanent, low-odour alcohol-based ink, smudge-resistant, waterproof and fade-resistant.

**Application:** Especially for very fine labelling, marking and labelling of cables. Also suitable for marking slides and plastic.

| Order No. | Colours | 9757 edding 0.3 mm | |
|---|---|---|---|
| 0400 | black, red, blue, green | 6.50 | |
| | | (W996) | |

## Industrial paint marker edding 8750

**Design:** Round tip with aluminium shaft. Quick-drying, highly permanent, paint-like pigment ink.

**Application:** Ideal for writing on slightly oily, dusty, dark or transparent surfaces.

| Order No. | Colour | 9772 edding 2.0-4.0 mm | |
|---|---|---|---|
| 0010 | red | 3.59 | |
| 0015 | blue | 3.59 | |
| 0020 | yellow | 3.59 | |
| 0025 | white | 3.59 | |
| 0030 | green | 3.59 NEW | |

(W996)

## Metal marker Stylmark®

NEW

**Design:** Steel ball tip. No added xylene, smudge- and waterproof, light-resistant. Tube made of aluminium. Marking temperature resistance up to 200 °C.

**Application:** Highly viscose non-drip paint suitable for overhead markings and on rough, oily, greasy, rusty, dirty and vertical surfaces.

| Order No. | Colour | 978A Markal | | Content ml |
|---|---|---|---|---|
| 0010 | red | 3.36 | | 50 |
| 0020 | yellow | 3.36 | | 50 |
| 0025 | white | 3.36 | | 50 |

(W996)

## Signal marker Gel

NEW

**Design:** Grip softener with special clip for one-handed use, with integrated sharpener in the protector. The perfect replacement for marker tubes, **1 Pica GEL replaces up to four 50 ml tubes.** Waterproof and light-resistant. Temperature-resistant to 1000 °C.

**Application:** For marking all smooth and rough surfaces, whether light or dark, inside or outside, even under water.

| Order No. | Colour | 978B Pica 2.0-8.0 mm | |
|---|---|---|---|
| 0005 | black | 6.00 | |
| 0010 | red | 6.00 | |
| 0020 | yellow | 6.00 | |
| 0025 | white | 6.00 | |

(W996)

## Zinc spray

**Design:** 95 % pure zinc, temperature resistant to +500 °C. Highly pigmented, 90 % zinc in dry film. Quick-drying, electrically conductive and can be varnished.

**Application:** Zinc primer for metallic substrates. Ideal for exhaust systems, manifolds, pipe elbows, heat exchangers, automotive repair and body work. Furthermore, suitable for repair of damaged hot-dip galvanizing, for corrosion protection of welded joints, steel buildings, steel doors, road barriers, smoke explorers and other thermally stressed parts.

| Order No. | Design | 9778 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 7.65 | 12 | Grey matte |

(W980)

## Zinc spray, light

**Design:** Temperature resistant to +500 °C. Quick-drying, electrically conductive and spot weldable.

**Application:** Suitable for all body work, for the repair of damaged hot-dip galvanising, as an intermediate layer in spot welding, as well as corrosion protection.

| Order No. | Design | 9781 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 7.15 | 12 | silver grey, bright, shiny |

(W980)

## Zinc Alu Spray

**Design:** Temperature resistant to +500 °C. Quick-drying, electrically conductive and can be painted over. Forms a tough, flexible, non-greasy protective film that can be welded.

**Application:** Primer for metallic substrates. Long-term protection for polished and electroplated iron workpieces, for repairs of damaged galvanised parts and for coating of welding and drilling.

| Order No. | Design | 9780 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 7.80 (W980) | 12 | Silver, shiny |

## Zinc dust colour

**Design:** The zinc dust paint consists of about 95% zinc and 5% resin. Zinc gives metal surfaces cathodic rust protection and protects by by means of resistant synthetic resin film. Dilute with trade resin, nitro or universal thinner, see (Order No. 9838 or 9840).

**Application:** Water-resistant, double protection against rust formation on metals. Ideal for chassis work, for repairing damaging zinc layers, for coating drill holes and welded areas, as conductive intermediate layer for spot welding, as a primer for water and weather-exposed systems, and for the protection of steel constructions, pipelines, ships, oil platforms, sea containers and lots more.

| Order No. | Design | 9782 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1800 | 800 g can | 18.10 (W980) | 12 | Grey matte |

## Aluminium spray 900

**Design:** Temperature resistant up to +800 °C, from 99.5% pure aluminium.

**Application:** Corrossion protection for all metal substrates. For wheels, exhausts and truck bodies as well as in air-conditioning and ventilation technology, for combustion turbines, piping, tanks and to achieve a colour match with the freshly galvanised surface after application of zinc spray.

| Order No. | Design | 9784 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 6.90 (W980) | 12 | silver, shiny (chrome effect) |

## Stainless steel spray

**Design:** Temperature resistant up to +300 °C, with high chemical resistance.

**Application:** Stainless steel primer for metallic substrates, protects against rust and is resistant to abrasion. For repairing damaged stainless steel parts.

| Order No. | Design | 9786 E-COLL | PU | Colour |
|---|---|---|---|---|
| 0400 | 400 ml spray can | 7.60 (W980) | 12 | anthracite |

## Primer spray

**Design:** With non-toxic pigments. Filling power, fast drying and paintable.

**Application:** Ideal corrosion protection with long-term effect: For metal, wood and plastics, as well as for priming after welding.

| Order No. | Design | 9788 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 7.10 (W980) | 12 | grey |

## Corrosion protection wax

**Design:** Temperature resistant from -30 °C to +90 °C, dropping point approx. 100 °C. Achieves 240 hours in the salt spray test (DIN 50 021).

**Application:** As a temporary corrosion protection for suitable components, such as on folds and surfaces on motor vehicles, construction machinery, agricultural implements and tools. Also suitable for interior preservation of pressure vessels.

| Order No. | Design | 9791 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 6.30 (W980) | 12 | clear |

## Silicone spray

**Design:** Solvent-free, temperature resistant from 0 °C to +180 °C.

**Application: The ideal mounting aid.** Forms a tremendously stable lubricating and protective film. Protects against moisture and rust. Lubricates, protects, impregnates and eliminates jamming, squeaking and sticking of workpieces. Therefore, for universal use as a release agent and anti blocking agent for paper, wood, printing and packaging industries as well as for the foam and textile processing, for the protective gas and electrode manual welding, as a release agent for plastics technology, for all thermoplastics and thermo sets and rubber (except silicone rubber) and as maintenance and care product for the automotive sector.

| Order No. | Design | 9794 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 3.66 (W980) | 12 | clear |

## Separating spray

**Design:** Silicone free.

**Application:** Protects the welding nozzle and acts as a blowing agent for protective gas and electric welding. Prevents sticking and burning on gas nozzle and workpiece surfaces. After treatment, the workpieces can be painted, electroplated, anodised, and burnished without any problem.

| Order No. | Design | 9792 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1400 | 400 ml spray can | 3.92 (W980) | 12 | clear |

## Rust primer

**Design:** Free of lead and chromate, with a resin base. Temperature-resistant to +80 °C. Quick drying and weather resistant. Largely resistant against oils and petrols, with good adhesive properties.

**Application:** Suitable for indoor and outdoor use. For basic coating of iron and steel, galvanised workpieces, non-ferrous metals and wood.

**Note:** Not suitable for hot-dip galvanised workpieces.

| Order No. | Design | 9790 E-COLL | PU | Colour |
|---|---|---|---|---|
| 0400 | 400 ml spray can | 8.70 | 12 | grey |
| 1400 | 400 ml spray can | 8.70 (W980) | 12 | red-brown |

## Construction site marker spray

**Design:** Solvent-free dispersion of lead-and cadmium-free pigments. Contains no chlorinated solvents. Fluorescent colours except black and white.

**Application:** For all markings, e.g. on building sites, car parks, wood, grass, sand, gravel, steel and lots more.

| Order No. | Design | 9779 E-COLL | PU | Colour |
|---|---|---|---|---|
| 0005 | 500 ml spray can | 7.25 | 12 | yellow |
| 0015 | 500 ml spray can | 7.25 | 12 | red |
| 0020 | 500 ml spray can | 7.25 | 12 | pink |
| 0035 | 500 ml spray can | 7.25 (W980) | 12 | black |

## WD-40 multi-functional product

**Design:** Silicone-, resin- and PTFE-free. Temperature resistance from –45 °C to +148 °C.

**Application:** It infiltrates rust layers, loosens jammed mechanics and jammed vehicle and machine parts. Removes stubborn stains, repels moisture from electrical contacts and prevents current leakage. In addition, WD-40 leaves a thin protective film which inhibits the formation of moisture and rust on metal parts.

| Order No. | Design | 9796 WD-40 | PU |
|---|---|---|---|
| 0003 | 200 ml spray can | on request NEW | 6 |
| 0001 | 300 ml spray can, Smart Straw™ | on request | 30 |
| 0005 | 400 ml spray can | on request | 24 |
| 0007 | 500 ml spray can, Smart Straw™ | on request | 24 |
| 0008 | 5 l canister | on request | 4 |
| 0010 | 600 ml sprayer, empty | 8.40 (999,W979) | 1 |

9796 0005

9796 0007

## WD-40 Specialist®

NEW

**9796 0050** Universal cleaner. NSF K1 registered. For removal of grease, oil and dirt, without residue.

**9796 0055** Contact spray, NSF K2 registered. For removal of oil, dirt and oxidation residues on electric/electronic devices.

**9796 0060** Rust remover, NSF H2 registered. Temperature resistance from -20 °C to +90 °C. Quickly penetrates jammed parts made of metal, alloys, plastic or rubber, and protects from further corrosion.

**9796 0065** Silicone spray, colourless lubricant, water-repellent, NSF H2 registered Temperature resistance from -35 °C to +200 °C. Protects against moisture, is suitable for metals, plastics, wood and rubber.

**9796 0070** White lithium spray grease, water- and temperature-resistant lubricant, NSF H2 registered. Temperature resistance from -18 °C to +145 °C. For reducing friction for metals, including with high loads.

**9796 0075** PTFE lube spray, NSF H2 registered. Temperature resistance from –20 °C to +100 °C. Lubricates, protects and extends the service life of tools and devices made from metal, glass, vinyl, plastic and rubber.

**9796 0080** PTFE dry lube spray, quick-drying dry lubricant, NSF H2 registered. Temperature resistance from –45 °C to +260 °C. To reduce friction and wear for metal, plastic and glass.

| Order No. | Design | 9796 WD-40 | PU |
|---|---|---|---|
| 0050 | 500 ml spray can | on request | 12 |
| 0055 | 400 ml spray can | on request | 12 |
| 0060 | 400 ml spray can | on request | 12 |
| 0065 | 400 ml spray can | on request | 12 |
| 0070 | 400 ml spray can | on request | 12 |
| 0075 | 400 ml spray can | on request | 12 |
| 0080 | 400 ml spray can | on request (999) | 12 |

9796 0050

9796 0070

## Rust remover

**Design:** With specially developed solid/lubricant combination based on molybdenum disulphide as well as specially selected raw materials.
Temperature resistance from –30 °C to +150 °C.

**Application:** Loosens rusted screws, nuts and machine parts. Prevents new rust formation and protects against wear.

| Order No. | Design | 9798 E-COLL | PU |
|---|---|---|---|
| 1300 | 300 ml spray can | 4.80 (W980) | 6 |

## Leak locator

**Design: Non-toxic according to DIN-DVGW.** Silicone-free.

**Application: Leak testing agent for pressurised systems.** For finding leaks in pressurised pipes and containers. Ideal for checking compressors, steel cylinders, valves, isolating valves, breathing equipment, oxyacetylene and gas welding equipment, Bunsen burners, vents, screw joints, air brakes and lots more. Suitable for compressors, refrigerants, acetylene, butane, natural gas, carbon dioxide, oxygen, propane, city gas, nitrogen, hydrogen, ammonia.

| Order No. | Design | 9800 E-COLL | PU |
|---|---|---|---|
| 1400 | 400 ml spray can | 3.57 (W980) | 12 |

## Freeze spray

**Design:** For local cooling up to –45 °C.

**Application:** Metal construction parts can thus be placed in the closest fits, and dismantled again as well. For troubleshooting in electrical circuits due to thermal overload and preventing heat damage when soldering electrical components. Ideal for maintenance work in the production and repair sector as well as in the automotive trade. In the same way, tissue samples for microscopy can be prepared in the field of medicine.

| Order No. | Design | 9801 E-COLL | PU |
|---|---|---|---|
| 0400 | 400 ml spray can | 7.75 (W980) | 12 |

## Compressed air spray

**Design:** Temperature resistant to +80 °C. No ignition and explosion hazard when properly used.

**Application:** For dusting, blowing out and away, for example, from electronic assemblies as well as for cleaning vacuum pump systems and equipment under clean room conditions in semiconductor manufacturing.

| Order No. | Design | 9801 E-COLL | PU |
|---|---|---|---|
| 1000 | 400 ml spray can | 7.75 (W979) | 12 |

## Compressed air spray 67

**Design:** Incombustible, clean and oil-free compressed gas, with certified safety. No ignition and explosion hazard when properly used.

**Application:** For the safe, clean and oil-free blowking out of dirt and dust on machines, control boxes, precision mechanics, computers, visual equipment and lots more.

| Order No. | Design | 9803 CRC | PU |
|---|---|---|---|
| 0011 | 200 ml spray can | on request (999) | 12 |

## Contact cleaner Contact 60

**Design:** Loosens tough oxide layers and reduces contact resistances.

**Application:** For the fast repair of faults in systems and equipment as well as for the preventative maintenance of fault-prone modules, connectors, switches and lots more.

| Order No. | Design | 9803 CRC | PU |
|---|---|---|---|
| 0015 | 200 ml spray can | on request (999) | 12 |

## Label remover Solvent 50

**Design:** The highly effective solvent based on natural orange terpene penetrates the label and loosens the adhesive.

**Application:** For removing labels and stickers in warehouses, dispatch, offices and workshops. Also removes sticky residue like tar spots or adhesive residue from stickers. Reaction time about 2-4 minutes.

**Note:** Do not use on solvent-sensitive plastics such as perspex or CD cases.

| Order No. | Design | 9803 | PU |
|---|---|---|---|
| 0021 | 200 ml spray can | on request (999) | 12 |

## Industrial atomiser

**Design:** With Viton seal and plastic nozzle. The feed rate is 1.5 ml per stroke, with adjustable nozzle. Height 26.5 cm, width 11 cm.

**Application:** For light chemicals, solvents, detergents and mould oil.

**Note:** For professional atomiser see (Order No. 9561).

| Order No. | Design | 9802 |
|---|---|---|
| 0005 | 1 l hand sprayer, empty | 5.35 (W980) |

## Industrial pressure sprayer

**Design:** With Viton seal and acid-resistant plastic nozzle. Very powerful air pump for priming of pressure. The precision plastic nozzle is adjustable and swivels in every direction. Sturdy container with measuring scale. Safety valve supplies pressure relief. Height 34 cm, width 14.5 cm.

**Application:** For light chemicals, solvents and detergents.

**Note:** For professional atomiser see (Order No. 9561).

| Order No. | Design | 9804 |
|---|---|---|
| 0005 | 1.5 l pressure sprayer, empty | 36.20 (W980) |

## Universal pressure sprayer

**Design:** With Viton seal, safety valve and adjustable plastic nozzle. Sturdy container with measuring scale and smooth-running nylon pump. Due to the new quality of the pressure sprayer it is also suitable as brake cleaner (but testing is required).

**Application:** For light chemicals, solvents and cleaning agents in the automotive and workshop sector, for liquids containing naphta and for mould oil.

**Note:** For professional atomizer see (Order No. 9561).

| Order No. | Design | 9804 |
|---|---|---|
| 0020 | 1.5 l pressure sprayer, empty | 25.60 (W980) |

## Oil binding agent

**Design:** Mineral granulate based on calcium silicate hydrate type III R. Absorbing or chemical binding of organic and inorganic compounds, such as oils, used oils, greases, lubricants, alkalis, paints, lacquers, solvents, hydrocarbons. Avoid contact with strong acids and oxidising agents. Non water-repellent and non-buoyant. Bulk weight: approx. 680 g/l, 1 litre of oil binder binds 0.48 litres of fuel oil, grain size: 0.125-1 mm.

**Area of application:** Binds oils and other liquid spills, suitable for traffic areas. For the cleaning and securing of industrial floors and to scatter dangerous traces of oil on roads and taxiways.

E-COLL

| Order No. | Design | 9808 E-COLL | Colour |
|---|---|---|---|
| 0020 | 20 kg sack (29 litres) | 14.70 (W980) | Beige-grey |

## Oil binding agent

NEW

E-COLL

**Design:** Clay-based oil and chemical binding agent (mol granulated, Type III/R. Binds acids, base/alkaline substances (alkaline solutions) for flammable, combustible, aqueous and polar liquids. Suitable for traffic areas. Bulk weight: approx. 500 g/l, 1 litre of oil binder binds 0.5 litres of oil, grain size: 0.5-1 mm.

**Application:** Binds oil, grease, lubricant and petrol, and other leaked liquids.

| Order No. | Design | 9808 E-COLL | Colour |
|---|---|---|---|
| 0030 | 20 kg sack (40 litres) | 23.00 (W980) | red |

## Oil binding agent

NEW

E-COLL

**Design:** PU-foam granules Type III/R, road- and rain-worthy, for all traffic areas. Water-repellent. Very absorbent, odour-neutralising, long storage life, soil conserving. Lower disposal costs thanks to lightweight product. Bulk weight: approx. 405 g/l, 1 litre of oil binder binds 0.6 litres of oil, grain size: 0.5-4 mm.

**Application:** Binds oil, grease, lubricant and petrol, and other leaked liquids.

| Order No. | Design | 9808 E-COLL | Colour |
|---|---|---|---|
| 0040 | 19 kg sack (40 litres) | 17.45 (W980) | dark beige |

## High-pressure adhesive grease

E-COLL

**Design:** Temperature resistant from –25 °C to +80 °C, good protection from seawater and salt air, good atmosphere-resistance.

**Application:** For lubricating rolling and plain bearings, even in mixed-friction areas, especially grease lubrication for all permissible running speeds. Corrosion protection of sliding parts, especially cable. Excellent corrosion protection against exposure to aggressive water, gases and alkalis.
Ideal for open gears, screws, hinges, bearings, plain bearings and water pumps, water turbines, sluice gates, car washes, cylinder guides, lead screws, screws in underwater equipment, offshore components, lifting equipment, containers and trailer lashing equipment, yachts and shipyard supplier components.

| Order No. | Design | 9810 E-COLL | PU |
|---|---|---|---|
| 1300 | 300 ml spray can | 9.05 (W980) | 12 |

## Chain adhesive spray

E-COLL

**Design:** Temperature resistant from –30 °C to +110 °C, moisture-inhibiting, rust-loosening and water-repellent. Very good adhesion, also does not run off warm surfaces.

**Application:** Suitable for loosening. Very adhesive long-life grease for lubricating cars, motorcycles, bicycles, appliances and lots more. O/X-ring tested. Ideal for chains, wire ropes, all kinds of rods, O-rings, hinges, joints, ball bearings, cable pulleys, door locks, bicycle and worm gear of all kinds.

| Order No. | Design | 9812 E-COLL | PU |
|---|---|---|---|
| 0500 | 500 ml spray can | 6.65 (W980) | 12 |

## Multi-purpose grease

**Design:** The special long-life active ingredient combinations are lithium-emulsified for emergency operating features. The dropping point lies above 180 °C. Consistency index according to DIN 51818: NLGI Class 2.

**Application:** Universal grease for lubricating rolling and sliding bearings, even in mixed friction area, especially for all sliding speeds permissible for grease lubrication. Reduces friction and wear even under high loads.

**9814** **Resin-free, with colloidal graphite.** Temperature resistance from –30 °C to +120 °C. Bearing protection against harmful contaminants. Also with protective properties against corrosion and maintaining the lubricating effect even in the presence of water. Ideal for agricultural machinery, construction equipment, excavators, trucks, tractors, stone crushers, articulated lorries, as well as lifts, battery chargers, conveyor belts and water pumps. Possible designation according to DIN 51502: KPF2K-30.

**9816** **Light.** Temperature resistance from –30 °C to +120 °C, (for short periods up to +130 °C). Protects against corrosion and maintains the lubricating effect even in the presence of water. Ideal for central lubrication systems with eligible conventional tubing cross sections, lifetime lubricated automobile bearings, as lubrication in construction and agricultural machines, electric motor bearings, conveyor roller bearing and axle bearings in railway operation.

| Order No. | Design | 9814 E-COLL | 9816 E-COLL | PU |
|---|---|---|---|---|
| 1400 | 400 g cartridge | 3.61 (W980) | 3.42 (W980) | 12 |

9814

9816

## Assembly paste/copper paste

**Design:** Made from neutral carriers, special additives and metal polish. On a copper basis.

**Application:** Offers best separating and solvent effects up to +1100 °C as well as cost-effective wear protection, and forms an effective lubricating and separating film against corrosion and frictional corrosion wear. With pressure loading a flat, coppered surface forms, thanks to the high proportion of solid lubricant. This creates a higher level of protection against cold welding and wear. Ideal for screws, bolts and nuts, plug-on and bayonet connections that are exposed to extremely high temperatures, assembly lubrication of joints on internal combustion engines, flange joints and fittings, lubrication of wearing bushes and also on contact with water.

| Order No. | Design | 9818 E-COLL | PU |
|---|---|---|---|
| 0100 | 100 g tube | 5.95 (W980) | 20 |

## Special Vaseline

**Design:** Acid and non-toxic, highly refined, pharmaceutical and long astringent. The dropping point is approx. +55 °C (DIN ISO 2176), the freezing point is approx. +50 °C (ISO 2207).

**Application:** As separating agent, rust protection and as skincare product. For lubrication, preservation, sealing, insulation and care of leather

| Order No. | Design | 9820 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1080 | 80 ml tube | 3.44 | 12 | white |
| 1750 | 750 ml can | 12.95 (W980) | 1 | white |

9820 1080

9820 1750

## Spray grease

**Design:** Temperature resistant from -25 °C to +120 °C.

**Application:** Universal grease for all industrial uses, as well as for maintenance cleaning and care in the workshop, garage and home. Prevents wear, eliminates squeaking and protects against corrosion. Ideal for conveyor roller bearings, electric motor bearings, axle bearings in railway operation, lifetime lubricated automobile bearings, as lubrication in construction and agricultural machines, chains, drive wheels and door hinges, and lots more.

| Order No. | Design | 9822 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1300 | 300 ml spray can | 5.95 (W980) | 6 | white |

## Anti-Seize metal lubrication

**Design:** Temperature resistance from –180 °C to +1200 °C, pressure-mark resistant to 2300 kp/cm², freshwater- and seawater-resistant, withstands most acids and alkalis, heavy-metal-free.

**Application:** To prevent seizing, wear or corrosion in mechanically held shrink and press fits, screws in aluminium or magnesium castings, for threading or screwing stainless steel and lubricating threaded forging tools for flanges, bolts, fittings, cylinder heads, valve guides, metal seals for vehicles.

| Order No. | Design | 9823 E-COLL | PU |
|---|---|---|---|
| 0400 | 400 ml spray can | 9.20 (W980) | 12 |

## PTFE spray

**Design:** Grease and silicone free. Temperature resistance from –80 °C to +260 °C.

**Application:** Hard-drying permanent separation, lubrication and sliding agent. For the lubrication of saw blades and threads, drawers and instruments, chutes and conveyors. Highly-effective separation agent for wood, plastic and rubber processing.

| Order No. | Design | 9824 E-COLL | PU |
|---|---|---|---|
| 1400 | 400 ml spray can | 6.80 (W980) | 12 |

## Cutting oil spray

**Design:** Chlorine- and silicone-free. Temperature resistance to +180 °C.

**Application:** For all-around processing. Ensures optimum cooling. Outstanding cooling property provides for the extension of tool life, excellent lubricity and a high surface quality. Can be sprayed from all positions. Reduces effort and makes high continuous load and higher cutting speed possible. Ideal for drilling, punching, milling, sawing, turning and lots more.

**Note:** For hand refractometers see (Order No. 9606 📖 9/107).

| Order No. | Design | 9829 E-COLL | PU |
|---|---|---|---|
| 1005 | 400 ml spray can | 6.90 (W980) | 12 |

## opta Cut cutting oil spray

**Design:** Chlorine- and silicone-free.

**Application:** The outstanding cooling properties extend the service life of tools, offer the best lubrication and a high surface quality. From all positions selectively sprayable. For all areas of metalworking, especially for rust- and acid-resistant stainless steels. Ideal for thread cutting, drills and spaces, for assembly and repair works.

| Order No. | Design | 9825 opta | PU |
|---|---|---|---|
| 0400 | 400 ml spray can | 15.30 (W994) | 12 |

## Cutting oil spray opta Cut S DVGW

**Design:** Synthetic, chlorine-free, with DVGW approval.

**Application:** For processing steel and stainless steel. Ideal for thread cutting and sawing at drinking water provision and sanitary facilities.

| Order No. | Design | 9805 opta | PU |
|---|---|---|---|
| 0400 | 400 ml spray can | 10.30 (W994) | 12 |

## Cutting oil spray opta Cut Planto S

**Design:** Cutting oil spray based on naturally replenishable raw materials.

**Application:** For processing steel and stainless steel, cast, non-ferrous metals and aluminium. Good performance for drilling, thread cutting and moulding, as well as reaming. Environmentally friendly and quickly biodegradable.

| Order No. | Design | 9806 | PU |
|---|---|---|---|
| 0400 | 400 ml spray can | 9.20 (W994) | 12 |

## Universal cutting oil

**Design:** Free from hazardous substances. Temperature resistance to +180 °C, free from chlorine and silicone. Not miscible with water.

**Application:** For outstanding cooling, extends the service life of tools, excellent lubricity, high surface quality, reduces effect of force, very durable and great cutting speed. For all normal applications in drilling, punching, milling, sawing, turning and lots more.

| Order No. | Design | 9830 | PU |
|---|---|---|---|
| 0015 | 5 l canister | 37.80 | 4 |
| 0020 | 10 l canister | 72.70 (W980) | 1 |

9830 0020

9830 0015

## Premium cutting oil opta Cut 3000

**Design:** Mineral-oil based. Chlorine-, silicone-, PCB- and solvent-free.

**Application:** For processing high-alloy steels and stainless steel, steel, cast, non-ferrous metals and aluminium. Outstanding performance for all difficult metal-cutting processes.

| Order No. | Design | 9807 |
|---|---|---|
| 0015 | 5 l canister | 59.40 |
| 0020 | 10 l canister | 111.00 (W994) |

## High-performance cutting oil opta Cut 2000

**Design:** Chlorine- and silicone-free. Not miscible with water.

**Application:** For hand processing with powerful wear protective materials due to outstanding high-pressure properties. For processing low-carbon to high-alloy steels, chrome-nickel steels (VA) and non-ferrous metals. Ideal for tapping, drilling, sink, milling, turning, broaching, friction with reamers and lots more.

| Order No. | Design | 9839 | PU |
|---|---|---|---|
| 0005 | 250 ml bottle | 5.35 | 10 |
| 0015 | 5 l canister | 55.70 | 1 |
| 0020 | 10 l canister | 103.50 (W994) | 1 |

9839 0020 9839 0005 9839 0015

## Special cutting oil opta Cut Planto S

**Design:** Based on naturally replenishable raw materials.

**Application:** For processing aluminium, steel and stainless steel. Very good performance for drilling, boring and milling. Very good results for thread cutting and moulding, broaching and reaming. Can be used for the circulation and spray cooling and for manual processing.

| Order No. | Design | 9806 |
|---|---|---|
| 0015 | 5 l canister | 64.10 |
| 0020 | 10 l canister | 124.00 (W994) |

## Special High-performance Cutting Oil opta Cut DVGW-S

**Design:** Synthetic, chlorine-free, with DVGW approval.

**Application:** For processing steel and stainless steel. Ideal for thread cutting and sawing at drinking water provision and sanitary facilities. Processing in pipe thread machines and for materials that do not come into contact with foodstuffs.

**Note:** Ready to use, only use undiluted.

| Order No. | Design | 9805 |
|---|---|---|
| 0015 | 5 l canister | 60.00 |
| 0020 | 10 l canister | 114.00 |
| | | (W994) |

## Cutting oil opta Cut Akafil

**Design:** Mineral-oil based cutting oil, free from chlorine, silicone, PCB and solvents.

**Application:** For processing steel and stainless steel. Outstanding performance, especially with thread cutting, thread forming and reaming in manual processing.

| Order No. | Design | 9809 | PU |
|---|---|---|---|
| 0210 | 210 ml bottle | 9.40 | 10 |
| | | (W994) | |

## Cooling lubrication pen opta Akawax

**Design:** Chlorine- and silicone-free.

**Application:** For the hand processing of high-quality cutting wax for the machining of all types of metal. Ideal for tapping and sawing. Perfect lubrication and cooling, also suitable for surface grinding.

| Order No. | Design | 9837 | PU |
|---|---|---|---|
| 0001 | 80 g applicator | 4.50 | 20 |
| 0005 | 350 g applicator | 10.50 | 10 |
| | | (W994) | |

## Minimal quantity lubrication opta Minimal 1000

**Design:** Mineral-oil based. Free from chlorine and heavy metals, environmentally friendly and biodegradable.

**Application:** For processing steel and stainless steel and non-ferrous metals. Very good performance for drilling, milling and sawing. Leaves no residue, eliminates the cleaning and degreasing of the workpieces. The lubricant can be used in high pressure and micro-dosing systems.

| Order No. | Design | 9841 |
|---|---|---|
| 0015 | 5 l canister | 108.50 |
| 0020 | 10 l canister | 217.00 |
| | | (W994) |

## Minimal quantity lubrication opta Minimal 2000

**Design:** Mineral-oil based.

**Application:** For aluminium work. Very good performance for drilling, milling and sawing. Leaves no residue, eliminates the cleaning and degreasing of the workpieces. Residue-free vaporisation at temperatures over 200 °C. Can be used in high pressure and micro-dosing systems.

| Order No. | Design | 9815 |
|---|---|---|
| 0015 | 5 l canister | 159.50 |
| | | (W994) |

## Drilling oil concentrate

**Design:** Contains mineral oil EP-drilling compound, chlorine-free, totally stable and homogeneous. Immune to hardness ranges in water (lime, etc.). Largely resistant to microbial attack. When used properly, physiologically safe.

**Application:** Emulsifiable for long tool life. Ideal for drilling, turning, milling, sawing and thread cutting. For aluminium, non-ferrous metals and their alloys, cast- and stainless steel.

**Application concentration:** Milling: approx. 9% strength (1 l concentrate in 11 l water).
Sawing, turning, drilling: approx. 10% (1 l concentrate in 10 l water).
Thread cutting: approx. 10% (1 l concentrate in 10 l water).

| Order No. | Design | 9826 E-COLL | PU | Colour |
|---|---|---|---|---|
| 1010 | 1 l bottle | 10.00 | 20 | white |
| 0015 | 5 l canister | 40.70 | 1 | white |
| 0020 | 10 l canister | 76.70 (W980) | 1 | white |

9826 1010

9826 0015

9826 0020

## High performance cooling lubricant concentrate

**Design:** Organically stable, contains mineral oil, nitrite-and chlorine-free and free from PCB, PCT compounds and bacteria. The concentrate is alkaline.

**Application:** The concentrate is stirred with water and forms a stable easy-to-handle emulsion, which offers high tool service lives and perfect surface qualities. Good corrosion protection, long-lasting emulsion and good skin compatibility. Ideal for drilling, turning, milling, sawing, grinding and thread cutting.

**Application concentration:** Grinding: approx. 3% strength (1 l concentrate in 35 l of water).
Sawing, milling, turning, drilling: approx. 5% strength (1 l concentrate in 19 l water).
Thread cutting: approx. 9% strength (1 l concentrate in 11 l water).

| Order No. | Design | 9828 E-COLL |
|---|---|---|
| 1015 | 5 l canister | 58.60 |
| 0020 | 10 l canister | 112.00 (W980) |

9828 1015

9828 0020

## High-performance cooling lubricant opta Cool 500

**Design:** Long-term stable, water-miscible cooling lubricant based on mineral oil with EP wear-protection substances.

**Application:** Emulsion stable with good corrosion protection. Universally applicable for almost all materials and manufacturing, such as turning, milling, drilling machines and saws. Chlorine- and silicon-free. Corresponds to TRGS 611.

**Application concentration:** 5%.

| Order No. | Design | 9827 opta |
|---|---|---|
| 0015 | 5 l canister | 55.20 |
| 0020 | 10 l canister | 103.00 |
| 0040 | 30 l canister | 302.50 (W994) |

## High performance cooling lubricant opta Cool 600 HS

**Design:** Semi-synthetic, water-miscible cooling lubricant, chlorine- and nitrite-free.

**Application:** Stable long-lasting emulsion for drilling, turning, milling, sawing and grinding. Suitable for central installations and single machines. Corresponds to TRGS 611. The coolant provides good corrosion protection and good lubricity.

**Application concentration:** 5-6 %.

| Order No. | Design | 9831 opta |
|---|---|---|
| 0020 | 10 l canister | 113.00 (W994) |

## Premium cooling lubricant opta Cool 700 S

**Version:** Synthetic, water-miscible cooling lubricant with special combination of EP active ingredients. The clear solution is chlorine-, boron-free, amine-free and seal compatible.

**Application:** For processing steel and stainless steel. Very good performance when drilling, turning, milling, cutting threads and sawing, good results when threading forming and reaming. Meets the requirements of TRGS 611.

**Use concentration:** 5% (normal processing), 10% (heavy processing).

| Order No. | Design | 9833 |
|---|---|---|
| 0015 | 5 l canister | 56.80 |
| 0020 | 10 l canister | 107.50 |
| | | (W994) |

## Special cooling lubricant opta Cool Planto S

**Design:** Synthetic, water-miscible special cooling lubricant based on naturally replenishable raw materials. Chlorine- and nitrite-free, environmentally friendly and quick to biodegrade.

**Application:** For processing aluminium, cast, steel and stainless steel. Very good performance for drilling, boring, milling and sawing. Fulfils requirements of TRGS 611.

**Use concentration:** 5-6 % (normal processing), 8-10 % (heavy processing).

| Order No. | Design | 9746 |
|---|---|---|
| 0015 | 5 l canister | 65.30 |
| 0020 | 10 l canister | 125.00 |
| | | (W994) |

## Grinding coolant opta Cool Grind S Premium

**Design:** Synthetic, completely clear, chlorine- and zinc-free, low-foam, skin-friendly and environmentally compatible.

**Application:** For the fine processing on steel and cast surfaces.

**Use concentration:** Normal grinding 3 to 5%.

| Order No. | Design | 9747 |
|---|---|---|
| 0015 | 5 l canister | 53.70 |
| 0020 | 10 l canister | 100.50 |
| | | (W994) |

## Hand-held refractometer

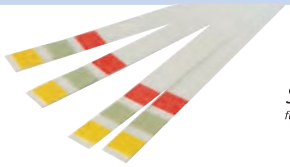
**Design:** Adjustable, automatic temperature compensation, adjustable ocular.

**Application:** For the precise and fast calculation of oil content or other concentrations in cooling lubricants and other water mixtures.

| Order No. | Measurement range % | 9606 |
|---|---|---|
| 0001 | 0–32 | 121.00 |
| | | (W991) |

## Test strips opta

| Order No. | Application | 9748 | PU | Measurement range |
|---|---|---|---|---|
| 0005 | Nitrite load | 0.58 | 100 Δ | 1-80 mg/l |
| 0010 | Nitrate load | 0.58 | 100 Δ | 10-500 mg/l |
| 0015 | pH value | 0.28 | 100 Δ | 7.5–9.5 pH |
| 0020 | Bioburden | 6.25 | 10 Δ | 102–105 disinfectant against bacteria, fungi and yeasts. |
| | | (W994) | | Δ Can only be supplied as a whole packaging unit. |



## System cleaner opta Grotanol SR 1

**Design:** Microbiocidal system cleaner.

**Application:** For cleaning the coolant system of metalworking machines prior to changing the cooling emulsion. PITA disinfectant against bacteria, fungi and yeasts and eliminates grease, dirt nests, bacterial contamination and fungus. Old debris and bacteria columns are reliably removed and washed away.
Also useful as cold cleaner for places, which do not come into contact with cooling lubricant during circulation.

**Note:** Use biocides safely. Always read label and product information before use!

| Order No. | Design | 9845 |
|---|---|---|
| 0020 | 10 kg canister | 145.50 (W994) |

## High-performance stamping and forming lubricant opta Form 1000 S

**Design:** Mineral-oil based. Free from chlorine and heavy metals.

**Application:** For processing aluminium, steel and stainless steel. Especially for stamping, fine blanking and for the most difficult forming.

| Order No. | Design | 9783 |
|---|---|---|
| 0015 | 5 l canister | 61.00 (W994) |

## Bed track oil opta

**Design:** Demulsifying slide and bed track oil with very good stick-slip properties.

**Application:** For use together with water miscible cooling lubricants.

**9785** **CGLP 68**

**9787** **CGLP 220**
Highly viscous.

| Order No. | Design | 9785 | 9787 |
|---|---|---|---|
| 0020 | 10 l canister | 145.50 (W994) | 147.00 (W994) |

## Hydraulic oil opta

**Design:** According to DIN 51524-2, based on ageing-resistant special raffinates.

**Application:** For demanding hydraulic facilities with high thermal loads. Prevents corrosion and has a wear-reducing effect on mixed friction on pumps and hydraulic motors.

| Order No. | Design | 9793 ISO VG 32 | 9795 ISO VG 46 | 9797 ISO VG 68 |
|---|---|---|---|---|
| 0020 | 10 l canister | 71.00 (W994) | 69.20 (W994) | 58.50 (W994) |

## Cleaning and polishing cloth

**Design:** Washable up to 95 °C, without fabric softener

**9835 0005** **Scotch-Brite™ high performance cloth**
For cleaning **all surfaces** with minimal effort. Absorbs up to 100 times more fat and dirt than traditional cleaning cloths. Washable up to 300 times.

**9835 0010** **Scotch-Brite™ Microfaser Polishing Cloth**
Specifically for dry, humid and wet cleaning of all surfaces, **painted and sensitive surfaces.** Removes grease, dust and liquids without creating micro-scratches. Washable up to 50 times.

**9835 0015** **Scotch-Brite™ Mikrofaser-Reinigungstuch**
For damp and wet cleaning of **glass surfaces.** Usage with and without chemicals is possible. Very high dirt- and water absorption, leaves a lint- and streak-free surface.

9835 0005
9835 0010
9835 0015

| Order No. | Design | 9835 3M | Colour | Dimension mm |
|---|---|---|---|---|
| 0005 | High-performance cloth | 9.90 | blue | 320 x 360 |
| 0015 | Micro-fibre cleaning cloth | 7.75 | green | 320 x 400 |
| 0010 | Micro-fibre polishing cloth | 9.25 (W981) | yellow | 320 x 360 |

## Acetone

**Design:** Solvent with low boiling-point and excellent removal action for acetate, nitrocellulose and methacrylate paints.

**Application:** For thinning paint, as a paint stripper, removes very oily, grease and hardened marks, can be used in the processing of plastics.

| Order No. | Design | 9849 E-COLL | PU |
|---|---|---|---|
| 1010 | 1 l can | 5.75 (W980) | 12 |

## Brake cleaner

**Design:** Free from aromatic and halogenated hydrocarbons as well as silicone. Free of acetone, butanol, ethyl acetate, dries quickly.

**Application:** Universal multi-purpose cleaner, that degreases using special solvents. Removes even stubborn dirt thoroughly and gently. For cleaning drum and disc brakes, brake pads, springs, clamps, couplings, coverings, printing plates and clutch parts generally, transmissions, carburetors, fuel pumps, engine parts and lots more.

| Order No. | Design | 9832 E-COLL | PU |
|---|---|---|---|
| 1500 | 500 ml spray can | 3.98 (W980) | 10 |

## Stainless steel cleaner and care spray

**Design:** Silicone free.

**Application:** For caring for, cleaning, protecting and reducing finger prints on stainless steel surfaces. Effortlessly treats surfaces without scrubbing. Easy to use and economical in use. The protective film left means water drips off. Cleans large surfaces without streaking. For stainless steel surfaces on dishwashers, countertops, cabinets, shelves, thermo carts, convection ovens, wall coverings and lots more.

| Order No. | Design | 9834 E-COLL | PU |
|---|---|---|---|
| 0400 | 400 ml spray can | 5.95 (W980) | 12 |

## Universal foam cleaner

**Design:** Silicone-free, non-corrosive, develops no corrosive fumes, and generates no static charge.

**Application:** For use on small areas in workshops, offices, the home, machines and internal car cleaning Removes dirt, oil, grease, tar, organic residues on glass, plastic, rubber, chrome, paint, metal, Formica, stone and carpets

| Order No. | Design | 9834 E-COLL | PU |
|---|---|---|---|
| 0500 | 500 ml spray can | 6.85 (W980) | 12 |

## Methylated spirit

**Design:** 94 % vol. ethyl alcohol, mildly flammable.

**Application:** Due to the high proportion of alcohol, denatured alcohol is suitable for cleaning and degreasing glass, plastic, chrome, rubber, for diluting lacquers, solvents and antifreeze in windscreen washers (1:2).

| Order No. | Design | 9836 E-COLL | PU |
|---|---|---|---|
| 1010 | 1 l bottle | 4.01 (W980) | 12 |

## Universal nitro thinner

**Design:** Contains completely evaporating solvents.

**Application:** Specially designed thinner for all common paints such as nitro, resin and chlorinated rubber coatings. The high dissolving power promotes the spreading properties in paint. Produces high-gloss paint appearance. Ideal as a thinner and cleaning agent for painting and lacquering jobs, for bodywork and automotive industries, and for the cleaning of paint equipment and spray guns.

| Order No. | Design | 9838 E-COLL | PU |
|---|---|---|---|
| 1010 | 1 l can | 4.55 | 12 |
| 1015 | 6 l canister | 22.20 (W980) | 4 |

## Nitro-thinner

**Design:** Contains completely evaporating solvents, low toxicity.

**Application:** Thinner and cleaning agent for paint shops as well as the bodywork and automotive industries. The high dissolving power promotes the spreading properties in paint. Ideal as a thinner for all common nitro, resin and chlorinated rubber coatings, as well as a thinner and cleaning agent, and for the cleaning of paint equipment and spray guns.

| Order No. | Design | 9840 E-COLL | PU |
|---|---|---|---|
| 1010 | 1 l can | 4.31 | 12 |
| 1015 | 6 l canister | 20.40 (W980) | 4 |

## Petroleum

**Design:** Petroleum product.

**Application:** Very slow evaporating cleaner. Also serves for the corrosion protection of metal parts. Ideal for metalworking companies and vehicle repair shops for rust removal and removal of corrosion protection. Also for metal processing, mould, punch and stripping oil. Can be applied or sprayed on. For cleaning parts contaminated with oil and grease, such as engines, gear Shells, engines and for removing tar.

**Note:** Not permitted for use as a propellant, heating fuel or lubricant.

| Order No. | Design | 9842 E-COLL | PU |
|---|---|---|---|
| 1010 | 1 l can | 6.05 (W980) | 12 |

## Turpentine substitute

**Design:** Petroleum product.

**Application:** Thinner and cleaning agent for painters and decorators, and the handyman. Ideally suited for cleaning parquet and linoleum floors and as a cleaning agent for equipment such as brushes and lots more. For thinning oil, resin and coating varnishes due to the slow evaporation. Can be used for painting, rolling, dipping and spraying. Also suitable for wood and stone floors, glass and textiles.

**Note:** Not permitted for use as a propellant, heating fuel or lubricant.

| Order No. | Design | 9844 E-COLL | PU |
|---|---|---|---|
| 1010 | 1 l can | 6.45 (W980) | 12 |

## White spirit

**Design:** Petroleum product. Vaporises residue-free.

**Application:** High-quality cleaning and degreasing agent, also used in the paint and lacquering industry. For cleaning dirt spots on carpets. For removing grease spots on textiles and upholstery. For the degreasing of plastic, stone, tiles and metals, where quick drying is required after cleaning.

**Note:** Not permitted for use as a propellant, heating fuel or lubricant.

| Order No. | Design | 9851 E-COLL | PU |
|---|---|---|---|
| 1010 | 1 l can | 5.40 (W980) | 12 |

## Hand cleaner, liquid

**Design:** Extra mild, soap-free, biodegradable and pH neutral.

**Application:** Mild liquid soap for gentle cleaning, even in continuous use. Gentle skin cleansing for light soiling. Ideal for use in offices and administrative areas, as well as for washing and toilet facilities.

**Note:** For dispenser system see (Order No. 9856) or pump (Order No. 9850).

| Order No. | Design | 9846 E-COLL | PU |
|---|---|---|---|
| 0010 | 1 l bottle | 5.10 (W980) | 10 |

## Moisturising handwash cream

**Design:** Phosphate-free handwash cream for removing the toughest dirt, and for quick and gentle cleaning. Surfactants biodegradable, soap-free.

**Application:** For the most stubborn dirt, also for tough sticky work substances such as printing inks, fresh paint and tar which do not come off with solvent-free hand washing.

**Note:** For dispenser system see (Order No. 9856) or pump (Order No. 9850) for the 1 l bottle.

| Order No. | Design | 9848 E-COLL | PU |
|---|---|---|---|
| 0004 | 250 ml bottle | 3.94 | 24 |
| 1005 | 500 ml can | 4.45 | 27 |
| 1010 | 1 l bottle | 7.65 | 10 |
| 1020 | 3 l round container | 17.20 (W980) | 3 |

## Pump

**Design:** Made of plastic.

**Application:** Dispenser for mounting on 1 l bottles. Hand washing cream (Order No. 9848) and hand cleaner liquid (Order No. 9846).

| Order No. | 9850 E-COLL |
|---|---|
| 0006 | 8.90 (W980) |

## Wall bracket

**Design:** Made of chrome steel.

**Application:** Wall mount for round 3 l container. Hand washing cream (Order No. 9848).

| Order No. | 9850 E-COLL |
|---|---|
| 0010 | 27.10 (W980) |

## Dispenser pump

**Design:** Pump made of plastic, metal spout.

**Application:** Dispenser for mounting on round 3 l containers. Hand washing cream (Order No. 9848).

| Order No. | 9850 E-COLL |
|---|---|
| 0015 | 46.40 (W980) |

## Dispensers

**Design:** Made of plastic.

**Application:** Dispenser for 1 l bottles. Hand washing cream (Order No. 9848) and hand cleaner liquid (Order No. 9846).

| Order No. | 9856 E-COLL |
|---|---|
| 0010 | 60.80 (W980) |

## Skin protection creme

NEW

**Design:** For oily, grease dirt, and tough-to-remove soiling. Silicone-free, easy to distribute, quickly forms a dry and stable protective film after being rubbed in. Doesn't affect dexterity or the function of the skin.

**Application:** Protects the skin when working with oil, grease, graphite, rust, dust, paint, (PU) glue, resin, filler and lots more.

| Order No. | Design | 9846 | PU |
|---|---|---|---|
| 0020 | 1 l can | on request (999) | 12 |

## Invisible hand protection

NEW

E-COLL

**Design:** To protect skin from all types of soiling in non-aqueous areas of work. Makes it easier to clean hands. With soothing glycerine and beeswax. No preservatives or silicone.
**Application:** Offers protection against oil, dirt and paint, adhesives, varnishes etc. Before starting work, simply rub into the hands. Rinse with water after work.

| Order No. | Design | 9846 E-COLL | PU |
|---|---|---|---|
| 0030 | 250 ml tube | 5.05 | 25 |
| 0040 | 1 l can | 13.15 (W980) | 1 |

## Hand care cream

E-COLL

**Design:** O/W emulsion, slightly greasy, absorbs well and silicone-free, perfumed. Moisturises the skin and supplies it with fatty materials. Cares with moisturising allantoin. Panthenol has an anti-inflammatory effect and accelerates the healing process.

**Application:** Care, protection and regeneration of the skin for all skin types after work. Ideal for printers and car repair workshops, for the rubber, leather and textile industries, as well as mechanical engineering.

| Order No. | Design | 9852 E-COLL | PU |
|---|---|---|---|
| 0100 | 100 ml bottle | 2.91 (W980) | 12 |

## Handwashing paste

E-COLL

**Design:** Sand free and moisturising hand washing paste. Phosphate-free and biodegradable. Combination of mild, skin-friendly surfactants (= active washing substances), skin-care and organic friction products. The fine soft wood granules, in largely cubic shape, relieve the drain lines.

**Application:** Preferably against medium to strong soiling caused by water-insoluble materials with grease and pigment base.

| Order No. | Design | 9854 E-COLL | PU |
|---|---|---|---|
| 1005 | 500 ml can | 2.25 | 18 |
| 1020 | 10 l bucket | 19.90 (W980) | 1 |

## Hand cleansing wipes

E-COLL

**Design:** Wipe size 25 x 25 cm.

**Area of application:** Suitable for gentle removal of contamination without water Removes grease, oil, paints, adhesives, ink, grass stains and lots more.

| Order No. | Design | 9853 E-COLL |
|---|---|---|
| 0072 | Dispensing bucket with 72 cloths | 20.50 (W980) |

## Spray glue

**Design:** Fast-drying contact adhesive.
Temperature resistance from –40 °C to +90 °C.

**Area of application:** For fast bonding of large surfaces. Suitable for bonding paper, cardboard, wood, leather and lots more.

| Order No. | Design | 9855 E-COLL | PU |
|---|---|---|---|
| 1400 | 400 ml spray can | 9.70 (W980) | 12 |

## Screw locker Loctite 222

**Design: Low strength** thread locker for connections to M 36.

**Application:** To secure screws, nuts and bolts from loosening due to vibration, such as gearboxes, housings, and enclosures. **The connections can be disassembled using normal hand tools.**

| Order No. | Content ml | 9861 LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | on request | 12 |
| 0051 | 50 | 47.70 (W978,999) | 12 |

## Screw locker Loctite 242

**Design: Medium strength** screw locker for connections to M36.

**Application:** To secure screws, nuts and bolts from loosening due to vibration, such as gearboxes, housings, and enclosures. Easy to apply thanks to thixotropic component.

| Order No. | Content ml | 9858 LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | on request | 12 |
| 0050 | 50 | on request (999) | 12 |

## Screw locker Loctite 243

**Design: Medium strength** screw locker for connections to M36.

**Application:** To secure screws, nuts and bolts from loosening due to vibration, such as gearboxes, housings, and enclosures. Easy to apply thanks to thixotropic component. **With KTW recommendation. The connections can be disassembled using normal hand tools.**

| Order No. | Content ml | 9860 LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | 12.20 | 12 |
| 0050 | 50 | 40.00 (W978) | 12 |

## Screw locker Loctite 270

**Design: High strength** screw locker for connections to M20.

**Application:** To secure screws, nuts and bolts from loosening due to vibration, such as gearboxes, housings, and enclosures. **Can only be removed if warmed to 300 °C.**

| Order No. | Content ml | 9862 LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | 12.25 | 12 |
| 0050 | 50 | 40.00 (W978) | 12 |

## Screw locker Loctite 2701

**Design: High strength** screw locker for connections to M20.

**Application:** For permanent locking and sealing of threaded fasteners against loosening and leakage from shock and vibration. Especially for passive materials and applications where **maximum resistance to hot oil** is required. Operating temperature range: -55 °C to +150 °C.

| Order No. | Content ml | 9864 LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | 13.65 | 12 |
| 0050 | 50 | 52.40 (W978) | 12 |

## 2-component epoxy glue Loctite 3430

NEW

**Design:** Universal and fast. Viscosity 23 Pa.s.

**Appliation:** For structural bonding and for clean, almost invisible joints. For bonding glass, decorative panels, display cabinets and for general work.

| Order No. | Content ml | 986A LOCTITE | PU |
|---|---|---|---|
| 0024 | 24 | 17.00 (W978) | 12 |

## 2-component epoxy glue Loctite 3450

NEW

**Design:** Fast-hardening, viscosity 35 Pa.s.

**Application:** For bonding or repairing metal components. Thanks to its ability to fill gaps, it is suitable for rough or poor-quality metal surfaces.

| Order No. | Content ml | 986B LOCTITE | PU |
|---|---|---|---|
| 0025 | 25 | 16.50 (W978) | 6 |

## 2-component epoxy glue Loctite 3463

NEW

**Design:** Steel-filled, workable stick. Adheres to damp surfaces and below water. Can be drilled, filed and painted over.

**Application:** Emergency repairs for sealing leakages in pipes and tanks. For smoothing welded joints and repairing small cracks in cast parts.

| Order No. | Content g | 986C LOCTITE | PU |
|---|---|---|---|
| 0050 | 50 | 13.15 (W978) | 12 |

## Superglue Loctite 401

**Design:** Universal superglue, viscosity 100 mPa.s.

**Application:** Bonds virtually all plastics, elastomers, paper, cardboard, wood and metal. Especially suitable for porous materials.

| Order No. | Content g | 9866 LOCTITE | PU |
|---|---|---|---|
| 0003 | 3 | 4.11 | 12 |
| 0020 | 20 | 22.30 (W978) | 12 |

## Superglue Loctite 406

**Design:** Universal superglue, viscosity 20 mPa.s.

**Application:** Particularly suitable for bonding plastics.

| Order No. | Content g | 9877 LOCTITE | PU |
|---|---|---|---|
| 0020 | 20 | 25.60 (W978) | 12 |

## Superglue Loctite 415

**Design:** Powerful bonding and quick-curing. Viscosity 100 mPa.s.

**Application:** The product is particularly suitable for bonding metals and metal to plastic and rubber as well as for bonding porous and uneven parts.

| Order No. | Content g | 9868 LOCTITE | PU |
|---|---|---|---|
| 0021 | 20 | 27.60 (W978) | 12 |

## Superglue Loctite 416

**Design:** Universally applicable, viscosity 1200 mPa.s

**Application:** Suitable for universal applications.

| Order No. | Content g | 9869 LOCTITE | PU |
|---|---|---|---|
| 0021 | 20 | 27.40 (W978) | 12 |

## Superglue Loctite 454

**Design:** Universal instant adhesive gel, viscosity in gelatinous form, with P1 NSF Reg. No. 123009.

**Application:** Ideal for use on vertical and overhead surfaces. Bonds paper, wood, cork, foam, leather, cardboard, metal and plastic.

| Order No. | Content g | 9879 LOCTITE | PU |
|---|---|---|---|
| 0003 | 3 | on request | 12 |
| 0020 | 20 | on request (999) | 10 |

## Superglue Loctite 3090

NEW

**Design:** Universal instant adhesive gel, viscosity in gelatinous form.

**Application:** For porous materials like wood, paper, leather, cork and textiles.

| Order No. | Content g | 986D LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | 24.30 (W978) | 12 |

## Plastic primer Loctite 770

NEW

**Design:** Is used to pretreat polyolefins or other materials with a low surface energy so that they can be bound with adhesives.

**Application:** For tough-to-bond materials such as polyethylenes, polypropylenes, polytetrafluoroethylenes (PTFE) and thermo-plastic elastomers.

| Order No. | Content g | 986F LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | 32.30 (W978) | 10 |

## Thread sealant Loctite 542

**Design:** Medium strength pipe sealant, liquid. With DVGW approval (EN 751-1): NG–5146 AR0855.

**Application:** Ideal for precision-threaded metal connections with a thread size up to 3/4" in hydraulic and pneumatic systems, as well as for small threaded connections.

| Order No. | Content ml | 9885 LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | on request | 12 |
| 0050 | 50 | on request (999) | 12 |

## Flange sealing Loctite 574

NEW

**Design:** Multi-purpose, high tolerance to oil and very resistant to water and glycol.

**Application:** For the sealing of hard-to-reach connections between warp-resistant metal sealing and flange surfaces.

| Order No. | Content ml | 986G LOCTITE | PU |
|---|---|---|---|
| 0050 | 50 | 27.10 (W978) | 12 |

## Thread sealant Loctite 577

**Design:** Medium strength pipe sealant.

**Application:** Multi-purpose thread sealant for all normal metal threads and coarse threads up to 80 mm (3" ). Ideal for fast processing at low temperatures, e.g. for outdoor maintenance work. Seals immediately at low pressure. **Mit DVGW und WRC approval.**

| Order No. | Content ml | 9889 LOCTITE | PU |
|---|---|---|---|
| 0050 | 50 | 27.90 | 12 |
| 0251 | 250 | 126.00 (W978) | 10 |

## Thread pipe sealant Loctite 55

**Design:** Nylon thread, white coating.

**Application:** For sealing metal and plastic threads up to 6 inches in diameter in the domestic and industrial sectors. The thread pipe sealant can be used in contact with drinking water (hot and cold), gas, compressed air and industrial oils.
Complies with the requirements of the KTW recommendation for cold and hot water and is suitable for suitable for potable water up to +85 °C in accordance with BS 6920. Also via the **DVGW approval,** Reg. No. DV-5142 AU 0166, tested according to EN 751-2 (grade ARp) and DIN 30660.

| Order No. | Content m | 9865 LOCTITE | PU |
|---|---|---|---|
| 0151 | 160 | 14.20 (999) | 48 |

## Retainer Loctite 603

**Design:** Oil-tolerant retaining product, firmness to touch after approx. 10 minutes.

**Application:** For bond gaps up to 0.1 mm. Fast-hardening and very strong. Tolerates low oil-based contaminants. Used for bonding of cylindrical fitting parts, particularly in those cases where clean surfaces cannot always be guaranteed. The product cures under air between close fitting metal surfaces and prevents loosening and leakage independent from shock and vibration. Typical applications include attaching roller bearings or oil impregnated bushings in bearing Shells. With WRC approval.

| Order No. | Content ml | 9871 LOCTITE | PU |
|---|---|---|---|
| 0050 | 50 | 52.70 (W978) | 12 |

## Retainer Loctite 638

**Design:** Very strong, multi-purpose retaining product, firmness to touch after approx. 5 minutes.

**Application:** For bond gaps up to 0.25 mm. Ideal for places where a high resistance to dynamic, axial and radial loads is required, such as in gears, pulleys and lots more. **Mit DVGW und WRC approval.**

| Order No. | Content ml | 9897 LOCTITE | PU |
|---|---|---|---|
| 0010 | 10 | 13.70 | 12 |
| 0051 | 50 | on request (999,W978) | 12 |

## Flange sealing Loctite 5910

NEW

**Design:** Permanently elastic flange sealing for non-warp-resistant flanges and for plastic/plastic and metal/plastic combinations. Also suitable as replacement for solid sealants, very good resistance to vibrations.

**Applications:** For oilt tanks, housing lids, motors, gearboxes and water pumps.

| Order No. | Content ml | 9899 LOCTITE | PU |
|---|---|---|---|
| 0050 | 50 | 10.35 (W978) | 10 |

## Loctite 7061 Quick cleaner

NEW

**Design:** Solvent-based surface cleaner with an acetone base, vaporises very quickly.

**Application:** For degreasing and cleaning surfaces. Is used for final cleaning prior to assembly and to remove most greases, oils, liquid lubricants, metal chips and fine particles from the bonding surfaces.

| Order No. | Content ml | 9872 LOCTITE | PU |
|---|---|---|---|
| 0050 | 400 | 9.85 (W984) | 10 |

## Loctite 7063 Quick cleaner

**Design:** Solvent-based surface cleaner.

**Application:** For degreasing and cleaning surfaces to be bonded with LOCTITE® adhesives. The product can also be used to clean and degrease machine parts during maintenance works.

| Order No. | Content ml | 9872 LOCTITE | PU |
|---|---|---|---|
| 0100 | 400 | 12.40 (W978) | 12 |

## Loctite 7200 Quick cleaner

NEW

**Design:** Glue and sealant remover. For aluminium and other soft metal flanges with surfaces that could be damaged by scratching off the sealant.

**Application:** Removes hardened sealants and solid sealants.

| Order No. | Content ml | 9872 LOCTITE | PU |
|---|---|---|---|
| 0400 | 400 | 14.15 (W978) | 12 |

## Sealant

NEW

**Design:** Suitable for the effective sealing of metal to metal and plastic to plastic.

**Applicaiton:** Seals water and oil pumps, cylinder heads and oil tanks, motors and inlet distributors, gearbox and switchgear casing compenents, threads. Also suitable for the assembly of gas turbines, water-cooled generators and turbo vacuum systems, and for coating preformed seals.

| Order No. | Content ml | 9872 | PU |
|---|---|---|---|
| 0080 | 80 | 6.70 (W978) | 10 |

## Strong adhesive Pattex® Classic

**Design:** Contact adhesive, free from hexanaphthene, high heat resistance to 100 °C.

**Application:** Ideal for combination gluing of wooden materials with decorative laminates, rubber, leather, cork, felt, hard PVC, soft foams, metal and lots more.

**Note:** Not suitable for polypropylene, polyethylene, polystyrene, soft PVC and artificial leather.

Henkel

| Order No. | Design | 9905 Henkel | PU |
|---|---|---|---|
| 0015 | 50 g tube | on request | 12 |
| 0005 | 125 g tube | on request | 12 |
| 0010 | 300 g can | on request | 12 |
| 0020 | 650 g can | on request | 6 |
| | | (999) | |

## Strong adhesive Pattex® Gel Compact

**Design:** Contact adhesive, free from hexanaphthene. Clean, non-stringy and does not drip.

**Application:** Ideal for combination gluing of wooden materials with decorative laminates, rubber, leather, cork, felt, hard PVC, soft foams, metal and lots more.

**Note:** Not suitable for polypropylene, polyethylene, polystyrene, soft PVC and artificial leather.

Henkel

| Order No. | Design | 9905 Henkel | PU |
|---|---|---|---|
| 0022 | 50 g tube | on request | 12 |
| 0025 | 125 g tube | on request | 12 |
| 0030 | 625 g can | on request | 6 |
| | | (999) | |

## Strong adhesive Pattex® Stabilit Express

**Design:** Two-component acrylate adhesive, fast-hardening. Temperature resistance from -20 °C to +80 °C.

**Application:** Ideal for stone, plastic, ceramic, wood, metal. Especially suitable for materials with an uneven surface.

Henkel

| Order No. | Design | 9905 Henkel | PU |
|---|---|---|---|
| 0045 | 30 g tube | on request | 6 |
| 0050 | 80 g tube | on request | 6 |
| | | (999) | |

## Hot glue gun Pattex® Supermatic

**Design:** Low electricity consumption thanks to electronic temperature control with PTC heat technology. Very high melting power, the heat-insulated silicone nozzle and the mechanical feed allow for a fast application of glue as well as the precise dosing of the melted adhesive.

**Application:** Clean, even and fast bonding in the home and workshop.

**Note:** For appropriate melt adhesive see (Order No. 9905 0037).

Henkel

| Order No. | Design | 9905 Henkel | Weight g |
|---|---|---|---|
| 0035 | Hot glue gun for glue sticks with ∅ 11.0 mm | 28.00 (W984) | 480 |

## Pattex® hot adhesive cartridge

**Design:** Transparent, high-strength, melting temperature approx. 200 °C, by heating the glued spots become loose again. After 2 minutes, the splice is strong and resilient.

**Application:** For almost all materials except soft plastic (PVC), polyethylene (PE), polypropylene (PP), polytetrafluorethylene (PTFE) and Styropor®.

Henkel

| Order No. | Design | 9905 Henkel | Length mm |
|---|---|---|---|
| 0037 | 1 kg package | on request (999) | 200 |

## Special adhesive Tangit PVC-U

**Design:** PVC glue on tetrahydrofuran basis, stabilised. Meets the requirements of DIN 16970, KRV Directive R 1.1.7 and the construction and testing of drainage systems. VBF: AI.

**Application:** Suitable for longitudinal force joining of pressure pipes (e.g. drinking water and gas pipes) with solvent cement socket or fittings made of PVC-U in line with the recommendations of the Plastic Pipe Association for bonding cable sewer pipes, gutters and lots more made of PVC-U.

**Note:** This product is subject to the prohibition of self service from the Chemical Prohibition Regulation (ChemVerbotsV).

Henkel

| Order No. | Design | 9911 (Henkel) | PU |
|---|---|---|---|
| 0025 | 125 g tube | on request | 12 |
| 0010 | 250 g can | on request | 12 |
| 0015 | 500 g can | on request | 12 |
| 0020 | 1 kg can | on request | 6 |
| | | (999) | |

## Special cleaner Tangit PE/PP/PB/PVDF

**Design:** Cleaner based on ethyl alcohol.

**Application:** For the intensive cleaning, degreasing and preparation of welded plastic joints. Preferably for PE, PP, PB, PVDF plastics.

Henkel

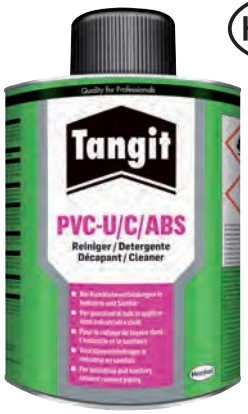
| Order No. | Design | 9911 (Henkel) | PU |
|---|---|---|---|
| 0005 | 1 l bottle | 17.75 | 8 |
| | | (W984) | |

## Cleaner Tangit PVC-U/C ABS

**Design:** Cleaner based on acetone/tetrahydrofuran, stabilised. VBF: B.

**Application:** For cleaning PVC-U and PVC-C bonding surfaces for subsequent bonding.

Henkel




| Order No. | Design | 9911 (Henkel) | PU |
|---|---|---|---|
| 0035 | 125 ml bottle | on request | 20 |
| 0030 | 1 l bottle | on request | 12 |
| | | (999) | |

## Reaction adhesive UHU PLUS SOFORTFEST

**Design:** Solvent-free two-component adhesive with an epoxy resin base, for fast bonding on small surfaces. The processing time is up to 2 minutes, firmness to touch is achieved after 5 minutes. End strength is 800 N/cm². The adhesive bond cures transparent, impact-resistant, non-aging and moisture resistant.

**Application:** Especially suited to fast bonding on small surfaces. For metal, glass, porcelain, wood, marble, stone, concrete, thermosetting plastic, glass fibre reinforced plastic, rigid PVC, rubber and lots more.

**Note:** Not suitable for polyethylene, polypropylene, polytetrafluoroethylene, polystyrene, soft PVC and adhesions on large glass surfaces.

UHU

| Order No. | Design | 9913 UHU | PU |
|---|---|---|---|
| 0045 | 35 g tubes (binder and hardener) | on request | 6 |
| | | (999) | |

## Reaction adhesive UHU PLUS SCHNELLFEST

NEW

UHU

**Design:** Solvent-free two-component adhesive with an epoxy resin base, for fast, load-bearing adhesion. Enables high-strength gluing on almost all solid materials. The processing time is up to 5 minutes, firmness to touch is achieved after 20 minutes. End strength is approx. 1300 N/cm². The adhesive bond cures transparent, impact-resistant, non-aging and moisture resistant.

**Application:** For fast, load-bearing adhesions. Enables high-strength gluing on almost all solid materials.

| Order No. | Design | 9913 UHU | PU |
|---|---|---|---|
| 0055 | 35 g tubes (binder and hardener) | on request (999) | 6 |

## Reaction adhesive UHU PLUS ENDFEST 300

UHU

**Design:** Solvent-free two-component adhesive with an epoxy resin base, for very high loads. The processing time is up to 90 minutes. Curing and ultimate strength (up to 3000 N/cm²) are temperature-dependent. Hard after 12 hrs at room temperature. The adhesive bond is impact-, ageing- and moisture-resistant.

**Application:** For metal, glass, porcelain, wood, marble, stone, concrete, thermosetting plastic, glass fibre reinforced plastic, rigid PVC, rubber and lots more.

**Note:** Not suitable for polyethylene, polypropylene, polytetrafluoroethylene, polystyrene, soft PVC and adhesions on large glass surfaces.
This product is subject to the prohibition of self service from the Chemical Prohibition Regulation (ChemVerbotsV).

9913 0005

9913 0015

9913 0040

| Order No. | Design | 9913 UHU | PU |
|---|---|---|---|
| 0005 | 33 g tubes (binder and hardener) | on request | 6 |
| 0010 | 163 g tubes (binder and hardener) | on request | 1 |
| 0015 | 50 ml double chamber cartridge | on request NEW | 6 |
| 0035 | Binder 915 g can | on request | 3 |
| 0040 | Hardener 740 g can | on request (999) | 3 |

## Accessories for double chamber cartridges

NEW

UHU

9913 0030

9913 0025

9913 0050

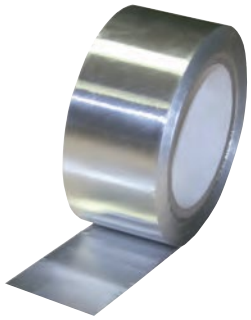
9913 0020

| Order No. | Design | 9913 UHU | PU |
|---|---|---|---|
| 0020 | Dosing device | 69.90 | 1 |
| 0030 | Curved mixer | 1.33 | 10 |
| 0025 | Short mixer | 1.03 | 10 |
| 0050 | Medium mixer | 1.13 (W993) | 10 |

## Aluminium adhesive tape

**Design**: Pure aluminium with acrylic adhesive, without carrier film. Short term temperature resistance to 100 °C.

**Application:** For covering, protecting and insulating as well as used as a water vapour barrier and reflective tape.



| Order No. | Tape width mm | 9857 | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 5101 | 30 | 15.15 | Aluminium | 50 | 0.08 |
| 5106 | 50 | 22.60 | Aluminium | 50 | 0.08 |
| 5111 | 100 | 45.30 (W993) | Aluminium | 50 | 0.08 |

## Double-sided adhesive tape

**Design:** Fabric carrier with white, aggressive adhesive synthetic rubber adhesive. Temperature resistance from –20 °C to +70 °C.

**Application:** For laying and fixing carpets, even on rough surfaces.

| Order No. | Tape width mm | 9857 | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 5140 | 50 | 6.90 (W993) | Beige | 25 | 0.19 |

## Fabric adhesive tape

**Design:** PE-coated fabric, very flexible and coated with a natural rubber adhesive.

**Application:** Steam-proof packing, fixing and repairs. For bonding in the construction sector.

| Order No. | Tape width mm | 9857 | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 3101 | 50 | 8.50 (W993) | silver | 50 | 0.18 |

## PP packing tape with acrylate adhesive

**Design:** Unwinds noiselessly. Temperature resistance from –30 °C to +70 °C.

**Application:** Packing tape for the secure, permanent sealing of boxes.

| Order No. | Tape width mm | 9857 | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 3200 | 50 | 2.34 (W993) | Buff | 66 | 0.05 |

## PP packing tape with natural rubber adhesive

**Design:** Unwinds noiselessly. Temperature resistance from –30 °C to +70 °C.

**Application:** Packing tape.

| Order No. | Tape width mm | 9857 | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0110 | 50 | 2.67 | brown | 66 | 0.06 |
| 0115 | 50 | 2.67 (W993) | clear | 66 | 0.06 |

## PVC tape "Caution glass!"

**Design:** Coloured PVC film with cross-linked rubber adhesive.

**Application:** For labelling and packaging.

| Order No. | Tape width mm | 9857 | PU | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|---|
| 0120 | 50 | 7.90 (W993) | 6 | fluorescent orange | 66 | 0.06 |

## PVC warning tape

**Design:** Coloured PVC film with strong rubber adhesive.

**Application:** For labelling scaffolding, stands, posts, protruding parts and lots more.

| Order No. | Tape width mm | 9857 | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 5130 | 60 | 8.50 | yellow/black | 66 | 0.05 |
| 5135 | 60 | 8.50 (W993) | red/white | 66 | 0.05 |

## Crepe adhesive tape

**Design:** With rubber adhesive. Temperature resistance to 80 °C.

**Application:** For covering, sealing, bundling and packaging.

| Order No. | Tape width mm | 9857 | PU | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|---|
| 2106 | 25 | 1.86 | 12 | Buff | 50 | 0.1 |
| 2111 | 30 | 2.00 | 10 | Buff | 50 | 0.1 |
| 2116 | 38 | 2.40 | 8 | Buff | 50 | 0.1 |
| 2121 | 50 | 3.12 (W993) | 6 | Buff | 50 | 0.1 |

## PVC packing tape

**Design:** With natural rubber adhesive. Rolls out evenly and quietly, very high tear-resistance.

**Application:** For medium to heavy packages, can be used both manually and with machinery.

9813 0115

9813 0110

| Order No. | Tape width mm | 9813 tesa | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0115 | 50 | 5.60 | Clear | 66 | 0.07 |
| 0110 | 50 | 5.60 (W984) | Buff | 66 | 0.07 |

## Crepe adhesive tape

**Design:** Loosely creped paper with natural rubber adhesive. Temperature resistance to 140 °C. Can be removed without tearing and residue, wet-grinding-resistant and very good hold on paint and fillers.

**Application:** For covering during painting work with subsequent drying.

| Order No. | Tape width mm | 9813 tesa | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0700 | 19 | 3.22 | Beige | 50 | 0.19 |
| 0705 | 25 | 4.22 | Beige | 50 | 0.19 |
| 0710 | 30 | 5.05 | Beige | 50 | 0.19 |
| 0715 | 38 | 6.40 | Beige | 50 | 0.19 |
| 0720 | 50 | 8.40 (W984) | Beige | 50 | 0.19 |

## Fabric adhesive tape, plastic-coated

**Design:** Acrylate-coated fabric with natural rubber adhesive. Short term temperature resistance to 130 °C. Good resistance to water and ageing. Can be torn by hand and labelled.

**Application:** For universal use, e.g. for labelling, bundling, sealing slits and holes and affixing, including on coarse substrates.

| Order No. | Tape width mm | 9813 tesa black | 9814 tesa white | 9815 tesa red | 9816 tesa grey | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|---|---|
| 5019 | 19 | 23.80 | 23.80 | 26.50 | 23.80 | 50 | 0.31 |
| 5025 | 25 | 34.90 | 34.90 | 34.90 | 31.40 | 50 | 0.31 |
| 5038 | 38 | 47.80 | 53.10 | 53.10 | 47.80 | 50 | 0.31 |
| 5050 | 50 | 62.80 (W984) | 62.80 (W984) | 69.80 (W984) | 62.80 (W984) | 50 | 0.31 |

## Tape dispenser

**Design:** Very stable metal construction with metal blade. For maximum 140 mm roller diameter.

| Order No. | For roll lengths up to m | 9857 |
|---|---|---|
| 9101 | 50 | 9.60 (W993) |

## Tape dispenser Comfort

NEW

**Design:** Durable tape dispenser with soft rubber handle and hidden blade. With manually adjustable roller brake for maximum 140 mm roller diameter. Delivery without tape.

| Order No. | For roll lengths up to m | 9857 tesa |
|---|---|---|
| 9110 | 50 | 28.80 (W984) |

## Sealing and insulating tape

NEW

**Design**: Covered with an embossed foil on one side, self-welding, UV-stable, ozone-resistant and forms a waterproof seal with the substrate. Temperature resistance from –40 °C to +90 °C.

**Application:** For splicing cable insulations, sealing plugs and bushing on cables and repairing tubes.

| Order No. | Tape width mm | 9857 | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 6101 | 19 | 5.10 (W993) | black | 10 | 0.50 |

## Electrical insulation tape 302

**Design: DIN EN 60454-3-1 F-PVC/105/A-Tx Type 10:** Coloured soft PVC film with acrylic adhesive. Flame retardant, resistant to ageing and largely resistant to acids and alkalis. Temperature resistance: –10 °C to +105 °C, dielectric strength: > 40 kV/mm.

**Application:** For all normal insulation, repair of damaged insulation, wrapping of cable ends and branches, stripping of armatures and coils and for marking.

**Note:** Cable ties can be found on 📖 5/87..
Cable markers can be found on 📖 9/94.

| Order No. | Tape width mm | 9821 Coroplast | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0005 | 15 | 1.63 | black | 10 | 0.15 |
| 0010 | 15 | 1.63 | white | 10 | 0.15 |
| 0015 | 15 | 1.63 | blue | 10 | 0.15 |
| 0020 | 15 | 1.63 | grey | 10 | 0.15 |
| 0025 | 15 | 1.63 (W965) | Green/yellow | 10 | 0.15 |

## Electrical insulation tape Super 33+

**Design:** PVC film with rubber adhesive. Weather and UV resistant.

**Application:** To isolate electrical applications up to 1 kV and for protection against moisture, alkalis, diluted acids and solvents.

**Note:** Cable ties can be found on 📖 5/87..
Cable markers can be found on 📖 9/94.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0005 | 19 | 7.80 (W984) | black | 20 | 0.18 |

## Fabric adhesive tape 1909

**Design:** PE-coated fabric with synthetic rubber resin adhesive.

**Application:** To cover rough surfaces such as plaster. Also suitable as a repair tape and packaging.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0105 | 50 | 17.35 | silver | 50 | 0.28 |
| 0110 | 50 | 17.35 (W984) | black | 50 | 0.28 |

## Fabric adhesive tape 8979

**Design:** PE-coated fabric with synthetic rubber resin adhesive.

**Application:** Multi-purpose tape suitable for outdoor applications and repairs thanks to its 12-month UV-resistance.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0205 | 48 | 18.15 (W984) | blue-grey | 22.8 | 0.33 |

## Fabric adhesive tape 5959

**Design:** PE-coated fabric with cross-linked rubber resin adhesive. UV, water and weather resistant up to 3 months, can be removed without residue.

**Application:** Bonding the most wide-ranging substrates outdoors (concrete, bricks, stone, wood, masonry, tiles).

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0215 | 48 | 20.60 (W984) | red | 22.8 | 0.32 |

## Aluminium adhesive tape 431

**Design:** Soft aluminium with acrylic adhesive. A special layer on the topside (release coating) allows for easy unrolling, without allowing the tape to stick to itself.

**Application:** For masking, sealing, heat and light reflection, as an anodising aluminium cover and moisture barrier.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0300 | 38 | 31.40 (W984) | silver | 50 | 0.09 |

## Tartan™ adhesive tape 8954

**Design:** Standard filament tape, longitudinally and transversely reinforced. Polypropylene film with synthetic, solvent-free rubber.

**Application:** For securing pallets, bundling lightweight products, sealing and reinforcing boxes. Suitable for packaging and transport of dangerous goods.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0410 | 50 | 7.20 (W984) | transparent | 50 | 0.13 |

## Carpet adhesive tape 9191

**Design:** Fabric carrier with hot-melt plastic.

**Application:** For fixing fitted carpets and carpet tiles.

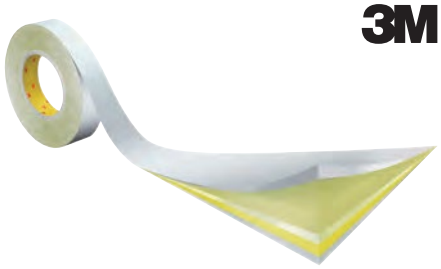
| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0500 | 50 | 11.70 (W984) | Beige | 25 | 0.26 |

## Carpet adhesive tape 9195

**Design:** Polypropylene film with various strength adhesives. One side is coated with hot melt plastic; the other with an acrylic dispersion.

**Application:** Particularly suited for exhibition stand construction. The bonded carpets can be easily removed from concrete, concrete hall floorings and lots more without residue.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0600 | 50 | 12.00 (W984) | Beige | 25 | 0.13 |



## Crepe adhesive tape 201E

**Design:** Latex impregnated, finely creped paper backing with rubber resin adhesive.

**Application:** For general covering and sticking in industry, e.g. for short paint jobs, fixing, holding, sealing, packaging, mounting and lots more.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0701 | 18 | 2.30 | Beige | 50 | 0.14 |
| 0706 | 24 | 3.08 | Beige | 50 | 0.14 |
| 0711 | 30 | 3.68 | Beige | 50 | 0.14 |
| 0716 | 36 | 4.61 | Beige | 50 | 0.14 |
| 0721 | 48 | 6.15 (W984) | Beige | 50 | 0.14 |

## Crepe adhesive tape 244

NEW

**Design:** Smooth and extra thin paper tape with special impregnation and very high-quality acrylate adhesive. Resistant to solvents and water, paint and varnish will not bleed through.

**Application:** For covering when painting and varnishing, for use indoors and outdoors. Wherever UV-resistance and a residue-free removal with a drying process of 100 °C over 30 minutes is required.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m | Tape thickness mm |
|---|---|---|---|---|---|
| 0750 | 24 | 8.75 | gold | 50 | 0.08 |
| 0755 | 30 | 10.45 | gold | 50 | 0.08 |
| 0760 | 36 | 12.90 | gold | 50 | 0.08 |
| 0765 | 48 | 17.40 (W984) | gold | 50 | 0.08 |

## Hook and loop fastener SJ 352 D

NEW

**Design:** The easily removable pressure lock allows for rational assembly and easy disassembly, and invisible fixing. Features adhesive strips on the rear.

| Order No. | Tape width mm | 9915 3M | Colour | Tape length m |
|---|---|---|---|---|
| 0900 | 25.4 | 71.90 (W984) | black | 5 |

## Ear muffs H4A

**Design:** A real lightweight with maximum wearer comfort. Can be used for many jobs due to extremely flat capsules, and can be easily combined with other equipment.

**Level range:** High 31 dB (A), medium 21 dB (A), low 12 dB (A).

3M PELTOR®

| Order No. | SNR value dB(A) | 9875 3M | Weight g |
|---|---|---|---|
| 0005 | 24 | 13.65 (W973) | 130 |

## Ear muffs Optime™ I H510A

**Design:** Frame made of stainless spring steel with soft padding - comfortable even when worn for long periods.

**Application:** For forestry work, the automotive industry, construction, precision mechanics, metalworking and wood processing.

**Level range:** High 32 dB (A), medium 25 dB (A), low 15 dB (A).

3M PELTOR®

| Order No. | Design | 9870 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 18.35 | 27 | 180 |
| 0010 | Hygiene set HY51 | 8.40 (W973) | – | – |

## Ear muffs Optime™ II H520A

**Design:** Frame made of stainless spring steel with soft padding - comfortable even when worn for long periods. Good insulation even at low frequencies.

**Application:** For construction equipment, heavy industry, mining, airports and lots more.

**Level range:** High 34 dB (A), medium 29 dB (A), low 20 dB (A).

3M PELTOR®

| Order No. | Design | 9873 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 22.80 | 31 | 210 |
| 0011 | Hygiene set HY52 | 8.15 (W973) | – | – |

## Ear muffs Optime™ III H540A

**Design:** Double-shell ear-muffs for extreme noise areas. Optimum protection with low weight and optimum wearing comfort.

**Application:** For extremely high noise sources dominated by low frequencies.

**Level range:** High 40 dB (A), medium 32 dB (A), low 23 dB (A).

3M PELTOR®

| Order No. | Design | 9874 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 26.30 | 35 | 285 |
| 0010 | Hygiene set HY54 | 10.35 (W973) | – | – |

## Ear muffs X1A

NEW

**Design:** Electrically insulated headset with insulated wires. Capsules offer plenty of room to minimise heat and moisture.

**Application:** To protect against low-level noise in construction, airports, automotive industry, steelworks, metalworking, printing presses and lots more.

**Level range:** High 32 dB (A); medium 24 dB (A); low 16 dB (A).

3M PELTOR®

| Order No. | Design | 987A 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 20.60 | 27 | 184 |
| 0010 | Hygiene set HYX1 | 9.05 (W973) | – | – |

## Ear muffs X2A

NEW

**Design:** Good insulation that covers most industrial needs.

**Level range:** High 34 dB (A); medium 29 dB (A); low 20 dB (A).

| Order No. | Design | 987B 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 25.00 | 31 | 220 |
| 0010 | Hygiene set HYX2 | 9.05 (W973) | – | – |

## Ear muffs X3A

NEW

**Design:** Electrically insulated headset with insulated wires, high insulation with single-shell design.

**Level range:** High 35 dB (A); medium 30 dB (A); low 25 dB (A).

| Order No. | Design | 987C 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 29.30 | 33 | 245 |
| 0010 | Hygiene set HYX3 | 10.15 (W973) | – | – |

## Ear muffs X4A

NEW

**Design:** Protection against low-frequency noise.

**Level range:** High 36 dB (A); medium 30 dB (A); low 22 dB (A).

| Order No. | Design | 987D 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 33.60 | 33 | 234 |
| 0010 | Hygiene set HYX4 | 11.30 (W973) | – | – |

## Ear muffs X5A

NEW

**Design:** Insulation from intermediate ring, capsule design and sealing rings with foam. Outstanding balance and very comfortable to wear despite larger capsules.

**Level range:** High 37 dB (A); medium 35 dB (A); low 27 dB (A).

| Order No. | Design | 987E 3M | SNR value dB(A) | Weight g |
|---|---|---|---|---|
| 0005 | Ear muffs | 38.00 | 37 | 351 |
| 0010 | Hygiene set HYX5 | 11.30 (W973) | – | – |

## Banded hearing protection Flexicap™

**Design:** Banded hearing protection with hinged headset. Can be worn around the neck, over the head or below the chin. Soft PU plugs ensure high wearing comfort.

**Level range:** High 26 dB (A), medium 19 dB (A), low 17 dB (A).

| Order No. | SNR value dB(A) | 9876 3M |
|---|---|---|
| 0007 | 23 | 6.15 (W973) |

## Banded hearing protection caps™

**Design:** Plastic headset with good wearing comfort. Extremely light.

**Level range:** High 27 dB (A), medium 19 dB (A), low 17 dB (A).

| Order No. | SNR value dB(A) | 9880 3M |
|---|---|---|
| 0007 | 23 | 4.50 (W973) |

## Ear plugs

**Design:** Soft PU plugs, suitable for Flexicap (Order No. 9876) and Caps 200 (Order No. 9880)

| Order No. | 9876 3M | PU |
|---|---|---|
| 0011 | 1.65 (W973) | 50 pairs<br>Δ Supply only possible as a whole packaging unit. |

## Ear plugs ULTRAFIT™

**Design:** Preformed, lamellar ear plugs with additional safety cord. Easy to clean and very durable. 1 pair in carton.

**Level range:** High 33 dB (A), medium 28 dB (A), low 25 dB (A).

| Order No. | SNR value dB(A) | 9878 3M |
|---|---|---|
| 0005 | 32 | 2.15 (W973) |

## Hearing protection plugs Classic™ II

**Design:** In dispenser box of 250 pair, pairs individually packaged.

**Level range:** High 30 dB (A), medium 24 dB (A), low 22 dB (A).

| Order No. | SNR value dB(A) | 9884 3M |
|---|---|---|
| 0006 | 28 | 55.20 (W973) |

## Ear plugs SOFT™

**Design:** PU foam plugs offering high wearing comfort and reliable protection. In dispenser box containing 250 pairs, pairs individually packaged.

**Level range:** High 34 dB (A), medium 34 dB (A), low 31 dB (A).

| Order No. | SNR value dB(A) | 9885 3M |
|---|---|---|
| 0005 | 36 | 44.60 (W973) |

## Hearing protection plugs dispenser One-Touch™ Pro

NEW

**Design:** Plastic case. Collection tray prevents plugs falling out; suitable for wall mounting. Delivery without ear plugs.

| Order No. | 9885 3M |
|---|---|
| 0100 | 75.00 (W001) |

## Respiratory protection mask FF P1

**Design:** With adjustable nose clip and latex-free head bands.

**Application:** To protect against fine dust particles up to 4 times the limit value. Not approved for carcinogenic substances and microorganisms.

9982 0006 format professional quality

9983 0006 format professional quality

9886 0006 (3M: 8710E) 3M

9886 0010 (3M: 8812) 3M

| Order No. | Design | 9982 format | 9983 format | 9886 3M | 9886 3M | PU |
|---|---|---|---|---|---|---|
| 0006 | Contour mask, without respiratory air valve | 0.62 | – | 1.00 | – | 20 Δ |
| 0006 | Folding mask, without respiratory air valve | – | 0.62 | – | – | 20 Δ |
| 0010 | Contour mask, with respiratory air valve | – (W997) | – (W997) | – (W973) | 1.70 (W974) | 10 Δ |

## Respiratory protection mask FF P2

**Design:** With adjustable nose clip and latex-free head bands.

**Application:** To protect against solid and liquid, harmful fine dust particles, smoke and aerosols up to 10 times the limit value.

9984 format professional quality

9985 format professional quality

9888 (3M: 8822) 3M

9893 (3M: 9322+) 3M

| Order No. | Design | 9984 format | 9985 format | 9888 3M | 9893 3M | PU |
|---|---|---|---|---|---|---|
| 0006 | Contour mask, with respiratory air valve | 0.98 | – | 2.75 | – | 10 Δ |
| 0006 | Folding mask, with respiratory air valve | – (W997) | 0.98 (W997) | – (W974) | 3.30 (W974) | 10 Δ |

## Respiratory protection mask FF P3

**Design:** With adjustable nose clip and latex-free head bands.

**Application:** To protect against poisonous and harmful dusts, smoke, carcinogenic and radioactive harmful substances, as well as viruses, bacteria and fungal spores up to 30 times the limit value.

9986 format professional quality

9987 format professional quality

9892 (3M: 8835) 3M

9895 (3M: 9332+) 3M

| Order No. | Design | 9986 format | 9987 format | 9892 3M | 9895 3M | PU 9986 | PU 9987 | PU 9892 | PU 9895 |
|---|---|---|---|---|---|---|---|---|---|
| 0006 | Contour mask, with respiratory air valve | 2.45 | – | 8.55 | – | 5 Δ | – | 5 Δ | – |
| 0006 | Folding mask, with respiratory air valve | – (W997) | 2.10 (W997) | – (W974) | 6.55 (W974) | – | 10 Δ | – | 10 Δ |

Δ Supply only possible as a whole packaging unit.

## Half-mask 4255 FFA2P3D

**Design:** EN 405, with good wearing comfort, ideal for glasses-wearers.

**Application:** To protect against gases and vapours from organic compounds and particles. Especially for paint-spraying work, for the metal industry and building trade.

| Order No. | Protection class | 9894 3M |
|---|---|---|
| 0006 | P3 | 27.60 (W974) |

## Half-mask body 6200M

**Design:** Flexible double filter system with innovative bayonet lock for light and fast handling, low-maintenance. The double filter system also reduces breathing resistance. The very lightweight mask body offers fatigue-free work. Delivery without filter.

| Order No. | Size | 9904 3M |
|---|---|---|
| 0006 | medium | 16.65 (W974) |

## Gas and combination filter 6000

**9904 0070** NEW — Protection against organic gases and vapours with a boiling point of over 65 °C.

**9904 0080** NEW — Protection against ammonia and derivatives.

**9904 0100** — Protection against organic gases and vapours with a boiling point of over 65 °C.

**9904 0090** NEW — Protection against organic gases and vapours with a boiling point of over 65 °C. For protection against non-organic vapours and acid gases.

**9906** — Protection against organic gases and vapours with a boiling point of over 65 °C. Protection against ammonia and derivatives.

| Order No. | Protection class | 9904 3M | 9906 3M | PU |
|---|---|---|---|---|
| 0070 | A1 | 5.00 | – | 2 Δ |
| 0080 | K1 | 6.05 | – | 2 Δ |
| 0100 | A2 | 5.95 | – | 2 Δ |
| 0090 | ABE1 | 5.70 | – | 8 Δ |
| 0101 | ABEK1 | – (W974) | 6.30 (W974) | 2 Δ |

Δ Can only be supplied as a whole packaging unit.

## Particle filter insert 5000

**Design:** According to EN143:2000+A1:2006.

**990A** — Protection against solid and liquid particles.

**9908** NEW — Protect against solid and liquid particles up to 10 times the limit value.

**9909** — Protect against solid and liquid particles up to 30 times the limit value.

| Order No. | Protection class | 990A 3M | 9908 3M | 9909 3M | PU |
|---|---|---|---|---|---|
| 0100 | P1R | 1.25 | – | – | 2 Δ |
| 0100 | P2R | – | 2.90 | – | 2 Δ |
| 0100 | P3R | – (W974) | – (W974) | 3.80 (W974) | 2 Δ |

Δ Supply only possible as a whole packaging unit.

## Particle filter 2000

**Design:** According to EN143:2000+A1:2006.

3M

**9910 0050** NEW — Protection against solid and liquid particles.

**9910 0065** NEW — Filter with activated carbon layer, for protection against solid and liquid particles, organic and acid gases and vapours as well as ozone + HF (30ppm) up to 10 times the limit.

**9910 0070** NEW — Protection against solid and liquid particles.

**9910 0060** — Filter with activated carbon layer, for protection against solid and liquid particles, organic and acid gases and vapours below the limit value, as well as ozone + HF (30ppm) up to 10 times the limit value.

| Order No. | Protection class | 9910 3M | PU |
|---|---|---|---|
| 0050 | P2R | 3.55 | 2 |
| 0065 | P2R, with activated carbon | 4.10 | 2 |
| 0070 | P3R | 4.20 | 2 |
| 0060 | P3R, with activated carbon | 4.80 (W974) | 2 |

## Filter cover 501

**Application:** For combining particle filter inserts with gas filters.

3M

| Order No. | 9910 3M | PU |
|---|---|---|
| 0100 | 1.70 (W974) | 2 |

## Panoramic glasses

NEW

**Design:** In line with EN 166, optical class 1. Viewing panes made of polycarbonate, with UV protection, scratch-resistant and anti-fog. Arms with soft pads for optimum fit.

format professional quality

| Order No. | Strap colour | 9972 format |
|---|---|---|
| 0030 | black/silver | 4.60 (W997) |

## Single-plate glasses

**Design:** According to EN 166. High-quality single shield with scratch-resistant polycarbonate pane with integrated side protection. The ergonomic nose area, the adjustable arm lengths and the roundings on the ends of the arms ensure the best fit. The arm ends are perforated so that a glasses strap can be fitted.

**Application:** Milling, turning and grinding operations, fine-mechanical work, easy assembly activities, DIY.

format professional quality

| Order No. | Strap colour | 9972 format |
|---|---|---|
| 0005 | Ocean blue | 2.60 (W997) |

## Visitors' safety glasses

**Design:** According to EN 166, optical class 1. High-quality single shield in convex shape with scratch-resistant polycarbonate pane with integrated side protection. The eyes are also protected from above by a stop ridge.

**Note:** Fit over normal glasses.

format professional quality

| Order No. | Strap colour | 9972 format |
|---|---|---|
| 0010 | transparent | 1.60 (W997) |

## Multi-purpose protective safety glasses

**Design:** According to EN 166 and 170 (UV protection level 2-1.2), optical class 1. Multi-purpose protective safety glasses with scratch-resistant acetate pane with integrated side protection and ventilation slots. Frame and arms made of polyamide. The arms can be adjusted in terms of length and gradient, and ensure best fit.

**Application:** Dusty work (conditional), milling, turning and grinding operations, fine-mechanical work, easy assembly activities, general plastering work.

| Order No. | Strap colour | 9972 format |
|---|---|---|
| 0015 | Ocean blue | 3.70 (W997) |

## Welder's safety glasses

**Design:** According to EN 166 and 169, optical class 1. Welder's safety glasses with scratch- and chip-resistant propionate pane (DIN 5) with integrated side protection and ventilation slots. Frame and arms made of polyamide. The arms can be adjusted in terms of length and gradient, and ensure best fit.

| Order No. | Strap colour | 9972 format |
|---|---|---|
| 0020 | Ocean blue | 5.45 (W997) |

## Full goggles

**Design:** According to EN 166, optical class 1. High-quality full goggles with scratch-resistant polycarbonate pane. The elasticated and adjustable head band and the soft, transparent strap with high tightness and indirect ventilation ensure best fit.

**Application:** Milling, turning and grinding operations, fine-mechanical work, general plastering work, general labouring.

**Note:** Fit over normal glasses.

| Order No. | 9972 format |
|---|---|
| 0025 | 7.20 (W997) |

## Safety spectacles SOLUS™

**Design:** According to EN 166, only 23 g weight, optimum tuning of the glass curvature for fit, field of view and eye protection, viewing panels, anti-fog coated. Supplied in microfibre bag.

**Application:** Milling, turning and grinding operations, DIY and lots more.

| Order No. | Strap colour | 9919 3M |
|---|---|---|
| 0006 | black/orange | 9.25 (W974) |

## Protective face shield

**Design:** In line with EN 166, optical class 1. With contour-shaped pane, large-dimensioned forehead protection, comfortable head band with one-handed twist-lock and interchangeable forehead sweat band.

**Application:** To protect against splashing liquids, molten metal and hot solids.

| Order No. | Design | 9973 format |
|---|---|---|
| 0005 | With PC screen | 16.05 |
| 0010 | with AC screen | 31.40 |
| 0015 | PC replacement screen | 8.25 |
| 0020 | AC replacement screen | 16.90 |
| 0025 | Head band | 3.65 (W997) |

## Safety helmet INAP Master 6

**Design:** According to EN 397 With 6-point webbed harness KAN-90/6, ventilation holes, chinstrap holder and side slots for hearing protection. Strongly angled neck tape for perfect fit, with neck guard. Head width adjustable between 51-64 cm.

| Order No. | Colour | 9920 |
|---|---|---|
| 0005 | signal white | 7.80 |
| 0010 | sulphur yellow | 7.80 |
| 0015 | light-blue | 7.80 |
| 0020 | carmine red | 7.80 |
| 0025 | apple green | 7.80 |
| 0030 | traffic orange | 7.80 |
| | | (W977) |

## Chin strap for safety helmet

**9927 0066** Cowhide leather with glide buckle.

9927 0066

**9927 0068** NEW Fabric band with quick release

9927 0068

| Order No. | Material | 9927 | 9927 |
|---|---|---|---|
| 0066 | Leather | 3.00 | – |
| 0068 | Fabric | – | 4.80 |
| | | (W977) | (W998) |

## Bump cap

**Design:** EN 812:2012 plus A1:2012 - side protection radius: 60 degrees. Very absorbent sweatband. With side reflective strips and braid accents on the peak, with 12 ventilation openings. Head size adjustable up to 63 cm.

| Order No. | Colour | 9925 |
|---|---|---|
| 2005 | black | 15.50 |
| 2010 | Marine-blue | 15.50 |
| | | (W997) |

## Full cowhide leather glove

**Design:** According to EN 388, 1.2 mm full cowhide, lined, with stable, rubberised, light cuff with pulse protection. **Protection under Category II.**

**Application:** Suitable for assembly.

2.1.4.3

| Order No. | Size | 9974 | PU |
|---|---|---|---|
| 0008 | 8 | 3.90 | 12 pairs Δ |
| 0010 | 10 | 3.90 | 12 pairs Δ |
| 0012 | 12 | 3.90 | 12 pairs Δ |
| | | (W997) | Δ Supply only possible as a whole packaging unit. |

## Split cowhide glove

NEW

**Design:** According to EN 388, 1.3 mm split cowhide, lined, with stable, rubberised, light cuff with pulse protection. **Protection under Category II.**

**Application:** Suitable for assembly.

| Order No. | Size | 9979 format | PU |
|---|---|---|---|
| 0009 | 9 | 2.30 | 12 pairs Δ |
| 0010 | 10 | 2.30 | 12 pairs Δ |
| 0012 | 12 | 2.30 (W997) | 12 pairs Δ |

Δ Supply only possible as a whole packaging unit.

4.1.4.3

## Welder's glove

**Design:** According to EN 420 With long split leather cuff, total length 35 cm. With yarn sewn from aramid fibres. **Protection under Category II.**

**9975** EN 388. Inner surface made of calf shagreen, back of hand made of split calf leather, cuff with pulse protection.

**9976** EN 12477-A. Made of very soft nappa sheepskin leather, thus maximum dexterity.

2.1.3.3

2.1.2.2

| Order No. | Size | 9975 format | 9976 format | PU |
|---|---|---|---|---|
| 0010 | 10 | 9.15 (W997) | 9.95 (W997) | 10 |

9975

9976

## Glove MechanicOILGRIP

NEW

**Design:** In line with EN 388, nitrile, impervious to liquid, long-lasting NBR coating on the inside up to the fingertips. Very good resistance to oils, solvents and chemicals. High heat resistance and tensile strength.

**Application:** For oily and wet materials, and dirty workplaces.

| Order No. | Size | 997A format | PU |
|---|---|---|---|
| 0007 | 7 | 2.55 | 1 pair |
| 0008 | 8 | 2.55 | 1 pair |
| 0009 | 9 | 2.55 | 1 pair |
| 0010 | 10 | 2.55 | 1 pair |
| 0011 | 11 | 2.55 (W997) | 1 pair |

4.1.2.1

## Glove MechanicFLEX

NEW

**Design:** In line with EN 388, nylon, outstanding grip on dry and oily surfaces. GRIPMASTER® coating, oil-resistant and high breathability.

**Application:** For transportation, logistics and assembly works.

| Order No. | Size | 997B format | PU |
|---|---|---|---|
| 0007 | 7 | 2.60 | 1 pair |
| 0008 | 8 | 2.60 | 1 pair |
| 0009 | 9 | 2.60 | 1 pair |
| 0010 | 10 | 2.60 | 1 pair |
| 0011 | 11 | 2.60 (W997) | 1 pair |

4.1.3.1

## Coarse knitted glove MechanicSNOW

**Design:** In line with EN 388, also fulfils the requirements of EN 511, coarse knit with fluid-impervious latex foam on the inside of the hand.

**Application:** Refrigerated warehouses, roadworks, working in cold conditions.

| Order No. | Size | 9977 format | PU |
|---|---|---|---|
| 0008 | 8 | 3.20 | 10 pairs |
| 0010 | 10 | 3.20 | 10 pairs |
| | | (W997) | |

2.2.2.2

02X

## Cut protection glove BladeCLASSIC 3

NEW

**Design:** In line with EN 388, EN407, seamless knit, with PU coating on the inside up to the fingertips. 15 gauge.

**Application:** Steel and glass processing, hazardous and rough work.

| Order No. | Size | 997C format | PU |
|---|---|---|---|
| 0007 | 7 | 6.65 | 1 pair |
| 0008 | 8 | 6.65 | 1 pair |
| 0009 | 9 | 6.65 | 1 pair |
| 0010 | 10 | 6.65 | 1 pair |
| 0011 | 11 | 6.65 | 1 pair |
| | | (W997) | |

4.3.4.3

## Cut protection glove BladeCLASSIC 5

**Design:** In line with EN 388, knitted without seams, TEKORA® offers the best abrasion-resistance and optimum cut protection, PU coating on the inside of the hand up to the fingertips. 15 gauge.

**Application:** Steel and glass processing, hazardous and rough work.

| Order No. | Size | 9978 format | PU |
|---|---|---|---|
| 0007 | 7 | 8.85 | 1 pair |
| 0008 | 8 | 8.85 | 1 pair |
| 0009 | 9 | 8.85 | 1 pair |
| 0010 | 10 | 8.85 | 1 pair |
| 0011 | 11 | 8.85 | 1 pair |
| | | (W997) | |

4.5.4.3

## Chemical safety glove Camatril® 730

**Design:** Nitrile, inside cotton velour, napped and with cuff, length 31 cm. Silicone-free, lacquer indifference. Good sensitivity and grip even with greasy and oily parts. Resistant to various hazardous substances such as N-heptane and sulphuric acid, suitable for use with foodstuffs according to EN 1935/2004. More resistance information available on request. **Chemical protection under Category III.**

**Application:** Especially suitable for use in the automotive and supplier industry, petrochemicals, printing, industrial and commercial cleaning services, chemical industry, food industry, in laboratories and maintenance.

| Order No. | Size | 9937 | PU |
|---|---|---|---|
| 0015 | 9 | 2.70 | 10 pairs Δ |
| 0020 | 10 | 2.70 | 10 pairs Δ |
| | | (W976) | Δ Can only be supplied as a whole packaging unit. |

3.0.0.1.

AJL

## Protective overalls

**Design:** Elasticated on the hood, waist, cuffs and ankles, with covered zip.

**9948** NEW

**Design:** Made of polypropylene, breathable.

**Application:** Protects against coarse dirt. Does not offer protection against chemicals.

**9935**

**Design:** Made of spunbonded HDPE, antistatic and breathable. External seams for greater protection. **Protection under Category III**, Type 5 B (particle-tight safety clothing), Type 6 B (limited splash-proof protective clothing).

**Application:** Painting, industrial cleaning, asbestos removal, cleaning work, chemical industry.

| Order No. | Size | 9948 | 9935 |
|---|---|---|---|
| 0003 | L | 1.95 | 6.55 |
| 0006 | XL | 1.95 | 6.55 |
| 0011 | XXL | 1.95 | 6.55 |
| 0015 | XXXL | 1.95 (W998) | 6.55 (W998) |

## Welder's apron

**Design:** Made of split cowhide, heavy duty, strapping with leather.

| Order No. | Size cm | 9933 |
|---|---|---|
| 0005 | 80 x 100 | 18.45 (W998) |

## Warning vest

**Design:** According to EN ISO 20471/2, with 2 reflective strips, one size, circumference: about 130 cm.

| Order No. | Design | 9940 | Colour |
|---|---|---|---|
| 0005 | Cotton mixed fabric | 8.65 | orange |
| 0007 | Cotton mixed fabric | 8.65 NEW | yellow |
| 0011 | Polyester | 3.70 | orange |
| 0015 | Polyester | 3.70 (W998) | yellow |

9940 0005 + 0011

9940 0007 + 0015

## First Aid kit

Due to the new ASR A4.3 (Technical Regulation for workplaces) First Aid rooms, means and equipment for First Aid will be subject to guidelines for all workplaces. ASR A4.3 specifies requirements of the German Workplace Ordinance, such as the requirements for means and equipment for First Aid as well as First Aid rooms or the type and number of First Aid kits and their content to be provided. The technical regulations for workplaces (e.g. ASR A4.3) differentiate between large and small operational First Aid kits. The minimum content is described in table 2 of ASR A4.3. The standards DIN 13157 (small) and DIN 13169 (large) are comparable and can be considered basic equipment.

**Minimum number of First Aid kits to be provided**

| | | |
|---|---|---|
| Administration and Commercial operations | 1 to 50 employees | 1 × DIN 13157 |
| | 51 to 300 employees | 1 × DIN 13169 |
| | Each further 300 employees extra | 1 × DIN 13169 |
| Production and Processing operations | 1 to 20 employees | 1 × DIN 13157 |
| | 21 to 100 employees | 1 × DIN 13169 |
| | Each further 100 employees extra | 1 × DIN 13169 |
| Construction site | 1 to 10 employees | 1 × DIN 13157 |
| | 11 to 50 employees | 1 × DIN 13169 |
| | Each further 50 employees extra | 1 × DIN 13169 |

**A large First Aid kit DIN 13169 can also be replaced by two small First Aid kits DIN 13157. First Aid kits according to ASR A4.3 can also be deployed in the field service.**

## First-aid box, small, DIN 13157

**Design:** Orange, two same-size case shells with transparent cover plates for the protection of the content and all-round rubber seal. Variable internal compartments due to separators, can be sealed.

**Supplied:** In impact-resistant ABS plastic case with wall bracket with 90°stop arrest and content standard according to DIN 13157.

| Order No. | Design | 9946 format | Dimensions W x D x H mm |
|---|---|---|---|
| 0005 | First-aid box, DIN 13157 | on request | 260 x 170 x 110 |
| 1005 | Refill pack, DIN 13157 | on request (999) | – |

## First-aid box, large, DIN 13169

**Design:** Orange, two same-size case shells with transparent cover plates for the protection of the content and all-round rubber seal. Variable internal compartments due to separators, can be sealed.

**Supplied:** In impact-resistant ABS plastic case with wall bracket with 90°stop arrest and content standard according to DIN 13169.

| Order No. | Design | 9947 format | Dimensions W x D x H mm |
|---|---|---|---|
| 0005 | First-aid box, DIN 13169 | on request | 310 x 210 x 130 |
| 1005 | Refill pack, DIN 13169 | on request (999) | – |

## Eye wash station

**Design:** Dust-protected wall box with 2 x 0.5 l sterile eyewash bottles (according to DIN EN 15154-4), with identification eye rinse and mirror. In case of first-aid, kit is very easy and quick to open.

**Application:** Particularly suitable for use in workplaces where foreign bodies and dust and dirt accumulate. **Flushing time a total of about 10 minutes.**

| Order No. | Design | 9945 plum | Dimensions W x D x H mm |
|---|---|---|---|
| 0005 | Wall box | 51.00 | 227 x 110 x 265 |
| 0010 | Eye wash bottle 0.5 l | 13.45 (W998) | – |

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| Trademark | Trademark owner |
|---|---|
| ACR PHILLIPS® | Phillips Screw Company |
| ACR TORQ-SET® | Phillips Screw Company |
| ASSY® | Adolf Würth GmbH & Co. KG |
| Hastelloy® | Haynes International, Inc. |
| INBUS® | Ruia Global Fasteners AG |
| Inconel® | Huntington Alloys Canada Ltd. |
| KEVLAR® | E. I. du Pont de Nemours and Company |
| RADOX® | HUBER+SUHNER GmbH |
| SDS-max® | Robert Bosch GmbH |
| SDS-plus® | Robert Bosch GmbH |
| SIT® | Adolf Würth GmbH & Co. KG |
| systainer® | TTS Tooltechnic Systems AG & Co. KG |
| TORX PLUS® | Acument Intellectual Properties, LLC |
| TORX® | Acument Intellectual Properties, LLC |
| TRI-WING® | Phillips Screw Company |
| Weldon® | Fastcut Tool Corp. |

### Notes regarding the tool catalogue

**Edition 2017/19**

#### I. Tool catalogue

This catalogue contains more than 1500 pages of coordinated, high-quality products that we are sure will meet your demands.
The range has been selected by specialist based on many years of experience and countless discussions with our customers.

#### II. Catalogue range

The range is divided into **9 product categories** in order to make using the catalogue easier. Alongside the alphabetic index, the product category overviews make it easier to quickly locate certain products.
The range of products contained in the catalogue has been developed to meet requirements in accordance.

#### III. Terms regarding prices, sales, delivery and payment

The article prices detailed in the catalogue are **guideline prices** without VAT. Unless other quantities are specified, these prices apply to a single unit. If packaging units (PU) are marked with a Δ, the products may only be sold in complete PUs.
The prices are valid until 31.08.2019.
We hope you understand that unpredictable changes to the market may require price corrections and that prices may be lowered or raised as a result.
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All deliveries are subject to the currently valid edition of our sales, delivery and payment terms.

#### IV. Orders

Each individually defined article has an **8 character catalogue number.**
The **order quantity and catalogue number** are sufficient to place an order. For safety's sake and to prevent errors when writing out orders, we have to that you also include the short name for the article and any dimension specifications. Your orders will be processed in accordance with our valid delivery terms.

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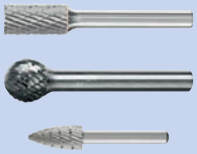
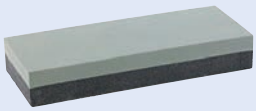
| 1 Cutting Tools | 1/12 | 1/129 | 1/234 | Drills, circular cutters, countersinks, reamers, thread-cutters, thread-millers, chisels, drill bits and deburring tools |
| 2 Cutting Tools | 2/16 | 2/144 | 2/163 | Milling, sawing, broaching tools, lathe tools, knurling tools, indexable tools for milling, drilling, turning, grooving and threading |
| 3 Clamping Systems | 3/4 | 3/39 | 3/133 | Lathe chucks, centre punches, tool holders, tapping chucks, vices, clamps, vacuum chucks, magnetic clamps |
| 4 Measuring Equipment | 4/10 | 4/44 | 4/131 | Calipers, micrometers, dial indicators, external and internal calipers, measuring stands, gauge blocks, ring gauges and mandrels, magnifiers, microscopes, squares, folding rulers, tape measures, laser measuring technology, water balances, scales, concentricity and shaft testing devices, measurement and control panels, height and marking gauges, surface roughness testers, stopwatches and measuring and testing instruments |
| 5 Hand Tools | 5/3 | 5/21 | 5/131 | Screw vices and clamps, electronic water pumps and grip pliers, wire cutters, stripping and crimping tools, tools for photovoltaics, voltage and continuity testers, bolt cutters, screws, ratchets, plugs, hooks, hex and Torx spanners, friction ratchets, sparking tools |
| 6 Hand Tools | 6/2 | 6/74 | 6/117 | Socket wrench sets and kits, tool sets, workshop trolleys, sliding and folding workbenches, power socket inserts, torque wrenches, screwdrivers and sets, bits and accessories, tweezers, files, scrapers, metal saws, hammers, chisels, pin punches, punches, strippers and automotive tools |
| 7 Hand Tools | 7/13 | 7/47 | 7/81 | Wire brushes, sheet metal shears and punches, pipe wrenches, pipe cleaning and testing equipment, pipe benders and cutters, installation, woodworking and masonry tools, knives, glass cutters, tool boxes and cases |
| 8 Abrasives | NEW 8/13 |  8/69 |  8/87 | Sharpening, cutting and grinding discs, diamond wheels, cutting discs and pins, sharpeners on backing material, fleece, sharpening pins and files, abrasives, handlappers, polishing tools, grinding and polishing pastes |
| 9 Soldering/Welding/ Workshop Equipment | 9/2 | 9/26 | 9/55 | Cable drums, current distributors, hand-held and site lamps, painters tools, brooms, soldering and welding equipment, blind rivets, blind rivet nuts, compressed air couplings and treatments, compressed air hoses, tyre inflators, blow-out pistols, cooling systems, marking, chemical products and industrial safety |
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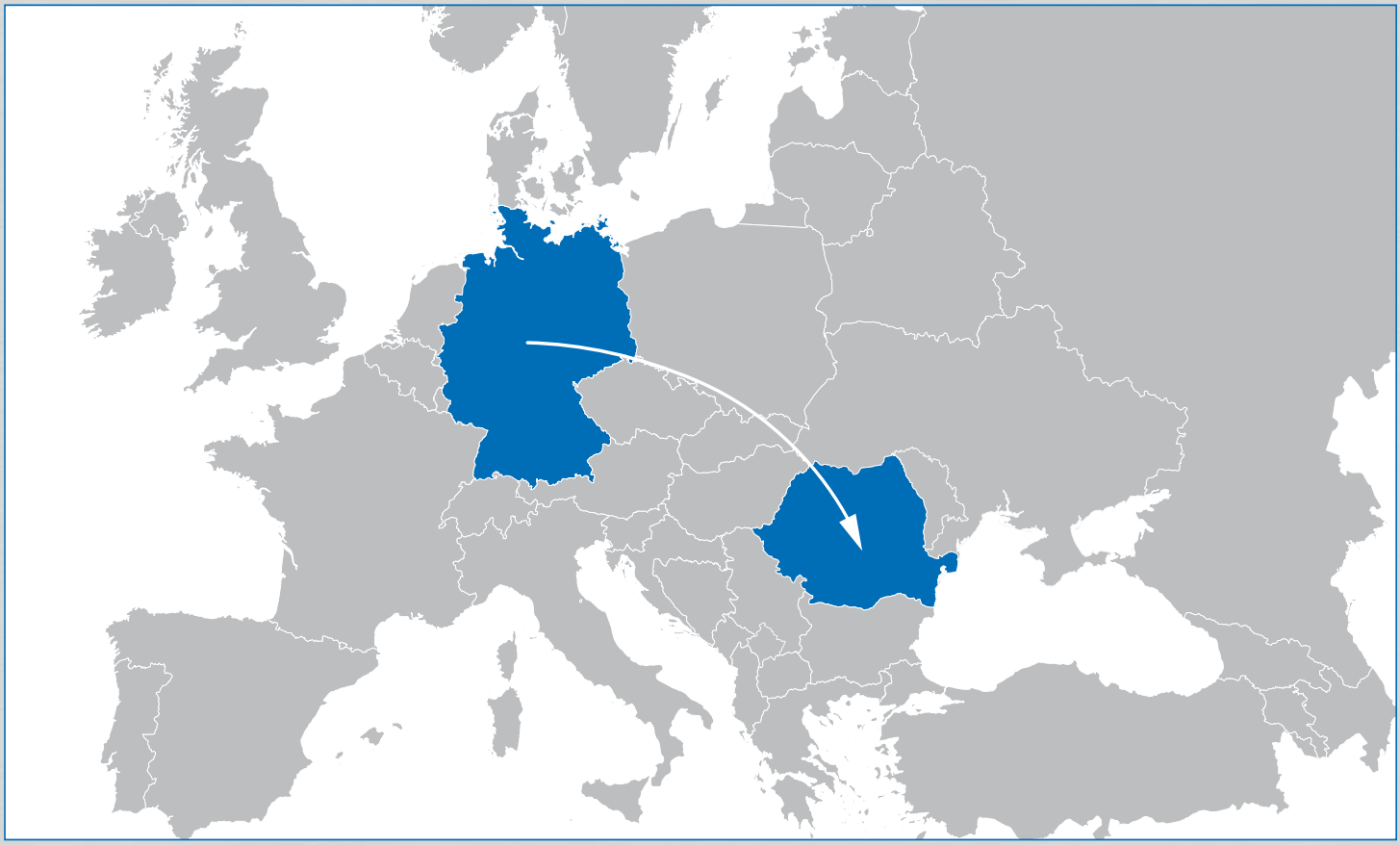

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