












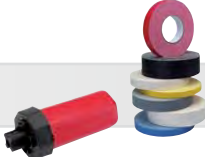

**cimco**<sup>®</sup>  
W E R K Z E U G F A B R I K

The complete range of tools for  
industry and the electrical trade



**2017/2018**

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Administration



Logistics centre



### Available for you worldwide

CIMCO is represented internationally by associated companies or renowned commercial agencies (see last page). Foreign markets are supported with all means of modern merchandising that are tailor-made to the special features of the local country.






### Company profile

CIMCO tool factory was founded in Remscheid in 1827 and can still be found today at this traditional stronghold of the European tool industry. Right from the start, the family-run company has always remained true to its philosophy of making tools which meet the highest possible requirements of professionals. This requires the use of the best possible materials, professional workmanship and quality control as well as the continuous adjustment to individual customer needs and new technological challenges. This has allowed the company to successfully develop from a once regionally active plier factory to a manufacturer and distributor of high quality manual tools with international acclaim.

### Memberships

Among others, CIMCO is a member of the following organisations:

- ZVEI:** • Zentralverband Elektrotechnik und Elektroindustrie e. V., Frankfurt a. M.
-  • Fachverband Elektrotechnische Handwerke NRW, Dortmund
-  • ISD Interseroh
-  • Fachverband Werkzeugindustrie e. V., Remscheid



# Product quality



## Tested safety

A great number of electricians in trade and industry place their trust in quality tools from CIMCO every day. For this reason, safety tools play an important role in the company's own production. Internally developed production techniques are used here to manufacture special protective insulation.

## Sophisticated quality control

The safety of CIMCO tools can be relied on at all times. For example, all insulated tools are individually tested in a water bath at 10,000 volts according to the valid directives. CIMCO has completely automated this testing process by deploying an industrial robot, probably the only manufacturer to do so worldwide.



## Permanent innovations

Constant optimisation and expansion of our product range by useful innovations is a permanent feature of our business strategy. CIMCO is thus always one step ahead of the changing demands of the market!

Terms such as flexibility and mobility are increasingly important in trade and electrical engineering professions and demand corresponding implementation in the development of tools. That is why all CIMCO products are manufactured for a wide range of applications and can be adapted to many different situations.

## One-stop-shopping thanks to the enormous product range

Do you know of a larger range of hand tools for the electrical industry? We don't! This catalogue offers electrical wholesalers everything from a single source, including all specialities, special sizes and latest products at a glance. It dispenses with the need for a large number of individual suppliers and helps to reduce your processing costs for purchasing, incoming goods, warehousing and accounting.



Product quality

# Marketing

## Sales displays – stock, salesperson and business card



“Buying by seeing” – our products are mostly bought in the cash-and-carry store of the specialist trade. Attractive product presentation guarantees sales success!

Thanks to decades of experience, CIMCO can provide tailor-made presentation aids to specialist dealers. With open sales walls, high-quality glass showcases or complete shop-in-shop-systems in the customer’s corporate design, CIMCO offers plenty of optically appealing and verifiably promotional possibilities for clear stocking and presentation of the range.

This involves no risk for our dealer customers: all displays are delivered free of charge (under reservation of title) and specially trained CIMCO sales promoters handle delivery, set-up and stocking.



## Success by sales promotions

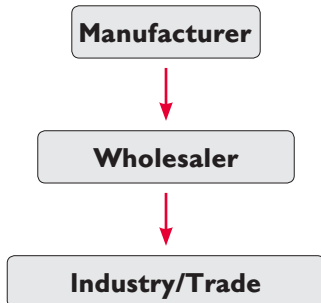
CIMCO is known for continual strong-selling and high-yield sales promotions.

New products, special price offers and so called “add-on-promotions” are shown on leaflets which the wholesaler can request free of charge in any desired amount printed with his logo and address. This enables the wholesaler to generate more turnover without much of his own effort.



Marketing

# Sales & Service



## Clear sales channels

CIMCO-Werkzeugfabrik has always been committed to the three-step sales channel "manufacturer/specialist wholesaler/user". In our sales policy you will not find direct sales to the industry or trade, or supply in retail, such as DIY-markets. Customer loyalty is our prime principle.

## There for you in person – on site

An extensive network of dedicated sales personnel provide personal support to wholesalers and users of our tools on location. Whether at product training or application workshops, counter days or hundreds of regional specialist and in-house trade fairs every year: Your CIMCO field sales partner is always nearby and offers comprehensive advice and active sales support. You can find a list of all representatives on the last page.

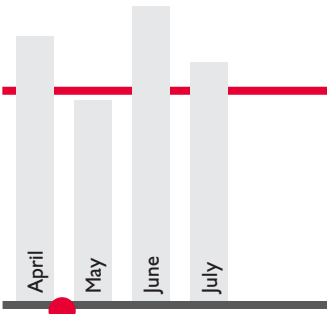


## Counter displays

No work, no risk – that is the success formula for counter sales increase! With our counter displays, we offer you as a wholesaler the option of periodically presenting new tool features and innovations directly to your cash and carry customers at the counter.

It is proven that our customers on average increase their "counter sales" by between 20% and 40%. Our sales employees will gladly provide you with information on our current new features and the presentation options they offer.

# Logistics



## Delivery reliability

On average, 97.5% of all catalogue products are permanently available from stock at CIMCO. Consistent use of our comprehensive logistics controlling system has allowed us to further improve on our delivery rate.

## For the sake of the environment

All CIMCO sales and delivery packaging are reusable or can be recycled thanks to the easily separable materials. CIMCO has already been working with disposal companies such as ISD Interseroh for years.



## Rapid order processing

Delivery of a customer's order is normally effected in less than 36 hours from receipt of the order. Thanks to efficient logistics partners, every CIMCO customer receives the required goods within 3 to 4 days and, in urgent cases – if the order reaches CIMCO before 10:00 a.m., delivery may even be made on the next working day.

## Customised logistics services

Special customer requirements, such as reusable transport systems, scheduled domestic and foreign delivery dates, delivery tracking via the internet or special packaging requirements are no problem for us – we'll sort it!



## If it's really urgent!

The wholesaler is normally unable to stock tools in exceptional sizes and special tools. However, it is exactly these specialities which are particularly urgent when they are required. CIMCO arranges drop shipments to the user or the building site – all over Germany!

Logistics



# HARDSHELL TOOL CASES



Integrated tool insertion slots to hold tools professionally

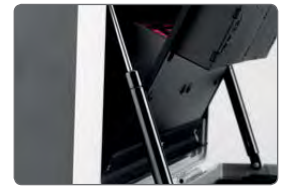


Profile grid in case bottom to keep the inserts firmly in place



External hinges integrated in the frame

**Diamond**



Two gas struts ensure easy opening of the case



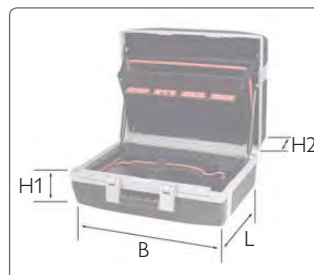
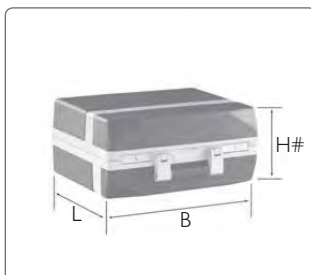
Removable tool boards for more flexibility



Tool boards with end stops



Particularly high and robust feet for maximum stability



$$H\# = H1 + H2$$

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## METRO Tool case

Reasonably priced, absolutely professional hardshell tool case, specifications: shell made of ABS material, surrounding aluminium frame with 2 integrated lockable clamp locks, carrying capacity up to 15 kg, 2 tool boards with a total of 26 tool pockets, document clipboard 400 mm wide, bottom shell can be individually subdivided incl. separators, lid support and hinges made of metal, plastic bottom-slider.

Weight 4400 g 405/490/190 mm 350/460/105/70/175 mm 1 17 0073



## CHAMPION Master case

Pro hardshell case with outstanding cost effectiveness! Broad aluminium frame for high stability, case shells made of extremely impact and drop-resistant polypropylene, extra spacious bottom shell with various partitions for useful division into small boxes, 3 tool boards with numerous pockets of different sizes for storing all kinds of hand tools securely, 3 metal hinges with snap-in locking hold the case securely open without additional braces, comfort carrying handle with soft rubber insert, 2 robust lockable snap locks, nameplate.

Weight 5200 g 380/485/220 mm 350/470/120/90/210 mm 1 17 0930



## CHAMPION Double tool case with 180° opening function

Shells that open 90° on both sides provide the case with a particularly good upright stability (both case shells can lie flat for a stable case position). The two shells made of extremely impact and drop-resistant polypropylene are connected by 3 dual purpose metal hinges (hinge function for upper and lower shell) to the 3 aluminium frames and secured by 4 clamp locks. With 4 locking hinges in the case, the upper and lower shells can be opened and closed precisely. In addition, the case shells also remain stable when open or full. The handle with soft rubber insert makes it easy to carry without tiring. The case has a carrying capacity of up to 35 kg and is equipped with 4 tool boards with 6 pockets. The bottom shell can be variably divided with separators so that machines or small parts can be transported securely.

Weight 6800 g 385/485/245 mm 350/470/115/100/215 mm 1 17 0935



## CHAMPION Master case - roller case

Professional hardshell case (same as CIMCO article no. 17 0930) with integrated roller system and 4-fold telescopic handle for high mobility and comfort. The extra wide rollers on the outer shell of the case prevent it tipping over. Broad aluminium frame for high stability, shells made of extremely impact and drop-resistant polypropylene, extra spacious bottom shell with various partitions for individual division into small boxes, 3 tool boards with numerous pockets of different sizes for secure storage of hand tools of all kinds, 3 metal hinges with snap-in locking and two additional interior braces hold the case securely open, comfort carrying handle with soft rubber insert, 2 robust lockable snap locks, nameplate.

Weight 6850 g 375/485/250 mm 350/470/135/90/225 mm 1 17 0932



## CLASSIC Master case

Professional hardshell case made of impact-resistant 3 mm thick ABS plastic, outer bottom shell with 4 stable feet, surrounding aluminium frame, fasteners on the sides to attach a shoulder strap (CIMCO article no. 17 0275), 3 removable tool boards with rubberised tool insertion straps and a document compartment, bottom shell with individually adjustable dividers for measuring tools, small parts, tools, etc., 2 key-operated locks. Weight 6000 g

black 425/505/230 mm 350/440/105/80/185 mm 1 17 0075  
red 425/505/230 mm 345/435/105/80/185 mm 1 17 0070



## Shoulder strap for CLASSIC Master case

40 mm wide, with shoulder pad (Velcro attachment), 2 plastic holders to attach to the tool case, infinitely adjustable between 75 and 135 cm

Weight 120 g 1 17 0275



### Tool board set for CLASSIC Master case

3 tool boards with rubberised tool insertion slots and a document compartment, incl. quick release for quick exchange.

Weight 1460 g		1	17 0375
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### BOMBER Master case

Double-walled hardshell case made of impact-resistant and shock-proof polyethylene plastic. Extremely durable, virtually indestructible. Resistant to high and low temperatures and also to many chemicals. With 2 tool boards, 2 lockable clamp locks, document compartment, adjustable partitions in bottom of case.

Weight 5500 g	360/475/205 mm	315/430/80/70/150 mm	1	17 0076
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### MEGA-WHEEL Master case

Double-walled shells of impact-resistant and unbreakable polyethylene, highly temperature and chemical resistant, 80 mm deep bottom shell with dividing walls for flexible interior division according to individual needs, 2 removable boards with innovative, patented FLEXIPOUCH pockets for storing tools and small parts, spacious two-part document compartment, metal cover holder stable on both sides, 2 large rollers (ø 98 mm!) with ball bearings for more stability and robustness, 4 rubber bottom-sliders and appropriate recesses on the case cover make the case securely stackable. The telescopic handle is discretely integrated into the bottom shell and does not get in the way during normal case transport. The handle can be extended to an ergonomically comfortable 115 cm. Handle with soft rubber insert and abutment springs, 2 stable key locks.

Weight 8000 g	410/550/245 mm	370/475/110/75/185 mm	1	17 0074
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### MODULAR Master case

This hardshell case defines new standards!

**Flexibility:**

Patented click system for quick insertion and removal of tool boards in the required number (max. 3), bottom shell of case with an innovative system for subdivision: clip-on dividing partitions are simultaneously variable and difficult to lose. The case is revolutionary with the accessories "telescopic system" and "trolley". All individual working environments and mobility requirements are taken into account with these optional features.

**Design:**

Shells made of highly shock-resistant plastic, edges especially reinforced with attractive coloured protection caps, 2 tool boards with many pockets, 2 high-quality chrome-plated key-operated locks, chrome-plated carrying handle with soft rubber insert.

**Further equipment specifications:**

3 strong bottom-slider hinge-elements, additional combination lock, all movable parts are screwed on making them easy to replace.

Weight 6300 g	385/490/240 mm	345/465/105/115/220 mm	1	17 1000
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### Telescopic system for MODULAR Master case

Stable mounting frame with 4 height-adjustable telescopic legs, which lift the MODULAR master case to an ergonomically comfortable working height between 450 and 730 mm and making it stable even on extremely uneven surfaces. Can also be used separately as a work table. Simple attachment on the bottom side of the case with 4 toggles (= case bottom-sliders), telescopic legs can be folded away and height-adjusted with quick release fasteners, weight 2000 g.

folded up	450 x 50 x 350 mm	1	17 1006
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### Trolley for MODULAR Master case

This attachment set provides mobility and ergonomics: heavy loads are moved effortlessly. 2 stable castors, aluminium telescopic handle with 2 extension lengths to select from (800 and 1100 mm). Simple attachment on the bottom side of case with 4 toggles (= case bottom-sliders), trolley can also be used alone for transporting loads of up to 30 kg.

Weight 1600 g

folded up	490 x 260 mm	1	17 1004
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### PERFEKT Super Master case

The elegant, strong, robust hardshell case with 3 tool boards = 4 push-in brackets and one document compartment. Bottom shell with grid layout and separators for reliable placement of measuring tools and small parts. The HIGHLIGHT: The tool boards with a sensational clamp effect. Small and large tools can be inserted without much organisation and will be held safely in place. Also during transport and even if case is upside down.

Weight 4900 g	355/485/180 mm	305/455/100/65/165 mm	1	17 5075
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Tool case "red", 4 push-in brackets (2 tool boards), but larger internal dimensions, without document compartment

Weight 5100 g	400/495/205 mm	355/465/110/75/185 mm	1	17 5076
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### PERFEKT Super Master case - roller case

Further development of the popular PERFEKT master case CIMCO article no. 17 5075, now "king-size" with integrated roller system for high mobility and comfort. Pulling and pushing the case is possible thanks to the extra-wide four-fold telescopic handle (up to 1050 mm) and rubberised, large rollers running on bearings with wide wheel-base (prevents it tipping over). Aluminium double frame with carrying capacity of up to 40 kg, 2 elegant, lockable clamp locks, 2 locking hinges with case lid latching, protective integrated bottom-sliders, 2 robust, washable tool boards made of ConPearl® with a patented clamping system that reliably holds all types of hand tools in place, with a document compartment, easy to carry without tiring thanks to the ergonomic handles with padded recessed grips made of springy material.

Weight 6600 g	400/495/240 mm	355/465/110/105/215 mm	1	17 5078
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### JUMBO tool case

Extremely voluminous tool case, perfect for carrying tools, electrical machines and components simultaneously. Made of unbreakable, impact-resistant and shock-proof HDPE plastic, with multiple rivets and exceptionally strong aluminium frame, simple and comfortable to transport thanks to 2-step pull-out telescopic handle and large rollers with ball bearings, 2 removable click system tool boards with innovative, patented FLEXIPOUCH pockets, 1 document compartment, 2 robust lockable snap locks, 2 hinged carrying handles for optional vertical or horizontal transport, 4 rubber bottom-sliders.

red

Weight 8500 g	415/500/360 mm	385/465/195/145/340 mm	1	17 0072
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black

Weight 8500 g	415/500/360 mm	385/465/195/145/340 mm	1	17 0071
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### DELUXE tool case

Elegant aluminium case made for high-tech installations and service, cold formed shells in solid anodized aluminium, bottom shell with pre-cut cube-shaped foam inserts for safely transporting sensitive components and equipment, such as a laptop, measuring tools, printed circuit boards etc., double aluminium frame provides highest stability and does not warp, 2 tool boards with many pockets, separate document bag, 2 chrome-plated designer locks, additional combination lock, ergonomic soft-grip handle.

Weight 6000 g	375/485/195 mm	355/470/100/75/175 mm	1	17 3200
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## Master case **Diamant**

### The revolution in hardshell tool cases

Revolutionary stability:

- Case shells made of 3.5 mm ABS (airworthy)
- Reinforced aluminium frame (single frame)
- Hinges for case shells integrated in the frame
- Large aluminium handle with plastic insert
- Two cylinder locks countersunk in the frame
- Particularly high and robust feed for maximum stability

Revolutionary comfort:

- Two gas struts ensure it is easy to open the case
- Tool boards in the upper case shell with 30° angle to make tool removal easier
- Profile grid in the case bottom for raaco Carry-Lite 55 inserts
- Tool boards with innovative end stops
- Made of material which can be recycled
- Easy repair orientated design and development

### DIAMANT 25 Master toolbox

Carrying capacity up to 25 kg. Two removable tool boards with rubberised tool insertion straps and a document compartment. Additional tool board with rubberised tool insertion straps in the base plate.

Delivery incl. 5 raaco Carry-Lite 55 inserts to safely store small parts and accessories.

Case shell without additional aluminium frame.

Weight 5300 g	375/488/210 mm	290/415/50/90/140 mm	1	17 8010
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Case as described above but with integrated tool insertion slots in the base plate.

Case shell without additional aluminium frame.

Weight 5300 g	375/488/210 mm	290/415/50/90/140 mm	1	17 8015
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### DIAMANT 30 Master case

Carrying capacity up to 30 kg, case shells equipped with an additional aluminium frame for increased stability, two removable tool boards with rubberised tool straps and a document compartment.

Additional tool board with integrated tool insertion slots in the base plate.

Delivery incl. 5 raaco Carry-Lite 55 inserts to safely store small parts and accessories.

Case shells equipped with one additional aluminium frame for increased torsional stiffness.

Weight 5900 g	375/488/210 mm	290/415/50/90/140 mm	1	17 8075
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### DIAMANT 35 Master case

Contains a tool board with tool insertion slots and a tool board with tool insertion straps in the lid, but with a carrying capacity of up to 35 kg. Case shells have an additional aluminium frame for absolute torsional stiffness.

black

Weight 6400 g	430/498/235 mm	340/420/50/100/150 mm	1	17 8077
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red

Weight 6400 g	430/498/235 mm	340/420/50/100/150 mm	1	17 8076
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### DIAMANT 40 Master case

corresponds to CIMCO article no. 17 8015, but with carrying capacity of up to 40 kg.

Case shells have two additional aluminium frames for absolute torsional stiffness.

Weight 6100 g	375/488/210 mm	290/415/50/90/140 mm	1	17 8175
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## DIAMANT 45 Master case

corresponds to CIMCO article no. 17 8077, but with a carrying capacity up to 45 kg.  
Case has two additional aluminium frames for absolute torsional stiffness.  
black

Weight 6800 kg	430/498/235 mm	340/420/50/100/150 mm	1	17 8177
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red

Weight 6800 kg	430/498/235 mm	340/420/50/100/150 mm	1	17 8176
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## DIAMANT 45 Master toolbox with trolley function

corresponds to CIMCO article no. 17 8177, including 4-stage extendable trolley system for the greatest possible mobility. Extension height of 110 cm with two strong castors. Case shells have two additional aluminium frames for absolute torsional stiffness.

Weight 8100 g	440/498/270 mm	340/420/50/100/150 mm	1	17 8178
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## Separators for DIAMANT Master case

for optimal division within the bottom shell, longitudinal dividers

for DIAMANT 25/30/40	280 x 19 x 46	Longitudinal dividers	1 pair	17 8180
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for DIAMANT 35/45	330 x 19 x 46	Longitudinal dividers	1 pair	17 8182
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for DIAMANT 25/30/35/40/45	430 x 19 x 46	Cross dividers	1 pair	17 8184
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## Explorer case

The case originally designed for the military is especially suitable for punishing everyday use. It protects its contents from water and dust, is air-tight, acid-resistant, pressure-resistant, shock-proof and almost indestructible. The acid-resistant bolts in the hinge and lock area, together with the rubber seal integrated in the case shell ensure that the case has an IP 67 protection rating. In addition, the case can be secured with an additional shackle lock in the lock area. Plastic supports on the case provide increased stability. To compensate for positive pressure the case is equipped with a hand valve. The name plate can only be replaced when the case is open. The extremely wide and stable handle with especially good tactile characteristics increases carrying comfort.  
Additional sizes and colours available upon request.

without foam inserts	220/180/105 mm	125/190/65/20/85 mm	1	17 0082
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without foam inserts	220/245/120 mm	160/220/75/20/95 mm	1	17 0084
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without foam inserts	305/360/195 mm	240/330/100/70/170 mm	1	17 0085
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without foam inserts	335/410/210 mm	270/375/130/45/175 mm	1	17 0086
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without foam inserts	440/515/230 mm	365/475/155/50/205 mm	1	17 0088
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With the foam inserts in the bottom and top shells, the interior of the case can be adjusted to meet many special requirements.

with foam inserts	220/180/105 mm	125/190/65/20/85 mm	1	17 0182
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with foam inserts	220/245/120 mm	160/220/75/20/95 mm	1	17 0184
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with foam inserts	305/360/195 mm	240/330/100/70/170 mm	1	17 0185
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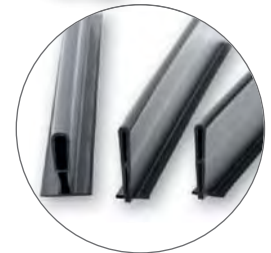
with foam inserts	335/410/210 mm	270/375/130/45/175 mm	1	17 0186
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with foam inserts	441/515/230 mm	365/475/155/50/205 mm	1	17 0188
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## Multi-transport box

made of extremely resistant polypropylene, water-repellent, shock-proof, cold and heat-resistant, with transport rollers and fold-away handles. With two insert shells and additional dividers for clearly arranged tool storage. Wrist straps included in scope of delivery. The case can be secured with additional shackle locks in the lock area. The name plate can only be replaced when the case is open. Transport option using two carrying handles and a recessed carrying handle. Trolley function by means of side-mounted handle and two transport rollers. Thanks to its lightweight and stackable design, this case is the ideal all-rounder.

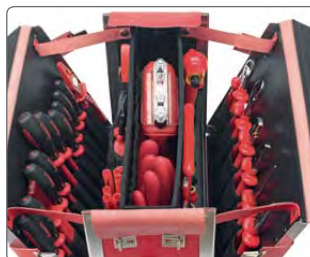
Weight 6300 g	460/805/355 mm	410/780/280/50/330 mm	1	17 0194
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# TOOL BAGS



- Easy to open
- Does not require much workspace
- Improved tool removal
- Complete overview of all tools
- Maximum access options
- Secure storage of NH safety handle
- Safety gloves for electricians with reinforced dividing walls in centre section
- Fixing tools with foam insert



\*All articles depicted are delivered without content.

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## 1 Tool case made of tough cowhide

with galvanised, riveted sheet metal bottom trough, folding down front panel, front and back walls, bottom, lid and extra-reinforced side parts, solid carrying handle, 2 key-operated locks, key locks at the side, bottom-sliders, lateral loops for shoulder strap, inner surfaces with numerous tool pockets and adjustable loops, outer edges additionally reinforced with aluminium corners.

Weight 2200 g 225/390/175 mm 220/370/ - /155/155 mm 1 17 6020

with document compartment on the front

Weight 2900 g 285/440/200 mm 225/425/ - /160/160 mm 1 17 6024

with document compartment on the front and holding straps instead of pockets, without lateral loops for shoulder straps

Weight 2750 g 290/435/190 mm 250/420/ - /160/160 mm 1 17 0924

with additionally folding back panel, removable partition wall and document compartment on the front

Weight 4100 g 335/445/205 mm 305/425/80/80/160 mm 1 17 6027

Weight 5300 g 375/500/245 mm 340/475/85/80/165 mm 1 17 6028

## 7 Industrial electrician tool bag

made of durable cowhide, extra robust, front, middle and back panel with 17 pockets with usual internal division, transparent clamping compartment in lid, removable carrying strap, with robust key lock.

Weight 1200 g 270/250/165 mm 250/225/ - /140/140 mm 1 17 6000

## 10 Tool case made of tough cowhide

with 2 key locks, extra reinforced bottom and side parts, inner surfaces with leather loops.

Weight 920 g 190/370/125 mm 175/330/ - /115/115 mm 1 17 0004

## 11 Tool case made of tough cowhide

Specially for safety tools and safety devices, all outer edges reinforced with aluminium corners. Side parts, front and back wall, bottom and lid with extra reinforcement, front and back wall can be unfolded to a 90° angle. Lockable key locks, lateral closures, heavy cleat carrying handle, numerous tool pockets, document compartment, lateral loops for shoulder strap, floor studs, foam inserts with recesses for spanner sockets. Particularly safe storage of electricians safety gloves and NH safety handle with two reinforced dividing walls.

Weight 5800 g 380/480/220 mm 325/445/60/65/60/200 mm 1 17 0078

additionally with document compartment on the front.

Weight 3200 g 280/430/205 mm 250/415/ - /160/160 mm 1 17 6025

## 19 NEW Tool bag

made of hard-wearing plastic fabric, bag cover with additional reinforcement, for even distribution of the load, 4 strong plastic floor sliders make sure it is stable, the water and dirt resistant plastic coating on the bottom makes it easy to clean, additional elastic straps on the lid, numerous tool insertion straps, trolley holder and business card holder on the back, practical tool segments to flexibly hold tools on the middle wall, lateral loops for the shoulder straps (included in the scope of delivery)

Weight 4200 g 400/470/270 mm 1 17 0940

## 22 Shoulder strap

Shoulder pad and 2 spring hooks, for tool bags.

length adjustable up to 1500 mm 1 17 0060





## Tool backpack

Backpack for tool transport and storage, special configuration diversity and high-quality workmanship for professional use: plastic back shell with comfort-padding, adjustable, padded shoulder straps, adjustable lap belt, document compartment on the front, numerous pockets, holding straps and removable inner pockets for tools, small parts, documents etc., carrying handle, 4 strong bottom sliders, will carry up to 15 kg in weight.

Weight 2300 g 440 x 340 x 180 mm 1 17 0430

## Tool backpack trolley

made of wear-resistant and tear-resistant synthetic fabric. With integrated trolley, protective cover for the wheels, 2 padded carrying belts and a handle. The backpack trolley has a padded laptop compartment and a total of 30 different tool holders (15 pockets and 15 rubber straps). In addition, the backpack has 2 fastening straps and 4 outside pockets (2 with zips). The tool boards can be used as needed and they can be easily exchanged or removed with swivel fasteners, will carry up to 15 kg in weight.

Weight 4300 g 500 x 380 x 200 mm 1 17 0440

## Storage bag for laptop computers and accessories

Functional and very lightweight carrier bag with numerous compartments for documents, business cards, mobile phone and accessories, 2 special padded inner compartments for laptop and additional equipment, i.e. printer, removable pocket for power supply etc., fixed with Velcro fastener, made of durable black polyester / Koskin fabric.

Weight 1250 g 410 x 130 x 340 mm 1 17 5150

## Roll-up tool case

made of plastic with a fabric backing, with leather strap closure

12 compartments 530 x 320 mm 1 17 0142

20 compartments 760 x 320 mm 1 17 0144

## Tool box

made of steel sheets, painted inside and outside, five-piece set, lockable (shackle lock accessory)

5 compartments 540 x 200 x 200 mm 1 17 0212

## Brass locks

brass block body, hardened steel shackle, with 2 keys

Size	Shackle	Shackle Width	Shackle Height
mm	ø mm	mm	mm
40	6	20	19

1 17 0252

## Tool belt bag

made of thick, hard-wearing, smooth cowhide, 1 insulating tape roll holder, 5 outside pockets, 1 hammer loop, weight 550 g

230 x 100 x 230 mm 1 17 0705

## Cowhide belt

1200 x 40 mm 1 17 0780



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# WORK Line

## the flexible bag-system for the professions of today and tomorrow!

WORK-Line is more than a complete set of tool bags! Understand WORK-Line as a new organisation system for your work: a combination of carefully considered storage and transport bags, which adapt themselves to your individual needs in different working situations! All elements of WORK-Line are functional and convenient, due to the flexible combination options of the all-purpose bags you also obtain maximum flexibility that corresponds to your changing requirements!

All WORK-Line products are made of the wear-resistant and tear-resistant, lightweight and special weatherproof synthetic fabric polyester 600 D in a modern two-colour design. The bags and accessories are visually accentuated with reflector ribbon from 3M.

All articles depicted are delivered without content.

### Padded belt

60 mm wide, continuously variable width from 84 to 116 cm, large snap lock for fast one-hand operation.

Weight 130 g	1	17 0782
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### Mobile phone bag

Bag especially for mobile phones or for glasses, measuring instruments and other sensitive small devices, specially padded, Velcro fastening, 2 pencil holders, universal-metal-clip for fixing to belts and bags of all kinds.

Weight 70 g	80 x 35 x 120 mm	1	17 5102
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### Cordless screwdriver bag

Belt holster for inserting all popular common battery screwdrivers, transport securing device with securing band with Velcro attachment, 4 pockets for accessories such as drill, bits, pencil, etc., particularly sturdy design with padding, reinforced material and seams, belt loops.

Weight 120 g	180 x 340 mm	1	17 5104
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### Bit pocket

Foldable bag for screw-bits and accessories, holders for 12 bits, 5 drills and one bit-holder, Velcro fastening, universal metal clip for attaching to belts and bags of all kinds.

Weight 120 g	130 x 20 x 180 mm	1	17 5106
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### Small inventory bag

Pocket for diverse tools and utensils such as notepad, measuring tape etc., particularly suitable for storing screws and nails thanks to the robust padding, pencil holder, universal metal clip for attaching to belts and bags of all kinds.

Weight 60 g	170 x 100 x 160 mm	1	17 5108
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### Small universal bag

Bag for tools and utensils, 3 pockets, snap ring for keys, measuring tape etc., Velcro fastening, universal metal clip for attaching to belts and bags of all kinds.

Weight 120 g	105 x 60 x 170 mm	1	17 5110
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### Electrician belt bag

Tool belt bag with numerous functional details, 1 large and 2 small pockets, 6 different sized elastic fastening straps for screwdrivers, drills etc., large reinforced elastic holder for hammer, pliers etc., metal chain and holder for several rolls of insulating tape, made of strengthened special fabric, belt loop.

Weight 350 g	280 x 50 x 285 mm	1	17 5112
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## Tool strap bag

with numerous functional details in reinforced special fabric, 2 spacious inner compartments, small inner compartment with Velcro fastening, 6 elastic holders for writing utensils, drills, screwdrivers etc., zipped compartment at the front, bag lid closable with Velcro fastener and/or 2 zips (one-hand operation), integrated size-adjustable apron with 3 additional pockets, integrated belt with continuously variable width of up to 160 cm with large snap lock for convenient one-hand operation, belt can also be used as shoulder strap, so that the body bag changes into a shoulder bag.

Weight 750 g 300 x 95 x 210 mm 1 17 5114



## Tool vest

Greater freedom isn't possible! Tools always close at hand and both hands are free! Numerous functional equipment details for professional use: padded pocket for mobile phones, glasses etc., with Velcro fixing band and elastic holder for writing utensils, 2 breast-pockets with Velcro fastening, 1 of which is foldable with 4 inner pockets, 2 large padded waist bags for diverse tools, 1 with Velcro fastening flap, 8 small elastic holders for writing utensils, drills screwdrivers etc., zip chest pocket for business cards, pocket with window, i.e. for name tag, rivet-reinforced wide holder for hammer, pliers etc., large back pocket with 2 zips for small parts and documents, accessible from the left and right, comfortable padded shoulder straps, vest in standard size, individually adjustable width.

Weight 1000 g 480 x 660 mm 1 17 5120



## Tool and document bag

Tool bag for service technicians, perfect for smaller maintenance and installation work, 3 pockets for business cards, 2 elastic holders for mobile phone, measuring tape, small tools etc., 18 pockets of different size for tools of any kind, 4 ring binders for catalogues and other documents. Removable clipboard with the following features: clipboard up to max. DIN A-4 papers, elastic pen-holder, 9 elastic holders of different size for writing utensils, screwdrivers, small tools etc., zipped bag for small utensils. DIN A 4 document compartment on the front with velcro fastener on the front, 2 carrying handles.

Weight 1300 g 385 x 70 x 290 mm 1 17 5130



## Tool, document and laptop bag

The top model of WORK-Line: tool case, briefcase and laptop computer case, all in one! Completely folding tool bag with zip, 9 tool pockets of different size, 15 different elastic holders for small tools, screwdrivers, writing utensils etc., integrated laptop computer bag suitable for all common laptop computers includes separately removable equipment bag for power supply, mouse etc., large document compartment with zip and varyingly large pockets and holders for writing utensils, business cards etc., bag for mobile phone and additional inner zip bag, small external document bag, rubberised carrying handle, detachable, extremely adjustable carrying strap with shoulder pad.

Weight 1600 g 400 x 130 x 320 mm 1 17 5132



## Electrician shoulder bag

Professional storage bag with flexible clipping system for holding all types of tools. 2 removable tool boards, shoulder strap, 2 side pockets, padded carrying handle. Includes two small organiser boxes.

Weight 1300 g 200 x 300 x 100 mm 1 17 5134



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# TOOL ASSORTMENTS



## Electric master case

		Master case <b>KLASSIK</b> "Electric white goods"	Master case <b>PERFEKT</b> "Electric white goods"	Master case <b>PERFEKT</b> "Electric white goods"	Master case <b>KLASSIK</b> "Electric white goods"
<b>Article no., equipped with tool case</b>		<b>17 0333</b>	<b>17 5333</b>	<b>17 5410</b>	<b>17 6410</b>
Article no.		Master case KLASSIK 17 0075	Master case PERFEKT 17 5075	Master case PERFEKT 17 5075	Master case KLASSIK 17 0075
Description		s. catalogue p. 10	s. catalogue p. 12	s. catalogue p. 12	s. catalogue p. 10
Telephone pliers with straight jaws	200 mm	•	•	•	•
Telephone pliers with bent jaws	200 mm	•	•	•	•
Round nose pliers	160 mm	•	•	•	•
Combination pliers	180 mm	•	•	•	•
Heavy duty diagonal pliers	200 mm	•	•	•	•
Wire stripper 0.5 to 6 mm <sup>2</sup>	160 mm	•	•	•	•
Water pump pliers	250 mm	•	•	•	•
Electronic diagonal pliers	115 mm	•	•	•	•
Electronic needle nose pliers with bent jaws	130 mm	•	•	•	•
Tweezers, bent, pointed, finely ridged jaws	120 mm	•	•	•	•
Flexible pick-up tool	540 mm	•	•	•	•
Control mirror, 30 mm diameter	275 mm	•	•	•	•
Electrician slot-head screwdriver (Blade dimensions)	3.0 x 0.5 x 100 mm 4.0 x 0.8 x 100 mm 5.5 x 1.0 x 125 mm 6.5 x 1.2 x 150 mm	• • • •	• • • •	• • • •	• • • •
Electrician crosshead screwdriver (Blade dimensions)	PH 1 x 80 mm PH 2 x 100 mm PZ 1 x 80 mm PZ 2 x 100 mm	• • • •	• • • •	• • • •	• • • •
Insulated screw-holding screwdriver	4.0 x 0.8 x 125 mm	•	•	•	•
Electronic slot-head screwdriver	2.0 x 0.4 x 60 mm	•	•	•	•
Angled slot-head screwdriver	5.0 x 0.65 x 100 mm	•	•	•	•
Angled Phillips screwdriver	PH 1 and PH 2 x 100 mm	•	•	•	•
Hexagon socket wrench (Wrench size across flats)	5.5 mm 7 mm 8 mm 10 mm	• • • •	• • • •	• • • •	• • • •
Set of socket wrenches 1/4"	33 piece	•	•	•	•
Hex key (Allen) set, 7 pieces	2.5 to 10 mm	•	•	•	•
Voltage tester, 120 to 250 V AC	140 mm	•	•	•	•
Universal shears	190 mm	•	•	•	•
Telephone scissors, ridged	130 mm	•	•	•	•
Varnish stripper 0.6 mm (AWG 22)	125 mm	•	•	•	•
Automatic cable stripping knife	8 to 28 mm diameter	•	•	•	•
Cable stripping knife with plastic handle	with scraper	•	•	•	•
Pocket saw PROFI	150 mm span width	•	•	•	•
Square awl, 6 mm (reamer)	100 mm	•	•	•	•
Safety cross peen hammer	300 g	•	•	•	•
Electronic solder 60% Sn, 1.5 mm	100 g	•	•	•	•
Quantity of tools		27	27	31	31



17 0333



17 5333



17 5410



17 6410

## Electric master case

		Master case DIAMANT 30 "Electric"	Master case DIAMANT 40 "Electric"
<b>Article no., equipped</b>		<b>17 0431</b>	<b>17 5431</b>
with tool case		Master case DIAMANT 30	Master case DIAMANT 40
Article no.		17 8075	17 8175
Description		s. catalogue p. 13	s. catalogue p. 13
Telephone pliers with straight jaws	200 mm	•	•
Telephone pliers with bent jaws	200 mm	•	•
Round nose pliers	160 mm		
Combination pliers	180 mm	•	•
Heavy duty diagonal pliers	200 mm	•	•
Wire stripper 0.5 to 6 mm <sup>2</sup>	160 mm	•	•
Water pump pliers	250 mm	•	•
Electronic diagonal pliers	115 mm	•	•
Electronic needle nose pliers with bent jaws	130 mm		
Tweezers, bent, pointed, finely ridged jaws	120 mm		
Flexible pick-up tool	540 mm		
Control mirror, 30 mm diameter	275 mm		
Electrician slot-head screwdriver	3.0 x 0.5 x 100 mm	•	•
(Blade dimensions)	4.0 x 0.8 x 100 mm	•	•
	5.5 x 1.0 x 125 mm	•	•
	6.5 x 1.2 x 150 mm	•	•
Electrician Phillips screwdriver	PH 1 x 80 mm	•	•
(Blade dimensions)	PH 2 x 100 mm	•	•
	PZ 1 x 80 mm	•	•
	PZ 2 x 100 mm	•	•
Insulated screw-holding screwdriver	4.0 x 0.8 x 125 mm		
Electronic slot-head screwdriver	2.0 x 0.4 x 60 mm	•	•
Angled slot-head screwdriver	5.0 x 0.65 x 100 mm		
Angled Phillips screwdriver	PH 1 and PH 2 x 100 mm		
Hexagon socket wrench	5.5 mm		
(Wrench size across flats)	7 mm		
	8 mm		
	10 mm		
Set of socket wrenches 1/4"	33 piece		
Hex key (Allen) set, 7 pieces	2.5 to 10 mm	•	•
Voltage tester, 120 to 250 V AC	140 mm	•	•
Universal shears	190 mm	•	•
Telephone shears, ridged	130 mm		
Varnish stripper 0.6 mm (AWG 22)	125 mm		
Automatic cable stripping knife	8 to 28 mm diameter	•	•
Cable stripping knife with plastic handle	with scraper	•	•
Pocket saw PROFI	150 mm span width	•	•
Square awl, 6 mm (reamer)	100 mm	•	•
Safety cross peen hammer	300 g		
Electronic solder 60% Sn, 1.5 mm	100 g		
Quantity of tools		23	23



17 0431



17 5431



17 0331



## Electrician apprentice case



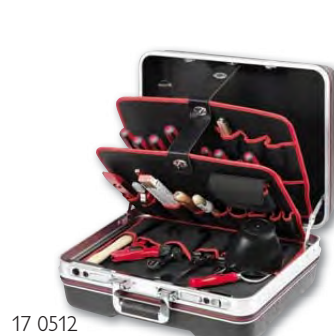
17 0300



17 2004



17 0500



17 0512



17 0600



17 0602

Article no., equipped with tool case	17 0300	17 2004
	Cowhide tool bag	Hardshell case in 2-colour design
Article no.	17 0924	
Description	see catalogue page 16	with 2 tool boards, bottom shell, document compartment
Telephone pliers with straight jaws	200 mm	•
Telephone pliers with bent jaws	200 mm	•
Combination pliers	180 mm	•
Water pump pliers	250 mm	•
Screw pliers	M2 to M6	•
S-opening pipe pliers	49 mm span width	•
Diagonal pliers	160 mm	•
Heavy duty diagonal pliers	200 mm	•
Electronic diagonal pliers		•
Cable shears for copper and aluminium cables	200 mm	•
Wire stripper 0.5 to 6 mm <sup>2</sup>	160 mm	•
Automatic wire stripper SENSOR SPECIAL		•
Wire stripper SUPER 4 PLUS	0.2 to 6 mm <sup>2</sup>	•
Wire stripper SUPER 4	0.5 to 4 mm <sup>2</sup>	•
Electrician slot-head screwdriver (Blade dimensions)	3.0 x 0.5 x 100 mm	•
	3.5 x 0.6 x 100 mm	•
	4.0 x 0.8 x 100 mm	•
	5.5 x 1.0 x 125 mm	•
	6.5 x 1.2 x 150 mm	•
Electrician Phillips screwdriver (Blade dimensions)	PH 1 x 80 mm	•
	PH 2 x 100 mm	•
	PZ 1 x 80 mm	•
	PZ 2 x 100 mm	•
Screwdriver combi-profile	PZ FL 1 x 80 mm	•
	PZ FL 2 x 100 mm	•
TORX® screwdriver	T 10 x 60 mm	•
	T 15 x 75 mm	•
	T 20 x 100 mm	•
	T 25 x 100 mm	•
Hex key set	9 pieces	•
Express spanner	Size 17-19	•
Plier wrench PowerGRIP	250 mm	•
Universal switch cabinet key		•
Voltage tester, 120 to 250 V AC	140 mm	•
Automatic cable stripping knife	8 to 28 mm ø	•
Cable stripping knife with wooden handle	with scraper	•
Universal knife, 2-component, professional design	135 mm	•
Pocket saw PUK	150 mm span width	•
Pipe cutter, ø 3-35 mm	160 mm	•
Electrician's chisel	250 x 10 mm	•
Steel wire brush, 4-row	290 mm	•
Painter's spatula	width 40 mm	•
Plaster cup made of soft rubber	125 mm ø	•
Water brush	24 mm ø	•
Cross peen hammer with ash handle	300 g	•
Wooden folding ruler	2 m	•
Electrician's safety spirit level	600 mm	•
Cabinet spirit level with magnet	200 mm	•
Carpenter's pencil, black	240 mm	•
click'n' crimp parallel - ELECTRICAL ENGINEERING		•
Quantity of tools	23	23





## 1000-Volt safety tool assortments



**Master Case  
KLASSIK  
“Electric  
safety”  
17 0370**

### Article no., equipped

with tool case

Master case  
KLASSIK RED

Article no.

17 0070

Description

s. catalogue p. 10



17 0370



17 5370



17 0378

Telephone pliers with straight jaws	200 mm	•
Telephone pliers with bent jaws	200 mm	•
Round nose pliers	160 mm	•
Combination pliers	180 mm	•
Heavy duty diagonal pliers	200 mm	•
Wire stripper 0.5 to 6 mm <sup>2</sup>	160 mm	•
Electrician slot-head screwdriver (Blade dimensions)	2.5 x 0.4 x 75 mm	•
	4.0 x 0.8 x 100 mm	•
	6.5 x 1.2 x 150 mm	•
	8.0 x 1.2 x 175 mm	•
Electrician Phillips screwdriver (Blade dimensions)	PH 1 x 80 mm	•
	PH 2 x 100 mm	•
	PZ 1 x 80 mm	•
	PZ 2 x 100 mm	•
Insulated screw-holding slot-head screwdriver (without VDE) (Blade dimensions)	3.0 x 0.5 x 100 mm	•
	4.0 x 0.8 x 125 mm	•
Insulated screw-holding Phillips screwdriver (without VDE) (Blade dimensions)	PH 1 x 150 mm	•
	PH 2 x 175 mm	•
Angled hex key (Allen)	5 mm	•
(Wrench size across flats)	6 mm	•
Hexagon socket wrench, 1000 V-insulated (Wrench size across flats)	5.5 mm	•
	7 mm	•
	8 mm	•
	10 mm	•
Single-ended open-end spanner, 1000 V-insulated (Wrench size across flats)	10 mm	•
	13 mm	•
	17 mm	•
	19 mm	•
	22 mm	•
Flat nose pliers made of solid plastic	200 mm	•
VDE ratchet (reversible), 1/2" square drive	250 mm long	
VDE T-socket wrench, 1/2" square drive	200 mm long	
Hex socket, 1000 V-insulated (Wrench size across flats)	10 mm	
	11 mm	
	13 mm	
	14 mm	
	17 mm	
	19 mm	
Plastic clip for holding rubber cloths	160 mm	
Rubber drape, insulating up to 1000 Volt	1000 x 1000 x 1.6 mm	
Slip-on snouts 1000 V, up to 10 mm diameter	Numbered “No. 1”	5 pieces
	Numbered “No. 2”	5 pieces
	Numbered “No. 3”	5 pieces
PVC adhesive tape, red, 25 mm wide	25 m	•
NH safety handle, according to VDE standard	for fuses Size 00 to 3	•
Electric safety gloves, insulating up to 1000 V	Size 10	•
2-pole voltage tester	12 to 690 V AC / DC	•
Cable shears, up to 12 mm cables, 1000 V VDE	160 mm	•
Automatic cable stripping knife, fully insulated	8 to 28 mm diameter	•
Safety cable knife, 1000 V-insulated	with straight, solid blade	•
Quantity of tools		47



## Tool assortments network technology / telecommunications / electronics

Master case  
"Mechatronik"

17 0334

Master case  
KLASSIK

17 0075

s. catalogue p. 10

Article no., equipped  
with tool case

Article no.

Description

Telephone pliers with straight jaws	200 mm	
Telephone pliers with bent jaws	200 mm	
Telephone pliers	160 mm	•
Combination pliers	180 mm	
Diagonal pliers	160 mm	•
Water pump pliers	250 mm	
Electronic diagonal pliers	115 mm	
Electronic needle nose pliers with bent jaws	130 mm	
Electronic flat nose pliers with short, wide jaws	130 mm	
Crimping pliers ECONOMY for cable connectors	220 mm	•
Crimping pliers for unshielded modular plugs connectors	4-, 6- and 8-pin	
Crimping tool click 'n' crimp network technology	with 3 pairs of inserts	
Tweezers, straight, pointed, plain jaws	120 mm	
Tweezers, bent, pointed, finely ridged jaws	120 mm	
Electrician slot-head screwdriver (Blade dimensions)	2.5 x 0.4 x 75 mm 3.0 x 0.5 x 100 mm 4.0 x 0.8 x 100 mm 5.5 x 1.0 x 125 mm 6.5 x 1.2 x 150 mm	• • • •
Electronic slot-head screwdriver (Blade dimensions)	2.0 x 0.4 x 60 mm 2.5 x 0.4 x 75 mm 3.0 x 0.5 x 75 mm 3.5 x 0.6 x 100 mm 4.0 x 0.8 x 150 mm	
Electrician Phillips screwdriver (Blade dimensions)	PH 0 x 60 mm PH 1 x 80 mm PH 2 x 100 mm PZ 1 x 80 mm PZ 2 x 100 mm	• • • •
Electronic Phillips screwdriver (Blade dimensions)	PH 0 x 60 mm PH 1 x 80 mm	
Voltage tester, 120 to 250 V AC	140 mm	
Double fork spanner	6 x 7 mm 8 x 9 mm 10 x 11 mm 12 x 13 mm 14 x 15 mm 16 x 17 mm 17 x 19 mm 18 x 19 mm 20 x 22 mm	• • • • • • • •
Hex key (Allen) set, 7 pieces	2.5 to 10 mm	•
Torx key set		•
Universal switch cabinet key	made of metal, with bits	•
One-hand cable shears, up to 12 mm cables	160 mm	
Universal shears	190 mm	
Telephone shears	130 mm, ridged 130 mm, flat	
Precision wire stripper PWS "Plus"	to 0.8 mm ø	
Wire stripper		•
Cable sheath stripper COAXI	to 7.5 mm ø	
Sheath stripper for data cables PC-STRIP	to 15 mm ø	
Automatic cable stripping knife with hook-shaped blade	8 to 28 mm ø	
Data cable wire stripper DATA STRIP		
Cable stripping knife with wooden handle	with scraper	
Pocket saw PUK	150 mm span width	
Insertion tool ECONOMY	For LSA-Plus terminals	
Wooden folding ruler	2 m	
Tape measure		•
Universal pressurised air spray can	400 ml	
Safety cross peen hammer		•
Number of tools		21



17 0334



17 0310



17 3210



## Electrical engineer tool case

Article no., equipped with tool case		Tool case <b>CHAMPION</b>	Mounting case "Energy and building technology"	Tool case "Electric <b>ENGINEER I</b> "	Tool case "Electric <b>ENGINEER II</b> "	Tool case "Electric <b>ENGINEER III</b> "
		17 5230	17 0173	17 6350	17 6326	17 6328
		Tool case CHAMPION	Tool case	Tool case made of cowhide	Tool case made of cowhide	Tool case made of cowhide
Article no.		17 0930	17 0073	17 6027	17 6028	17 6028
Description		s. catalogue p. 10	s. catalogue p. 10	s. catalogue p. 16	s. catalogue p. 16	s. catalogue p. 16
Telephone pliers with straight jaws	200 mm	•	•	•	•	•
Telephone pliers with bent jaws	200 mm	•	•	•	•	•
Round nose pliers	160 mm	•	•	•	•	•
Combination pliers	180 mm	•	•	•	•	•
Diagonal pliers	145 mm	•	•	•	•	•
	160 mm	•	•	•	•	•
Heavy duty diagonal pliers	200 mm	•	•	•	•	•
Wire stripper 0.5 to 6 mm <sup>2</sup>	160 mm	•	•	•	•	•
Water pump pliers	250 mm	•	•	•	•	•
Fitting pliers	250 mm	•	•	•	•	•
Electronic diagonal pliers	115 mm	•	•	•	•	•
Electronic needle nose pliers with bent jaws	130 mm	•	•	•	•	•
Tweezers, straight, flat-round jaws, insulated	145 mm	•	•	•	•	•
Electrician slot-head screwdriver	2.5 x 0.4 x 100 mm	•	•	•	•	•
(Blade dimensions)	3.0 x 0.5 x 100 mm	•	•	•	•	•
	4.0 x 0.8 x 100 mm	•	•	•	•	•
	5.5 x 1.0 x 125 mm	•	•	•	•	•
	6.5 x 1.2 x 150 mm	•	•	•	•	•
	8.0 x 1.2 x 175 mm	•	•	•	•	•
Electrician Phillips screwdriver	PH 0 x 60 mm	•	•	•	•	•
(Blade dimensions)	PH 1 x 80 mm	•	•	•	•	•
	PH 2 x 100 mm	•	•	•	•	•
	PZ 1 x 80 mm	•	•	•	•	•
	PZ 2 x 100 mm	•	•	•	•	•
Insulated screw-holding screwdriver	4.0 x 0.8 x 125 mm	•	•	•	•	•
Electronic slot-head screwdriver	2.0 x 0.4 x 60 mm	•	•	•	•	•
Electronic Phillips screwdriver	PH 1 x 80 mm	•	•	•	•	•
Angled slot-head screwdriver	5.0 x 0.65 x 100 mm	•	•	•	•	•
Angled Phillips screwdriver	PH 1 and PH 2 x 100 mm	•	•	•	•	•
Hexagon socket wrench	5.5 mm	•	•	•	•	•
(Wrench size across flats)	7 mm	•	•	•	•	•
	8 mm	•	•	•	•	•
	10 mm	•	•	•	•	•
Bit case, 10 pieces		•	•	•	•	•
Hex key (Allen) set, 7 pieces	2.5 to 10 mm	•	•	•	•	•
Hex key (Allen) set, 9 pieces	1.5 to 10 mm	•	•	•	•	•
Adjustable spanner	160 mm	•	•	•	•	•
Universal switch cabinet key	made of metal, with bits	•	•	•	•	•
Voltage tester, 120 to 250 V AC	140 mm	•	•	•	•	•
One-hand cable shears, up to 12 mm cables	160 mm	•	•	•	•	•
Universal shears	190 mm	•	•	•	•	•
Telephone shears, ridged	130 mm	•	•	•	•	•
Wire stripper	0.5 - 4 mm <sup>2</sup>	•	•	•	•	•
Autom. wire stripper POWER STRIPPER	for flat and round cables	•	•	•	•	•
Super sheath stripper		•	•	•	•	•
Automatic cable stripping knife	8 to 28 mm diameter	•	•	•	•	•
Safety cable stripping knife, 1000 V insulated	Blade interchangeable	•	•	•	•	•
Cable stripping knife with plastic handle	with scraper	•	•	•	•	•
Universal knife ("carpet knife")	150 mm	•	•	•	•	•
Pocket saw PROFI	150 mm span width	•	•	•	•	•
Square awl, 6mm (reamer)	100 mm	•	•	•	•	•
Safety cross peen hammer	300 g	•	•	•	•	•
Electrician's chisel	10 x 8 x 250 mm	•	•	•	•	•
Plastic folding ruler	2 m	•	•	•	•	•
Plastic electrician spirit level	400 mm	•	•	•	•	•
Plastic winding rod	10 metres	•	•	•	•	•
Quantity of tools		15	22	24	35	45



17 5230



17 0173



17 6350



17 6326



17 6328

# STORAGE AND TRANSPORT SYSTEMS



- Tools organised according to area of application (screwdrivers, pliers, screwing tools etc.)



- All foam inserts are half the size of a drawer for individual arrangement



- Non-slip holding position thanks to high clamping force and precise fit



- Two-colour design enables quick detection of missing tools
- Foam modules can also be ordered individually



Configure your own individual foam insert!  
Really easy, with the new ITSS foam configurator at [www.cimco.de](http://www.cimco.de).

- Quite simple: [www.cimco.de](http://www.cimco.de) leads you directly to the virtual ITSS configurator
- The 2D smartphone scan enables the use of your specific tools
- Online calculation and order confirmation ensure reliable cost transparency before production



**raaco COMPACT**

Transport and storage case made of highly impact-resistant polypropylene, making it lightweight and extremely wear-resistant (no dents and cracks, chemically resistant), can be used as a stool thanks to its extraordinary stability, has removable tool carrier that can hold the variable CARRY-LITE 55/boxxser 55 programme inserts, double bail handle with integrated locking system prevents case from opening unintentionally, 2 side carrying handles (COMPACT 37 upwards)

**COMPACT 20**

with 6 inserts, without dividing walls, without drawers, no option of fitting carrying strap and castors, weight 1.9 kg

474 x 239 x 190 mm 1 41 7173

**COMPACT 27**

with 6 inserts, without dividing walls, with 2 drawers, no option of fitting carrying strap and castors, weight 2.6 kg

474 x 239 x 248 mm 1 41 7180

**COMPACT 37**

with 7 inserts, 3 dividing walls for individual subdivision of interior, without drawers, with option of fitting carrying strap and castors, weight 3.7 kg

540 x 296 x 230 mm 1 41 7197

**COMPACT 47**

with 7 inserts, 3 dividing walls for individual subdivision of interior, with 2 drawers, with option of fitting carrying strap and castors, weight 4.6 kg

540 x 296 x 292 mm 1 41 7203

**COMPACT 62**

with 10 inserts, 1 dividing wall for individual subdivision of interior, with 4 drawers, with option of fitting carrying strap and castors, weight 7.1 kg

621 x 311 x 322 mm 1 41 7227

**Carrying strap for COMPACT**

for COMPACT models 37, 47 and 62, attach by simply clipping onto special hooks on the case, length continuously adjustable from 0.9 to 1.6 m, weight only 150 g

1 41 4059

**Set of castors for COMPACT**

4 swivelling castors, 2 with locking device, for COMPACT models 37, 47 and 62, simple to install by inserting into bottom of case, weight (set) 600 g

1 41 3656





## raaco Tool Taco

The new flexible system with a sporty design offers a very simple way to set up your toolbox in a completely individual manner. With the help of accompanying pockets, holders and component boxes, the Tool Taco can be changed at any time according to need. A generous opening provides easy access to the tools. The box is equipped with an efficient holder for tools of all shapes and sizes (max. 30 mm ø).

Additional features: 4 strong hooks to attach the shoulder strap, elastic bands on the side, for example to hold gloves or knee pads, strong magnets for locking the lid, robust, lightweight hardshell construction, water-proof, lightweight, waterproof, etc.

### Tool Taco L

with 1 x 1/2 Tool Fix, 1 x 1/4 Tool Fix, 1 x boxxser 55 4 x 4-9, ergonomically shaped, padded shoulder strap.  
Weight 3.6 kg.

256 x 504 x 234 mm	1	43 6006
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### Tool Taco XL

2 x 1/2 Tool Fix, 1 x boxxser 55 4 x 4-9, ergonomically shaped, padded shoulder strap.  
Weight 4.5 kg.

311 x 616 x 278 mm	1	43 6013
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### Tool Fix

Holder for tools of all shapes up to max. ø 30 mm. Strong Velcro tape for holding tools in the Tool Taco.

1/4	150 x 118 x 40 mm	1	43 6020
1/2	150 x 238 x 40 mm	1	43 6037



### Handbag

For storing tools and accessories. Can be combined with Tool Fix of the same size (bag 1/2 open will also fit in a boxxser 55 4 x 4). Sturdy clip for simple and secure attachment to Tool Taco.

1/4 open	155 x 145 x 55 mm	1	43 1009
1/2 open	155 x 255 x 55 mm	1	43 1016
1/4 with lid	160 x 150 x 65 mm	1	43 1023
1/2 with lid	160 x 265 x 65 mm	1	43 1030



### Saw holder

Holder for saw (max. 24") plus universal holder (max. width 70 mm). With two clips for simple and secure attachment to the Tool Taco.

155 x 570 x 25 mm	1	43 1047
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### Cover

Waterproof protective cover for Tool Taco protects against rain and dust.

L	535 x 495 x 5 mm	1	43 1061
XL	695 x 615 x 5 mm	1	43 1078



## raaco boxxser – Set case

The boxxser series consists of 6 case variants in 2 different heights, made of shock-proof and break-proof polycarbonate in a double-wall construction, profile grid in lid and base secure the case contents during transport, two fixed partitions (next to the handle) provide space for storing small parts or accessories. The integrated profile guides on the base protect and secure the set case when stacked. Handle with integrated locking mechanism prevents the case from coming open when carried.



## raaco boxxser 80

incl. 3 labelling clips (yellow, green, grey)

type (grid dimension L x W - inserts)	dimensions (mm)		
boxxser 80 (5 x 10- 0)	421 x 361 x 78	1	43 4255
boxxser 80 (5 x 10-14)	421 x 361 x 78	1	43 4262
boxxser 80 (5 x 10-20)	421 x 361 x 78	1	43 4279
boxxser 80 (5 x 10-25)	421 x 361 x 78	1	43 4286
boxxser 80 (8 x 8- 0)	465 x 401 x 78	1	43 4224
boxxser 80 (8 x 8-18)	465 x 401 x 78	1	43 4231
boxxser 80 (8 x 8-20)	465 x 401 x 78	1	43 4248



## raaco boxxser 55

incl. 3 labelling clips (yellow, green, grey)

Type (grid dimensions L x W - inserts)	Dimensions (mm)		
boxxser 55 (4 x 4- 0)	241 x 225 x 55	1	43 4385
boxxser 55 (4 x 4- 9)	241 x 225 x 55	1	43 4392
boxxser 55 (4 x 4-11)	241 x 225 x 55	1	43 4408
boxxser 55 (5 x 5- 0)	298 x 284 x 55	1	43 4354
boxxser 55 (5 x 5-13)	298 x 284 x 55	1	43 4361
boxxser 55 (5 x 5-15)	298 x 284 x 55	1	43 4378
boxxser 55 (6 x 6- 0)	354 x 323 x 55	1	43 4323
boxxser 55 (6 x 6-12)	354 x 323 x 55	1	43 4347
boxxser 55 (6 x 6-14)	354 x 323 x 55	1	43 4330
boxxser 55 (5 x 10- 0)	421 x 361 x 55	1	43 4293
boxxser 55 (5 x 10-25)	421 x 361 x 55	1	43 4309
boxxser 55 (5 x 10-45)	421 x 361 x 55	1	43 4316



## HANDYBOX for raaco boxxser

Strong, handy transport device that holds up to 4 Boxxser set cases 55 4 x 4 or 5 x 5 as drawers, carrying handle, transport locking mechanism prevents the set cases from sliding out.

Dimensions: 342 x 347 x 305 mm

for boxxser 55, 4 x 4, incl. 4 x 43 4392	1	43 7942
empty	1	43 7935
for boxxser 55, 5 x 5, incl. 4 x 43 4378	1	43 7966
empty	1	43 7959



## Foam insert for raaco boxxser

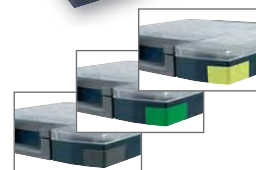
pre-perforated, for simple individual division (20 mm cubes)

393 mm x 273 mm x 20 mm	1	43 4583
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## Labelling clips for raaco boxxser

grey, 4 piece	1	43 4453
yellow, 4 piece	1	43 4446
green, 4 piece	1	43 4460



## CARRY-LITE service case

Lightweight storage and carrying case with a flexible design, interior dividers can be varied at any time with transparent inserts in many different sizes, lower shell of case made of polypropylene, case lid made of clear, transparent polycarbonate, lid with U-profiles for non-slip storage of materials and loose inserts, ergonomic carrying handle, two strong slide locks, stackable, can also be set up on edge.

### CARRY-LITE 150

Service case 150 mm tall, 413 mm long, 330 mm wide. Interior division can be individually designed using dividers instead of inserts.

with 8 dividers = 9 individual compartments	1	41 8958
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### CARRY-LITE 80

Service case with 80 mm height, 413 mm length, 330 mm width, grid layout 10 lengthwise x 5 wide

empty, without inserts	1	41 7494
with 15 inserts	5 x 80-BA8-1, 10 x 80 BA7-1	1 41 8774
with 20 inserts	15 x 80-BA8-1, 5 x 80 BA7-1	1 41 8743

### CARRY-LITE 55

Service case with 55 mm height, 413 mm length, 330 mm width, grid layout 10 lengthwise x 5 wide

empty, without inserts	1	41 7500
with 25 inserts	25 x 55-A8-1	1 41 9207
with 25 inserts	10 x 55-A9-1, 5 x 55 A7-1, 10 x 55 A8-1	1 41 9191

### Inserts for CARRY-LITE 80 and raaco boxxser 80

Height 69 mm

Type	Grid dimension		Length mm	Width mm		
	length	width				
80-BA8-1	1	2	55	79	1	41 9276
80-BA8-2	1	4	55	157	1	41 9283
80-BA8-3	1	6	55	235	1	41 9290
80-BA7-1	2	2	109	79	1	41 9306
80-BA7-2	4	2	218	79	1	41 9313
80-BA6-1	2	4	109	157	1	41 9320

### Inserts for CARRY-LITE 55 and raaco boxxser 55

Height 47 mm, precise fit for drawers and tool holders for raaco COMPACT, the PSC vario models and the 250-3 cabinet drawer.

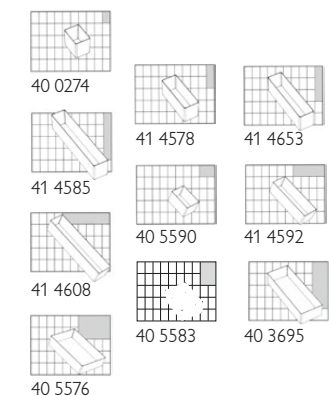
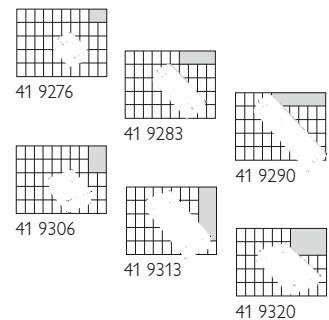
Type	Grid dimension		Length mm	Width mm		
	length	width				
55-A9-1	1	1	55	39	1	40 0274
55-A9-2	2	1	109	39	1	41 4578
55-A9-3	3	1	163	39	1	41 4653
55-A9-4	4	1	218	39	1	41 4585
55-A8-1	1	2	55	79	1	40 5590
55-A8-2	1	4	55	157	1	41 4592
55-A8-3	1	6	55	235	1	41 4608
55-A7-1	2	2	109	79	1	40 5583
55-A7-2	4	2	218	79	1	40 3695
55-A6-1	2	4	157	109	1	40 5576

### Safe box for CARRY-LITE

High-quality storage system for CARRY-LITE service cases, made of blue lacquered steel sheet, telescopic runners mounted on ball bearings, lockable, length 451 mm, width 330 mm, height 403 mm, weight (empty) 15 kg.

Delivery includes CARRY-LITE service case

Safe box 150 incl. 2 x 41 8958	1 Set	43 4569
Safe box 80 incl. 3 x 41 8774	1 Set	43 3067
Safe box 55 incl. 2 x 41 9207 and 2 x 41 9191	1 Set	43 4576



## Transporter box for CARRY-LITE

made of durable plastic, for holding up to 3 CARRY-LITE 80 or 4 CARRY-LITE 55, with 2 or 3 insertable intermediate bottoms, incl. shoulder strap, weight (empty) 2910 g

incl. 2 x 41 8774 and 1 x 41 8743	562 x 361 x 250 mm	1 Set	40 4883
incl. 2 x 41 9207 and 2 x 41 9191	562 x 361 x 250 mm	1 Set	40 8188



## PSC set cases

Cost-effective transport and storage case for small parts, with fixed or variable dividers or without any interior dividers, made of hard-wearing polypropylene, strong slide locks with ratcheting, case lid with U-profiles for non-slip storage of material and loose inserts, stackable, can also be set up on edge

### PSC fix

Set cases with fixed interior division.

Type	Small comp.	Weight (kg)	Dimensions (mm)		
fix-9	9	0.3	240 x 195 x 43	1	41 5384
fix-18	18	0.34	240 x 195 x 43	1	40 9963
fix-15	15	0.73	338 x 260 x 57	1	41 5407
fix-32	32	0.82	338 x 260 x 57	1	41 5414



### PSC vario

Set cases with variable interior division via CARRY-LITE 55 series inserts (Grid division: 8 lengthwise x 4 wide / PSC vario-240: 4 lengthwise x 4 wide). With ergonomic carrying handle (not PSC vario 240).

Type	Small comp.	Weight (kg)	Dimensions (mm)		
vario-240	none (empty)	0.25	241 x 195 x 56	1	41 1898
vario-340	none (empty)	0.59	338 x 261 x 57	1	41 2970
vario-15	15	0.9	338 x 261 x 57	1	41 2987
vario-17	17	0.89	338 x 261 x 57	1	40 8423



### PSC vario

Set cases with variable interior division for CARRY-LITE 80 series inserts

Type	Small comp.	Weight (kg)	Dimensions (mm)		
vario-XL	none (empty)	0.6	340 x 260 x 78	1	43 0899



## HANDYBOX for PSC set cases

Strong, handy transport device which holds up to 4 PSC set cases 57 mm tall and 340 mm long as drawers, carrying handle, transport safeguard against the PSC set cases unintentionally sliding out, connecting fittings to allow several Boxes to be mounted next to each other, also suitable for wall-mounting.

Weight (empty): 1.81 kg, dimensions: 376 x 265 x 310 mm

incl. 2 x 41 2987 and 2 x 40 8423	1 Set	41 2004
Empty	1	40 1943



## SUPERCLIPS workshop system

Large-scale system of different hooks, holders and mounting brackets for storing tools, components, electrical devices and accessories in the workshop. Clips can easily be installed and relocated at any time by simply inserting them in the special perforated panel in order to meet individual needs. Can be ideally combined with raaco storage bins and the TRD tool rack. High-quality material for continuous use in a professional environment.

### SUPERCLIP 1

Straight universal hook with angular holding end, i.e. for screwdrivers

Type				
1-30	47 x 27 x 60 mm	5	41 0709	
1-60	55 x 27 x 60 mm	5	41 0716	



### SUPERCLIP 2

Double-hook holder with angular holding ends, hook length 60 mm, i.e. for files

Type			
2-60	79 x 27 x 60 mm	3	41 0747



**SUPERCLIP 3**

straight universal hook with upright holding end, e.g. for ring spanners

Type

3-75	55 x 27 x 60 mm	5	41 0778
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**SUPERCLIP 4**

Double-hook holder with vertical holding ends, hook length 50 mm, e.g. for hammers

Type

4-50	79 x 50 x 60 mm	3	41 0792
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**SUPERCLIP 5**

Eye hook holder, i.e. for pliers

Type

5-17	53 x 45 x 60, eye 45 x 17 mm	3	41 0808
5-20	61 x 62 x 60, eye 62 x 20 mm	3	41 0815

**SUPERCLIP 6**

Rounded spring clip, open at front, i.e. for screwdrivers

Type

6-12	37 x 27 x 60, ø 12 mm	6	41 0631
6-18	46 x 27 x 60, ø 18 mm	6	41 0648
6-24	56 x 33 x 60, ø 24 mm	6	41 0655

**SUPERCLIP 9**

Universal storage box, i.e. for small parts of all kinds

Type

9	108 x 83 x 60 mm	1	40 4562
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**SUPERCLIP 10**

Rounded holder, i.e. for drilling machines, cordless screwdrivers, heat guns, cable coils, etc

Type

10	79 x 27 x 60 mm	4	40 8928
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**SUPERCLIP 11**

Spanner holder, for up to 8 spanners of variable sizes

Type

11	145 x 237 x 45 mm	1	41 4165
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**SUPERCLIP 12**

Drill holder, for 22 twist drills from 1 mm to 13 mm diameter

Type

12	94 x 77 x 65 mm	1	41 4172
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**raaco FIX**

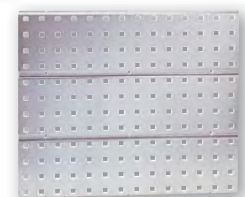
Patented tool holding system, suitable for holding tools of all kind, i.e. screwdrivers, pliers, files, tweezers, shears, spanners, measuring tools, etc.

SMALL	242 x 38 x 100 mm	2	42 5833
LARGE	242 x 38 x 140 mm	2	42 5840

**Perforated panels for SUPERCLIPS**

made of strong, galvanised steel sheet, for holding all raaco SUPERCLIPS, for mounting on the wall (fixing by plug/screw) or on the TRD tool rack

520 x 440 x 11 mm	1	41 8347
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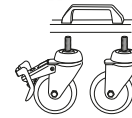
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26

## TRD tool rack for SUPERCLIPS

Strong stand of steel sheet for holding up to 6 perforated panels (CIMCO article no. 41 8347) for SUPERCLIPS or up to 6 slotted wall panels for raaco storage bins (CIMCO article no. 41 8330), delivery incl. 6 perforated panels (CIMCO article no. 41 8347), without clips, handles and castors, weight 23.5 kg

TRD	570 x 570 x 1600 mm	1	40 9666
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### Castor and handle set for TRD tool rack

4 rubber rollers, 2 with brakes, and 2 screw-on handles turn the tool rack into a movable tool board, ideal for workshops and in manufacturing, weight of the set 1.8 kg

		1	41 2369
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## raaco Storage cabinets

for free-standing installation (rubber feet protect from scratches and provide a firm stand), wall mounting (suspension holes for screws) and mounting on turntables for storage cabinets (see pages 39 and 40), body made of blue lacquered steel sheet, drawers made of wear-resistant, transparent polypropylene, stop rim prevents the draw from sliding out unintentionally, option of subdividing into small compartments with additional dividers, labels can be attached to front side

### Storage cabinets series 150

Cabinet depth 150 mm, height 552 mm, width 306 mm, maximum load 40 kg

CABINET 60-00

fitted with 60 drawers Type 150-0, weight 5.12 kg

		1	40 8065
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CABINET 48-01

fitted with 48 drawers Type 150-1, weight 5.11 kg

		1	40 7341
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CABINET 24-02

fitted with 24 drawers Type 150-2, weight 4.58 kg

		1	40 7303
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CABINET 08-03

fitted with 8 drawers Type 150-3, weight 4.19 kg

		1	40 7297
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CABINET 16-04

fitted with 16 drawers Type 150-4, weight 4.29 kg

		1	40 9215
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CABINET 40-123

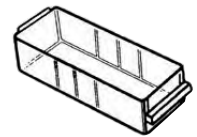
fitted with 36 drawers type 150-1, 3 drawers type 150-2, 1 drawer type 150-3, weight 4.93 kg

		1	40 7242
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**Drawers for cabinets series 150**

150-0	41 x 55 x 150 mm	1	40 8980
150-1	41 x 67 x 150 mm	1	40 4692
150-2	64 x 91 x 150 mm	1	40 4715
150-3	64 x 279 x 150 mm	1	40 4708
150-4	64 x 139 x 150 mm	1	40 9178

**Drawer dividers for cabinet series 150**

for 150-0	31 x 52 x 2 mm	60	40 1981
for 150-1	31 x 64 x 2 mm	48	40 1998
for 150-2	50 x 87 x 2 mm	24	40 2032
for 150-3 /-4	50 x 134 x 2 mm	16	40 2049

**Drawer labels for cabinets series 150**

White, interchangeable, individually inscribable, coated with stain-resistant, wear-resistant plastic

for 150-0	10 x 52 x 1 mm	60	40 9024
for 150-1	10 x 64 x 1 mm	48	40 7761
for 150-2	18 x 87 x 1 mm	24	40 7778
for 150-3	18 x 275 x 1 mm	8	40 7785
for 150-4	18 x 135 x 1 mm	16	40 9017

**Turntable for storage cabinets series 150**

to hold up to 12 cabinets of series 150, max. load-bearing capacity 480 kg, can be turned on maintenance-free roller bearings, weight without cabinets 12,5 kg, delivery without storage cabinets

1760 x 680 x 680 mm	1	40 3732
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**Storage cabinets series 250**

Cabinet depth 250 mm, height 435 mm, width 357 mm, maximum load 40 kg

**CABINET 24-1**

fitted with 24 drawers Type 250-1, weight 6.9 kg

1	40 9048
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**CABINET 8-2**

fitted with 8 drawers Type 250-2, weight 6.0 kg

1	40 8560
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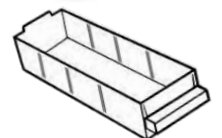
**CABINET 6-3**

fitted with 6 drawers Type 250-3, weight 7.2 kg

1	40 8577
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**Drawers for cabinets series 250**

250-1	58 x 80 x 250 mm	1	40 7273
250-2	92 x 159 x 250 mm	1	40 7259
250-3	57 x 320 x 250 mm	1	40 3114

**Drawer dividers for cabinet series 250**

for 250-1	46 x 75 x 3 mm	36	40 6757
for 250-2	80 x 154 x 3 mm	12	40 6764



## Drawer labels for cabinets series 250

White, interchangeable, self-adhesive, individually inscribable, coated with stain-resistant, wear-resistant plastic

for 250-1	15 x 75 x 1 mm	24	40 7792
for 250-2	32 x 155 x 1 mm	8	40 7815
for 250-3	15 x 315 x 1 mm	6	40 7822



## Turntable for storage cabinets series 250

To hold up to 12 cabinets of series 250, max. carrying power 600 kg, can be turned on maintenance-free roller bearings, weight without cabinets 22.3 kg, delivery without storage cabinets

1600 x 880 x 880 mm	1	40 2582
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## raaco Storage bins

Open storage bins made of impact-resistant polypropylene, for free-standing installation, stacking, attaching to wall panels and mounting on turntable (not bin 5), with conveniently shaped handle and front side for label attachment

	Load (kg)	Height x Width x Depth		
Storage bin 1	5	50 x 125 x 133 mm	1	43 6631
Storage bin 2	5	75 x 125 x 173 mm	1	40 3404
Storage box 3	5	101 x 125 x 228 mm	1	41 8354
Storage box 4	10	126 x 125 x 300 mm	1	41 6398
Storage bin 5	15	200 x 256 x 365 mm	1	43 6679



## Wall panels for raaco storage bins

Panels of galvanised steel sheets for holding raaco storage bins 1 to 5, can be easily screw-mounted onto the wall or mounted on the raaco TRD tool rack for SUPERCLIPS (CIMCO article no. 40 9666, see page 38), with 4 vertical rows with 12 slots each = 48 slots for bins, weight 1.475 kg

520 x 440 x 11 mm	1	41 8330
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## Turntable for raaco storage bins

Rotating workshop and storage stand for holding (depending on the sizes of the selected bins) up to 148 storage bins.

With 6 vertical columns x 48 slots = 288 slots for bins. Ideally equipped with, e.g.

48 x bin 1, 32 x bin 2 and 24 x bin 3 (= 104 bins)

48 x bin 1, 64 x bin 2 (= 112 boxes)

32 x bin 2, 24 x bin 3 and 16 x bin 4 (= 72 bins)

48 x bin 4

Quicker access to all bins thanks to rotating tower and loadable roller bearings, max. load 450 kg, weight 27 kg

	Load (kg)	Height x Width x Depth		
Tower empty	450	1600 x 655 x 655 mm	1	40 2780



## Workshop trolley, empty

- Extremely robust and strong
- Simple, convenient handling
- Rounded contours and produced according to national safety standards
- A ribbed rubber mat protects the top level
- 100% pull-out drawers, on telescopic runners mounted on ball bearings and lined with oil-resistant rubber mats
- With central locking
- 8 side compartments to store tools and equipment, 6 of which are movable
- Two fixed and two movable (one of which with locking brake)
- oil-resistant rubber wheels ø 125 mm
- Surface coating: powder coating RAL 3020
- Fitted with 7 drawers (internal dimensions: 640 x 417 mm)
  - 1 drawer: 665 x 445 x 50 mm
  - 4 drawers: 665 x 445 x 70 mm
  - 2 drawers: 665 x 445 x 168 mm
- Maximum load per drawer: 30 kg
- Total carrying weight max. 280 kg
- Dead weight: 74 kg

Trolley empty	1	17 7500
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## Workshop trolley, including tool

All tools in customised foam inserts for structured, safe storage of your tools:

- Ten pre-configured ITSS foam inserts including tools
- Tools organised according to area of application (screwdrivers, pliers, screwing tools etc.)
- All foam inserts are half the size of a drawer for individual arrangement
- Non-slip holding position thanks to high clamping force and precise fit
- Two-colour design provides a quick overview of missing tools
- Foam modules can also be ordered individually



Trolley equipped

1

17 7502



Configure your own individual foam insert! Very simply, with the ITSS foam configurator at [www.cimco.de](http://www.cimco.de).

## Hard foam inserts

### Screwdriver

equipped with 12 diamond Drei-Ve screwdrivers,

CIMCO article no. 11 7701, 11 7702, 11 7703, 11 7704, 11 7705, 11 7706, 11 7708, 11 7710, 11 7741, 11 7742, 11 7751, 11 7752

1

17 7510

### Screwdriver/Electronics

equipped with 14 diamond Drei-Ve TORX® and electronic screwdrivers

CIMCO article no. 11 7908, 11 7909, 11 7910, 11 7915, 11 7920, 11 7925, 11 7930, 11 1864, 11 1865, 11 1866, 11 1868, 11 1870, 11 1877, 11 1880

1

17 7512

### Ring spanners

equipped with 12 ring spanners

CIMCO article no. 11 2330, 11 2332, 11 2334, 11 2338, 11 2344, 11 2348, 11 2352, 11 2356, 11 2358, 11 2362, 11 2364, 11 2368

1

17 7516

### Measuring and screwing tools

equipped with 9 measuring and screwing tools

CIMCO article no. 11 0596, 11 0598, 11 0604, 11 0290, 11 0294, 11 0120, 21 1442, 21 0065, 11 1282

1

17 7508

### Crimping tools

equipped with 5 crimping pliers for wire end ferrules

CIMCO article no. 10 4190, 10 4192, 10 4194, 10 4200, 10 4202

1

17 7520

### Pliers

equipped with 8 diamond-Plus pliers

CIMCO article no. 10 0574, 10 0216, 10 0336, 10 1224, 10 0816, 10 0528, 10 0238, 10 0802

1

17 7504

### Striking tools

equipped with 6 striking tools

CIMCO article no. 13 0582, 13 1053, 13 0354, 13 0358, 13 0022, 13 0210

1

17 7506

### Open-ended-ring spanners

equipped with 12 Ratchet rings and open-end spanners

CIMCO article no. 11 2508, 11 2509, 11 2510, 11 2511, 11 2512, 11 2513, 11 2514, 11 2515, 11 2516, 11 2517, 11 2518, 11 2519

1

17 7518

### Stripping tools

equipped with 9 tools

CIMCO article no. 12 0028, 12 0023, 12 1027, 10 0686, 12 0030, 12 0515, 12 0081, 20 8500, 14 0205

1

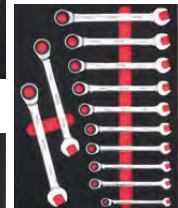
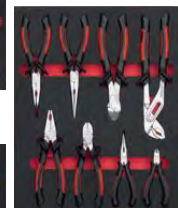
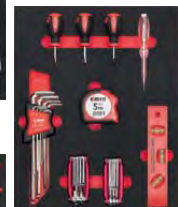
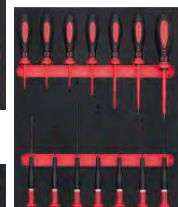
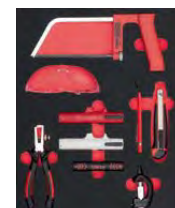
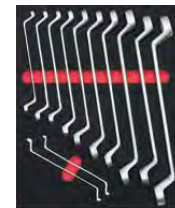
17 7514

### Foam empty

Configured foam with a large recess for storage of small parts, sets, etc.

1

09 7618



# PLIERS

## Perfect material processing

CIMCO pliers perform brilliantly in punishing everyday use. Both material and design are designed for a tough workload. The high-alloy steels used are specially designed for use by tradespeople. An ideal level of durability is achieved in connection with careful hardening.

- All pliers are hardened in an oil bath. All blades are subjected to additional induction hardening - the best prerequisite for excellent durability, even when dealing with high levels of stress.
- Due to the general exclusion of air during the melting process, electric steel achieves a high degree of purity and reduces the CO<sup>2</sup> emissions.



## Unrivalled cutting performance

- Precisely closing blades.
- Favourable transmission ratio for low expenditure of force when cutting.
- Induction hardened precision blades (approx. 64HRC) for all types of wire, including piano wire.

## Smooth opening and closing

Virtually clearance-free joint for smooth and uniform opening and closing across the entire functional area.



## Special gripping surfaces

- Functional conical gripping surfaces to grip the whole surface of the most common workpieces.
- Distinctive, uniform serration of gripping surfaces and burner hole.

# Diamant PLUS - Safety pliers with 1000 V protective insulation

Optimised lever conditions, smoothness and easy-grip handle design that permit your hand to work ergonomically, saving energy, manufactured using the most suitable high-alloy tool steels, completely hardened in oil, all blades are additionally induction hardened, surfaces are polished to a high-sheen and are meticulously chrome-plated.

## Description of the symbols

Energised work	Blade hardness in HRC	With cutting bevel	Own joint	Flat nose pliers	Wire type soft	Wire type piano
VDE/GS tested	Ridged gripping surfaces	With slight cutting bevel	Lap joint	Flat round pliers	Wire type medium-hard	Wire type rope
	Gripping surfaces ridged at an angle		Box joint	Round nose pliers	Wire type hard	Wire type Cu-cable

- Set the adjusting screw to the desired conductor cross section to be stripped by turning it (left / right).
- Secure the adjusting screw using the counter nut.
- Insert the cable.
- Close the pliers by pressing them and remove the plastic sheathing.

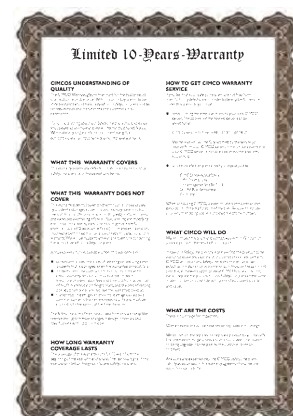


## 10 year durability guarantee

on all Diamant-Plus pliers. If defects in the material or processing can be proved, we will provide you with a replacement free of charge. Please ask for the exact guarantee terms at your local CIMCO dealer or from CIMCO directly.

## 1000 V protective insulation according to VDE

The pliers belonging to the Diamant-Plus range correspond to the current standards of IEC 900, IEC 60900:2004 and VDE 0682/Part 201 (excluding engineers pliers). These strict safety rules stipulate 10 different quality checks for the insulation protection of all pliers. In addition to the type examination, the independent testing body of VDE also regularly performs production and storage inspections. Each individual set of pliers is examined in the water bath for disruptive discharges and flashovers at a testing voltage of 10,000 Volt AC. As a result, we guarantee the safety has been tested on all pieces.



The range of pliers that is exclusively "Made in Germany" undergoes a range of unrivalled trend-setting and robot-supported production processes. The work sequences are implemented with the aid of robots, from forging to grinding and polishing, right through to the dielectric strength testing of the insulating coating in order to ensure a consistent standard of quality. Ergonomic design handle sleeves in a modern 2-component design made of premium plastic with excellent tactile properties. Superb grip thanks to non-slip, non-adhesive surfaces when dealing with wet conditions and dirt. Excellent skin-tolerance, insulation in extreme temperatures, electrical shocks and vibrations. Resistance against sweat, salt water, oil, many chemicals and UV radiation.

## Heavy duty diagonal pliers

according to DIN ISO 5749 A, lap joint, with induction hardened precision blades (approx. 64 HRC), for all wires, also including piano wire, made of electric steel



145 (5.5") 6 10 0524

## 1000 V Heavy duty diagonal pliers



160 (6") 6 10 0526  
200 (8") 6 10 0528

## Diagonal pliers

according to DIN ISO 5749 B, single joint with induction hardened precision blades (approx. 64 HRC), for all wires, also including piano wire, made of electric steel



130 (5") 6 10 0570

## 1000 V Diagonal pliers



145 (5.5") 6 10 0572  
160 (6") 6 10 0574  
180 (7") 6 10 0577



## 1000 V Stripping diagonal pliers

Single joint with induction hardened precision blade, (approx. 64 HRC), for hard, medium-hard and

soft wire, with two additional stripping functions for solid and multi-wire conductors measuring 1.5 mm<sup>2</sup> and 2.5 mm<sup>2</sup>



160 (6") 6 10 0652

## Diagonal sealing pliers

Single joint with induction hardened

precision blades (approx. 64 HRC), for all wires, also for piano wire, made of electric steel, with punches 8 mm ø



160 (6") 6 10 0030

loose punch

8 mm ø 1 item 10 1732

## 1000 V Heavy duty end cutter

according to DIN ISO 5748, lap joint,

with induction hardened precision blade

(approx. 64 HRC), for all types of wire, also including piano wire, made of electric steel



200 (8") 6 10 0402

## 1000 V Combination pliers

according to DIN ISO 5746, single joint,

with induction hardened precision blade (approx. 64 HRC), for all wires, also including piano wire, made of special tool steel with slightly conical, ridged gripping surfaces and ridged opening (burner hole)



160 (6") 6 10 0334

180 (7") 6 10 0336

200 (8") 6 10 0338

## 1000 V Wire stripper

Single joint with adjusting screw

for setting the desired wire or stranded wire diameter, for solid and multi-wire conductors

up to 5 mm ø or 0.75 mm<sup>2</sup> to 6 mm<sup>2</sup>, with internal opening spring



160 (6") 6 10 0686

## 1000 V Telephone pliers with straight jaws

according to DIN ISO 5745, single joint,

with induction hardened precision blade (approx. 60 HRC),

long, flat-round jaws (flat-round pliers), serrated gripping surfaces and serrated opening (burner hole),

with blades for hard and soft wire



145 (5.5") 6 10 0212



160 (6") 6 10 0214

200 (8") 6 10 0216

## 1000 V Telephone pliers with bent jaws

according to DIN ISO 5745, single joint,

jaws at a 45° angle, with induction hardened

precision blade (approx. 60 HRC), long, flat-round jaws (flat-round pliers), serrated gripping surfaces and serrated opening (burner hole), with blades for hard and soft wire



160 (6") 6 10 0236

200 (8") 6 10 0238

## 1000 V Flat nose pliers (long flat nose pliers)

according to DIN ISO 5745, single joint,

long, flat jaws, jaw length 50 mm, serrated gripping surfaces



160 (6") 6 10 0024

## 1000 V Round nose pliers (long flat nose pliers)

according to DIN ISO 5745, single joint,

long, round jaws, jaw length 50 mm, finely serrated gripping surfaces



160 (6") 6 10 0062



## Engineering pliers

without VDE-tested 1000 V protective insulation,  
with precision box joint for clearance-free, particularly durable guidance, jaw length 75 mm,  
gripping surfaces with fine angled cut



straight, flat-round jaws	190 (7.5")	6	10 0082
flat-round jaws, 45° angled	190 (7.5")	6	10 0086



straight, flat-wide jaws	190 (7.5")	6	10 0090
flat-wide jaws, 45° angled	190 (7.5")	6	10 0094

## Water pump pliers

according to DIN ISO 8976, with box joint,  
self-clamping on the tool, with serrated opening (burner hole), made of chrome-vanadium steel



without handle sleeves	250 (10")	10	10 1222
with handle sleeves	250 (10")	6	10 1224

## 1000 V Plier assortment, 4 pieces

Heavy duty diagonal pliers	200 (8")		10 0528
Telephone pliers with straight jaws	200 (8")		10 0216
Combination pliers	180 (7")		10 0336
Wire stripper	160 (6")		10 0686
		1	10 4020



## Plier assortment, 3 pieces

Water pump pliers	250 (10")		10 1224
Telephone pliers with bent jaws	200 (8")		10 0238
Diagonal pliers	160 (6")		10 0574
		1	10 4022

## **1000 V Diagonal pliers DIAMANT**

according to DIN ISO 5749

**Cutting performance:** A special blade shape, optimises hand power transmission and most suitable material quality ensure astoundingly low cutting forces on all types of cables and wires.

**Surface coating:** Thanks to new technological possibilities, the diagonal pliers have a double primer coat as well as a more refined surface coating to ensure a high level of wear resistance and improved corrosion protection.

**Handle sleeves:** Ergonomic design handle sleeves in modern 2-component design made of premium plastic with excellent tactile properties, VDE-certified insulation protection up to 1000 Volt AC according to DIN EN 60900:2004.

160	6	10 0000
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## Screw pliers

The patented 2-component screw pliers that have been awarded the Design Prize is the ideal problem solver for embedded, dirty or corrosion-damaged screws.

The special head shape of the pliers securely surrounds the screw head, thus loosening the screws which can no longer be removed with conventional tools.

Single joint with arched, vertically ridged gripping surfaces,  
for all self-tapping or metric screws from M1 - M3

130	1	10 0350
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Single joint with induction hardened precision blade (approx. 58 HRC), for hard, medium-hard and soft wire.  
Arched, horizontally and vertically ridged gripping surfaces,  
for all self-tapping or metric screws from M2 - M6

160	1	10 0352
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**Diamant**  
**PLUS**

The range of pliers that is exclusively "Made in Germany" undergoes a range of unrivalled trend-setting and robot-supported production processes. The work sequences are implemented with the aid of robots, from forging to grinding and polishing, right through to the dielectric strength testing of the insulating coating in order to ensure a consistent standard of quality.

Handles with two-colour plastic dip insulation for optimum safety. In the event of damage to the outer red insulation layer, the lower orange plastic insulation that is now visible indicates that 100% safety in accordance with the safety standards can no longer be guaranteed.

### 1000 V Heavy duty diagonal pliers

according to DIN ISO 5749 A, lap joint,

with induction hardened

precision blade (approx. 64 HRC), for all wires, also including piano wire, made of electric steel



160 (6")	6	10 8789
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200 (8")	6	10 8784
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### 1000 V Diagonal pliers

according to DIN ISO 5749 B, single joint with induction hardened precision blade (approx. 64 HRC),

for all wires also including piano wire, made of electric steel



145 (5.5")	6	10 8785
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160 (6")	6	10 8786
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180 (7")	6	10 8787
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250 (10")	6	10 8788
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### 1000 V Stripping diagonal pliers

Single joint with induction hardened precision blade

(approx. 64 HRC), for hard,

medium-hard and soft wire, with two additional stripping functions for solid and multi-wire conductors measuring 1.5 mm<sup>2</sup> and 2.5 mm<sup>2</sup>



160 (6")	6	10 8792
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### 1000 V Heavy duty end cutter

according to DIN ISO 5748, lap joint,

with induction hardened precision blade

(approx. 64 HRC), for all types of wire, also including piano wire, made of electric steel



200 (8")	6	10 8795
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### 1000 V Flat nose pliers (long flat nose pliers)

according to DIN ISO 5745, single joint,

long, flat jaws, jaw length 50 mm, serrated gripping surfaces



160 (6")	6	10 8771
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### 1000 V Round nose pliers (long flat nose pliers)

according to DIN ISO 5745, single joint,

long, round jaws, jaw length 50 mm, finely serrated gripping surfaces



160 (6")	6	10 8773
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### 1000 V Telephone pliers with straight jaws

according to DIN ISO 5745, single joint,

with induction hardened precision blade

(approx. 60 HRC), long, flat-round jaws (flat-round pliers), serrated gripping surfaces and serrated opening (burner hole), with blades for hard and soft wire



160 (6")	6	10 8779
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200 (8")	6	10 8778
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### 1000 V Telephone pliers with bent jaws

according to DIN ISO 5745, single joint,

jaws at a 45° angle, with induction hardened

precision blade (approx. 60 HRC), long, flat-round jaws (flat-round pliers), serrated gripping surfaces and serrated opening (burner hole), with blades for hard and soft wire



160 (6")	6	10 8777
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200 (8")	6	10 8780
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## 1000 V Combination pliers

according to DIN ISO 5746, single joint,

with induction hardened precision blade (approx. 64 HRC), for all wires, also including piano wire, manufactured of special tool steel with slightly conical, ridged gripping surfaces and ridged opening (burner hole)



160 (6")	6	10 8781
180 (7")	6	10 8782
200 (8")	6	10 8783

## 1000 V Water pump pliers

according to DIN ISO 8976, with box joint,

self-clamping on the tool, with serrated opening (burner hole), made of chrome-vanadium steel



250 (10")	6	10 8724
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## 1000 V Wire stripper

Single joint, with adjusting screw

for setting to the desired wire or stranded wire diameter, for solid and multi-wire conductors up to 5 mm  $\varnothing$  or 0.75 mm<sup>2</sup> to 6 mm<sup>2</sup>, with internal opening spring



160 (6")	6	10 8790
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## 1000 V Safety plier set, 4-pieces

Double dip-coated handles

Telephone pliers, straight	200 (8")	10 8778
Combination pliers	180 (7")	10 8782
Heavy duty diagonal pliers	200 (8")	10 8784
Wire stripper	160 (6")	10 8790
	1	10 8002



## 1000 V Plastic telephone pliers

made of impact-resistant, fibre-glass reinforced plastic with 2-component handles, ridged gripping surfaces and narrow tips, robust design, can be used in temperatures as low as -40 °C

180	1	10 0790
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## 1000 V Plastic grip pliers

made of impact-resistant, glass fibre reinforced plastic with 2-component handles, gripping zone with 8 recesses for different cable diameters, without blades, robust design, can be used in temperatures as low as -40 °C

180	1	10 0792
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## 1000 V Plastic combination pliers

made of impact-resistant, fibre-glass reinforced plastic with 2-component handles, with blade inserts made of special steel, extra-long blades for flexible conductors with diameters of up to 12 mm as well as medium-hard wire gripping zone with 3 openings for different cable diameters, robust design, can be used in temperatures as low as -40 °C

190	1	10 0794
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## 1000 V Plastic cable cutter

made of impact-resistant, fibre-glass reinforced plastic with 2-component handles, with blade inserts made of special steel, for flexible Al and Cu conductors with diameters of up to 15 mm, excellent cutting performance, robust design, can be used in temperatures as low as -40 °C


170	1	12 0790
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


## Precision electronic pliers with box joint, drop-forged design


High-precision design made of special steel, easily self-opening thanks to double leaf springs, excellent durability, finely ground surface with ergonomically-designed 2-component handle sleeves (in ESD or 1000 V design upon request)

### Electronic diagonal pliers


oval-round head, diagonal, with side face  120 1 10 0802

oval-round head, diagonal, without side face  120 1 10 0804

pointed head, flat, with side face  120 1 10 0806


pointed head, flat, without side face  120 1 10 0808

### Electronic end cutter


with wide blade and face  120 1 10 0810

### Electronic diagonal end cutter with stripping function


ø 1.0 mm = 0.8 mm<sup>2</sup>


with wide blade, without face, 37° angle  120 1 10 0824


### Electronic diagonal end cutter

short blade, without face, 30° angle  120 1 10 0826


### Electronic needle nose pliers with blade


straight shape, pointed 2.5 x 1.5 mm  130 1 10 0812

straight shape, pointed 2.5 x 1.5 mm  150 1 10 0814

bent shape, pointed 2.5 x 1.5 mm  150 1 10 0816


### Electronic flat nose pliers

smooth, wide jaws 2.0 x 3.5 mm  130 1 10 0818

smooth, narrow jaws 2.0 x 1.0 mm  130 1 10 0820

### Electronic round nose pliers

short shape, smooth jaws

Tip 1.5 mm ø  130 1 10 0822

### Electronic pliers set, 3 pieces

Diagonal pliers 120 10 0802

Needle nose pliers 150 10 0816

Flat nose pliers 130 10 0818

1 10 4032





## Case-hardened 3 mm-flat tool steel design


Precision ground cutting edges, self-opening thanks to smooth spiral spring, finely burnished, with elastic 2-component plastic handles (apart from electronics heavy duty diagonal pliers, CIMCO article no. 10 1054 and 10 1055)

### Micro-electronic diagonal pliers


without side face

Setting Soft wires

angle up to  $\varnothing$  mm

21°	0.8		118	1	10 1030
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with fine tips, without side face


21°	1.0		129	1	10 1038
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### Electronic diagonal pliers


without side face

Setting Soft wires Hard wires

angle up to  $\varnothing$  mm up to  $\varnothing$  mm


21°	1.3		132	1	10 1040
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without side face


48°	1.3		130	1	10 1044
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reinforced design, with side face,


blades also suitable for steel wire

21°	2.0	0.6		140	1	10 1046
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reinforced design, without side face

21°	1.3		132	1	10 1048
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with reinforced blade, without side face

21°	1.0		132	1	10 1050
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with reinforced blade, with side face

21°	1.0		132	1	10 1051
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strong design, without side face


21°	2.0		131	1	10 1052
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### Electronic heavy duty diagonal pliers


without side face, with 1-component ergonomic handle sleeves

Setting Soft wires


angle up to  $\varnothing$  mm


20°	2.5		148	1	10 1054
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with side face


20°	2.5		148	1	10 1055
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### Micro electronics needle nose pliers

Bent jaws, smooth, 1 mm wide		52	1	10 1076
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Straight jaws, ridged, 1.2 mm wide		152	1	10 1082
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### Electronics flat nose pliers

Straight jaws, ridged, 3 mm wide		140	1	10 1096
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### Electronic pliers set, 3 pieces

Diagonal pliers	132	10 1040
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Needle nose pliers, bent	150	10 1076
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Flat nose pliers	140	10 1096
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	1	10 4030
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## Tweezers

### Technical tweezers

made of steel

straight, pointed shape, without serration	120	1	10 3012
bent, pointed shape, fine serration	120	1	10 3016
bent, pointed shape, fine serration	155	1	10 3018

### College tweezers

made of steel, with guiding pins

bent, pointed-round shape, fine serration	155	1	10 3042
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### Crossed tweezers

made of steel, with copper jaws for heat dissipation

straight, narrow-round shape	160	1	10 3062
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### Insulated tweezers


straight, pointed shape	130	1	10 3110
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bent, pointed shape	150	1	10 3112
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straight, flat-round shape	145	1	10 3114
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### 1000 V Tweezers

with 2-layer safety insulation and anti-slip protection, tested according to DIN EN 60900

 1000 V straight, flat-round shape	145	1	10 3232
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 1000 V bent, flat-pointed shape	145	1	10 3240
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### Control mirror

Mirror ø 30 mm	275	6	11 1600
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### Combi pick-up tool

with additional integrated 500 g ring magnet. Black, plastic-coated bendable shaft (returns to the original position after bending) complete with a ø 6 mm (externally ø 7 mm)

Pick-up tool and anodised case measuring ø 15 mm. Aluminium actuation handle with ø 32 mm counterholder, ø 24 mm actuation pushbutton and integrated return spring.

Total length 700 mm (usable depth 600 mm)	700	1	11 1650
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### Flexible pick-up tool

Bendable shaft ø 6 mm (does not return to the original position after bending).

Pick-up tool design complete with return spring on the actuation pushbutton. Aluminium actuation handle with ø 20 mm counterholder, ø 16 mm actuation pushbutton.

Total length 540 mm (usable depth 450 mm)	540	6	11 1652
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### Flexible magnetic pick-up tool

Mini magnetic pick-up tool with ø 4 mm neodymium magnet, on flexible, plastic-coated wire spindle, for recovering metal items from small and narrow spaces

Adhesive force 270 g	400	1	11 1654
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### Telescopic magnetic pick-up tool ø 6 mm

in pocket format complete with attachment clip, extendable from 125 mm up to 630 mm (total length) and a tensile force of 500 g.

7 mm head diameter, chrome-plated design

	125	1	11 1622
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## Sealing pliers and accessories

### Diagonal sealing pliers

single joint with induction hardened precision blade (approx. 64 HRC),  
for all types of wire, also including piano wire, made of electric steel with 8 mm  $\varnothing$  punches

	160 mm (6")	1	10 0030
loose punch	8 mm $\varnothing$	1	10 1732

### Sealing pliers

Punch $\varnothing$ mm	Receptacle $\varnothing$ mm			
8	4	125	1	10 1690
9	4	145	1	10 1692
10	5	165	1	10 1694
12	5	220	1	10 1698
loose punch $\varnothing$ mm	Receptacle $\varnothing$ mm			
8	4		1	10 1700
9	4		1	10 1702
10	5		1	10 1704
12	5		1	10 1708

### Sealing pliers

without strap lock, 8 mm $\varnothing$	105	1	10 1720
with strap lock, 8 mm $\varnothing$	105	1	10 1722
loose punch, 8 mm $\varnothing$		1	10 1724

### Engravings for seal punches

up to 3 letters	1	10 1733
every additional letter	1	10 1734
every border	1	10 1735
Special engraving		

### Lead seals

$\varnothing$ mm		Height mm		
8	approx. 850 pieces	4	1 kg	14 0750
9	approx. 600 pieces	4	1 kg	14 0752
10	approx. 400 pieces	5	1 kg	14 0754
12	approx. 300 pieces	5	1 kg	14 0758

### Wire lead seals

with moulded coil wire, 200 mm in length

$\varnothing$ mm			
8	approx. 450 pieces	1 kg	14 0760
10	approx. 260 pieces	1 kg	14 0762
12	approx. 150 pieces	1 kg	14 0764

### Plastic seals

$\varnothing$ mm			
8	orange	1000	14 0738
9	grey	1000	14 0740
10	orange	1000	14 0742
12	grey	1000	14 0744

### Plastic-coated seal wire

Iron wire	$\varnothing$ mm		
Coil: 100 m, white	0.5 x 0.6	1	14 0778
Coil: 100 m, blue	0.5 x 0.6	1	14 0779

### Seal wire

galvanised steel wire, stainless steel	$\varnothing$ mm		
Coil: 1/2 kg = approx. 115 m	0.5 x 0.5	1	14 0768
Coil: 1 kg = approx. 230 m	0.5 x 0.5	1	14 0770
Coil: 1/2 kg = ca. 190 m	0.5 x 0.3	1	14 0772
Coil: 1 kg = approx. 380 m	0.5 x 0.3	1	14 0774



## Sealing pliers set

consisting of diagonal sealing pliers CIMCO article no. 10 0030 incl. punch pair, 1000 plastic seals orange CIMCO article no. 14 0738, 100 m plastic coated seal wire white (CIMCO article no. 14 0778), in stable plastic box

1 10 1730



## Circlip pliers (Seeger pliers)

for the damage-free application and removal of circlips or snap rings on shafts and in boreholes, made of chrome-vanadium steel, polished-chrome plated, with PVC handle sleeves, cylindrical plier tips.

Shape for circlips mm ø

according to DIN 5254 A for external circlips, straight jaws

A 3 (A 0)	3 - 10	140	1	10 1410
A 10 (A 1)	10 - 25	140	1	10 1412
A 19 (A 2)	19 - 60	180	1	10 1414
A 40 (A 3)	40 - 100	225	1	10 1416
A 85 (A 4)	85 - 165	310	1	10 1418



according to DIN 5254 B for external circlips, 90° angled jaws

B 3 (A 01)	3 - 10	130	1	10 1430
B 10 (A 11)	10 - 25	130	1	10 1432
B 19 (A 21)	19 - 60	170	1	10 1434
B 40 (A 31)	40 - 100	210	1	10 1436
B 85 (A 41)	85 - 165	310	1	10 1438



according to DIN 5256 C for internal circlips, straight jaws

C 3 (J 0)	3 - 10	140	1	10 1450
C 8 (J 1)	8 - 25	140	1	10 1452
C 19 (J 2)	19 - 60	180	1	10 1454
C 40 (J 3)	40 - 100	225	1	10 1456
C 85 (J 4)	85 - 165	290	1	10 1458



according to DIN 5256 D for internal circlips, 90° angled jaws

D 3 (J 01)	3 - 10	130	1	10 1470
D 8 (J 11)	8 - 25	130	1	10 1472
D 19 (J 21)	19 - 60	170	1	10 1474
D 40 (J 31)	40 - 100	210	1	10 1476
D 85 (J 41)	85 - 165	290	1	10 1478



## Lever pressure pliers (locking pliers)

ideal for holding and fixing of workpieces for welding, soldering, cutting and finishing. Jaws made of chrome vanadium steel, with unfasten lever and wire cutter

Span width mm

0 - 35	185	1	10 1300
0 - 50	250	1	10 1302
0 - 65	300	1	10 1304



## Bolt cutters

Robust bolt cutters in a compact design. Blade and pipehead made of drop-forged special steel.

Reduced separating force thanks to ideal geometry and cutting performance up to 48 HRC.

With ergonomic 2-component handles and precise, adjustable blades.

460 1 10 0450



## Pincers (nippers)

according to DIN ISO 9243, with PVC handle sleeves

200 6 10 1524



## Rabitz pliers (mechanic's pliers)

according to DIN ISO 9242, with PVC handle sleeves

220 6 10 1540



## Revolving punch pliers

forged, with brass pressure piece and 6 interchangeable hole punches (CIMCO article no. 10 1552 up to 10 1558)

2 - 2.5 - 3 - 3.5 - 4 - 5 mm $\varnothing$	230	1	10 1550
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made of steel sheet, with brass pressure piece

2 - 2.5 - 3 - 3.5 - 4 - 4.5 mm $\varnothing$	220	1	10 1562
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## Notching pliers

Special tool for the fast and clean cutting out of plastic tracks (e.g. cable channels)

Cutting depth 30 mm    Cutting width 15 mm	180	1	10 1640
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## Control pliers

for paper punches and thin plastics, e.g. for the simple marking of stickers before they are removed from the backing material. Opening depth 30 mm

round recess 3 mm $\varnothing$	120	1	10 1650
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Special recesses for control pliers

round recess up to max. 5 mm  $\varnothing$  as well as special shapes up to 3 mm in height, e.g.

Please state the special recess upon ordering:



## PICCOLO folding pliers

made of chrome vanadium steel, with single joint, jaw width 22 mm

Jaw shape

straight	180	1	10 2080
45°	180	1	10 2082

## Folding pliers

made of chrome vanadium steel, with single joint, PVC-coated handles

### Straight folding pliers

Working head 40 mm	240	1	10 2060
Working head 60 mm	260	1	10 2062
Working head 80 mm	300	1	10 2063

### 45° folding pliers

Working head 40 mm	240	1	10 2064
Working head 60 mm	260	1	10 2066
Working head 80 mm	300	1	10 2067

### 90° folding pliers

Working head 40 mm	240	1	10 2057
Working head 60 mm	260	1	10 2058
Working head 80 mm	300	1	10 2059

### Flat nose pliers, straight

Working head 12 mm, with cut	250	1	10 2068
Working head 12 mm, without cut	250	1	10 2069

### Flat nose pliers 45°

Working head 12 mm, without cut	250	1	10 2072
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### Round nose pliers

Working head 7 mm, with cut	250	1	10 2070
Working head 7 mm, without cut	250	1	10 2071

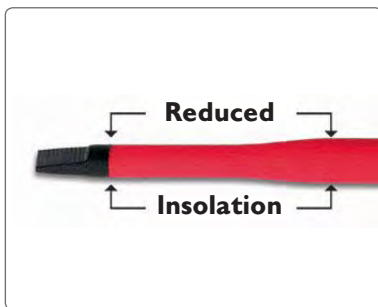


# SCREWDRIVER, ELECTRONIC SCREWDRIVER



## Reduced insulation

For optimum accessibility of recessed screws with the SLIM blade version.



## Screw system marking

The handle end of the screwdrivers is marked with a symbol for the screw system and size. This allows the user to pick out the "right" tool at a glance (an advantage in your tool bag for example).

## Blade

The specially hardened and high-alloy steel guarantees a long service life. Due to the machined blade tips, we guarantee maximum fitting precision of all VDE types in the screw head.

## Insulation

All insulated 3K screwdrivers are not only VDE/GS approved, they also fulfil the new, enhanced IEC 60900:2005 standard without compromise. This specifies, among other things, an individual item test in a water bath with a testing voltage of 10,000 V.

## Quick rotation zone

A slim quick rotation zone with good grip allows particularly precise, sensitive work.

## Handle

The three-component handle with its rounded triangular shape and curved longitudinal contour allow for fatigue-free work.

## Markings

Permanently on the handle with standard specifications:

- IEC 60900:2005
- VDE GS double strike
- Voltage range AC 1000 V
- C = Increased impact resistance for extreme cold
- EAN Code

## Insulated screwdrivers according to IEC 60900:2005, classification VDE 0682, part 201. Individually tested in a water bath with a testing voltage of 10,000 V.

### Electrician screwdriver

according to DIN EN 60900; VDE 0682 - 201:2005 - 01; DIN ISO 2380

2.5 x 0.4	75	160	12	11 7701
3.0 x 0.5	100	185	12	11 7702
3.5 x 0.6	100	185	12	11 7703
4.0 x 0.8	100	185	12	11 7704
5.5 x 1.0	125	220	12	11 7705
6.5 x 1.2	150	245	12	11 7706
8.0 x 1.2	175	285	12	11 7708
10.0 x 1.6	200	310	12	11 7710



### Phillips cross-head screwdriver

according to DIN EN 60900; VDE 0682 - 201:2005 - 01; DIN ISO 8764

PH 0	60	145	12	11 7730
PH 1	80	165	12	11 7731
PH 2	100	195	12	11 7732
PH 3	150	260	12	11 7733

### Pozidriv crosshead screwdriver

according to DIN EN 60900; VDE 0682 - 201:2005 - 01; DIN ISO 8764

PZ 0	60	145	12	11 7740
PZ 1	80	165	12	11 7741
PZ 2	100	195	12	11 7742
PZ 3	150	260	12	11 7743

### Special screwdrivers with combination profile

according to DIN EN 60900; VDE 0682 - 201:2005 - 01

for combined slot-head/crosshead screws in electrical equipment, e.g. terminal blocks

PZ FL 1	80	165	12	11 7751
PZ FL 2	100	195	12	11 7752
Set PZ FL 1 and PZ FL 2 (CIMCO article no. 11 7751 and 11 7752)			1	11 7750
PH FL 1	80	165	12	11 7757
PH FL 2	100	195	12	11 7758

### Hex key (Allen wrench)

according to DIN EN 60900; VDE 0682 - 201:2005 - 01

Size 3	75	160	12	11 7823
Size 4	75	160	12	11 7824
Size 5	75	170	12	11 7825
Size 6	100	195	12	11 7826
Size 8	100	210	12	11 7828

### TORX® screwdriver

according to DIN EN 60900; VDE 0682 - 201:2005 - 01

T 8	60	145	12	11 7908
T 9	60	145	12	11 7909
T 10	60	155	12	11 7910
T 15	75	170	12	11 7915
T 20	100	195	12	11 7920
T 25	100	195	12	11 7925
T 30	100	210	12	11 7930

### Nut drivers

according to DIN EN 60900; VDE 0682 - 201:2005 - 01

Size 5.5	125	220	12	11 7805
Size 6	125	220	12	11 7806
Size 7	125	235	12	11 7807
Size 8	125	235	12	11 7808
Size 9	125	235	12	11 7809
Size 10	125	235	12	11 7810
Size 11	125	235	12	11 7811
Size 13	125	235	12	11 7813

**Electrician screwdriver set, 7 pieces**

VDE electrician screwdrivers for slot-head screws

2.5 x 0.4 x 75	11 7701
3.0 x 0.5 x 100	11 7702
4.0 x 0.8 x 100	11 7704
5.5 x 1.0 x 125	11 7705

VDE crosshead screwdriver

PH 1 x 80	11 7731
PH 2 x 100	11 7732
VDE voltage tester (250 V AC)	11 1280

1 11 7800


**Electrician screwdriver set, 7 pieces**

VDE electrician screwdrivers for slot-head screws

2.5 x 0.4 x 75	11 7701
3.0 x 0.5 x 100	11 7702
4.0 x 0.8 x 100	11 7704
5.5 x 1.0 x 125	11 7705

VDE crosshead screwdriver

PZ 1 x 80	11 7741
PZ 2 x 100	11 7742
VDE voltage tester (250 V AC)	11 1280

1 11 7802


**Slot-head screwdriver set, 5 pieces**

VDE electrician screwdriver for slot-head screws

2.5 x 0.4 x 75	11 7701
3.5 x 0.6 x 100	11 7703
4.0 x 0.8 x 100	11 7704
5.5 x 1.0 x 125	11 7705
6.5 x 1.2 x 150	11 7706

1 11 7700


**Crosshead screwdriver set, 6 pieces**

VDE crosshead screwdriver

PH 1 x 80	11 7731
PH 2 x 100	11 7732
PH 3 x 150	11 7733
PZ 1 x 80	11 7741
PZ 2 x 100	11 7742
PZ 3 x 150	11 7743

1 11 7745


**Hex key (Allen wrench) set, 5 pieces**

VDE hex key

Size 3 x 75	11 7823
Size 4 x 75	11 7824
Size 5 x 75	11 7825
Size 6 x 100	11 7826
Size 8 x 100	11 7828

1 11 7820


**TORX® screwdriver set, 5 pieces**

VDE TORX® screwdriver

T 8 x 60	11 7908
T 10 x 60	11 7910
T 15 x 75	11 7915
T 20 x 100	11 7920
T 25 x 100	11 7925

1 11 7900






### Nut driver set, 5 pieces

VDE nut driver

Size 5.5 x 125	11 7805
Size 7 x 125	11 7807
Size 8 x 125	11 7808
Size 10 x 125	11 7810
Size 13 x 125	11 7813
1 11 7801	



### VDE screwdriver set ELEKTRO-MEGA-DRIVE, 13 pieces

VDE electrician screwdriver for slot-head screws

2.5 x 0.4 x 75	11 7701
3.0 x 0.5 x 100	11 7702
4.0 x 0.8 x 100	11 7704
5.5 x 1.0 x 125	11 7705

VDE crosshead screwdriver

PH 1 x 80	11 7731
PH 2 x 100	11 7732
PZ 1 x 80	11 7741
PZ 2 x 100	11 7742

VDE TORX® screwdriver

T 10	11 7910
T 15	11 7915
T 20	11 7920
T 25	11 7925

VDE voltage tester (250 V AC)	11 1280
1 11 7000	



### VDE SLIM screwdriver set, 5 pieces

for optimal accessibility of recessed screws

VDE electrician screwdriver for slot-head screws

3.0 x 0.6 x 100 mm
4.0 x 0.8 x 100 mm
5.5 x 1.0 x 125 mm

VDE crosshead screwdriver

PZ 1 x 80 mm	
PZ 2 x 100 mm	
1 11 7850	



### Non-insulated screwdriver with uncoated, matt chromium-plated blade

#### Workshop screwdriver

according to ISO 2380

3.5 x 0.6 x 75	160	12	11 7103
4.0 x 0.8 x 100	185	12	11 7104
5.5 x 1.0 x 125	220	12	11 7105
6.5 x 1.2 x 150	245	12	11 7106
8.0 x 1.2 x 150	260	12	11 7107
8.0 x 1.6 x 175	285	12	11 7108
10.0 x 1.6 x 200	310	12	11 7110

#### Electrician screwdriver

2.5 x 0.4 x 75	160	12	11 7121
3.0 x 0.5 x 100	185	12	11 7122
3.5 x 0.6 x 100	185	12	11 7123
4.0 x 0.8 x 100	185	12	11 7124
5.5 x 1.0 x 125	220	12	11 7125
5.5 x 1.0 x 200	295	12	11 7126



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### Phillips cross-head screwdriver

according to DIN ISO 8764

PH 0 x 60	145	12	11 7130
PH 1 x 80	165	12	11 7131
PH 2 x 100	195	12	11 7132
PH 3 x 150	260	12	11 7133

### Pozidriv cross-head screwdriver

according to DIN ISO 8764 - 1

PZ 0 x 60	145	12	11 7140
PZ 1 x 80	165	12	11 7141
PZ 2 x 100	195	12	11 7142
PZ 3 x 150	260	12	11 7143

### TORX® screwdriver with bore (tamper resistant)

T 6 x 60 (without bore)	135	12	11 7306
T 7 x 60	135	12	11 7307
T 8 x 60	145	12	11 7308
T 9 x 60	145	12	11 7309
T 10 x 80	175	12	11 7310
T 15 x 80	175	12	11 7315
T 20 x 100	195	12	11 7320
T 25 x 100	195	12	11 7325
T 30 x 115	225	12	11 7330
T 40 x 115	225	12	11 7340

### Ball-end hex key (Allen wrench)

according to DIN 5265

Size 3 x 100	185	12	11 7223
Size 4 x 100	185	12	11 7224
Size 5 x 100	195	12	11 7225
Size 6 x 125	220	12	11 7226
Size 8 x 150	260	12	11 7228

### Hexagon nut driver

according to DIN 3125

Size 5 x 125	210	12	11 7204
Size 5.5 x 125	210	12	11 7205
Size 6 x 125	210	12	11 7206
Size 7 x 125	220	12	11 7207
Size 8 x 125	220	12	11 7208
Size 9 x 125	220	12	11 7209
Size 10 x 125	220	12	11 7210
Size 11 x 125	235	12	11 7211
Size 13 x 125	235	12	11 7213
Size 14 x 125	235	12	11 7214
Size 17 x 125	235	12	11 7217

### Stubby screwdrivers

with 2-component handle, for slot-head screws

5.5 x 1.0 x 38	95	12	11 0290
6.5 x 1.2 x 38	95	12	11 0294

for Phillips crosshead screws

PH 1 x 38	95	12	11 0120
PH 2 x 38	95	12	11 0122

### Slot-head screwdriver

according to DIN ISO 2380, long design

5.5 x 1.0 x 300	410	12	11 7112
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### Phillips cross-head screwdriver

according to DIN ISO 8764, long design

PH 1 x 300	400	12	11 7114
PH 2 x 300	410	12	11 7116



### Screwdriver set, 3 pieces

Slot-head screwdriver

5.5 x 1.0 x 300 11 7112

Crosshead screwdriver

PH 1 x 300 11 7114

PH 2 x 300 11 7116

1 11 7102



### Screwdriver set, 6 pieces

Electrician screwdriver

2.5 x 0.4 x 75 11 7121

4.0 x 0.8 x 100 11 7124

Workshop screwdriver

5.5 x 1.0 x 125 11 7105

6.5 x 1.2 x 150 11 7106

Crosshead screwdriver

PH 1 x 80 11 7131

PH 2 x 100 11 7132

1 11 7100



### Slot-head screwdriver set, 6 pieces

Electrician screwdriver

2.5 x 0.4 x 75 11 7121

3.5 x 0.6 x 100 11 7123

4.0 x 0.8 x 100 11 7124

Workshop screwdriver

5.5 x 1.0 x 125 11 7105

6.5 x 1.2 x 150 11 7106

8.0 x 1.2 x 150 11 7107

1 11 7101



### Crosshead screwdriver set, 6 pieces

Phillips

PH 1 x 80 11 7131

PH 2 x 100 11 7132

PH 3 x 150 11 7133

Pozidriv

PZ 1 x 80 11 7141

PZ 2 x 100 11 7142

PZ 3 x 150 11 7143

1 11 7145



### TORX® screwdriver set with bore, 5 pieces

T 8 x 60 11 7308

T 10 x 80 11 7310

T 15 x 80 11 7315

T 20 x 100 11 7320

T 25 x 100 11 7325

1 11 7300



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### Ball-end hex key set (Allen wrench), 5 pieces

Size 3 x 100			11 7223
Size 4 x 100			11 7224
Size 5 x 100			11 7225
Size 6 x 125			11 7226
Size 8 x 150			11 7228
	1		11 7220



### Nut driver set, 5 pieces

Size 5.5 x 125			11 7205
Size 7 x 125			11 7207
Size 8 x 125			11 7208
Size 10 x 125			11 7210
Size 13 x 125			11 7213
	1		11 7200



### Insulated screw-holding screwdriver

Blades made of chrome vanadium steel, with impact-resistant plastic haft and holding device for slot-head screws

3 x 0.5 x 100	185	12	11 0782
4 x 0.8 x 125	215	12	11 0784
5 x 1.0 x 150	250	12	11 0786
6 x 1.2 x 175	275	12	11 0788



for Phillips crosshead screws

PH 0 x 125	215	12	11 0790
PH 1 x 150	250	12	11 0792
PH 2 x 175	275	12	11 0794

### Screw-holding screwdriver set, 5 pieces

Slot-head screwdriver

3 x 0.5 x 100			11 0782
4 x 0.8 x 125			11 0784
5 x 1.0 x 150			11 0786

Phillips cross-head screwdriver

PH 0 x 125			11 0790
PH 1 x 150			11 0792
	1		11 0796



### Workshop screwdriver VSM STANDARD

with two-component handles and black blade tips covered with a tube

3.5 x 0.5 x 90 (size 1)	180	12	11 7511
4.0 x 0.6 x 100 (size 2)	190	12	11 7512
5.5 x 0.8 x 120 (size 3)	220	12	11 7513
6.5 x 1.0 x 140 (size 4)	250	12	11 7514
8.0 x 1.2 x 160 (size 5)	270	12	11 7515



## Workshop screwdriver VSM STANDARD

Blades according to the Swiss standard VSM 35601, made of high-alloy chrome vanadium steel, high gloss chromium-plated, with black tips, handles made of impact-resistant, transparent plastic bare blades

3.5 x 0.5 x 90 (size 1)	170	12	11 4706
6.5 x 1.0 x 140 (size 4)	240	12	11 4712

blades covered with a tube

3.5 x 0.5 x 90 (size 1)	170	12	11 4736
5.5 x 0.8 x 120 (size 3)	220	12	11 4740
6.5 x 1.0 x 140 (size 4)	240	12	11 4742

## Phillips cross-head screwdriver

PH 1 x 80	170	12	11 4762
PH 2 x 100	200	12	11 4764
PH 3 x 150	270	12	11 4766

## Torque screwdrivers

Mechanics made exclusively of metal components guarantee outstanding stability and wear resistance. The torque (tolerance range  $\pm 5\%$ ) can be adjusted without additional tools and the locking mechanism prevents unintentional adjustment. When the torque is achieved a clear clicking sound can be heard. The torque limiting mechanism grabs when you tighten a screw, so you can loosen screws even with high torques. The 2-component handle has a replacement blade holder and is supplied in the set with replacement blades, roll-up case and test certificate.

Size 4.0 x 160 mm

Contains one each of: 0.5 x 3.0 - 0.6 x 3.5 - 0.8 x 4.0 - PZ 0 - PZ 1 - PZ FL 1 - magnetic bit holder - roll-up case

Tightening torque 0.5 x 1.5 Nm adjustment step 0.025 Nm, 160 mm	1	11 4800
Tightening torque 1.5 x 4.0 Nm adjustment step 0.05 Nm, 160 mm	1	11 4802

Replacement blades (size 4.0 x 160 mm) of molybdenum vanadium steel, chrome-plated:

0.4 x 2.0	1	11 4810
0.4 x 2.5	1	11 4812
0.5 x 3.0	1	11 4814
0.6 x 3.5	1	11 4816
0.8 x 4.0	1	11 4818
PH 00	1	11 4820
PH 0	1	11 4822
PH 1	1	11 4824
PZ 0	1	11 4826
PZ 1	1	11 4828
PZ FL 1	1	11 4830
PZ FL 2	1	11 4831
T 5	1	11 4832
T 6	1	11 4834
T 7	1	11 4836
T 8	1	11 4838
T 9	1	11 4840
T 10	1	11 4842
T 15	1	11 4844
T 20	1	11 4846
T 25	1	11 4848
Size 1.5	1	11 4850
Size 2.0	1	11 4852
Size 2.5	1	11 4854
Size 3.0	1	11 4856
Size 4.0	1	11 4858
Size 1/4"	1	11 4860
Magnetic bit holder	1	11 4862



### Precision clockmaker's screwdriver set

in steel sheet case, screwdriver with nickel-plated brass handle, 6 pieces,  
one each of 1 - 1.5 - 1.8 - 2.3 - 2.9 - 3.6 mm blade width

			1	11 1810
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### Offset screwdriver

according to DIN 5200, made of chrome vanadium steel, nickel-plated  
for slot-head screws

5.0 x 0.65 x 100			12	11 0620
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for Phillips crosshead screws

PH 1 + PH 2 x 100			12	11 0630
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### Awls

made of chrome vanadium steel, with large, impact-resistant plastic haft for the required pressure and rotating movement.

ø mm	L mm	design		
6	100	○ (punch)	12	11 0480
6	100	□ (reamer)	12	11 0482



### Precision screwdriver (electronic screwdriver)

The optimum tools especially for smallest screws in electronic and electrical components, radio and stereo systems, telephone systems and all communication technology connections, for precision mechanics, electronics, model making and similar precision work, blades made of special steel, colour-coded ring for marking the screw system

Slot-head screwdriver (colour code white)

1.0 x 0.18 x 40	140	12	11 1860
1.2 x 0.25 x 40	140	12	11 1861
1.8 x 0.3 x 60	160	12	11 1863
2.0 x 0.4 x 60	160	12	11 1864
2.5 x 0.4 x 75	175	12	11 1865
3.0 x 0.5 x 75	175	12	11 1866
3.5 x 0.6 x 100	200	12	11 1868
4.0 x 0.8 x 100	200	12	11 1869
4.0 x 0.8 x 150	250	12	11 1870



Phillips cross-head screwdriver (colour code light blue)

PH 000 x 40	140	12	11 1875
PH 00 x 40	140	12	11 1876
PH 0 x 60	160	12	11 1877
PH 1 x 80	180	12	11 1880
PH 1 x 150	250	12	11 1881



TORX® screwdriver (colour code light green)

T 5 x 50	150	12	11 1889
T 6 x 50	150	12	11 1890
T 7 x 50	150	12	11 1891
T 8 x 60	160	12	11 1892
T 9 x 60	160	12	11 1893
T 10 x 80	180	12	11 1894
T 15 x 80	180	12	11 1895



Hex key (Allen wrench, colour code yellow)

Size 0.7 x 40	140	12	11 1910
Size 0.9 x 40	140	12	11 1911
Size 1.3 x 40	140	12	11 1912
Size 1.5 x 50	150	12	11 1913
Size 2.0 x 50	150	12	11 1914
Size 2.5 x 60	160	12	11 1915
Size 3.0 x 60	160	12	11 1916



**Electronic screwdriver set, 7 pieces**

for slot-head screws

1.0 x 0.18 x 40	140	11 1860
1.2 x 0.25 x 40	140	11 1861
1.8 x 0.3 x 60	160	11 1863
2.0 x 0.4 x 60	160	11 1864
2.5 x 0.4 x 75	175	11 1865
3.5 x 0.6 x 100	200	11 1868
4.0 x 0.8 x 150	250	11 1870
		1 11 1898

**Electronic screwdriver set, 7 pieces**

for Phillips crosshead screws

PH 000 x 40	140	11 1875
PH 00 x 40	140	11 1876
PH 0 x 60	160	11 1877
PH 1 x 80	180	11 1880
PH 1 x 150	250	11 1881
for Pozidriv crosshead screws		
PZ 0 x 60	160	11 1886
PZ 1 x 80	180	11 1887
		1 11 1909

**Electronic screwdriver set, 7 pieces**

for slot-head screws

2.0 x 0.4 x 60	160	11 1864
2.5 x 0.4 x 75	175	11 1865
3.0 x 0.5 x 75	175	11 1866
3.5 x 0.6 x 100	200	11 1868
4.0 x 0.8 x 150	250	11 1870
for Phillips crosshead screws		
PH 0 x 60	160	11 1877
PH 1 x 80	180	11 1880
		1 11 1901

**Electronic screwdriver set, 7 pieces**

for TORX® screws

T 5 x 50	150	11 1889
T 6 x 50	150	11 1890
T 7 x 50	150	11 1891
T 8 x 60	160	11 1892
T 9 x 60	160	11 1893
T 10 x 80	180	11 1894
T 15 x 80	180	11 1895
		1 11 1903

**Electronic hex key (Allen wrench) set, 7 pieces**

for hex socket screws

Size 0.7 x 40	140	11 1910
Size 0.9 x 40	140	11 1911
Size 1.3 x 40	140	11 1912
Size 1.5 x 50	150	11 1913
Size 2.0 x 50	150	11 1914
Size 2.5 x 60	160	11 1915
Size 3.0 x 60	160	11 1916
		1 11 1920



**Electronic safety screwdriver set, 7 pieces**

according to IEC 60900:2005, blade, insulation and handle are inseparably connected to each other, routine testing in a water bath with a test voltage of 10,000 Volts.



for slot-head screws

1.5 x 0.3 x 40	140	11 2000
1.8 x 0.3 x 60	160	11 2002
2.0 x 0.4 x 60	160	11 2004
2.5 x 0.4 x 75	175	11 2006
3.0 x 0.5 x 75	175	11 2008

for Phillips crosshead screws

PH 00 x 40	140	11 2020
PH 0 x 60	160	11 2022

1 11 2050



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# SCREWING TOOLS

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## Heating valve / Square

□ 5 mm

## Square / Triangle

□ 9-10 mm

▲ 10-11 mm

## Square / Half-moon

□ 6 mm

◐ 3-5 mm

## Square / Triangle

□ 7-8 mm

▲ 8-9 mm

## Two-way key bit / Triangle

⊖ 3-5 mm

▲ 7 mm



for 1/4" bit drive

## BITFLEX bits

The damping zone (only for bits in 25 mm length) between drive and working tip minimises the excessive power peaks which previously lead to high wear and destructive ejection forces. The FLEX-Zone significantly increases the service life of the BITFLEX in comparison with conventional standard bits. All bits with 1/4" hex drive,

### STANDARD

according to DIN 3128, single bits for Phillips crosshead screws

PH 1	25	1	11 4511
PH 1	90	1	11 4508
PH 2	25	1	11 4512
PH 2	90	1	11 4509
PH 3	25	1	11 4513
PH 3	90	1	11 4510

Single bits for Pozidriv crosshead screws

PZ 1	25	1	11 4515
PZ 1	90	1	11 4518
PZ 2	25	1	11 4516
PZ 2	90	1	11 4519
PZ 3	25	1	11 4517
PZ 3	90	1	11 4520

Single bits for slot-head screws, without FLEX-Zone

4.0 x 0.5	25	1	11 4551
5.5 x 0.8	25	1	11 4555
6.5 x 1.2	25	1	11 4559

Single bits for TORX® screws with bore (tamper resistant), without FLEX-Zone

T 10	25	1	11 4970
T 10	90	1	11 4573
T 15	25	1	11 4971
T 15	90	1	11 4574
T 20	25	1	11 4972
T 20	90	1	11 4575
T 25	25	1	11 4973
T 25	90	1	11 4576

### Module bits

for combined slot-head/crosshead screws in electrical equipment, e.g. terminal blocks

PZ FL 1	70	1	11 4941
PZ FL 2	70	1	11 4942

### TIN

TIN, this is the abbreviation for titanium nitride. This special coating contributes to the already excellent BITFLEX values by improving the service life.

Single bits for Phillips crosshead screws

PH 1	25	1	11 4521
PH 2	25	1	11 4522
PH 3	25	1	11 4523

Single bits for Pozidriv crosshead screws

PZ 1	25	1	11 4525
PZ 2	25	1	11 4526
PZ 3	25	1	11 4527

### Magnetic holder

according to DIN 3126, for 1/4" bit drive; with permanent magnet

60		1	11 4505
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Blade size (W x H x L mm)

Total length mm

PU Article no.

### Ball-end magnetic bit holder

with pivoting angle up to 20°, 1/4" x 90 mm,  
 for screwing applications in deep corners or other tight places. With torque-stable stainless steel casing, hardened, blasted and bronzed. Sliding casing that releases the pivoting function is plated in matt chrome and has a colour ring. Hex ball-end joint of chrome vanadium steel, stainless steel casing ø 12.0 x 32 mm

90 x 17 mm 1 11 4502

### T-handle magnetic bit holder

in modern two-component design, for 1/4" bits of all lengths

85 x 95 12 11 4500

### Bit case, 10 pieces

case cap with star-shaped receiver for bits and universal holder

for slot-head screws

4 - 5.5 - 7 mm width

for Phillips crosshead screws

PH 1 - PH 2 - PH 3

for Pozidriv crosshead screws

PZ 1 - PZ 2 - PZ 3

1 11 4604

### Handy bit cases

each with a 60 mm magnetic holder. The case can also be used directly as an assembly tool.

with 6 bits

for slot-head screws 5.5 x 0.8 - 6.5 x 1.2

for Phillips crosshead screws PH 1 + PH 2

for Pozidriv cross-head screws PZ 1 + PZ 2

7 pieces 1 11 4598

with 16 bits

for slot-head screws 6.5 x 1.2

for Phillips crosshead screws PH 1, PH 2 (2 piece), PH 3

for Pozidriv crosshead screws PZ 1, PZ 2 (3 piece), PZ 3

for TORX® with bore T 10, T 15, T 20, T 25, T 30, T 40

17 pieces 1 11 4596

with 2 TORX® bits each of size T 10 - T 20 - T 25

7 pieces 1 11 4597

### COMFORT bit sets

in an impact-resistant plastic box with a practical opening mechanism to provide quick access

to individual bits and magnetic bit holders

Magnetic holder 60 mm for 1/4" bit drive

for Phillips crosshead screws PH 1, PH 2

for Pozidriv cross-head screws PZ 1, PZ 2

for TORX® size T 15, T 20, T 25, T 30

for Slot-head screws 0.8 mm, 1.0 mm

11 pieces 1 11 4590

Magnetic holder 90 mm for 1/4" bit drive

Magnetic holder with quick-fit coupling 60 mm for 1/4" bit drive

for TORX® size T 10, 2x T 15, 2x T 20, T 25, T 30

for TORX® with bore size T 10, 2x T 15, 2x T 20, T 25, T 30

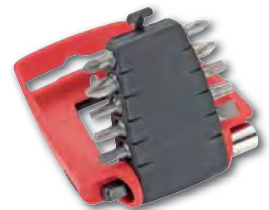
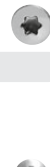
for cross-head screws Phillips PH 1, 3x PH 2, PH 3

for cross-head screws Pozidriv PZ 1, 3x PZ 2, PZ 3

for Hex socket 4.0 mm, 5.0 mm, 6.0 mm

for Slot-head screws 0.8 mm, 1.0 mm, 1.2 mm

32 pieces 1 11 4592



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Blade size (W x H x L mm)

Total length mm

PU Article no.



**Bit set ELEKTRO TOP, 21 pieces**

in a practical transport and storage case, includes 1 universal bit holder with permanent magnet, in the types and sizes most common in the electrical field with 60 mm length, and 20 bits 90 mm long

Cross-head Phillips PH 1, PH 2, PH 3

Cross-head Pozidriv PZ 1, PZ 2, PZ 3

for TORX® size T 10 - T 15 - T 20 - T 25

1 11 4602

**SPECIAL bit set, 33 pieces**

bit set for unscrewing safety screws.

Contents: one each of: magnetic holder 60 mm for 1/4" bit drive

TORX® bits with bore (tamper resistant) T 8 - T 10 - T 15 - T 20 - T 25 - T 27 - T 30 - T 35 - T 40

Hex bits with bore (tamper resistant) 2 - 2.5 - 3 - 4 - 5 - 6 mm,  
5/64" - 3/32" - 7/64" - 1/8" - 9/64" - 9/32"

Slot bits with recess (Spanner) 4 - 6 - 8 - 10 mm

Tri-wing bits TW 1 - TW 2 - TW 3 - TW 4

Torq-Set bits TS 6 - TS 8 - TS 10

1 11 4599

**"Long safety bits" set, 50 pieces**

for working with screws of all types, especially safety screws and special screws. Thanks to extended length of 75 mm excellent for working in tight spaces which are hard to access, with standard hex receiver 1/4" for cordless screwdriver and manual operation, made of chrome vanadium steel, stored neatly and securely in a shock-resistant plastic case (195 x 135 x 38 mm). Contains one each of the following screw bits:

Slot 4 mm - 5 mm - 6 mm

Slot with recess (Spanner)  
4 mm - 6 mm - 8 mm - 10 mm

Cross-head Phillips PH 1 - PH 2

Pozidriv cross-head PZ 1 - PZ

Square socket (Robertson) size 1 - size 2

Hex socket (Allen) 4 mm - 5 mm - 6 mm

Hex socket (Allen) with bore (tamper resistant)  
2 mm - 2.5 mm - 3 mm - 4 mm - 5 mm - 6 mm

Universal bit holder, with 1/4" hex receiver and permanent magnet, length 60 mm

1 11 4606

**Hex key set, 9 pieces**

with key sizes 1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 8 - 10 mm, with extra long blade with ball end, made of fully hardened S2 special steel, polished, hard chrome-plated surface, rounded edges, in a practical plastic holder for adding to a tool bag or mounting on the wall

1 11 0604

**SPECIAL Hex key set, 9 pieces**

with key sizes 1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 8 - 10 mm, with extra long blade with ball-end, made of fully hardened S2 special steel, polished, hard chrome-plated surface, in a practical plastic holder with a belt clip. Special feature: With the help of the special key shape, it is even possible to undo damaged (rounded) hex socket screws.

1 11 0606



## T-handle screwdriver set, 8 pieces

for applying significantly more force than with conventional screwdrivers. With double-sided drive for hex socket screws (Allen screws). Voluminous, edge-free handle in 2-component technology with soft rubber insert, blades made of tempered S2 special steel, chrome-plated, with ball-end on longer blade, black satined, including a practical storage stand for on the workbench or mounting on the wall.

One key each of 2 - 2.5 - 3 - 4 - 5 - 6 - 8 - 10 mm

1 11 0520

## Hex key sets, 8 pieces

on key ring, according to DIN 911, made of chrome vanadium steel

sizes 2 - 2.5 - 3 - 4 - 5 - 6 - 8 - 10

1 11 0592

$\frac{5}{64}$ " -  $\frac{3}{32}$ " -  $\frac{1}{8}$ " -  $\frac{5}{32}$ " -  $\frac{3}{16}$ " -  $\frac{7}{32}$ " -  $\frac{1}{4}$ " -  $\frac{5}{16}$ "

1 11 0594

## Ball-end hex key set 7 pieces

in a pocket-sized holder

Sizes 2.5 - 3 - 4 - 5 - 6 - 8 - 10

1 11 0596

## TORX® key set, 8 pieces

in a pocket-sized holder

T 9 - T 10 - T 15 - T 20 - T 25 - T 27 - T 30 - T 40

1 11 0598

## Socket wrench set, 33 pieces

$\frac{1}{4}$ " square drive, hex sockets made of chrome vanadium steel, plated with polished chrome, in a metal case.

Reversible ratchet with PosiLock holding mechanism, slide handle, 50 mm and 150 mm extensions, holder,

Cardan joint, sockets/bits: hexagon socket wrench sizes 4 to 14 mm, hex bit (Allen) 3 to 6 mm

Slot-head screwdriver 0.5 x 4 - 0.6 x 4.5 - 0.8 x 5.5

Crosshead screwdriver PH 1 - PH 2 - PH 3 - PZ 1 - PZ 2 - PZ 3

TORX® screwdriver T 10 - T 15 - T 20

280 x 130 x 90 mm

1 11 3104

## Socket wrench set, 52 pieces

in a robust metal case, tools made of chrome vanadium steel, high-gloss polished and chrome-plated.

Contents:

$\frac{1}{4}$ " socket wrench system

One of each of the following:

Hex sockets 4 - 4.5 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 13 mm

Ratchet with plastic handle, reversible for clockwise/counterclockwise rotation, with ball stop and quick release button that prevents sockets from being released accidentally, with 36-step ratcheting (pivoting angle 10°)

115 mm T-handle with sliding head

Extension 75 mm

Cardan joint 35 mm

Holder for  $\frac{1}{4}$ " hex bits

$\frac{1}{2}$ " socket wrench system

One of each of the following:

Hex sockets 10 - 11 - 12 - 13 - 14 - 15 - 17 - 19 - 22 - 24 - 27 - 30 - 32 mm

Hex socket 21 mm, with rubber clamp (spark plug wrench)

Ratchet with plastic handle, reversible for clockwise/counterclockwise rotation, with ball stop and quick release button that prevents sockets from being released accidentally, with 36-step ratcheting (pivoting angle 10°)

295 mm T-handle with sliding head

Extensions 125 and 250 mm

Cardan joint 65 mm

Screw bit system  $\frac{1}{4}$ " hex drive

One of each of the following:

Ratchet screwdriver, clockwise/counterclockwise rotation or locking in middle position, 180 mm

Standard bits in plastic holders:

Slot-head screwdriver 0.5 x 4 mm, 0.8 x 5.5 mm, 1.2 x 7 mm

Cross-head screwdriver PH 1, PH 2, PH 3

Hex socket screw key (Allen) 3 - 4 - 5 - 6 - 7 - 8 mm

$\frac{1}{4}$ " Square drive with ball stop

Additional tools: One each of hex socket L-key 1.5 - 2 - 2.5 mm

1 11 3152



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**Bit and socket wrench set, 28 pieces**

in attractive, compact, two-coloured plastic box, socket wrench and drive ratchet made of chrome vanadium steel, specially hardened, high-gloss polished and hard chrome-plated.

Contains one of each of the following:

Twelve-point sockets with 1/4" square drive: 4 - 4.5 - 5 - 5.5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 mm

Mini ratchet with reverser and quick release 1/4" square drive,

screw bits made of S2 special steel, 25 mm long; each bit

for slot-head screws 4 - 5 - 6 mm

for Phillips crosshead screws PH 1 - PH 2 - PH 3

for Pozidriv crosshead screws PZ 1 - PZ 2 - PZ 3

for hex socket (Allen) screws 4 - 5 - 6 mm

Bit holder with quick-release, 55 mm long, for manual and machine operation

Adapter from 1/4" square drive (e.g. ratchet) to 1/4" hex drive (e.g. for screw bits), 25 mm long

1 11 3154

**NEW****SPECIAL socket wrench set, 7 pieces**

with key sizes 8 - 10 - 11 - 13 - 15 - 17 mm

Contents: per piece

hex sockets with 3/8" square drive and drive cross-handle made of chrome vanadium steel, specially hardened, highly polished and hard chrome-plated.

Special feature: With the help of the special key shape, it is even possible to undo damaged (rounded) hex socket screws.

1 11 3160

**Ratchet-ring and open-end spanner set, 12 pieces**

Wrench size across flats in set: 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 mm

(CIMCO article no. 11 2508 to 11 2519), delivered in a robust, spacious roll-up tool case.

1 11 2505

**Ratchet-ring and open-end spanner set, 16 pieces**

made of chrome vanadium steel, highly polished and chrome-plated, ratchet with fine gearing (72 teeth = only 5° pivoting angle), ideally suited for work in tight spaces.

Contents:

Open-ended and ratchet-ring spanners (size 10, 11, 13 and 17), bits for Phillips / Pozidriv crosshead screws

PH 1 - PH 2 - PZ 1 - PZ 2 Bits for slot-head screws 4 - 5.5 - 6.5 mm widths, bits for hex socket screws size 5 - size 6,

10 mm bit adapter, 1/4" square adapter

1 11 2434

**Ratchet-ring and open-end spanners**

for loosening or quickly tightening screws and nuts in one go with ratchet mechanism without having to reposition the ring-ratchet. At one end an open-end or fork spanner with 15° offset, at the other end a ring spanner of the same size with integrated ratchet mechanism with particular advantages:

Ratchet with fine gearing: 72 teeth = only 5° minimum pivoting angle. Turn to the left and right by simply turning the key and not with a cumbersome switch lever which often changes position unintentionally.

The overall height of the keys is very flat, despite the ratchet. This means the tools are particularly useful in tight spaces.

12-point ring with flank drive, i.e., the drive does not take place over the edges of the screw head but on the flanks, whereby a fundamentally higher power transmission is achieved and the edges of the screw heads and nuts are spared.

Drop-forged from chrome vanadium steel, tempered, polished to a high sheen, nickel-plated and hard-chrome-plated.

Extremely high torque transmission, DIN requirements are exceeded.

Wrench size across flats

8 mm	1	11 2508
9 mm	1	11 2509
10 mm	1	11 2510
11 mm	1	11 2511
12 mm	1	11 2512
13 mm	1	11 2513
14 mm	1	11 2514
15 mm	1	11 2515
16 mm	1	11 2516
17 mm	1	11 2517
18 mm	1	11 2518
19 mm	1	11 2519



**Double open-ended spanner sets**

according to DIN 3110 and ISO 3318, jaw position 15°, made of chrome vanadium steel, bright chrome-plated  
8-pieces 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, with plastic clip

	1	11 2310
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12-pieces 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

	1	11 2312
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**Double open-ended spanner, individual**

6 x 7 mm	1	11 2200
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8 x 9 mm	1	11 2202
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10 x 11 mm	1	11 2204
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10 x 13 mm	1	11 2206
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12 x 13 mm	1	11 2208
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13 x 14 mm	1	11 2210
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13 x 17 mm	1	11 2212
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14 x 15 mm	1	11 2214
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16 x 17 mm	1	11 2218
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17 x 19 mm	1	11 2220
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18 x 19 mm	1	11 2222
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20 x 22 mm	1	11 2226
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21 x 23 mm	1	11 2228
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24 x 27 mm	1	11 2232
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25 x 28 mm	1	11 2234
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30 x 32 mm	1	11 2238
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**12-point ring spanner sets**

according to DIN 838 and ISO 3318, deep-offset (75°), made of chrome vanadium steel, bright chrome-plated,  
8 pieces 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	11 2430
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12-pieces 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

	1	11 2432
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**12-point ring spanners, individual**

6 x 7 mm	1	11 2330
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8 x 9 mm	1	11 2332
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10 x 11 mm	1	11 2334
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10 x 13 mm	1	11 2336
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12 x 13 mm	1	11 2338
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14 x 15 mm	1	11 2344
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16 x 17 mm	1	11 2348
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17 x 19 mm	1	11 2350
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18 x 19 mm	1	11 2352
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20 x 22 mm	1	11 2356
------------	---	---------

21 x 23 mm	1	11 2358
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24 x 27 mm	1	11 2362
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25 x 28 mm	1	11 2364
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30 x 32 mm	1	11 2368
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## Combination spanner set, 17 pieces

according to DIN 3113 A and ISO 3318, made of chrome vanadium steel, bright chrome-plated

Size 6 to 22 mm, in 1 mm increments	1	11 2500
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## Combination spanners, individual

6 mm	1	11 2450
7 mm	1	11 2452
8 mm	1	11 2454
9 mm	1	11 2456
10 mm	1	11 2458
11 mm	1	11 2460
12 mm	1	11 2462
13 mm	1	11 2464
14 mm	1	11 2466
15 mm	1	11 2468
16 mm	1	11 2470
17 mm	1	11 2472
18 mm	1	11 2474
19 mm	1	11 2476
20 mm	1	11 2478
21 mm	1	11 2480
22 mm	1	11 2482
24 mm	1	11 2484
27 mm	1	11 2486
30 mm	1	11 2488
32 mm	1	11 2490



## Adjustable spanners

according to DIN 3117 A, forged from steel, handle PVC coated, to allow simple work to be carried out quickly and flexibly.

Size 19	160	1	11 2800
Size 24	210	1	11 2802
Size 29	260	1	11 2804



## Ratchet tool and inserts for screwed cable glands

Patented, professional tool system for time-saving, non-sliding and comfortable assembly of screwed cable glands, outstanding performance even in very constricted working areas (minimum pivoting angle only 10°) and while working with screwed cable glands with inserted cable, no damage to screw connections, for plastic and metal screw connections of several jaw sizes, ratchet and sockets made of special precision-manufactured steel, loading capacity at least 20 Nm

## Torque wrench

Releasing torque wrench with holder for interchangeable tool attachments, quick adjusting via QuickSelect (safety locking device), window indicator with Nm and ft.lb or in.lb, 2-component handle. Additional loading after release or loading against the functional direction, e.g. with screws that are stuck, does not affect the release mechanism as it is protected against such damage. Indicator deviation ± 3%. Size of tool holder in mm, with Manoskop (square socket) 9 x 12 mm. Supply includes operating instructions and factory calibration certificate.

Only for use in combination with CIMCO article no. 11 5114, 11 5116 and 11 5100

Scale range: 2-20 Nm / 20-180 in.lb

Scale increments: 1 Nm/ 10 in.lb

Fine scale increments: 0.2 Nm

Weight 740 g	1	11 5110
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Scale range: 10-50 Nm / 7-37 ft.lb

Scale increments: 5 Nm/ 1 ft.lb

Fine scale increments: 0.25 Nm

Weight 831 g	1	11 5112
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## Ratchet adapter

made of chrome vanadium steel, reversible, 60 teeth, suitable for torque wrench with 9 x 12 mm square holder.

Connection between torque wrench and ratchet adapter is secured by a spring-loaded retaining pin. When used with

CIMCO torque wrench, article no. 11 5110 and 11 5112, no gauge correction needed on the torque wrench.

Only for use in combination with CIMCO article no. 11 5110 and 11 5112.

1/2"	1	11 5114
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3/8"	1	11 5116
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## Open ring-ratchet

Slotted ratchet head with removable plastic handle, wrench size across flats size 20 to hold all the following sockets, with simple rotation to turn to left and right which makes it suitable for tightening and loosening screwed cable glands. Can also be used in combination with CIMCO article no. 11 5110 and 11 5112.

1	11 5100
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## Sockets for screwed cable gland ratchet

with size 20 holder, slotted version (other dimensions available upon request, minimum order 100 pieces) for screw connections

(mind manufacturer dimensions)	Size	PU	Article no.
M 12	14	1	11 5014
M 12	15	1	11 5015
M 12, M 16	17	1	11 5017
M 12, M 16	19	1	11 5019
M 12, M 16	20	1	11 5020
M 16, M 20	22	1	11 5022
M 16, M 20	24	1	11 5024
M 20, M 25	27	1	11 5027
M 20, M 25	30	1	11 5030



## Set of ratchets and sockets for screwed cable glands

set in impact-resistant plastic transport and storage case, consisting of 2-part open ring-ratchet, CIMCO article no. 11 5100 and 9 sockets (CIMCO article no. 11 5014 to 11 5030) for all common plastic and metal screwed cable glands of various manufacturers up to M 25

11-pieces	14 - 30	1	11 5000
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## Universal wrench for screwed cable glands

for tightening and loosening screwed cable glands of all kind, automatic continuously adjustable jaw size, ratchet-like function with 60° pivoting angle, handy and convenient even in constricted working areas, with fixed setting for continuous work with the same screw connection sizes, burnished metal surfaces, with two-component plastic handles

for wrench size across flats mm	Length mm	weight g	PU	Article no.
Size 13 – 23	180	180	6	11 5040
Size 24 – 36	200	220	6	11 5042
2 piece set size 13 – 23 and size 24 – 36			1	11 5045



## Mast key

made of die cast zinc (GD-ZN), 90 x 90 mm

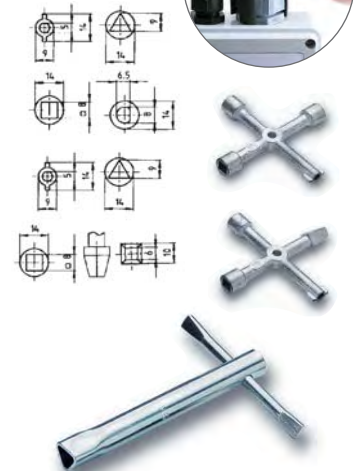
with half-moon	10	11 2882
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with square drive bit	10	11 2883
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## Triangle nut driver

according to DIN 22417, with moving handle, galvanised, length 70 mm

for screws	Length of edges (inner dimension)	PU	Article no.
M 3	6 mm	1	11 2900
M 4	7 mm	1	11 2902
M 5	9 mm	1	11 2904
M 6	11 mm	1	11 2906
M 8	13 mm	1	11 2908
M 10	16.5 mm	1	11 2910
M 12	18 mm	1	11 2912



## Multi-Key

A completely new system - every switch cabinet key or mast key can be assembled individually.

Choose from among 13 different ends. All parts made of robust precision cast steel.

The interchangeable sockets are captively attached by a neodymium magnet.

## Multi-Key set

complete set cross-key (CIMCO article no. 11 2783), all sockets (CIMCO article no. 11 2784 to 11 2797), in a plastic storage case

1	11 2798
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### Cross-key

with 4 x 1/4" holder. Arms round (9 mm ø). With long chain and screwdriver bit 7 mm.

		1	11 2783
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### Sockets

for Multi-Key system

□ Square socket	6	1	11 2784
	7	1	11 2785
	8	1	11 2786
	10	1	11 2787
▲ Triangular socket	7	1	11 2788
	8	1	11 2790
	9	1	11 2791
	10	1	11 2792
■ Square drive bit	6 - 10	1	11 2795
○ Two-way key bit	3	1	11 2793
	5	1	11 2794
◐ Half-moon		1	11 2797
○ DB standard		1	11 2796



### Switch cabinet key made of die-cast zinc

for all common switch cabinets. Small dimensions, low weight.

With an adapter for 1/4" bits, with square key for radiator bleed valves and reversible bit for:

slot-head screws 1.0 x 7.0 mm			
PH2 crosshead screws			
□ 7 - 8 mm	□ 6 mm	○ 5 mm	
▲ 9 mm	○ 3 - 5 mm		

Universal switch cabinet key	1	11 2894
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Switch cabinet key case	1	11 2898
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Switch cabinet key "Mini"	1	11 2891
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### SuBMaster

for all common switch cabinets, sub-distributions, street lamps, etc. Eight different wrenches can be brought into position by means of a double turning mechanism. An attached 5.0 mm square is especially suitable for ventilating heaters.

With adapter for 1/4" bits, designed with karabiner chain.

Magnetic plug connection for 9 - 10 mm square.

Weight 200 g

5 mm	6 mm	7-8 mm	9-10 mm	7 mm	8-9 mm	10-11 mm	3-5 mm	6 mm
96 x 92						1	11 2992	



### SuBMaster BAU

Universal key for all locks with cylinder bore, also for all common technical tips. With a quadruple turning mechanism, eight different switch cabinet locking mechanisms can be moved into position.

Additionally with 5 mm square on the body. The incremental squares are attached magnetically with the SuBMaster and are easy to release. With stable chain and snap hook.

5 mm	6 mm	7-8 mm	9-10 mm	7 mm	8-9 mm	10-11 mm	3-5 mm	6 mm	5-9 mm
1									11 2990



## SuBMaster KOMPAKT

Universal key for all common switching cabinets, sub-distributions, street lamps, etc. In a practical trouser pocket format (dimensions 97 x 25 mm) with clip.

With a double turning mechanism, four different switch cabinet ends can be brought into position.

Additionally there are a 5 mm square and a 1/4" bit holder incl. magnet in the body for 7-8 mm square.



5 mm 6 mm 7-8 mm 9 mm 3-5 mm 1/4" Bit holder  
1 11 2988

## Special DB switch cabinet key

Design as with universal switch cabinet key (CIMCO article no. 11 2894), but with ends for Daimler Benz standard instead of 6 mm square

1 11 2895

## Universal key PROFI KEY

made of die-cast zinc, with chain, adapter for 1/4" bits and double-bit for:

slot-head screws 1.0 x 7.0 mm



PH 2 crosshead screws



5 mm 7 mm 8 mm 9 mm 5 - 9 mm  
(e.g. heater ventilating valve)

Ideal for heating, air conditioning, ventilation and in new builds.

1 11 2922

## New construction key

Solid metal key made of annealed cast iron, with versatile use options in buildings, especially new construction.

□ Square socket 6, 7 and 8 mm, □ Square drive bit 6 - 10 mm for doors and windows without metal fittings, hex key (Allen) 3 mm for set screws on door handles, adapter to close and open profile cylinder lock holders (17 mm ø), depth gauge for built-in locks 22 to 75 mm, bottle opener

195 1 11 2890

## SuBKey ELEKTRO

for all common switch cabinets. By means of double turning mechanism, 4 different switch cabinet keys can be put into position. A universal 1/4" bit holder allows for use of all commercially available bits. A neodymium permanent magnet securely holds the bits in the holder. Weight: approx. 120 g.

Bit for:

PH 2 crosshead screws



5 mm 6 mm 7-8 mm 9 mm 3-5 mm  
155 1 11 2994



## SuBKey BAU

for all common technical tips, also for door and window fittings, with new step-shaped square drive bit.  
By means of double turning mechanism, 3 different keys can be put into position.

A 5.0 mm square attached to the pin is especially suitable for ventilating heaters. Due to the 1/4" bit holder, all commercial bits can be used. A neodymium permanent magnet securely holds the bits in the holder.

Weight 110 g

Bit for:

PH 2 crosshead screws



5 mm



7 mm



8 mm



9 mm



5 - 9 mm

145

1

11 2998



## Subfinder - SuBKey ELEKTRO PLUS

The universal switch cabinet key for all common switch cabinets is manufactured from polycarbonate and has an integrated voltage tester. With a double turning mechanism, 4 different switch cabinet keys can be put into position. A universal 1/4" bit holder allows for use of all commercially available bits. A neodymium permanent magnet securely holds the bits in the holder.

The PLUS: the non-contact and optical voltage tester provides secure measurements of alternating currents (50 - 600 volt AC, 50 - 60 Hz) even with line interruptions. The tester can be switched on or off with a push button.

Bit for:

PH 2 crosshead screws



5 mm



6 mm



7-8 mm



9 mm



3 - 5 mm

155

1

11 2996



## Wrench for set screws for fuses

Diazed, with lacquered wooden haft, suitable for all sizes

175

10

14 0100



## Wrench for set screws for fuses and for contact screws

Diazed, combined, re-insert to use for set screws 2 - 63 A, haft made of insulation material

105

10

14 0102



# MEASURING AND TESTING INSTRUMENTS



## Illumination of test points

using a white LED



## Captive test probe guard



## Test probe cover

GS38



## Adapter



## Compliant

When testing between the outer and protective conductor in an electric circuit, the RCD/FI is not triggered

### AC/DC voltage tester up to 690 V with LED and LCD display

- Automatic polarity detection
  - Display: 1 LCD 3 digits, 12 LEDs (+12 V, -12 V, 24 V, 50 V, 120 V, 230 V, 400 V, 690 V)
  - Continuity test with visual and acoustic display
  - Integrated single-pole testing
  - Impact-resistant modern housing
  - Bright LED display
  - Quick single lever testing at earthed contact sockets
  - Test probe protection
  - Single-pole test, continuity test
  - Automatic polarity display
  - TÜV / GS certified
  - Weight: 180 g
- Incl. 2 batteries 1.5 V AAA, LR03
  - Cable length: 1.2 m
  - Overvoltage category CAT III / IV
  - Tested in accord. with EN 61010, EN 61243-3:2010
  - Power consumption < 3.5 mA
  - Continuity test visual and acoustic
  - Protection class: IP 64
  - Measurement category: CAT IV 600 V, CAT III 1000 V
  - Single-pole test > 90 – 690 V AC
  - AC frequency range 40 - 400 Hz
  - Voltage range 12 - 690 V AC/DC
  - Integrated torch
  - ELV, rotating field L/R

240 x 65 x 19

1

11 1429



### AC/DC voltage tester to 690 V with LED display

- Automatic polarity detection
  - Display: 12 LEDs (+12 V, -12 V, 24 V, 50 V, 120 V, 230 V, 400 V, 690 V)
  - Continuity test with visual and acoustic display
  - Integrated single-pole testing
  - Impact-resistant modern housing
  - Bright LED display
  - Quick single lever testing at earthed contact sockets
  - Test probe protection
  - Single-pole test, continuity test
  - Automatic polarity display
  - TÜV / GS certified
  - Weight: 170 g
- Incl. 2 batteries 1.5 V AAA, LR03
  - Cable length: 1.2 m
  - Overvoltage category CAT III / IV
  - Tested in accord. with EN 61010, EN 61243-3:2010
  - Power consumption < 3.5 mA
  - Continuity test visual and acoustic
  - Protection class: IP 64
  - Measurement category: CAT IV 600 V, CAT III 1000 V
  - Single-pole test > 90 – 690 V AC
  - AC frequency range 40 - 400 Hz
  - Voltage range 12 - 690 V AC/DC
  - Integrated torch
  - ELV, rotating field L/R

240 x 65 x 19

1

11 1432



### AC/DC voltage tester to 690 V

- Automatic polarity detection
  - Display: 11 LEDs (+12 V, -12 V, 24 V, 50 V, 120 V, 230 V, 400 V, 690 V)
  - Continuity test with visual and acoustic display
  - Integrated single-pole testing
  - Impact-resistant modern housing
  - Bright LED display
  - Quick single lever testing at earthed contact sockets
  - Test probe protection
  - Single-pole test, continuity test
  - Automatic polarity display
  - TÜV / GS certified
  - Weight: 130 g
- Incl. 2 batteries 1.5 V AAA, LR03
  - Cable length: 1.2 m
  - Overvoltage category CAT III / IV
  - Tested in accord. with EN 61010, EN 61243-3:2010
  - Power consumption < 3.5 mA
  - Visual and acoustic continuity/diode test
  - Protection class: IP 64
  - Measurement category: CAT III 600 V, CAT IV 300 V
  - Single-pole test > 100 – 690 V AC
  - AC frequency range 0 - 65 Hz
  - Voltage range 12 - 690 V AC/DC
  - ELV

205 x 67 x 27

1

11 1434



## AC/DC voltage tester to 690 V

- Automatic polarity detection
- Quick single lever testing at earthed contact sockets
- Test probe protection
- Display: 8 LEDs  
(+12 V, -12 V, 24 V, 50 V, 120 V, 230 V, 400 V, 690 V)
- Power consumption < 3.5 mA at 690 V AC L-PE
- Tested in accordance with EN 61243-3:2010, IEC 61010-1
- CE certified
- Weight: 115 g
- Bright LED display
- Impact-resistant, modern housing
- Nominal voltages: 12 - 690 V AC/DC
- Automatic polarity display
- Frequency range: AC 0 - 65 Hz
- Measurement category: CAT III 600 V, CAT IV 300 V
- Protection class: IP 64
- Cable length: 1.2 m
- Works without batteries

205 x 55 x 21

1

11 1436



## Continuity and circuit tester DUTEST

- With additional torch function (continuous light)
- Two-stage range indicator: 0 - 900  $\Omega$ /0 - 90 k $\Omega$
- Visual by means of diode display (LED)
- High-resistance measuring range: 0 - 90 k $\Omega$
- Protection class IP 40
- LED and buzzer
- Low-resistance measuring range: 0 - 900  $\Omega$
- With external voltage protection
- Tested and certified in accordance with VDE 0403

1

11 1435



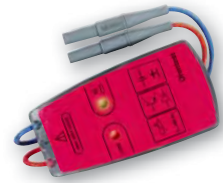
## Continuity tester

- For resistance, semiconductor, polarity and testing (0.01 to 1000  $\mu$ F)
- Resistance range 0 to 500 k $\Omega$
- External voltage display > 50 V
- Power supply 1 battery 9 V IEC 6LR61
- With acoustic signal and visual display with capacitor resistance-dependent tone pitch
- Testing current approx. 2.2 mA
- Electric strength up to 600 V
- Weight 230 g

100 x 50 x 25

1

11 1400



## Digital Multimeter

- Safety pursuant to DIN VDE 0411, EN 61010, IEC 61010, CAT III 600 V
- Visual (LED) and acoustic continuity test
- Device complies with the directive (2002/96/EC) WEEE
- Shock- and impact-proof due to protective sleeve included as standard
- $3\frac{3}{4}$ -digit digital display with 4000 digits
- Voltage, current and resistance measurement
- Temperature, capacity and frequency measurement
- Automatic measuring range selection

155 x 75 x 33

1

11 1404



## Clip-on adapter

can be used in combination with any digital multimeter with a range of 200 mV/2 V alternating current to carry out current measuring. The connection is made directly at the 4 mm input jack on the multimeter.

- Measurement range: 0 A to 300 A at 1.5%  $\pm$  2 A
- Operating temperature: 0  $^{\circ}$ C to 50  $^{\circ}$ C
- Conversion 1 A AC corresponds to 1 mV
- Width of opening max. 28 mm

1

11 1414



## Clip-on measuring instrument

- Small measuring tool for one-hand operation
- Measurement range alternating current up to 40 A/400 A
- Direct voltage up to 400 V/600 V
- Measurement accuracy  $\pm$  2%
- Data hold button for easier reading
- Charging status display
- Weight only 250 g including batteries
- Automatic switch-off after ca. 10 minutes with no operation (energy saving function)
- Pincer opening 30 mm
- Alternating voltage up to 600 V
- Resistance up to 400  $\Omega$  / 4000
- Large LC display (max. 3999)
- Continuity test with acoustic display
- Overload protection 480 A AC / 720 V AC
- Supplied with 2 R03 batteries (1.5 volt DC)
- 1 set of test leads

184 x 44 x 27

1

11 1413



## Digital clip-on measuring instrument AC / DC

- Small, handy clip-on measuring instrument for one-hand operation
- Pincer opening 30 mm
- Power consumption ca. 15 mA
- Data hold button for easier reading
- Battery charge status is displayed
- Display by means of large LC display (max. 4199 digits)
- Automatic switch-off after ca. 10 minutes from last operation (energy saving function with only 35  $\mu$ A power consumption for battery conservation)
- Overload protection for 10 seconds AC/DC 480 A or 720 V with display on LC display
- Complies with IEC 61 010-1 CAT. III 300 V
- Delivery incl. 2 batteries R03 (1.5 Volt DC)
- Weight only 200 g including batteries
- 1 set of test leads and user manual
- Each with two self-adjusting measurement ranges for:
  - Alternating current AC: up to 40 A ( $\pm$  3%) and up to 400 A ( $\pm$  4%), frequency range 50/60 Hz
  - Direct current DC: up to 40 A ( $\pm$  3%) and up to 400 A ( $\pm$  4%)
  - Alternating voltage AC: up to 400 V ( $\pm$  2%) and up to 600 V ( $\pm$  2%), frequency range 50/60 Hz
  - Direct voltage DC: up to 400 V ( $\pm$  1.5%) and up to 600 V ( $\pm$  1.5%)
  - Resistance: up to 400  $\Omega$  and up to 4000  $\Omega$  ( $\pm$  2%)
  - Continuity test: with acoustic display at 50  $\Omega \pm 35 \Omega$

187 x 68 x 38	1	11 1415
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## Test probes

- With 4 mm safety technology in accordance with DIN VDE 0411 / EN 61010 / IEC 61010
- Measurement circuit category CAT III / 1000 Volt with 2 mm tips made of stainless steel, Length 102 mm
- Short design,
- Current carrying capacity up to 16 A

2-piece set grey-red and grey-black	1	11 1474
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with 4 mm tips, length 142 mm

grey-red	1	11 1475
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grey-black	1	11 1476
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## Crocodile clip set

- With 4 mm safety technology in accordance with DIN VDE 0411 / EN 61010 / IEC 61010
- Measurement circuit category CAT III / 1000 Volt
- Opening ca. 21 mm
- Current carrying capacity up to 16 A

grey-red and grey-black	1	11 1480
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## Test lead set, 6 pieces

Contains: 1 item each of

- Test lead 1 m red
- Test lead 1 m black
- Crocodile clip grey-red
- Crocodile clip grey-black

1	11 1485
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## Non-contact voltage tester Voltfix and Magno-Voltfix

- Reliably displays voltages from 12 V AC
- Two selectable voltage ranges/sensitivity levels
- The white tip provides a bright, all-round signal display
- Acoustic signal via integrated tone generator
- Automatically time-controlled switch-off
- Splash-water-protected, robust housing
- Slim, insulated measuring sensor suitable for EU, UK and US electrical sockets
- Measurement category CAT IV 1000 V
- Integrated torch
- Suitable for aircraft information systems up to 400 Hz
- Electric fields are displayed in red
- On/Off switch with visual display
- Battery monitoring with visual warning

Voltfix voltage tester	1	11 1460
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Magno-Voltfix voltage tester (incl. magnetic field detection)	1	11 1465
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## Cable detective

Test instrument for mains copper cables, for discovering connection faults in customised data cables and complete installations. All coaxial connections with BNC/TNC connectors, USB cables and all UTP/STP cabling with 6 or 8 pin modular plugs can be checked in seconds for wire breaks, pin assignment and short circuits, both for individual conductors and for shielding.

With visual (LED) and acoustic error signals. The "Cable Detective" reduces the tedious, fraught and expensive search for cable faults to a minimum. Even longer cables laid up to 200 m can be tested by a single person.

In a practical belt bag, for 9 Volt E-block battery, comprehensive operating instructions.



145 x 86 x 26 mm	1	11 1440
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## Voltage tester

with clear, transparent, impact-resistance plastic haft tested according to VDE

W mm	L mm	Testing range Volt			
3.0	65	120 - 250 AC	140	12	11 1280
3.5	100	120 - 250 AC	190	12	11 1288

## Voltage tester Drei-Ve

The innovative triangular handle means this new CIMCO voltage tester is simply easier to hold in the hand.

The Drei-Ve voltage tester has an ergonomically shaped triangular handle in transparent, impact-resistant plastic.

The curved vertical contour allows the best possible contact pressure and the appropriately shaped holding clip on the handle will secure it to a shirt or overall pocket. The voltage tester is manufactured to meet the latest DIN standards and VDE/GS tested.

W mm	L mm	Testing range Volt			
3.0	65	150 - 250 AC	155	1	11 1282

## Voltage tester

with clear, transparent, impact-resistance plastic haft in DIY pouch (not licensed for Germany)

W mm	L mm	Testing range Volt			
3	45	100 - 500 AC	125	12	11 1320

## Voltage tester

with retractable screwdriver blade

W mm	L mm	Test area volt			
4	25	150 - 250 AC	140	12	11 1300

## Voltage tester EURO

with surrounding anti-slip protection

W mm	L mm	Testing range Volt			
3.5	14	125 - 250 AC	190	12	11 1290



# CABLE SPOOLING AND PULLING AIDS



## The CIMCO-PowerDrive

allows motor-driven advance or retraction of an existing cable pulling system. just insert the glass-fibre rod, screw on a 10 mm head, close driver and adjust contact pressure.

## The powerful cordless screwdriver

for direct connection with a 1/4" hex for fatigue-free work in the tightest of spaces. CIMCO article no. 11 0006



## Simple handling

The flexible guide spring and the wide handles on the PowerDrive help you thread it through - even in occupied pipes or sockets.



## Cable unwinding and winding devices

### Cable coil dispenser

manufactured from powder-coated steel tubing and suitable for use with all types of cables as well as flexible empty conduits, for horizontal and vertical unwinding and winding of cable coils with a minimum internal diameter of 110 mm and maximum outer diameter of 300 mm, quickly adjustable to varying coil diameters thanks to self-locking guides, complete with 3 anti-slip rubber feet, carrying handle and quick winding crank handle, maximum load-bearing capacity up to 70 kg



The simultaneous unwinding and pulling of multiple conductors is made easier if multiple restriction discs (CIMCO article no. 14 2742) are used on the cable coil dispenser.



The hand-held cable length measuring tool can be mounted onto the cable coil dispenser without any problems whatsoever. Simply pull off the plastic handle on the cable coil unwinder, attach the measurement device and fix in place with a hex socket screw.



H x W x L mm  
570 x 460 x 400

1

14 2740

### Cable drum unroller TROMMELFIX

Extremely robust cable drum dispenser manufactured from powder-coated steel sheet complete with carrying handle and four height-adjustable, anti-slip rubber feet, flat loading ramp, with two bearer rollers and lateral drum guides

#### TROMMELFIX 200

Maximum load-bearing capacity of 200 kg, maximum drum diameter of 700 mm, maximum drum width of 530 mm, bearer roller distance can be adjusted as desired by simply re-hanging the rollers (200, 300 and 400 mm), weight 15.7 kg

120 x 600 x 635

1

14 2750



#### TROMMELFIX 200 ULTRA

Lightweight construction with weight savings of 6 kg. Made of powder-coated steel sheets, a flat loading ramp, integrated drum guide in the bearer rollers, convenient winding and unwinding of cable drums thanks to the new drum brake (unwinding brake) in the front drum axle, max. drum width: 530 mm, load-bearing capacity up to 200 kg, weight: 9.4 kg

70 x 580 x 660

1

14 2756



#### TROMMELFIX 700

maximum load-bearing capacity of 700 kg, drum diameter of 1000 mm, maximum drum width of 730 mm, bearer roller distance can be adjusted as desired by simply re-hanging the rollers (200, 300, 400 and 500 mm), weight 26 kg

160 x 750 x 780

1

14 2752

### Transport set for cable drum unroller TROMMELFIX 200

Useful addition for mobile use of the cable drum unroller 200 kg (CIMCO article no. 14 2750).

Set consisting of: 4 screw-on castors (2 of which can be oscillated and 2 complete with parking brake); hand rod that can be plugged together for the pushing and pulling of even a loaded cable drum unroller including receptacle for hand-held cable length measuring tool CIMCO article no. 14 2745; stable loading ramp manufactured from grooved steel sheet which prevents the slipping of heavy drums, complete with 4 anti-slip rubber feet and carrying handle; 2 screw-on receptacles for the connection of cable drum unroller and hand rod; assembly instructions. The set can be assembled very quickly and can also be utilised as a retrofit set when dealing with older CIMCO cable drum unrollers.

1

14 2754



### KATIMEX Dispensers for disposable cable drums

for cable drums with a max. diameter of 800 mm and maximum weight of 200 kg, particularly advantageous when dealing with damaged cable drums, ideally suitable for the simple winding, unwinding and re-winding of small cable and wire cross-sections thanks to a second upper axle.

Collapsible and therefore more comfortable and provides space-saving transportation in the vehicle.

Dispenser basic unit 980 x 800 x 200 1 14 2730

second upper axle 1 14 2732



## Aluminium runner

with a load-bearing capacity of up to 300 kg, for cable drums of any width, with a flat loading ramp and non-slip rubber feet, variable bearer roller distance (250 mm, 330 mm, 410 mm).

With plastic rollers, without lock (unwinding brake)	1 pair	14 2698
Aluminium rollers for 14 2698 with 2 axles and screw fittings	1 pair	14 2704
With aluminium rollers and manual drum brakes (unwinding brake)	1 pair	14 2706

with a load-bearing capacity of up to 1000 kg, for cable drums of any width, aluminium body, with repositionable rollers.

220 x 140 x 1000	1 pair	14 2702
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## Hand-held cable length measuring tool

Measuring device for quickly and accurately determining cable lengths, further area of application for all types of cables and similar wound products measuring between 4 and 35 mm in diameter, automatic cable size adjustment via leaf clamp, branded German counter with excellent measuring accuracy, measurement range from 0 to 9999.9 m, zero position via the reset toggle switch, rubberised measuring wheel, screw-off handle for mobile use on construction sites, in the warehouse, workshop etc., with receiver shaft for stationary use in connection with all CIMCO TROMMELFIX dispensing aids and the CIMCO connection frame, can also be assembled on the cable coil dispenser (CIMCO article no. 14 2740)

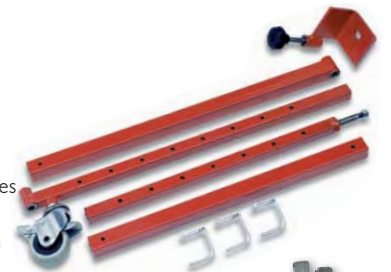
Rubberised measuring wheel made of aluminium	4 - 35 mm ø	1	14 2744
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## Connection frame for cable length hand measuring device

The cable length hand measuring device is fixed to the CIMCO Trommelfix 200 and Trommelfix 700 cable drum unroller using the connection frame. As a result, the measuring device becomes a stationary facility for cutting wire to size on standard cable drums. Can be adjusted to many positions in both height and length and can also be oscillated via the lockable rollers, ensuring that it can be adjusted to all individual working and location situations, assembly is completed within a few seconds thanks to simply plugging it together, ideal for all cable drum warehouses when it comes to wholesale and retail as well as on construction sites, exceptionally low weight of 3.5 kg

1	14 2748
---	---------



## Cable drum spindle hoist

for cable drums with a maximum diameter of 1600 mm, lifting height greater than 100 mm, capacity of 4000 kg per pair, construction height of 640 mm, floor space 400 x 200 mm, weight 13.2 kg

1	14 2320
---	---------



## Hydraulic cable drum hoist

with hand pump, three-fold height adjustment, for cable drums with a maximum diameter of 1600 mm, lifting height of 100 mm, capacity of 4000 kg per pair, construction height of between 620 and 960 mm, floor space 400 x 200 mm, weight 16.3 kg

1	14 2322
---	---------



## Cable drum hoist

Sensitive height adjustment of the axle bearing shells via notches, for cable drums with a maximum diameter of 1600 mm, lifting height of 60 mm, capacity of 2000 kg per pair, construction height of 900 mm, floor space 630 x 310 mm, weight 14 kg

Left design	1	14 2323
Right design	1	14 2324



## CE Cable drum hoist HYDROKAT

Hydraulic cable drum hoist, mobile, can be easily positioned by one person working on the cable drum, safe load acceptance thanks to double columns, 7-stage or 13-stage height adjustment of the axle bearing shells via notches, lifting height of 150 mm, capacity of 10,000 kg per pair, floor space 540 x 340 mm

For cable drums with a diameter of	Construction height	Weight		
700 mm up to 2200 mm	1070 mm	53 kg	1	14 2326
700 mm up to 3200 mm	1635 mm	69 kg	1	14 2328



## CE Cable drum hoist HYDROKAT

Design with embedded axle bearing shells, for a low-friction unwinding of cable drums, protects the drum axles and the axle bearing shells. Utilisation only in combination with adjusting rings.

For cable drums with a diameter of	Construction height	Weight		
800 mm up to 2200 mm	1070 mm	53 kg	1	14 7026
800 mm up to 3200 mm	1635 mm	69 kg	1	14 7027
Adjusting ring for axle diameter of 51 mm			1	14 7028
Adjusting ring for axle diameter of 76 mm			1	14 7029



## CE Mini cable drum hoist HYDROKAT

Hydraulic cable drum hoist, for lower drum diameters, safe load acceptance thanks to double columns, capacity of up to 4,000 kg per pair, four-fold height-adjustable axle bearing shell, lifting height of 100 mm, floor space 400 x 200 mm

With diameter of	Lifting height	Weight		
500 mm up to 1100 mm	735 mm	18 kg	1	14 2325



## Drum axles

manufactured from heavy, galvanised steel pipe

Capacity	Length	Axle ø	Weight		
3000 kg	1500 mm	51 mm	18 kg	1	14 2330
8000 kg	1850 mm	76 mm	41 kg	1	14 2331
8000 kg	2200 mm	76 mm	45 kg	1	14 2332



## Drum axle shells

manufactured from galvanised steel

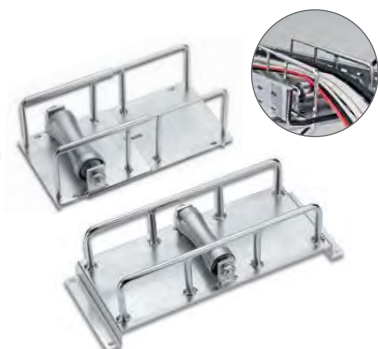
for axle diameter of 51 mm	0.8 kg	1	14 2335
for axle diameter of 76 mm	1.2 kg	1	14 2336



## Cable laying aids for tray ends and straight routes TAXIMAX

Prevention of cable damage when dealing with tray ends with sharp edges. Can also be used in the event of overcrowding of the cable trays. No further technician is required, even when dealing with longer routes. Galvanised, metal design complete with ball bearing-mounted aluminium rollers on both sides. With lateral elongated holes for the fastening of cable ties onto the trays (if already occupied with cables). Max. cable diameter 70 mm.

adjustable for varying rung and lattice distances	1	14 2760
with bevelled sheet	1	14 2762



## Cable laying aid for TAXIFIX tray offset

Prevention of cable damage when dealing with sharp corners. Can also be used in the event of overcrowding of the cable trays. No further technician is required, even when dealing with longer routes. Metal design (red, powder-coated) with four aluminium rollers, arrangement of the rollers in cable shape (curved) and locking system for the loading and removal of cables, retainer for screwing onto the tray. Max. cable diameter 75 mm.

Metal case, 2 dispensing aids, 2 screw retainers	1	14 2764
Metal case, 4 dispensing aids, 4 screw retainers	1	14 2766



XL additional retainer	Width 100 mm	1	14 2768
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## Cable pulling aids

### Plastic winding rods

manufactured from stretched monofilament, complete with solid steel end pieces and additional lead spring, approx. 130 mm in length, cable lugs on both sides, material  $\varnothing$  4 mm, tensile strength 900 N

5 m	1	14 0052
10 m	1	14 0054
15 m	1	14 0056
20 m	1	14 0058
25 m	1	14 0060
30 m	1	14 0062



### Crimping pliers for the repair of plastic winding rod

compound leverage crimping pliers complete with automatic ratcheting mechanism and square profile crimping inserts, for the repair of CIMCO winding plastic rods with 4 mm  $\varnothing$ .

220	1	10 6114
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End piece/lug for the plastic rod 1 14 0065

Lead spring for the plastic rod 1 14 0067

Coupling for the plastic rod 1 14 0069



### Crimping pliers set for plastic rods

in raaco - PSC vario-240 component boxes, with crimping pliers CIMCO article no. 10 6114.

Contents: 10 lead springs preassembled with coupling piece, 10 coupling pieces, 10 end pieces

31 pieces	240 x 190 x 60 mm	1	10 6314
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### Winding spirals EFLEX

manufactured from quadruple-rolled steel wire spirals, with solid steel end pieces,  $\varnothing$  4 mm shafts, tensile strength 500 N

5	1	14 0040
10	1	14 0042
15	1	14 0044
20	1	14 0046
25	1	14 0048
30	1	14 0050



### Steel winding rods

with 2 winding lugs, high-frequency welded, rod thickness 3.5 x 0.5 mm, tensile strength 900 N

10	1	14 0004
15	1	14 0006
20	1	14 0008
25	1	14 0010



### Cable pilot set

Cable guiding heads for directly inserting many common cables into short empty conduit routes.

Set consisting of small cable pilot (for coaxial cables, NYM 3 x 1.5 mm<sup>2</sup> etc.) and large cable pilot (for cables NYM 3 x 2.5 mm<sup>2</sup> - 5 x 1.5 mm<sup>2</sup> - 5 x 2.5 mm<sup>2</sup> etc.)

1	14 2188
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### Cable guiding heads for domestic connection cables

Simply screw on to the cable end and push the cable directly into the short empty conduit (approx. 10 to 20 m), no damage caused to cables that have already been laid, no deployment of laborious underground cable laying systems required, manufactured from full aluminium

for cables up to 22 mm  $\varnothing$  1 14 2182

for cables between 20 and 30 mm  $\varnothing$  1 14 2184

for cables between 30 and 50 mm  $\varnothing$  1 14 2186



## Fibre glass push rod set

The perfect solution for laying cables in suspended ceilings or confined spaces. Each with one M 5 internal or external threaded sleeve at the end of the push rod for any required extension Including LED viewing probe for enough light and a sliding attachment for obstacles. Supplied in a practical bag with attachment option (e.g. on ladders). Also without available cable ducts, empty conduits or other cable runs.

3 push rod  $\varnothing$  6 mm length 1 m

7 push rod  $\varnothing$  8 mm length 1 m

1 sliding attachment

1 LED lamp

1 guide head with ring

1 hook

1 guide head

1 chain

1 draw head

1 magnet

1 flex rod 15 cm

1 adapter from M 6 to M 5

1 accessories bag

**21 pieces**

1

14 6270

Push rod extension set:

3 push rod  $\varnothing$  6 mm length 1 m

3 push rod  $\varnothing$  8 mm length 1 m

**6 pieces**

1

14 6271

Push rod accessory set:

1 sliding attachment

1 adapter from M 6 to M 5

1 LED lamp

1 guide head with ring

1 hook

1 guide head

1 chain

1 draw head

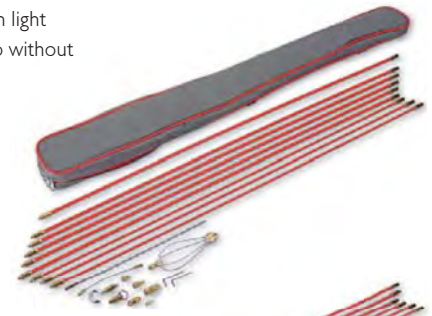
1 magnet

1 flex rod 15 cm

**10 pieces**

1

14 6292



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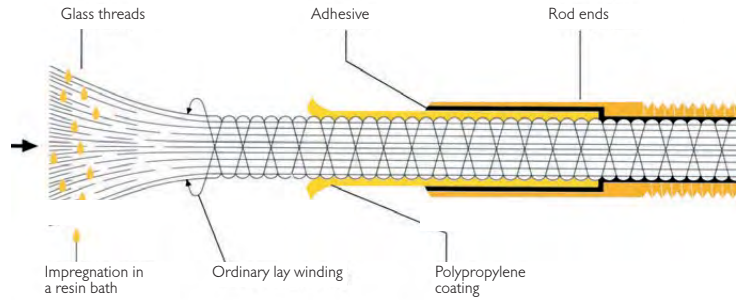
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## Rational cable winding devices for professional electricians Polykat® – The fibreglass rod

Polykat® fibreglass rods are the basic elements of all Katimex® cable pulling systems. The combination of extreme bending strength and high thrust stability provides the rod with the characteristics of a flexible rod. As a result, extremely small bending radii are possible and narrow pipe bends can be passed through easily. The smooth plastic coating has excellent sliding characteristics and reduces the friction coefficient to a minimum. It is characterised by high wear resistance. The high elasticity of Polykat® fibreglass rods permits the construction of unrivalled small, compact and handy devices.



	Kati® Blitz	Kati® Blitz 2.0	Kabelmax®	Cable jet®	Pipe eel®	
Fibreglass rod diameter	3.0 mm		4.5 mm	7.2 mm	9.0 mm	11.0 mm
Minimum bending radius	50 mm with rod ends 2.0 from 30 mm		100 mm	160 mm	200 mm	250 mm
Rod tensile strength	5.0 kN		10.3 kN	28.0 kN	40.0 kN	65.0 kN
Tested tensile strength of the rod - sleeve connection	1.0 kN		1.5 kN	7.5 kN	10.0 kN	15.0 kN
Sleeve - rod fastening	glued			glued and pinned		
Typical empty conduit diameter to nominal width	30 mm		60 mm	80 mm	100 mm	250 mm
Maximum winding lengths up to	50 m		80 m	120 m	150 m	500 m
End and connecting sleeve lengths	M 5			M 12		
Typical areas of use	Domestic installation, energy and antenna cables, telephone lines, intercoms and video systems		Commercial installation, cable duct and underground cabling, cabling on suspended ceilings	Signal system construction (traffic lights), street lights, underground and telecommunications cabling	Underground line construction, telecommunication and energy cabling	





### – Comfortable cable winding

Same cable winding device as with the Kati® Blitz but with additional detection function via customary cable detectors. Targetted location and tracking of the pipe path or blocked points. With tried and trusted POLYKAT fibreglass profile in shock-proof housing. No moving external parts and replaceable slip ring transmitters. With integrated accessory set and special draw aid Kati® Grip, 1 each of 7 - 10 mm ø guide head, 3 rod ends and 2 rod ends 2.0 on the tie, 3 connecting sleeves, 5 cable lugs, 1 cable draw grip 6 - 9 mm ø, 1 glass fibre fix adhesive (3 g bottle).

Detection	30 m	1	14 2034
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### – Comfortable cable winding

with integrated accessory set and special draw aid Kati® Grip, 1 each of 7 - 10 mm ø guide head, 3 rod ends and 2 rod ends 2.0 on the tie, 3 connecting sleeves, 5 cable lugs, 1 cable draw grip 6 - 9 mm ø, 1 glass fibre fix adhesive (3 g bottle).

20 m	1	14 2020
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30 m	1	14 2024
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50 m	1	14 2028
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### – 2.0 Comfortable cable winding

Same cable winding device as with the Kati® Blitz 2.0 but with additional detection function (connection on front). Internal, protected slip ring transmitters. Targetted location and tracking of the pipe path or blocked points. With tried and trusted Polykat® fibreglass profile in shock-proof housing. With integrated accessory set, 2 each of 7 and 10 mm ø guide heads, 4 rod ends 2.0 (2 of which on the rod), 3 connecting sleeves, 5 cable lugs, 1 cable draw grip 6 - 9 mm ø, 1 glass fibre fix adhesive (3 g bottle).

30 m	1	14 4630
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### – 2.0 Comfortable cable winding

with crank function for winding the rod into the housing, improved service cover and wear-resistant tie outlet. With integrated accessory set, 2 each of 7 and 10 mm ø guide heads, 2 rod ends 2.0 and 2 rod ends 2.0 on the tie, 3 connecting sleeves, 5 cable lugs, 1 cable draw grip 6 - 9 mm ø, 1 glass fibre fix adhesive (3 g bottle).

20 m	1	14 1620
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30 m	1	14 1630
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without crank function	50 m	1	14 1650
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### – EASY GRIP

for the energy-saving and fatigue-free insertion of a 3 mm fibreglass rod into empty conduits. The transfer of force is carried out via a two-jaw clamping system complete with form-fitting connection to the fibreglass rod. Max. thrust: 20 kg

1	14 2180
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### PowerDrive cable pull system

for lightning-fast transportation of fibreglass rods (ø 3.0 mm) in confined spaces even in places which are difficult to access. The drive is implemented with a commercially available cordless screwdriver with a 1/4" hex drive (or with CIMCO 2-speed cordless screwdriver 14.4 volts CIMCO article no. 11 0006).

For trouble-free operation, we recommend the cable retractors of the Kati® Blitz range and the guide heads.

1	14 2360
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## Kati® Twist

The new wear-resistant polyester ties are characterised by their high thrust stability and the low friction resistance (up to 60% lower than conventional plastic or steel ties) in empty conduits

- Extremely good bending and sliding properties
- Maximum tensile load on rod ends (M5): 200 kg
- Repairable in the event of a rod breakage (press-on rod ends)
- Tensile strength/rod: 4.0 kN
- All accessories of Kati® Blitz and Kabelmax® are compatible

ø 4.5 mm	Length 15 m	1	14 2540
ø 4.5 mm	Length 25 m	1	14 2545
ø 5.2 mm	Length 20 m	1	14 2555
ø 5.2 mm	Length 40 m	1	14 2556
ø 6.0 mm	Length 40 m	1	14 2565

## Steel winder Kati® Twist

including 1 spring guide head ø 10 mm, 1 brass draw head with lug ø 6 mm (thread M5), 2 brass rod ends (thread M5)

ø 4.5 mm	Length 25 m	1	14 2541
ø 5.2 mm	Length 20 m	1	14 2550
ø 5.2 mm	Length 40 m	1	14 2551
ø 6.0 mm	Length 40 m	1	14 2560

## Repair set Kati® Twist

3 rod ends for each to press on (crimp shape 16 mm<sup>2</sup>)

ø 4.5 mm	1	14 1249
ø 5.2 mm	1	14 1251
ø 6.0 mm	1	14 1252

## Kabelmax® – The professional-grade underground cable pulling system

for the problem-free pulling of cables into empty or occupied cable ducts or pipes with ø of up to 60 mm.

Cable pulling device for underground ducts complete with 4.5 mm ø glass fibre profile, 2 M 5 rod ends, 11 mm ø pulling eye with 6 mm ø cable lugs

ECONOMY design	40 m	1	14 1796
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5 M 5 rod ends, 1 11 mm ø pulling eye, 2 6 mm ø cable lugs, 3 connecting sleeves, 3 g special adhesive and service bag

Steel tube frame with ball bearing-mounted aluminium winch	60 m	1	14 1802
Steel tube frame with ball bearing-mounted aluminium winch	80 m	1	14 1806

## Kabelmax® replacement rod

4.5 mm ø glass fibre profile, M 5 rod ends attached on both sides,

1 11 mm ø pulling eye complete with 1 6 mm ø cable lug

	40 m	1	14 1808
	60 m	1	14 1812
	80 m	1	14 1816

## Rod ends

brass, with M 5 male thread

	1	14 1842
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## Pulling eye

brass, 11 mm ø with M 5 female thread and 6 mm ø cable lug

	1	14 1844
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## Connecting sleeve

brass

	1	14 1846
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## Service set for Kablemax®

consisting of 5 rod ends, 3 connecting sleeves, 1 guide head with lug and 1 bottle of special adhesive. Weight approx. 45 g

1	14 2163
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## Cable draw grips manufactured from galvanised steel wire

for domestic installation, complete with cable lug weaved into the loop, M 5 female thread, suitable for all Kati® Blitz- and Kabelmax® devices

for cable ø mm

4 - 6	1	14 2500
6 - 9	1	14 2498
9 - 12	1	14 2501
12 - 15	1	14 2502
15 - 19	1	14 2503
19 - 25	1	14 2504
25 - 31	1	14 2505



## Battery-powered drill drive for Kati® Blitz and Kabelmax®

Thanks to being able to connect to a standard battery-powered drill already available on the construction site, the drive for the Kati® Blitz and Kabelmax® cable winding devices makes motorised insertion of the glass fibre rods into empty conduits and underground ducts easy. The advantages of insertion at the push of a button can be seen when cabling longer routes. The speed can be individually adjusted. Weight only 270 g.

Drive for Kati® Blitz	1	14 2350
Drive for Kabelmax®	1	14 2352



## Cablejet® – The variable cable pulling system

galvanised, collapsible steel tube frame complete with 7.2 mm ø glass fibre bar, 2 M 12 rod ends, 25 mm ø pulling eye, shackle with bolts, 1 connecting sleeve and 4 clamping sleeves, 1 20 g special adhesive and service bag

40 m	1	14 2220
60 m	1	14 2221
80 m	1	14 2222
100 m	1	14 2223
120 m	1	14 2224



## Cablejet® replacement rod

7.2 mm ø glass fibre bar, two M 12 rod ends, 25 mm ø pulling eye, shackle

40 m	1	14 2225
60 m	1	14 2226
80 m	1	14 2227
100 m	1	14 2228
120 m	1	14 2229



## Rod ends

brass, with M 12 male thread

1	14 2230
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## Connecting sleeve

brass, for 7.2 mm ø glass fibre bar

1	14 2231
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## Pipe eel® – The cable pulling system for underground cabling

galvanised steel tube frame, mobile on rollers, ball bearing-mounted winch with integrated parking brake, complete with glass fibre bar, two M 12 rod ends, 25 mm ø pulling eye, shackle, 1 connecting sleeve and clamping sleeves, 1 20 g special adhesive and service bag

Rod thickness ø	Winch-ø	Length m		
9 mm	750 mm	40	1	14 2240
		60	1	14 2241
		80	1	14 2242
		100	1	14 2243
		120	1	14 2244
11 mm	1000 mm	150	1	14 2245
		200	1	14 2250
		250	1	14 2251
		250	1	14 2252
		300	1	14 2253



Rod lengths up to 500 m and rods with detection function on request.

## Pipe eel® replacement rod

two M 12 rod ends, 25 mm ø pulling eye, shackle

Rod thickness ø	Length m		
9 mm	40	1	14 2270
	60	1	14 2271
	80	1	14 2272
	100	1	14 2273
	120	1	14 2274
11 mm	150	1	14 2279
	150	1	14 2275
	200	1	14 2276
	250	1	14 2277
	300	1	14 2278



## Rod ends

Brass, M 12 male thread

for 9 mm ø rod	1	14 2285
for 11 mm ø rod	1	14 2286



## Connecting sleeves

brass

for 9 mm ø rod	1	14 2290
for 11 mm ø rod	1	14 2291



## Length measuring device for pipe eel®

for quickly and simply determining lengths on underground pipe trays. Pipe blockages, fractures and other defects can be accurately located. No more annoying re-measurements, inspections or marking and all of this with a significantly higher measuring accuracy. The device can be effortlessly retrofitted onto all standard winding devices.

120 mm x 115 mm x 110 mm	1	14 2310
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## Accessories for Cablejet® and pipe eel®

### Pulling eye

Aluminium, 25 mm ø, length 60 mm, M 12 female thread

	1	14 2280
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### Guide head

Aluminium, 40 mm ø, length 80 mm, M 12 female thread

	1	14 2281
with cable lug, 18 mm	1	14 3208



### Shackle

shape according to DIN 82101, galvanised, maximum capacity 4 kN

bolt diameter 10 mm	1	14 2292
bolt diameter 12 mm	1	14 1494



### Connecting pin

for the coupling together of multiple glass fibre bars, galvanised steel, two M 12 connecting threads

	1	14 2293
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### Twist compensation pin

with double axial bearings, made of stainless steel, for connecting draw grip and shackle

outer ø	Max. Tensile load	Length		
16 mm	3.3 kN	64 mm	1	14 7183
22 mm	10.0 kN	86 mm	1	14 7174
25 mm	15.6 kN	98 mm	1	14 7175



## Service sets for Cablejet® and pipe eel®

Each consisting of 2 rod ends, 1 connecting sleeve, 2 clamping sleeves and 20 g bottle of special adhesive. Weight approx. 150 g

For Cablejet with a 7.2 mm rod diameter	1	14 2160
For pipe eel with a 9 mm rod diameter	1	14 2161
For pipe eel with a 11 mm rod diameter	1	14 2162

Further accessories such as the twist compensation pin as well as pipe cleaning and duct brushes or gathering devices can be delivered upon request.



## Cable draw grips manufactured from galvanised steel wire

for underground cabling, with 1 crimped wire loop

for cable ø mm

10 - 20	1	14 2506
20 - 30	1	14 2507
30 - 40	1	14 2508
40 - 50	1	14 2509
50 - 65	1	14 2510
65 - 80	1	14 2511



for underground cabling, with 2 crimped rope loops

for cable ø mm

10 - 20	1	14 2520
20 - 30	1	14 2521
30 - 40	1	14 2522
40 - 50	1	14 2523
50 - 65	1	14 2524



## Cable draw grip special designs

Special cable draw grips for particular applications such as those listed below can be delivered at short notice:

- Larger dimensions
- Cable draw grips with lateral loop
- Separated cable draw grips
- Multiple draw grips, e.g. for the simultaneous pulling of triple conductor power cables into a shared protective pipe
- Kevlar-reinforced plastic draw grips (non-conducting, anti-magnetic)
- Multi-level, highly-flexible cable draw grips for optical fibre lines
- Draw grips for overhead line construction
- Cable draw grips manufactured from stainless steel strands

Please request the desired cable draw grips.



## Rope and cable connection grips

To quickly create a stable connection between two cables or ropes. They are used where existing cables or rope are to be replaced by new ones, e.g. the exchange of aged underground cables, introduction of new ropes in cranes. Hand-woven from galvanised steel wire strands, average effective braided length 1200 mm.

Cable ø mm	Practical breaking load	Max. laying tensile force		
8 - 16	15 kN	7.5 kN	1	14 2301
10 - 20	19 kN	9.4 kN	1	14 2302
20 - 30	55 kN	27.4 kN	1	14 2303
30 - 40	55 kN	27.4 kN	1	14 2304



## Cable and rope guidance products

a comprehensive set of laying tools for cable or rope guidance in ditches and shafts (e.g. deflection and corner pulleys, cable protection and shaft guidance curves, cable introduction bushes) can be delivered at short notice. Please request the desired cable and rope guides.

### Shaft cover lifter

Manufactured from galvanised steel, weight 0.6 kg

320 mm x 155 mm	1	14 2300
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### Special KatiGrip handle

for the quick and simple pulling of all pulling wires measuring between 3 and 6 mm in ø (flat steel, helical wire, plastic and glass fibre wires)

	1	14 2190
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### Glass fibre special adhesive

for Kati® Blitz and Kabelmax®

3 g		1	14 2192
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### Glass fibre special adhesive

for Cablejet® and pipe eel®, viscous

20 g		1	14 2193
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### Cable lubricant GLIT®

improved formula with significantly improved lubricating properties. Glit® eliminates up to 90% of the friction that is generated when inserting power cables, telephone cables, coaxial cables and glass fibre cables. For inserting all types of pulling rods. Simply apply to the Kati® Blitz and Kabelmax® guide head and insert.

Pumpable, silicone-free, skin-compatible, non-flammable.

Tube 200 ml	0.2 kg	1	14 2194
Bucket 1 litre	1.1 kg	1	14 2195
Bucket 5 litre	5.2 kg	1	14 2196
Bucket 10 litre	10.4 kg	1	14 2197

### Silicone spray

an ideal lubricant, protective agent, maintenance agent and separating agent, makes the winding of cables easier, protects electric contacts against moisture, protects rubber, plastic and metal parts. Only handle when in a de-energised state.

400 ml		12	15 1004
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# SHEARS



## Cutting

The precise cutting geometry allows for problem-free separation both of especially flexible and of solid conductors up to 45 mm in diameter (copper and aluminium).

## Design

Ergonomically shaped shank and handle design, together with optimum leverage transfer thanks to ratchet mechanism allow one-handed use requiring minimal strength.



### Cable shears

excellent cutting performance for copper and aluminium cable, made of case hardened 5 mm flat tool steel, precision-ground cutting edges, finest gunmetal finish, 2-component plastic handle sleeves with special blade for fine wire cables up to 18 mm in diameter



for cable ø	solid mm <sup>2</sup>	flexible mm <sup>2</sup>			
18 mm	16	50	180	1	12 0116



### One-hand cable shears

excellent cutting performance for copper and aluminium cable, smooth, non-deforming cut, die-forged, precision ground, adjustable screwed joint, 2-component plastic handle sleeves



for cable ø	solid mm <sup>2</sup>	flexible mm <sup>2</sup>			
16 mm	16	50	160	6	12 0104



### 1000 V one-hand cable shears

excellent cutting performance for copper and aluminium cable, smooth, non-deforming cut, with double dip-coated special insulation



for cable ø	solid mm <sup>2</sup>	flexible mm <sup>2</sup>			
16 mm	16	50	160	6	12 0206



### One-hand cable shears

excellent cutting performance for copper and aluminium cable, smooth, non-deforming cut, die-forged, precision ground, adjustable screwed joint, 2-component plastic handle sleeves



for cable ø	solid mm <sup>2</sup>	flexible mm <sup>2</sup>			
25 mm	25	70	200	6	12 0100



### 1000 V one-hand cable shears

excellent cutting performance for copper and aluminium cable, smooth, non-deforming cut, with double-dip coated special insulation



for cable ø	solid mm <sup>2</sup>	flexible mm <sup>2</sup>			
25 mm	25	70	200	6	12 0202



### Cable shears

Universal cable shears for copper, aluminium and coaxial cables. For solid cables up to 10 mm ø or 50 mm<sup>2</sup> and multi-core cables up to 12 mm ø or 70 mm<sup>2</sup>. This tool is suitable for cable stripping, removing insulation (special zone on the cutting head) and precise cutting of cables. With ergonomically shaped 2-component plastic handle sleeves.



Weight 300 g.					
	200			1	12 0138



### Insulation stripping cable shears

Universal cable shears for copper and aluminium cables. For multi-core, solid cables up to 16 mm<sup>2</sup>. Insulation stripping function can be set with a screw for adjusting to the desired wire or flex diameter from 0.5 to 2.0 mm (special zone on the cutting head). This tool is suitable for stripping 4 - 16 mm (in the cutting area) and for precision cutting of cables. With single-dip coating.



	160			1	12 0242
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### Cable shears

Universal cable shears for copper, aluminium and coaxial cables. This tool is suitable for precision cutting of cables, handles with single-dip coating.



12 mm ø or 70 mm <sup>2</sup>	240			1	12 0330
20 mm ø or 95 mm <sup>2</sup>	235			1	12 0340



### Cable shears

Universal cable shears for copper, aluminium and coaxial cables. This tool is suitable for stripping, removing insulation (special zone on the cutting head) and precision cutting of cables. Handles with single-dip coating.



10 mm ø or 50 mm <sup>2</sup>	160			1	12 0332
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## Cable shears

Universal cable shears for copper, aluminium and coaxial cables.



This tool is suitable for precision cutting of cables. Additional blade for cutting steel wires, handles with single-dip coating.

12 mm $\varnothing$	180	1	12 0334
16 mm $\varnothing$	220	1	12 0336



## Cable shears

Universal cable shears for copper, aluminium and coaxial cables.



This tool is suitable for precision cutting of cables, one-handed operation even for larger cable diameters thanks to a slot in the riveted area of the shank, handles with single-dip coating.

for cable $\varnothing$	cross-section mm <sup>2</sup>				
20 mm	95	250	1	12 0338	



## Cable shears

with lever transfer and exchangeable blades, PVC-covered steel tube shanks

for cable $\varnothing$	cross-section mm <sup>2</sup>				
26 mm	120	600	1	12 0150	



## Cable shears

with exchangeable blades

for cable $\varnothing$	cross-section mm <sup>2</sup>				
26 mm	120		1	12 0147	
42 mm	300		1	12 0151	
65 mm	400		1	12 0157	



## Cable cutter

- With ratchet action
- One-handed operation thanks to optimum leverage transfer and step-by-step cutting
- Release option in all cutting positions
- All parts in high-strength special steel
- Cutting edges and parts under stress tempered or hardened, surface with gunmetal finish
- Ergonomically shaped soft handles
- For copper and aluminium cables, single and multiple conductors

for cable $\varnothing$	solid mm <sup>2</sup>	multiple wire mm <sup>2</sup>			
32 mm	1 x 150	4 x 35	250	1	12 0180
52 mm	1 x 300	4 x 90	310	1	12 0184
54 mm	1 x 400	4 x 120	310	1	12 0185



## 1000 V cable cutter

- With ratchet action
- One-handed operation thanks to optimum leverage transfer and step-by-step cutting
- Release option in all cutting positions
- All parts in high-strength special steel
- Cutting edges and parts under stress tempered or hardened, surface with gunmetal finish
- With double-dip coating special insulation
- For copper and aluminium cables, single, multiple and flexible conductors

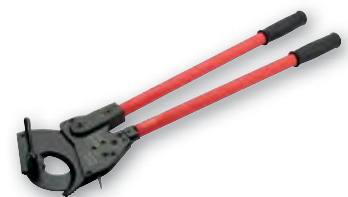
for cable $\varnothing$	solid mm <sup>2</sup>	multiple wire mm <sup>2</sup>			
32 mm	1 x 150	4 x 35	250	1	12 0182



## Cable cutter

- With ratchet action
- Two-handed operation thanks to optimum leverage transfer and step-by-step cutting
- Release option in all cutting positions
- All parts in high-strength special steel
- Cutting edges and stressed parts tempered or hardened, surface with gunmetal finish
- Ergonomically shaped soft handles
- For copper and aluminium cables, single or multiple conductor

for cable $\varnothing$					
60 mm		720	1	12 0170	
100 mm		820	1	12 0172	



## One-hand ratchet cable cutter

For crush-free cutting of cables with a maximum external diameter of 45 mm. Suitable for copper and aluminium cables, not suitable for steel cables, steel reinforced cables and hard-drawn copper or bronze conductors. Clean cutting thanks to sharp, specially hardened blades, effortless one-handed use possible despite compact shape and thanks to ratchet mechanism with needle bearing eccentric transmission and ergonomic handles with narrow opening width. However, the handles are long enough to allow the second hand to be used in support for peak stress. Weight only 980 g. Mobile, fully swivelling blade that can be released in any position, handles can be locked with a turning knob (lock symbol), small opening of the cutting blades with lockable safety catch.

### Max. cutting performance

Cu ( copper )	max. $\varnothing$	45 mm
	Multi-wire	300 mm <sup>2</sup> / 600 MCM
	Sector-shaped conductor	3 x 70 SM
Al ( aluminium )	max. $\varnothing$	45 mm
	Multi-wire	400 mm <sup>2</sup> / 800 MCM
	Sector-shaped conductor	4 x 70 SE

	1	12 0168
Replacement pivot blade	1	12 9168

### Max. cutting performance

Cu ( copper )	max. $\varnothing$	60 mm
	Multi-wire	400 mm <sup>2</sup> / 800 MCM
	Sector-shaped conductor	4 x 150 SM
Al ( aluminium )	max. $\varnothing$	60 mm
	Multi-wire	400 mm <sup>2</sup> / 800 MCM
	Sector-shaped conductor	4 x 150 SE

	1	12 0178
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## Battery-operated cutting tools

General product features of CIMCO battery-operated hydraulic tools:

- Quick advance thanks to double piston hydraulics (advantage: reduced pressing time due to rapid bridging of no-load stroke)
- Automatic pressure limit (advantage: no danger of overpressing)
- Quick stop (advantage: no running-on of the hydraulics - which means no accidental damage)
- Motor switch-off and automatic return after completed pressing (advantage: clear indication of end of pressing process)
- Electronic control and monitoring of the pressing process (advantage: errors minimised by monitoring)
- Manual return
- Multi-function electronics with sleep mode for maintenance display and battery monitoring (advantage: longer working life for all components)
- Mini-USB interface allows connection to all common PC systems for service and monitoring
- The latest in battery technology! Lithium-ion technology without self-discharge and with reduced weight!
- Service and monitoring software for all common PC systems

### Hydraulic battery-operated cutter up to 45 mm diameter

suitable for cutting aluminium and copper cables, plus aluminium-steel cables up to a diameter of 45 mm.

Features: fold-out cutting head, can be rotated 270°

Delivery: Basic unit in case, charger, 2 rechargeable batteries, analysis software, mini-USB cable

Weight with case 14,500 g, weight without case 6,100 g

Cutting area	Cutting force	Operating pressure	PU	Article no.
max. 45 mm $\varnothing$	60 kN	700 bar (70MPa)	1	10 5706



### Hydraulic battery-operated cutter up to 50 mm diameter

suitable for cutting aluminium and copper cables up to a diameter of 50 mm.

Features: fold-out cutting head, can be rotated 270°

Delivery: Basic unit in case, charger, 2 rechargeable batteries, analysis software, mini-USB cable

Weight with case 14,050 g, weight without case 5,250 g

Cutting area	Cutting force	Operating pressure	PU	Article no.
max. 50 mm $\varnothing$	60 kN	700 bar (70MPa)	1	10 5708



### Hydraulic battery-operated cutter up to 85 mm diameter

suitable for cutting aluminium and copper cables up to a diameter of 85 mm.

Features: fold-out cutting head, can be rotated 270°

Delivery: Basic unit in case, charger, 2 rechargeable batteries, analysis software, mini-USB cable

Weight with case 15,750 g, weight without case 7,650 g

Cutting area	Cutting force	Operating pressure	PU	Article no.
max. 85 mm $\varnothing$	70 kN	700 bar (70MPa)	1	10 5710



### Cable shears

Cutters made of 3 mm high grade stainless steel, handles of impact-resistant plastic, hardness HRC 50 to 54, self-locking nut and washer of high alloy steel, safety lock, self-opening by means of spring, suitable for right-handed and left-handed use. For cutting cables and conductors up to 10 mm in diameter, insulation, wood, rope and other materials.

165	1	12 0110
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### Universal shears

Cutters made of high grade stainless steel, handles of impact-resistant plastic, hardness HRC 56 to 58, one cutter finely serrated, self-locking nut and washer of high alloy steel, safety lock, self-opening due to spring, suitable for right-handed and left-handed use, cutting length 42 mm. For cutting wire, cables, sheet metal, paper, cardboard, plastic, wood, leather and other materials.

145	1	12 0120
190	1	12 0122



## Electrician scissors

Blades in stainless VA steel-vanadium-molybdenum alloy, one cutting edge finely serrated, glass fibre reinforced impact-proof 2-component plastic handles, total length 140 mm, cutting length 47 mm. For cutting and stripping insulation off conductors and cables up to 22 mm in diameter, for cutting insulating tape, cable binders and other materials.

140	1	12 0130
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## Electrician scissors with holster

- Ergonomic two-component grip with fibreglass reinforcement
- Blades made of stainless steel HRC 56 AISI 420 4 mm with serrated edge
- Length 155 mm, with 26 mm blades
- For cutting and stripping insulation from lines with diameters of up to 16 mm (50 mm<sup>2</sup>)
- Plastic holster for easy attachment to a belt or bag
- Shears weight: 87 g
- Holster weight: 16 g
- Sheath length: 133 mm

	1	12 0126
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## Electrician scissors

- Hand grip made of two-component material with fibreglass reinforcement; joint reinforced to avoid loosening
- Blades made of stainless steel 52/54 HRC 3 mm, with serrated edge
- Length 145 mm, with a blade length of 35 mm
- For cutting and stripping insulation from lines with a diameter of up to 8 mm (25 mm<sup>2</sup>)
- Weight: 80 g

	1	12 0132
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## Ergonomic electrician scissors

- Grip with innovative design to reduce cutting forces Two-component material with fibreglass reinforcement
- Blades made of stainless steel 52/54 HRC 3 mm, with micro-serration
- Length 155 mm, with a blade length of 40 mm
- Weight: 61 g

	1	12 0134
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## Electrician scissors with crimp insert

- Hand grip made of two-component material with fibreglass reinforcement; all-round coating prevents slipping during the cutting process
- Reinforced joint; prevents loosening of the joint
- Blades made of stainless steel 52/54 HRC, 3 mm with serrated edge
- Length 162 mm, with a blade length of 42 mm
- For cutting and stripping insulation from lines with a diameter of up to 8 mm (25 mm<sup>2</sup>) with a straight cut and a cross section of up to 70 mm<sup>2</sup> (fine wire) with a round cut
- Crimp insert for wire end ferrules for cross sections of 1 to 6 mm<sup>2</sup>; Crimp insert made of stainless steel
- Weight: 100 g

	1	12 0144
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## Telephone scissors

with wire cutter, bright nickel plated

with smooth cutting edge	130	1	12 0220
with serrated cutting edge	130	1	12 0222



## Crown scissors

bright nickel plated, with serrated cutting edge, for the thinnest wires

115	12	12 0230
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## 1 Universal shears (paper, wallpaper and household scissors)

stainless steel blades, modern 2-component technology, ergonomically shaped handles with soft rubber insert

220 1 12 0128



## 3 Multi-purpose shears for plastics

practical set, consisting of quality shears and 5 exchangeable cutting insets, in impact-proof, easy to handle plastic box, essential for almost all craft work in electrical and sanitary installation. Not suitable for cutting halogen-free materials.

**Contains:** Multi-purpose shears for quick, non-crushing cutting work on plastic, rubber and wooden parts and on ribbon cables (except for hard metals), solid precision cutting blade (cutting length 57 mm) in case-hardened tool steel (> 52 HRC), can be sharpened, special cutting geometry for very light cut, eccentrically placed pivot point for oblique shearing to do away with tedious deburring, with opening spring and locking device, ergonomically shaped plastic handles with slip guard. 5 different cutting insets in lightweight metal, can be changed in seconds:

**flat-straight inset** (pre-mounted in the shears) for general cutting work with flat materials such as plastic profiles, ribbon cables, cable ducts, flooring strips etc., **mitre inset** with stop angle and markings for angle cuts at 45° - 60° - 75° - 90° - 105° - 120°, **profile inset at 90°** for cutting box profiles up to 25 x 45 mm, e.g. small cable and wiring ducts, and also for hard or thick-walled plastic pipes and hoses up to 25 mm diameter, **round profile inset 16 / 19 mm** each with one circular guide 16 mm (<sup>5</sup>/<sub>8</sub>"-) and one 19 mm (<sup>3</sup>/<sub>4</sub>" diameter respectively, plus **round profile inset 25 mm** with a circular guide 25 mm (1") diameter, ideal for burr-free cutting of flexible and hard plastic pipes and hoses.

Not suitable for halogen-free materials.

1 12 0210

Replacement parts:

flat-straight 1 12 0211

Mitre insert 1 12 0212

Round profile 16/19 mm ø 1 12 0213

Round profile 25 mm ø 1 12 0214

Profile insert 90° 1 12 0215

Replacement blade 1 12 0216



## 13 Multi-purpose shears for plastic pipes and hoses

Shears as CIMCO article no. 12 0210, with pre-mounted cutting inset CIMCO article no. 12 0213, for cutting round profiles with a diameter of 16 mm (<sup>5</sup>/<sub>8</sub>" and 19 mm (<sup>3</sup>/<sub>4</sub>" ), in particular hard and flexible plastic pipes (corrugated pipes).

1 12 0290

## 16 Plastic shears with adjustable stop

Shears as in the range (CIMCO article no. 12 0210), but with adjustable stop angle for convenient mitre cuts, locking positions at 45°, 60°, 75°, 90°, 105°, 120° and 135°, 2-component handles.

1 12 0208



# WIRE STRIPPING TOOLS



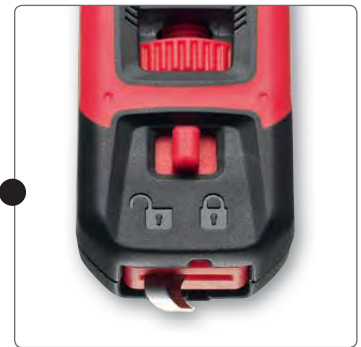
## Exchangeable hook blade system

This revolutionary knife makes short work of stripping 4 – 70 mm  $\varnothing$  cables using an exchangeable hook blade system. Changing the various blades is easy using the "push" function.



## Top safety guaranteed

The specially shielded TiN-coated hook blade is only activated when the safety mechanism is pushed back. You can adjust the blade depth over four settings using the slide mechanism.



## Precisely adjusted cutting depth

An adjusting screw enables you to adjust the cutting depth of the blade according to the sheathing thickness. It's an extra advantage for you that markings help you quickly set the blade to already-used thicknesses.



## Visible cutting progress

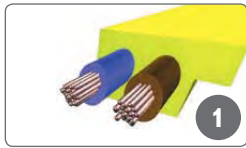
There is a small viewing gap on the metal hook blade so you can keep your eye on the cutting process.



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- 25
- 26

## Description of the symbols

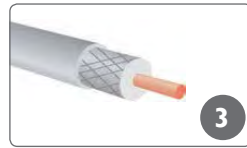
Cable symbols with the respective main fields of application are assigned to the wire stripping tools. The field of application can by all means include multiple cable and line types; in order to facilitate selection, however, only the respective main application is identified.



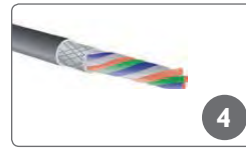
AS interface cable



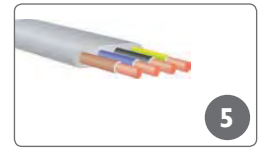
Cat data line



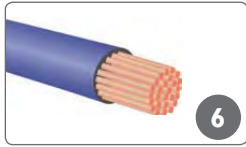
Coaxial cable for audio, video and TV connection (antenna line), coaxial cable for networking



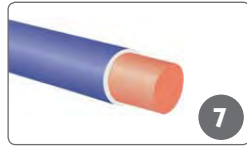
Data lines; network cables; sensor and actuator lines; shielded and unshielded



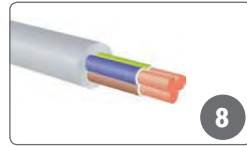
Flat cable with several conductors for fixed installation e.g. NYIF-J



Single conductor



Insulated, solid single conductor



Lines for fixed installation; lines with multiple conductors for fixed laying; flexible cable; lines for wetrooms e.g. NYM, NYY, NHXMH halogen-free



Solar, power lines



Connection and control lines, e.g. Ölflex®

## Chapter 1 - Manual cable sheath stripper / insulation stripper

Insulation stripping tools with which the process of cutting and splitting the insulation is primarily performed manually.

### 1.1 Universal application: Single conductors, installation cables, underground cables

#### Universal cable sheath cutter

for removing all insulation layers from cables from 25 mm  $\varnothing$ , e.g., lead sheath, rubber, PE and PVC adjustable cutting depth of 0.5 - 5 mm, suitable for longitudinal and round cuts, interchangeable knife

> 25 mm $\varnothing$	1	12 0002
Replacement blade	1	12 0003

#### KABIFIX cable sheath stripper

for longitudinal and round cuts. Suitable for slitting and stripping cables from 6 to 28  $\varnothing$ , also for cutting PVC pipes, interchangeable knife

6 - 28 mm $\varnothing$	1	12 0030
Replacement blade	1	12 0032

#### KAIMAN cable sheath stripper

Specially designed for moisture-proof cable to 7 x 1.5 mm<sup>2</sup> or 5 x 2.5 mm<sup>2</sup>, extremely well suited for work in switch and junction boxes. Robust, hard chrome-plated design with anti-slip protection and interchangeable blade; adjusting screw enables continuously adjustable cutting depth.

Insulation stripping of longer sheath sections can be carried out by leading the conductor through the hole in the handle area. With rotational direction marking for cable round cut.

6 - 13 mm $\varnothing$	1	10 0765
Replacement blade	1	10 0766

#### ROTAX 29 cable sheath stripper

Professional cable sheath stripper for round cut, longitudinal cut and spiral cut; for cable from 4.5 to 29 mm diameter. Due to the unique spiral cut, even difficult to process insulation types (e.g., rubber, butyl) can be easily removed. Adjustable cutting depth, especially stable plastic housing and extra sharp, interchangeable blade.

4.5 - 29 mm $\varnothing$	140	1	12 0036
Replacement blade		1	12 0038





## MULTISTRIPPER cable sheath stripper



Tool for processing all round cables from 8 to 13 mm  $\varnothing$ .

Sheath stripping: round and longitudinal cut, as well as flush stripping in difficult to reach places such as ceiling and wall areas, in distributors and junction boxes.

Insulation stripping: flexible and solid conductors 0.5 – 0.75 – 1.5 – 2.5 – 4 – 6 mm<sup>2</sup>

Cutting: solid conductors to 4 mm<sup>2</sup>, flexible conductors to 6 mm<sup>2</sup>

8 – 13 mm  $\varnothing$

1

12 0021



## »»JOKARI<sup>original</sup> Super sheath stripper



With round and longitudinal cutter, insulation stripping mechanism and foldaway additional knife

Sheath stripping: cable of 8 - 13 mm  $\varnothing$ , e.g.: 7 x 1.5 mm<sup>2</sup> or 5 x 2.5 mm<sup>2</sup>

Insulation stripping: 0.2 – 0.3 – 0.8 – 1.5 – 2.5 – 4 mm<sup>2</sup>

8 – 13 mm  $\varnothing$

1

12 0025

TiN



## »»JOKARI<sup>original</sup> Universal cable sheath stripper



for all common cables of 8 - 13 mm  $\varnothing$ .

Especially suitable for work in places that are difficult to access

8 – 13 mm  $\varnothing$

1

12 0028

TiN



## »»JOKARI<sup>original</sup> Sheath stripper for flat cables



for all common flat and oval cables to a width of 12 mm, insulation stripping for conductors and flexible stranded wires 0.75 – 1.5 – 2.5 mm<sup>2</sup>

max. 12 mm

1

12 0029



## »»JOKARI<sup>original</sup> All-rounder cable sheath stripper



All common round cables incl. cables for building wiring installations, wetroom, industrial, energy, telephone, solar, sensor, YMzK, halogen-free, data, coax, Cat (5,6,7), RG58/59, video cables as well as ribbon cable for installations. An insulation stripper for stripping the sheath off ribbon and round cables, for DIY, trade or industrial applications. Area to be stripped: common round cables with a PVC sheath, rubber, or hard plastic sheath 4 - 15 mm  $\varnothing$  such as NYM 3 x 1.5 mm<sup>2</sup> or 5 x 2.5 mm<sup>2</sup>, installation ribbon cable up to 15 mm width, flexible conductors 1.5 - 50 mm<sup>2</sup>. Long stretches of cable can be stripped using a longitudinal cut. Repositionable length stop for left and right handed people with a parking position for free conductor bypass for any length of stripping, structured, anti-slip surfaces, TÜV/GS certified. Stripping a cable with varying wall thickness of the sheath makes it difficult for any user not to damage the inner conductors because the cut depth of the blade and the contact pressure of the hand cannot be precisely controlled.

4 – 15 mm  $\varnothing$

130

1

12 0009



## »»JOKARI<sup>original</sup> Cable sheath stripper Uni-Plus



for sheath stripping round cables between 8 - 13 mm  $\varnothing$ , insulation stripping various types of cable, e.g. NYM 3 x 1.5 mm to 5 x 2.5 mm, it is not necessary to adjust the blade to the cutting depth, housing made of high quality, wear-resistant polyamide, with insulation stripping device for conductors and stranded wires 1.5 mm and 2.5 mm, with two-way length stop (ideal for right and left-handed people), with attachment device at the end of the handle, TÜV / GS certified

8 – 13 mm  $\varnothing$

130

1

12 0005



## »JOKARI<sup>original</sup> Locator box for 12 0009 and 12 0005

With the locator system, the user can equip their Allrounder sheath stripper CIMCO article no. 12 0009 or UNI-Plus CIMCO article no. 12 0005 with a force and height limiter (locator). After defining the blade spacing by precisely setting the locator to the wall thickness of the cable, the depth at which the blade can penetrate the cable sheath is limited. This significantly speeds up insulation stripping on type of cable which appear frequently. By adjusting the locator, the blade spacing on the Allrounder sheath stripper can be precisely set between 4.0 to 11.9 mm. The locator box can easily be stored in the tool handle and equipped with an Allen key as an accessory. The different colours of the locators provide the option to reserve set locators for selected types of cable which appear frequently. The locator system allows cut injuries caused by sharp blades to be avoided and allows a specified level of process safety to be attained in cable processing.

1	12 9009
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## DUOSTRIPPER sheath and insulation stripping tool



Sheath and insulation stripping with one tool.

Sheath stripping: for all common round cables of 4 - 28 mm  $\phi$ .

Insulation stripping: automatic adjustment to conductor widths of 0.5 - 6 mm<sup>2</sup>

4 - 28 mm $\phi$	1	12 0048
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## Varnish stripper

for wires of  $\phi$  mm

0.5 (AWG 24)	125	6	10 0710
0.6 (AWG 22)	125	6	10 0712



## 1.2 Application for coaxial cables

### »JOKARI<sup>original</sup> Cable sheath stripper COAXI

for all common cables of 4.8 - 7.5 mm  $\phi$ , especially suited for coaxial cable (antenna cable)

4.8 - 7.5 mm $\phi$	1	12 0027
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with length scaling

4.8 - 7.5 mm $\phi$	1	12 1027
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TiN



## ECONOMY coaxial cable insulation stripper

for coaxial cable, esp. RG 58, RG 59, RG 62, RG 6; adjustable knife cutting depth, 3 interchangeable knives, select from cutting distances of 8 mm, 6 mm and 4 mm

110	1	12 0098
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## CUT AND STRIP cable sheath stripper

Incremental trimming and stripping of sheaths and insulation of all common coaxial cables as well as of many flexible cables, integrated cable cutter up to 6 mm<sup>2</sup>, for all common cables 4.8 - 7.5 mm  $\phi$

4.8 - 7.5 mm $\phi$	1	12 0026
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## 1.3 Application for network cables / fibre optic cables

### »JOKARI<sup>original</sup> PC-STRIP insulation stripper

Special wire stripping tool for data and control lines, communication lines, system cables, etc.

Sheath stripping: cable of 5 - 13 mm  $\phi$

Insulation stripping: conductors of 0.2 - 4.0 mm<sup>2</sup> or AWG 26 - 11

5 - 13 mm $\phi$	1	12 0034
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TiN



### »»JOKARI<sup>original</sup> PC-CAT wire stripper



Special wire stripping tool for PVC-insulated data communication and control lines (e.g., CAT 5, CAT 6 or CAT 7 cable, twisted pair cable), sheath stripping for cables 4.5 to 10 mm  $\varnothing$  and 0.2, 0.3 and 0.8 mm<sup>2</sup>

4.5 – 10 mm $\varnothing$	1	12 0017
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for PVC-insulated data cables (e.g., CAT 5, CAT 6 or CAT 7 cable, twisted pair cable) with a  $\varnothing$  of 4.5 to 10 mm. It is not necessary to adjust the cutting depth to the respective diameter as the special blade position perfectly strips the outer insulation and the metal foil shield can then also be scored and removed. The insulation stripping blades are equipped with a premium titanium nitrate coating for precise cuts. TÜV/GS-tested.



4.5 – 10 mm $\varnothing$	1	12 0015
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### »»JOKARI<sup>original</sup> Sheath strippers for power and safety cables



for all common short-circuit-proof and short-to-ground-proof, flame-resistant, halogen-free lines (NSGAFÖU, VER H07RN-F, ignition cable), no cutting depth adjustment required, with integrated length stop for conductor cross section

Length stop	Conductor cross section	PU	Article no.
8 mm	1.5 mm <sup>2</sup>	1	12 0022
10 mm	2.5 mm <sup>2</sup> to 6 mm <sup>2</sup>	1	12 0023
12 mm	10 mm <sup>2</sup> to 16 mm <sup>2</sup>	1	12 0024

### »»JOKARI<sup>original</sup> Sheath and insulation stripping tool for rubberised AS-interface cable



for quickly and precisely removing sheaths and insulation stripping from two-conductor actuator sensor interface (AS-i) cable with rubberised profiled exterior insulation to a width of 12 mm. The cutting blades are designed for the special cable shape. No adjustment of the cutting depth required, individual blades on the side for stripping the insulation from both internal conductors (1.5 mm<sup>2</sup>).

125	1	12 0019
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### »»JOKARI<sup>original</sup> CAN-STRIP cable sheath stripper



Sheath stripper for Data Bus Twisted Pair cables and WF cables. Working range 3.3 to 3.6 mm  $\varnothing$ .

3.3 – 3.6 mm $\varnothing$	100	1	12 0007
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### Universal insulation stripper DATA STRIP for data cable



for trimming and stripping sheaths and insulation from round and flat cables, shielded and unshielded cables, adjustable cutting depth, 3 interchangeable knives, for cables from 2 to 10 mm  $\varnothing$

2 - 10 mm $\varnothing$	110	1	12 0092
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### LWL wire stripper

Precision insulation stripper with 3 stripping stations for primary coating, secondary coating and outer sheath for fibre optic cables; pre-set cutting depth, is however continuously adjustable, locking mechanism, ergonomic 2-component handle

1	12 1104
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## 1.4 Multiple application, also for crimping wire end ferrules

### DUOCRIMP multi-function tool



for cutting off and stripping insulation from conductors and stranded wires, as well as for crimping non-insulated and insulated wire end ferrules.

Working range of side cutter:	flexible	up to 6 mm <sup>2</sup>
	solid	up to 4 mm <sup>2</sup>
Working range of insulation stripper		up to 6 mm <sup>2</sup>
Crimping area		0.5-2.5 mm <sup>2</sup>
		4 -6 mm <sup>2</sup>

160	1	10 0720
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## Chapter 2 - Automatic wire strippers

Insulation stripping tools with which the process of stripping and removing the insulation is primarily performed automatically by the mechanical function of the tool.

### 2.1 Universal application: Single conductors, installation cables, underground cables

#### POWER STRIP



wire stripper that automatically adjusts itself to the conductor width, suitable for several common cables. Also suitable for problematic insulation, such as silicone insulation or outer sheaths made of PVC or flexible rubber cable (e.g.  $3 \times 0.75 \text{ mm}^2$ ). Optical length measurement 8 mm to 24 mm or  $\frac{5}{16}$ " to 1" for continuously consistent stripping lengths for volume work with wire end ferrules and cable lugs. Optimal force transmission and a window to push the cable through provide up to 20 cm of insulation stripping depending on the cable type. The special sensor system adjusts itself automatically to the respective cable width and protects the interior conductor from damage. A fine 5-fold pressure setting to various cable types and diameters is possible. With an integrated, easily accessible side cutter for flexible and solid copper conductors of up to 3 mm  $\varnothing$ . Ergonomic pistol grip for fatigue-free work, weight only 200 g. Designed for round cable of 0.5 to 16 mm<sup>2</sup> (AWG 20 to AWG 6)

0.5 - 16 mm <sup>2</sup>	170	1	10 0770
Replacement blade		1	10 0773
Designed for 2 and 3-conductor flat cable from 0.75 to 2.5 mm <sup>2</sup> and maximum widths up to 12 mm			
max. 12 mm	170	1	10 0771
Replacement blade		1	10 0772



#### MAXIM 6 automatic wire stripper



for finely wired and solid conductors with PVC insulation. For round, oval and flat cables of 0.2 - 6 mm<sup>2</sup>. Stripping length with stop can be set from 4 to 18 mm for volume work. No damage to the conductors due to special self-adjusting, interchangeable segmented cutter. Automatic opening of the gripping device after insulation stripping. Integrated high-performance wire cutter. Especially ergonomic, energy-saving design. Weight 198 g

0.2 - 6 mm <sup>2</sup>		1	10 0736
Replacement blade		1	10 0737



#### »JOKARI original EASYSTRIP wire stripper



Automatic stripping tool for Al and Cu wires from 0.5 - 6 mm<sup>2</sup> (AWG 20 to AWG 10), integrated side cutter for Cu wires up to 2.8 mm  $\varnothing$ , especially light and ergonomic. Weight 160 g.

0.5 - 6 mm <sup>2</sup>	180	1	10 0755
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#### Automatic wire stripper



for flexible stranded wires and solid conductors of 0.08 - 6 mm<sup>2</sup>. Automatic adjustment. Adjustable stripping length from 4 - 18 mm. With wire cutter

0.08 - 6 mm <sup>2</sup>		1	10 0730
Replacement blade		1	10 0731



#### MINIM automatic wire stripper



for solid and flexible cables and wires with PVC insulation, working range 0.08 - 2.5 mm<sup>2</sup>, automatic setting to conductor cross-section, replaceable blade, adjustable length stop for stripping length from 3 to 15 mm, integrated wire cutter (solid up to 1.5 mm<sup>2</sup>, flexible up to 2.5 mm<sup>2</sup>), particularly ergonomic "pistol" design, weight 260 g.

0.08 - 2.5 mm <sup>2</sup>		1	10 0738
Replacement blade		1	10 0739



#### Automatic wire stripper



for flexible stranded wires and solid conductors of 0.08 to 1 mm<sup>2</sup>. Automatic adjustment. Adjustable stripping length from 2.5 - 7 mm. With wire cutter

0.08 - 1 mm <sup>2</sup>	135	1	10 0732
Replacement blade		1	10 0733



### »»JOKARI<sup>original</sup> Automatic wire stripper



Wire stripper that automatically adjusts itself to the conductor width, for solid and flexible conductors and stranded wires from 0.2 mm<sup>2</sup> to 6 mm<sup>2</sup> (AWG 24 to AWG 10), suitable for standard insulation (e.g. of PVC), integrated wire cutter for copper and aluminium wires up to 2.5 mm<sup>2</sup>, with adjustable length stop from 6 to 18 mm for volume work, especially ergonomic due to handy pistol shape, handle with soft plastic insert.

Interchangeable knife weight 150 g

0.2 - 6 mm <sup>2</sup>	1	10 0775
Replacement blade	1	10 0777



### »»JOKARI<sup>original</sup> SUPER 4 PLUS wire stripper



for flexible stranded wires and solid conductors, suitable for almost all insulation types. In an ergonomic pistol shape with adjustable length stop of 6.0 to 15.0 mm. Automatic adjustment to widths of 0.2 mm<sup>2</sup> to 6.0 mm<sup>2</sup> with a special sensor system. Stable, easily accessible side cutter for wires up to 2.5 mm<sup>2</sup>.

0.2 - 6 mm <sup>2</sup>	160	1	10 0780
Replacement blade		1	10 0764



### »»JOKARI<sup>original</sup> Automatic wire stripper SAFETY-STRIP

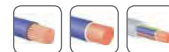


for flexible stranded wires and solid conductors of 0.2 to 6 mm<sup>2</sup>, insulation-protected to 1000 volt, tested in accordance to DIN EN 60 900, automatic adjustment to the conductor width, integrated length stop and closer for transport and storage

⚡ 1000 V 0.2 - 6 mm <sup>2</sup>	1	10 0762
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### »»JOKARI<sup>original</sup> MAXISTRIP wire stripper



for quick and problem-free insulation stripping of flexible stranded wires and solid conductors of 6 - 16 mm<sup>2</sup>.

Automatic adjustment to conductor width, damage to conductor is eliminated.

With optical length stop 15 - 18 - 20 mm. Weight 120 g.

6 - 16 mm <sup>2</sup>	180	1	10 0744
Replacement blade		1	10 0745



### »»JOKARI<sup>original</sup> Ribbon cable pliers (FKZ)



Automatic wire stripper suitable for PVC insulated ribbon cable up to a max. width of 12 mm and 0.75 x 2.5 mm<sup>2</sup>, cross-section, optical length stop up to 20 mm, not necessary to adjust the wire stripper, length to be stripped can be freely selected.

max. 12 mm	1	10 0724
Replacement blade	1	10 0726



## 2.2 Application for sensor lines

### »»JOKARI<sup>original</sup> SENSOR SPEZIAL automatic wire stripper



Wire stripper developed especially for halogen-free PUR and PVC lines, removes the outer sheath without damaging the inner conductor or the braid. Due to the absence of a length stop, cables can be stripped to any desired length.

Automatic adjustment and special blade geometry ensure secure insulation stripping for the following cable types:

Halogen-free sensor/actuator lines with PUR or PVC outer sheath, 3 to 8-conductor cable construction, shielded or unshielded (e.g., 3 x 0.34 mm<sup>2</sup> unshielded to 8 x 0.25 mm<sup>2</sup> shielded), round cable ø: 4.4 to 7 mm.

4.4 - 7 mm ø	165	1	10 0746
Replacement blade		1	10 0743



### »»JOKARI<sup>original</sup> SENSOR MINI wire stripper



Designed for processing sensor cables with a new type of blade, precise distance of PVC / PUR

cable sheaths from 3.20 mm ø upwards without damaging the conductor or the braid.

The sensor system for the pliers automatically adjusts to the various cable diameters. Stripping the insulation off cables, e.g. for the connection of sensor / actuator distributor boxes, bus couplers and plug connectors is quick and easy to do. Suitable for: PUR halogen-free sensor / actuator cables, highly flexible TPE-U cables,

PUR / PVC cables, PVC cables, multi-core cable as well as shielded and unshielded cables,

round cables 3.2 - 4.4 mm ø. Weight: 126 g

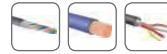
3.2 - 4.4 mm ø	165	1	10 0747
Replacement blade		1	10 0753



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## 2.3 Application for problematic insulations such as rubber, silicone, TPE, Teflon, etc.

### »JOKARI<sup>original</sup> HIGHSTRIP wire stripper



for quick and absolutely precise stripping of even problematic insulation stripping, such as Teflon, PVC, rubber, TPE, silicone, THHN, THWN, PMMA, fibre optic cables with PE sheath, e.g., 0.5 - 0.75 - 1.5 - 2.5 - 4 mm<sup>2</sup>. Damage to the conductor or stranded wires is eliminated, weight 100 g.

0.5 - 4 mm <sup>2</sup>	160	1	10 0740
Replacement blade		1	10 0741



## 2.4 Application for solar lines

### Automatic wire stripper



Automatic wire stripper for all common solar cables of 1.5 mm<sup>2</sup> to 6 mm<sup>2</sup> that are used in the photovoltaic sector. Due to the precise, fine, 5-fold adjustment, stripping even the multi-layered insulation of solar cables is no problem. Optical length measurement of 8 to 24 mm, 5/16" to 1" for continuously consistent stripping lengths. With an integrated, easily accessible side cutter for cable of up to 3 mm ø.

Ergonomic pistol grip for fatigue-free work. Weight 240 g

1.5 - 6 mm <sup>2</sup>		1	10 0774
Replacement blade		1	10 0779



## 2.5 Application for AS interface lines

### »JOKARI<sup>original</sup> Sheath strippers for AS-i cable with TPE or PUR insulation



for quickly and precisely removing sheaths from two-conductor actuator sensor interface (AS-i) cables with profiled exterior insulation of TPE (thermoplastic elastomer) or PUR (polyurethane) to a width of 12 mm. Special blade contour that adjusts to the cable profile, no cutting depth adjustment required, not possible to damage inner conductors. Fibre glass reinforced tool body, interchangeable knife, specially ground and hardened, weight only 120 g

	160	1	10 0748
Replacement blade		1 pair	10 0749



## 2.6 Application for cable sheath sections

### »JOKARI<sup>original</sup> OUTLET SPECIAL wire stripper

suited for round cables (e.g., NYM 3 x 1.5 mm<sup>2</sup>, 3 x 2.5 mm<sup>2</sup>, 5 x 1.5 mm<sup>2</sup>) or shielded lines. Especially useful in cramped working spaces. A 55 / 20 mm wide cable opening is created at any point in the cable in 3 steps; cutting depth 1.2 mm. Compatible with OBO cable laying system.



Longitudinal cut



Round cut to the left and right of the longitudinal cut through 1/4 rotational movement of pliers

up to 55 mm	175	1	10 0752
up to 20 mm	175	1	10 0751



## 2.7 Multiple application, also for crimping wire end ferrules

### »JOKARI<sup>original</sup> QUADRO wire stripper - The pliers with 4 functions

for efficient and precise processing of insulated wire end ferrules in strip form from 0.5 - 2.5 mm<sup>2</sup> functions:



#### 1. Cutting

for wires and stranded wires up to 2.5 mm<sup>2</sup>

#### 2. Insulation stripping

working range 0.5 - 2.5 mm<sup>2</sup>

#### 3. Twisting

no fanning out of the wires means safe feed-in of the conductor into the wire end ferrule.

#### 4. Crimping

flawless crimping of 0.5 - 2.5 mm<sup>2</sup> by appropriate trapezoidal crimping.

QUADRO complete case		1	10 0728
QUADRO changer magazine		1	10 0727
QUADRO pliers with magazine	180	1	10 0725

For sleeve strips, see page 257 in chapter 22.



## Chapter 3 - Precision insulation stripper

Stripping tools which are primarily operated mechanically and are suitable for small and tiny cable and line dimensions thanks to pre-defined grids.

### 3.1 Range with adjustable working range

#### »»JOKARI<sup>original</sup> Precision insulation stripper PWS-PLUS



Ideal for applications in electronics, computer technology, telecommunications, data communication, model building etc. Adjustable stripping range from 0.25 to 1.00 mm  $\varnothing$ , including adjustable length stop up to 15 mm and cutting mechanism for wires up to 0.8 mm  $\varnothing$ . Especially suitable for stripping conductors with outer insulation of PVC, Teflon<sup>®</sup>, KYNAR<sup>®</sup>, TEFZEL<sup>®</sup> and MYLAR<sup>®</sup>.

	Working range	AWG		
grey push button	0.12 - 0.4 mm $\varnothing$	36 - 26	1	12 0097
red push button	0.25 - 0.80 mm $\varnothing$	30 - 20	1	12 0033
blue push button	0.30 - 1.00 mm $\varnothing$	28 - 18	1	12 0031
Replacement blade			1	12 0099



### 3.2 Range with fixed working range

#### »»JOKARI<sup>original</sup> SWS-PLUS mini-precision insulation stripper



Simple and convenient mini-precision stripping tool for stripping the sheath off conductors and stranded wires. Suitable for conductors with outer insulation of: PVC, Teflon<sup>®</sup>, KYNAR<sup>®</sup>, TEFZEL<sup>®</sup> and MYLAR<sup>®</sup>. For applications in electronics, computer and networking technology, alarm and bell systems, wire wrapping, telecommunications, data communication and model construction. Particularly helpful for assembly workstations as the working range can be precisely set to a particular cable diameter, thereby avoiding any damage to the corresponding workpiece.

mm $\varnothing$	AWG		
0.12	36	1	12 0091
0.16	34	1	12 0093
0.20	32	1	12 0095
0.25	30	1	12 0083
0.30	28	1	12 0084
0.40	26	1	12 0085
0.50	24	1	12 0086
0.60	22	1	12 0087
0.80	20	1	12 0088
1.00	18	1	12 0089



### 3.3 ESD range (electrostatic discharges)

#### »»JOKARI<sup>original</sup> ESD-PLUS mini-precision insulation stripper



Simple and convenient mini-precision stripping tool for stripping the sheath off conductors and stranded wires. Tool housing made of electrostatically discharging material. Especially suitable for conductors with outer insulation of PVC, Teflon<sup>®</sup>, KYNAR<sup>®</sup>, TEFZEL<sup>®</sup> and MYLAR<sup>®</sup>. For applications where electrostatic discharge could damage components.

mm $\varnothing$	AWG		
0.12 - 0.40	36 - 26	1	12 0035
0.25 - 0.80	30 - 20	1	12 0037
0.30 - 1.00	28 - 18	1	12 0039



## Chapter 4 - Cable stripping knife

Cable stripping knife with one or more functions.

### Automatic cable stripping knife

Cable stripping knife, time-tested through millions of uses, for round and longitudinal cuts, individually screw-adjustable cutting depth that eliminates damage to the inner conductor. Handle shells of wear-resistant polyamide.

Both the tips of the interior cable stripping knives and the cutting edges of the attached clamping blades are coated with titanium nitride. At approx 500 °C, the cutting blade is vapour coated with titanium nitride in a vacuum chamber according to the PVD process. Excellent gliding qualities and high resistance to wear and abrasion are achieved through the reduced surface area structure and the extremely high hardness. TiN-coated blades can be used with significantly higher durability and cutting performance.

#### »JOKARI<sup>original</sup> Cable stripping knife

Design with changeable blades and TiN-coated safety blade.

Two-component tool with improved ergonomics for better control during the stripping process and safe operation.

Blade system very easy to exchange without aid of the tool; blade size as delivered for cable diameter 8 - 28 mm.

Adjustable and scalable inner blade for longitudinal and round cut. Protected hooked blade with adjustable depth; automatic protection mechanism in order to avoid unintentional slipping and cut injuries.



**TiN**

8 - 28 mm ø	1	12 2016
Exchangeable hook blades for 12 2016		
4 - 16 mm ø	1	12 2020
8 - 28 mm ø	1	12 2021
27 - 35 mm ø	1	12 2022
35 - 50 mm ø	1	12 2023
50 - 70 mm ø	1	12 2024

Replacement parts

Hook blade, TiN-coated	1	12 2025
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### Replacement blade (inner blade)

for all automatic cable stripping knives

1	12 0020
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**TiN**

#### »JOKARI<sup>original</sup> Cable stripping knife

Two-component tool with non-slip, soft grip insert and thumb mould

for optimal handiness.

with hooked blade

8 - 28 mm ø	1	12 0010
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with straight blade

8 - 28 mm ø	1	12 0011
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**TiN**

#### »JOKARI<sup>original</sup> Cable stripping knife without blade

for slitting open and stripping sheaths from moisture-proof cables, two-component tool

with non-slip, soft grip insert and thumb mould for optimal handiness.

4 - 16 mm ø	1	12 0012
8 - 28 mm ø	1	12 0014
28 - 35 mm ø	1	12 0016
35 - 50 mm ø	1	12 0018
50 - 70 mm ø	1	12 0013



**TiN**

#### »JOKARI<sup>original</sup> Cable stripping knife

Standard design with enlarged adjusting screw

with hooked blade

8 - 28 mm ø	1	12 1010
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with straight blade

8 - 28 mm ø	1	12 1011
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**TiN**

#### »JOKARI<sup>original</sup> Cable stripping knife without blade

Standard design with enlarged adjusting screw For cutting open and stripping the sheath off wetroom cables.

4 - 16 mm ø	1	12 1012
8 - 28 mm ø	1	12 1014





### »»JOKARI<sup>original</sup> Cable stripping knife without blade

fully insulated, all individual parts except for interior knife made of plastic, for stripping sheaths from all conventional cables, with enlarged adjusting screw.

8 - 28 mm  $\varnothing$  1 12 0008



#### Protective cap

Replacement protective cap for all automatic cable stripping knives with a blade.

1 12 1020

### SAFETY STRIPPER automatic cable stripping knife

Cable stripping knife with self-rotating blade for round and longitudinal cuts, for cable from 4 to 28 mm  $\varnothing$  ( $5/32$ " to  $1 1/8$ ""). An adjustment screw enables the cutting depth to be individually adjusted. Handle shells of wear resistant, fibre glass reinforced polyamide. Hooked blade foldaway and lockable.

4 - 28 mm  $\varnothing$  1 12 0006



### SAFETY STRIPPER PLUS automatic cable stripping knife

Cable stripping knife with self-rotating blade for round and longitudinal cuts, for cable from 4 to 28 mm  $\varnothing$  ( $5/32$ " to  $1 1/8$ ""). An adjustment screw enables the cutting depth to be individually adjusted. Handle shells of wear resistant, fibre glass reinforced polyamide. Insulation stripping (0.5 - 0.8 - 1.5 - 2.5 - 4.0 - 6.0 mm<sup>2</sup>) via flap mechanism on handle end.

4 - 28 mm  $\varnothing$  1 12 0004



### Cable stripping knife - shears set, 2 piece

Cable stripping knife

Blade design with reinforced blade back and lightly serrated front cutting edge. The additional cutting edge in the front area of the main cutting edge, together with the metal guide shoe on the blade guard, allows you to make secure longitudinal cable cuts. The foldaway blade guard with integrated stripper for cable of 0.5 - 6 mm<sup>2</sup> (AWG 20 - 10) can also be used as counter pressure on the cable for round cuts to a diameter of 50 mm. Total length 170 mm, blade length 45 mm.

Electrician scissors

one-sided micro-serrated cutting edge, fibre glass reinforced, impact-resistant, 2-component plastic handle, total length 140 mm, cutting edge length 47 mm. For cutting and stripping insulation from conductors and cables to a diameter of 22 mm, for cutting insulating tape, cable ties and other materials.

Tool holder

light plastic holder for knives and shears with belt receiver. The knife can also be secured by means of a locking mechanism

2 pieces 180 mm 1 12 0218



### 1000 V Safety cable stripping knife

with insulated blade back and blade guard that folds away into the shaft, interchangeable blade

Blade length 50 mm 1 12 0064

Interchangeable blade 1 12 0066



### 1000 V Safety cable stripping knife

Cable stripping knife especially suitable for working with insulation on large cables, with strong, straight blade of stainless steel, blade length approx. 50 mm. 1000 volt insulating handle with large anti-slip protection in modern 2-component technology (polypropylene with soft rubber insert) for working comfortably and securely even in wet, cold or hot conditions. With blade protection cover.

1 12 1042



### 1000 V Cable stripping knife

with hooked blade and shuttle

Blade length 40 mm 1 12 0046






### 1000 V Cable stripping knife

with strong, straight blade

Blade length 50 mm 1 12 0042



Design	Size/mm	PU	Article no.
 <b>1000 V Cable stripping knife</b> with straight blade and insulated blade back Blade length 50 mm		1	12 0043
 <b>1000 V Stripping knife</b> with hooked cutting edge Blade length 35 mm		1	12 0044
 <b>1000 V Cable paper knife</b> with especially sharp blade Blade length 50 mm		1	12 0045
<b>Cable stripping knife</b> Haft of a single piece, impact-resistant plastic. Blade with round and triangular scraper 1 pieces		1	12 0050
with wooden shell, blade with scraper 1 pieces		12	12 0052
with wooden shell, blade and reamer 2 pieces		12	12 0054
with wooden shell, blade, reamer and screwdriver 3 pieces		12	12 0056
with plastic shell, 2 blades, reamer and screwdriver 4 pieces		12	12 0058
<b>Cable and lead knife</b> with wooden haft and fixed blade 1 pieces		12	12 0060
<b>Safety knife</b> made of die cast zinc, for trapezoidal blades 60 x 19 x 65 mm, blade can be changed without tools (interlock system), with blade storage		1	12 0062
Replacement blades for 12 0062	175	10	12 0063
<b>Universal knife</b> made of die cast zinc, stainless steel blade guide, knife feeder with locking system with rubber insert 18 mm Replacement blade for 12 0078	170	1 10	12 0078 12 0079
lightweight plastic design, with adjustable foldaway blade (breakaway blade, 9 mm) <b>ECONOMY</b> 2-component, professional design Replacement blades for 12 0080 / 12 0081	135 135	12 1 10	12 0080 12 0081 12 0082



# SAWS, PIPE CUTTERS

## Design

With the handy pistol shape, already laid pipes can be quickly and easily shortened. Pumping movements release the ratchet mechanism and the blade is thus pushed through the cutting material with the slightest manual effort.

## Blade

The robust replaceable cutting edge can be used with the following materials: hard and soft plastics, rubber hoses, Isoflex pipes, hard and soft PVC pipes, etc. The blade symmetry provides precise right angle cuts without burrs or deformation.



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## Pocket saws PUK Vario

Innovative small saw bow of 10 x 5 mm flat steel, high-gloss zinc plating, with ergonomic, glass fibre reinforced plastic handle, blade tension via embedded knurled screw. 65 mm high sawing space. In two different lengths, each with universal saw blade.

Design	Weight	Size/mm	PU	Article no.
Vario 150	165 g	260	1	12 0515
Vario 200	177 g	310	1	12 0520

## Pocket saws PUK

Span width 150 mm, with metal cutting saw blade

Design	PU	Article no.
with adjustable polished wooden haft	3	12 0500
with firm, lacquered wooden haft	6	12 0502

## Pocket saw PROFI

with universal blade

Design	PU	Article no.
Span width 150 mm	10	12 0490

## 1000 V saw bow

fully insulated

Design	PU	Article no.
Span width 150 mm	1	12 0700

## Bulk saw blades

According to DIN 6494 Form C, 150 mm length, 6 mm width, 0.4 mm thickness

Wood cutting saw blade for hard and soft woods, chipboard and hardboard, soft plastic, etc.

Design	PU	Article no.
Tooth pitch 1.8 mm (14 teeth per inch)	150	12 0504
as above but for Vario 200	200	12 0505

Universal saw blade for steel, aluminium, nonferrous metals, fibre glass, plastic conduit and pipes, mineral, rigips and cement asbestos boards

Design	PU	Article no.
Tooth pitch 1.0 mm (25 teeth per inch)	150	12 0506
as above but for Vario 200	200	12 0507

Metal cutting blade for all metals, non-ferrous metals (copper), stainless steel, special alloys, Plexiglas® and plastics

Design	PU	Article no.
Tooth pitch 0.8 mm (32 teeth per inch)	150	12 0512
as above but for Vario 200	200	12 0513

## Saw blade set

According to DIN 6494 Form C, 150 mm length, 6 mm width, 0.4 mm thickness. Contains 3 each of the following: universal saw blade (tooth pitch 1.0 mm (25 teeth per inch)), metal cutting saw blade (tooth pitch 0.8 mm (32 teeth per inch)), fine metal cutting saw blade for especially fine, burr-free cuts even in very thin sheets (tooth pitch 0.5 mm (50 teeth per inch)), wood cutting saw blade (tooth pitch 1.8 mm (14 teeth per inch))

PU	Article no.
1	12 0508

## Metal saw bow

Innovative metal saw bow with 2-component plastic handle in ultra-lightweight design. Ergonomic saw line, fibre glass reinforced, total length 400 mm, suitable for a wide range of tool cases (bottom shell), integrated key and blade magazine, powder-coated, PUK bi-metal saw blade 300 mm, 24 teeth/inch

PU	Article no.
1	12 0530

## Metal saw bow

Especially light and simultaneously very stable metal cutting saw for 300 mm saw blades. Made of die cast aluminium in an ergonomic design, with soft rubber inserts on the handle and front grip. High cutting precision of the blade in straight and 40 degree position due to captive locking pins. Blade can be tensioned up to 800 N by turn-lock fastener in the handle. Delivery incl. a bi-metal cutting saw blade.

Design	Weight	PU	Article no.
Span width 300 mm	650 g	1	12 0602



### Metal saw bow

Hacksaw with innovative quick release on the two-component handle for single-sided saw blades DIN 6494 Form A. With improved grip due to nonslip plastic and additional front slide protection, glossy chrome-plated, with captive locking pins.

Span width 300 mm	520	6	12 0600
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### Metal saw bow

adjustable, made of right-angle steel tubing, material thickness 16 x 10 mm, red powder coating, with attachment pin

Span width 300 mm		6	12 0607
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### 1000 V saw bow

Fully insulated hacksaw with innovative quick release on the handle for single-sided saw blades DIN 6494 Form A. With improved grip due to nonslip plastic and reduced weight.

Span width 300 mm	Weight 785 g	520	1	12 0702
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### Metal cutting saw blade

according to DIN 6494 Form A, single-sided

Material	Dimensions mm	Teeth per inch		
HSS-CO	300 x 13 x 0.65	24	100	12 0608

Form B, double sided

Material	Dimensions mm	Teeth per inch		
WS	300 x 25 x 0.8	24	50	12 0614

### SUPER pipe cutter

New, reinforced design

Working range 6 - 35 mm ø	1	12 0410
Replacement blade	1	12 0412

### MAXI pipe cutter

with adjustment-lever for modification of cut-opening

Working range 6 - 42 mm ø	1	12 0420
Replacement blade	1	12 0422

### MINI plastic pipe shears

made of die cast magnesium, for cutting plastic and composite pipes up to a diameter of 35 mm. Optimum power transmission, with quick change system for changing blades simply and easily. Automatic blade retraction.

Blade of PTFE-coated INOX steel with long service life (made in Solingen).

Extremely light and compact, only 270 g.

35 mm ø / 1 3/8"	220	1	12 0416
Replacement blade		1	12 0417

### PROFI plastic pipe cutter

made of die cast magnesium, for cutting plastic and composite pipes up to a diameter of 42 mm. Optimum power transmission thanks to ratchet mechanism with progressive, gear driven blade feed with 2-component handle.

Blade retraction via one-hand quick retraction mechanism. With quick change system for replacing blades quickly and easily. Blade of PTFE-coated INOX steel with long service life (made in Solingen).

42 mm ø / 1 5/8"	240	1	12 0418
Replacement blade		1	12 0419



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## Universal pipe cutter

with 2 interchangeable knives for insulation and hard PVC pipes and for soft plastic and rubber hoses

Pipe outer ø max. 29 mm	200	1	12 0450
Bulk knives			
for hard PVC		1	12 0452
for soft pipes		1	12 0453



## Corrugated pipe cutter

for cutting and trimming corrugated plastic tubes (flex tubes) and plastic shield tubes up to 42 mm ø in the electrical, plumbing and heating fields, simply rotate the tool to safely cut at the outer diameter without damaging the interior pipe, with two interchangeable cutting inserts, weight only 45 g

Working range to 42 mm ø	110	1	12 0430
Replacement cutting inserts		1 pair	12 0432



## Ratchet pipe cutter

Innovative pipe cutter with a worldwide patent. Ratchet mechanism allows you to cut a pipe without having to completely rotate the tool. Especially suitable for work in restricted working spaces (e.g., pipes installed in corners or on walls). One-hand operation. Especially high performance. Thanks to special cutting wheel and double roller guides (speed, durability). Integrated deburrer for clean edges on the cut pipes. Easily interchangeable cutting wheel. One replacement cutting wheel is contained in the scope of delivery.

Weight 400 g. For plastic, copper, aluminium and similar pipes.

For outer pipe diameters ranging from 12 to 35 mm ( $1/4''$  to  $1 3/8''$ ).

	175 x 38 x 68	1	12 0480
Replacement wheel		1	12 0481



## Hole and disc cutter

for manual operation, with scale, for rubber, leather, plastic, etc., two knives also provide ring cutouts

400 mm ø		1	12 0834
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## Hole punch for trapezoidal sheets

for trapezoidal sheets up to 1.2 mm thick and for a cutting width up to 100 mm. Depth stop adjustable from 35 mm – 105 mm. Tempered punching die fitted with formed ejection springs.

with hole diameter 10 mm	700 mm	1	10 1570
Punching die with ejection springs		1	10 1571



# DRILLS, HOLE SAWS, DIAMOND TOOLS

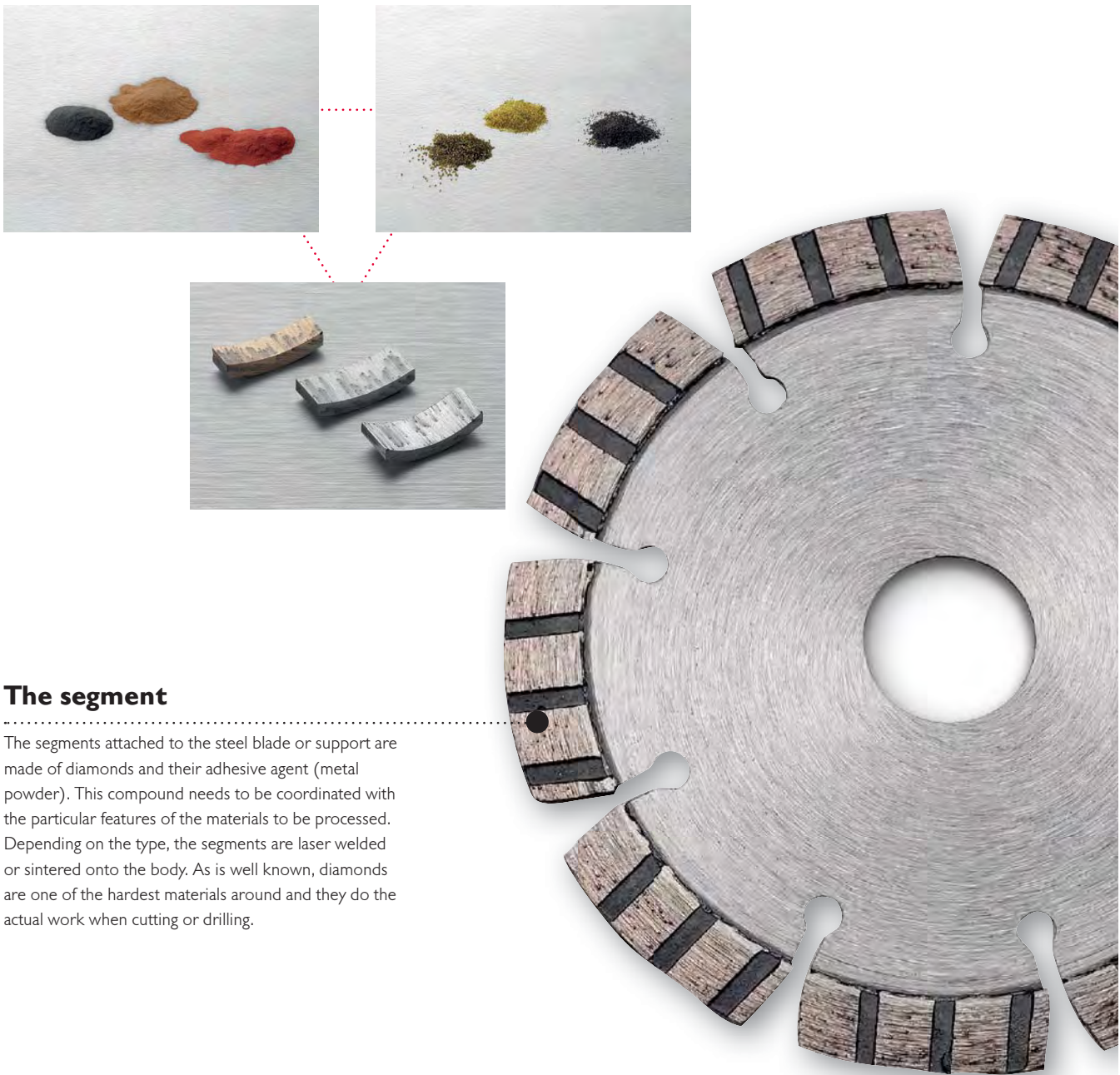
Materials used today are required to be highly energy efficient.

They not only need to provide a high level of thermal insulation, be breathable and flame-resistant, but must also be resistant to mould and provide excellent sound insulation.

This increases the demands made of the tools to be used.

And that is precisely where we come into play! We have compiled a product range of diamond tools which meets both the requirements of modern materials (e.g. concrete, quality C 20/25, C 25/30) and also those of the used in older buildings (e.g. natural stone).

The diamond segments in our cutting disks and core bits are just one of the advantages you will find in these professional tools which allow the user to attain first class results when carrying out the work required.



## The segment

The segments attached to the steel blade or support are made of diamonds and their adhesive agent (metal powder). This compound needs to be coordinated with the particular features of the materials to be processed. Depending on the type, the segments are laser welded or sintered onto the body. As is well known, diamonds are one of the hardest materials around and they do the actual work when cutting or drilling.

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## Pneumatic rotary drill hammer 550 W

The lightest rotary hammer drill with the best weight/performance ratio in the world, an ergonomic shape allowing you to work without tiring, with brush switchover of maximum torque turning to the left and right, sophisticated hammer drill technology for the diameter range 6-12 mm (raw plug holes), robust magnesium pressure-cast transmission casing, network cable module 4 m long

Included in delivery:

550 W pneumatic rotary drill hammer and 2-component soft handle complete with drilling depth stop.

Supplied in a professional plastic case.

Power consumption	550 Watt
Idling speed	0...1450 rpm
Hammer energy	1.8 Joule
Tool holder	SDS Plus
Recommended drilling range	
Hammer drilling	up to a $\varnothing$ of 4-12 mm
Hammer drilling in concrete	up to a $\varnothing$ of 18 mm
Drilling in steel	up to a $\varnothing$ of 13 mm
Drilling in wood	up to a $\varnothing$ of 25 mm
Machine weight	1700 g

1 11 0002



## 850 W 2-speed hammer drill

Ergonomic shape full-wave electronics with speed selection, brush switchover allowing maximum torque turning to the left and right, mechanical 2-gear transmission, made of robust pressure-cast aluminium, metal quick-action chuck  $\varnothing$  13 mm, network cable module 4 m long.

Included in delivery:

850 W 2-speed hammer drill and 2-component soft handle complete with drilling depth stop.

Supplied in a professional plastic case.

Power consumption	850 Watt
1st gear idling speed	0 ... 1250 rpm
2nd gear idling speed	0 ... 3000 rpm
Drilling capacity in $\varnothing$ :	wood 40 mm, steel 13 mm, hammer drilling: concrete 20 mm
Machine weight	2300 g

1 11 0004



## 14.4 V 2-speed cordless screwdriver

Powerful cordless screwdriver with rapid-action chuck changing system, 2-gear planetary transmission in 1st gear for screw action and 2nd gear for drilling, robust aluminium pressure-cast transmission housing, charging time only 15 min., lithium-ion battery technology.

Included in delivery: 14.4 Volt 2-speed cordless screwdriver,  $\varnothing$  13 mm quick-clamping chuck, second battery pack.

Supplied in a professional plastic case. Battery 14.4 Volt / 1.5 Ah Li-Ion

1st gear idling speed	0...360 rpm
2nd gear idling speed	0...1500 rpm
Chuck span	1.5 – 13 mm
Drilling in wood	up to a $\varnothing$ of 38 mm
Drilling in steel	up to a $\varnothing$ of 13 mm
Screwing in wood	up to a $\varnothing$ of 10 mm
Max. torque (hard)	55 Nm
Machine weight incl. chuck	1600 g

1 11 0006





## Twist drill

according to DIN 338/HSS Type N, short cylindrical, right-hand cutting, roll-forged design

ø mm	Total length	Spiral length		
1.0	34	12	10	20 0314
1.5	40	18	10	20 0324
2.0	49	24	10	20 0334
2.4	57	30	10	20 0342
2.5	57	30	10	20 0344
2.8	61	33	10	20 0350
3.0	61	33	10	20 0354
3.1	65	36	10	20 0356
3.2	65	36	10	20 0358
3.3	65	36	10	20 0360
3.5	70	39	10	20 0364
4.0	75	43	10	20 0373
4.1	75	43	10	20 0374
4.2	75	43	10	20 0375
4.5	80	47	10	20 0379
4.8	86	52	10	20 0383
5.0	86	52	10	20 0385
5.1	86	52	10	20 0386
5.2	86	52	10	20 0387
5.5	93	57	10	20 0391
6.0	93	57	10	20 0397
6.5	101	63	10	20 0403
6.8	109	69	10	20 0407
7.0	109	69	10	20 0409
7.5	109	69	10	20 0415
8.0	117	75	10	20 0421
8.5	117	75	10	20 0427
9.0	125	81	10	20 0433
9.5	125	81	10	20 0439
10.0	133	87	10	20 0445
10.2	133	87	10	20 0447
10.5	133	87	10	20 0451
11.0	142	94	10	20 0457
11.5	142	94	10	20 0463
12.0	151	101	5	20 0469
12.5	151	101	5	20 0472
13.0	151	101	5	20 0476

Further dimensions, in particular intermediate sizes available ex stock.

## Twist drill sets

according to DIN 338, in highly-stable plastic cartridge with clamping bar for each drill

Unit	ø mm	increasing by			
			mm		
Roll-milled drill, HSS					
19	1 - 10	0.5		1	20 1352
25	1 - 13	0.5		1	20 1354
Profile-ground drill, HSS, uncoated design					
19	1 - 10	0.5		1	20 1358
25	1 - 13	0.5		1	20 1360

## Twist drill set

in round plastic box, roll-milled drill, HSS, according to DIN 338

Unit	ø mm	increasing by			
			mm		
19	1 - 10	0.5		1	20 1320

## Twist drill workshop magazine

in metal cartridge, roll-milled drill, HSS, according to DIN 338, 170 pieces, increasing by 0.5 mm

10 units each of sizes 1.0 - 8.0 mm and 5 units each of sizes 8.5 - 10.0 mm	1	20 1340
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## Stone and concrete drill

with hard metal blades and cylindrical shaft, ideal for use in cordless combi drills, optimised for constantly recurring applications in masonry

ø mm	Total length	Spiral length		
4	85	45	10	20 1604
5	90	50	10	20 1610
6	100	60	10	20 1614
	150	110	10	20 1702
	400	275	10	20 1752
7	100	60	10	20 1618
8	120	80	10	20 1622
	400	275	10	20 1758
	600	350	5	20 1854
10	150	110	10	20 1630
	400	275	10	20 1760
12	150	90	10	20 1634
	400	275	10	20 1762
14	150	90	10	20 1638
	600	500	10	20 1862



## Stone and concrete drill set, 7 pieces

for hammer drills and cordless screwdrivers. With round shaft and four-spiral conveying helix for a rapid transportation of the drilling dust. Hard metal tips, premium soldering. In a practical plastic box.

Drill ø x length mm

4 x 80 / 5 x 95 / 5 x 150 / 6 x 100 / 8 x 120 / 10 x 120 / 12 x 150 mm 1 20 1380

## PROFI SDS-Plus hammer drill

with hard metal blades, high drilling speed thanks to the wide Twinmax helix, the user is protected by the vibration-optimised drilling behaviour, certified by the German Masonry Drill Bit Testing Association (PGM) in accordance with the requirements as set out by the German Institute for Building Technology (DIBt), suitable for all machines with SDS plus holders, Made in Germany

ø mm	Total length	Spiral length		
5	110	50	1	20 8302
	160	100	1	20 8304
6	110	50	1	20 8308
	160	100	1	20 8310
7	110	50	1	20 8316
	160	100	1	20 8318
8	110	50	1	20 8320
	160	100	1	20 8322
	210	150	1	20 8324
10	110	50	1	20 8328
	160	100	1	20 8330
	210	150	1	20 8332
	310	250	1	20 8334
	460	400	1	20 8336
12	260	200	1	20 8341
	160	100	1	20 8342
	210	150	1	20 8343
	310	250	1	20 8344
	450	400	1	20 8346
	600	550	1	20 8348
14	160	100	1	20 8354
	200	150	1	20 8355
	300	250	1	20 8356
	450	400	1	20 8357
15	250	200	1	20 8360
16	160	100	1	20 8362
	200	150	1	20 8364
	300	250	1	20 8365
	450	400	1	20 8366
	600	550	1	20 8368
18	200	150	1	20 8372
	450	400	1	20 8373
19	450	400	1	20 8378
20	200	150	1	20 8380
	450	400	1	20 8382
22	250	200	1	20 8384
	450	400	1	20 8386
24	250	200	1	20 8388
25	300	250	1	20 8390

Further sizes on request.



## SDS-Plus hammer drill set, 7 pieces

equipped with drills from our 20 8300 ff. range, supplied in a stable plastic cartridge.

Drill  $\varnothing$  x length mm

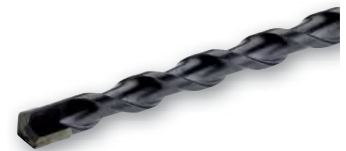
5 x 110 / 6 x 110 / 6 x 160 / 8 x 110 / 8 x 160 / 10 x 160 / 12 x 160 1 20 1395

## SDS-Plus hammer drill CIMCO

with hard metal blades, for all concrete and stone applications (concrete, aerated concrete/YTONG, sand-lime brick masonry, stone), certified by the German Masonry Drill Bit Testing Association (PGM) in accordance with the requirements as set out by the German Institute for Building Technology (DIBt), suitable for all machines with SDS plus holders

$\varnothing$ mm	Total length	Spiral length		
5	110	50	1	20 8602
	160	100	1	20 8604
5.5	110	50	1	20 8605
	160	100	1	20 8606
6	110	50	1	20 8608
	160	100	1	20 8610
6.5	110	50	1	20 8616
	160	100	1	20 8618
8	110	50	1	20 8620
	160	100	1	20 8622
	210	150	1	20 8624
	310	250	1	20 8634
10	110	50	1	20 8628
	160	100	1	20 8630
	210	150	1	20 8632
	310	250	1	20 8634
	450	400	1	20 8636
	600	550	1	20 8648
12	160	100	1	20 8642
	210	150	1	20 8643
	310	250	1	20 8644
	450	400	1	20 8646
14	160	100	1	20 8654
	210	150	1	20 8655
	310	250	1	20 8656
	450	400	1	20 8657
16	160	100	1	20 8662
	210	150	1	20 8664
	450	400	1	20 8666
	600	550	1	20 8668
18	210	150	1	20 8672
	450	400	1	20 8673
20	210	150	1	20 8680
	450	400	1	20 8682
22	310	250	1	20 8684
	450	400	1	20 8686
25	310	250	1	20 8690

Further sizes on request.



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## TripleX SDS-Plus hammer drill

Three-winged hard metal blades with a wave-like head design and laterally reinforced blade shape make the TripleX permanently strong in the hardest concrete. Also suitable for stone, aerated concrete, sand-lime brick masonry. An innovative, the TripleX owes its extreme service life and powerful drilling behaviour to its very wide hard metal design of the drilling head. The embedded hard metal head complete with curved shape is created using a novel production process, enabling it to withstand the highest of forces. Thanks to its three wide spirals in combination with the three hard metal blades, ideal drilling dust removal is ensured without the drilling dust being blown out. Also remains steady in the event of reinforcement being struck.

The TripleX is certified by the German Masonry Drill Bit Testing Association (PGM) in accordance with the requirements as set out by the German Institute for Building Technology (DIBt).

ø mm	Total length	Spiral length		
5	110	50	1	20 8400
5	160	100	1	20 8402
5.5	110	50	1	20 8404
5.5	160	100	1	20 8406
6	110	50	1	20 8408
6	160	100	1	20 8410
6	210	150	1	20 8412
6	260	200	1	20 8414
6.5	110	50	1	20 8416
6.5	160	100	1	20 8418
6.5	210	150	1	20 8420
7	160	100	1	20 8422
7	210	150	1	20 8424
8	110	50	1	20 8426
8	160	100	1	20 8428
8	210	150	1	20 8430
8	260	200	1	20 8432
8	310	250	1	20 8434
8	450	400	1	20 8436
10	110	50	1	20 8438
10	160	100	1	20 8440
10	210	150	1	20 8442
10	260	200	1	20 8444
10	310	250	1	20 8446
10	450	400	1	20 8448
10	600	550	1	20 8450
12	160	100	1	20 8452
12	210	150	1	20 8454
12	260	200	1	20 8456
12	310	250	1	20 8458
12	450	400	1	20 8460
12	600	550	1	20 8462
14	160	110	1	20 8464
14	200	150	1	20 8466
14	250	200	1	20 8468
14	300	250	1	20 8470
14	450	400	1	20 8472
14	600	550	1	20 8474
16	200	150	1	20 8476
16	260	200	1	20 8478
16	300	250	1	20 8480
16	450	400	1	20 8482
16	600	550	1	20 8484



## SDS-MAX hammer drill

with hard metal blades, 12 - 15 mm  $\varnothing$  = 2 blades, from 16 mm in  $\varnothing$  = 4 blades, with SDS-MAX holder system, suitable for all machines with SDS-MAX holders.

$\varnothing$ mm	Total length	Spiral length		
12	340	200	1	20 8100
	540	400	1	20 8102
	740	600	1	20 8104
14	340	200	1	20 8106
	540	400	1	20 8108
15	340	200	1	20 8110
	540	400	1	20 8112
16	340	200	1	20 8114
	540	400	1	20 8116
18	340	200	1	20 8118
	540	400	1	20 8120
20	320	200	1	20 8122
	520	400	1	20 8124
	920	800	1	20 8126
22	320	200	1	20 8128
	520	400	1	20 8130
	920	800	1	20 8132
24	320	200	1	20 8134
	520	400	1	20 8136
25	320	200	1	20 8138
	520	400	1	20 8140
	920	800	1	20 8142
28	320	200	1	20 8144
	520	400	1	20 8146
30	320	200	1	20 8150
	520	400	1	20 8152
32	320	200	1	20 8154
	520	400	1	20 8156
	920	800	1	20 8158
35	320	200	1	20 8160
	520	400	1	20 8162
	720	600	1	20 8164
38	320	200	1	20 8166
	520	400	1	20 8168
40	320	200	1	20 8170
	520	400	1	20 8172
	920	800	1	20 8174



## Multi-purpose drills

with hard metal blades and cylindrical shaft. The ideal universal drill for a variety of materials used during construction. A slight hammer action may be used when drilling in masonry and stone.

$\varnothing$ mm	Total length	Spiral length		
4	85	45	1	20 1880
5	95	50	1	20 1882
6	100	60	1	20 1884
7	150	110	1	20 1886
8	120	80	1	20 1888
10	120	80	1	20 1890
12	150	90	1	20 1892

**SDS-Plus chisel****Pointed chisel**

for the laying of lines, for all types of chiselling / demolition works as well as breakthrough works.

11 mm, round	250	1	20 8002
14 mm, square	250	1	20 8004

**Flat chisel**

for selective breaking actions, all types of chiselling / demolition works and breakthrough works.

20 mm	250	1	20 8010
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**Spade chisel**

for the large-scale universal removal of material.

40 mm	250	1	20 8006
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**Gouge**

for cutting narrow channels into concrete and masonry.

22 mm	250	1	20 8020
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**Tile chisel**

for the removal of tiles.

40 mm	250	1	20 8012
75 mm	165	1	20 8000

**Winged chisel**

for the stemming, cutting and pulling of channels with a depth restriction.

22 mm	250	1	20 8008
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**Groove chisel**

for removing and cleaning grooves and masonry.

25 mm	250	1	20 8014
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**HM groove chisel**

for removing and cleaning grooves and masonry with an extra-long service life.

32 mm	125	1	20 8016
32 mm	200	1	20 8018

**SDS-Max chisel****Pointed chisel**

for the laying of lines, for all types of chiselling / demolition works as well as breakthrough works.

	280	1	20 8030
	400	1	20 8032
	600	1	20 8034

**Flat chisel**

for selective breaking actions, all types of chiselling / demolition works and breakthrough works.

25 mm	280	1	20 8036
25 mm	400	1	20 8038
25 mm	600	1	20 8040

**Spade chisel**

for the large-scale universal removal of material.

50 mm	400	1	20 8042
80 mm	300	1	20 8044
115 mm	350	1	20 8060

**Channel chisel**

for the pulling, stemming and cutting of channels.

32 mm	300	1	20 8046
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**Gouge**

for cutting narrow channels into concrete and masonry.

26 mm	300	1	20 8050
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### Toothed chisel

for restoring grooves and masonry.

32 mm	300	1	20 8052
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### Mortar chisel

for removing and cleaning joints in masonry and mortar.

10 mm	300	1	20 8054
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### Tile chisel

for the removal of tiles.

50 mm	300	1	20 8056
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### Winged chisel

for the stemming, cutting and pulling of channels with a depth restriction.

35 mm	380	1	20 8058
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### Impact core bits

The 6 accurately ground blades soldered with silver achieve excellent durability, even when dealing with hard materials. The hardened steel body with M 16 female thread and the optimised concentricity is ideally suited for concrete, stone, masonry, clinker brick, tiles and lightweight construction materials.

Holder shaft in hexagonal or SDS-plus version. Low-wear hard metal teeth with slot soldering ensure maximum stability. With interchangeable centring drill bits for light impacting use (material dependent), precise incorporation of switch / distribution boxes.

	Drilling ø mm		
Impact core bits in hexagonal version	68	1	20 7311
	80 (82)	1	20 7315
Impact core bits with SDS-Plus	68	1	20 7321
	80 (82)	1	20 7325
Centring drill bit	9 (8)	1	20 7340
Hexagonal holder shaft	SW 12 100	1	20 7330
SDS-Plus holder shaft	110	1	20 7334

### HSS step drill

especially for screwed cable glands in electrical assembly, perfectly round and cylindrical holes in various diameters, centring, drilling, drilling out and deburring in a single work stage, suitable for use in hand and box column drills in the fields of trade and industry, for sheet metal and plate metal, profiles and tubes manufactured from steel, brass, copper, aluminium, V2A stainless steel, plastic, wood, etc. up to 3 mm in thickness. Holder shaft 12 mm ø.

Surfaces additionally coated with TiN (titanium nitrite) after hardening are extremely hard and smooth. Higher cutting speed permits quicker working, lower wear increases the durability by between 5 and 10 fold!

Drilling ø mm

40.5 through-hole for  
38.5 core hole for  
37.0 through-hole for  
32.5 through-hole for  
30.5 core hole for  
28.3 through-hole for  
25.5 through-hole for  
23.5 core hole for  
22.5 through-hole for  
20.5 through-hole for  
20.4 through-hole for  
18.6 through-hole for  
18.5 core hole for  
16.5 through-hole for  
15.2 through-hole for  
14.5 core hole for  
12.5 through-hole for  
8.0 centring drill bit

	M 40	M 40	Pg 2933.6	M 32	M 32	Pg 2125.8	M 25	Pg 16	M 20	Pg 13.5	Pg 11	M 16	Pg 9	M 12	M 12	Drill steps		
HSS	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	9	1	20 1201
HSS-TIN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	9	1	20 1206
HSS	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	11	1	20 1200
HSS-TIN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	11	1	20 1205
HSS	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	10	1	20 1207
HSS-TIN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	10	1	20 1208
HSS	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	12	1	20 1209
HSS-TIN	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	12	1	20 1210

### Replacement centring drill

suitable for all CIMCO step drills

Shaft ø 6 mm	8 mm ø	1	20 1273
Shaft ø 4 mm (new generation)	8 mm ø	1	20 1274



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## HSS step drill for screwed cable glands

Special design for centric core holes and through-holes for metric screwed cable glands with 2 flutes, holder shaft  $\varnothing$  12 mm

Drilling range

M 12 - 32	1	20 1275
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## Special step drill for screw punching

HSS step drill for burr-free drilling of through-holes for screw puncher tension bolts M 8 ( $\frac{3}{8}$ " ) – M 10 ( $\frac{7}{16}$ " ) – M 12 – M 16 –  $\frac{3}{4}$ " – M 20 in material up to 4 mm thick. Suitable for use in hand and box column drills, total of 9 drill steps, holder shaft ( $\varnothing$  10 mm) with  $\varnothing$  3 driver carriers prevents slipping in the chuck.

	1	20 1212
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Step drill holder shaft 10 mm $\varnothing$	M12, M16, M20, M25, M32, M40	1	13 4032
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## Step drill

for mechanical engineering and sheet metal processing, manufactured from HSS, complete with 2 blades, increasing by 1 mm

Drilling range Max. drilling Holder  
 $\varnothing$  mm depth mm shaft  $\varnothing$  mm

4 - 12	5	6	1	20 1214
12 - 20	4	9	1	20 1216
20 - 30	4	12	1	20 1218

## Drilling paste

50 g	1	20 1307
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## Sheet taper drill

for burr-free processing of thin materials up to 2 mm, manufactured from HSS

Drilling range

$\varnothing$ mm	Shaft $\varnothing$ mm	Size	Length mm		
3 - 9.1	6		60	1	20 1294
3 - 11.2	6		60	1	20 1295
3 - 14.0	6	0	60	1	20 1280
8 - 20.0	8	1	62	1	20 1282
16 - 30.0	10	2	72	1	20 1284
25 - 40.0	12	3	83	1	20 1286

## Sheet taper drill set

in sheet steel cassette, with drilling paste

1 each of the following CIMCO article no. 20 1280, 20 1282, 20 1284	1	20 1300
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## Aerial drill

manufactured from HSS

Drilling range

$\varnothing$ mm	Shaft $\varnothing$ mm	Size	Length mm		
9.5 - 22.5	8	1	80	1	20 1290
4.0 - 30.5	10	2	100	1	20 1293

## Milling drill

manufactured from premium-quality HSS for excellent performance and high durability, ground milling teeth and deep-ground flutes for drilling, milling, cutting, rasping and filing wood, chipboard, plastics, aluminium, other nonferrous metals, steel sheets, plasterboard.

$\varnothing$  mm Length mm

6.35 ( $\frac{1}{4}$ " )	94	1	20 1298
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## 90° countersink bit

manufactured from HSS, 3 blades, with axial and radial back taper,  $\frac{1}{4}$ " shaft, according to DIN 3126

$\varnothing$  mm for M Length mm

6.3	3	31	1	20 1982
8.3	4	31	1	20 1983
10.4	5	34	1	20 1984
12.4	6	35	1	20 1985
16.5	8	38	1	20 1986
20.5	10	42	1	20 1987





## 90° countersink bit set

6 pieces, in sheet steel cassette

1 unit each of countersink bit 6.3 - 20.5 mm ø 1 20 1989

## Combi thread taps

drilling - thread cutting - deburring in a single work stage, manufactured from HSS, suitable for steel and non-ferrous metals, for material thicknesses up to 1 x diameter

M 3	1	20 7372
M 4	1	20 7373
M 5	1	20 7374
M 6	1	20 7375
M 8	1	20 7376
M 10	1	20 7377

## Combi thread tap set

for core hole drilling, thread cutting and deburring in a single work stage, with 1/4" hexagonal shaft. This product is used in the processing of steel non-ferrous metals and plastics. Particularly useful for assembly work and small batches, supplied in a practical plastic box.

1 unit each of M 3 - 4 - 5 - 6 - 8 - 10 1 20 7360

## HSS thread tap bits

in metal cartridge, with thread taps according to DIN 352 for metric standard threads, 3 piece bits with roughing tap, middle tap and finish tap, 1 bit each in sizes M 3 - 4 - 5 - 6 - 8 - 10 - 12

1 20 3920

additionally with HSS twist drills (core hole drills)

2.5 - 3.3 - 4.2 - 5 - 6.8 - 8.5 - 10.2 mm ø 1 20 3924

## Hand thread tap DIN 352/HSS

for metric ISO thread according to DIN 13 (6 H tolerance), 3 piece bits: roughing tap - middle tap - finish tap

Thread	Increased mm	Shaft ø mm	Total length mm		
M 1	0.25	2.5	32	1	20 2100
M 2	0.40	2.8	40	1	20 2110
M 2.2	0.45	2.8	40	1	20 2112
M 2.5	0.45	2.8	40	1	20 2114
M 3	0.45	2.8	40	1	20 2116
M 3.5	0.60	4.0	45	1	20 2118
M 4	0.70	4.5	45	1	20 2120
M 5	0.80	6.0	50	1	20 2123
M 6	1.00	6.0	50	1	20 2124
M 7	1.00	6.0	40	1	20 2125
M 8	1.25	6.0	56	1	20 2126
M 9	1.25	7.0	63	1	20 2127
M 10	1.50	7.0	70	1	20 2128
M 11	1.50	8.0	70	1	20 2129
M 12	1.75	9.0	75	1	20 2130

## HSS thread tap DIRECT CUTTER

DIN 352/B cutting thread tap with spiral point, for metric standard thread, supplied in a plastic cartridge

1 unit each of thread tap size M 3 - 4 - 5 - 6 - 8 - 10 - 12

1 unit each of HSS twist drill (core hole drill) in sizes 2.5 - 3.3 - 4.2 - 5.0 - 6.8 - 8.5 - 10.2 mm

1 tap wrench, size 1 1/2 (for M 1 - M 12 thread tap)

1 20 3070



## HSS thread tap DIRECT CUTTER

with exposed teeth, dimensions according to DIN 352, for metric ISO thread according to DIN 13

Thread	Increased mm	Shaft ø mm	Total length mm		
M 3	0.50	3.5	40	1	20 3050
M 4	0.70	4.5	45	1	20 3051
M 5	0.80	6.0	50	1	20 3052
M 6	1.00	6.0	50	1	20 3053
M 8	1.25	7.0	56	1	20 3054
M 10	1.50	7.0	70	1	20 3055
M 12	1.75	9.0	75	1	20 3060



## Tool holder

with ratchet for clockwise and anti-clockwise rotation, chrome plated

Clamping range for thread taps

mm	DIN	ISO			
2.6 - 5.5	M 3 - 10	M 3 - 6	85	1	20 7170
4.6 - 8	M 5 - 12	M 6 - 12	110	1	20 7172



## Adjustable tap wrenches DIN 1814

for thread taps according to DIN 352

Size	□ mm	For thread tap metr. M	Wwth. $\frac{1}{16}$ - $\frac{1}{4}$	Wwth. $\frac{3}{16}$ - $\frac{1}{2}$	Wwth. $\frac{3}{8}$ - $\frac{1}{4}$		
0	2.1 - 4.9	1 - 8	$\frac{1}{16}$ - $\frac{1}{4}$	-	-	1	20 7150
1	2.1 - 5.5	1 - 10	$\frac{1}{16}$ - $\frac{3}{8}$	-	-	1	20 7151
1 1/2	2.1 - 7	1 - 12	$\frac{1}{16}$ - $\frac{1}{2}$	-	-	1	20 7152
2	3.8 - 7	4 - 12	$\frac{3}{16}$ - $\frac{1}{2}$	$\frac{3}{8}$ - $\frac{1}{4}$	-	1	20 7153
3	4.9 - 12	5 - 21	$\frac{1}{4}$ - $\frac{3}{4}$	$\frac{1}{8}$ - $\frac{3}{8}$	-	1	20 7154
4	5.5 - 16	9 - 27	$\frac{3}{8}$ - 1	$\frac{1}{8}$ - $\frac{3}{4}$	-	1	20 7155



## HSS thread cutting tool bit

for metric standard threads.

Supplied in metal cartridge, with thread taps according to DIN 352, 3 pieces in sizes M 3 - 4 - 5 - 6 - 8 - 10 - 12,

Threading die according to DIN 223 M 3 - 4 - 5 - 6 - 8 - 10 - 12, thread gauge,

Threading die holder mm 20 x 5 - 20 x 7 - 25 x 9 - 30 x 11 - 38 x 14

Tap wrench size 1 - size 2

1 20 3930



## Nipple threading die

with guidance, threading die and interchangeable thread tap

M 10 + M 13	1	14 1000
M 10 x 1 mm	1	14 1002
M 13 x 1 mm	1	14 1004



## Threading die DIN 223

pre-slit, for metric ISO threads according to DIN 13 (6 G tolerance)

Thread	Increased mm	External ø mm	Height mm		
M 2	0.40	16	5	1	20 3610
M 2.2	0.45	16	5	1	20 3612
M 2.5	0.45	16	5	1	20 3614
M 3	0.50	20	5	1	20 3616
M 3.5	0.60	20	5	1	20 3618
M 4	0.70	20	5	1	20 3620
M 5	0.80	20	7	1	20 3623
M 6	1.00	20	7	1	20 3624
M 7	1.00	25	9	1	20 3625
M 8	1.25	25	9	1	20 3626
M 9	1.25	25	9	1	20 3627
M 10	1.50	30	11	1	20 3628
M 11	1.50	30	11	1	20 3629
M 12	1.75	38	14	1	20 3630



## Threading die holder DIN 225

for DIN 223 threaded dies

Size	For thread		Length mm		
	metr. M	Wwth.			
0	1-2-6	1/16 - 3/32	16 x 5	1	20 7200
1	3 - 4	1/8 - 5/32	20 x 5	1	20 7201
2	4.5 - 6	3/16 - 1/4	20 x 7	1	20 7202
3	7 - 9	5/16	25 x 9	1	20 7203
4	10 - 11	3/8 - 7/16	30 x 11	1	20 7204
5	12 - 14	1/2 - 9/16	38 x 14	1	20 7206



further thread taps, threading dies and tool holders available upon request.

## Thread cutting tools for screwed cable glands

### Thread tap

for metric screwed cable glands, also in plastic, not in VA stainless steel

	Total length	Thread length		
M 12 x 1.5	70	24	1	14 0850
M 16 x 1.5	74	26	1	14 0852
M 20 x 1.5	80	28	1	14 0854
M 25 x 1.5	93	33	1	14 0856
M 32 x 1.5	105	38	1	14 0858
M 40 x 1.5	105	38	1	14 0860
M 50 x 1.5	120	40	1	14 0862
M 63 x 1.5	120	40	1	14 0864



for tube PG (steel conduit thread) according to DIN 40430 PG

PG 7	70	24	1	14 0970
PG 9	74	26	1	14 0972
PG 11	76	26	1	14 0974
PG 13.5	80	28	1	14 0976
PG 16	85	30	1	14 0978
PG 21	93	33	1	14 0980
PG 29	105	38	1	14 0982
PG 36	110	40	1	14 0984
PG 42	120	40	1	14 0986
PG 48	120	40	1	14 0988

## Adjustable tap wrenches

for thread taps

M	Inch	PG		
5 - 20	1/4" - 3/4"	7 - 21	1	14 1020
27 - 64	1/2" - 2 1/2"	11 - 48	1	14 1022



## Screw dies

to the clip housing

for metric screwed cable glands

	Blade quantity	L x W x H mm		
M 12 x 1.5	4	47 x 47 x 14	1	14 0889
M 16 x 1.5	4	47 x 47 x 14	1	14 0890
M 20 x 1.5	4	47 x 47 x 14	1	14 0891
M 25 x 1.5	6	47 x 47 x 14	1	14 0892
M 32 x 1.5	6	71 x 71 x 19	1	14 0893
M 40 x 1.5	6	71 x 71 x 19	1	14 0894
M 50 x 1.5	8	100 x 100 x 20	1	14 0895
M 63 x 1.5	8	100 x 100 x 20	1	14 0896

for tube PG (steel conduit thread) according to DIN 40430 PG

PG 7	4	47 x 47 x 14	1	14 0910
PG 9	4	47 x 47 x 14	1	14 0912
PG 11	4	47 x 47 x 14	1	14 0914
PG 13.5	4	47 x 47 x 14	1	14 0916
PG 16	4	47 x 47 x 14	1	14 0918
PG 21	6	47 x 47 x 14	1	14 0920
PG 29	7	71 x 71 x 19	1	14 0922
PG 36	8	71 x 71 x 19	1	14 0924
PG 42	8	100 x 100 x 20	1	14 0926
PG 48	10	100 x 100 x 20	1	14 0928



## Guides

to the clip housing

for metric screwed cable glands

M 12	1	14 0869
M 16	1	14 0870
M 20	1	14 0871
M 25	1	14 0872
M 32	1	14 0873
M 40	1	14 0874
M 50	1	14 0875
M 63	1	14 0876

for tube PG

PG 7	1	14 0930
PG 9	1	14 0932
PG 11	1	14 0934
PG 13.5	1	14 0936
PG 16	1	14 0938
PG 29	1	14 0940
PG 42	1	14 0942



## Clip housing for steel conduit thread

manufactured from malleable cast iron, with steel tube arms, without accessories

M 12 - 25 / PG 7 - 21	1	14 0900
M 32 - 40 / PG 29 - 36	1	14 0902
M 50 - 63	1	14 0884
PG 42 - 48	1	14 0904



## Complete clips for steel conduit thread

with screw dies and guidance

M 16 - 25	1	14 0886
M 32 - 40	1	14 0887
M 50 - 63	1	14 0888
PG 9 - 21	1	14 0950
PG 29 - 36	1	14 0952

with adjustable guide (guide rings not required)

M 12 - M 25	1	14 0966
M 32 - M 40	1	14 0968
PG 7 - 21	1	14 0960
PG 29 - 36	1	14 0964



## Step thread tap for metric screwed cable glands

Step thread tap manufactured from the most suitable oil-hardened tool steel for the most common metric screwed cable glands. Suitable for working with plastic and metal as well as stainless steel, between 5 and 6 threads per step, drive via hexagonal shaft (e.g. via ring, open-end or socket wrench). Approximately 85% of all screwed cable glands are covered with the M 12 - M 32 drill (CIMCO article no. 20 1240), approximately 90% of all screwed cable glands are covered with both of the other drills.

Compared to many single thread taps, the step thread taps offer a cost saving of up to 25%.

For screwed cable glands	Length	Hexagonal wrench size		
M 12 - 16 - 20 - 25 - 32	80	13	1	20 1240
M 12 - 16 - 20	55	10	1	20 1242
M 25 - 32 - 40	55	13	1	20 1244

## Step drill and thread tap set for screwed cable glands

Compact set for the drilling of centric core holes and through-holes, as well as for the thread cutting of metric screwed cable glands according to DIN EN 60 423, supplied in a handy plastic carrying case. Set consisting of 1 HSS step drill for burr-free drilling and reaming, double-edged, with solid centring point and 13 laser-marked drilling steps for through-holes and core holes for screw glands measuring between M 12 and M 32, 12 mm ø holder shaft with 3 driver carriers to protect against the drill bit from slipping in the chuck, 5 HSS cutting thread taps (direct taps) sorted by ISO fine thread M 12 x 1.5 - M 16 x 1.5 - M 20 x 1.5 - M 25 x 1.5 - M 32 x 1.5, 45 mm long design, with hexagonal drive shaft (10 / 13 mm) for single-handed work even on areas difficult to reach, actuation via nut driver (groove and ratchet), but also via spanner and ring wrenches.

6 pieces	1	20 1250
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## Nozzle reamer bit

12 nozzle reamers, tapered, and holders, supplied in plastic box

0.60; 0.65; 0.70; 0.75; 0.80; 0.90; 1.0; 1.10; 1.30; 1.50; 1.70; 1.90 mm ø	10	20 4815
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## Diamond cutting discs

- according to EN 13236
- Dry and wet cutting
- Suitable for all standard angle grinders and wall chasers (holder ø 22.2 mm)
- With key holes for cooling
- High-performance diamond segments made of diamond grit bond

### Line Blue diamond cutting discs

with sinter-fused diamond segments, steel blade hardness: 28 HRC  
suitable for: concrete products (soft), paving stone, composite stone, masonry brick

Height mm	Segment length mm	Quantity	ø mm		
7	38	8	115	1	20 8700
7	37	9	125	1	20 8702
7	34	14	180	1	20 8704
7	39	16	230	1	20 8706

### Line Beige diamond cutting discs

with laser-fused diamond segments, steel blade hardness: 38 HRC, suitable for: concrete products (soft/medium), kerbstone, paving stone, composite stone, masonry brick, roof tiles (soft), hollow concrete block, tiles (hard), sand-lime brick (hard), sandstone (hard), clinker brick (medium-hard), cast iron pipe ductile)

Height mm	Segment length mm	Quantity	ø mm		
10	31.5	9	115	1	20 8708
10	31.5	10	125	1	20 8710
10	31.5	12	150	1	20 8712
10	33	14	180	1	20 8714
10	38	16	230	1	20 8716

### Line Silver diamond cutting discs

with sinter-fused diamond segments, steel blade hardness: 28 HRC  
suitable for: concrete products (soft), plaster, roof tiles (soft), hollow concrete block, masonry brick, clay brick (soft), sand-lime brick (soft abrasive), fire clay (soft), plaster, breezeblock, eternite and screed

Height mm	Segment length mm	Quantity	ø mm		
8	53	6	115	1	20 8718
8	58	6	125	1	20 8720
8	58	7	135	1	20 8722
8	58	7	135	1	20 8724*
8	53	8	150	1	20 8726
8	64	8	180	1	20 8728
8	76	10	230	1	20 8732

\*Holder: ø 30 mm



## Line White diamond cutting discs

with laser-fused diamond segments, steel blade hardness: 38 HRC

suitable for: concrete products (soft/medium-hard), kerbstone, paving stone, composite stone, roof tiles (medium-hard/soft), hollow concrete block, masonry brick, tiles (soft/hard), sand-lime brick (hard) and clinker brick (medium hard)

Height mm	Segment length mm	Quantity	ø mm		
7	31.5	9	115	1	20 8734
7	31.5	10	125	1	20 8736
7	33	14	180	1	20 8738
7	38.5	16	230	1	20 8740



## Line Green diamond cutting discs

with laser-fused diamond segments, steel blade hardness: 38 HRC, suitable for: concrete products (medium-hard/hard),

reinforced concrete, exposed aggregate concrete, kerbstone, paving stone, composite stone, roof tiles (medium-hard), hollow concrete block, masonry brick, tiles (hard), sand-lime brick (hard/high-density), Quadro block, sandstone (hard), clinker brick (hard/medium-hard), cast iron pipe (ductile), fireclay (soft), basalt and natural stone

Height mm	Segment length mm	Quantity	ø mm		
10	31.5	9	115	1	20 8742
10	31.5	10	125	1	20 8744
10	31.5	12	150	1	20 8746
10	33	14	180	1	20 8748
10	40	16	230	1	20 8750



## Line Red diamond cutting discs

with laser-fused diamond segments, steel blade hardness: 38 HRC, suitable for: concrete products (medium-hard/hard),

reinforced concrete, exposed aggregate concrete, kerbstone, paving stone, composite stone, roof tiles (medium-hard/soft), masonry brick, sand-lime brick (soft abrasive/hard), Quadro block, clinker brick (medium-hard)

Height mm	Segment length mm	Quantity	ø mm		
10	31.5	9	115	1	20 8752
10	31.5	10	125	1	20 8754
10	31.5	11	140	1	20 8756
10	33	12	150	1	20 8758
10	33	14	180	1	20 8760
10	38.5	16	230	1	20 8762



## Line Black diamond cutting discs

with laser-fused diamond segments, steel blade hardness: 38 HRC

suitable for: sand-lime brick (soft/abrasive), sandstone (abrasive), plaster, aerated concrete and screed

Height mm	Segment length mm	Quantity	ø mm		
7	31.5	9	115	1	20 7980
7	31.5	10	125	1	20 7982
7	31.5	12	150	1	20 7984
7	33	14	180	1	20 7986
7	38.5	16	230	1	20 7988



## Wall chaser 150

A parallel grip position, a short and compact design, as well as the ability to mill close to the edge are essential features that facilitate work with this wall chaser. Features: suction hose lock, milling depth adjustment (without tools), spindle lock for easy disc replacement, short distance to the guard, the ability to work close to the edge (up to 15 mm), slot widths can be changed in 1 mm increments, enclosed hood, easy removal of debris, sliding cut, electronic soft start, temperature and overload shut-down function, 35 mm ø connecting piece for direct connection to industrial vacuum cleaners

Specifications:

- Power consumption: 2,300 W
- Nominal speed: 4300 rpm
- Disc diameter: 150 mm
- Slot depth: 45 mm
- Weight: 5.8 kg
- Nominal voltage: 230 V ~
- Idling speed: 7500 rpm
- Disc holder: 22.2 mm
- Max. slot width: 46 mm

1 11 0012



## Wall chaser 180

Enables work to be conducted quickly in even the hardest of materials. It is the ideal tool for installers to run larger cable ducts and conduits underneath plaster. Features: suction hose lock, milling depth adjustment (without tools), spindle lock for easy disc replacement, slim design, short distance to the guard, the ability to work close to the edge (up to 15 mm), slot widths can be changed in 1 mm increments, enclosed hood, easy removal of debris, sliding cut, electronic soft start, temperature and overload shutdown function, 35 mm ø connecting piece for direct connection to industrial vacuum cleaners

Specifications:

- Power consumption: 2,300 W
- Nominal voltage: 230 V ~
- Nominal speed: 2300 rpm
- Idling speed: 3100 rpm
- Disc diameter: 180 mm
- Disc holder: 22.2 mm
- Slot depth: 60 mm
- Max. slot width: 46 mm
- Weight: 7.5 kg

1 11 0014



## Vacuum device 25

Despite its small container, the vacuum device is able to absorb large amounts of water and dust. The vibrating mechanism cleans the filters before a dust cloud develops, thereby enabling you to work without a filter bag. With electromagnetic filter vibration, enhanced service life of the filter cartridges, additional manual vibration possible, device socket with automatic start and switch-on delay for connected power tools, two polyester filter cartridges – durable and washable, filter surface 8600 cm<sup>2</sup> - high constant suction, with practical storage, self-supporting, wheels with parking brake, water detection with sensor switch-off function – automatic shut down when max. water level is detected, filter protection, electronically controlled soft start, electronically controlled overrun, visual display of the suction power

Specifications:

- Power consumption: 1,400 W
- Nominal voltage: 230 V ~
- Frequency: 50 - 60 Hz
- Max. airflow: 61 l/s
- Max. negative pressure: 248 mbar
- Container volume: 25 l
- Dust volume (net): 20 l
- Dimensions (L x W x H): 420 x 410 x 580 mm
- Weight: 12.7 kg

1 11 0016



## Corundum cutting discs, steel

- according to EN 12413
- Suitable for all standard angle grinders (holder ø 22.2 mm)
- Dry cut

## Corundum cutting discs, steel

Universal cutting disk

suitable for: steel, pipes, structural steel, mild steel, solid materials, metal sheeting etc.

Thickness mm	Design	ø mm		
2.5	offset 	115	1	20 8900
2.5	offset 	125	1	20 8902
2.5	straight 	230	1	20 8904

## Corundum cutting discs, Inox

Inox cutting disk

High cutting speed, clean cut surfaces, virtually no burrs, little cutting waste


suitable for: sheet steel (including car body pressing), profiles, pipes and stainless steel

Thickness mm	Design	ø mm		
1.2	offset 	115	1	20 8910
1.2	offset 	125	1	20 8912
2.0	straight 	230	1	20 8914

## Corundum cutting discs, stone

Universal cutting disk

suitable for: natural and synthetic stone, concrete, exposed aggregate concrete, tiles, etc.

Thickness mm	Design	ø mm		
2.5	offset 	115	1	20 8920
2.5	offset 	125	1	20 8922
3.0	straight 	230	1	20 8924

## Zircon corundum serrated washer

for dry grinding, especially for surface machining, hard and tough abrasive grain allows extremely good removal of material

suitable for: steel (stainless), tempered steel, tough nonferrous metal and cast steel

Thickness mm	Design	ø mm		
60 grain	offset 	125	1	20 8930



## Cased drill

safety cased drill bit manufactured from CR-V steel for wood, lightweight boards, plasterboards, not suitable for concrete and stone.

ø mm	Size/mm	PU	Article no.
6	400	1	20 6306
	600	1	20 6346
8	400	1	20 6308
	600	1	20 6348
10	400	1	20 6310
	600	1	20 6350
12	400	1	20 6312
	600	1	20 6352
14	400	1	20 6314
	600	1	20 6354
16	400	1	20 6316
	600	1	20 6356
18	400	1	20 6318
	600	1	20 6358
20	400	1	20 6320
	600	1	20 6360
22	400	1	20 6322
	600	1	20 6362
24	400	1	20 6324
	600	1	20 6364
25	400	1	20 6325
	600	1	20 6365
26	400	1	20 6326
	600	1	20 6366
28	400	1	20 6328
	600	1	20 6368
30	400	1	20 6330
	600	1	20 6370



## Hole saws manufactured from HSS bi-metal with Vario tothing

The variable tooth distribution (4 - 6 teeth per inch) ensures vibration-free drilling. Hole saws with holder thread, from 32 mm ø additional driver holes. For rational drilling of steel, cast iron, stainless steel, copper, non-ferrous metals, hard and soft wood, sheetrock boards and other materials. Saw length 50 mm, max. drilling depth 40 mm, M 16 holder thread.

For holder shafts (CIMCO article no. 20 7580 and 20 7588).

ø mm	PU	Article no.
14	1	20 7414
16	1	20 7416
17	1	20 7417
19	1	20 7419
20	1	20 7420
21	1	20 7421
22	1	20 7422
24	1	20 7424
25	1	20 7425
27	1	20 7427
29	1	20 7429
30	1	20 7430





## Hole saws manufactured from HSS bi-metal with Vario tooting

The variable tooth distribution (4 - 6 teeth per inch) ensures vibration-free drilling. Hole saws with holder thread, from 32 mm ø additional driver holes. For rational drilling of steel, cast iron, stainless steel, copper, non-ferrous metals, hard and soft wood, sheetrock boards and other materials. Saw length 50 mm, max. drilling depth 40 mm, M 16 holder thread, for holder shafts (CIMCO article no. 20 7584, 20 7586 and 20 7589).

ø mm

32	1	20 7432
35	1	20 7435
37	1	20 7437
38	1	20 7438
40	1	20 7440
41	1	20 7441
43	1	20 7443
44	1	20 7444
45	1	20 7445
46	1	20 7446
48	1	20 7448
50	1	20 7450
51	1	20 7451
52	1	20 7452
54	1	20 7454
55	1	20 7455
57	1	20 7457
59	1	20 7459
60	1	20 7460
64	1	20 7464
65	1	20 7465
67	1	20 7467
68	1	20 7468
70	1	20 7470
73	1	20 7473
75	1	20 7475
76	1	20 7476
79	1	20 7479
83	1	20 7483
86	1	20 7486
89	1	20 7489
92	1	20 7492
95	1	20 7495
98	1	20 7498
100	1	20 7500
102	1	20 7502
105	1	20 7505
111	1	20 7511
114	1	20 7514
121	1	20 7521
127	1	20 7527
140	1	20 7540
146	1	20 7546
152	1	20 7552



## Hole saws for switch boxes

complete with holder shaft (CIMCO article no. 20 7584), guide drill bit (CIMCO article no. 20 7590) and push-out spring (CIMCO article no. 20 7596)

68	1	20 7562
68	1	20 7563



## Holder shafts

complete with guide drill bit, CIMCO article no. 20 7590 and male thread, suitable for all HSS bi-metal hole saws  
9.5 mm hexagonal bar, without driver

for hole saws 14 - 30 mm $\varnothing$	1	20 7580
for hole saws 32 - 152 mm $\varnothing$	1	20 7581

11 mm hexagonal bar, with driver

for hole saws 32 - 152 mm $\varnothing$	1	20 7584
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11 mm hexagonal bar, with driver and and internal counternut

for hole saws 32 - 152 mm $\varnothing$	1	20 7586
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SDS holder, without driver

for hole saws 14 - 30 mm $\varnothing$	1	20 7588
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SDS holder, with driver

for hole saws 32 - 152 mm $\varnothing$	1	20 7589
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## HSS guide drill

for holder shafts (CIMCO article no. 20 7580, 20 7581, 20 7584, 20 7586, 20 7588 and 20 7589)

6.35 mm $\varnothing$ - 70 mm in length	1	20 7590
6.35 mm $\varnothing$ - 115 mm in length	1	20 7592

## Push-out spring

suitable from 52 mm  $\varnothing$

1	20 7596
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## Edge countersink

for HSS bi-metal hole saws with 68 mm  $\varnothing$ , with two specially-hardened cutting teeth

1	20 7598
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## HSS bi-metal – hole saw sets

### ELEKTRO-TOP with edge countersink

Contents: One hole saw each in sizes 35 mm, 68 mm, 75 mm  $\varnothing$

Edge countersink for 68 mm  $\varnothing$ , with two specially-hardened cutting teeth

Holder shaft with two driver pins No. 20 7584

HSS guide drill bit, 6.35 mm  $\varnothing$ , length 70 mm

Push-out spring (for all saws from 52 mm  $\varnothing$ )

Comprehensive drilling instructions, supplied in impact-resistant plastic box

1	20 7400
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### ELEKTRO METRIC

with 6 hole saws for drilling through-holes for metric screwed cable glands

Holder shafts with HSS guide drill, (CIMCO article no. 20 7580 and 20 7584)

Hole saws  $\varnothing$  mm

20	20 7420
25	20 7425
32	20 7432
40	20 7440
50	20 7450
64	20 7464
1	20 7573

## Socket cutter

Hole saw with metal body, 6 mm  $\varnothing$  holder shaft, induction-hardened saw tips, cutting depth 19 mm

7 saw attachments 25 (1") - 32 (1 1/4") - 38 (1 1/2") - 44 (1 3/4") - 51 (2") - 57 (2 1/4") - 63 (2 1/2") mm  $\varnothing$

for wood and sheetrock	1	12 0882
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## Hard metal hole saws

For the rational drilling of:

sheetrock boards, Ytong stone, aerated concrete, wood, chipboard, plywood, hard cardboard, PVC, plastic coated boards, glass fibre boards

Saw length: 66 mm, max. drilling depth: 58 mm, M 16 holder thread, for hole saws

ø mm

35	1	20 7714
68	1	20 7728
71	1	20 7730
74	1	20 7732

## Hard metal edge countersink

with 2 teeth

for hard metal hole saws 68 mm ø

1	20 7750
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## Holder shafts

without guide drill bit, with M 16 receiver thread

cylindrical Holder 13 mm ø, 3 driver carriers	70	1	20 7760
SDS holder system	70	1	20 7764

## Guide drill

hard metal-equipped

8 mm ø	100	1	20 7770
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## Hard metal hole saw

68 mm ø, with edge countersink, holder shaft and HM guide drill bit

with holder shaft 13 mm ø (CIMCO article no. 20 7760)	1	20 7740
with SDS holder shaft (CIMCO article no. 20 7764)	1	20 7744

## Hard metal hole saw set, 5 pieces

in steel sheet case, 3 hole saws, edge countersinks for 68 mm ø, 13 mm ø holder shaft,

1 each of HSS and hard metal guide drill bit

Hole saws ø mm

35, 68, 74	1	20 7700
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## Diamond core drill bit

laser-welded diamond studs, for dry cutting, no regrinding required, excellent drilling capacity and high durability.

Drilling without impact in general masonry, stone and concrete, Quadro stone, sand-lime brick.

M 16 holder thread, total length 80 mm, maximum drilling depth 70 mm.

Diamond stud quantity (segments)

6	ø 68	1	20 7380
10	ø 82	1	20 7382

## Holder shaft

for diamond core drill bit, M 16 holder thread

Shaft SW 12 (hexagonal)	1	20 7384
SDS holder system	1	20 7385

## Hard metal centring drill

for shaft (CIMCO article no. 20 7384)	9 mm ø x 120 mm	1	20 7386
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## Diamond core drill bit

complete with holder shaft and HM centring drill bit  
with holder shaft (order number 20 7384)

Hexagonal size 12	ø mm	PU	Article no.
	ø 68	1	20 7378
	ø 82	1	20 7379

with holder shaft (order number 20 7385)

SDS holder system	ø mm	PU	Article no.
	ø 68	1	20 7388
	ø 82	1	20 7389



## Diamond core bits

- Dry and wet cutting
- Suitable for all standard Diamant dry drills (holder M 16) speed recommendation approx. 2,000 rpm
- Designed with diagonal slotting for cooling (dust removal)
- High-performance diamond segments made of diamond grit bond

### Diamond core bits 65, red

Working length: 65 mm

with laser-fused diamond segments made of diamond grit bond, suitable for: hollow concrete block, masonry brick, tiles (soft), sand-lime brick (soft abrasive/hard), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm	PU	Article no.
8	24	3	68	1	20 8770
8	24	4	82	1	20 8772



### Diamond core bits 65, silver

Working length: 65 mm

with laser-fused diamond segments made of diamond grit bond  
suitable for: concrete products (soft), hollow concrete block, masonry brick, tiles (soft), sand-lime brick (soft abrasive/hard/high density), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm	PU	Article no.
8	24	3	68	1	20 8774
8	24	4	82	1	20 8776



### Diamond core bits 65, blue

Working length: 65 mm

with laser-fused diamond segments made of diamond grit bond, suitable for: concrete products (medium-hard), reinforced concrete, hollow concrete block, masonry brick, tiles (hard), sand-lime brick (soft abrasive/hard/high density), Quadro block, sand stone (hard), clinker stone (medium-hard), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm	PU	Article no.
8	24	3	68	1	20 8778
8	24	4	82	1	20 8780



### Diamond core bits 65, black

Working length: 65 mm

with laser-fused diamond segments made of diamond grit bond  
suitable for: sand-lime brick (soft/abrasive), sandstone (abrasive), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm	PU	Article no.
8	24	3	68	1	20 8782
8	24	4	82	1	20 8784



### Holder shaft 65

for working length: 65 mm

Steel design, including ejector drift

Design

Design	PU	Article no.
Hex	1	20 8836
SDS	1	20 8838

### Centring drill (tapered) 65

for working length: 65 mm and for extensions with a conical holder shaft

Design

Design	PU	Article no.
Total length 120 mm	1	20 8834



## Diamond core bits 90, red

Working length: 90 mm

with laser-fused diamond segments made of diamond grit bond, suitable for: hollow concrete block, masonry brick, tiles (soft), sand-lime brick (soft abrasive/hard), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm		
8	24	3	68	1	20 8790
8	24	4	82	1	20 8792

## Diamond core bits 90, silver

Working length: 90 mm

with laser-fused diamond segments made of diamond grit bond suitable for: concrete products (soft), hollow concrete block, masonry brick, tiles (soft), sand-lime brick (soft abrasive/hard/high density), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm		
8	24	3	68	1	20 8794
8	24	4	82	1	20 8796

## Diamond core bits 90, black

Working length: 90 mm

with laser-fused diamond segments made of diamond grit bond suitable for: sand-lime brick (soft/abrasive), sandstone (abrasive), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm		
8	24	3	68	1	20 8798
8	24	4	82	1	20 8800

## Diamond core bits 90 ruby

Working length: 90 mm

with laser-fused diamond segments made of diamond grit bond suitable for: concrete products (medium-hard), reinforced concrete, hollow concrete block, masonry brick, tiles (hard), sand-lime brick (soft abrasive/hard/high-density), Quadro block, sandstone (hard), plaster and aerated concrete

Height mm	Segment length mm	Quantity	ø mm		
8	24	3	68	1	20 8802
8	24	4	82	1	20 8804

## Holder shaft 90

for working length: 90 mm

Steel design, including ejector drift

Design

Hex	1	20 8836
SDS	1	20 8838

## Centring drill (tapered) 90

for working length: 90 mm and for extensions with a conical holder shaft

Design

Total length 140 mm	1	20 8844
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## Hard metal core bits 60 dry wall

Working length: 60 mm

with hard metal segments welded on, core bit holder M 16 suitable for: plywood, plastics (PVC), Fermacell, wood-core plywood, chipboard and GRP

Height mm	Segment length mm	Quantity	ø mm		
8	2.5	5	68	1	20 8786
8	2.5	5	82	1	20 8788

## Holder shaft 60

for working length: 60 mm

including Allen key

Design

Hex	1	20 8850
SDS	1	20 8852



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## 60 centring drill

for working length: 60 mm and for extensions with a cylindrical holder shaft and locking surface

Design

Total length 120 mm	1	20 8854
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## Diamond core bits 150 Universal

Working length: 150 mm

with laser-fused diamond segments made of diamond grit bond, suitable for: concrete products (medium-hard), exposed aggregate concrete, kerbstone, paving stone, composite stone, roof tiles (medium-hard), hollow concrete block, masonry brick, tiles (soft/hard) sand-lime brick (soft abrasive/hard/high-density), Quadro block sandstone (hard), clinker stone (medium-hard), plaster, aerated concrete and screed

Height mm	Segment length mm	Quantity	ø mm		
7	24	3	32	1	20 8810
7	24	3	42	1	20 8812
7	24	4	52	1	20 8814
7	24	4	72	1	20 8816
7	24	4	82	1	20 8818
7	24	5	112	1	20 8820
7	24	6	132	1	20 8822
7	24	7	152	1	20 8824
7	24	7	182	1	20 8826

## Holder shaft 150

for working length: 150 mm, useable length: 200 mm

Steel design, including centring drill bit and ejector drift

Design

Hex	1	20 8830
SDS	1	20 8832

## Centring drill (conical) 150

for working length: 150 mm

	1	20 8833
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## Dust vac. - diam. core bits

for core bits (holder M 16), with head slot, suitable for tool types with a connecting thread M 18

	1	20 8846
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Centring point for dust removal	1	20 8848
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## Diamond dry drilling machine

Diamond dry drilling machine The ideal tool for recessing sockets up to 82 mm, for outlet sockets and junction boxes, dimensionally accurate and with little time required, also for hard materials such as sand-lime brick, masonry and clinker brick (dry). With mechanical safety clutch, electronic soft start, overload shutdown and temperature monitoring function, additional hand grip – can be variably adjusted on the clamping collar, locking knob with protection against unintentional setting.

Technical Data:

- power consumption: 1,300 W
- nominal voltage: 230 V ~
- nominal speed: 0 – 2000 rpm
- max. drilling diameter: 32 – 82 mm
- idling speed: 3400 rpm
- tool holder: M 18 outside
- clamping collar diameter: 46 mm
- weight: 3.4 kg

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## Diamond dry drill, light impact

Dry drilling in diameters up to 90 mm in particularly hard material, e.g. high density sand-lime brick, armoured concrete and other abrasive materials.

With high operating speed, powerful motor, electronic soft start, temperature and overload shutdown function, gear mechanism with switchable light impact function, mechanical safety clutch, additional hand grip - variable adjustment via the clamping collar.

### Specifications:

- Power consumption: 1,800 W
- Nominal voltage: 230 V ~
- Nominal speed: 0 – 2,050 rpm
- max. drilling diameter: 90 mm
- Idling speed: 3000 rpm
- Tool holder: M 18 external
- Clamping collar diameter: 53 mm
- Impact frequency: 41,000 impacts/min
- Weight: 5.9 kg

1 11 0010



## Vacuum device 25

Despite its small container, the vacuum device is able to absorb large amounts of water and dust. The vibrating mechanism cleans the filters before a dust cloud develops, thereby enabling you to work without a filter bag. With electromagnetic filter vibration, enhanced service life of the filter cartridges, additional manual vibration possible, device socket with automatic start and switch-on delay for connected power tools, two polyester filter cartridges – durable and washable, filter surface 8600 cm<sup>2</sup> - high constant suction power, with practical storage, self-supporting, wheels with parking brake, water detection with sensor switch-off function – automatic shut down when max. water level is detected, filter protection, electronically controlled soft start and overrun, visual display of the suction power

### Specifications:

- Power consumption: 1,400 W
- Nominal voltage: 230 V ~
- Frequency: 50 - 60 Hz
- Max. airflow: 61 l/s
- Max. negative pressure: 248 mbar
- Container volume: 25 l
- Dust volume (net): 20 l
- Dimensions (L x W x H): 420 x 410 x 580 mm
- Weight: 12.7 kg

1 11 0016



## Holder shafts - dry drills

Steel design, with tool holder M 18, 5/8" or R 1/2"

including SDS centring drill bit	M 18 x 2.5 / M 16	1	20 8858
including cylindrical centring drill bit	5/8" / M 16	1	20 8860
including cylindrical centring drill bit	R 1/2" / M 16	1	20 8862
including centring drill bit (hook function)	M 18 x 2.5 / M 16	1	20 8856



## Universal deburrer

for all deburring work on drill holes as well as on straight, convex and concave edges (e.g. pipe inner and outer edges), aluminium handle, interchangeable, hardened blade

1 20 8500



## Jigsaw blades manufactured from CrV steel

self-service packaged, for wood, plastic up to 60 mm

for AEG - Bosch - Metabo - tools	5	20 8506
for Black + Decker - Skil - Fein - tools	5	20 8507

## Jigsaw blades manufactured from HSS bi-metal

self-service packaged, for soft steel, aluminium, non-ferrous metal, stainless steel metal up to 4 mm

for AEG - Bosch - Metabo - tools	5	20 8522
for Black + Decker - Skil - Fein - tools	5	20 8523



## 5-piece set of workshop files


with cross cut, cut 2 (medium fine), length 200 mm, with wooden haft, suitable for metal as well as wood and plastic

1pc.  1 20 6806



## Workshop files

according to DIN 7261, without grip

Shape A, flat hand 

Cut	Size/mm	PU	Article no.
Cut 1	150	10	20 6502
	200	10	20 6503
	250	10	20 6504
	300	5	20 6505
Cut 2	150	10	20 6512
	200	10	20 6513
	250	10	20 6514
	300	5	20 6515
Cut 3	150	10	20 6522
	200	10	20 6523
	250	10	20 6524
	300	5	20 6525

Shape C, triangular 

Cut	Size/mm	PU	Article no.
Cut 1	150	10	20 6532
	200	10	20 6533
	250	5	20 6534
	300	5	20 6535
Cut 2	150	10	20 6542
	200	10	20 6543
	250	5	20 6544
	300	5	20 6545
Cut 3	150	10	20 6552
	200	10	20 6553
	250	5	20 6554
	300	5	20 6555

Shape D, square 


Cut	Size/mm	PU	Article no.
Cut 1	150	10	20 6561
	200	10	20 6562
	250	10	20 6563
	300	5	20 6564
Cut 2	150	10	20 6571
	200	10	20 6572
	250	10	20 6573
	300	5	20 6574
Cut 3	150	10	20 6581
	200	10	20 6582
	250	10	20 6583
	300	5	20 6584





## Workshop files

according to DIN 7261, without grip

Shape E, semi-circular 

Cut 1	150	10	20 6592
	200	10	20 6593
	250	10	20 6594
	300	5	20 6595
Cut 2	150	10	20 6602
	200	10	20 6603
	250	10	20 6604
	300	5	20 6605
Cut 3	150	10	20 6612
	200	10	20 6613
	250	10	20 6614
	300	5	20 6615

Shape F, round 

Cut 1	150	10	20 6622
	200	10	20 6623
	250	10	20 6624
	300	5	20 6625
Cut 2	150	10	20 6632
	200	10	20 6633
	250	10	20 6634
	300	5	20 6635
Cut 3	150	10	20 6642
	200	10	20 6643
	250	10	20 6644
	300	5	20 6645

## Rasps

without grip

Cut 1	250	1	20 6701
Cut 2	250	1	20 6711

## File grips

according to DIN ISO 395, manufactured from beech wood

for files mm

up to 100	80	20	20 6850
up to 125	100	20	20 6852
up to 200	120	20	20 6854
up to 300	140	20	20 6856
up to 350	160	20	20 6857

## Key file set, 6 files

with wooden haft, according to DIN 7283, shape A to F, length 100 mm

supplied in a plastic bag 	10	20 6750
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## File brush

for the cleaning of wood and metal files. With stable beech wood carrier and steel edging.

Working surface 115 mm x 40 mm	250	12	14 1325
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## Contact file set, 6-pieces

in DIY snatch bag

Length 160 mm	1 set	20 6760
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## Contact brush

contact brush or spark plug brush with 0.15 mm ø curved brass edging and stable beech wood handles.

Double-row	100	12	14 1320
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# SCREW PUNCHERS, PLATE PUNCHERS

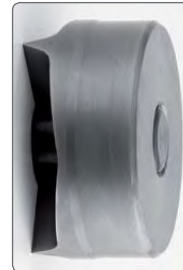
## First class

- 100% Made in Germany
- All tools made of particularly robust special steel for a long working life



## Well planned

- Special cutting geometry for light first cut and speedy punching
- Less force required due to tapered, relieved blades
- Die with crosshairs for improved positioning



## Innovative

- Round punchers split scrap pieces into three parts
- Shaped punches have lateral ejectors for the scrap part



## Practical

- For manual and hydraulic use
- All tools and accessory parts can be ordered individually - no packaged units
- All punching tools are 100% compatible with the systems of other manufacturers
- Special punches can be produced at short notice if dimensions are given



## Screw puncher DIAMANT

Innovative splitting punch with three cutting tips: punched waste is split into three parts.  
Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: manual and hydraulic  
Design: with punch, die, tension bolt with ball bearing (encapsulated)



Nominal size PG	Nominal size, metric	Hole ø mm	Bolt size mm	Pre-drill ø mm	Max. material thickness mm	PU	Article no.
	12	12.5	6.0 x 40.0	6.5	1.5	1	13 2500
	16	16.2	9.5 x 50.0	10.0	2.0	1	13 2502
13	20	20.4	9.5 x 50.0	10.0	2.0	1	13 2504
	25	25.4	9.5 x 50.0	10.0	2.0	1	13 2506
	32	32.5	19.0 x 55.0	20.4*	3.0	1	13 2508
	40	40.5	19.0 x 75.0	20.4*	3.0	1	13 2510
	50	50.5	19.0 x 75.0	20.4*	3.0	1	13 2512
	63	63.5	19.0 x 75.0	20.4*	3.0	1	13 2514

\* 1. Pre-drill: ø 10.0 mm 2. Pre-punch: ø 20.4 mm

Nominal size PG	Nominal size, metric	Hole ø mm	Bolt size mm	Pre-drill ø mm	Max. material thickness mm	PU	Article no.
9		15.2	9.5 x 50.0	10.0	2.0	1	13 2518
11		18.6	9.5 x 50.0	10.0	2.0	1	13 2520
13	20	20.4	9.5 x 50.0	10.0	2.0	1	13 2504
16		22.5	9.5 x 50.0	10.0	2.0	1	13 2524
21		28.3	9.5 x 50.0	10.0	2.0	1	13 2526
29		37.0	19.0 x 55.0	20.4*	3.0	1	13 2528
36		47.0	19.0 x 75.0	20.4*	3.0	1	13 2530
42		54.0	19.0 x 75.0	20.4*	3.0	1	13 2532
48		60.0	19.0 x 75.0	20.4*	3.0	1	13 2534

\* 1. Pre-drill: ø 10.0 mm 2. Pre-punch: ø 20.4 mm

Nominal size inch	Hole ø mm	Bolt size mm	Pre-drill ø mm	Max. material thickness mm	PU	Article no.
1-7/32"	30.5	9.5 x 50.0	10.0	2.0	1	13 2536

## Screw puncher accessories DIAMANT

for bolt size 6.0 mm x 40 mm	Size mm	PU	Article no.
Tension bolt with ball bearing	6.0 x 40	1	13 5010
Hydraulic bolt, complete	19.0 / 6.0	1	13 5012
Punch (with 6.0 mm thread)	12.5	1	13 2542
Die (for 6.0 mm bolt)	12.5	1	13 2544

for bolt size 9.5 mm x 50 mm	Size mm	PU	Article no.
Tension bolt with ball bearing	9.5 x 50	1	13 5000
Hydraulic bolt	19.0 / 9.5	1	13 5002
Punch (with 9.5 mm thread)	15.2	1	13 2550
	16.2	1	13 2552
	18.6	1	13 2554
	20.4	1	13 2556
	22.5	1	13 2558
	25.4	1	13 2560
	28.3	1	13 2562
	30.5	1	13 2564
Die (for 9.5 mm bolt)	15.2	1	13 2566
	16.2	1	13 2568
	18.6	1	13 2570
	20.4	1	13 2572
	22.5	1	13 2574
	25.4	1	13 2576
	28.3	1	13 2578
	30.5	1	13 2580



## Screw puncher accessories DIAMANT

for bolt size 19 mm x 55 mm

Size mm

	Size mm	PU	Article no.
Tension bolt with ball bearing	19.0 x 55.0	1	13 5004
Hydraulic bolt	19.0 x 120.0	1	13 5006
Punch (with 19 mm thread)	32.5	1	13 2586
	37.0	1	13 2588
Die (for 19 mm bolt)	32.5	1	13 2590
	37.0	1	13 2592

for bolt size 19 mm x 75 mm

Size mm

	Size mm	PU	Article no.
Tension bolt with ball bearing	19.0 x 75	1	13 5008
Hydraulic bolt	19.0 x 120	1	13 5006
Punch (with 19 mm thread)	40.5	1	13 2598
	47.0	1	13 2600
	50.5	1	13 2602
	54.0	1	13 2604
	60.0	1	13 2606
	63.5	1	13 2608
Die (for 19 mm bolt)	40.5	1	13 2610
	47.0	1	13 2612
	50.5	1	13 2614
	54.0	1	13 2616
	60.0	1	13 2618
63.5	1	13 2620	



## Screw puncher DIAMANT - VA

Innovative splitting punch with three cutting tips: punched waste is split into three parts.

Suitable for: stainless steel (VA steel), steel sheets (ST 37), plastic and aluminium. Operation: manual and hydraulic (we recommend the use of a hydraulic unit.) Design: with splitting punch, die, without tension bolt

Nominal size	Nominal size	Hole-ø	Bolt	Pre-drill ø	max. Material		
PG	metric	mm	Size mm	mm	thickness mm	PU	Article no.
13	16	16.2	11.1 x 60.0	11.5	2.5	1	13 2700
13	20	20.4	11.1 x 60.0	11.5	2.5	1	13 2702
	25	25.4	11.1 x 60.0	11.5	2.5	1	13 2704
	32	32.5	19.0 x 55.0	20.4*	3.5	1	13 2706
	40	40.5	19.0 x 75.0	20.4*	3.5	1	13 2708
	50	50.5	19.0 x 75.0	20.4*	3.5	1	13 2710
	63	63.5	19.0 x 75.0	20.4*	3.5	1	13 2712

\* 1. Pre-drill: ø 11.5 mm 2. Pre-punch: ø 20.4 mm

Nominal size	Nominal size	Hole-ø	Bolt	Pre-drill ø	max. Material		
PG	metric	mm	Size mm	mm	thickness mm	PU	Article no.
9		15.2	11.1 x 60.0	11.5	2.5	1	13 2714
11		18.6	11.1 x 60.0	11.5	2.5	1	13 2716
13	20	20.4	11.1 x 60.0	11.5	2.5	1	13 2702
16		22.5	11.1 x 60.0	11.5	2.5	1	13 2720
21		28.3	19.0 x 55.0	20.4*	3.5	1	13 2722
29		37.0	19.0 x 55.0	20.4*	3.5	1	13 2724
36		47.0	19.0 x 75.0	20.4*	3.5	1	13 2726
42		54.0	19.0 x 75.0	20.4*	3.5	1	13 2728
48		60.0	19.0 x 75.0	20.4*	3.5	1	13 2730

\* 1. Pre-drill: ø 11.5 mm 2. Pre-punch: ø 20.4 mm

Nominal size	Hole-ø	Screw	Pre-drill ø	max. Material		
Inch	mm	Size mm	mm	thickness mm	PU	Article no.
1-7 / 32"	30.5	19 x 55	20.4*	3.5	1	13 2732

\* 1. Pre-drill: ø 11.5 mm 2. Pre-punch: ø 20.4 mm





## Screw puncher accessories DIAMANT - VA

for bolt size 11.1 mm x 60 mm

Size mm

	Size mm	PU	Article no.
Tension bolt with ball bearing	11.1 x 60.0	1	13 5014
Hydraulic bolt, complete	19.0 / 11.1	1	13 5016
Punch (with 11.1 mm thread)	15.2	1	13 2734
	16.2	1	13 2736
	18.6	1	13 2738
	20.4	1	13 2740
	22.5	1	13 2742
	25.4	1	13 2744
Die (for 11.1 mm bolt)	15.2	1	13 2746
	16.2	1	13 2748
	18.6	1	13 2750
	20.4	1	13 2752
	22.5	1	13 2754
	25.4	1	13 2756

for bolt size 19 mm x 55 mm

Size mm

	Size mm	PU	Article no.
Tension bolt with ball bearing	19.0 x 55.0	1	13 5004
Hydraulic bolt	19.0 x 120.0	1	13 5006
Punch (with 19 mm thread)	28.3	1	13 2758
	30.5	1	13 2760
	32.5	1	13 2762
	37.0	1	13 2764
	Die (for 19 mm bolt)	28.3	1
	30.5	1	13 2768
	32.5	1	13 2770
	37.0	1	13 2772

for bolt size 19 mm x 75 mm

Size mm

	Size mm	PU	Article no.
Tension bolt with ball bearing	19.0 x 75.0	1	13 5008
Hydraulic bolt	19.0 x 120.0	1	13 5006
Punch (with 19 mm thread)	40.5	1	13 2774
	47.0	1	13 2776
	50.5	1	13 2778
	54.0	1	13 2780
	60.0	1	13 2782
	63.5	1	13 2784
Die (for 19 mm bolt)	40.5	1	13 2786
	47.0	1	13 2788
	50.5	1	13 2790
	54.0	1	13 2792
	60.0	1	13 2794
	63.5	1	13 2796

## Round screw puncher BASIC

Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: manual and hydraulic

Design: includes punch, die and tension bolt with ball bearing (encapsulated)

Nominal size PG	Nominal size metric	Hole- $\varnothing$ mm	Bolt Size mm	Pre-drill $\varnothing$ mm	max. Material thickness mm	PU	Article no.
16	16	16.2	9.5 x 50.0	10.0	2.0	1	13 2300
13	20	20.4	9.5 x 50.0	11.0	2.0	1	13 2302
	25	25.4	9.5 x 50.0	11.0	2.0	1	13 2304
	32	32.5	9.5 x 50.0	11.0	2.0	1	13 2306
	40	40.5	19.0 x 55.0	20.4*	3.0	1	13 2308
	50	50.5	19.0 x 75.0	20.4*	3.0	1	13 2310
	63	63.5	19.0 x 75.0	20.4*	3.0	1	13 2312

\* 1. Pre-drill:  $\varnothing$  10.0 mm 2. Pre-punch:  $\varnothing$  20.4 mm



## Round screw puncher BASIC

Nominal size PG	Nominal size metric	Hole- $\varnothing$ mm	Bolt Size mm	Pre-drill $\varnothing$ mm	max. Material thickness mm	PU	Article no.
9		15.2	9.5 x 50.0	10.0	2.0	1	13 2318
11		18.6	9.5 x 50.0	11.0	2.0	1	13 2320
13	20	20.4	9.5 x 50.0	11.0	2.0	1	13 2302
16		22.5	9.5 x 50.0	11.0	2.0	1	13 2324
21		28.3	9.5 x 50.0	11.0	2.0	1	13 2326
29		37.0	19.0 x 55.0	20.4*	3.0	1	13 2328
36		47.0	19.0 x 75.0	20.4*	3.0	1	13 2330
42		54.0	19.0 x 75.0	20.4*	3.0	1	13 2332
48		60.0	19.0 x 75.0	20.4*	3.0	1	13 2334

\* 1. Pre-drill:  $\varnothing$  10.0 mm 2. Pre-punch:  $\varnothing$  20.4 mm



Nominal size Inch	Hole- $\varnothing$ mm	Screw Size mm	Pre-drill $\varnothing$ mm	max. Material thickness mm	PU	Article no.
1-7 / 32"	30.5	9.5 x 50.0	10.0	2.0	1	13 2336
	68.0	19.0 x 75.0	20.4*	3.0	1	13 2338
2-3 / 4"	70.0	19.0 x 75.0	20.4*	3.0	1	13 2340
3"	76.2	19.0 x 75.0	20.4*	3.0	1	13 2342
3-1 / 8"	80.0	19.0 x 75.0	20.4*	3.0	1	13 2344
	82.0	19.0 x 75.0	20.4*	3.0	1	13 2346

\* 1. Pre-drill:  $\varnothing$  10.0 mm 2. Pre-punch:  $\varnothing$  20.4 mm

## Screw puncher accessories BASIC

for bolt size 9.5 mm x 50 mm	Size mm	PU	Article no.
Tension bolt with ball bearing	9.5 x 50.0	1	13 5000
Hydraulic bolt	19.0 / 9.5	1	13 5002
Punch (with 9.5 mm thread)	15.2	1	13 2354
	16.2	1	13 2356
	18.6	1	13 2358
	20.4	1	13 2360
	22.5	1	13 2362
	25.4	1	13 2364
	28.3	1	13 2366
	30.5	1	13 2368
	32.5	1	13 2370
	Die (for 9.5 mm bolt)	15.2	1
16.2		1	13 2376
18.6		1	13 2378
20.4		1	13 2380
22.5		1	13 2382
25.4		1	13 2384
28.3		1	13 2386
30.5		1	13 2388
32.5		1	13 2390



for bolt size 19 mm x 55 mm	Size mm	PU	Article no.
Tension bolt with ball bearing	19.0 x 55.0	1	13 5004
Hydraulic bolt	19.0 x 120.0	1	13 5006
Punch (with 19 mm thread)	37.0	1	13 2396
	40.5	1	13 2398
	40.5	1	13 2402
Die (for 19 mm bolt)	37.0	1	13 2400
	40.5	1	13 2402



## Screw puncher accessories BASIC

for bolt size 19 mm x 75 mm

Size mm

Design	Size/mm	PU	Article no.
Tension bolt with ball bearing	19.0 x 75.0	1	13 5008
Hydraulic bolt	19.0 x 120.0	1	13 5006
Punch (with 19 mm thread)	47.0	1	13 2408
	50.5	1	13 2410
	54.0	1	13 2412
	60.0	1	13 2414
	63.5	1	13 2416
	68.0	1	13 2418
	70.0	1	13 2420
	76.2	1	13 2424
	80.0	1	13 2426
	82.0	1	13 2428
Die (for 19 mm bolt)	47.0	1	13 2430
	50.5	1	13 2432
	54.0	1	13 2434
	60.0	1	13 2436
	63.5	1	13 2438
	68.0	1	13 2440
	70.0	1	13 2442
	76.2	1	13 2446
	80.0	1	13 2448
	82.0	1	13 2450



## Screw puncher DIAMANT sets

Options with five or seven different sizes.

Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: manual and hydraulic

Design: consists of splitting punches and dies. Storage: in practical, robust plastic case

Design	Nominal size metric mm	Max. material thickness mm	PU	Article no.
5 pieces	16	2.0	1	13 3000
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		
7 pieces	16	2.0	1	13 3002
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		
	50	3.0		
	63	3.0		
11 pieces	12	1.5	1	13 3008
	16	2.0		
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		
13 pieces	16	2.0	1	13 3010
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		
	63	3.0		

Additional equipment: tension bolt with ball bearing (encapsulated), pre-drill and assembly paste

Design

Nominal size

Max. material thickness mm

metric mm

12	1.5
16	2.0
20	2.0
25	2.0
32	2.0
40	3.0
16	2.0
20	2.0
25	2.0
32	2.0
40	3.0
50	3.0
63	3.0





## Screw puncher DIAMANT sets

12 pieces screw puncher sets including hand-held punch and accessories. Options: with straight hand-held punch or 90° angled hand-held punch.

Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: hydraulic

Design: consists of five splitting punches and dies per set; hydraulic bolts (2 items), pre-drill and spacer sleeve set (3 pieces). Storage: in practical, robust plastic case

### Contains straight hydraulic hand-held punch

Design	Nominal size metric mm	Max. material thickness mm
	16	2.0
	20	2.0
	25	2.0
	32	2.0
	40	3.0

12 pieces 1 13 3012



### Contains 90° angled hand-held punch, can be rotated 360°

Design	Nominal size metric mm	Max. material thickness mm
	16	2.0
	20	2.0
	25	2.0
	32	2.0
	40	3.0

12 pieces 1 13 3014



## 12 pieces screw puncher set accessories

Individual parts	Size mm		
Hydraulic bolt, complete	19.0 / 9.5	1	13 5002
Hydraulic bolt	19.0 x 120.0	1	13 5006
Spacer sleeve set (3 pieces)		1	13 5072
Pre-drill	10.0	1	13 4026



## Screw puncher DIAMANT - VA sets

Screw puncher sets consisting of splitting punches and dies: options for five or seven different sizes.

Suitable for: stainless steel (VA steel), steel sheets (ST 37), plastic and aluminium. Operation: manual and hydraulic (We recommend the use of a hydraulic unit.)

Design: consists of splitting punches and dies.

Storage: in practical, robust plastic case

Design	Nominal size metric mm	Max. material thickness mm
	16	2.5
	20	2.5
	25	2.5
	32	3.5
	40	3.5

5 pieces 1 13 3004

	16	2.5
	20	2.5
	25	2.5
	32	3.5
	40	3.5
	50	3.5
	63	3.5

7 pieces 1 13 3006







## Screw puncher DIAMANT - VA sets

12 pieces screw puncher sets including hand-held punch and accessories. Options: with straight hand-held punch or 90° angled hand-held punch.

Suitable for: stainless steel (VA steel), steel sheets (ST 37), plastic and aluminium. Operation: hydraulic

Design: consists of five splitting punches and dies per set; hydraulic bolts (2 items), pre-drill and spacer sleeve set (3 pieces). Storage: in practical, robust plastic case

### Contains straight hydraulic hand-held punch

Design	Nominal size metric mm	Max. material thickness mm
	16	2.5
	20	2.5
	25	2.5
	32	3.5
	40	3.5

12 pieces 1 13 3016



### Contains 90° angled hand-held punch, can be rotated 360°

Design	Nominal size metric mm	Max. material thickness mm
	16	2.5
	20	2.5
	25	2.5
	32	3.5
	40	3.5

12 pieces 1 13 3018



## 12 pieces screw puncher set accessories

Individual parts	Size mm		
Hydraulic bolt, complete	19.0 / 11.1	1	13 5016
Hydraulic bolt	19.0 x 120.0	1	13 5006
Spacer sleeve set (3 pieces)		1	13 5072
Pre-drill	11.5	1	13 4030



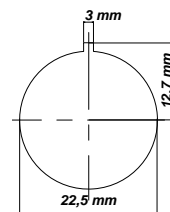
## Round and groove screw puncher

Patented die: with lateral scrap part ejector. Hole punching with 3 mm stud: for anti-rotation locking of pushbuttons and switches. Suitable for:

steel sheet (ST 37), plastic and aluminium. Operation: manual and hydraulic

Design: with punch, die, tension bolt with ball bearing (encapsulated), counter nut and adapter for hydraulic operation. Storage: in a practical, robust plastic case

Nominal size ø	Pre-drill ø mm	Max. material thickness mm		
22.5 mm with 3 mm stud	14.0	2.0	1	13 2800



## Round and groove screw puncher accessories

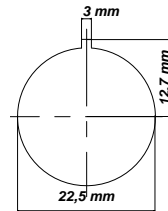
Individual parts	Size mm		
Tension bolt with ball bearing		1	13 5018
Counter nut		1	13 5020
Screw-down nut		1	13 5022
Adapter for hydraulics		1	13 5024
Punch	22.5 - 3.2 - 25.4	1	13 2802
Die	22.5 - 3.2 - 25.4	1	13 2804





## Round and groove screw puncher VA

With lateral ejector for the scrap part, supplied in a plastic case, also suitable for hydraulic operation, stainless steel sheets (VA) and steel sheets (ST 37). Hole punch design complete with stud. For anti-rotation locking of pushbuttons and switches.



Nominal size ø	Pre-drill ø mm	Max. material thickness mm	PU	Article no.
22.5 mm with 3 mm stud	14.0	2.0	1	13 2801



## Round and groove screw puncher VA accessories

Tension bolt with ball bearing	1	13 5018
Counter nut	1	13 5020
Screw-down nut	1	13 5022
Adapter for hydraulics	1	13 5024
Punch	22.5 - 3.2 - 25.4	1 13 2803
Die	22.5 - 3.2 - 25.4	1 13 2804

## Rectangular screw puncher

Patented die: with lateral scrap part ejector.

Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: manual and hydraulic

Design: with punch, die, tension bolt with ball bearing (encapsulated), counter nut and adapter for hydraulic operation.

Storage: in a practical, robust plastic case

Nominal size ø	Pre-drill ø mm	Max. material thickness mm	PU	Article no.
17.0 x 19.0	14.0	2.0	1	13 2806
21.8 x 25.8	17.0	2.0	1	13 2808
22.0 x 30.0	17.0	2.0	1	13 2810
22.0 x 42.0	17.0	2.0	1	13 2811
25.0 x 50.0	17.0	2.0	1	13 2812



## Rectangular screw puncher accessories

Individual parts	Size mm	PU	Article no.
Tension bolt with ball bearing		1	13 5028
Counter nut		1	13 5020
Screw-down nut		1	13 5022
Adapter for hydraulics		1	13 5024
Punch	17.0 x 19.0	1	13 2818
Die	17.0 x 19.0	1	13 2828



## Rectangular screw puncher accessories

Individual parts	Size mm	PU	Article no.
Tension bolt with ball bearing		1	13 5021
Counter nut		1	13 5020
Screw-down nut		1	13 5030
Adapter for hydraulics		1	13 5032
Punch	21.8 x 25.8	1	13 2820
Punch	22.0 x 30.0	1	13 2822
Punch	22.0 x 42.0	1	13 2824
Die	21.8 x 25.8	1	13 2830
Die	22.0 x 30.0	1	13 2832
Die	22.0 x 42.0	1	13 2834
Counter nut		1	13 5046
Punch	25.0 x 50.0	1	13 2826
Die	25.0 x 50.0	1	13 2836





## Rectangular screw puncher

Patented die: with lateral scrap part ejector.

Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: hydraulic

Design: with punch, die, hydraulic bolt and counter nut

Storage: in a practical, robust plastic case

Nominal size $\varnothing$	Pre-drill $\varnothing$ mm	Max. material thickness mm	PU	Article no.
45.0 x 92.0	24.0	2.0	1	13 2813
46.0 x 92.0	24.0	2.0	1	13 2814
68.0 x 138.0	30.0*	3.0	1	13 2816

\*Only in combination with CIMCO article no. 13 4022 or adapter 13 5088



## Rectangular screw puncher accessories

Individual parts	Size mm	PU	Article no.
Hydraulic bolt		1	13 5034
Counter nut		1	13 5036
Punch	45.0 x 92.0	1	13 2837
Punch	46.0 x 92.0	1	13 2838
Die	45.0 x 92.0	1	13 2841
Die	46.0 x 92.0	1	13 2842
Hydraulic bolt		1	13 5038
Counter nut		1	13 5040
Punch	68.0 x 138.0	1	13 2840
Die	68.0 x 138.0	1	13 2844



## Square screw puncher

Patented die: with lateral scrap part ejector.

Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: manual and hydraulic

Design: with punch, die, tension bolt with ball bearing (encapsulated), counter nut and adapter for hydraulic operation.

Storage: in a practical, robust plastic case

Nominal size $\varnothing$	Pre-drill $\varnothing$ mm	Max. material thickness mm	PU	Article no.
12.7 x 12.7	10.0	1.75	1	13 2846
15.8 x 15.8	10.0	1.75	1	13 2848
19.0 x 19.0	14.0	2.00	1	13 2850
22.2 x 22.2	14.0	2.00	1	13 2852
24.0 x 24.0	14.0	2.00	1	13 2854
25.4 x 25.4	17.0	2.00	1	13 2856



## Square screw puncher accessories

Individual parts	Size mm	PU	Article no.
Tension bolt with ball bearing		1	13 5042
Counter nut		1	13 5044
Screw-down nut		1	13 5022
Adapter for hydraulics		1	13 5024
Punch	12.7 x 12.7	1	13 2872
Punch	15.8 x 15.8	1	13 2874
Die	12.7 x 12.7	1	13 2884
Die	15.8 x 15.8	1	13 2886
Tension bolt with ball bearing		1	13 5028
Counter nut		1	13 5020
Screw-down nut		1	13 5022
Adapter for hydraulics		1	13 5024
Punch	19.0 x 19.0	1	13 2876
Punch	22.2 x 22.2	1	13 2878
Punch	24.0 x 24.0	1	13 2880
Die	19.0 x 19.0	1	13 2888
Die	22.2 x 22.2	1	13 2890
Die	24.0 x 24.0	1	13 2892



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### Square screw puncher accessories

Tension bolt with ball bearing		1	13 5021
Counter nut		1	13 5020
Screw-down nut		1	13 5030
Adapter for hydraulics		1	13 5032
Punch	25.4 x 25.4	1	13 2882
Die	25.4 x 25.4	1	13 2894



### Square screw puncher

Patented die: with lateral scrap part ejector.

Suitable for: steel sheets (ST 37), plastic and aluminium. Operation: hydraulic. Design: with punch, die, hydraulic bolt and counter nut. Storage: in a practical, robust plastic case

Nominal size $\varnothing$	Pre-drill $\varnothing$ mm	Max. material thickness mm	PU	Article no.
45.5 x 45.5	20.0	3.0	1	13 2858
46.0 x 46.0	20.0	3.0	1	13 2860
50.8 x 50.8	24.0	3.0	1	13 2862
68.0 x 68.0	24.0	3.0	1	13 2864
92.0 x 92.0	30.0*	3.0	1	13 2866
125.0 x 125.0	30.0*	3.0	1	13 2868
138.0 x 138.0	30.0*	3.0	1	13 2870

\*Only in combination with CIMCO article no. 13 4022 or adapter 13 5088



### Square screw puncher accessories

Individual parts	Size mm	PU	Article no.
Hydraulic bolt		1	13 5048
Counter nut		1	13 5050
Punch	45.5 x 45.5	1	13 2896
Punch	46.0 x 46.0	1	13 2898
Die	45.5 x 45.5	1	13 2910
Die	46.0 x 46.0	1	13 2912
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	50.8 x 50.8	1	13 2900
Die	50.8 x 50.8	1	13 2914
Hydraulic bolt		1	13 5034
Counter nut		1	13 5036
Punch	68.0 x 68.0	1	13 2902
Die	68.0 x 68.0	1	13 2916
Hydraulic bolt		1	13 5038
Counter nut		1	13 5036
Punch	92.0 x 92.0	1	13 2904
Die	92.0 x 92.0	1	13 2918
Hydraulic bolt		1	13 5038
Counter nut		1	13 5054
Punch	125.0 x 125.0	1	13 2906
Punch	138.0 x 138.0	1	13 2908
Die	125.0 x 125.0	1	13 2920
Die	138.0 x 138.0	1	13 2922





## Square screw puncher - VA

Patented die: with lateral scrap part ejector.

Suitable for: stainless steel (VA steel) and steel sheets (ST 37). Operation: hydraulic. Design: with punch, die, hydraulic bolt and counter nut. Storage: in a practical, robust plastic case

Nominal size $\varnothing$	Pre-drill $\varnothing$ mm	Max. material thickness mm	PU	Article no.
46.0 x 46.0	20.0	2.0	1	13 2861
68.0 x 68.0	24.0	2.0	1	13 2865
92.0 x 92.0	30.0*	2.0	1	13 2867

\*Only in combination with CIMCO article no. 13 4022 or adapter 13 5088



## Square screw puncher VA accessories

Individual parts	Size mm	PU	Article no.
Hydraulic bolt		1	13 5048
Counter nut		1	13 5050
Punch	46.0 x 46.0	1	13 2899
Die	46.0 x 46.0	1	13 2912
Hydraulic bolt		1	13 5034
Counter nut		1	13 5036
Punch	68.0 x 68.0	1	13 2903
Die	68.0 x 68.0	1	13 2916
Hydraulic bolt		1	13 5038
Counter nut		1	13 5036
Punch	92.0 x 92.0	1	13 2905
Die	92.0 x 92.0	1	13 2918



## Screw puncher Sub-Min-D

Patented die: with lateral scrap part ejector. Suitable for: steel sheets (ST 37) and stainless steel (VA steel).

Operation: manual and hydraulic. Design: for multiple plug-in connectors, with punch, die, tension bolt, counter nut, screw-down nut with ball bearing (encapsulated) and adapter for hydraulic operation

Storage: in a practical, robust plastic case

Number of pins	Nominal size mm	Pre-drill $\varnothing$ mm	Max. material thickness mm	PU	Article no.
9	20.0 x 11.9	10.0	2.00 / 1.50	1	13 2924
15	28.6 x 11.9	10.0	2.00 / 1.50	1	13 2926
25	42.0 x 11.9	10.0	1.75 / 1.25	1	13 2928
37	58.3 x 11.9	10.0	1.75 / 1.25	1	13 2930
50	55.9 x 14.7	10.0	1.65 / 1.00	1	13 2932



## Screw punch Sub-Min-D accessories

Individual parts	Size mm	PU	Article no.
Tension bolt		1	13 5056
Counter nut		1	13 5058
Screw-down nut		1	13 5022
Adapter/hydraulics		1	13 5024
Punch	20.0 x 11.9	1	13 2934
Die	20.0 x 11.9	1	13 2944
Tension bolt		1	13 5056
Counter nut		1	13 5060
Screw-down nut		1	13 5022
Adapter/hydraulics		1	13 5024
Punch	28.6 x 11.9	1	13 2936
Die	28.6 x 11.9	1	13 2946
Tension bolt		1	13 5056
Counter nut		1	13 5062
Screw-down nut		1	13 5022
Adapter/hydraulics		1	13 5024
Punch	42.0 x 11.9	1	13 2938
Die	42.0 x 11.9	1	13 2948



## Screw punch Sub-Min-D accessories

Individual parts	Size mm		
Tension bolt		1	13 5056
Counter nut		1	13 5064
Screw-down nut		1	13 5022
Adapter/hydraulics		1	13 5024
Punch	58.3 x 11.9	1	13 2940
Die	58.3 x 11.9	1	13 2950
Tension bolt		1	13 5056
Counter nut		1	13 5066
Screw-down nut		1	13 5022
Adapter/hydraulics		1	13 5024
Punch	55.9 x 14.7	1	13 2942
Die	55.9 x 14.7	1	13 2952



## Special screw puncher for heavy-duty plug-in connectors

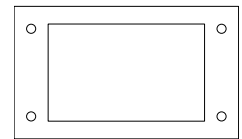
Patented die: with lateral scrap part ejector. Drilling position is marked out by the die using prick punches: prick punches can be exchanged using 2.5 mm hex keys or wound back. There is therefore no need to mark out the centre marking.

Suitable for: steel sheet (ST 37), plastic and aluminium.

Operation: hydraulic. Design: with punch, die, hydraulic bolt and counter nut.

Storage: in a practical, robust plastic case

Number of pins	Nominal size mm	Pre-drill ø mm	Max. material thickness mm		
6	52.0 x 36.0	24.0	2.0	1	13 2954
10	65.0 x 36.0	24.0	2.0	1	13 2956
16	86.0 x 36.0	24.0	2.0	1	13 2958
24	112.0 x 36.0	24.0	2.0	1	13 2960



## Special screw puncher accessories

Individual parts	Size mm		
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	52.0 x 36.0	1	13 2962
Die	52.0 x 36.0	1	13 2970
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	65.0 x 36.0	1	13 2964
Die	65.0 x 36.0	1	13 2972
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	86.0 x 36.0	1	13 2966
Die	86.0 x 36.0	1	13 2974
Hydraulic bolt		1	13 5034
Counter nut		1	13 5070
Punch	112.0 x 36.0	1	13 2968
Die	112.0 x 36.0	1	13 2976



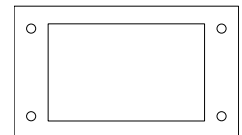
## Special screw puncher VA for heavy-duty plug-in connectors

Patented die: with lateral scrap part ejector. Drilling position is marked out by the die using prick punches: prick punches can be exchanged using 2.5 mm hex keys or wound back. There is therefore no need to mark out the centre marking.

Suitable for: stainless steel (VA) and steel sheet (ST 37).

Operation: hydraulic. Design: with punch, die, hydraulic bolt and counter nut. Storage: in a practical, robust plastic case

Number of pins	Nominal size mm	Pre-drill ø mm	Max. material thickness mm		
6	52.0 x 36.0	24.0	2.0	1	13 2980
10	65.0 x 36.0	24.0	2.0	1	13 2982
16	86.0 x 36.0	24.0	2.0	1	13 2984
24	112.0 x 36.0	24.0	2.0	1	13 2986



### Special screw puncher VA accessories

Design	Size mm	PU	Article no.
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	52.0 x 36.0	1	13 2990
Die	52.0 x 36.0	1	13 2970
Hydraulic bolt		1	13 5034
Counter nut		1	13 5070
Punch	65.0 x 36.0	1	13 2992
Die	65.0 x 36.0	1	13 2972
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	86.0 x 36.0	1	13 2994
Die	86.0 x 36.0	1	13 2974
Hydraulic bolt		1	13 5034
Counter nut		1	13 5070
Punch	112.0 x 36.0	1	13 2996
Die	112.0 x 36.0	1	13 2976



### Hydraulic battery-operated punch

Practical hand-held hydraulic tool with high performance rechargeable 18 V battery, for round, rectangular and square punching in control cabinets and plant construction. With pressure relief valve, high-performance drive motor, high tensile strength aluminium head, weight including battery only 3.7 kg, ergonomically designed two-component handle, rechargeable battery packages can be inserted from either of two sides:



Battery insertion at the front to ensure stable position



Battery insertion at the back for space-saving operation



- Punching force: 70 kN with pressure relief valve
- Battery: charging time: 45 minutes after full discharge
- Charger: will charge all rechargeable 18 - 28 V batteries, compatible with NiCD, NiMH and Li-Ion batteries,
- Automatic temperature monitoring, charge condition on LED display
- Supplied in a robust plastic case: battery operated hand-held hydraulic unit, two 18 V rechargeable batteries, 18 - 28 V charger, two hydraulic bolts, spacer sleeve set (3 pieces), pre-drill 11.0 mm, operating instructions

Hydraulic battery-operated punch with accessories	1	13 4012
Rechargeable battery	1	13 4014

### Hydraulic hand-held punches

Practical hand-held punch for round, rectangular and square punching in control cabinets and plant construction. Pressure relief valve provides safety function: pressure switched off automatically at 650 bar. Made of high tensile strength aluminium (saving approx. 40% in weight), ergonomic handle - springs back by itself, one-handed operation means easier positioning of the die in the crosshairs. Punching force: 75 kN, operating pressure max: 650 bar.

Hydraulic hand-held punch - straight design (1.6 kg)	1	13 4016
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Hydraulic hand-held punch - angled 90°, can be rotated 360° (1.9 kg)	1	13 4018
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## Hydraulic punch with hand pump

Ideal in restricted spaces, for round, rectangular and square punching in control cabinets and plant construction.

Punching force: 75 kN with pressure relief valve

Operating pressure max: 650 bar

Weight: 2.0 kg

Supplied in a robust plastic case: hydraulic punch with hand pump, hydraulic cylinder,

hydraulic 600 mm hose, two hydraulic bolts, spacer sleeve set (3 pieces),

HSS pre-drill 11.0 mm



Hydraulic punch with hand pump

1

13 4020

## Hydraulic punch with foot pump

Ideal in restricted spaces, for round, rectangular and square punching in control cabinets and plant construction.

Keep both hands free for exact positioning and punching: splayed support stand ensures tip-proof operation

Punching force: 75 kN with pressure relief valve

Operating pressure max: 700 bar<sup>3</sup>

Tank volume: 270 cm<sup>3</sup>

Usable oil volume: 210 cm<sup>3</sup>

Flow rate: 1.7 cm per piston stroke

Supplied in a robust plastic case: foot pump, hydraulic cylinder with quick-fitting coupling,

hydraulic hose 2.8 m, two hydraulic bolts, spacer sleeve set (5 pieces),

pre-drill 11.0 mm



Hydraulic punch with foot pump

1

13 4022

## Hydraulic cylinder

For all electric, foot and hand-operated pumps with quick-fitting coupling and a maximum output pressure of 700 bar.

Compact construction, for punching round, rectangular and square holes as well as special shapes in stainless steel and steel sheet ST 37 (control cabinets and plant construction).

Hydraulic cylinder with quick-fitting coupling (up to 115 kN), high tensile strength aluminium body, suitable for tension bolts with UNF thread,  $\varnothing$  19.0 mm, drip-free coupling and uncoupling, easy operation, with dust protector cap, supplied in a plastic case.



1

13 4023

## Keyway pliers

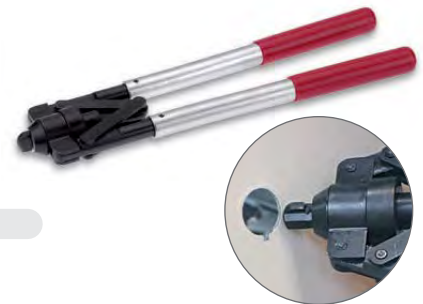
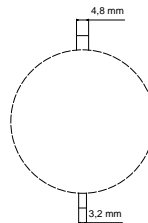
Punch keyways quickly and easily in 2.0 mm steel sheets (ST 37),

save time-consuming filing of grooves for anti-rotational locking,

options for keyways in 3.2 mm and 4.8 mm size, exchangeable keyway punch,

long operating life as punch and die are made of hardened tool steel,

easy punching thanks to strong lever action, weight 1.3 kg



Keyway pliers

1

13 4000

Replacement punches in 3.2 mm and 4.8 mm

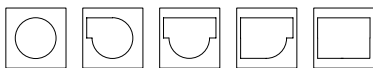
1

13 4002

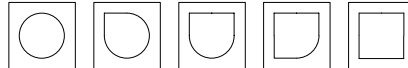
## Nibbler

Pre-punched round holes can easily and economically be converted to square or rectangular holes.

Particularly recommended for producing unusual dimensions (special shapes).



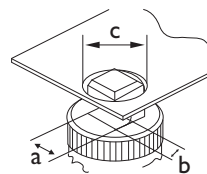
Round to rectangular



Round to square

Material thickness: max. 2.0 mm ST 37

Dimensions:	a	b	c	Pre-punch
ASN 15	15.0	6.5	21.5	21.5 mm $\varnothing$
ASN 20	20.0	9.0	28.5	28.5 mm $\varnothing$



Nibbler ASN15

1

13 4004

Nibbler ASN20

1

13 4006

Replacement punch ASN15

1

13 4008

Replacement punch ASN20

1

13 4010





## Quick release nut

For shaped punch with thread shape UNF 19 mm, used as replacement for normal counter nut saving approx. 75% time in comparison to screw version. For quickly locking and unlocking on the thread, however screwing it on or off normally is ensured despite this even if it jams. The quick release nut is pushed onto the thread of the tension bolt and then when it touches the stamp, is latched onto Cover. Pushing the cover back releases this latching on again.

Quick release nut without tension bolt	1	13 5026
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## Screw puncher centring ring

Made of plastic. Ideal aid for tension bolts or hydraulic bolts in screw puncher systems.

For use in oversized drill holes, for example in control cabinets to centre tension bolts (screw puncher).

The centring ring can be used with all known screw puncher designs that split the scrap part - including products from other manufacturers! Suitable for puncher systems that split into 2 or 3 pieces. The ring size 3 is suitable for 19 mm connecting bolts (UNF3/4-16) both in manual and also in hydraulic operation. The ring in size 3 can be used for a hole diameter of up to 28 mm in the sheet to be processed. The smallest hole diameter in which the ring will still link tool and workpiece is 20.4 mm.

	1	13 5080
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## Individual parts for manual operation

Bolts for steel sheets ST 37

Tension bolt with ball bearing (encapsulated)	6.0 x 40.0	1	13 5010
Tension bolt with ball bearing (encapsulated)	9.5 x 50.0	1	13 5000

Bolts for stainless steel and steel sheets ST 37

Tension bolt with ball bearing (encapsulated)	19.0 x 55.0	1	13 5004
Tension bolt with ball bearing (encapsulated)	19.0 x 75.0	1	13 5008
Tension bolt with ball bearing	11.1 x 60.0	1	13 5014



## Individual parts for hydraulic operation

Bolts for steel sheets ST 37

Hydraulic bolt, complete	19.0 / 9.5	1	13 5002
Hydraulic bolt 13 5002	9.5 x 75.0	1	13 5074
Adapter for hydraulic bolt 13 5002	19.0 x 38.0 (inside: 9.5)	1	13 5024
Hydraulic bolt	19.0 x 120.0	1	13 5006

Bolts for stainless steel

Hydraulic bolt, complete	19.0 / 11.1	1	13 5016
Hydraulic bolt 13 5016	11.1 x 75.0	1	13 5076
Adapter for hydraulic bolt 13 5016	19.0 x 38.0 (inside: 11.1)	1	13 5078
Hydraulic bolt	19.0 x 120.0	1	13 5006

Spacer sleeve set (3 pieces)	1	13 5072
Hydraulic oil	1 litre	13 4024



## Spacer sleeve set

When using tension bolts size 30.0 mm and above,

A set contains: tension bolt A0, long, spacer, two countersunk screws hex socket M 6 x 30, two countersunk screws hex socket M 6 x 35

	1	13 5088
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## General accessories

Pre-drill	10.0	1	13 4026
Pre-drill	11.0	1	13 4028
Pre-drill	11.5	1	13 4030
Step drill, holder shaft ø 10 mm	M12, M16, M20, M25, M32, M40	1	13 4032
Assembly paste	120 g	1	13 4034



## Special step drill for screw punching

HSS step drill for burr-free drilling of through-holes for screw puncher tension bolts M 8 ( $\frac{3}{8}$ " ) – M 10 ( $\frac{7}{16}$ " ) – M 12 – M 16 –  $\frac{3}{4}$ " – M 20 in material up to 4 mm thick. Suitable for use in hand and box column drills, total of 9 drill steps, holder shaft ( $\varnothing$  10 mm) with 3 driver carriers prevents slipping in the chuck.

1 20 1212



## Cable duct cutter

For cutting burr-free lengths without waste, for plastic conduits and covers, low force required for cutting, foldable, sprung blade protection, fastening lugs for workbench mounting, width of cutting blades up to 125 mm, laser engraved length stop up to 1000 mm

1 13 4036

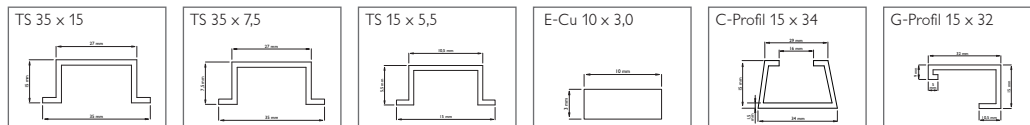


## DIN profile cutter and punching tool

For cutting burr-free lengths without waste, for copper mounting rails, reduced force needed with reinforced eccentric, laser-engraved length stop up to 1000 mm, hand operation for length cutting and punching in lengthways and crossways mode

Profile equipment: TS 35x15 - TS 35x7.5 - TS 15x5.5 - E-Cu 10x3.0 - C 15x34 13 4038

Profile equipment: TS 35x15 - TS 35x7.5 - TS 15x5.5 - E-Cu 10x3.0 - G 15x32 13 4040



# HAMMERS, CHISELS, SPATULAS

## Head

Mechanical blocking of the hammer head with a steel wedge, sealed with synthetic resin.



## Safety sleeve

The hammer head with forged on shaft safety collar for additional stability and the protective nylon sheath for effective damping in the event of a miss-hit.

## Shaft

Patented security shaft in 3-component composition: Core made of thick-walled aluminium tube in high strength alloy, coated with chemically resistant and waterproof polyamide, handle of non-slip thermoplastic rubber.

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## 3-component club hammer and cross peen hammer

Ergonomic, indestructible, vibration-free – so gentle on joints. Patented head with forged on shaft safety collar made of high quality steel according to DIN. 3-component high-security shaft, patented, mechanically fixed with steel wedge for mechanical blocking, core made of aluminium alloy. Polyamide components ultra resistant to oil and solvents as well, handle and protective sheath made of thermoplastic non-slip rubber.

### Cross peen hammer

Hammer weight g

300	6	13 0403
500	6	13 0405
1000	6	13 0410

### Club hammer

Hammer weight g

800	6	13 0708
1000	6	13 0710
1250	6	13 0712
1500	6	13 0715

### Safety cross peen hammer

Dimensions and finish according to DIN 1041, GS certified.

With forged-on protective shaft collar and additional nylon protective haft sleeve.

With double curved hickory shaft, hammer head double secured by ring wedge and synthetic resin seal.

Hammer weight g

200	6	13 0580
300	6	13 0582
400	6	13 0584
500	6	13 0586
1000	6	13 0592

### Safety club hammer

According to DIN 6475, other processing as above

Hammer weight g

1000	6	13 0600
1250	6	13 0602
1500	6	13 0604

### Cross peen hammer

According to DIN 1041, GS certified, with polished, curved ash shaft, hammer head secured by ring wedge.

Hammer weight g

300	12	13 0804
500	6	13 0808

### Club hammer

According to DIN 6475, GS certified, with polished, curved ash shaft, hammer head secured by ring wedge.

Hammer weight g

1000	6	13 0880
1250	6	13 0882

### Plastic hammer

With replaceable Cellidor inserts, for hammering out and flattening metal sheets and frames or for use with sensitive surfaces (paint, enamel, galvanisation, chrome-plating)

Head 35 mm ø	6	13 1053
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### Electrician's chisel

Made of chrome vanadium steel

Blade width Steel thickness

mm	mm			
10	8	250	10	13 0006
12	8	250	10	13 0008
15	10	250	10	13 0010



## Stone chisel

According to DIN 7254 A, made of chrome vanadium air-hardening steel

Blade width mm	Steel thickness mm			
26	20 x 12	250	10	13 0022
29	23 x 13	300	10	13 0024

## Octagonal stone chisel

According to DIN 7254 B, made of chrome vanadium air-hardening steel

Blade width mm	Steel thickness mm			
23	16	250	10	13 0032
26	18	300	10	13 0034

## Octagonal pointed chisel

According to DIN 7256, made of chrome vanadium air-hardening steel

Blade width mm	Steel thickness mm			
16	250	10	13 0052	
18	300	10	13 0054	

## Octagonal slot chisel

Made of chrome vanadium air-hardening steel

Blade width mm	Steel thickness mm			
30	18	240	10	13 0070

## Pointed punch

For centring drill holes, according to DIN 7250, octagonal, made of chrome vanadium air-hardening steel

Steel thickness mm				
10	120	10	13 0210	

## Drift punch set with pointed punch

Made of chrome vanadium air hardened steel, length 120 mm, in plastic container, for cutting through sheet metal and thin metals, pin punching and driving in nails

1 each of the following: 1 - 2 - 3 - 4 - 5 mm ø, pointed punch 120 x 10 mm

120	1	13 0354
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## Pin punch

Made of chrome vanadium steel, length 150 mm, in plastic container, for punching out pins, dowel pins and clips from drill holes

1 each of the following: 3-4-5-6-7-8 mm ø

150	1	13 0358
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## Nail setter

Made of chromium molybdenum vanadium air-hardening steel, completely hardened and head tempered.

For setting steel nails with a cylindrical shaft and thread (holder M6)

M 6	170	1	13 0075
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## Hand protection for nail setter

1	13 0076
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## Bevelled edge chisel

According to DIN 5139, with side bevel, polished wooden haft and blade protection

Blade width mm			
10	245	1	13 0524
15	260	1	13 0530
20	270	1	13 0534
22	275	1	13 0536
26	275	1	13 0538



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### Painter's spatula

Made of steel, ground blade, with oval wooden haft

Width mm				
25	185	12	13	1322
40	185	12	13	1324
50	205	12	13	1326
60	205	12	13	1328



### Double spatula

Plastic covered handle

Width mm				
20	225	10	13	1404



### Plasterer's spatula

According to DIN 6441 C, with painted wooden haft

Width mm				
60		5	13	1420
70		5	13	1422



### Plaster pan

Made of sheet steel, hot-dip galvanised, with polished wooden haft

Height 75 mm	ø 180 mm	1	14	0302
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### Plaster cup

Made of soft rubber

Height 90 mm	ø 125 mm	1	14	0306
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### Water brush

Pure bristles

	ø 24 mm	36	14	0310
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### Chalk line roller

With push-system, storage space for serrated hooks and belt clip, body made of metal, cord length 15 m, including 60 g coloured powder

		1	14	0320
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Coloured powder, grease and oil-free, in plastic bottle

blue	100 g	1	14	0322
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# MEASURING TOOLS



## Simple work

The new range of spirit levels made by CIMCO has come up with a whole load of innovations which allow precision work to be carried out in all situations.



## Always perfectly aligned

The computer optimised profile (COP) ensures the perfect support. The two integrated acrylic vertical levels can then also be read perfectly from in front with the patented Plumb-Site® Dual-View™. There is now also a larger horizontal level, with finely milled surfaces on both sides, ergonomic grips with the patented Ergo Grip™ anti-slip function as well as polypropylene and TPR end caps with air-sprung PVC shock absorbers.



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## Electrician safety spirit level

Made of non-conducting, non-warping plastic, with 1 horizontal and 1 vertical bubble level

400 mm	24 x 52 mm	1	21 1435
800 mm	24 x 52 mm	1	21 1437

With three levels (1 x horizontal, 1 x vertical, 1 x 45°), made of non-conductive, distortion-free plastic with ergonomic recessed grips and a patented level housing

600 mm	32 x 58 mm	1	21 1536
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## Switch cabinet spirit level

Torpedo-shaped, with three levels which are easy to read (1 x horizontal, 1 x vertical, 1 x 45°), a magnetic V-ledge for pipes or cables as well as robust rubber end caps

230 mm	18 x 38 mm	1	21 1540
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## Switch cabinet spirit level

With Plumb Site® Dual-View™ level, made of non-conductive plastic with a robust aluminium rail and integrated magnetic ledge, three levels (1 x horizontal, 1 x vertical, 1 x 45°)

250 mm	16 x 55 mm	1	21 1542
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## Measurement and marking spirit level

Made of aluminium, in a stable, triangular design, two inserted levels (horizontal, vertical), two slide markers, mm and cm scale, as well as zero point and central point indicators, slider with blade guide for cutting paper, removable nail gripper to remove nails from walls. The 2 adjustable sliders have been set into the aluminium profile to enable more precise display of drill holes in horizontal or vertical arrangement. Ideal as a marking template for setting switch boxes.

600 mm	28 x 40 mm	1	21 1550
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## Electrician spirit level

With four fixed marker point at 71 mm intervals which keep to a precise switch or socket distance, with two levels (horizontal, vertical), with a milled surface and shock-absorbing end caps.

470 mm	20 x 50 mm	1	21 1552
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## Mini spirit level

Box section made of aluminium, with shock-resistant plastic level, certified accuracy, shock-resistant end caps. Practical for any tool belt and small pockets.

100 mm	20 x 50 mm	1	21 1556
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## Lightweight metal spirit level

With Plumb Site® Dual-View™ level. Two levels (horizontal, vertical) with a milled surface and shock-absorbing end caps.

400 mm	20 x 50 mm	1	21 1520
600 mm	20 x 50 mm	1	21 1522
800 mm	20 x 50 mm	1	21 1523
1000 mm	20 x 50 mm	1	21 1524

With two magnets

600 mm	20 x 50 mm	1	21 1526
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## Professional lightweight metal spirit level

Computer-optimised profile (COP), two integrated acrylic vertical levels with Plumb-Site® Dual-View™, a larger horizontal level, with finely milled surfaces on both sides, ergonomic grips with patented Ergo Grip™ anti-slip function, polypropylene and TPR end caps with air sprung PVC shock absorbers.

Accuracy: 0.5 mm / m

600 mm	31 x 67 mm	1	21 1530
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## Professional switch cabinet spirit level

Made of cast aluminium, heavy-duty version, with Plumb Site® Dual-View™ level, three solid acrylic glass levels, with two magnets. Accuracy: 0.5 mm / m

250 mm	19 x 45 mm	1	21 1528
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## Folding spirit level

Ideal 3D spirit level for measuring and aligning pipes, columns, cables etc. precisely, in several dimensions at the same time. Catches every 15°, four magnets to attach to metallic surfaces as well as a rubber band for non-magnetic surfaces.

190 x 132 x 32 mm		1	21 1554
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## Digital tape measure

With new laser technology. Allows a professional user to quickly attain precise measurement results. Simple, intuitive operation. Max. distance in inside spaces: up to approx. 70 m. Max. distance outside: up to 10 m. Measures the shortest distance to the target with dynamic (continuous) measurement. Backlit LCD display. Range, surface and volume measurement. Indirect measurement using Pythagoras. Option of three reference points. Extended memory function. Shock-resistant plastic. 1/4" thread for attachment to a tripod. Accuracy: 1.5 mm per 70 m. Laser class: II. Battery: 9 V block (included in scope of delivery). Compliant with CE and RoHS

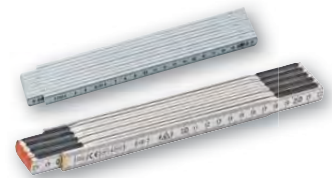
105 x 32 x 60 mm		1	21 1560
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## Folding ruler

10 sections, length 2 m, mm divisions on both sides; Class III

Made of fibre glass, highly elastic, non-conductive	10	21 0008
Made of wood, with steel spring	10	21 0004



## Pocket tape measure (metal tape measure)

Made of 19 mm wide spring band steel, enamelled yellow, in metric scale, easy running automatic measure return with strong stop key, unbreakable ABS housing in modern 2-component design with ergonomic soft rubber inset, with carrying clip

5 m	6	21 0065
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## Fibre glass tape measure

13 mm wide, yellow, kink-proof unbreakable fibre glass tape measure, metric scale on one side (metre and centimetre), EC type approval, accuracy class II, with plastic end hook, in closed round capsule of daimpact-resistant plastic, with crank

20 m	1	21 0104
30 m	1	21 0106



## Cable or wire gauge

According to Swiss standard (Dätwyler)

in nylon	95 x 35 x 3 mm	1	14 0120
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## Electronic digital pocket slide caliper

For measuring length, depth, external and internal diameter, rust-free, hardened finish, large LCD display, adjustable zero setting, conversion mm – inch, automatic display switch-off, with thumb roll for fine adjustment and fixing screw, includes batteries and instructions, in black plastic case

	Reading			
	mm	Inch		
150 mm / 6"	1/100	1/2000"	1	21 0300



## Precision pocket slide caliper

Made of stainless steel, completely hardened, with measuring probes, depth measurement and thread table, jaw length 47 mm, with torque fixing, in plastic pouch

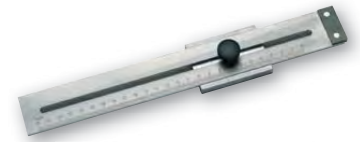
	Measurement	Reading		PU	Article no.
	range mm	mm	Inch		
matt chrome-plated	150	1/20	1/128"	10	21 0202



## Marking gauge

Made of steel, flat design, mm division

	Measurement	Reading		PU	Article no.
	range mm	mm			
	0-200	1/10		1	21 2000
	0-250	1/10		1	21 2002



## Bow compass

With square legs and box joint, tips hardened

Radius max. 235 mm	200 mm	1	21 2062
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## Scriber with hard metal tip

Hard metal tip can be exchanged and retracted

	150 mm	10	21 2100
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Loose hard metal tips

		10	21 2102
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## Scriber with steel tips

Corded holder, hardened tips can be screwed out, with straight and 90° angled tip

	240 mm	10	21 2140
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## Cellugraph universal pencil

Will write on all smooth surfaces (glass, tiles, metal etc.) and on foil and film, wipeable

black	240 mm	50	21 2168
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## Carpenter's pencil

For marking wood, metal and rubber

black	240 mm	100	21 2170
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## Pointed

For carpenter's pencils with oval (European) and flat oval shape, also for marking chalks

ø mm	PU	Article no.
10 - 15	1	21 2179



## Marking chalk

12 mm hexagonal, 115 mm long, hard, robust chalks for marking wood, metal, stone, cardboard, tiles, paper or similar.

red	12	21 2172
yellow	12	21 2173
blue	12	21 2176



## Chalk holder

With push-button chalk advance, octagonal, in black impact-proof polystyrene with metal pressure mechanism. For chalks 11 mm or 12 mm in diameter.

115 mm	10	21 2180
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## Deep hole marker I – Graphite / Red / Yellow

For marking, marking out and lettering even in places that are hard to access. Will write on almost all materials even on dusty, rough and oily surfaces. Can be wiped off with a damp cloth on smooth surfaces. The leads are protected by a stainless steel tube and advanced by a pressure mechanism. The practical storage case also serves as a sharpener.

Marker with graphite lead B2 (universal writer)	1	21 2150
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Replacement leads

Pack of 12 replacement leads graphite B2	1	21 2152
Pack of 12 replacement leads (3 x red, 3 x yellow, 6 x graphite)	1	21 2154

## Deep hole marker – Ink

For marking, marking out and lettering even in places that are hard to access. Will mark and write on all surfaces (plastics, metals, stone, wood and glass). Waterproof, quick-drying ink. Robust, patented stainless steel telescopic tip. Practical case with special clip for easy handling and one-handed use.

Mark width 1 mm

black	10	21 2182
blue	10	21 2184
red	10	21 2186

## Deep hole marker II – Graphite / Red / Yellow

For marking, marking out and lettering even in places that are hard to access. Will write on almost all materials even on dusty, rough and oily surfaces. Can be wiped off with a damp cloth on smooth surfaces. The leads are protected by a stainless steel tube and advanced by a pressure mechanism. The practical storage case also serves as a sharpener.

Marker with graphite lead B2 (universal writer)	1	21 2151
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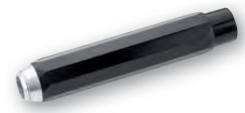
Replacement leads

Pack of 10 replacement leads graphite B2	1	21 2153
Pack of 8 replacement leads (2 x red, 2 x yellow, 4 x graphite)	1	21 2155
Pack of 10 replacement leads red	1	21 2157
Pack of 10 replacement leads yellow	1	21 2159

## Marking spray

For coloured freehand and stencil markings, based on chalk (non-permanent), environmentally friendly, free of toxic substances, solvents and CFC propellant gases, water hazard class 0, will adhere even in wet conditions to different surfaces such as concrete, asphalt, masonry, wood, metal, plastic, grass (among others), approved by Deutsche Telekom.

red	400 ml	6	21 2190
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# INSULATED SAFETY TOOLS PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Insulation

The double dip-coated insulation (interior: orange, exterior: red) ensures optimum safety. As soon as the exterior red coat is damaged, the newly visible orange colour indicates with its signal effect that the safety level is no longer 100% of that required by safety regulations.



## Anti-slip protection

This prevents your hand from slipping onto current-carrying parts.

## Testing

All tools are individually tested in a water bath with a testing voltage of 10,000 V in accordance with IEC 60900:2004.

# Diamant Plus – Safety pliers with 1000 V protective insulation

Optimised lever conditions, smoothness and easy-grip handle design that permit your hand to work ergonomically, saving energy, manufactured using the most suitable high-alloy tool steels, completely hardened in oil, all blades are additionally induction hardened, surfaces are polished to a high-sheen and are meticulously chrome-plated.

## Description of the symbols

Energised work	Blade hardness in HRC	With cutting bevel	Own joint	Flat nose pliers	Wire type soft	Wire type piano
VDE/GS tested	Ridged gripping surfaces	With slight cutting bevel	Lap joint	Flat round pliers	Wire type medium-hard	Wire type rope
	Gripping surfaces ridged at an angle		Box joint	Round nose pliers	Wire type hard	Wire type Cu-cable

- Set the adjusting screw to the desired conductor cross section to be stripped by turning it (left / right).
- Secure the adjusting screw using the counter nut.
- Insert the cable.
- Close the pliers by pressing them and remove the plastic sheathing.

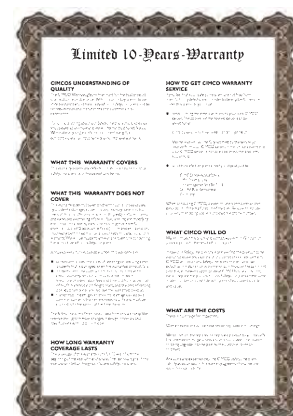


## 10 year durability guarantee

on all Diamant-Plus pliers. If defects in the material or processing can be proved, we will provide you with a replacement free of charge. Please ask for the exact guarantee terms at your local CIMCO dealer or from CIMCO directly.

## 1000 V protective insulation according to VDE

The pliers belonging to the Diamant-Plus range correspond to the current standards of IEC 900, IEC 60900:2004 and VDE 0682/Part 201 (excluding engineers pliers). These strict safety rules stipulate 10 different quality checks for the insulation protection of all pliers. In addition to the type examination, the independent testing body of VDE also regularly performs production and storage inspections. Each individual set of pliers is examined in the water bath for disruptive discharges and flashovers at a testing voltage of 10,000 Volt AC. As a result, we guarantee the safety has been tested on all pieces.



## Diamant Plus

The range of pliers that is exclusively “Made in Germany” undergoes a range of unrivalled trend-setting and robot-supported production processes. The work sequences are implemented with the aid of robots, from forging to grinding and polishing, right through to the dielectric strength testing of the insulating coating in order to ensure a consistent standard of quality. Ergonomic design handle sleeves in a modern 2-component design made of premium plastic with excellent tactile properties. Superb grip thanks to non-slip, non-adhesive surfaces when dealing with wet conditions and dirt. Excellent skin-tolerance, insulation in extreme temperatures, electrical shocks and vibrations. Resistance against sweat, salt water, oil, many chemicals and UV radiation.

### 1000 V Heavy duty diagonal pliers



160 (6")	6	10 0526
200 (8")	6	10 0528

### 1000 V Diagonal pliers



145 (5.5")	6	10 0572
160 (6")	6	10 0574
180 (7")	6	10 0577

### 1000 V stripping diagonal pliers

Single joint, with induction hardened precision blade, (approx. 64 HRC), for hard, medium-hard and soft wire, with two additional stripping functions for solid and multi-wire conductors measuring 1.5 mm<sup>2</sup> and 2.5 mm<sup>2</sup>



160 (6")	6	10 0652
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## 1000 V heavy duty end cutter

According to DIN ISO 5748, lap joint,  
with induction hardened precision blade



(approx. 64 HRC), for all wires, also including piano wire, made of electric steel

200 (8")	6	10 0402
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## 1000 V combination pliers

According to DIN ISO 5746, single joint,



with induction hardened precision blade (approx. 64 HRC), for all wires, also including piano wire, manufactured of special tool steel with slightly conical, ridged gripping surfaces and ridged opening (burner hole)

160 (6")	6	10 0334
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180 (7")	6	10 0336
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200 (8")	6	10 0338
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## 1000 V wire stripper

Single joint with adjusting screw for setting



the desired wire or stranded wire diameter, for solid and multi-wire conductors up to 5 mm  $\varnothing$  or 0.75 mm<sup>2</sup> to 6 mm<sup>2</sup>, with internal opening spring

160 (6")	6	10 0686
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## 1000 V telephone pliers with straight jaws

According to DIN ISO 5745, single joint, with  
induction hardened precision blade



(approx. 60 HRC), long, flat-round jaws (needle nose pliers), ridged gripping surfaces and ridged opening (burner hole), with blades for hard and soft wire

160 (6")	6	10 0214
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200 (8")	6	10 0216
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## 1000 V telephone pliers with bent jaws

According to DIN ISO 5745, single joint, 45° angled  
jaws, with induction hardened precision blade



(approx. 60 HRC), long, flat-round jaws (needle nose pliers), ridged gripping surfaces and ridged opening (burner hole), with blades for hard and soft wire

160 (6")	6	10 0236
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200 (8")	6	10 0238
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## 1000 V flat nose pliers (long flat nose pliers)

According to DIN ISO 5745, single joint, long, flat jaws,  
jaw length 50 mm, ridged gripping surfaces



160 (6")	6	10 0024
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## 1000 V round nose pliers (long flat nose pliers)

According to DIN ISO 5745, single joint, long, round jaws,  
jaw length 50 mm, finely ridged gripping surfaces



160 (6")	6	10 0062
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## 1000 V plier assortment, 4 pieces

Heavy duty diagonal pliers	200 (8")	10 0528
Telephone pliers with straight jaws	200 (8")	10 0216
Combination pliers	185 (7")	10 0336
Wire stripper	160 (6")	10 0686
	1	10 4020



The range of pliers that is exclusively "Made in Germany" undergoes a range of unrivalled trend-setting and robot-supported production processes. The work sequences are implemented with the aid of robots, from forging to grinding and polishing, right through to the dielectric strength testing of the insulating coating in order to ensure a consistent standard of quality. Handles with two-colour plastic dip insulation for optimum safety. In the event of damage to the outer red insulation layer, the lower orange plastic insulation that is now visible indicates that 100% safety in accordance with the safety standards can no longer be guaranteed.

### 1000 V heavy duty diagonal pliers

According to DIN ISO 5749 A, lap joint, with induction hardened precision blade (approx. 64 HRC), for all wires, also including piano wire, made of electric steel

160 (6")	6	10 8789
200 (8")	6	10 8784

### 1000 V diagonal pliers

According to DIN ISO 5749 B, lap joint with induction hardened precision blade (approx. 64 HRC), for all wires also including piano wire, made of electric steel

145 (5.5")	6	10 8785
160 (6")	6	10 8786
180 (7")	6	10 8787



250 (10")	6	10 8788
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### 1000 V stripping diagonal pliers

Single joint, with induction hardened precision blade (approx. 64 HRC), for hard, medium-hard and soft wire, with two additional stripping functions for solid and multi-wire conductors measuring 1.5 mm<sup>2</sup> and 2.5 mm<sup>2</sup>

160 (6")	6	10 8792
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### 1000 V heavy duty end cutter

According to DIN ISO 5748, lap joint, with induction hardened precision blade (approx. 64 HRC), for all wires, also including piano wire, made of electric steel

200 (8")	6	10 8795
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### 1000 V flat nose pliers (long flat nose pliers)

According to DIN ISO 5745, single joint, long, flat jaws, jaw length 50 mm, ridged gripping surfaces

160 (6")	6	10 8771
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### 1000 V round nose pliers (long flat nose pliers)

According to DIN ISO 5745, single joint, long, round jaws, jaw length 50 mm, finely ridged gripping surfaces

160 (6")	6	10 8773
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### 1000 V telephone pliers with straight jaws

According to DIN ISO 5745, single joint, with induction hardened precision blade (approx. 60 HRC), long, flat-round jaws (needle nose pliers), ridged gripping surfaces and ridged opening (burner hole), with blades for hard and soft wire

160 (6")	6	10 8779
200 (8")	6	10 8778

### 1000 V telephone pliers with bent jaws

According to DIN ISO 5745, single joint, 45° angled jaws, with induction hardened precision blade (approx. 60 HRC), long, flat-round jaws (needle nose pliers), ridged gripping surfaces and ridged opening (burner hole), with blades for hard and soft wire

160 (6")	6	10 8777
200 (8")	6	10 8780



**1000 V combination pliers**

According to DIN ISO 5746, single joint, with induction hardened precision blade (approx. 64 HRC), for all wires, also including piano wire, made of special tool steel, with slightly conical, ridged gripping surfaces and ridged opening (burner hole)



160 (6")	6	10 8781
180 (7")	6	10 8782
200 (8")	6	10 8783

**1000 V water pump pliers**

According to DIN ISO 8976, single joint, self-clamping on the tool, with ridged opening (burner hole), made of chrome-vanadium steel



250 (10")	6	10 8724
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**1000 V wire stripper**

Single joint with adjusting screw for setting the desired wire or stranded wire diameter, for solid and multi-wire conductors up to 5 mm  $\varnothing$  or 0.75 mm<sup>2</sup> to 6 mm<sup>2</sup>, with internal opening spring



160 (6")	6	10 8790
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**1000 V safety plier set, 4 pieces**

Double dip-coated handles

Telephone pliers, straight	200 (8")	10 8778
Combination pliers	180 (7")	10 8782
Heavy duty diagonal pliers	200 (8")	10 8784
Wire stripper	160 (6")	10 8790

1 10 8002

**1000 V DIAMANT diagonal pliers**

According to DIN ISO 5749

**Cutting performance:** A special blade shape, optimised hand power transmission and most suitable material quality ensure astoundingly low cutting forces on all types of cables and wires.

**Surface coating:** Thanks to new technological possibilities, the diagonal pliers obtain a double primer coat as well as a more refined surface coating that ensure a high level of wear resistance and improved corrosion protection.

**Handle sleeves:** Ergonomic design handle sleeves in a modern two-component design made of premium plastic with excellent tactile properties, VDE-certified insulation protection up to 1000 Volt AC according to DIN EN 60900:2004.

160	6	10 0000
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**1000 V plastic telephone pliers**

Made of impact-resistant, fibre glass reinforced plastic with two-component handles, ridged gripping surfaces and narrow tips, robust design, can be used in temperatures as low as -40 °C

180	1	10 0790
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**1000 V plastic grip pliers**

Made of impact-resistant, glass fibre reinforced plastic with two-component handles, gripping zone with 8 recesses for different cable diameters, without blades, robust design, can be used in temperatures as low as -40 °C

180	1	10 0792
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**1000 V plastic combination pliers**

Made of impact-resistant, fibre glass reinforced plastic with two-component handles, with blade inserts made of special steel, extra-long blades for flexible conductors with diameters of up to 12 mm as well as medium-hard wire gripping zone with 3 openings for different cable diameters, robust design, can be used in temperatures as low as -40 °C

190	1	10 0794
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**1000 V plastic cable cutter**

Made of impact-resistant, fibre glass reinforced plastic with two-component handles, with blade inserts made of special steel, for flexible Al and Cu conductors with diameters of up to 15 mm, excellent cutting performance, robust design, can be used in temperatures as low as -40 °C

170	1	12 0790
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**1000 V plastic flat nose pliers**

Especially suitable for meter installation

	200	1	10 0796
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**Insulated tweezers**

straight, pointed shape	130	1	10 3110
bent, pointed shape	150	1	10 3112
straight, flat-round shape	145	1	10 3114

**1000 V insulated tweezers**

With 2-layer safety insulation and anti-slip protection, tested according to DIN EN 60900

 1000 V straight, flat-round shape	145	1	10 3232
 1000 V bent, flat-pointed shape	145	1	10 3240



**Insulated screwdrivers according to IEC 60900:2005, classification VDE 0682, part 201. Individually tested in a water bath with a testing voltage of 10,000 V.**

**Electrician screwdriver**

According to DIN EN 60900, VDE 0682-201:2005-01, DIN ISO 2380

2.5 x 0.4	75	160	12	11 7701
3.0 x 0.5	100	185	12	11 7702
3.5 x 0.6	100	185	12	11 7703
4.0 x 0.8	100	185	12	11 7704
5.5 x 1.0	125	220	12	11 7705
6.5 x 1.2	150	245	12	11 7706
8.0 x 1.2	175	285	12	11 7708
10.0 x 1.6	200	310	12	11 7710



**Phillips cross-head screwdriver**

According to DIN EN 60900, VDE 0682-201:2005-01, DIN ISO 8764

PH 0	60	145	12	11 7730
PH 1	80	165	12	11 7731
PH 2	100	195	12	11 7732
PH 3	150	260	12	11 7733



**Pozidriv cross-head screwdriver**

According to DIN EN 60900, VDE 0682-201:2005-01, DIN ISO 8764

PZ 0	60	145	12	11 7740
PZ 1	80	165	12	11 7741
PZ 2	100	195	12	11 7742
PZ 3	150	260	12	11 7743



**Special screwdrivers with combination profile**

According to DIN EN 60900, VDE 0682-201, 2005-01

for combined slot-head/cross-head screws in electrical equipment, i.e. terminal blocks

PZ 1	80	165	12	11 7751
PZ 2	100	195	12	11 7752
Set PZ 1 and PZ 2 (CIMCO article no. 11 7751 and 11 7752)			1	11 7750
PH FL 1	80	165	12	11 7757
PH FL 2	100	195	12	11 7758



**Hex key (Allen wrench)**

According to DIN EN 60900, VDE 0682-201:2005-01

Size 3	75	160	12	11 7823
Size 4	75	160	12	11 7824
Size 5	75	170	12	11 7825
Size 6	100	195	12	11 7826
Size 8	100	210	12	11 7828



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**TORX® screwdriver**

According to DIN EN 60900, VDE 0682-201:2005-01

Design	Size/mm	PU	Article no.
T 8	60	145	12 11 7908
T 9	60	145	12 11 7909
T 10	60	155	12 11 7910
T 15	75	170	12 11 7915
T 20	100	195	12 11 7920
T 25	100	195	12 11 7925
T 30	100	210	12 11 7930

**Nut drivers**

According to DIN EN 60900, VDE 0682-201:2005-01

Size	Design	Size/mm	PU	Article no.
5.5	125	220	12	11 7805
6	125	220	12	11 7806
7	125	235	12	11 7807
8	125	235	12	11 7808
9	125	235	12	11 7809
10	125	235	12	11 7810
11	125	235	12	11 7811
13	125	235	12	11 7813

**Screwdriver sets****Electrician screwdriver set, 7 pieces**

VDE electrician screwdriver for slot-head screws

2.5 x 0.4 x 75	11 7701
3.0 x 0.5 x 100	11 7702
4.0 x 0.8 x 100	11 7704
5.5 x 1.0 x 125	11 7705

VDE cross-head screwdriver

PH 1 x 80	11 7731
PH 2 x 100	11 7732

VDE voltage tester	11 1280
	1 11 7800

**Electrician screwdriver set, 7 pieces**

VDE electrician screwdriver for slot-head screws

2.5 x 0.4 x 75	11 7701
3.0 x 0.5 x 100	11 7702
4.0 x 0.8 x 100	11 7704
5.5 x 1.0 x 125	11 7705

VDE cross-head screwdriver

PZ 1 x 80	11 7741
PZ 2 x 100	11 7742

VDE voltage tester	11 1280
	1 11 7802

**Slot-head screwdriver set, 5 pieces**

VDE electrician screwdriver for slot-head screws

2.5 x 0.4 x 75	11 7701
3.5 x 0.6 x 100	11 7703
4.0 x 0.8 x 100	11 7704
5.5 x 1.0 x 125	11 7705
6.5 x 1.2 x 150	11 7706
	1 11 7700

**Cross-head screwdriver set, 6 pieces**

VDE cross-head screwdriver

PH 1 x 80	11 7731
PH 2 x 100	11 7732
PH 3 x 150	11 7733
PZ 1 x 80	11 7741
PZ 2 x 100	11 7742
PZ 3 x 150	11 7743
	1 11 7745



1000 V



1000 V



1000 V



1000 V



**Hex key (Allen wrench) set, 5 pieces**

VDE hex key

Size 3 x 75  
 Size 4 x 75  
 Size 5 x 75  
 Size 6 x 100  
 Size 8 x 100

11 7823  
 11 7824  
 11 7825  
 11 7826  
 11 7828  
 11 7820

1

**TORX® screwdriver set, 5 pieces**

VDE-TORX® screwdriver

T 8 x 60  
 T 10 x 60  
 T 15 x 75  
 T 20 x 100  
 T 25 x 100

11 7908  
 11 7910  
 11 7915  
 11 7920  
 11 7925  
 11 7900

1

**Nut driver set, 5 pieces**

VDE nut driver

Size 5.5 x 125  
 Size 7 x 125  
 Size 8 x 125  
 Size 10 x 125  
 Size 13 x 125

11 7805  
 11 7807  
 11 7808  
 11 7810  
 11 7813  
 11 7801

1

**VDE SLIM screwdriver set, 5 pieces**

For optimal accessibility of recessed screws

VDE electrician screwdriver for slot-head screws

3.0 x 0.6 x 100 mm  
 4.0 x 0.8 x 100 mm  
 5.5 x 1.0 x 125 mm

VDE cross-head screwdriver

PZ 1 x 80 mm  
 PZ 2 x 100 mm

11 7850

1

**Electronic safety screwdriver set, 7 pieces**

According to IEC 60900:2004

Blade, insulation and handle are inseparably connected to each other,  
 individually tested in water bath with a testing voltage of 10,000 V.

for slot-head screws

1.5 x 0.3 x 40	140	11 2000
1.8 x 0.3 x 60	160	11 2002
2.0 x 0.4 x 60	160	11 2004
2.5 x 0.4 x 75	175	11 2006
3.0 x 0.5 x 75	175	11 2008

for Phillips cross-head screws

PH 00 x 40	140	11 2020
PH 0 x 60	160	11 2022

1

11 2050



## Insulated screwing tools

Tested according to DIN EN 60900/VDE 0680 part 2, two-colour double dip-coated



### Angled screwdriver

According to DIN 7439, made of chrome vanadium steel, for hex socket screws (Allen)

	1000 V	Size 5	1	11 0804
	1000 V	Size 6	1	11 0806
	1000 V	Size 8	1	11 0808



### T-handle screwdriver

Made of chrome vanadium steel, for hex socket screws (Allen)

	1000 V	Size 5	160	1	11 0812
	1000 V	Size 6	160	1	11 0814
	1000 V	Size 8	160	1	11 0816
	1000 V	Size 10	160	1	11 0817



### T-handle nut drivers

According to DIN 7440, made of molybdenum vanadium steel, for hex nuts, shaft 200 mm, handle 160 mm

	1000 V	Size 13	1	11 0836
	1000 V	Size 17	1	11 0840
	1000 V	Size 19	1	11 0842



Shaft 300 mm, handle 160 mm

	1000 V	Size 13	1	11 0856
	1000 V	Size 17	1	11 0860
	1000 V	Size 19	1	11 0862



### Sockets

According to DIN 7448, with  $\frac{3}{8}$ " square socket

	1000 V	Size 8	28	1	11 2520
	1000 V	Size 10	28	1	11 2522
	1000 V	Size 11	28	1	11 2523
	1000 V	Size 13	28	1	11 2525
	1000 V	Size 14	28	1	11 2526
	1000 V	Size 15	28	1	11 2527
	1000 V	Size 16	28	1	11 2528
	1000 V	Size 17	28	1	11 2529
	1000 V	Size 18	28	1	11 2530
	1000 V	Size 19	28	1	11 2531
	1000 V	Size 22	28	1	11 2534



### Screwdriver bit sockets

For screws with hexagon socket (Allen)

	1000 V	Size 4	65	1	11 2560
	1000 V	Size 5	65	1	11 2561
	1000 V	Size 6	65	1	11 2562
	1000 V	Size 8	65	1	11 2563
	1000 V	Size 10	65	1	11 2564



### Reversible ratchet

According to DIN 7449

	1000 V	190	1	11 2570
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### Extension

According to DIN 7434

	1000 V	125	1	11 2575
	1000 V	250	1	11 2576



### T-handle

According to DIN 7436

	1000 V	200	1	11 2580
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## Insulated screwing tools

With safety mechanism to prevent unintentional release of the attached tools

### Sockets

According to DIN 7448, with 1/2" square socket



1000 V Size 10	50	1	11 2600
1000 V Size 11	50	1	11 2602
1000 V Size 12	50	1	11 2604
1000 V Size 13	50	1	11 2606
1000 V Size 14	50	1	11 2608
1000 V Size 15	50	1	11 2609
1000 V Size 16	50	1	11 2611
1000 V Size 17	50	1	11 2610
1000 V Size 18	50	1	11 2613
1000 V Size 19	50	1	11 2612
1000 V Size 20	50	1	11 2615
1000 V Size 21	50	1	11 2617
1000 V Size 22	50	1	11 2614
1000 V Size 24	50	1	11 2616
1000 V Size 27	50	1	11 2618
1000 V Size 32	50	1	11 2622



### Screwdriver bit sockets

For screws with hexagon socket



1000 V Size 4	70	1	11 2670
1000 V Size 5	70	1	11 2671
1000 V Size 6	70	1	11 2672
1000 V Size 8	70	1	11 2673
1000 V Size 10	70	1	11 2674



### Reversible ratchet

According to DIN 7449



1000 V	250	1	11 2628
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### Extensions

According to DIN 7434



1000 V	125	1	11 2640
1000 V	250	1	11 2642



### T-handle

According to DIN 7436



1000 V	200	1	11 2650
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### Torque wrench

Fully insulated according to DIN EN 60900, VDE 0680/2, with integrated reversible ratchet, adjustable from 5 - 50 Nm with 3/8" square socket



1000 V 5 - 50 Nm	370	1	11 2581
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with 1/2" square socket

1000 V 5 - 50 Nm	370	1	11 2582
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## House connection set, 21 pieces

In a transport and storage case made of impact-resistant plastic, consisting of dip-insulated tools:



































1 x torque wrench 1/4"	5 – 25 Nm	1 x slot-head screws 4.0 x 0.5 mm
1 x extension 1/4"	75 mm	1 x slot-head screws 5.5 x 0.8 mm
1 x extension 1/4"	100 mm	1 x slot-head screws 6.5 x 1.2 mm
1 x extension 1/4"	150 mm	1 x Phillips crosshead screws PH 1
1 x socket 1/4"	6 mm	1 x Phillips crosshead screws PH 2
1 x socket 1/4"	8 mm	1 x combination profile cross-head screws PZ/FL 1
1 x socket 1/4"	10 mm	1 x combination profile cross-head screws PZ/FL 2
1 x socket 1/4"	13 mm	1 x hex socket (Allen) 5 mm
1 x socket 1/4"	14 mm	1 x hex socket (Allen) 6 mm
2 x bit holders 1/4"		1 x hex socket (Allen) 8 mm

  **1000 V** 255 x 210 x 45 1 17 0362



## Open-ended spanner































According to DIN 7446, made of chrome vanadium steel, 15° offset

  <b>1000 V</b> Size 8	105	1	11 2704
  <b>1000 V</b> Size 9	105	1	11 2706
  <b>1000 V</b> Size 10	105	1	11 2708
  <b>1000 V</b> Size 11	115	1	11 2710
  <b>1000 V</b> Size 12	125	1	11 2712
  <b>1000 V</b> Size 13	132	1	11 2714
  <b>1000 V</b> Size 14	140	1	11 2716
  <b>1000 V</b> Size 15	150	1	11 2718
  <b>1000 V</b> Size 16	160	1	11 2719
  <b>1000 V</b> Size 17	160	1	11 2720
  <b>1000 V</b> Size 18	165	1	11 2721
  <b>1000 V</b> Size 19	170	1	11 2722
  <b>1000 V</b> Size 22	195	1	11 2724
  <b>1000 V</b> Size 24	220	1	11 2726
  <b>1000 V</b> Size 27	230	1	11 2728
  <b>1000 V</b> Size 30	240	1	11 2730
  <b>1000 V</b> Size 32	240	1	11 2732



## Ring spanners

According to DIN 7447, made of chrome vanadium steel, deep-offset

  <b>1000 V</b> Size 8	155	1	11 2754
  <b>1000 V</b> Size 10	165	1	11 2758
  <b>1000 V</b> Size 11	175	1	11 2760
  <b>1000 V</b> Size 12	185	1	11 2762
  <b>1000 V</b> Size 13	190	1	11 2764
  <b>1000 V</b> Size 14	200	1	11 2766
  <b>1000 V</b> Size 15	210	1	11 2768
  <b>1000 V</b> Size 16	210	1	11 2769
  <b>1000 V</b> Size 17	210	1	11 2770
  <b>1000 V</b> Size 18	220	1	11 2771
  <b>1000 V</b> Size 19	230	1	11 2772
  <b>1000 V</b> Size 22	250	1	11 2774
  <b>1000 V</b> Size 24	270	1	11 2776
  <b>1000 V</b> Size 27	300	1	11 2778
  <b>1000 V</b> Size 30	300	1	11 2780



## 1000 V ratchet ring spanners

According to DIN 3110 / ISO 3318 (torque) made of chrome vanadium steel

Ratchet mechanism with fine gearing (72 teeth) and a reset angle of 5° (shank angle).

Change from clockwise to counterclockwise rotation by simply turning over the spanner.

Wrench size across flats

10 mm	Weight 56 g	1	11 2740
13 mm	Weight 80 g	1	11 2742
14 mm	Weight 56 g	1	11 2744
17 mm	Weight 80 g	1	11 2746
19 mm	Weight 56 g	1	11 2748



**1000 V safety cable stripping knife**

Cable stripping knife especially suitable for working with insulation on large cables, with strong, straight blade of stainless steel, blade length approx. 50 mm. 1000 volt insulating handle with large anti-slip protection in modern 2-component technology (polypropylene with soft rubber insert) for working comfortably and securely even in wet, cold or hot conditions. With blade protection cover.

1	12 1042
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**1000 V cable stripping knife**

With strong, straight blade

Blade length 50 mm	1	12 0042
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**1000 V cable stripping knife**

With straight blade and insulated blade back

Blade length 50 mm	1	12 0043
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**1000 V stripping knife**

With hooked cutting edge

Blade length 35 mm	1	12 0044
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**1000 V cable paper knife**

With especially sharp blade

Blade length 50 mm	1	12 0045
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**1000 V cable stripping knife**

With hooked blade and shuttle

Blade length 40 mm	1	12 0046
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**1000 V safety cable stripping knife**

With insulated blade back and blade guard that folds away into the shaft, with interchangeable blade

Blade length 50 mm	1	12 0064
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Interchangeable replacement blade

Blade length 50 mm	1	12 0066
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**»JOKARI original Automatic wire stripper SAFETY STRIP**

For flexible stranded wires and solid conductors of 0.2 to 6 mm<sup>2</sup>, insulation-protected to 1000 volt, tested in accordance to DIN EN 60 900:2004, automatic adjustment to the conductor width, integrated length stop and closer for transport and storage

1000 V 0.2 - 6 mm <sup>2</sup>	1	10 0762
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**1000 V one-hand cable shears**

With double dip-coated special handle sleeves, high-gloss polished chrome

for cable ø	solid mm <sup>2</sup>	flexible mm <sup>2</sup>			
16 mm	16	50	160	6	12 0206
25 mm	25	70	200	6	12 0202

**1000 V saw bow**

Fully insulated

Span width 150 mm	250	1	12 0700
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**1000 V saw bow**

Fully insulated hacksaw with innovative quick release on the handle for single-sided saw blades DIN 6494 Form A. With improved grip due to nonslip plastic and reduced weight.

Span width 300 mm	Weight 785 g	520	1	12 0702
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## 1000 V safety tool assortments



**Master case  
KLASSIK  
"Electric  
safety"  
17 0370**

Master case  
KLASSIK RED  
17 0070

see catalogue p. 10



17 0370

Telephone pliers with straight jaws	200 mm	•
Telephone pliers with bent jaws	200 mm	•
Round nose pliers	160 mm	•
Combination pliers	180 mm	•
Heavy duty diagonal pliers	200 mm	•
Wire stripper 0.5 to 6 mm <sup>2</sup>	160 mm	•
Electrician slot-head screwdriver (Blade dimensions)	2.5 x 0.4 x 75 mm 4.0 x 0.8 x 100 mm	•

	6.5 x 1.2 x 150 mm	•
	8.0 x 1.2 x 175 mm	•
Electrician Phillips screwdriver (Blade dimensions)	PH 1 x 80 mm PH 2 x 100 mm	•
	PZ 1 x 80 mm PZ 2 x 100 mm	•

Insulated screw-holding slot-head screwdriver (without VDE) (Blade dimensions)	3.0 x 0.5 x 100 mm 4.0 x 0.8 x 125 mm	•
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Insulated screw-holding Phillips screwdriver (without VDE) (Blade dimensions)	PH 1 x 150 mm PH 2 x 175 mm	•
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Angled hex key (Allen) (Wrench size across flats)	5 mm 6 mm	•
Hexagon socket wrench, 1000 V-insulated (Wrench size across flats)	5.5 mm 7 mm 8 mm	•

Single-ended open-end spanner, 1000 V-insulated (Wrench size across flats)	10 mm 13 mm 17 mm 19 mm 22 mm	•
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Flat nose pliers made of solid plastic	200 mm	•
VDE ratchet (reversible), 1/2" square drive	250 mm long	•
VDE T-socket wrench, 1/2" square drive	200 mm long	•
Hexagon socket wrench insert, 1000 V-insulated (Wrench size across flats)	10 mm 11 mm 13 mm 14 mm 17 mm 19 mm	•

	160 mm	•
Plastic clip for holding rubber cloths	160 mm	•
Rubber drape, insulating up to 1000 V	1000 x 1000 x 1.6 mm	•

Slip-on snouts 1000 V, up to 10 mm diameter	Numbered "No. 1" Numbered "No. 2" Numbered "No. 3"	5 pieces 5 pieces 5 pieces
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PVC adhesive tape, red, 25 mm wide	25 m	•
NH safety handle, according to VDE standard	for fuses Size 00 to 3	•
Electric safety gloves, insulating up to 1000 V	Size 10	•
Voltage tester	12 to 690 V AC / DC	•
Cable shears, up to 12 mm cables, 1000 V VDE	160 mm	•
Automatic cable stripping knife, fully insulated	8 to 28 mm diameter	•
Safety cable knife, 1000 V-insulated	with straight, solid blade	•

Quantity of tools		47
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17 5370



17 0378





## Wrench for set screws for fuses and for contact screws

Combination, re-insert to use for set screws for fuses 2 - 63 A, haft made of insulation material

diazed	105	10	14 0102
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## 1000 V cover cloths

Ozone and weather resistance, excellent flame resistance, resistant to grease and acid, temperature resistant from -40 °C to +100 °C, no ageing inhibitor necessary, for covering current-carrying parts, according to VDE 0680/1

	L x W x H mm		
	600 x 600 x 1.6	1	14 0154
	1000 x 1000 x 1.6	1	14 0156
	1200 x 1200 x 1.6	1	14 0158
Roll	10 m x 1 m x 1.6 mm	1	14 0157



## 1000 V plastic clips

For attaching cover sheets

	Length mm		
	80	1	14 0179
	160	1	14 0180



## 1000 V slip-on snouts

Conical, to protect bare, current-carrying parts, numbered: No. 1 - 2 - 3

	Holder ø max.		
No. 1	10 mm	80	1 14 0166
No. 2	10 mm	80	1 14 0168
No. 3	10 mm	80	1 14 0170



## 1000 V slip-on snouts

Self clamping, with sleeve, not numbered

	Holder ø		
	10 mm	75	1 14 0172
	20 mm	100	1 14 0174
	30 mm	120	1 14 0176



## 1000 V insulating protective cap

Made of soft PVC, wing length 80 mm

	L x H mm		
with one wing	220 x 160	1	14 0184
with two wings	300 x 160	1	14 0185



## Spreading wedge

Made of plastic

without groove	163 x 16 x 35	1	14 0198
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## 1000 V cleaning brush

Fully plastic design

	L x W mm		
	420 x 25	1	14 0260
	420 x 38	1	14 0261



## 1000 V electrician and industrial hardhats

Light and modern head protection according to DIN EN 397, made of HDPE (polyethylene), with ventilation holes, electric insulation to 440 V AC, 1000 V in connection with a face guard, longer at the back to provide neck protection, with hygienic towelling sweatband, rain channels and side slots for attaching ear or eye protection, ratcheting headband, 8-point interior webbing, for head sizes 50-66 cm, 310 g.

Colour

yellow	1	14 0200
blue	1	14 0201
white	1	14 0202
red	1	14 0203

### 2-point chin strap made of elastic material

To attach to an electrician hardhat. Ensures a secure hold e.g. in high wind, when working at height. etc.

12 14 0268

## 1000 V face guard

According to DIN EN 166 to be combined with the electrician hardhat, complete protection over the whole facial area, including ears, from flame arcs, arc flashes caused by short-circuit, liquid sprays and other damage, transparent and colourless, protective shield can be folded up

clear as glass 1 14 0204

## 1000 V face guard

Same as CIMCO article no. 14 0204 however with edge protection due to beading tape and symmetrical short circuit value - 7 kA

clear as glass 1 14 0207

## 1000 V electrician protective face hood

According to DIN EN 166, use as arc flash face protection with ear protection during short-term switching activities as well as other energised work (e.g., on distributor cabinets, home junction boxes, during meter changes, pulling and installing NH fuses, creating a T-socket, etc.), not to be used with energised work on non-insulated, overhead lines and on equipment with risk of contact to active parts, type and CE tested

1 14 0206

### Safety glasses EXPLORER

According to EN 166 5-3.1 1F

base model with clear protective lens, scratch-resistant

12 14 0205

### Safety glasses SUNDOWNER

According to EN 166 1

black frame, clear lens, scratch-resistant, anti-fog

12 14 0208

### Full view safety goggles

With anti-fog, clear safety lens, high dust protection and wearing comfort thanks to light weight, wide textile elastic strap, indirect ventilation and flat design

### Electrician safety goggles

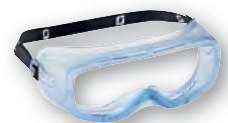
According to DIN EN 166, compact goggles in traditional design, soft, flexible, indirectly ventilated PVC frame for high wearing comfort, interchangeable, scratch-resistance polycarbonate anti-fog lens, 130° field of view, weight only 65 g, fits over most prescription glasses

1 14 0270

### Panorama safety goggles

According to DIN EN 166, with a 140° field of view, weight only 115 g, otherwise similar to safety goggles with CIMCO article no. 14 0270

1 14 0272



## Ear muffs

CE according to EN241-1

Flat ear muffs, seal cushion gentle to skin, head piece with comfortable foam cushion, comfortable for all head sizes due to sliding mechanism, pleasant contact pressure thanks to two-point attachment and optimised tension force.

Highest comfort, even when worn for long periods of time.

medium noise protection (yellow)	1	14 0274
good noise protection (orange)	1	14 0278

For attaching to electrician hardhat CIMCO article No. 14 0200 et seq.

medium noise protection (yellow)	1	14 0275
good noise protection (orange)	1	14 0276

## Ear plugs

5 pairs of washable foam rubber ear plugs for multiple use, level range: high 30 dB(A), medium 24 dB(A), low 22 dB(A), SNR value: 28 dB(A), 43.6 dB(A) at 4000 Hz, according to EN 352

	1	14 0279
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## Reusable ear plugs

With linear damping, contact to the surrounding environment is retained (good speech intelligibility) despite this, prevents harmful noise exposure, excellent fit, for low noise level area (insulation value SNR 20), removable strap

	1 pair	14 0280
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## Fine dust mask FFP1

Protection from solid particles of inert substances, according to DIN EN 149, protection level FFP1 (particle filter class P1 DIN 58645), CE certified, light, gentle to the skin with low breathing resistance, adjustable rubber band, individually wrapped

	20	14 0282
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## Fine dust mask FFP2

Protection class FFP2, CE 0194, EN 149:2001+A1:2009, Latex, PVC and silicone-free, with rubber band and breath valve

	20	14 0284
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## 5-finger work gloves

### STANDARD

Made of split pigskin, smoothed, glove back made of cotton, one size 10/11

	1 pair	14 0230
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### PROFI

Made of full pigskin, glove back made of cotton, lined, one size 10/11

	1 pair	14 0232
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### SOFT

Category II, EN 388, washable, ergonomic fit, good grip on greasy and oily parts, extremely good sense of touch, freedom of movement, excellent mechanical stability, long service life

9	1 pair	14 0290
10	1 pair	14 0292
11	1 pair	14 0294

## Winter worker

Made of full pigskin, smoothed, glove back made of cotton, with thermal lining, according to EN 388 cat. II and EN 511, one size 10/11

	1 pair	14 0233
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## NITRILE

Protective gloves with flexible nitrile coating according to EN 388 cat. II, TÜV and GS tested, with tricot lining and knitted cotton cuff, good wet and dry gripping properties, liquid- and oil-resistant, very sturdy, machine washable, anatomical fit.

	1 pair	14 0234
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## Electrical safety gloves

According to DIN EN 60903, with test mark for work in the 1000 volt range, made of natural latex, anatomical fit, best flexibility

Size	Working voltage	Test voltage	Length mm	Class	Material thickness mm		
9	500 V	2 500 V	360	00	0.5	1 pair	14 0237
10	500 V	2 500 V	360	00	0.5	1 pair	14 0238
11	500 V	2 500 V	360	00	0.5	1 pair	14 0239
9	1 000 V	5 000 V	360	0	1.0	1 pair	14 0215
10	1 000 V	5 000 V	360	0	1.0	1 pair	14 0214
11	1 000 V	5 000 V	360	0	1.0	1 pair	14 0240
9	7 500 V	10 000 V	360	1	1.5	1 pair	14 0245
10	7 500 V	10 000 V	360	1	1.5	1 pair	14 0244
11	7 500 V	10 000 V	360	1	1.5	1 pair	14 0243
9	17 000 V	20 000 V	360	2	2.3	1 pair	14 0247
10	17 000 V	20 000 V	360	2	2.3	1 pair	14 0246
11	17 000 V	20 000 V	360	2	2.3	1 pair	14 0242
11	26 500 V	30 000 V	360	3	2.9	1 pair	14 0241



## Composite electrical safety gloves

According to DIN EN 60903, with increased mechanical properties for working in voltage ranges to 1000 V (class 00)

Size	Working voltage	Test voltage	Length mm	Material thickness mm		
8	500 V	2 500 V	360	2.3	1	14 0130
9	500 V	2 500 V	360	2.3	1	14 0132
10	500 V	2 500 V	360	2.3	1	14 0134
11	500 V	2 500 V	360	2.3	1	14 0136
8	1 000 V	5 000 V	360	2.3	1	14 0140
9	1 000 V	5 000 V	360	2.3	1	14 0142
10	1 000 V	5 000 V	360	2.3	1	14 0144
11	1 000 V	5 000 V	360	2.3	1	14 0146



## Tricot lining gloves

For absorbing skin moisture and for better ventilation while wearing safety gloves, made of 100% cotton, unbleached and undyed, elastic, especially suited for protecting sensitive skin

One size	12	14 0216
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## Storage box for electrical safety gloves

For transport or secure storage in vehicles or toolboxes, made of impact-resistant insulating material. Dimensions: 476 x 224 x 100 mm, weight 320 g

1	14 0150
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## 1000 V NH safety handle

According to VDE 0680/4, with anti-slip protection and protective guard of smooth, impregnated leather.

For NH fuses sizes 00-3

1	14 0210
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## Electrician boots

Premium safety boots made of a PVC-nitrile mixture, tested according to EN 345-SB. EN 50321.1999 class 0

Shoe size	Pair	
42	1	14 0219
43	1	14 0220
44 - 45	1	14 0221
46	1	14 0222



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26

## Insulating overshoes

The comfortable alternative to rubber boots. For energised electrical work indoors on firm ground (e.g., energised meter changes, meter disconnection activities, work on interior cable distributors). The galoshes serve as a comparable replacement for position insulation to 1000 V AC / 1500 V DC.

Use in wet conditions, on ladders and outdoors, especially in cable trenches is not permitted, nor is work where earth contact with other body parts cannot be ruled out (e.g., while working on your knees). Comfortable and quick attachment to normal shoes via 2 Velcro fasteners in the front area along with a snap-in strap for the heel, type tested on the basis of DIN EN 50 321.

For sole length	approx. shoe size	Interior length		
280 to 300 mm	40 to 43	300 mm	1 pair	14 0227
300 to 320 mm	43 to 46	320 mm	1 pair	14 0228



## Portable rescue case 36 kV

Specially designed for electrical safety interventions (rescue actions involving electrical cars, etc.).

Case cover serves simultaneously as an insulating stool to prevent direct contact with the medium during rain (personal protection).

- Contents:
- Insulating bench (case base)
  - Insulated telescopic pole (45 kV)
  - Rescue hook with voltage indicator (127 V – 90 kV)
  - Cable cutter (36 kV)
  - Pair of insulated boots (20 kV) size 44
  - Bottle of talcum powder
  - Adhesive tape yellow/black
  - Information sign (first aid measures)
  - Electrical safety gloves (class 3, to 26.5 kV, size 9)
  - Transport bag with karabiner hook



570 x 71 x 240 mm	1	17 0366
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## 1000 V insulating mat

protection mats for electrical switch rooms tested according to DIN EN 61111, resistant against weathering, ozone, light, acids, oil and fire (UL 94 V-0). The standing mat with a thickness of 3 mm has a dielectric strength of the test voltage class 0 (1000 V), a raised, grooved coarse tread made from grey polymer (hardness approx. 65° Shore A), tear resistance > 10 N/mm, elongation at break > 600%, for increased surefootedness, abrasion < 300 mm, temperature resistance from -30°C to +70°C. In addition, the standing mat is free of nitrosamine and PAH according to EU 1272/2013.

1000 x 1000 x 4 mm	1	14 0224
10 m x 1 m x 4 mm	1	14 0225



## Your personal safety set, 4 pieces

In a practical and sturdy carrying bag	17 0110
Electrician's hardhat	14 0200
Electrician's face guard	14 0204
NH safety handle	14 0210
Electrician's gloves	14 0214
	1 14 0255



## Your personal safety set, 5 pieces

In a practical and sturdy carrying bag	17 0112
Electrician's hardhat	14 0200
Electrician's face guard	14 0204
NH safety handle	14 0210
Electrician's gloves	14 0214
Insulating mat	14 0224
	1 14 0250



## Safety harness type A

For working in areas with risk of falling, e.g., towers, poles, building overhangs, safety harness with a back receiver ring (according to DIN EN 361) two side attachment rings, (according to DIN EN 358), weight only 1.4 kg.

Suitable for all body sizes	1	14 0455
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## Safety harness type B

Like type A but with a chest loop as front receiver point for better work and two side attachment rings as well as a comfortable 100 mm wide, padded back support, weight 1.5 kg.

Suitable for all body sizes	1	14 0456
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## Guided fall arrester MAGIC

According to EN 353-2

The small and light fall arrester runs free in both directions. Available in different rope lengths made of 12 mm kernmantle rope.

10 m	1	14 0475
15 m	1	14 0476

## Safety lanyard ERGOGRIP

According to EN 358

Safety lanyard for workstation positioning with ergonomically shaped operating element, length 1.5 m and one-hand karabiner, 12 mm kernmantle rope. The rope is fixed to the attachment rings on the harness.

1	14 0490
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## Electrician safety set STANDARD

This set is intended for use in repair and maintenance work, e.g. working on pitched roofs.

The receiver rings in the front and at the sides correspond to the BG [Employer's Liability Insurance Association] guidelines for work in areas with a risk of falling. The stable case of steel sheet contains:

Safety harness (EN 361/358)

Belt sling 30 KN - 1 metre

Running safety lanyard ERGOGRIP

1	14 0495
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## ROPE BAG electrician safety set

This set finds versatile application in construction and industry. The receiver rings correspond to the BG [Employer's Liability Insurance Association] guidelines for work in areas with a risk of falling.

The practical rope bag contains:

Safety harness (EN 361)

Belt sling 22 KN - 2 metre

Guided fall arrester MAGIC 15 m

1	14 0496
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## SHOCKYARD fall damping belt

According to EN 355, 354

Fall damper and sling in one. Extremely short falling distance: only 95 cm at a fall factor of 2 (4 m - 100 kg falling weight). Very comfortable as it is very light and flexible over its whole length, primarily for sternal applications.

Temperature-resistant to 80 °C, abrasion proof protective shell. Continuous fall arresting due to elastic fibres.

During a fall, no shock-creating noise from tearing.

1	14 0500
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## Safety belt

The safety belt has a double-pin buckle and two side attachment rings with adjustable length, spliced lanyard. The belt can only be used in places where there is no risk of falling.

Belt length mm	Waist size cm	PU	Article no.
1400	90 - 100	1	14 0502
1500	100 - 110	1	14 0504
1600	110 - 120	1	14 0506

## Crampons

According to DIN 48345, pole model, with 2 spikes, angled footplate and wide leather counter

Spike width 260 mm for wooden poles 150 - 240 mm	1	14 0550
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## Warning vest

As a breakdown vest for car drivers and for use by street crews, in luminous orange (RAL 2005), made of mixed cotton fabric (80% polyester, 20% cotton), with two horizontal 50 mm wide reflective strips all the way around the vest for best visibility, one size, universal size adjustment via Velcro fastener, according to EN 471

1	14 2012
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## Warning triangle EURO

Officially tested and approved according to EC directive ECE-27R03 in all European countries, optimal warning effect even at night, 4 point stand, folds together, in a plastic tube (445 x 160 x 40 mm), total weight only 1700 g

unfolded 440 x 450 mm	1	14 2014
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## Commercial first aid case

According to DIN 13 157, in a modern design with attractive colouring, splash-proof, dust-tight and maintenance-free, can be hung on the wall or removed from the holder for mobile help on site, extremely clear layout thanks to transparent ABS housing and variable interior partitioning, one-hand opening and defined opening angle with additional externally accessible plaster dispenser, including room thermometer, "First Aid Instructions", pen, anti-theft protection, with wall bracket, wall plugs and screws

350 x 370 x 120 mm	1	14 2006
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Refill pack for first aid case according to DIN 13 157	1	14 2007
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## Car first aid kit

According to DIN 13 164, only for cars, not permitted for commercial operations, in a robust metal case

225 x 165 x 70 mm	1	14 2008
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Refill pack for car first aid kit according to DIN 13 164	1	14 2009
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## Professional torches UNDERWATER KINETICS

Very reliable and robust high-output torches, with extremely bright XENON bulbs in a pre-focused quality reflector for optimal light yield, with rotating front switch, tested according to the most recent EC directive, ATEX 100a Eex, and permitted for use in explosive areas of zones 1 and 2, light and non-slip ABS housing, 100% dust- and water-tight, corrosion-resistant, not electrically conductive. Additional technical data:

Length x diameter	Weight incl. batteries	Light duration	Output / Range	PU	Article no.
120 mm x 17 mm	38 g	2 to 3 h	1 Watt / 50 m	11	1510
120 mm x 17 mm	38 g	2 to 3 h	1 Watt / 50 m	11	1513
157 mm x 40 mm	148 g	4 to 5 h	2 Watt / 120 m	11	1514
157 mm x 40 mm	148 g	4 to 5 h	2 Watt / 120 m	11	1515
218 mm x 50 mm	360 g	4 to 6 h	3 Watt / 140 m	11	1518
218 mm x 50 mm	360 g	4 to 6 h	3 Watt / 140 m	11	1519

Batteries included

MINI inspection light, black	1	11 1510
MINI inspection light, yellow	1	11 1513
Bendable light guide for extremely precise work	1	11 1512

MIDI torch and helmet light, black	1	11 1514
MIDI torch and helmet light, neon yellow, with additional rear switch	1	11 1515

MAXI work tube light, neon yellow	1	11 1519
Special helmet mounting kit, universal	1	11 1516





## Headlamp UK 3AAA LED Vizion

Insert can be removed and used individually. Via a rotating filter, the light can be used in three different modes: focused, diffuse and red. The duration of the light, at 150 hours, is exceptionally long.

The large switch can be perfectly operated even with thick gloves. The continuously adjustable headband is very soft and can be set for a precise fit. The angle of the lamp can be cleanly adjusted via a large button.

Additional technical data: 100% dust and water tight, output: 1 watt, weight 110 g, batteries included

black	74 x 37 x 46 mm	1	11 1525
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## MIDI-LED torch and helmet light

Large light output due to an improved LED and explosion protection class (II 2G EX e ib IIC T4/ II 2D Ex ib 21 T 98 °C) confirm the torch's claim to be the standard in its output class. With rotating front switch and rear switch.

Additional technical data: output: 3 watts, illumination: 80 lumens, light duration: 10.5 h, weight: 159 g, batteries included

neon yellow	172 x 40 x 37 mm	1	11 1517
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Special helmet mounting kit, universal		1	11 1516
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## Mini LED lamp

With holding clip and magnet. Patented mini torch for bright, point illumination, pivots in all directions, with three attachment or standing options:

- Foot for standing on horizontal surfaces
- Magnetic foot for attaching to metal objects
- Spring clip for attaching to clothing, helmet, visor, metal sheets, tool bags, etc.

Long light duration thanks to LED technology, delivery includes 3 LR44 button cell batteries.

		1	11 1506
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## LED pocket torches

Premium LED lamps with focused illumination, 1 (to 1.2) watt output, very robust housing made of solid aluminium, splash protected (protection class IP 67), can be expanded with extensive accessories, maximum light yield with simultaneously low heat development, rechargeable battery operation for high light duration and service life. Rotate to turn on and off. With all functions described above, but with an additional rotating function for focusing the light, IP 64, with soft grip, battery operated.

Housing ø 28 mm	165	1	11 1534
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## LED inspection lamps

Premium LED lamps with focused illumination, 1 watt output, very robust housing made of solid aluminium, splash protected (protection class IP 67), can be expanded with extensive accessories, maximum light yield with simultaneously low heat development, battery operation for high light duration and service life. Rotate to turn on and off. Design with black rubber shaft, 1 x mirror ø 30 mm, 1 x mirror 65 x 43 mm, magnetic head, battery operated

Handle ø 22 mm, head ø 15 mm	Total length 630	1	11 1540
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## LED workshop lamp

Premium LED lamps with patented focusing system for adjustable emission angle, 6 watt output, very robust housing made of solid aluminium, splash protected (protection class IP 64), can be expanded with extensive accessories, maximum light yield with simultaneously low heat development, mains operation for high light duration and service life. With black rubber flex shaft, magnetic base, power supply plug.

Head ø 64 mm	Flex length 500	1	11 1562
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## LED work lamp

Ideal for home, workshop, garage, construction site, camping, boat, etc.

This innovative LED work lamp replaces the common neon tube lights thanks to many advantages. With 60 (tube light) plus 9 (torch light) white LEDs, the lamp wins acclaim due to its high yield of bright, even and focused light, simple operation with one push button switch, unlimited freedom of movement thanks to wireless operation with integrated rechargeable batteries (7.2 V NiMH), can be charged with 230 volt/50 Hz charger and 12-volt cigarette lighter (charging time approx. 1.5 hours), very low power consumption for a long light runtime (approx. 5 to 8 hours, depending on mode), impact-resistant, oil, splash and dust-resistant housing (IP 54) made of polycarbonate with a non-slip rubber handle, handy and light: length 410 mm, ø 41 mm, weight 470 g.

LED work lamp		1	11 1522
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**LED construction site spotlight 10W**

For any mobile use, even outdoors (protection type: IP 65) due to large lithium ion batteries (7.4 V/4.400 mAh). Battery operating time: 4 hours, battery charging time: 3 hours, luminous flux: 700 Lumen, light colour: 5,500 - 6,000 K, light angle: 120°. State-of-the-art LED technology allows precise illumination in a horizontal and vertical alignment, overcharge and discharge protection, solid die cast aluminium housing, toughened glass.

10 W	148 x 167 x 240 mm	1	11 1580
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**LED construction site spotlight 20W**

For any mobile use, even outdoors (protection type: IP 65) due to large lithium ion batteries (7.4 V/6.600 mAh). Battery operating time: 5 hours, battery charging time: 5 hours, luminous flux: 1,300 Lumen, light colour: 5,500 - 6,000 K, light angle: 120°. State-of-the-art LED technology allows precise illumination in a horizontal and vertical alignment, overcharge and discharge protection, solid die cast aluminium housing, toughened glass.

20 W	215 x 185 x 268 mm	1	11 1586
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**LED construction site spotlight 30W**

For any mobile use, even outdoors (protection type: IP 65) due to large lithium ion batteries (14.8 V/6.600 mAh). Battery operating time: 3 hours, battery charging time: 5 hours, luminous flux: 2,000 Lumen, light colour: 5,500 - 6,000 K, light angle: 120°. State-of-the-art LED technology allows precise illumination in a horizontal and vertical alignment, overcharge and discharge protection, solid die cast aluminium housing, toughened glass.

30 W	225 x 184 x 305 mm	1	11 1588
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**LED construction site spotlight 50W**

For any mobile use, even outdoors (protection type: IP 65) due to large lithium ion batteries (14.8 V/6.600 mAh). Battery operating time: 3 hours, battery charging time: 5 hours, luminous flux: 2,600 Lumen, light colour: 5,500 - 6,000 K, light angle: 120°. State-of-the-art LED technology allows precise illumination in a horizontal and vertical alignment, overcharge and discharge protection, solid die cast aluminium housing, toughened glass.

50 W	288 x 188 x 325 mm	1	11 1590
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**LED construction site spotlight 20W with spare rechargeable battery**

For any mobile use, even outdoors (protection type: IP 65) due to large lithium ion batteries (7.4 V/6.600 mAh). Battery operating time: 3 hours, battery charging time: 5 hours, luminous flux: 1,300 Lumen, light colour: 5,500 - 6,000 K, light angle: 120°. Including spare rechargeable battery, CIMCO article no. 11 1593. Special feature: the USB port with cover can be used to charge mobile devices such as smartphones or tablets. State-of-the-art LED technology allows precise illumination in a horizontal and vertical alignment, overcharge and discharge protection, solid die cast aluminium housing, toughened glass.

20 W	182 x 170 x 256 mm	1	11 1592
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**Spare rechargeable battery for 11 1592**

With USB port for use as a power bank. Lithium ion batteries (7,4 V/6.600 mAh), for use with LED construction site spotlight, CIMCO article no. 11 1592.

1	11 1593
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**SAFETY BOX**

To protect plug connections on power lines against humidity and moisture, as well as against unintentional separation of the plug connection. Ideally suited for use when working with electrical devices outdoors (garden, camping, construction site, boat, etc.), for the holiday and Christmas lighting, also worth recommending for the protection of small children.

Simple handling: open the housing parts of the SAFETY BOX, connect the plug and socket and insert them in the middle, fix the plug connection and then turn on the power. For lines with up to 9 mm diameter,

IP 44 splash protected, weight 110 g.

red	1	14 2016
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## Cutout switch lock

The secure locking element which can be used, for example, for fuses. After the cutout switch has been switched off, the clip block can be attached with an insulated electrician screwdriver (blade max. 4 mm); then the locking device is secured with a padlock (CIMCO article no. 18 2612) or a multi-locking clamp (CIMCO article no. 18 2616) to prevent the cutout switch from being switched back on.

Packaging unit 5 pieces

M3 circuit breaker	1	18 2600
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## Padlock for locking device

With 4 mm brass shackle Base body made of plastic with two-sided locking disc, with a "Do not switch on" prohibition sign (according to VBG 125) and label field.

Delivery includes two keys. Weight 192 g

50 x 6 mm	1	18 2610
50 x 4 mm	1	18 2612
23 x 6 mm	1	18 2614

## Multi-locking clamp for locking element

For use with multiple locking elements, with "Do not switch on" prohibition sign (according to VBG 125) and labelling field. Scope of supply: housing with 2 m protection band.

	1	18 2616
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## ESD service kit

Practical working mat for mobile application areas, made of sturdy dissipative vinyl material.

Equipped with 2 pockets and seamed edges. Delivery including grounding cable 3 m with crocodile clip, wrist band.

Bleeder resistance 108 Ohm.

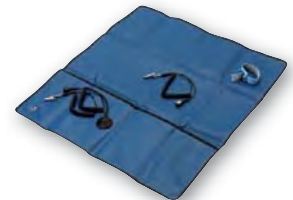
600 x 650	1	15 0370
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## Circuit board cutlery, 3 pieces

With 6 different accessory soldering tools of special steel that solder does not stick to.

With fork, stainless steel brush, hook, awl, knife and scraper.

175	1	15 0350
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# PLUMBING TOOLS

## Jaws and opening

The jaws are ground and inductively hardened.  
The self-clamping ridging in the 45 degree  
"S-opening" ensures a secure grip.



## Material

Made of chrome-vanadium steel  
and also forged from solid steel.



18

## Water pump pliers

According to DIN ISO 8976, with box joint, self-clamping on the tool, with serrated opening (burner hole), manufactured from chrome-vanadium steel.



without handle sleeves	250 mm (10")	6	10 1222
with handle sleeves	250 mm (10")	6	10 1224

## Water pump pliers

According to DIN ISO 8976, made of chrome-vanadium steel, with burner hole and box slip joint, for even force distribution, with safety locking protection, varnished.

	175	1	10 1236
	245	10	10 1237
	300	1	10 1238

## FastGRIP water pump pliers

According to DIN / ISO 8976 with quick adjustment on the workpiece via push button. Easy running, super-fine adjustment via 12 tab locations. Ergonomically shaped for the greatest force transmission, self-locking on the workpiece, power conserving, slip-proof design. With box slip joint and double fulcrum. Inductively hardened ridged opening and safety lock protection. High-quality tempering. Maximum span width 37 mm, weight 392 g.

	240	1	10 1230
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## PowerGRIP plier wrench

Parallel gripping pliers with practical push-button adjustment. For working on parallel and flat workpieces such as nuts, bolts, screwed cable glands and thin metal sheets. High transmission ratio with noticeable support of hand power. Ergonomic shape, extremely robust. Free play joint with continuous, easy-running fine adjustment. Chrome-plated with dip insulated handles.

Design	Span width	Weight		
180 mm	36 mm	275 g	1	10 1241
250 mm	46 mm	490 g	1	10 1239
300 mm	60 mm	640 g	1	10 1243

## Syphon pliers

For mounting and dismantling syphons and water drains on washbasins and sink units; also for larger filling valves (water taps) made of chrome-vanadium steel, for pipe fittings with screwed slip joint, shanks dipped.

	230	1	10 1256
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## S-opening pipe pliers

According to DIN 5234 C, drop-forged, with inductively hardened grip area, self-locking on the workpiece, double-T profile handle, captive adjusting nut and safety locking protection to prevent crush injuries.

For pipes	Span width			
inch	mm			
1/2	39	245	6	10 1277
1	49	320	6	10 1279
1 1/2	68	440	6	10 1281
2	85	560	6	10 1283
3	120	675	6	10 1285

## Lever pressure pliers (locking pliers)

Ideal for holding and fixing of workpieces for welding, soldering, cutting and finishing. Jaws made of chrome vanadium steel, with unfasten lever and wire cutter

Span width mm			
0 - 35	185	1	10 1300
0 - 50	250	1	10 1302
0 - 65	300	1	10 1304

## Fitting pliers

With non-slip woven rubber strap

	max. 160 mm ø	1	10 1370
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## Basin wrench

With swivel claw, for left and right-handed rotation, varnished

	235	1	10 2020
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## One-hand basin wrench

For easy mounting of high-quality fittings, e.g. chrome-plated, in hard to access places with restricted working space, holders  $\frac{3}{8}$ "

Wrench inserts

Size 27 mm		1	11 4021
Size 32 mm		1	11 4022
Size 36 mm		1	11 4023
Extension	300 mm	1	11 4024
Sliding T-handle	$\frac{3}{8}$ "	1	11 4026
Set no. 11 4021 to no. 11 4026	5 pieces	1	11 4019

## Express spanner

Fork spanner with M 10 hanger bolt spanner

Size 17 - 19		1	11 4011
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## Ventil-Quick

Waste valve holder and screw-in wrench. Just insert to be immediately torque-proof. No chance of damaging chrome surfaces, weighs only 365 g. Ready for use in seconds

		1	11 4040
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## Plumbing four-way socket wrench

With offset surfaces, making it suitable for all brands for tap extensions  $\frac{3}{8}$ " -  $\frac{1}{2}$ " -  $\frac{3}{4}$ " - 1", with thread for M 10 + M 12 hanger bolts

		1	11 4120
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## Radiator spud wrench

For cam, hex and double hex drive, to install valves and screw fittings  $\frac{3}{8}$ " - 1",  $\frac{1}{2}$ " square drive

		1	11 4000
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## Ratchet

With  $\frac{1}{2}$ " square socket, for radiator spud wrench (CIMCO article no. 11 4000) meaning it can be used as an ordinary ratchet for a nut driver

		1	11 4001
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## Radiator spud wrench

Chrome-plated, with adjustable tommy bar, for valve nipples  $\frac{3}{8}$ " and  $\frac{1}{2}$ "

		1	11 4150
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## Pipe cutters for plastic pipes and cable ducts

For hard and soft PVC pipes and cable ducts; also for fibre-reinforced plastic and rubber hoses. The stability and the cutting geometry of the blade ensures a burr and deformation-free, right-angled cut on both round and angular material.

## SUPER pipe cutter

Working range 6 - 35 mm $\varnothing$		1	12 0410
Replacement blade		1	12 0412

## MAXI pipe cutter

With adjustment-lever for modification of cut-opening

Working range 6 - 42 mm $\varnothing$		1	12 0420
Replacement blade		1	12 0422

## MINI plastic pipe shears

Made of die cast magnesium, for cutting plastic and composite pipes up to a diameter of 35 mm. Optimum power transmission, with quick change system for changing blades simply and easily. Automatic blade retraction. Blade of PTFE-coated INOX steel with long service life (made in Solingen). Extremely light and compact, only 270 g.

35 mm $\varnothing$ / 1 $\frac{3}{8}$ "	220	1	12 0416
Replacement blade		1	12 0417



## Plastic pipe cutter PROFI

Made of die cast magnesium, for cutting plastic and composite pipes up to a diameter of 42 mm.

Optimum power transmission thanks to ratchet mechanism with progressive, gear driven blade feed with 2-component handle. Blade retraction via one-hand quick retraction mechanism. With quick change system for replacing blades quickly and easily. Blade of PTFE-coated INOX steel with long service life (made in Solingen).

42 mm $\varnothing$ / 1 5/8"	240	1	12 0418
Replacement blade		1	12 0419

## Universal pipe cutter

With 2 interchangeable knives for insulation and hard PVC pipes and for soft plastic and rubber hoses

Pipe outer $\varnothing$ max. 29 mm	200	1	12 0450
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Bulk knives

for hard PVC		1	12 0452
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for soft pipes		1	12 0453
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## Corrugated pipe cutter

For cutting and trimming corrugated plastic tubes (flex tubes) and plastic shield tubes up to 42 mm  $\varnothing$  in the electrical, plumbing and heating fields, simply rotate the tool to safely cut at the outer diameter without damaging the interior pipe, with two interchangeable cutting inserts, weight only 45 g

Working range to 42 mm $\varnothing$	110	1	12 0430
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Replacement cutting inserts		1 pair	12 0432
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## Metal saw bow

Especially light, yet extremely sturdy metal saw for 300 mm saw blades. Made of die cast aluminium in an ergonomic design, with soft rubber inserts on the handle and front grip. High cutting precision of the blade in straight and 40 degree position due to captive locking pins. Blade can be tensioned up to 800 N by turn-lock fastener in the handle. Delivery incl. a bi-metal cutting saw blade.

Span width 300 mm	Weight 650 g	1	12 0602
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## Metal saw bow

Acc. to DIN 6473 A, heavy duty design, material thickness 18 x 8 mm, bright chrome plated, with captive locking pins

Span width 300 mm		6	12 0600
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## Metal cutting saw blade

According to DIN 6494, 24 teeth per inch

Version A, ridges on one side

Material	Dimensions mm		
HSS-CO	300 x 13 x 0.65	100	12 0608

Version B, ridges on both sides

Material	Dimensions mm		
WS	300 x 25 x 0.8	50	12 0614

## Bolt cutters

Robust bolt cutters in a compact design. Blade and pipehead manufactured from drop-forged special steel.

Reduced separating force thanks to ideal geometry and cutting performance up to 48 HRC.

With ergonomic 2-component handles and precise, adjustable blades.

Weight 2013 g	460	1	10 0450
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## Pipe milling cutter internal and external

For vibration-free chamfering of plastic, copper, aluminium and soft steel pipes from 4 - 42 mm in diameter

		1	12 0890
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## Ratchet pipe cutter

Innovative pipe cutter with a worldwide patent. Ratchet mechanism allows you to cut a pipe without having to completely rotate the tool. Especially suitable for work in restricted working spaces (e.g., pipes installed in corners or on walls). One-hand operation. Especially high performance. Thanks to special cutting wheel and double roller guides (speed, durability). Integrated deburrer for clean edges on the cut pipes. Easily interchangeable cutting wheel. One replacement cutting wheel is contained in the scope of delivery. Weight 400 g. For plastic, copper, aluminium and similar pipes.

For outer pipe diameters ranging from 12 to 35 mm (1/4" to 1 1/8").

	175 x 38 x 68	1	12 0480
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Replacement wheel		1	12 0481
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## 1 Mini pipe cutter

With a cutting wheel which can be changed without requiring tools thanks to quick change system, double roller guide, for copper pipes.

3 - 16 mm $\varnothing$	$1/8'' - 5/8'' \varnothing$	60	1	12 0460
3 - 25 mm $\varnothing$	$1/8'' - 1''$	70	1	12 0461

## 2 Pipe cutter

With a cutting wheel which can be changed without requiring tools thanks to quick change system, double roller guide and deburrer

3 - 35 mm $\varnothing$	$1/8'' - 1 3/8'' \varnothing$	160	1	12 0464
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## 3 Pipe cutter

With a cutting wheel which can be changed without requiring tools thanks to quick change system, double roller guide

10 - 60 mm $\varnothing$	$1/8'' - 2'' \varnothing$	390	1	12 0472
10 - 42 mm $\varnothing$	$1/8'' - 1 1/4''$	290	1	12 0473

## 4 KOMPAKT professional pipe cutter

For aluminium, copper and thin-walled steel pipes. Made from die cast magnesium with steel bearing mounted spindle to make slide move more easily. With 4 guide rollers for optimum hold of the pipe when cutting. Includes an extendable deburring blade and a replacement cutting wheel (in the turn knob).

Cutting wheel can be changed without tools thanks to quick change mechanism.

3 - 35 mm $\varnothing$	$1/8'' - 1 3/8'' \varnothing$	155 mm	1	12 0468
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Loose wheels

for 12 0460, 12 0461, 12 0464, 12 0468	1	12 0462
for 12 0472	1	12 0474
for 12 0473	1	12 0475

## 5 Safety cross peen hammer

Dimensions and finish according to DIN 1041. With forged-on protective shaft collar and additional nylon protective haft sleeve. With double curved hickory shaft, hammer head double secured by tapered collar and synthetic resin seal.

Hammer weight g

500	6	13 0586
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## 6 Universal lever shears for sheet metal

With lever transmission; double hardened fine-toothed blades; self-opening. Hex socket head screw, fully hardened; with fine thread for adjusting the cutting edge gap.

## 7 Ideal straight cutting shears

250	1	12 0280
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## 8 Special shape cutting shears

With especially flat lower blade

right-hand cutting	250	1	12 0282
left-hand cutting	250	1	12 0283

## 9 Double sheet metal puncher – Plumbing

For punching holes in sink unit basins (stainless steel), spanner operation Size 19

Hole $\varnothing$	Pre-drill $\varnothing$ mm	Bolt size	max. Sheet thickness mm		
28 / 32	11	10 x 55	1.5	1	13 1822
Replacement tension bolt		10 x 55		1	13 5068

## 10 Workshop file set

With wooden haft

1 unit each 200 mm Cut no. 2		1	20 6806
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## 11 Valve seat milling cutter

With double brass cylinder, with flat steel cutters, for water supply taps, for pipes  $3/8'' - 1/2'' - 3/4'' - 1''$

1	14 1150
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### Excelsior spanner

With movable jaw and tyre lever, polished, smooth jaws without teeth.

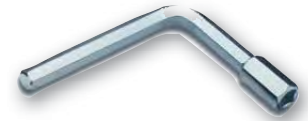
	240	1	11 2842
	300	1	11 2844
	370	1	11 2846



### L-key

Chrome-plated, with square socket, for 10 mm tap extensions.

$\frac{3}{8}'' + \frac{3}{4}''$		1	11 4130
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### Flexible pipe cleaners

Made of hot-dip galvanised, double layered steel wire, with claw and adjustable wooden handle.

Flexible cleaner	Claw			
ø mm	ø mm	m		
7	17	5	1	14 1170
7	17	10	1	14 1176
10	20	10	1	14 1186
10	30	10	1	14 1200
12	40	5	1	14 1192
12	40	10	1	14 1202



### Extensions for flexible pipe cleaners

Flexible cleaner ø mm	m		
12	5	1	14 1212



### ROHRTEUFEL pipe cleaner

Universal use pipe cleaner for cleaning all pipes from 10 to 55 mm diameter, e.g. drain pipes, sinks, washbasins, shower drain pipes, baths and WCs, with crank for hand operation and hex receiver for electronically regulated drills, hot-dip galvanised piano wire spiral, 7.5 m long, 8 mm ø

		1	14 1250
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### Steel wire brush

4 rows of bristles	Length 290 mm	6	14 1314
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### Magnetic welding mirror

With strong, permanent magnet, ball joint and flexible brass hose, nickel-plated steel mirror, 1 mm thick.

	Length 500 mm	1	14 1330
Loose welding mirrors	80 x 70 mm	1	14 1340



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# SOLDERING EQUIPMENT AND ACCESSORIES – CHEMICAL PRODUCTS

## Function test

without complex testing equipment.  
For photoelectric (optoelectronic) smoke detectors

## Battery test

The functionality of a smoke alarm is not ensured by pressing the battery test button, rather only by using a smoke alarm spray.

## Contents

sufficient for approx. 150 smoke detector tests.



Note: Due to the limited shelf-life, it is not possible to return the spray and cleaner cans!

## Lead-free electronic solder

According to DIN 29453, S-Sn 99.3 Cu 0.7, with active resin flux according to DIN EN 29454-1 1.1.2.B 2.5% (weight %  $2.5 \pm 0.5$ ), non-corrosive on non-ferrous metals, supplied on disposable coils

Wire ø mm	Weight g		
1.0	100	1	15 0152
	250	1	15 0154
	500	1	15 0156
	1000	1	15 0158
1.5	100	1	15 0162
	250	1	15 0164
	500	1	15 0166
2.0	1000	1	15 0168
	250	1	15 0174
	500	1	15 0176
3.0	1000	1	15 0178
	250	1	15 0180
	500	1	15 0182

## Electronic solder

According to DIN EN 29453, with activated resin flux, non-corrosive on non-ferrous metals, fast-flowing, flux according to DIN EN 29454-1 1.1.2.B 2.5% (weight %  $2.5 \pm 0.5$ ) S-Sn60Pb40, supplied on disposable coils

Wire ø mm	Weight g		
1.0	100	1	15 0052
	250	1	15 0054
	500	1	15 0056
	1000	1	15 0058
	6	1 m	15 0060
1.5	100	1	15 0062
	250	1	15 0064
	500	1	15 0066
2.0	1000	1	15 0068
	250	1	15 0074
	500	1	15 0076
3.0	1000	1	15 0078
	250	1	15 0080
	500	1	15 0082

## Radio solder

According to DIN EN 29453, with activated resin flux, non-corrosive on non-ferrous metals, fast-flowing, flux according to DIN EN 29454-1 1.1.2.B 2.5% (weight %  $2.5 \pm 0.5$ ) S-Sn40Pb60, supplied on disposable coils

Wire ø mm	Weight g		
2	250	1	15 0104

## Solder in triangular rods

According to DIN EN 29453, extruded, standard dimension: 11 x 11 x 11 mm, approx. length 440 mm

SN %			
35	1 kg	15 0140	
40	1 kg	15 0150	
60	1 kg	15 0160	

## Lead-free solder in triangular rods

According to DIN EN 29453, extruded, standard dimensions: 11 x 11 x 11 mm, approx. length 400 mm

SN %			
99.3	1 kg	15 0161	

## Soldering grease

Acc. to DIN EN 29454-1 3.1.1.C, for the soft soldering of tinplate and leaded sheet metal, for the tinning of copper and brass, not suitable for use in the field of electrical engineering and electronics (contains zinc chloride, corrosive)

50 g	1	15 0230	
100 g	1	15 0232	
250 g	1	15 0234	



## Contact soldering paste

Acc. to DIN EN 29454-1 1.1.2.C, for soldering in the fields of electrical engineering, electronics and electrical installation

50 g tin

1 15 0240



## Desoldering pump

Ideally suitable for repair work on circuit boards and electronic components, in professional industrial quality with extremely high and constant suction power and large aluminium solder chamber, low weight (only 65 g), with thin, anti-static Teflon desoldering tip.

195

1 15 0300



## Electronic soldering devices

220 Volt, with plastic handle, 1.5 m power cable and "Schuko" safety plug, interchangeable copper soldering tips

Watt Soldering tip temp. Approx. heating time Soldering tip ø mm

15 370 °C 1.5 min 5-straight 1 15 0448

Replacement soldering tip for 15 0448 1 15 0449

30 410 °C 1.5 min 5-straight 1 15 0600

Replacement soldering tip for 15 0600 1 15 0601

60 460 °C 2.0 min 7-bent 1 15 0453

Replacement soldering tip for 15 0453 1 15 0457

80 480 °C 2.5 min 7-bent 1 15 0602

Replacement soldering tip for 15 0602 1 15 0603

100 500 °C 2.5 min 7-bent 1 15 0456

Replacement soldering tip for 15 0456 + 15 0453 1 15 0457



## Tool holder for electrical and gas soldering irons

With tray for cleaning sponge

80 x 110 mm

1 15 0301

## Electrical soldering gun

220 Volt, with soldering point light and Euro plug

Watt Soldering tip temp. Approx. heating time

100 400 °C 0.2 min 1 15 0700

Replacement soldering tip 1 15 0702



## Gas soldering set

10 pieces, for lighter butane gas. For challenging soldering tasks without obstructive cables in all locations where power supply is not available, e.g. in installation, service and repair areas. Also suitable for heat-shrinking work, micro-welding and the cutting of plastic films and plates thanks to various interchangeable attachments. With electronic ignition, infinitely variable output, temperatures up to 1,300 °C in the event of naked flames, soldering up to 500 °C, heat-shrinking up to 500 °C, burning time approx. 60 min. In handy shock-proof plastic storage and transport case complete with window.

Each set consists of 1:

- Gas soldering iron with protective safety cap and locking device 15 0810
- Pencil tip soldering tip 15 0820
- 3 mm single-sided, diagonal soldering tip (elliptical shape) 15 0821
- 3.5 mm dual-sided, diagonal soldering tip (chisel shape) 15 0822
- Hot knife with 12.5 mm blade width for the cutting and forming of plastic and rigid foams 15 0826
- Heat reflector for heat-shrinking 15 0828
- 3.5 mm ø flame nozzle for micro-welding 15 0824
- 7 mm and 8 mm spanner for soldering tip assembly
- Cleaning sponge in 40 x 40 mm sponge container
- Comprehensive instruction manual

10 pieces gas soldering iron set 275 x 160 x 45 mm 1 15 0800

Gas soldering iron individual device 235 x 27 mm 1 15 0810



## Soldering station with infinitely variable control

Primary voltage 230 V, 50/60 Hz, secondary voltage 12 V, safety transformer, LED function display, soldering iron with separate equipotential bonding and interchangeable soldering tip

Watt Soldering tip temp. Approx. heating time Soldering tip ø mm

30 200 - 450 °C 1.5 min 4 1 15 0730

## Replacement soldering iron

Watt Soldering tip temp. Approx. heating time Soldering tip ø mm

30 200 - 450 °C 1.5 min 4 1 15 0732



## Cleaning sprays

### Plastic cleaner

Cleans and degreases plastics, ideal for the pre-treatment of surfaces when bonding sensitive plastics, rubber or painted surfaces, evaporates without leaving residue.

500 ml 12 15 1138

### Cleaner and degreaser

Cleaner and degreaser for all metals, glass and ceramic as well as the majority of plastics. Cleans stubborn dirt such as oil, grease, tar, wax, silicone/adhesive residue from electrical contacts, boilers and burners, brakes, clutches, motors, transmissions, etc. without leaving any residue, degreasing effect.

500 ml 12 15 1150

### TFT/LCD screen cleaner

Reliable removal of dirt, dust, grease and nicotine. Leaves behind an anti-static effect in order to provide long-term surface protection against contamination. Also suitable for use on sensitive plastics and glass surfaces.

Application on flat and plasma screens, computers, notebooks.

200 ml 12 15 1151

### Multi-foam

The powerful universal cleaner, fully biodegradable. Cleans all metals, glass and plastic parts without leaving residue, eliminates insects, smears, protective films, freshens matt and weathered plastics, prevents rubber seals from bonding and freezing solid, etc.

400 ml 12 15 1152

## Technical sprays

### AT 44 all-round spray with PTFE

Corrosion protection, cleaning, lubrication, water displacement and conservation in a single product. Displaces moisture on electrical lines, prevents creep currents, loosens seized screws, etc. eliminates squeaking and creaking noises, cleans surfaces. Leaves behind a wafer-thin film that does not stick and does not attract dust.

400 ml 12 15 1000

### PTFE spray

A dry, clean, grease-free, highly-adhesive and durable dry lubricant. Repels dirt, dust and water. Resistant to corrosive chemicals and oils. Temperature-resistant from  $-180\text{ }^{\circ}\text{C}$  to  $+250\text{ }^{\circ}\text{C}$ .

400 ml 12 15 1002

### Silicone spray

An ideal lubricating, protecting, maintenance and separating agent. Makes the winding of cables easier, protects electric contacts against moisture, protects rubber, plastic and metal parts. Only handle when in a de-energised state.

400 ml 12 15 1004

### Rust remover and contact spray

Corrosion protection, cleaning, lubrication, water displacement and conservation in a single product. Removes rust, displaces water from ignition contacts and electrical lines, provides sustainable protection against corrosion and greases sliding surfaces, with good creeping properties. Prevents creep currents, sparks and short circuits.

400 ml 12 15 1040

### Freeze spray

For thermal troubleshooting and the quickest functional testing of electrical components, thermostats, ignition- and control units, for the cooling of motor parts and heat-sensitive components (e.g. in order to prevent overheating during soldering) cools locally to  $-45\text{ }^{\circ}\text{C}$ , suitable for all materials (excluding plastics), highly flammable.

400 ml 12 15 1090

### Compressed air spray

Removes dust and loose contamination without residue, thus enabling a dry, contact-free cleaning, even in inaccessible corners and sensitive surfaces when dealing with electronic devices, magnetic heads, cameras, clockwork mechanisms, model-making equipment, measurement technology, etc.

400 ml 12 15 1092



## All-round spray

High-performance maintenance and service product for all applications in the fields of industry, trade, household and hobby, acts as corrosion protection on metal parts, as penetrating oil (rust remover, elimination of squeaking and creaking noises), as a water displacing agent, as a lubricant and as a cleaner (including oil, grease, tar and adhesive residue), leaves behind a long-lasting adhesive film that neither smears nor sticks. Ideal application in the field of electrical engineering and electronics as an anti-condensation agent on circuit boards, as a contact spray on generators and solenoid switches.

400 ml	12	15 1120
50 ml	12	15 1122

## Smoke detector test spray

Special testing gas for the quick and reliable functional testing of photoelectric (optoelectronic) smoke detectors without complex testing equipment. Tin content sufficient for approx. 150 smoke detector tests.

250 ml	1	15 1126
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## Adhesives

### Assembly adhesive

For the quick, universal bonding of metals, various plastics, concrete, marble, natural and artificial stone, ceramics, enamel, plaster as well as MDF board, wooden board, chipboard, fibreboard and plasterboard. Thanks to its firm consistency, it is possible to bond cable ducts in areas where drilling is not possible (e.g. on walls and ceilings) without any problems whatsoever. The assembly adhesive is silicone and solvent free and can be coated / painted over ("wet on wet").

white	310 ml	12	15 1154
grey	310 ml	12	15 1156

### Epoxy minute adhesive

Transparent 2-component adhesive with extremely good adhesive properties, elastic as well as impact/tension/shock resistant, for all materials.

24 g	12	15 1210
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### Fast metal minute adhesive

Steel-filled 2 component epoxy minute adhesive, high impact and tensile strength, temperature resistant from -60 °C to +145 °C.

24 g	12	15 1215
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### CIMLOCK screw lock

Premium adhesive and sealant for the securing, fastening and sealing of screws, studs, joint and surface connections. Hardening takes place following metal contact with the air. Medium-strength, for gap bridging 0.05 mm to max. 0.25 mm.

10 ml	12	15 1224
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### Universal instant adhesive

Solvent-free and cold-setting cyanoacrylate adhesive that hardens under pressure.

20 g	12	15 1200
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## Silicone

1 component adhesive and sealant, bonds to the majority of sub-surfaces such as aluminium, steel, glass, glass fabric, ceramic, plastic, wood and many other materials.

transparent	310 ml	12	15 1260
white	310 ml	12	15 1262
grey	310 ml	12	15 1264

## Metal sprays

### Zinc spray

Durable, quick-drying cathodic corrosion protection with long-term effect for all metal surfaces, resistant against salt, water and heat up to approx. 500 °C, suitable for the improvement of damaged zinc layers.

400 ml	12	15 1100	
light	400 ml	12	15 1102

### Aluminium spray

99.5% pure aluminium, long-term heat resistant protection up to +800 °C, bonds to almost all materials such as steel, non-ferrous metal, wood, cardboard, plastic, ceramic, etc. resistant against weathering.

400 ml	12	15 1110
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### Stainless steel spray

Corrosion-resistant and effective surface coating, securely bonds to all metals, glass, wood, stone, cardboard and the majority of plastics.

400 ml	12	15 1114
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## WET.PROTECT

Protects against wet and moisture-related short circuits, failure and corrosion, infiltrates the moisture and subsequently forms a permanent protective film, maintains conductivity and increases the service life of the treated parts, can be used as a preventive measure or directly following the effects of moisture as a means of repair. Only handle when in a de-energised state. For use in industry, trade and the domestic household

e.basic	50 ml	1	15 1140
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e.basic	200 ml	1	15 1142
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For use on motorbikes, trikes and mopeds

e.motorbike	50 ml	1	15 1144
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For use on boats and yachts in saltwater environments

e.nautic	50 ml	1	15 1146
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e.nautic	200 ml	1	15 1147
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For use on passenger cars and heavy goods vehicles

e.car	50 ml	1	15 1148
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Note: Due to the limited shelf-life, it is not possible to return the spray and cleaner cans!



## Cartridge gun

For all standard cartridges (e.g. silicone), open skeleton structure, soft delivery stroke, extremely long service life, with pressure release and spray nozzle opener

		1	15 1270
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## Hot glue gun set

Electronic temperature control, mechanical feed device for glue sticks, approx. melting temperature 120 °C, approx. heating time 7 min., output 25 W, for 11 mm ø glue sticks. Supplied in a practical plastic case complete with 6 glue sticks.

		1	18 1400
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25 glue sticks	200 mm in length	1	18 1401
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## Plaster and assembly cement

Supply to wholesale trade in Germany only in full packaging units (= 1 pallet per article) and from a minimum total delivery amount of 5 t per shipment!

### Building and electrician plaster

For the insertion of sockets, filling of holes, for improvement and installation work, dowelling, smoothing and fixing in interior areas. Specially designed for building and electrical work. Also ideally suitable for forming and model-making work. Approx. processing time of 15 to 20 minutes, approx. mixing ratio of 8 l water / 10 kg, approx. storage time of 6 months.

PU = 1 pallet

in paper sack	25 kg	40 sacks	14 0330
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	10 kg	60 sacks	14 0332
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	5 kg	120 sacks	14 0334
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in plastic bucket	10 kg	44 buckets	14 0335
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### Fixing plaster

For fixing plasterboard, plaster fibre and plasterboard composite boards on stable and absorbent sub-surfaces. Pre-treat smooth concrete surfaces with Betokontakt and highly absorbent sub-surfaces with primer or absorbent substrates. The guidelines provided by the construction panel manufacturer must be observed. Also suitable for the fixing interior plaster profiles. Approx. processing time of 50 minutes, approx. material consumption of 5 kg / m<sup>2</sup>, approx. storage time of 6 months.

PU = 1 pallet

in paper sack	25 kg	40 sacks	14 0338
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## RED-WHITE bonding plaster

Single-layer interior plaster complete with adhesive additives and high yield for manual processing on all common plaster sub-surfaces as well as on rough or smooth concrete surfaces in interior areas including domestic kitchens and bathrooms. A pre-treatment with Betokontakt is essential when dealing with smooth sub-surfaces. Smoothened, felted or can be freely processed. Processing time approx. 100 min (depending on processing conditions), recommended plaster thickness 8 mm, material consumption approx. 5 m<sup>2</sup> / 25 kg sack for 8 mm plaster thickness, approx. storage time of 6 months.

PU = 1 pallet

in paper sack	25 kg	24 sacks	14 0342
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## Assembly cement MZ 1

Quick-hardening cement for attachments, assemblies and repairs. For the dowelling and fastening of consoles, rails, wall hooks, doors, gates, frames, switch boxes and much more. For the sealing of water penetrations in concrete, masonry and pipes. For the improvement of stair steps, screeds, concrete and plaster.

Approx. processing time of 5 - 7 minutes, approx. mixing ratio of 0.15 - 0.2 l water / 1 kg powder, approx. storage time of 12 months.

PU = 1 pallet

in plastic bucket	7 kg	80 buckets	14 0346
	15 kg	44 buckets	14 0348





# WORKSHOP AND BUSINESS EQUIPMENT

## Warranty

A 5 year durability warranty speaks for the professional qualities of the ladders.

## Stability

A wide floor beam provides additional stability and a steady hold, especially when it comes to large ladders.

## Insulation

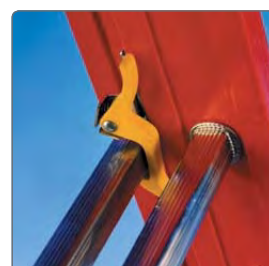
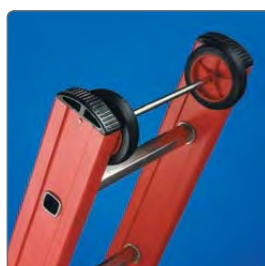
The insulating effect of the plastic ladders up to 100,000 Volt is regularly tested and confirmed by independent testing institutes.



Fibre glass bars in an H shape allow the ladders to be both lightweight and extremely stable. The grooved aluminium rungs are crimped three times making them twist and fracture-proof as a result.

2 wall rollers on the upper end of the ladder protect walls and other surfaces when the ladder is used as a leaning ladder and enable the ladder to be extended to the desired height.

Locks manufactured from stable plastic prevent the unintentional extension of the ladders.



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## Plastic ladders

Ladders with tested and extremely ageing-resistant fibre glass bars with an insulating effect, designed especially for professional users that work in close proximity to cables, connections or other live systems.

Light and handy thanks to the special design of the GRP bars (hollow / C-shape) as well as aluminium rungs / steps, rungs and steps durably crimped twofold with the beams, rung distance 280 mm, capacity 150 kg, anti-slip stability thanks to rubber ladder feet, includes comprehensive operating, assembly and safety instructions.

Ladders comply with European Standard EN 131 and electrical tests according to DIN 53 481, 53 482 and 53 483 performed by independent testing institute C.E.S.I., 5-year durability warranty.

## 3 piece rung step ladder and extension ladder

Insulating ladder up to 100,000 V. Combined three piece rung ladder that can be used as a step ladder as well as an extension ladder (leaning ladder). When being used as a step ladder, the third upper part of the ladder serves only as a safety bridge. Ideal stability thanks to the floor beam, height of the extension ladder can be adjusted from rung to rung by hand, 2 wall rollers on the upper end of the ladder, aluminium locking and opening mechanism, high-strength lashing straps against the unintentional opening of the step ladder, hollow GRP bars in H-shape (90 x 32 mm or 70 x 32 with 8 rungs), aluminium rungs with a width of 27 mm and a length of 425 mm, outer width 480 mm.

Number of rungs	Step ladder height (m)	Extension ladder (max)	Weight kg		
3 x 8	2.30	5.75	27	1	14 6208
3 x 10	2.90	7.45	32	1	14 6210
3 x 12	3.40	8.60	38	1	14 6212
3 x 14	4.00	10.25	43	1	14 6214



## Step ladder

Insulating ladder up to 100,000 V. 80 mm wide grooved aluminium steps on both sides for safe and comfortable standing, especially when undertaking lengthy work, aluminium connecting joints, stable and collapsible bars on both sides preventing the unintentional opening of the step ladder, GRP bars in C-shape (82 x 30 mm), outer ladder width 480 mm.

Number of steps	Height (m)	Weight kg		
2 x 6	1.50	7.5	1	14 6506
2 x 8	2.00	10.5	1	14 6508
2 x 10	2.50	13.5	1	14 6510
2 x 12	3.00	21.6	1	14 6512



## Aluminium folding ladder

according to European Standard EN 131

In aluminium rectangular tube design 50 x 25 mm, with aluminium platform 300 x 260 mm, narrow design measuring only 140 mm (when folded up). Hooks and tool tray for the safe storage of objects.

Two aluminium hinges protect against unintentional opening, two nylon retainers act as an opening restrictor.

The step distance measures 25 cm, complete with anti-slip plastic feet, max. load-bearing capacity 150 kg.

Number of steps	Height (m)	Weight kg		
7	2.19	7.8	1	14 6742
8	2.42	8.6	1	14 6744



## Aluminium ladders

### Height-adjustable aluminium telescopic ladder

Flexible 3-in-1 aluminium rung ladder that can be used as a leaning ladder, an extension ladder as well as a step ladder. Both sides of the ladder can be extended from rung to rung separately from one another, as a result, this ladder can also be used on inclined surfaces as well as on stairs. Light, handy, easy to use and is professionally equipped and finished: maximum load-bearing capacity for 6 to 9 rungs: 150 kg, for 10 and 12 rungs: 120 kg, ideal stability thanks to rubber feet, automatic aluminium joints, completely secure and comfortable locking of the ladder thanks to 4 locking elements complete with spring bolts, snap-in hooks and covers manufactured from break-proof plastic, complete with practical plastic tool holder measuring 310 x 260 mm, continuously grooved, crimped aluminium rungs, rung width of 27 mm, rung distance of 280 mm, according to DIN EN 131.

Number of steps	Height min. (m)	Step ladder height (m)	Height max. (m)	Weight kg		
2 x 6	0.97	1.46	3.00	8.5	1	14 6706
2 x 7	1.25	1.71	3.55	9.6	1	14 6707
2 x 8	1.25	1.96	4.10	11.0	1	14 6708
2 x 10	1.53	2.51	5.22	13.0	1	14 6710
2 x 12	1.81	3.10	6.35	15.0	1	14 6712



### Aluminium telescopic ladder X-TEND

From 0.8 to 3.8 metres in a couple of seconds. X-TEND is a new telescopic ladder complying with European Standard EN 131 for professional use in the fields of trade and industry. By simply pulling out the ladder bars from rung to rung, the height of the ladder can be varied as desired and can be fixed into the desired position by means of the self-locking safety buttons. After use, the ladder independently retracts by pressing the locking buttons. Extremely compact in the transport position (only 80 cm in length), extendable to a maximum of 3.80 metres.

Manufactured from abrasion-resistant anodised aluminium. 13 rungs with a width of 40 mm and an anti-slip profile for comfortable and safe working, rung distance of 30 cm, lower ladder bar diameter of 8 cm, 49 cm wide floor beam complete with anti-slip plastic feet, max. load-bearing capacity of 150 kg, weighs only 11.5 kg.

800 mm 1 14 6720



### Aluminium telescopic ladder X-TEND PLUS

The further development of the X-TEND telescopic ladder sets new standards for the user. Manufactured according to European Standard EN 131. Can be used as a leaning ladder with a height of 2 metres and as a step ladder with a height of 1.70 metres. The two last rungs (0.60 metres) additionally serve as a safety function for leaning or securing. Ideal for use on stairs. Thanks to the telescopic function, the ladder can be stored in the most confined of spaces and increases carrying comfort. 5 rungs with a width of 40 mm and an anti-slip profile for comfortable and safe working, rung distance of 30 cm, max. load-bearing capacity of 150 kg, weight only 19.3 kg.

750 mm 1 14 6722



### Folding working platform

Manufactured from lightweight metal. Can be folded in one movement, stable aluminium rectangular pipe beams, upper standing area (platform) manufactured from grooved aluminium sheet metal, wide platform (300 x 400 mm) and 80 mm wide grooved steps for maximum step safety, anti-slip PVC ladder feet, doubly secured against unintentional folding by snap-in platform and safety struts, load-bearing capacity of 150 kg, step distance of 250 mm, ladder width when folded only 150 mm, complies with European Standard EN 131.

Number of steps	Height (m)	Width (m)	Weight kg		
3	0.69	0.54	4.6	1	14 6800



## Ladder accessories

### Safety equipment for masts

Equipment to protect against the unintentional slipping of leaning ladders on masts (lighting posts and power posts, flag poles, trees and similar objects), universal fastening onto all rung ladders, complete with 2 plastic sliding surfaces and stable safety chain. Max. diameter 280 mm

1 14 6810



## Cable drum

With double tube frame (powder-coated), with patented cable guidance and 3 professional 230 V 16A 3p protective contact sockets with spring hinged covers and thermo switch, drum body manufactured from special material with properties similar to hard-rubber and ventilation slits for improved heat dissipation.

H07RN-F 3G1.5 supply line, IP 44 protection class.

25 m	285 x 370 x 220	1	14 6900
40 m	285 x 370 x 220	1	14 6902

## Cable drum

With double tube frame (powder-coated), with patented cable guidance and 2 power points 230 V 16A 3-pin safety sockets, 1 400 V 16A 5-pin CEE socket with spring hinged covers and thermo switch, drum body manufactured from special material with properties similar to hard-rubber and ventilation slits for improved heat dissipation.

H07RN-F 5G1.5 supply line, protection class IP 44.

25 m	285 x 370 x 220	1	14 6904
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## Hand cleaner

With biodegradable abrasive agent (walnut shell flour), good cleaning power when dealing with med. soiling caused by oils, greases, carbon black, graphite, metal dusts, lubricants for example, good skin tolerance, solvent a. soap-free, scented.

Tube	250 ml	1	15 1626
Soft bottle dispenser	2000 ml	1	15 1624

## Hand cleaner dispenser

For the accommodation of the 2 litre hand cleaner soft bottles, in proven quality and function, simple handling and filling, also suitable for use in shower rooms, shock-proof plastic housing for wall assembly, with drip-proof dosage mechanism.

White	135 x 135 x 320 mm	1	15 1630
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## Moist cleaning wipes

Ideal if areas need to be cleaned with only a small amount of liquid in order to prevent danger from occurring to sensitive technology, for hands, tools and machines, removes greases, lubricant, adhesive, oil, tar, asphalt, ink, carbon, graphite and similar soiling, moist viscous cloths with textile characteristic, immersed in a liquid detergent, quick-drying without residue, particularly skin-friendly, pleasant fresh fragrance, supplied in a handy, re-sealable dispenser bucket with 72 wipes.

250 x 250 mm	1 bucket	14 5018
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## Skin care cream

Fast-absorbing cream for the hands and face, especially for the care of skin stressed by work and the environment, suitable for all skin types, moderately oily, silicone-free, unscented.

Tube	100 ml	1	15 1628
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## Pickaxe

According to DIN 20 109, with oval eye, painted black, with wooden handle.

3 kg	1	13 1424
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## Sand shovel (Frankfurt shape)

According to DIN 20 121, round-pointed shape, oil-hardened, with handle sleeve, with beech handle.

300 x 270 mm	1	13 1428
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## Sand shovel (Holstein shape)

According to DIN 20 120, square shape, oil-hardened, with handle sleeve, with beech handle.

250 x 270 mm	1	13 1430
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## Snow shovel

With an ergonomic plastic push grip and light aluminium handle, 27 mm ø.

The grip enables a comfortable one-handed pushing and lateral tipping of the snow as well as an ideal power distribution to the blade and the edge. Cold insulating aluminium handle with an elastic, soft-plastic profiling.

## Plastic snow shovel

Clearing blade cold impact-resistant to -40 °C and resistant to grit.

Slide stabilisers ensure additional blade stability, runner effect for better sliding. Raised sides prevent snow slipping off the sides. Highly abrasion-resistant plastic edge, therefore low noise and protects the sub-surface. Ideal for natural stone and tiled floors.

Blade size 50 x 37 cm	Length 155 cm	1	13 1432
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## Aluminium snow shovel

Clearing blade manufactured from lightweight strip aluminium, thickness 1.8 mm. Widened rib reinforcement and robust aluminium profile edge provide the blade with more stability and improve the sliding characteristics. High side edge prevents snow slipping off the sides and ensures high-volume snow collection.

Slides smoothly over paving stones and natural stone joints.

Blade size 50 x 35 cm	Length 158 cm	1	13 1434
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## Road salt and lava road grit

Supply to wholesale trade in Germany upon a minimum purchase of four full pallets (=1 pallet per article).

Furthermore, it must be ensured that the supplying 40 t HGV can be unloaded from one side using a forklift truck.

The Euro pallets will be exchanged on a 1:1 basis.

## Road salt

The free-flowing, easy to spread road salt can be distributed by hand or using standard spreading equipment without any problems whatsoever.

PU = 1 pallet

3 kg	300 bags	1	14 0380
10 kg	104 Sacks	1	14 0382
25 kg	40 Sacks	1	14 0384
10 kg	65 buckets	1	14 0386

## Winter lava road grit

Immediate and long-lasting dulling effect to ensure safe walking and driving, can be applied by hand or using spreading equipment without any problems whatsoever.

PU = 1 pallet

10 kg	91 Sacks	1	14 0388
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## Construction bucket

With litre scale, manufactured from premium polyethylene regenerate mixture, recyclable, reinforced bottom, galvanised 5 mm handle.

black	12 Litres	1	13 1435
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## Street broom

For coarse and stuck dirt - including moist dirt - on streets and factory surfaces, particularly durable plastic fibres (Elaston), flat wood with handle hole, supplied without handle.

red	400 mm	1	14 3024
including wooden handle	1.4 m	1	14 3028

## Hall broom

For light and dusty dirt on dry floors, highest quality manufactured from real horsehair, saddle wood with handle hole, supplied without handle.

black	600 mm	1	14 3026
including wooden handle	1.4 m	1	14 3028

## Hand brush

Premium quality and manufactured from real horsehair, complete with black bristles, manufactured from wood

	300 mm	1	14 3030
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## Dustpan

Robust design manufactured from painted metal.

1	14 3032
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## All-purpose waste bag

Approx. content of 120 L, manufactured from recyclable polyethylene regenerate film (PE-LD), problem-free incineration at landfill sites thanks to its groundwater-neutral behaviour and no release of harmful gases or substances, film thickness of 80 µm, particularly stable and tear-proof, water-proof, 25 bags per roll.

blue	700 x 1100 mm	1 roll	14 5001
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## Cover sheets

Clear-transparent, manufactured from recyclable polyethylene regenerate film, dimensions 4 m x 5 m = 20 m²

Manufactured from PE-HD	Film thickness 10 µm	1	14 5004
Manufactured from PE-LD	Film thickness 15 µm	1	14 5006



## Non-slip non-woven cover

Absorbent, non-woven material coated with non-slip PE membrane for the protection of sensitive surfaces and smooth marble, wood (parquet, boards), plastic, laminate, carpet and similar types of floors, prevents the leakage of paints, dilutions, oil, adhesives, plaster, etc., simple to cut and easy to lay, re-usable.

1 m x 25 m	1 roll	14 5007
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## Overshoes

Ideal for all areas of application, for the prevention of dirt and damage caused by fitter's / work shoes, permeable to air and water vapour, anti-static, abrasion-resistant, lint-free, colour: white

flat	1	14 0235
flat with outsole	1	14 0236

Unsterile, can be worn on both feet, rectangular shape, elasticated opening, hammered PE film (anti-slip effect), free from formaldehyde and chlorine, colour: blue

flat	1000	14 0229
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## Bump cap - FIRSTBASE

According to EN 812

Removable ABS plastic shells as bump and head protection minimise the impact of unintended head bumps. Made of microfibre (40° machine washable), head size can be adjusted individually, high wearing comfort, weight: 200 g.

Design with normal visor (length: 70 mm)

Navy blue	1	14 0190
Royal blue	1	14 0192
Black	1	14 0194
Grey	1	14 0196

Design with shortened visor (length: 50 mm)

Navy blue	1	14 0191
Royal blue	1	14 0193
Black	1	14 0195
Grey	1	14 0197



# CRIMPING TOOLS

## IMPROVED INTERCHANGEABLE HEAD SYSTEM VERSION 2.0

With the interchangeable head system, a wide variety of applications can be carried out with only one device and in professional quality.

Hydrauliksystem  
**Genius** 2.0



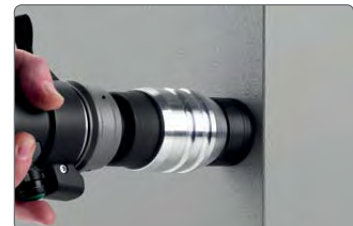
### Three different applications with just one basic tool



- Crimping up to 300 mm<sup>2</sup>  
DIN compression cable lugs



- Cutting up to a  $\varnothing$  of 50 mm  
(corresponds to 4 x 120 mm<sup>2</sup>)



- Punching up to an ISO 63 diameter or  
square punching 92 x 92 mm



Crimping pliers with interchangeable crimping profile inserts, fixed by a catch holder in the tool body, thus offering profile change in seconds without the aid of any other tools. Two further crimping profiles not currently in use are held captive in the two integral magazine holders for the legs of the pliers. Tool body is made of strong, specially tempered, hardened sheet steel, with leverage transfer for reduced use of manual force, adjustable ratchet mechanism with automatic release for standard-compliant crimping pressure, ergonomic 2-component handle sleeves, completely equipped with hardened precision crimping profile inserts. Weight including 3 crimping profile inserts only 690 g.



**click 'n' crimp sets**

click 'n' crimp is available in standard sets, consisting of the crimping pliers body and the three most commonly used crimping profile inserts for a particular application:

**click 'n' crimp ELECTRICAL ENGINEERING**

with crimping profile inserts CIMCO article no. 10 6010 (for insulated cable lugs from 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup>), CIMCO article no. 10 6011 (for non-insulated cable lugs 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup>) and CIMCO article no. 10 6012 (for wire end ferrules from 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup>)

1	10 6000
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**click 'n' crimp AUTOMOTIVE**

with crimping profile inserts CIMCO article no. 10 6010 (for insulated cable lugs from 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup>), CIMCO article no. 10 6011 (for non-insulated cable lugs 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup>) and CIMCO article no. 10 6013 (for blade receptacles and blade terminals with open crimping ears from 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup>)

1	10 6002
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**click 'n' crimp DATA NETWORK TECHNOLOGY**

with crimping profile inserts CIMCO article no. 10 6015 (for BNC/TNC coaxial plug connectors), CIMCO article no. 10 6017 (for unshielded 8-pole modular plugs) and CIMCO article no. 10 6019 (for shielded 8-pole modular plugs, CIMCO design and similar)

1	10 6009
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**click 'n' crimp SOLAR TECHNOLOGY**

with crimping profile inserts CIMCO article no. 10 6010 (for insulated cable lugs from 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup>), CIMCO article no. 10 6027 (for solar plug connectors type MC 3 from 2.5 mm<sup>2</sup> to 6 mm<sup>2</sup>) and CIMCO article no. 10 6028 (for solar plug connectors type MC 4 from 2.5 mm<sup>2</sup> to 6 mm<sup>2</sup>)

1	10 6052
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**click 'n' crimp crimping profile inserts**

click 'n' crimp can be assembled according to the user's individual requirements:

click 'n' crimp crimping pliers bodies without crimping profile inserts

1	10 6005
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click 'n' crimp crimping profile inserts (in pairs, consisting of upper and lower profile jaw) for insulated cable lugs red – blue – yellow from 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup> or AWG 22 to AWG 10, oval crimp (W)

IS	1 pair	10 6010
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for non-insulated cable lugs from 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup> or AWG 22 to AWG 8, indent crimp (N)

Q R	1 pair	10 6011
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for insulated and non-insulated wire end ferrules from 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup> respectively AWG 22 to AWG 8, trapezoid crimp (B)

ZAE AE	1 pair	10 6012
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for insulated and non-insulated wire end ferrules from 16 mm<sup>2</sup> to 35 mm<sup>2</sup> respectively AWG 5 to AWG 2, trapezoid-indent crimping (D2), optimised crimp shape; particularly suitable for thinned-out, finely-stranded conductors according to IEC 228

ZAE AE	1 pair	10 6014
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for insulated and non-insulated wire end ferrules 25 mm<sup>2</sup> and 50 mm<sup>2</sup>, trapezoid-indent crimping (D1), optimised crimp shape; particularly suitable for thinned-out, finely-stranded conductors according to IEC 228

ZAE AE	1 pair	10 6071
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for non-insulated blade terminal connectors and blade receptacles with open crimping ears from 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup> resp. AWG 22 to AWG 10, roll crimp (C)

FL	1 pair	10 6013
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for BNC/TNC coaxial plug connectors RG 58, RG 59, RG 62 AU, RG 174, hexagonal crimping (A)  
(crimping dimensions: 1.73 mm / 0.068" – 4.75 mm / 0.187" – 5.41 mm / 0.213" – 6.48 mm / 0.255")

1 pair	10 6015
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for unshielded 6-pin modular plugs (Western plugs) RJ 11 (6P4C) and RJ 12 (6P6C), SS design, AMP (M4)

1 pair	10 6016
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for unshielded 8-pin modular plugs (Western plugs) RJ 45 (8P8C), SS design, AMP (M5)

1 pair	10 6017
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for shielded 8-pin modular plugs (Western plugs) RJ 45 (8P8C) CAT 5 etc., CIMCO design (M2)

1 pair	10 6019
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for shielded 8-pin modular plugs (Western plugs) RJ 45 (8P8C) CAT 5 etc., HIROSE TM 11/21 design (M1)

1 pair	10 6018
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for solar plug connectors type MC 3 from 2.5 mm<sup>2</sup> to 6 mm<sup>2</sup> (C3)

1 pair	10 6027
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for solar plug connectors type MC 4 from 2.5 mm<sup>2</sup> to 6 mm<sup>2</sup> (C4)

1 pair	10 6028
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### click 'n' crimp Parallel

The unique crimping pliers with a newly developed parallel crimping profile insert to produce industrial standard crimping connections. The parallel guide achieves a permanent symmetrical crimp and thus a reduction in the manual crimping forces as well as a homogenous crimping result.

ELECTRICAL ENGINEERING version with crimping profile inserts CIMCO article no. 10 6070 (for insulated cable lugs from 0.5 mm<sup>2</sup> to 6 mm<sup>2</sup>), CIMCO article no. 10 6011 (for non-insulated cable lugs 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup>) and CIMCO article no. 10 6012 (for wire end ferrules from 0.5 mm<sup>2</sup> to 10 mm<sup>2</sup>).

1	10 6060
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### One-hand system crimping pliers

Compound leverage crimping pliers with ratchet mechanism and pressure point release, with a variety of interchangeable crimping inserts fixed by two fastening screws. The ergonomically shaped crimping pliers are easy and convenient to use. The lever action of the handle triggers the integrated automatic ratchet mechanism. Adjustable automatic release guarantees optimum crimping results. All inserts are made of carbon tool steel and are suitable for use with the PROFI-CRIMP (CIMCO article no. 10 6112) and SUPER-LIGHT (CIMCO article no. 10 6150). The 15 different profiles are suitable for almost all kinds of cable connector crimping.

with oval crimp

Tool body PROFI-CRIMP	1	10 6112
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Crimping profile inserts for:

insulated cable lugs according to DIN: 0.5 to 1 (red), 1.5 to 2.5 (blue), 4 to 6 mm<sup>2</sup> (yellow),

AWG: 18/20 - 14/16 - 10/12, with oval crimp

Crimping pliers complete with insert	220	1	10 6144
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Crimping profile inserts loose asymmetric, standard crimping	IS	1 pair	10 2008
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Crimping pliers complete with insert		1	10 1916
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Crimping profile inserts loose symmetric, oval crimp	IS	1 pair	10 2004
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non-insulated cable lugs according to DIN: 1.5 to 10 mm<sup>2</sup>, AWG: 20 to 8

Crimping pliers complete with insert	220	1	10 6134
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Crimping profile inserts loose, indent crimp	Q R	1 pair	10 2003
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non-insulated plug connectors with open crimping ears according to DIN: 0.5 to 1, 1.5 to 2.5, 4 to 6 mm<sup>2</sup>,

AWG: 18/20 - 14/16 - 10/12

Crimping pliers complete with insert	220	1	10 6136
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Crimping profile inserts, loose, roll crimp	FL	1 pair	10 2002
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insulated and non-insulated wire end ferrules according to DIN: 0.5 - 0.75 - 1.5 - 2.5 - 4 - 6 - 10 - 16 mm<sup>2</sup>,

AWG: 22 - 20 - 16 - 14 - 12 - 10 - 8 - 6

Crimping pliers complete with insert	220	1	10 6120
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Crimping profile inserts, loose, trapezoid crimp	ZAE AE	1 pair	10 2001
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insulated and non-insulated wire end ferrules according to DIN: 16 - 25 - 35 mm<sup>2</sup>  
 optimised crimp shape; particularly suitable for thinned-out, finely-stranded conductors according to IEC 228

Crimping pliers complete with insert	220		1	10 6140
Crimping profile inserts, loose, trapezoid crimp		ZAE AE	1 pair	10 2006

insulated and non-insulated wire end ferrules according to DIN: 25 and 50 mm<sup>2</sup>  
 optimised crimp shape; particularly suitable for thinned-out, finely-stranded conductors according to IEC 228

Crimping pliers complete with insert	220		1	10 6142
Crimping profile inserts loose, trapezoid crimp		ZAE AE	1 pair	10 2007

shielded modular plug, 8-pin, RJ 45 CAT.5 (8P8C), CIMCO design (F236Q)

Crimping pliers complete with insert	220		1	10 6201
Crimping profile inserts, loose			1 pair	10 6217

shielded modular plug, 8-pin, RJ 45 CAT.5 (8P8C), HIROSE design (2Q1)

Crimping pliers complete with insert	220		1	10 6202
Crimping profile inserts, loose			1 pair	10 6215

shielded modular plug, 8-pin, RJ 45 CAT.5/6 (8P8C), Stewart Stamping design (2S)

Crimping pliers complete with insert	220		1	10 6203
Crimping profile inserts, loose			1 pair	10 6216

BNC/TNC coaxial plug connectors RG 55, RG 58, RG 59, RG 62, RG 174, RG 8279, FO (3A4)

Crimping pliers complete with insert	220		1	10 6138
Crimping profile inserts, loose, hexagonal crimping			1 pair	10 6218

FO connector with round crimping, e.g. for SC-/AMP-SMA-/FC-/PC connectors (F1)

Crimping pliers complete with insert	220		1	10 6156
Crimping profile inserts, loose, round crimp			1 pair	10 6213

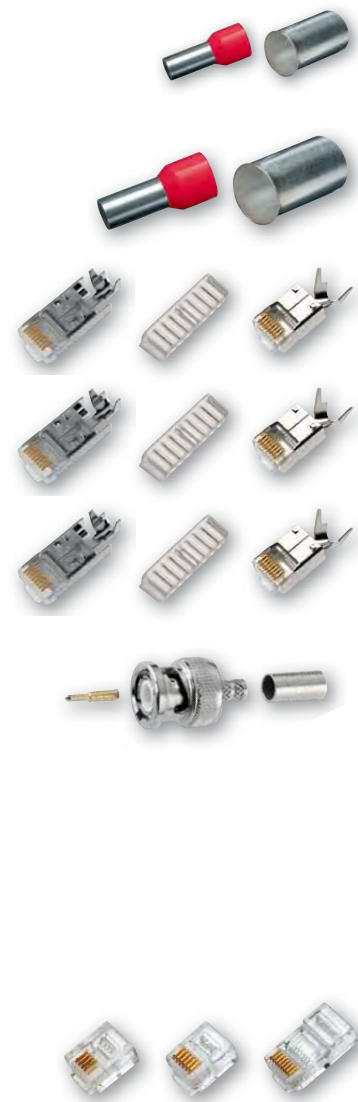
FO connectors with hexagonal crimping, e.g. for 3M-ST, AT&T-ST, AMP-SMA connectors (3F2)

Crimping pliers complete with insert	220		1	10 6158
Crimping profile inserts, loose, hexagonal crimping			1 pair	10 6214

loose crimping profile inserts for unshielded modular plugs (Western plugs) (28P)

6-pin, RJ 11 (6P4C), RJ 12 (6P6C)			1 pair	10 6211
8-pin, RJ 45 (8P8C)			1 pair	10 6212

Please note our crimping plier sets on pages 219 + 222.



**NEW**

### Automatic crimping pliers for turned industrial plug-in contacts

Automatic crimping pliers for turned industrial plug-in contacts (e.g. Harting, ILME, Phoenix, Amphenol, Walther, HTS, Contact, Weidmüller)

2.5 mm <sup>2</sup>			1	10 6122
0.35 - 1.5 mm <sup>2</sup>			1	10 6124
0.14 - 0.5 mm <sup>2</sup>			1	10 6126



### Insertion tool for LSA-Plus terminals

Solder, screw and stripping-free connection and automatic trimming of conductors with 0.5 to 0.8 mm ø (AWG 24 to 20) to insulation displacement terminals in connection boxes and patch panels, professional design with pressure sensor for optimum insertion force, 2 pull-out hooks

ECONOMY model

			1	11 8017
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KRONE model, pressure sensor and trimming function can be switched off

			1	11 8018
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### Crimping pliers for BNC/TNC coaxial plug connectors

Ratchet mechanism with compound leverage, with adjustable locking (pressure point release), for data plug connectors for RG 58/RG 59/RG 62/RG 174,

crimp sizes: 1.72 mm (0.068") - 4.75 mm (0.187") - 5.41 mm (0.213") - 6.48 mm (0.255")

	220		1	10 6138
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### ECONOMY crimping pliers for Western plugs

for unshielded modular plugs, with cutting and stripping tools, interchangeable knives

for Western plugs 4-pin RJ 10 (4P4C) and RJ 14 (4P2C)	1	10 6116
for Western plugs 6-pin RJ 11 (6P4C) and RJ 12 (6P6C)	1	10 6117
for Western plugs 8-pin RJ 45 (8P8C)	1	10 6118



### Crimping pliers for unshielded modular plugs (Western plugs)

#### 4-, 6- and 8-pin

Ratchet mechanism with adjustable locking, cutting and stripping tools, 2-component handles, for RJ 10 (4P2C and 4P4C), RJ 11 (6P4C), RJ 12 (6P6C), RJ 45 (8P8C)

	1	10 6200
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### Crimping pliers for shielded modular plugs, 8-pin

Ratchet mechanism with adjustable locking, conductors and shielding crimped in a single operation, for RJ 45 CAT.5 (8P8C)

for HIROSE design connectors	220	1	10 6202
for CIMCO design connectors	220	1	10 6201
for STEWART STAMPING design connectors	220	1	10 6203



### Crimping pliers for FO (fibre-optic) connectors

with automatic ratchet mechanism and adjustable locking

Round crimp, crimp sizes: 1.07 mm (0.042") - 1.72 mm (0.068") - 3.38 mm (0.133") - 4.11 mm (0.162") - 4.95 mm (0.195"), e.g. for SC-/AMP-SMA-/FC-/PC connectors

	1	10 6156
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Hexagonal crimping, crimp sizes: 1.07 mm (0.042") - 1.72 mm (0.068") - 3.84 mm (0.151") - 4.52 mm (0.178") - 5.41 mm (0.213"), e.g. for 3M-ST/AT&T ST/SMA connectors

	1	10 6158
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### Crimping pliers set DATA TECHNOLOGY/TELECOMMUNICATIONS

Crimping pliers with 7 interchangeable crimping profile inserts for almost all copper- and fibre glass-based cables, neatly arranged in a handy, impact-resistant plastic case. Contents:

Crimping tool body with automatic ratchet mechanism and adjustable locking device

One crimping profile insert each for:

- unshielded modular plug (Western plug) 8-pin RJ 45 (8P8C), (CIMCO article no. 10 6212)
- shielded modular plug 8-pin RJ 45 CAT.5/6 (8P8C), HIROSE design (CIMCO article no. 10 6215)
- shielded modular plug 8-pin RJ 45 CAT.5 (8P8C), STEWART STAMPING design (CIMCO article no. 10 6216)
- unshielded modular plug (Western plug) 6-pin RJ 11 (6P4C), RJ 12 (6P6C) (CIMCO article no. 10 6211)
- BNC/TNC coaxial plug connectors RG 55, RG 58, RG 59, RG 62, RG 174, RG 8279, FO (CIMCO article no. 10 6218)
- FO connector with round crimping, e.g. for SC-/AMP-SMA-/FC-/PC connectors (CIMCO article no. 10 6213)
- FO connectors with hexagonal crimping, e.g. for 3M-ST-/AT&T-ST-/Amphenol-SMA connectors (CIMCO article no. 10 6214)
- Screwdriver with 1000 V protective insulation for Phillips crosshead screws, size PH 1 (CIMCO article no. 11 7731)

	1	10 6210
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### Tool set F-compression connectors

for creating watertight and therefore weatherproof coax connections, in particular for cable and satellite TV equipment.

For connections with high mechanical stress and excellent shielding.

Set consisting of:

- Professional crimping tool for compression connectors (CIMCO article no. 10 6152)
  - Specially for RG 59 and RG 6 coaxial cables. Thanks to the easily adjustable length stop, suitable for crimping compression connectors of various lengths and types (F, BNC and RCA connectors). Also suitable for angle connectors and keystones. Very little manual effort required for crimping. With ergonomic two-component handle sleeves, length 195 mm
- Coaxial cable stripping tool (CIMCO article no. 12 0098)
  - For quick and precise sheath stripping and insulation stripping of coaxial cables (RG 58, RG 59, RG 62, RG 6, RG 9 and others) in a single operation. With three interchangeable knives; depth of cut and distance between cuts are adjustable.
- 20 pieces F-compression connectors (CIMCO article no. 18 2980)
  - Double protected against moisture penetration through external sleeve and internal O-ring, outstanding shielding and mechanical strength of the cable connection. Gold-plated, for RG 6 coaxial cables

Tool set F-compression connectors	1	10 6154
Crimping tool for compression connectors	1	10 6152
Coaxial cable stripping tool	1	12 0098
F-compression connectors (price unit 100 pcs.)	10	18 2980



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## Hand crimping pliers for insulated and non-insulated wire end ferrules and twin wire end ferrules

Trapezoid crimp	0.25 - 2.5	150	AE	1	10 1911
Indent crimp	0.5 - 2.5	150	AE	1	10 1906
Indent crimp	1.5 - 6	150	AE	1	10 1907
Indent crimp	0.5 - 16	230	AE	1	10 1904
Indent crimp	10.0 - 35	230	AE	1	10 1905



## Crimping pliers for wire end ferrules, compound leverage, with ratchet mechanism and adjustable locking (pressure point release) Crimping pliers

Trapezoid crimp	0.5 - 16	226	ZAE AE	1	10 6120
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## Front crimping pliers FLEXI-CRIMP

With web or lamella die that self-adjusts to the conductor cross-section, square crimping with 16 mm crimp length, rounded inner edges so as not to cut into thin-walled wire end ferrules, front crimping, i.e. the connectors and conductors are inserted into the tool from the front, making it suitable for work in hard to access places and confined spaces, with new-style precision steel spring component for constant crimping quality even at extremely high or low temperatures, adjustable via cam, unlockable forced locking, ergonomically shaped two-component handles with soft padding.

Square crimp	0.14 - 6	210	ZAE AE	1	10 1940
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## Front crimping pliers FLEXI-CRIMP PRO

Crimping pliers for wire end ferrules up to 16 mm<sup>2</sup> with reliable technology as with Flexi Crimp, CIMCO article no. 10 1940, Crimping ranges set with selector switch 0.5 to 6 mm<sup>2</sup> and 6 to 16 mm<sup>2</sup>. Also for twin wire end ferrules from 2 x 0.5 to 2 x 6 mm<sup>2</sup>. Suitable for all conductor types, even thinned-out, finely-stranded conductors according to IEC 228!

Square crimp	0.5 - 16	220	ZAE AE	1	10 1945
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## Crimping pliers

with automatic adjustment to conductor cross-section

Square crimp	0.08 - 10	180	ZAE AE	1	10 1925
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## Crimping pliers

Trapezoid crimp	6 - 16	210	ZAE AE	1	10 1946
optimised crimp shape, especially suitable for thinned-out, finely stranded conductors according to IEC 228					
Trapezoid crimp	16 - 35	226		1	10 6140
optimised crimp shape, especially suitable for thinned-out, finely stranded conductors according to IEC 228					
Trapezoid crimp	25 and 50	226	ZAE AE	1	10 6142



## »»JOKARI<sup>original</sup> Wire stripper - QUADRO – the 4-function pliers

for efficient and precise processing of insulated wire end ferrules in strip form from 0.5 - 2.5 mm<sup>2</sup>

Functions

1. Cutting of wires and strands up to 2.5 mm<sup>2</sup>
2. Insulation stripping, working range 0.5 - 2.5 mm<sup>2</sup>
3. Twisting; no fanning out of the wires means safe insertion of the conductor into the wire end ferrule
4. Crimping, flawless crimping from 0.5 - 2.5 mm<sup>2</sup> through professional trapezoid crimp

QUADRO case complete			AE	1	10 0728
QUADRO with cabinet	180			1	10 0725

For sleeve strips, see page 257 in chapter 22.



## Multi-function tool DUO CRIMP

for cutting off and stripping insulation from conductors and stranded wires, as well as for crimping non-insulated and insulated wire end ferrules.

Working range of side cutter: flexible up to 6 mm<sup>2</sup>  
solid up to 4 mm<sup>2</sup>

Working range of wire stripper: up to 6 mm<sup>2</sup>  
crimping ranges: 0.5 to 2.5 mm<sup>2</sup>  
4 to 6 mm<sup>2</sup>

	160		AE	1	10 0720
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## Crimping tools **Diamant**

Automatic crimping tools:

for wire end ferrules, side insertion of ferrule

Square crimping	0.08 - 10	ZAE	AE	10 4194
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for wire end ferrules, side insertion of ferrule

Square crimping	2.5 - 16	ZAE	AE	10 4196
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for wire end ferrules, front insertion of ferrule

Trapezoidal crimping	0.14 - 6	ZAE	AE	10 4190
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for wire end ferrules, front insertion of ferrule

Trapezoidal crimping	6 - 16	ZAE	AE	10 4192
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Crimping tools:

for wire end ferrules

Trapezoidal crimping	10.0 - 50	ZAE	AE	10 4200
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for wire end ferrules

Trapezoidal crimping	50.0 - 95	ZAE	AE	10 4202
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## ECONOMY crimping pliers

for insulated and non-insulated cable lugs, with wire and screw cutters up to M 5, as well as insulation stripping device 0.5 - 6 mm<sup>2</sup>, crimping of stranded wires and cable insulation in 2 operations

Crimp shape	Insulation stripping range mm <sup>2</sup>				
Oval crimp	0.5 - 6	220	IS	1	10 1892

## Crimping pliers for insulated cable lugs, compound leverage, with ratchet mechanism and adjustable locking (pressure point release), double crimping

### Crimping pliers

Oval crimp, asymmetric, standard	0.5 - 6	220	IS	1	10 6144
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Oval crimp, symmetric	0.5 - 6	220	IS	1	10 1916
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Oval crimp	10.0 - 16	215	IS	1	10 1918
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## Crimping pliers **Diamant**

for insulated cable connectors

Oval crimp	0.5 - 6	IS	1	10 4206
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for insulated cable connectors

Oval crimp	6.0 - 16	IS	1	10 4210
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## Crimping pliers for blade terminal connections

Crimping pliers for non-insulated blade terminal connectors according to DIN 46244 etc., 2.8 - 4.8 - 6.3 mm tab width

### Crimping pliers

compound leverage, with ratchet mechanism and adjustable locking (pressure point release), crimping of stranded wires and cable insulation in 1 operation

Roll crimp	0.5 - 6	220	FL	1	10 6136
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for non-insulated blade terminal connectors, Diamant-Crimping plier

Roll crimp	0.25 - 6	FL	1	10 4208
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## Crimping pliers for non-insulated cable lugs (crimping cable lugs / terminal pins)

### Crimping pliers

compound leverage, with ratchet mechanism and locking (pressure point release)

Indent crimp	1.5 - 10	220	Q	1	10 6134
Indent crimp	0.5 - 16	325	Q	1	10 1909
Indent crimp	10 - 35	325	Q	1	10 6146

for non-insulated cable connectors, Diamant-Crimping plier

Notch crimping	0.1 - 16		R Q	1	10 4204
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## STANDARD crimping pliers set

Crimping pliers with 4 interchangeable crimping profile inserts for the most commonly used standard cable connectors, conveniently arranged in an impact-resistant plastic case

Contents:

Crimping tool body with automatic ratchet mechanism and adjustable locking device

One crimping profile insert each for:

insulated and non-insulated wire end ferrules from 0.5 to 16 mm<sup>2</sup>, trapezoid crimp, (CIMCO article no. 10 2001) **AE**

insulated cable lugs from 0.5 to 6 mm<sup>2</sup> (red - blue - yellow) **IS**, symmetric oval crimp, (CIMCO article no. 10 2004)

non-insulated cable lugs from 1.5 to 10 mm<sup>2</sup>, indent crimp, (CIMCO article no. 10 2003) **Q**

non-insulated plug connectors with open crimping ears from 0.5 to 6 mm<sup>2</sup>, roll crimp, (CIMCO article no. 10 2002) **FL**

Knurled screws for easy fastening of the inserts by hand, 2-component screwdriver with

1000 volt protective insulated blade for cross-head screws

PHILLIPS size PH 1 (CIMCO article no. 11 7731)

				1	10 2000
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## Crimping pliers for tubular cable lugs and connectors, "standard design"

### Crimping pliers

compound leverage, with locking device (pressure point release)

Indent crimp	0.75 - 16	325	R Q	1	10 1902
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### Crimping pliers

with integral, rotatable profile discs, compound leverage

Notch crimping	6 - 50	600	R F	1	10 1870
Notch crimping	50 - 120	970	R F	1	10 1872
Notch crimping	120 - 240	975	R F	1	10 1874
Hexagonal crimping	6 - 50	390	R	1	10 1882
Hexagonal crimping	10 - 120	650	R	1	10 1880
Hexagonal crimping	16 - 95	530	R	1	10 1884
Hexagonal crimping	25 - 150	650	R	1	10 1885



## Crimping pliers for compression cable lugs and connectors according to DIN 46235/46267

### Crimping pliers

with integral, rotatable profile discs, compound leverage

Hexagonal crimping	6 - 50	390	D	1	10 1883
Hexagonal crimping	16 - 95	650	D	1	10 1886
Hexagonal crimping	25 - 150	650	D	1	10 1888



## Mechanical hand press up to 60 kN (185 mm<sup>2</sup>)

suitable for crimping connection material up to a maximum conductor cross section of 185 mm<sup>2</sup>.

Features:

- for interchangeable inserts DIN 48083, Sheet 1
- lightweight, compact design
- variably adjustable telescopic handles (total length 580 - 830 mm)
- C-shaped head, can be rotated through 360°
- without crimping inserts
- crimping force: 60 kN
- max. travel: 20 mm

**additional inserts can be supplied / scope of application**

	cross section range:
Tubular cable lugs and connectors "standard design"	6 - 185
compression cable lugs and compression connectors DIN 46235 / DIN 46267, part 1	6 - 185
aluminium cable lugs and connectors	10 - 185
rounding inserts for Al and Cu sector-shaped conductors	10sm - 240se / 185sm
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10 - 70
wire end ferrules	10 - 95
twin wire end ferrules	2 x 4 - 2 x 16
cutting insert	18 mm ø

For crimping inserts see catalogue pages 228 ff.

Other inserts can be supplied on request

1 10 1867



## Mechanical hand press up to 60 kN (300 mm<sup>2</sup>)

suitable for crimping connection material up to a maximum conductor cross-section of 300 mm<sup>2</sup>.

Features:

- lightweight, compact design
- variably adjustable telescopic handles (total length 560 - 860 mm)
- foldable crimping head can be rotated through 360°
- without crimping inserts
- crimping force: 60 kN
- max. travel: 19 mm

**additional inserts can be supplied / scope of application**

	cross section range:
Tubular cable lugs and connectors "standard design"	6 - 300
compression cable lugs and compression connectors DIN 46235 / DIN 46267, part 1	6 - 300
aluminium cable lugs and connectors	10 - 240
rounding inserts for Al and Cu sector-shaped conductors	10sm - 300se / 240sm
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10 - 70
wire end ferrules	10 - 240
twin wire end ferrules	2 x 4 - 2 x 16

For crimping inserts see catalogue page 230 ff.

Other inserts can be supplied on request

1 10 1868



## Hydraulic System GENiUS 2.0

One basic tool, revolutionary possibilities – now in improved design with modified return valve!

With the interchangeable head system, a wide variety of applications can be carried out with only one device and in professional quality.

The basic tool is one of the smallest and lightest 60 kN battery-operated hydraulic units of its kind on the global market.

For the first time, it is possible to carry out the following applications with a single device:

- Crimping up to 300 mm<sup>2</sup> DIN compression cable lugs
- Cutting up to a  $\varnothing$  of 50 mm (corresponds to 4 x 120 mm<sup>2</sup>)
- Hole punching up to a size of  $\varnothing$  ISO 63 or square punching 92 x 92 mm

## Battery-operated hydraulic basic tool for holding interchangeable heads for crimping, cutting and punching

Electronic control and monitoring of the crimping, cutting and punching process.

Bar shape design - one-button operating concept for easy use.

- On/Off switch with automatic switch-off (no stand-by power consumption)
- Selectable light for illuminating the working area
- Evaluation function via visual interface, also for maintenance / charge status of the batteries
- Universal electronics with
  - Cycle counter
  - Real-time clock
  - Storage of all work processes with date
  - Readable current wave form
  - Storage of all processing parameters
- Automatic warranty start only after completion of the first 20 operations
- Guaranteed crimping force: 61 - 63.5 kN
- Ergonomically shaped housing with soft touch
- Automatic return for cutting and crimping
- Manual return if required and in emergency
- Motor brake, no dangerous piston overtravel
- Closure time for 240 mm<sup>2</sup> crimping: 4 seconds
- Cycle time 6-7 seconds
- At least 100 operations per battery charge
- Software for evaluation available as an option (please request)
- Service - cycle: 30,000 operations
- Heads can be rotated as desired without limit stop
- Optional attachment of a shoulder carrying strap possible



## Interchangeable heads GENiUS 2.0

### Crimping head

up to 300 mm<sup>2</sup>

Crimping inserts suitable for e.g. CIMCO article no. 10 5701

Weight 1600 g	385	1	10 6301
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### Cutting head

up to  $\varnothing$  50 mm max. (e.g. 4 x 120 mm<sup>2</sup> NYN)

Weight 2900 g	460	1	10 6306
Replacement blade for Cu and Al cables		1	10 6311
Replacement blade for Cu conductors with Fe		1	10 6312
Replacement blade for ACSR cables		1	10 6313

### Hole punching head

up to a  $\varnothing$  size of ISO 63 or square punching 92 x 92 mm

Tension bolts and receptacle thread correspond to the CIMCO screw puncher range

Weight 1600 g	370	1	10 6308
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### Battery-operated hydraulic crimping tool GENiUS 2.0

consisting of:  
battery-operated basic tool, carrying case, battery charger and two batteries  
Crimping head up to 300 mm<sup>2</sup>

1	10 6321
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### Battery-operated hydraulic cutting tool GENiUS 2.0

consisting of:  
battery-operated basic tool, carrying case, battery charger and two batteries  
Cutting head up to ø 50 mm

1	10 6324
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### Battery-operated hydraulic punching tool GENiUS 2.0

consisting of:  
battery-operated basic tool, carrying case, battery charger and two batteries  
Hole punching head

1	10 6326
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### Battery-operated hydraulic crimping and cutting tool GENiUS 2.0

consisting of:  
battery-operated basic tool, carrying case, battery charger and two batteries  
Crimping head up to 300 mm<sup>2</sup>  
Cutting head up to ø 50 mm

1	10 6330
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### Battery charger GENiUS 2.0

1	10 4312
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### Replacement rechargeable battery GENiUS 2.0

Rechargeable battery technology: 18 V Li-Ion, 2.0 Ah	1	10 4314
Rechargeable battery technology: 18 V Li-Ion, 3.0 Ah	1	10 4313

### Reading unit for documentation

1	10 4315
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### Mains adapter 230 Volt

1	10 4311
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### Hydraulic battery-operated crimping tool up to 60 kN (300 mm<sup>2</sup>)

Same technical features as the hydraulic system Genius 2.0, but here with a permanently mounted crimping head, suitable for crimping of connection material up to a maximum conductor cross-section of 300 mm<sup>2</sup>.

Features:

- foldable crimping head can be rotated through 270°
- without crimping inserts
- max. travel: 17 mm
- Crimping force: 60 kN
- weight with case 8,200 g, weight without case 3,550 g
- operating pressure: 700 bar (70MPa)
- scope of supply: basic tool in case with storage option for crimping inserts, battery charger, 2 batteries

additional inserts can be supplied / scope of application	cross section range:
tubular cable lugs and connectors "standard design"	6 – 300
compression cable lugs and compression connectors DIN 46235 / DIN 46267, part 1	6 – 300
aluminium cable lugs and connectors	10 – 240
rounding inserts for Al and Cu sector-shaped conductors	10sm - 300se/240sm
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10 – 70
wire end ferrules	10 – 240
twin wire end ferrules	2 x 4 - 2 x 16

For crimping inserts see catalogue page 230.

Other inserts can be supplied on request

1	10 5705
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## Battery-operated hydraulic crimping tools for interchangeable inserts

General product features of CIMCO battery-operated hydraulic tools:

- Quick advance thanks to double piston hydraulics (advantage: reduced pressing time due to rapid bridging of no-load travel)
- Automatic pressure limit (advantage: no danger of overpressing)
- Quick stop (advantage: no running-on of the hydraulics - which means no accidental damage)
- Motor switch-off and automatic return after completed crimping (advantage: clear indication of end of crimping process)
- Electronic control and monitoring of the pressing process (advantage: errors minimised by monitoring)
- Manual return
- Multi-function electronics with sleep mode for maintenance display and battery monitoring (advantage: longer working life for all components)
- Mini-USB interface allows connection to all common PC systems for service and monitoring
- The latest in battery technology! Lithium-ion technology without self-discharge and with reduced weight!
- Service and monitoring software for all current PC systems

### Hydraulic battery-operated crimping tool up to 60 kN (185 mm<sup>2</sup>)

suitable for crimping conductor material up to a maximum cross-section of 185 mm<sup>2</sup>.

Features:

- for interchangeable inserts DIN 48083, Sheet 1
- foldable crimping head can be rotated through 270°
- without crimping inserts
- max. travel: 17 mm
- crimping force: 60 kN
- operating pressure: 700 bar (70MPa)
- scope of supply: basic tool in case with storage option for crimping inserts, battery charger, 2 rechargeable batteries, analysis software, mini USB cable
- Weight with case 10,150 g, weight without case 4,900 g

**additional inserts can be supplied / range of application**

tubular cable lugs and connectors "standard design"	<b>cross section range:</b> 6 – 185
compression cable lugs and compression connectors DIN 46235 / DIN 46267, part 1	6 – 185
aluminium cable lugs and connectors	10 – 185
rounding inserts for Al and Cu sector-shaped conductors	10sm - 240se / 185sm
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10 – 70
wire end ferrules	10 – 95
twin wire end ferrules	2 x 4 - 2 x 16
cutting insert	18 mm ø

For crimping inserts see catalogue page 228 + 229.

Other inserts can be supplied on request

1    10 5698



### Hydraulic battery-operated crimping tool up to 60 kN (300 mm<sup>2</sup>)

suitable for crimping connection material up to a maximum conductor cross-section of 300 mm<sup>2</sup>.

Features:

- foldable crimping head can be rotated through 270°
- without crimping inserts
- max. travel: 17 mm
- crimping force: 60 kN
- Weight with case 10,350 g, weight without case 5,100 g
- operating pressure: 700 bar (70MPa)
- scope of supply: basic tool in case with storage option for crimping inserts, battery charger, 2 rechargeable batteries, analysis software, mini USB cable

**additional inserts can be supplied / range of application**

tubular cable lugs and connectors "standard design"	<b>cross section range:</b> 6 – 300
compression cable lugs and compression connectors DIN 46235 / DIN 46267, part 1	6 – 300
aluminium cable lugs and connectors	10 – 240
rounding inserts for Al and Cu sector-shaped conductors	10sm - 300se/240sm
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10 – 70
wire end ferrules	10 – 240
twin wire end ferrules	2 x 4 - 2 x 16

For crimping inserts see catalogue page 230 + 231.

Other inserts can be supplied on request

1    10 5701



### Hydraulic battery-operated crimping tool up to 130 kN (400 mm<sup>2</sup>)

suitable for crimping of connection material up to a maximum conductor cross-section of 400 mm<sup>2</sup>.

Features:

- C-shaped crimping head for easy insertion of the crimping inserts
- can be rotated through 270°
- without crimping inserts
- Weight with case 14,950 g
- weight without case 7,750 g
- head opening: 29 mm
- crimping force: 130 kN
- operating pressure: 700 bar (70MPa)
- scope of supply: basic tool in case with storage option for crimping inserts, battery charger, 2 rechargeable batteries, analysis software, mini USB cable

**additional inserts can be supplied / range of application**

tubular cable lugs and connectors "standard design"	<b>cross section range:</b> 10 – 400
compression cable lugs and compression connectors DIN 46235 / DIN 46267, part 1	10 – 300
aluminium cable lugs and connectors	16 – 300
rounding inserts for Al and Cu sector-shaped conductors	10sm - 300sm
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	16 – 150
wire end ferrules	16 – 240

For crimping inserts see catalogue page 232 + 233.

Other inserts can be supplied on request

1    10 5702



## Hydraulic battery-operated crimping tool up to 130 kN (400 mm<sup>2</sup>)

suitable for crimping of connection material up to a maximum conductor cross-section of 400 mm<sup>2</sup>.

Features:

- H-shaped crimping head, can be rotated through 270°
- deep groove crimping possible
- without crimping inserts
- head opening: 35 mm
- Crimping force: 130 kN
- operating pressure: 700 bar (70MPa)
- scope of supply: basic tool in case with storage option for crimping inserts, battery charger, 2 rechargeable batteries, analysis software, mini USB cable

**additional inserts can be supplied / scope of application**

tubular cable lugs and connectors "standard design"	cross section range:
compression cable lugs and compression connectors DIN 46235 / DIN 46267, part 1	10 – 400
aluminium cable lugs and connectors	10 – 300
rounding inserts for Al and Cu sector-shaped conductors	16 – 300
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10sm – 300sm
wire end ferrules	16 – 150
	16 – 240

Weight with case 14,550 g, weight without case 6,100 g, for crimping inserts see catalogue page 232 +233.

Other inserts can be supplied on request



1    10 5704

## Accessories for battery-operated hydraulic crimping and cutting tools

14.4 V lithium-ion rechargeable battery for all battery-operated hydraulic crimping and cutting tools by CIMCO

1    10 5550

## Battery charger

Universal charger for all CIMCO rechargeable batteries, 230 V

1    10 5554

## Analysis software

CD-ROM with the current analysis software for all battery-operated hydraulic crimping and cutting tools by CIMCO

1    10 5555

## Compact electro-hydraulic drive unit

Hydraulic battery/mains unit, suitable for operating all industry standard hydraulic crimping and cutting tools.

Compact design, smaller size and lower weight enable universal deployment and mobility. The drive unit's distinguishing feature is very high performance that ensures enormous productivity.

Features:

- lightweight, compact and robust design
- with remote control (1.5 m)
- ergonomic design
- integrated scratch-proof display
- rapid tool return due to high return delivery volume
- pressure monitoring via electronic pressure sensor
- Li-Ion rechargeable battery
- charging status display on the battery
- double piston technology for rapid feed and high pressure:
  - delivery volume in the low pressure range < 100 bar: 1.15 l/min
  - delivery volume in the high pressure range up to 700 bar: 0.1 l/min
  - operating pressure: 700 bar (70MPa)
  - output: 200 W
  - battery voltage: 18.0 V DC
  - battery capacity: 3.0 Ah
  - operating temperature: -20 °C to +55 °C

**Weight 4.6 kg (with battery)**    **290 x 190 x 205 mm**    1    10 5650



## Accessories

Hydraulic crimping head, round, up to 300 mm<sup>2</sup>, crimping force 60 kN

1    10 5652

Hydraulic crimping head up to 400 mm<sup>2</sup>, crimping force 130 kN

1    10 5655

Hydraulic cutting head up to max. ø 50 mm, for CU/ALU cables, closed form

1    10 5654

Hydraulic cutting head up to max. ø 95 mm, for CU/ALU cables, closed form

1    10 5656

Hydraulic cutting head up to max. ø 120 mm, for CU/ALU cables, closed form

1    10 5657

Safety foot switch

1    10 5651

Hydraulic high-pressure hose 5 m

1    10 5658

Hydraulic high-pressure hose 10 m

1    10 5659

Hydraulic plug adapter, for connecting hydraulic components of other manufacturers

1    10 5653



## Hydraulic cylinder

for all electric-, foot- and hand operated hydraulic pumps with quick coupling connection and a maximum output pressure of 700 bar. Compact design, for punching round, square and rectangular openings as well as special shapes in stainless steel and steel sheets ST 37 (switch cabinet and plant construction).

- Hydraulic cylinder with quick coupling (up to 115 kN)
- Weight 0.68 kg
- Supplied in plastic case
- High tensile strength aluminium body
- Suitable for tension bolts with UNF thread  $\varnothing$  19.0 mm
- operating pressure 700 bar
- Drip-free coupling and uncoupling
- Convenient operability
- With dust protection cap

1 13 4023



## Crimping inserts for the tools: 10 1867 and 10 5698

for tubular cable lugs and connectors "standard design"

hexagonal crimping, crimp width 5 mm  
mm<sup>2</sup>

6	R	1 pair	10 5300
10	R	1 pair	10 5302
16	R	1 pair	10 5304
25	R	1 pair	10 5306
35	R	1 pair	10 5308
50	R	1 pair	10 5310
70	R	1 pair	10 5312
95	R	1 pair	10 5314
120	R	1 pair	10 5316
150	R	1 pair	10 5318
185	R	1 pair	10 5320



for compression cable lugs and compression connectors DIN 46235/46267

hexagonal crimping, crimp width 5 mm  
mm<sup>2</sup> Index according to DIN

6	5	D	1 pair	10 5330
10	6	D	1 pair	10 5332
16	8	D	1 pair	10 5334
25	10	D	1 pair	10 5336
35	12	D	1 pair	10 5338
50	14	D	1 pair	10 5340
70	16	D	1 pair	10 5342
95	18	D	1 pair	10 5344
120	20	D	1 pair	10 5346
150	22	D	1 pair	10 5348
185	25	D	1 pair	10 5350



for aluminium cable lugs and connectors DIN 46239

and similar hexagonal crimping, crimp width 7mm  
mm<sup>2</sup> Index according to DIN

10	10	AL	1 pair	10 5360
16-25	12	AL	1 pair	10 5362
35	14	AL	1 pair	10 5364
50	16	AL	1 pair	10 5366
70	18	AL	1 pair	10 5368
95-120	22	AL	1 pair	10 5370
150	25	AL	1 pair	10 5372
185	28	AL	1 pair	10 5374



### Crimping inserts for the tools: 10 1867 and 10 5698

for rounding of single-stranded (se) and multi-stranded (sm) Al and Cu sector-shaped conductors, for 3 and 4 sector-shaped conductors (120° and 90°)

Rounding width 19.5 mm

mm <sup>2</sup>	Index according to DIN			
sm	se			
10	-	RU	1 pair	10 5392
16	-	RU	1 pair	10 5394
25	35	RU	1 pair	10 5396
35	50	RU	1 pair	10 5398
50	70	RU	1 pair	10 5400
70	95	RU	1 pair	10 5402
95	120	RU	1 pair	10 5404
120	150	RU	1 pair	10 5406
150	185	RU	1 pair	10 5408
185	240	RU	1 pair	10 5410

for crimping cable lugs DIN 46234 and pin-type cable lugs DIN 46230

Indent crimp

mm <sup>2</sup>				
10	F	Q	1 pair	10 5442
16	F	Q	1 pair	10 5444
25	F	Q	1 pair	10 5446
35	F	Q	1 pair	10 5448
50	F	Q	1 pair	10 5450
70	F	Q	1 pair	10 5452
95	F	Q	1 pair	10 5454

for wire end ferrules

trapezoid crimp, crimping width 20 mm

mm				
10	AE		1 pair	10 5462
16	AE		1 pair	10 5464
25	AE		1 pair	10 5466
35	AE		1 pair	10 5468
50	AE		1 pair	10 5470
70	AE		1 pair	10 5472
95	AE		1 pair	10 5474

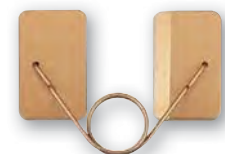
for twin wire end ferrules

trapezoid crimp, crimping width 20 mm

mm <sup>2</sup>				
2 x 4	ZAE		1 pair	10 5480
2 x 6	ZAE		1 pair	10 5482
2 x 10	ZAE		1 pair	10 5484
2 x 16	ZAE		1 pair	10 5486

Cutting insert for Al and Cu cables

Cutting range up to 18 mm ø		1 pair	10 5490
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## Crimping inserts for tools: 10 1868, 10 5701, 10 6321 and 10 6330

for tubular cable lugs and connectors "standard design"

Hexagonal crimping, crimp width 5 mm

mm<sup>2</sup>

6	R	1 pair	10 5711
10	R	1 pair	10 5712
16	R	1 pair	10 5713
25	R	1 pair	10 5714
35	R	1 pair	10 5715
50	R	1 pair	10 5716
70	R	1 pair	10 5717
95	R	1 pair	10 5718
120	R	1 pair	10 5719
150	R	1 pair	10 5720
185	R	1 pair	10 5721
240	R	1 pair	10 5722
300	R	1 pair	10 5723



for tubular cable lugs and connectors "standard design"

WM-crimping, for compressed, multi-stranded or thinned-out, finely stranded conductors, crimp width 5 mm

mm<sup>2</sup>

6	R	1 pair	10 5670
10	R	1 pair	10 5672
16	R	1 pair	10 5674
25	R	1 pair	10 5676
35	R	1 pair	10 5678
50	R	1 pair	10 5680
70	R	1 pair	10 5682
95	R	1 pair	10 5684
120	R	1 pair	10 5686
150	R	1 pair	10 5688
185	R	1 pair	10 5690
240	R	1 pair	10 5692
300	R	1 pair	10 5694



for compression cable lugs and connectors DIN 46235/46267

Hexagonal crimping, crimp width 5 mm

mm<sup>2</sup>

Index according to DIN

6	5	D	1 pair	10 5730
10	6	D	1 pair	10 5731
16	8	D	1 pair	10 5732
25	10	D	1 pair	10 5733
35	12	D	1 pair	10 5734
50	14	D	1 pair	10 5735
70	16	D	1 pair	10 5736
95	18	D	1 pair	10 5737
120	20	D	1 pair	10 5738
150	22	D	1 pair	10 5739
185	25	D	1 pair	10 5740
240	28	D	1 pair	10 5741
300	32	D	1 pair	10 5742



for aluminium cable lugs and connectors DIN 46239

and similar hexagonal crimping, crimp width 7 mm

mm<sup>2</sup>

Index according to DIN

10	10	AL	1 pair	10 5784
16-25	12	AL	1 pair	10 5785
35	14	AL	1 pair	10 5786
50	16	AL	1 pair	10 5787
70	18	AL	1 pair	10 5788
95-120	22	AL	1 pair	10 5789
150	25	AL	1 pair	10 5790
185	28	AL	1 pair	10 5791
240	32	AL	1 pair	10 5792
300	34	AL	1 pair	10 5793



### Crimping inserts for tools: 10 1868, 10 5701, 10 6321 and 10 6330

for rounding of single-stranded (se) and multi-stranded (sm) Al and Cu sector-shaped conductors, for 3 and 4 sector-shaped conductors (120° and 90°)

Rounding width 19.5 mm

mm <sup>2</sup>	Index according to DIN				
sm	se				
10	-		RU	1 pair	10 5749
16	-		RU	1 pair	10 5750
25	35		RU	1 pair	10 5751
35	50		RU	1 pair	10 5752
50	70		RU	1 pair	10 5753
70	95		RU	1 pair	10 5754
95	120		RU	1 pair	10 5755
120	150		RU	1 pair	10 5756
150	185		RU	1 pair	10 5757
185	240		RU	1 pair	10 5758
240	300		RU	1 pair	10 5759



for crimping cable lugs DIN 46234 and pin-type cable lugs DIN 46230

Indent crimp

mm <sup>2</sup>					
10	F	Q		1 pair	10 5760
16	F	Q		1 pair	10 5761
25	F	Q		1 pair	10 5762
35	F	Q		1 pair	10 5763
50	F	Q		1 pair	10 5764
70	F	Q		1 pair	10 5765



for wire end ferrules

trapezoid crimp, crimping width 20 mm

mm <sup>2</sup>					
10		AE		1 pair	10 5770
16		AE		1 pair	10 5771
25		AE		1 pair	10 5772
35		AE		1 pair	10 5773
50		AE		1 pair	10 5774
70		AE		1 pair	10 5775
95		AE		1 pair	10 5776
120		AE		1 pair	10 5777
150		AE		1 pair	10 5778
185		AE		1 pair	10 5779
240		AE		1 pair	10 5799



for twin wire end ferrules

trapezoid crimp, crimping width 20 mm

mm <sup>2</sup>					
2 x 4		ZAE		1 pair	10 5780
2 x 6		ZAE		1 pair	10 5781
2 x 10		ZAE		1 pair	10 5782
2 x 16		ZAE		1 pair	10 5783



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## Crimping inserts for the tools: 10 5702 and 10 5704

for tubular cable lugs and connectors "standard design"

hexagonal crimping, wide crimping (exception: 300 and 400 mm<sup>2</sup> / 7 mm)

mm<sup>2</sup>

10	R	1 pair	10 5802
16	R	1 pair	10 5804
25	R	1 pair	10 5806
35	R	1 pair	10 5808
50	R	1 pair	10 5810
70	R	1 pair	10 5812
95	R	1 pair	10 5814
120	R	1 pair	10 5816
150	R	1 pair	10 5818
185	R	1 pair	10 5820
240	R	1 pair	10 5822
300	R	1 pair	10 5824
400	R	1 pair	10 5826



for compression cable lugs and connectors DIN 46235/46267

hexagonal crimping, wide crimping (exception: 240 and 300 mm<sup>2</sup> / 7 mm)

mm<sup>2</sup>

Index according to DIN

10	6	D	1 pair	10 5830
16	8	D	1 pair	10 5832
25	10	D	1 pair	10 5834
35	12	D	1 pair	10 5836
50	14	D	1 pair	10 5838
70	16	D	1 pair	10 5840
95	18	D	1 pair	10 5842
120	20	D	1 pair	10 5844
150	22	D	1 pair	10 5846
185	25	D	1 pair	10 5848
240	28	D	1 pair	10 5850
300	32	D	1 pair	10 5852



for aluminium cable lugs and connectors DIN 46239 and similar

hexagonal crimping, wide crimping

mm<sup>2</sup>

Index according to DIN

10	10	AL	1 pair	10 5860
16-25	12	AL	1 pair	10 5862
35	14	AL	1 pair	10 5864
50	16	AL	1 pair	10 5866
70	18	AL	1 pair	10 5868
95-120	22	AL	1 pair	10 5870
150	25	AL	1 pair	10 5872
185	28	AL	1 pair	10 5874
240	32	AL	1 pair	10 5876
300	34	AL	1 pair	10 5878





### Crimping inserts for the tools: 10 5702 and 10 5704

for rounding of single-stranded (se) and multi-stranded (sm) Al and Cu sector-shaped conductors, for 3 and 4 sector-shaped conductors (120° and 90°)

Rounding width 35 mm

mm <sup>2</sup>	Index according to DIN				
sm	se				
10	-		RU	1 pair	10 5892
16	-		RU	1 pair	10 5894
25	35		RU	1 pair	10 5896
35	50		RU	1 pair	10 5898
50	70		RU	1 pair	10 5900
70	95		RU	1 pair	10 5902
95	120		RU	1 pair	10 5904
120	150		RU	1 pair	10 5906
150	185		RU	1 pair	10 5908
185	240		RU	1 pair	10 5910
240	300		RU	1 pair	10 5912
300	-		RU	1 pair	10 5914



for crimping cable lugs DIN 46234 and pin-type cable lugs DIN 46230

Indent crimp

mm <sup>2</sup>					
16	F	Q		1 pair	10 5942
25	F	Q		1 pair	10 5944
35	F	Q		1 pair	10 5946
50	F	Q		1 pair	10 5948
70	F	Q		1 pair	10 5950
95	F	Q		1 pair	10 5952
120	F	Q		1 pair	10 5954
150	F	Q		1 pair	10 5956



for wire end ferrules

trapezoid crimp, crimping width 20 mm

mm <sup>2</sup>					
10	AE			1 pair	10 5962
16	AE			1 pair	10 5964
25	AE			1 pair	10 5966
35	AE			1 pair	10 5968
50	AE			1 pair	10 5970
70	AE			1 pair	10 5972
95	AE			1 pair	10 5974
120	AE			1 pair	10 5976
150	AE			1 pair	10 5978
185	AE			1 pair	10 5980
240	AE			1 pair	10 5982



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# SOLDERLESS + INSULATED CABLE CONNECTORS, WIRE END FERRULES



## Solderless cable connectors

- Highest copper quality according to DIN EN 13600
- Maximum electrical and mechanical capacity
- Greatest dimensional precision due to automated production according to automotive guidelines
- Tested according to the latest testing standards
- Compatible with all market standards
- Annealed to copper hardness F 20

## Insulated cable connectors

- Highest copper quality according to DIN EN 13600
- Premium insulation guarantees dielectric strength
- Greatest dimensional precision due to automated production according to automotive guidelines
- Tested according to the latest testing standards
- Compatible with all market standards
- Hard soldered ferrule seam, maximum electrical and mechanical capacity



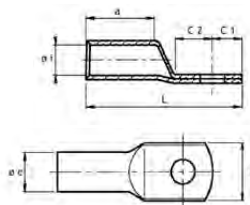
## Wire end ferrules

- Highest copper quality according to DIN EN 13600
- Premium insulation guarantees dielectric strength
- Identification via colour coding
- Adjusted crimp shapes for tapered, finely stranded conductors according to IEC 228
- Improve contacting in the terminals
- Prevent finely stranded conductors from fanning out

## Solderless cable connectors tubular cable lugs Cu, standard design

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- Also available with view hole
- Also suitable for finely stranded conductors according to IEC 228 tubular cable lugs Cu, standard design
- Annealed to copper hardness F 20



Cross section (mm <sup>2</sup> )	Pin ø (mm)	W	øi	øe	C1	C2	a	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no
0.75	3	4.8	1.4	3.2	2.3	4.8	6.9	16	0.07	100	18 0650
	4	8	1.4	3.2	4.1	6.6	6.9	19.6	0.09	100	18 0652
	5	8	1.4	3.2	4.1	6.6	6.9	19.6	0.08	100	18 0654
1.5	4	6.5	1.9	3.3	3.5	5	6	17	0.13	100	18 0660
	5	7.5	1.9	3.3	3.5	5	6	18	0.08	100	18 0662
	6	9	1.9	3.3	4.5	5.5	6	18.5	0.09	100	18 0664
2.5	4	8	2.3	3.9	3.8	6.1	6.9	20.1	0.14	100	18 0670
	5	8	2.3	3.9	3.8	6.1	6.9	20.1	0.16	100	18 0672
	6	10.7	2.3	3.9	6.1	8.1	6.9	25.2	0.15	100	18 0674
	8	12	2.3	3.9	6.1	8.1	6.9	25.2	0.15	100	18 0676
4	4	9	2.7	5	6.2	7.4	9	26	0.30	100	18 0680
	5	9	2.7	5	6.2	7.4	9	26	0.29	100	18 0682
	6	12	2.7	5	6.2	7.4	9	26	0.28	100	18 0684
	8	12	2.7	5	6.2	7.4	9	26	0.26	100	18 0686
6	5	10	3.5	6.5	6.8	6.5	9	26.5	0.5	100	18 0692
	6	10	3.5	6.5	6.8	6.5	9	26.5	0.48	100	18 0694
	8	12	3.5	6.5	6.8	6.5	9	26.5	0.57	100	18 0696
	10	15	3.5	6.5	9.8	9.5	9	32.5	0.66	100	18 0697
	12	17	3.5	6.5	12	12	9	35	0.66	100	18 0698
10	5	12	4.5	7	6.8	6.5	10	28	0.51	100	18 0700
	6	12	4.5	7	6.8	6.5	10	28	0.49	100	18 0702
	8	15	4.5	7	9.8	9.5	10	34	0.59	100	18 0704
	10	17	4.5	7	11.8	11.5	10	38	0.64	100	18 0705
	12	19	4.5	7	13	12.5	10	41	0.65	100	18 0706
16	5	12	5.5	8.5	6.8	6.5	13	31.5	0.85	100	18 0709
	6	12	5.5	8.5	6.8	6.5	13	31.5	0.83	100	18 0710
	8	15	5.5	8.5	9.8	9.5	13	37.5	0.96	100	18 0712
	10	17	5.5	8.5	11.8	11.5	13	41.5	1.03	100	18 0714
	12	19	5.5	8.5	13	12.5	13	44	1.07	100	18 0715
25	5	14	7	10	7	7	15	35.5	1.18	50	18 0718
	6	14	7	10	7	7	15	35.5	1.15	50	18 0720
	8	16	7	10	9.5	9.5	15	40.5	1.28	50	18 0722
	10	18	7	10	11.5	11.5	15	44.5	1.37	50	18 0724
	12	19	7	10	13	13.5	15	48	1.40	50	18 0725
	14	21	7	10	14.5	14.5	15	52.5	1.42	50	18 0726
35	6	17	8.5	12	7	7	17	39	1.80	50	18 0730
	8	17	8.5	12	9.5	9.5	17	44	1.98	50	18 0732
	10	19	8.5	12	11.5	11.5	17	48	2.09	50	18 0734
	12	21	8.5	12	13	13.5	17	51.5	2.13	50	18 0735
	14	21	8.5	12	14	14.5	17	53.5	2.14	50	18 0736
	16	26	8.5	12	16	16	17	58	2.28	50	18 0737
50	6	20	10	14	9.5	9.5	19	47	2.92	50	18 0739
	8	20	10	14	9.5	9.5	19	47	2.84	50	18 0740
	10	20	10	14	11.5	11.5	19	51	3.01	50	18 0742
	12	23	10	14	13	13.5	19	54.5	3.16	50	18 0744
	14	23	10	14	14	14.5	19	56.5	3.18	50	18 0745
	16	28	10	14	16	16	19	62	3.29	50	18 0746
	20	30	10	14	19	19	19	67	3.60	50	18 0747

## Tubular cable lugs, Cu, standard design



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See previous page for description

Cross section (mm <sup>2</sup> )	Pin ø (mm)	W	øi	øe	C1	C2	a	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no
70	6	23	12	16.5	10	10	21	53	4.57	50	18 0749
	8	23	12	16.5	11.5	11.5	21	54	4.48	25	18 0750
	10	23	12	16.5	11.5	11.5	21	54	4.36	25	18 0752
	12	23	12	16.5	13	13.5	21	57.5	4.49	25	18 0754
	14	23	12	16.5	14	14.5	21	59.5	4.52	25	18 0755
	16	28	12	16.5	15.5	16	21	62.5	4.67	25	18 0756
	20	30	12	16.5	19	19	21	72	5.05	25	18 0758
95	8	26	13.5	18	11.5	11.5	25	59	5.48	25	18 0759
	10	26	13.5	18	11.5	11.5	25	59.5	5.36	25	18 0760
	12	26	13.5	18	13	13.5	25	63	5.53	25	18 0762
	14	26	13.5	18	14	14.5	25	65	5.58	25	18 0763
	16	28	13.5	18	15.5	16	25	68	5.68	25	18 0764
	20	36	13.5	18	22	22	25	82	6.26	25	18 0766
120	8	28	15	19.5	13	13.5	26	65.5	6.58	20	18 0768
	10	28	15	19.5	13	13.5	26	65.5	6.50	20	18 0770
	12	28	15	19.5	13	13.5	26	65.5	6.32	20	18 0772
	14	28	15	19.5	14	14.5	26	67.5	6.39	20	18 0773
	16	30	15	19.5	15.5	16	26	70.5	6.52	20	18 0774
	20	36	15	19.5	22	22	26	85	7.13	20	18 0776
150	8	31	16.5	21	14.5	14.5	30	73	8.12	20	18 0778
	10	31	16.5	21	14.5	14.5	30	73	8.01	20	18 0780
	12	31	16.5	21	14.5	14.5	30	73	7.83	20	18 0782
	14	31	16.5	21	14.5	14.5	30	73	7.68	20	18 0783
	16	31	16.5	21	15.5	16	30	75.5	7.79	20	18 0784
	20	36	16.5	21	22	22	30	88	8.34	20	18 0786
185	10	35	19	24	17	18	30	81	11.33	10	18 0788
	12	35	19	24	17	18	30	81	11.13	10	18 0790
	14	35	19	24	17	18	30	81	10.96	10	18 0791
	16	35	19	24	17	18	30	81	10.75	10	18 0792
	20	39	19	24	21	22	30	89	11.53	10	18 0794
240	10	39	21	26	17	18	35	88	13.58	10	18 0798
	12	39	21	26	17	18	35	88	13.38	10	18 0800
	14	39	21	26	17	18	35	88	13.22	10	18 0801
	16	39	21	26	17	18	35	88	13.00	10	18 0802
	20	39	21	26	21	22	35	96	13.72	10	18 0804
300	12	43	23.5	29.5	17	18	44	99	20.49	5	18 0818
	14	43	23.5	29.5	17	18	44	99	20.29	5	18 0819
	16	43	23.5	29.5	17	18	44	99	20.03	5	18 0820
	20	43	23.5	29.5	21	22	44	107	21.10	5	18 0822
400	12	49	27	34	23	23	44	112	31.31	5	18 0826
	14	49	27	34	23	23	44	112	31.08	5	18 0828
	16	49	27	34	23	23	44	112	30.77	5	18 0830
	20	49	27	34	23	23	44	112	29.94	5	18 0832

## Angled tubular cable lugs Cu, standard design with 90° and 45° angle

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- Also suitable for finely stranded conductors according to IEC 228
- Annealed to copper hardness F 20

### 90° angle

Cross section (mm <sup>2</sup> )	Pin ø (mm)	Weight per 100 pcs. ~kg	PU/pcs. ~kg	Article no.
6	5	0.6	100	18 3160
	6	0.59	100	18 3161
	8	0.67	100	18 3162
	10	0.8	100	18 3163
	12	0.8	100	18 3164
10	5	0.6	100	18 3165
	6	0.59	100	18 3166
	8	0.67	100	18 3167
	10	0.72	100	18 3168
	12	0.76	100	18 3169
16	5	1.01	100	18 3170
	6	1	100	18 3171
	8	1.2	100	18 3172
	10	1.2	100	18 3173
	12	1.23	100	18 3174
25	5	1.34	100	18 3175
	6	1.31	100	18 3134
	8	1.47	100	18 3135
	10	1.56	100	18 3176
	12	1.6	100	18 3177
35	6	2.04	100	18 3156
	8	2.28	100	18 3130
	10	2.39	100	18 3136
	12	2.54	100	18 3157
50	6	3.14	100	18 3158
	8	3.38	100	18 3131
	10	3.52	100	18 3137
	12	3.8	100	18 3159
70	8	5.09	100	18 3132
	10	5.34	100	18 3133
	12	5.44	100	18 3140
	16	5.85	100	18 3141
95	8	6.4	50	18 3138
	10	6.27	50	18 3139
	12	6.48	50	18 3142
	16	7.12	50	18 3143
120	8	6.69	50	18 3144
	10	7.1	50	18 3145
	12	7.23	50	18 3146
	16	7.81	50	18 3147
150	10	8.2	50	18 3148
	12	8.3	50	18 3149
185	12	11.9	50	18 3150
	20	11.53	50	18 3152
240	10	14.63	20	18 3153
	12	14.42	20	18 3154
	20	14.76	20	18 3155



### 45° angle

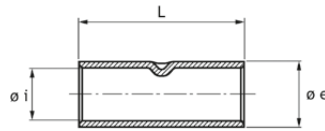
Cross section (mm <sup>2</sup> )	Pin ø (mm)	Weight per 100 pcs. ~kg	PU/pcs. ~kg	Article no.
6	5	0.6	100	18 3060
	6	0.59	100	18 3061
	8	0.67	100	18 3062
	10	0.8	100	18 3063
	12	0.8	100	18 3064
10	5	0.6	100	18 3065
	6	0.6	100	18 3066
	8	0.67	100	18 3067
	10	0.8	100	18 3068
	12	0.76	100	18 3069
16	5	1.1	100	18 3070
	6	0.97	100	18 3071
	8	1.1	100	18 3072
	10	1.17	100	18 3073
	12	1.23	100	18 3074
25	5	1.34	100	18 3075
	6	1.31	100	18 3034
	8	1.47	100	18 3035
	10	1.56	100	18 3052
	12	1.6	100	18 3053
35	6	2.04	100	18 3056
	8	2.28	100	18 3030
	10	2.39	100	18 3036
	12	2.54	100	18 3057
50	6	3.14	100	18 3058
	8	3.45	100	18 3031
	10	3.58	100	18 3037
	12	3.76	100	18 3059
70	8	5.24	100	18 3032
	10	6.6	100	18 3033
	12	5.69	100	18 3040
	16	5.94	100	18 3041
95	8	6.3	50	18 3038
	10	6.46	50	18 3039
	12	6.68	50	18 3042
	16	7.06	50	18 3043
120	8	6.87	50	18 3044
	10	7.29	50	18 3045
	12	7.71	50	18 3046
	16	8.03	50	18 3047
150	10	8.6	50	18 3048
185	12	13.2	50	18 3050
	16	13	50	18 3051

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## Butt connectors, Cu, standard design

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- Also suitable for finely stranded conductors according to IEC 228
- Annealed to copper hardness F 20



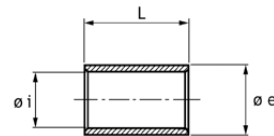
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Cross section (mm <sup>2</sup> )	øi	øe	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.75	1.4	3.2	15.7	0.08	100	18 0900
1.5	1.8	3.3	14.5	0.08	100	18 0902
2.5	2.4	4	14.5	0.11	100	18 0904
4	2.7	5	19	0.25	100	18 0906
6	3.5	6.5	24	0.50	100	18 0908
10	4.5	7	28	0.56	100	18 0910
16	5.5	8.5	34	1.00	100	18 0912
25	7	10	38	1.36	100	18 0914
35	8.5	12	42	2.11	50	18 0916
50	10	14	48	3.22	50	18 0918
70	12	16.5	52	4.66	50	18 0920
95	13.5	18	59	5.85	50	18 0922
120	15	19.5	62	7.4	50	18 0924
150	16.5	21	72	9	50	18 0926
185	19	24	72	12.2	25	18 0928
240	21	26	82	15.2	25	18 0930
300	23.5	29.5	102	22.23	25	18 0932
400	27	34	102	29.85	10	18 0934

## Parallel connectors, Cu, standard design

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- Also suitable for finely stranded conductors according to IEC 228
- Annealed to copper hardness F 20



R

Cross section (mm <sup>2</sup> )	øi	øe	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
1.5	1.6	3.2	7	0.04	100	18 3180
2.5	2.3	3.9	7	0.05	100	18 3182
4-6	3.6	5.6	7	0.09	100	18 3184
10	4.5	6.7	9	0.18	100	18 3186
16	5.8	8.2	10	0.22	100	18 3188
25	7.5	10.5	11	0.41	50	18 3190
35	9	12.2	12	0.74	50	18 3192
50	11	15	16	1.20	50	18 3194
70	13.1	17	19	1.60	50	18 3196
95	14.5	19	20	2.11	25	18 3198
120	16.2	21	20	2.50	25	18 3200
150	18	23	20	2.87	25	18 3202
185	20.6	26	28	4.93	10	18 3204
240	23	28	31	5.53	10	18 3206

## Ferrules for compressed or tapered conductors, Cu, standard design

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Suitable for compressed, multi-stranded or tapered, finely stranded conductors for diameter equalisation (only narrow hexagonal crimping!)



Cross section (mm <sup>2</sup> )	Length mm	PU/pcs.	Article no.
16	11	100	18 3400
25	14	100	18 3401
35	15	100	18 3402
50	18	50	18 3403
70	19	50	18 3404
95	21	50	18 3405
120	22	50	18 3406
150	26	25	18 3407
185	26	25	18 3408
240	30	25	18 3409
300	38	10	18 3410
400	38	10	18 3411

## Assortment of ferrules for compressed conductors

in premium-quality raaco component box

Contents:

285 pieces, sorted

50 pieces each	50 mm <sup>2</sup>	18 3403
50 pieces each	70 mm <sup>2</sup>	18 3404
50 pieces each	95 mm <sup>2</sup>	18 3405
50 pieces each	120 mm <sup>2</sup>	18 3406
25 pieces each	150 mm <sup>2</sup>	18 3407
25 pieces each	185 mm <sup>2</sup>	18 3408
25 pieces each	240 mm <sup>2</sup>	18 3409
10 pieces each	300 mm <sup>2</sup>	18 3410

Component box of ferrules for compressed conductors 1 18 3415

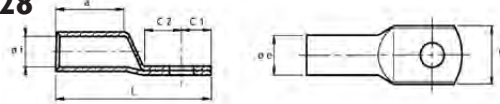


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## Tubular cable lugs, Cu, designed for finely stranded conductors according to DIN 0295 and IEC 228

### Technical data

- Material: ETP Cu according to DIN EN 13600
- "Easy Entry" flared cable entry
- Surface: galvanically tin-coated, other surfaces available upon request
- Annealed to copper hardness F 20



**F**

Cross section (mm <sup>2</sup> )	Pin ø (mm)	W	øi	øe	C1	C2	a	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
10	5	12	5.6	8	6	7	12.6	32	0.68	100	18 3255
	6	12	5.6	8	6	7	12.6	32	0.65	100	18 3256
	8	15	5.6	8	8	10	12.6	36	0.71	100	18 3258
	10	15	5.6	8	8	10	12.6	36	0.67	100	18 3260
16	12	15	5.6	8	8	10	12.6	36	0.72	100	18 3262
	5	13	6.6	9.5	7	9	14.6	37.6	1.18	50	18 3265
	6	13	6.6	9.5	7	9	14.6	37.6	1.15	50	18 3266
	8	16	6.6	9.5	9	11	14.6	41.6	1.24	50	18 3268
25	10	16	6.6	9.5	9	11	14.6	41.6	1.18	50	18 3270
	12	17.5	6.6	9.5	9	11	14.6	41.6	1.11	50	18 3272
	5	15	7.9	11	9	11	16.5	43.5	1.73	50	18 3275
	6	15	7.9	11	9	11	16.5	43.5	1.7	50	18 3276
35	8	17	7.9	11	9	11	16.5	43.5	1.65	50	18 3278
	10	17	7.9	11	9	11	16.5	43.5	1.58	50	18 3280
	12	18.5	7.9	11	9	11	16.5	43.5	1.49	50	18 3282
	6	18	9.2	12.5	7	10	18.5	43.5	2.08	50	18 3286
50	8	18	9.2	12.5	10	14	18.5	51	2.40	50	18 3288
	10	18	9.2	12.5	10	14	18.5	51	2.32	50	18 3290
	12	19	9.2	12.5	10	14	18.5	51	2.20	50	18 3292
	14	20.8	9.2	12.5	10	14.5	18.5	51	2.12	50	18 3294
50	6	21	11	15	10	14	21.5	55.5	3.90	50	18 3296
	8	21	11	15	10	14	21.5	55.5	3.82	50	18 3298
	10	21	11	15	10	14	21.5	55.5	3.72	50	18 3300
	12	21	11	15	10	14	21.5	55.5	3.56	50	18 3302
	14	21	11	15	10	14	21.5	55.5	3.44	50	18 3304



## Tubular cable lugs, Cu, designed for finely stranded conductors according to DIN 0295 and IEC 228

See previous page for description



**F**

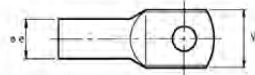
Cross section (mm <sup>2</sup> )	Pin ø (mm)	W	øi	øe	C1	C2	a	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
70	6	24	13.1	17	13.5	15.5	27.5	67.5	5.39	25	18 3306
	8	24	13.1	17	13.5	15.5	27.5	67.5	5.31	25	18 3308
	10	24	13.1	17	13.5	15.5	27.5	67.5	5.21	25	18 3310
	12	24	13.1	17	13.5	15.5	27.5	67.5	5.06	25	18 3312
	14	24	13.1	17	13.5	15.5	27.5	67.5	4.93	25	18 3314
	16	24	13.1	17	13.5	15.5	27.5	67.5	4.77	25	18 3316
95	8	28	14.5	19	13	17	32.5	75.5	7.66	25	18 3318
	10	28	14.5	19	13	17	32.5	75.5	7.55	25	18 3320
	12	28	14.5	19	13	17	32.5	75.5	7.38	25	18 3322
	14	28	14.5	19	13	17	32.5	75.5	7.24	25	18 3324
	16	28	14.5	19	13	17	32.5	75.5	7.06	25	18 3326
120	8	30	16.2	21	17	17	31.5	80	8.95	10	18 3328
	10	30	16.2	21	17	17	31.5	80	8.83	10	18 3330
	12	30	16.2	21	17	17	31.5	80	8.64	10	18 3332
	14	30	16.2	21	17	17	31.5	80	8.98	10	18 3334
	16	30	16.2	21	17	17	31.5	80	8.78	10	18 3336
150	8	33	18	23	17	18	35.5	89	11.26	10	18 3338
	10	33	18	23	17	18	31.5	89	11.13	10	18 3340
	12	33	18	23	17	18	31.5	89	10.55	10	18 3342
	14	33	18	23	17	18	31.5	89	11.34	10	18 3344
	16	33	18	23	17	18	31.5	89	11.13	10	18 3346
	20	33	18	23	13.5	21.5	31.5	89	10.55	10	18 3348
185	10	37	20.6	26	19	20	39.6	96	15.04	10	18 3350
	12	37	20.6	26	19	20	39.6	96	14.82	10	18 3352
	14	37	20.6	26	19	20	39.6	96	15.35	10	18 3354
	16	37	20.6	26	19	20	39.6	96	15.12	10	18 3356
	20	37	20.6	26	19	20	39.6	96	14.85	10	18 3360
240	12	41	23	28	19	21	41	101	16.04	10	18 3362
	14	41	23	28	19	21	41	101	15.88	10	18 3364
	16	41	23	28	19	21	41	101	15.66	10	18 3366
	20	41	23	28	19	21	41	101	15.44	10	18 3370
300	12	47	26	32	20	25	43	111	25.39	10	18 3372
	14	47	26	32	20	25	43	111	25.20	10	18 3374
	16	47	26	32	20	25	43	111	24.95	10	18 3376
	20	47	26	32	20	25	43	111	24.26	10	18 3380

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## Compression cable lugs, Cu, DIN 46235

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- Especially suitable for finely stranded conductors according to IEC 228
- Annealed to copper hardness F 20

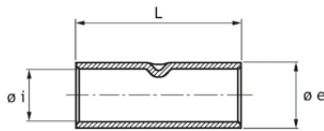


Cross section (mm <sup>2</sup> )	Pin ø (mm)	Index	W	øi	øe	C1	C2	a	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
6	5	5	8.5	3.8	5.5	7	9	11	32	0.34	100	18 3500
	6	5	8.5	3.8	5.5	8.5	9	11	33.5	0.32	100	18 3501
	8	5	13	3.8	5.5	11	9	11	36	0.32	100	18 3570
10	5	6	9	4.5	6	7	11	12	35	0.39	100	18 3502
	6	6	9	4.5	6	8.5	11	12	36.5	0.38	100	18 3503
	8	6	13	4.5	6	11	11	12	39	0.38	100	18 3504
16	6	8	13	5.5	8.5	8.5	12.5	20.5	45.5	1.32	100	18 3505
	8	8	13	5.5	8.5	11	12.5	20.5	48	1.27	100	18 3506
	10	8	17	5.5	8.5	13	12.5	20.5	50	1.31	100	18 3507
	12	8	18	5.5	8.5	14	12.5	20.5	51	1.35	100	18 3508
25	6	10	14	7	10	8.5	13.5	20.5	47.5	1.67	50	18 3509
	8	10	16	7	10	11	13.5	20.5	50	1.64	50	18 3510
	10	10	17	7	10	13	13.5	20.5	52	1.72	50	18 3511
	12	10	19	7	10	14	13.5	20.5	53	1.65	25	18 3512
35	6	12	17	8.2	12.5	8.5	14.5	20.5	51.5	2.5	100	18 3572
	8	12	17	8.2	12.5	11	14.5	20.5	54	3.44	50	18 3513
	10	12	19	8.2	12.5	13	14.5	20.5	56	3.34	50	18 3514
	12	12	21	8.2	12.5	14	14.5	20.5	57	3.21	50	18 3515
	14	12	21	8.2	12.5	15.5	14.5	20.5	58.5	2.90	25	18 3516
50	8	14	20	10	14.5	11	16.5	30	64	5.04	50	18 3517
	10	14	22	10	14.5	13	16.5	30	66	4.93	50	18 3518
	12	14	24	10	14.5	14	16.5	30	67	5.06	50	18 3519
	14	14	24	10	14.5	15.5	16.5	30	68.5	4.96	25	18 3520
	16	14	28	10	14.5	17	16.5	30	70	4.77	25	18 3521
70	8	16	24	11.5	16.5	11	16.5	31	67	6.76	25	18 3522
	10	16	24	11.5	16.5	13	16.5	31	69	6.64	25	18 3523
	12	16	24	11.5	16.5	14	16.5	31	70	6.8	25	18 3524
	14	16	24	11.5	16.5	15.5	16.5	31	71.5	6.12	25	18 3525
	16	16	30	11.5	16.5	17	16.5	31	73	6.43	25	18 3526
95	8	18	28	13.5	19	11	16.5	37	77	9.00	25	18 3574
	10	18	28	13.5	19	13	16.5	37	79	10.22	25	18 3527
	12	18	28	13.5	19	14	16.5	37	80	10	25	18 3528
	14	18	28	13.5	19	15.5	16.5	37	81.5	10	25	18 3529
	16	18	32	13.5	19	17	16.5	37	83	9.58	25	18 3530
120	10	20	32	15.5	21	13	21	38	84	11.36	25	18 3531
	12	20	32	15.5	21	14	21	38	85	11.28	25	18 3532
	14	20	32	15.5	21	15.5	21	38	86.5	11.7	25	18 3533
	16	20	32	15.5	21	17	21	38	88	11.63	25	18 3534
	20	20	38	15.5	21	20	21	38	91	12.18	25	18 3535
150	10	22	34	17	23.5	13	21	41	92	16.11	10	18 3536
	12	22	34	17	23.5	14	21	41	93	16.00	10	18 3537
	14	22	34	17	23.5	15.5	21	41	94.5	16.14	10	18 3538
	16	22	34	17	23.5	17	21	41	96	16.07	10	18 3539
	20	22	40	17	23.5	20	21	41	99	17.65	10	18 3540
185	10	25	37	19	25.5	13	24	42	96	18.96	10	18 3541
	12	25	37	19	25.5	14	24	42	97	18.89	10	18 3542
	14	25	37	19	25.5	15.5	24	42	98.5	19.21	10	18 3543
	16	25	37	19	25.5	17	24	42	100	19.92	10	18 3544
	20	25	40	19	25.5	20	24	42	103	20.09	10	18 3545
240	12	28	42	21.5	29	14	24	51	107	26.58	5	18 3546
	14	28	42	21.5	29	15.5	24	51	108.5	29.90	5	18 3547
	16	28	42	21.5	29	17	24	51	110	28.44	5	18 3548
	20	28	45	21.5	29	20	24	51	113	28.44	5	18 3549
300	14	32	48	24.5	32	15.5	24	55	116.5	38.60	5	18 3550
	16	32	48	24.5	32	17	24	55	118	32.46	5	18 3551
	20	32	48	24.5	32	20	24	55	121	32.72	5	18 3552
400	14	38	55	27.5	38.5	23	24	72	139	68.5	5	18 3553
	16	38	55	27.5	38.5	23	24	72	139	68.2	5	18 3554
	20	38	55	27.5	38.5	23	24	72	139	67.5	5	18 3555
500	16	42	60	31	42	23	26	75	149	81	5	18 3556
	20	42	60	31	42	23	26	75	149	81	5	18 3557
625	16	44	60	34.5	44	23	26	83	159	84	5	18 3558
	20	44	60	34.5	44	23	26	83	159	84	5	18 3559

## Compression connectors, Cu, DIN 46267, Part 1

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- For connections with strain relief
- Especially suitable for finely stranded conductors according to IEC 228
- Annealed to copper hardness F 20

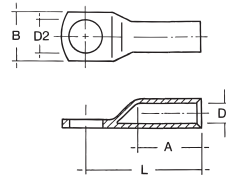


Cross section (mm <sup>2</sup> )	Index	øi	øe	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
6	5	3.8	5.5	31	0.34	100	18 3700
10	6	4.5	6	31	0.33	100	18 3701
16	8	5.5	8.5	51	1.49	100	18 3702
25	10	7	10	51	1.80	50	18 3703
35	12	8.2	12.5	51	3.15	50	18 3704
50	14	10	14.5	57	4.37	50	18 3705
70	16	11.5	16.5	57	5.54	50	18 3706
95	18	13.5	19	71	8.84	25	18 3707
120	20	15.5	21	71	9.92	25	18 3708
150	22	17	23.5	81	14.86	10	18 3709
185	25	19	25.5	86	17.35	10	18 3710
240	28	21.5	29	91	24.03	10	18 3711
300	32	24.5	32	101	29.86	5	18 3712
400	38	27.5	38.5	151	71.00	5	18 3713
500	42	31	42	161	92.00	1	18 3714
625	44	34.5	44	161	80.00	1	18 3715

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## Compression cable lugs, Al, DIN 46329

made of E-Al, bare, barrier seal design with oil stop.



Cross section mm <sup>2</sup>	Cross section se (mm <sup>2</sup> )	Bore	Index	D1 mm	D2 mm	A mm	B mm	L mm	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
50	70	M 8	16	9.8	8.4	42	25	62	2.75	4	18 3617
50	70	M10	16	9.8	10.5	42	25	62	2.7	4	18 3618
50	70	M12	16	9.8	13	42	25	62	2.65	4	18 3619
70	95	M 8	18	11.2	8.4	52	25	72	3.45	4	18 3622
70	95	M10	18	11.2	10.5	52	25	72	3.8	4	18 3623
70	95	M12	18	11.2	13	52	25	72	3.35	4	18 3624
95	120	M10	22	13.2	10.5	56	25	75	6.9	4	18 3627
95	120	M12	22	13.2	13	56	25	75	4.92	4	18 3628
95	120	M16	22	13.2	17	56	25	75	6	4	18 3630
120	150	M10	22	14.7	10.5	56	30	80	5.95	4	18 3631
120	150	M12	22	14.7	13	56	30	80	5.84	4	18 3632
120	150	M16	22	14.7	17	56	30	80	6.6	4	18 3634
150	185	M10	25	16.3	10.5	60	30	90	8.5	4	18 3636
150	185	M12	25	16.3	13	60	30	90	7.73	4	18 3637
150	185	M16	25	16.3	17	60	30	90	7.6	4	18 3639
150	185	M20	25	16.3	21	60	30	90	8.2	4	18 3640
185	240	M10	28	18.3	10.5	60	30	91	11	4	18 3641
185	240	M12	28	18.3	13	60	30	91	9.88	4	18 3642
185	240	M16	28	18.3	17	60	30	91	10.1	4	18 3644
185	240	M20	28	18.3	21	60	30	91	10	4	18 3645
240	300	M10	32	21	10.5	70	38	103	15.5	4	18 3646
240	300	M12	32	21	13	70	38	103	13.8	4	18 3647
240	300	M16	32	21	17	70	38	103	13.48	4	18 3648
240	300	M20	32	21	21	70	38	103	15	4	18 3649
300		M12	34	23.3	13	70	38	103	17.6	1	18 3650
300		M16	34	23.3	17	70	38	103	17.28	1	18 3651
300		M20	34	23.3	21	70	38	103	17.4	1	18 3652
400		M12	38	26	13	73	38	116	38	1	18 3653
400		M16	38	26	17	73	38	116	37.4	1	18 3654
400		M20	38	26	21	73	38	116	40.2	1	18 3655
500		M12	44	29	13	79	44	122	43.7	1	18 3656
500		M16	44	29	17	79	44	122	43.3	1	18 3657
500		M20	44	29	21	79	44	122	43	1	18 3658

## Compression connectors, Al, DIN 46267, Part 2

made of E-Al, bare. For pre-rounded sm/se sector-shaped conductors.

Cross section rm/sm (mm <sup>2</sup> )	Cross section se (mm <sup>2</sup> )	Index	Inside-ø mm	Length mm	Weight kg/100	PU/pcs.	Article no.
35	50	14	8	85	2.6	10	18 3860
50	70	16	9.8	85	3.2	10	18 3861
70	95	18	11.2	105	5.3	10	18 3862
95	120	22	13.2	105	7.6	10	18 3863
120	150	22	14.7	105	7.8	10	18 3864
150	185	25	16.3	125	10.7	10	18 3865
185	240	28	18.3	125	14.3	5	18 3866
240	300	32	21	145	20.3	5	18 3867
300	---	34	23.3	145	22.2	1	18 3868
400	---	38	26	210	40.8	1	18 3869



## Compression cable lugs, Al-Cu

made of E-Al and E-Cu according to EN 13600, bare, barrier seal with solid Cu screw mounting link. Tube dimensions according to DIN 46329, with compression markings. For screwing Al connections to Cu rails. For strain-relieved connections of AL cables according to DIN 48201, Part 1 and AL conductors according to DIN EN 50182.

For pre-rounded sector-shaped conductors.

Cross section rm/sm (mm <sup>2</sup> )	Cross section se (mm <sup>2</sup> )	Index	D1 mm	D2 mm	B mm	L mm	Total weight kg/100	PU/pcs.	Article no.
25	35	12	6.8	8.5	25	61	3.2	10	18 3910
25	35	12	6.8	10.5	25	61	3.1	10	18 3911
25	35	12	6.8	13	25	61	3	10	18 3912
35	50	14	8	10.5	25	71	3.8	10	18 3914
35	50	14	8	13	25	71	3.6	10	18 3915
50	70	16	9.8	10.5	25	72	4.3	10	18 3918
50	70	16	9.8	13	25	72	4.1	10	18 3919
70	95	18	11.2	10.5	25	82	5.3	10	18 3923
70	95	18	11.2	13	25	82	5.1	10	18 3924
95	120	22	13.2	13	30	85	9.9	10	18 3928
95	120	22	13.2	17	30	85	10.5	10	18 3930
120	150	22	14.7	13	30	87	10.6	10	18 3932
120	150	22	14.7	17	30	87	10	10	18 3934
150	185	25	16.3	13	30	104	16.2	5	18 3937
150	185	25	16.3	17	30	104	15.7	5	18 3939
185	240	28	18.3	13	30	105	21.8	5	18 3942
185	240	28	18.3	17	30	105	21.4	5	18 3944
240	300	32	21	13	35	120	29.8	5	18 3946
240	300	32	21	17	35	120	29	5	18 3948
300	---	34	24.5	17	40	120	40.7	1	18 3951
300	---	34	24.5	21	40	120	39.5	1	18 3952



## Compression connectors, Al-Cu, DIN 46267, Part 2

made of E-Al and E-Cu according to EN 13600, bare. For connections of Cu cables according to DIN 48201, Al cables according to DIN 48201, Part 1 and Al conductors DIN EN 50182.



Cross sect. AL mm/sm (mm <sup>2</sup> )	Cross sect. AL se (mm <sup>2</sup> )	Cross sect. CU (mm <sup>2</sup> )	Index AL	Index CU	AL mm	CU mm	Length mm	Weight CU kg/100	Total weight kg/100	PU/pcs.	Article no.
70	95	16	18	8	11.2	5.5	79	0.71	4.1	20	18 3420
70	95	25	18	10	11.2	7	79	0.89	3.95	20	18 3421
70	95	35	18	12	11.2	8.2	79	1.62	4.9	20	18 3422
70	95	50	18	14	11.2	10	85	2.36	5.7	20	18 3423
70	95	70	18	16	11.2	11.5	96	2.92	7.25	20	18 3424
70	95	95	18	18	11.2	13.5	95	4.96	9.36	20	18 3425
70	95	120	18	20	11.2	15.5	99	5.64	10.54	20	18 3426
95	120	16	22	8	13.2	5.5	79	0.71	6.15	20	18 3430
95	120	25	22	10	13.2	7	79	0.89	6.3	20	18 3431
95	120	35	22	12	13.2	8.2	79	1.52	6.8	20	18 3432
95	120	50	22	14	13.2	10	85	2.36	8.05	20	18 3433
95	120	70	22	16	13.2	11.5	87	3.11	8.2	20	18 3434
95	120	95	22	18	13.2	13.5	95	4.96	10.35	20	18 3435
95	120	120	22	20	13.2	15.5	95	5.64	11.55	20	18 3436
120	150	35	22	12	14.7	8.2	81	1.52	7.6	20	18 3440
120	150	50	22	14	14.7	10	87	2.36	7.9	20	18 3441
120	150	70	22	16	14.7	11.5	89	3.11	8.5	20	18 3442
120	150	95	22	18	14.7	13.5	97	4.86	11	20	18 3443
120	150	120	22	20	14.7	15.5	97	5.64	10.28	20	18 3444
150	185	16	25	8	16.3	5.4	92	0.71	7.8	20	18 3450
150	185	25	25	10	16.3	6.8	92	0.89	8	20	18 3451
150	185	35	25	12	16.3	8.2	92	1.62	8.4	20	18 3452
150	185	50	25	14	16.3	10	99	2.36	10.2	20	18 3453
150	185	70	25	16	16.3	11.5	100	3.11	10.35	20	18 3454
150	185	95	25	18	16.3	13.5	108	4.96	12.65	20	18 3455
150	185	120	25	20	16.3	15.5	108	5.64	13.9	20	18 3456
150	185	150	25	22	16.3	17	124	8.23	16.7	20	18 3457
185	240	50	28	14	18.3	10	99	2.36	12.1	20	18 3460
185	240	70	28	16	18.3	11.5	100	3.11	13	20	18 3461
185	240	95	28	18	18.3	13.5	108	4.96	14.45	20	18 3462
185	240	120	28	20	18.3	15.5	108	5.64	13.72	20	18 3463
185	240	150	28	22	18.3	17	113	8.23	19.55	20	18 3464
185	240	185	28	25	18.3	19	116	9.62	21	20	18 3465
240	300	50	32	14	21	10	110	2.36	16.5	20	18 3470
240	300	70	32	16	21	11.5	111	3.11	18	20	18 3471
240	300	95	32	18	21	13.5	119	4.96	19	20	18 3472
240	300	120	32	20	21	15.5	119	5.64	20.5	20	18 3473
240	300	150	32	22	21	17	124	8.23	23.3	20	18 3474
240	300	185	32	25	21	19	127	9.62	25.5	20	18 3475
240	300	240	32	28	21	21.5	128	12.71	30.1	20	18 3476
300	300	120	34	20	23.5	15.5	119	5.64	27.8	20	18 3480
300	300	150	34	22	23.5	17	124	8.23	31.1	20	18 3481
300	300	185	34	25	23.5	19	127	9.62	32.7	20	18 3482
300	300	240	34	28	23.5	21.5	128	12.71	37.5	20	18 3483
300	300	300	34	32	23.5	24.5	134	16.1	41.7	20	18 3484

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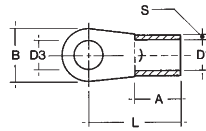
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## Crimping cable lugs, ring-shaped, Cu, DIN 46234

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- Especially suitable for finely stranded conductors according to IEC 228

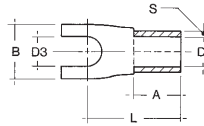


Cross section (mm <sup>2</sup> )	Pin ø (mm)	Nominal size according to DIN	D1	D3	A	B	L	S	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	3	3 - 1	1.6	3.2	5	6	11	0.8	0.07	100	18 0400
	4	4 - 1	1.6	4.3	5	8	12	0.8	0.07	100	18 0402
	5	5 - 1	1.6	5.3	5	10	13	0.8	0.07	100	18 0403
1.5 - 2.5	3	3 - 2.5	2.3	3.2	5	6	11	0.8	0.07	100	18 0407
	4	4 - 2.5	2.3	4.3	5	8	12	0.8	0.08	100	18 0408
	5	5 - 2.5	2.3	5.3	5	10	14	0.8	0.09	100	18 0410
	6	6 - 2.5	2.3	6.5	5	11	16	0.8	0.11	100	18 0412
4 - 6	8	8 - 2.5	2.3	8.4	5	14	17	0.8	0.13	100	18 0413
	4	4 - 6	3.6	4.3	6	8	14	1	0.14	100	18 0416
	5	5 - 6	3.6	5.3	6	10	15	1	0.16	100	18 0418
	6	6 - 6	3.6	6.5	6	11	16	1	0.16	100	18 0420
10	8	8 - 6	3.6	8.4	6	14	19	1	0.22	100	18 0422
	10	10 - 6	3.6	10.5	6	18	21	1	0.28	100	18 0423
	5	5 - 10	4.5	5.3	8	10	16	1.1	0.23	100	18 0426
	6	6 - 10	4.5	6.5	8	11	17	1.1	0.25	100	18 0428
16	8	8 - 10	4.5	8.4	8	14	20	1.1	0.3	100	18 0430
	10	10 - 10	4.5	10.5	8	18	21	1.1	0.35	100	18 0432
	12	12 - 10	4.5	13	8	22	23	1.1	0.43	100	18 0434
	5	5 - 16	5.8	5.3	10	11	20	1.2	0.39	100	18 0436
25	6	6 - 16	5.8	6.5	10	11	20	1.2	0.38	100	18 0438
	8	8 - 16	5.8	8.4	10	14	22	1.2	0.43	100	18 0440
	10	10 - 16	5.8	10.5	10	18	24	1.2	0.5	100	18 0442
	12	12 - 16	5.8	13	10	22	26	1.2	0.5	100	18 0444
35	5	5 - 25	7.5	5.3	11	12	25	1.5	0.7	100	18 0446
	6	6 - 25	7.5	6.5	11	12	25	1.5	0.69	100	18 0448
	8	8 - 25	7.5	8.4	11	16	25	1.5	0.75	100	18 0450
	10	10 - 25	7.5	10.5	11	18	26	1.5	0.8	100	18 0452
50	12	12 - 25	7.5	13	11	22	31	1.5	0.92	100	18 0454
	16	16 - 25	7.5	17	11	28	35	1.5	0.92	100	18 0456
	6	6 - 35	9	6.5	12	15	26	1.6	1.01	100	18 0458
	8	8 - 35	9	8.4	12	16	26	1.6	0.98	100	18 0460
70	10	10 - 35	9	10.5	12	18	27	1.6	1	100	18 0462
	12	12 - 35	9	13	12	22	31	1.6	1.26	100	18 0464
	16	16 - 35	9	17	12	28	36	1.6	1.47	100	18 0466
	6	6 - 50	11	6.5	16	18	34	1.8	1.75	100	18 0468
95	8	8 - 50	11	8.4	16	18	34	1.8	1.68	100	18 0470
	10	10 - 50	11	10.5	16	18	34	1.8	1.6	100	18 0472
	12	12 - 50	11	13	16	22	36	1.8	1.8	100	18 0474
	16	16 - 50	11	17	16	28	40	1.8	2.1	100	18 0476
120	6	6 - 70	13	6.5	18	22	38	2	2.7	100	18 0478
	8	8 - 70	13	8.4	18	22	38	2	2.6	100	18 0480
	10	10 - 70	13	10.5	18	22	38	2	2.5	100	18 0482
	12	12 - 70	13	13	18	22	38	2	2.4	100	18 0484
150	16	16 - 70	13	17	18	28	42	2	2.7	100	18 0486
	8	8 - 95	15	8.4	20	24	42	2.5	4.02	100	18 0488
	10	10 - 95	15	10.5	20	24	42	2.5	3.92	100	18 0490
	12	12 - 95	15	13	20	24	42	2.5	3.9	100	18 0492
185	16	16 - 95	15	17	20	28	44	2.5	3.7	100	18 0494
	8	8 - 120	17	8.4	22	24	44	3	5.8	100	18 0496
	10	10 - 120	17	10.5	22	24	44	3	5.6	100	18 0498
	12	12 - 120	17	13	22	24	44	3	5.4	100	18 0500
240	16	16 - 120	17	17	22	28	48	3	5.8	100	18 0502
	10	10 - 150	19	10.5	24	30	50	3.2	7.7	100	18 0504
	12	12 - 150	19	13	24	30	50	3.2	7.6	100	18 0506
240	16	16 - 150	19	17	24	30	50	3.2	7.5	100	18 0508
	12	12 - 185	21	13	28	36	50	3.5	10.8	100	18 0510
	16	16 - 185	21	17	28	36	50	3.5	10.2	100	18 0512
240	12	12 - 240	23.5	13	32	38	56	4	14.70	100	18 0514
	16	16 - 240	23.5	17	32	38	56	4	14.30	100	18 0516

## Crimping cable lugs, fork-shaped, Cu

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Hard soldered ferrule seam
- For connections with strain relief

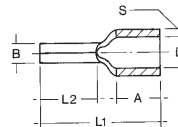


Cross section (mm <sup>2</sup> )	Pin ø (mm)	D1	D3	A	B	L	S	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	3	1.6	3.2	5	5.8	11	0.8	0.06	100	18 0520
	4	1.6	4.3	5	7	12	0.8	0.07	100	18 0522*
	5	1.6	5.3	5	9.6	13	0.8	0.07	100	18 0524*
1.5 - 2.5	3	2.3	3.2	5	5.8	11	0.8	0.06	100	18 0530*
	4	2.3	4.3	5	7	12	0.8	0.08	100	18 0532*
	5	2.3	5.3	5	9.6	13	0.8	0.09	100	18 0534*
4 - 6	6	2.3	6.5	5	12	13	0.8	0.12	100	18 0536*
	4	3.6	4.3	6	8.5	14	1	0.14	100	18 0540*
	5	3.6	5.3	6	9	14	1	0.16	100	18 0542*
10	6	3.6	6.5	6	12.5	18	1	0.17	100	18 0544*
	8	3.6	8.4	6	15	21	1	0.2	100	18 0546*
	5	4.5	5.3	7	10.5	17	1.1	0.22	100	18 0550
16	6	4.5	6.5	7	10.5	17	1.1	0.25	100	18 0552
	5	5.8	5.3	10	11	20	1.2	0.358	100	18 0560
	6	5.8	6.5	10	11	20	1.2	0.358	100	18 0562

## Crimping cable lugs, pin-shaped, Cu, 0.5 - 6 mm<sup>2</sup> acc. to DIN 46230

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Hard soldered ferrule seam
- For connections with strain relief



Cross section (mm <sup>2</sup> )	Pin ø (mm)	L1	L2	D1	A	B	S	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	1.8	17	10	1.8	5	1.9	0.8	0.06	100	18 0590*
1.5-2.5	2.3	17	10	2.3	5	1.9	0.8	0.07	100	18 0592*
4 - 6	3.4	20	11	3.6	6	2.7	0.8	0.15	100	18 0594*
10	4.5	24.5	11	4.3	10	4.3	1	0.27	100	18 0600*
16	6	29.5	15	5.4	11.5	5.8	1	0.42	100	18 0602*
25	7	33.5	15	6.7	13.5	6.8	1.2	0.66	100	18 0604
35	8	40.5	20	8.2	16	8	1.5	1.2	50	18 0606*
50	9.5	45	20	9.5	19	9.5	1.8	1.91	50	18 0608*
70	11	55	23	11.2	24	11	2	3	50	18 0610
95	12.5	55	23	13.5	24	12.5	2.5	4.3	50	18 0612

\*The articles marked with an asterisk



**cimco**



## Tubular cable lug sets

in a premium **raaco** component box with crimping pliers

Content:

255 pieces, sorted:	PU	Article no.
• 25 tubular cable lugs 6 mm <sup>2</sup> , M6		18 0694
• 25 tubular cable lugs 6 mm <sup>2</sup> , M8		18 0696
• 25 tubular cable lugs 10 mm <sup>2</sup> , M6		18 0702
• 25 tubular cable lugs 10 mm <sup>2</sup> , M8		18 0704
• 25 tubular cable lugs 16 mm <sup>2</sup> , M8		18 0712
• 25 tubular cable lugs 25 mm <sup>2</sup> , M8		18 0722
• 25 tubular cable lugs 25 mm <sup>2</sup> , M10		18 0724
• 20 tubular cable lugs 35 mm <sup>2</sup> , M8		18 0732
• 20 tubular cable lugs 35 mm <sup>2</sup> , M10		18 0734
• 20 tubular cable lugs 50 mm <sup>2</sup> , M10		18 0742
• 20 tubular cable lugs 50 mm <sup>2</sup> , M12		18 0744
• Crimping tool, 6 - 50 mm <sup>2</sup> , hexagonal crimping		10 1882
<b>Component box with tubular cable lugs</b>	<b>1</b>	<b>18 1545</b>



## Compression cable lug sets

in a premium **raaco** component box with crimping pliers

Content:

370 pieces, sorted:	PU	Article no.
• 50 compression cable lugs 6 mm <sup>2</sup> , M5		18 3500
• 50 compression cable lugs 6 mm <sup>2</sup> , M6		18 3501
• 50 compression cable lugs 10 mm <sup>2</sup> , M5		18 3502
• 50 compression cable lugs 10 mm <sup>2</sup> , M6		18 3503
• 25 compression cable lugs 16 mm <sup>2</sup> , M8		18 3506
• 25 compression cable lugs 16 mm <sup>2</sup> , M10		18 3507
• 25 compression cable lugs 25 mm <sup>2</sup> , M8		18 3510
• 25 compression cable lugs 25 mm <sup>2</sup> , M10		18 3511
• 20 compression cable lugs 35 mm <sup>2</sup> , M8		18 3513
• 20 compression cable lugs 35 mm <sup>2</sup> , M10		18 3514
• 15 compression cable lugs 50 mm <sup>2</sup> , M10		18 3518
• 15 compression cable lugs 50 mm <sup>2</sup> , M12		18 3519
• Crimping tool, 6 - 50 mm <sup>2</sup> , hexagonal crimping		10 1883
<b>Component box with compression cable lugs</b>	<b>1</b>	<b>18 1546</b>

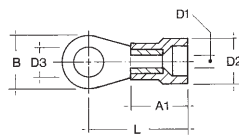
## Insulated cable connectors

### Crimping cable lugs, ring-shaped, Cu, insulated, DIN 46237 from 0.5 - 6 mm<sup>2</sup>



#### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily

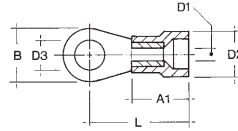


Cross section (mm <sup>2</sup> )	Pin ø (mm)	Nominal size according to DIN	Insulation colour	D1	D2	D3	A1	B	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	2		yellow	1	3.2	2.3	10.5	5	14	0.02	100	18 0008
	3		yellow	1	3.2	3.2	10.5	5	16	0.03	100	18 0010
	4		yellow	1	3.2	4.3	10.5	6	17	0.04	100	18 0014
	5		yellow	1	3.2	5.3	10.5	8	18	0.05	100	18 0016
0.5 - 1	3	3 - 1	red	1.6	4.1	3.2	11.5	6	16	0.07	100	18 0020
	4	4 - 1	red	1.6	4.1	4.3	11.5	8	17	0.08	100	18 0024
	5	5 - 1	red	1.6	4.1	5.3	11.5	10	18	0.1	100	18 0026
	6		red	1.6	4.1	6.5	11.5	11	20	0.11	100	18 0028
	8		red	1.6	4.1	8.4	11.5	14	22	0.14	100	18 0027
1.5 - 2.5	10		red	1.6	4.1	10.5	11.5	18	24	0.19	100	18 0029
	3	3 - 2.5	blue	2.3	4.5	3.2	11.5	6	17	0.08	100	18 0030
	4	4 - 2.5	blue	2.3	4.5	4.3	11.5	8	18	0.09	100	18 0034
	5	5 - 2.5	blue	2.3	4.5	5.3	11.5	10	20	0.11	100	18 0036
4 - 6	6	6 - 2.5	blue	2.3	4.5	6.5	11.5	11	22	0.12	100	18 0038
	8	8 - 2.5	blue	2.3	4.5	8.4	11.5	14	23	0.15	100	18 0040
	10		blue	2.3	4.5	10.5	11.5	18	25	0.21	100	18 0042
	4	4 - 6	yellow	3.6	6.8	4.3	13	8	20	0.16	100	18 0050
10	5	5 - 6	yellow	3.6	6.8	5.3	13	10	21	0.19	100	18 0052
	6	6 - 6	yellow	3.6	6.8	6.5	13	11	22	0.2	100	18 0054
	8	8 - 6	yellow	3.6	6.8	8.4	13	14	25	0.24	100	18 0056
	10	10 - 6	yellow	3.6	6.8	10.5	13	18	27	0.3	100	18 0058
	5		red	4.5	8.6	5.3	16.5	10	24	0.29	100	18 0070
16	6		red	4.5	8.6	6.5	16.5	11	25	0.3	100	18 0072
	8		red	4.5	8.6	8.4	16.5	14	28	0.34	50	18 0074
	10		red	4.5	8.6	10.5	16.5	18	29	0.41	50	18 0076
	12		red	4.5	8.6	13	16.5	22	31	0.49	50	18 0078
16	5		blue	5.8	9.6	5.3	21.5	11	30	0.494	50	18 0080
	6		blue	5.8	9.6	6.5	21.5	11	30	0.494	50	18 0082
	8		blue	5.8	9.6	8.4	21.5	14	32	0.592	50	18 0084
	10		blue	5.8	9.6	10.5	21.5	18	34	0.572	50	18 0086
	12		blue	5.8	9.6	13	21.5	22	36	0.768	50	18 0088

## Crimping cable lugs, fork-shaped, Cu, insulated, DIN 46237 from 0.5 - 6 mm<sup>2</sup>

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



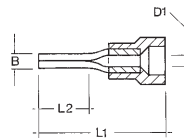
IS

Cross section (mm <sup>2</sup> )	Pin ø (mm)	Nominal size according to DIN	Insulation colour	D1	D2	D3	A1	B	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	3		yellow	1	3.2	3.3	10.5	5	16	0.04	100	18 0118
0.5 - 1	3	3 - 1	red	1.6	4.1	3.2	11.5	5.8	16	0.07	100	18 0120*
	4	4 - 1	red	1.6	4.1	4.3	11.5	7	17	0.08	100	18 0124*
	5	5 - 1	red	1.6	4.1	5.3	11.5	9.6	18	0.09	100	18 0126*
	6		red	1.6	4.1	6.5	11.5	11	20	0.1	100	18 0128*
1.5 - 2.5	3	3 - 2.5	blue	2.3	4.5	3.2	11.5	5.9	17	0.08	100	18 0140*
	4	4 - 2.5	blue	2.3	4.5	4.3	11.5	7	19	0.09	100	18 0144*
	5	5 - 2.5	blue	2.3	4.5	5.3	11.5	10	20	0.11	100	18 0146*
	6	6 - 2.5	blue	2.3	4.5	6.5	11.5	12	23	0.12	100	18 0148*
4 - 6	4	4 - 6	yellow	3.6	6.8	4.3	13	9	20	0.17	100	18 0160*
	5	5 - 6	yellow	3.6	6.8	5.3	13	9	21	0.19	100	18 0162*
	6	6 - 6	yellow	3.6	6.8	6.5	13	12.5	22	0.2	100	18 0164*
	8	8 - 6	yellow	3.6	6.8	8.4	13	15	25	0.24	100	18 0166*
10	10	10 - 6	yellow	3.6	6.8	10.5	13	19.2	27	0.3	100	18 0168*
	5		red	4.5	8.6	5.3	16.5	10.5	17	0.16	100	18 0170
16	6		red	4.5	8.6	6.4	16.5	10.5	17	0.16	100	18 0172
	6		blue	5.8	9.6	6.4	21.5	11	20	0.44	100	18 0174

## Crimping cable lugs, pin-shaped, Cu, insulated, DIN 46231 from 0.5 - 6 mm<sup>2</sup>

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- For connections with strain relief
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



IS

Cross section (mm <sup>2</sup> )	Pin length (mm)	Nominal size	Insulation colour acc. to DIN	L1	L2	D1	B	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	9		yellow	20	9	1	1	0.05	100	18 0220
0.5 - 1	10	1	red	22	10	1.6	1.9	0.08	100	18 0222*
1.5 - 2.5	10	2.5	blue	22	10	2.3	1.9	0.09	100	18 0224*
4 - 6	11	6	yellow	27	11	3.6	2.7	0.19	100	18 0226*
10	11		red	33	11	4.3	4.3	0.31	100	18 0227*
16	15		blue	38	15	5.4	5.5	0.49	100	18 0228*

\*The articles marked with an asterisk

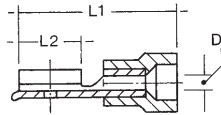


**cimco**

## Blade receptacles, insulated, DIN 46245, Part 1-3, and similar designs

Technical data

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



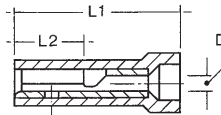
IS

Cross section (mm <sup>2</sup> )	Terminal dimension (mm)	Nominal size according to DIN	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	2.8 x 0.5		red	17.5	8	1.6	0.07	100	18 0250*
	2.8 x 0.8		red	17.5	8	1.6	0.07	100	18 0252*
	4.8 x 0.5		red	18	6	1.6	0.09	100	18 0254*
	4.8 x 0.8	4.8 - 1	red	18	6	1.6	0.09	100	18 0256*
	6.3 x 0.8	6.3 - 1	red	22	7.5	1.6	0.11	100	18 0230*
1.5 - 2.5	2.8 x 0.5		blue	18	8	2.3	0.1	100	18 0236*
	2.8 x 0.8		blue	18	8	2.3	0.08	100	18 0238*
	4.8 x 0.5		blue	18	6	2.3	0.09	100	18 0258*
	4.8 x 0.8	4.8 - 2.5	blue	18	6	2.3	0.09	100	18 0260*
	6.3 x 0.8	6.3 - 2.5	blue	21	7.4	2.3	0.11	100	18 0232*
4 - 6	6.3 x 0.8	6.3 - 6	yellow	21	7.5	3.6	0.17	100	18 0234*
	9.5 x 1.2		yellow	26.5	12	3.6	0.26	100	18 0235

## Blade receptacles, fully insulated

Technical data

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- Insulation: fully insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



IS

Cross section (mm <sup>2</sup> )	Terminal dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	2.8 x 0.5	red	20	8	1.6	0.08	100	18 0241*
	2.8 x 0.8	red	20	8	1.6	0.1	100	18 0243*
	4.8 x 0.5	red	18	6	1.6	0.09	100	18 0244*
	4.8 x 0.8	red	18	6	1.6	0.09	100	18 0245*
	6.3 x 0.8	red	21	7.5	1.6	0.12	100	18 0240
1.5 - 2.5	2.8 x 0.5	blue	20	8	2.3	0.1	100	18 0246*
	2.8 x 0.8	blue	20	8	2.3	0.09	100	18 0247*
	4.8 x 0.5	blue	18	6	2.3	0.1	100	18 0248*
	4.8 x 0.8	blue	18	6	2.3	0.1	100	18 0249*
	6.3 x 0.8	blue	21	7.4	2.3	0.13	100	18 0242
4 - 6	4.8 x 0.5	yellow	18	6	2.3	0.15	100	18 0270
	4.8 x 0.8	yellow	18	6	2.3	0.15	100	18 0272
	6.3 x 0.8	yellow	21	7.5	3.6	0.19	100	18 0274*

\*The articles marked with an asterisk

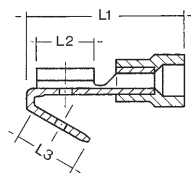


**cimco**

## Blade receptacles with branch, insulated

### Technical data

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



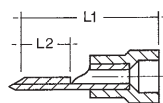
IS

Cross section (mm <sup>2</sup> )	Terminal dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	6.3 x 0.8	red	22	7.5	8	0.15	100	18 0280*
1.5 - 2.5	6.3 x 0.8	blue	22	7.5	8	0.15	100	18 0282*
4 - 6	6.3 x 0.8	yellow	25	8	8	0.21	100	18 0284*

## Blade terminal, insulated

### Technical data

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



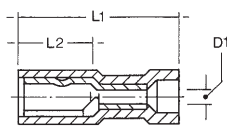
IS

Cross section (mm <sup>2</sup> )	Terminal dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	2.8 x 0.8	red	14.6	5.5		0.09	100	18 0286*
	4.8 x 0.8	red	18.5	6.5		0.08	100	18 0288*
	6.3 x 0.8	red	22	7.5		0.1	100	18 0290*
1.5 - 2.5	4.8 x 0.8	blue	18.5	6.5		0.09	100	18 0291*
	6.3 x 0.8	blue	22	7.5		0.1	100	18 0292*
4 - 6	6.3 x 0.8	yellow	22	7.5		0.16	100	18 0294*

## Circular sockets, insulated

### Technical data

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



IS

Cross section (mm <sup>2</sup> )	Terminal dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	4	red	24	13	1.6	0.12	100	18 0310*
1.5 - 2.5	5	blue	24	13	2.3	0.15	100	18 0312*
4 - 6	5	yellow	24	13	3.6	0.2	100	18 0314

\*The articles marked with an asterisk



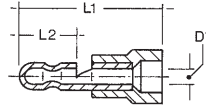
**cimco**

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## Pin terminal, insulated

### Technical data

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- For connections with strain relief and Cu inner sleeve
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



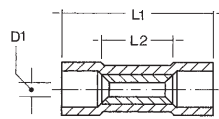
IS

Cross section (mm <sup>2</sup> )	Terminal dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	4	red	23	13	1.6	0.12	100	18 0300
1.5 - 2.5	5	blue	23	13	2.3	0.15	100	18 0302
4 - 6	5	yellow	25	13	3.6	0.2	100	18 0304

## Parallel connectors, insulated

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Insulation: PVC/ PE
- Temperature resistance -40 °C to +70 °C



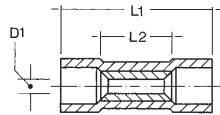
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Cross section (mm <sup>2</sup> )	Insulation material	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	PE	yellow	13	5	1	0.06	100	18 0318
0.5 - 1	PVC	red	18	8	1.6	0.07	100	18 0320*
1.5 - 2.5	PVC	blue	19	8	2.3	0.09	100	18 0322*
4 - 6	PVC	yellow	21	9	3.6	0.14	100	18 0324

## Butt connectors, insulated

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Insulation: PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily
- Not suitable for solid conductors



IS

Cross section (mm <sup>2</sup> )	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	yellow	20	11	1	0.04	100	18 0328
0.5 - 1	red	25	15	1.6	0.13	100	18 0330
1.5 - 2.5	blue	25	15	2.3	0.14	100	18 0332
4 - 6	yellow	27	15	3.6	0.24	100	18 0334

\*The articles marked with an asterisk

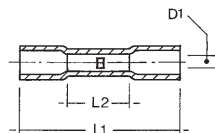


**cimco**

## Butt connectors with shrink insulation

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Polyolefin insulation with inner layer of hot-melt adhesive
- Shrinking temperature: +150 °C
- Temperature resistance -10 °C to +105 °C
- After shrinking the hot-melt adhesive forms a connection that insulates, resists ageing, relieves strain and is water-tight.



IS

Cross section (mm <sup>2</sup> )	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	red	37	15	1.6	0.12	100	18 0340
1.5 - 2.5	blue	37	15	2.3	0.15	100	18 0342
4 - 6	yellow	42	15	3.6	0.25	50	18 0346

## Long design

Due to the longer design of the copper ferrule and consequently the possibility to crimp the conductor twice, this connector is also suitable for repairing damaged solid conductors.

1.5 - 2.5	blue	55	28	2.3	0.28	100	18 0352
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IS

NEW

## Insulating cable lug sets

in a premium **raaco** component box with crimping pliers

Contents:	PU/pcs.	Article no.
135 pieces, sorted		
• 15 ring cable lugs DIN 46237, 0.5 - 1 mm <sup>2</sup> , M4		18 0024
• 15 ring cable lugs DIN 46237, 1.5 - 2.5 mm <sup>2</sup> , M4		18 0034
• 15 ring cable lugs DIN 46237, 1.5 - 2.5 mm <sup>2</sup> , M5		18 0036
• 15 ring cable lugs DIN 46237, 4 - 6 mm <sup>2</sup> , M5		18 0052
• 15 blade receptacles DIN 46245, 1.5 - 2.5 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0232
• 15 blade receptacles DIN 46245, 4 - 6 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0234
• 15 blade receptacles with branch, 1.5 - 2.5 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0282
• 15 blade terminals, insulated, 1.5 - 2.5 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0292
• 15 butt connectors, insulated, 1.5 - 2.5 mm <sup>2</sup>		18 0332
• Crimping tool, 0.5 - 6 mm <sup>2</sup> , oval crimp		10 1892
<b>Component box with insulated insulated cable lugs</b>	<b>1</b>	<b>18 1530</b>



Contents:	PU/pcs.	Article no.
500 pieces, sorted		
• 50 ring cable lugs DIN 46237, 0.5 - 1 mm <sup>2</sup> , M4		18 0024
• 50 ring cable lugs DIN 46237, 0.5 - 1 mm <sup>2</sup> , M5		18 0026
• 50 ring cable lugs DIN 46237, 1.5 - 2.5 mm <sup>2</sup> , M5		18 0036
• 25 ring cable lugs DIN 46237, 4 - 6 mm <sup>2</sup> , M5		18 0052
• 25 fork-shaped cable lugs DIN 46237, 0.5 - 1 mm <sup>2</sup> , M4		18 0124
• 25 fork-shaped cable lugs DIN 46237, 1.5 - 2.5 mm <sup>2</sup> , M5		18 0146
• 25 pin-type cable lugs DIN 46231, 0.5 - 1 mm <sup>2</sup> , 9 mm		18 0222
• 25 pin-type cable lugs DIN 46231, 1.5 - 2.5 mm <sup>2</sup> , 10 mm		18 0224
• 25 blade receptacles DIN 46245, 0.5 - 1 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0230
• 25 blade receptacles DIN 46245, 1.5 - 2.5 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0232
• 20 blade receptacles with branch, 0.5 - 1 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0280
• 20 blade receptacles with branch, 1.5 - 2.5 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0282
• 20 blade terminals, insulated, 0.5 - 1 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0290
• 20 blade terminals, insulated, 1.5 - 2.5 mm <sup>2</sup> , 6.3 x 0.8 mm		18 0292
• 10 pin terminals, insulated, 0.5 - 1 mm <sup>2</sup> , 4 mm		18 0300
• 10 pin terminals, insulated, 1.5 - 2.5 mm <sup>2</sup> , 5 mm		18 0302
• 10 circular sockets, 0.5 - 1 mm <sup>2</sup> , 4 mm		18 0310
• 10 circular sockets, 1.5 - 2.5 mm <sup>2</sup> , 5 mm		18 0312
• 25 butt connectors, 0.5 - 1 mm <sup>2</sup>		18 0330
• 20 butt connectors, 1.5 - 2.5 mm <sup>2</sup>		18 0332
• 10 butt connectors, 4 - 6 mm <sup>2</sup>		18 0334
• Crimping tool, 0.5 - 6 mm <sup>2</sup> , oval crimp		10 1892
<b>Component box with insulated cable lugs</b>	<b>1</b>	<b>18 1540</b>



**cimco**

## Wire end ferrules

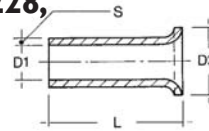
### Non-insulated wire end ferrules according to DIN 46228,

#### Part 1 and special dimensions

Technical data

• Material: ETP Cu according to DIN EN 13600

• Surface: galvanically tin-coated



Cross section (mm <sup>2</sup> )	Length (mm)	L	D1	D2	S	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.25	5	5	0.8	1.7	0.15	0.01	1000	18 2040
	7	7	0.8	1.7	0.15	0.01	1000	18 2042
0.34	5	5	0.9	1.8	0.15	0.01	1000	18 2046
	7	7	0.9	1.8	0.15	0.01	1000	18 2048
0.5	6	6	1	2.1	0.15	0.01	1000	18 2050
	8	8	1	2.1	0.15	0.01	1000	18 2051
	10	10	1	2.1	0.15	0.01	1000	18 2049
0.75	6	6	1.2	2.3	0.15	0.01	1000	18 2052
	10	10	1.2	2.3	0.15	0.01	1000	18 2054
	15	15	1.2	2.3	0.15	0.01	1000	18 2055
1	6	6	1.4	2.5	0.15	0.01	1000	18 2056
	8	8	1.4	2.5	0.15	0.01	1000	18 2057
	10	10	1.4	2.5	0.15	0.01	1000	18 2058
	12	12	1.4	2.5	0.15	0.01	1000	18 2059
1.5	7	7	1.7	2.8	0.15	0.01	1000	18 2060
	10	10	1.7	2.8	0.15	0.01	1000	18 2062
	12	12	1.7	2.8	0.15	0.02	1000	18 2064
	15	15	1.7	2.8	0.15	0.02	1000	18 2066
2.5	18	18	1.7	2.8	0.15	0.02	1000	18 2067
	7	7	2.2	3.4	0.15	0.01	1000	18 2070
	10	10	2.2	3.4	0.15	0.01	1000	18 2071
	12	12	2.2	3.4	0.15	0.01	1000	18 2072
4	15	15	2.2	3.4	0.15	0.02	1000	18 2074
	20	20	2.2	3.4	0.15	0.02	1000	18 2075
	9	9	2.8	4	0.2	0.02	1000	18 2078
	12	12	2.8	4	0.2	0.02	1000	18 2080
6	15	15	2.8	4	0.2	0.02	250	18 2082
	20	20	2.8	4	0.2	0.03	250	18 2083
	10	10	3.5	4.7	0.2	0.02	250	18 2085
	12	12	3.5	4.7	0.2	0.03	250	18 2086
10	15	15	3.5	4.7	0.2	0.03	100	18 2088
	20	20	3.5	4.7	0.2	0.05	250	18 2089
	12	12	4.5	5.8	0.2	0.06	100	18 2092
	15	15	4.5	5.8	0.2	0.07	250	18 2094
16	18	18	4.5	5.8	0.2	0.08	100	18 2096
	25	25	4.5	5.8	0.2	0.09	250	18 2097
	12	12	5.8	7.5	0.2	0.05	250	18 2100
	15	15	5.8	7.5	0.2	0.05	250	18 2102
25	18	18	5.8	7.5	0.2	0.07	100	18 2104
	25	25	5.8	7.5	0.2	0.09	250	18 2103
	32	32	5.8	7.5	0.2	0.01	250	18 2105
	12	12	7.3	9.5	0.22	0.06	100	18 2106
35	15	15	7.3	9.5	0.22	0.07	100	18 2108
	18	18	7.3	9.5	0.22	0.09	100	18 2110
	25	25	7.3	9.5	0.22	0.12	100	18 2112
	32	32	7.3	9.5	0.22	0.14	100	18 2111
50	15	15	8.3	11	0.22	0.1	100	18 2113
	18	18	8.3	11	0.22	0.11	100	18 2114
	25	25	8.3	11	0.22	0.16	100	18 2115
	32	32	8.3	11	0.22	0.24	100	18 2119
70	18	18	10.3	13	0.3	0.17	100	18 2120
	22	22	10.3	13	0.3	0.2	100	18 2116
	32	32	10.3	13	0.3	0.31	100	18 2121
	22	22	12.5	15	0.4	0.22	100	18 2123
95	26	26	12.5	15	0.4	0.35	100	18 2118
	30	30	12.5	15	0.4	0.4	100	18 2124
	32	32	12.5	15	0.4	0.43	100	18 2125
	25	25	14.5	17	0.4	0.4	100	18 2127
120	30	30	14.5	17	0.4	0.47	25	18 2122
	32	32	14.5	17	0.4	0.48	25	18 2128
	32	32	16.5	19	0.5	0.75	25	18 2129
150	34	34	16.5	19	0.5	0.97	25	18 2126
	40	40	16.5	19	0.5	1.11	25	18 2131
	32	32	18.5	21	0.5	0.95	25	18 2132
185	40	40	18.5	21	0.5	1.3	25	18 2133
	32	32	20	23.5	0.6	1.26	25	18 2134
	40	40	20	23.5	0.6	1.54	25	18 2135

Silver-plated design upon request.



## Insulated wire end ferrules, in tapes

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Insulation: Polypropylene
- Temperature resistance -35 °C to +105 °C

### Colour row according to DIN 46228, part 4

Cross section (mm <sup>2</sup> )	Length (mm)	Insulation colour	PU/pcs.	Article no.
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0.5	14	white	500	18 4500
0.75	14	grey	500	18 4502
1	14	red	500	18 4504
1.5	14	black	500	18 4506
2.5	14	blue	400	18 4508

### Colour row 1

Cross section (mm <sup>2</sup> )	Length (mm)	Insulation colour	PU/pcs.	Article no.
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0.5	14	white	500	18 4460
0.75	14	blue	500	18 4462
1	14	red	500	18 4464
1.5	14	black	500	18 4466
2.5	14	grey	400	18 4468

### Colour row 2

Cross section (mm <sup>2</sup> )	Length (mm)	Insulation colour	PU/pcs.	Article no.
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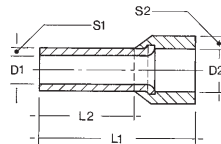
0.5	14	orange	500	18 4480
0.75	14	white	500	18 4482
1	14	yellow	500	18 4484
1.5	14	red	500	18 4486
2.5	14	blue	400	18 4488



## Insulated wire end ferrules according to DIN 46228, Part 4 and special dimensions

### Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Insulation: Polypropylene
- Temperature resistance -35 °C to +105 °C
- For effortless attachment to finely stranded copper conductors, prevents damage and fanning out



Cross section (mm <sup>2</sup> )	Length without insulation L2	Total length L1	D1	S1	S2	D2	Insulation colour	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5	6	12	1	0.15	0.25	2.6	white	0.01	100	18 2310
	8	14	1	0.15	0.25	2.6		0.01	100	18 2312
	10	16	1	0.15	0.25	2.6		0.01	100	18 2314
0.75	6	12	1.2	0.15	0.25	2.8	grey	0.01	100	18 2316
	8	14	1.2	0.15	0.25	2.8		0.01	100	18 2318
	10	16	1.2	0.15	0.25	2.8		0.01	100	18 2320
1	12	18	1.2	0.15	0.25	2.8	red	0.01	100	18 2322
	6	12	1.4	0.15	0.25	3		0.01	100	18 2324
	8	14	1.4	0.15	0.25	3		0.01	100	18 2326
1.5	10	16	1.4	0.15	0.25	3	black	0.01	100	18 2328
	12	18	1.4	0.15	0.25	3		0.01	100	18 2330
	8	14	1.7	0.15	0.25	3.5		0.01	100	18 2332
1.5	10	16	1.7	0.15	0.25	3.5	black	0.01	100	18 2334
	12	18	1.7	0.15	0.25	3.5		0.02	100	18 2335
	18	24	1.7	0.15	0.25	3.5		0.02	100	18 2336

## Insulated wire end ferrules according to DIN 46228,

### Part 4 and special dimensions See previous page for description

Cross section (mm <sup>2</sup> )	Length without insulation L2	Total length L1	D1	S1	S2	D2	Insulation colour	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
2.5	8	15	2.2	0.15	0.25	4.2	blue	0.02	100	18 2338
	12	18	2.2	0.15	0.25	4.2		0.03	100	18 2340
	18	25	2.2	0.15	0.25	4.2		0.03	100	18 2342
4	10	17	2.8	0.2	0.3	4.8	grey	0.03	100	18 2344
	12	20	2.8	0.2	0.3	4.8		0.03	100	18 2346
	18	26	2.8	0.2	0.3	4.8		0.03	100	18 2348
6	12	20	3.5	0.2	0.3	6.3	yellow	0.06	100	18 2350
	18	26	3.5	0.2	0.3	6.3		0.06	100	18 2352
10	12	22	4.5	0.2	0.4	7.6	red	0.06	100	18 2354
	18	28	4.5	0.2	0.4	7.6		0.08	100	18 2356
16	12	24	5.8	0.2	0.4	8.8	blue	0.08	100	18 2358
	18	28	5.8	0.2	0.4	8.8		0.08	100	18 2360
25	16	30	7.3	0.2	0.4	11.2	yellow	0.13	50	18 2362
	22	36	7.3	0.2	0.4	11.2		0.16	50	18 2364
35	16	30	8.3	0.2	0.4	12.7	red	0.21	50	18 2366
	25	39	8.3	0.2	0.4	12.7		0.22	50	18 2368
50	20	36	10.3	0.3	0.5	15	blue	0.30	50	18 2370
	25	40	10.3	0.3	0.5	15		0.35	50	18 2372
70	21	37	13.5	0.4	0.6	16	yellow	0.67	25	18 2374
95	25	44	14.7	0.4	0.6	18	red	0.67	25	18 2376
120	27	48	16.7	0.45	0.7	20	blue	0.93	25	18 2378
150	32	58	19	0.5	1	23	yellow	1.06	25	18 2380

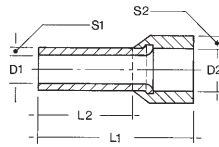
## Insulated wire end ferrules, dimensions according to DIN 46228,

### Part 4, colour row 1

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Insulation: Polypropylene
- Temperature resistance -35 °C to +105 °C

• For effortless attachment to finely stranded copper conductors, prevents damage and fanning out



Cross section (mm <sup>2</sup> )	Length without insulation L2	Total length L1	D1	S1	S2	D2	Insulation colour	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.25	6	10	0.8	0.15	0.25	1.8	violet	0.01	100	18 0988
	8	12	0.8	0.15	0.25	1.8		0.01	100	18 0990
0.34	6	10	0.9	0.15	0.25	2	pink	0.01	100	18 0992
	8	12	0.9	0.15	0.25	2		0.01	100	18 0994
0.5	6	12	1	0.15	0.25	2.6	white	0.01	100	18 0996
	8	14	1	0.15	0.25	2.6		0.01	100	18 0998
	8	14	1	0.15	0.25	2.6		0.01	500	18 4998
	10	16	1	0.15	0.25	2.6		0.01	100	18 0999
0.75	6	12	1.2	0.15	0.25	2.8	blue	0.01	100	18 0940
	8	14	1.2	0.15	0.25	2.8		0.01	100	18 1000
	8	14	1.2	0.15	0.25	2.8		0.01	500	18 5000
	10	16	1.2	0.15	0.25	2.8		0.01	100	18 1001
1	12	18	1.2	0.15	0.25	2.8		0.01	100	18 0942
	6	12	1.4	0.15	0.25	3	red	0.01	100	18 0944
	8	14	1.4	0.15	0.25	3		0.01	100	18 1002
	8	14	1.4	0.15	0.25	3		0.01	500	18 5002
	10	16	1.4	0.15	0.25	3		0.01	100	18 1003
1.5	12	18	1.4	0.15	0.25	3		0.02	100	18 0946
	8	14	1.7	0.15	0.25	3.5	black	0.01	100	18 1004
	8	14	1.7	0.15	0.25	3.5		0.01	500	18 5004
	10	16	1.7	0.15	0.25	3.5		0.01	100	18 0948
	12	18	1.7	0.15	0.25	3.5		0.02	100	18 0949

## Insulated wire end ferrules, dimensions according to DIN 46228, part 4, colour row 1

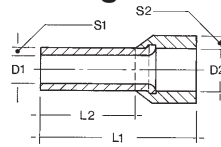
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								PU/pcs.	Article no.
	18	24	1.7	0.15	0.25	3.5		100	18 1005
	18	24	1.7	0.15	0.25	3.5		500	18 5005
2.5	8	15	2.2	0.15	0.25	4.2	grey	100	18 1006
	8	15	2.2	0.15	0.25	4.2		500	18 5006
	12	18	2.2	0.15	0.25	4.2		100	18 0950
	18	25	2.2	0.15	0.25	4.2		100	18 1007
	18	25	2.2	0.15	0.25	4.2		500	18 5007
4	10	17	2.8	0.2	0.3	4.8	orange	100	18 1008
	10	17	2.8	0.2	0.3	4.8		500	18 5008
	12	20	2.8	0.2	0.3	4.8		100	18 0952
	18	26	2.8	0.2	0.3	4.8		100	18 1009
	18	26	2.8	0.2	0.3	4.8		500	18 5009
6	12	20	3.5	0.2	0.3	6.3	green	100	18 1010
	12	20	3.5	0.2	0.3	6.3		500	18 5010
	18	26	3.5	0.2	0.3	6.3		100	18 1012
	18	26	3.5	0.2	0.3	6.3		500	18 5012
10	12	22	4.5	0.2	0.3	7.6	brown	100	18 1014
	12	22	4.5	0.2	0.3	7.6		500	18 5014
	18	28	4.5	0.2	0.3	7.6		100	18 1016
	18	28	4.5	0.2	0.3	7.6		500	18 5016
16	12	24	5.8	0.2	0.4	8.8	ivory	100	18 1018
	12	24	5.8	0.2	0.4	8.8		500	18 5018
	18	28	5.8	0.2	0.4	8.8		100	18 1020
	18	28	5.8	0.2	0.4	8.8		500	18 5020
25	16	30	7.3	0.2	0.4	11.2	black	0.13	50 18 1022
	22	36	7.3	0.2	0.4	11.2		0.16	50 18 1023
35	16	30	8.3	0.2	0.4	12.7	red	0.21	50 18 1024
	25	39	8.3	0.2	0.4	12.7		0.22	50 18 1025
50	20	36	10.3	0.3	0.5	15.0	blue	0.30	50 18 1026
	25	40	10.3	0.3	0.5	15.0		0.35	50 18 1027

## Insulated wire end ferrules, dimensions according to DIN 46228, part 4, colour row 2

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Insulation: Polypropylene
- Temperature resistance -35 °C to +105 °C
- For effortless attachment to finely stranded copper conductors, prevents damage and fanning out



AE

Cross section (mm <sup>2</sup> )	Length without insulation L2	Total length L1	D1	S1	S2	D2	Insulation colour	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.25	6	10	0.8	0.15	0.25	1.8	light blue	0.01	100	18 2188
	8	12	0.8	0.15	0.25	1.8		0.01	100	18 2190
0.34	6	10	0.9	0.15	0.25	2	turquoise	0.01	100	18 2192
	8	12	0.9	0.15	0.25	2		0.01	100	18 2194
0.5	6	12	1	0.15	0.25	2.6	orange	0.01	100	18 2196
	8	14	1	0.15	0.25	2.6		0.01	100	18 2198
	10	16	1	0.15	0.25	2.6		0.01	100	18 2199
0.75	6	12	1.2	0.15	0.25	2.8	white	0.01	100	18 2140
	8	14	1.2	0.15	0.25	2.8		0.01	100	18 2200
	10	16	1.2	0.15	0.25	2.8		0.01	100	18 2201
	12	18	1.2	0.15	0.25	2.8		0.01	100	18 2242
1	6	12	1.4	0.15	0.25	3	yellow	0.01	100	18 2244
	8	14	1.4	0.15	0.25	3		0.01	100	18 2202
	10	16	1.4	0.15	0.25	3		0.01	100	18 2203
	12	18	1.4	0.15	0.25	3		0.02	100	18 2246
1.5	8	14	1.7	0.15	0.25	3.5	red	0.01	100	18 2204
	10	16	1.7	0.15	0.25	3.5		0.01	100	18 2248
	12	18	1.7	0.15	0.25	3.5		0.02	100	18 2249
	18	24	1.7	0.15	0.25	3.5		0.02	100	18 2205
2.5	8	14	2.2	0.15	0.25	4.2	blue	0.02	100	18 2206
	12	18	2.2	0.15	0.25	4.2		0.03	100	18 2250
	18	25	2.2	0.15	0.25	4.2		0.03	100	18 2207

## Insulated wire end ferrules, dimensions according to DIN 46228, part 4, colour row 2

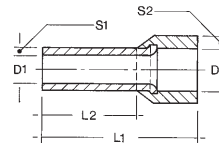
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									PU/pcs.	Article no.
4	10	17	2.8	0.2	0.3	4.8	grey	0.03	100	18 2208
	12	20	2.8	0.2	0.3	4.8		0.03	100	18 2252
	18	26	2.8	0.2	0.3	4.8		0.04	100	18 2209
6	12	20	3.5	0.2	0.3	6.3	black	0.06	100	18 2210
	18	26	3.5	0.2	0.3	6.3		0.06	100	18 2212
10	12	22	4.5	0.2	0.4	7.6	ivory	0.06	100	18 2214
	18	28	4.5	0.2	0.4	7.6		0.08	100	18 2216
16	12	24	5.8	0.2	0.4	8.8	green	0.08	100	18 2218
	18	28	5.8	0.2	0.4	8.8		0.08	100	18 2220
25	16	30	7.3	0.2	0.4	11.2	brown	0.13	50	18 2222
	22	36	7.3	0.2	0.4	11.2		0.16	50	18 2223
35	16	30	8.3	0.2	0.4	12.7	beige	0.21	50	18 2224
	25	39	8.3	0.2	0.4	12.7		0.22	50	18 2225
50	20	36	10.3	0.3	0.5	15	olive	0.35	50	18 2226
	25	40	10.3	0.3	0.5	15		0.35	50	18 2227

## Insulated twin wire end ferrules

Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Insulation: Polypropylene
- Temperature resistance -35 °C to +105 °C
- For effortless work with 2 finely stranded copper conductors, prevents damage and fanning out

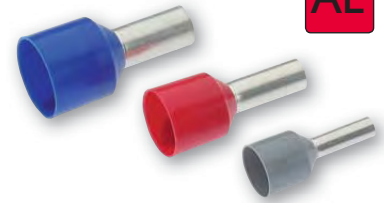


Colour row according to DIN 46228, part 4

Cross section (mm <sup>2</sup> )	Length without insulation L2	Total length L1	D1	S1	S2	D2	Insulation colour	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
2 x 0.5	8	15	1.5	0.15	0.25	2.5	white	0.03	100	18 2460
2 x 0.75	8	15	1.8	0.15	0.25	2.8	grey	0.03	100	18 2462
	10	17	1.8	0.15	0.25	2.8		0.03	100	18 2464
2 x 1	8	15	2	0.15	0.25	3.4	red	0.04	100	18 2466
	10	17	2	0.15	0.25	3.4		0.04	100	18 2468
2 x 1.5	8	16	2.3	0.15	0.25	3.6	black	0.02	100	18 2470
	12	20	2.3	0.15	0.25	3.6		0.03	100	18 2472
2 x 2.5	10	18.5	2.9	0.2	0.25	4.2	blue	0.07	100	18 2474
	13	21.5	2.9	0.2	0.25	4.2		0.08	100	18 2476
2 x 4	12	23	3.8	0.2	0.3	4.9	grey	0.11	100	18 2478
2 x 6	14	26	4.9	0.2	0.3	5.9	yellow	0.09	100	18 2480
2 x 10	14	26	6.5	0.2	0.4	7.2	red	0.13	100	18 2482
2 x 16	14	30	8.3	0.2	0.4	9.6	blue	0.13	100	18 2484
Colour row 1										
2 x 0.5	8	15	1.5	0.15	0.25	2.5	white	0.03	100	18 2400
2 x 0.75	8	15	1.8	0.15	0.25	2.8	blue	0.03	100	18 2402
	10	17	1.8	0.15	0.25	2.8		0.03	100	18 2404
2 x 1	8	15	2	0.15	0.25	3.4	red	0.04	100	18 2406
	10	17	2	0.15	0.25	3.4		0.04	100	18 2408
2 x 1.5	8	16	2.3	0.15	0.25	3.6	black	0.02	100	18 2410
	12	20	2.3	0.15	0.25	3.6		0.03	100	18 2412
2 x 2.5	10	18.5	2.9	0.2	0.25	4.2	grey	0.07	100	18 2414
	13	21.5	2.9	0.2	0.25	4.2		0.08	100	18 2416
2 x 4	12	23	3.8	0.2	0.3	4.9	orange	0.11	100	18 2418
2 x 6	14	26	4.9	0.2	0.3	5.9	green	0.09	100	18 2420
2 x 10	14	26	6.5	0.2	0.4	7.2	brown	0.13	100	18 2422
2 x 16	14	30	8.3	0.2	0.4	9.6	ivory	0.13	100	18 2424
Colour row 2										
2 x 0.5	8	15	1.5	0.15	0.25	2.5	orange	0.03	100	18 2430
2 x 0.75	8	15	1.8	0.15	0.25	2.8	white	0.03	100	18 2432
	10	17	1.8	0.15	0.25	2.8		0.03	100	18 2434
2 x 1	8	15	2	0.15	0.25	3.4	yellow	0.04	100	18 2436
	10	17	2	0.15	0.25	3.4		0.04	100	18 2438
2 x 1.5	8	16	2.3	0.15	0.25	3.6	red	0.02	100	18 2440
	12	20	2.3	0.15	0.25	3.6		0.03	100	18 2442
2 x 2.5	10	18.5	2.9	0.2	0.25	4.2	blue	0.07	100	18 2444
	13	21.5	2.9	0.2	0.25	4.2		0.08	100	18 2446
2 x 4	12	23	3.8	0.2	0.3	4.9	grey	0.11	100	18 2448
2 x 6	14	26	4.9	0.2	0.3	5.9	black	0.09	100	18 2450
2 x 10	14	26	6.5	0.2	0.4	7.2	ivory	0.13	100	18 2452
2 x 16	14	30	8.3	0.2	0.4	9.6	green	0.13	100	18 2454

# Insulated wire end ferrules for short-circuit-proof and short-to-ground-proof conductors (NSGAFÖU), colour row according to DIN 46228, part 4

AE



## Technical data

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Polypropylene insulation
- Temperature resistance -35 °C to +110 °C
- With large plastic collar for accepting conductors with thick insulation

Cross section (mm <sup>2</sup> )	Length without insulation L2	Total length L1	D1	S1	S2	D2	Insulation colour	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
1.5	8	17.5	1.8	0.15	0.25	7	black	0.02	100	18 2500
	10	19.5	1.8	0.15	0.25	7		0.03	100	18 2502
2.5	8	17.5	2.3	0.15	0.25	7.9	blue	0.03	100	18 2504
	12	21.5	2.3	0.15	0.25	7.9		0.04	100	18 2506
4	10	19.5	2.9	0.2	0.3	7.9	grey	0.04	100	18 2508
6	12	23	3.6	0.2	0.3	8.7	yellow	0.07	100	18 2510
10	12	24	4.6	0.2	0.3	10.2	red	0.08	100	18 2512
16	12	25.5	6	0.2	0.3	12.5	blue	0.11	100	18 2514

## Non-insulated wire end ferrule sets

in a practical dispenser, 2500 pieces, sorted

Content:	PU/pcs.	Article no.
• 500 pcs. 0.50 mm <sup>2</sup> 6 mm in length		
• 500 pcs. 0.75 mm <sup>2</sup> 6 mm in length		
• 500 pcs. 1 mm <sup>2</sup> 6 mm in length		
• 500 pcs. 1.50 mm <sup>2</sup> 7 mm in length		
• 500 pcs. 2.50 mm <sup>2</sup> 7 mm in length		

Dispenser with non-insulated wire end ferrules 1 18 1520

in **raaco** - PSC Vario 240 component box, with crimping pliers CIMCO article no. 10 1906, 3500 pieces, sorted

Contents:	PU/pcs.	Article no.
• 1000 pcs. 0.75 mm <sup>2</sup> 6 mm in length		
• 1000 pcs. 1 mm <sup>2</sup> 6 mm in length		
• 750 pcs. 1.50 mm <sup>2</sup> 7 mm in length		
• 750 pcs. 2.50 mm <sup>2</sup> 7 mm in length		

Component box with non-insulated wire end ferrules 1 18 1510

in **raaco** - PSC Vario 340 component box, with universal notch pliers CIMCO article no. 10 1904, 4350 pieces, sorted

Contents:	PU/pcs.	Article no.
• 1000 pcs. 1 mm <sup>2</sup> 6 mm in length		
• 1000 pcs. 1.50 mm <sup>2</sup> 7 mm in length		
• 1000 pcs. 2.50 mm <sup>2</sup> 7 mm in length		
• 500 pcs. 4 mm <sup>2</sup> 9 mm in length		
• 500 pcs. 6 mm <sup>2</sup> 12 mm in length		
• 250 pcs. 10 mm <sup>2</sup> 18 mm in length		
• 100 pcs. 16 mm <sup>2</sup> 18 mm in length		

Component box with non-insulated wire end ferrules 1 18 1512

## Insulated wire end ferrule sets

400 pieces, sorted, in a practical dispenser, stackable

Contents:	PU/pcs.	Article no.
• 50 pcs. 0.5 mm <sup>2</sup> 8 mm in length		
• 100 pcs. 0.75 mm <sup>2</sup> 8 mm in length		
• 100 pcs. 1 mm <sup>2</sup> 8 mm in length		
• 100 pcs. 1.5 mm <sup>2</sup> 8 mm in length		
• 50 pcs. 2.5 mm <sup>2</sup> 8 mm in length		

Colour row 1 1 18 1502

Colour row 2 1 18 1503

Colour row DIN 1 18 1504

100 pieces, sorted, in a practical dispenser, stackable

Contents:	PU/pcs.	Article no.
• 50 pcs. 4 mm <sup>2</sup> 10 mm in length		
• 20 pcs. 6 mm <sup>2</sup> 12 mm in length		
• 20 pcs. 10 mm <sup>2</sup> 12 mm in length		
• 10 pcs. 16 mm <sup>2</sup> 12 mm in length		

Colour row 1 1 18 1505

Colour row 2 1 18 1506

Colour row DIN 1 18 1507



## 1 Modular plugs

for telecommunication and data networks, quality plugs for at least 500 plug cycles, contacts with 50  $\mu$  inches (1.27 micrometres) gold-plated, housing made of flame-retardant polycarbonate, tensile load-bearing capacity cable to plug at least 89 N.

## 3 Unshielded modular plugs (at least cat. 3)

suitable for flat and round cables

for flexible conductors

Designation	Number of positions	Number of contacts	PU/pcs.	Article no.
RJ 10	4	4	100	18 3000
RJ 11	6	4	100	18 3002
RJ 12	6	6	100	18 3004
RJ 45	8	8	50	18 3008

For solid conductors

Designation	Number of positions	Number of contacts	PU/pcs.	Article no.
RJ 45	8	8	50	18 3010



## 5 Shielded modular plugs (at least cat. 5e)

suitable for round cables, includes a threading ridge for each plug for easily placing the conductor in the correct crimping position, for crimping with CIMCO crimping pliers CIMCO article no. 10 6201.

for flexible conductors and solid conductors

Designation	Number of positions	Number of contacts	PU/pcs.	Article no.
RJ 45	8	8	50	18 3012

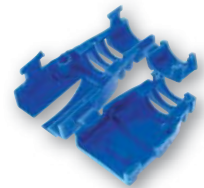


## 12 Kink protection sleeve for modular plugs

can be opened and closed again at any time, can be subsequently attached to and removed from plug,

for shielded and unshielded modular plugs RJ 45, for round cables up to 6 mm  $\varnothing$

black	25	18 3020
red	25	18 3022
white	25	18 3024
blue	25	18 3026
yellow	25	18 3028



## 16 Service case NETZWERKTECHNIK I

raaco, -CARRY-LITE 55 service case containing:

Wire stripper DATA STRIP	1	12 0092
Insertion tool ECONOMY	1	11 8017
Crimping pliers 4-, 6-, 8-pole, unshielded	1	10 6200
Crimping pliers 8-pole, shielded	1	10 6201
Modular plug 4-pole RJ 10 unshielded	100	18 3000
Modular plug 6-pole RJ 12 unshielded	100	18 3004
Modular plug 8-pole RJ 45, unshielded for flexible conductors	50	18 3008
Modular plug 8-pole RJ 45 shielded	50	18 3012
Kink protection sleeve for modular plugs, black	25	18 3020
Kink protection sleeve for modular plugs, red	25	18 3022
413 x 330 x 55	1	18 1300



## 22 Service case NETZWERKTECHNIK II

raaco, -CARRY-LITE 55 service case containing:

Modular plug 4-pole RJ 10 unshielded	100	18 3000
Modular plug 6-pole RJ 12 unshielded	100	18 3004
Modular plug 8-pole RJ 45, unshielded for flexible conductors	50	18 3008
Modular plug 8-pole RJ 45 shielded	50	18 3012
Kink protection sleeve for modular plugs, black	25	18 3020
Kink protection sleeve for modular plugs, red	25	18 3022
Roll of Velcro tape, 16 mm wide x 25 mm in length, black	1	18 1922
413 x 330 x 55	1	18 1302



## Photovoltaic connector system

Using this new photovoltaic connector saves time and effort on the construction site.

The CIMCO connector system is compatible with the MC4 market standard and fits all common solar cables from 2.5 mm<sup>2</sup> to 6 mm<sup>2</sup>.

Consisting of a plug and socket connection system, including plastic housing; each package contains 100 plugs–crimp contacts as well as plastic housing in a polythene bag and 100 sockets–crimp contacts as well as plastic housing in a polythene bag.

Specifications:

2.5 to 6 mm<sup>2</sup>, voltage range: 1000 V, current capacity: 30 A (4 mm<sup>2</sup>, 6 mm<sup>2</sup>), contact resistance of the connector system:

5 mΩ, diameter of the plug contact: 4 mm, protection class: IP 67, temperature range: -40 °C / +85 °C,

insulation material: PC/PA, contact material: copper, silver-plated, safety class: II,

certification: TÜV, crimping range: 2.5 - 6 mm<sup>2</sup>

100 18 0000



## Photovoltaic MC3 adapter system

Adapter set for plugging onto MC3 contacts, for crimping with MC4-compatible tools 1.5 to 4 mm<sup>2</sup>

Consisting of an MC3 plug and socket adapter system, including plastic housing; each package contains 1 plug–crimp contacts as well as plastic housing and 1 socket–crimp contacts as well as plastic housing.

Specifications:

Pin dimensions: ø 3.0 mm, cable diameter: 5.0 mm to 8.0 mm, cable cross section: 1.5 – 4.0 mm<sup>2</sup>, AWG 16/14/12,

contact type: stamp roll contact, nominal voltage: 1000 V DC, nominal current: 25 A at 70 °C / 20A at 85 °C,

contact resistance: <5 mΩ Ohm, protection class: IP 67, temperature range: -40 °C / +90 °C, certification: TÜV

1 18 0003



## Photovoltaic MC4 unlocking tool

Unlocking tool for releasing the plug connection of photovoltaic connectors.

1 18 0004



## Photovoltaic MC4 Y-distributor

Y-distributor on an MC4-basis.

Specifications:

Pin dimensions: ø 4.0 mm, contact type: stamp roll contact, nominal voltage: 1000V DC, nominal current: 30A at 70 °C / 25A

at 85 °C, contact resistance: <5 mΩ Ohm, protection class: IP 67, temperature range: -40 °C / +90 °C, certification: TÜV

MMF = 1 x female input and 2 x male outputs 1 18 0005

FFM = 1 x male input and 2 x female outputs 1 18 0006



## Earthing terminal SOLFIL

CIMCO's secure and permanent solution for earthing PV panels. The choice for simple and permanent protection. It is necessary to protect photovoltaic panels by earthing. It should be permanent and guarantee protection against the effects of lightning strikes and electromagnetic disturbances over the entire service life. The connection series offers you solutions that are adapted to the various types of photovoltaic panels. A secure earthing connection is produced by establishing an optimal electrical contact between the panel housing and the earthing conductor. The module frames are made of anodised aluminium, or whose surface is treated in another way. These surface treatments protect against rust but are not conductive.

Thanks to the series, electrical contact with the aluminium of the panel is possible. Either by a thread on the screwed models or secured through the recessed thread with bolt connection with the help of a serrated washer, that scrapes off the anodising when tightened. The connection is secured by tightening the earthing conductor with a maximum cross section of 10 mm<sup>2</sup>. With an insulated conductor you have to remove the insulation on 30 mm. The models are made of stainless steel which guarantees outstanding rust protection and galvanic compatibility with the aluminium.

### Attachment to an existing bore

with bolts, each bore  $\varnothing$  6 mm (0.26"). The serrated washer ensures the electrical contact.

Cross section range of the earthing conductor in mm<sup>2</sup> [multi-stranded or solid]: 4, 6, 10, 4+4, 6+6

1 18 8012

### Attachment to an existing bore

with self-tapping screw, each bore  $\varnothing$  4 mm (0.16").

Cross section range of the earthing conductor in mm<sup>2</sup> [multi-stranded or solid]: 4, 6, 10, 4+4, 6+6

1 18 8014

### Attachment outside the bore

with self-drilling screw.

Cross section range of the earthing conductor in mm<sup>2</sup> [multi-stranded or solid]: 4, 6, 10, 4+4, 6+6

1 18 8016

### Attachment outside the bore

with self-drilling screw.

Cross section range of the earthing conductor in mm<sup>2</sup> [multi-stranded or solid]: 16, 16+4, 16+6, 25

1 18 8018

## Stainless steel (VA) tubular cable lugs

- Material: V2A
- Temperature resistant up to 400 °C
- Resistant to acid and rust
- Ring shaped
- Especially suitable for earthing and lightning protection of aluminium support and frame elements in the photovoltaic field.
- The stainless steel cable lug can be used to connect copper conductors to aluminium elements, since VA steel does not react corrosively or electrochemically with either of these materials.

When commercially available tubular copper cable lugs are used, the less precious metal (in this case aluminium) can be successively stripped away under the influence of moisture and voltage and thus destroy the frame profiles!

Nominal cross section mm <sup>2</sup>	Connection bolt $\varnothing$	Weight / 100 pcs. in kg.		
4 - 6	M 8	0.28	100	18 8686
10	M 8	0.78	100	18 8704
10	M 10	0.77	100	18 8705
16	M 8	0.6	50	18 8712
16	M 10	0.6	50	18 8714





# CABLE TIES

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## Standard

The standard solution for the tradesman, tested quality at good prices. Available in different colours.

## Re-openable

For multiple use.

## Steel tongue

Hard-wearing, with stainless steel tongue.



## Steel cable ties

The anti-magnetic stainless steel ties coated and uncoated for demanding applications, conditions and environment.

## TEFZEL cable ties

Resistant to exposure to chemicals, radioactivity and environmental factors.

## Cable ties

### Raw material:

Pure polyamide 6.6 (PA 6.6, nylon) with no recycling material content, raw materials procured solely from leading quality manufacturers, colours: natural or black (RAL 9011) through enrichment with carbon (carbon black).

### Material properties:

Self-extinguishing according to UL 94-V2, melting point +260 °C, halogen-free, silicon-free, non-toxic, food-safe according to Recommendation "X" (10) BGA (German Health Authority), non-conductive, high abrasion resistance, low frictional resistance, impact-resistant, recyclable. Black cable ties retain the moisture in the plastic, thus preventing embrittlement, hardening and fragility. Black cable ties are thus suitable for outdoor applications and weatherproof for at least two years.

### Chemical resistance:

Resistant to (among others) oils, petroleum products (e.g. petrol, kerosene, fats and lubricants), hydrocarbons (e.g. lower alcohols, acetone), cleaning agents and solvents, alkalis, mould, salt water. Conditionally resistant among others, to strongly diluted acids. Non-resistant to, amongst others, phenols, oxidising chemicals, formic acid, phosphoric acid, chlorine, chloric acid (e.g. hydrochloric acid, butanoic acid), benzoic acid, mineral acids.

### Conditions for processing and use:

Installation temperature (during assembly) -10 °C to +80 °C, continuous service temperature (after assembly) -40 °C to +105 °C, possible changes in length depending on temperature (between -20 °C and +100 °C) maximum ± 1.5%, depending on relative humidity (between 25% and 100%) maximum ± 3%, no changes in length due to ageing if cable ties are not under load.

### Information for the storage of cable ties:

Leave cable ties in the sealed packaging until needed to prevent drying out, store in cool, not particularly dry places, away from sources of heat. Naturally coloured cable ties can turn yellow after an extended period of time due to temperature-dependent oxidation. This will not affect performance properties.

### Packaging:

Packaged in synthetic transparent foil, 100 % recyclable, vacuum sealed.

### Approvals and Quality Certifications:

Products comply with EN 62275, the IEC Standard IEC 92-101, flame retardant according to UL 94-V2, "Yellow Card" certification from Underwriters Laboratories Inc., self-extinguishing in accordance with UL 94, flame class 94V-2, self-extinguishing in accordance with ISO 1210, flame class FV-2, minimum binding strength according to Standard MIL-S-23190 E.



UNDERWRITERS  
LABORATORIES INC.



GERMANISCHER  
LLOYD



natural colour

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength kp	N				
2.5	75	2 - 16	9	88	100	18 1360		
	100	2 - 24					100	18 1361
	135	2 - 35					100	18 1362
	160	2 - 42					100	18 1402
	200	2 - 55					100	18 1363
3.5	140	2.5 - 36	18	176	100	18 1364		
	200	2.5 - 55					100	18 1404
	280	2.5 - 80					100	18 1378
4.5	160	2.5 - 40	22	216	100	18 1365		
	180	3 - 45					100	18 1366
	200	3 - 51					100	18 1367
	250	5 - 70					100	18 1379
	280	5 - 76					100	18 1368
	360	5 - 101					100	18 1369
7.5	180	5 - 46	60	588	100	18 1371		
	240	5 - 64					100	18 1372
	280	5 - 76					100	18 1377
	360	5 - 101					100	18 1373
	450	18 - 132					100	18 1374
9.0	540	20 - 160	80	784	100	18 1375		
	750	32 - 222					100	18 1376
	780	20 - 235					100	18 1390
	920	40 - 280					100	18 1391
12.5	1220	50 - 375	110	1080	100	18 1394		
	500	10 - 140					50	18 1392
	750	40 - 225					50	18 1393
	1000	40 - 300			50	18 1395		



## Cable ties

black (RAL 9011) = weather-proof design, conditionally UV resistant.

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength			
			kp	N		
2.5	75	2 - 16	9	88	100	18 1860
	100	2 - 24				18 1861
	135	2 - 35				18 1862
	160	2 - 42				18 1802
	200	2 - 55				18 1863
3.5	140	2.5 - 36	18	176	100	18 1864
	200	2.5 - 55				18 1804
	280	2.5 - 80				18 1878
4.5	160	2.5 - 40	22	216	100	18 1865
	180	3 - 45				18 1866
	200	3 - 51				18 1867
	250	5 - 70				18 1879
	280	5 - 76				18 1868
7.5	180	5 - 46	60	588	100	18 1871
	240	5 - 64				18 1872
	280	5 - 76				18 1877
	360	5 - 101				18 1873
	450	18 - 132				18 1874
	540	20 - 160				18 1875
	750	32 - 222				18 1876
9.0	780	20 - 235	80	784	100	18 1890
	920	40 - 280				18 1891
	1220	50 - 375				18 1894
12.5	500	10 - 140	110	1080	50	18 1892
	750	40 - 225				18 1893
	1000	40 - 300				18 1895



## Re-openable cable ties

made of polyamide 6.6, after opening re-usable as often as required, simple release by pressing a finger on the tab

Width mm	Length mm	Bundle ø mm	Minimum tensile strength			
			kp			
natural colour						
7.5	200	to 50	36		100	18 1490
	280	to 76				18 1491
	360	to 100				18 1492
black (RAL 9011) = weather-proof design, UV resistance						
7.5	200	to 50	36		100	18 1495
	280	to 76				18 1496
	360	to 100				18 1497

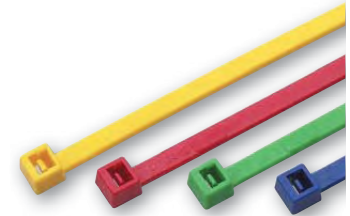


## Coloured cable ties

for labelling and marking

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength		PU	Article no.
			kp	N		
red (RAL 3000)						
2.5	100	2 - 24	9	88	100	18 1450
3.5	140	2.5 - 36	18	176	100	18 1452
4.5	200	3 - 51	22	216	100	18 1454
	280	5 - 76			100	18 1456
blue (RAL 5002)						
2.5	100	2 - 24	9	88	100	18 1460
3.5	140	2.5 - 36	18	176	100	18 1462
4.5	200	3 - 51	22	216	100	18 1464
	280	5 - 76			100	18 1466
green (RAL 6024)						
2.5	100	2 - 24	9	88	100	18 1470
3.5	140	2.5 - 36	18	176	100	18 1472
4.5	200	3 - 51	22	216	100	18 1474
	280	5 - 76			100	18 1476
yellow (RAL 1021)						
2.5	100	2 - 24	9	88	100	18 1480
3.5	140	2.5 - 36	18	176	100	18 1482
4.5	200	3 - 51	22	216	100	18 1484
	280	5 - 76			100	18 1486

Other colours available upon request. Please inquire for minimum order quantity, price and delivery times.



## Cable ties with labelling surface

made of polyamide 6.6, natural colour

Width mm	Length mm	Cable harness ø mm	Size mm x mm	PU	Article no.
2.5	100	4.0 - 18	8 x 25		
2.5	200	4.0 - 50	8 x 25	100	18 1422
4.8	190	15 - 50	10 x 28	100	18 1424
4.8	270	15 - 75	10 x 28	100	18 1426



## Printed cable ties

Cable ties can be custom printed, also with logo, serial numbers and variable printing ink colour.

For special marking, registration and marking of cables, equipment and many other components, even for closure and tamper-proof sealing of packages, mailing bags, sacks, etc. For use in electrical engineering, machine- and vehicle construction, logistics, food and pharmaceutical industries, public authorities, etc. For cable ties of any length with at least 1 mm thickness, min. order quantity per printing order 30,000 cable ties.

We are happy to advise you about technical details and questions of processing, delivery times, pricing etc.



## Plug-in cable ties

Cable ties made from polyamide 6.6, black, self-extinguishing according to UL 94 V-2, with expansion anchor head for fast and safe installation in drill holes (approx. 5 mm ø) by means of force fitting, affixing and bundling of cables in one working step, especially suited for use in vehicle and engine construction, as well as the aerospace industry.

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength		PU	Article no.
			kp	N		
3.5	140	max. 32	18	176	100	18 1850



## Cable ties with steel tongue

made of polyamide 6.6, with corrosion-resistant, anti-magnetic, stainless steel tongue  
natural colour

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength			
			kp	N		
2.5	100	2 - 16	8	80	100	18 1338
	200	2 - 50			100	18 1336
2.4	356	2 - 102			100	18 1337
3.5	140	2 - 29	18	180	100	18 1339
	200	2 - 50			100	18 1340
	280	2 - 76			100	18 1341
3.6	368	2 - 103			100	18 1342
4.5	200	3.5 - 54	22	220	100	18 1343
	290	3.5 - 78			100	18 1344
	360	3.5 - 102			100	18 1345
7.5	360	6 - 90	55	540	50	18 1347
7.0	762	6 - 229			50	18 1348

black

2.5	100	2 - 16	8	80	100	18 1738
	200	2 - 50			100	18 1736
2.4	356	2 - 102			100	18 1737
3.5	140	2 - 29	18	180	100	18 1739
	200	2 - 50			100	18 1740
	280	2 - 76			100	18 1741
3.6	368	2 - 103			100	18 1742
4.5	200	3.5 - 54	22	220	100	18 1743
	290	3.5 - 78			100	18 1744
	360	3.5 - 102			100	18 1745
7.5	360	6 - 90	55	540	50	18 1747
7.0	762	6 - 229			50	18 1748

Packaging unit 1000 pieces upon request.

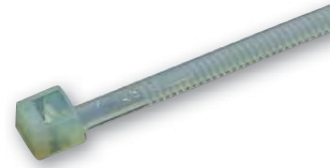


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## Heat-resistant cable ties

Special additives to the raw material create permanently temperature-resistant cable ties up to +130 °C, properties otherwise the same as standard cable ties, basic material pure polyamide 6.6 without recycling content, colour pale green.

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength kpN			
3.5	140	2.5 - 36	18	176	100	18 1710
4.5	200	3 - 51	22	216	100	18 1712
	280	5 - 76			100	18 1713
	360	5 - 101			100	18 1714
7.5	360	5 - 101	60	588	100	18 1716



## UV and cold-resistant cable ties

Continual exposure to UV radiation and cold causes standard cable ties to become brittle. They will eventually crack following continuous exposure. The addition of special carbons increases the service life of UV-resistant cable ties by approx. a factor of ten, for up to 10 years when used correctly. They are also resistant to cold up to -40 °C.

These cable ties are thus ideal for outdoor use and at continuously low temperatures.

Flammability rating according to UL 94 HB, colour black (RAL 9011).

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength			
			kp	N		
3.5	140	2.5 - 36	16	158	100	18 1720
4.5	200	3 - 51	20	194	100	18 1722
	280	5 - 76			100	18 1723
	360	5 - 101			100	18 1724
7.5	360	5 - 101	54	529	100	18 1726



## Flame-resistant, self-extinguishing cable ties

for use in areas requiring especially high flame retardant properties. Flame retardance according to UL 94 V-0:

The flame-retardant material must not burn longer than 10 seconds nor ignite combustible materials underneath it.

Halogen-free, can be used in a temperature range of -20 °C to +80 °C. Colour milk white.

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength			
			kp	N		
3.5	140	2.5 - 36	14	140	100	18 1728
	280	5 - 76			100	18 1731
	360	5 - 101			100	18 1732
7.5	360	5 - 101	48	470	100	18 1734



## TEFZEL® cable ties

Cable ties made from ethylene tetrafluorethylene copolymer. Very high resistance to UV radiation, radioactivity, many aggressive chemicals (incl. acids, alkalis, oxidising agents, metal salt solutions, oils, fats), windproof and weatherproof, does not absorb water, heat-stable and flame-retardant (UL 94 V 0), service temperature -50 °C to +150 °C, the ideal tie for use in nuclear power plants, the chemical industry, refineries, etc.

Width mm	Length mm	Cable harness ø mm	Min. tensile strength			
			N			
4.8	186	46	100		100	18 1487
	360	104	100		100	18 1488
7.0	338	85	320		50	18 1489



## Fastening element for cable ties

natural colour

Fastening	Dimensions mm	for cable ties up to max. mm width	for screw up to ø mm		
For screwing	20 x 10	4.8	4	100	18 1380
	30 x 15	9.0	4	100	18 1389
For bonding					
Adhesive (self-adhesive) + screw, natural colours	19 x 19	3.6	4	100	18 1382
Adhesive (self-adhesive) + screw, black	19 x 19	3.6	4	100	18 1882
Adhesive (self-adhesive) + screw, natural colours	27 x 27	4.8	4	100	18 1384
Adhesive (self-adhesive) + screw, black	27 x 27	4.8	4	100	18 1884



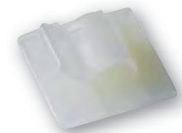
## Cable clips

Suitable for fastening and release at any time of one or several hoses, round cables and lines of different diameters. Especially suitable when laying cables on very smooth, hard surfaces and in places difficult to access, where the use of normal fastening elements / cable ties is not possible.

Made from polyamide 6.6, natural colour, self-adhesive.

Black available on request.

Length mm	Width mm	Height mm	max. cable ø mm		
19	19	10	5	100	18 1381
26	26	13	10	100	18 1383
26	26	18	15	100	18 1385



## Wall dowel cable tie holder

For fastening cables, cable bundles, pipes/tubes etc. on masonry, for drilled holes 7 to 8 mm in diameter, screw-on head for easy adjustment of height and alignment of the holding block, distance from cable to wall approx. 12 mm

for cable ties up to 9 mm in width	10 x 13	100	18 1386
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## Spiral bands

to bundle and protect cables in cable manufacturing, in the electronics industry, as well as in switch cabinet-, controller- and plant engineering. For efficient and tidy bundling and laying of cables, wiring, cable harnesses and wire bundles. Also for protecting cables from abrasion or other damage, as well as for stiffening cable harnesses. Customised lengths possible, thus no material wastage. Easily adaptable to different bundle diameters, re-openable and reusable. In the case of spiral bands wound at a distance, the material usage is lower, the cable bundles are more flexible and branches consisting of one or more cables are possible at any point without problem. Ideal for subsequent winding around cable bundles. Made of polyethylene (PE), temperature-resistant from -20 °C to +65 °C, flame resistant, halogen-free, silicone-free

1 roll each = 10 m length.

Bundle ø mm	Spiral mm width	Outer ø mm		
natural colour				
4 - 20	7.0	6	1	18 6200
6 - 60	11.4	10	1	18 6202
9 - 70	13.9	12	1	18 6204
12 - 80	15.0	15	1	18 6206
15 - 100	18.2	19	1	18 6208
25 - 130	19.6	24	1	18 6210
black				
4 - 20	7.0	6	1	18 6220
6 - 60	11.4	10	1	18 6222
9 - 70	13.9	12	1	18 6224
12 - 80	15.0	15	1	18 6226
15 - 100	18.2	19	1	18 6228
25 - 130	19.6	24	1	18 6230



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### Adjustable cable tie clamping and cutting tool

in pistol format for cable ties with a width of 2.2 mm to 4.8 mm, clamping strength adjustable to max. 12 kg and with automatic cutting tool. Weight 303 g.

adjustable	175 mm	1	10 1930
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### Cable tie clamping and cutting tool Heavy duty

in sheet steel for cable ties with a width of 2.3 mm to 12.5 mm, with integrated cutting tool. Weight 320 g.

heavy duty version	195 mm	1	10 1931
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### Cable tie bag

for all standard cable ties, sewn in hard-wearing, double padded material, with elastic band retainer and belt loop function. When removing individual cable ties from the bag, the elastic band prevents the remaining ties from falling out.

280 mm x 70 mm x 45 mm	1	17 0120
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## Steel cable ties

made from stainless steel 316 (DIN 1.4401), with ball closure, resistant to corrosion and radiation, anti-magnetic, extremely resistant to high temperatures (steel -80 °C to +538 °C) and aggressive chemicals, steel thickness 0.25 mm, Spec./approval UL. For use in machine- and vehicle construction, signalling systems, shipbuilding and mining, in the food- and chemical industries, in power plants, subways, buildings, switch cabinets, on oil rigs etc.

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength			
			kp	N		
4.6	100	20	56	550	100	18 6000
	125	27				18 6001
	150	44				18 6002
	200	50				18 6003
	290	75				18 6004
	360	102				18 6005
7.9	200	50	122	1200	100	18 6010
	290	75				18 6011
	360	102				18 6012
	520	152				25 18 6013
	680	203				25 18 6014
	840	254				25 18 6015
12.0	1000	318	224	2200	25	18 6016
	290	75				18 6020
	360	102				18 6021
	520	152				18 6022
	680	203				18 6023
	840	254				18 6024
	1000	318			25	18 6025

with protective cable coating made from epoxy resin polyester, halogen-free, black

Width mm	Length mm	Cable harness ø mm	Minimum tensile strength			
			kp	N		
4.6	100	20	56	550	100	18 6100
	150	44				18 6102
	200	50				18 6103
	290	75				18 6104
	360	102				18 6105
	520	152				25 18 6106
7.9	200	50	122	1200	100	18 6110
	290	75				18 6111
	360	102				18 6112
	520	152				25 18 6113
	680	203				25 18 6114
	840	254				25 18 6115
12.0	1000	318	224	2200	25	18 6116
	290	75				18 6120
	360	102				18 6121
	520	152				18 6122
	680	203				18 6123
	840	254				18 6124
	1000	318			25	18 6125

## Clamping tool

made of steel, for clamping of steel ties up to 12 mm in width, even with protective cable coating, with rotating cutter for burr-free cutting edges

Length mm			
205	1	10 1935	



## Velcro ties (Velcro tape cable ties and retaining strips)

### Areas of application:

For bundling, fastening, affixing, and many other uses. Especially suitable for the installation of sensitive cables (network cabling, telecommunications, fibre optics) and whenever frequent closing and opening of the ties is required (e.g. pre-assembly of cable harnesses).

### Special product features:

Soft, flexible surface for minimum load on cable bundles, avoidance of unintentional damage of cables due to sharp or hard edges, even and flush contact over the entire circumference of the cable bundle, Velcro closure technique adheres in any position, easy to open and close, quick installation without the use of tools, high tensile and shearing strength, adjustable, multiple-use, low wear for long service life, durable, non-fading colours, washable with no risk of damage, light-resistant, UV-resistant and sweat-resistant, waterproof and resistant to saltwater, no wastage during use, in a range of dimensions.

### Velcro tape belt with synthetic eyelet

manufactured from woven polyamide, in two colours red/black to facilitate use, belt end without hook for rapid opening of the tie, suitable for up to 10,000 tie openings, tensile strength 260 N/cm, thickness approx. 2 mm (the minimum tensile load given is valid with at least 50 mm band overlap), silicone- and halogen-free.

Width mm	Length mm		
25	240	10	18 1900
25	300	10	18 1902
25	360	10	18 1904

### Velcro tape

made of black, extruded polyamide velour laminate, tensile strength min. 120 N/cm, thickness approx. 1.4 mm, self-adhesive back-to-back, suitable for approx. 200 actuations. Apart from the standard colour black, also available in white, red, blue, green, yellow. Please enquire about minimum order quantity, delivery time approx. 8 weeks.

Velcro ties with tab, cut to binding lengths for common electrical installations

Width mm	Length mm		
7	200	25	18 1910
13	200	25	18 1912
16	300	25	18 1914

Velcro ties on rolls, roll length 25 m, tensile strength min. 120 N/cm, custom-cut lengths

Width mm	Length mm		
13	25	1 roll	18 1920
16	25	1 roll	18 1922
20	25	1 roll	18 1924
25	25	1 roll	18 1926
30	25	1 roll	18 1928

### Self-adhesive Velcro tape

self-adhesive hook and loop tape ideal for individual and secure fastenings and yet always separable. Velcro tape can simply be cut to the desired length, according to requirements.

Material strength min. 210 N/cm, shear strength 10.3 N/cm<sup>2</sup>, approx. 10,000 actuations possible.

Adhesive: rubber-resin based, temperature range: -15 °C to +90 °C

Supplied in dispenser box, each with one roll of hook and loop tape

Width mm	Length m		
20	10	1	18 1980
50	25	1	18 1982



## Markings

### Self-laminating cable markers

Cable markers for simple, fast and permanent identification of cables.

Clear PV 006, self-adhesive soft PVC foil, 0.08 mm thick. Protects the inscription block from mechanical influences.

The marker consists of a patented, transparent press-on section, white inscription surface, transparent protective section.

Temperature-resistant from -30 °C to +120 °C, permanent adhesive strength, high UV-resistance. Resistant to dirt, moisture, alcohol, petroleum-based oils. Inscription with pencil, pen, printer etc.

Pocket format

Inscription block mm	Max. cable ø mm	Quantity per package	Length mm		
25 x 25	14	60	75	10	18 2650
25 x 25	38	30	150	10	18 2652
25 x 25	63	30	250	10	18 2654
Sheet					
10 x 23	7	40	38	10	18 2656
25 x 23	14	20	75	10	18 2658

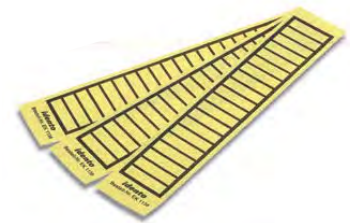


### Hand inscription labels

self-adhesive inscription labels in yellow woven fabric for tagging of electrical systems, equipment identification, stock and item labelling. Easy to inscribe with pencil, pen and typewriter.

Self-adhesive PVC-impregnated woven fabric in yellow with black border, 0.15 mm thick. Temperature-resistant from -30 °C to +80 °C, good adhesion, resistant to ageing.

	Quantity per sheet	Dimensions mm		
	40	11 x 19	10	18 2660
	20	25 x 38	10	18 2662



### Inspection stickers

Inspection stickers are used in quality assurance (QA) processes according to DIN EN ISO 9000 ff, in association with, e.g. legally stipulated inspections and within the context of the German Accident Prevention Guidelines (UVV). This especially applies to the monitoring of testing devices, equipment and systems, as well as important supply lines (cables, pipes/tubes). There are two ways to affix the inspection stickers: directly onto the inspected equipment or onto one of the basic stickers provided, which are affixed to the equipment. The date of inspection is documented with a writing instrument or notch pliers. The inspection stickers consist of tamper-proof document foil, i.e. to prevent misuse, the sticker is irrevocably destroyed when an attempt is made to remove it.

Document foil properties:

The document foil can be marked using pencil, pen, felt pen or typewriter. It is 0.05 mm thick and temperature-resistant from -30 °C to +80 °C. The adhesive strength is greater than the tear strength of the foil.

The foil breaks when removed and is largely resistant to ageing, weather and light. It is also resistant to water, salt water, alcohol, aliphatic solvents as well as petroleum-based oils and fats.

	ø mm	Quantity per sheet		
red "flash"	15	10	1	18 2670
yellow "flash"	15	10	1	18 2672
green "16"	20	8	1	18 2686
yellow "17"	20	8	1	18 2687
green "18"	20	8	1	18 2688
yellow "19"	20	8	1	18 2689
green "20"	20	8	1	18 2692
yellow "21"	20	8	1	18 2693



## Control pliers

for paper punches and thin plastics, e.g. for the simple marking of stickers before they are removed from the backing material. Opening depth 30 mm

round recess 3 mm ø 120 1 10 1650

Please specify any custom recess when ordering.



## Basic stickers

The self-adhesive basic sticker consists of white, write-on plastic foil, to which stickers can be repeatedly attached. It adheres well to a clean surface and is destroyed when removed. The document foil is resistant to water, aliphatic solvents and petroleum-based oils and fats.

Quantity  
per sheet      Dimensions  
mm

25      92 x 40      1      18 2690



## Identification of conductors

The self-adhesive foil symbols for the marking of non-insulated and insulated conductors, housings, switch cabinets and equipment are available in a range of sizes on a sheet for rapid application. The symbols correspond to the German Industrial Standards DIN 40 009, DIN 40 011 and the IEC. Material: Self-adhesive PVC foil with lamination, 0.10 mm thick. Temperature resistant from -30 °C to +100 °C, dirt-repellent, durable adhesive power. ø: 12.5 mm

Quantity  
per sheet

Outer conductor 1, black 10 10 18 2620

Outer conductor 2, black 10 10 18 2622

Outer conductor 3, black 10 10 18 2624

Neutral conductor N, blue 10 10 18 2626

Protective conductor PE, green-yellow 10 10 18 2628

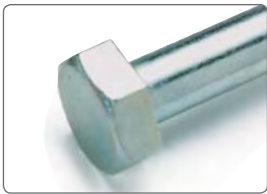
Neutral conductor protective function 10 10 18 2630

Earth 10 10 18 2632

Earth, does not comply with DIN 40 011 10 10 18 2634



# SCREWS



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## Multi-purpose screws

chipboard screws, galvanised, countersunk head with Pozidriv crosshead

ø mm	Length mm	for cross-head			
		Pozidriv size			
3.0	16	1	200	19 0005	
	20	1	200	19 0006	
3.5	15 (device screw)	2	200	19 0014	
	20	2	200	19 0015	
	25 (device screw)	2	200	19 0016	
	30	2	200	19 0017	
4.0	40 (device screw)	2	200	19 0019	
	25	2	200	19 0026	
	30	2	200	19 0027	
	35	2	200	19 0028	
4.5	40	2	200	19 0029	
	45	2	200	19 0030	
	50	2	200	19 0031	
	35	2	200	19 0040	
	40	2	200	19 0041	
5.0	45	2	200	19 0042	
	50	2	100	19 0043	
	60	2	100	19 0044	
	30	2	200	19 0051	
6.0	40	2	200	19 0053	
	50	2	100	19 0054	
	60	2	100	19 0055	
	80	2	100	19 0056	
6.0	45	3	100	19 0062	
	50	3	100	19 0063	
	60	3	100	19 0064	



## Multi-purpose screws

chipboard screws, galvanised, round headed (pan head) with Pozidriv crosshead

ø mm	Length mm	for cross-head			
		Pozidriv size			
3.5	16	2	200	19 0088	
	20	2	200	19 0089	
	25	2	200	19 0090	
	30	2	200	19 0091	
	35	2	200	19 0092	
	40	2	200	19 0093	
4.0	20	2	200	19 0098	
	25	2	200	19 0099	
	30	2	200	19 0100	
	35	2	200	19 0101	
	40	2	200	19 0102	
	45	2	200	19 0103	
4.5	50	2	200	19 0104	
	25	2	200	19 0108	
	30	2	200	19 0109	
	35	2	200	19 0110	
	40	2	200	19 0111	
	45	2	200	19 0112	
5.0	50	2	200	19 0113	
	30	2	200	19 0118	
	35	2	200	19 0119	
	40	2	200	19 0120	
6.0	50	2	200	19 0121	
	60	2	200	19 0122	
	60	3	100	19 0126	



## Multi-purpose screws

chipboard screws, hardened steel, galvanised, round head (pan head) with internal serration drive for TORX® tools

ø mm	Length mm	for TORX® drive		
3.0	20	T 10	200	19 1201
3.5	16	T 15	200	19 1205
	20	T 15	200	19 1206
	30	T 15	200	19 1208
	40	T 15	200	19 1210
4.0	30	T 20	200	19 1215
	35	T 20	200	19 1216
	40	T 20	200	19 1217
	50	T 20	200	19 1219
4.5	40	T 20	200	19 1227
	45	T 20	200	19 1228
	50	T 20	200	19 1229
5.0	40	T 25	200	19 1235
	50	T 25	200	19 1237
	60	T 25	200	19 1238



## Multi-purpose screws

chipboard screws, hardened steel, galvanised, countersunk head with internal serrated drive for TORX® tools

ø mm	Length mm	for TORX® drive		
3.0	16	T 10	200	19 1500
	20	T 10	200	19 1501
3.5	25	T 15	200	19 1507
	30	T 15	200	19 1508
	40	T 15	200	19 1510
4.0	30	T 20	200	19 1515
	35	T 20	200	19 1516
	40	T 20	200	19 1517
4.5	45	T 20	200	19 1528
5.0	40	T 25	200	19 1535
	50	T 25	200	19 1537
	60	T 25	200	19 1538



## Multi-purpose screws SPAX®

bright galvanised, countersunk head, T-Star plus

ø mm	Length mm	Blade size T		
4.0	30	20	200	19 3027
	35	20	200	19 3028
	40	20	200	19 3029
4.5	45	20	200	19 3042
5.0	50	20	200	19 3054



## Multi-purpose screws SPAX®

bright galvanised, round head, T-Star plus

ø mm	Length mm	Blade size T		
3.5	20	15	200	19 3089
4.0	25	20	200	19 3099
	30	20	200	19 3100
	35	20	200	19 3101
	40	20	200	19 3102
	45	20	200	19 3103
	50	20	200	19 3104
4.5	40	20	200	19 3111
	45	20	200	19 3112
	50	20	200	19 3113
5.0	40	20	200	19 3120
	50	20	100	19 3121
	60	20	100	19 3122



## Hex-head wood screws (key screws)

according to DIN 571, galvanised, general requirements according to DIN 267 Part 1

ø mm	Length mm	For hexagonal key size		
6.0	40	Size 10	50	19 0210
	60	Size 10	25	19 0211
	80	Size 10	25	19 0212
8.0	50	Size 13	50	19 0222
	60	Size 13	25	19 0223
	80	Size 13	25	19 0224
10.0	100	Size 13	25	19 0225
	120	Size 13	25	19 0226
	60	Size 17	10	19 0235
10.0	80	Size 17	10	19 0236
	100	Size 17	10	19 0237
	120	Size 17	10	19 0238



## Sheet metal screws (self-drilling screws)

according to DIN 7504M (previously N), self-drilling, hardened steel, galvanised, round head, raised head with Phillips cross-head, sheet metal screw thread according to DIN 7970

ø mm	Length mm	For cross-head Phillips size		
3.5	9.5	2	100	19 0410
	13	2	100	19 0411
	16	2	100	19 0412
	19	2	100	19 0413
3.9	13	2	100	19 0416
	16	2	100	19 0417
	19	2	100	19 0418
	25	2	100	19 0419
4.2	13	2	100	19 0422
	16	2	100	19 0423
	19	2	100	19 0424
	22	2	100	19 0425
	25	2	100	19 0426
4.8	13	2	100	19 0432
	16	2	100	19 0433
	19	2	100	19 0434
	22	2	100	19 0435
	25	2	100	19 0436





## Raised head sheet metal screws

according to ISO 7049, EN 27049 and DIN 7981, Form H with point, galvanised, raised head with Phillips cross-head

ø mm	Length mm	For cross-head Phillips size		
3.5	9.5	2	100	19 0300
	13.0	2	100	19 0301
	16.0	2	100	19 0302
	19.0	2	100	19 0303
	22.0	2	100	19 0304
3.9	25.0	2	100	19 0305
	13.0	2	100	19 0313
	16.0	2	100	19 0314
	19.0	2	100	19 0315
	25.0	2	100	19 0317
4.2	32.0	2	100	19 0318
	9.5	2	100	19 0324
	13.0	2	100	19 0325
	16.0	2	100	19 0326
	19.0	2	100	19 0327
	22.0	2	100	19 0328
	25.0	2	100	19 0329
4.8	13.0	2	100	19 0336
	16.0	2	100	19 0337
	19.0	2	100	19 0338
	22.0	2	100	19 0339
	25.0	2	100	19 0340
	32.0	2	100	19 0341
	38.0	2	100	19 0342



## Wood screws

according to DIN 96, galvanised, round head with slot

ø mm	Length mm	for slot-head screwdriver Slot length (mm)			
3.5	20	7.0 x 0.8	200	19 0149	
	4.0	30	8.0 x 1.0	200	19 0160
		35	8.0 x 1.0	200	19 0161
		40	8.0 x 1.0	200	19 0162
5.0	50	8.0 x 1.0	200	19 0164	
	30	10.0 x 1.2	200	19 0182	
	35	10.0 x 1.2	200	19 0183	
	40	10.0 x 1.2	200	19 0184	
	50	10.0 x 1.2	200	19 0186	
	60	10.0 x 1.2	100	19 0187	



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## Hex-head machine screws

according to DIN 933, with thread up to the head, tempered steel, galvanised, Grade 8.8

Length mm

M 4	20	Size 7	100	19 0500
	30	Size 7	100	19 0504
	40	Size 7	100	19 0506
M 5	10	Size 8	100	19 0514
	16	Size 8	100	19 0516
	25	Size 8	100	19 0520
	35	Size 8	100	19 0522
M 6	45	Size 8	100	19 0524
	60	Size 8	100	19 0528
	10	Size 10	100	19 0535
M 6	16	Size 10	100	19 0538
	25	Size 10	100	19 0542
	35	Size 10	100	19 0545
	45	Size 10	100	19 0547
M 8	20	Size 13	100	19 0562
	25	Size 13	100	19 0564
	30	Size 13	100	19 0566
	35	Size 13	100	19 0567
	40	Size 13	100	19 0568
	50	Size 13	100	19 0570
M 10	60	Size 13	100	19 0572
	20	Size 17	100	19 0588
	30	Size 17	100	19 0592
	40	Size 17	100	19 0594
	50	Size 17	50	19 0596
M 12	70	Size 17	25	19 0600
	25	Size 19	50	19 0614
	30	Size 19	50	19 0616
	40	Size 19	50	19 0618
M 12	50	Size 19	50	19 0620
	60	Size 19	50	19 0622



## Cylinder head screws

according to ISO 1207, EN 21207 or DIN 84, Form A, with slot, made of tempered steel, galvanised, Grade 4.8

ø mm      Length mm      Slot size mm

M 3	10	5.5 x 0.8	100	19 0800
	16	5.5 x 0.8	100	19 0806
	20	5.5 x 0.8	100	19 0808
	30	5.5 x 0.8	100	19 0811
M 4	10	7.0 x 1.2	100	19 0828
	16	7.0 x 1.2	100	19 0832
	20	7.0 x 1.2	100	19 0834
	25	7.0 x 1.2	100	19 0836
	30	7.0 x 1.2	100	19 0837
M 5	40	7.0 x 1.2	100	19 0839
	10	8.5 x 1.2	100	19 0848
	16	8.5 x 1.2	100	19 0862
	20	8.5 x 1.2	100	19 0864
	25	8.5 x 1.2	100	19 0866
	30	8.5 x 1.2	100	19 0867
M 6	40	8.5 x 1.2	100	19 0869
	10	10.0 x 1.6	100	19 0878
	16	10.0 x 1.6	100	19 0882
	20	10.0 x 1.6	100	19 0884
M 6	25	10.0 x 1.6	100	19 0887
	30	10.0 x 1.6	100	19 0888
	40	10.0 x 1.6	100	19 0890
M 8	30	13.0 x 2.0	50	19 0908
	40	13.0 x 2.0	50	19 0910



## Threaded rods (threaded bolts)

according to DIN 976, steel, galvanised, Length 1000 mm

ø mm

4	1	19 1104
5	1	19 1105
6	1	19 1106
8	1	19 1108
10	1	19 1110
12	1	19 1112



## Hex nuts

according to ISO 4032, EN 24032 and DIN 934, galvanised steel, Grade 8

ø mm For hexagonal  
key size

M 3	Size 5.5	100	19 2000
M 4	Size 7	100	19 2001
M 5	Size 8	100	19 2002
M 6	Size 10	100	19 2003
M 8	Size 13	100	19 2005
M 10	Size 17	100	19 2006
M 12	Size 19	50	19 2007



## Washers

according to ISO 7089, EN 27089 and DIN 125, Form A without chamfer, galvanised steel

For screws Internal ø mm External ø mm

M 3	3.2	7	100	19 2600
M 4	4.3	9	100	19 2602
M 5	5.3	10	100	19 2603
M 6	6.4	12	100	19 2604
M 8	8.4	16	100	19 2606
M 10	10.5	20	100	19 2607
M 12	13.0	24	100	19 2608



## Washers

according to ISO 7093, EN 27093 and DIN 9021N (mudguard washers),  
steel, galvanised, external diameter = approx. 3 x thread ø

For screws Internal ø mm External ø mm

M 4	4.3	12	100	19 2650
M 5	5.3	15	100	19 2651
M 6	6.4	18	100	19 2652
M 8	8.4	24	100	19 2654
M 10	10.5	30	100	19 2656



## Serrated washers

according to DIN 6798, Form A, externally toothed, steel, galvanised

For screws Internal ø mm External ø mm

M 3	3.2	6	100	19 2700
M 4	4.3	8	100	19 2702
M 5	5.3	9	100	19 2703
M 6	6.4	11	100	19 2704
M 8	8.4	14	100	19 2706
M 10	10.5	18	100	19 2708
M 12	13.0	20	100	19 2710



## Spring lock washers

according to DIN 127, Form B (smooth), galvanised spring steel, steel

For screws External ø mm

M 3	6.2	100	19 2750
M 4	7.6	100	19 2752
M 5	9.2	100	19 2754
M 6	11.8	100	19 2756
M 8	14.8	100	19 2758
M 10	18.1	100	19 2760
M 12	21.1	100	19 2762



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## PVC adhesive tapes

### Universal insulating tapes

**Description:**

PVC membrane, coated on one side with non-corrosive, pressure sensitive rubber adhesive.

**Special features:**

Flame-retardant, self-extinguishing, good electrical and mechanical properties, waterproof, weather- and UV-resistant, silicone-free. Certified according to DIN EN 60454 - Part 2

**Typical areas of use:**

All-round adhesive tape in excellent quality, for bundling, standard insulation, coloured marking (e.g. green-yellow protective conductor) and reinforcing, ideal for many electrical installation and repair tasks.

black	15	10	120	16 0100
white			120	16 0101
grey			120	16 0102
yellow			120	16 0103
blue			120	16 0104
red			120	16 0105
violet			120	16 0106
green			120	16 0107
brown			120	16 0108
green-yellow			120	16 0109
black	15	20	60	16 0110
white			60	16 0111
grey			60	16 0112
yellow			60	16 0113
blue			60	16 0114
red			60	16 0115
violet			60	16 0116
green			60	16 0117
brown			60	16 0118
green-yellow			60	16 0119
black	19	20	48	16 0130
white			48	16 0131
grey			48	16 0132
yellow			48	16 0133
blue			48	16 0134
red			48	16 0135
violet			48	16 0136
green			48	16 0137
brown			48	16 0138
green-yellow			48	16 0139
black	25	20	36	16 0140
white			36	16 0141
grey			36	16 0142
yellow			36	16 0143
blue			36	16 0144
red			36	16 0145
violet			36	16 0146
brown			36	16 0148
green-yellow			36	16 0149
black	30	20	30	16 0150
black	38	20	24	16 0160
black	50	20	18	16 0170
<b>Rainbow pack</b>				
10 assorted colours	15	10	100	16 0000



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## Insulating tapes for phase marking

### Description:

PVC membrane, coated on one side with non-corrosive, pressure sensitive rubber adhesive.

### Special features:

Black with white print L1, L2 and L3, blue with white print N.

### Typical areas of use:

Electrical insulation tapes for marking the conductor phase of multi-core cables.

black, L1	15	10	100	16 0201
black, L2	15	10	100	16 0202
black, L3	15	10	100	16 0203
blue, N	15	10	100	16 0204
Assortment, 4-pieces, L1, L2, L3, N15		10	1	16 0205



## High performance electrical insulation tape for high temperatures, VDE

### Description:

PVC membrane, coated on one side with non-corrosive, pressure sensitive rubber adhesive.

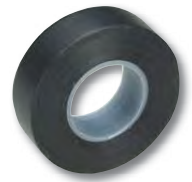
### Special features:

Excellent resistance to high temperatures up to +105 °C, flame-retardant, self-extinguishing, UV- and weather-resistant, VDE approved. Approved according to EN 60 454 Type 10

### Typical areas of use:

Insulating and repair tasks indoors and outdoors, in particular for use with the persistent influence of higher temperatures, e.g. cable wrapping on engines and in bodywork areas, wrapping of cable harnesses for motor vehicles, washing machines, dishwashers, for general thermal insulation, for bundling and for reinforcing as mechanical protection.

black	19	33	48	16 0250
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## All weather high performance electrical insulation tape

### Description:

PVC membrane, coated on one side with non-corrosive, pressure sensitive rubber adhesive.

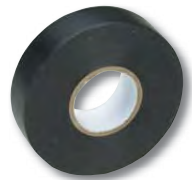
### Special features:

Excellent resistance and working properties, even at low temperatures (down to -20 °C), flame-retardant, self-extinguishing, UV- and weather resistant. Approved according to EN 60 454 Type 11

### Typical areas of use:

Insulating- and repair tasks indoors and outdoors, in particular for outdoor use in extreme weather conditions, above all at low temperatures and great fluctuations in temperature, sealing and joining of medium-voltage cables, insulation and sealing of cold-storage rooms, general thermal insulation.

black	19	20	48	16 0260
black	25	20	36	16 0262



## Corrosion protection tapes

### Description:

Particularly strong PVC membrane, coated on one side with non-corrosive, aggressive adhesive

### Special features:

Heavy duty PVC adhesive tapes with high abrasion resistance, UV and water-resistant (including salt water), resistant to alkaline solutions and many acids and micro-organisms, bitumen compatible.

### Typical areas of use:

As an external wrap for additional protection against wear due to abrasion, weather influences and corrosion, thereby extending the service life and reducing frequent maintenance work. Examples: As protection against stone impact, kicking and scratches for exposed cables and underground cables, pipes and connection points of cables and pipelines, corrosion protection of exposed cables and lines (e.g. on ships, in wet areas, in the chemical industry), outstanding mechanical and corrosion protection for installation pipes and masts that are buried underground, base protection for electrical appliances (washing machines, tumble driers, chest freezers).

Tape thickness 0.25 mm, for heavy duty use

silver-coloured	50	33	18	16 0280
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Tape thickness 0.44 mm, for particularly heavy duty use

black	50	33	18	16 0282
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## Self-amalgamating insulating tapes

### Self-amalgamating high voltage insulating tape up to 35 kV

**Description:**

Cold amalgamating insulating tape made from polyisobutylene, with an easy to pull off plastic separating layer.

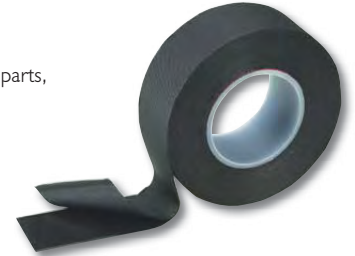
**Special features:**

Amalgamated after processing under slight tension to form a solid airtight and waterproof rubber layer, extremely expandable (elongation at break 600%) and able to be adapted to any form, permanently elastic, compatible with all materials for insulation and sheathing, wide application temperature range, very good electrical properties (in particular dielectric strength), resistant to UV, ozone, weather and ageing, non silicone-free.

**Typical areas of use:**

Ideal for sealing, splicing, insulating and the repair of current-carrying cables, mainly for the voltage insulation of power cables up to 17 kV/mm, very good repair properties even on heavy rubber hose lines, for the watertight sealing of electrical joints and connections (e.g. TV satellite dishes), for fastening cables outdoors, corrosion protection of metal parts, also perfectly suitable for emergency repairs on radiators, water- and engine hoses, vacuum cleaner hoses, sinks and waste pipes.

black, 0.5 mm thick	19	10	42	16 2840
	25	10	36	16 2841



### Self-amalgamating insulating tape for extreme temperatures

**Description:**

Cold amalgamating insulating tape made of polyethylene, with easy to pull off plastic separating layer.

**Special features:**

Amalgamated after processing under slight tension to form a solid airtight and waterproof mass, extremely expandable (elongation at break 600%) and can be adapted to any form, permanently elastic, compatible with all materials for insulating and sheathing, extraordinary wide application temperature range, very good electrical properties (in particular dielectric strength), resistant to ozone, weather and ageing, outstanding resistance to alkaline solutions, hydraulic fluids and other chemical substances.

**Typical areas of use:**

Purposes the same as high voltage insulation tape CIMCO article no. 16 2840 – 16 2841, however additional excellent resistance to very high and very low temperatures (-35 °C to +95 °C, short-term up to 130 °C) as well as to many chemicals, for demanding insulation tasks up to 34 kV/mm and for the retention of the chemical resistance at increased temperatures.

black	19	10	42	16 2830
	25	10	36	16 2831



## Woven insulation tapes

### Universal quality woven tape

**Description:**

Extruded woven tape, coated on the one side with waterproof polyethylene coating, on the other side with an aggressive, non-corrosive, pressure-sensitive adhesive.

**Special features:**

Matt, water- and weatherproof equipment, very easy to write on with pencil, ball-point pen, permanent marker, felt pen and etching pen, largely resistant to many chemicals, insensitive to softeners and oil vapours, very good electrical properties, can be easily torn off laterally and particularly neatly by hand.

**Typical areas of use:**

Universal gaffer tape for trade and industry: coloured identification and marking of cables, electrical components, pipes and ducts, labelling of switch cabinets, distributors, patch bays, for bundling, fixing, securing and reinforcing of cables, pipes and tubes, for masking during decorating and painting work.

black	15	50	80	16 2000
white			80	16 2001
grey			80	16 2002
blue			80	16 2003
yellow			80	16 2004
red			80	16 2005
green			80	16 2006
black	19	50	64	16 2010
white			64	16 2011
grey			64	16 2012
blue			64	16 2013
yellow			64	16 2014
red			64	16 2015
green			64	16 2016
black	25	50	48	16 2020
white			48	16 2021
grey			48	16 2022
blue			48	16 2023
yellow			48	16 2024
red			48	16 2025
green			48	16 2026
black	30	50	40	16 2030
white			40	16 2031
grey			40	16 2032
blue			40	16 2033
yellow			40	16 2034
red			40	16 2035
green			40	16 2036
black	38	50	32	16 2040
white			32	16 2041
grey			32	16 2042
blue			32	16 2043
yellow			32	16 2044
red			32	16 2045
green			32	16 2046
black	50	50	24	16 2050
white			24	16 2051
grey			24	16 2052
blue			24	16 2053
yellow			24	16 2054
red			24	16 2055
green			24	16 2056





## Special adhesive tapes

### Aluminium foil adhesive tape

**Description:**

Aluminium foil, 40 µm (0.04 mm) thick, coated on one side with pressure sensitive acrylic adhesive. The tape is laminated with strong, polyethylene-coated separating paper.

**Special features:**

Heat deflecting, light reflecting, moisture resistant, very low water permeability (water vapour barrier).

**Typical areas of use:**

Heat protection and shielding of electromagnetic fields on electronic equipment, sealing of cooling insulation, bonding of intersections of aluminium foil-laminated insulation mats and insulating panels made from rock wool or fibre glass, sealing of metal or plastic ducts, applications with more stringent requirements of preventive fire protection, e.g. flame protection wrap for the installation of cables.

silver-coloured	50	50	24	16 2900
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### Filament adhesive tape with mesh thread reinforcement

**Description:**

Carrier layer made from polypropylene, reinforced with meshed nylon threads running lengthwise and across for the full length of the tape, coated on one side with rubber adhesive.

**Special features:**

Excellent resistance to abrasion, extremely tear resistant (longitudinal and lateral strength), no fraying at the sides, strong immediate adhesion.

**Typical areas of use:**

Bundling and pulling through cables and wiring harnesses, high-strength package tape for sealing and reinforcing even heavy packages, e.g. cardboard boxes and cartons, strapping heavy packages and other goods, banding plastic and metal tubes, metal rods, etc.

transparent	50	50	18	16 2950
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### Double-sided adhesive foam tape

**Description:**

Closed-cell polyethylene foam, coated on both sides with acrylic-based adhesive, comes with separating paper.

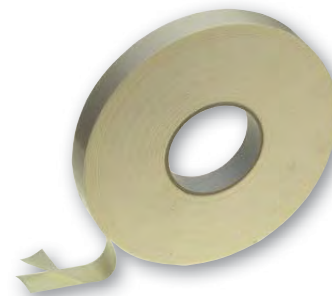
**Special features:**

Excellent resistance to pressure, very pliable, very good resistance to UV, ageing, moisture, oils, solvents and softeners, strong immediate adhesion.

**Typical areas of use:**

Used for diverse installations of heavy loads, even vertical, indoors and outdoors, instead of riveting, screwing and liquid adhesives, also particularly good for bonding onto non-elastic materials with irregular, rough surfaces (wood, masonry, concrete, coats of paint): surface-mounting of cable ducts, cable clamps, switchboxes, attachment of badges, displays and signs, both made from and onto plastic, shock-proof and vibration-damped soft mounting of assemblies (e.g. circuit boards, switch panels, fittings), effective reduction of the transmission of noise (rattle protection), form-fit seals against dust, water, vapour, wind and light, also for sealing air outlets to save energy.

white	15	33	20	16 2861
	19	33	16	16 2862
	25	33	12	16 2863



### Paper masking tape

Low crepe paper masking tape, 0.16 mm. thick. Medium adhesion thanks to rubber-based adhesive.

Suitable for indoor use.

**Special features:**

High tear resistance of approx. 114 N / 25 mm and medium adhesion of 6.2 N / 25 mm. Temperature resistant up to max. 85 °C for 1 hour. The crepe allows it to adapt very well to different substrates and radii.

**Typical areas of use:**

Masking of areas to be blocked when painting and varnishing.

beige	19	50	1	16 0302
	25	50	1	16 0304
	38	50	1	16 0306
	50	50	1	16 0308



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## Cast resin joints

### Cast resin joint

non-flammable according to VDE 0304 Part 3

The joint body consists of a transparent, thermoplastic material and as a result is extremely resistant to chemical and mechanical influences. The polyurethane foam seals are highly reliable, preventing the escape of resin before it has cured.

### The casting resin

according to VDE 0291 Part 2

Polyurethane casting resin is an unfilled, low viscosity, elastic curing two-component system.

Technical data:

- Can be stored for 24 months
- Storage in dry rooms between +5 °C and +50 °C
- Curing within 24 hours
- Temperature resistant between -25 °C and +120 °C in the cured state
- Resin and hardener can be disposed of in domestic waste

### 1 kV cast resin joint sets including joint casing and pack of casting resin in cans

consisting of joint casing, including polyurethane casting resin and hardener, one pair of disposable gloves, one spatula, two foam seals and abrasive paper.

Type	Wire cross-section in mm <sup>2</sup>		Fill quantity resin/hardener		
	Clearance	Branch			
AVM 40-175 D	3 x 1.5 to 5 x 6	3 x 1.5 to 5 x 4	0.225 kg	1	18 4660
AVM 55-220 D	5 x 6 to 10	5 x 2.5 to 10	0.615 kg	1	18 4662
AVM 75-300 D	4 x 16 to 25	5 x 4 to 16	1.350 kg	1	18 4664
AVM 95-400 D	4 x 35 to 70	4 x 16 to 25	2.500 kg	1	18 4666
AVM 110-500 D	4 x 95 to 150	4 x 25 to 50	4.700 kg	1	18 4668

### 1 kV two-component casting resin set as can pack

including stirrer, gloves and instructions

Type	Fill quantities			
	Resin	Hardener		
PUR 160-200 D	0.225 kg	172 cm <sup>3</sup>	1	18 4680
PUR 160-400 D	0.400 kg	345 cm <sup>3</sup>	1	18 4682
PUR 160-615 D	0.615 kg	528 cm <sup>3</sup>	1	18 4770



## Shrink-on coupling sleeves

### Shrink-on coupling sleeves for compression connector or screw connector 1kV

Thick-walled electrical shrink-on sleeves (heat shrinking) with outstanding mechanical strength, chemical resistance and electrical properties. Lined with hot melt adhesive, thus giving excellent protection against water and damp. For the long-term connection of plastic cables laid in the ground and also on cable trays or in the open air. Resistant to environmental influences, e.g. UV rays, ozone, oxygen, acids, alkaline earths.

Type	Wire cross-section in mm <sup>2</sup>	Cable ø mm	Hose length mm		
1.5 – 6/3	3 x 1.5 to 6	11 – 18	200 x 60	1	18 4060
1.5 – 6/5	5 x 1.5 to 6	13 – 21	200 x 60	1	18 4062
6 – 16/5	5 x 6 to 16	18 – 25	450 x 100	1	18 4064
6 – 25	4 x 6 to 25	16 – 32	450 x 100	1	18 4066
16 – 50	4 x 16 to 50	21 – 36	550 x 150	1	18 4068
50 – 150	4 x 50 to 150	29 – 54	650 x 200	1	18 4070



## Connectors

Screw connectors or branch and connector terminals for 1 kV cast resin joints, shrink-on sleeve couplings and mechanical box and branch joints (MVM and MAM).

### Screw connectors

Type	Wire cross-section in mm <sup>2</sup>			
brass	1.5 – 16	only Cu	1	18 0960
tin-coated	6 – 25	Cu and Al	1	18 0962



### Branch and connector terminals

Type	Wire cross-section in mm <sup>2</sup>			
brass	1.5 – 10	Cu and Al	1	18 0964
brass	2.5 – 16	Cu and Al	1	18 0966
brass	6 – 25	Cu and Al	1	18 0968



## ALPA-GEL

The simple solution for protecting cable connections from dust and damp (IP 68). After the gel mass has cured, removal is possible at any time. The solvent-free two-component silicone gel, mixing ratio 1:1 and with a dielectric strength of 20 KV/mm, is supplied in 2 different pack sizes with mixing jug, mixing spatula and disposable gloves.



250 ml	1	15 1010
1,000 ml	1	15 1012

Large pack without mixing jug, mixing spatula and disposable gloves	1	15 1014
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## Heat-shrink tubes

Made from homogenous polyolefin, thermally stabilised, cross-linked by irradiation, with outstanding mechanical stability, chemical resistance and electrical properties:

### Significant mechanical performance properties (typical measured values):

Tensile strength 14.8 MPa / min (N/mm<sup>2</sup>), tensile strength after heat ageing 14.5 MPa / min (N/mm<sup>2</sup>), elongation at break 460%, elongation at break after heat ageing (168 h at +158 °C) 480%, thermal shock (4 h at +250 °C) 8% with complete shrinkage, cold shock (1 h at -30 °C) no breaking. Continuous operation temperature -55 °C to +125 °C. Very good printability with heat seal-, inkjet- and offset printing.

### Significant chemical performance properties:

Excellent UV light, ozone and salt water resistance, good resistance to commonly used chemicals (cleaners and solvents, weak acids and bases, fuels, oils), resistance to fungus and rot (Rating 1 according to ISO 846 Method A). The heat shrink tubes do not contain any asbestos, azoic compounds, formaldehydes or silicone. The heat shrink tubes are self-extinguishing according to UL 224 VW-1. No dioxin is released during incineration. The products are non-corrosive (compatible with copper) and compatible with all commonly used materials for cable insulation, such as plastic, rubber, lead, steel, aluminium, silicone, etc.

### Significant electrical performance properties:

Dielectric strength 17 kV/mm (green-yellow design 15 kV/mm), specific electrical resistance 1 × 1015 Ω/cm (yellow-green design 1 × 1014 Ω/cm),

Further detailed mechanical, chemical and electrical product data, as well as an overview of the approvals and certifications from various test institutes, can be obtained on request in the form of our Technical Data Sheets.

Detailed dimensions of the individual types and sizes of the CIMCO heat shrink tube range can be found on page 299.

### Working instructions:

- If necessary, cut the heat shrink tube to the desired length, taking care to ensure a smooth cut edge.
- Only undertake shrinking on clean surfaces, as free of dust and grease as possible.
- Begin the shrinking process, starting at one end of the tube.
- Shrinking temperature from +70 °C to +115 °C.
- Ideally, work with a special hot-air blower, heating furnace or infrared lamp.

## Thin-walled, black heat shrink tube, shrinkage ratio 2 : 1

Halogen-free, thin-walled, flexible standard electrical heat shrink tube with shrinkage ratio 2 : 1 (shrinking capability down to half the specified internal diameter before heat shrinking). Highly suitable for electrical insulation, as bend- and abrasion protection, as damp protection for seals, for bundling, for strain relief and for marking in electronics and electrical engineering, telecommunications, cable assembly, in the automotive industry and many other areas. Supplied on dispenser rolls, stable, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (depending on size of heat shrink tube), core diameter approx. 30 mm, for industrial use in particular.

Nominal-ø BEFORE shrinking		Shrink range mm	Length m		
inch	mm				
3/64	1.1	0.5 - 11.0	200	1 Roll	18 4002
1/16	1.5	0.65 - 1.5	200	1 Roll	18 4004
3/32	2.5	1.0 - 2.5	200	1 Roll	18 4006
1/8	3.5	1.5 - 3.5	200	1 Roll	18 4008
3/16	5.0	2.3 - 5.0	100	1 Roll	18 4010
1/4	6.5	3.0 - 6.5	100	1 Roll	18 4012
3/8	9.5	4.5 - 9.5	100	1 Roll	18 4014
1/2	12.5	6.0 - 12.5	100	1 Roll	18 4016
3/4	19.0	9.0 - 19.0	100	1 Roll	18 4018
1	26.0	12.5 - 26.0	50	1 Roll	18 4020
1 1/2	41.5	20.0 - 41.5	50	1 Roll	18 4022
2	50.0	25.0 - 50.0	25	1 Roll	18 4024
3	80.0	41.0 - 80.0	25	1 Roll	18 4026
4	100.0	51.0 - 100.0	25	1 Roll	18 4028



In handy dispensing boxes for trade and industry use, practical transport and storage boxes made from coated cardboard, for convenient and dust-free storage even after the package has been opened and easy and orderly unrolling and cutting off, ideal for workshops and mobile use.

Nominal-ø		Shrink range mm	Length m		
BEFORE shrinking inch	mm				
1/16	1.5	0.65 to 1.5	20	1	18 1318
3/32	2.5	1.0 to 2.5	15	1	18 1319
1/8	3.5	1.5 to 3.5	15	1	18 1327
3/16	5.0	2.3 to 5.0	12	1	18 1303
1/4	6.5	3.0 to 6.5	12	1	18 1305
3/8	9.5	4.5 to 9.5	8	1	18 1307
1/2	12.5	6.0 to 12.5	5	1	18 1311
3/4	19.0	9.0 to 19.0	5	1	18 1313
1	26.0	12.5 to 26.0	5	1	18 1317



In small package, suitable for trade use, containing 1 piece heat shrink tube 1 metre in length.

Nominal-ø		Shrink range mm	Length m		
BEFORE shrinking inch	mm				
3/16	5.0	2.3 to 5.0	1	1	18 1330
1/4	6.5	3.0 to 6.5	1	1	18 1331
3/8	9.5	4.5 to 9.5	1	1	18 1332
1/2	12.5	6.0 to 12.5	1	1	18 1333
3/4	19.0	9.0 to 19.0	1	1	18 1334
1	26.0	12.5 to 26.0	1	1	18 1335

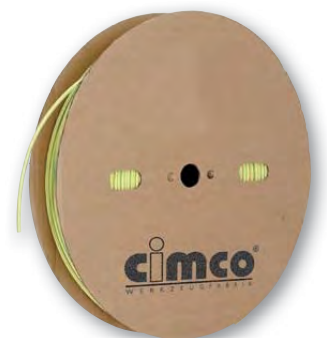


## Thin-walled green-yellow heat shrink tube, shrinkage ratio 2 : 1

Two-coloured, lengthwise striped, thin-walled, flexible electrical heat shrink tube with shrinkage ratio 2 : 1 (shrinking capacity down to half the specified internal diameter before heat shrinking). Highly suitable for electrical insulation, as bend- and abrasion protection, as damp protection for seals, for bundling, for strain relief and for marking in electronics and electrical engineering, telecommunications, cable assembly, in the automotive industry and many other areas, ideal marking grounding conductors.

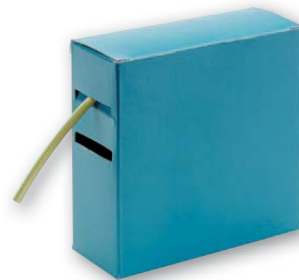
Supplied on dispenser rolls, stable, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (depending on size of heat shrink tube), core diameter approx. 30 mm, for industrial use in particular.

Nominal-ø		Shrink range mm	Length m		
BEFORE shrinking inch	mm				
3/32	2.5	1.0 to 2.5	200	1 Roll	18 4106
1/8	3.5	1.5 to 3.5	200	1 Roll	18 4108
3/16	5.0	2.3 to 5.0	100	1 Roll	18 4110
1/4	6.5	3.0 to 6.5	100	1 Roll	18 4112
3/8	9.5	4.5 to 9.5	100	1 Roll	18 4114
1/2	12.5	6.0 to 12.5	100	1 Roll	18 4116
3/4	19.0	9.0 to 19.0	100	1 Roll	18 4118
1	26.0	12.5 to 26.0	50	1 Roll	18 4120
1 1/2	41.5	20.0 to 41.5	50	1 Roll	18 4122
2	51.0	25.0 to 51.0	25	1 Roll	18 4124
3	80.0	40.0 to 80.0	25	1 Roll	18 4126
4	100.0	50.0 to 100.0	25	1 Roll	18 4128



In handy dispensing boxes for trade and industry use, practical transport and storage boxes made from coated cardboard, for convenient and dust-free storage even after the package has been opened and easy and orderly unrolling and cutting off, ideal for workshops and mobile use.

Nominal-ø		Shrink range mm	Length m		
BEFORE shrinking inch	mm				
3/32	2.5	1.0 to 2.5	15	1	18 4136
1/8	3.5	1.5 to 3.5	15	1	18 4138
3/16	5.0	2.3 to 5.0	12	1	18 4140
1/4	6.5	3.0 to 6.5	12	1	18 4142
3/8	9.5	4.5 to 9.5	8	1	18 4144
1/2	12.5	6.0 to 12.5	8	1	18 4146
3/4	19.0	9.0 to 19.0	5	1	18 4148
1	26.0	12.5 to 26.0	5	1	18 4150



## Medium-walled black heat shrink tube,

### Shrinkage ratio 3 : 1

Halogen-free, medium-walled yet flexible standard electrical shrink tube with shrinkage ratio 3 : 1 (shrinkage capacity down to a third of the given internal diameter before heat shrinking). Highly suitable for electrical insulation, as bend and abrasion protection, as damp protection for seals, for bundling, for strain relief and for identification in electronics and electrical engineering, telecommunications, cable assembly, in the automotive industry and many other areas. Thanks to the shrinkage ratio of 3 : 1, particularly suitable for compensating large differences in diameter of the object to be shrink-wrapped, e.g. markedly contoured parts such as connection sleeves, plugs and switches, as well as for covering a wide range of applications with just a few heat shrink tube sizes, without adhesive lining.

Supplied on dispenser rolls, stable, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (depending on size of heat shrink tube), core diameter approx. 30 mm, for industrial use in particular.



Nominal-ø		Shrink range mm	Length m		
BEFORE shrinking inch	mm				
1/16	1.5	0.5 to 1.5	200	1 Roll	18 4204
1/8	3.0	1.0 to 3.0	200	1 Roll	18 4206
1/4	6.0	2.0 to 6.0	100	1 Roll	18 4208
3/8	9.0	3.0 to 9.0	50	1 Roll	18 4210
1/2	12.0	4.0 to 12.0	50	1 Roll	18 4212
3/4	18.0	6.0 to 18.0	50	1 Roll	18 4214
1	24.0	8.0 to 24.0	25	1 Roll	18 4216

#### Heat shrink tube in 1 metre sections

1 1/2	39.0	13 to 39	1	1	18 4218
2	50.0	16 to 50	1	1	18 4220
3	80.0	26 to 80	1	1	18 4222
4	100.0	33 to 100	1	1	18 4224

In handy dispensing boxes for trade and industry use, practical transport and storage boxes made from coated cardboard, for convenient and dust-free storage even after the package has been opened and easy and orderly unrolling and cutting off, ideal for workshops and mobile use.

Nominal-ø		Shrink range mm	Length m		
BEFORE shrinking inch	mm				
1/16	1.5	0.5 to 1.5	17	1	18 4234
1/8	3.0	1.0 to 3.0	15	1	18 4236
1/4	6.0	2.0 to 6.0	5	1	18 4238
3/8	9.0	3.0 to 9.0	8	1	18 4240
1/2	12.0	4.0 to 12.0	6	1	18 4242
3/4	18.0	6.0 to 18.0	4	1	18 4244
1	24.0	8.0 to 24.0	3	1	18 4246



## Medium-walled black heat shrink tube,

### Shrinking ratio 3 : 1, with internal adhesive

Halogen-free, medium-walled, yet very flexible standard electrical heat shrink tube with shrinkage ratio 3 : 1 (shrinking capacity down to a third of the specified internal diameter before heat shrinking). Thanks to outstanding mechanical stability and chemical resistance, this tube is highly suitable for electrical insulation, as bend and abrasion protection, as damp protection for seals, for bundling, for strain relief and for marking in electronics and electrical engineering, telecommunications, cable assembly, in the automotive industry and many other areas. Thanks to the shrinkage ratio of 3 : 1, particularly suitable for compensating large differences in diameter of the object to be shrink-wrapped, e.g. markedly contoured parts such as connection sleeves, plugs and switches, as well as for covering a wide range of applications with just a few heat shrink tube sizes. Excellent sealing properties thanks to the inner lining of special hot melt adhesive, providing outstanding protection against water and moisture penetration. The melting temperature of the hot melt adhesive is approx. +70 °C to +80 °C.

Supplied on dispenser rolls, stable, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (depending on size of heat shrink tube), core diameter approx. 30 mm, for industrial use in particular.

Nominal-ø		Shrink range	Length		
BEFORE shrinking					
inch	mm	mm	m		
1/8	3.2	1.0 to 3.2	200	1 Roll	18 4306
1/4	6.4	2.2 to 6.4	100	1 Roll	18 4308

#### Heat shrink tube in 1.22 metre sections

3/8	9.5	3.2 to 9.5	1.22	1	18 4310
1/2	12.7	4.2 to 12.7	1.22	1	18 4312
3/4	19.1	6.3 to 19.1	1.22	1	18 4314
1	25.4	8.5 to 25.4	1.22	1	18 4316
1 1/2	39.0	13.5 to 39.0	1.22	1	18 4318
2	50.0	17.0 to 50.0	1.22	1	18 4320



### Hot air blower range

Robust and reliable device "Made in Germany" for all standard applications with hot air up to max. 500 °C, e.g. thawing water pipes, heat shrinking, drying and removing paint, plastic forming, soft-soldering, etc.

With 2 heat settings: Setting 1 up to 300 °C and 240 Litres/min. air volume, Setting 2 up to 500 °C and 500 Litres/min. air volume, wattage 1600 W, 230 - 240 Volt, 50 Hz, with strong rubber connecting cable, double overheating protection, suitable for manual and stand operation. Weight 700 g

Supply includes 2 push-on nozzles: wide angle nozzle (for all-round even heat for soft-soldering thin copper pipes, for heat shrinking heat shrink tubes and for forming PVC tubes), soldering reflector nozzle (for simultaneous soldering and shrinking of soldering sleeves).

240 x 200 mm	1	18 1351
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## Feed-through- and bend-protection grommets made from soft PVC

Softened PVC is one of the first plastics to find a use in technical applications. Thanks to its thermoplastic properties, soft PVC can be processed both by injection moulding and extrusion. Depending on the formula of the blend, its consistency can be from semi-hard to rubber-like.

Soft PVC is distinguished by the following features:

- Resistant to heat up to +90 °C short-term, up to +70/75 °C long-term
- Resistant to cold down to -25 °C to -30 °C
- Resistant to water, ozone, weathering, diluted acids, alkalis and salts
- Very good resistance to ageing
- Medium resistance to: aromas, ketones, mineral oil, petrol, esters (swelling)
- Very good electrical insulating properties
- Large range of colours, lightfast settings
- Glass clear or coloured-transparent possible

The mouldings have a perfect surface and are dimensionally precise.

### Feed-through grommets with through hole

Made from black soft PVC 9542

Service temperatures: -30 °C to +70 °C

Hardness Shore A: 55 +/- 5

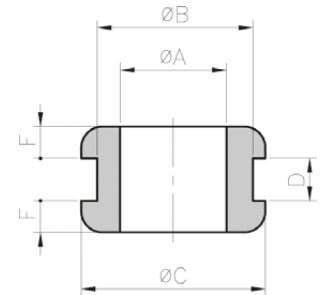
Tensile strength: 8 MPa

Elongation at break: > 250%

Dielectric strength: > 20 kV/mm

Properties: HB UL94

ø A	ø B	ø C	D	F	PG-dimension		metric
mm	mm	mm	mm	mm			
4	8	11	1.5	2.0		100	18 4800
5	8	11	1.5	2.0		100	18 4802
6	9	12	1.0	2.0		100	18 4804
6	9	12	4.0	2.0		100	18 4806
6	9	12	2.0	2.0		100	18 4808
6	9	12	1.5	2.0		100	18 4810
7	10	14	1.5	2.5		100	18 4812
8	10	14	1.5	2.5		100	18 4814
8	12	16	1.5	2.5	7	12	100 18 4816
9	12	16	1.5	2.5	7	12	100 18 4818
10	12	16	2.0	2.5	7	12	100 18 4820
10	18	22	1.0	2.5	11		100 18 4822
10	18	22	4.0	2.5	11		100 18 4824
12	18	22	1.0	2.5	11		100 18 4826
14	22	27	1.0	3.0	16		100 18 4828
16	22	27	1.0	3.0	16		100 18 4830
18	22	27	1.0	3.0	16		100 18 4832



### Feed-through grommet with elongated hole

Made from grey soft PVC

Service temperatures: -30 °C to +70 °C

Hardness Shore A: 55 +/- 5

Tensile strength: 8 MPa

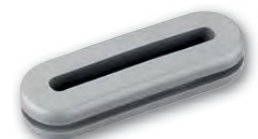
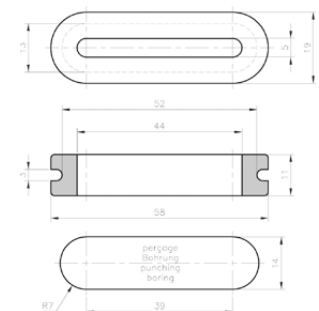
Elongation at break: > 250%

Dielectric strength: > 20 kV/mm

Properties: HB UL94

Application: for the protection of flat cables

L mm	W mm	H mm		
52.0	13.0	11.0	100	18 4834



NEW

2

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NEW

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NEW

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26



## Kink protection grommets

Made from black soft PVC

Service temperatures: -30 °C to +70 °C

Hardness Shore A: 55 +/- 5

Tensile strength: 8 MPa

Elongation at break: > 250%

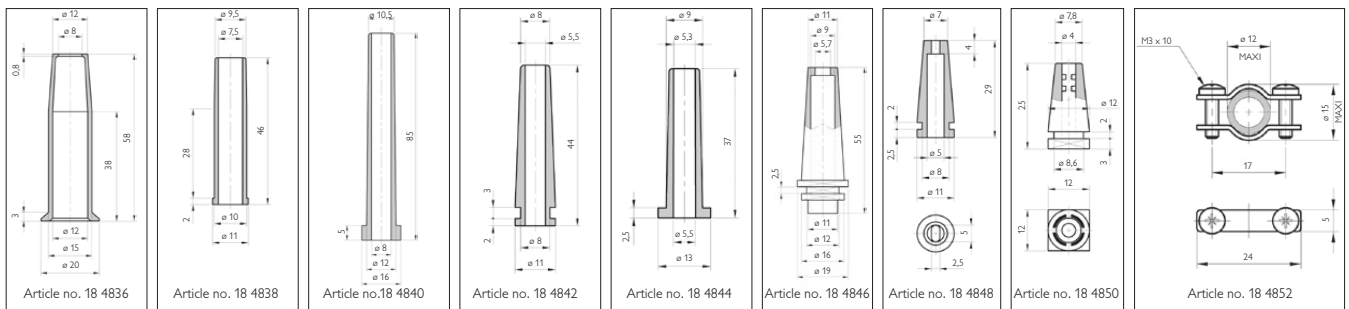
Dielectric strength: > 20 kV/mm

Properties: HB UL94

Application: for the protection of flat cables

PG-dimension

	100	18 4836
	100	18 4838
7	100	18 4840
	100	18 4842
	100	18 4844
7	100	18 4846
	100	18 4848
	100	18 4850
	100	18 4852



## Membrane feed-through grommets

Made from black soft PVC

Service temperatures: -30 °C to +70 °C

Hardness Shore A: 55 +/- 5

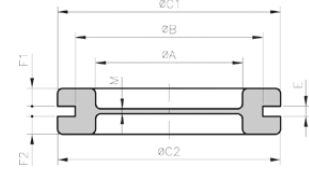
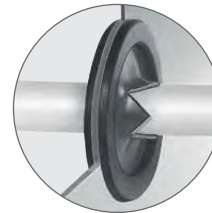
Tensile strength: 8 MPa

Elongation at break: > 250%

Dielectric strength: > 20 kV/mm

Properties: HB UL94

Application: for closing cable outlets; they allow the feeding of cables and wires through their membrane and ensure a good seal against dust.



ø A	ø B	ø C1	ø C2	E	F1	F2	M	PG dimension		
mm	mm	mm	mm	mm	mm	mm	mm	mm		
9.0	15.0	20.0	18.0	2.0	2.5	2.5	1.0	9	100	18 4854
11.0	18.0	22.5	21.5	2.0	2.5	2.5	1.0	11	100	18 4856
13.5	20.0	24.0	24.0	2.0	2.5	2.5	1.0	13.5	100	18 4858
16.0	22.0	27.5	26.0	2.0	2.7	2.7	1.0	16	100	18 4860
21.0	28.0	34.5	34.5	2.0	3.0	3.0	1.0	21	100	18 4862
21.0	28.0	34.5	34.5	1.0	4.0	3.0	1.2	21	100	18 4864
29.0	36.5	43.0	43.0	2.2	3.7	3.7	1.5	29	50	18 4866
35.0	46.0	52.5	52.5	2.5	3.8	3.8	1.3	36	50	18 4868
46.5	59.0	66.2	66.2	2.5	4.0	4.0	1.6	48	50	18 4870

ø A	ø B	ø C1	ø C2	E	F1	F2	M	metric dimension		
mm	mm	mm	mm	mm	mm	mm	mm	mm		
9.0	16.0	20.0	20.0	2.0	2.5	2.5	1.0	M16	100	18 4874
13.5	20.0	25.0	25.0	2.0	2.5	2.5	1.0	M20	100	18 4876
18.5	25.0	30.5	30.5	2.0	2.5	2.5	1.0	M25	100	18 4878
25.0	32.0	39.0	39.0	2.0	3.0	3.0	1.0	M32	100	18 4880
31.0	40.0	47.0	47.0	2.5	3.8	3.8	1.0	M40	50	18 4882
39.0	50.0	57.0	57.0	2.5	3.8	3.8	1.0	M50	50	18 4884
53.0	63.5	75.0	75.0	2.5	3.8	3.8	1.0	M63	50	18 4886



## Technical appendix

### Technical data heat-shrink tubes

Nominal size		Internal diameter			Wall thickness				Application area
Inch	mm	BEFORE	AFTER		BEFORE	AFTER			ø mm
		shrinking	shrinking		shrinking	shrinking			
		mm	Tolerance +/- mm		mm	Tolerance +/- mm		Tolerance +/- mm	
<b>Heat shrink tube, thin-walled, black, shrinkage rate 2 : 1</b>									
3/64	1.1	1.0	0.2	0.50	0.13	0.05	0.22	0.05	0.5 up to 1.1
1/16	1.5	1.5	0.3	0.65	0.18	0.05	0.25	0.05	0.65 up to 1.5
3/32	2.5	2.5	0.3	1.00	0.18	0.05	0.35	0.05	1.0 up to 2.5
1/8	3.5	3.5	0.4	1.50	0.20	0.05	0.40	0.05	1.5 up to 3.5
3/16	5.0	5.0	0.4	2.25	0.23	0.08	0.50	0.08	2.3 up to 5.0
1/4	6.5	6.5	0.4	3.00	0.28	0.08	0.55	0.08	3.0 up to 6.5
3/8	9.5	9.5	0.5	4.50	0.30	0.08	0.60	0.08	4.5 up to 9.5
1/2	12.5	12.5	0.5	6.00	0.30	0.08	0.60	0.08	6.0 up to 12.5
3/4	19.0	19.0	0.7	9.00	0.40	0.15	0.80	0.15	9.0 up to 19.0
1	26.0	25.6	0.7	12.5	0.45	0.15	0.90	0.15	12.5 up to 26.0
1 1/2	41.5	41.5	0.7	20.0	0.50	0.15	1.0	0.15	20.0 up to 41.5
2	50.0	51.5	0.7	25.0	0.50	0.15	1.0	0.15	25.0 up to 50.0
3	80.0	80.0	1.0	40.0	0.55	0.20	1.8	0.15	41.0 up to 80.0
4	100.0	100.0	1.0	50.0	0.70	0.20	2.2	0.15	51.0 up to 100.0
<b>Heat-shrink tube, thin-walled, green-yellow, shrink rate 2 : 1</b>									
3/32	2.5	2.5	0.2	1.00	0.20	0.05	0.40	0.05	1.0 up to 2.5
1/8	3.5	3.5	0.3	1.50	0.25	0.05	0.40	0.05	1.5 up to 3.5
3/16	5.0	4.5	0.3	2.00	0.25	0.05	0.44	0.05	2.3 up to 5.0
1/4	6.5	6.5	0.3	3.00	0.25	0.05	0.55	0.08	3.0 up to 6.5
3/8	9.5	10.7	0.4	5.00	0.30	0.08	0.60	0.08	4.5 up to 9.5
1/2	12.5	12.5	0.4	6.00	0.30	0.08	0.65	0.08	6.0 up to 12.5
3/4	19.0	21.4	0.5	10.0	0.40	0.15	0.82	0.15	9.0 up to 19.0
1	26.0	26.5	0.8	12.5	0.40	0.15	1.0	0.15	12.5 up to 26.0
1 1/2	41.5	41.5	1.0	20.0	0.50	0.15	1.2	0.15	20.0 up to 41.5
2	51.0	51.5	1.0	25.0	0.50	0.15	1.2	0.15	25.0 up to 51.0
3	80.0	80.0	1.0	40.0	0.60	0.15	1.7	0.15	40.0 up to 80.0
4	100.0	100.0	1.0	50.0	0.70	0.15	2.1	0.15	50.0 up to 100.0
<b>Heat shrink tube, medium walled, black, shrinkage ratio 3 : 1</b>									
1/16	1.5	1.5	0.3	0.5			0.50	0.10	0.5 up to 1.5
1/8	3.0	3.0	0.3	1.0			0.65	0.10	1.0 up to 3.0
1/4	6.0	6.0	0.4	2.0			0.75	0.10	2.0 up to 6.0
3/8	9.0	9.0	0.4	3.0			0.95	0.15	3.0 up to 9.0
1/2	12.0	12.0	0.4	4.0			1.10	0.15	4.0 up to 12.0
3/4	18.0	18.0	0.5	6.0			1.25	0.15	6.0 up to 18.0
1	24.0	24.0	0.5	8.0			1.50	0.20	8.0 up to 24.0
1 1/2	39.0	39.0	0.7	13.0			1.90	0.20	13.0 up to 39.0
2	50.0	50.0	0.7	16.0			2.50	0.20	16.0 up to 50.0
3	80.0	80.0	1.0	26.0			2.8	0.20	26.0 up to 80.0
4	100.0	100.0	1.03	3.0			3.0	0.20	33.0 up to 100.0
<b>Heat shrink tube, medium walled, black, shrinkage ratio 3 : 1, with adhesive lining</b>									
1/16	1.5	1.5	0.3	0.5			0.50	0.10	0.5 up to 1.5
1/8	3.2	3.0	0.3	1.0			0.65	0.10	1.0 up to 3.2
1/4	6.4	6.0	0.4	2.0			0.75	0.10	2.2 to 6.4
3/8	9.5	9.0	0.4	3.0			0.95	0.15	3.2 up to 9.5
1/2	12.7	12.0	0.4	4.0			1.10	0.15	4.2 up to 12.7
3/4	19.1	18.0	0.5	6.0			1.25	0.15	6.3 up to 19.1
1	25.4	24.0	0.5	8.0			1.50	0.20	8.5 up to 25.4
1/8	3.2	3.5	0.3	1.0			0.95	0.35	1.0 up to 3.2
1/4	6.4	6.8	0.4	2.2			1.2	0.60	2.2 up to 6.4
3/8	9.5	9.9	0.4	3.2			1.4	0.65	3.2 up to 9.5
1/2	12.7	13.2	0.5	4.2			1.6	0.75	4.2 up to 12.7
3/4	19.1	19.6	0.5	6.3			2.0	0.90	6.3 up to 19.1
1	25.4	25.4	0.8	8.5			2.1	0.90	8.5 up to 25.4
1 1/2	39.0	40.0	0.8	13.5			2.4	1.05	13.5 up to 39.0
2	50.0	51.5	0.8	17.0			2.7	1.20	17.0 up to 50.0

# Technical appendix

## Safety tools

Insulated safety tools and insulated protective agents have been developed for use during work on live parts. Their use should not, however, be a "blank cheque" for the user; rather applicable regulations (including accident prevention regulations, VBG, DIN, VDE and others) must always be observed and followed. Upon request we will gladly send you specifics and additional informational material.



Insulated hand tools, tested and VDE-certified according to European standard EN 60900 or VDE specification 0682, part 201. Valid from 01.01.2005.



Insulated hand tools tested according to European standard EN 60900 or VDE specification 0682, part 201.

## Description of the symbols



Energised work



VDE/GS tested



Cutting edge hardness in HRC



Ridged gripping surfaces



Gripping surfaces ridged at an angle



With cutting bevel



With slight cutting bevel



Single joint



Lap joint



Box joint



Flat nose pliers



Flat round pliers



Round nose pliers



Wire type soft



Wire type medium-hard



Wire type hard



Wire type piano

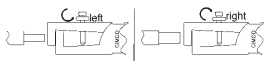


Wire type rope



Wire type Cu-cable

## Functional description of the wire strippers



- Set the adjusting screw to the desired conductor cross section to be stripped by turning it (left / right).
- Secure the adjusting screw with the counter nut.
- Insert the cable.
- Close the pliers by pressing them and remove the plastic sheathing.

## Circlip pliers

Shape	Size mm for circlips	Shape	Size mm for circlips	Shape	Size mm for circlips	Shape	Size mm for circlips
A 3	3 - 10	B 3	3 - 10	C 3	3 - 10	D 3	3 - 10
A 10	10 - 25	B 10	10 - 25	C 10	10 - 25	D 10	10 - 25
A 19	19 - 60	B 19	19 - 60	C 19	19 - 60	D 19	19 - 60
A 40	40 - 100	B 40	40 - 100	C 40	40 - 100	D 40	40 - 100
A 85	85 - 165	B 85	85 - 165	C 85	85 - 165	D 85	85 - 165

Shape A and B for external circlips

Shape C and D for internal circlips

## Classification of Cimco screwing tools according to thread ø mm

Cross-head Pozidriv		Cross-head Phillips		Torx®	
Thread ø mm	Tool holder	Thread ø mm	Tool holder	Thread ø mm	Tool holder
2.5 - 3.0	Size 1	2.0 - 3.0	Size 0	3.0 - 3.5	T 10
3.5 - 5.0	Size 2	2.5 - 3.0	Size 1	4.0 - 4.5	T 20
6.0	Size 3	3.5 - 4.8	Size 2	5.0 - 6.0	T 25
		5.5 - 7.0	Size 3		

Wood screws DIN 96		Cylinder head screws DIN 84		Machine hex screws DIN	
Thread ø mm	Tool holder	Thread ø mm	Tool holder	Thread ø mm	Tool holder
3	6.0 x 0.8	M 3	5.5 x 0.8	2.5	Size 5
3.5	7.0 x 0.8	M 4	7.0 x 1.2	3.0	Size 5.5
4	8.0 x 1.0	M 5	8.5 x 1.2	4.0	Size 7
4.5	9.0 x 1.0	M 6	10.0 x 1.6	5.0	Size 8
5	10.0 x 1.2	M 8	13.0 x 2.0	6.0	Size 10
6	12.0 x 1.6			8.0	Size 13
				10.0	Size 17

## English and American units of measurement

Weights		Units of length	
1 ounce	28.349 g	1 inch	25.4 mm
1 pound (lb)	0.454 kg	1 foot	0.3048 m
1 engl. ton	1.016 t	1 yard	0.914 m
1 am. ton	0.907 t	1 mile	1.609 km
1 kp	10 Newton		

## Parameters for installing straddling dowels

Dowel ø mm	Dowel length mm	Dowel hole depth mm	Drill ø mm	Screw ø mm
5	25	35	5	2.5 - 4
6	30	40	6	3.5 - 5
8	40	55	8	4.5 - 6
10	50	70	10	6 - 8
12	60	75	12	8 - 10
14	70	85	14	10 - 12
16	80	95	16	12 - 14
20	90	110	20	16

## According to DIN VDE 0220 part 2 screws of strength class 8.8 are tightened with the following torques: 1.2.

Thread size	Tightening torque (Nm)	Thread size	Tightening torque (Nm)
M 5	5	M 12	75
M 6	9	M 14	120
M 7	15	M 16	190
M 8	22	M 20	380
M 10	44		





# Technical appendix

## HSS bi-metal hole saw

ø mm	Soft steel	VA Steel	Cast steel	Brass	Aluminium
14	550	300	400	790	900
16	530	275	365	730	825
17	500	250	330	665	750
19	460	230	300	600	690
21	425	210	280	560	630
22	390	195	260	520	585
24	370	185	245	495	555
25	350	175	235	470	525
27	325	160	215	435	480
29	300	150	200	400	450
30	285	145	190	380	425
32	275	140	180	360	410
33	260	135	175	345	390
35	250	125	165	330	375
37	240	120	160	315	360
38	230	115	150	300	345
40	220	110	145	290	330
41	210	105	140	280	315
43	205	100	135	270	305
44	195	95	130	260	295
46	190	95	125	250	285
48	180	90	120	240	270
51	170	85	115	230	255
52	165	80	110	220	245
54	160	80	105	210	240
57	150	75	100	200	230
59	145	75	100	195	225

## HSS bi-metal hole saw

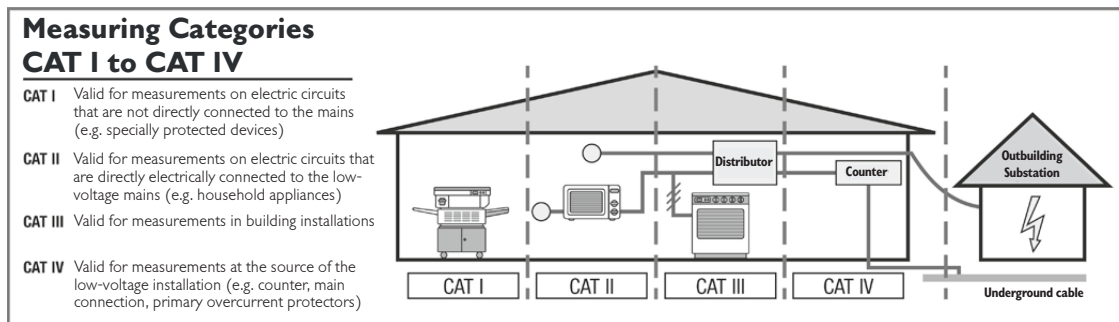
ø mm	Soft steel	VA steel	Cast steel	Brass	Aluminium
60	140	70	95	190	220
64	135	70	90	180	205
65	130	65	85	175	200
67	130	65	85	170	195
70	125	60	80	160	185
73	120	60	80	160	180
76	115	55	75	150	170
79	119	55	70	145	165
83	105	50	70	140	155
86	100	50	65	130	150
89	95	45	65	125	145
92	95	45	60	120	140
95	90	45	60	120	135
98	90	45	60	115	130
102	85	40	55	115	125
105	85	40	55	110	120
108	80	40	55	110	115
111	80	40	50	100	110
114	75	35	50	100	105
121	70	35	45	90	95
127	65	30	40	85	90
140	60	30	35	80	85
146	55	25	35	75	80
152	55	25	35	75	80

## Measuring categories CAT I to CAT IV

The IEC/EN 61010-1 standard subdivides electric circuits into measuring categories CAT I to CAT IV so that measuring devices can be designed for the widely varying installation and application purposes. The measuring categories indicate in which application areas a measuring device can be safely used. The protection of a measuring device from a transient (=short-term, temporary) overvoltage is determined by the specification of the measurement category (overvoltage category) and the working voltage (nominal current to ground) e.g. CAT IV 600 V, CAT III 1,000 V.

The IEC/EN 61010-1 standard subdivides measuring electric circuits into the following measuring categories:

- CAT I: for measurements on electric circuits that are not directly connected to the mains.
- CAT II: for measurements on electric circuits that are directly connected to the mains.
- CAT III: for measurements in building installations.
- CAT IV: for measurements at the source of the low-voltage installation.



- The specification of the measurement category and the maximum nominal voltage determine the protection of the measuring device vis-à-vis transient (temporary) overvoltage.
- Transient overvoltages can occur due to a lightning strike in the distribution network or due to the switching on/off of large loads.
- The following basic principle applies: the higher the measurement category and the higher the nominal voltage, the higher the protection of the measuring device vis-à-vis transient overvoltage.
- Protection against transient (temporary) overvoltage to 8 kV

## Data sheet for LED lamps

Designation	Article no.	Output	Luminous flux	Protection class	Light angle	Operation	Operating time	Luminous colour
LED torches 500.01-4500F	11 1534	1.2 W	180 Lm	IP 64	15 - 75°	3 x AAA	10 hrs	4.500 K
LED head lamp 500.03	11 1536	1 W	100 Lm	IP 64	6°	2 Xx AA	10 hrs	4.500 K
LED inspection lamps 600.08G	11 1540	0.15 W	5 Lm	IP 67	15°	2 x LR06	150 hrs	5.500 K
LED workshop lamps 700.01-4500G	11 1562	6 W	650 Lm	IP 64	25 - 100°	230 V/24 V		4.500 K

## Technical appendix

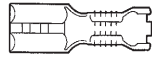
### Protection classes IP..

First no.	Degree of protection: protection against contact and foreign bodies	Second no.	Degree of protection: protection against water
X	No special protection	X	No special protection
1	Protection against ingress of solid particles with a diameter greater than 50 mm	1	Protection against vertically dripping water
2	Protection against ingress of solid particles with a diameter greater than 12.5 mm	2	Protection against vertically dripping water, equipment tipped up to 15°
3	Protection against ingress of solid particles with a diameter greater than 2.5 mm	3	Protection against spraying water up to an angle of 60° to vertical
4	Protection against ingress of solid particles with a diameter greater than 1 mm	4	Protection against spraying water from all directions
5	Protection against dust (dust-protected). Complete contact protection	5	Protection against spraying water (jets) from all directions
6	Protection against ingress of dust (dust-tight). Complete contact protection	6	Protection against powerful water spray or rough sea
		7	Protection against water immersion under conditions of pressure and time
		8	Protection against water when the equipment is constantly submerged

### Tool recommendation table

#### Non-insulated blade terminal connectors, DIN 46244 ff, 2.8 - 4.8 - 6.3 mm tab width

**FL**



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
0.5 - 6	10 6136	Roll crimp	217
0.5 - 6	10 6000	Roll crimp	216
0.5 - 6	10 6112	Roll crimp	217
0.5 - 6	10 4208	Roll crimp	221

#### Insulated connection materials

**IS**



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
0.5 - 6	10 1892	Oval crimp	221
0.5 - 6	10 6144	Oval crimp, asymmetric	221
0.5 - 6	10 1916	Oval crimp, symmetric	221
0.5 - 6	10 6000	Oval crimp, symmetric	216
0.5 - 6	10 6112	Oval crimp	217
10 - 16	10 1918	Oval crimp	221
0.5 - 6	10 4206	Oval crimp	221
0.25 - 6	10 4208	Roll crimp	221

#### AL compression cable lugs and connectors

**AL**



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
10 - 185	10 1867	Hex crimp	223
10 - 240	10 1868	Hex crimp	223
10 - 185	10 5698	Hex crimp	226
10 - 240	10 5701	Hex crimp	226
16 - 300	10 5702	Hex crimp	226
16 - 300	10 5704	Hex crimp	227

#### Wire end ferrules

**AE**



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
0.5 - 2.5	10 1906	Indent crimp	220
1.5 - 6	10 1907	Indent crimp	220
0.25 - 2.5	10 1911	Trapezoid crimp	220
0.5 - 16	10 1904	Indent crimp	220
10 - 35	10 1905	Indent crimp	220
0.5 - 16	10 6120	Trapezoid crimp	220
16 - 35	10 6140	Trapezoid crimp	220
25 + 50	10 6142	Trapezoid crimp	220
6 - 16	10 1946	Trapezoid crimp	220
0.14 - 6	10 1940	Square crimp	220
0.08 - 10	10 1925	Square crimp	220
0.5 - 2.5	10 0725	Trapezoid crimp	220
0.5 - 2.5	10 0720	Trapezoid crimp	220
0.5 - 10	10 6000	Trapezoid crimp	216
0.5 - 50	10 6112	Oval crimp	217
0.14 - 10	10 4220	Trapezoid crimp	220
10 - 50	10 4200	Trapezoid crimp	221
50 - 95	10 4202	Trapezoid crimp	221
0.14 - 6	10 4190	Trapezoid crimp	221
6 - 16	10 4192	Trapezoid crimp	221
0.08 - 10	10 4194	Square crimp	221
2.5 - 16	10 4196	Square crimp	221
10 - 95	10 1867	Trapezoid crimp	223
10 - 240	10 1868	Trapezoid crimp	223
10 - 95	10 5698	Trapezoid crimp	226
10 - 240	10 5701	Trapezoid crimp	226
16 - 240	10 5702	Trapezoid crimp	226
16 - 240	10 5704	Trapezoid crimp	227

# Technical appendix

## Tubular cable lugs and connectors "standard design"



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
0.75 - 16	10 1902	Indent crimp	222
6 - 50	10 1870	Notch crimp	222
50 - 120	10 1872	Notch crimp	222
120 - 240	10 1874	Notch crimp	222
6 - 50	10 1882	Hex crimp	222
10 - 120	10 1880	Hex crimp	222
16 - 95	10 1884	Hex crimp	222
25 - 150	10 1885	Hex crimp	222
0.1 - 16	10 4204	Notch crimp	222
6 - 185	10 1867	Hex crimp	223
6 - 300	10 1868	Hex crimp	223
6 - 185	10 5698	Hex crimp	226
6 - 300	10 5701	Hex crimp	226
10 - 400	10 5702	Hex crimp	226
10 - 400	10 5704	Hex crimp	227

## Non-insulated crimping cable lugs (ring, fork and pin-shaped)



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
1.5 - 10	10 6134	Indent crimp	217
0.5 - 16	10 1909	Indent crimp	222
10 - 35	10 6146	Indent crimp	222
0.5 - 10	10 6000	Indent crimp	216
0.5 - 10	10 6112	Oval crimp	217
0.1 - 16	10 4204	Notch crimp	222
10 - 70	10 1867	Indent crimp	223
10 - 70	10 1868	Indent crimp	223
10 - 70	10 5698	Indent crimp	226
10 - 70	10 5701	Indent crimp	226
16 - 150	10 5702	Indent crimp	226
16 - 150	10 5704	Indent crimp	227

## Tubular cable lugs for finely-stranded conductors



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
10 - 70	10 1867	Indent crimp	223
10 - 70	10 1868	Indent crimp	223
10 - 70	10 5698	Indent crimp	226
10 - 70	10 5701	Indent crimp	226
16 - 150	10 5702	Indent crimp	226
16 - 150	10 5704	Indent crimp	227

## Compression cable lugs and connectors according to DIN 46235 / DIN 46267



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
6 - 50	10 1883	Hex crimp	222
16 - 95	10 1886	Hex crimp	222
25 - 150	10 1888	Hex crimp	222
6 - 185	10 1867	Hex crimp	223
6 - 300	10 1868	Hex crimp	223
6 - 185	10 5698	Hex crimp	226
6 - 300	10 5701	Hex crimp	226
10 - 300	10 5702	Hex crimp	226
10 - 300	10 5704	Hex crimp	227

## Round crimp inserts



Cross section mm <sup>2</sup>	Article no.	Crimp shape	Catalogue page
10 - 185	10 1867	Indent crimp	223
10 - 240	10 1868	Indent crimp	223
10 - 185	10 5698	Indent crimp	226
10 - 240	10 5701	Indent crimp	226
10 - 300	10 5702	Indent crimp	226
10 - 300	10 5704	Indent crimp	227

## Crimping shapes for cable connections



### Hex crimp

For crimping Cu tubular cable lugs and connectors, compression cable lugs and connectors DIN 46235/DIN 46267, Al compression cable lugs and connectors. Application areas: 6 - 1000 mm<sup>2</sup>



### Oval crimp

For crimping insulated tubular cable lugs and connectors, insulated pin-shape cable lugs and insulated cable connectors. Application areas: 0.1 - 185 mm<sup>2</sup>



### Notching

For notching Cu tubular cable lugs and connectors. Application areas: 6 - 400 mm<sup>2</sup>



### Indent crimp

For crimping Cu tubular cable lugs and connectors of "standard design". Application areas: 0.75 - 400 mm<sup>2</sup>



### Trapezoid crimp

For crimping wire end ferrules and twin wire end ferrules. Application areas: 0.14 - 185 mm<sup>2</sup>



### Indent crimp

For crimping wire end ferrules and twin wire end ferrules. Application areas: 4 - 95 mm<sup>2</sup>



### Square crimp

For crimping wire end ferrules and twin wire end ferrules. Application areas: 0.14 - 10 mm<sup>2</sup>



### Roll crimp

For crimping non-insulated blade terminal connections. Application areas: 0.1 - 6 mm<sup>2</sup>



### Round crimp

For sector-shaped conductors 90° and 120°. Application areas: 10 sm - 300 sm, 35 se - 300 se



## Technical appendix

Modular plugs		RJ 14	RJ 10	RJ 11	RJ 12	RJ 45 unshielded	RJ 45 shielded	RJ 45 shielded	RJ 45 shielded	BNC-/TNC Coaxial	bre optics (fibre optic) connector		
Positions			4	4	6	6	8	Type CIMCO, etc.	Type HIROSE	Type Stewart stamping	(RG 58, RG 59, RG 62)	Round crimp	Hex crimp
Order no.	Contacts		2	4	4	6	8						
10 6116	no	no	•	•									
10 6117	no	no			•	•							
10 6211	yes	yes			•	•							
10 6118	no	no					•						
10 6212	yes	yes					•						
10 6110	yes	yes			•	•	•						
10 6200	yes	yes	•	•	•	•	•						
10 6201	yes	yes						•					
10 6202	yes	yes							•				
10 6203	yes	yes								•			
10 6138	yes	yes									•		
10 6156	yes	yes										•	
10 6158	yes	yes											•
Set 10 6210	yes	yes			•	•	•		•	•	•	•	•
Set 10 6009	yes	yes					•	•			•		•
10 6016	yes	yes			•	•							
10 6018	yes	yes					•						
10 6019	yes	yes						•					
10 6018	yes	yes							•				
10 6015	yes	yes									•		

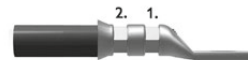
bold = crimp profile inserts for click 'n' crimp, see page 216.

### We recommend the following number of crimps for the individual cross sections:

Cross section mm <sup>2</sup>	Tubular cable lugs 5 mm crimp insert	Tubular cable lugs wide crimp inserts	Cable lugs DIN 46235 5 mm crimp insert	Cable lugs DIN 46235
6	1	1		
10	1	1		
16	1	1	2	1
25	2	1	2	1
35	2	1	2	1
50	2	1	3	1
70	2	1	3	1
95	2	1	4	2
120	2	1	4	2
150	2	1	4	2
185	2	1	4	2
240	4	2	5	2
300	4	2	5	4

### Installation notes for cable lugs and connectors:

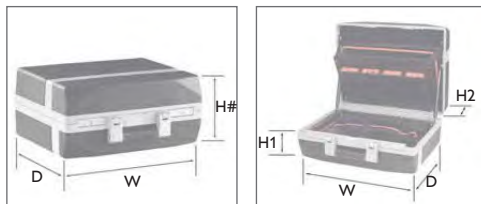
- Strip conductor to required insertion length (+10% due to length change of the crimp sleeve).
  - The conductor ends must be mechanically cleaned prior to installation.
  - Insert the conductor into the cable lug or connector to the full insertion length.
  - While minding the crimp direction, crimp the cable lug or connector with the assigned tool.
- Please use the adjacent drawing to determine the crimping direction for the cable lugs.



**We keep replacement parts available for you for a number of articles. Our sales team will gladly advise you!**

### Case dimensioning

H# = H1 + H2



1  
2  
3  
4  
5  
6  
7  
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9  
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11  
12  
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25  
26

## Technical appendix

MCM	AWG	Outer diameter		Cross section	Comparable
		mm	inch	mm <sup>2</sup>	metric cross section
0.0025	46	0.04	0.0016	0.00126	
0.0039	44	0.05	0.0020	0.00196	
0.0076	41	0.07	0.0028	0.00385	
0.0097	40	0.079	0.0031	0.00490	
0.0123	39	0.089	0.0035	0.00622	
0.0161	38	0.102	0.0040	0.00817	
0.0201	37	0.114	0.0045	0.0102	
0.0250	36	0.127	0.0050	0.013	
0.0313	35	0.142	0.0056	0.016	
0.0397	34	0.16	0.0063	0.020	
0.0502	33	0.18	0.0071	0.025	
0.0639	32	0.203	0.0080	0.032	
0.0792	31	0.226	0.0089	0.040	
0.100	30	0.254	0.0100	0.051	0.05
0.128	29	0.287	0.0113	0.065	
0.159	28	0.32	0.0126	0.080	0.08
0.204	27	0.363	0.0143	0.103	0.1
0.253	26	0.404	0.0159	0.128	0.14
0.321	25	0.455	0.0179	0.163	
0.405	24	0.511	0.0201	0.205	0.2
0.511	23	0.574	0.0226	0.259	0.25
0.641	22	0.643	0.0253	0.325	0.34
0.812	21	0.724	0.0285	0.412	0.38
1.02	20	0.813	0.032	0.519	0.5
1.29	19	0.912	0.036	0.653	
1.63	18	1.024	0.040	0.824	0.75
2.05	17	1.151	0.045	1.040	1
2.58	16	1.29	0.051	1.307	
3.26	15	1.45	0.057	1.651	1.5
4.11	14	1.628	0.064	2.082	
5.19	13	1.829	0.072	2.627	2.5
6.53	12	2.052	0.081	3.31	
8.2	11	2.304	0.091	4.17	4
10.4	10	2.588	0.102	5.26	
13.1	9	2.906	0.114	6.63	6
16.6	8	3.268	0.128	8.39	
20.8	7	3.665	0.144	10.5	10
26.2	6	4.12	0.162	13.3	
33.1	5	4.62	0.182	16.8	16
41.7	4	5.19	0.204	21.1	
52.6	3	5.83	0.229	26.7	25
66.4	2	6.54	0.257	33.6	35
83.7	1	7.35	0.289	42.4	
105	0 or 1/0	8.25	0.324	53.5	50
133	00 or 2/0	9.27	0.364	67.4	70
167	000 or 3/0	10.4	0.41	85.0	95
211	0000 or 4/0	11.7	0.46	107.2	
250		14.6	0.57	127	120
300		16.0	0.63	152	150
350		17.3	0.68	177	185
400		18.9	0.74	203	
500		19.7	0.78	253	240
600		20.7	0.81	304	300
700		21.3	0.84	355	
750		22.0	0.87	380	
800		22.7	0.89	405	400
900		24.1	0.95	456	
1000		25.4	1.00	507	500
1250		28.4	1.12	633	625
1500		31.1	1.22	760	800
1750		33.6	1.32	887	
2000		35.9	1.41	1013	1000

The given values refer to single-wire solid conductors. For multi-stranded conductors the values are approximate.

MCM = 1000 circular mils; 1 circular mils = 0.0005067 mm<sup>2</sup>

AWG = American wire gauge

## Terms of sale and delivery – Status as of August 2016

### I. General provisions

1. Mutual written declarations are decisive for the scope of the deliveries or performances (hereinafter: deliveries). However, the buyer's general terms and conditions of business only apply if the supplier or performance provider (hereinafter: supplier) has expressly agreed to them in writing. Oral agreements must be confirmed in writing to be valid. Offers carry no obligation prior to our written order confirmation.
2. The supplier reserves without restriction its property rights and its exploitation rights arising from copyright for cost estimates, drawings and other documents (hereinafter: documents). The documents may only be made available to third parties with the prior consent of the supplier and, if the order is not granted to the supplier, the documents must be returned to the supplier upon request without undue delay. Sentences 1 and 2 apply correspondingly for the buyer's documents; these may, however, be made available to third parties which the supplier has permissibly commissioned for the deliveries.
3. Partial deliveries are permissible provided they are reasonable for the buyer.
4. Specifications of dimensions, weights and other characteristics of the goods are approximate values and are subject to the tolerances common in the field. The specifications do not indicate warranted characteristics in the legal sense provided they are not expressly designated as such. The products are described exclusively in our catalogue.

### II. Prices and payment conditions

1. The prices listed are ex works and do not include packaging, shipping costs and transport insurance, nor do they include the legally applicable VAT.
2. The supplier's pecuniary claim is due 10 days after receipt of invoice.
3. For payments made within 10 days of the invoice date a 3% discount is granted. For payments made within 30 days of the invoice date a 2% discount is granted. All invoices are payable in full within 60 days of the invoice date.
4. Payments shall be made free of all transfer charges to the supplier's account.
5. The buyer can only settle with claims that are uncontested or legally effective.
6. If payment is made late, the supplier has the right to calculate interest for delay in accordance with currently valid legislation.

### III. Shipping terms; returns

1. Shipping occurs ex works and with no guarantee of the cheapest type of shipping, provided no specific agreement has been reached. Orders of more than €500 are shipped free of charge; orders of less than €50 are shipped ex works plus a €10 handling charge. Export shipments above a net goods value of €250 are made free to the German border or F.O.B. at a German sea port.
2. Returning goods requires the consent of the supplier, provided this is not a matter of justified claims. If the buyer returns goods without the express consent of the supplier, and provided the reason for this is not a defective delivery, then the supplier shall charge a processing fee of 15% of the net goods value at current purchasing prices. The right to demand contractual fulfillment and acceptance of the goods, including reimbursement of the added costs incurred by the supplier due to the return, remains unaffected hereby. Returns of damaged and discontinued goods are never accepted.
3. Articles requiring revision can not be returned.
4. VDE certified articles will only be accepted for return against an increased fee of 30 %.

### IV. Retention of title

1. The objects of the deliveries (retained goods) remain the property of the supplier until all of the supplier's claims against the buyer that have arisen from the business transaction have been fulfilled. Lokal Insofar as the value of all security interests to which the supplier is entitled exceeds the value of all secured claims by more than 20%, the supplier shall release part of the security interests upon request by the buyer.
2. While the retention of title is in effect, the buyer does not have the right to pledge the goods or transfer them by way of security. During this time, only resellers may resell the goods in the usual course of business and only under the condition that the reseller receives payment from its customer or, if the reseller stipulates that title to the goods is transferred to its customer, only after the customer has fulfilled its payment obligations.
3. a) If the buyer sells the retained goods, then the buyer transfers as security the future claims on its customer that arise from the resell, including all ancillary rights such as balance claims. This transfer takes effect with no special subsequent explanations. If the retained goods are resold together with other objects without an agreement on individual prices, then the buyer transfers to the supplier, with priority over the remaining claim, that part of the total price claim which corresponds to the price of the retained goods set by the supplier in its invoice.  
b) During substantiation of a justified interest, the buyer must provide the supplier with the customer information required to satisfy the supplier's claims against the customer and the buyer must hand over the required documents.  
c) Until revocation, the buyer is authorised to collect the transferred claims from the resell. If an important reason exists, in particular delayed payment, stoppage of payment, entry into insolvency proceedings, protest of a bill or justified suspicion of over-indebtedness or pending inability to pay on the part of the buyer, the supplier has the right to revoke the buyer's authorisation to collect. Furthermore, the supplier can, after giving prior warning with a reasonable grace period, disclose the assignment for security, realise the transferred claims and demand that the buyer disclose the assignment for security to the customer.
4. a) The buyer is permitted to process the retained good or to mix it or connect it with other objects. The processing, mixing or connecting (hereinafter: processing) is carried out for the supplier. The buyer shall keep the new thing for the supplier and afford it the care that a proper salesman does. The new thing counts as a retained good.  
b) If processing is carried out with other objects which do not belong to the supplier, the supplier is entitled to a share of the ownership of the new thing which corresponds to the ratio of the value of the processed, mixed or connected (hereinafter: processed) retained good to the value of the rest of the processed good at the time of processing. If the buyer acquires individual ownership of the new thing, the supplier and the buyer agree that the buyer grants to the supplier a share of the ownership of the new thing created by the processing corresponding to a ratio of the value of the processed retained good to the value of the rest of the processed good at the time of processing.  
c) If the new thing is sold, the buyer transfers herewith to the supplier as security its claim against the customer from the re-sell, including all ancillary rights. This transfer takes effect with no special subsequent explanations. The transfer only applies to an amount that corresponds to the value set by the supplier for the processed retained good in its invoice. The share of the claim transferred to the supplier shall be given settlement priority. With regard to the authorisation to collect as well as the requirements for its revocation, No. 3. c) applies correspondingly.  
d) If the buyer connects the retained good with real estate or mobile things, then the buyer also transfers as security the claim to which it is entitled as compensation for the connection, including all ancillary rights, to an amount corresponding to the ratio of the value of the connected retained good to the value of the rest of the connected goods at the time of the connection. This transfer takes effect with no special subsequent explanations.
5. In the event of executions, confiscations or other access or intervention by a third party, the buyer must inform the supplier immediately.
6. In the event of breach of duty by the buyer, in particular delayed payment, the supplier has the right, after the expiration of a reasonable grace period for performance given to the buyer, to withdraw or retract; the legal stipulations on the expendability of setting a grace period are unaffected hereby. The buyer is obligated to surrender possession.

### V. Deadlines for deliveries; delay

1. If the supplier is prevented from meeting a performance deadline, the performance deadline is pushed back by a reasonable period; this does not apply if the supplier itself is responsible for the delay. Deadline compliance assumes the proper receipt of all documents, required approvals and releases, in particular of plans, delivered by the buyer, as well as the compliance of the buyer with the agreed payment conditions and other obligations. If these requirements are not fulfilled on time, the deadlines shall be extended correspondingly; this does not apply if the supplier is responsible for the delays.
2. Agreed delivery dates ("Delivery by ...", "Delivery in ...", "Delivery on ...") count as target dates, provided they are not expressly declared as binding by phrases such as "at the latest on ...", "guaranteed by ...".
3. If deadlines are not met due to force majeure, e.g. mobilisation, war, civil unrest or other event, e.g., strike, lockout, the deadlines are extended accordingly.
4. If the supplier is late, the buyer can insofar as it can verify that it has incurred damages hereby demand compensation for each complete week of delay of 0.5%, but totalling no more than 5% of the price for the part of the delivery that, because of the delay, could not be put to its intended use.
5. Compensation claims by the buyer due to delivery delays and instead of performance which exceed the limits listed in No. 4 are excluded in all cases of delayed delivery, even after the expiry of any delivery deadline that may have been set. This does not apply insofar as liability is mandatory in cases of wilful intent, gross negligence, personal injury or death; a change in burden of proof to the disadvantage of the buyer is not connected herewith. The buyer can only withdraw from the contract within the framework of legal provisions, insofar as the supplier is responsible for the delivery delay.
6. If requested to do so by the supplier, the buyer is obligated to declare within an appropriate deadline whether, due to the delivery delay, it intends to withdraw from the contract and/or demand compensation in lieu of performance or whether it insists on performance.
7. If, at the buyer's request, shipping or delivery is delayed by more than a month from notification of readiness for shipping, the buyer may be charged a storage fee for each month commenced of 0.5 % of the price of the delivery items, up to a maximum, however, of 5%. The contracting parties have the right to provide evidence of higher or lower storage costs.
8. If the buyer claims that it did not receive a delivery shipped to it, the supplier can charge the buyer for the costs of the inquiry, no less, however, than €30.
9. Additional and other claims and rights in connection with delayed delivery or performance are excluded.

## VI. Transfer of risk

1. Risk is transferred to the buyer, even in the case of carriage-free delivery, when the delivery is brought to shipping or is picked up, but no later than when the delivery leaves the warehouse, and indeed this is also the case if the delivery is transported on our lorries. Upon the buyer's request and at cost to buyer, the deliveries shall be insured against the usual transport risks.
2. If shipping or delivery is delayed for reasons attributed to the buyer or if the buyer delays acceptance for other reasons, then the risk passes to the buyer.

## VII. Acceptance

1. The buyer may not refuse acceptance of deliveries due to negligible defects.

## VIII. Material defects

The supplier is liable for material defects as follows:

1. All parts or performances that display a material defect within the limitation period without regard to operating time, shall, at the discretion of the supplier, be remedied, replaced or rendered again free of charge, provided the cause of the defect occurred before the risk transfer.
2. Material defect claims have a limitation period of 12 months. This does not apply if legislation dictates longer periods.
3. The purchaser shall inspect the received goods immediately after arrival for quantity, condition and any assured characteristics. The buyer shall inform the supplier about material defects in writing and without undue delay. Acknowledgement of material defects must always be made in writing.
4. In the event of a defect notification, an amount of the buyer's payments may be retained, which corresponds to the share of the material defects found. The buyer may retain payments if a defect notification is made provided there is no doubt about the validity of the claim. If the defect notification is shown to be unjustified, the supplier has the right to demand that the buyer compensate the supplier for its cost incurred.
5. Initially the supplier always has the opportunity for supplementary performance within an appropriate period.
6. If the supplementary performance is unsuccessful, the buyer can withdraw from the contract without affecting any damage claims in accordance with Art. XI – or reduce the payment. The legal right to withdraw does not require that the supplier is responsible for an existing defect of a purchased good. In all other cases, the buyer may only withdraw if there is a breach of duty for which the supplier is responsible.
7. There shall be no claims for defects in the case of negligible deviations from the agreed condition, of only negligible impairments to usability, of natural wear or of damages that occur after the transfer of risk as a result of improper or careless treatment, overloading or unsuitable operating materials or due to particular external influences which are not presupposed by the contract. If the buyer or a third party makes improper changes or performs improper maintenance work, there shall also be no claims for defects from this or from the consequences arising therefrom.
8. Claims by the buyer for the necessary expenses incurred for the purpose of supplementary performance, in particular transport, infrastructure, labour and material costs, are excluded insofar as the expenses increase because the delivery item is subsequently relocated to a different place than the buyer's place of business, unless the relocation is in keeping with its intended use.
9. The buyer has statutory rights of recourse against the supplier only insofar as the buyer has not reached any agreements with its customer which go beyond the statutory claims for defects. Furthermore, number 8 applies correspondingly for the extent of the buyer's right of recourse against the supplier.
10. In addition, Art. XI (Other damage claims) applies for damage claims. Additional claims or claims other than those regulated by Art. VIII, which are made by the buyer against the supplier and its agents, and which are based on a material defect are excluded.

## IX. Commercial property rights and copyrights; defects of title

1. Unless agreed otherwise, the supplier is obligated to provide the delivery free from third-party commercial property rights and copyrights (hereinafter: property rights) in the supplier's country only. Insofar as a third party asserts justified claims against the buyer owing to the infringement of property rights through deliveries provided by the supplier which are used as per contract, the supplier shall be liable to the buyer within the period defined in Art. VIII No. 2 as follows:
  - a) The supplier shall at its choice and at its cost either obtain a right of use for the relevant deliveries, change the delivery so that property rights are not infringed or exchange the delivery. If this is not possible at reasonable conditions, the buyer shall be entitled to the statutory right of withdrawal or reduction. The buyer cannot demand compensation for useless expenditures.
  - b) The supplier's obligation to provide compensation for damages is governed by Art. XI.
  - c) The aforementioned obligations of the supplier apply only if the buyer promptly notifies the supplier in writing about claims raised by third parties, if the buyer does not recognise the claim and if the supplier retains its right to all defensive actions and settlement talks. Should the buyer discontinue the use of the delivered items in order to mitigate damages or for other important reasons, it shall notify the third party that the discontinuation of use does not imply the acceptance of an infringement of property rights.
2. Claims of the buyer are excluded insofar as it is responsible for the infringement of property rights.
3. Claims of the buyer are further excluded insofar as the infringement of property rights is caused by special specifications of the buyer, by an application which was not foreseeable by the supplier or due to the fact that the delivery is changed by the buyer or used together with products which were not delivered by the supplier.
4. In the case of property rights infringements, the provisions of Art. VIII No. 4, 5 and 9 correspondingly apply to the claims of the buyer set forth in No. 1 a).
5. In the case of other defects of title, the provisions of Art. VIII apply correspondingly.
6. Irrespective of their legal bases, additional claims and rights or claims and rights (e.g., cancellation, reduction, withdrawal) other than those regulated by this article that are made by the buyer against the supplier and its agents on the grounds of material defect are excluded.

## X. Impossibility; amendment

1. To the extent that supply is not possible the buyer is entitled to demand compensation unless the supplier is not responsible for the impossibility. However, the claim for compensation by the buyer shall be confined to 10% of the value of the part of the delivery which cannot be put to its intended use, due to the impossibility. This does not apply insofar as liability is mandatory in cases of wilful intent, gross negligence, personal injury or death; a change in burden of proof to the disadvantage of the buyer is not connected herewith. The right of the buyer to withdraw from the contract is not affected.
2. Insofar as an unforeseeable event in the sense of Art. V No. 3 changes the commercial importance or the contents of the delivery or have substantial implications on the operation of the supplier, the contract shall be readjusted in accordance with the principles of good faith. Insofar as this is commercially unjustifiable, the supplier has the right to withdraw from the contract. If the supplier intends to withdraw from the contract it shall notify the buyer of this without undue delay after recognising the implications of the event, even if an extended delivery time was initially agreed with the buyer.

## XI. Other claims to compensation for damages

1. Claims to compensation for damages on the part of the buyer, regardless of their legal basis, but in particular on account of breach of duties derived from contractual obligation and from impermissible acts are excluded.
2. This does not apply insofar as liability is mandatory, e.g., in accordance with the Product Liability Act, in cases of wilful intent, gross negligence, personal injury or death or on account of infringement of essential contractual obligations. Compensation for damage for infringement of essential contractual obligations is, however, limited to contractual, foreseeable damages unless it is a matter of wilful intent or gross negligence or unless liability is assumed because of personal injury or death. The aforementioned stipulations do not imply a change in the burden of proof to the disadvantage of the buyer.
3. Insofar as the buyer is entitled to compensation for damages in accordance with Art. XI, these expire at the end of the expiry period valid for material defect claims in accordance with Art. VIII No. 2.

## XII. Place of jurisdiction and applicable law

1. If the buyer is a dealer, the sole place of jurisdiction for all disputes arising directly or indirectly from the contractual relationship (including check and security claims) is the seat of the supplier. The supplier, however, has the right to bring legal action at the buyer's place of business.
2. Contractual relations are governed by German substantive law, to the exclusion of the United Nations Convention on Contracts for the International Sale of Goods (CISG).

## XIII. Binding nature of the contract

If individual provisions of this contract are or become legally invalid, the remaining sections of the contract shall remain binding. This does not apply if abiding by the contract would represent an unreasonable hardship for one of the parties.

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<b>09 7618</b>	<b>1</b>	<b>41</b>	10 1222	6	45/197	10 2059	1	53	10 5554	1	227
<b>10 0000</b>	<b>6</b>	<b>45/176</b>	10 1224	6	45/197	10 2060	1	53	10 5555	1	227
10 0024	6	44/174	10 1230	1	197	10 2062	1	53	10 5650	1	227
10 0030	1	44/51	10 1236	1	197	10 2063	1	53	10 5651	1	227
10 0062	6	44/174	10 1237	10	197	10 2064	1	53	10 5652	1	227
10 0082	1	45	10 1238	1	197	10 2066	1	53	10 5653	1	227
10 0086	1	45	10 1239	1	197	10 2067	1	53	10 5654	1	227
10 0090	1	45	10 1241	1	197	10 2068	1	53	10 5655	1	227
10 0094	1	45	10 1243	1	197	10 2069	1	53	10 5656	1	227
10 0212	1	44	10 1256	1	197	10 2070	1	53	10 5657	1	227
10 0214	6	44/174	10 1277	1	197	10 2071	1	53	10 5658	1	227
10 0216	6	44/174	10 1279	1	197	10 2072	1	53	10 5659	1	227
10 0236	6	44/174	10 1281	1	197	10 2080	1	53	10 5670	1	230
10 0238	6	44/174	10 1283	1	197	10 2082	1	53	10 5672	1	230
10 0334	6	44/174	10 1285	1	197	10 3012	1	50	10 5674	1	230
10 0336	6	44/174	10 1300	1	52/197	10 3016	1	50	10 5676	1	230
10 0338	6	44/174	10 1302	1	52/197	10 3018	1	50	10 5678	1	230
10 0350	1	45	10 1304	1	52/197	10 3042	1	50	10 5680	1	230
10 0352	1	45	10 1370	1	197	10 3062	1	50	10 5682	1	230
10 0402	6	44/174	10 1410	1	52	10 3110	1	50/177	10 5684	1	230
10 0450	1	52/199	10 1412	1	52	10 3112	1	50/177	10 5686	1	230
10 0524	6	43	10 1414	1	52	10 3114	1	50/177	10 5688	1	230
10 0526	6	43/173	10 1416	1	52	10 3232	1	50/177	10 5690	1	230
10 0528	6	43/173	10 1418	1	52	10 3240	1	50/177	10 5692	1	230
10 0570	6	43	10 1430	1	52	10 4020	1	45/174	10 5694	1	230
10 0572	6	43/173	10 1432	1	52	10 4022	1	45	10 5698	1	226
10 0574	6	43/173	10 1434	1	52	10 4030	1	49	10 5701	1	226
10 0577	6	43/173	10 1436	1	52	10 4032	1	48	10 5702	1	226
10 0652	6	44/174	10 1438	1	52	10 4190	1	221	10 5704	1	227
10 0686	6	44/174	10 1450	1	52	10 4192	1	221	10 5705	1	225
10 0710	6	106	10 1452	1	52	10 4194	1	221	10 5706	1	100
10 0712	6	106	10 1454	1	52	10 4196	1	221	10 5708	1	100
10 0720	1	107/220	10 1456	1	52	10 4200	1	221	10 5710	1	100
10 0724	1	109	10 1458	1	52	10 4202	1	221	10 5711	1	230
10 0725	1	110/220	10 1470	1	52	10 4204	1	222	10 5712	1	230
10 0726	1	109	10 1472	1	52	10 4206	1	221	10 5713	1	230
10 0727	1	110	10 1474	1	52	10 4208	1	221	10 5714	1	230
10 0728	1	110/220	10 1476	1	52	10 4210	1	221	10 5715	1	230
10 0730	1	108	10 1478	1	52	10 4311	1	225	10 5716	1	230
10 0731	1	108	10 1524	1	52	10 4312	1	225	10 5717	1	230
10 0732	1	108	10 1540	1	52	10 4313	1	225	10 5718	1	230
10 0733	1	108	10 1550	1	53	10 4314	1	225	10 5719	1	230
10 0736	1	108	10 1562	1	53	10 4315	1	225	10 5720	1	230
10 0737	1	108	10 1570	1	118	10 5300	1	228	10 5721	1	230
10 0738	1	108	10 1571	1	118	10 5302	1	228	10 5722	1	230
10 0739	1	108	10 1640	1	53	10 5304	1	228	10 5723	1	230
10 0740	1	110	10 1650	1	53/276	10 5306	1	228	10 5730	1	230
10 0741	1	110	10 1690	1	51	10 5308	1	228	10 5731	1	230
10 0743	1	110	10 1692	1	51	10 5310	1	228	10 5732	1	230
10 0744	1	109	10 1694	1	51	10 5312	1	228	10 5733	1	230
10 0745	1	109	10 1698	1	51	10 5314	1	228	10 5734	1	230
10 0746	1	109	10 1700	1	51	10 5316	1	228	10 5735	1	230
10 0747	1	109	10 1702	1	51	10 5318	1	228	10 5736	1	230
10 0748	1	110	10 1704	1	51	10 5320	1	228	10 5737	1	230
10 0749	1 pair	110	10 1708	1	51	10 5330	1	228	10 5738	1	230
10 0751	1	110	10 1720	1	51	10 5332	1	228	10 5739	1	230
10 0752	1	110	10 1722	1	51	10 5334	1	228	10 5740	1	230
10 0753	1	109	10 1724	1	51	10 5336	1	228	10 5741	1	230
10 0755	1	108	10 1730	1	52	10 5338	1	228	10 5742	1	230
10 0762	1	109/183	10 1732	1	44/51	10 5340	1	228	10 5749	1	231
10 0764	1	109	10 1733	1	51	10 5342	1	228	10 5750	1	231
10 0765	1	104	10 1734	1	51	10 5344	1	228	10 5751	1	231
10 0766	1	104	10 1735	1	51	10 5346	1	228	10 5752	1	231
10 0770	1	108	10 1867	1	223	10 5348	1	228	10 5753	1	231
10 0771	1	108	10 1868	1	223	10 5350	1	228	10 5754	1	231
10 0772	1	108	10 1870	1	222	10 5360	1	228	10 5755	1	231
10 0773	1	108	10 1872	1	222	10 5362	1	228	10 5756	1	231
10 0774	1	110	10 1874	1	222	10 5364	1	228	10 5757	1	231
10 0775	1	109	10 1880	1	222	10 5366	1	228	10 5758	1	231
10 0777	1	109	10 1882	1	222	10 5368	1	228	10 5759	1	231
10 0779	1	110	10 1883	1	222	10 5370	1	228	10 5760	1	231
10 0780	1	109	10 1884	1	222	10 5372	1	228	10 5761	1	231
10 0790	1	47/176	10 1885	1	222	10 5374	1	228	10 5762	1	231
10 0792	1	47/176	10 1886	1	222	10 5392	1	229	10 5763	1	231
10 0794	1	47/176	10 1888	1	222	10 5394	1	229	10 5764	1	231
10 0796	1	177	10 1892	1	221	10 5396	1	229	10 5765	1	231
10 0802	1	48	10 1902	1	222	10 5398	1	229	10 5770	1	231
10 0804	1	48	10 1904	1	220	10 5400	1	229	10 5771	1	231
10 0806	1	48	10 1905	1	220	10 5402	1	229	10 5772	1	231
10 0808	1	48	10 1906	1	220	10 5404	1	229	10 5773	1	231
10 0810	1	48	10 1907	1	220	10 5406	1	229	10 5774	1	231
10 0812	1	48	10 1909	1	222	10 5408	1	229	10 5775	1	231
10 0814	1	48	10 1911	1	220	10 5410	1	229	10 5776	1	231
10 0816	1	48	10 1916	1	217/221	10 5442	1	229	10 5777	1	231
10 0818	1	48	10 1918	1	221	10 5444	1	229	10 5778	1	231
10 0820	1	48	10 1925	1	220	10 5446	1	229	10 5779	1	231
10 0822	1	48	10 1930	1	272	10 5448	1	229	10 5780	1	231
10 0824	1	48	10 1931	1	272	10 5450	1	229	10 5781	1	231
10 0826	1	48	10 1935	1	273	10 5452	1	229	10 5782	1	231
10 1030	1	49	10 1940	1	220	10 5454	1	229	10 5783	1	231
10 1038	1	49	10 1945	1	220	10 5462	1	229	10 5784	1	230
10 1040	1	49	10 1946	1	220	10 5464	1	229	10 5785	1	230
10 1044	1	49	10 2000	1	222	10 5466	1	229	10 5786	1	230
10 1046	1	49	10 2001	1	217	10 5468	1	229	10 5787	1	230
10 1048	1	49	10 2002	1	217	10 5470	1	229	10 5788	1	230
10 1050	1	49	10 2003	1	217	10 5472	1	229	10 5789	1	230
10 1051	1	49	10 2004	1	217	10 5474	1	229	10 5790	1	230
10 1052	1	49	10 2006	1	218	10 5480	1	229	10 5791	1	230
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10 5808	1	232	10 6201	1	218/219	11 1440	1	81	11 2434	1	70
10 5810	1	232	10 6202	1	218/219	11 1460	1	80	11 2450	1	72
10 5812	1	232	10 6203	1	218/219	11 1465	1	80	11 2452	1	72
10 5814	1	232	10 6210	1	219	11 1474	1	80	11 2454	1	72
10 5816	1	232	10 6211	1	218	11 1475	1	80	11 2456	1	72
10 5818	1	232	10 6212	1	218	11 1476	1	80	11 2458	1	72
10 5820	1	232	10 6213	1	218	11 1477	1	80	11 2460	1	72
10 5822	1	232	10 6214	1	218	11 1480	1	80	11 2462	1	72
10 5824	1	232	10 6215	1	218	11 1485	1	80	11 2464	1	72
10 5826	1	232	10 6216	1	218	11 1506	1	193	11 2466	1	72
10 5830	1	232	10 6217	1	218	11 1510	1	192	11 2468	1	72
10 5832	1	232	10 6218	1	218	11 1512	1	192	11 2470	1	72
10 5834	1	232	10 6301	1	224	11 1513	1	192	11 2472	1	72
10 5836	1	232	10 6306	1	224	11 1514	1	192	11 2474	1	72
10 5838	1	232	10 6308	1	224	11 1515	1	192	11 2476	1	72
10 5840	1	232	10 6311	1	224	11 1516	1	192/193	11 2478	1	72
10 5842	1	232	10 6312	1	224	11 1517	1	193	11 2480	1	72
10 5844	1	232	10 6313	1	224	11 1519	1	192	11 2482	1	72
10 5846	1	232	10 6314	1	86	11 1522	1	193	11 2484	1	72
10 5848	1	232	10 6321	1	225	11 1525	1	193	11 2486	1	72
10 5850	1	232	10 6324	1	225	11 1534	1	193	11 2488	1	72
10 5852	1	232	10 6326	1	225	11 1540	1	193	11 2490	1	72
10 5860	1	232	10 6330	1	225	11 1562	1	193	11 2500	1	72
10 5862	1	232	10 8002	1	47/176	11 1580	1	194	11 2505	1	70
10 5864	1	232	10 8724	6	47/176	11 1586	1	194	11 2508	1	70
10 5866	1	232	10 8771	6	46/175	11 1588	1	194	11 2509	1	70
10 5868	1	232	10 8773	6	46/175	11 1590	1	194	11 2510	1	70
10 5870	1	232	10 8777	6	46/175	11 1592	1	194	11 2511	1	70
10 5872	1	232	10 8778	6	46/175	11 1593	1	194	11 2512	1	70
10 5874	1	232	10 8779	6	46/175	11 1600	6	50	11 2513	1	70
10 5876	1	232	10 8780	6	46/175	11 1622	1	50	11 2514	1	70
10 5878	1	232	10 8781	6	47/176	11 1650	1	50	11 2515	1	70
10 5892	1	233	10 8782	6	47/176	11 1652	6	50	11 2516	1	70
10 5894	1	233	10 8783	6	47/176	11 1654	1	50	11 2517	1	70
10 5896	1	233	10 8784	6	46/175	11 1810	1	62	11 2518	1	70
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10 5900	1	233	10 8786	6	46/175	11 1861	12	62	11 2520	1	180
10 5902	1	233	10 8787	6	46/175	11 1863	12	62	11 2522	1	180
10 5904	1	233	10 8788	6	46/175	11 1864	12	62	11 2523	1	180
10 5906	1	233	10 8789	6	46/175	11 1865	12	62	11 2525	1	180
10 5908	1	233	10 8790	6	47/176	11 1866	12	62	11 2526	1	180
10 5910	1	233	10 8792	6	46/175	11 1868	12	62	11 2527	1	180
10 5912	1	233	10 8795	6	46/175	11 1869	12	62	11 2528	1	180
10 5914	1	233	<b>11 0002</b>	<b>1</b>	<b>120</b>	11 1870	12	62	11 2529	1	180
10 5942	1	233	11 0004	1	120	11 1875	12	62	11 2530	1	180
10 5944	1	233	11 0006	1	120	11 1876	12	62	11 2531	1	180
10 5946	1	233	11 0008	1	142	11 1877	12	62	11 2534	1	180
10 5948	1	233	11 0010	1	142	11 1880	12	62	11 2560	1	180
10 5950	1	233	11 0012	1	134	11 1881	12	62	11 2561	1	180
10 5952	1	233	11 0014	1	135	11 1889	12	62	11 2562	1	180
10 5954	1	233	11 0016	1	135/143	11 1890	12	62	11 2563	1	180
10 5956	1	233	11 0120	12	58	11 1891	12	62	11 2564	1	180
10 5962	1	233	11 0122	12	58	11 1892	12	62	11 2570	1	180
10 5964	1	233	11 0290	12	58	11 1893	12	62	11 2575	1	180
10 5966	1	233	11 0294	12	58	11 1894	12	62	11 2576	1	180
10 5968	1	233	11 0480	12	62	11 1895	12	62	11 2580	1	180
10 5970	1	233	11 0482	12	62	11 1898	1	63	11 2581	1	181
10 5972	1	233	11 0520	1	69	11 1901	1	63	11 2582	1	181
10 5974	1	233	11 0592	1	69	11 1903	1	63	11 2600	1	181
10 5976	1	233	11 0594	1	69	11 1909	1	63	11 2602	1	181
10 5978	1	233	11 0596	1	69	11 1910	12	62	11 2604	1	181
10 5980	1	233	11 0598	1	69	11 1911	12	62	11 2606	1	181
10 5982	1	233	11 0604	1	68	11 1912	12	62	11 2608	1	181
10 6000	1	216	11 0606	1	68	11 1913	12	62	11 2609	1	181
10 6002	1	216	11 0620	12	62	11 1914	12	62	11 2610	1	181
10 6005	1	216	11 0630	12	62	11 1915	12	62	11 2611	1	181
10 6009	1	216	11 0782	12	60	11 1916	12	62	11 2612	1	181
10 6010	1	216	11 0784	12	60	11 1920	1	63	11 2613	1	181
10 6011	1	216	11 0786	12	60	11 2050	1	64/179	11 2614	1	181
10 6012	1	216	11 0788	12	60	11 2200	1	71	11 2615	1	181
10 6013	1	216	11 0790	12	60	11 2202	1	71	11 2616	1	181
10 6014	1	216	11 0792	12	60	11 2204	1	71	11 2617	1	181
10 6015	1	217	11 0794	12	60	11 2206	1	71	11 2618	1	181
10 6016	1	217	11 0796	12	60	11 2208	1	71	11 2622	1	181
10 6017	1	217	11 0804	1	180	11 2210	1	71	11 2628	1	181
10 6018	1	217	11 0806	1	180	11 2212	1	71	11 2640	1	181
10 6019	1	217	11 0808	1	180	11 2214	1	71	11 2642	1	181
10 6027	1	217	11 0812	1	180	11 2218	1	71	11 2650	1	181
10 6028	1	217	11 0814	1	180	11 2220	1	71	11 2670	1	181
10 6052	1	216	11 0816	1	180	11 2222	1	71	11 2671	1	181
10 6060	1	217	11 0817	1	180	11 2226	1	71	11 2672	1	181
10 6071	1	216	11 0836	1	180	11 2228	1	71	11 2673	1	181
10 6112	1	217	11 0840	1	180	11 2232	1	71	11 2674	1	181
10 6114	1	86	11 0842	1	180	11 2234	1	71	11 2704	1	182
10 6116	1	219	11 0856	1	180	11 2238	1	71	11 2706	1	182
10 6117	1	219	11 0860	1	180	11 2310	1	71	11 2708	1	182
10 6118	1	219	11 0862	1	180	11 2312	1	71	11 2710	1	182
10 6120	1	217/220	11 1280	12	81	11 2330	1	71	11 2712	1	182
10 6122	1	218	11 1282	1	81	11 2332	1	71	11 2714	1	182
10 6124	1	218	11 1288	12	81	11 2334	1	71	11 2716	1	182
10 6126	1	218	11 1290	12	81	11 2336	1	71	11 2718	1	182
10 6134	1	217/222	11 1300	12	81	11 2338	1	71	11 2719	1	182
10 6136	1	217/221	11 1320	12	81	11 2344	1	71	11 2720	1	182
10 6138	1	218	11 1400	1	79	11 2348	1	71	11 2721	1	182
10 6140	1	218/220	11 1404	1	79	11 2350	1	71	11 2722	1	182
10 6142	1	218/220	11 1413	1	79	11 2352	1	71	11 2724	1	182
10 6144	1	217/221	11 1414	1	79	11 2356	1	71	11 2726	1	182
10 6146	1	222	11 1415	1	80	11 2358	1	71	11 2728	1	182
10 6152	1	219	11 1429	1	78	11 2362	1	71	11 2730	1	182
10 6154	1	219	11 1432	1	78	11 2364	1	71	11 2732	1	182
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11 2746	1	182	11 4576	1	66	11 7205	12	58	12 0021	1	105
11 2748	1	182	11 4590	1	67	11 7206	12	58	12 0022	1	107
11 2754	1	182	11 4592	1	67	11 7207	12	58	12 0023	1	107
11 2758	1	182	11 4596	1	67	11 7208	12	58	12 0024	1	107
11 2760	1	182	11 4597	1	67	11 7209	12	58	12 0025	1	105
11 2762	1	182	11 4598	1	67	11 7210	12	58	12 0026	1	106
11 2764	1	182	11 4599	1	68	11 7211	12	58	12 0027	1	106
11 2766	1	182	11 4602	1	68	11 7213	12	58	12 0028	1	105
11 2768	1	182	11 4604	1	67	11 7214	12	58	12 0029	1	105
11 2769	1	182	11 4606	1	68	11 7217	12	58	12 0030	1	104
11 2770	1	182	11 4706	12	61	11 7220	1	60	12 0031	1	111
11 2771	1	182	11 4712	12	61	11 7223	1	58	12 0032	1	104
11 2772	1	182	11 4736	12	61	11 7224	1	58	12 0033	1	111
11 2774	1	182	11 4740	12	61	11 7225	1	58	12 0034	1	106
11 2776	1	182	11 4742	12	61	11 7226	1	58	12 0035	1	111
11 2778	1	182	11 4762	12	61	11 7228	1	58	12 0036	1	104
11 2780	1	182	11 4764	12	61	10,15			12 0037	1	111
11 2783	1	74	11 4766	12	61	11 7300	1	59	12 0038	1	104
11 2784	1	74	11 4800	1	61	11 7306	12	58	12 0039	1	111
11 2785	1	74	11 4802	1	61	11 7307	12	58	12 0042	1	113/183
11 2786	1	74	11 4810	1	61	11 7308	12	58	12 0043	1	113/183
11 2787	1	74	11 4812	1	61	11 7309	12	58	12 0044	1	113/183
11 2788	1	74	11 4814	1	61	11 7310	12	58	12 0045	1	113/183
11 2790	1	74	11 4816	1	61	11 7315	12	58	12 0046	1	113/183
11 2791	1	74	11 4818	1	61	11 7320	12	58	12 0048	1	106
11 2792	1	74	11 4820	1	61	11 7325	12	58	12 0050	1	114
11 2793	1	74	11 4822	1	61	11 7330	12	58	12 0052	12	114
11 2794	1	74	11 4824	1	61	11 7340	12	58	12 0054	12	114
11 2795	1	74	11 4826	1	61	11 7511	12	60	12 0056	12	114
11 2796	1	74	11 4828	1	61	11 7512	12	60	12 0058	12	114
11 2797	1	74	11 4830	1	61	11 7513	12	60	12 0060	12	114
11 2798	1	73	11 4831	1	61	11 7514	12	60	12 0062	1	114
11 2800	1	72	11 4832	1	61	11 7515	12	60	12 0063	10	114
11 2802	1	72	11 4834	1	61	11 7700	1	56/178	12 0064	1	113/183
11 2804	1	72	11 4836	1	61	11 7701	12	55/177	12 0066	1	113/183
11 2842	1	201	11 4838	1	61	11 7702	12	55/177	12 0078	1	114
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11 2846	1	201	11 4842	1	61	11 7704	12	55/177	12 0080	12	114
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11 2883	10	73	11 4846	1	61	11 7706	12	55/177	12 0082	10	114
11 2890	1	75	11 4848	1	61	11 7708	12	55/177	12 0083	1	111
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11 2900	1	73	11 4858	1	61	11 7733	12	55/177	12 0088	1	111
11 2902	1	73	11 4860	1	61	11 7740	12	55/177	12 0089	1	111
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11 2908	1	73	11 4942	1	66	11 7743	12	55/177	12 0093	1	111
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11 2912	1	73	11 4971	1	66	11 7750	1	55/177	12 0097	1	111
11 2922	1	75	11 4972	1	66	11 7751	12	55/177	12 0098	1	106/219
11 2988	1	75	11 4973	1	66	11 7752	12	55/177	12 0099	1	111
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11 2992	1	74	11 5014	1	73	11 7758	12	55/177	12 0104	6	97
11 2994	1	75	11 5015	1	73	11 7800	1	56/178	12 0110	1	100
11 2996	1	76	11 5017	1	73	11 7801	1	57/179	12 0116	1	97
11 2998	1	76	11 5019	1	73	11 7802	1	56/178	12 0120	1	100
11 3104	1	69	11 5020	1	73	11 7805	12	55/178	12 0122	1	100
11 3152	1	69	11 5022	1	73	11 7806	12	55/178	12 0126	1	101
11 3154	1	70	11 5024	1	73	11 7807	12	55/178	12 0128	1	102
11 3160	1	70	11 5027	1	73	11 7808	12	55/178	12 0130	1	101
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11 4011	1	198	11 5042	6	73	11 7811	12	55/178	12 0138	1	97
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11 4130	1	201	11 7101	1	59	11 7900	1	56/179	12 0178	1	99
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11 4508	1	66	11 7106	12	57	11 7920	12	55/178	12 0202	6	97/183
11 4509	1	66	11 7107	12	57	11 7925	12	55/178	12 0206	6	97/183
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12 2025	1	111	13 2414	1	151	13 2772	1	149	13 2956	1	158
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13 0358	1	165	13 2500	1	147	13 2804	1	153/154	13 2992	1	159
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13 0405	6	164	13 2504	1	147	13 2808	1	154	13 2996	1	159
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13 0582	6	164	13 2524	1	147	13 2819	1	154	13 3014	1	152
13 0584	6	164	13 2526	1	147	13 2820	1	154	13 3016	1	153
13 0586	6	164/200	13 2528	1	147	13 2822	1	154	13 3018	1	153
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13 0600	6	164	13 2532	1	147	13 2826	1	154	13 4000	1	160
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13 4036	1	162	14 0179	1	186	14 0744	1000	51	14 1325	12	145
13 4038	1	162	14 0180	1	186	14 0750	1 kg	51	14 1330	1	201
13 4040	1	162	14 0184	1	186	14 0752	1 kg	51	14 1340	1	201
13 5000	1	147/150/161	14 0185	1	186	14 0754	1 kg	51	14 1430	1	201
13 5002	1	147/150/152/161	14 0190	1	214	14 0758	1 kg	51	14 1494	1	93
13 5004	1	148/150/161	14 0191	1	214	14 0760	1 kg	51	14 1620	1	89
13 5006	1	148/150/151/152/153/161	14 0192	1	214	14 0762	1 kg	51	14 1630	1	89
13 5008	1	148/151/161	14 0193	1	214	14 0764	1 kg	51	14 1650	1	89
13 5010	1	147/161	14 0194	1	214	14 0768	1	51	14 1796	1	91
13 5012	1	147	14 0195	1	214	14 0770	1	51	14 1802	1	91
13 5014	1	149/161	14 0196	1	214	14 0772	1	51	14 1806	1	91
13 5016	1	149/153/161	14 0197	1	214	14 0774	1	51	14 1808	1	91
13 5018	1	153/154	14 0198	1	186	14 0778	1	51	14 1812	1	91
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13 5021	1	154/156	14 0201	1	187	14 0850	1	131	14 1842	1	91
13 5022	1	153/154/155/157/158	14 0202	1	187	14 0852	1	131	14 1844	1	91
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13 5030	1	154/156	14 0206	1	187	14 0860	1	131	14 2008	1	192
13 5032	1	154/156	14 0207	1	187	14 0862	1	131	14 2009	1	192
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13 5036	1	155/156/157	14 0210	1	189	14 0869	1	132	14 2014	1	192
13 5038	1	155/156/157	14 0214	1 pair	189	14 0870	1	132	14 2016	1	194
13 5040	1	155	14 0215	1 pair	189	14 0871	1	132	14 2020	1	89
13 5042	1	155	14 0216	12	189	14 0872	1	132	14 2024	1	89
13 5044	1	155	14 0219	1 pair	189	14 0873	1	132	14 2028	1	89
13 5046	1	154	14 0220	1 pair	189	14 0874	1	132	14 2034	1	89
13 5048	1	156/157	14 0221	1 pair	189	14 0875	1	132	14 2035	1	90
13 5050	1	156/157/158/159	14 0222	1 pair	189	14 0876	1	132	14 2120	1	90
13 5054	1	156	14 0224	1	190	14 0884	1	132	14 2122	1	90
13 5056	1	157/158	14 0225	1	190	14 0886	1	132	14 2124	1	90
13 5058	1	157	14 0227	1 pair	190	14 0887	1	132	14 2130	1	90
13 5060	1	157	14 0228	1 pair	190	14 0888	1	132	14 2132	1	90
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13 5070	1	158/159	14 0234	1 pair	188	14 0893	1	132	14 2152	1	90
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13 5074	1	161	14 0236	1	214	14 0895	1	132	14 2161	1	94
13 5076	1	161	14 0237	1 pair	189	14 0896	1	132	14 2162	1	94
13 5078	1	161	14 0238	1 pair	189	14 0900	1	132	14 2163	1	92
13 5080	1	161	14 0239	1 pair	189	14 0902	1	132	14 2180	1	89
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18 0232	100	252	18 0504	100	247	18 0784	20	236	18 1342	100	269
18 0234	100	252	18 0506	100	247	18 0786	20	236	18 1343	100	269
18 0235	100	252	18 0508	100	247	18 0788	10	236	18 1344	100	269
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18 3322	25	241	18 3518	50	242	18 3869	1	245	18 4502	500	257
18 3324	25	241	18 3519	50	242	18 3910	10	245	18 4504	500	257
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20 8442	1	124	20 8788	1	141	40 3695	1	35	43 4309	1	34
20 8444	1	124	20 8790	1	141	40 3732	1	39	43 4316	1	34
20 8446	1	124	20 8792	1	141	40 4562	1	37	43 4323	1	34
20 8448	1	124	20 8794	1	141	40 4692	1	39	43 4330	1	34
20 8450	1	124	20 8796	1	141	40 4708	1	39	43 4347	1	34
20 8452	1	124	20 8798	1	141	40 4715	1	39	43 4354	1	34
20 8454	1	124	20 8800	1	141	40 4883	1 set	36	43 4361	1	34
20 8456	1	124	20 8802	1	141	40 5576	1	35	43 4378	1	34
20 8458	1	124	20 8804	1	141	40 5583	1	35	43 4385	1	34
20 8460	1	124	20 8810	1	142	40 5590	1	35	43 4392	1	34
20 8462	1	124	20 8812	1	142	40 6757	36	39	43 4408	1	34
20 8464	1	124	20 8814	1	142	40 6764	12	39	43 4446	1	34
20 8466	1	124	20 8816	1	142	40 7242	1	38	43 4453	1	34
20 8468	1	124	20 8818	1	142	40 7259	1	39	43 4460	1	34
20 8470	1	124	20 8820	1	142	40 7273	1	39	43 4569	1 set	35
20 8472	1	124	20 8822	1	142	40 7297	1	38	43 4576	1 set	35
20 8474	1	124	20 8824	1	142	40 7303	1	38	43 4583	1	34
20 8476	1	124	20 8826	1	142	40 7341	1	38	43 6006	1 set	33
20 8478	1	124	20 8830	1	142	40 7761	48	39	43 6013	1 set	33
20 8480	1	124	20 8832	1	142	40 7778	24	39	43 6020	1 set	33
20 8482	1	124	20 8833	1	142	40 7785	8	39	43 6037	1 set	33
20 8484	1	124	20 8834	1	140	40 7792	24	40	43 6631	1	40
20 8500	1	143	20 8836	1	140/141	40 7815	8	40	43 6679	1	40
20 8506	5	143	20 8838	1	140/141	40 7822	6	40	43 7935	1	34
20 8507	5	143	20 8844	1	141	40 8065	1	38	43 7942	1	34
20 8522	5	143	20 8846	1	142	40 8188	1 set	36	43 7959	1	34
20 8523	5	143	20 8848	1	142	40 8423	1	36	43 7966	1	34
20 8602	1	123	20 8850	1	141	40 8560	1	39			
20 8604	1	123	20 8852	1	141	40 8577	1	39			
20 8605	1	123	20 8854	1	142	40 8928	4	37			
20 8606	1	123	20 8856	1	143	40 8980	1	39			
20 8608	1	123	20 8858	1	143	40 9017	16	39			
20 8610	1	123	20 8860	1	143	40 9024	60	39			
20 8616	1	123	20 8862	1	143	40 9048	1	39			
20 8618	1	123	20 8900	1	135	40 9178	1	39			
20 8620	1	123	20 8902	1	135	40 9215	1	38			
20 8622	1	123	20 8904	1	135	40 9666	1	38			
20 8624	1	123	20 8910	1	135	40 9963	1	36			
20 8628	1	123	20 8912	1	135	<b>41 0709</b>	<b>5</b>	<b>36</b>			
20 8630	1	123	20 8914	1	135	41 0716	5	36			
20 8632	1	123	20 8920	1	135	41 0747	3	36			
20 8634	1	123	20 8922	1	135	41 0778	5	37			
20 8636	1	123	20 8924	1	135	41 0792	3	37			
20 8642	1	123	20 8930	1	135	41 0808	3	37			
20 8643	1	123	<b>21 0004</b>	<b>1</b>	<b>169</b>	41 0815	3	37			
20 8644	1	123	21 0008	1	169	41 1898	1	36			
20 8646	1	123	21 0065	1	169	41 2004	1 set	36			
20 8648	1	123	21 0104	1	169	41 2369	1	38			
20 8654	1	123	21 0106	1	169	41 2970	1	36			
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