








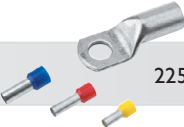


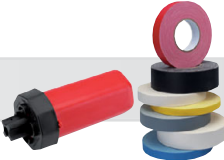



**The complete
range of tools for industry
and electrical trade**



Category	Page
1 HARDSHELL TOOL CASES	 7 – 12
2 TOOL BAGS	 13 – 17
3 TOOL ASSORTMENTS	 18 – 28
4 raaco STORAGE AND TRANSPORT SYSTEMS	 29 – 38
5 PLIERS	 39 – 50
6 SCREWDRIVERS	 51 – 60
7 SCREWING TOOLS	 61 – 72
8 MEASURING AND TESTING INSTRUMENTS	 73 – 77
9 KATIMEX® CABLE SPOOLING AND PULLING DEVICES	 78 – 91
10 SHEARS	 92 – 97
11 WIRE STRIPPING TOOLS	 98 – 106
12 SAWS, TUBE CUTTERS	 107 – 110
13 DRILLS, HOLE SAWS, DIAMOND TOOLS	 111 – 133

Category	Page
14 SCREW PUNCHERS, PLATE PUNCHERS 	134 – 149 
15 HAMMERS, CHISELS, SCRAPERS	150 – 153 
16 MEASURING TOOLS	154 – 157 
17 INSUL. SAFETY TOOLS, PERSONAL PROTECTIVE EQUIPMENT (PPE)	158 – 180 
18 PLUMBING TOOLS	181 – 186 
19 SOLDERING EQUIPMENT AND ACCESSORIES, CHEMICAL PRODUCTS	187 – 193 
20 WORKSHOP AND BUSINESS EQUIPMENT, WORK CLOTHES	194 – 203 
21 PRESSING AND CRIMPING TOOLS	204 – 224 
22 SOLDERLESS + INSULATED CABLE CONNECTORS, CABLE END SLEEVES	225 – 255 
23 CABLE TIES, VELCRO FASTENER CABLE TIES, LABELLING	256 – 267 
24 SCREWS	268 – 274 
25 ADHESIVE TAPES, HEAT-SHRINKABLE/COUPLING SLEEVE TECHNOLOGY	275 – 289 
26 TECHNICAL ANNEX, NUMERICAL LIST, INDEX	290 – 320 



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 is still today settled in this traditional stronghold of the European tool industry. From the beginning, the family owned company has been devotedly following its philosophy by manufacturing tools that meet the professionals' highest requirements. Therefore optimal materials, professional workmanship and control as well as the continuous adjustment to individual customer needs and new technological challenges are required. This has allowed the company to successfully develop from a regionally active plier factory to an internationally recognised manufacturer and distributor of high quality tools.

CIMCO is among others member of the following organizations:

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



Product quality

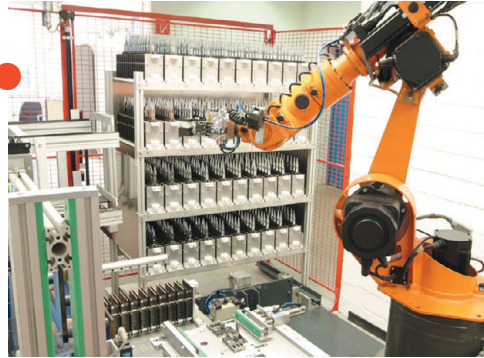


Safety tested

Numerous trade and industry electricians trust in CIMCO quality tools daily. Due to this fact we place particular emphasis on safety tools in our in-house production. Internally developed production techniques are installed here to manufacture special protective insulation.

Ambitious quality control

You can always rely on the safety of CIMCO tools. All insulated tools are tested individually in a water bath at a voltage of 10,000 V according to existing guidelines. CIMCO has completely automated this testing process by installing an industrial robot, probably the only manufacturer to do so world wide.



Permanent innovations

The constant optimisation and expansion of our product range by useful innovations is a permanent feature of our business strategy. Therefore CIMCO is always one step ahead of the changing requirements of the market. Features like flexibility and mobility are more and more important also in trade and electrical professions – they demand adequate implementation in the development of tools. That is why all CIMCO products are manufactured for wide application and can adjust to many different situations.

One-stop-shopping thanks to the enormous product range

Do you know of a larger assortment of hand tools for the electrical industry? We don't! This catalogue offers the electrical wholesalers, along with all specialities, special sizes and latest products at a glance, everything from one source. It helps to minimise the number of suppliers and to reduce the process costs in purchasing, receiving, stocking and accounting.



Product quality

Marketing

Sales display – stock, seller and business card



“Buying by seeing” – our products are mostly bought in the wholesalers pick-up areas. An attractive product presentation guarantees sales success! Due to a long experience CIMCO can provide especially produced shop displays to the wholesalers. CIMCO offers with open sales walls, high-quality glass showcases or complete shop-in-shop-systems in the customer's corporate design plenty of optically appealing and verifiably promotional possibilities for clear stocking and presentation of the range.

This comes with no risk for our dealer customers: all displays will be delivered, arranged and decorated by especially trained CIMCO sales assistants free of charge (under reservation of proprietary rights).



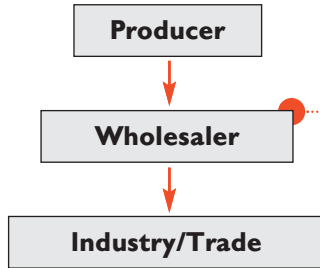
Success by sales promotions

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 with less of his own effort.



Marketing

Sales and service



Clear sales channels

CIMCO communicates clearly the three-step sales channel "manufacturer-wholesaler-user". Neither direct sales to the industry or trade nor to retailers like DIY-markets find a place in our sales policy. Customer loyalty is our prime principle.

On site – personally for you

An extensive network of committed sales assistants support wholesalers and users of our tools personally on site. Whether at product trainings, user workshops, counter days or hundreds of in-house exhibitions and trade fairs: your CIMCO agent is always close by and can support you with competent advice and active sales promotion. You can find a list of all representatives on the last page.

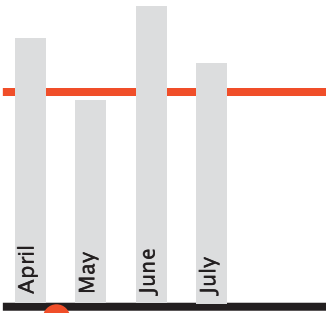


Counter displays

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



Sales & Service



Delivery reliability

On average, 97.5% of all CIMCO catalogue products are permanently stocked. By consequent use of our broad logistics controlling system we achieve further improvement on our delivery rate.

Logistics

For the sake of the environment

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



Rapid order processing

The receipt of a customer's order to the delivery normally takes less than 36 hours. Due to efficient logistics partners, every CIMCO customer receives the required goods within 3 to 4 days, in urgent cases – if the order arrives at CIMCO before noon – delivery could be on the next working day.

Customised logistic services

Individual demands of our customers such as reusable transport systems, on-time inland and abroad delivery, delivery tracing by 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 of exceptional sizes and special tools. But it are these specialities which are urgent when required, CIMCO provides direct delivery to the user or the building site – within Germany without extra charge!

Logistics

HARDSHELL – TOOL CASES



Integrated tool insertion slots for professional tool storage



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



Outer hinges integrated into the frame

Diamant



Two gas shock absorbers ensure easy opening of the case



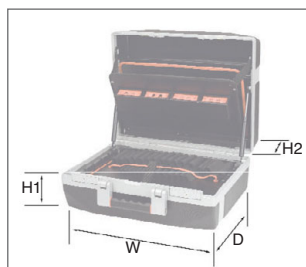
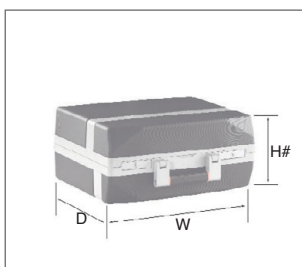
Removable tool boards for more flexibility



Tool boards with end stops



Especially high and robust feet for maximum standing stability



$$H\# = H1 + H2$$

- 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

1 Tool case METRO

Reasonably priced, absolute professional hardshell tool case, specifications: shell made of ABS-material, surrounding aluminium frame with 2 integrated lockable tip-locks, loading 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. separating elements, cover-holder and hinges made of metal, plastic bottom-slider.

Weight 3500 g	385/490/190 mm	350/460/105/60/165 mm	1	17 0073
---------------	----------------	-----------------------	---	---------



2 Master case CHAMPION

Pro-hardshell case with outstanding cost effectiveness! Broad aluminium frame for high stability, shells made of extremely shock and drop resistant polypropylene, extra capacious bottom shell with diverse gates for useful separation in small boxes, 3 tool boards with numerous pockets of different size for reliable storage of hand tools of all kinds, 3 metal hinges with snap-in locking allowing the case to be opened without additional braces, comfort carrying handle with soft rubber wadding, 2 robust lockable snaps, nameplate.

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



3 Tool case CHAMPION Double with 180° opening function

Shells that open 180° 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 means of 3 double-functioning metal hinges (hinge function for upper and lower shell) on 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 wadding provides fatigue-free carrying. 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
---------------	----------------	------------------------	---	---------



4 Master case CHAMPION – roller case

Professional hardshell case (like 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 provide it with extra tipping stability. Broad aluminium frame for high stability, shells made of extremely impact- and drop-resistant polypropylene, extra capacious bottom shell with diverse gates 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 wadding, 2 robust lockable snaps, nameplate.

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



5 Master case KLASSIK

Pro-hardshell case made of impact-resistant 3 mm strong ABS-plastic with aluminium frame, 3 tool boards with many tool pockets, separate document holder, bottom shell with individually adjustable separating elements for small parts, measuring devices, tools, etc., 2 locks. Weight 4500 g.

black	380/450/210 mm	350/440/105/80/185 mm	1	17 0075
red	385/450/205 mm	345/435/105/80/185 mm	1	17 0070



Master case BOMBER

Innovative, double-walled hardshell case made of impact-resistant and shock-proof polyethylene. Extreme durability, almost indestructible. Resistant to high and low temperatures and many chemicals. With 2 tool boards, 2 lockable clamp-locks, document box, adjustable partitionings in bottom.

Weight 5500 g 360/475/205 mm 315/430/80/70/150 mm 1 17 0076



Master case MEGA-WHEEL

Double-walled shells of impact-resistant and break-proof polyethylene, highly temperature and chemical resistant, 80 mm deep bottom shell with separating walls for flexible interior division according to individual needs, 2 removable boards with innovative, patented FLEXIPOUCH pockets for storing tools and small parts, capacious two-part document box, 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 ergonomically comfortable 115 cm. Handle with soft rubber wadding and abutment springs, 2 stable key locks.

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



Master case MODULAR

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 frames 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 consolidated with attractive coloured protection caps, 2 tool boards with many pockets, 2 high-quality chromium-plated locks, chromium-plated carrying handle with soft rubber wadding.

Further equipment specifications:

3 stable bottom-slider hinge-elements, additional combination lock, all movable parts are screwed for unproblematic replacement.

Weight 6300 g 385/490/240 mm 345/465/105/115/220 mm 1 17 1000



Telescopic system for master case MODULAR

Stable mounting frame with 4 height-adjustable telescopic legs, which lift the MODULAR case to an ergonomically pleasing working height between 450 and 730 mm and provides secure positioning 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 480 x 50 x 350 mm 1 17 1006



Trolley for master case MODULAR

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 up to 30 kg.

Weight 1600 g

folded up 490 x 260 mm 1 17 1004



1 Super master case PERFEKT

The elegant, stable, robust hard shell case with 3 tool boards = 4 push-in brackets and one document-box. Bottom shell with grid layout and separators for reliable placement of measurement instruments and small parts. The HIGHLIGHT: The new tool boards with a sensational clamp effect. Small and large tools can be fixed without much organisation and will be held safe. 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
---------------	----------------	-----------------------	---	---------

Tool case "red", similar to model no. 17 5075 but larger internal dimensions, without document box

Weight 5100 g	400/495/205 mm	355/465/110/75/185 mm	1	17 5076
---------------	----------------	-----------------------	---	---------



7 Super master case PERFEKT - roller case

Further development of the popular mastercase PERFEKT No. 17 5075, now in "king-size-format" 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 (tilt resistant). Aluminium double frame with carrying capacity of up to 40 kg, 2 shapely, lockable clamp-locks, 2 locking hinges with case cover latching, protective integrated bottom-sliders, 2 robust washable tool boards of ConPearl® with a patented clamping system that holds all types of hand tools without sliding, fatigue-free carrying thanks to the ergonomic handle with upholstered grip mould in springy material.

Weight 6600 g	400/495/240 mm	355/465/110/105/215 mm	1	17 5078
---------------	----------------	------------------------	---	---------



12 Tool case JUMBO

Extremely voluminous tool case, perfect for carrying tools, electrical machines and components simultaneously. Made of unbreakable, impact-resistant and shock-proof HDPE plastic, multiple riveted with exceptionally robust aluminium frame, simple and comfortable 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 box, 2 removable small plastic boxes for small parts, 2 stable lockable snap locks, 2 hinged handles for optional vertical or horizontal transport, 4 rubber bottom-sliders.

red	Weight 8500 g	415/500/355 mm	390/465/195/140/335 mm	1	17 0072
-----	---------------	----------------	------------------------	---	---------

black	Weight 8500 g	415/500/360 mm	385/465/195/145/340 mm	1	17 0071
-------	---------------	----------------	------------------------	---	---------



18 Tool case DELUXE

Elegant aluminium case made for high-tech installation and service, cold formed shells in solid anodized aluminium, bottom shell with pre-cut cube-shaped foam inserts for the safe transport of sensitive components and equipment such as a laptop, measurement instruments, printed circuit boards etc., double aluminium frame provides highest stability and is non-warping, 2 tool boards with many pockets, separate document bag, 2 chromed 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
---------------	----------------	-----------------------	---	---------



Master toolbox **Diamant**

The revolution in hardshell tool cases

Revolutionary stability:

- Case shell of 3.5 mm ABS (airworthy)
- Reinforced aluminium frame (individual frame)
- Hinges for case shells integrated into frame
- Large aluminium handle with plastic wadding
- Two cylinder locks countersunk in the frame
- Especially high and robust feet for maximum standing stability

Revolutionary comfort:

- Two gas shock absorbers ensure easy opening of the case
- Tool boards in the upper case shell with 30° incline for easier tool removal
- Profile grid in the case bottom for raaco Carry-Lite 55 inserts
- Tool boards with innovative end stops
- Made of recyclable materials
- Ease-of-repair orientated design and development

Master toolbox **DIAMANT 25**

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.

Weight: 5300 g 375/488/210 mm 290/415/50/90/140 mm 1 17 8010

Case as described above but with integrated tool insertion slots in the base plate.

Weight: 5300 g 375/488/210 mm 290/415/50/90/140 mm 1 17 8015

Master toolbox **DIAMANT 30**

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 insertion slots and a document box. 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.

Weight: 5900 g 375/488/210 mm 290/415/50/90/140 mm 1 17 8075

Master toolbox **DIAMANT 35**

corresponds to article no. 17 8075, but with carrying capacity up to 35 kg.

Weight: 6400 g 430/498/235 mm 340/240/50/100/150 mm 1 17 8077

Master toolbox **DIAMANT 40**

corresponds to article no. 17 8075, but with carrying capacity up to 40 kg.

Case shells equipped with two additional aluminium frames for complete stability.

Weight: 6100 g 375/488/210 mm 290/415/50/90/140 mm 1 17 8175

Master toolbox **DIAMANT 45**

corresponds to article no. 17 8175, but with carrying capacity up to 45 kg.

Weight: 6800 g 430/498/235 mm 340/240/50/100/150 mm 1 17 8177

Master toolbox **DIAMANT 45 with trolley function**

corresponds to article no. 17 8177, including 4-stage extendable trolley system for the greatest possible mobility. Extension height of 110 cm with two stable castors.

Weight: 8100 g 440/498/270 mm 340/420/50/100/150 mm 1 17 8178



Explorer case

The case originally designed for the military is especially suitable for hard everyday use. It protects its contents from water and dust, is air-tight, acid-resistant, pressure-resistant, impact-resistant and almost indestructible. The acid-resistant bolts in the hinge and lock area, together with the integrated rubber seal, provide the case with 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 standing 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 haptic 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
without foam inserts	220/245/120 mm	160/220/75/20/95 mm	1	17 0084
without foam inserts	305/360/195 mm	240/330/100/70/170 mm	1	17 0085
without foam inserts	335/410/210 mm	270/375/130/45/175 mm	1	17 0086
without foam inserts	440/515/230 mm	365/475/155/50/205 mm	1	17 0088

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
with foam inserts	220/245/120 mm	160/220/75/20/95 mm	1	17 0184
with foam inserts	305/360/195 mm	240/330/100/70/170 mm	1	17 0185
with foam inserts	335/410/210 mm	270/375/130/45/175 mm	1	17 0186
with foam inserts	441/515/230 mm	365/475/155/50/205 mm	1	17 0188

Multi-transport box

of extremely resistant polypropylene, water-repellent, impact-resistant, 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 closing area. The name plate can only be replaced when the case is open. Transport option by means of two carrying handles and a recessed carrying handle. Trolley function by means of side-mounted handle and two transport rollers. Thanks to its low dead weight 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
---------------	----------------	-----------------------	---	---------



TOOL BAGS

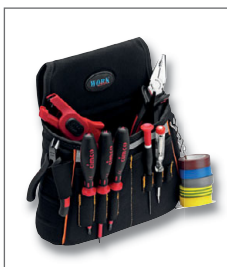
Flexible storage

Thanks to the 15 pockets and 15 flexible retaining plates, you can organise your backpack trolley according to your needs. The tool boards can be used as needed; you can easily exchange them or remove them with the swivel.



Telescopic handle

Both the easily extendable telescopic handle and the padded carrying straps provide pleasant carrying and transporting comfort.



Tool cases made of solid cowhide

with galvanised, riveted sheet metal bottom trough, folding down front, front and back walls, bottom, cover and extra-strengthened side parts, solid carrying handle, 2 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 consolidated with aluminium corners.

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

with document compartment on front

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

with document compartment on the front and loops instead of pockets

Weight 2750 g 290/435/200 mm 250/420/ - /160/160 mm 1 17 0924

with additionally folding back panel, removable partition 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



Industrial electrician tool bag

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

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

Tool case made of solid cowhide

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

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

Tool cases made of solid cowhide

especially for safety tools and protection devices, all outer edges strengthened with aluminium corners, side parts, front and back panels, extra strengthened bottom and cover, folding front panel, key locks, lateral closures, solid cleat-carrying handle, numerous tool pockets, lateral loops for shoulder strap, bottom sliders

additionally with document compartment on the front, foldable back panel, flap compartment for small parts, partition, foam insert with recesses for sockets.

Weight 6000 g 350/470/250 mm 335/445/75/125/200 mm 1 17 0078

additionally with document compartment in front.

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

Shoulder strap

made of leather with shoulder-cover and 2 spring hooks, for leather tool bags.

length adjustable up to 1150 mm 1 17 0060

Tool backpack

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

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.

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



Rollable tool bag

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 sheet steel, lacquered inside and outside, five-piece, lockable (shackle lock accessory)

5 compartments 540 x 200 x 200 mm 1 17 0212



Brass lock

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 500 g

230 x 100 x 230 mm 1 17 0705



Cowhide belt

1200 x 40 mm 1 17 0780



WORK *Line*

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

WORK-Line is more than a complete product range of tool bags! Understand WORK-Line as a new organising system for your work: an interaction of carefully reconsidered 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 imaged articles are delivered without content.

Padded belt

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

Weight 130 g 1 17 0782

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 kind.

Weight 70 g 80 x 35 x 155 mm 1 17 5102

Cordless screwdriver bag

Holster to hold all common battery-powered screwdrivers, transport security via fastening strap with Velcro fastener, 4 pockets for accessories such as drills, bits, pencils, etc., especially robust design due to padding, reinforced material and rivets, belt loop.

Weight 120 g 180 x 340 mm 1 17 5104

Bit pocket

foldable bag for screw-bits and accessories, intakes for 12 bits, 5 drills and one bit-holder, velcro fastening, universal metal clip for attaching to belts and bags of all kind.

Weight 120 g 130 x 20 x 180 mm 1 17 5106

Small inventory bag

2 pockets 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, fixing band with Velcro fastening, rivet-reinforced belt loop.

Weight 60 g 100 x 55 x 195 mm 1 17 5108

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 kind.

Weight 120 g 105 x 60 x 170 mm 1 17 5110

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., inner zip-bag for documents, large elasticated holder strengthened with rivets for hammer, pliers and so on, metal chain and holder for several rolls of electrical tape, made of strengthened special fabric, belt loop.

Weight 350 g 280 x 50 x 285 mm 1 17 5112



Tool body bag

with numerous functional details in reinforced special fabric, 2 capacious inner compartments, small inner compartment with Velcro fastening, 6 elastic holders for writing utensils, drills, screwdrivers etc., zipped compartment at the front, bag cover 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

More liberty isn't possible! Tools always close at hand and both hands are free! Numerous functional equipment details for professional application: padded pocket for mobile phones, glasses etc., with velcro fixing band and elasticated 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-strengthened wide holder for hammer, pliers etc., large backside 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 works and installations, 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 bag 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 usual 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 variable carrying strap with shoulder pad.

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



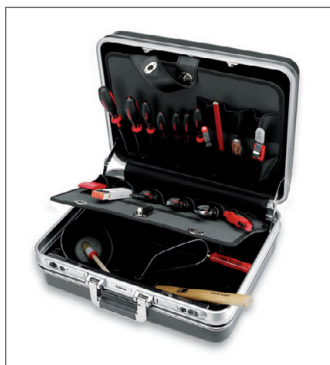
Electrician shoulder bag

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

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



TOOL ASSORTMENTS



Electric master case

		Master case KLASSIK „Electric White Goods“	Master case PERFEKT „Electric White Goods“	Master case PERFEKT „Electric Electronics“	Master case KLASSIK „Electric Electronics“
Article no., equipped		17 0333	17 5333	17 5410	17 6410
		Master case KLASSIK	Master case PERFEKT	Master case PERFEKT	Master case KLASSIK
article no.		17 0075	17 5075	17 5075	17 0075
Description		see catalogue p. 8	see catalogue p. 10	see catalogue p. 10	see catalogue p. 8
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 side cutter	200 mm	•	•	•	•
Wire stripper 0.5 to 6 mm ²	160 mm	•	•	•	•
Water pump pliers	250 mm	•	•		
Electronic side cutter	115 mm	•	•	•	•
Electronic needle nose pliers with bent jaws	130 mm			•	•
Tweezer, bent, pointed, finely serrated 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 screwdrivers	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-part	•	•		
Hexagonal allen key set, 7-part	2.5 to 10 mm	•	•		
Voltage tester, 120 to 250 V AC	140 mm	•	•	•	•
Universal shear	190 mm	•	•	•	•
Telephone shear, serrated	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 spread	•	•		
Piercing 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“**

Article no., equipped with tool case		17 0431	17 5431
		Master case DIAMANT 30	Master case DIAMANT 40
Article no.		17 8075	17 8175
Description		see catalogue p. 11	see catalogue p. 11
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 side cutter	200 mm	•	•
Wire stripper 0.5 to 6 mm ²	160 mm	•	•
Water pump pliers	250 mm	•	•
Electronic side cutter	115 mm	•	•
Electronic needle nose pliers with bent jaws	130 mm		
Tweezers, bent, pointed, finely serrated jaws	120 mm		
Flexible pick-up tool	540 mm		
Control mirror, 30 mm diameter	275 mm		
Electrician slot-head screwdrivers (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 Phillips screwdrivers (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-part		
Hexagonal allen key set, 7-part	2.5 to 10 mm	•	•
Voltage tester, 120 to 250 V AC	140 mm	•	•
Universal shear	190 mm	•	•
Telephone shear, serrated	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 spread	•	•
Piercing 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

**Super
Apprentice case**

Article no., equipped

17 0300

with tool case

Tool bag
made of cowhide

Description

17 0924

see catalogue
page 14

Telephone pliers with straight jaws	200 mm	•
Combination pliers	180 mm	•
Heavy duty side cutter	200 mm	•
Wire stripper 0.5 to 6 mm ²	160 mm	•
Electrician slot-head screwdrivers (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 Phillips screwdrivers (Blade dimensions)	PH 1 x 80 mm PH 2 x 100 mm PZ 1 x 80 mm PZ 2 x 100 mm	• • • •
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	•
Pocket saw PUK	150 mm spread	•
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	•
Sledge hammer with ash handle	1000 g	•
Electrician chisel	10 x 8 x 250 mm	•
Brick chisel	29 x 300 mm	•
Wooden folding ruler	2 m	
Cabinet spirit level with magnet	200 mm	
Carpenter's pencil, black	240 mm	
WET.PROTECT e.basic	50 ml	•
Quantity of tools		24

17 0300

17 2004

17 0500

1000 V safety tool assortments



1000 V

Master case
KLASSIK
„Electric
safety“

17 0370

Master case
KLASSIK RED

17 0070

see catalogue p. 8

Article no., equipped

with tool case

Article no.

Description

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 side cutter	200 mm	•
Wire stripper 0.5 to 6 mm ²	160 mm	•
Electrician slot-head screwdrivers (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 screwdrivers (Blade dimensions)	PH 1 x 80 mm PH 2 x 100 mm PZ 1 x 80 mm PZ 2 x 100 mm PZ 2 x 100 mm	• • • • •
Insulated screw-holding slot-head screwdrivers (without VDE) (Blade dimensions)	3.0 x 0.5 x 100 mm 4.0 x 0.8 x 125 mm	• •
Insulated screw-holding Phillips screwdrivers (without VDE) (Blade dimensions)	PH 1 x 150 mm PH 2 x 175 mm	• •
Angled L-key screwdrivers (Allen wrench) (Wrench size across flats)	5 mm 6 mm	• •
Hexagon socket wrenches, 1000 V-insulated (Wrench size across flats)	5.5 mm 7 mm 8 mm 10 mm	• • • •
Single-ended open jaw wrench, 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	
Hexagon socket wrench inserts, 1000 V-insulated (Wrench size across flats)	10 mm 11 mm 13 mm 14 mm 17 mm 19 mm	
Plastic clip for holding rubber drapes	160 mm	
Rubber drape, insulating up to 1000 V	1000 x 1000 x 1.6 mm	
Slip-on bushes 1000 V, up to 10 mm Diameter	numbered „No. 1“ numbered „No. 2“ numbered „No. 3“	5 pieces 5 pieces 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	•
Voltage tester DUSPOL ANALOG	12 to 690 V AC/DC	•
Cable shear, 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



17 0370



17 5370



17 0378

Tool assortments network technology / telecommunications / electronics



17 0334



17 0310



17 3210

Article no., equipped
with tool case

Master case
„Mechatronik“
17 0334

master case
KLASSIK

Article no.

17 0075

Description

see catalogue p. 8

Telephone pliers with straight jaws	200 mm	
Telephone pliers with bent jaws	200 mm	
Telephone pliers	160 mm	•
Combination pliers	180 mm	
Side cutter	160 mm	•
Water pump pliers	250 mm	
Electronic side cutter	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 connectors	4-, 6- and 8-pole	
Crimping tool Click 'n' Crimp network technology	with 3 pairs of inserts	
Tweezer, straight, pointed, plain jaws	120 mm	
Tweezer, bent, pointed, finely serrated jaws	120 mm	
Electrician slot-head screwdrivers (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	
Electrician slot-head screwdrivers (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	•
Electrician Pozidriv screwdriver (Blade dimensions)	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 open end wrenches (Wrench size)	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	
Hexagonal allen key set, 7-part	2.5 to 10 mm	•
Torx L-key set		•
Universal switch cabinet key	made of metal, with bits	•
One-hand cable shears, up to 12 mm cables	160 mm	
Universal shear	190 mm	
Telephone shears	130 mm, serrated	
	130 mm, flat	
Precision wire stripper PWS "Plus"	to 0.8 mm ø	
Wire stripper		•
Wire stripper for cables COAXI	to 7.5 mm ø	
Wire 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 knife with wooden handle	with scraper	
Pocket saw PUK	150 mm spread	
Insertion tool ECONOMY	for LSA Plus clamps	
Wooden folding ruler	2 m	
Tape measure		•
Universal pressurised air spray can	400 ml	
Safety cross peen hammer		•
Number of tools		21

Electric mechanic tool case

		Tool case CHAMPION „Mounting professional“	Mounting case „Energy and building technology“	Tool case „Electric I“	Tool case „Electric II“	Tool case „Electric III“
Article no., equipped with tool case		17 5230 Tool case CHAMPION	17 0173 Tool case	17 6350 Tool case made of cowhide	17 6326 Tool case made of cowhide	17 6328 Tool case made of cowhide
Article no.		17 0930	17 0073	17 6027	17 6028	17 6028
Description		see catalogue p. 8	see catalogue p. 8	see catalogue p. 14	see catalogue p. 14	see catalogue p. 14
Telephone pliers with straight jaws	200 mm	•	•	•	•	•
Telephone pliers with bent jaws	200 mm	•	•	•	•	•
Round nose pliers	160 mm	•	•	•	•	•
Combination pliers	180 mm	•	•	•	•	•
Side cutters	145 mm	•	•	•	•	•
	160 mm	•	•	•	•	•
Heavy duty side cutter	200 mm	•	•	•	•	•
Wire stripper 0.5 to 6 mm ²	160 mm	•	•	•	•	•
Water pump pliers	250 mm	•	•	•	•	•
Fitting pliers	250 mm	•	•	•	•	•
Electronic side cutter	115 mm	•	•	•	•	•
Electronic needle nose pliers with bent jaws	130 mm	•	•	•	•	•
Tweezer, straight, flat-round jaws, insulated	145 mm	•	•	•	•	•
Electrician slot-head screwdrivers (Blade dimensions)	2.5 x 0.4 x 100 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	•	•	•	•	•
	8.0 x 1.2 x 175 mm	•	•	•	•	•
Electrician Phillips screwdrivers (Blade dimensions)	PH 0 x 60 mm	•	•	•	•	•
	PH 1 x 80 mm	•	•	•	•	•
	PH 2 x 100 mm	•	•	•	•	•
Electrician Pozidriv screwdriver (Blade dimensions)	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-box, 10-part		•	•	•	•	•
Hexagonal allen key set, 7-part	2.5 to 10 mm	•	•	•	•	•
Hexagonal allen key set, 9-part	1.5 to 10 mm	•	•	•	•	•
Adjustable wrench	160 mm	•	•	•	•	•
Universal switch cabinet key	made of metal, with bits	•	•	•	•	•
Voltage tester, 120 to 250 V AC	140 mm	•	•	•	•	•
One-hand cable shear, up to 12 mm cables	160 mm	•	•	•	•	•
Universal shear	190 mm	•	•	•	•	•
Telephone shear, ridged	130 mm	•	•	•	•	•
Wire stripping pliers	0.5 - 4 mm ²	•	•	•	•	•
Autom. wire stripper POWER STRIPPER	for flat and round cables	•	•	•	•	•
Super remover for cables		•	•	•	•	•
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 spread	•	•	•	•	•
Piercing awl, 6 mm (reamer)	100 mm	•	•	•	•	•
Safety cross peen hammer	300 g	•	•	•	•	•
Electrician chisel	10 x 8 x 250 mm	•	•	•	•	•
Plastic folding ruler	2 m	•	•	•	•	•
Plastic electrician spirit level	400 mm	•	•	•	•	•
Plastic cable puller	10 metres	•	•	•	•	•
Quantity of tools		15	22	24	35	45

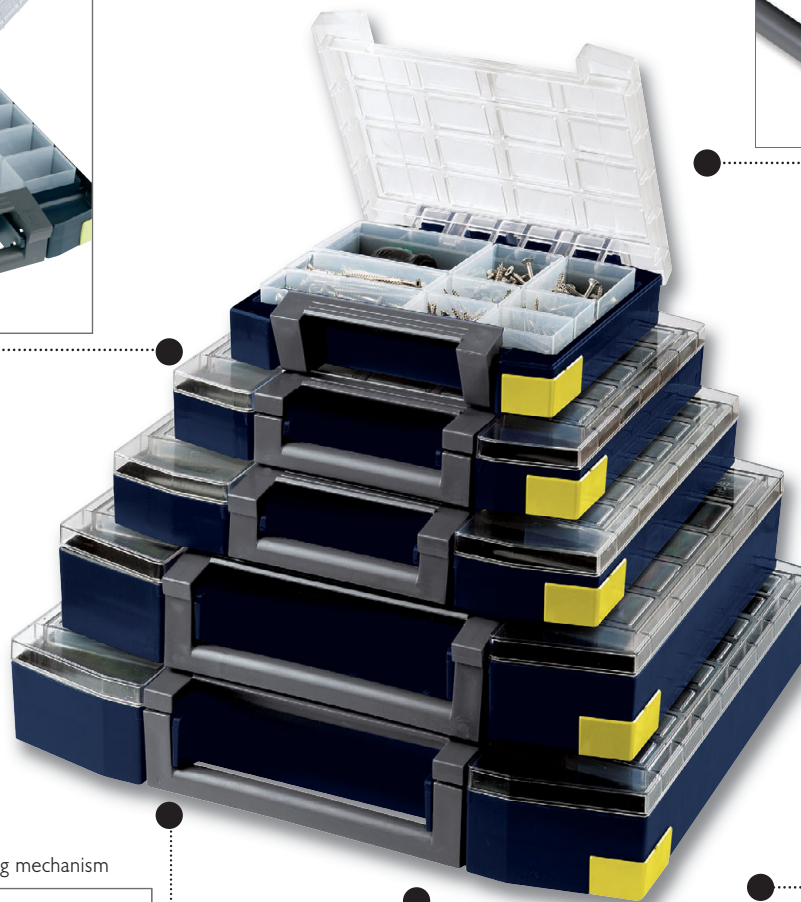


STORAGE AND TRANSPORT SYSTEMS

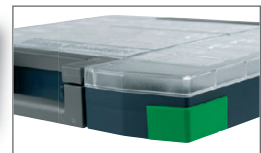
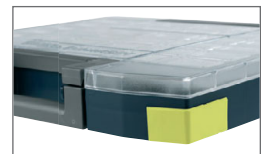
- Stackable due to integrated profile guides on the base
- Profile grid in cover and base
- Two different heights



Two fixed partitions



Colour labelling clips



Handle with integrated locking mechanism



Extremely stable due to doublewall construction of impact resistant and break-proof polycarbonate.



raaco COMPACT

Transport and storage case made of highly shock-resistant polypropylene, thereby lightweight and extremely wear-resistant (no bulges 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 inserts, double bail handle with integrated locking system prevents case from opening unintentionally, 2 side carrying handles (COMPACT 37 and up)

COMPACT 20

with 6 inserts, without dividers, 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 dividers, 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 dividers 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 dividers 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 divider 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 variable from 0.9 to 1.6 m, weight only 150 g

1 41 4059

Castors (roller set) for COMPACT

4 swivelling castors, 2 with locking device, for the COMPACT models 37, 47 and 62, simple installation 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 stabile hooks for attaching shoulder straps, rubber side straps to hold, for instance, gloves or knee pads, strong magnets for locking the cover, robust, lightweight hard-shell construction, water-proof, etc.

Tool Taco L

with 1 x ½ Tool Fix, 1 x ¼ Tool Fix, 1 x boxxser 55 4x4-9, ergonomically shaped, padded shoulder strap. Weight 3.6 kg.

256 x 504 x 234 mm	1	43 6006
--------------------	---	---------

Tool Taco XL

2 x ½ Tool Fix, 1 x boxxser 55 4x4-9, ergonomically shaped, padded shoulder strap. Weight 4.5 kg.

311 x 616 x 278 mm	1	43 6013
--------------------	---	---------

Tool Fix

Holder for tools of all shape to max. Ø 30 mm. Strong Velcro strip for holding tools in the Tool Taco.

¼	150 x 118 x 40 mm	1	43 6020
½	150 x 238 x 40 mm	1	43 6037

Bag

For storing tools and accessories. Can be combined with Tool Fix of the same size. (Bag ½ open also contains a boxxser 55 4x4). Robust clip for simple and secure attachment to the Tool Taco.

¼ open	155 x 145 x 55 mm	1	43 1009
½ open	155 x 255 x 55 mm	1	43 1016
¼ with cover	160 x 150 x 65 mm	1	43 1023
½ with cover	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
-------------------	---	---------

Universal holder

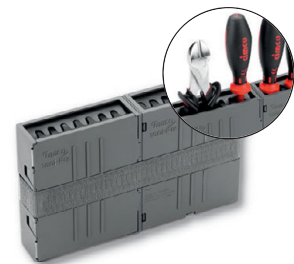
for longer objects (50 - 100 mm long), e.g., level, Velcro band holds tools tightly. With two clips for simple and secure attachment to the Tool Taco.

90 x 280 x 10 mm	1	43 1054
------------------	---	---------

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



NEW

NEW

NEW

NEW

NEW

NEW

NEW

raaco boxxser – assortment box

The boxxser series consists of 6 case variants in 2 different heights, made of impact-resistant and break-proof polycarbonate in a double-wall construction, profile grid in cover 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 assortment box 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 dimensions L x W - inserts)	Dimensions (mm)	PU	Article no.
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)	PU	Article no.
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

Solid, handy transport device that holds up to 4 boxxser 55 4x4 or 5x5 assortment boxes as drawers, carrying handle, transport locking mechanism prevents the assortment boxes from sliding out.

Weight (empty): 2937 g, 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

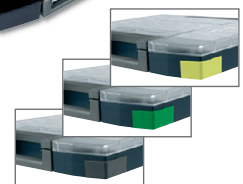
pre-perforated, for simple individual division (20 mm cubes)

393 mm x 273 mm x 20 mm	1	43 4583
-------------------------	---	---------



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

Light storage and transport case that can be flexibly arranged, interior division can be changed at any time with transparent inserts in many different sizes, case bottom of polypropylene, case cover of clear, transparent polycarbonate, cover with U-profiles for slide-free storage of contents and loose inserts, ergonomic carrying handle, two stable sliding locks, stackable, also sits upright.

CARRY-LITE 150

Service case with 150 mm height, 413 mm length, 330 mm width. Interior division can be individually arranged only via dividers, not inserts.

with 8 dividers = 9 individual compartments	1	41 8958
---	---	---------

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

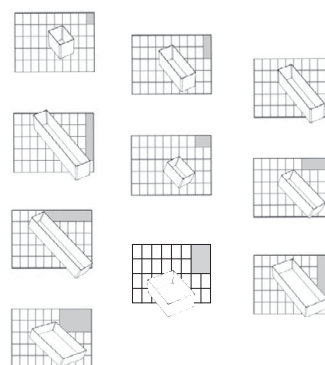
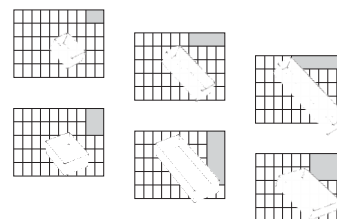
Height 47 mm, precisely fitting also for the drawers and tool holders of raaco COMPACT, the PSC vario models and the 250-3 cabinet drawer.

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 component boxes

Affordable transport and storage boxes for small parts, with window, variable or without interior division, made of durable polypropylene, solid sliding locks with ratchet mechanism, case cover with U-profiles for slide-free storage of contents and loose inserts, stackable, also sits upright

PSC fix

Component boxes with fixed interior division.

Type	Small compartments	Weight (kg)	Dimensions (mm)	PU	Article no.
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

Component boxes 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 compartments	Weight (kg)	Dimensions (mm)	PU	Article no.
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

Component boxes with variable interior division for CARRY-LITE 80 series inserts

Type	Small compartments	Weight (kg)	Dimensions (mm)	PU	Article no.
vario XL	none (empty)	0.6	340 x 260 x 78	1	43 0899



HANDYBOX for PSC component boxes

Stable, handy transport device that holds up to 4 PSC component boxes with height 57 mm and length 340 mm as drawers, carrying handle, transport locking mechanism prevents the PSC component boxes from sliding out, connectors for slide-free attachment of multiple HANDYBOXES 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 panel 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	Dimensions (mm)	PU	Article no.
1-30	47 x 27 x 60 mm	5	41 0709
1-60	55 x 27 x 60 mm	5	41 0716



SUPERCLIP 3

Straight universal hook with upright holding end, i.e. for ring wrenches

Type	Dimensions (mm)	PU	Article no.
3-75	55 x 27 x 60 mm	5	41 0778



SUPERCLIP 10

Rounded holder, i.e. for drilling machines, cordless screwdrivers, cable rings etc

Type	Size L x W x H	PU	Article no.
10	79 x 27 x 60 mm	4	40 8928

SUPERCLIP 2

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

Type	Size L x W x H	PU	Article no.
2-60	79 x 27 x 60 mm	3	41 0747

SUPERCLIP 4

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

Type	Size L x W x H	PU	Article no.
4-50	79 x 50 x 60 mm	3	41 0792

SUPERCLIP 5

Eye hook holder, i.e. for pliers

Type	Size L x W x H, eye L x W mm	PU	Article no.
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	Size L x W x H, Ø mm	PU	Article no.
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 kind

Type	Size L x W x H	PU	Article no.
9	108 x 83 x 60 mm	1	40 4562

SUPERCLIP 11

Spanner holder, for up to 8 spanners of variable size

Type	Size L x W x H	PU	Article no.
11	145 x 237 x 45 mm	1	41 4165

SUPERCLIP 12

Drill bit holder, for 22 twist drills from 1 mm to 33 mm Ø

Type	Size L x W x H	PU	Article no.
12	94 x 77 x 65 mm	1	41 4172

raaco FIX

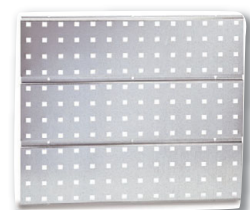
Patented tool holding system, suitable for holding tools of all kind, i.e. screwdrivers, pliers, files, tweezers, shears, spanners, measuring tools, etc.

Size	Size L x W x H	PU	Article no.
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

Type	Size L x W x H	PU	Article no.
	520 x 440 x 11 mm	1	41 8347



- 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

TRD tool rack for SUPERCLIPS

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

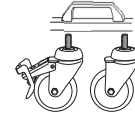
TRD	570 x 570 x 1600 mm	1	40 9666
-----	---------------------	---	---------



Roller and handle-set for Toolrack TRD

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
--	--	---	---------



raaco Drawer cabinet

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 37 and 38), 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 partitions, labels can be attached to front side

Drawer cabinet series 150

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

CABINET 60-00

assembled with 60 drawers Type 150-0, Weight 5.12 kg

		1	40 8065
--	--	---	---------

CABINET 48-01

assembled with 48 drawers Type 150-1, Weight 5.11 kg

		1	40 7341
--	--	---	---------

CABINET 24-02

assembled with 24 drawers Type 150-2, Weight 4.58 kg

		1	40 7303
--	--	---	---------

CABINET 08-03

assembled with 8 drawers Type 150-3, Weight 4.19 kg

		1	40 7297
--	--	---	---------

CABINET 16-04

assembled with 16 drawers Type 150-4, Weight 4.29 kg

		1	40 9215
--	--	---	---------

CABINET 40-123

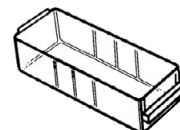
assembled with 36 drawers Type 150-1, 3 drawers Type 150-2, 1 drawer Type 150-3, Weight 4.93 kg

		1	40 7242
--	--	---	---------



Drawers for cabinet 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 cabinet series 150

White, removable, individually inscribable, coated with dirt-resistant, durable 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

For holding up to 12 cabinets of series 150, max. carrying capacity 480 kg, turntable on maintenance-free roller bearings, weight without cabinets 12.5 kg, delivery does not include storage cabinets

1760 x 680 x 680 mm	1	40 3732
---------------------	---	---------

Drawer cabinet series 250

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

CABINET 24-1

assembled with 24 drawers Type 250-1, Weight 6,9 kg

1	40 9048
---	---------

CABINET 8-2

assembled with 8 drawers Type 250-2, Weight 6,0 kg

1	40 8560
---	---------

CABINET 6-3

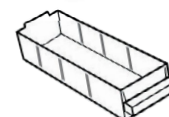
assembled with 6 drawers Type 250-3, Weight 7.2 kg

1	40 8577
---	---------



Drawers for cabinet 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, removable, individually inscribable, coated with dirt-resistant, durable 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

For holding up to 12 cabinets of series 250, max. carrying capacity 600 kg, turntable on maintenance-free roller bearings, weight without cabinets 22.3 kg, delivery does not include storage cabinets

1600 x 880 x 880 mm	1	40 2582
---------------------	---	---------



raaco Storage bins

Open 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 bin 3	5	101 x 125 x 228 mm	1	41 8354
Storage bin 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

Panel 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 (order no. 40 9666, see page 25), with 4 vertical rows with 12 slots each = 48 slots for bins, weight 1.475 kg

440 x 520 x 11 mm	1	41 8330
-------------------	---	---------



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



PLIERS

Perfect material processing

CIMCO pliers perform brilliantly in hard everyday use. Both material and design are designed for a tough workload. The steels used are specially designed for use by craftsmen. An ideal level of durability is achieved in connection with a thorough hardening.

- All pliers are hardened in an oil bath.
All blades are given an additional induction hardening – the best prerequisite for excellent durability, even when dealing with high levels of stress.
- Thanks to air being excluded to a large degree during the smelting process, the electric steel obtains a high degree of purity and reduces the CO² 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 wires including piano wire.

Smooth opening and closing

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



Special gripping surfaces

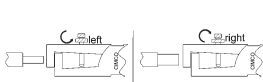
- Functional conical gripping surfaces for the complete gripping of the most common work pieces.
- Distinctive, uniform tothing of gripping surfaces and burner hole.

Diamant PLUS - Safety pliers with 1000 V protective insulation

Optimised lever conditions, smoothness and easy-grip handle design that permit energy-saving and ergonomic work for the hand, 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

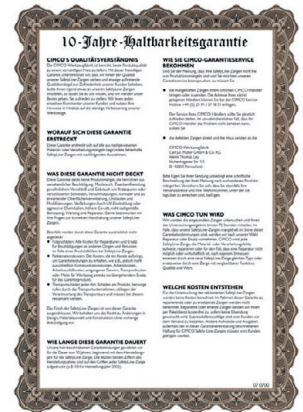
	Working on live parts		Blade hardness in HRC		With cutting bevel		Single joint		Flat nose pliers		Wire type soft		Wire type piano
	VDE/GS tested		Gripping surfaces serrated		With slight cutting bevel		Lap joint		Flat-round pliers		Wire type medium-hard		Wire type rope
			Gripping surfaces diagonally serrated				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. Every individual pliers are 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 are exclusively "Made in Germany" undergoes a range of unrivalled trend-setting and robot-supported production processes. As a result, the work sequences are performed with robots; from forging and grinding as well as polishing, right through to the dielectric strength testing of the insulating sheathing in order to ensure a consistent standard of quality. Ergonomic design handle sleeves in a modern 2-component design manufactured from premium plastic with excellent haptic 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 side-cutters

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



145 (5.5") 6 10 0524



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



1000 V Side-cutters

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



130 (5") 6 10 0570



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



1000 V Side-cutter with stripping function

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 mm² and 2.5 mm²



160 (6")	6	10 0652
----------	---	---------

Diagonal sealing pliers

single joint with induction hardened precision blades (approx. 64 HRC), for all wires, also including piano wire, manufactured from electric steel with 8 mm ø punches.



160 (6")	6	10 0030
loose punch	8 mm ø 1 piece	10 1732

1000 V Heavy duty end cutter

according to DIN ISO 5748, lap joint, with induction hardened precision blades (approx. 64 HRC), for all wires, also including piano wire, manufactured from 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 manufactured from special tool steel, with slightly conical, serrated gripping surfaces and serrated 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 adjustment to the desired wire or strand diameter, for solid and multi-wire conductors up to 5 mm ø or 0.75 mm² to 6 mm², 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 blades (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, 45° angled jaws, 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 (long flat nose pliers), jaw length 50 mm, serrated gripping surfaces



160 (6")	6	10 0024
----------	---	---------

1000 V Round nose pliers (long round nose pliers)

according to DIN ISO 5745, single joint, long, round jaws (long round nose pliers), jaw length 50 mm, finely serrated gripping surfaces



160 (6")	6	10 0062
----------	---	---------



Engineers 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 diagonal 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), manufactured from chrome-vanadium steel



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

1000 V Plier assortment, 4-piece



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-piece

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 Side-cutter DIAMANT

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 high level of wear resistance and an improved corrosion protection.

Handle sleeves: Ergonomic design handle sleeves in modern 2-component design manufactured from premium with excellent haptic properties, VDE-certified insulation protection up to 1000 Volt AC according to DIN EN 60900:2004.

	160	6	10 0000
--	-----	---	---------



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 that can no longer be removed using standard tools.

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

	130	1	10 0350
--	-----	---	---------

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

	160	1	10 0352
--	-----	---	---------





The range of pliers that are exclusively "Made in Germany" undergoes a range of unrivalled trend-setting and robot-supported production processes. As a result, the work sequences are performed with robots; from forging and grinding as well as polishing, right through to the dielectric strength testing of the insulating sheathing 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 displays that a 100 % level of safety in accordance with the safety standards is no longer in place.

1000 V Heavy duty side-cutter

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



160 (6") 6 10 8789

200 (8") 6 10 8784



1000 V Side-cutter

according to DIN ISO 5749 B, lap joint with induction hardened precision blade (approx. 64 HRC), for all wires also including piano wire, manufactured from electric steel



145 (5.5") 6 10 8785

160 (6") 6 10 8786

180 (7") 6 10 8787



1000 V Side-cutter with stripping function

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 mm² and 2,5 mm²



160 (6") 6 10 8792



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, manufactured from electric steel



200 (8") 6 10 8795



1000 V Flat nose pliers (long flat nose pliers)

according to DIN ISO 5745, single joint, long, flat jaws (long flat nose pliers), jaw length 50 mm, serrated gripping surfaces



160 (6") 6 10 8771



1000 V Round nose pliers (long round nose pliers)

according to DIN ISO 5745, single joint, long, round jaws (long round nose pliers), jaw length 50 mm, finely serrated gripping surfaces



160 (6") 6 10 8773



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

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 (flat-round pliers), serrated gripping surfaces and serrated 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, manufactured from special tool steel with slightly conical, serrated gripping surfaces and serrated 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), manufactured from chrome-vanadium steel



250 (10")	6	10 8724
-----------	---	---------

1000 V Wire stripper

single joint, with adjusting screw for adjustment to the desired wire or strand diameter, for solid and multi-wire conductors up to 5 mm \varnothing or 0.75 mm² to 6 mm², with internal opening spring



160 (6")	6	10 8790
----------	---	---------

1000 V Safety plier set, 4-piece

Double dip-coated handles

Telephone pliers, straight	200 (8")	10 8778
Combination pliers	185 (7")	10 8782
Heavy duty side-cutter	200 (8")	10 8784
Wire stripper	160 (6")	10 8790
	1	10 8002



1000 V Plastic telephone pliers

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

180	1	10 0790
-----	---	---------

1000 V Plastic grip pliers

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

180	1	10 0792
-----	---	---------

1000 V Plastic combination pliers

manufactured from impact-resistant, fibre-glass reinforced plastic with 2-component handles, with blade inserts manufactured from 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
-----	---	---------

1000 V Plastic cable cutters

manufactured from impact-resistant, fibre-glass reinforced plastic with 2-component handles, with blade inserts manufactured from 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
-----	---	---------



Precision electronic pliers with lap joint, drop-forged design

High-precision design manufactured from 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 side-cutter

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 mm²

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, smooth jaws, 2.5 x 1.5 mm tip		130	1	10 0812
straight shape, smooth jaws, 2.5 x 1.5 mm tip		150	1	10 0814
bent shape, smooth jaws, 2.5 x 1.5 mm tip		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

1.5 mm diameter tip		130	1	10 0822
---------------------	--	-----	---	---------

Electronic pliers assortment, 3-piece

Diagonal side-cutter				10 0802
Needle nose pliers				10 0816
Flat nose pliers				10 0818
		1		10 4032




Case-hardened 3 mm-flat tool steel design


precision grinded cutting edges, self-opening thanks to smooth spiral spring, finely barnished, with elastic 2-component plastic handles (except of electronics heavy duty side cutters, order number 10 1054 and 10 1055)

Micro-electronic side-cutters

without side face


Setting-angle	Soft wires up to ø in mm				
21°	0.8		118	1	10 1030

with fine tips, without side face


21°	1.0		129	1	10 1038
-----	-----	---	-----	---	---------

Electronic side-cutters


without side face

Setting-angle	Soft wires up to ø in mm	Hard wires up to ø in mm			
21°	1.3			132	1 10 1040


without side face

48°	1.3			130	1 10 1044
-----	-----	--	---	-----	-----------


reinforced design, with side face, blades also suitable for steel wire

21°	2.0	0.6		140	1 10 1046
-----	-----	-----	---	-----	-----------


reinforced design, without side face

21°	1.3			132	1 10 1048
-----	-----	--	---	-----	-----------


with reinforced blade, without side face

21°	1.0			132	1 10 1050
-----	-----	--	---	-----	-----------

with reinforced blade, with side face


21°	1.0			132	1 10 1051
-----	-----	--	--	-----	-----------

strong design, without side face


21°	2.0			131	1 10 1052
-----	-----	--	---	-----	-----------

Electronic heavy duty side-cutters


without side face, with 1-component ergonomic handle sleeves


Setting-angle	Soft wires up to ø in mm				
20°	2.5		148	1	10 1054

with side face


20°	2.5		148	1	10 1055
-----	-----	---	-----	---	---------

Micro electronic needle nose pliers

Bent jaws, smooth, 1 mm wide		52	1	10 1076
------------------------------	---	----	---	---------

Straight jaws, serrated, 1.2 mm wide		152	1	10 1082
--------------------------------------	---	-----	---	---------

Electronic flat nose pliers

Straight jaws, serrated, 3 mm wide		140	1	10 1096
------------------------------------	---	-----	---	---------

Electronic pliers assortment, 3-piece

Side-cutter	132	10 1040
Needle nose pliers, bent	150	10 1076
Flat nose pliers	140	10 1096
	1	10 4030



Tweezers

Technical tweezers

manufactured from 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 tweezer

manufactured from steel, with guiding pins

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

Cross jaw tweezer

manufactured from steel, with copper jaws for heat dissipation

straight, narrow-round shape	160	1	10 3062
------------------------------	-----	---	---------

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 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
---	-----	---	---------

Control mirror

Mirror ø 30 mm	275	6	11 1600
----------------	-----	---	---------

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
---	-----	---	---------

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
---	-----	---	---------

Flexible magnetic pick-up tool

mini magnetic pick-up tool with ø 4 mm neodymium magnets, on flexible, plastic-coated wire spindle, for the recovery of metal pieces from small and narrow spaces.

Adhesive force 270 g	400	1	11 1654
----------------------	-----	---	---------

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

chrome-plated design	125	1	11 1622
----------------------	-----	---	---------



Sealing pliers and accessories

Diagonal sealing pliers

single joint with induction hardened precision blade (approx. 64 HRC), for all wires, also including piano wire, manufactured from electric steel with 8 mm ø punches.

	160 mm (6")	1	10 0030
loose punch	8 mm ø	1 piece	10 1732



Sealing pliers

Punch ø mm	Receptacle ø 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 ø mm	Receptacle ø 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 ø	105	1	10 1720
with strap lock, 8 mm ø	105	1	10 1722
loose punch, 8 mm ø		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

ø mm				
8	approx. 850 pieces	1 kg	14 0750	
9	approx. 600 pieces	1 kg	14 0752	
10	approx. 400 pieces	1 kg	14 0754	
12	approx. 300 pieces	1 kg	14 0758	



Wire lead seals

with moulded coil wire, 200 mm in length

ø 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

ø 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	ø 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	ø mm			
Coil: 1/2 kg = approx. 115 m	0.5 x 0.5	1	14 0768	
Coil: 1 kg = ca. 230 m	0.5 x 0.5	1	14 0770	
Coil: 1/2 kg = approx. 190 m	0.5 x 0.3	1	14 0772	
Coil: 1 kg = ca. 380 m	0.5 x 0.3	1	14 0774	

Sealing pliers set

comprising of diagonal sealing pliers no. 10 0030 incl. punch pair, 1000 plastic seals orange no. 14 0738, 100 m plastic-coating seal wire, white (order 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, manufactured from made of chrome-vanadium steel, polished-chrome plated, with PVC handle sleeves, cylindric plier tips.

Shape	for circlips mm ø			
according to DIN 5254 A		for external retainers, 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



Shape	for circlips mm ø			
according to DIN 5254 B		for external retainers, 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



Shape	for circlips mm ø			
according to DIN 5256 C		for internal retainers, 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



Shape	for circlips mm ø			
according to DIN 5256 D		for internal retainers, 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 the holding and fixing of workpieces for welding, soldering, cutting and processing. Chrome-vanadium steel jaws, with release lever and wire cutter

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



Bolt cutter

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.

	460	1	10 0450
--	-----	---	---------



Pincer (nippers)

according to DIN ISO 9243, with PVC handle sleeves	200	6	10 1524
--	-----	---	---------



Rabitz plier (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 punches (order no. 10 1552 up to 10 1558)

2 - 2.5 - 3 - 3.5 - 4 - 5 mm \varnothing	230	1	10 1550
--	-----	---	---------

manufactured from steel sheets, with brass pressure piece and 6 interchangeable punches

2 - 2.5 - 3 - 3.5 - 4 - 4.5 mm \varnothing	220	1	10 1562
--	-----	---	---------

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
--	-----	---	---------

Control pliers

for paper punches and thin plastics, e.g. for the simple marking of badges before they are removed from the carrying material. Mouth depth 30 mm

Round recess 3 mm \varnothing	120	1	10 1650
---------------------------------	-----	---	---------

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

manufactured from chrome vanadium steel, with single joint, jaw width 22 mm

Jaw shape

straight	180	1	10 2080
----------	-----	---	---------

45°	180	1	10 2082
-----	-----	---	---------

Folding pliers

manufactured from 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, with cut	250	1	10 2072
------------------------------	-----	---	---------

Round nose pliers

Working head 7 mm, with cut	250	1	10 2070
-----------------------------	-----	---	---------

Working head 7 mm, without cut	250	1	10 2071
--------------------------------	-----	---	---------



SCREWDRIVERS, ELECTRONIC SCREWDRIVERS

Design

The non-slip handle design allows individual handling. The plate-shaped turning cap with large finger grips allows for precise and fine adjustment.

Colour coding

The desired blade type can be identified at a glance by the colour-coded rings.

Blade

All blades are manufactured to a precise profile of high-alloy, tough and hard special steel.



Screw system marking

The screwdrivers are marked on the end of the handle with a symbol for the screw system and size. This allows the user to choose the "right" tool at a glance (convenient, for instance, in the tool bag).

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 test in a water bath with a testing voltage of 10,000 V.

Quick rotation zone

A narrow, quick rotation zone with good grip allows for precise and sensitive work.

Handle

The three-component handle with its rounded triangular shape and curved longitudinal contour allows 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 cold impact resistance
- 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 screwdrivers



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 screwdrivers



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 screwdrivers



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, i.e. 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 (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 keys (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® screwdrivers

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

Hex 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-piece

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 (250 V AC)	11 1280

1 11 7800



Electrician screwdriver set, 7-piece

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 (250 V AC)	11 1280

1 11 7802



Slot-head screwdriver set, 5-piece

VDE electrician screwdrivers 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-piece

VDE Phillips/Pozidriv 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



Hex key (Allen wrench) set, 5-piece

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-piece

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



Hex nut driver set, 5-piece

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-piece

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 Phillips/Pozidriv cross-head screwdrivers

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® screwdrivers

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



Non-insulated screwdrivers with polished, chromium-plated blade Workshop screwdrivers

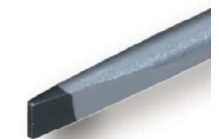
according to ISO 2380

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 screwdrivers

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



Phillips cross-head screwdrivers

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 screwdrivers

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® screwdrivers 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 keys (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

Hex nut drivers

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

Chubby 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 cross-head 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

5.5 x 1.0 x 300	410	12	11 7112
-----------------	-----	----	---------

Phillips cross-head screwdrivers

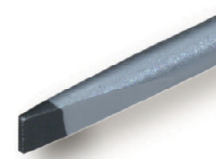
according to DIN ISO 8764

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

Screwdriver set, 3-piece

Slot-head screwdriver			
5.5 x 1.0 x 300			11 7112
Cross-head screwdrivers			
PH 1 x 300			11 7114
PH 2 x 300			11 7116
3 piece	1		11 7102

- 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



Screwdriver set, 6-piece

Electrician screwdrivers

2.5 x 0.4 x 75

4.0 x 0.8 x 100

Workshop screwdrivers

5.5 x 1.0 x 125

6.5 x 1.2 x 150

Cross-head screwdrivers

PH 1 x 80

PH 2 x 100

11 7121

11 7124

11 7105

11 7106

11 7131

11 7132

1 11 7100



Slot-head screwdriver set, 6-piece

Electrician screwdrivers

2.5 x 0.4 x 75

3.5 x 0.6 x 100

4.0 x 0.8 x 100

Workshop screwdrivers

5.5 x 1.0 x 125

6.5 x 1.2 x 150

8.0 x 1.2 x 150

11 7121

11 7123

11 7124

11 7105

11 7106

11 7107

1 11 7101



Cross-head screwdriver set, 6-piece

Phillips

PH 1 x 80

PH 2 x 100

PH 3 x 150

Pozidriv

PZ 1 x 80

PZ 2 x 100

PZ 3 x 150

11 7131

11 7132

11 7133

11 7141

11 7142

11 7143

1 11 7145



TORX® screwdriver set with bore, 5-piece

T 8 x 60

T 10 x 80

T 15 x 80

T 20 x 100

T 25 x 100

11 7308

11 7310

11 7315

11 7320

11 7325

1 11 7300



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

Size 3 x 100

Size 4 x 100

Size 5 x 100

Size 6 x 125

Size 8 x 150

11 7223

11 7224

11 7225

11 7226

11 7228

1 11 7220



Hex nut driver set, 5-piece

Size 5.5 x 125

Size 7 x 125

Size 8 x 125

Size 10 x 125

Size 13 x 125

11 7205

11 7207

11 7208

11 7210

11 7213

1 11 7200



Insulated screw-holding screwdrivers

Blades made of chrome vanadium steel, with impact-resistant plastic handle 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 cross-head 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-piece

Slot-head screwdrivers

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 screwdrivers

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



Workshop screwdrivers VSM STANDARD

with two-component handles and black tips that are covered with a tube and recessed at the tip

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 screwdrivers 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

2.5 x 0.4 x 80 (size 0)	155	12	11 4704
3.5 x 0.5 x 90 (size 1)	170	12	11 4706
4.0 x 0.6 x 100 (size 2)	180	12	11 4708
5.5 x 0.8 x 120 (size 3)	220	12	11 4710
6.5 x 1.0 x 140 (size 4)	240	12	11 4712
8.0 x 1.2 x 160 (size 5)	270	12	11 4714
10.0 x 1.6 x 180 (size 6)	300	12	11 4716

Blades tube-coated

3.5 x 0.5 x 90 (size 1)	170	12	11 4736
4.0 x 0.6 x 100 (size 2)	180	12	11 4738
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
8.0 x 1.2 x 160 (size 5)	270	12	11 4744



Phillips cross-head screwdrivers

PH 0 x 60	140	12	11 4760
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 +/- 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 receptacle 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
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 piece, one each of 1 - 1.5 - 1.8 - 2.3 - 2.9 - 3.6 mm blade width

	1	11 1810
--	---	---------



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
------------------	----	---------

for Phillips crosshead screws

PH 1 + PH 2 x 100	12	11 0630
-------------------	----	---------



Awls

made of chrome vanadium steel, with large, impact-resistant plastic handle 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 screwdrivers (electronic screwdrivers)

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)

Blade size (W x H x L mm)	Total length mm	PU	Article no.
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 screwdrivers (colour code light blue)

Blade size (W x H x L mm)	Total length mm	PU	Article no.
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® screwdrivers (colour code light green)

Blade size (W x H x L mm)	Total length mm	PU	Article no.
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 keys (Allen wrenches, colour code yellow)

Blade size (W x H x L mm)	Total length mm	PU	Article no.
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-piece

for slot-head screws

Blade size (W x H x L mm)	Total length mm	PU	Article no.
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-piece

for Phillips cross-head screws

Blade size (W x H x L mm)	Total length mm	PU	Article no.
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 cross-head screws

Blade size (W x H x L mm)	Total length mm	PU	Article no.
PZ 0 x 60	160		11 1886
PZ 1 x 80	180		11 1887
			1 11 1909



Electronic screwdriver set, 7-piece

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 cross-head screws

PH 0 x 60	160	11 1877
PH 1 x 80	180	11 1880

1 11 1901

**Electronic screwdriver set, 7-piece**

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-piece**

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 nut driver set, 7-piece**

for hex head screws

Size 2.5 x 60	160	11 1932
Size 3.0 x 60	160	11 1933
Size 3.2 x 60	160	11 1934
Size 3.5 x 60	160	11 1935
Size 4.0 x 60	160	11 1936
Size 5.0 x 60	160	11 1938
Size 5.5 x 60	160	11 1939

1 11 1942

**Electronic safety screwdriver set, 7-piece**

according to IEC 60900:2005, 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 crosshead screws

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

1 11 2050



SCREWING TOOLS

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



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/cross-head screws in electrical equipment, i.e. terminal blocks 

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

TIN

TIN, this is the abbreviation for titanium nitride. This special coating provides an additional tool life improvement to the already excellent values of BITFLEX.

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 bit holder

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

60		1	11 4505
----	--	---	---------



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	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 box, 10-piece

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 60 mm magnetic bit holder. The case can also be used directly as a screw 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 crosshead screws PZ 1 + PZ 2

7-piece	1	11 4598
---------	---	---------

with 16 bits

- for slot-head screws 6.5 x 1.2
- for Phillips crosshead screws PH 1, PH 2 (2 pieces), PH 3

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

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

17-piece	1	11 4596
----------	---	---------

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

7-piece	1	11 4597
---------	---	---------

Bit case PROBIT, 21-piece

Transparent, clearly organised storage magazine. Thanks to its compact, rounded design and receiver for a magnetic bit holder, it can also be used as screwdriver. With magnetic bit holder and 20 bits.

- for slot-head screws 5.5 x 0.8 mm and 6.5 x 1.2 mm
- for crosshead screws PH 1 (2 pieces), PH 2 (3 pieces) and PH 3
- for crosshead screws PZ 1 (2 pieces), PZ 2 (3 pieces) and PZ 3
- for TORX® screws T 10, T 15, T 20, T 25, T 30 and T 40

	1	11 4600
--	---	---------

Bit set ELEKTRO TOP, 21-piece

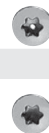
In a practical transport and storage case, includes 1 universal bit holder with permanent magnet, in the types and sizes most common in the electrical field with 60 mm length, and 20 bits 90 mm long

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

Pozidriv crosshead screws PZ 1, PZ 2, PZ 3

TORX® size T 10 - T 15 - T 20 - T 25

	1	11 4602
--	---	---------



Bit set SPEZIAL, 33-piece

Bit set for loosening safety screws. Contains 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 mm

1 11 4599



Screwdriver

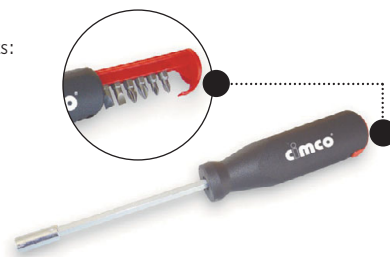
including 6 bits, with 125 mm long, rigid shaft and magnetic holder. Sliding bit holder integrated into handle for 6 bits:

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

for Phillips crosshead screws PH 1 + PH 2

for Pozidriv crosshead screws PZ 1 + PZ 2

1 11 4580



"Long safety bits" set, 50-piece

for working with screws of all types, especially safety screws and special screws. Thanks to extended length of 75 mm excellent for working in less accessible places in cramped conditions, 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

Phillips crosshead PH 1 - PH 2

Pozidriv crosshead PZ 1 - PZ 2

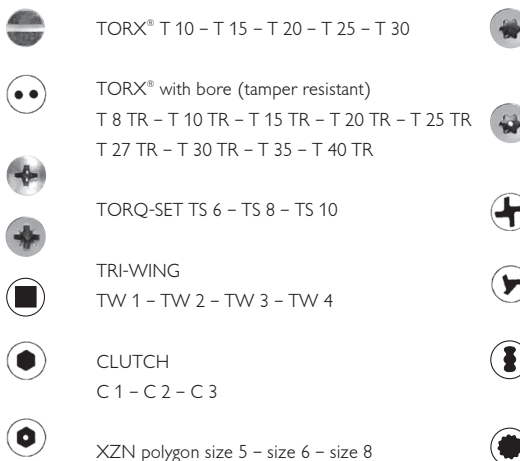
Square socket (Robertson) size 1 - size 2

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-piece

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 for mounting on the wall

1 11 0604

T-handle screwdriver set, 8-piece

for applying significantly more power than with conventional screwdrivers. With double-sided drive for hex socket screws (Allen screws). Voluminous edge-free handle with 2-component design and soft rubber insert, blades made of highly tempered S2 special steel, chrome-plated, with ball end on the longer blade, black glazed, including practical storage stand for positioning on the work bench or for 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-piece

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

Size 2 - 2,5 - 3 - 4 - 5 - 6 - 8 - 10	1	11 0592
5/64" - 3/32" - 1/8" - 5/32" - 3/16" - 7/32" - 1/4" - 5/16"	1	11 0594



Ball-end hex key set, 7-piece

in a pocket-sized holder

Size 2.5 - 3 - 4 - 5 - 6 - 8 - 10	1	11 0596
-----------------------------------	---	---------



TORX® key set, 8-piece

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-piece

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: hex sockets sizes 4 to 14 mm, hex bit (Allen) 3 to 6 mm
Slot-head screw bit 0.5 x 4 0.6 x 4.5 0.8 x 5.5
Crosshead screw bits PH 1 - PH 2 - PH 3 - PZ 1 - PZ 2 - PZ 3
TORX® screw bits T 10 - T 15 - T 20



280 x 130 x 90 mm	1	11 3104
-------------------	---	---------

Socket wrench set, 52-piece

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

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

75 mm extension

35 mm cardan joint

Adapter for 1/4" hex bits



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

21 mm hex socket 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

125 and 250 mm extensions

65 mm cardan joint



1/4" hex drive screw bit system

One of each of the following:

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

Standard bits in plastic holder:

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

Crosshead bits PH 1, PH 2, PH 3

Hex bits (Allen) 3 - 4 - 5 - 6 - 7 - 8 mm

1/4" square drive with ball stop



Additional tools: 1.5 - 2 - 2.5 mm hex keys (one each)

	1	11 3152
--	---	---------

Bit and socket wrench set, 28-piece

in attractive, compact, two-coloured plastic box, sockets 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 of S2 special steel, 25 mm long; one bit each

for slot-head screws 4 - 5 - 6 mm

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

for Pozidriv cross-head 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 (i.e. for ratchet) to 1/4" hex drive (i.e. for screw bit), 25 mm long

1 11 3154



Ratchet-ring and open-end spanner set, 12-piece

Spanner sizes in set: 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 mm (order no. 11 2508 to 11 2519), delivered in a robust, roomy roll-up tool bag.

1 11 2505



Ratchet-ring and open-end spanner set, 16-piece

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 constricted working areas.

Contents:

Open-ended and ratchet-ring spanners (size 10, 11, 13 and 17), bits for Phillips / Pozidriv cross-head 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 5 - 6 mm,

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.

On one side open-end spanner with 15° offset, on the other side a ring spanner of the same size with integrated ratchet mechanism with distinct advantages: Ratchet with fine gearing: 72 teeth = only 5° minimum pivoting angle. Switch from clockwise and counterclockwise rotation by simply turning over the spanner rather than by switching a lever, often in the wrong direction.

The spanners have very narrow dimensions in spite of ratchet. Thus the tools are especially suitable for constricted working 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.

Made of chrome vanadium steel, drop-forged, specially hardened, high-gloss polished, nickel-plated and hard-chrome plated.

Very high torque transmission, the requirements of DIN are exceeded.

Spanner widths

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 wrench sets

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

12-piece 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
--	--	---	---------



Double open-ended wrenches, individual

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



12-point double-endend ring wrench sets

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

12-piece 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
--	--	---	---------



12-point double-endend ring wrenches, individual

6 x 7 mm	1	11 2330
8 x 9 mm	1	11 2332
10 x 11 mm	1	11 2334
10 x 13 mm	1	11 2336
12 x 13 mm	1	11 2338
14 x 15 mm	1	11 2344
16 x 17 mm	1	11 2348
17 x 19 mm	1	11 2350
18 x 19 mm	1	11 2352
20 x 22 mm	1	11 2356
21 x 23 mm	1	11 2358
24 x 27 mm	1	11 2362
25 x 28 mm	1	11 2364
30 x 32 mm	1	11 2368



Combination wrench set, 17-piece

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
-------------------------------------	---	---------



Combination wrenches, 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 wrenches

according to DIN 3117 A, made of forged steel, chrome-plated, handle coated with PVC, for handling simple tasks quickly and flexibly.

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



Ratchet tool and sockets 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 wrenches

Releasing torque wrench with receiver 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 stuck screws, does not affect the release mechanism as it is protected against such damage. Indicator deviation ± 3%. Size of tool receiver 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 and 11 5116

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
--------------	---	---------

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
--------------	---	---------



Ratchet adapters

made of chrome vanadium steel, reversible, 60 teeth, suitable for torque wrench with 9 x 12 square receiver. 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
3/8"	1	11 5116



Open ring-ratchet

Slotted ratchet head with removable plastic handle, size 20 mm for receiving all of the following sockets, clockwise and counterclockwise rotation by simply turning over the ratchet, thus suitable for tightening and loosening screwed cable glands

	1	11 5100
--	---	---------



Sockets for screwed cable gland ratchet

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

(mind manufacturer dimensions)	Size		
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



Ratchet and socket set for screwed cable glands

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

11 piece	14 - 30	1	11 5000
----------	---------	---	---------



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 size mm	Length mm	Weight g		
13 - 23	180	180	6	11 5040
24 - 36	200	220	6	11 5042
2 piece set size 13 - 23 and size 24 - 36			1	11 5045



Mast key

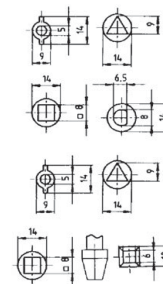
made of die cast zinc (GD-ZN), 90 x 90 mm

with half-moon	10	11 2882
with square bit	10	11 2883

Triangle socket wrench

according to DIN 22417, with moving handle, zinc-coated, length 70 mm

for screws	Length of edges		
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 (order no. 11 2783), all sockets (order no. 11 2784 to 11 2797), in a plastic storage case

	1	11 2798
--	---	---------









Cross-key

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

		1	11 2783
--	--	---	---------

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 bit	6 - 10	1	11 2795
	3	1	11 2793
 Two-way key	5	1	11 2794
 Half-moon		1	11 2797
 DB standard		1	11 2796



Switch cabinet key made of metal


for all common switch cabinets. Small dimensions, light weight. With adapter for 1/4" bits, with square key for ventilating valves on heating radiators and double-bit for:

Slot-head screws 1.0 x 7.0 mm



Cross-head screws PH 2




 7 - 8 mm

 6 mm

 5 mm

 9 mm

 3 - 5 mm

Universal switch cabinet key	1	11 2894
------------------------------	---	---------





Switch cabinet key case	1	11 2898
-------------------------	---	---------



Switch cabinet key „Mini“	1	11 2891
---------------------------	---	---------

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 carabiner hook. 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



NEW

SuBMaster „Building“







Universal key for all locks with cylinder bore, also for all common technical tips. By means of a quadruple turning mechanism, 8 different switch cabinet tips can be brought 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 carabiner hook.

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



SuBMaster KOMPAKT

Universal wrench for all common switch cabinets, sub-distributions, street lamps, etc.
 In a practical trouser pocket format (dimensions 97 x 25 mm) with clip.
 By means of a double turning mechanism, 4 different switch cabinet ends can be brought into position.
 Additionally there are a 5 mm square and a 1/4" bit receiver incl. magnet in the body for 7-8 mm square.

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








Special DB switch cabinet wrench

Design as with universal switch cabinet key (order 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							
Crosshead screws PH 2							
							
5 mm	7 mm	8 mm	9 mm	4 - 10 mm			

(e.g. heater ventilating valve)
 Ideal for heating, air conditioning and ventilation and in new construction.

						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 fittings, hex key (Allen) 3 mm for set screws on door handles, adapter to close and open profile cylinder lock receivers (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 universal keys for switch cabinets can be put into position. A universal 1/4" bit receiver allows for use of all commercially available bits. A neodymium permanent magnet securely holds the bits in the receiver. Weight: approx. 120 g.

Bits for:

								
Crosshead screws PH 2								
								
5 mm	6 mm	7-8 mm	9 mm	3 - 5 mm		155	1	11 2994



SuBKey BUILDING

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

Weight 110 g

Bit for:

Crosshead screws PH 2



6 - 9 mm	9 mm	8 mm	5 mm	145	1	11 2998
----------	------	------	------	-----	---	---------



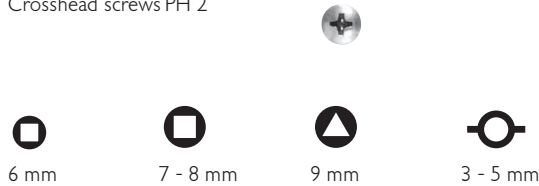
Subfinder - SuBKey ELEKTRO PLUS

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

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:

Crosshead screws PH 2



6 mm	7 - 8 mm	9 mm	3 - 5 mm	155	1	11 2996
------	----------	------	----------	-----	---	---------



Wrench for set screws for fuses

with lacquered wooden handle, suitable for all sizes

175	10	14 0100
-----	----	---------

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

105	10	14 0102
-----	----	---------



MEASURING AND TESTING INSTRUMENTS



Multifunction

The clip-on measuring instrument will measure direct and alternating current, direct and alternating voltage, resistance and continuity.

Energy saving function

About 10 minutes after its last operation, the instrument automatically switches to SLEEP mode, using only 35 μ A of current and saving on battery power.

Data hold button

Press the button and the data will be held on the LCD for easier reading.

Liquid crystal display

Easy to read display on large LCD with a digit maximum of 4199.

Voltage and continuity tester ALPHA

voltage testing 12 V to 690 V AC/DC, automatic AC/DC recognition, automatic polarity display,

Testing current < 3.5 mA, integral unipolar phase testing to determine the phase also without counter-potential, acoustic signal and particularly bright LED bar display (+ 12 V, - 12 V, 24 V, 50 V, 120 V, 230 V, 400 V, 690 V, single pole, continuity), voltage display even without or with discharged batteries, continuity test with visual display and acoustic signal, resistance range 0 to 400 k Ω , patented double-pole phase rotation indicator (100 to 690 V), battery testing function, integral test point lighting, loss-proof probe point protector, broad anti-slip guard, quick one-handed test for mains sockets using fixed 19 mm contact gap, power supply 2 batteries 1.5 V IEC LR603

1 11 1420



Voltage and continuity tester DUSPOL EXPERT

display of direct and alternating voltage 12 - 690 V (LED), display stages: 12, 24, 50, 120, 230, 400, 690 V / 750 V DC, additional vibrating alarm for voltage recognition, continuity test 0 - 108 k Ω (buzzer and LED), phase rotation / phase testing (LCD), polarity testing (LED), load connection via push-button: IC \leq 200 mA, with precision lighting of dark testing points, type of protection IP 64 (dustproof / splash protected), tested and certified in accordance with IEC 61243-3, VDE 0682 part 401, overvoltage category CAT IV 500 V, includes 2 x 1.5 V micro-batteries (LR03 / AAA)

1 11 1433



Voltage tester DUSPOL ANALOG PLUS

display of direct and alternating voltage from 12 - 690 V (7-stage LED / plunger coil), display stages: 12, 24, 50, 120, 230, 400, 500, 690 V AC / 750 V DC, additional vibrating alarm for voltage recognition, phase rotation / phase testing (LCD), polarity testing (LED), deliberate tripping of the ground fault circuit interrupter (IC \leq 250 mA), type of protection IP 64 (dustproof / splash protected), tested and certified in accordance with IEC 61243-3, VDE 0682-401, overvoltage category CAT IV 500 V

1 11 1430



Voltage and continuity tester DUSPOL digital LC

illuminated 3-digit LCD and 7-stage LED display for direct and alternating voltage from 6 - 690 V, continuous voltage display: 6 V - 690 V AC / 750 V DC (LCD), display stages: 12, 24, 50, 120, 230, 400, 690 V AC / 750 V DC (LED), additional vibration alarm for voltage recognition, acoustic / visual continuity test (buzzer / LCD), phase rotation / phase test (LCD), polarity test (LCD), deliberate tripping of ground fault circuit interrupter (IC \leq 250 mA), illumination of test points, type of protection IP 64 (dustproof / splash protected), tested and certified according to IEC 61243-3, VDE 0682-401, overvoltage category CAT IV 500 V, III 690 V, including 2 x 1.5 V micro-batteries (LR03/ AAA)

1 11 1427



Voltage and continuity tester DUSPOL COMBI

display of direct and alternating voltage from 12 - 690 V (LED), display stages: 12, 24, 50, 120, 230, 400, 690 V / 750 V DC, additional vibration alarm for voltage recognition, continuity and semiconductor test 0 - 600 k Ω (LCD), polarity test (LED), load connection via push-button: IC \leq 200 mA, type of protection IP 64 (dustproof / splash protected), tested and certified according to IEC 61243-3, VDE 0682 Part 401, overvoltage category CAT IV 500 V.

1 11 1428



Safety voltage tester PROFIPOL

with polarity display, phase display against protective earth, for direct and alternating current from 6 - 400 V on LED, diode display (LED) +/- 6 V, 12 V, 50 V, 120 V, 230 V, 400 V, polarity display on LED, power input 30 mA, type of protection IP 65 (dust/waterproof), approved for indoor and outdoor use, tested and certified in accordance with IEC 61243-3, VDE 0682 Part 401

1 11 1425



Continuity and circuit tester DUTEST

with additional torch function (permanent light) and two-stage range indicator: 0 - 900 Ω / 0 - 90 k Ω by LED and buzzer, visually by diode display (LED), acoustically by buzzer, low-resistance measuring range: 0 - 900 Ω , high-resistance measuring range: 0 - 90 k Ω , with external voltage protection, type of protection IP 40, tested and approved in accordance with VDE 0403

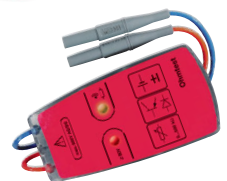
1 11 1435



Continuity tester

for resistance, semiconductor, polarity and capacitor testing (0.01 to 1000 μ F), with acoustic signal and visual display with resistance-dependent tone pitch, resistance range 0 bis 500 k Ω , testing current approx. 2.2 mA, external voltage display > 50 V, electric strength up to 600 V, power supply 1 battery 9 V IEC 6LR61, weight 230 g

100 x 50 x 25 1 11 1400



Digital pocket multimeter

in credit card format, with a wide range of measurements and a high degree of accuracy: automatic choice of measurement range, direct current and alternating voltage measurements up to 400 mV / 4 V / 40 V / 400 V / 600 V respectively, frequency measurements up to 10 Hz / 100 Hz / 1 kHz / 10 kHz / 100 kHz / 1 MHz / 10 MHz, resistance measurement up to 400 Ω / 4 k Ω / 40 k Ω / 400 k Ω / 4 M Ω / 40 M Ω , relative function for measurement by comparison, diode, capacitance and continuity tests, display on large LCD (max. 3999), data hold button for easier reading, continuity test with acoustic signal, automatic switch-off about 15 minutes after last operation (energy saving function), overload protection 3700 V AC, weight only 70 g including batteries, supplied with 2 LR44 batteries (1.5 volt), 1 set of integral test leads plus folder for carrying and protection.

107 x 54 x 10	1	11 1402
---------------	---	---------



Digital multimeter

compact multimeter with a wide range of measurements and a high degree of precision: direct, automatic or manual measurement of direct and alternating current, up to 400 mV / 4 V / 40 V / 400 V / 600 V, 400 μ A / 4000 μ A / 40 mA / 400 mA / 4 A / 10 A respectively, frequency measurement up to 5.12 Hz / 51.2 Hz / 512 Hz / 5.12 kHz / 51.2 kHz / 512 kHz / 5.12 MHz / 10 MHz, resistance measurement up to 400 Ω / 4 k Ω / 40 k Ω / 400 k Ω / 4 M Ω / 40 M Ω , relative function for testing by comparison, diode, capacitance and continuity tests, display on large LCD (max. 3999), data hold button for easier reading, continuity test with acoustic signal, display of charge condition, automatic switch-off about 30 minutes after last use (energy saving function), overload protection 3700 V AC for 1 minute, weight only 260 g including batteries, supplied with 2 R6P batteries (1.5 volt), 1 fuse 0.5 A / 250 V and 1 fuse 10 A / 250 V, 1 set of test leads plus rubber protective case.

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. Connects directly to the 4 mm input socket of the multimeter. Measurement range: 0 A to 300 A at 1.5% \pm 2 A, conversion 1 A AC corresponds to 1 mV, operating temperature: 0 $^{\circ}$ C bis 50 $^{\circ}$ C, width of opening max. 28 mm

1	11 1414
---	---------



Clip-on measuring instrument

small measuring instrument for one-handed operation, pincer opening 30 mm, measurement range for alternating current up to 40 A/400 A, alternating voltage up to 600 V, direct voltage up to 400 V/600 V, resistance up to 400 Ω / 4000 Ω , precision of measurement \pm 2 %, LC-display (max. 3999), data hold button for easier reading, continuity test with acoustic signal, charge condition display, automatic switch-off after about 10 minutes without operation (energy saving function), overload protection 480 A AC/720 V AC, weight only 250 g including batteries, delivery includes 2 R03 batteries (1.5 volt) and 1 set of test leads.

184 x 44 x 27	1	11 1413
---------------	---	---------



Digital clip-on measuring instrument AC / DC

small, easy to handle clip-on measuring instrument for one-handed operation, pincer opening width 30 mm, display on large LCD (digits max. 4199), data hold button for easier reading, battery charge condition is displayed, current consumption approx. 15 mA, automatic switch-off about 10 minutes after last operation (energy saving function, only 35 μ A current consumption to conserve the battery), overload protection for 10 seconds AC/DC 480 A or respectively 720 V with display on the LCD, complies with IEC 61 010-1 CAT. III 300 V.

Two self-setting 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 Ω and up to 4000 Ω (\pm 2 %)

Continuity test: with acoustic signal at 50 Ω \pm 35 Ω .

Weight only 200 g including batteries, supplied with 2 R03 batteries (1.5 volt DC), 1 set of test leads and operating instructions.

187 x 68 x 38	1	11 1415
---------------	---	---------



Test leads

both ends with 4 mm safety technology in accordance with DIN VDE 0411/EN 61010/IEC 61010, one end straight, one end angled. PVC insulated highly flexible 0.8 mm test lead, current rating up to 16 A, measuring circuit category CAT III / 1000 volt, length 1 m

red	1	11 1470
black	1	11 1471



Test probes

with 4 mm safety technology according to DIN VDE 0411 / EN 61010 / IEC 61010, short design, current rating up to 16 A, measurement circuit category CAT III / 1000 volt
with 2 mm stainless steel probes, length 102 mm

2-piece set grey / red and grey / black	1	11 1474
with 4 mm probes, length 142 mm		
grey / red	1	11 1475
grey / black	1	11 1476
2-piece set grey / red and grey / black	1	11 1477

Crocodile clips

with 4 mm safety technology according to DIN VDE 0411 / EN 61010 / IEC 61010, opening approx. 21 mm, current rating up to 16 A, measurement circuit category CAT III / 1000 volt

grey / red	1	11 1478
grey / black	1	11 1479
2-piece set grey / red and grey / black	1	11 1480

Test lead set, 6-pieces

contains: 1 item each of

Test lead 1 m red		11 1470
Test lead 1 m black		11 1471
Crocodile clip grey / red		11 1478
Crocodile clip grey / black		11 1479
	1	11 1485

Non-contact voltage tester VOLTFIX

non-contact, visual and acoustic recognition of alternating voltages. Quick, exact discovery of wire breaks in exposed cables, e. g. in cable drums. Compact, easy to handle shape, able to fit in any pocket. Wide range of applications in craft trades and industry, includes 2 1.5 volt batteries. (In rare cases, static charging may lead to false readings: please always check the instrument before starting operations by carrying out a function test with a known power source).

50 to 600 V AC, 50 to 500 Hz	1	11 1460
------------------------------	---	---------

Non-contact magnet tester MAGNO-VOLTFIX

non-contact, visual and acoustic recognition of alternating voltages. Visual signal for recognition of magnetic fields, e. g. on magnetic coils or permanent magnets. Quick, exact discovery of cable breaks in exposed cables, e. g. cable drums, includes 2 1.5 volt batteries.

50 to 600 V AC, 50 to 500 Hz	1	11 1465
------------------------------	---	---------

Metal and voltage detector

non-contact detection of voltages AC 50-300 V down to a depth of 100 mm, metal detection down to 40 mm, visual display and acoustic signal.

	1	11 1416
--	---	---------

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 practical belt pouch, comprehensive operating instructions. For 9 volt E-block battery.

145 x 86 x 26 mm	1	11 1440
------------------	---	---------



Voltage tester

with clear, transparent, impact-proof plastic handle tested according to VDE, Diy pouch

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

Voltage tester

with clear, transparent, impact-proof plastic handle, in Diy pouch (no approval for Germany)

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



Voltage tester

with retractable screwdriver blade

W mm	L mm	Testing range V			
4	25	150 - 250 AC	140	12	11 1300



Voltage tester EURO

with all-round slip guard

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



- 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

CABLE UNWINDING AND WINDING DEVICES

Measuring device

For the quick and accurate determination of cable lengths complete with a wide range of application thanks to the automatic cable size adjustment, suitable for all types of cables and similar wound products with diameters ranging from 4 mm to 35 mm.



Combination

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.

Application

The flat, low-lying loading ramp permits the problem-free intake of cable drums. Lateral guides prevent the cable drum from slipping.

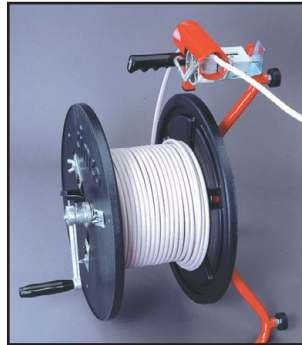
Mobility

All CIMCO TROMMELFIX 200 cable drum unrollers can be equipped using a castor set, thus providing the utmost mobility in the warehouse as well as on the construction site.

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



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 mm

1

14 2750



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 mm

1

14 2752

Transport set for cable drum unroller TROMMELFIX 200

Useful addition for the mobile utilisation of the cable drum unroller (order no. 14 2750). Set comprises of: 4 screw-on castors (2 of which can be swiveled 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 cable length hand measuring device number 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



KATMEX dispensers for disposable cable drums

for cable drums with maximum diameters of 800 mm and maximum weights 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 mm 1 14 2730

2. matching axle 1 14 2732

Aluminium runner

for all widths of cable drum; aluminium body with repositionable rollers.

Load-bearing capacity/pair Max. drum ø H x W x L mm

Slip-resistant thanks to rubber liner, complete with plastic rollers

300 kg 800 mm 152 x 120 x 590 1 pair 14 2700

complete with aluminium rollers

1000 kg 1200 mm 220 x 140 x 1000 1 pair 14 2702



Cable length hand measuring device

measuring device for the quick and accurate determination of 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, German-branded counter with excellent measuring accuracy, measurement range from 0 to 9999.9 m, zero position via the reset toggle switch, knurled aluminium measuring wheel, unscrewable handle for mobile use on construction sites, in the warehouse, workshop etc., with mounting 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 (order no. 14 2740)

4 - 35 mm ø

1

14 2745

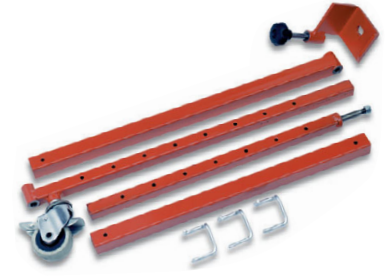


Connection frame for cable length hand measuring device

the cable length hand measuring device is fixed to the CIMCO Trommelfix 200 and Trommelfix 700 cable drum unrollers using the connection frame. As a result, the measuring device becomes a stationary facility for the cutting wire to size on all 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



KATIMEX cable drum hoists

robust and compact steel structures suitable for construction sites, galvanised or powder-coated. Two hoists and a matching axle are required for the assembly of a complete hoisting facility.

Cable drum ø mm	max. capacity /pair kg		Actuation	Special feature	Article No.
	min.	max.			
1100	1600	4000	Spindling, by hand	-	14 2320
1100	1600	4000	Pumping, by hand	Quick adjustment	14 2322
600	1600	2000	Levering, by hand	-	14 2324
800	2200	10000	Pumping, by foot, presetting by ratcheting the axle bearing shells	Quick adjustment, mobile	14 2326
800	3200	10000	Pumping, by foot, presetting by ratcheting the axle bearing shells	Quick adjustment, mobile	14 2328

Further hoists for cable drums weighing up to 20,000 kg available on request.

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, 3-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



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

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



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

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

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.

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

XL additional retainer	Width 100 mm	1	14 2768
------------------------	--------------	---	---------

Cable winding aids

Plastic winding rods (Fishing tapes)

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 ø 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 nylon winding rods with 4 mm ø.

220	1	10 6114
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 assortment for plastic rods

in raaco – PSC vario-240 component boxes, with crimping pliers 10 6114.

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

31-piece	240 x 190 x 60 mm	1	10 6314
----------	-------------------	---	---------



Winding spirals EFLEX (Fishing tapes)

manufactured from quadruple-rolled steel wire spirals, with solid steel end pieces, ø 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 (Fishing tapes)

with 2 winding lugs, high-frequency welded, rod thickness 3.5 x 0.5 mm, tensile strength 900 N

10	10	14 0004
15	10	14 0006
20	10	14 0008
25	10	14 0010



Cable pilot set

cable guiding heads for direct insertion of many standard cables into short empty conduit routes. Simply screw the cable pilot onto the cable by hand, push the cable through, unscrew the cable pilot. Eliminates the work stages of implementing the cable winding system, fastening the cable to cable lugs or cable grip, winding and unwinding of the cable winding aid; set consists of small cable pilot (for coaxial cable, NYM 3 x 1.5 mm² etc.) and large cable pilot (for NYM cable 3 x 2.5 mm² - 5 x 1.5 mm² - 5 x 2.5 mm² etc.)

	1	14 2188
--	---	---------



Cable guiding heads for domestic connection cables

same method of function as with the cable pilot, i.e. 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 ø	1	14 2182
for cables between 20 and 30 mm ø	1	14 2184
for cables between 30 and 50 mm ø	1	14 2186

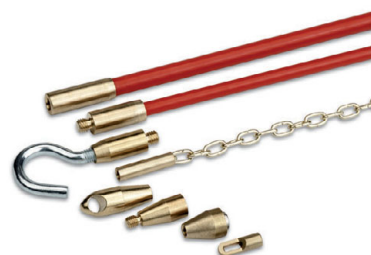


Glass-fibre push rod basic assortment

the perfect solution for laying cables in suspended ceilings or confined spaces. The 6 mm and 8 mm glass-fibre push rods are equipped with an M 5 / M 6 female or male thread sleeve on each end and can be extended as desired.

Push rod assortment, 13-piece

8 mm pull-push rod (5 units)	1020 mm		
6 mm pull-push rod (2 units)	1020 mm		
Adapter M 5 / M 6	20 mm		
Hook M 6	60 mm		
Chain M 5	310 mm		
Magnet M 5	18 mm		
Pulling eye M 5	30 mm		
Pull head M 5	18 mm		
13-piece		1	14 6273



Push rod extension assortment, 3-piece

Pull-push rod 8 mm (3 units)	1020 mm	1	14 6274
Pull-push rod 6 mm (3 units)	1020 mm	1	14 6275



Push rod accessory assortment, 6-piece

Adapter M 5 / M 6	20 mm		
Hook M 6	60 mm		
Chain M 5	310 mm		
Magnet M 5	18 mm		
Pulling eye M 5	30 mm		
Pull head M 5	18 mm		
6-piece		1	14 6290



Super Rod push rod system

makes laying electrical lines in dry construction systems and lightweight designs easier.

The Super Rod push rod systems facilitate an efficient cable by saving time as well as reducing risks and interruptions on the construction site.

The product range is characterised by numerous innovative attachments that increase functionality and allow craftspersons to work more productively.

Despite the brass fitting that is located on each bar and cannot be bent, the pull bars are extremely flexible.

In order to prevent the bars from breaking as a result of over-bending, each bar has been assigned with a maximum bending radius that can be recognised by the colour of the bar.

Push rod set MEGA

total length: 16 metres for the greatest possible flexibility.

Included in the set:

- 3 rigid push rods (black), bending radius > 4 m, respective length 1 m
- 7 medium push rods (red), bending radius > 2.5 m, respective length 1 m
- 4 flexible push rods (yellow), bending radius > 2 m, respective length 1 m
- 1 ultra-flexible push rod (white), bending radius < 1 m, length 1 m
- 1 phosphorescent push rod (matt white), bending radius > 2.5 m, length 1 m
- 1 guide rod for bends (white), length 17 cm
- 1 pliable guide rod for bends (black), length 17 cm
- 1 cable draw grip for cable diameters between 6 and 10 mm (red)
- 1 cable draw grip for cable diameters between 11 and 15 mm (black)
- 1 draw hook
- 1 mini light for the illumination of inaccessible locations
- 1 magnetic end piece in combination with
- 1 chain end piece for the quick location and withdrawal of rod ends
- 1 ring end piece for the fixing of cables to the push rods
- 1 connecting sleeve, both sides with female thread
- 1 semi-spherical end piece for smoothening and cleaning
- 1 cylindrical end piece for pushing and cleaning
- 1 slider

1

14 7300



NEW

Push rod set DELUXE

total length: 10 metres

Included in the set:

- 2 rigid push rods (black), bending radius > 4 m, respective length 1 m
- 6 medium push rods (red), bending radius > 2.5 m, respective length 1 m
- 2 flexible push rods (yellow), bending radius > 2 m, respective length 1 m
- 1 guide rod for bends (white), length 17 cm
- 1 draw hook
- 1 mini light for the illumination of inaccessible locations
- 1 magnetic end piece
- 1 ring end piece for the fixing of cables to the push rods
- 1 connecting sleeve, both sides with female thread
- 1 semi-spherical end piece for smoothening and cleaning
- 1 cylindrical end piece for pushing and cleaning

1

14 7302



NEW

Push rod set SUPER SIX

total length: 6 metres

Included in the set:

- 1 rigid push rod (black), bending radius > 4 m, respective length 1 m
- 3 medium push rods (red), bending radius > 2.5 m, respective length 1 m
- 2 flexible push rods (yellow), bending radius > 2 m, respective length 1 m
- 1 guide rod for bends (white), length 17 cm
- 1 draw hook
- 1 magnetic end piece
- 1 ring end piece for the fixing of cables to the push rods
- 1 connecting sleeve, both sides with female thread
- 1 semi-spherical end piece for smoothening and cleaning
- 1 cylindrical end piece for pushing and cleaning

1

14 7304



Push rod set STANDARD

total length: 5 metres

Included in the set:

- 4 medium push rods (red), bending radius > 2.5 m, respective length 1 m
- 1 flexible push rod (yellow), bending radius > 2 m, respective length 1 m
- 1 guide rod for bends (white), length 17 cm
- 1 draw hook
- 1 ring end piece for the fixing of cables to the push rods
- 1 connecting sleeve, both sides with female thread
- 1 semi-spherical end piece for smoothening and cleaning

1

14 7306



Push rod set BASIS

total length: approx. 2 metres

The set contains the three most-used attachments. Furthermore, all attachments belonging to their main sets can be used. The handy basic set is designed for confined spaces in which long bars are too cumbersome or only short cable routes are being laid.

Included in the set:

- 1 rigid push rod (black), bending radius > 4 m, respective length 0.53 m
- 2 medium push rods (red), bending radius > 2.5 m, respective length 0.53 m
- 1 flexible push rod (yellow), bending radius > 2 m, respective length 0.53 m
- 1 ultra-flexible push rod (white), bending radius < 1 m, respective length 0.36 m
- 1 draw hook
- 1 ring end piece for the fixing of cables to the push rods
- 1 semi-spherical end piece for smoothening and cleaning

1

14 7308



Push rod set for tool boxes

Total length: approx. 1.5 metres

The tool set provides you with versatility in a compact design. Measuring only 330 mm, it fits into the majority of tool boxes and is available in all four bending radii.

The set can also be combined with the complete range of accessories.

Included in the set:

- 1 rigid push rod (black), bending radius > 4 m, respective length 0.36 m
- 2 medium push rods (red), bending radius > 2.5 m, respective length 0.36 m
- 1 flexible push rod (yellow), bending radius > 2 m, respective length 0.36 m
- 1 ultra-flexible push rod (white), bending radius < 1 m, respective length 0.36 m
- 1 draw hook
- 1 ring end piece for the fixing of cables to the push rods
- 1 semi-spherical end piece for smoothening and cleaning

1

14 7310

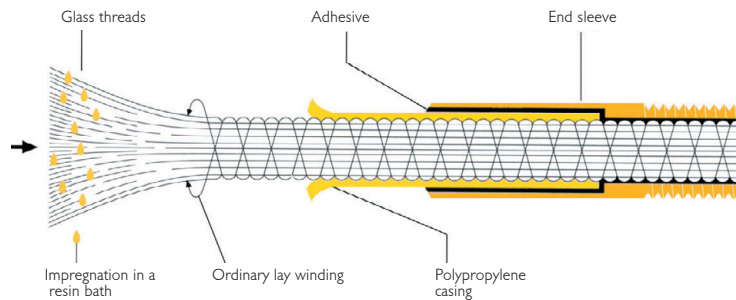




rational cable winding devices for professional electricians

Polykat® the glass fibre rod

Polykat® glass fibre 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® glass fibre rods permits the construction of unrivalled small, compact and handy devices.



	KatiBlitz	KatiBlitz vario	KABELMAX	KABELJET	Pipe eel	
Glass fibre rod diameter	3.0 mm		4.5 mm	7.2 mm	9.0 mm	11.0 mm
Minimum bending radius	50 mm		100 mm	160 mm	200 mm	250 mm
Rod braking 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	30 m	80 m	120 m	150 m	500 m
End and connecting sleeve lengths	M 5			M 12		
Typical areas of application						
available accessories / individual parts						
Replacement / extension rod	No. 14 2120 et seq.	x	No. 14 1808 et seq.	No. 14 2225 et seq.	No. 14 2240 et seq.	No. 14 2250 et seq.
Replacement magazine	x	on request	x	x	x	x
End sleeve	No. 14 2142		No. 14 1842	No. 14 2230	No. 14 2285	No. 14 2286
Connecting sleeve	No. 14 2146		No. 14 1846	No. 14 2231	No. 14 2290	No. 14 2291
Cable lugs	No. 142144			x	x	x
Pulling eyes	x	x	No. 141844	No. 14 2280		
Spring guide heads	No. 14 2130 et seq.			x	x	x
Shackle with 10 mm bolts	x	x	x	No.14 2292		
Cable draw grips	No. 14 2498 et seq.			No. 14 2506 et seq.		
Special adhesive	No. 14 2192			No. 14 2193		
Special pulling handle	No. 14 2190				x	x
Cable lubricant	No. 14 2194 to No. 14 2197					
Supplementary accessories	Battery-powered drill drive for KatiBlitz compact No. 14 2350		Battery-powered drill drive for Cabelmax No. 14 2352		Length measuring device for pipe eel No. 14 2310	
	Length measuring device on request		Length measuring device on request	Length measuring Twist compensation pin, gathering devices, pipe cleaning and duct brushes on request		

KATI BlitzOrtung ²ⁱⁿ¹ – 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 glass fibre profile in shock-proof housing. No moving external parts and replaceable slip ring transmitters. With integrated accessory assortment and special draw aid KATIGRIP, 1 each of 7 - 10 mm ø guide head, 5 rod end sleeves, 3 connecting sleeves, 5 cable lugs, 1 cable draw grip 6 - 9 mm ø, 1 glass fibre fix adhesive (3 g bottle).

Detection	20	1	14 2030
Detection	30	1	14 2034
Detection	50	1	14 2038

KATI Blitzcompact – comfortable cable winding

with integrated accessory assortment and special draw aid KATIGRIP, 1 each of 7 - 10 mm ø guide head, 5 rod end sleeves, 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
	30 m	1	14 2024
	50 m	1	14 2028

with integrated accessory assortment and special draw aid KATIGRIP, 1 each of 7 - 13 mm ø pulling eyes, 3 connecting sleeves, 5 cable lugs, 1 cable draw grip 6 - 9 mm ø, 1 glass fibre fix adhesive (3 g bottle).

with flexible guide head	30 m	1	14 2040
--------------------------	------	---	---------

KATI Blitzvario

Kati Blitz vario is the current premium product from KATIMEX for domestic installation. It possesses a changeable magazine in which the glass fibre winding rod is located. With a new crank mechanism, it is now possible for the rod to be rapidly extended and retracted without becoming knotted or forming loops. The entire accessory is always ready to hand in the magazine case. The robust and shock-proof housing is light and compact. The accessory parts and spare parts for the KatiBlitz vario and KatiBlitz compact are identical. Accessories provided: 2 x 7 mm and 10 mm spring guiding heads, 5 pull heads with brass lugs complete with M 5 thread, 1 cable draw grip with twistcompensation for 6 - 9 mm cables, 5 brass rod end sleeves with M 5 thread, 3 brass connecting sleeves, 1 bottle of glass fibre fix adhesive.

	20 m	1	14 1420
	30 m	1	14 1430
	50 m	1	14 1450

KATI Blitz – EASY GRIP

for the energy-saving and fatigue-free insertion of a 3 mm glass fibre rods into empty conduits. The transfer of force is carried out via a two-jaw clamping system complete with form-fitting connection to the glass fibre rod.

Max. sub-tensile force: 20 kg		1	14 2180
-------------------------------	--	---	---------

KATI Blitz – replacement bar

for KatiBlitz compact and KatiBlitz vario, complete with 2 end sleeves

	20 m	1	14 2120
	30 m	1	14 2122
	50 m	1	14 2124

KATI BlitzOrtung – replacement bar

for KatiBlitz detection with 2 end sleeves

Detection	20 m	1	14 2031
Detection	30 m	1	14 2035
Detection	50 m	1	14 2039

Flexible guide head

the flexible guide head is adhered directly to the glass fibre rod. Due to the fact that rigid end sleeves are no longer required, extremely tight bending radii of the empty conduits can be effortlessly overcome. Length with guide head: approx. 95 mm, male thread for the screwing on of various attachments: M 5.

Includes screwed on pulling eye (CIMCO article no.: 14 2138)

Head ø			
10 mm	weight 13 g	1	14 2136



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

NEW

NEW

NEW

Flexible guide head pulling eye

brass; with M 5 female thread, for flexible guide head
Head ø

7 mm	weight 3 g	1	14 2137
10 mm	weight 7 g	1	14 2138
13 mm	weight 13 g	1	14 2139

Flexible guide head pulling eye set

brass; with M 5 female thread, for flexible guide head with 1 x 7, 10, 13 mm ø guide head each

		1	14 2141
--	--	---	---------

Guide head

brass; with M 5 female thread, suitable for all lengths as well as for all KABELMAX devices

Head ø			
7 mm		1	14 2130
10 mm		1	14 2132
13 mm		1	14 2134

Guide head set

with 1 x 7, 10, 13 mm ø guide head each

		1	14 2140
--	--	---	---------

End sleeve

brass, with M 5 male thread, suitable for all lengths

		1	14 2142
--	--	---	---------

Cable lug

brass, with M 5 female thread, suitable for all lengths as well as for all KABELMAX devices

		1	14 2144
--	--	---	---------

Connecting sleeve

brass, suitable for all lengths

		1	14 2146
--	--	---	---------

Cable pulling sock

without loop, with non-rotational coupling, M 5 female thread

for 6 - 9 mm ø cables		1	14 2152
-----------------------	--	---	---------

Service set

accessory and replacement part assortment for all KatiBlitz products, consisting of

5 end sleeves			14 2142
5 cable lugs			14 2144
3 connecting sleeves			14 2146
1 glass fibre special adhesive			14 2192
14-piece		1	14 2150

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 end sleeves,

11 mm ø pulling eye with 6 mm ø cable lug

ECONOMY design	40 m	1	14 1796
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 bar

4.5 mm ø glass fibre profile, M 5 end sleeves attached on both sides,

11 mm ø pulling eye complete with 6 mm ø cable lug

	40 m	1	14 1808
	60 m	1	14 1812
	80 m	1	14 1816



End sleeve

brass, with M 5 male thread

		1	14 1842
--	--	---	---------

Pulling eye

brass, 11 mm ø with M 5 female thread and 6 mm ø cable lug

		1	14 1844
--	--	---	---------

Connecting sleeve

brass

		1	14 1846
--	--	---	---------

Service set for KABELMAX

consisting of 5 end sleeves, 3 connecting sleeves, 1 guide head with lug and 1 bottle of special adhesive. Weight approx. 45 g

		1	14 2163
--	--	---	---------

Cable pulling socks manufactured from galvanised steel wire

for domestic installation, complete with cable lug weaved into the loop, M 5 female thread, suitable for all KatiBlitz- 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 KatiBlitz and KABELMAX

thanks to a connection to a standard battery-powered drill present on the construction site, the drive for the KatiBlitz and KABELMAX cable winding devices enables the comfortable motor insertion of the glass fibre rods into empty conduits and underground ducts. 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 KatiBlitz	1	14 2350
Drive for KABELMAX	1	14 2352

KABELJET – The variable cable pulling system

galvanised, collapsible steel tube frame complete with 7.2 mm ø glass fibre bar, 2 M 12 end sleeves, 25 mm ø pulling eye, shackle with bolts, connecting and clamping sleeves, 1 special adhesive

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

KABELJET replacement bar

7.2 mm ø glass fibre bar, 2 M 12 end sleeves, 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

End sleeve

brass, with M 12 male thread

		1	14 2230
--	--	---	---------

Connecting sleeve

brass, for 7.2 mm ø glass fibre bar

		1	14 2231
--	--	---	---------



The 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, 2 M 12 end sleeves, 25 mm ø pulling eye, shackle, connecting and clamping sleeves, 1 special adhesive

Rod thickness ø	Winch-ø	Length m	PU	Article no.
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
		300	1	14 2252
		300	1	14 2253

Rod lengths up to 500 m and rods with detection function on request.



Pipe eel replacement bar

2 M 12 end sleeves, 25 mm ø pulling eye, shackle

Rod thickness ø	Length m	PU	Article no.
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



End sleeves

brass, M 12 male thread

for 9 mm ø bar	1	14 2285
for 11 mm ø bar	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 the quick and simple determination of length 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
--------------------------	---	---------



Accessories for Cablejet and pipe eel

Pulling eye

Aluminium, 25 mm ø, length 60 mm, M 12 female thread

1	14 2280
---	---------



Guide head

Aluminium, 40 mm ø, length 80 mm, M 12 female thread

1	14 2281
---	---------



Shackle

shape according to DIN 82101, bolt diameter 10 mm, galvanised, maximum capacity 4 kN

1	14 2292
---	---------



Connecting pin

for the coupling together of multiple glass fibre bars, galvanised steel, 2 M 12 connecting threads

1	14 2293
---	---------



Service sets for KABELJET and pipe eel

each consisting of 2 end sleeves, 1 connecting sleeve and 20 g bottle of special adhesive. Weight approx. 150 g

for Cablejet with a	7.2 mm bar diameter	1	14 2160
for pipe eel with a	9 mm bar diameter	1	14 2161
for pipe eel with a	11 mm bar 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 pulling socks 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 pulling socks special designs

special cable pulling socks for particular applications such as those listed below can be delivered at short notice:

- Larger dimensions
- Cable pulling socks with lateral loop
- Separated cable pulling socks
- Multiple draw grips, e.g. for the simultaneous pulling of triple conductor power cables into a shared protective pipe
- Kevlar-reinforced plastic pulling socks (non-conducting, anti-magnetic)
- Multi-level, highly-flexible cable pulling socks for optical fibre lines
- Pulling socks for overhead line construction
- Cable pulling socks manufactured from stainless steel strands

Please request the desired cable pulling socks.



Rope and cable connection socks

for the quick creation of 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 assortment 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 enquire.

Shaft cover lifter

manufactured from galvanised steel, weight 0.6 kg

320 mm x 155 mm	1	14 2300
-----------------	---	---------



Special KATIGRIP handle

for the quick and simple pulling of all pulling wires measuring between 3 and 11 mm in ø (flat steel, helical wire, plastic and glass fibre wires)

	1	14 2190
--	---	---------



Glass fibre fix adhesive

for KatiBlitz and KABELMAX

3 g		1	14 2192
-----	--	---	---------

Glass fibre special adhesive

for KABELJET and pipe eel, viscous

20 g		1	14 2193
------	--	---	---------

GLIT[®] cable lubricant

improved formula with significantly improved lubricating properties. Glit[®] eliminates up to 90% of the friction that is generated during the introduction of power cables, telephone cables, coaxial cables and glass fibre cables. For the insertion of all types of pulling rods. Simply apply onto 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.

400 ml		12	15 1004
--------	--	----	---------



- 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

SHEARS/CUTTERS



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 thanks to ratchet mechanism, ensures one-handed use with the minimum exercise of strength.

Handle lock

Handles are kept in closed condition.



Safety bolt

Jumps to end position automatically (spring powered) when the positive release is pressed. Release by pulling out manually.

Positive release

If the positive release is pressed, the safety bolt automatically jumps to the end position. In order to unlock the cutting edge, the moveable, opened handle must be held against the stop.

Cable shear

for copper and aluminium cables,
 excellent cutting performance, made of case hardened 5 mm flat tool steel, precision-ground cutting edges,
 finest gunmetal finish, 2-component handle sleeves with special blade for fine wire cables up to 18 mm in diameter

for cable ø	solid mm ²	flexible mm ²			
18 mm	16	50	180	1	12 0116



One-hand cable shear

for copper and aluminium cables,
 excellent cutting performance, smooth, non-deforming cut, die-forged, precision ground, adjustable screwed joint,
 2-component plastic handle sleeves

for cable ø	solid mm ²	flexible mm ²			
16 mm	16	50	160	6	12 0104



1000 V One-hand cable shear

for copper and aluminium cables,
 excellent cutting performance, smooth, non-deforming cut, with double-dip coated insulation

for cable ø	solid mm ²	flexible mm ²			
16 mm	16	50	160	6	12 0206



One-hand cable shear

for copper and aluminium cables,
 excellent cutting performance, smooth, non-deforming cut, die-forged, precision ground, adjustable screwed joint,
 2-component plastic handle sleeves

for cable ø	solid mm ²	flexible mm ²			
25 mm	25	70	200	6	12 0100



1000 V One-hand cable shear

for copper and aluminium cables,
 excellent cutting performance, smooth, non-deforming cut, with double-dip coated special insulation

for cable ø	solid mm ²	flexible mm ²			
25 mm	25	70	200	6	12 0202



Cable shear

universal cable shear for copper, aluminium and coaxial cables.
 For solid cables up to 10 mm in diameter or 50 mm² and multi-core cables up to 12 mm in diameter or 70 mm².
 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 handle sleeves.
 Weight 300 g.

			200	1	12 0138
--	--	--	-----	---	---------



Cable shear

universal cable shear for copper and aluminium cables.
 For multi-core, solid cables up to 16 mm². 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
--	--	--	-----	---	---------



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 ²			230	1	12 0330
20 mm ø or 95 mm ²			240	1	12 0340



Cable shear

universal cable shear 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 ²			160	1	12 0332
-------------------------------	--	--	-----	---	---------



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 ø	180	1	12 0334
16 mm ø	220	1	12 0336



Cable shear

universal cable shear 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.



20 mm ø or 95 mm ²	250	1	12 0338
-------------------------------	-----	---	---------



Cable shear

with lever transmission and exchangeable blades, PVC-covered steel tube shanks
for cable ø cross-sections mm²

26 mm	120	600	1	12 0150
-------	-----	-----	---	---------



Cable shears

with exchangeable blades
for cable ø cross-section mm²

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 due to optimum leverage 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 ø	solid mm ²	multiple wires mm ²			
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 due to optimum leverage 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 and multiple conductors

for cable ø	solid mm ²	multiple wire mm ²			
32 mm	1 x 150	4 x 35	250	1	12 0182



Cable cutters

- With ratchet action.
- Two-handed operation thanks to optimum leverage 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 ø					
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 conductors. Clean cutting thanks to sharp, specially hardened blades, non-tiring, one-handed use possible despite compact shape, 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, easy to exchange (replacement swivelling blade CIMCO article no. 12 9168), 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. ø	45 mm
	Multi-wire	300 mm ² / 600 MCM
	Sector-shaped conductor	3 x 70 SM
Al (aluminium)	Max. ø	45 mm
	Multi-wire	400 mm ² / 800 MCM
	Sector-shaped conductor	4 x 70 SE

	1	12 0168
Replacement swivel blade	1	12 9168



Ratchet cable cutter for steel cables

- With ratchet action
- Two-handed operation thanks to optimum leverage and step-by-step cutting
- Suitable for cutting:
 - Flexible steel cables up to 18 mm diameter
 - Stainless and high density steel cables up to 14 mm diameter

for cable ø

18 mm	430 mm	1	12 0140
-------	--------	---	---------



Hand-hydraulic cutting tools

Hydraulic hand cable cutter up to 45 mm diameter

suitable for cutting aluminium and copper cables, and also aluminium-steel cables up to 45 mm diameter.

Features:

Lightweight, compact design, cutting head with snap closure and blade guide, can be rotated 270°
Quick advance thanks to double piston hydraulics, integral pressure limit

Delivery:

Basic unit in plastic case

Cutting area	Cutting force	Operating pressure		
max. 45 mm ø	60 kN	700 bar (70MPa)	1	10 5506



Hydraulic hand cable cutter up to 50 mm diameter

suitable for cutting aluminium and copper cables up to a diameter of 50 mm.

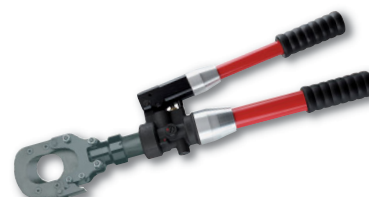
Features:

Lightweight, compact design, cutting head with snap closure and blade guide, can be rotated 270°
Quick advance thanks to double piston hydraulics, integral pressure limit

Delivery:

Basic unit in plastic case

Cutting area	Cutting force	Operating pressure		
max. 50 mm ø	60 kN	700 bar (70MPa)	1	10 5508



Hydraulic hand cable cutter up to 85 mm diameter

suitable for cutting aluminium and copper cables up to a diameter of 85 mm.

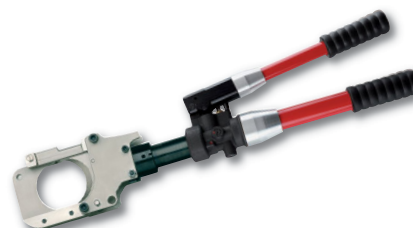
Features:

Lightweight, compact design, cutting head with snap closure and blade guide, can be rotated 270°
Quick advance thanks to double piston hydraulics, integral pressure limit

Delivery:

Basic unit in plastic case

Cutting area	Cutting force	Operating pressure		
max. 85 mm ø	70 kN	700 bar (70MPa)	1	10 5510



Battery-powered cutting tools

General product features of CIMCO battery-operated hydraulic tools:

- Quick advance thanks to double piston hydraulics (advantage: reduced cutting time due to rapid bridging of no-load stroke)
- Automatic pressure limit
- Quick stop (advantage: no running-on of the hydraulics - which means no accidental damage)
- Motor switch-off and automatic return after completed cutting (advantage: clear indication of end of cutting process)
- Electronic control and monitoring of the cutting 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 current 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 (Windows 2000, XP, Vista, Windows 7)!

Hydraulic battery-powered 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 including case 14,500 g, weight without case 6,100 g

Cutting area	Cutting force	Operating pressure		
max. 45 mm ø	60 kN	700 bar (70MPa)	1	10 5706



Hydraulic battery-powered 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 including case 14,050 g, weight without case 5,250 g

Cutting area	Cutting force	Operating pressure		
max. 50 mm ø	60 kN	700 bar (70MPa)	1	10 5708



Hydraulic battery-powered 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 including case 15,750 g, weight without case 7,650 g

Cutting area	Cutting force	Operating pressure		
max. 85 mm ø	70 kN	700 bar (70MPa)	1	10 5710



Cable shear

3 mm stainless steel blades, impact-resistant plastic handles, hardness HRC scale 50 to 54, self-locking nut and washer

In VA steel, safety lock, self-opening (spring operated), suitable for left and right-handed use.

For cutting cables and conductors up to 10 mm in diameter, insulation, wood, rope and other materials.

165	1	12 0110
-----	---	---------



Universal shears

shears in stainless steel, impact-proof handles, hardness scale HRC 56 to 58, one cutting edge finely serrated,

self-locking nut and washer in VA steel, safety lock, self-opening (spring operated), suitable for left and right-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 scissor

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 ties and other materials.

	140	1	12 0130
--	-----	---	---------



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 scissor

bright nickel plated, with serrated cutting edge, for the thinnest wires

	115	12	12 0230
--	-----	----	---------

Universal scissor (paper, wallpaper and household scissor)

stainless steel blades, modern 2-component technology, ergonomically shaped handles with soft rubber inset

	220	1	12 0128
--	-----	---	---------



Cable scissors for fibre optic cables

especially for kevlar and aramid fibres

with ceramic cutting edges	145	1	12 0250
----------------------------	-----	---	---------

Blades in high-alloy, stainless steel, hardness scale HRC 60 to 62, cutting edge hardness scale HK 1200, one cutting edge micro-serrated, adjustable screw hinge, ergonomic plastic handles, suitable for left and right-hand use, cutting length 42 mm.

	160	1	12 0252
--	-----	---	---------



Multi-purpose shear for plastics

Practical set, consisting of quality shear and 5 exchangeable cutting insets, in impact-proof, easy to handle plastic box, essential for almost all craft work in electrical and sanitary installation.

Contains: Multi-purpose shear 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), resharpenable, 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 shear) 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 (5/8")- and one 19 mm (3/4") 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.

	1	12	0210
--	---	----	------

Replacement parts:

Flat-straight	1	12	0211
Mitre inset	1	12	0212
Round profile 16/19 mm diameter	1	12	0213
Round profile 25 mm diameter	1	12	0214
Profile inset 90°	1	12	0215
Replacement blade	1	12	0216



Multi-purpose shear for plastic pipes and hoses

Shear as no. 12 0210, with pre-mounted cutting inset no. 12 0213, for cutting round profiles with a diameter of 16 mm (5/8") and 19 mm (3/4"), in particular hard and flexible plastic pipes (corrugated pipes).

	1	12	0290
--	---	----	------



Plastic shear with adjustable stop

Shear as in the range (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

Fully automatic wire stripper

Ergonomic, fully automatic wire stripper for solid and flexible conductors and stranded wires of 0.2 – 6.0 mm² (AWG 24 – 10)

Diagonal side cutter

Well-positioned, external side cutter for conductors up to 2.5 mm²

Sensor system

Special sensor system prevents damage to the conductor

Length stop

Adjustable length stop from 6.0 – 15.0 mm for consistent volume stripping

Wire stripper

For quick and precise stripping, even in difficult to reach places

Tool body

Tool body made of glass fibre reinforced polyamide with a slotted hole in the handle for attachment

Suitable for insulated PVC cables and other materials

TüV / GS tested



Universal cable sheath stripper

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, in plastic case, interchangeable knife

	1	12 0002
Replacement blade	1	12 0003

Cable sheath stripper KABIFIX

for longitudinal and round cuts. Suitable for slitting and stripping cables from 6 to 28 \varnothing , also for cutting PVC tubes, interchangeable knife

	1	12 0030
Replacement blade	1	12 0032

Cable sheath stripper KAIMAN

specially designed for moisture-proof cable to $7 \times 1.5 \text{ mm}^2$ or $5 \times 2.5 \text{ mm}^2$, 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.

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.

Working range/sheath stripping 6 – 13 mm \varnothing	1	10 0765
Replacement blade	1	10 0766

Cable sheath stripper ROTAX 29

Professional cable sheath stripper for round cut, longitudinal cut and spiral cut in cable of 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 knife.

4.5 – 29 mm \varnothing	140	1	12 0036
Replacement blade		1	12 0038

Cable sheath stripper MULTISTRIPPER

Newly developed tool for processing all round cables of 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 mm²

Cutting: solid conductors to 4 mm², flexible conductors to 6 mm²

	1	12 0021
--	---	---------

Super sheath stripper

Both the tips of the interior cable stripping knives and the cutting edges of the attached clamping blades are coated with titanium nitrite. At approx 500 °C, the cutting blade is vapour coated with titanium nitrite 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 knives can be used with significantly higher durability and cutting performance. With round and longitudinal cutter, insulation stripping mechanism and foldaway additional knife. Sheath stripping: cable of 8 - 13 mm \varnothing , e.g.: $7 \times 1.5 \text{ mm}^2$ or $5 \times 2.5 \text{ mm}^2$

Insulation stripping: 0.2 – 0.3 – 0.8 mm \varnothing , 1.5 – 2.5 – 4 mm²

	1	12 0025
--	---	---------

Universal cable sheath stripper

for all common cables of 8 - 13 mm \varnothing .

Especially suitable for work in difficult to reach places

	1	12 0028
--	---	---------

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 mm² - 1.5 mm² - 2.5 mm²

	1	12 0029
--	---	---------



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

Wire stripper PC-STRIP

Special sheath and insulation stripping tool for data and control lines, communication lines, system cables, etc.

Sheath stripping: cable of 5.5 - 15 mm \varnothing

Insulation stripping: conductors of 0.2 - 4.0 mm² or AWG 26 - 11

TiN

1 12 0034



Wire stripper PC-CAT

Special sheath and insulation 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 of 4.5 to 10 mm \varnothing and

0.2, 0.3 and 0.8 mm²

1 12 0017

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 since 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.

1 12 0015



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 width Length stop

1.5 mm² 8 mm 1 12 0022

2.5 mm² up to 6 mm² 10 mm 1 12 0023

10 mm² up to 16 mm² 12 mm 1 12 0024



Sheath and insulation stripping tool for rubberised AS-interface cable

for quickly and precisely removing sheaths and insulation from two-conductor actuator sensor interface (AS-i) cable with rubber 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 (1.5mm²).

125 1 12 0019



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. Glass fibre reinforced tool body, interchangeable knife, specially ground and hardened, weight only 120 g

160 1 10 0748

Replacement blade 1 pair 10 0749



Cable sheath stripper COAXI

for all common cables of 4.8 - 7.5 mm \varnothing ,

especially suited for coaxial cable (antenna cable)

TiN

1 12 0027



with length scaling

round 2-component design 1 12 1027

Cable sheath stripper CUT AND STRIP

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 mm², for all common cables 4.8-7.5 mm \varnothing

1 12 0026



Coaxial cable insulation stripping tool ECONOMY

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



Wire stripper QUADRO

The stripper with 4 functions

for rationally and precisely processing strips of insulated cable end sleeves of 0.5 - 2.5 mm²

Functions:

1. Cutting

for wires and stranded wires to 2.5 mm²

2. Insulation stripping

working range 0.5 - 2.5 mm²

3. Twisting

wires do not fan out and the conductor can thus be lead securely into the cable end sleeve.

4. Crimping

faultless crimping of 0.5 - 2.5 mm² due to proper trapezoidal crimping shape.

QUADRO complete case	1	10 0728
----------------------	---	---------

Stripper QUADRO with magazine	180	1	10 0725
-------------------------------	-----	---	---------

For sleeve strips, see page 248 in chapter 22.

Multi-function tool DUOCRIMP

for cutting and stripping insulation from conductors and stranded wires, as well as for crimping non-insulated and insulated cable end sleeves.

Working range of side cutter	flexible	to 6 mm ²
	solid conductor	to 4 mm ²

Working range of wire stripper	to 6 mm ²
--------------------------------	----------------------

Crimping range	0.5-2.5 mm ²
	4 -6 mm ²

160	1	10 0720
-----	---	---------

Sheath and insulation stripping tool DUOSTRIPPER

sheath and insulation stripping with one tool.

Sheath stripping: for all common round cables of 4 - 28 mm ø.

Insulation stripping: automatic adjustment to conductor widths of 0.5 - 6 mm².

1	12 0048
---	---------

Wire stripper OUTLET SPECIAL 55

suitable for round cables (e.g., NYM 3 x 1.5 mm², 3 x 2.5 mm², 5 x 1.5 mm²) or shielded lines. Especially useful in cramped working spaces. In 3 steps a 55 mm wide cable opening is created at any point in the cable, cutting depth 1.2 mm. Compatible with OBO cable laying system.



Longitudinal cut



Round cut left and right of the longitudinal cut via 1/4 rotation of the stripper

175	1	10 0752
-----	---	---------

POWER STRIP

wire stripper that automatically adjusts itself to the conductor width, suitable for several common cables.

Also suitable for problematic insulation, such as silicon insulation or outer sheaths made of PVC or flexible rubber cable (e.g. 3 x 0.75 mm²). Optical length measurement 8 mm to 24 mm or 5/16" to 1" for continuously consistent stripping lengths for volume work with cable end sleeves and cable shoes. 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 ø. Ergonomic pistol grip for fatigue-free work, weight only 200 g. Designed for round cable of 0.5 to 16 mm² (AWG 20 to AWG 6)

170	1	10 0770
-----	---	---------

Replacement blade	1 pair	10 0773
-------------------	--------	---------

Designed for 2 and 3-conductor flat cable of 0.75 to 2.5 mm² and maximum width of 12 mm

170	1	10 0771
-----	---	---------

Replacement blade	1 pair	10 0772
-------------------	--------	---------





Automatic wire stripper

automatic wire stripper for all common solar cables of 1.5 mm² to 6 mm² 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	10 0774
--	---	---------

Automatic wire stripper MAXIM 6

for finely wired and solid conductors with PVC insulation. For round, oval and flat cables of 0.2 - 6 mm². 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 stripping. Integrated high-performance wire cutter. Especially ergonomic, energy-saving design. Weight 198 g.



	1	10 0736
Replacement blade	1 pair	10 0737

Wire stripper EASYSTRIP

automatic stripping tool for Al and Cu wires of 0.5 - 6 mm² (AWG 20 to AWG 10), integrated side cutter for Cu wires to 2.8 mm ø, especially light and ergonomic. Weight 160 g.



	180	1	10 0755
--	-----	---	---------

Automatic wire stripper

for flexible stranded wires and solid conductors of 0.08 - 6 mm². Automatic adjustment. Adjustable stripping length from 4 - 18 mm. With wire cutter.



	1	10 0730
Replacement blade	1 pair	10 0731

Automatic wire stripper MINIM

for solid and flexible conductors and stranded wires with PVC insulation, working range 0.08 - 2.5 mm², automatic adjustment to the conductor width, interchangeable knife, adjustable length stop for stripping lengths of 3 to 15 mm, integrated wire cutter (solid to 1.5 mm², flexible to 2.5 mm²), especially ergonomic "pistol" design, weight 260 g



	1	10 0738
Replacement blade	1 pair	10 0739

Automatic wire stripper

for flexible stranded wires and solid conductors of 0.08 to 1 mm². Automatic adjustment. Adjustable stripping length from 2.5 - 7 mm. With wire cutter.



	135	1	10 0732
Replacement blade	1 pair	10 0733	

Wire stripper HIGHSTRIP

for quick and absolutely precise stripping of even problematic insulation, PVC, rubber, TPE, silicon, THHN, THWN, PMMA, light wave conductor with PE sheath, e.g., 0.5 - 0.75 - 1.5 - 2.5 - 4 mm². Damage to the conductor or stranded wires is eliminated, weight 100 g.



	160	1	10 0740
--	-----	---	---------

Automatic wire stripper

Wire stripper that automatically adjusts itself to the conductor width, for solid and flexible conductors and stranded wires of 0.2 mm² to 6 mm² (AWG 24 to AWG 10), suitable for standard insulation (e.g., of PVC), integrated wire cutter for copper and aluminium wires to 2.5 mm², with adjustable length stop of 6 to 18 mm for volume work, especially ergonomic due to handy pistol shape, handle with soft plastic insert and light weight. Interchangeable knife. Weight 150 g.



	1	10 0775
--	---	---------

Wire stripper SUPER 4 PLUS

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 to 6.0 mm² by means of special sensor system. Stable, easily accessible side cutter for wires to 2.5 mm².

160 1 10 0780



Automatic wire stripper SAFETY STRIP

for flexible stranded wires and solid conductors of 0.2 to 6 mm², 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

1 10 0762



Wire stripper MAXISTRIP

for quick and problem-free cutting of flexible stranded wire and solid conductors of 6 - 16 mm². Automatic adjustment to conductor width, damage to conductor is eliminated. With optical length stop 15 - 18 - 20 mm. Weight 120 g.

180 1 10 0744



Automatic wire stripper SENSOR SPEZIAL

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 mm² unshielded to 8 x 0.25 mm² shielded), round cable ø: 4.40 to 7.00 mm.

165 1 10 0746



NEW

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 termination in connection boxes and patch panels, professional design with pressure sensor for optimum pressing force, 2 pull-out hooks

ECONOMY model 1 11 8017

KRONE model, pressure sensor and trimming function can be switched off 1 11 8018



Universal wire stripper DATA STRIP for data cables

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 ø

110 1 12 0092



Varnish stripper

for wires of ø mm

0.5 (AWG 24) 125 6 10 0710

0.6 (AWG 22) 125 6 10 0712



Wire stripper LWL

precision wire stripper with 3 stripping stations for primary coating, secondary coating and outer sheath for light wave conductor cables, pre-set cutting depth, is however continuously adjustable, locking mechanism, ergonomic 2-component handle

1 12 1104



Precision wire stripper PWS-PLUS

ideal for applications in electronics, computer technology, telecommunications, data communications, model building, etc. Adjustable stripping range from 0.25 to 0.80 mm ø, adjustable length stop to 15 mm and cutting mechanism for wires to 0.8 mm ø. Especially suitable for stripping conductors with outer insulation of PVC, Teflon, KYNAR, TEFZEL and MYLAR.

Working range				
red push button	0.25 – 0.80 mm ø	30 – 20 AWG	1	12 0033
blue push button	0.30 – 1.00 mm ø	28 – 18 AWG	1	12 0031



Precision wire stripper MICRO-STRIPPER

precision insulation stripping tool for 6 different wire widths each. With adjustable length stop. Suitable for wires with insulation of: MYLAR® KYNAR® TEFZEL® TEFLON® PVC and others

AWG	36	34	32	30	28	26		
mm ø	0.12	0.16	0.20	0.25	0.30	0.40		
							1	10 0694
AWG	30	28	26	24	22	20		
mm ø	0.25	0.30	0.40	0.50	0.60	0.80		
							1	10 0695
AWG	28	26	24	22	20	18		
mm ø	0.30	0.40	0.50	0.60	0.80	1.00		
							1	10 0696



Micro-Stripper LWL

high-precision insulation stripping tool for LWL primary coating, for 0.18 mm (180 µm) ø

	1	10 0698
--	---	---------

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 shell 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 nitrite 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 knives can be used with significantly higher durability and cutting performance.



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
with straight blade		
8 - 28 mm ø	1	12 0011

TiN



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

TiN



Cable stripping knife

Standard design with enlarged adjusting screw with hooked blade

8 - 28 mm ø	1	12 1010
with straight blade		
8 - 28 mm ø	1	12 1011

TiN



Cable stripping knife without blade

fully insulated, all individual parts except the interior knife made of plastic, for stripping sheaths from all conventional cables, with enlarged adjusting screw

8 - 28 mm ø	1	12 0008
-------------	---	---------

TiN



Replacement blades

for all automatic cable stripping knives

	1	12 0020
--	---	---------

TiN

Automatic cable stripping knife SAFETY STRIPPER

cable stripping knife with self-rotating blade for round and longitudinal cuts, for cable from 4 to 28 mm (5/32" to 1 1/8") ø. An adjustment screw enables the cutting depth to be individually adjusted. Handle shells of wear-free, glass fibre reinforced polyamide. Hooked blade foldaway and lockable.

4 - 28 mm ø	1	12 0006
-------------	---	---------

Automatic cable stripping knife SAFETY STRIPPER PLUS

cable stripping knife with self-rotating blade for round and longitudinal cuts, for cable from 4 to 28 mm (5/32" to 1 1/8") ø. An adjustment screw enables the cutting depth to be individually adjusted. Handle shells of wear resistant, glass fibre reinforced polyamide. Insulation stripping (0.5 - 0.8 - 1.5 - 2.5 - 4.0 - 6.0 mm²) via flap mechanism on handle end.

4 - 28 mm	1	12 0004
-----------	---	---------

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
-----------------------	---	---------

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 mm² (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 shears

one-sided micro-serrated cutting edge, glass fibre 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-piece	180 mm	1	12 0218
---------	--------	---	---------

1000 V Safety cable stripping knife

cable stripping knife especially 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
--------------------	---	---------

1000 V Cable stripping knife

with straight blade and insulated blade back

Blade length 50 mm	1	12 0043
--------------------	---	---------

1000 V Stripping knife

with hooked cutting edge

Blade length 35 mm	1	12 0044
--------------------	---	---------

1000 V Cable paper knife

with especially sharp blade

Blade length 50 mm	1	12 0045
--------------------	---	---------

Design	Size mm	PU	Article no.
---------------	----------------	-----------	--------------------



Cable stripping knife

handle of a single piece, impact-resistant plastic. Blade with round and triangular scraper

1-piece		1	12 0050
---------	--	---	---------

with wooden handle, blade with scraper

1-piece		12	12 0052
---------	--	----	---------

with wooden handle, blade and reamer

2-piece		12	12 0054
---------	--	----	---------

with wooden handle, blade, reamer and screwdriver

3-piece		12	12 0056
---------	--	----	---------

with plastic handle, 2 blades, reamer and screwdriver

4-piece		12	12 0058
---------	--	----	---------

Cable and lead knife

with wooden handle

1-piece		12	12 0060
---------	--	----	---------

Safety knife

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:

	175	1	12 0062
Replacement blades for 12 0062		10	12 0063

Universal knife

made of die cast zinc, stainless steel blade guide, knife feeder with locking system with rubber insert

18 mm	170	1	12 0078
Replacement knives for 12 0078		10	12 0079

light design of plastic, with adjustable foldaway knife (breakaway blade, 9 mm)

ECONOMY	135	12	12 0080
2-component, professional design	135	1	12 0081
Replacement blades for 12 0080 / 12 0081		10	12 0082



SAWS, TUBE CUTTERS

Design

With the handy pistol shape, already laid tubes 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 tubes, hard and soft PVC tubes, etc. The blade symmetry provides precise right angle cuts without burrs or deformation.



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.

Vario 150	weight 165 g	260	1	12 0515
Vario 200	weight 177 g	310	1	12 0520

Pocket saws PUK

span width 150 mm, with metal cutting saw blade

with adjustable polished wooden handle			3	12 0500
with firm, lacquered wooden handle			6	12 0502

Pocket saw PROFI

with universal blade

Span width 150 mm			10	12 0490
-------------------	--	--	----	---------

1000 V Saw bow

fully insulated

Span width 150 mm		250	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.

Tooth pitch 1.8 mm (14 teeth per inch)	150		12	12 0504
as above but for Vario 200	200		12	12 0505

Universal saw blade for steel, aluminium, nonferrous metals, fibre glass, plastic conduit and tubing, mineral, rigips and cement asbestos boards

Tooth pitch 1.0 mm (25 teeth per inch)	150		12	12 0506
as above but for Vario 200	200		12	12 0507

Metal cutting blade for all metals, non-ferrous metals (copper), stainless steel, special alloys, Plexiglas® and plastics

Tooth pitch 1.2 mm (32 teeth per inch)	150		12	12 0512
as above but for Vario 200	200		12	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))

			1	12 0508
--	--	--	---	---------

Metal hacksaw frame

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. The blade can be tightened up to 800 N via the turn-lock fastener in the handle. Delivery incl. a bi-metal cutting saw blade.

Span width 300 mm	weight 650 g		1	12 0602
-------------------	--------------	--	---	---------

Metal hacksaw frame

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
-------------------	--	-----	---	---------

Metal hacksaw frame

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
-------------------	--	--	---	---------

1000 V Hacksaw frame

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
-------------------	--------------	-----	---	---------



Metal cutting saw blades

according to DIN 6494 Form A, single-sided

Material	Dimensions mm	Teeth per inch	PU	Article no.
HSS-Co	300 x 13 x 0.65	24	100	12 0608

Form B, double sided

Material	Dimensions mm	Teeth per inch	PU	Article no.
WS	300 x 25 x 0.8	24	50	12 0614

Tube cutter SUPER

new, reinforced design

Working range 6 - 35 mm \varnothing	1	12 0410
Replacement blade	1	12 0412

Tube cutter MAXI

with adjustment lever for changing the cutting opening

Working range 6 - 42 mm \varnothing	1	12 0420
Replacement blade	1	12 0422

Plastic tube shear MINI

made of die cast magnesium, for cutting plastic and composite tubes 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 INOX steel with long service life (made in Solingen).

Extremely light and compact, only 270 g.

35 mm \varnothing / 1 3/8"	220	1	12 0416
Replacement blade		1	12 0417

Plastic tube cutter PROFI

made of die cast magnesium, for cutting plastic and composite tubes 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 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 tube cutter

with 2 interchangeable knives for insulation and hard PVC tubes and for soft plastic and rubber hoses

Tube outer \varnothing max. 29 mm	200	1	12 0450
Bulk knives			
for hard PVC		1	12 0452
for soft tubes		1	12 0453

Corrugated tube 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 tube, with two interchangeable cutting inserts, weight only 45 g

Working range to 42 mm \varnothing	110	1	12 0430
Replacement cutting inserts		1 pair	12 0432



Ratcheting tube cutter

innovative tube cutter with a worldwide patent. Ratchet mechanism allows you to cut a tube without having to completely rotate the tool. Especially suitable for work in restricted working spaces (e.g., tubes installed in corners or on walls). One-hand operation. High performance thanks to special cutting wheel and double roller guide (speed, durability). Integrated deburrer for clean edges on the cut tubes. Easily replaceable cutting wheel. One replacement cutting wheel is contained in the scope of delivery. Weight 400 g. Cutting capacity – for tubes of plastic, copper, aluminium, etc. For outer tube diameter of 12 to 35 mm ($1/4''$ to $1\ 3/8''$).

175 x 38 x 68

1

12 0480



Hole and disc cutter

for machine operation, for metal sheets of up to 5 mm thickness, cement asbestos and plastic plates, for installing lights, built-in loudspeakers and other cutouts.

Cut ø mm	Receiver shaft- ø mm	drill ø mm
max. 100	8	4

max. 100

8

4

1

12 0800



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



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

Interchangeable centring drill

On a step drill, the tapping device is the part that is under the most stress. Therefore, CIMCO step drills have exchangeable centring drill. Once the centring drill become worn, it is only these drill that are replaced within in a matter of seconds and not the entire drill bit- which saves a lot of money.

Three flutes

On CIMCO step drills, the cutting load is distributed differently than on single or double flute constructions as it is distributed over 3 blades. This means a higher cutting performance, low pressure and vibration-free working as well as low wear!

Back taper

Each step has a radial and axial back taper, whereby the blade represents the highest point in diameter and in the cutting step – ensuring the utmost in cutting performance and complete smoothness!

Three drive surfaces

The drill bit shaft has three clamping surfaces. This ensures a solid hold in the chuck and prevents slipping in the machine, even when dealing with severe loads.

Special centring point design

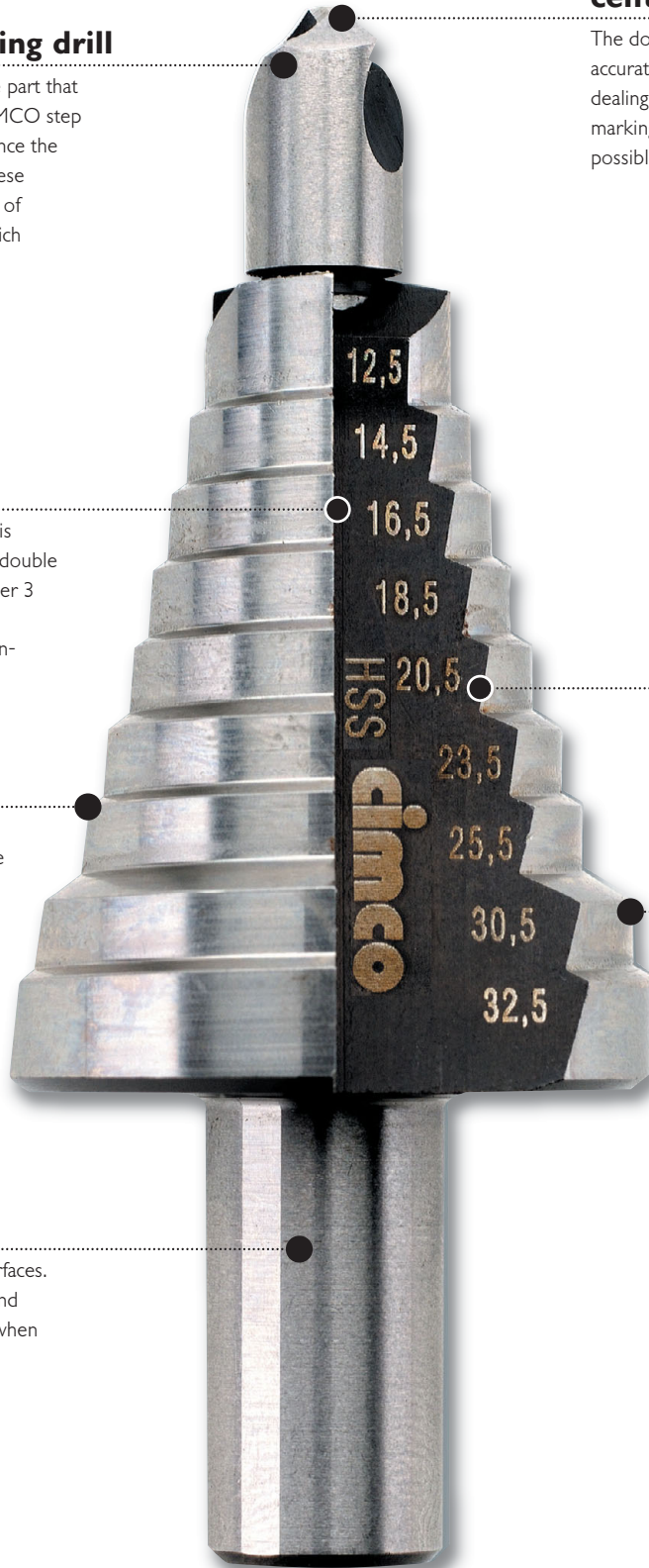
The double-edged drill bit shape guarantees accurate centring and drilling, even when dealing with thin-walled material – no punch-marking or pre-drilling required and it is not possible to slide away.

Laser-inscribed drilling steps

Each hole diameter can be accurately read in the flutes.

Automatic deburring

drilling through the transition and into the next drill bit step in the same work stage prevents sharp edges.



550 W pneumatic rotary drill hammer

- Lightest rotary drill hammer with the best power to weight ratio in the world.
- Low weight and an ergonomic design enable low-fatigue working, especially when performing overhead work.
- Reversing brush system enables maximum torque in both clockwise and anti-clockwise directions (jammed drill bits can be released without any problems whatsoever).
- Excellent drilling progress thanks to sophisticated impact mechanism technology, ideally designed for a diameter range of 6-12 mm (dowel holes).
- Robust magnesium die-cast drive housing for ideal impact performance and long service life.
- Impact stop for normal drilling and screwing.
- Control electronics for sensitive drilling.
- Safety slipping clutch protects the user if the drill bit should become jammed.
- Power cable module measuring 4 m ensures a great freedom of movement.
- 10-year device warranty includes a 2-year full warranty (incl. wear parts).

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
Nominal speed	900 rpm
Idling mode impact rate	5790 rpm
Impact rate at nominal load	4010 rpm
Impact energy	1.8 Joule
Recommended drilling range	
Hammer drilling up to a \varnothing of:	4-12 mm
Hammer drilling in concrete:	18 mm
Drilling in steel up to a \varnothing of	13 mm
Drilling in wood up to a \varnothing of	25 mm
Clamping collar \varnothing	43 mm
Machine weight	1.7 kg

1

11 0002



850 W 2-speed hammer drill

- Ergonomic design with rubberised handle surfaces for low-fatigue and slip-free work.
- Full wave electronic system with speed pre-selection for sensitive drilling and accurate screwing.
- Reversing brush system enables maximum torque in both clockwise and anti-clockwise directions (jammed drill bits and driven-in screws can be released without any problems whatsoever).
- Mechanic 2-speed drive with high torque in 1st gear for screwing and high speed in 2nd gear for drilling.
- Robust aluminium die-cast drive housing for ideal impact performance and long service life.
- Powerful 850 Watt motor for excellent drilling performance.
- Impact stop for normal drilling and screwing.
- Impact-resistant metal quick-action chuck \varnothing 13 mm.
- Safety slipping clutch protects the user if the drill bit should become jammed.
- Suitable for use in drill stands thanks to the 43 mm clamping collar and speed pre-selection complete with locking button.
- Power cable module measuring 4 m ensures a great freedom of movement.
- 10-year device warranty

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
2st gear idling speed	0 ... 3000 rpm
Idling mode impact rate	48000 rpm
Chuck adapter	1/2" x 20 UNF
Drilling capacity in \varnothing :	
Wood	40 mm
Steel	13 mm
Impact drilling in concrete	20 mm
Clamping collar \varnothing	43 mm
Machine weight	2.3 kg

1

11 0004



14.4 V 2-speed cordless screwdriver

- Powerful cordless combination drill in compact and light design.
- QuiXS rapid-action chuck changing system - screw bit in the spindle and drill bit in the chuck - rapid changeover between drilling and screwing possible without having to exchange tools.
- Long service life thanks to intelligent overload protection.
- 2-speed planetary drive with high torque in 1st gear for screwing and high speed in 2nd gear for drilling.
- Robust aluminium die-cast drive housing for a long service life.
- Extremely brief charging time of only 15 minutes (charging time can be viewed on the capacity display).
- Lithium ion battery technology.
- Winner of the iF product design award 2010 – award for ergonomics & functionality.
- 10 year device warranty and 2 year battery warranty.

Battery	14.4 Volt / 1.5 Ah Li-Ion
1st gear idling speed	0...360 rpm
2nd gear idling speed	0...1500 rpm
Corner dimension	30 mm
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
Max. torque (soft)	35 Nm
Charging time	15 min.
Machine weight without chuck	1.3 kg
Machine weight with chuck	1.6 kg
Dimensions without chuck	172 x 58 x 212 mm
Dimensions with chuck	224 x 58 x 212 mm

Included in delivery: 14.4 Volt 2-speed cordless screwdriver, \varnothing 13 mm quick-clamping chuck, second battery pack, CSL 30 LI quick charger with cable storage, drive protective cap. Supplied in a professional plastic case.

1 11 0006



NEW

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

Stone and concrete drill bit

with carbide tipped blades and cylindrical shaft, ideal for use in cordless combination 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
	600	400	5	20 1856
12	150	90	10	20 1634
	400	275	10	20 1762
	600	550	5	20 1858
14	150	90	10	20 1638
	600	500	10	20 1862



Stone and concrete drill bit assortment, 7-piece

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 bit 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 carbide tipped 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 receivers, 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	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
	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 assortment, 7-piece

equipped with drill bits from our 20 8300 ff. range, supplied in a stable plastic cartridge.

Drill bit ø 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 carbide tipped 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 receivers

ø 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
10	210	150	1	20 8624
	110	50	1	20 8628
	160	100	1	20 8630
12	210	150	1	20 8632
	310	250	1	20 8634
	450	400	1	20 8636
14	160	100	1	20 8642
	210	150	1	20 8643
	310	250	1	20 8644
16	450	400	1	20 8646
	600	550	1	20 8648
	160	100	1	20 8654
18	210	150	1	20 8655
	310	250	1	20 8656
	450	400	1	20 8657
20	160	100	1	20 8662
	210	150	1	20 8664
	450	400	1	20 8666
22	600	550	1	20 8668
	210	150	1	20 8672
	450	400	1	20 8673
25	210	150	1	20 8680
	450	400	1	20 8682
	310	250	1	20 8684
25	450	400	1	20 8686
	310	250	1	20 8690

Further sizes on request.



TripleX SDS-Plus hammer drill

triple-winged carbide tipped 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. The TripleX owes its extreme service life and powerful drilling behaviour to an innovative and very wide hard metal design of the drilling head. The embedded hard metal head created by means of a novel production process with a curved shape withstands the highest of forces. Thanks to its three wide helixes in combination with the three hard metal blades, an ideal drilling dust removal is ensured without the drilling dust being blown out. Also remains firm 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 carbide tipped blades, 12 - 15 mm \varnothing = 2 blades, from 16 mm in \varnothing = 4 blades, with SDS-MAX receivers system, suitable for all machines with SDS-MAX receivers.

\varnothing mm	Total length	Spiral length		
12	340	200	1	20 8100
	540	400	1	20 8102
	690	550	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	400	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	370	250	1	20 8144
	570	450	1	20 8146
30	370	250	1	20 8150
	570	450	1	20 8152
32	370	250	1	20 8154
	570	450	1	20 8156
	920	800	1	20 8158
35	370	250	1	20 8160
	570	450	1	20 8162
	670	550	1	20 8164
38	370	250	1	20 8166
	570	450	1	20 8168
40	370	250	1	20 8170
	570	450	1	20 8172
	920	800	1	20 8174



Multi-purpose drill bit

with carbide tipped blades and cylindrical shaft. The ideal universal drill bit for a variety of materials used during construction. A slight impact may be used when drilling in masonry and stone.

\varnothing mm	Total length	Spiral length		
4	85	41	1	20 1880
5	95	44	1	20 1882
6	100	54	1	20 1884
7	110	59	1	20 1886
8	120	63	1	20 1888
10	120	83	1	20 1890
12	150	99	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
-------	-----	---	---------

Spade chisel

for the large-scale universal removal of material.

40 mm	250	1	20 8006
-------	-----	---	---------

Gouge

for the pulling of narrow channels into concrete and masonry.

22 mm	250	1	20 8020
-------	-----	---	---------

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
-------	-----	---	---------

Jointing chisel

for the removal and cleaning of joints and masonry.

25 mm	250	1	20 8014
-------	-----	---	---------

HM jointing chisel

for the removal and cleaning of joints 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
-------	-----	---	---------

Gouge

for the pulling of narrow channels into concrete and masonry.

26 mm	300	1	20 8050
-------	-----	---	---------



HSS step drill for screwed cable glands

special design for centric core holes and through-holes for metric screwed cable glands, with 2 flutes

Drilling range				
M 12 - 32		1		20 1275

Special step drill for screw puncher

HSS step drill for the burr-free drilling of through-holes for screw puncher tension bolts in sizes M 8 (3/8") - M 10 (7/16") - M 12 - M 16 - 3/4" - M 20 in materials up to 4 mm in thickness. Suitable for use in hand and box column drills, total of 9 drill steps, receiver shaft (ø 10 mm) with 3 driver carriers prevents slipping in the chuck.

		1		20 1212
--	--	---	--	---------

Step drill

for mechanical engineering and sheet metal processing, manufactured from HSS, complete with 2 blades, increasing by 1 mm

Drilling range	Max. drilling depth	Receiver		
ø mm	mm	shaft ø 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
------	--	---	--	---------

Sheet taper drill

for the burr-free processing of thin materials, manufactured from HSS

Drilling range					
ø mm	Shaft ø 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 assortment

in sheet steel cassette, with drilling paste

1 unit each of No. 20 1280, No. 20 1282, No. 20 1284		1		20 1300
--	--	---	--	---------

Aerial drill

manufactured from HSS

Drilling range					
ø mm	Shaft ø 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, separating, rasping and filing of wood, chipboard, plastics, aluminum, other non-ferrous metals, steel sheets, plasterboard.

ø mm		Length mm		
6,35 (1/4")		94	1	20 1298

90° countersink bit

manufactured from HSS, 3 blades, with axial and radial back taper, 1/4" shaft, according to DIN 3126

ø 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 assortment

6 piece, in sheet steel cassette

1 unit each of countersink bit 6.3 - 20.5 mm ø	1	20 1989
--	---	---------

Combination 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

Combination thread tap assortment

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 box, 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 bit: roughing tap - middle tap - finish tap

Thread	Increase mm	Shaft-ø mm	Total length mm		
M 1.0	0.25	2.5	32	1	20 2100
M 2.0	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	0.45	2.8	40	1	20 2116
M 3.5	0.60	4.0	45	1	20 2118
M 4.0	0.70	4.5	45	1	20 2120
M 5.0	0.80	6.0	50	1	20 2123
M 6.0	1.00	6.0	50	1	20 2124
M 7.0	1.00	6.0	40	1	20 2125
M 8.0	1.25	6.0	56	1	20 2126
M 9.0	1.25	7.0	63	1	20 2127
M 10.0	1.50	7.0	70	1	20 2128
M 11.0	1.50	8.0	70	1	20 2129
M 12.0	1.75	9.0	75	1	20 2130

HSS thread tap (Direct cut)

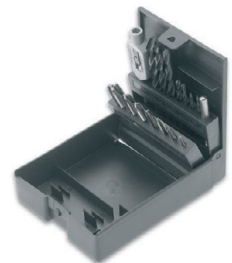
DIN 352/B cutting thread tap with spiral point, for metric standard thread, supplied in a plastic box

1 unit each of thread tap sizes M 3 - 4 - 5 - 6 - 8 - 10 - 12

1 unit each of HSS twist drill (core hole drills) 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
--	---	---------



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



Tap wrench 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



Tap wrench 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 30 - 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 bit (order number 20 1240), approximately 90 % of all screwed cable glands are covered with both of the other drill bits. 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 assortment 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 transport case. Assortment comprises 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 receiver 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 socket wrench (groove and ratchet), but also via spanner and ring wrenches.

6 piece			1	20 1250
---------	--	--	---	---------

Nozzle reamer

12 nozzle reamers and holders, supplied in plastic box

0.61 - 1.9 mm ø			10	20 4815
-----------------	--	--	----	---------

Diamond cutting disk

for dry grinding, suitable for all standard angle grinders (holding fixture 22.2 mm ø)

Sinter-fused diamond stud design, medium hardness (marble, shale)

	115	1	20 7950
	125	1	20 7952

Turbo segment design for dry and wet cutting. For granite, concrete, natural stone, exposed aggregate concrete, hard bricks, roofing tiles (particular problem solver on wall grinders and joint cutters). Tested according to UVV VBG 49 regulation.

	115	1	20 7960
	125	1	20 7962
	150	1	20 7964
	180	1	20 7966
	230	1	20 7968

Fully-covered, sintered-on diamond layer design, smooth steel core with cooling holes (tiles, thin granites, natural stones)

	115	1	20 7970
	125	1	20 7972
	150	1	20 7974
	180	1	20 7976
	230	1	20 7978

Lasered diamond segment and black steel blade design, increased segment thickness, for abrasive materials for wall grinders (sand-lime brick, plaster, masonry, screed, sandstone)

	115	1	20 7980
	125	1	20 7982
	150	1	20 7984



Cased drill bit

safety cased drill bit manufactured from chrome-vanadium 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 receiver thread, from 32 mm ø additional driver holes. For the 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 receiver thread. For receiver shafts (order number 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



- 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

Hole saws manufactured from HSS bi-metal with Vario toothing

the variable tooth distribution (4 - 6 teeth per inch) ensures vibration-free drilling. Hole saws with receiver thread, from 32 mm ø additional driver holes. For the 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 receiver thread. For receiver shafts (order number 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 drive arbor (order number 20 7584), guide drill bit and push-out spring.

68	1	20 7562
68	1	20 7563



Drive arbors

complete with guide drill bit order number 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 ø	1	20 7580
for hole saws 32 - 152 mm ø	1	20 7581
11 mm hexagonal bar, with driver		
for hole saws 32 - 152 mm ø	1	20 7584

11 mm hexagonal bar, with driver and and internal counternut

for hole saws 32 - 152 mm ø	1	20 7586
-----------------------------	---	---------

SDS receiver, without driver

for hole saws 14 - 30 mm ø	1	20 7588
----------------------------	---	---------

SDS receiver, with driver

for hole saws 32 - 152 mm ø	1	20 7589
-----------------------------	---	---------

HSS center drill

for drive arbors order numbers 20 7580, 20 7581, 20 7584, 20 7586, 20 7588 and 20 7589

6.35 mm ø - 70 mm in length	1	20 7590
6.35 mm ø - 115 mm in length	1	20 7592

Push-out spring

suitable from 52 mm ø

	1	20 7596
--	---	---------

Edge countersinker

for HSS bi-metal hole saws with 68 mm ø, with two specially-hardened cutting teeth

	1	20 7598
--	---	---------

HSS bi-metal – hole saw assortments

ELEKTRO-TOP with edge countersinker

Contents: One hole saw each in sizes 35 mm, 68 mm, 75 mm ø
Edge countersinker for 68 mm ø, with two specially-hardened cutting teeth.
Receiver shaft with two driver pins No. 20 7584
HSS guide drill bit, 6.35 mm ø, length 70 mm
Push-out spring (for all saws from 52 mm ø)
Comprehensive drilling instructions, supplied in shock-proof plastic box

	1	20 7400
--	---	---------

ELEKTRO METRIC

with 6 hole saws for the drilling of through-holes for metric screwed cable glands

Receiver shafts with HSS guide drill bit, (order number 20 7580 and 20 7584)

Hole saw ø 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 ø receiver 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 ø

for wood and rigips	1	12 0882
---------------------	---	---------



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 receiver 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 countersinker

with 2 teeth
 for 68 mm ø hard metal hole saws

	1		20 7750
--	---	--	---------



Drive arbors

without guide drill bit, with M 15 receiver thread

cylindrical 13 mm ø receiver, 3 driver carriers	70	1	20 7760
SDS receiver system	70	1	20 7764



Center drill

hard metal-equipped

8 mm ø	100	1	20 7770
--------	-----	---	---------



Hard metal hole saw

68 mm ø, with edge countersinker, receiver shaft and HM guide drill bit

with 13 mm ø receiver shaft (order number 20 7760)	1		20 7740
with SDS receiver shaft (order number 20 7764)	1		20 7744



Hard metal hole saw assortment, 5 piece

in steel sheet case, 3 hole saws, edge countersinkers for 68 mm ø, 13 mm ø receiver shaft,
 1 each of HSS and hard metal guide drill bit

Hole saws ø mm			
35, 68, 74	1		20 7700



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 receiver 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



Drive arbors

for diamond core drill bit, M 16 receiver thread

Size 12 shaft (hexagonal)	1		20 7384
SDS receiver system	1		20 7385



Hard metal center drill

for shaft (order number 20 7384)	9 mm ø x 120 mm	1	20 7386
----------------------------------	-----------------	---	---------



Diamond core drill bit

complete with drive arbors and HM centring drill
with drive arbor (order number 20 7384)

Hexagonal size 12	ø 68	1	20 7378
	ø 82	1	20 7379
with drive arbor (order number 20 7385)			
SDS receiver system	ø 68	1	20 7388
	ø 82	1	20 7389



Engineer's file assortment, 5 piece

with cross cut, cut 2 (medium-fine), length 200 mm, with wooden grip, suitable for metal as well as wood and plastic

1 unit each	□ △ □ △ ○	1	20 6806
-------------	-----------	---	---------

Engineer's files

according to DIN 7261, without grip

Shape A, flat hand □			
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 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 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




- 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

Engineer's 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 assortment

6 files with wooden grip, according to DIN 7283, shape A - B - C - D - E - F, length 100 mm

supplied in a plastic bag  10 20 6750



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



Contact files

6 units in self-service tear-off bag

Length 160 mm 1 set 20 6760



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



Universal deburrer

for all deburring works 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 - machines	5		20 8506
-------------------------------------	---	--	---------

for Black + Decker - Skil - Fein - machines	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 - machines	5		20 8522
-------------------------------------	---	--	---------

for Black + Decker - Skil - Fein - machines	5		20 8523
---	---	--	---------

- 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

NEW

SCREW PUNCHERS, PLATE PUNCHERS

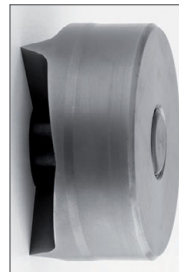
First class

- 100 % Made in Germany
- All tools made of particularly robust special steel for a long working life



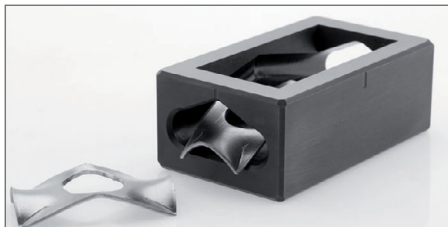
Well planned

- 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



cimco

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 ø mm	Bolt Size mm	Pre-drill ø mm	max. Material thickness mm		
	16	16.2	9.5 x 50.0	11.0	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: Ø 11.0 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		
9		15.2	9.5 x 50.0	11.0	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: Ø 11.0 mm 2. Pre-punch: Ø 20.4 mm

Nominal size Inch	Hole ø mm	Screw Size mm	Pre-drill ø mm	max. Material thickness mm		
1-7 / 32"	30.5	9.5 x 50.0	11.0	2.0	1	13 2336
1-7 / 32"	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: Ø 11.0 mm 2. Pre-punch: Ø 20.4 mm

Screw puncher accessories BASIC

	Size mm		
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	13 2374
	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



Screw puncher accessories BASIC

	Size mm		
for bolt size 19 mm x 55 mm			
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
Die (for 19 mm bolt)	37.0	1	13 2400
	40.5	1	13 2402
for bolt size 19 mm x 75 mm			
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

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: includes punch, die and tension bolt with ball bearing (encapsulated)



Nominal dimensions PG	Nominal dimensions metric	Hole ø mm	Bolt Size mm	Pre-drill ø mm	max. Material thickness mm		
	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 11.0 mm 2. Pre-punch: Ø 20.4 mm

Nominal dimensions PG	Nominal dimensions metric	Hole ø mm	Bolt Size mm	Pre-drill ø mm	max. Material thickness mm		
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 11.0 mm 2. Pre-punch: Ø 20.4 mm

Nominal size Inch	Hole ø mm	Screw Size mm	Pre-drill ø mm	max. Material thickness mm		
1-7/32"	30.5	9.5 x 50.0	10.0	2.0	1	13 2536





Screw puncher accessories DIAMANT

	Size mm		
for bolt size 6.0 mm x 40 mm			
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			
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
for bolt size 19 mm x 55 mm			
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			
Tension bolt with ball bearing	19 x 75	1	13 5008
Hydraulic bolt	19 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 use of hydraulic unit.). Design: with splitting punch, die, without tension bolt

Nominal size PG	Nominal size metric	Hole ø mm	Bolt Size mm	Pre-drill ø mm	max. Material thickness mm		
16	16.2	11.1	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 11.0 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	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 11.0 mm 2. Pre-punch: Ø 20.4 mm

Nominal size Inch	Hole ø mm	Screw Size mm	Pre-drill ø mm	max. Material thickness mm	PU	Article no.
1-7/32"	30.5	19 x 55	20.4*	3.5	1	13 2732

* 1. Pre-drill: Ø 11.0 mm 2. Pre-punch: Ø 20.4 mm

Screw puncher accessories DIAMANT - VA

for bolt size 11.1 mm x 60 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	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	13 2766
	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	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





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		
5-piece	16	2.0	1	13 3000
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		
7-piece	16	2.0	1	13 3002
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		
	50	3.0		

Additional equipment: tension bolt with ball bearing (encapsulated), pre-drill and assembly paste

Design	Nominal size metric mm	max. Material thickness mm		
11-piece	12	1.5	1	13 3008
	16	2.0		
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		
13-piece	16	2.0	1	13 3010
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		

Screw puncher DIAMANT sets

12-piece 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		
12-piece	16	2.0	1	13 3012
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		

Contains 90° angled hand-held punch, can be rotated 360°

Design	Nominal size metric mm	max. Material thickness mm		
12-piece	16	2.0	1	13 3014
	20	2.0		
	25	2.0		
	32	2.0		
	40	3.0		





Screw puncher set, 12-piece accessories

Individual parts	Sizes 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 piece)		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-piece			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-piece			1	13 3006



12-piece 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-piece			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-piece			1	13 3018



Screw puncher set, 12-piece accessories

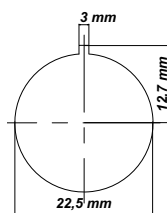
Individual parts	Sizes mm		
Hydraulic bolt, complete	19.0 / 11.1	1	13 5016
Hydraulic bolt	19.0 x 120.0	1	13 5006
Spacer sleeve set (3 piece)		1	13 5072
Pre-drill	11.5	1	13 4030





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 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 practical, robust plastic case



Nominal size Ø	Pre-drilling Ø mm	max. Material thickness mm		
22.5 mm with 3 mm stud	14.0	2.0	1	13 2800



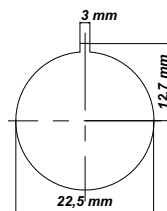
Round and groove screw puncher accessories

Individual parts	Sizes 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 scrap part lateral ejector, supplied in plastic case, suitable for hydraulic operation, stainless steel sheets (VA steel) and steel sheets (ST 37). Hole punching with one stud. For anti-rotation locking of pushbuttons and switches.



Nominal dimensions	Pre-drilling Ø mm	max. Material thickness mm		
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 practical, robust plastic case

Nominal size mm	Pre-drilling Ø mm	max. Material thickness mm		
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	Sizes mm			
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	Sizes mm		
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

Tension bolt with ball bearing		1	13 5021
Counter nut		1	13 5046
Screw-down nut		1	13 5030
Adapter for hydraulics		1	13 5032
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 practical, robust plastic case

Nominal dimensions	Pre-drill	max.Material		
mm	Ø mm	thickness mm		
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



Rectangular screw puncher accessories

Individual parts	Sizes mm		
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 practical, robust plastic case

Nominal size	Pre-drill	max.Material		
mm	Ø mm	thickness mm		
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		
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
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 practical, robust plastic case

Nominal dimensions mm	Pre-drill Ø mm	max. Material thickness mm		
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



Square screw puncher accessories

Individual parts	Size mm		
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





Square screw puncher accessories

Individual parts		Sizes mm	
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 practical, robust plastic case

Nominal size mm	Pre-drill Ø mm	max. Material thickness mm		
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



Square screw puncher VA accessories

Individual parts		Sizes mm	
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



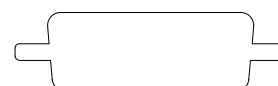
Screw puncher Sub-Min-D

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 practical, robust plastic case

No. of pins	Nominal size mm	Pre-drill Ø mm	max. Material thickness mm ST 37 / VA		
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		Sizes mm	
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





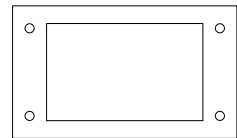
Screw punch Sub-Min-D accessories

Individual parts	Sizes mm		
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
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 sheets (ST 37), plastic and aluminium. Operation: hydraulic. Design: with punch, die, hydraulic bolt and counter nut. Storage: in practical, robust plastic case



No. of pins	Nominal dimensions	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

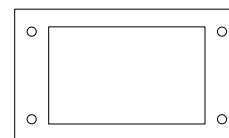
Individual parts	Sizes mm		
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	52.0 x 36.0	1	13 2962
Die	52.0 x 36.0	1	13 2970
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	65.0 x 36.0	1	13 2964
Die	65.0 x 36.0	1	13 2972
Hydraulic bolt		1	13 5034
Counter nut		1	13 5050
Punch	86.0 x 36.0	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. Therefore there is no need to mark out the centre marking. Suitable for: stainless steel (VA steel) and steel sheets (ST 37).

Operation: hydraulic. Design: with punch, die, hydraulic bolt and counter nut. Storage: in practical, robust plastic case



No. of pins	Nominal size mm	Pre-drill Ø mm	max. Material thickness mm		
ST 37 / VA.					
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		
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 5038
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 robust plastic case: battery operated hand-held hydraulic unit, 18 V rechargeable batteries, charger 18-28 V, two hydraulic bolts, set of spacer sleeves (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. With pressure relief valve, 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 with pressure relief valve, operating pressure max: 650 bar.

Hydraulic hand-held punch - straight design (1.6 kg)	1	13 4016
Hydraulic hand-held punch - angled 90°, can be rotated 360° (1.9 kg)	1	13 4018



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 robust plastic case: hydraulic punch with hand pump, hydraulic cylinder, hydraulic 600 mm hose, two hydraulic bolts, spacer sleeve set (3 piece), 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. Tank volume: 270 cm³. Usable oil volume: 210 cm³. Flow rate: 1.7 cm³ per piston stroke. Supplied in robust plastic case: foot pump, hydraulic cylinder with quick-fitting coupling, hydraulic hose 2.8 m, two hydraulic bolts, spacer sleeve set (5 piece), pre-drill 11.0 mm

Hydraulic punch with foot pump	1	13 4022
--------------------------------	---	---------



Hydraulic cylinder

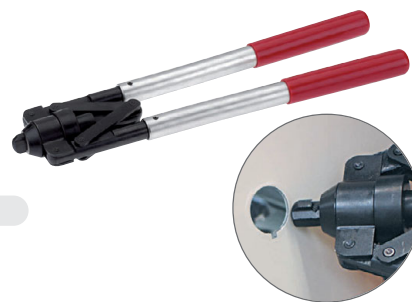
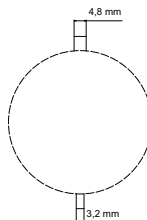
for all electric, foot and hand-operated pumps with quick-fitting coupling and a maximum output pressure of 700 bar. Compact construction, for punching round, rectangular and square holes as well as special shapes in stainless steel and steel sheets ST 37 (control cabinets and plant construction). Hydraulic cylinder with quick-fitting coupling (up to 115 kN), high tensile strength aluminium body, suitable for tension bolts with UNF thread, diameter 19.0 mm, drip-free coupling and uncoupling, easy operation, with dust protector cap, supplied in plastic case.

	1	13 4023
--	---	---------



Keyway pliers

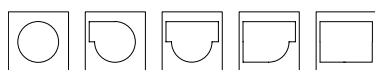
punch keyways quickly and easily in 2.0 mm steel sheets (ST 37), save time-consuming filing of grooves for anti-rotational locking, options for keyways in 3.2 mm and 4.8 mm size, exchangeable keyway punch, long operating life as punch and die are made of hardened tool steel, easy punching thanks to strong lever action, weight 1.3 kg



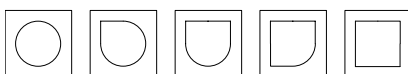
Keyway pliers	1	13 4000
Replacement punches in 3.2 mm and 4.8 mm	1	13 4002

Nibbler

pre-punched round holes can easily and economically be converted to square or rectangular holes. Particularly recommended for producing unusual dimensions (special shapes).



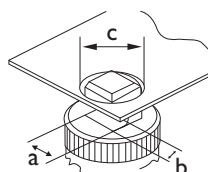
Round to rectangular



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 Ø
ASN 20	20.0	9.0	28.5	28.5 mm Ø



Nibbler ASN15	1	13 4004
Nibbler ASN20	1	13 4006
Replacement punch ASN15	1	13 4008
Replacement punch ASN20	1	13 4010

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 work piece is 20.4 mm.

10 items	1	13 5080
100 items	1	13 5082



Individual parts for manual operation

bolts for steel sheets ST 37

Design	Size mm	PU	Article no.
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 piece)		1	13 5072
Hydraulic oil		1 litre	13 4024



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	M12, M16, M20, M25, M32, M40	1	13 4032
Assembly paste	120 g	1	13 4034



Special step drill for screw punching

HSS stepped drill for burr-free drilling of through borings for screw puncher tension bolts M 8 (3/8") – M 10 (7/16") – M 12 – M 16 – 3/4" – M 20 in material up to 4 mm thick. Suitable for use in hand-held and column drills, 9 drill steps in total, mounting shank (diameter 10 mm) with 3 parallel flats prevents slipping in the drill chuck.

		1	20 1212
--	--	---	---------



Cable duct cutter

for cutting burr-free lengths without wastage, for plastic ducts 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
--	--	---	---------

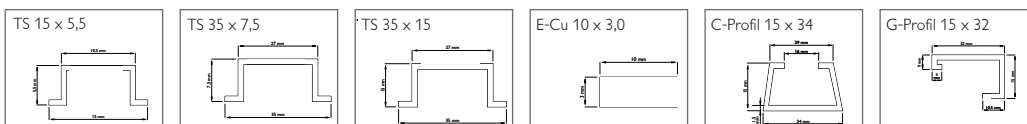


DIN profile cutter and punching tool

for cutting burr-free lengths without waste, for 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, SCRAPERS

Head

Mechanical locking of hammer head by steel wedge, sealed with synthetic resin.



Safety sleeve

The hammer head has a forged-on protective shaft collar for extra stability and a nylon protective sleeve underneath for effective shock absorbance of missed strokes.

Shaft

Patented high-safety shaft in 3-component design: core of thick-walled aluminium tube in high-strength alloy, cover in waterproof nylon resistant to chemicals, grip in non-slip thermo-plastic rubber.

3-component engineer's - and sledgehammer

Ergonomic design, indestructible, vibration-free – low impact on the joints. Patented head with forged-on protective shaft collar in high-quality steel in accordance with DIN. 3-component high-safety shaft, patented, mechanically fixed by steel wedge for mechanical locking, core made of aluminium alloy. Nylon components are ultra resistant, including resistance to oil and solvents, grip and protective sleeve in thermo-plastic, non-slip rubber.

Engineer's hammer

Hammer weight g			
300	6	13 0403	
500	6	13 0405	
1000	6	13 0410	

Sledgehammer

Hammer weight g			
800	6	13 0708	
1000	6	13 0710	
1250	6	13 0712	
1500	6	13 0715	

Safety engineer's hammer

dimensions and finish in accordance with DIN 1041, GS certified.
 With forged-on protective shaft collar and additional protective nylon shaft 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 sledgehammer

according to DIN 6475, otherwise finish as above

Hammer weight g			
1000	6	13 0600	
1250	6	13 0602	
1500	6	13 0604	

Engineer's 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	

Sledgehammer

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 exchangeable Cellidor insets, for panel beating and straightening of metal sheets and frames or for use on sensitive surfaces (varnish, enamel, galvanised, chrome-plated)

Head 35 mm ø	6	13 1053	
--------------	---	---------	--

Electrician chisel

in chrome vanadium steel

Cutting edge width mm	Steel thickness 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

Cutting edge width mm	Steel thickness mm		PU	Article no.
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

Cutting edge width mm	Steel thickness mm		PU	Article no.
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

Steel thickness mm		PU	Article no.
16	250	10	13 0052
18	300	10	13 0054



Octagonal slot chisel

made of chrome vanadium air hardening steel

Cutting edge width mm	Steel thickness mm		PU	Article no.
30	18	240	10	13 0070



Center punch

for centring drill holes, according to DIN 7250, octagonal, made of chrome vanadium air-hardening steel

Steel thickness mm		PU	Article no.
10	120	10	13 0210



Drift punch set with center punch

made of chrome vanadium air hardening steel, length 120 mm, in plastic container, for cutting through sheet metal and thin metals, pin punching and driving in nails

1 item each per set of 1 - 2 - 3 - 4 - 5 mm diameter, pointed punch 120 x 10 mm		PU	Article no.
120	1		13 0354



Pin punch

in chrome vanadium steel, length 150 mm, in plastic container, for driving out pins, locating pins and clips from drill holes

1 item each per set of 3-4-5-6-7-8 mm diameter		PU	Article no.
150	1		13 0358



Nail setter

in chrome molybdenum vanadium air hardening steel, completely hardened, head tempered. For setting steel nails with cylindrical shaft and thread (plug M6)

M 6		PU	Article no.
170	1		13 0075



Hand protection for nail setter

		PU	Article no.
		1	13 0076



Firmer chisel

according to DIN 5139, with bevelled sides, polished wood handle and cutting edge protector

Cutting edge width mm		PU	Article no.
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



Painter's spatulas

made of steel, ground blade, with oval wooden heft

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 spatulas

according to DIN 6441 C, with varnished wooden heft

Width mm			
60		5	13 1420
70		5	13 1422

Plaster pan

made of sheet steel, hot-dip galvanised, with polished wooden handle

Height 75 mm	ø 180 mm	1	14 0302
--------------	----------	---	---------

Plaster cup

made of soft rubber

Height 90 mm	ø 125 mm	1	14 0306
--------------	----------	---	---------

Water brush

pure bristles

	ø 24 mm	36	14 0310
--	---------	----	---------

Chalk line roller

with push system, storage for toothed hook and belt clip, metal body, length of string 15 m, includes 60 g coloured powder

		1	14 0320
--	--	---	---------

Coloured powder, grease and oil-free, in plastic bottle

blue	100 g	1	14 0322
------	-------	---	---------



MEASURING TOOLS



Counter

German brand-name counter with high-precision measurement and a measurement range from 0 to 9999.9 metres

Handle

Screw-off handle for mobile use option on building sites, in warehouses, workshops etc.

Material

Straight-knurled aluminium measurement wheel and powder-coated, galvanised housing.



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
600 mm	24 x 52 mm	1	21 1436
800 mm	24 x 52 mm	1	21 1437

Cabinet spirit level

torpedo shaped, otherwise designed as above

250 mm	20 x 40 mm	1	21 1440
--------	------------	---	---------

Cabinet spirit level

torpedo shaped with magnetic clamp,

with horizontal, vertical and 45° bubble level

200 mm	15 x 38 mm	1	21 1442
--------	------------	---	---------

Marking spirit level for switch boxes

new, more robust design with rulers in anodised aluminium, with abrasion-resistant mm and cm scale and shock-absorbing plastic end caps, with 2 integral quality bubble levels in unbreakable acrylic glass with very high precision measurement, seal guaranteed for 30 years. The 4 adjustable sliders have been set into the aluminium profile to ensure more precise display of up to 5 drill holes in horizontal or vertical arrangement and to guarantee the pre-set distance. Ideal as a marking template for setting switch boxes, for assembling control cabinets, ductwork, washbasins, notices and much more.

800 mm	20 x 55 mm	1	21 1452
--------	------------	---	---------

Lightweight metal spirit level

anodised, with 1 horizontal and 1 vertical bubble level

400 mm	20 x 57 mm	1	21 1420
600 mm	20 x 57 mm	1	21 1422
800 mm	20 x 57 mm	1	21 1423
1000 mm	20 x 57 mm	1	21 1424

Folding ruler

10 sections, length 2 m, mm divisions on both sides

in plastic, highly elastic		10	21 0008
----------------------------	--	----	---------

in 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

red	5 m	6	21 0065
-----	-----	---	---------

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 impact-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
----------	----------------	---	---------



Hand-held cable length measuring tool

measuring tool for fast, exact determination of cable length, wide range of application for all types of cable and similar coiled products from 4 to 35 mm in diameter, automatic cable size adjustment by leaf clamp, German brand-name counter with high precision measurement, measurement range 0 to 9999.9 m, zero setting with reset toggle switch, knurled aluminium measurement wheel, screw-off handle for mobile use on building sites, in warehouses, workshops etc., with receiver shaft for stationary use in combination with all CIMCO-TROMMELFIX dispensing aids and the CIMCO connection frame

4 - 35 mm ø	1	14 2745
-------------	---	---------



Electronic digital pocket vernier 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

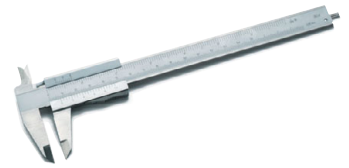
	Reading			
	mm	inch		
150 mm / 6"	1/100	1/2000"	1	21 0300



Precision pocket vernier caliper

in stainless steel, completely hardened, with measuring probes, depth measurement and thread table, with auto lock, in plastic pouch

	Range	Reading			
		mm	inch		
matt chrome	150	1/20	1/128"	10	21 0202



Marking gauge

made of steel, flat design, mm division

	Range	Reading		
	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
--------------------	--------	---	---------



Scriber with hard metal tip

hard metal tip can be exchanged and retracted

150 mm	10	21 2100
--------	----	---------

loose hard metal tips

	10	21 2102
--	----	---------



Scriber with steel tips

corded holder, hardened tips can be screwed out, with straight and 90° angled tip

240 mm	10	21 2140
--------	----	---------



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
-------	--------	----	---------



Carpenter's pencil

for marking wood, metal and rubber

black	240 mm	100	21 2170
-------	--------	-----	---------



Sharpener

for carpenter's pencils with oval (European) and flat oval shape; also for marking chalks

ø mm

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
--------	----	---------

Deep hole marker – 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
---	---	---------

Replacement leads

Pack of 10 replacement leads graphite B2	1	21 2152
Pack of 8 replacement leads (2 x red, 2 x yellow, 4 x graphite)	1	21 2154
Pack of 10 replacement leads red	1	21 2156
Pack of 10 replacement leads yellow	1	21 2158

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

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
-----	--------	---	---------



NEW

NEW

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 guard

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.

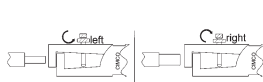


Diamant PLUS - Safety pliers with 1000 V protective insulation

Optimised lever conditions, smoothness and easy-grip handle design permit energy-saving and ergonomic work for the hand, 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

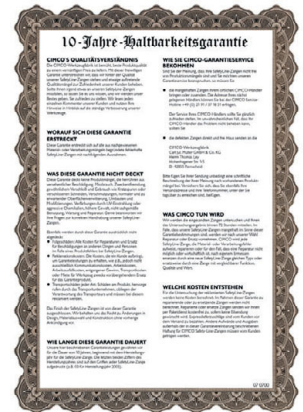
Energised work	Blade hardness in HRC	With cutting bevel	Single joint	Flat nose pliers	Wire type soft	Wire type piano
VDE/GS tested	Serrated surfaces	With slight cutting bevel	Lap joint	Flat-round pliers	Wire type medium-hard	Wire type rope
	Diagonally serrated surfaces		Box joint	Round nose pliers	Wire 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 pliers are 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 are exclusively "Made in Germany" undergoes a range of unrivalled trend-setting and robot-supported production processes. As a result, the work sequences are performed with robots; from forging and grinding as well as polishing, right through to the dielectric strength testing of the insulating sheathing in order to ensure a consistent standard of quality. Ergonomic design handle sleeves in a modern 2-component design manufactured from premium plastic with excellent haptic 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 side-cutters

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



145 (5.5") 6 10 0524



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



1000 V Side-cutters

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



130 (5") 6 10 0570



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



1000 V Side-cutter with stripping function

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 mm² and 2.5 mm²

160 (6") 6 10 0652

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, manufactured from 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 manufactured from special tool steel, with slightly conical, serrated gripping surfaces and serrated 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 to 5 mm ø or 0.75 mm² up to 6 mm², 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 blades (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 0214

200 (8") 6 10 0216

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 (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 (long flat nose pliers), jaw length 50 mm, serrated gripping surfaces

160 (6") 6 10 0024

1000 V Round nose pliers (long round nose pliers)

according to DIN ISO 5745, single joint, long, round jaws (long round nose pliers), jaw length 50 mm, finely serrated gripping surfaces

160 (6") 6 10 0062

1000 V Plier assortment, 4-piece

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

Plier assortment, 3-piece

Water pump pliers (no VDE)	250 (10")	10 1224
Telephone pliers with bent jaws	200 (8")	10 0238
Diagonal pliers	160 (6")	10 0574
	1	



The range of pliers that are exclusively "Made in Germany" undergoes a range of unrivalled trend-setting and robot-supported production processes. As a result, the work sequences are performed with robots; from forging and grinding as well as polishing, right through to the dielectric strength testing of the insulating sheathing 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 displays that a 100 % level of safety in accordance with the safety standards is no longer in place.

1000 V Heavy duty side-cutters

according to DIN ISO 5749 A, lap joint, with induction hardened precision blade



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

160 (6")	6	10 8789
200 (8")	6	10 8784

1000 V Side-cutters

according to DIN ISO 5749 B, lap joint with induction hardened precision blade (approx. 64 HRC), for all wires also including piano wire, manufactured from electric steel



145 (5.5")	6	10 8785
160 (6")	6	10 8786
180 (7")	6	10 8787



250 (10")	6	10 8788
-----------	---	---------

1000 V Side-cutter with stripping function

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 mm² and 2.5 mm²

160 (6")	6	10 8792
----------	---	---------

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, manufactured from electric steel

200 (8")	6	10 8795
----------	---	---------

1000 V Flat nose pliers (long flat nose pliers)

according to DIN ISO 5745, single joint,



long, flat jaws (long flat nose pliers), jaw length 50 mm, serrated gripping surfaces

160 (6")	6	10 8771
----------	---	---------

1000 V Round nose pliers (long round nose pliers)

according to DIN ISO 5745, single joint,



long, round jaws (long round nose pliers), jaw length 50 mm, finely serrated gripping surfaces

160 (6")	6	10 8773
----------	---	---------

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
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 (flat-round pliers), serrated gripping surfaces and serrated 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, manufactured
of special tool steel with slightly conical, serrated gripping surfaces and serrated 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), manufactured from chrome-vanadium steel



250 (10")	6	10 8724
-----------	---	---------

1000 V Wire stripper

single joint, with adjusting screw
for adjustment to the desired wire or strand diameter, for solid and multi-wire conductors
up to 5 mm \varnothing or 0.75 mm² to 6 mm², with internal opening spring

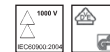


160 (6")	6	10 8790
----------	---	---------

1000 V Safety plier set, 4-piece

Double dip-coated handles

Telephone pliers, straight	200 (8")	10 8778
Combination pliers	185 (7")	10 8782
Heavy duty diagonal pliers	200 (8")	10 8784
Wire stripper	160 (6")	10 8790
	1	10 8002



1000 V Side cutter 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 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 modern 2-component design manufactured from premium with excellent haptic properties, VDE-certified insulation protection up to 1000 Volt AC according to DIN EN 60900:2004.

160	6	10 0000
-----	---	---------

1000 V Plastic telephone pliers

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

180	1	10 0790
-----	---	---------

1000 V Plastic grip pliers

manufactured from 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
-----	---	---------

1000 V Plastic combination pliers

manufactured from impact-resistant, fibre-glass reinforced plastic with 2-component handles, with blade inserts manufactured from 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
-----	---	---------

1000 V Plastic cable cutter

manufactured from impact-resistant, fibre-glass reinforced plastic with 2-component handles, with blade inserts manufactured from 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
-----	---	---------



1000 V Plastic flat nose pliers

especially suitable for meter installation

	200	1	10 0796
--	-----	---	---------

Insulated tweezers




straight, pointed shape	130	1	10 3110
-------------------------	-----	---	---------




straight, bent 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 screwdrivers

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

 1000 V  

Phillips cross-head screwdrivers

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 screwdrivers

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

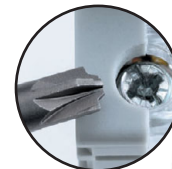
for combined slot-head/cross-head screws in electrical equipment, i.e. terminal blocks

PZ 1	80	165	12	11 7751
PZ 2	100	195	12	11 7752
Set PZ 1 and PZ 2 (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 keys (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



Hex key set (Allen wrench), 5-piece

VDE hex keys

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-piece

VDE-TORX screwdrivers

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



Hex nut driver set, 5-piece

VDE nut drivers

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



Electronic safety screwdriver set, 7-piece

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 screwdrivers

according to DIN 7439, made of chrome vanadium steel, for hex socket screws (Allen)

Size 5	1	11 0804
Size 6	1	11 0806
Size 8	1	11 0808



T-handle screwdrivers

made of chrome vanadium steel, for hex socket screws (Allen)

Size 5	160	1	11 0812
Size 6	160	1	11 0814
Size 8	160	1	11 0816
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 3/8" square drive



△ 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
----------	-----	---	---------



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
----------	-----	---	---------



Insulated screwing tools

with safety mechanism to prevent unintentional release of the attached tools

Sockets



according to DIN 7448, with 1/2" square drive

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
--------	-----	---	---------



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
--------	-----	---	---------



Torque wrenches

fully insulated according to DIN EN 60900, VDE 0680/2, with integrated reversible ratchet, adjustable from 5 - 50 Nm with 3/8" square drive

1000 V	5 - 50 Nm	370	1	11 2581
1000 V	5 - 50 Nm	370	1	11 2582



- 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

1000 V safety tool assortments



Master case
KLASSIK
“Electric
safety”

17 0370

Master case
KLASSIK RED

17 0070

see catalogue p. 8



17 0370

Article no., equipped

with tool case

Article no.

Description

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 side cutter	200 mm	•
Wire stripper 0,5 to 6 mm ²	160 mm	•
Electrician slot-head screwdrivers (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 screwdrivers (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 screwdrivers (without VDE) (Blade dimensions)	3.0 x 0.5 x 100 mm 4.0 x 0.8 x 125 mm	• •
Insulated screw-holding Phillips screwdrivers (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 wrenches, 1000 V-insulated (Wrench size across flats)	5.5 mm 7 mm 8 mm 10 mm	• • • •
Single-ended open jaw wrenches, 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	
Hexagon socket wrench insert, 1000 V-insulated (Wrench size across flats)	10 mm 11 mm 13 mm 14 mm 17 mm 19 mm	
Plastic clip for holding rubber drapes	160 mm	
Rubber drape, insulating up to 1000 V	1000 x 1000 x 1.6 mm	
Slip-on bushes 1000 V, up to 10 mm Diameter	numbered “No. 1” numbered “No. 2” numbered “No. 3”	5 pieces 5 pieces 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	•
Voltage tester DUSPOL ANALOG	12 to 690 V AC/DC	•
Cable shear, 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





17 5370



17 0378

House connection set, 21-piece



































in a transport and storage case made of impact-resistant plastic, consisting of dip-insulated tools:

1 x torque wrench ¼"	5 – 25 Nm	1 x slot-head screw 4.0 x 0.5 mm
1 x extension ¼"	75 mm	1 x slot-head screw 5.5 x 0.8 mm
1 x extension ¼"	100 mm	1 x slot-head screw 6.5 x 1.2 mm
1 x extension ¼"	150 mm	1 x Phillips crosshead screw PH 1
1 x socket ¼"	6 mm	1 x Phillips crosshead screw PH 2
1 x socket ¼"	8 mm	1 x combination profile crosshead screw PZ/FL 1
1 x socket ¼"	10 mm	1 x combination profile crosshead screw PZ/FL 2
1 x socket ¼"	13 mm	1 x hex socket (Allen) 5 mm
1 x socket ¼"	14 mm	1 x hex socket (Allen) 6 mm
2 x bit holders ¼"		1 x hex socket (Allen) 8 mm
  1000 V	255 x 210 x 45	1 17 0362



Open-ended wrenches































according to DIN 7446, made of chrome vanadium steel, 15° offset

  1000 V	Size 8	105	1	11 2704
  1000 V	Size 9	105	1	11 2706
  1000 V	Size 10	105	1	11 2708
  1000 V	Size 11	115	1	11 2710
  1000 V	Size 12	125	1	11 2712
  1000 V	Size 13	132	1	11 2714
  1000 V	Size 14	140	1	11 2716
  1000 V	Size 15	150	1	11 2718
  1000 V	Size 16	160	1	11 2719
  1000 V	Size 17	160	1	11 2720
  1000 V	Size 18	165	1	11 2721
  1000 V	Size 19	170	1	11 2722
  1000 V	Size 22	195	1	11 2724
  1000 V	Size 24	220	1	11 2726
  1000 V	Size 27	230	1	11 2728
  1000 V	Size 30	240	1	11 2730
  1000 V	Size 32	240	1	11 2732



Ring wrenches

according to DIN 7447, made of chrome vanadium steel, deep-offset

  1000 V	Size 8	155	1	11 2754
  1000 V	Size 10	165	1	11 2758
  1000 V	Size 11	175	1	11 2760
  1000 V	Size 12	185	1	11 2762
  1000 V	Size 13	190	1	11 2764
  1000 V	Size 14	200	1	11 2766
  1000 V	Size 15	210	1	11 2768
  1000 V	Size 16	210	1	11 2769
  1000 V	Size 17	210	1	11 2770
  1000 V	Size 18	220	1	11 2771
  1000 V	Size 19	230	1	11 2772
  1000 V	Size 22	250	1	11 2774
  1000 V	Size 24	270	1	11 2776
  1000 V	Size 27	300	1	11 2778
  1000 V	Size 30	300	1	11 2780



1000 V ratchet ring wrenches

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.

Size			
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 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 strong, straight blade

Blade length 50 mm	1	12 0042
--------------------	---	---------

1000 V Cable stripping knife

with straight blade and insulated blade back

Blade length 50 mm	1	12 0043
--------------------	---	---------

1000 V Stripping knife

with hooked cutting edge

Blade length 35 mm	1	12 0044
--------------------	---	---------

1000 V Cable paper knife

with especially sharp blade

Blade length 50 mm	1	12 0045
--------------------	---	---------

1000 V Cable stripping knife

with hooked blade and shuttle

Blade length 40 mm	1	12 0046
--------------------	---	---------

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
--------------------	---	---------

interchangeable blade	1	12 0066
-----------------------	---	---------

Automatic wire stripper SAFETY STRIP

for flexible stranded wires and solid conductors of 0.2 to 6 mm², insulation-protected to 1000 volt, tested in accordance with DIN EN 60 900:2004, automatic adjustment to the conductor width, integrated length stop and closer for transport and storage

	1	10 0762
--	---	---------

1000 V One-hand cable shears

with double dip-coated special handle sleeves, high-gloss polished chrome

for cable ø	solid mm ²	flexible mm ²			
16 mm	16	50	160	6	12 0206
25 mm	25	70	200	6	12 0202

1000 V Hacksaw frame

fully insulated

Span width 150 mm	250	1	12 0700
-------------------	-----	---	---------

1000 V Hacksaw frame

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
-------------------	--------------	-----	---	---------



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

	105	10	14 0102
--	-----	----	---------



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 clip

for attaching rubber cloths

	Length mm		
	80	1	14 0179
	160	1	14 0180



1000 V Slip-on spouts

conical, to protect bare, current-carrying parts, numbered: No 1 - 2 - 3

Receptacle ø max.

No.	Receptacle 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 spouts

self clamping, with sleeve, not numbered

Receptacle ø

Receptacle 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
----------------	---------------	---	---------



1000 V cleaning brush

fully plastic design

	L x W mm		
	420 x 25	1	14 0260
	420 x 38	1	14 0261



Insulating protective equipment and protective clothing

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	1	14 0190
royal blue	1	14 0192
black	1	14 0194
grey	1	14 0196

Design with shortened visor (length: 50 mm)

navy	1	14 0191
royal blue	1	14 0193
black	1	14 0195
grey	1	14 0197



1000 V CE Electrician and industrial helmets

light and modern head protection according to DIN EN 397, made of HDPE (polyethylene), with ventilation holes, electric insulation to 440 V AC, with visor, lengthed in the back for neck protection, with hygienic terry cloth 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

1000 V Visor

according to DIN EN 166 to be combined with the electrician helmet, 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 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 76 g, fits over most prescription glasses, protects against electrical arcs according to DIN 4646/4647

	1	14 0270
--	---	---------

Panorama safety goggles

according to DIN EN 166, with a 140° field of view, otherwise similar to safety goggles with 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
--------------------------------	---	---------

Ear plugs

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 pair	14 0279
--	--------	---------



Fine dust mask

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
--	----	---------

5-finger work gloves

STANDARD

made of split pigskin, smoothed, glove back made of cotton, one size 10/11

	1 pair	14 0230
--	--------	---------

PROFI

made of full pigskin, glove back made of cotton, lined, one size 10/11

	1 pair	14 0232
--	--------	---------

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
--	--------	---------

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
--	--------	---------

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	Material thickness mm		
9	500 V	2 500 V	360	0.5	1 pair	14 0237
10	500 V	2 500 V	360	0.5	1 pair	14 0238
11	500 V	2 500 V	360	0.5	1 pair	14 0239
9	1 000 V	5 000 V	410	1.0	1 pair	14 0215
10	1 000 V	5 000 V	410	1.0	1 pair	14 0214
11	1 000 V	5 000 V	410	1.0	1 pair	14 0240
9	7 500 V	10 000 V	410	1.5	1 pair	14 0245
10	7 500 V	10 000 V	410	1.5	1 pair	14 0244
11	7 500 V	10 000 V	410	1.5	1 pair	14 0243
9	17 000 V	20 000 V	410	2.3	1 pair	14 0247
10	17 000 V	20 000 V	410	2.3	1 pair	14 0246
11	17 000 V	20 000 V	410	2.3	1 pair	14 0242
11	26 500 V	30 000 V	410	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	2500 V	360	2.3	1	14 0130
9	500 V	2500 V	360	2.3	1	14 0132
10	500 V	2500 V	360	2.3	1	14 0134
11	500 V	2500 V	360	2.3	1	14 0136
8	1000 V	5000 V	360	2.3	1	14 0140
9	1000 V	5000 V	360	2.3	1	14 0142
10	1000 V	5000 V	360	2.3	1	14 0144
11	1000 V	5000 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
----------	----	---------



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
---	---------



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
---	---------



1500 V NH safety handle for photovoltaic applications

based on VDE 0680/4, with anti-slip protection and protective guard of smooth, impregnated leather. For NH fuses sizes 1 XL, 2 XL and 3 L.

1	14 0211
---	---------



Electrician boots

premium safety boots made of a PVC-nitrile mixture, tested according to EN 345-SB. EN 50321.1999 class 0
Shoe size

42	1	14 0219
43	1	14 0220
44 - 45	1	14 0221
46	1	14 0222



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
- Adhesive tape yellow/black
- Information sign (first aid measures)
- Electrical safety gloves (class 3, to 26.5 kV, size 9)
- Transport bag with carabiner hook

570 x 71 x 240 mm	1	17 0366
-------------------	---	---------



  **1000 V Insulating floor mat**

protective mats for electrical switch rooms, specific surface resistance approx. 1012 ohm/cm, dielectric strength 16.4 kV/mm (tested according to DIN VDE 0303 part 21), thus the 4-mm thick matt has a dielectric strength of 50 kV (test voltage 5 kV/min according to DIN VDE 0680 part 1), made of green NR/SBR polymer plastic (hardness approx. 55° Shore A), tensile strength > 50 N/mm², elongation at rupture > 500%, embossed, grooved walking surfaces of course material for increased stepping safety, abrasive wear < 300 mm³, temperature resistance from -30 °C to +70 °C

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-piece

in a practical and sturdy carrying bag	17 0110
Electrician helmet	14 0200
Electrician visor	14 0204
NH safety handle	14 0210
Electrician finger gloves	14 0214
	1 14 0255



Your personal safety set, 5-piece

in a practical and sturdy carrying bag	17 0112
Electrician helmet	14 0200
Electrician visor	14 0204
NH safety handle	14 0210
Electrician finger gloves	14 0214
Insulated floor 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.

fits all body sizes	1	14 0455
---------------------	---	---------



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.

fits all body sizes	1	14 0456
---------------------	---	---------



Guided fall arrester MAGIC

according to EN 353-2
The small and light fall arrester runs free in both directions. Available in various rope lengths 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 carabiner, 12 mm kernmantle rope. The rope is fixed to the attachment rings on the harness.

	1	14 0490
--	---	---------



Electrician safety set STANDARD

this set is intended for use in repair and maintenance work, e.g., work 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 risk of falling. The stable case of steel sheet contains:

- Safety harness (EN 361/358)
- Belt sling 30 KN - 1 meter
- Running safety lanyard ERGOGRIP

	1	14 0495
--	---	---------



Electrician safety set ROPE BAG

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 risk of falling.

The practical rope bag contains:

- Safety harness (EN 361)
- Belt sling 22 KN - 2 meters
- Guided fall arrester MAGIC 15 m

	1	14 0496
--	---	---------



Fall damping belt SHOCKYARD

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
--	---	---------



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		
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
--	---	---------



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
--	---	---------



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
-----------------------	---	---------



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
Refill pack for first aid case according to DIN 13 157	1	14 2007



Car first aid kit

according to DIN 13 164, only for cars, not permitted for commercial operations, in a stabile metal case

	225 x 165 x 70 mm	1	14 2008
Refill pack for car first aid kit DIN 13 164		1	14 2009



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	
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

batteries included

MIDI torch and helmet light, black	1	11 1514
MIDI torch and helmet light, neon yellow, with additional rear switch	1	11 1515

batteries not included

MAXI tubular work light, black	1	11 1518
MAXI tubular work 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
-------	-----------------	---	---------



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
special helmet mounting kit, universal		1	11 1516



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
--	---	---------



LED work lamp

ideal for home, workshop, garage, construction site, camping, boat, etc. This innovative LED work lamp replaces the common neon stick lamps thanks to many advantages. Via 60 (tubular lamp) plus 9 (torch) white LED lamps, 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), chargeable via 230 volt/50 Hz charger and 12-volt cigarette lighter (charging time approx. 1.5 hours), very low power consumption for long light duration (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
---------------	---	---------



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 wrist strap, stretch sleeve, battery operated.

housing ø 24 mm	150	1	11 1530
-----------------	-----	---	---------

With case, rechargeable battery, power supply plug.

housing ø 24 mm	150	1	11 1532
-----------------	-----	---	---------

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
-----------------	-----	---	---------

LED headlamp

with lamp head that swivels 100°, flexible nylon strap with stainless steel clasp for size adjustment

head ø 24 mm	1	11 1536
--------------	---	---------

Accessories for LED hand lamps

for magnetic torch attachment

articulated magnetic clip	1	11 1537
---------------------------	---	---------

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
------------------------------	------------------	---	---------

Design with black rubber shaft, mirror 65 x 43 mm, battery operated

handle ø 22 mm, head ø 24 mm	Total length 600	1	11 1542
------------------------------	------------------	---	---------

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 24 mm	Flex length 500	1	11 1560
--------------	-----------------	---	---------

head ø 64 mm	Flex length 500	1	11 1562
--------------	-----------------	---	---------

Accessories for LED workshop lamp

table clamp	1	11 1563
-------------	---	---------

screw clamp	1	11 1545
-------------	---	---------

For additional technical data, see page 248.

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 set 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
-----	---	---------

Cutout switch lock

the secure locking element for, for instance, 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

circuit breaker	1	18 2600
-----------------	---	---------



NEW

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



NEW

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
--	---	---------

**ESD service kit**

practical working mat for mobile application areas, made of sturdy dissipative vinyl material. Equipped with 2 pockets and seamed edges. Delivery includes 3 m earthing cable with crocodile clamps, wrist strap and pocket with push button fastener. Typical working resistance $R_G = 10^7$ to 10^9 Ohm.

600 x 650	1	15 0370
-----------	---	---------

**Circuit board cutlery, 3-piece**

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
-----	---	---------



PLUMBING TOOLS

Jaws and opening

The jaws are ground and inductively hardened. The self-clamping serration in the 45 degree "S-opening" ensures a secure grip.



Material

Made of chrome-vanadium steel and also completely steel forged.

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")	10	10 1222
with handle sleeves	250 mm (10")	6	10 1224

Water pump pliers

according to DIN ISO 8976, in 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

Water pump pliers FastGRIP

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 opening serration and safety lock protection. High-quality tempering. Maximum span width 37 mm, weight 392 g.

	240	1	10 1230
--	-----	---	---------

Plier wrenches PowerGRIP

parallel gripping pliers with practical push-button adjustment. For working on parallel and flat work-pieces 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 dismounting of syphons and water drains on washbasins and sink units; also for larger filling valves (taps for water) made of chrome-vanadium steel, for pipe fittings with screwed slip joint, handles dipped.

	230	1	10 1256
--	-----	---	---------

Pipe wrench with S-claw

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
--	---------------	---	---------

Basin wrench

with swivel claw, for left and right-handed rotation, varnished

	235	1	10 2020
--	-----	---	---------



One-hand basin wrench

for easy mounting of high-quality fittings, e.g. chrome-plated, in hard to access places with restricted working space, receptacles $\frac{3}{8}$ "

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
Range no. 11 4021 to no. 11 4026	5 piece	1	11 4019

Express spanner

open-end spanner with hanger bolt spanner M 10

Size 17 - 19		1	11 4011
--------------	--	---	---------

Ventil-Quick

waste valve holder and screw-in wrench. Just push in and it's immediately torque-proof.

No chance of damaging chrome surfaces, weighs only 365 g. Ready for use in seconds

		1	11 4040
--	--	---	---------

Sanitary four-way socket wrench

with different surfaces, making it suitable for all brands

for tap extensions $\frac{3}{8}$ " - $\frac{1}{2}$ " - $\frac{3}{4}$ " - 1", with thread for hanger bolts M 10 + M 12

		1	11 4120
--	--	---	---------

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
--	--	---	---------

Ratchet

with $\frac{1}{2}$ " square socket, for radiator spud wrench (order no. 11 4000) with $\frac{1}{2}$ " push-through square socket supplied, enabling use as ordinary ratchet for socket wrench

		1	11 4001
--	--	---	---------

Radiator spud wrench

chrome-plated, with adjustable tommy bar, for valve nipples $\frac{3}{8}$ " and $\frac{1}{2}$ "

		1	11 4150
--	--	---	---------

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 with both round and angular material.

Pipe cutter SUPER

Working range 6 - 35 mm \varnothing		1	12 0410
Replacement blade		1	12 0412

Pipe cutter MAXI

with adjustment-lever for modification of cut-opening

Working range 6 - 42 mm \varnothing		1	12 0420
Replacement blade		1	12 0422

Plastic pipe shear MINI

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 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 INOX steel with long service life (made in Solingen).

42 mm ø / 1 5/8"	240	1	12 0418
Replacement blade		1	12 0419

Universal pipe cutter

with 2 interchangeable knives for insulation and hard PVC tubes and for soft plastic and rubber hoses

Tube 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 pipes (flex pipes) and plastic shield pipes 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

Metal hacksaw frame

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.

Span width 300 mm	weight 650 g	1	12 0602
-------------------	--------------	---	---------

Metal hacksaw frame

according to DIN 6473 A, heavy duty design, material thickness 18 x 8 mm, chrome plated, with captive locking pins

Span width 300 mm		6	12 0600
-------------------	--	---	---------

Metal cutting saw blade

according to DIN 6494, 24 teeth per inch

Version A, one-sided serration

Material	Dimensions mm		
HSS-CO	300 x 13 x 0,65	100	12 0608

Version B, double-sided serration

Material	Dimensions mm		
WS	300 x 25 x 0.8	50	12 0614

Bolt cutter

robust bolt cutter 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 2000 g	460 mm	10	0450
---------------	--------	----	------

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
--	--	---	---------

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 tubes. Easily interchangeable cutting wheel. One replacement cutting wheel is contained in the scope of delivery. Weight 400 g.

Cutting performance – for plastic, copper, stainless steel (VA), aluminium and similar pipes.

For external pipe diameters of 12 to 35 mm (1/4" to 1 1/8").

	175 x 38 x 68	1	12 0480
--	---------------	---	---------



Mini pipe cutter

with one cutting wheel and double roller guide, for copper pipes

3 - 16 mm \varnothing 1/8" - 5/8" \varnothing	60	1	12 0460
3 - 30 mm \varnothing 1/8" - 1 1/8"	70	1	12 0461

Pipe cutter

with one cutting wheel, double roller guide and deburrer

3 - 35 mm \varnothing 1/8" - 1 3/8" \varnothing	160	1	12 0464
---	-----	---	---------

Pipe cutter

with one cutting wheel and double roller guide

3 - 50 mm \varnothing 1/8" - 2" \varnothing	390	1	12 0472
10 - 42 mm \varnothing 1/8" - 1 1/4"	290	1	12 0473

Loose wheels

for 12 0460, 12 0464, 12 0467, 12 0461		1	12 0462
for 12 0472		1	12 0474

Professional pipe cutter KOMPAKT

for aluminium, copper and thin-walled steel pipes. Made from die cast zinc with steel bearing mounted spindle for easier motion of the slide. 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	155 mm	1	12 0468
-------------------------	--------	---	---------

Safety engineer's 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
-----	--	---	---------

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.

Ideal straight cutting shear

	250	1	12 0280
--	-----	---	---------

Special shape cutting shears

with especially flat lower blade

right-hand cutting	250	1	12 0282
left-hand cutting	250	1	12 0283

Double sheet metal puncher – Sanitary installation

for punching holes in sink unit basins (stainless steel), spanner operation Size 19

Hole \varnothing	Pre-drill \varnothing	Bolt size	max. Sheet metal thickness mm		
metric mm	mm				
28 / 32	11	10 x 55	1.5	1	13 1822
Replacement tension bolt		10 x 55		1	13 5068

Workshop file set

with wooden haft

each 1 item 200 mm Cut 2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1	20 6806
--------------------------	---	---	---------

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
--	--	---	---------



NEW

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
-----------------------------------	--	---	---------



Flexible pipe cleaners

made of hot-dip galvanised, double layered steel wire, with claw and adjustable wooden handle.

Cleaner ø mm	Claw 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



Extension for flexible pipe cleaners

Cleaner ø mm	m		
12	5	1	14 1212



Pipe cleaner ROHRTEUFEL

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 in diameter

		1	14 1250
--	--	---	---------



Steel wire brush

4 rows of bristles	length 290 mm	6	14 1314
--------------------	---------------	---	---------



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
-----------------------	------------	---	---------



SOLDERING EQUIPMENT AND ACCESSORIES - CHEMICAL PRODUCTS

Function test

Without complex testing equipment.
For photoelectric (optoelectronic)
smoke detectors.

Battery test

The functionality of a smoke detector
is not ensured by pressing the
battery test button; it is only achieved
by using a smoke detector spray.



Content

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.

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 and all other types of plastic.

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 from 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. Dirt, dust and water repellent. Resistant to corrosive chemicals and oils. Temperature-resistant from -180 °C to +250 °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.

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 °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 on 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
--------	----	---------

Note: Due to the limited shelf-life, it is not possible to return the spray and cleaner cans.



WET.PROTECT

protects against wet and moisture-related short circuits, failure and corrosion, infiltrates the moisture and subsequently forms a permanent protective film, obtains conductivity and increases the service life of the treated parts, can be used as a preventative measure or directly following the effects of moisture as a means of repair.

For use in industry, trade and the domestic household

e.basic	50 ml	1	15 1140
e.basic	200 ml	1	15 1142
For use on motorbikes, trikes and mopeds			
e.motorbike	50 ml	1	15 1144
For use on boats and yachts in saltwater environments			
e.nautic	50 ml	1	15 1146
e.nautic	200 ml	1	15 1147
For use on passenger cars and heavy goods vehicles			
e.car	50 ml	1	15 1148



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
--	--	---	---------



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
Corr. 11 mm ø glue sticks	200 mm in length	1	18 1401



Plaster and assembly cement

Supply to wholesale trade in Germany exclusively in full packaging units (= 1 pallet per article) and from a minimum 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, smoothening 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 – 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	24 sacks	14 0330
	10 kg	60 sacks	14 0332
	5 kg	120 sacks	14 0334
in plastic bucket	10 kg	44 buckets	14 0335

Fixing plaster

for the fixing of plasterboard, plaster fibre and plasterboard composite plates onto 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 of interior plaster profiles. Approx. processing time: 50 minutes, approx. material consumption of 5 kg / m², approx. storage time: 6 months.

PU = 1 pallet			
in paper sack	25 kg	40 sacks	14 0338



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. 60 minutes (depending upon processing conditions), recommended plaster thickness 8 mm, approx. material consumption 5 m² / 25 kg sacks with a plaster thickness of 8 mm, approx. storage time: 6 months.

PU = 1 pallet

in paper sack	25 kg	40 sacks	14 0342
---------------	-------	----------	---------

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 steps, screed, 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



- 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

WORKSHOP AND BUSINESS EQUIPMENT, WORK CLOTHES

Warranty

A 5 year durability warranty speaks for the professional qualities of the ladders.

Insulation

The insulating effect of the plastic ladders up to 100,000 Volt is regularly tested and confirmed by independent testing institutes.

Stability

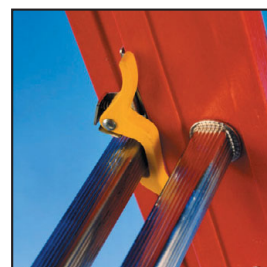
A wide floor beam provides additional stability and a steady hold, especially when it comes to large ladders.



Fibre glass beams in a H shape enable an equally low weight and high stability of the ladders. The grooved aluminium rungs are crimped three times and 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.



Plastic ladders

ladders with tested and extremely ageing-resistance fibre glass beams 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 beams (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 durability warranty.

Leaning rung ladder

Insulating ladder up to 100,000 V. Light and stable rung ladder, hollow GRP beams in H-shape (70 x 32 mm or 90 x 32 from 16 rungs), aluminium rungs with a width of 27 mm and length of 365 mm, ladder outer width 420 mm.

Number of rungs	Height m	Weight kg	PU	Article no.
8	2.30	8	1	14 6008
10	2.85	10	1	14 6010
12	3.45	12	1	14 6012
14	4.00	13	1	14 6014
16	4.55	15	1	14 6016



2-piece rung step ladder and extension ladder

Insulating ladder up to 100,000 V. Combined two piece rung ladder that can be used as a step ladder as well as an extension ladder (leaning ladder). 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 beams in H-shape (70 x 32 mm or 90 x 32 from 12 rungs), aluminium rungs with a width of 27 mm and a length of 425 mm, outer width 480 mm.

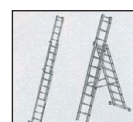
Number of rungs	Step ladder height (m)	Extension ladder-height max. (m)	Weight kg	PU	Article no.
2 x 8	2.30	4.05	19	1	14 6108
2 x 10	2.90	5.20	23	1	14 6110
2 x 12	3.40	6.30	27	1	14 6112
2 x 14	4.00	7.15	30	1	14 6114
2 x 16	4.50	8.25	34	1	14 6116
2 x 18	5.00	9.10	38	1	14 6118



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 step 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 protecting against the unintentional opening of the step ladder, hollow GRP beams 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-height max. (m)	Weight kg	PU	Article no.
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



2-piece rung extension ladder with cable pull

Insulating ladder up to 100,000 V. Can only be used as an extension ladder and not as a step ladder! Ideal stability thanks to the floor beam, height of the step ladder can be comfortably adjusted from rung to rung by cable pull, 2 wall rollers on the upper end of the ladder, aluminium locking and opening mechanism, hollow GRP beams in H-shape (90 x 32 mm), aluminium rungs with a width of 27 mm and a length of 420 mm, outer width 490 mm.

Number of rungs	Length (m)	Extension ladder height max. (m)	Weight kg	PU	Article no.
2 x 12	3.50	6.00	28	1	14 6312
2 x 18	5.20	9.10	39	1	14 6318

3-piece rung extension ladder with cable pull

Insulating ladder up to 100,000 V. Same equipment and processing as with the 2-piece extension rung ladders as stated above

Number of rungs	Length (m)	Extension ladder height max. (m)	Weight kg	PU	Article no.
3 x 12	3.50	8.60	40	1	14 6412
3 x 14	4.10	10.25	45	1	14 6414

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 beams in C-shape (82 x 30 mm), outer ladder width 480 mm.

Number of steps	Height m	Weight kg	PU	Article no.
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

50 x 25 mm aluminium rectangular pipe design, with 30 x 26 cm aluminium platform, narrow design measuring only 14 cm (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 steps	Height m	Weight kg	PU	Article no.
6	1.96	7.0	1	14 6740
7	2.19	7.8	1	14 6742
8	2.42	8.6	1	14 6744

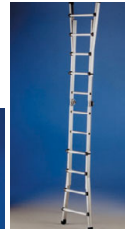


Aluminium ladders

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 run to run 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 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 beams 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 beam 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 2.30 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. 6 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, weighs only 19.3 kg.

750 mm 1 14 6722



Folding working platform

manufactured from lightweight metal. Can be folded with one handle, 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 the utmost 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, step length of 750 mm, ladder width when folded only 150 mm, complies with European Standard EN 131

Number 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 (red 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 (red powder-coated), with patented cable guidance and 2 "Schuko" 230 V 16A 3p 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 3G1.5 supply line, IP 44 protection class.

25 m	285 x 370 x 220	1	14 6904
------	-----------------	---	---------



Hand cleaner

with biodegradable abrasive agent (walnut shell flour), good cleaning power when dealing with medium soiling caused by oils, greases, carbon black, graphite, metal dusts, lubricants for example, good skin tolerance, solvent and 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
-------	--------------------	---	---------



Moist cleaning cloths

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 a textile characteristics, immersed in a liquid detergent, quick-drying without residue, particularly skin-friendly, pleasant fresh fragrance, supplied in a handy, resealable dispenser bucket with 72 cloths.

	250 x 250 mm	1 bucket	14 5018
--	--------------	----------	---------



Skin care cream

fast-absorbing cream for the hands and face especially for the care of skin under strain due to work and the environment, suitable for all skin types, moderately oily, silicone-free, unscented.

tube	100 ml	1	15 1628
------	--------	---	---------



Pickaxe

according to DIN 20 109, with oval eye, painted black, with wooden handle.

3 kg		1	13 1424
------	--	---	---------



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
--	--------------	---	---------



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
--	--------------	---	---------



Dustpan

robust design manufactured from painted metal.

		1	14 3032
--	--	---	---------



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
------	---------------	--------	---------



Cover sheets

clear-transparent, manufactured from recyclable polyethylene regenerate film, dimensions 4 m x 5 m = 20 m²

manufactured from PE-HD	film thickness 12 µm	1	14 5004
manufactured from PE-LD	film thickness 18 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
--	------------	--------	---------



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
------	--	------	---------



Professional work clothing

Print and embroidery service for emblems

with durable sewn or printed company emblem, work clothing is tax-deductible and you also take advantage of the advertising effect for your company. We produce the woven, embroidered or printed emblems in accordance with your requirements and either sew or seal the respective emblems onto the clothing. We are happy to advise you regarding design, processing and cost issues.

Dungaree overalls

canvas stretch – 60 % cotton / 40 polyester, 300 g/m²

Double bib pocket complete with flap and zip, higher back section, double folding ruler pocket, mobile phone pocket and additional front pocket, 2 back pockets. 2 side pockets, thigh pocket with zip and mobile phone pocket, pockets for knee pads, elasticated straps, side elasticated inserts, reflective piping, colour coded

Size	Anthracite/grey Article no.	Navy/royal blue Article no.	Black/red Article no.	
46-48	30 0047	30 0048	30 0046	1
50-52	30 0051	30 0052	30 0050	1
54	30 0054	30 0055	30 0053	1
56-58	30 0057	30 0058	30 0056	1
60-62	30 0061	30 0062	30 0060	1



Jeans trousers with waistband

canvas stretch – 60 % cotton / 40 % polyester, 300 g/m²

Double folding ruler pocket, additional front pocket, 2 side pockets, 2 back pockets, 1 thigh pocket with zip and mobile phone pocket, pockets for knee pads, reflective piping, colour coded

Size	Anthracite/grey Article no.	Navy/royal blue Article no.	Red/black Article no.	
46-48	30 0147	30 0148	30 0146	1
50-52	30 0151	30 0152	30 0150	1
54	30 0154	30 0155	30 0153	1
56-58	30 0157	30 0158	30 0156	1
60-62	30 0161	30 0162	30 0160	1



Jackets

canvas stretch – 60 % cotton / 40 % polyester, 300 g/m²

covered front zip, stand-up collar, 2 chest pockets and additional mobile phone pocket, 2 side pockets with flap, sleeve cuffs adjustable via popper, inside pocket, reflective piping, colour coded

Size	Anthracite/grey Article no.	Navy/royal blue Article no.	Black/red Article no.	
46-48	30 0247	30 0248	30 0246	1
50-52	30 0251	30 0252	30 0250	1
54	30 0254	30 0255	30 0253	1
56-58	30 0257	30 0258	30 0256	1
60-62	30 0261	30 0262	30 0260	1



Soft shell jackets

outer material: 94 % polyester, 6 % elastane

Lining manufactured from 100% polyester fleece, 2 side pockets, 1 chest pocket, 2 inside pockets, 1 mobile phone pocket, adjustable waist via drawstring

Size	Grey/black Article no.	Black/ grey Article no.	Black/red Article no.	PU
46-48	30 0346	30 0347	30 0348	1
50-52	30 0350	30 0351	30 0352	1
54	30 0353	30 0354	30 0355	1
56-58	30 0356	30 0357	30 0358	1
60-62	30 0360	30 0361	30 0362	1



T-Shirts

jersey - 100 % cotton, 190 g/m²

Tubular product (only one side seam), neck band, ribbed collar with elastane

Size	Black Article no.	Blue Article no.	Red Article no.	Grey Article no.	PU
46-48	30 0502	30 0512	30 0522	30 0532	1
50-52	30 0504	30 0514	30 0524	30 0534	1
54	30 0506	30 0516	30 0526	30 0536	1
56-58	30 0508	30 0518	30 0528	30 0538	1
60-62	30 0510	30 0520	30 0530	30 0540	1



Polo shirts

pique - 100 % cotton, 210 g/m²

Button panel, neck band, side slit, double seam on the sleeves and waist

Size	Black Article no.	Blue Article no.	Red Article no.	Grey Article no.	PU
46-48	30 0602	30 0612	30 0622	30 0632	1
50-52	30 0604	30 0614	30 0624	30 0634	1
54	30 0606	30 0616	30 0626	30 0636	1
56-58	30 0608	30 0618	30 0628	30 0638	1
60-62	30 0610	30 0620	30 0630	30 0640	1



Sweatshirts

50 % cotton / 50 % polyester fleece, 280 g/m²

elastic knitwear on the sleeve cuffs, collar and waist, double seams on the collar

Size	Black Article no.	Blue Article no.	Red Article no.	Grey Article no.	PU
46-48	30 0702	30 0712	30 0722	30 0732	1
50-52	30 0704	30 0714	30 0724	30 0734	1
54	30 0706	30 0716	30 0726	30 0736	1
56-58	30 0708	30 0718	30 0728	30 0738	1
60-62	30 0710	30 0720	30 0730	30 0740	1



PRESSING AND CRIMPING TOOLS

OPTIMIZED 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 with professional quality.

Hydrauliksystem
Genius 2.0



Three areas of application with only one basic tool



- Crimping up to 300 mm²
DIN compression cable lugs



- Cutting up to a diameter of 50 mm
(corresponds to 4 x 120 mm²)



- Punching up to ISO 63 diameter size or
square punching 92 x 92 mm



click 'n' crimp sets

click 'n' crimp is available in standard sets, consisting of the crimping pliers body and the three most frequently used crimping profile inserts for a particular application:



click 'n' crimp ELECTRICAL ENGINEERING

with crimping profile inserts no. 10 6010 (for insulated cable lugs 0.5 mm² to 6 mm²), no. 10 6011 (for non-insulated cable lugs 0.5 mm² to 10 mm²) and no. 10 6012 (for cable end sleeves 0.5 mm² to 10 mm²)

1 10 6000

click 'n' crimp AUTOMOTIVE

with crimping profile inserts no. 10 6010 (for insulated cable lugs 0.5 mm² to 6 mm²), no. 10 6011 (for non-insulated cable lugs 0.5 mm² to 10 mm²) and no. 10 6013 (for blade receptacles and blade terminals with open crimping ears 0.5 mm² to 6 mm²)

1 10 6002

click 'n' crimp DATA NETWORK TECHNOLOGY

with crimping profile inserts no. 10 6015 (for BNC/TNC coaxial plug connectors), no. 10 6017 (for unshielded 8-pin modular plugs) and no. 10 6019 (for shielded 8-pin modular plugs, CIMCO and similar designs)

1 10 6009

click 'n' crimp SOLAR TECHNOLOGY

with crimping profile inserts no. 10 6010 (for insulated cable lugs 0.5 mm² to 6 mm²), no. 10 6027 (for solar plug connectors type MC 3 from 2.5 mm² to 6 mm²) and no. 10 6028 (for solar plug connectors type MC 4 from 2.5 mm² to 6 mm²)

1 10 6052



click 'n' crimp crimping profile dies

click 'n' crimp can be put together according to the user's individual requirements:

click 'n' crimp crimping pliers body without crimping profile dies

1 10 6005

click 'n' crimp crimping profile dies (in pairs, consisting of upper and lower profile jaw) for insulated cable lugs, red - blue - yellow / from 0.5 mm² to 6 mm² or respectively AWG 22 to AWG 10, oval crimping (W)

IS 1 pair 10 6010

for non-insulated cable lugs 0.5 mm² to 10 mm² or respectively AWG 22 to AWG 8, indent crimping (N)

Q R 1 pair 10 6011

for insulated/non-insulated cable end sleeves 0.5 mm² to 10 mm² or respectively AWG 22 to AWG 8, trapezoid crimping (B)

AE 1 pair 10 6012

for insulated/non-insulated ferrules 16 mm² to 35 mm² or respectively AWG 5 to AWG 2, trapezoid-indent crimping (D2)

AE 1 pair 10 6014

for non-insulated blade terminal connectors and blade receptacles with open crimping ears from 0.5 mm² to 6 mm² or respectively AWG 22 to AWG 10, roll pressing (C)

FL 1 pair 10 6013

for BNC/TNC coaxial plug connectors RG 58, RG 59, RG 62 AU, RG 174, hexagonal crimping (A) (crimping sizes: 1.73 mm / 0.068" - 4.75 mm / 0.187" - 5.41 mm / 0.213" - 6.048" mm / 0.255")

1 pair 10 6015

for unshielded 6-pin modular plugs (Western plugs) RJ 11 (6P4C) and RJ 12 (6P6C), SS design, AMP (M4)

1 pair 10 6016

for unshielded 8-pin modular plugs (Western plugs) RJ 45 (8P8C), SS design, AMP (M5)

1 pair 10 6017

for shielded 8-pin modular plugs (Western plugs) RJ 45 (8P8C) CAT 5 etc., CIMCO design (M2)

1 pair 10 6019

for shielded 8-pin modular plugs (Western plugs) RJ 45 (8P8C) CAT 5 etc., HIROSE TM 11/21 design (M1)

1 pair 10 6018

for solar plug connectors type MC 3 from 2.5 mm² to 6 mm² (C3)

1 pair 10 6027

for solar plug connectors type MC 4 from 2.5 mm² to 6 mm² (C4)

1 pair 10 6028



One-handed system crimping pliers

compound leverage crimping pliers with ratchet mechanism and pressure point unlocking, with numerous interchangeable crimping dies fixed by two fastening screws. The ergonomically shaped crimping pliers are easy and convenient to use. The lever action of the handle starts the integral automatic ratchet mechanism. Forced unlocking can be regulated, guaranteeing optimum crimping results. All dies are made of carbon tool steel and are suitable for use with the PROFI-CRIMP (article no. 10 6112) and SUPER-LIGHT (article no. 10 6150) crimping pliers. The 15 different profiles are suitable for almost all kinds of cable connector crimping.



for oval crimping

Tool body PROFI-CRIMP		1	10 6112
-----------------------	--	---	---------

Crimping profile inserts for:

insulated cable lugs according to DIN: 0.5 to 1 (red), 1.5 to 2.5 (blue), 4 to 6 mm² (yellow), AWG: 10/12 - 14/16 - 18/20, with oval crimping

Crimping pliers complete with dies	220		1	10 6144
Crimping profile dies, loose, oval crimping		IS	1 pair	10 2004
Crimping profile dies, loose, standard crimping		IS	1 pair	10 2008

non-insulated cable lugs according to DIN: 1.5 to 10 mm², AWG: 8 to 20

Crimping pliers complete with dies	220		1	10 6134
Crimping dies, loose, indent crimping		Q R	1 pair	10 2003

non-insulated plug connectors with open crimping ears according to DIN: 0.5 to 1, 1.5 to 2.5, 4 to 6 mm², AWG: 10/12 - 14/16 - 18/20

Crimping pliers complete with dies	220		1	10 6136
Crimping profile dies, loose, roll crimping		FL	1 pair	10 2002

insulated and non-insulated cable end sleeves according to DIN: 0.5 - 0.75 - 1.5 - 2.5 - 4 - 6 - 10 - 16 mm², AWG: 6 - 8 - 10 - 12 - 14 - 16 - 20 - 22

Crimping pliers complete with dies	220		1	10 6120
Crimping profile dies, loose, trapezoid crimping		AE	1 pair	10 2001

insulated and non-insulated cable end sleeves according to DIN: 16 - 25 - 35 mm²

Crimping pliers with dies	220		1	10 6140
Crimping profile dies, loose, trapezoid crimping		AE	1 pair	10 2006

insulated and non-insulated cable end sleeves according to DIN: 25 and 50 mm²

Crimping pliers complete with dies	220		1	10 6142
Crimping profile dies, loose, trapezoid crimping		AE	1 pair	10 2007

shielded modular plug, 8-pin, RJ 45 CAT.5 (8P8C), CIMCO design (F236Q)

Crimping pliers complete with dies	220		1	10 6201
Crimping profile dies, loose			1 pair	10 6217

shielded modular plug, 8-pin, RJ 45 CAT.5 (8P8C), HIROSE design (2Q1)

Crimping pliers complete with dies	220		1	10 6202
Crimping profile dies, loose			1 pair	10 6215

shielded modular plug, 8-pin, RJ 45 CAT.5/6 (8P8C), Stewart Stamping design (2S)

Crimping pliers complete with dies	220		1	10 6203
Crimping profile dies, loose			1 pair	10 6216

BNC/TNC coaxial plug connectors RG 55, RG 58, RG 59, RG 62, RG 174, RG 8279, LWL (3A4)

Crimping pliers complete with dies	220		1	10 6138
Crimping profile dies, loose, hexagonal crimping			1 pair	10 6218

fibre-optic connector with round crimping, e. g. for SC-/AMP-SMA-/FC-/PC connectors (F1)

Crimping pliers complete with dies	220		1	10 6156
Crimping profile dies, loose, round crimping			1 pair	10 6213

fibre-optic connectors with hexagonal crimping, e. g. for 3M-ST, AT&T-ST, AMP-SMA connectors (3F2)

Crimping pliers complete with dies	220		1	10 6158
Crimping profile dies, loose, hexagonal crimping			1 pair	10 6214

loose crimping profile dies 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 ranges on pages 208 and 211.



Crimping pliers SUPER-LIGHT

the innovative "lightweight" for the most commonly used non-soldered cable connectors and mains plugs! The body of the crimping pliers is not made of sheet steel, as with standard crimping pliers, but of 3 mm thick sheet aluminium. This gives the following advantages:

- Enormous saving in weight! Weight including crimping profile insert only 339 g = 50 % reduced weight! This means far less tiring crimping, ideal for "multicrimpers" such as switch cabinet and controls constructors, industrial manufacture, cable assembly, etc.
- Excellent corrosion protection!
- Anti-magnetic, making it ideal for electronic uses!
- Spark-free!

With forced locking for guaranteed optimum crimping results and compound leverage ratchet mechanism, all joints set in steel bushings for long working life (more than 50,000 crimpings!). Easily interchangeable crimping profile inserts. SUPER-LIGHT crimping pliers are supplied WITHOUT crimping profile inserts. Put together your own SUPERLIGHT according to your requirements for use! CIMCO offers you 15 different crimping profiles for insulated and non-insulated cable lugs, cable end sleeves, blade terminal connectors, shielded and unshielded modular (Western) and fibre-optic connectors from various manufacturers. All the crimping profile inserts for the one-hand crimping pliers on page 206 will fit.



Crimping pliers frame without crimping profile dies	220	1	10 6150
---	-----	---	---------

As above, but with crimping insert for insulated and non-insulated cable end sleeves, trapezoid crimping (cf. order no. 10 6120)

Trapezoid crimping	0.5 - 16	220	AE	1	10 6160
--------------------	----------	-----	----	---	---------

As above, but with crimping dies for insulated cable lugs according to DIN, oval crimping (cf. order no. 10 6144)

Oval crimping	0.5 - 6	220	IS	1	10 6164
---------------	---------	-----	----	---	---------

As above, but with crimping dies for coaxial BNC/TNC connectors (cf. order no. 10 6138)

Hexagonal crimping RG 58 / RG 59 / RG 62	220	1	10 6168
--	-----	---	---------

System crimping pliers Diamant

the linear guided system crimping tool meets the highest demands in quality and functional use.

Linear method of working, unlockable forced lock, interchangeable crimping inserts, low tolerance due to double guides, special profile geometry precision, reduced hand power requirement thanks to optimum power transmission, ergonomically formed handles with anti-slip protection, fold-out positioner for optimum fixing of the contact

System crimping pliers DIAMANT	270	1	10 4220
--------------------------------	-----	---	---------



Crimping dies

for insulated cable connectors

Oval crimping 0.5 - 6	IS	1	10 4222
-----------------------	----	---	---------

for cable end sleeves

Trapezoidal crimping 0.14 - 10	AE	1	10 4224
--------------------------------	----	---	---------

for non-insulated blade terminal connectors, for insulation with overlapping crimping

Roll crimping 0.5 - 6	FL	1	10 4226
-----------------------	----	---	---------

for non-insulated blade terminal connectors, for insulation with B-crimping

Roll crimping 0.5 - 6	FL	10 4228
-----------------------	----	---------

for solar plug connectors

type MC3 2.5 - 6	10 4230
------------------	---------

for solar plug connectors

type MC4 2.5 - 6	10 4232
------------------	---------

for solar plug connectors

type MC4 1.5 - 4	10 4234
------------------	---------



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 termination in connection boxes and patch panels, professional design with pressure sensor for optimum pressing force, 2 pull-out hooks

ECONOMY model	1	11 8017
---------------	---	---------

KRONE model, pressure sensor and trimming function can be switched off	1	11 8018
--	---	---------

Crimping pliers for coaxial BNC/TNC connectors

ratchet mechanism with compound leverage, with adjustable locking (pressure point unlocking), 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
-----	---	---------



Crimping pliers ECONOMY for Western plugs

for unshielded modular plugs, with cutting and stripping tools, interchangeable blades

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 plug (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
--	---	---------



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 fibre-optic connectors

with ratchet mechanism and adjustable locking

Round crimping, crimp size: 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
--	---	---------

Hexagonal crimping, crimp size: 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
--	---	---------



Crimping pliers set DATA TECHNOLOGY/TELECOMMUNICATIONS

crimping pliers with 7 interchangeable crimping profile dies for almost all cabling work based on copper and fibre glass, conveniently arranged in a handy, impact resistant plastic case.

Contents: crimping pliers body with ratchet automatic mechanism and adjustable locking

One profile set each for:

- unshielded modular plugs (Western plugs), 8-pin RJ 45 (8P8C), (no. 10 6212)
- shielded modular plugs, 8-pin, RJ 45 CAT.5/6 (8P8C), HIROSE design (no. 10 6215)
- shielded modular plugs, 8-pin, RJ 45 CAT.5 (8P8C), STEWART STAMPING design (No. 10 6216)
- unshielded modular plugs (Western plugs), 6-pin RJ 11 (6P4C), RJ 12 (6P6C) (no. 10 6211)
- BNC/TNC coaxial plug connectors RG 55, RG 58, RG 59, RG 62, RG 174, RG 8279, fibre-optic (no. 10 6218)
- fibre-optic connectors with round crimping, e.g. for SC/AMP-SMA/FC/PC connectors (no. 10 6213)
- fibre-optic connectors with hexagonal crimping, e.g. for 3M-ST/AT&T-ST-Amphenol-SMA connectors (no. 10 6214)
- screwdriver with 1000V protective insulation for Phillips crosshead screws size PH 1 (no. 11 7731)

	1	10 6210
--	---	---------



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 contains:

- **Professional crimping tool for compression connectors (order no. 10 6152)**
Specially for RG 59 and RG 6 coaxial cables. Suitable, thanks to easily adjustable length stop, for crimping compression connectors of various lengths and types (F, BNC and RCA connectors). Also suitable for angle connectors and keystone. Very low hand power expenditure in crimping. With ergonomic two-component handle sleeves, length 195 mm
- **Coaxial cable stripping tool (article no. 12 0098)**
For quick and precise sheath and wire stripping of coaxial cables (RG 58, RG 59, RG 62, RG 6, RG 9 and others) in a single operation. With three interchangeable blades; depth of cut and distance between cuts are adjustable.
- **20 pieces F-compression connectors (article no. 18 2980)**
Double protected against moisture penetration by external sleeve and internal O-ring, outstanding shielding and mechanical stability of 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 pieces)	10	18 2980



Hand crimping pliers for insulated and non-insulated cable end sleeves and twin cable end sleeves

Crimping pliers

Trapezoid crimping	0.25 - 2.5	150	AE	1	10 1911
Indent crimping	0.5 - 2.5	150	AE	1	10 1906
Indent crimping	1.5 - 6	150	AE	1	10 1907

Notch pliers

for cable end sleeves

Indent crimping	0.5 - 16	230	AE	1	10 1904
Indent crimping	10.0 - 35	230	AE	1	10 1905

Crimping pliers for cable end sleeves, compound leverage, with ratchet mechanism and adjustable locking (pressure point unlocking)

Crimping pliers

Trapezoid crimping	0.5 - 16	226	AE	1	10 6120
--------------------	----------	-----	----	---	---------

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 cable sleeve ends, 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 space, with new-style precision steel spring component for constant crimping quality even at extremely high or low temperatures, adjustable via eccentric, unlockable forced locking, ergonomically shaped two-component handles with soft padding

Square crimping	0.14 - 6	210	AE	1	10 1940
-----------------	----------	-----	----	---	---------

Crimping pliers

with automatic adjustment to conductor cross-section

Square crimping	0.08 - 10	180	AE	1	10 1925
-----------------	-----------	-----	----	---	---------

Crimping pliers

Trapezoidal crimping	6 - 16	210	AE	1	10 1946
Trapezoidal crimping	16 - 35	226	AE	1	10 6140
Trapezoidal crimping	25 and 50	226	AE	1	10 6142

Wire stripper - QUADRO - The 4-function pliers

for efficient and precise processing of insulated cable end sleeves in strip form from 0.5 - 2.5 mm²

Functions:

1. **Cutting;** of wires and strands up to 2.5 mm²
2. **Wire stripping;** working range 0.5 - 2.5 mm²
3. **Twisting;** no fanning out of the wires means safe feed-in of the conductor into the cable end sleeves
4. **Crimping;** flawless crimping of 0.5 - 2.5 mm² by appropriate trapezoidal crimping

QUADRO complete case			AE	1	10 0728
QUADRO with magazine	180			1	10 0725

For sleeve strips, see page 248 in chapter 22.

Multi-function tool DUO CRIMP

for cutting and stripping insulation from conductors and stranded wires, as well as for crimping non-insulated and insulated cable end sleeves.

Working range of side cutter: flexible up to 6 mm²
solid up to 4 mm²

Working range of wire stripper: up to 6 mm²

Crimping range: 0.5 to 2.5 mm²
4 to 6 mm²

		160	AE	1	10 0720
--	--	-----	----	---	---------



Pressing tools **Diamant**

Automatic pressing tools:

for cable end sleeves, side feed-in of ferrule

Square crimping	0.08 - 10	AE	10 4194
-----------------	-----------	----	---------

for cable end sleeves, side feed-in of ferrule

Square crimping	2.5 - 16	AE	10 4196
-----------------	----------	----	---------

for cable end sleeves, front feed-in of ferrule

Trapezoidal crimping	0.14 - 6	AE	10 4190
----------------------	----------	----	---------

for cable end sleeves, front feed-in of ferrule

Trapezoidal crimping	10.0 - 16	AE	10 4192
----------------------	-----------	----	---------

Pressing tools:

for cable end sleeves

Trapezoidal crimping	10.0 - 50	AE	10 4200
----------------------	-----------	----	---------

for cable end sleeves

Trapezoidal crimping	50.0 - 95	AE	10 4202
----------------------	-----------	----	---------

Crimping pliers **ECONOMY**

for insulated and non-insulated cable lugs, with wire and screw cutters up to M 5, plus wire stripping device for wires 0.5 - 6 mm², crimping of wire strands and cable insulation in 2 operations

Die	Insulation stripping range mm ²				
Oval crimping	0.5 - 6	220	IS	1	10 1892

Crimping pliers for insulated cable lugs, compound leverage, with ratchet mechanism and adjustable locking (pressure point unlocking), double crimping

Crimping pliers

Oval crimping, standard	0.5 - 6	220	IS	1	10 6144
-------------------------	---------	-----	----	---	---------

Oval crimping, asymmetrical	0.5 - 6	220	IS	1	10 1916
-----------------------------	---------	-----	----	---	---------

Oval crimping	10.0 - 16	215	IS	1	10 1918
---------------	-----------	-----	----	---	---------

Crimping pliers

with cable cutter and wire stripper 0.5 - 6 mm²

Oval crimping	0.5 - 6	215	IS	1	10 1900
---------------	---------	-----	----	---	---------

for insulated terminals

Oval crimping	0.5 - 6		IS	1	10 4206
---------------	---------	--	----	---	---------

for insulated terminals

Oval crimping	6.0 - 16		IS	1	10 4210
---------------	----------	--	----	---	---------

Wire stripper and cutter for the crimping pliers design no. 10 4206

	0.5 - 6			1	10 4212
--	---------	--	--	---	---------

Crimping pliers for blade terminal connections

crimping pliers for non-insulated terminals 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 unlocking),

crimping of strand wire and cable insulation in 1 operation

Roll crimping	0.5 - 6	220	FL	1	10 6136
---------------	---------	-----	----	---	---------

for non-insulated terminals

Roll crimping	0.25 - 6		FL	1	10 4208
---------------	----------	--	----	---	---------

Wire stripper and cutter for crimping pliers design no. 10 4208

	0.5 - 6			1	10 4212
--	---------	--	--	---	---------



Crimping pliers for non-insulated cable lugs (crimping / pin-type cable lug)

Crimping pliers

compound leverage, with ratchet mechanism and locking (pressure point unlocking)

Indent crimping	1.5 - 10	220	Q	1	10 6134
Indent crimping	0.5 - 16	325	Q	1	10 1909
Indent crimping	10 - 35	325	Q	1	10 6146

for non-insulated cable connectors

Notch crimping	0.1 - 16		R Q	1	10 4204
----------------	----------	--	-----	---	---------

wire stripper and cutter for crimping pliers design no. 10 4204

	0.5 - 6			1	10 4212
--	---------	--	--	---	---------



NEW

Crimping pliers set STANDARD

crimping pliers with 4 interchangeable crimping plier inserts for the most commonly used standard cable connectors, conveniently arranged in impact-resistant plastic case

Contents: Crimping tool body with automatic ratchet mechanism and adjustable locking device

One set of crimping profiles each for:

insulated and non-insulated cable end sleeves from 0.5 to 16 mm², trapezoidal crimping, (article no. 10 2001) **WE**

insulated cable lugs from 0.5 to 6 mm² (red - blue - yellow) **LN**, symmetrical oval crimping, (article no. 10 2004)

non-insulated cable lugs from 1.5 to 10 mm², indent crimping, (article no. 10 2003) **C**

non-insulated plug connectors with open crimping ears from 0.5 to 6 mm², roll crimping, (article no. 10 2002) **FL**

knurled head screws for comfortable fastening of inserts by hand

2-component screwdriver with 1000 volt protective insulated blade, for crosshead screws,

PHILLIPS size PH 1 (article no. 11 7731)

				1	10 2000
--	--	--	--	---	---------



Crimping pliers for tubular cable lugs and connectors, "standard design"

Crimping pliers

compound leverage, with locking device (pressure point unlocking)

Indent crimping	0.75 - 16	325	R	1	10 1902
-----------------	-----------	-----	---	---	---------

Crimping pliers

with integral, rotatable profile discs, compound leverage

Notch crimping	6 - 50	600	R	1	10 1870
Notch crimping	50 - 120	970	R	1	10 1872
Notch crimping	120 - 240	975	R	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



Pressing tools for interchangeable inserts

Mechanical hand press up to 60 kN (185 mm²)

suitable for crimping conductor material up to a maximum cross-section of 185 mm².

Features:

- for interchangeable inserts DIN 48083, Sheet 1
- lightweight, compact design
- continuously adjustable telescopic handles (overall length 580 - 830 mm)
- C-shaped head, can be rotated 360°
- without pressing inserts
- pressing force: 60 kN
- max. travel: 20 mm

Additional inserts can be supplied / area of application

tubular cable lugs and connectors "standard design"
 compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1
 aluminium cable lugs and connectors
 rounding inserts for Al and Cu sector-shaped conductors
 crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230
 cable end sleeves
 twin cable end sleeves
 cutting insert
 for crimping inserts see catalogue pages 219 ff.
 further dies can be supplied on request

Cross-section range:

6 - 185
 6 - 185
 10 - 185
 10sm - 240se / 185sm
 10 - 70
 10 - 95
 2 x 4 - 2 x 16
 18 mm ø



1 10 1867

Mechanical hand press up to 60 kN (300 mm²)

suitable for crimping connector material up to a maximum conductor cross-section of 300 mm².

Features:

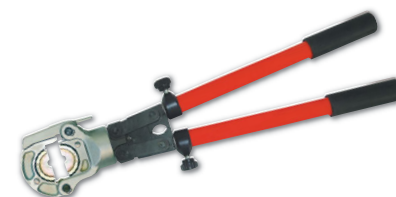
- lightweight, compact design
- continuously adjustable telescopic handles (overall length 560 - 860 mm)
- fold-out crimping head, can be rotated 360°
- without crimping inserts
- pressing strength: 60 kN
- max. travel: 19 mm

Additional inserts can be supplied / application area

tubular cable lugs and connectors "standard design"
 compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1
 aluminium cable lugs and connectors
 rounding inserts for Al and Cu sector-shaped connectors
 crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230
 cable end sleeves
 twin cable end sleeves
 for crimping inserts see catalogue pages 221 ff.
 further dies can be supplied on request

Cross-section range:

6 - 300
 6 - 300
 10 - 240
 10sm - 300se / 240sm
 10 - 70
 10 - 150
 2 x 4 - 2 x 16



1 10 1868

Hand-held hydraulic pressing tools for interchangeable inserts

Hydraulic hand press up to 60 kN (185 mm²)

suitable for crimping conductor material up to a maximum cross-section of 185 mm².

Features:

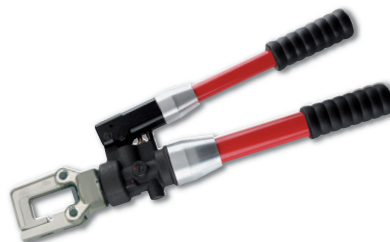
- for interchangeable inserts DIN 48083, Sheet 1
- sturdy, compact design
- fold-out crimping head, can be rotated 270°
- quick advance thanks to double piston hydraulics
- automatic pressure limit
- without crimping inserts
- max. travel: 17 mm
- pressing strength: 60 kN
- operating pressure: 700 bar (70MPa)
- scope of delivery: basic tool in plastic case with storage options for crimping inserts

Additional inserts can be supplied / application area

tubular cable lugs and connectors "standard design"
 compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1
 aluminium cable lugs and connectors
 rounding inserts for Al and Cu sector-shaped conductors
 crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230
 cable end sleeves
 twin cable end sleeves
 cutting insert
 for crimping inserts see pages 219 ff.
 further dies can be supplied on request

Cross-section range:

6 - 185
 6 - 185
 10 - 185
 10sm - 240se / 185sm
 10 - 70
 10 - 95
 2 x 4 - 2 x 16
 18 mm ø



1 10 5498

Hydraulic crimping tool up to 60 kN (300 mm²)

suitable for crimping connector material up to a maximum conductor cross-section of 300 mm².

Features:

- sturdy, compact design
- fold-out crimping head, can be rotated 270°
- quick advance thanks to double piston hydraulics
- automatic pressure limit
- without crimping inserts
- max. travel: 17 mm
- pressing strength: 60 kN
- operating pressure: 700 bar (70MPa)
- scope of delivery: basic tool in plastic case with storage options for crimping inserts

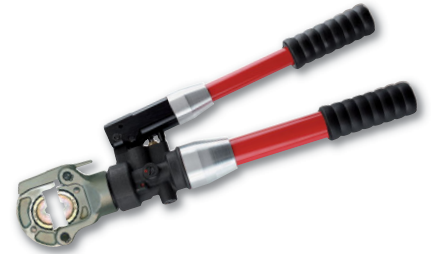
Additional inserts can be supplied / area of application

tubular cable lugs and connectors "standard design"	Cross-section range:
compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1	6 – 300
aluminium cable lugs and connectors	6 – 300
rounding inserts for Al and Cu sector-shaped conductors	10 – 240
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10sm - 300se / 240sm
cable end sleeves	10 – 70
twin cable end sleeves	10 – 150
	2 x 4 - 2 x 16

for crimping dies see catalogue pages 221 ff.

further dies available on request

1 10 5501



Hydraulic crimping tool up to 130 kN (400 mm²)

suitable for crimping of connector material up to a maximum conductor cross-section of 400 mm².

Features:

- sturdy, compact design
- C-shaped crimping head for easy insertion of the press inserts
- can be rotated 270°
- quick advance due to double piston hydraulics
- without crimping inserts
- max. travel: 30 mm
- head opening: 29 mm
- pressing strength: 130 kN
- operating pressure: 700 bar (70 MPa)
- scope of delivery: basic tool in plastic case with storage options for crimping inserts

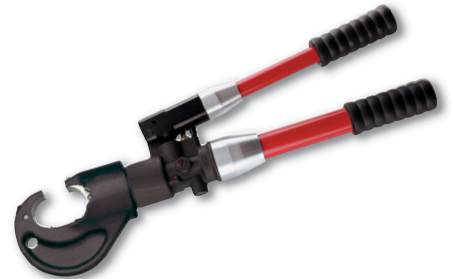
Additional inserts can be supplied / area of application

tubular cable and connectors "standard design"	Cross-section range:
compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1	10 – 400
aluminium cable lugs and connector	10 – 300
rounding insert for Al and Cu sector-shaped conductors	16 – 300
crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230	10sm - 300sm
cable end sleeves	16 – 150
	16 – 185

crimping dies see catalogue pages 223 ff.

further dies are available on request

1 10 5502



Hydraulic crimping tool up to 130 kN (400 mm²)

suitable for crimping of connector material up to a maximum conductor cross-section of 400 mm².

Features:

- sturdy, compact design
- H-shaped crimping head, can be rotated 270°
- deep groove pressing option
- quick advance thanks to double piston hydraulics
- automatic pressure limit
- without crimping inserts
- max. travel: 30 mm
- head opening: 35 mm
- pressing strength: 130 kN
- operating pressure: 700 bar (70 MPa)
- scope of delivery: basic tool in plastic case with storage options for crimping inserts

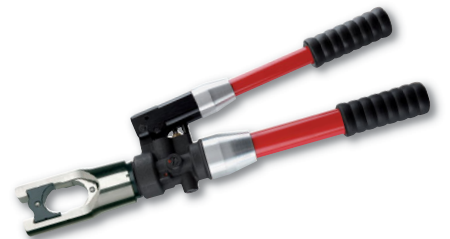
Additional inserts can be supplied / area of application

tubular cable lugs and connectors "standard design"	Cross-section range:
compression cable lugs and 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
cable end sleeves	16 – 150
	16 – 185

for crimping dies see catalogue pages 223 ff.

further dies are available on request

1 10 5504



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

Hydraulic system GENiUS 2.0

one basic device, revolutionary possibilities – optimized version with modified retraction valve!
With interchangeable head system, a wide variety of applications can be carried out with only one device and with professional quality.

The basic device is one of the smallest and lightest 60 kN battery-powered hydraulic units on the global market.

For the first time, it is possible to carry out the following functions with a single device:

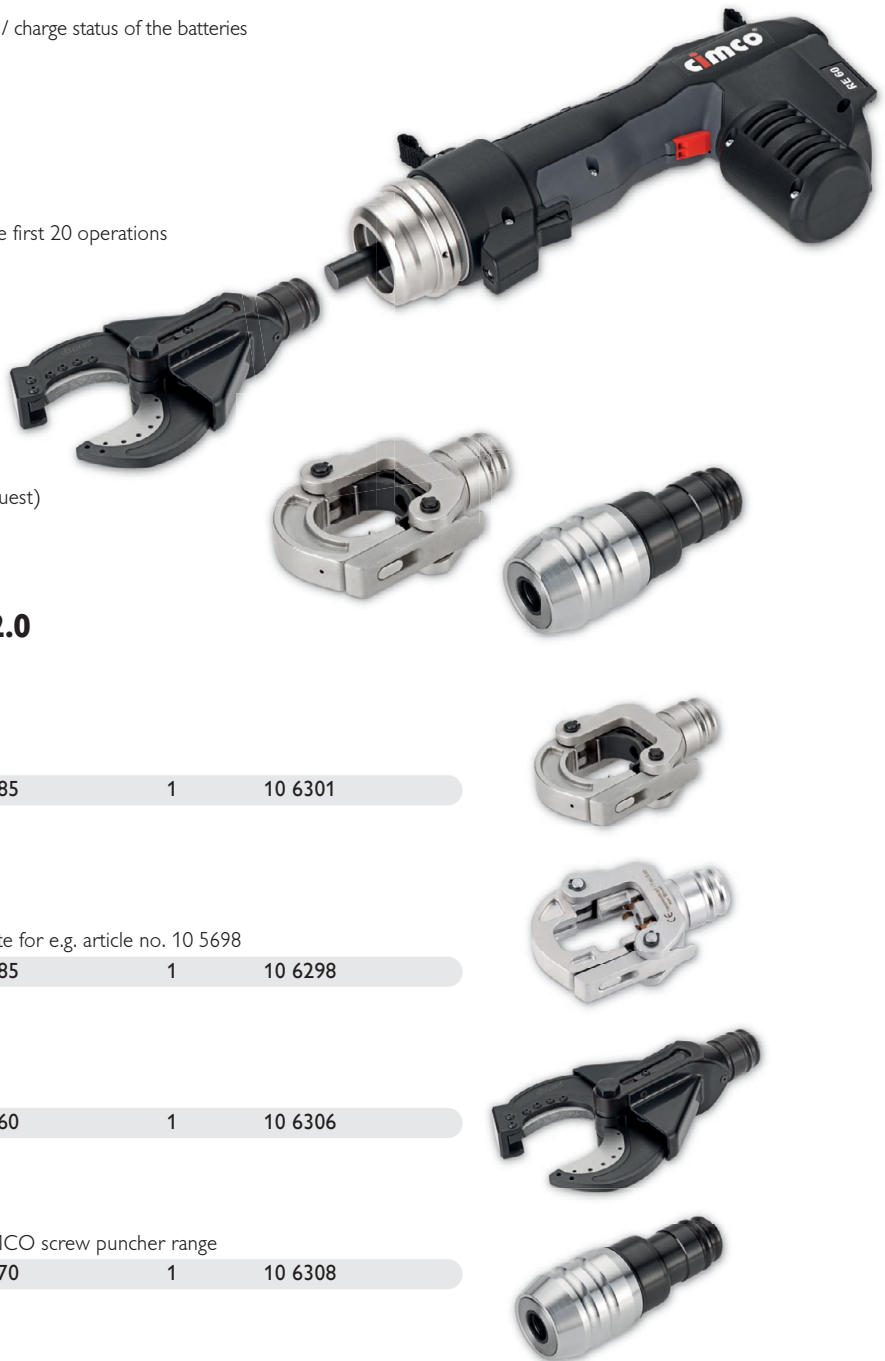
- Crimping up to 300 mm² DIN compression cable lugs
- Cutting up to a diameter of 50 mm (corresponds to 4 x 120 mm²)
- Punching to ISO 63 diameter size or square punching 92 x 92 mm

Battery-powered hydraulic basic tool will hold interchangeable heads for crimping, cutting and punching

electronic control and monitoring of the crimping, cutting and punching process.

Baton shape design - single button operating concept for easy use.

- On/off switch with automatic switch-off (no stand-by power consumption)
- Selectable light for illuminating work 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 operations with date
 - readable power curve
 - storage of all processing parameters
- Automatic guarantee start only after the completion of the first 20 operations
- Guaranteed pressing strength: 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 mm² 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
- Option for attaching a shoulder carrying strap



Interchangeable heads GENiUS 2.0

Crimping head

up to 300 mm²

Crimping inserts appropriate for e.g. article no. 10 5701

Weight 1600 g	385	1	10 6301
---------------	-----	---	---------

Crimping head

up to 185 mm²

Crimping inserts according to DIN 48083 Part 4, appropriate for e.g. article no. 10 5698

Weight 1600 g	385	1	10 6298
---------------	-----	---	---------

Cutting head

up to 50 mm max. diameter (e.g. 4 x 120 mm² NYY)

Weight 2900 g	460	1	10 6306
---------------	-----	---	---------

Punching head

up to ISO 63 diameter size or square 92 x 92 mm

Tension bolts and receptacle thread correspond to the CIMCO screw puncher range

Weight 1600 g	370	1	10 6308
---------------	-----	---	---------

Battery-powered hydraulic crimping tool GENiUS 2.0

consisting of:
 Battery-powered basic device
 Crimping head up to 300 mm²

1	10 6321
---	---------

Battery-powered hydraulic cutting tool GENiUS 2.0

consisting of:
 Battery-powered basic device
 Cutting head up to ø 50 mm

1	10 6324
---	---------

Battery-powered hydraulic punching tool GENiUS 2.0

consisting of:
 Battery-powered basic device
 Punching head

1	10 6326
---	---------

Battery-powered hydraulic crimping and cutting tool GENiUS 2.0

consisting of:
 Battery-powered basic device
 Crimping head up to 300 mm²
 Cutting head up to ø 50 mm

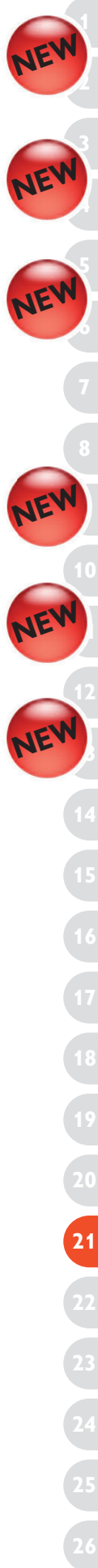
1	10 6330
---	---------

Battery charger GENiUS 2.0

1	10 4312
---	---------

Replacement rechargeable battery GENiUS 2.0

Rechargeable battery technology: 18 V 1.1Ah Li-ion	1	10 4314
--	---	---------



Battery-powered hydraulic crimping tool 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 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)
- Mini-USB interface allows connection to all current 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 (Windows 2000, XP, Vista, Windows 7).

Battery-powered hydraulic crimping tool up to 60 kN (185 mm²)

suitable for crimping conductor material up to a maximum cross-section of 185 mm².

Features:

- for interchangeable inserts DIN 48083, Sheet 1
- fold-out crimping head, can be rotated 270°
- without crimping inserts
- max. travel: 17 mm
- weight with case 10,150 g, weight without case 4,900 g
- pressing strength: 60 kN
- operating pressure: 700 bar (70MPa)
- scope of delivery: basic device in case with storage options for crimping inserts, charger, 2 rechargeable batteries, analysis software, mini USB cable

Additional inserts can be supplied / area of application

- tubular cable lugs and connectors "standard design"
- compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1
- aluminium cable lugs and connectors
- rounding inserts for Al and Cu sector-shaped conductors
- crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230
- cable end sleeves
- twin cable end sleeves
- cutting insert

for crimping inserts see catalogue pages 219 ff.
 further dies can be supplied on request

1	10 5698
---	---------

Cross-section range:

- 6 – 185
- 6 – 185
- 10 – 185
- 10sm - 240se / 185sm
- 10 – 70
- 10 – 95
- 2 x 4 - 2 x 16
- 18 mm ø



Battery powered hydraulic crimping tool up to 60 kN (300 mm²)

suitable for crimping connector material up to a maximum conductor cross-section of 300 mm².

Features:

- fold-out crimping head can be rotated by 270°
- without crimping inserts
- max. travel: 17 mm
- pressing strength: 60 kN
- weight with case 10,350 g, weight without case 5,100 g
- operating pressure: 700 bar (70MPa)
- delivery: basic device in case with storage options for crimping inserts, charger, 2 rechargeable batteries, analysis software, mini USB cable

Additional inserts can be supplied / areas of application

tubular cable lugs and connectors "standard design"
 compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1
 aluminium cable lugs and connectors
 rounding inserts for Al and Cu sector-shaped conductors
 crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230
 cable end sleeves
 twin cable end sleeves
 for crimping dies see catalogue pages 221 ff.
 further dies available on request

Cross-section range:

6 – 300
 6 – 300
 10 – 240
 10sm - 300se/240sm
 10 – 70
 10 – 150
 2 x 4 - 2 x 16



1 10 5701

Battery powered hydraulic crimping tool up to 130 kN (400 mm²)

suitable for crimping of connector material up to a maximum conductor cross-section of 400 mm².

Features:

- C-shaped crimping head for easy insertion of crimping inserts
- can be rotated 270°
- without crimping inserts
- weight with case 14,950 g, weight without case 7,750 g
- head opening: 29 mm
- pressing strength: 130 kN
- operating pressure: 700 bar (70 MPa)
- delivery: basic device in case with storage options for crimping inserts, charger, 2 rechargeable batteries, analysis software, mini USB cable

Additional inserts can be supplied / area of application

tubular cable lugs and connectors "standard design"
 compression cable lugs and connectors DIN 46235 / DIN 46267, Part 1
 aluminium cable lugs and connectors
 rounding inserts for Al and Cu sector-shaped conductors
 crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230
 cable end sleeves
 for crimping dies see catalogue pages 223 ff.
 further dies are available on request

Cross-section range:

10 – 400
 10 – 300
 16 – 300
 10sm - 300sm
 16 – 150
 16 – 185



1 10 5702

Battery powered hydraulic crimping tool up to 130 kN (400 mm²)

suitable for crimping of connector material up to a maximum conductor cross-section of 400 mm².

Features:

- H-shaped crimping insert, can be rotated 270°
- deep groove pressing option
- without crimping inserts
- head opening: 35 mm
- pressing strength: 130 kN
- operating pressure: 700 bar (70 MPa)
- scope of delivery: basic device in case with storage options for crimping inserts, charger, 2 rechargeable batteries, analysis software, mini USB cable

Additional inserts can be supplied / area of application

tubular cable lugs and connectors "standard design"
 compression cable lugs and cable connectors DIN 46235 / DIN 46267, Part 1
 aluminium cable lugs and connectors
 round press inserts for Al and Cu sector-shaped conductors
 crimping cable lugs DIN 46234 / pin-type cable lugs DIN 46230
 cable end sleeves
 weight with case 14,550 g, weight without case 6,100 g,
 for crimping dies see pages 223 ff,
 further dies are available on request

Cross section range:

10 – 400
 10 – 300
 16 – 300
 10sm - 300sm
 16 – 150
 16 – 185



1 10 5704

Accessories for battery-powered crimping tools, crimp- and cutting tools

Rechargeable battery

14.4 V lithium-ion rechargeable battery for all CIMCO battery-operated hydraulic pressing and cutting tools

	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 CIMCO battery-powered hydraulic crimping and cutting tools, except GENIUS

Operating system Windows 2000, XP, Vista, Windows 7	1	10 5555
---	---	---------

Compact electro-hydraulic drive unit

hydraulic battery/mains drive unit, suitable for operating all industry standard hydraulic pressing and cutting tools. Compact construction, smaller size and lower weight enable universal deployment and mobility. The drive unit's distinguishing feature is very high performance that makes for great productivity.

Features:

- lightweight, compact and sturdy construction
- with remote control (1.5 m)
- ergonomic design
- integral scratch-proof display
- quick tools return due to high return displacement volume
- pressure monitoring via electronic pressure sensor
- Li-ion rechargeable battery
- charging status display on the battery
- double piston technology for fast advance and high pressure:
 - displacement vol. in low pressure up to < 100 bar: 1.15 l/m
 - displacement vol. in high pressure up to 700 bar: 0.1 l/m
 - operating pressure: 700 bar (70 MPa)
 - 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 (including battery)	290 x 190 x 205 mm	1	10 5650
-----------------------------------	--------------------	---	---------



Accessories

hydraulic crimping head, round, up to 300 mm², pressing strength 60 kN

	1	10 5652
--	---	---------

hydraulic crimping head up to 400 mm², pressing strength 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 from other manufacturers

	1	10 5653
--	---	---------



Hydraulic cylinder

for all electric, foot and hand operated pumps with quick coupling connection and a maximum output pressure of 700 bar. Compact design, for punching round, square and rectangular openings plus 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 diameter 19.0 mm
- Operating pressure 700 bar
- Drip-free coupling and uncoupling
- Convenient operation
- With dust protection cap

	1	13 4023
--	---	---------



Pneumatic pressing tool **Diamant**

ergonomic shape and low weight combine to provide extremely easy handling - even in continuous use. The pneumatic pressing tool is intended for series production of individual contacts as well as for use in switch cabinet construction. Compressed air drive allows for precise and consistent crimping connections. The integral forced locking ensures complete closure of the device. The tool head, which can be rotated 360°, adjusts to the desired working position and enables optimum handling. The optional foot switch available allows the device to be used for stationary work as a table tool.

Technical data:

Approved pressure range: 6 to 8 bar, air consumption at 6 bar: 0.75 l per cycle, length of cycle: max. 1 second, weight: 1.5 kg

	1	10 4250
--	---	---------

Crimping heads for pneumatic pressing tool

for insulated cable connectors

Oval crimping	0.5 - 6	IS	1	10 4260
---------------	---------	----	---	---------

for non-insulated blade terminal connectors

Roll crimping	0.5 - 6	FL	1	10 4262
---------------	---------	----	---	---------

for non-insulated cable connectors

Notch crimping	0/5 - 6	Q	1	10 4264
----------------	---------	---	---	---------

for wire end ferrules

Trapezoidal crimping	0.14 - 10	AE	1	10 4266
----------------------	-----------	----	---	---------

Accessories for pneumatic pressing tool

Table bracket	1	10 4251
Activating unit with foot switch	1	10 4252

Safety crimp press

with its newly developed (patent applied for) safety mechanism, this pneumatic table pressing tool now has an integrated safety valve available. The valve only allows crimping if the opening between the impact surfaces of the dies is smaller than 5.9 mm. This means all forms of prescribed safety covers to protect the operator are no longer necessary. The safety double foot pedal also increases productivity and simplifies use further.

The mechanical pneumatic safety control guarantees a 3-stage crimping procedure:

- Stage 1 holding down the contact
- Stage 2 pre-pressing (can be continuously activated)
- Stage 3 effective contact crimping

Technical data:

Crimping strength: starts at 9 kN and increases exponentially; up to 120 kN in the last millimeter of travel.

Operating pressure: max. 6 bar / 90 PSI

Noise level: 62 dB(A)

Dimensions: 280 x 160 x 280 mm

Weight: 26 kg

Equipped with:

- electronic piece counter
- sequence control system
- closing speed control
- pneumatic safety double foot pedal
- colour-coded 4-fold connection hose

	1	10 4254
--	---	---------

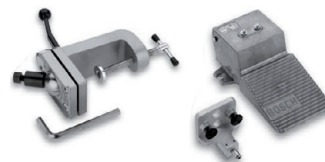
Accessories for safety crimp press

die holder for crimping inserts

	1	10 4256
--	---	---------

Crimping dies for safety crimp press

the crimping inserts are identical to the inserts for the CIMCO system crimping pliers - article no.: 10 4220 / page 207.

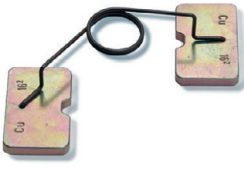


Crimping dies for tools no. 10 1867, no. 10 5498 and no. 10 5698

for tubular cable lugs and connectors "standard design"

Hexagonal crimping, compression width 5 mm

mm ²				
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 connectors DIN 46235/46267

Hexagonal crimping, compression width 5 mm

mm ²	identification number 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



- 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

Crimping dies for tools no. 10 1867, no. 10 5498 and no. 10 5698

for aluminium cable lugs and connectors DIN 46239 and similar

Hexagonal crimping, compression width 7 mm

mm ²	identification number 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

for rounding of single-strand (se) and multi-strand (sm) Al and Cu sector-shaped conductors, for 3 and 4 sector-shaped conductors (120° and 90°)

rounding width 19.5 mm

mm ²	identification number 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 crimping

mm ²				
10	Q	1 pair	10 5442	
16	Q	1 pair	10 5444	
25	Q	1 pair	10 5446	
35	Q	1 pair	10 5448	
50	Q	1 pair	10 5450	
70	Q	1 pair	10 5452	
95	Q	1 pair	10 5454	

for twin cable end sleeves

Trapezoidal crimping, compression width 20 mm

mm ²				
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	

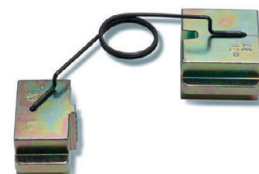
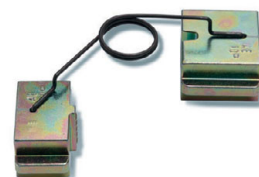
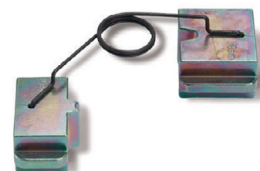
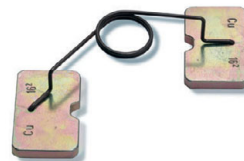
for twin cable end sleeves

Trapezoidal crimping, compression width 20 mm

mm ²				
2 x 4	AE	1 pair	10 5480	
2 x 6	AE	1 pair	10 5482	
2 x 10	AE	1 pair	10 5484	
2 x 16	AE	1 pair	10 5486	

cutting insert for Al and Cu cables

Cutting range up to 18 mm ø		1 pair	10 5490
-----------------------------	--	--------	---------



Crimping dies for tools 10 1868, 10 5501 and 10 5701

for tubular cable lugs and connectors "standard design"

Hexagonal crimping, compression width 5 mm

mm ²				
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 compression cable lugs and connectors DIN 46235/46267

Hexagonal crimping, compression width 5 mm

mm ²	Identification number 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, compression width 7 mm

mm ²	Identification number 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



Crimping dies for tools 10 1868, 10 5501 and 10 5701

for rounding of single-strand (se) and multi-strand (sm) Al and Cu sector-shaped conductors, for 3 and 4 sector-shaped conductors (120° and 90°)
rounding width 19.5 mm

mm ²	identification number 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 crimping

mm ²			
10	Q	1 pair	10 5760
16	Q	1 pair	10 5761
25	Q	1 pair	10 5762
35	Q	1 pair	10 5763
50	Q	1 pair	10 5764
70	Q	1 pair	10 5765



for cable end sleeves

Trapezoidal crimping, compression width 20 mm

mm ²			
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 cable end sleeves

Trapezoidal crimping, compression width 20 mm

mm ²			
2 x 4	AE	1 pair	10 5780
2 x 6	AE	1 pair	10 5781
2 x 10	AE	1 pair	10 5782
2 x 16	AE	1 pair	10 5783



Crimping dies for tools no. 10 5502, no. 10 5504, no. 10 5702 and no. 10 5704

for tubular cable lugs and connectors "standard design"

Hexagonal crimping, wide compression (exception: 300 and 400 mm² / 7 mm)

mm ²				
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 compression (exception: 240 and 300 mm² / 7 mm)

mm ²	Identification number 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 compression

mm ²	Identification number 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



- 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

Crimping dies for tools no. 10 5502, no. 10 5504, no. 10 5702 and no. 10 5704

for rounding of single-strand (se) and multi-strand (sm) Al and Cu sector-shaped conductors, for 3 and 4 sector-shaped conductors (120° and 90°)

Rounding width 35 mm

mm ²	identification number 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 crimping

mm ²				
16		Q	1 pair	10 5942
25		Q	1 pair	10 5944
35		Q	1 pair	10 5946
50		Q	1 pair	10 5948
70		Q	1 pair	10 5950
95		Q	1 pair	10 5952
120		Q	1 pair	10 5954
150		Q	1 pair	10 5956



for cable end sleeves

Trapezoidal crimping, compression width 20 mm

mm ²				
10		AE	1 Paar	10 5962
16		AE	1 Paar	10 5964
25		AE	1 Paar	10 5966
35		AE	1 Paar	10 5968
50		AE	1 Paar	10 5970
70		AE	1 Paar	10 5972
95		AE	1 Paar	10 5974
120		AE	1 Paar	10 5976
150		AE	1 Paar	10 5978
185		AE	1 Paar	10 5980
240		AE	1 Paar	10 5982



SOLDERLESS + INSULATED CABLE CONNECTORS, CABLE END SLEEVES

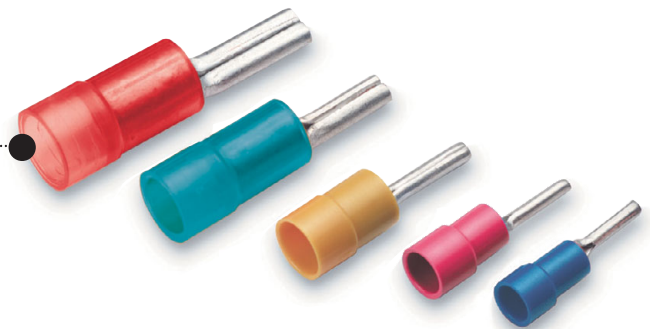


Solderless cable connectors

- 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 newest 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 newest testing standards
- Compatible with all market standards
- Hard soldered ferrule seam, maximum electrical and mechanical capacity



Cable end sleeves

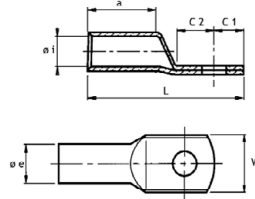
- Highest copper quality according to DIN EN 13600
- Premium insulation guarantees dielectric strength
- Identification via colour coding
- Adjusted crimp profile for tapered, finely stranded conductors according to IEC 228
- Improve contacting in the terminals
- Prevent finely stranded conductors from fanning out

Solderless cable connectors

Tubular cable lugs, Cu, standard design

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- Also available with inspection hole
- Also suitable for finely stranded conductors according to IEC 228 tubular cable lugs, Cu, standard design
- Annealed to copper hardness F 20



Cross sect. (mm ²)	Bolt 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	0.06	100	18 0650
	4	8	1.4	3.2	4.1	6.6	6.9	19.6	0.06	100	18 0652
	5	8	1.4	3.2	4.1	6.6	6.9	19.6	0.06	100	18 0654
1.5	4	6.5	1.9	3.3	3.5	5	6	17	0.08	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	0.17	100	18 0670
	5	8	2.3	3.9	3.8	6.1	6.9	20.1	0.17	100	18 0672
	6	10.7	2.3	3.9	6.1	8.1	6.9	25.2	0.17	100	18 0674
	8	12	2.3	3.9	6.1	8.1	6.9	25.2	0.17	100	18 0676
4	4	9	2.7	5	6.2	7.4	9	26	0.26	100	18 0680
	5	9	2.7	5	6.2	7.4	9	26	0.26	100	18 0682
	6	12	2.7	5	6.2	7.4	9	26	0.26	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	0.6	100	18 0694
	8	12	3.5	6.5	6.8	6.5	9	26.5	0.65	100	18 0696
	10	15	3.5	6.5	9.8	9.5	9	32.5	0.7	100	18 0697
10	12	17	3.5	6.5	12	12	9	35	0.71	100	18 0698
	5	12	4.5	7	6.8	6.5	10	28	0.52	100	18 0700
	6	12	4.5	7	6.8	6.5	10	28	0.5	100	18 0702
	8	15	4.5	7	9.8	9.5	10	34	0.6	100	18 0704
16	10	17	4.5	7	11.8	11.5	10	38	0.66	100	18 0705
	12	19	4.5	7	13	12.5	10	41	0.66	100	18 0706
	5	12	5.5	8.5	6.8	6.5	13	31.5	0.87	100	18 0709
	6	12	5.5	8.5	6.8	6.5	13	31.5	0.84	100	18 0710
25	8	15	5.5	8.5	9.8	9.5	13	37.5	0.99	100	18 0712
	10	17	5.5	8.5	11.8	11.5	13	41.5	1.07	100	18 0714
	12	19	5.5	8.5	13	12.5	13	44	1.05	100	18 0715
	5	14	7	10	7	7	15	35.5	1.21	50	18 0718
35	6	14	7	10	7	7	15	35.5	1.18	50	18 0720
	8	16	7	10	9.5	9.5	15	40.5	1.32	50	18 0722
	10	18	7	10	11.5	11.5	15	44.5	1.41	50	18 0724
	12	19	7	10	13	13.5	15	48	1.46	50	18 0725
	14	21	7	10	14.5	14.5	15	52.5	1.43	50	18 0726
	6	17	8.5	12	7	7	17	39	1.85	50	18 0730
50	8	17	8.5	12	9.5	9.5	17	44	2.03	50	18 0732
	10	19	8.5	12	11.5	11.5	17	48	2.17	50	18 0734
	12	21	8.5	12	13	13.5	17	51.5	2.23	50	18 0735
	14	21	8.5	12	14	14.5	17	53.5	2.24	50	18 0736
20	16	26	8.5	12	16	16	17	58	2.26	50	18 0737
	6	20	10	14	9.5	9.5	19	47	3.04	50	18 0739
	8	20	10	14	9.5	9.5	19	47	2.96	50	18 0740
	10	20	10	14	11.5	11.5	19	51	3.12	50	18 0742
	12	23	10	14	13	13.5	19	54.5	3.26	50	18 0744
	14	23	10	14	14	14.5	19	56.5	3.29	50	18 0745
25	16	28	10	14	16	16	19	62	3.93	50	18 0746
	20	30	10	14	19	19	19	67	4.16	50	18 0747

Tubular cable lugs, Cu, standard design



R

See previous page for description

Cross sect. (mm ²)	Bolt 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	4.3	50	18 0749
	8	23	12	16.5	11.5	11.5	21	54	4.62	25	18 0750
	10	23	12	16.5	11.5	11.5	21	54	4.5	25	18 0752
	12	23	12	16.5	13	13.5	21	57.5	4.63	25	18 0754
	14	23	12	16.5	14	14.5	21	59.5	4.66	25	18 0755
	16	28	12	16.5	15.5	16	21	62.5	4.89	25	18 0756
	20	30	12	16.5	19	19	21	72	5.63	25	18 0758
95	8	26	13.5	18	11.5	11.5	25	59	5.68	25	18 0759
	10	26	13.5	18	11.5	11.5	25	59.5	5.56	25	18 0760
	12	26	13.5	18	13	13.5	25	63	5.73	25	18 0762
	14	26	13.5	18	14	14.5	25	65	5.79	25	18 0763
	16	28	13.5	18	15.5	16	25	68	5.93	25	18 0764
	20	36	13.5	18	22	22	25	82	6	25	18 0766
120	8	28	15	19.5	13	13.5	26	65.5	6.89	20	18 0768
	10	28	15	19.5	13	13.5	26	65.5	6.77	20	18 0770
	12	28	15	19.5	13	13.5	26	65.5	6.59	20	18 0772
	14	28	15	19.5	14	14.5	26	67.5	6.66	20	18 0773
	16	30	15	19.5	15.5	16	26	70.5	6.84	20	18 0774
	20	36	15	19.5	22	22	26	85	7.74	20	18 0776
150	8	31	16.5	21	14.5	14.5	30	73	8.39	20	18 0778
	10	31	16.5	21	14.5	14.5	30	73	8.28	20	18 0780
	12	31	16.5	21	14.5	14.5	30	73	8.1	20	18 0782
	14	31	16.5	21	14.5	14.5	30	73	7.96	20	18 0783
	16	31	16.5	21	15.5	16	30	75.5	8.06	20	18 0784
	20	36	16.5	21	22	22	30	88	8.8	20	18 0786
185	10	35	19	24	17	18	30	81	11.8	10	18 0788
	12	35	19	24	17	18	30	81	11.59	10	18 0790
	14	35	19	24	17	18	30	81	11.43	10	18 0791
	16	35	19	24	17	18	30	81	11.21	10	18 0792
	20	39	19	24	21	22	30	89	11.98	10	18 0794
240	10	39	21	26	17	18	35	88	14.08	10	18 0798
	12	39	21	26	17	18	35	88	13.87	10	18 0800
	14	39	21	26	17	18	35	88	13.71	10	18 0801
	16	39	21	26	17	18	35	88	13.49	10	18 0802
	20	39	21	26	21	22	35	96	14.21	10	18 0804
300	12	43	23.5	29.5	17	18	44	99	21.31	5	18 0818
	14	43	23.5	29.5	17	18	44	99	21.11	5	18 0819
	16	43	23.5	29.5	17	18	44	99	20.85	5	18 0820
	20	43	23.5	29.5	21	22	44	107	21.92	5	18 0822
400	12	49	27	34	23	23	44	112	32.62	5	18 0826
	14	49	27	34	23	23	44	112	32.39	5	18 0828
	16	49	27	34	23	23	44	112	32.08	5	18 0830
	20	49	27	34	23	23	44	112	31.25	5	18 0832

Angled tubular cable lugs, Cu

Standard design with 90° and 45° angle

Specifications

- 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

90° angle

Cross sect. (mm ²)	Bolt ø (mm)	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
6	5	0.6	100	18 3160
	6	0.59	100	18 3161
	8	0.67	100	18 3162
	10	0.72	100	18 3163
	12	0.77	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
16	12	0.76	100	18 3169
	5	1.01	100	18 3170
	6	1	100	18 3171
	8	1.1	100	18 3172
25	10	1.17	100	18 3173
	12	1.23	100	18 3174
	5	1.34	100	18 3175
	6	1.31	100	18 3134
35	8	1.47	100	18 3135
	10	1.56	100	18 3176
	12	1.6	100	18 3177
	6	2.04	100	18 3156
50	8	2.28	100	18 3130
	10	2.39	100	18 3136
	12	2.54	100	18 3157
	6	3.13	100	18 3158
70	8	3.38	100	18 3131
	10	3.52	100	18 3137
	12	3.8	100	18 3159
	8	5.09	100	18 3132
95	10	5.34	100	18 3133
	12	5.44	100	18 3140
	16	5.85	100	18 3141
	8	6.11	50	18 3138
120	10	6.27	50	18 3139
	12	6.48	50	18 3142
	16	7.12	50	18 3143
	8	6.69	50	18 3144
150	10	7.1	50	18 3145
	12	7.23	50	18 3146
	16	7.81	50	18 3147
	10	8.2	50	18 3148
185	12	8.3	50	18 3149
	12	11.9	50	18 3150
240	20	12	50	18 3152
	10	14.6	20	18 3153
	12	14.4	20	18 3154
	20	14.8	20	18 3155

45° angle

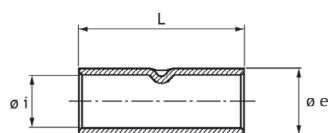
Cross sect. (mm ²)	Bolt ø (mm)	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
6	5	0.6	100	18 3060
	6	0.59	100	18 3061
	8	0.67	100	18 3062
	10	0.72	100	18 3063
10	12	0.77	100	18 3064
	5	0.6	100	18 3065
	6	0.59	100	18 3066
	8	0.67	100	18 3067
16	10	0.72	100	18 3068
	12	0.76	100	18 3069
	5	1.01	100	18 3070
	6	1	100	18 3071
25	8	1.1	100	18 3072
	10	1.17	100	18 3073
	12	1.23	100	18 3074
	5	1.34	100	18 3075
35	6	1.31	100	18 3034
	8	1.47	100	18 3035
	10	1.56	100	18 3052
	12	1.6	100	18 3053
50	6	2.04	100	18 3056
	8	2.28	100	18 3030
	10	2.39	100	18 3036
	12	2.54	100	18 3057
70	6	3.13	100	18 3058
	8	3.38	100	18 3031
	10	3.52	100	18 3037
	12	3.76	100	18 3059
95	8	5.24	100	18 3032
	10	6.46	100	18 3033
	12	5.69	100	18 3040
	16	5.94	100	18 3041
120	8	6.3	50	18 3038
	10	6.46	50	18 3039
	12	6.68	50	18 3042
	16	7.06	50	18 3043
150	8	6.87	50	18 3044
	10	7.29	50	18 3045
	12	7.71	50	18 3046
	16	8.03	50	18 3047
185	10	8.6	50	18 3048
	12	13.2	50	18 3050
	16	13	50	18 3051

Butt connectors, Cu, standard design

Specifications

- 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

Cross sect. (mm ²)	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	0.52	100	18 0908
10	4.5	7	28	0.6	100	18 0910
16	5.5	8.5	34	1.03	100	18 0912
25	7	10	38	1.43	100	18 0914
35	8.5	12	42	2.26	50	18 0916
50	10	14	48	3.36	50	18 0918
70	12	16.5	52	4.93	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	22.8	25	18 0932
400	27	34	102	29.6	10	18 0934



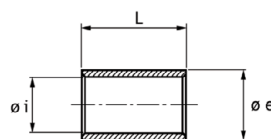
R

Parallel connectors, Cu, standard design

Specifications

- 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

Cross sect. (mm ²)	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	0.09	100	18 3182
4-6	3.6	5.6	7	0.15	100	18 3184
10	4.5	6.7	9	0.16	100	18 3186
16	5.8	8.2	10	0.25	100	18 3188
25	7.5	10.5	11	0.49	50	18 3190
35	9	12.2	12	0.74	50	18 3192
50	11	15	16	1.13	50	18 3194
70	13.1	17	19	1.5	50	18 3196
95	14.5	19	20	2.1	25	18 3198
120	16.2	21	20	3.35	25	18 3200
150	18	23	20	4.9	25	18 3202
185	20.6	26	28	5	10	18 3204
240	23	28	31	6	10	18 3206

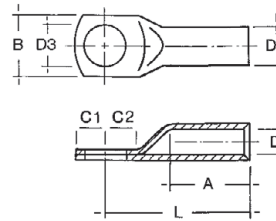


R

NEW

Tubular cable lugs for switchgear connections

- Design with narrow flange, without inspection hole
- Material: ETP Cu according to DIN EN 13 600, soft, F20, so that even large cross sections can be crimped manually
- Surface: galvanically tin-coated



Cross sect. (mm ²)	Bolt ø (mm)	Dimension								Weight per 100 pcs. ~kg	PU/pcs.	Article no.
		ø D1	A	B	ø D3	ø D2	C1	C2	L			
35	6	8.5	17	15	6.5	12	7.5	7.5	32	1.78	25	18 3800
50	6	10	19	15	6.5	14	10	10	37	2.95	25	18 3802
		8	10	19	17	8.5	14	10	10	37	2.82	25
70	10	10	19	19	10.5	14	11.5	12	39	3.08	25	18 3806
	6	12	21	17	6.5	16	10	10	43	4.22	25	18 3808
	8	12	21	17	8.5	16	10	10	43	4.10	25	18 3810
95	10	12	21	19	10.5	16	11.5	12	44	4.45	25	18 3812
	12	12	21	19	13	16	13	13	46	4.22	25	18 3814
	8	13.5	25	19	8.5	18	11.5	12	48	5.46	25	18 3816
120	10	13.5	25	19	10.5	18	11.5	12	48	5.13	25	18 3818
	12	13.5	25	19	13	18	13	13	49	5.15	25	18 3820
	8	15	26	19	8.5	19.5	11.5	14	51	5.94	10	18 3822
150	10	15	26	19	10.5	19.5	11.5	14	51	5.81	10	18 3824
	12	15	26	19	13	19.5	14	14	51	5.92	10	18 3826
	8	16.5	30	19	8.5	21	11.5	14	56	6.80	10	18 3828
185	10	16.5	30	19	10.5	21	11.5	14	56	6.75	10	18 3830
	12	16.5	30	19	13	21	15	15	57	7.15	10	18 3832
	10	19.5	30	24.5	10.5	24	11.5	18	65	10.59	10	18 3834
240	12	19.5	30	31	13	24	18	18	65	11.09	10	18 3836
	16	19.5	30	31	17	24	18	18	65	9.76	10	18 3838
	10	21.5	35	31	10.5	26	11.5	19	72	12.70	5	18 3840
300	12	21.5	35	31	13	26	21.5	19	72	13.72	5	18 3842
	16	21.5	35	31	17	26	21.5	19	72	13.28	5	18 3844
	10	23.5	44	31	10.5	30	11.5	24	87	19.70	5	18 3846
300	12	23.5	44	31	13	30	24	24	87	22.72	5	18 3848
	16	23.5	44	31	17	30	24	24	87	22.50	5	18 3850

Available upon request!

Sleeves for compacted or tapered conductors, Cu, standard design

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Suitable for compacted, multi-stranded or tapered, finely stranded conductors for diameter equalisation (only narrow hex crimping!)

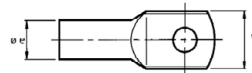
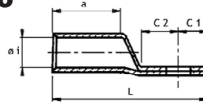


Cross sect. (mm ²)	Length (mm)	PU/pcs.	Article no.
16	11	100	18 3400
25	14	100	18 3401
35	15	100	18 3402
50	18	50	18 3403
70	19	50	18 3404
95	21	50	18 3405
120	22	50	18 3406
150	26	25	18 3407
185	26	25	18 3408
240	30	25	18 3409
300	10	10	18 3410
400	10	10	18 3411

Tubular cable lugs, Cu, designed for finely stranded conductors according to DIN 0295 and IEC 228

Specifications

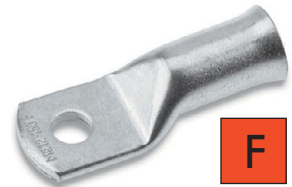
- Material: ETP Cu according to DIN EN 13600
- „Easy Entry“ flared cable entry
- Surface: galvanically tin-coated, other surfaces available upon request
- Annealed to copper hardness F 20



Cross sect. (mm ²)	Bolt 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	0.81	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	0.85	100	18 3260
	12	15	5.6	8	8	10	12.6	36	0.8	100	18 3262
16	5	13	6.6	9.5	7	9	14.6	37.6	1.15	50	18 3265
	6	13	6.6	9.5	7	9	14.6	37.6	1.14	50	18 3266
	8	16	6.6	9.5	9	11	14.6	41.6	1.24	50	18 3268
	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
25	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
	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
35	6	18	9.2	12.5	7	10	18.5	43.5	2.11	50	18 3286
	8	18	9.2	12.5	10	14	18.5	51	2.43	50	18 3288
	10	18	9.2	12.5	10	14	18.5	51	2.35	50	18 3290
	12	19	9.2	12.5	10	14	18.5	51	2.23	50	18 3292
	14	20.8	9.2	12.5	10	14.5	18.5	51	2.16	50	18 3294
50	6	21	11	15	10	14	21.5	55.5	3.75	50	18 3296
	8	21	11	15	10	14	21.5	55.5	3.88	50	18 3298
	10	21	11	15	10	14	21.5	55.5	3.78	50	18 3300
	12	21	11	15	10	14	21.5	55.5	3.62	50	18 3302
	14	21	11	15	10	14	21.5	55.5	3.5	50	18 3304

Tubular cable lugs, Cu, designed for finely stranded conductors according to DIN 0295 and IEC 228

See previous page for description



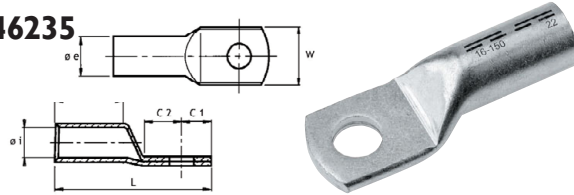
F

Cross sect. (mm ²)	Bolt 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	5.47	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	5.15	25	18 3312
	14	24	13.1	17	13.5	15.5	27.5	67.5	5.02	25	18 3314
	16	24	13.1	17	13.5	15.5	27.5	67.5	4.86	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	7.37	25	18 3322
	14	28	14.5	19	13	17	32.5	75.5	7.15	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	9.76	10	18 3328
	10	30	16.2	21	17	17	31.5	80	9.64	10	18 3330
	12	30	16.2	21	17	17	31.5	80	9.54	10	18 3332
	14	30	16.2	21	17	17	31.5	80	9.29	10	18 3334
	16	30	16.2	21	17	17	31.5	80	9.1	10	18 3336
150	8	33	18	23	17	18	35.5	89	11.25	10	18 3338
	10	33	18	23	17	18	31.5	89	11.12	10	18 3340
	12	33	18	23	17	18	31.5	89	10.93	10	18 3342
	14	33	18	23	17	18	31.5	89	12.77	10	18 3344
	16	33	18	23	17	18	31.5	89	12.56	10	18 3346
	20	33	18	23	13.5	21.5	31.5	89	11.98	10	18 3348
185	10	37	20.6	26	19	20	39.6	96	16.49	10	18 3350
	12	37	20.6	26	19	20	39.6	96	16.27	10	18 3352
	14	37	20.6	26	19	20	39.6	96	16.1	10	18 3354
	16	37	20.6	26	19	20	39.6	96	15.88	10	18 3356
	20	37	20.6	26	19	20	39.6	96	15.25	10	18 3360
240	12	41	23	28	19	21	41	101	17.44	10	18 3362
	14	41	23	28	19	21	41	101	17.28	10	18 3364
	16	41	23	28	19	21	41	101	17.07	10	18 3366
	20	41	23	28	19	21	41	101	16.49	10	18 3370
300	12	47	26	32	20	25	43	111	26.33	10	18 3372
	14	47	26	32	20	25	43	111	26.14	10	18 3374
	16	47	26	32	20	25	43	111	25.88	10	18 3376
	20	47	26	32	20	25	43	111	25.2	10	18 3380

Tubular compression cable lugs, Cu, DIN 46235

Specifications

- 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



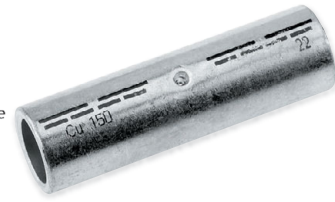
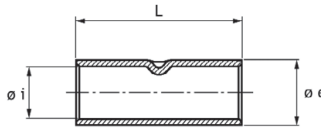
D

Cross sect (mm ²)	Bolt 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	0.35	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
50	14	12	21	8.2	12.5	15.5	14.5	20.5	58.5	4.4	25	18 3516
	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
70	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
	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
95	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
	8	18	28	13.5	19	11	16.5	37	77	9.95	25	18 3574
120	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
150	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
185	20	20	38	15.5	21	20	21	38	91	12.18	25	18 3535
	10	22	34	17	23.5	13	21	41	92	16.97	10	18 3536
	12	22	34	17	23.5	14	21	41	93	15.16	10	18 3537
	14	22	34	17	23.5	15.5	21	41	94.5	16.38	10	18 3538
240	16	22	34	17	23.5	17	21	41	96	17.43	10	18 3539
	20	22	40	17	23.5	20	21	41	99	17.65	10	18 3540
	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
300	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
	12	28	42	21.5	29	14	24	51	107	27.55	5	18 3546
400	14	28	42	21.5	29	15.5	24	51	108.5	28.7	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
500	14	32	48	24.5	32	15.5	24	55	116.5	37.4	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
625	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 joints, Cu, DIN 46267, part 1

Specifications

- 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 sect. (mm ²)	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	0.34	100	18 3701
16	8	5.5	8.5	51	1.5	100	18 3702
25	10	7	10	51	1.82	50	18 3703
35	12	8.2	12.5	51	3.17	50	18 3704
50	14	10	14.5	57	4.39	50	18 3705
70	16	11.5	16.5	57	5.57	50	18 3706
95	18	13.5	19	71	8.86	25	18 3707
120	20	15.5	21	71	9.95	25	18 3708
150	22	17	23.5	81	14.89	10	18 3709
185	25	19	25.5	86	17.37	10	18 3710
240	28	21.5	29	91	24.07	10	18 3711
300	32	24.5	32	101	29.88	5	18 3712
400	38	27.5	38.5	151	76.54	5	18 3713
500	42	31	42	161	90.27	1	18 3714
625	44	34.5	44	161	83.83	1	18 3715

Tubular compression cable lugs, Al, DIN 46329

made of E-Al, bare, barrier seal design with oil stop.



AL

NEW

Bore	Index	D1 mm	D2 mm	A mm	B mm	L mm	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
50 mm ² rm/sm and 70 mm ² se cross section									
M 8	16	9.8	8.4	42	25	62	2.75	4	18 3617
M10	16	9.8	10.5	42	25	62	2.7	4	18 3618
M12	16	9.8	13	42	25	62	2.65	4	18 3619
70 mm ² rm/sm and 95 mm ² se cross section									
M8	18	11.2	8,4	52	25	72	3.45	4	18 3622
M10	18	11.2	10.5	52	25	72	3.8	4	18 3623
M12	18	11.2	13	52	25	72	3.35	4	18 3624
95 mm ² rm/sm and 120 mm ² se cross section									
M10	22	13.2	10.5	56	25	75	6.9	4	18 3627
M12	22	13.2	13	56	25	75	4.92	4	18 3628
M16	22	13.2	17	56	25	75	6	4	18 3630
120 mm ² rm/sm and 150 mm ² se cross section									
M10	22	14.7	10.5	56	30	80	5.95	4	18 3631
M12	22	14.7	13	56	30	80	5.84	4	18 3632
M16	22	14.7	17	56	30	80	6.6	4	18 3634
150 mm ² rm/sm and 185 mm ² se cross section									
M10	25	16.3	10.5	60	30	90	8.5	4	18 3636
M12	25	16.3	13	60	30	90	7.73	4	18 3637
M16	25	16.3	17	60	30	90	7.6	4	18 3639
M20	25	16.3	21	60	30	90	8.2	4	18 3640
185 mm ² rm/sm and 240 mm ² se cross section									
M10	28	18.3	10.5	60	30	91	11	4	18 3641
M12	28	18.3	13	60	30	91	9.88	4	18 3642
M16	28	18.3	17	60	30	91	10.1	4	18 3644
M20	28	18.3	21	60	30	91	10	4	18 3645
240 mm ² rm/sm and 300 mm ² se cross section									
M10	32	21	10.5	70	38	103	15.5	4	18 3646
M12	32	21	13	70	38	103	13.8	4	18 3647
M16	32	21	17	70	38	103	13.48	4	18 3648
M20	32	21	21	70	38	103	15	4	18 3649
300 mm ² rm/sm cross section									
M12	34	23.3	13	70	38	103	17.6	1	18 3650
M16	34	23.3	17	70	38	103	17.28	1	18 3651
M20	34	23.3	21	70	38	103	17.4	1	18 3652
400 mm ² cross section									
M12	38	26	13	73	38	116	38	1	18 3653
M16	38	26	17	73	38	116	37.4	1	18 3654
M20	38	26	21	73	38	116	40.2	1	18 3655
500 mm ² cross section									
M12	44	29	13	79	44	122	43.7	1	18 3656
M16	44	29	17	79	44	122	43.3	1	18 3657
M20	44	29	21	79	44	122	43	1	18 3658

Compression joints, Al, DIN 46267, part 2

made of E-Al, bare. For pre-rounded sm/se sector-shaped conductors.



Cross sect. rm/sm (mm ²)	Cross sect. se (mm ²)	Index	Interior ø mm	Length mm	Weight per 100 pcs. ~kg	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 Al cables according to DIN 48201, part 1 and Al conductors according to DIN EN 50182. For pre-rounded sector-shaped conductors.



Cross sect. rm/sm (mm ²)	Cross sect. se (mm ²)	Index	D1 mm	D2 mm	B mm	L mm	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
25 mm ² rm/sm and 35 mm ² se cross section									
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 mm ² rm/sm and 50 mm ² se cross section									
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 mm ² rm/sm and 70 mm ² se cross section									
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 mm ² rm/sm and 95 mm ² se cross section									
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 mm ² rm/sm and 120 mm ² se cross section									
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 mm ² rm/sm and 150 mm ² se cross section									
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 mm ² rm/sm and 185 mm ² se cross section									
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 mm ² rm/sm and 240 mm ² se cross section									
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 mm ² rm/sm and 300 mm ² se cross section									
240	300	32	21	13	35	120	29.8	5	18 3946
240	300	32	21	17	35	120	29	5	18 3948
300 mm ² rm/sm cross section									
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 joints, Al-Cu, DIN 46267, part 2

made of E-Al and E-Cu according to EN 13600, bare. For connecting Cu cables according to DIN 48201, Al cables according to DIN 48201, part 1 and Al conductors DIN EN 50182.



AL

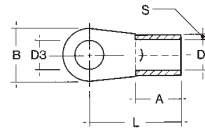
NEW

Cross sect. Al rm/sm (mm ²)	Cross sect. Al se (mm ²)	Cross sect. Cu (mm ²)	Index Al	Index Cu	Al mm	Cu mm	Length mm	Weight Cu kg/100	Weight total kg/100	Article no.
70 mm ² Al rm/sm and 95 mm ² Al se cross section										
70	95	16	18	8	11.2	5.5	79	0.71	4.1	18 3420
70	95	25	18	10	11.2	7	79	0.89	3.95	18 3421
70	95	35	18	12	11.2	8.2	79	1.62	4.9	18 3422
70	95	50	18	14	11.2	10	85	2.36	5.7	18 3423
70	95	70	18	16	11.2	11.5	96	2.92	7.25	18 3424
70	95	95	18	18	11.2	13.5	95	4.96	9.36	18 3425
70	95	120	18	20	11.2	15.5	99	5.64	10.54	18 3426
95 mm ² Al rm/sm and 120 mm ² Al se cross section										
95	120	16	22	8	13.2	5.5	79	0.71	6.15	18 3430
95	120	25	22	10	13.2	7	79	0.89	6.3	18 3431
95	120	35	22	12	13.2	8.2	79	1.52	6.8	18 3432
95	120	50	22	14	13.2	10	85	2.36	8.05	18 3433
95	120	70	22	16	13.2	11.5	87	3.11	8.2	18 3434
95	120	95	22	18	13.2	13.5	95	4.96	10.35	18 3435
95	120	120	22	20	13.2	15.5	95	5.64	11.55	18 3436
120 mm ² Al rm/sm and 150 mm ² Al se cross section										
120	150	35	22	12	14.7	8.2	81	1.52	7.6	18 3440
120	150	50	22	14	14.7	10	87	2.36	7.9	18 3441
120	150	70	22	16	14.7	11.5	89	3.11	8.5	18 3442
120	150	95	22	18	14.7	13.5	97	4.86	11	18 3443
120	150	120	22	20	14.7	15.5	97	5.64	10.28	18 3444
150 mm ² Al rm/sm and 185 mm ² Al se cross section										
150	185	16	25	8	16.3	5.4	92	0.71	7.8	18 3450
150	185	25	25	10	16.3	6.8	92	0.89	8	18 3451
150	185	35	25	12	16.3	8.2	92	1.62	8.4	18 3452
150	185	50	25	14	16.3	10	99	2.36	10.2	18 3453
150	185	70	25	16	16.3	11.5	100	3.11	10.35	18 3454
150	185	95	25	18	16.3	13.5	108	4.96	12.65	18 3455
150	185	120	25	20	16.3	15.5	108	5.64	13.9	18 3456
150	185	150	25	22	16.3	17	124	8.23	16.7	18 3457
185 mm ² Al rm/sm and 240 mm ² Al se cross section										
185	240	50	28	14	18.3	10	99	2.36	12.1	18 3460
185	240	70	28	16	18.3	11.5	100	3.11	13	18 3461
185	240	95	28	18	18.3	13.5	108	4.96	14.45	18 3462
185	240	120	28	20	18.3	15.5	108	5.64	13.72	18 3463
185	240	150	28	22	18.3	17	113	8.23	19.55	18 3464
185	240	185	28	25	18.3	19	116	9.62	21	18 3465
240 mm ² Al rm/sm and 300 mm ² Al se cross section										
240	300	50	32	14	21	10	110	2.36	16.5	18 3470
240	300	70	32	16	21	11.5	111	3.11	18	18 3471
240	300	95	32	18	21	13.5	119	4.96	19	18 3472
240	300	120	32	20	21	15.5	119	5.64	20.5	18 3473
240	300	150	32	22	21	17	124	8.23	23.3	18 3474
240	300	185	32	25	21	19	127	9.62	25.5	18 3475
240	300	240	32	28	21	21.5	128	12.71	30.1	18 3476
300 mm ² Al rm/sm and 300 mm ² Al se cross section										
300	300	120	34	20	23.5	15.5	119	5.64	27.8	18 3480
300	300	150	34	22	23.5	17	124	8.23	31.1	18 3481
300	300	185	34	25	23.5	19	127	9.62	32.7	18 3482
300	300	240	34	28	23.5	21.5	128	12.71	37.5	18 3483
300	300	300	34	32	23.5	24.5	134	16.1	41.7	18 3484

Solderless terminals, ring-type, Cu, DIN 46234

Specifications

- 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

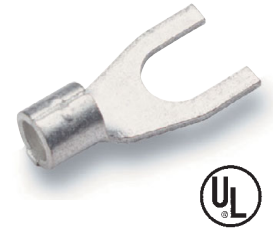
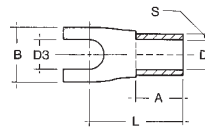


Cross sect. (mm ²)	Bolt ø (mm)	Nominal size acc. to DIN	D1	D3	A	B	L	S	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	3	3 - 1	1.6	3.2	5	6	11	0.8	0.07	100	18 0400
	4	4 - 1	1.6	4.3	5	8	12	0.8	0.07	100	18 0402
	5	5 - 1	1.6	5.3	5	10	13	0.8	0.07	100	18 0403
1.5 - 2.5	3	3 - 2.5	2.3	3.2	5	6	11	0.8	0.07	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
	8	8 - 10	4.5	8.4	8	14	20	1.1	0.3	100	18 0430
16	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
	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
25	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
	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
35	10	10 - 25	7.5	10.5	11	18	26	1.5	0.8	100	18 0452
	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
50	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
70	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
95	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
120	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
150	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
185	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

Solderless terminal, fork-type, Cu

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Hard soldered ferrule seam
- For connections with strain relief
- Especially suitable for finely stranded conductors according to IEC 228

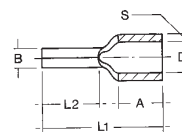


Cross sect. (mm ²)	Bolt ø (mm)	D1	D3	A	B	L	S	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	3	1.6	3.2	5	5.8	11	0.8	0.06	100	18 0520
	4	1.6	4.3	5	7	12	0.8	0.07	100	18 0522
	5	1.6	5.3	5	9.6	13	0.8	0.07	100	18 0524
1.5 - 2.5	3	2.3	3.2	5	5.8	11	0.8	0.06	100	18 0530
	4	2.3	4.3	5	7	12	0.8	0.08	100	18 0532
	5	2.3	5.3	5	9.6	13	0.8	0.09	100	18 0534
	6	2.3	6.5	5	12	13	0.8	0.12	100	18 0536
4 - 6	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
	6	3.6	6.5	6	12.5	18	1	0.17	100	18 0544
10	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
	6	4.5	6.5	7	10.5	17	1.1	0.25	100	18 0552
16	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

Pin terminals, Cu, 0.5 - 6 mm acc. to DIN 46230

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Hard soldered ferrule seam
- For connections with strain relief
- Especially suitable for finely stranded conductors according to IEC 228



Cross sect. (mm ²)	Bolt 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

Tubular cable lug set

in a premium raaco component box with crimping pliers

Content:

255 pieces, sorted:	PU	Article no.
• 25 tubular cable lugs, 6 mm ² , M6		18 0694
• 25 tubular cable lugs, 6 mm ² , M8		18 0696
• 25 tubular cable lugs, 10 mm ² , M6		18 0702
• 25 tubular cable lugs, 10 mm ² , M8		18 0704
• 25 tubular cable lugs, 16 mm ² , M8		18 0712
• 25 tubular cable lugs, 25 mm ² , M8		18 0722
• 25 tubular cable lugs, 25 mm ² , M10		18 0724
• 20 tubular cable lugs, 35 mm ² , M8		18 0732
• 20 tubular cable lugs, 35 mm ² , M10		18 0734
• 20 tubular cable lugs, 50 mm ² , M10		18 0742
• 20 tubular cable lugs, 50 mm ² , M12		18 0744
• Crimping tool, 6 - 50 mm ² , hex crimp		10 1882
Component box with tubular cable lugs	1	18 1545

raaco



Compression cable lug set

in a premium raaco component box with crimping pliers

Content:

370 pieces, sorted:	PU	Article no.
• 50 compression cable lugs 6 mm ² , M5		18 3500
• 50 compression cable lugs 6 mm ² , M6		18 3501
• 50 compression cable lugs 10 mm ² , M5		18 3502
• 50 compression cable lugs 10 mm ² , M6		18 3503
• 25 compression cable lugs 16 mm ² , M8		18 3506
• 25 compression cable lugs 16 mm ² , M10		18 3507
• 25 compression cable lugs 25 mm ² , M8		18 3510
• 25 compression cable lugs 25 mm ² , M10		18 3511
• 20 compression cable lugs 35 mm ² , M8		18 3513
• 20 compression cable lugs 35 mm ² , M10		18 3514
• 15 compression cable lugs 50 mm ² , M10		18 3518
• 15 compression cable lugs 50 mm ² , M12		18 3519
• Crimping tool, 6 - 50 mm ² , hex crimp		10 1883
Component box with compression cable lugs	1	18 1546

cimco®

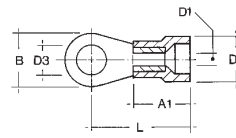
Insulated cable connectors

Solderless terminals, ring-type, Cu, insulated, DIN 46237 from 0.5 - 6 mm²



Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



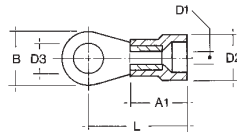
Cross sect. (mm ²)	Bolt ø (mm)	Nominal size acc. to DIN	Insulation colour	D1	D2	D3	A1	B	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	2		yellow	1	3.2	2.3	10.5	5	14	0.02	100	18 0008
	3		yellow	1	3.2	3.2	10.5	5	16	0.03	100	18 0010
	4		yellow	1	3.2	4.3	10.5	6	17	0.04	100	18 0014
	5		yellow	1	3.2	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
	6	6 - 2,5	blue	2.3	4.5	6.5	11.5	11	22	0.12	100	18 0038
4 - 6	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
	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
10	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
	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
16	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
	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
16	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



Solderless terminals, fork-type, Cu, insulated, DIN 46237 from 0.5 - 6 mm²

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily

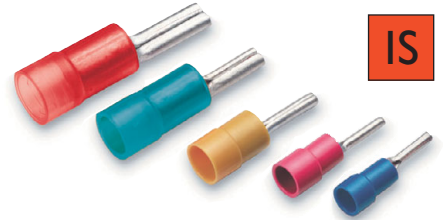
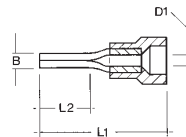


Cross sect. (mm ²)	Bolt ø (mm)	Nominal size acc. to DIN	Insulation colour	D1	D2	D3	A1	B	L	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	3		yellow	1	3.2	3.3	10.5	5	16	0.04	100	18 0118
0.5 - 1	3	3 - 1	red	1.6	4.1	3.2	11.5	5.8	16	0.07	100	18 0120
	4	4 - 1	red	1.6	4.1	4.3	11.5	7	17	0.08	100	18 0124
	5	5 - 1	red	1.6	4.1	5.3	11.5	9.6	18	0.09	100	18 0126
1.5 - 2.5	6		red	1.6	4.1	6.5	11.5	11	20	0.1	100	18 0128
	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
4 - 6	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	4 - 6	yellow	3.6	6.8	4.3	13	9	20	0.17	100	18 0160
10	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 - 6	yellow	3.6	6.8	10.5	13	19.2	27	0.3	100	18 0168
16	5		red	4.5	8.6	5.3	16.5	10.5	17	0.16	100	18 0170
	6		red	4.5	8.6	6.4	16.5	10.5	17	0.16	100	18 0172
16	6		blue	5.8	9.6	6.4	21.5	11	20	0.44	100	18 0174

Solderless terminals, pin-type, Cu, insulated, DIN 46231 from 0.5 - 6 mm²

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated, other surfaces available upon request
- For connections with strain relief
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily

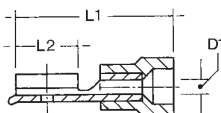


Cross sect. (mm ²)	Bolt length (mm)	Nominal size	Insulation colour acc. to DIN	L1	L2	D1	B	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	9		yellow	20	9	1	1	0.05	100	18 0220
0.5 - 1	10	1	red	22	10	1.6	1.9	0.08	100	18 0222
1.5 - 2.5	10	2.5	blue	22	10	2.3	1.9	0.09	100	18 0224
4 - 6	11	6	yellow	27	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

Blade receptacles, insulated, DIN 46245, part 1-3, and similar designs

Specifications

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- For connections with strain relief and Cu inner sleeve
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily

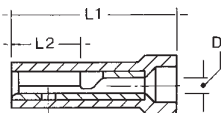


Cross sect. (mm ²)	Plug dimension (mm)	Nominal size acc. to DIN	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	2.8 x 0.5		red	17.5	8	1.6	0.07	100	18 0250
	2.8 x 0.8		red	17.5	8	1.6	0.07	100	18 0252
	4.8 x 0.5		red	18	6	1.6	0.09	100	18 0254
	4.8 x 0.8	4.8 - 1	red	18	6	1.6	0.09	100	18 0256
1.5 - 2.5	6.3 x 0.8	6.3 - 1	red	22	7.5	1.6	0.11	100	18 0230
	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 - 6	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
	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

Specifications

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- For connections with strain relief and Cu inner sleeve
- 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

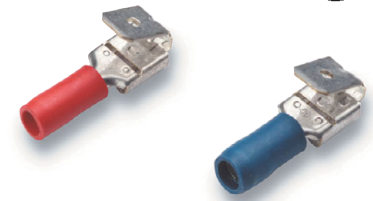
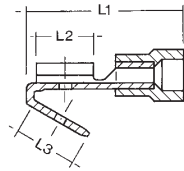


Cross sect. (mm ²)	Plug dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	2.8 x 0.5	red	20	8	1.6	0.08	100	18 0241
	2.8 x 0.8	red	20	8	1.6	0.1	100	18 0243
	4.8 x 0.5	red	18	6	1.6	0.09	100	18 0244
	4.8 x 0.8	red	18	6	1.6	0.09	100	18 0245
	6.3 x 0.8	red	21	7.5	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

Blade receptacles with branch, insulated

Specifications

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- For connections with strain relief and Cu inner sleeve
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily

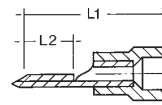


Cross sect. (mm ²)	Plug dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	6.3 x 0.8	red	22	7.5	8	0.15	100	18 0280
1.5 - 2.5	6.3 x 0.8	blue	22	7.5	8	0.15	100	18 0282
4 - 6	6.3 x 0.8	yellow	25	8	8	0.21	100	18 0284

Tabs, insulated

Specifications

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- For connections with strain relief and Cu inner sleeve
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily

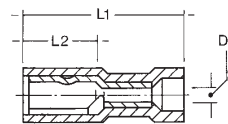


Cross sect. (mm ²)	Plug dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	2.8 x 0.8	red	14.6	5.5		0.09	100	18 0286
	4.8 x 0.8	red	18.5	6.5		0.08	100	18 0288
	6.3 x 0.8	red	22	7.5		0.1	100	18 0290
1.5 - 2.5	4.8 x 0.8	blue	18.5	6.5		0.09	100	18 0291
	6.3 x 0.8	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

Specifications

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- For connections with strain relief and Cu inner sleeve
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily

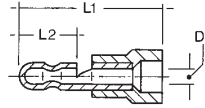


Cross sect. (mm ²)	Plug dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	4	red	24	13	1.6	0.12	100	18 0310
1.5 - 2.5	5	blue	24	13	2.3	0.15	100	18 0312
4 - 6	5	yellow	24	13	3.6	0.2	100	18 0314

Pin terminals, insulated

Specifications

- Material: CuZn (brass)
- Surface: galvanically tin-coated
- For connections with strain relief and Cu inner sleeve
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



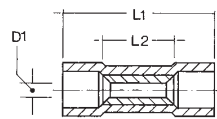
Cross sect. (mm ²)	Plug dimension (mm)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.5 - 1	4	red	23	13	1.6	0.12	100	18 0300
1.5 - 2.5	5	blue	23	13	2.3	0.15	100	18 0302
4 - 6	5	yellow	25	13	3.6	0.2	100	18 0304



Parallel connectors, insulated

Specifications

- 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



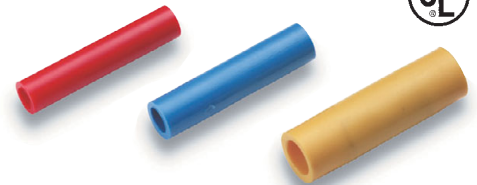
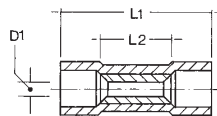
Cross sect. (mm ²)	Insulation material	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	PE	yellow	13	5	1	0.06	100	18 0318
0.5 - 1	PVC	red	18	8	1.6	0.07	100	18 0320
1.5 - 2.5	PVC	blue	19	8	2.3	0.09	100	18 0322
4 - 6	PE	yellow	21	9	3.6	0.14	100	18 0324



Butt connectors, insulated

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- For connections with strain relief
- Insulated PA (polyamide, nylon), halogen-free
- Temperature resistance -60 °C to +105 °C
- Easy Entry allows the conductor to be inserted quickly and easily



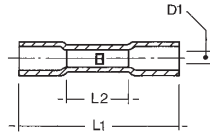
Cross sect. (mm ²)	Insulation colour	L1	L2	D1	Weight per 100 pcs. ~kg	PU/pcs.	Article no.
0.1 - 0.4	yellow	20	11	1	0.04	100	18 0328
0.5 - 1	red	25	15	1.6	0.13	100	18 0330
1.5 - 2.5	blue	25	15	2.3	0.14	100	18 0332
4 - 6	yellow	27	15	3.6	0.24	100	18 0334



Butt connectors with shrink insulation

Specifications

- 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 change, relieves strain and is water-tight.



IS

Cross sect. (mm ²)	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

Sets with insulated terminals

in a premium raaco component box with crimping pliers

Content:

Content:	PU/pcs.	Article no.
135 pieces, sorted		
• 15 ring cable lugs DIN 46237, 0.5 - 1 mm ² , M4		18 0024
• 15 ring cable lugs DIN 46237, 1.5 - 2.5 mm ² , M4		18 0034
• 15 ring cable lugs DIN 46237, 1.5 - 2.5 mm ² , M5		18 0036
• 15 ring cable lugs DIN 46237, 4 - 6 mm ² , M5		18 0052
• 15 blade receptacles DIN 46245, 1.5 - 2.5 mm ² , 6.3 x 0.8 mm		18 0232
• 15 blade receptacles DIN 46245, 4 - 6 mm ² , 6.3 x 0.8 mm		18 0234
• 15 blade receptacles with branch, 1.5 - 2.5 mm ² , 6.3 x 0.8 mm		18 0282
• 15 blade terminals, insulated, 1.5 - 2.5 mm ² , 6.3 x 0.8 mm		18 0292
• 15 butt connectors, insulated, 1.5 - 2.5 mm ²		18 0332
• Crimping tool, 0.5 - 6 mm ² , oval crimp		10 1892

Component box with insulated terminals 1 18 1530

Content:

Content:	PU/pcs.	Article no.
500 pieces, sorted		
• 50 ring cable lugs DIN 46237, 0.5 - 1 mm ² , M4		18 0024
• 50 ring cable lugs DIN 46237, 0.5 - 1 mm ² , M5		18 0026
• 25 ring cable lugs DIN 46237, 1.5 - 2.5 mm ² , M5		18 0036
• 25 ring cable lugs DIN 46237, 4 - 6 mm ² , M5		18 0052
• 25 fork-shaped cable lugs DIN 46237, 0.5 - 1 mm ² , M4		18 0124
• 25 fork-shaped cable lugs DIN 46237, 1.5 - 2.5 mm ² , M5		18 0146
• 25 pin-type cable lug DIN 46231, 0.5 - 1 mm ² , 9 mm		18 0222
• 25 pin-type cable lug DIN 46231, 1.5 - 2.5 mm ² , 10 mm		18 0224
• 25 blade receptacles DIN 46245, 0.5 - 1 mm ² , 6.3 x 0.8 mm		18 0230
• 25 blade receptacles DIN 46245, 1.5 - 2.5 mm ² , 6.3 x 0.8 mm		18 0232
• 20 blade receptacles with branch, 0.5 - 1 mm ² , 6.3 x 0.8 mm		18 0280
• 20 blade receptacles with branch, 1.5 - 2.5 mm ² , 6.3 x 0.8 mm		18 0282
• 20 blade terminals, insulated, 0.5 - 1 mm ² , 6.3 x 0.8 mm		18 0290
• 20 blade terminals, insulated, 1.5 - 2.5 mm ² , 6.3 x 0.8 mm		18 0292
• 10 pin terminals, insulated, 0.5 - 1 mm ² , 4 mm		18 0300
• 10 pin terminals, insulated, 1.5 - 2.5 mm ² , 5 mm		18 0302
• 10 circular sockets, 0.5 - 1 mm ² , 4 mm		18 0310
• 10 circular sockets, 1.5 - 2.5 mm ² , 5 mm		18 0312
• 25 butt connectors, 0.5 - 1 mm ²		18 0330
• 20 butt connectors, 1.5 - 2.5 mm ²		18 0332
• 10 butt connectors, 4 - 6 mm ²		18 0334
• Crimping tool, 0.5 - 6 mm ² , oval crimp		10 1892

Component box with insulated cable lugs 1 18 1540

raaco

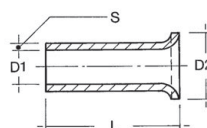


raaco



Cable end Sleeves

Non-insulated cable end sleeves according to DIN 46228, part 1 and special dimensions



Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated

Cross sect. (mm ²)	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
	18	18	1.7	2.8	0.15	0.02	1000	18 2067
2.5	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
	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
4	9	9	2.8	4	0.2	0.02	1000	18 2078
	12	12	2.8	4	0.2	0.02	1000	18 2080
	15	15	2.8	4	0.2	0.02	250	18 2082
	20	20	2.8	4	0.2	0.03	250	18 2083
6	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
	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
10	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
	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
16	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
	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
25	12	12	7.3	9.5	0.22	0.06	100	18 2106
	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
35	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
50	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
70	22	22	12.5	15	0.4	0.22	100	18 2123
	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
95	25	25	14.5	17	0.4	0.4	100	18 2127
	30	30	14.5	17	0.4	0.47	25	18 2122
	34	32	14.5	17	0.4	0.48	25	18 2128
120	32	32	16.5	19	0.5	0.75	25	18 2129
	34	34	16.5	19	0.5	0.97	25	18 2126
	40	40	16.5	19	0.5	1.11	25	18 2131
150	32	32	18.5	21	0.5	0.95	25	18 2132
	40	40	18.5	21	0.5	1.3	25	18 2133
185	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 cable end sleeves, in tapes

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Polypropylene insulation
- Temperature resistance -35 °C to +105 °C

Colour row according to DIN 46228, part 4

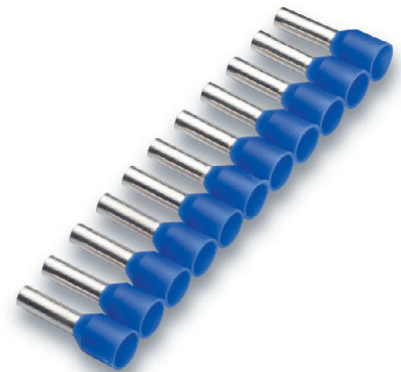
Cross sect. (mm ²)	Length (mm)	Insulation colour	PU/pcs.	Article no.
0.5	14	white	500	18 4500
0.75	14	grey	500	18 4502
1	14	red	500	18 4504
1.5	14	black	500	18 4506
2.5	14	blue	400	18 4508

Colour row 1

Cross sect. (mm ²)	Length (mm)	Insulation colour	PU/pcs.	Article no.
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

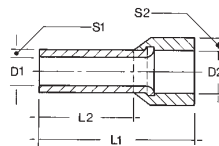
Cross sect. (mm ²)	Length (mm)	Insulation colour	PU/pcs.	Article no.
0.5	14	orange	500	18 4480
0.75	14	white	500	18 4482
1	14	yellow	500	18 4484
1.5	14	red	500	18 4486
2.5	14	blue	400	18 4488



Insulated cable end sleeves according to DIN 46228, part 4 and special dimensions

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Polypropylene insulation
- Temperature resistance -35 °C to +105 °C
- For effortless attachment to finely stranded copper conductors, prevents damage and fanning out



Cross sect. (mm ²)	Length w/o 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
	12	18	1.2	0.15	0.25	2.8		0.01	100	18 2322
1	6	12	1.4	0.15	0.25	3	red	0.01	100	18 2324
	8	14	1.4	0.15	0.25	3		0.01	100	18 2326
	10	16	1.4	0.15	0.25	3		0.01	100	18 2328
	12	18	1.4	0.15	0.25	3		0.01	100	18 2330
1.5	8	14	1.7	0.15	0.25	3.5	black	0.01	100	18 2332
	10	16	1.7	0.15	0.25	3.5		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 cable end sleeves according to DIN 46228,

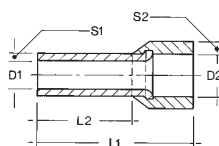
part 4 and special dimensions See previous page for description

Cross sect. (mm ²)	Length w/o 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	0.3	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 cable end sleeves, dimensions according to DIN 46228, part 4, colour row 1

Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Polypropylene insulation
- Temperature resistance -35 °C to +105 °C
- For effortless attachment to finely stranded copper conductors, prevents damage and fanning out



Cross sect. (mm ²)	Length w/o 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
1.5	10	16	1.4	0.15	0.25	3		0.01	100	18 1003
	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
1.5	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 cable end sleeves, dimensions according to DIN 46228, part 4, colour row 1

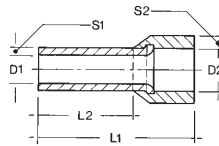
See previous page for description

									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	0.02	100	18 1006
	8	15	2.2	0.15	0.25	4.2		0.02	500	18 5006
	12	18	2.2	0.15	0.25	4.2		0.03	100	18 0950
	18	25	2.2	0.15	0.25	4.2		0.03	100	18 1007
	18	25	2.2	0.15	0.25	4.2		0.03	500	18 5007
4	10	17	2.8	0.2	0.3	4.8	orange	0.03	100	18 1008
	10	17	2.8	0.2	0.3	4.8		0.03	500	18 5008
	12	20	2.8	0.2	0.3	4.8		0.03	100	18 0952
	18	26	2.8	0.2	0.3	4.8		0.04	100	18 1009
	18	26	2.8	0.2	0.3	4.8		0.04	500	18 5009
6	12	20	3.5	0.2	0.3	6.3	green	0.06	100	18 1010
	12	20	3.5	0.2	0.3	6.3		0.06	500	18 5010
	18	26	3.5	0.2	0.3	6.3		0.06	100	18 1012
	18	26	3.5	0.2	0.3	6.3		0.06	500	18 5012
10	12	22	4.5	0.2	0.3	7.6	brown	0.06	100	18 1014
	12	22	4.5	0.2	0.3	7.6		0.06	500	18 5014
	18	28	4.5	0.2	0.3	7.6		0.08	100	18 1016
	18	28	4.5	0.2	0.3	7.6		0.08	500	18 5016
16	12	24	5.8	0.2	0.4	8.8	ivory	0.08	100	18 1018
	12	24	5.8	0.2	0.4	8.8		0.08	500	18 5018
	18	28	5.8	0.2	0.4	8.8		0.08	100	18 1020
	18	28	5.8	0.2	0.4	8.8		0.08	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

Insulated cable end sleeves, dimensions according to DIN 46228, part 4, colour row 2

Specifications

- Material: ETP Cu according to DIN EN 13660
- Surface: galvanically tin-coated
- Polypropylene insulation
- Temperature resistance -35 °C to +105 °C
- For effortless attachment to finely stranded copper conductors, prevents damage and fanning out



Cross sect. (mm ²)	Length w/o 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 cable end sleeves, dimensions according to DIN 46228, part 4, colour row 2

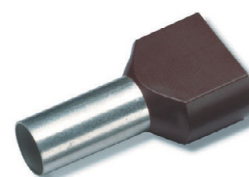
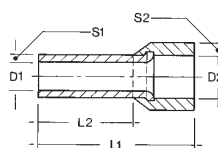
See previous page for description

									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 cable end sleeves

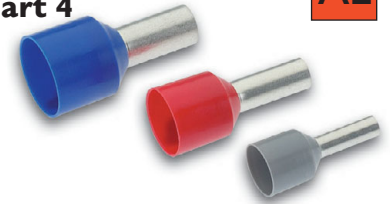
Specifications

- Material: ETP Cu according to DIN EN 13600
- Surface: galvanically tin-coated
- Polypropylene insulation
- 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 sect.	Length w/o 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	50	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		0.0	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 cable end sleeves for short-circuit-proof and short-to-ground-proof conductors (NSGAFÖU), colour row according to DIN 46228, part 4



Specifications

- 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 sect. (mm ²)	Length w/o 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 cable end sleeves sets

in a practical dispenser, 3000 pieces, sorted

Content:

- 1000 pcs. 0.50 mm² 6 mm in length
- 500 pcs. 0.75 mm² 6 mm in length
- 500 pcs. 1 mm² 6 mm in length
- 500 pcs. 1.50 mm² 7 mm in length
- 500 pcs. 2.50 mm² 7 mm in length

Dispenser with non-insulated cable end sleeves	1	18 1520
---	---	---------

in raaco PSC Vario 240 component box, with crimping pliers no. 10 1906, 3500 pieces, sorted

Content:

- 1000 pcs. 0.75 mm² 6 mm in length
- 1000 pcs. 1 mm² 6 mm in length
- 750 pcs. 1.50 mm² 7 mm in length
- 750 pcs. 2.50 mm² 7 mm in length

Component box with non-insulated cable end sleeves	1	18 1510
---	---	---------

in raaco PSC Vario 340 component box, with universal crimping tool no. 10 1904, 4350 pieces, sorted

Content:

- 1000 pcs. 1 mm² 6 mm in length
- 1000 pcs. 1.50 mm² 7 mm in length
- 1000 pcs. 2.50 mm² 7 mm in length
- 500 pcs. 4 mm² 9 mm in length
- 500 pcs. 6 mm² 12 mm in length
- 250 pcs. 10 mm² 18 mm in length
- 100 pcs. 16 mm² 18 mm in length

Component box with non-insulated cable end sleeves	1	18 1512
---	---	---------



Insulated cable end sleeves sets

400 pieces, sorted, in a practical dispenser, stackable

Content:

- 50 pcs. 0.5 mm² 8 mm in length
- 100 pcs. 0.75 mm² 8 mm in length
- 100 pcs. 1 mm² 8 mm in length
- 100 pcs. 1.5 mm² 8 mm in length
- 50 pcs. 2.5 mm² 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

Content:

- 50 pcs. 4 mm² 10 mm in length
- 20 pcs. 6 mm² 12 mm in length
- 20 pcs. 10 mm² 12 mm in length
- 10 pcs. 16 mm² 12 mm in length

Colour row 1	1	18 1505
---------------------	---	---------

Colour row 2	1	18 1506
---------------------	---	---------

Colour row DIN	1	18 1507
-----------------------	---	---------



Photovoltaic connector system

using this new photovoltaic connector saves time and effort at the construction site.

The CIMCO connector system is compatible with the MC4 market standard and fits all common solar cables from 2.5 mm² to 6 mm².

Consisting of a plug and socket connection system, including plastic housing; package contains 100 plugs – crimp contacts and plastic housing in a plastic bag and 100 sockets – crimp contacts and plastic housing in a plastic bag.

Specifications:

2.5 to 6 mm², voltage range: 1000 V, current capacity: 30 A (4 mm², 6 mm²), 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 mm²

100 18 0000



Photovoltaic MC3 adapter system

adapter set for attaching to MC3 contacts, for crimping with MC4 compatible tools 1.5 to 4 mm²

Consisting of an MC3 plug and socket adapter system, including plastic housing; package contains 1 plug – crimp contacts and plastic housing and 1 socket – crimp contacts and plastic housing.

Specifications:

Pin dimensions: ø 3.0 mm, cable diameter: 5.0 to 8.0 mm, cable cross section: 1.5 – 4.0 mm², AWG 16/14/12, contact type: stamp roll contact, nominal voltage: 1000 V DC, nominal current: 25 A at 70 °C / 20 A at 85 °C, contact resistance: < 5 m 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: 1000 V DC, nominal current: 30 A at 70 °C / 25 A at 85 °C, contact resistance: < 5 m 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 interferences over the entire service life. The connection series offers you solutions that suit the various types of photovoltaic panels. A secure earthing connection is provided by the establishment of an optimal electrical contact between the panel housing and the earthing conductor. The module frames are made of aluminium that is anodised or whose surface is otherwise treated. These surface treatments protect against rust but are not conductive. Thanks to the series, electrical contact with the aluminium of the panel becomes possible either by means of a cutting thread with the screwed models, or by means of a bolt connection with the help of serrated washers that scrape off the anodising when tightened. The connection is secured by tightening the earthing conductor with a maximum cross section of 10 mm². With an insulated conductor you have to remove the insulation on 30 mm. The models are made of stainless steel which guarantees rust protection and galvanic compatibility with the aluminium.

Attachment to an existing bore

with bolt for bore ø 6 mm (0.26"). The serrated washer ensures the electrical contact.

Cross section range of the earthing conductor in mm² [multi-stranded or solid]: 4, 6, 10, 4+4, 6+6

1 18 8012



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

NEW

Attachment to an existing bore

with self-tapping screw for bore \varnothing 4 mm (0.16").

Cross section range of the earthing conductor in mm² [multi-stranded or solid]: 4, 6, 10, 4+4, 6+6

1 18 8014



NEW

Attachment outside the bore

with self-drilling screw.

Cross section range of the earthing conductor in mm² [multi-stranded or solid]: 4, 6, 10, 4+4, 6+6

1 18 8016



NEW

Attachment outside the bore

with self-drilling screw.

Cross section range of the earthing conductor in mm² [multi-stranded or solid]: 16, 16+4, 16+6, 25

1 18 8018



NEW

Stainless steel (VA) tubular cable lugs

- Material: V2A
- Temperature-resistant 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 Al) can be successively stripped away under the influence of moisture and voltage and thus destroy the frame profiles!

Nominal cross sect. mm	Conn.-bolt \varnothing	Weight per 100 pcs. ~kg	PU/pcs.	
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



Modular plugs

for telecommunication and data networks, quality plugs for at least 500 plug cycles, contacts with 50 μ inches (1.27 micrometres) gold-plated, housing made of flame-resistant polycarbonate, tensile-loaded capacity of cable to plug at least 89 N.

Unshielded modular plugs (min. cat. 3)

suitable for flat and round cables

for flexible conductors

Designation	Number of positions	Number of contacts	PU/pcs.	
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.	
RJ 45	8	8	50	18 3010



Shielded modular plugs (min cat. 5e)

suitable for round cable, includes a threading ridge for each plug for easily placing the conductor in the correct crimping position, for crimping with CIMCO crimping pliers no. 10 6201.

for flexible and solid conductors

Designation	Number of positions	Number of contacts	PU/pcs.	
RJ 458	8	8	50	18 3012



Kink protection sleeves for modular plugs

can be opened and closed again at any time, can be subsequently added to and removed from plug, for shielded and unshielded modular plugs RJ 45, for round cables up to 6 mm ø

black	25	18 3020
red	25	18 3022
white	25	18 3024
blue	25	18 3026
yellow	25	18 3028



Service case NETZWERKTECHNIK I (DATA-NETWORK)

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 plugs 4-pole RJ 10, unshielded	100	18 3000
Modular plugs 6-pole RJ 12, unshielded	100	18 3004
Modular plugs 8-pole RJ 45, unshielded for flexible conductors	50	18 3008
Modular plugs 8-pole RJ 45, shielded	50	18 3012
Kink protection sleeves for modular plugs black	25	18 3020
Kink protection sleeves for modular plugs red	25	18 3022
413 x 330 x 55	1	18 1300

raaco



Service case NETZWERKTECHNIK II (DATA-NETWORK)

raacoCARRY-LITE 55 service case containing:

Modular plugs 4-pole RJ 10, unshielded	100	18 3000
Modular plugs 6-pole RJ 12, unshielded	100	18 3004
Modular plugs 8-pole RJ 45, unshielded for flexible conductors	50	18 3008
Modular plugs 8-pole RJ 45, shielded	50	18 3012
Kink protection sleeves for modular plugs black	25	18 3020
Kink protection sleeves for modular plugs red	25	18 3022
Roll of Velcro tape, 16 mm wide x 25 mm long black	1	18 1922
413 x 330 x 55	1	18 1302

raaco



CABLE TIES

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 tongue in stainless steel.



Steel cable ties

The anti-magnetic stainless steel ties coated and uncoated for demanding applications, conditions and environment.

TEFZEL cable ties

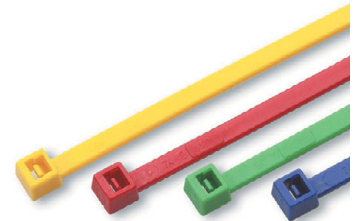
Resistant to exposure to chemicals, radioactivity and environmental factors.

Coloured cable ties

for labelling and marking

Width mm	Length mm	Cable harness ø mm	Min. tensile strength			
			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

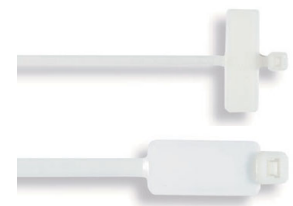
Other colours available upon request. Please inquire for minimum order quantity, price and delivery times.



Cable ties with labelling surface

in polyamide 6.6, natural colour

Harness ø mm	Size labelling surface mm x mm				
4.0 - 18	8 x 25	100 x 2.5	100	18 1420	
4.0 - 50	8 x 25	200 x 2.5	100	18 1422	
15 - 50	10 x 28	190 x 4.8	100	18 1424	
15 - 75	10 x 28	270 x 4.8	100	18 1426	



Printed cable ties

cable ties can be custom printed, also with logo, serial numbers and variable printing ink colour.

For special labelling, registration and marking of cables, equipment and other components, even for closure and tamper-proof sealing of packages, mailing bags, sacks, etc.. For use in electronic applications, machine and vehicle construction, logistics, food and pharmaceutical industries, public authorities, etc. For cable ties any length with min. 1 mm thickness, min. order quantity per printing order 30,000 cable ties.

We will be glad to help you with inquiries regarding technical details, as well as procedures, delivery times, price lists, 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	Minimal tensile strength			
			kp	N		
3,5	140	max. 32	18	176	100	18 1850



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

Cable tie with steel tongue

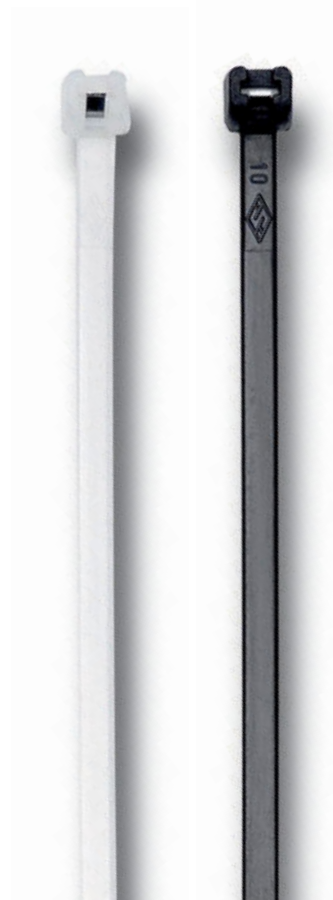
made from polyamide 6.6, with rust-proof, anti-magnetic, stainless steel tongue
 natural colour

Width mm	Length mm	Cable harness ø mm	Min. tensile strength kp	N	PU	Article no.
2.4	92	2 - 16	8	80	100	18 1338
	200	2 - 50				18 1336
	356	2 - 102				18 1337
3.6	140	2 - 29	18	180	100	18 1339
	208	2 - 50				18 1340
	281	2 - 76				18 1341
4.8	186	3.5 - 54	22	220	100	18 1343
	293	3.5 - 78				18 1344
	360	3.5 - 102				18 1345
7.6	338	6 - 90	55	540	50	18 1347
	762	6 - 229				18 1348

black

2.4	92	2 - 16	8	80	100	18 1738
	200	2 - 50				18 1736
	356	2 - 102				18 1737
3.6	140	2 - 29	18	180	100	18 1739
	208	2 - 50				18 1740
	281	2 - 76				18 1741
4.8	186	3.5 - 54	22	220	100	18 1743
	293	3.5 - 78				18 1744
	360	3.5 - 102				18 1745
7.6	338	6 - 90	55	540	50	18 1747
	762	6 - 229				18 1748

Packaging unit 1000 pieces upon request.



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	Min. tensile strength kp	N		
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 embrittled. These crack in time 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	Min. 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-retardant, self-extinguishing cable ties

for use in areas requiring especially high flame retardance. Flame retardance according to UL 94 V-0:

The flame-retardant material must not burn longer than 10 seconds nor ignite flammable materials underneath it. Halogen-free, usable at temperatures from -20 °C to +80 °C. Colour milk white.

Width mm	Length mm	Cable harness ø mm	Min. tensile strength kp	N		
3.5	140	2.5 - 36	14	140	100	18 1728
4.5	200	3 - 51	17	173	100	18 1730
	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, 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 elements for cable ties

natural colour

Fastening	Dimensions mm	For cable ties up to max. mm width	For screw up to ø mm		
screw	20 x 10	4.8	4	100	18 1380
adhesive (self-adhesive) + screw	19 x 19	3.6	4	100	18 1382
adhesive (self-adhesive) + screw	27 x 27	4.8	4	100	18 1384
screw	23 x 15	9.0	4	100	18 1389



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-extinguishing according to UL 94 V-2, self-adhesive.

Black available on request.

Length mm	Width mm	Height mm	max. cable ø m		
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

to affix cables, cable bundles, pipes etc. to walls, for drill holes 7 to 8 mm diameter, head with thread for simple adjustment of height and position of the holding block, distance of cable – wall approx. 12 mm

for cable ties up to 9 mm in width	10 x 13	100	18 1386
------------------------------------	---------	-----	---------

Spiral bands

to bundle and protect cables in cable manufacturing, in the electronics industry, as well as in switch cabinet engineering, control and plant engineering. For efficient and clean bundling and laying of cables, wiring, cable harness and wire bundles. Also for the protection of cables from abrasion or other damage, as well as for stiffening of 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 of cable bundles.

Made from polyethylene (PE), temperature-resistant from -20 °C to +65 °C, halogen-free. 1 reel = 10 m length.

Bundle ø mm	Coil width mm	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



Adjustable cable tie clamping and cutting tool

in gun format for cable ties with a width of 2.2 mm up 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
------------	--------	---	---------



Cable tie clamping and cutting tool HEAVY DUTY

in sheet steel for cable ties with a width of 2.3 mm to 9.5 mm, with integrated cutting tool. Weight 320 g.

robust design	195 mm	1	10 1931
---------------	--------	---	---------



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 only single 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
--	------------------------	---	---------



Steel cable ties

in stainless steel 316 (DIN 1.4401), with ball closure, rust and radiation resistant, anti-magnetic, extremely resistant to high temperatures (steel -80 °C to +538 °C) and aggressive chemicals, steel strength 0.25 mm, spec./authorisation UL. For application in machine and vehicle construction, signalling systems, ship construction and mining, in the food and chemical industries, in power plants, subways, building construction, switch cabinets, oil rigs, etc.

Width	Length	Cable harness	Min. tensile strength			
mm	mm	ø mm	kp	N		
4.6	100	20	56	550	100	18 6000
	125	27			100	18 6001
	150	44			100	18 6002
	200	50			100	18 6003
	290	75			100	18 6004
	360	102			100	18 6005
7.9	520	152			25	18 6006
	200	50	122	1200	100	18 6010
	290	75			100	18 6011
	360	102			100	18 6012
	520	152			25	18 6013
	680	203			25	18 6014
12.0	840	254			25	18 6015
	1000	318			25	18 6016
	290	75	224	2200	25	18 6020
	360	102			25	18 6021
	520	152			25	18 6022
	680	203			25	18 6023
	840	254			25	18 6024
	1000	318			25	18 6025



with protective cable coating made from epoxide resin polyester, halogen-free, black

Width	Length	Cable harness	Min. tensile strength			
mm	mm	ø mm	kp	N		
4.6	100	20	56	550	100	18 6100
	150	44			100	18 6102
	200	50			100	18 6103
	290	75			100	18 6104
	360	102			100	18 6105
	520	152			25	18 6106
7.9	200	50	122	1200	100	18 6110
	290	75			100	18 6111
	360	102			100	18 6112
	520	152			25	18 6113
	680	203			25	18 6114
	840	254			25	18 6115
12.0	1000	318			25	18 6116
	290	75	224	2200	25	18 6120
	360	102			25	18 6121
	520	152			25	18 6122
	680	203			25	18 6123
	840	254			25	18 6124
	1000	318			25	18 6125



Clamping tool

in steel, for clamping of steel ties up to 12 mm wide, 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 with 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 transverse 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, varying 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).

Width mm	Length mm		
25	240	10	18 1900
25	300	10	18 1902
25	360	10	18 1904

Velcro tape

in black, extruded polyamide velours laminate, tensile strength min. 120 N/cm, thickness approx. 1.4 mm, self-adhesive back-to-back, suitable for approx. 200 actuations. Standard colour is black; also available white, red, blue, green, yellow. Please inquire about minimum order quantity, delivery time approx. 8 weeks.

Velcro ties with tab, cut to binding lengths for normal electrical installations

Width mm	length mm		
7	200	25	18 1910
13	200	25	18 1912
16	300	25	18 1914

Velcro ties in reels, reel length 25 m, tensile strength min. 120 N/cm, custom-cut lengths

Width mm	Length m		
13	25	1 reel	18 1920
16	25	1 reel	18 1922
20	25	1 reel	18 1924
25	25	1 reel	18 1926
30	25	1 reel	18 1928

System Velcro tape

flexible back-to-back tie system for individual bundling and organising. Extra strong strap for heavy loads. Material strength min. 126 N/cm, shear strength 16 N/cm², suitable for approx. 200 actuations. Cut double-sided velours tape to desired length and affix a hook tab and a hook eyelet to each end.

Width mm	Length		Pcs. per package		
25	12.5 m	velour tape	1	1	18 1971
25	120 mm	hook tab	25	1	18 1972
25	53 mm	hook eyelet	25	1	18 1973
50	12.5 m	velour tape	1	1	18 1976
50	100 mm	hook tab	25	1	18 1977
50	53 mm	hook eyelet	25	1	18 1978



System Velcro tape set

flexible back-to-back tie system for individual bundling and organising. Extra strong strap for heavy loads. Material strength min. 126 N/cm, shear strength 16 N/cm², suitable for approx. 200 actuations. Cut double-sided velours tape to the desired length and affix a hook tab and a hook eyelet to each end.

Included in the set:

- 12.5 meters back-to-back velour tape in dispenser box
- 25 pcs. hook tab
- 25 pcs. hook eyelet

Width mm	Length m		
25	12.5	1	18 1970
50	12.5	1	18 1975

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/cm², approx. 10,000 actuations possible.

Adhesive: rubber-resin based, temperature range: -15° C to +90° C

Delivered in dispenser box with one reel each 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	Pieces 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

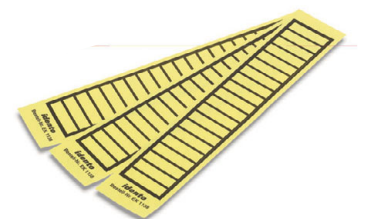
Hand inscription labels

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.

Pcs. 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 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 lines (cable, pipe). 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 punch 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 such as petroleum-based oils and fats.

	∅ mm	Pcs. per sheet		
red "Blitz"	15	10	1	18 2670
yellow "Blitz"	15	10	1	18 2672
green "12"	20	8	1	18 2682
blue "13"	20	8	1	18 2683
yellow "14"	20	8	1	18 2684
red "15"	20	8	1	18 2685
green "16"	20	8	1	18 2686



Control pliers

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

round recess 3 mm ∅	120	10	10 1650
---------------------	-----	----	---------

Please state the special recess upon ordering:



Basic stickers

the self-adhesive basic sticker consists of white, markable plastic foil, to which stickers can repeatedly be applied. 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

	Pcs. per sheet	Dimensions mm		
	25	92 x 40	1	18 2690



Identification of conductors

the self-adhesive foil symbols for the identification of non-insulated and insulated conductors, housing, switch cabinets and equipment are available in different 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 strength. Temperature-resistant from -30 °C to +100 °C, soil-resistant, long-lasting adhesion. ∅: 12.5 mm

	Pcs. 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



Multi-purpose screws

chipboard screws, galvanised, countersunk head with Pozidriv cross-head

ø mm	Length mm	For crosshead Pozidriv size		
3.0	16	1	200	19 0005
	20	1	200	19 0006
3.5	15 (fitting screw)	2	200	19 0014
	20	2	200	19 0015
	25 (fitting screw)	2	200	19 0016
	30	2	200	19 0017
	40 (fitting screw)	2	200	19 0019
4.0	25	2	200	19 0026
	30	2	200	19 0027
	35	2	200	19 0028
	40	2	200	19 0029
	45	2	200	19 0030
4.5	50	2	200	19 0031
	35	2	200	19 0040
	40	2	200	19 0041
	45	2	200	19 0042
	50	2	100	19 0043
5.0	60	2	100	19 0044
	30	2	200	19 0051
	40	2	200	19 0053
	50	2	100	19 0054
	60	2	100	19 0055
6.0	80	2	100	19 0056
	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 cross-head

ø mm	Length mm	For crosshead 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	200	19 3121
	60	20	200	19 3122



Multi-purpose screw assortment, stainless steel

includes Pozidriv bits PZ 1 X 25, PZ 2 X 25 and PZ 3 X 25 in raaco – assortment box Vario 340

ø mm	Length mm	Design	Contains pcs.
3.0	20	countersunk head	50
3.5	16	countersunk head	50
	20	countersunk head	50
4.0	20	countersunk head	100
	30	countersunk head	100
	40	countersunk head	100
5.0	30	countersunk head	100
	40	countersunk head	70
	50	countersunk head	50
6.0	50	countersunk head	25
3.0	20	round head	100
3.5	16	round head	100
	20	round head	100
4.0	20	round head	100
	30	round head	100
	40	round head	100
5.0	30	round head	100
	40	round head	70
	50	round head	50
6.0	50	round head	25

1,540 multi-purpose screws, Pozidriv crosshead, stainless steel, assorted 19 4212




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
	100	Size 13	25	19 0225
10.0	120	Size 13	25	19 0226
	60	Size 17	10	19 0235
	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, cylinder head with Phillips cross-head, sheet metal screw thread according to DIN 7970

ø mm	Length mm	For crosshead 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
	13	2	100	19 0422
4.2	16	2	100	19 0423
	19	2	100	19 0424
	22	2	100	19 0425
	25	2	100	19 0426
	13	2	100	19 0432
4.8	16	2	100	19 0433
	19	2	100	19 0434
	22	2	100	19 0435
	25	2	100	19 0436



Lens head sheet metal screw

according to ISO 7049, EN 27049 and DIN 7981, Form H with point, galvanised, lens head with Phillips cross-head

ø mm	Length mm	For crosshead		
		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
4.8	22.0	2	100	19 0328
	25.0	2	100	19 0329
	13.0	2	100	19 0336
	16.0	2	100	19 0337
	19.0	2	100	19 0338
4.8	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 size (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
	50	8.0 x 1.0	200	19 0164
5.0	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



Hex-head machine screws

according to DIN 933, with thread up to the head, hardened 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
	45	Size 8	100	19 0524
	60	Size 8	100	19 0528
M 6	10	Size 10	100	19 0535
	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	20	Size 17	100	19 0588
	30	Size 17	100	19 0592
	40	Size 17	100	19 0594
	50	Size 17	50	19 0596
	70	Size 17	25	19 0600
M 12	25	Size 19	50	19 0614
	30	Size 19	50	19 0616
	40	Size 19	50	19 0618
	50	Size 19	50	19 0620
	60	Size 19	50	19 0622



Cylinder head screws

according to ISO 1207, EN 21207 and DIN 84, Form A, with slot, made of hardened 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
	40	7.0 x 1.2	100	19 0839
M 5	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
	40	8.5 x 1.2	100	19 0869
M 6	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
	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



Thread rods (threaded bolts)

according to DIN 976, steel, galvanised, Length 1000 m

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 hex

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

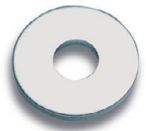
ISO 7093, EN 27093 and DIN 9021N (mudguard washers), steel, galvanised, external diameter = approx. 3 x thread diameter

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	20	100	19 2710



Spring lock washers

according to DIN 127, Form A (curved), 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



ADHESIVE TAPES, HEAT-SHRINKABLE/ COUPLING SLEEVE TECHNOLOGY

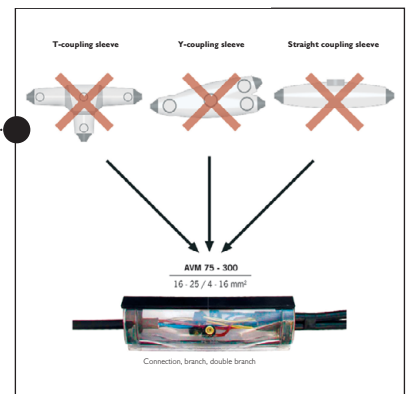
Large pour-in opening

The coupling sleeve sliders allow the coupling sleeve to be easily and reliably poured, even in a sloping position.



Versatile in application

Three different connections can be created with one coupling sleeve.

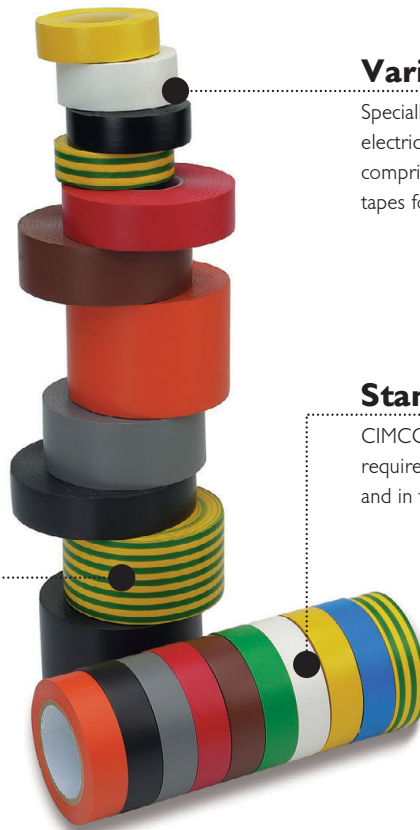


Practical application

The easy solution for protecting cable connections from dust and damp (IP 68). Can be removed at any time after curing of the gel mass.

Quality

CIMCO technical adhesive tapes offer constantly excellent qualities during installation and also in long-term continuous use.



Variety

Specially designed for use in the electrical industry and trade, our range comprises a great variety of adhesive tapes for different uses.

Standards

CIMCO adhesive tapes comply with the requirements of DIN EN 60454 and in the majority of cases exceed them.

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 electric 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. earth conductors in green-yellow) 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
Rainbow pack				
10 assorted colours	15	10	100	16 0000



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 piece, L1, L2, L3, N 15		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:

Insulation and repair work, indoors and outdoors, in particular for use where there is long-term high temperature influence, e. g. cable wrapping in engines and in car bodies, wrapping wire harness for cars, washing machines, dishwashers, for general thermal insulation, for bundling and for reinforcement as a mechanical protection.

black	19	33	48	16 0250
-------	----	----	----	---------



All weather high performance electrical insulation tape

Description:

PVC membrane, coated on one side with non-corrosive, pressure-sensitive rubber adhesive.

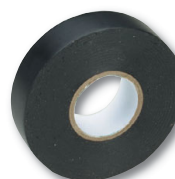
Special features:

Excellent reliability 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:

Insulation and repair work indoors and outdoors, in particular for outdoor use in extreme weather conditions, at low temperatures and with marked changes in temperature, sealing and connecting medium-high 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 by abrasion, weather influences and corrosion, thereby extending service life and reducing frequent maintenance work. Examples: as a protection against stone impact, step impact and scratching for freely suspended and underground cables, pipes and connection points of cables and pipes, corrosion protection of freely suspended cables and pipes (e.g. on shipboard, in wet operating areas, in the chemical industry), outstanding mechanical and corrosion protection for installation pipes and masts sunk into the ground, 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
-----------------	----	----	----	---------

Tape thickness 0.44 mm, for particularly heavy duty use

black	50	33	18	16 0282
-------	----	----	----	---------



Self-amalgamating insulating tapes

Cable sealing tapes / insulating mastic

Description:

Cold amalgamating insulating tape on butyl rubber base, with easy to pull off plastic separating layer.

Special features:

Will amalgamate after processing under light tensile stress to form an air and waterproof layer that can be shaped as desired by hand, is permanently elastic, compatible with all materials for cable jackets, will remain flexible even at temperatures below 0 °C, excellent dielectric properties, weather and aging resistant.

Typical areas of use:

For quick, economical construction or repair / replacement of insulation, in particular the maintenance of damaged cable jackets, can be built into complete installation systems in combination with other insulating tapes (e. g. cable end wrapping with PVC insulating tape), for provisional closure of coupling sleeves, padding of cable clips, use as dust and corrosion protection, e. g. against the effects of moisture at cable ends, can be used indoors and outdoors.

black, 2 mm thick	38	5	24	16 2810
black, 3 mm thick	38	1.5	24	16 2820



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:

Will amalgamate after processing under light tensile stress to form an air and waterproof rubber layer, extremely elastic (elongation at break 600 %) and shape adaptable, permanently elastic, compatible with all materials for insulation and cable jackets, wide range of temperatures for application, excellent electrical properties (in particular dielectric strength) UV, ozone, weather and aging resistant.

Typical areas of use:

Ideal for sealing, splicing, insulating and for the repair of live cables, mainly for voltage insulation of high-voltage cables up to 17 kV/mm, excellent repair properties, even on heavy rubber sleeve cables, for waterproof sealing of electrical circuits and connections (e. g. satellite TV dishes), for fixing cables outdoors, corrosion protection of metal parts, excellently suited for emergency repairs to car 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:

Will amalgamate after processing under light tensile stress to form an air and waterproof layer, extremely elastic (elongation at break 600 %) and shape adaptable, permanently elastic, compatible with all materials for insulation and cable jackets, unusually wide temperature range for application, excellent electrical properties (in particular dielectric strength), ozone, weather and aging resistant, outstanding resistance to alkaline solutions, hydraulic fluids and other chemical substances.

Typical areas of use:

Uses as for high-voltage insulation tape no. 16 2840 – 16 2841, but with added excellent resistance to very high and very low temperatures (–35 °C to +95 °C, up to 130 °C for short periods) and also to many chemicals, for demanding insulation work up to 34 kV/mm and for maintaining resistance to chemicals at high 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-resistant adhesive.

Special features:

Matte, water and weatherproof finish, easy to write on with pencil, ball-point pen, permanent marker, felt and etching pens, can be printed, largely resistant to many chemicals, unaffected by softeners and oil vapour, excellent electrical properties, can be easily and cleanly torn off crossways by hand.

Typical areas of use:

Universal woven adhesive tape for industry and craft use: colour marking and marking of cables, electrical components, tubes and ducts, labelling of switch cabinets, distribution, patch panels, for bundling, fixing, securing and reinforcing of cables and tubes, for masking in painting and varnishing 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



Fibre glass woven adhesive tapes

Description:

Woven tapes on a fibre glass base, coated with adhesive on one side.

Special features:

Thermal stability: fibre glass woven tapes have been developed especially for uses that require a high temperature resistance. The tapes also have very high mechanical stability (tear resistance 280 N/10mm, breaking elongation 5 %) and also good resistance to aging.

Typical areas of use:

Insulation of high heat-radiating components and protective wrapping against heat, e. g. thermal insulation of coils, of flat conductors in actuators, generators and similar devices, pressure wrapping of coils and armature winding as well as jackets for external wiring, fixing of temperature measurement sensors.

Fibre glass woven tape 130

Coated with heat curing rubber adhesive, permanently resistant to temperatures up to 130 °C

white	12	55	24	16 2500
-------	----	----	----	---------

Fibre glass woven tape 155

Coated with acrylic adhesive, permanently resistant to temperatures up to 155 °C

white	12	55	24	16 2510
	19	55	16	16 2511

Fibre glass woven tape 180

Coated with heat curing silicone adhesive, permanently temperature resistant up to 180 °C

white	19	33	16	16 2521
-------	----	----	----	---------



Special adhesive tapes

Aluminium foil adhesive tape

Description:

Aluminium foil, 40 µm (0.04 mm) thick, coated on one side with pressure resistant acrylic adhesive. The tape comes 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 for electronic devices, shielding from electromagnetic fields for electronic devices, sealing cooling insulation, covering cut edges of aluminium foil edged insulation mats and rock wool or fibre glass insulation panels, sealing of metal and plastic ducts, applications with higher requirements for preventive fire protection, e. g. flame retardant winding for cable installation.

silver-coloured	50	50	24	16 2900
-----------------	----	----	----	---------



Filament adhesive tape with mesh thread reinforcement

Description:

Base layer in 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 (lengthways and across), no fraying at the sides, powerful, immediate adhesion.

Typical areas of use:

Bundling and drawing through of cables and cable harnesses, very strong packaging tape for closing and reinforcing, including heavy packages, e. g. cardboard boxes and cartons, wrapping heavy packaging items and other goods, banding of plastic and metal tubes, metal rods etc.

transparent	50	50	18	16 2950
-------------	----	----	----	---------



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, easy to shape, very good resistance to UV, aging, moisture, oils, solvents and softeners, powerful immediate adhesion.

Typical areas of use:

Many different uses in assembly, even for vertical heavy load assemblies indoors and outdoors, instead of riveting, screwing and liquid adhesives, good adhesion including to non-elastic materials with irregular, rough surfaces (wood, masonry, concrete, paint): on wall mounting for cable routing ducts, cable clamps, switch cabinets, attaching labels, displays and notices, including those made of and attached to plastic, impact-resistant and vibration-cushioned soft bedding of components (e. g. PCBs, control panels, controls and instruments), effective reduction of sound transmission (rattle suppression), form-fitting seals against dust, water, vapour, wind and light, also for closing 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 to 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



Design/colour	Width/mm	Length/m	PU	Article no.	Type of adhesive tape from order no. to order no.	Tape thickness (mm)	Tear resistance / Breaking load (N/10mm)	Elongation at rupture / Elongation at break (%)	(ohm/25mm width)	Adhesive strength on steel (N/10mm)	Dielectric strength w/ regard to spec. tape dimensions (kV)	Temperature resistance (°C)		Flame resistance (self-extinguishing)	Water resistance	Salt water resistant	Corrosion resistant	UV-resistant	Ozone-resistant	Resistance to chemicals	Abrasion resistance	Fibreg resistance	Shape adaptable	Easy to break off	Residue-free removal	Incluable						
												min	max														min	max				
PVC insulation adhesive tapes																																
16 0000 - 16 0170	0,13	26	180	1 x 10 ¹¹	2,4	2,1	8	-5	+70	0	+40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
16 0201 - 16 0204	0,18	40	250	5 x 10 ¹³	2,3	1,7	10	-5	+70	0	+40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
16 0250 - 16 0252	0,15	25	150	1 x 10 ¹¹	3,0	2,6	9,5	-5	+105	0	+40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
16 0260 - 16 0262	0,19	30	200	5 x 10 ¹³	2,2	2,0	10	-20	+105	-10	+40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
16 0270	0,23	55	300	5 x 10 ¹³	2,5	2,0	10	-5	+70	+10	+40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
16 0280	0,25	44	220		3,3	3,0	10	-5	+80	+5	+40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
16 0282	0,44	90	200		3,0	2,6	12	+5	+80	+5	+40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
Self-adhering tapes																																
16 2800	1				-	-	16/mm	-30	+80	0	+40			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	part.			Yes	Yes	Yes	Yes			
16 2810	2				-	-	16/mm	-30	+80	0	+40			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	part.			Yes	Yes	Yes	Yes	Yes			
16 2820	3			2 x 10 ¹⁰	-	-	16/mm	-30	+80	0	+40			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	part.			Yes	Yes	Yes	Yes	Yes			
16 2840 - 16 2841	0,5	12	600	1 x 10 ¹³	-	-	40/mm	-95	+95	0	+40			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
16 2830 - 16 2831	0,5	20	600	1 x 10 ¹⁵	-	-	35/mm	-40	+90	0	+10			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	part.			Yes	Yes	Yes	Yes	Yes			
Fabric adhesive tapes																																
16 2000 - 16 2156	0,33	85	8		4,0	2,2	3	-50	+80	+10	+45			Yes											good		Yes	Yes	Yes	Yes		
16 2500 - 16 2502	0,18	280	5	1 x 10 ¹²	4,0		2,5	0	+130	+10	+10			Yes													Yes					
16 2510 - 16 2512	0,18	280	5	1 x 10 ¹²	3,5		2,5	0	+155	+10	+10			Yes													Yes					
16 2520 - 16 2522	0,18	280	5	1 x 10 ¹⁵	3,0		2,5	0	+180	+10	+40	Yes		Yes								Yes				Yes						
Special adhesive tapes																																
16 2900	0,08	22	5		3,8	3,8		-20	+110	0	+40	Yes		Yes																	Yes	
16 2950	0,13	280	10		8,0			0	+80	+10	+25			Yes												excellent		Yes				
16 2860 - 16 2863	0,85	11	300		10,0	10,0		-10	+100	+10	+40			Yes												Yes		Yes	Yes			
16 0302 - 16 0308	0,16	45	10		2,5			+5	+85	+5	+25			part.													Yes	Yes	Yes	Yes	Yes	Yes

Mechanical coupling sleeves

Quick and simple assembly makes mechanical coupling sleeves optimally suited as repair and connection sleeves or branch joints.

Mechanical cable joint box TDM

for quick and safe connection of communication, control and supply wires with diameters from 6 to 25 mm.

Waterproof (IP 68), UV resistant, alkaline earths and rot resistant, joint box body impact resistant, with screw lid, with lug to secure the seal against unauthorised access. Suitable for connecting up to four cables.

The cable joint box meets the ÖVE IM22 standard.

Scope of delivery: one cable joint box with sleeve insert, five cable ties, can of lubricant, cutter, assembly instructions.

Type	Conductor cross-section in mm ² clearance	Application area ø mm	PU	Article no.
TDM 1	3 x 1.5 up to 5 x 2.5	6 - 14	1	18 4760
TDM 2	3 x 1.5 up to 5 x 16	6 - 25	1	18 4762

Accessories

Spanner set TDM 2	1	18 4764
Replacement sleeve for TDM 1	1	18 4766
Replacement sleeve for TDM 2	1	18 4768



Mechanical connecting sleeves (MVM) and branch couplings (MAM)

suitable for connecting from 2 to 6 cables (with double sleeves 4 to 12 cables).

Waterproof (IP 68), high mechanical stability, acid earth resistance, separate strain relief for each entry.

Type	Application area ø mm	PU	Article no.
MVM 23/200	8 - 23 mm (8 - 13 mm)*	1	18 4160
MVM 42/320	8 - 42 mm (8 - 16 mm/8-23 mm)*	1	18 4162
MAM 23/200	8 - 23 mm (8 - 13 mm)*	1	18 4166
MAM 42/320	8 - 42 mm (8 - 16 mm/8-23 mm)*	1	18 4168

* If double sleeves are used, the values in brackets apply.



Cast resin joints

Cast resin joint

non-flammable according to VDE 0304 Part 3

Plastic joint body, transparent and thermo-plastic, making it extremely resistant to chemical and mechanical influences. The polyurethane foam seals are highly reliable, preventing the escape of resin before it has cured.

Cast resin

according to VDE 0291 Part 2

Polyurethane cast resin is an unfilled, low viscosity, elastic curing two-component system.

Technical data:

- can be stored for 24 months
- store in dry rooms between +5 °C and +50 °C
- curing within 24 hours
- temperature resistant between -25 °C and +120 °C in cured condition
- resin and hardener can be disposed of in domestic waste

1 kV cast resin joint sets including joint casing and pack of cast resin cans

comprising joint casing including polyurethane cast resin and hardener, one pair of disposable gloves, one spatula, two foam seals and sandpaper.

Type	Wire cross-section in mm ²		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 cast resin set as can pack

including stirrer, gloves and instructions

Type	Fill quantity			
	resin	hardener		
PUR 160-200 D	0.225 kg	172 cm ³	1	18 4680
PUR 160-400 D	0.400 kg	345 cm ³	1	18 4682
PUR 160-615 D	0.615 kg	528 cm ³	1	18 4770



Shrink-on coupling sleeves

Shrink-on coupling sleeves for crimped or screwed connections 1kV

thick-walled electrical shrink-on sleeves (heat shrinking) with outstanding mechanical stability, chemical resistance and electrical properties. Lined with hot melt adhesive, thus giving excellent protection against water and damp. For 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 Cable		Hose length mm		
	in mm ²	ø 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 ²	PU	Article no.
brass	1.5 – 16	1	18 0960
tin-coated	6 – 25	1	18 0962



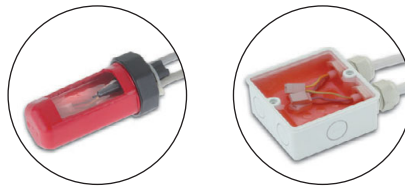
Branch and connector terminals

Type	Wire cross-section in mm ²	PU	Article no.
brass	1.5 – 10	1	18 0964
brass	2.5 – 16	1	18 0966
brass	6 – 25	1	18 0968



ALPA-GEL

the simple solution for protecting cable connections from dust and damp (IP 68). After curing of the gel mass, removal is possible at any time. The solvent-free two-component silicone gel mixed in 1:1 proportion and with an impact resistance of 20 KV/mm is supplied with mixing jug, mixing spatula and disposable gloves in 2 different pack sizes.



250 ml	1	15 1010
1,000 ml	1	15 1012

Large pack without mixing jug, mixing spatula and disposable gloves	1	15 1014
---	---	---------

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/mm²), tensile strength after heat aging 14.5 MPa / min (N/mm²), elongation at break 460 %, elongation after heat aging (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. Long-term operational temperature - 55 °C to + 125 °C. Will take print very well, with heat sealed, 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 are free of asbestos, azoic compounds, formaldehydes, silicone. The shrink tubes are self-extinguishing according to UL 224 VW-1. No dioxin is released on 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 electric resistance $1 \times 10^{15} \Omega/\text{cm}$ (yellow-green design $1 \times 10^{14} \Omega/\text{cm}$),

Further detailed mechanical, chemical and electrical product data, and a summary of approval certificates from test institutes, can be obtained on request in the form of our Technical Data Sheets.



Detailed measurements of the individual types and sizes of the CIMCO heat shrink tube range can be found on page 289.

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.
- Shrinkage temperature from +70 °C to +115 °C.
- Ideally, work with a special hot-air blower, furnace or infrared lamp.

Thin-walled, black heat shrink tube, shrinkage ratio 2 : 1

halogen-free, thin-walled, flexible standard electrical shrink tube with shrinkage ratio 2 : 1 (shrinkage capacity down to half the given internal diameter before heat shrinking). Excellently suited for electrical insulation, as bend and abrasion protection, as damp protection for seals, for bundling, for strain relief and for identification in electronics and electrics, telecommunications, cable assembly, in the automotive industry and many other areas. On dispensing rolls, robust, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (according to size of shrink tube), core hole diameter approx. 30 mm, particularly suited to industrial use.

Nominal ø		Shrink range mm	Length m		
BEFORE shrinking inch	mm				
3/64	1.2	0.6 - 0.8	200	1 roll	18 4002
1/16	1.6	0.75 - 1.5	200	1 roll	18 4004
3/32	2.4	1.1 - 1.8	200	1 roll	18 4006
1/8	3.2	1.6 - 2.7	200	1 roll	18 4008
3/16	4.8	2.35 - 4.0	100	1 roll	18 4010
1/4	6.4	3.1 - 5.4	100	1 roll	18 4012
3/8	9.6	4.7 - 8.0	100	1 roll	18 4014
1/2	12.7	6.2 - 11	100	1 roll	18 4016
3/4	19	9.3 - 17	100	1 roll	18 4018
1	25.4	12.8 - 24	50	1 roll	18 4020
1 1/2	38.1	21 - 39	50	1 roll	18 4022
2	50.8	26 - 49	25	1 roll	18 4024
3	76.2	41 - 79	25	1 roll	18 4026
4	101.6	46 - 98	25	1 roll	18 4028



In handy dispensing boxes for trade and industry use, practical transport and storage boxes of coated cardboard, for convenient and dust-free storage even after the package has been opened and for easy rolling off and cutting, ideal for workshops and portable uses.

Nominal ø		Shrink range mm	Length m	PU	Article no.
BEFORE shrinking					
Inch	mm				
1/16	1.6	0.75 up to 1.5	20	1	18 1318
3/32	2.4	1.1 up to 1.8	15	1	18 1319
1/8	3.2	1.6 up to 2.7	15	1	18 1327
3/16	4.8	2.35 up to 4.0	12	1	18 1303
1/4	6.4	3.1 up to 5.4	12	1	18 1305
3/8	9.6	4.7 up to 8.0	8	1	18 1307
1/2	12.7	6.2 up to 11	8	1	18 1311
3/4	19	9.3 up to 17	5	1	18 1313
1	25.4	12.8 up to 24	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	PU	Article no.
BEFORE shrinking					
Inch	mm				
3/16	4.8	2.35 up to 4.0	1	1	18 1330
1/4	6.4	3.1 up to 5.4	1	1	18 1331
3/8	9.6	4.7 up to 8.0	1	1	18 1332
1/2	12.7	6.2 up to 11	1	1	18 1333
3/4	19	9.3 up to 17	1	1	18 1334
1	25.4	12.8 up to 24	1	1	18 1335



Thin-walled green-yellow heat shrink tube, shrinkage ratio 2 : 1

Two-coloured, lengthwise striped, thin-walled, flexible electrical shrink tube with shrinkage ratio 2 : 1 (shrinkage capacity down to half the given internal diameter before heat shrinking). Excellently suited for electrical insulation, as bend and abrasion protection, as damp protection for seals, for bundling, for strain relief and for identification in electronics and electrics, telecommunications, cable assembly, in the automotive industry and many other areas. Ideal for marking earth wires.

On dispensing rolls, robust, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (according to shrink tube size), core hole diameter approx. 30 mm, particularly suited to industrial use.

Nominal ø		Shrink range mm	Length m	PU	Article no.
BEFORE shrinking					
Inch	mm				
3/32	2.4	1.2 up to 2.3	200	1 roll	18 4106
1/8	3.2	1.7 up to 3.3	200	1 roll	18 4108
3/16	4.8	2.2 up to 4.2	200	1 roll	18 4110
1/4	6.4	3.2 up to 6.3	100	1 roll	18 4112
3/8	9.6	5.2 up to 10.3	100	1 roll	18 4114
1/2	12.7	6.2 up to 12.3	100	1 roll	18 4116
3/4	19	10.2 up to 21	100	1 roll	18 4118
1	25.4	12.8 up to 26	50	1 roll	18 4120
1 1/2	38.1	21 up to 41	50	1 roll	18 4122
2	50.8	26 up to 51	25	1 roll	18 4124
3	76.2	41 up to 79	25	1 roll	18 4126
4	101.6	51 up to 98	25	1 roll	18 4128



In handy dispensing boxes for trade and industry use, practical transport and storage boxes of coated cardboard, for convenient and dust-free storage even after the package has been opened and for easy rolling off and cutting, ideal for workshops and portable uses.

Nominal ø		Shrink range	Length	PU	Article no.
BEFORE shrinking					
Inch	mm	mm	m		
3/32	2.4	1.2 up to 2.3	15	1	18 4136
1/8	3.2	1.7 up to 3.3	15	1	18 4138
3/16	4.8	2.2 up to 4.2	12	1	18 4140
1/4	6.4	3.2 up to 6.3	12	1	18 4142
3/8	9.6	5.2 up to 10.3	8	1	18 4144
1/2	12.7	6.2 up to 12.3	8	1	18 4146
3/4	19	10.2 up to 21	5	1	18 4148
1	25.4	12.8 up to 26	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). Excellently suited for electrical insulation, as bend and abrasion protection, as damp protection for seals, for bundling, for strain relief and for identification in electronics and electrics, telecommunications, cable assembly, in the automotive industry, and many other areas. Particularly suitable, thanks to a shrinkage ratio of 3 : 1, for balancing out large differences in diameter in 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 few shrink tube sizes.

On dispensing rolls, robust, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (according to shrink tube size), core hole diameter approx. 30 mm, particularly suited to industrial use.

Nominal ø		Shrink range	Length	PU	Article no.
BEFORE shrinking					
Inch	mm	mm	m		
1/16	1.6	0.7 up to 1.3	200	1 roll	18 4204
1/8	3.2	1.2 up to 2.6	200	1 roll	18 4206
1/4	6.4	2.2 up to 5.6	100	1 roll	18 4208
3/8	9.6	3.2 up to 8.6	50	1 roll	18 4210
1/2	12.7	4.2 up to 11.6	50	1 roll	18 4212
3/4	19	6.3 up to 17.5	50	1 roll	18 4214
1	25.4	8.3 up to 23	25	1 roll	18 4216



Heat shrink tube in 1 metre sections

1 1/2	38.1	14 up to 37	1	1	18 4218
2	50.8	17 up to 47	1	1	18 4220
3	76.2	27 up to 77	1	1	18 4222
4	101.6	35 up to 95	1	1	18 4224

In handy dispensing boxes for trade and industry use, practical transport and storage boxes of coated cardboard, for convenient and dust-free storage even after the package has been opened and for easy rolling off and cutting, ideal for workshops and portable uses.

Nominal ø		Shrink range	Length	PU	Article no.
BEFORE shrinking					
Inch	mm	mm	m		
1/16	1.6	0.7 up to 1.3	17	1	18 4234
1/8	3.2	1.2 up to 2.6	15	1	18 4236
1/4	6.4	2.2 up to 5.6	5	1	18 4238
3/8	9.6	3.2 up to 8.6	8	1	18 4240
1/2	12.7	4.2 up to 11.6	6	1	18 4242
3/4	19	6.3 up to 17.5	4	1	18 4244
1	25.4	8.3 up to 23	3	1	18 4246



Medium-walled black heat shrink tube, shrinkage ratio 3 : 1, lined with adhesive

halogen-free, medium-walled, yet very flexible standard electrical shrink tube with shrinkage ratio 3 : 1 (shrinkage capacity down to one third of the internal diameter before heat shrinkage). Thanks to outstanding mechanical stability and chemical resistance, this tube is very 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 electrics, telecommunications, cable assembly, in the automotive industry and many other areas. Particularly suitable, thanks to shrinkage ratio 3:1, for balancing out large differences in diameter in the object to be shrink wrapped, e. g. markedly contoured parts such as connection sleeves, plugs and switches, and also for covering a wide range of applications with few 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 at approx. +70 °C to +80 °C.

Dispensing rolls, robust, environmentally friendly cardboard rolls, diameter approx. 300 mm - 550 mm (according to size of shrink tube), core hole diameter approx. 30 mm, particularly suitable for industrial use.

Nominal ø		Shrink range mm	Length m	PU	Article no.
BEFORE shrinking					
Inch	mm				
1/8	3.2	1.0 up to 3.1	200	1 roll	18 4306
1/4	6.4	2.4 up to 6.4	100	1 roll	18 4308

Heat shrink tube in 1.22 metre sections

3/8	9.6	3.4 up to 9.4	1.22	1	18 4310
1/2	12.7	4.4 up to 12.5	1.22	1	18 4312
3/4	19	6.5 up to 18.8	1.22	1	18 4314
1	25.4	8.8 up to 25	1,22	1	18 4316
1 1/2	38.1	14.0 up to 39	1,22	1	18 4318
2	50.8	17.5 up to 49	1.22	1	18 4320



Hot air blower range

robust, tried and tested "Made in Germany" device for all standard hot air applications up to max. 500 °C, e. g. unfrozen water pipes, heat shrinking, drying and removing paint, shaping plastic, soft-soldering, etc. With 2 heat settings: Setting 1 up to 300 °C and 240 litres/min. air flow, setting 2 up to 500 °C and 500 litres/min. air flow, wattage 1600 W, 230 – 240 volt, 50 Hz, with strong rubber connecting lead, double overheating protection, suitable for hand-held and for stand use. Weight 700 g
Delivery includes 2 push-on nozzles: reflector nozzle (for all-round even heat for soft soldering of thin copper pipes, for heat shrinking of shrink tubes and shaping PVC tubes), soldering reflector nozzle (for simultaneous soldering and shrinking of soldering sleeves).

240 x 200 mm	1	18 1351
--------------	---	---------



Technical data heat shrink sleeves

Nominal size		Internal diameter			Wall thickness				Application area
		BEFORE shrinking		AFTER shrinking	BEFORE shrinking		AFTER shrinking		
		D	Tolerance	d	Tolerance		Tolerance		ø
Inch	mm	mm	+/- mm	mm	mm	+/- mm	mm	+/- mm	mm
Heat shrink tube, thin-walled, black, shrinkage rate 2 : 1									
3/64	1.2	1.0	0.2	0.50	0.13	0.05	0.22	0.05	0.6 up to 0.8
1/16	1.6	1.5	0.3	0.65	0.18	0.05	0.25	0.05	0.75 up to 0.9
3/32	2.4	2.5	0.3	1.00	0.18	0.05	0.35	0.05	1.1 up to 1.8
1/8	3.2	3.5	0.4	1.50	0.20	0.05	0.40	0.05	1.6 up to 2.7
3/16	4.8	5.0	0.4	2.25	0.23	0.08	0.50	0.08	2.35 up to 4.0
1/4	6.4	6.5	0.4	3.00	0.28	0.08	0.55	0.08	3.1 up to 5.4
3/8	9.6	9.5	0.5	4.50	0.30	0.08	0.60	0.08	4.7 up to 8.0
1/2	12.7	12.5	0.5	6.00	0.30	0.08	0.60	0.08	6.2 up to 11
3/4	19.0	19.0	0.7	9.00	0.40	0.15	0.80	0.15	9.3 up to 17
1	25.4	25.6	0.7	12.5	0.45	0.15	0.90	0.15	12.8 up to 24
1 1/2	38.1	41.5	0.7	20.0	0.50	0.15	1.0	0.15	21 up to 39
2	50.8	51.5	0.7	25.0	0.50	0.15	1.0	0.15	26 up to 49
3	76.2	80.0	1.0	40.0	0.55	0.20	1.8	0.15	41 up to 79
4	101.6	100.0	1.0	50.0	0.70	0.20	2.2	0.15	46 up to 98
Heat-shrink tube, thin-walled, green-yellow, shrink rate 2 : 1									
3/32	2.4	2.5	0.2	1.00	0.20	0.05	0.40	0.05	1.2 up to 2.3
1/8	3.2	3.5	0.3	1.50	0.25	0.05	0.40	0.05	1.7 up to 3.3
3/16	4.8	4.5	0.3	2.00	0.25	0.05	0.44	0.05	2.2 up to 4.2
1/4	6.4	6.5	0.3	3.00	0.25	0.05	0.55	0.08	3.2 up to 6.3
3/8	9.6	10.7	0.4	5.00	0.30	0.08	0.60	0.08	5.2 up to 10.3
1/2	12.7	12.5	0.4	6.00	0.30	0.08	0.65	0.08	6.2 up to 12.3
3/4	19.0	21.4	0.5	10.0	0.40	0.15	0.82	0.15	10.2 up to 21
1	25.4	26.5	0.8	12.5	0.40	0.15	1.0	0.15	12.8 up to 26
1 1/2	38.1	41.5	1.0	20.0	0.50	0.15	1.2	0.15	21 up to 41
2	50.8	51.5	1.0	25.0	0.50	0.15	1.2	0.15	26 up to 51
3	76.2	80.0	1.0	40.0	0.60	0.15	1.7	0.15	41 up to 79
4	101.6	100.0	1.0	50.0	0.70	0.15	2.1	0.15	51 up to 98
Heat shrink tube, medium walled, shrinkage ratio 3 : 1									
1/16	1.6	1.5	0.3	0.5			0.50	0.10	0.7 up to 1,3
1/8	3.2	3.0	0.3	1.0			0.65	0.10	1.2 up to 2.6
1/4	6.4	6.0	0.4	2.0			0.75	0.10	2.2 up to 5.6
3/8	9.6	9.0	0.4	3.0			0.95	0.15	3.2 up to 8.6
1/2	12.7	12.0	0.4	4.0			1.10	0.15	4.2 up to 11.6
3/4	19.0	18.0	0.5	6.0			1.25	0.15	6.3 up to 17.5
1	25.4	24.0	0.5	8.0			1.50	0.20	8.3 up to 23
1 1/2	38.1	39.0	0.7	13.0			1.90	0.20	14 up to 37
2	50.8	50.0	0.7	16.0			2.50	0.20	17 up to 47
3	76.2	80.0	1.0	26.0			2.8	0.20	27 up to 77
4	101.6	100.0	1.03	3.0			3.0	0.20	35 up to 95
Heat shrink tube, medium walled, black, shrinkage ratio 3 : 1, with adhesive lining									
1/16	1.6	1.5	0.3	0.5			0.50	0.10	0.7 up to 1,3
1/8	3.2	3.0	0.3	1.0			0.65	0.10	1.2 up to 2.6
1/4	6.4	6.0	0.4	2.0			0.75	0.10	2.2 up to 5.6
3/8	9.6	9.0	0.4	3.0			0.95	0.15	3.2 up to 8.6
1/2	12.7	12.0	0.4	4.0			1.10	0.15	4.2 up to 11.6
3/4	19.0	18.0	0.5	6.0			1.25	0.15	6.3 up to 17.5
1	25.4	24.0	0.5	8.0			1.50	0.20	8.3 up to 23
1/8	3.2	3.5	0.3	1.0			0.95	0.35	1.0 up to 3.1
1/4	6.4	6.8	0.4	2.2			1.2	0.60	2.4 up to 6.4
3/8	9.6	9.9	0.4	3.2			1.4	0.65	3.4 up to 9.4
1/2	12.7	13.2	0.5	4.2			1.6	0.75	4.4 up to 12.5
3/4	19.0	19.6	0.5	6.3			2.0	0.90	6.5 up to 18.8
1	25.4	25.4	0.8	8.5			2.1	0.90	8.8 up to 25
1 1/2	38.1	40.0	0.8	13.5			2.4	1.05	14.0 up to 39
2	50.8	51.5	0.8	17.0			2.7	1.20	17.5 up to 49

Technical appendix

Safety tools

Insulated safety tools and insulated protective equipment 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.



1000 V

Insulated hand tools, tested and VDE-certified according to European standard EN 60900 or VDE specification 0682, part 201. Valid from 01.01.2005.

1000 V

Insulated hand tools tested according to European standard EN 60900 or VDE specification 0682, part 201.

Description of the symbols

Energised work	Cutting edge hardness in HRC	With cutting bevel	Single joint	Flat nose pliers	Wire type soft	Wire type piano
VDE/GS tested	Grip surfaces serrated	With slight cutting bevel	Lap joint	Flat-round pliers	Wire type medium-hard	Wire type rope
	Grip surfaces diagonally serrated		Box joint	Round nose pliers	Wire type hard	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 using 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

Pozidriv crosshead		Phillips crosshead		Torx	
Thread ø mm	Tool receptacle	Thread ø mm	Tool receptacle	Thread ø mm	Thread receptacle
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		

Woodscrews DIN 96		Cylinder head screws DIN 84		Machine hex screws DIN	
Thread ø mm	Tool receptacle	Thread ø mm	Tool receptacle	Thread ø mm	Tool receptacle
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
					12.0
					14.0
					16.0
					20.0
					24.0
					30.0
					36.0
					46.0

Weights

1 ounce	28.349 g
1 pound (lb)	0.454 kg
1 engl. ton	1.016 t
1 am. ton	0.907 t
1 kp	10 Newton

Units of length

1 inch	25.4 mm
1 foot	0.3048 m
1 yard	0.914 m
1 mile	1.609 km

Parameters for installing straddling dowels

Dowel ø mm	Dowel length mm	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

Technical appendix

CIMCO order no.		Catalogue p.	With hammer	Receptacle			Material																
				Standard	Hex	SDS	Granite	Concrete	Armoured concrete	Clinker brick	Masonry e.g. lime sand brick	Tiles	Marble	Natural stone	Artificial stone e.g. aerated concrete	Hard wood	Soft wood	Plastic	Drywall e.g. Rigips	Aluminium	Other non-ferrous metals	Steel sheets	VA steel sheets
Diamond core drill	20 7380 ff	112	no		X	X	X	X	X	X	X	X	X	X	X								
Hammer drill	20 7311 ff	104	yes		X	X			X	X			X	X									
T.C.T. hole saw	20 7714 ff	112	no		X	X				X			X		X	X	X	X					
HSS bi-metal hole saw	20 7414 ff	110	no		X										X	X	X	X					
Step drill	20 1200 ff	104	no	X											X	X	X		X	X	X	X	
Sheet taper drill	20 1280 ff	105	no	X											X	X	X		X	X	X	X	
Twist drill	20 0314 ff	100	no	X											X	X	X		X	X	X	X	
Stone and concrete drill	20 1600 ff	101	yes	X					X	X	X	X	X	X									
Hammer drill	20 8100 ff	103	yes		X	X	X	X	X	X													
Multi-purpose drill	20 1880 ff	103	no	X					X	X	X	X	X	X	X	X	X	X					
Cased drill	20 6306 ff	90	no	X											X	X	X	X					

Keyword: new dimensions in electrical installation.

The European standard DIN EN 50262 "Cable Glands for Electrical Installations" has been valid since 1 January 2000 thus abolishing the PG system common in Germany. Electrical installation tubes, screwed cable glands, sockets, housings and cabinets are affected.

The change provides advantages to the user:

- 10 PG sizes are replaced with 8 metric sizes
 - With each metric size a sealing area is achieved that is approx. 20% larger than with the PG size
 - The outer thread diameter can be derived directly from the type designation (example: M16 = 16 mm outer diameter)
- During the transition period, both systems are available simultaneously (for replacement and repair installations). CIMCO recommends having both types of step drills, thread cutters and screw punchers on hand.

Recommended installation bores for screwed cable glands (PG and metric)

PG Thread	Thread ø mm	Required installation bore mm		Metric Thread	Required installation bore mm	
		Through hole	Core hole		Through hole	Core hole
Pg 7	12.5	13	11.5	M 12 x 1.5	12.5	10.5
Pg 9	15.2	15.7	14	M 16 x 1.5	16.5	14.5
Pg 11	18.6	19	17.4	M 20 x 1.5	20.5	18.5
Pg 13.5	20.4	21	19	M 25 x 1.5	25.5	23.5
Pg 16	22.5	23	21.25	M 32 x 1.5	32.5	30.5
Pg 21	28.3	28.8	27	M 40 x 1.5	40.5	38.5
Pg 29	37.0	37.5	35.5	M 50 x 1.5	50.5	48.5
Pg 36	47.0	47.5	45.5	M 63 x 1.5	63.5	61.5
Pg 42	54.0	54.5	52.5			
Pg 48	59.0	59.8	58			

Working guide values with good lubrication

Recommended revolutions per min. (rpm). For bore diameters not specified, select corresponding speed. Cutting performance and durability are significantly increased by good lubrication (CIMCO boring lubricant no. 20 1307) and by abiding by the recommended speeds.

Step drill

ø mm	PG dimension	Alloyed steel	Unalloyed steel	Non-ferrous metals	Plastic plywood
12.5	7	360	650	1200	2900
15.2	9	300	540	960	2400
18.6	11	250	450	800	2000
20.4	13.5	230	400	720	1800
22.5	16	200	370	650	1650
28.3	21	165	300	520	1300
37.0	29	125	215	400	1000

Sheet taper drill

ø mm	Alloyed steel	Unalloyed steel	Non-ferrous metals	Plastic plywood
3-14	600-400	800-500	2000-1500	3000-2000
6-20	500-200	700-400	1800-1000	2500-1500
16-30	200-100	400-200	1000- 500	1500-1000
25-40	100- 80	300-150	500- 300	1000- 500
36-52	80- 50	200-100	300- 200	600- 200

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

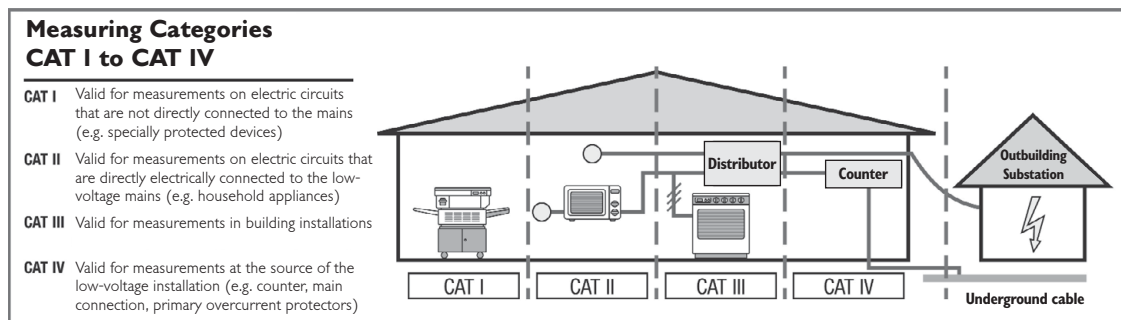
ø mm	Soft steel	VA-steel	Cast steel	Brass	Aluminium
60	140	70	95	190	220
64	135	70	90	180	205
65	130	65	85	175	200
67	130	65	85	170	195
70	125	60	80	160	185
73	120	60	80	160	180
76	115	55	75	150	170
79	119	55	70	145	165
83	105	50	70	140	155
86	100	50	65	130	150
89	95	45	65	125	145
92	95	45	60	120	140
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 (temporary) 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 (temporary) overvoltage.
- Protection against transient (temporary) overvoltage to 8 kV

Data sheet for LED lamps

Designation	Art. no.	Output	Luminous flux	Protection class	Light angle	Operation	Operating time	Luminous colour
LED torches 500.01	11 1530	1 W	100 Lm	IP 67	6°	2 x LR06	10 hrs	4,500 K
LED torches 500.02	11 1532	1 W	100 Lm	IP 67	6°	2 x LR06	7 hrs	4,500 K
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 inspection lamps 500.05G	11 1542	1 W	100 Lm	IP 67	6°	2 x LR06	10 hrs	4,500 K
LED workshop lamps 730.10-4500FG	11 1560	1.2 W	180 Lm	IP 64	15 - 75°	230V/ 3.5V		4,500 K
LED workshop lamps 700.01-4500G	11 1562	6 W	650 Lm	IP 64	25 - 100°	230V/ 24V		4,500 K

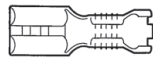
Technical appendix

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

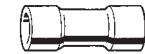
Tool recommendation table

Non-insulated blade terminal connectors, DIN 46244 ff, 2.8 - 4.8 - 6.3 mm terminal width



Cross section mm ²	Art. no.	Crimp shape	Catalogue page
0.5 - 6	10 6136	Roll crimp	210
0.5 - 6	10 6000	Roll crimp	205
0.5 - 6	10 6112	Roll crimp	206
0.5 - 6	10 6150	Roll crimp	207
0.5 - 6	10 4220	Roll crimp	207
0.5 - 6	10 4208	Roll crimp	210
0.5 - 6	10 4250	Roll crimp	218
0.5 - 6	10 4254	Roll crimp	218

Insulated connection materials



Cross section mm ²	Art. no.	Crimp shape	Catalogue page
0.5 - 6	10 1892	Oval crimp	210
0.5 - 6	10 1900	Oval crimp	210
0.5 - 6	10 6144	Oval crimp, asymmetric	210
0.5 - 6	10 1916	Oval crimp, symmetric	210
0.5 - 6	10 6000	Oval crimp, symmetric	205
0.5 - 6	10 6112	Oval crimp	206
0.5 - 6	10 6150	Oval crimp	207
0.5 - 6	10 4220	Oval crimp	207
10 - 16	10 1918	Oval crimp	210
0.5 - 6	10 4206	Oval crimp	210
6 - 16	10 4208	Oval crimp	210
0.5 - 6	10 4250	Oval crimp	218
0.5 - 6	10 4254	Oval crimp	218

Al compression cable lugs and connectors



Cross section mm ²	Art. no.	Crimp shape	Catalogue page
10 - 185	10 1867	Hex crimp	212
10 - 240	10 1868	Hex crimp	212
10 - 185	10 5498	Hex crimp	212
10 - 240	10 5501	Hex crimp	213
16 - 300	10 5502	Hex crimp	213
16 - 300	10 5504	Hex crimp	214
10 - 185	10 5698	Hex crimp	216
10 - 240	10 5701	Hex crimp	217
16 - 300	10 5702	Hex crimp	217
16 - 300	10 5704	Hex crimp	218

Cable end sleeves



Cross section mm ²	Art. no.	Crimp shape	Catalogue page
0.5 - 2.5	10 1906	Indent crimp	209
1.5 - 6	10 1907	Indent crimp	209
0.25 - 2.5	10 1911	Trapezoid crimp	209
0.5 - 16	10 1904	Indent crimp	209
10 - 35	10 1905	Indent crimp	209
0.5 - 16	10 6120	Trapezoid crimp	209
16 - 35	10 6140	Trapezoid crimp	209
25 + 50	10 6142	Trapezoid crimp	209
6 - 16	10 1946	Trapezoid crimp	209
0.14 - 6	10 1940	Square crimp	209
0.08 - 10	10 1925	Square crimp	209
0.5 - 2.5	10 0725	Trapezoid crimp	209
0.5 - 2.5	10 0720	Trapezoid crimp	209
0.5 - 35	10 6000	Trapezoid crimp	205
0.5 - 50	10 6112	Trapezoid crimp	206
0.5 - 50	10 6150	Trapezoid crimp	207
0.14 - 10	10 4220	Trapezoid crimp	207
10 - 50	10 4200	Trapezoid crimp	210
50 - 95	10 4202	Trapezoid crimp	210
0.14 - 6	10 4190	Trapezoid crimp	210
10 - 16	10 4192	Trapezoid crimp	210
0.08 - 10	10 4194	Square crimp	210
2.5 - 16	10 4196	Square crimp	210
10 - 95	10 1867	Trapezoid crimp	212
10 - 150	10 1868	Trapezoid crimp	212
10 - 95	10 5498	Trapezoid crimp	212
10 - 150	10 5501	Trapezoid crimp	213
16 - 185	10 5502	Trapezoid crimp	213
16 - 185	10 5504	Trapezoid crimp	214
10 - 95	10 5698	Trapezoid crimp	216
10 - 150	10 5701	Trapezoid crimp	217
16 - 185	10 5702	Trapezoid crimp	217
16 - 185	10 5704	Trapezoid crimp	218
0.14 - 10	10 4250	Trapezoid crimp	218
0.14 - 10	10 4254	Trapezoid crimp	218

Technical appendix

Tubular cable lugs and connectors "Standard design" **R**

Cross section mm ²	Art. no.	Crimp shape	Catalogue page
0.75 - 16	10 1902	Notch crimp	211
6 - 50	10 1870	Notch crimp	211
50 - 120	10 1872	Notch crimp	211
120 - 240	10 1874	Notch crimp	211
6 - 50	10 1882	Hex crimp	211
10 - 120	10 1880	Hex crimp	211
16 - 95	10 1884	Hex crimp	211
25 - 150	10 1885	Hex crimp	211
0.5 - 16	10 4204	Notch crimp	211
6 - 185	10 1867	Hex crimp	212
6 - 300	10 1868	Hex crimp	212
6 - 185	10 5498	Hex crimp	212
6 - 300	10 5501	Hex crimp	213
10 - 400	10 5502	Hex crimp	213
10 - 400	10 5504	Hex crimp	214
6 - 185	10 5698	Hex crimp	216
6 - 300	10 5701	Hex crimp	217
10 - 400	10 5702	Hex crimp	217
10 - 400	10 5704	Hex crimp	218

Tubular cable lugs for finely-stranded conductors **F**



Cross section mm ²	Art. no.	Crimp shape	Catalogue page
10 - 70	10 1867	Indent crimp	212
10 - 70	10 1868	Indent crimp	212
10 - 70	10 5498	Indent crimp	212
10 - 70	10 5501	Indent crimp	213
16 - 150	10 5502	Indent crimp	213
16 - 150	10 5504	Indent crimp	214
10 - 70	10 5698	Indent crimp	216
10 - 70	10 5701	Indent crimp	217
16 - 150	10 5702	Indent crimp	217
16 - 150	10 5704	Indent crimp	218

Round crimp inserts **RU**

Cross section mm ²	Art. no.	Crimp shape	Catalogue page
10 - 240	10 1867	Indent crimp	212
10 - 240	10 1868	Indent crimp	212
10 - 240	10 5498	Indent crimp	212
10 - 240	10 5501	Indent crimp	213
10 - 300	10 5502	Indent crimp	213
10 - 300	10 5504	Indent crimp	214
10 - 240	10 5698	Indent crimp	216
10 - 240	10 5701	Indent crimp	217
10 - 300	10 5702	Indent crimp	217
10 - 300	10 5704	Indent crimp	218

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 mm²



Oval crimp

For crimping insulated tubular cable lugs and connectors, insulated pin-shape cable lugs and insulated cable connectors. Application areas: 0.1 - 185 mm²



Notching

For notching Cu tubular cable lugs and connectors. Application areas: 6 - 400 mm²



Indent crimp

For crimping Cu tubular cable lugs and connectors of "standard design". Application areas: 0.75 - 400 mm²



Trapezoid crimp

For crimping cable end sleeves and twin cable end sleeves. Application areas: 0.14 - 185 mm²



Indent crimp

For crimping cable end sleeves and twin cable end sleeves. Application areas: 4 - 95 mm²



Square crimp

For crimping cable end sleeves and twin cable end sleeves. Application areas: 0.14 - 10 mm²



Roll crimp

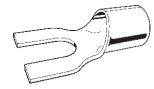
For crimping non-insulated blade terminal connections. Application area 0.1 - 6 mm²



Round crimp

For sector-shaped conductors 90° and 120°. Application areas: 10 sm - 300 sm, 35 se - 300 se

Non-insulated crimping cable lugs (ring, fork and pin-type) **Q**



Cross section mm ²	Art. no.	Crimp shape	Catalogue page
1.5 - 10	10 6134	Indent crimp	211
0.5 - 16	10 1909	Indent crimp	211
10 - 35	10 6146	Indent crimp	211
0.5 - 10	10 6000	Indent crimp	205
0.5 - 10	10 6112	Indent crimp	206
0.5 - 10	10 6150	Indent crimp	207
0.1 - 16	10 4204	Indent crimp	211
10 - 70	10 1867	Indent crimp	212
10 - 70	10 1868	Indent crimp	212
10 - 70	10 5498	Indent crimp	212
10 - 70	10 5501	Indent crimp	213
16 - 150	10 5502	Indent crimp	213
16 - 150	10 5504	Indent crimp	214
10 - 70	10 5698	Indent crimp	216
10 - 70	10 5701	Indent crimp	217
16 - 150	10 5702	Indent crimp	217
16 - 150	10 5704	Indent crimp	218

Compression cable lugs and connectors acc. to DIN 46235 / DIN 46267 **D**



Cross section mm ²	Art. no.	Crimp shape	Catalogue page
6 - 50	10 1883	Hex crimp	211
10 - 120	10 1886	Hex crimp	211
25 - 150	10 1888	Hex crimp	211
6 - 185	10 1867	Hex crimp	212
6 - 300	10 1868	Hex crimp	212
6 - 185	10 5498	Hex crimp	212
6 - 300	10 5501	Hex crimp	213
10 - 300	10 5502	Hex crimp	213
10 - 300	10 5504	Hex crimp	214
6 - 185	10 5698	Hex crimp	216
6 - 300	10 5701	Hex crimp	217
10 - 300	10 5702	Hex crimp	217
10 - 300	10 5704	Hex crimp	218

Technical appendix

Modular connectors		RJ 14	RJ 10	RJ 11	RJ 12	RJ 45	RJ 45 unshielded	RJ 45 shielded	RJ 45 shielded	BNC/TNC shielded	bre optics Coaxial (RG 58, RG 59 RG 62)	(fibre optic) connector	
Positions			4	4	6	6	8	Type CIMCO, etc.	Type HIROSE	Type Stewart	Stamping	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									•		

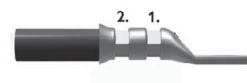
bold = crimp profile inserts for click 'n' crimp system; see page 205.

We recommend the following number of crimps for the individual cross sections:

Cross section mm ²	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	2	4
400	4	2	3	4
500			3	4
625			3	

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.



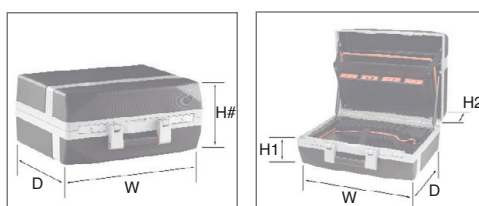
According to DIN VDE 0220 part 2 screws of strength class 8.8 are tightened with the following torques: 1.2.

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		

We keep replacement parts available for you for a number of articles. Our sales team will gladly advise you!

Case dimensioning

H# = H1 + H2



Technical appendix

MCM	AWG	Outer diameter		Cross section mm ²	Comparable metric cross section
		mm	inch		
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 mil = 0.0005067 mm²

AWG = American wire gauge

Terms of sale and delivery – Status as of January 2012

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.

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. 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 expensibility 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 limitation 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 contract-typical, 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.

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
PU = Packaging Unit (pieces)			10 1044	1	46	10 1892	1	210
10 0000	1	42/162	10 1046	1	46	10 1900	1	210
10 0024	1	41/160	10 1048	1	46	10 1902	1	211
10 0030	1	41/48	10 1050	1	46	10 1904	1	209
10 0062	1	41/160	10 1051	1	46	10 1905	1	209
10 0082	1	42	10 1052	1	46	10 1906	1	209
10 0086	1	42	10 1054	1	46	10 1907	1	209
10 0090	1	42	10 1055	1	46	10 1909	1	211
10 0094	1	42	10 1076	1	46	10 1911	1	209
10 0212	1	41	10 1082	1	46	10 1916	1	210
10 0214	1	41/160	10 1096	1	46	10 1918	1	210
10 0216	1	41/160	10 1222	1	42/182	10 1925	1	209
10 0236	1	41/160	10 1224	1	42/182	10 1930	1	263
10 0238	1	41/160	10 1230	1	182	10 1931	1	263
10 0334	1	41/160	10 1236	1	182	10 1935	1	264
10 0336	1	41/160	10 1237	1	182	10 1940	1	209
10 0338	1	41/160	10 1238	1	182	10 1946	1	209
10 0350	1	42	10 1239	1	182	10 2000	1	211
10 0352	1	42	10 1241	1	182	10 2001	1	206
10 0402	1	41/160	10 1243	1	182	10 2002	1	206
10 0414	1	49	10 1256	1	182	10 2003	1	206
10 0450	1	49/184	10 1277	1	182	10 2004	1	206
10 0524	1	40/159	10 1279	1	182	10 2006	1	206
10 0526	1	40/159	10 1281	1	182	10 2007	1	206
10 0528	1	40/159	10 1283	1	182	10 2008	1	206
10 0570	1	40/159	10 1285	1	182	10 2020	1	182
10 0572	1	40/159	10 1300	1	49/182	10 2057	1	50
10 0574	1	40/159	10 1302	1	49/182	10 2058	1	50
10 0577	1	40/159	10 1304	1	49/182	10 2059	1	50
10 0652	1	41/160	10 1370	1	182	10 2060	1	50
10 0686	1	41/160	10 1410	1	49	10 2062	1	50
10 0694	1	104	10 1412	1	49	10 2063	1	50
10 0695	1	104	10 1414	1	49	10 2064	1	50
10 0696	1	104	10 1416	1	49	10 2066	1	50
10 0698	1	104	10 1418	1	49	10 2067	1	50
10 0710	1	103	10 1430	1	49	10 2068	1	50
10 0712	1	103	10 1432	1	49	10 2069	1	50
10 0720	1	101/209	10 1434	1	49	10 2070	1	50
10 0725	1	101/209	10 1436	1	49	10 2071	1	50
10 0728	1	101/209	10 1438	1	49	10 2072	1	50
10 0730	1	102	10 1450	1	49	10 2080	1	50
10 0731	1	102	10 1452	1	49	10 2082	1	50
10 0732	1	102	10 1454	1	49	10 3012	1	47
10 0733	1	102	10 1456	1	49	10 3016	1	47
10 0736	1	102	10 1458	1	49	10 3018	1	47
10 0737	1	102	10 1470	1	49	10 3042	1	47
10 0738	1	102	10 1472	1	49	10 3062	1	47
10 0739	1	102	10 1474	1	49	10 3110	1	47/163
10 0740	1	102	10 1476	1	49	10 3112	1	47/163
10 0744	1	103	10 1478	1	49	10 3114	1	47/163
10 0746	1	103	10 1524	1	49	10 3232	1	47/163
10 0748	1	100	10 1540	1	49	10 3240	1	47/163
10 0749	1	100	10 1550	1	50	10 4020	1	42/160
10 0752	1	101	10 1562	1	50	10 4022	1	42/162
10 0755	1	102	10 1570	1	110	10 4030	1	46
10 0762	1	103/171	10 1571	1	110	10 4032	1	45
10 0765	1	99	10 1640	1	50	10 4190	1	210
10 0766	1	99	10 1650	1	50/267	10 4192	1	210
10 0770	1	101	10 1690	1	48	10 4194	1	210
10 0771	1	101	10 1692	1	48	10 4196	1	210
10 0772	1	101	10 1694	1	48	10 4200	1	210
10 0773	1	101	10 1698	1	48	10 4202	1	210
10 0774	1	102	10 1700	1	48	10 4204	1	211
10 0775	1	102	10 1702	1	48	10 4206	1	210
10 0780	1	103	10 1704	1	48	10 4208	1	210
10 0790	1	44/162	10 1708	1	48	10 4210	1	210
10 0792	1	44/162	10 1720	1	48	10 4212	1	210/211
10 0794	1	44/162	10 1722	1	48	10 4220	1	207
10 0796	1	163	10 1724	1	48	10 4222	1	207
10 0802	1	45	10 1730	1	49	10 4224	1	207
10 0804	1	45	10 1732	1	41/48	10 4226	1	207
10 0806	1	45	10 1733	1	48	10 4228	1	207
10 0808	1	45	10 1734	1	48	10 4230	1	207
10 0810	1	45	10 1735	1	48	10 4232	1	207
10 0812	1	45	10 1867	1	212	10 4234	1	207
10 0814	1	45	10 1868	1	212	10 4250	1	218
10 0816	1	45	10 1870	1	211	10 4251	1	218
10 0818	1	45	10 1872	1	211	10 4252	1	218
10 0820	1	45	10 1874	1	211	10 4254	1	218
10 0822	1	45	10 1880	1	211	10 4256	1	218
10 0824	1	45	10 1882	1	211	10 4260	1	218
10 0826	1	45	10 1883	1	211	10 4262	1	218
10 1030	1	46	10 1884	1	211	10 4264	1	218
10 1038	1	46	10 1885	1	211	10 4266	1	218
10 1040	1	46	10 1886	1	211	10 4298	1	215
			10 1888	1	211	10 4301	1	214



Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
10 4306	1	214	10 5698	1	215	10 5826	1	223
10 4308	1	214	10 5701	1	216	10 5830	1	223
10 4312	1	215	10 5702	1	216	10 5832	1	223
10 4314	1	215	10 5704	1	216	10 5834	1	223
10 4321	1	215	10 5706	1	96	10 5836	1	223
10 4324	1	215	10 5708	1	96	10 5838	1	223
10 4326	1	215	10 5710	1	96	10 5840	1	223
10 4330	1	215	10 5711	1	221	10 5842	1	223
10 5300	1	219	10 5712	1	221	10 5844	1	223
10 5302	1	219	10 5713	1	221	10 5846	1	223
10 5304	1	219	10 5714	1	221	10 5848	1	223
10 5306	1	219	10 5715	1	221	10 5850	1	223
10 5308	1	219	10 5716	1	221	10 5852	1	223
10 5310	1	219	10 5717	1	221	10 5860	1	223
10 5312	1	219	10 5718	1	221	10 5862	1	223
10 5314	1	219	10 5719	1	221	10 5864	1	223
10 5316	1	219	10 5720	1	221	10 5866	1	223
10 5318	1	219	10 5721	1	221	10 5868	1	223
10 5320	1	219	10 5722	1	221	10 5870	1	223
10 5330	1	219	10 5723	1	221	10 5872	1	223
10 5332	1	219	10 5730	1	221	10 5874	1	223
10 5334	1	219	10 5731	1	221	10 5876	1	223
10 5336	1	219	10 5732	1	221	10 5878	1	223
10 5338	1	219	10 5733	1	221	10 5892	1	224
10 5340	1	219	10 5734	1	221	10 5894	1	224
10 5342	1	219	10 5735	1	221	10 5896	1	224
10 5344	1	219	10 5736	1	221	10 5898	1	224
10 5346	1	219	10 5737	1	221	10 5900	1	224
10 5348	1	219	10 5738	1	221	10 5902	1	224
10 5350	1	219	10 5739	1	221	10 5904	1	224
10 5360	1	220	10 5740	1	221	10 5906	1	224
10 5362	1	220	10 5741	1	221	10 5908	1	224
10 5364	1	220	10 5742	1	221	10 5910	1	224
10 5366	1	220	10 5749	1	222	10 5912	1	224
10 5368	1	220	10 5750	1	222	10 5914	1	224
10 5370	1	220	10 5751	1	222	10 5942	1	224
10 5372	1	220	10 5752	1	222	10 5944	1	224
10 5374	1	220	10 5753	1	222	10 5946	1	224
10 5392	1	220	10 5754	1	222	10 5948	1	224
10 5394	1	220	10 5755	1	222	10 5950	1	224
10 5396	1	220	10 5756	1	222	10 5952	1	224
10 5398	1	220	10 5757	1	222	10 5954	1	224
10 5400	1	220	10 5758	1	222	10 5956	1	224
10 5402	1	220	10 5759	1	222	10 5962	1	224
10 5404	1	220	10 5760	1	222	10 5964	1	224
10 5406	1	220	10 5761	1	222	10 5966	1	224
10 5408	1	220	10 5762	1	222	10 5968	1	224
10 5410	1	220	10 5763	1	222	10 5970	1	224
10 5442	1	220	10 5764	1	222	10 5972	1	224
10 5444	1	220	10 5765	1	222	10 5974	1	224
10 5446	1	220	10 5770	1	222	10 5976	1	224
10 5448	1	220	10 5771	1	222	10 5978	1	224
10 5450	1	220	10 5772	1	222	10 5980	1	224
10 5452	1	220	10 5773	1	222	10 5982	1	224
10 5454	1	220	10 5774	1	222	10 6000	1	205
10 5462	1	220	10 5775	1	222	10 6002	1	205
10 5464	1	220	10 5776	1	222	10 6005	1	205
10 5466	1	220	10 5777	1	222	10 6009	1	205
10 5468	1	220	10 5778	1	222	10 6010	1	205
10 5470	1	220	10 5779	1	222	10 6011	1	205
10 5472	1	220	10 5780	1	222	10 6012	1	205
10 5474	1	220	10 5781	1	222	10 6013	1	205
10 5480	1	220	10 5782	1	222	10 6014	1	205
10 5482	1	220	10 5783	1	222	10 6015	1	205
10 5484	1	220	10 5784	1	221	10 6016	1	205
10 5486	1	220	10 5785	1	221	10 6017	1	205
10 5490	1	220	10 5786	1	221	10 6018	1	205
10 5498	1	212	10 5787	1	221	10 6019	1	205
10 5501	1	213	10 5788	1	221	10 6027	1	205
10 5502	1	213	10 5789	1	221	10 6028	1	205
10 5504	1	214	10 5790	1	221	10 6052	1	205
10 5506	1	95	10 5791	1	221	10 6112	1	206
10 5508	1	95	10 5792	1	221	10 6114	1	81
10 5510	1	95	10 5799	1	222	10 6116	1	208
10 5550	1	217	10 5802	1	223	10 6117	1	208
10 5554	1	217	10 5804	1	223	10 6118	1	208
10 5555	1	217	10 5806	1	223	10 6120	1	206/209
10 5651	1	217	10 5808	1	223	10 6134	1	206/211
10 5652	1	217	10 5810	1	223	10 6136	1	206/210
10 5653	1	217	10 5812	1	223	10 6138	1	206/207
10 5654	1	217	10 5814	1	223	10 6140	1	206/209
10 5655	1	217	10 5816	1	223	10 6142	1	206/209
10 5656	1	217	10 5818	1	223	10 6144	1	206/210
10 5657	1	217	10 5820	1	223	10 6146	1	211
10 5658	1	217	10 5822	1	223	10 6150	1	207
10 5659	1	217	10 5824	1	223	10 6152	1	208

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
10 6154	1	208	11 1404	1	75	11 1942	1	60
10 6156	1	206/208	11 1413	1	75	11 2050	1	60/165
10 6158	1	206/208	11 1414	1	75	11 2200	1	67
10 6160	1	207	11 1415	1	75	11 2202	1	67
10 6164	1	207	11 1416	1	76	11 2204	1	67
10 6168	1	207	11 1420	1	74	11 2206	1	67
10 6200	1	208	11 1425	1	74	11 2208	1	67
10 6201	1	206/208	11 1427	1	74	11 2210	1	67
10 6202	1	206/208	11 1428	1	74	11 2212	1	67
10 6203	1	206/208	11 1430	1	74	11 2214	1	67
10 6210	1	208	11 1433	1	74	11 2218	1	67
10 6211	1	206	11 1435	1	74	11 2220	1	67
10 6212	1	206	11 1440	1	76	11 2222	1	67
10 6213	1	206	11 1460	1	76	11 2226	1	67
10 6214	1	206	11 1465	1	76	11 2228	1	67
10 6215	1	206	11 1470	1	75	11 2232	1	67
10 6216	1	206	11 1471	1	75	11 2234	1	67
10 6217	1	206	11 1474	1	76	11 2238	1	67
10 6218	1	206	11 1475	1	76	11 2310	1	67
10 8002	1	44/162	11 1476	1	76	11 2312	1	67
10 8724	1	44/162	11 1477	1	76	11 2330	1	67
10 8771	1	43/161	11 1478	1	76	11 2332	1	67
10 8773	1	43/161	11 1479	1	76	11 2334	1	67
10 8777	1	43/161	11 1480	1	76	11 2336	1	67
10 8778	1	43/161	11 1485	1	76	11 2338	1	67
10 8779	1	43/161	11 1510	1	178	11 2344	1	67
10 8780	1	43/161	11 1512	1	178	11 2348	1	67
10 8781	1	44/162	11 1513	1	178	11 2350	1	67
10 8782	1	44/162	11 1514	1	178	11 2352	1	67
10 8783	1	44/162	11 1515	1	178	11 2356	1	67
10 8784	1	43/161	11 1516	1	178	11 2358	1	67
10 8785	1	43/161	11 1517	1	178	11 2362	1	67
10 8786	1	43/161	11 1518	1	178	11 2364	1	67
10 8787	1	43/161	11 1519	1	178	11 2368	1	67
10 8788	1	43/161	11 1522	1	179	11 2430	1	67
10 8789	1	43/161	11 1525	1	178	11 2432	1	67
10 8790	1	44/162	11 1530	1	179	11 2434	1	66
10 8792	1	43/161	11 1532	1	179	11 2448	1	66
10 8795	1	43/161	11 1534	1	179	11 2450	1	68
			11 1536	1	179	11 2452	1	68
			11 1537	1	179	11 2454	1	68
			11 1540	1	179	11 2456	1	68
			11 1542	1	179	11 2458	1	68
			11 1545	1	179	11 2460	1	68
			11 1560	1	179	11 2462	1	68
			11 1562	1	179	11 2464	1	68
			11 1563	1	179	11 2466	1	68
			11 1600	1	47	11 2468	1	68
			11 1622	1	47	11 2470	1	68
			11 1650	1	47	11 2472	1	68
			11 1652	1	47	11 2474	1	68
			11 1654	1	47	11 2476	1	68
			11 1810	1	58	11 2478	1	68
			11 1860	1	59	11 2480	1	68
			11 1861	1	59	11 2482	1	68
			11 1863	1	59	11 2484	1	68
			11 1864	1	59	11 2486	1	68
			11 1865	1	59	11 2488	1	68
			11 1866	1	59	11 2490	1	68
			11 1868	1	59	11 2500	1	68
			11 1869	1	59	11 2505	1	66
			11 1870	1	59	11 2508	1	66
			11 1875	1	59	11 2509	1	66
			11 1876	1	59	11 2510	1	66
			11 1877	1	59	11 2511	1	66
			11 1880	1	59	11 2512	1	66
			11 1881	1	59	11 2513	1	66
			11 1889	1	59	11 2514	1	66
			11 1890	1	59	11 2515	1	66
			11 1891	1	59	11 2516	1	66
			11 1892	1	59	11 2517	1	66
			11 1893	1	59	11 2518	1	66
			11 1894	1	59	11 2519	1	66
			11 1895	1	59	11 2520	1	166
			11 1898	1	59	11 2522	1	166
			11 1901	1	60	11 2523	1	166
			11 1903	1	60	11 2525	1	166
			11 1909	1	59	11 2526	1	166
			11 1910	1	59	11 2527	1	166
			11 1911	1	59	11 2528	1	166
			11 1912	1	59	11 2529	1	166
			11 1913	1	59	11 2530	1	166
			11 1914	1	59	11 2531	1	166
			11 1915	1	59	11 2534	1	166
			11 1916	1	59	11 2560	1	166
			11 1920	1	60	11 2561	1	166
11 0002	1	112						
11 0004	1	112						
11 0006	1	113						
11 0120	1	55						
11 0122	1	55						
11 0290	1	55						
11 0294	1	55						
11 0480	1	58						
11 0482	1	58						
11 0520	1	64						
11 0592	1	65						
11 0594	1	65						
11 0596	1	65						
11 0598	1	65						
11 0604	1	64						
11 0620	1	58						
11 0630	1	58						
11 0782	1	57						
11 0784	1	57						
11 0786	1	57						
11 0788	1	57						
11 0790	1	57						
11 0792	1	57						
11 0794	1	57						
11 0796	1	57						
11 0804	1	165						
11 0806	1	165						
11 0808	1	165						
11 0812	1	165						
11 0814	1	165						
11 0816	1	165						
11 0817	1	165						
11 0836	1	166						
11 0840	1	166						
11 0842	1	166						
11 0856	1	166						
11 0860	1	166						
11 0862	1	166						
11 1280	1	77						
11 1282	1	77						
11 1288	1	77						
11 1290	1	77						
11 1300	1	77						
11 1320	1	77						
11 1400	1	74						
11 1402	1	75						

- 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

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
11 2562	1	166	11 2800	1	68	11 4716	1	57
11 2563	1	166	11 2802	1	68	11 4736	1	57
11 2564	1	166	11 2804	1	68	11 4738	1	57
11 2570	1	166	11 2842	1	186	11 4740	1	57
11 2575	1	166	11 2844	1	186	11 4742	1	57
11 2576	1	166	11 2846	1	186	11 4744	1	57
11 2580	1	166	11 2882	1	69	11 4760	1	57
11 2581	1	167	11 2883	1	69	11 4762	1	57
11 2582	1	167	11 2890	1	71	11 4764	1	57
11 2600	1	167	11 2891	1	70	11 4766	1	57
11 2602	1	167	11 2894	1	70	11 4800	1	58
11 2604	1	167	11 2895	1	71	11 4802	1	58
11 2606	1	167	11 2898	1	70	11 4810	1	58
11 2608	1	167	11 2900	1	69	11 4812	1	58
11 2609	1	167	11 2902	1	69	11 4814	1	58
11 2610	1	167	11 2904	1	69	11 4816	1	58
11 2611	1	167	11 2906	1	69	11 4818	1	58
11 2612	1	167	11 2908	1	69	11 4820	1	58
11 2613	1	167	11 2910	1	69	11 4822	1	58
11 2614	1	167	11 2912	1	69	11 4824	1	58
11 2615	1	167	11 2922	1	71	11 4826	1	58
11 2616	1	167	11 2988	1	71	11 4828	1	58
11 2617	1	167	11 2990	1	71	11 4830	1	58
11 2618	1	167	11 2992	1	70	11 4832	1	58
11 2622	1	167	11 2994	1	71	11 4834	1	58
11 2628	1	167	11 2996	1	72	11 4836	1	58
11 2640	1	167	11 2998	1	72	11 4838	1	58
11 2642	1	167	11 3104	1	65	11 4840	1	58
11 2650	1	167	11 3152	1	65	11 4842	1	58
11 2670	1	167	11 3154	1	66	11 4844	1	58
11 2671	1	167	11 4000	1	183	11 4846	1	58
11 2672	1	167	11 4001	1	183	11 4848	1	58
11 2673	1	167	11 4011	1	183	11 4850	1	58
11 2674	1	167	11 4019	1	183	11 4852	1	58
11 2704	1	167	11 4021	1	183	11 4854	1	58
11 2706	1	170	11 4022	1	183	11 4856	1	58
11 2708	1	170	11 4023	1	183	11 4858	1	58
11 2710	1	170	11 4024	1	183	11 4860	1	58
11 2712	1	170	11 4026	1	183	11 4862	1	58
11 2714	1	170	11 4040	1	183	11 4941	1	62
11 2716	1	170	11 4120	1	183	11 4942	1	62
11 2718	1	170	11 4130	1	186	11 4970	1	62
11 2719	1	170	11 4150	1	183	11 4971	1	62
11 2720	1	170	11 4500	1	63	11 4972	1	62
11 2721	1	170	11 4502	1	63	11 4973	1	62
11 2722	1	170	11 4505	1	62	11 5000	1	69
11 2724	1	170	11 4508	1	62	11 5014	1	69
11 2726	1	170	11 4509	1	62	11 5015	1	69
11 2728	1	170	11 4510	1	62	11 5017	1	69
11 2730	1	170	11 4511	1	62	11 5019	1	69
11 2732	1	170	11 4512	1	62	11 5020	1	69
11 2740	1	170	11 4513	1	62	11 5022	1	69
11 2742	1	170	11 4515	1	62	11 5024	1	69
11 2744	1	170	11 4516	1	62	11 5027	1	69
11 2746	1	170	11 4517	1	62	11 5030	1	69
11 2748	1	170	11 4518	1	62	11 5040	1	69
11 2754	1	170	11 4519	1	62	11 5042	1	69
11 2758	1	170	11 4520	1	62	11 5045	1	69
11 2760	1	170	11 4521	1	62	11 5100	1	68
11 2762	1	170	11 4522	1	62	11 5110	1	68
11 2764	1	170	11 4523	1	62	11 5112	1	68
11 2766	1	170	11 4525	1	62	11 5114	1	68
11 2768	1	170	11 4526	1	62	11 5116	1	68
11 2769	1	170	11 4527	1	62	11 7000	1	54
11 2770	1	170	11 4551	1	62	11 7100	1	56
11 2771	1	170	11 4555	1	62	11 7101	1	56
11 2772	1	170	11 4559	1	62	11 7102	1	55
11 2774	1	170	11 4573	1	62	11 7103	1	54
11 2776	1	170	11 4574	1	62	11 7104	1	54
11 2778	1	170	11 4575	1	62	11 7105	1	54
11 2780	1	170	11 4576	1	62	11 7106	1	54
11 2783	1	70	11 4580	1	64	11 7107	1	54
11 2784	1	70	11 4596	1	63	11 7108	1	54
11 2785	1	70	11 4597	1	63	11 7110	1	54
11 2786	1	70	11 4598	1	63	11 7112	1	55
11 2787	1	70	11 4599	1	64	11 7114	1	55
11 2788	1	70	11 4600	1	63	11 7116	1	55
11 2790	1	70	11 4602	1	63	11 7121	1	54
11 2791	1	70	11 4604	1	63	11 7122	1	54
11 2792	1	70	11 4606	1	64	11 7123	1	54
11 2793	1	70	11 4704	1	57	11 7124	1	54
11 2794	1	70	11 4706	1	57	11 7125	1	54
11 2795	1	70	11 4708	1	57	11 7126	1	54
11 2796	1	70	11 4710	1	57	11 7130	1	54
11 2797	1	70	11 4712	1	57	11 7131	1	54
11 2798	1	69	11 4714	1	57	11 7132	1	54



Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
11 7133	1	54	11 7925	1	52/164	12 0213	1	97
11 7140	1	54	11 7930	1	52/164	12 0214	1	97
11 7141	1	54	11 8017	1	103/207	12 0215	1	97
11 7142	1	54	11 8018	1	103/207	12 0216	1	97
11 7143	1	54				12 0218	1	97/105
11 7145	1	56	12 0002	1	99	12 0220	1	97
11 7200	1	56	12 0003	1	99	12 0222	1	97
11 7204	1	55	12 0004	1	105	12 0230	1	97
11 7205	1	55	12 0006	1	105	12 0242	1	93
11 7206	1	55	12 0008	1	104	12 0250	1	97
11 7207	1	55	12 0010	1	104	12 0252	1	97
11 7208	1	55	12 0011	1	104	12 0280	1	185
11 7209	1	55	12 0012	1	104	12 0282	1	185
11 7210	1	55	12 0014	1	104	12 0283	1	185
11 7211	1	55	12 0015	1	100	12 0290	1	97
11 7213	1	55	12 0016	1	104	12 0330	1	93
11 7214	1	55	12 0017	1	100	12 0332	1	93
11 7217	1	55	12 0018	1	104	12 0334	1	94
11 7220	1	56	12 0019	1	100	12 0336	1	94
11 7223	1	55	12 0020	1	104	12 0338	1	94
11 7224	1	55	12 0021	1	99	12 0340	1	93
11 7225	1	55	12 0022	1	100	12 0410	1	109/183
11 7226	1	55	12 0023	1	100	12 0412	1	109/183
11 7228	1	55	12 0024	1	100	12 0416	1	109/183
11 7300	1	56	12 0025	1	99	12 0417	1	109/183
11 7306	1	55	12 0026	1	100	12 0418	1	109/184
11 7307	1	55	12 0027	1	100	12 0419	1	109/184
11 7308	1	55	12 0028	1	99	12 0420	1	109/183
11 7309	1	55	12 0029	1	99	12 0422	1	109/183
11 7310	1	55	12 0030	1	99	12 0430	1	109/184
11 7315	1	55	12 0031	1	104	12 0432	1	109/184
11 7320	1	55	12 0032	1	99	12 0450	1	109/184
11 7325	1	55	12 0033	1	104	12 0452	1	109/184
11 7330	1	55	12 0034	1	100	12 0453	1	109/184
11 7340	1	55	12 0036	1	99	12 0460	1	185
11 7511	1	57	12 0038	1	99	12 0461	1	185
11 7512	1	57	12 0042	1	105/171	12 0462	1	185
11 7513	1	57	12 0043	1	105/171	12 0464	1	185
11 7514	1	57	12 0044	1	105/171	12 0468	1	185
11 7515	1	57	12 0045	1	105/171	12 0472	1	185
11 7700	1	53/164	12 0046	1	105/171	12 0473	1	185
11 7701	1	52/163	12 0048	1	101	12 0474	1	185
11 7702	1	52/163	12 0050	1	106	12 0480	1	110/184
11 7703	1	52/163	12 0052	1	106	12 0490	1	108
11 7704	1	52/163	12 0054	1	106	12 0500	1	108
11 7705	1	52/163	12 0056	1	106	12 0502	1	108
11 7706	1	52/163	12 0058	1	106	12 0504	1	108
11 7708	1	52/163	12 0060	1	106	12 0505	1	108
11 7710	1	52/163	12 0062	1	106	12 0506	1	108
11 7730	1	52/163	12 0063	10	106	12 0507	1	108
11 7731	1	52/163	12 0064	1	105/171	12 0508	1	108
11 7732	1	52/163	12 0066	1	105/171	12 0512	1	108
11 7733	1	52/163	12 0074	1	106	12 0513	1	108
11 7740	1	52/163	12 0075	10	106	12 0515	1	108
11 7741	1	52/163	12 0078	1	106	12 0520	1	108
11 7742	1	52/163	12 0079	10	106	12 0600	1	108/184
11 7743	1	52/163	12 0080	1	106	12 0602	1	108/184
11 7745	1	53/164	12 0082	1	106	12 0607	1	108
11 7750	1	52/163	12 0092	1	103	12 0608	1	109/184
11 7751	1	52/163	12 0098	1	208	12 0614	1	109/184
11 7752	1	52	12 0100	1	93	12 0700	1	108/171
11 7757	1	52/163	12 0104	1	93	12 0702	1	108/171
11 7758	1	52/163	12 0110	1	96	12 0790	1	44/162
11 7800	1	53/164	12 0116	1	93	12 0800	1	110
11 7801	1	54/165	12 0120	1	96	12 0834	1	110
11 7802	1	53/164	12 0122	1	96	12 0882	1	129
11 7805	1	52/164	12 0130	1	97	12 0890	1	184
11 7806	1	52/164	12 0138	1	93	12 1010	1	104
11 7807	1	52/164	12 0140	1	94	12 1011	1	104
11 7808	1	52/164	12 0147	1	94	12 1027	1	100
11 7809	1	52/164	12 0150	1	94	12 1042	1	105/171
11 7810	1	52/164	12 0151	1	94	12 1104	1	103
11 7811	1	52/164	12 0157	1	94	12 9168	1	95
11 7813	1	52/164	12 0168	1	95			
11 7820	1	53/165	12 0170	1	94	13 0006	1	151
11 7823	1	52/163	12 0172	1	94	13 0008	1	151
11 7824	1	52/163	12 0180	1	94	13 0010	1	151
11 7825	1	52/163	12 0182	1	94	13 0022	1	152
11 7826	1	52/163	12 0184	1	94	13 0024	1	152
11 7828	1	52/163	12 0185	1	94	13 0032	1	152
11 7900	1	53/165	12 0202	1	93/171	13 0034	1	152
11 7908	1	52/164	12 0206	1	93/171	13 0052	1	152
11 7909	1	52/164	12 0208	1	97	13 0054	1	152
11 7910	1	52/164	12 0210	1	97	13 0070	1	152
11 7915	1	52/164	12 0211	1	97	13 0075	1	152
11 7920	1	52/164	12 0212	1	97	13 0076	1	152

- 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

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
13 0210	1	152	13 2410	1	136	13 2734	1	138
13 0354	1	152	13 2412	1	136	13 2736	1	138
13 0358	1	152	13 2414	1	136	13 2738	1	138
13 0403	1	151	13 2416	1	136	13 2740	1	138
13 0405	1	151	13 2418	1	136	13 2742	1	138
13 0410	1	151	13 2420	1	136	13 2744	1	138
13 0524	1	152	13 2424	1	136	13 2746	1	138
13 0530	1	152	13 2426	1	136	13 2748	1	138
13 0534	1	152	13 2428	1	136	13 2750	1	138
13 0536	1	152	13 2430	1	136	13 2752	1	138
13 0538	1	152	13 2432	1	136	13 2754	1	138
13 0580	1	151	13 2434	1	136	13 2756	1	138
13 0582	1	151	13 2436	1	136	13 2758	1	138
13 0584	1	151	13 2438	1	136	13 2760	1	139
13 0586	1	151	13 2440	1	136	13 2762	1	140
13 0592	1	151	13 2442	1	136	13 2764	1	141
13 0600	1	151	13 2446	1	136	13 2766	1	142
13 0602	1	151	13 2448	1	136	13 2768	1	143
13 0604	1	151	13 2450	1	136	13 2770	1	144
13 0708	1	151	13 2500	1	136	13 2772	1	145
13 0710	1	151	13 2502	1	136	13 2774	1	138
13 0712	1	151	13 2504	1	136	13 2776	1	138
13 0715	1	151	13 2506	1	136	13 2778	1	138
13 0804	1	151	13 2508	1	136	13 2780	1	138
13 0808	1	151	13 2510	1	136	13 2782	1	138
13 0880	1	151	13 2512	1	136	13 2784	1	138
13 0882	1	151	13 2514	1	136	13 2786	1	138
13 1053	1	151	13 2518	1	136	13 2788	1	138
13 1322	1	153	13 2520	1	136	13 2790	1	138
13 1324	1	153	13 2524	1	136	13 2792	1	138
13 1326	1	153	13 2526	1	136	13 2794	1	138
13 1328	1	153	13 2528	1	136	13 2796	1	138
13 1404	1	153	13 2530	1	136	13 2800	1	140
13 1420	1	153	13 2532	1	136	13 2801	1	141
13 1422	1	153	13 2534	1	136	13 2802	1	141
13 1424	1	198	13 2536	1	136	13 2803	1	141
13 1428	1	198	13 2542	1	137	13 2804	1	141
13 1430	1	198	13 2544	1	137	13 2806	1	141
13 1432	1	199	13 2550	1	137	13 2808	1	141
13 1434	1	199	13 2552	1	137	13 2810	1	141
13 1435	1	199	13 2554	1	137	13 2811	1	141
13 1822	1	185	13 2556	1	137	13 2812	1	141
13 2300	1	135	13 2558	1	137	13 2813	1	142
13 2302	1	135	13 2560	1	137	13 2814	1	142
13 2304	1	135	13 2562	1	137	13 2816	1	142
13 2306	1	135	13 2564	1	137	13 2818	1	141
13 2308	1	135	13 2566	1	137	13 2820	1	142
13 2310	1	135	13 2568	1	137	13 2822	1	142
13 2312	1	135	13 2570	1	137	13 2824	1	142
13 2318	1	135	13 2572	1	137	13 2826	1	142
13 2320	1	135	13 2574	1	137	13 2828	1	141
13 2324	1	135	13 2576	1	137	13 2830	1	142
13 2326	1	135	13 2578	1	137	13 2832	1	142
13 2328	1	135	13 2580	1	137	13 2834	1	142
13 2330	1	135	13 2586	1	137	13 2836	1	142
13 2332	1	135	13 2588	1	137	13 2837	1	142
13 2334	1	135	13 2590	1	137	13 2838	1	142
13 2336	1	135	13 2592	1	137	13 2840	1	142
13 2338	1	135	13 2598	1	137	13 2841	1	142
13 2340	1	135	13 2600	1	137	13 2842	1	142
13 2342	1	135	13 2602	1	137	13 2844	1	142
13 2344	1	135	13 2604	1	137	13 2846	1	142
13 2346	1	135	13 2606	1	137	13 2848	1	142
13 2354	1	135	13 2608	1	137	13 2850	1	142
13 2356	1	135	13 2610	1	137	13 2852	1	142
13 2358	1	135	13 2612	1	137	13 2854	1	142
13 2360	1	135	13 2614	1	137	13 2856	1	142
13 2362	1	135	13 2616	1	137	13 2858	1	143
13 2364	1	135	13 2618	1	137	13 2860	1	143
13 2366	1	135	13 2620	1	137	13 2861	1	144
13 2368	1	135	13 2700	1	137	13 2862	1	143
13 2370	1	135	13 2702	1	137/138	13 2864	1	143
13 2374	1	135	13 2704	1	137	13 2865	1	144
13 2376	1	135	13 2706	1	137	13 2866	1	143
13 2378	1	135	13 2708	1	137	13 2867	1	144
13 2380	1	135	13 2710	1	137	13 2868	1	143
13 2382	1	135	13 2712	1	137	13 2870	1	143
13 2384	1	135	13 2714	1	138	13 2872	1	143
13 2386	1	135	13 2716	1	138	13 2874	1	143
13 2388	1	135	13 2720	1	138	13 2876	1	143
13 2390	1	135	13 2722	1	138	13 2878	1	143
13 2396	1	136	13 2724	1	138	13 2880	1	143
13 2398	1	136	13 2726	1	138	13 2882	1	143
13 2400	1	136	13 2728	1	138	13 2884	1	143
13 2402	1	136	13 2730	1	138	13 2886	1	143
13 2408	1	136	13 2732	1	138	13 2888	1	143

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
13 2890	1	143	13 4040	1	149	14 0184	1	172
13 2892	1	143	13 5000	1	135/137/148	14 0185	1	172
13 2894	1	143	13 5002	1	135/137/140/149	14 0190	1	172
13 2896	1	143	13 5004	1	135/137/138/148	14 0191	1	173
13 2898	1	143	13 5006	1	135/137/138/140/149	14 0192	1	172
13 2899	1	144	13 5008	1	135/137/138/148	14 0193	1	173
13 2900	1	143	13 5010	1	137/148	14 0194	1	172
13 2902	1	143	13 5012	1	137	14 0195	1	173
13 2903	1	144	13 5014	1	138/148	14 0196	1	172
13 2904	1	144	13 5016	1	138/140/149	14 0197	1	173
13 2905	1	144	13 5018	1	140/141	14 0198	1	176
13 2906	1	144	13 5020	1	140/141/142/143	14 0200	1	173
13 2908	1	144	13 5021	1	142/143	14 0201	1	173
13 2910	1	143	13 5022	1	141/143/144/145	14 0202	1	173
13 2912	1	143/144	13 5024	1	141/143/144/145/149	14 0203	1	173
13 2914	1	143	13 5028	1	141/143	14 0204	1	173
13 2916	1	143/144	13 5030	1	142/143	14 0205	1	173
13 2918	1	144	13 5032	1	142/143	14 0206	1	173
13 2920	1	144	13 5034	1	142/143/144/145/146	14 0208	1	173
13 2922	1	144	13 5036	1	142/143/144	14 0210	1	175
13 2924	1	144	13 5038	1	142/144/146	14 0211	1	175
13 2926	1	144	13 5040	1	142	14 0214	1	174
13 2928	1	144	13 5042	1	143	14 0215	1	174
13 2930	1	144	13 5044	1	143	14 0216	1	175
13 2932	1	144	13 5046	1	142	14 0219	1	175
13 2934	1	144	13 5048	1	143/144	14 0220	1	175
13 2936	1	145	13 5050	1	143/144/145/146	14 0221	1	175
13 2938	1	145	13 5054	1	144	14 0222	1	175
13 2940	1	145	13 5056	1	144/145	14 0224	1	176
13 2942	1	145	13 5058	1	144	14 0225	1	176
13 2944	1	144	13 5060	1	145	14 0227	1	175
13 2946	1	145	13 5062	1	145	14 0228	1	175
13 2948	1	145	13 5064	1	145	14 0229	1	200
13 2950	1	145	13 5066	1	145	14 0230	1	174
13 2952	1	145	13 5068	1	185	14 0232	1	174
13 2954	1	145	13 5070	1	145/146	14 0233	1	174
13 2956	1	145	13 5072	1	140/149	14 0234	1	174
13 2958	1	145	13 5074	1	149	14 0235	1	200
13 2960	1	145	13 5076	1	149	14 0236	1	200
13 2962	1	145	13 5078	1	149	14 0237	1	174
13 2964	1	145	13 5080	10	148	14 0238	1	174
13 2966	1	145	13 5082	100	148	14 0239	1	174
13 2968	1	145				14 0240	1	174
13 2970	1	145/146	14 0004	1	82	14 0241	1	174
13 2972	1	145/146	14 0006	1	82	14 0242	1	174
13 2974	1	145/146	14 0008	1	82	14 0243	1	174
13 2976	1	145/146	14 0010	1	82	14 0244	1	174
13 2980	1	146	14 0040	1	82	14 0245	1	174
13 2982	1	146	14 0042	1	82	14 0246	1	174
13 2984	1	146	14 0044	1	82	14 0247	1	174
13 2986	1	146	14 0046	1	82	14 0250	1	176
13 2990	1	146	14 0048	1	82	14 0255	1	176
13 2992	1	146	14 0050	1	82	14 0260	1	172
13 2994	1	146	14 0052	1	81	14 0261	1	172
13 2996	1	146	14 0054	1	81	14 0270	1	173
13 3000	1	139	14 0056	1	81	14 0272	1	173
13 3002	1	139	14 0058	1	81	14 0274	1	174
13 3004	1	140	14 0060	1	81	14 0278	1	174
13 3006	1	140	14 0062	1	81	14 0279	1	174
13 3008	1	139	14 0065	1	81	14 0282	1	174
13 3010	1	139	14 0067	1	81	14 0302	1	153
13 3012	1	139	14 0069	1	81	14 0306	1	153
13 3014	1	139	14 0100	1	72	14 0310	1	153
13 3016	1	140	14 0102	1	72/172	14 0320	1	153
13 3018	1	140	14 0120	1	155	14 0322	1	153
13 4000	1	148	14 0130	1	175	14 0330	24	192
13 4002	1	148	14 0132	1	175	14 0332	60	192
13 4004	1	148	14 0134	1	175	14 0334	120	192
13 4006	1	148	14 0136	1	175	14 0335	44	192
13 4008	1	148	14 0140	1	175	14 0338	40	192
13 4010	1	148	14 0142	1	175	14 0342	40	193
13 4012	1	146	14 0144	1	175	14 0346	80	193
13 4014	1	146	14 0146	1	175	14 0348	44	193
13 4016	1	147	14 0150	1	175	14 0380	300	199
13 4018	1	147	14 0154	1	172	14 0382	104	199
13 4020	1	147	14 0156	1	172	14 0384	40	199
13 4022	1	147	14 0157	1	172	14 0386	65	199
13 4023	1	147/218	14 0158	1	172	14 0388	91	199
13 4024	1	149	14 0166	1	172	14 0455	1	176
13 4026	1	140/149	14 0168	1	172	14 0456	1	176
13 4028	1	149	14 0170	1	172	14 0475	1	176
13 4030	1	140/149	14 0172	1	172	14 0476	1	176
13 4032	1	149	14 0174	1	172	14 0490	1	177
13 4034	1	149	14 0176	1	172	14 0495	1	177
13 4036	1	149	14 0179	1	172	14 0496	1	177
13 4038	1	149	14 0180	1	172	14 0500	1	177

- 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

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
14 0502	1	177	14 1002	1	123	14 2227	1	88
14 0504	1	177	14 1004	1	123	14 2228	1	88
14 0506	1	177	14 1020	1	124	14 2229	1	88
14 0550	1	177	14 1022	1	124	14 2230	1	88
14 0738	1000	48	14 1150	1	185	14 2231	1	88
14 0740	1000	48	14 1170	1	186	14 2240	1	89
14 0742	1000	48	14 1176	1	186	14 2241	1	89
14 0744	1000	48	14 1186	1	186	14 2242	1	89
14 0750	1	48	14 1192	1	186	14 2243	1	89
14 0752	1	48	14 1200	1	186	14 2244	1	89
14 0754	1	48	14 1202	1	186	14 2245	1	89
14 0758	1	48	14 1212	1	186	14 2250	1	89
14 0760	1	48	14 1250	1	186	14 2251	1	89
14 0762	1	48	14 1314	1	186	14 2252	1	89
14 0764	1	48	14 1320	1	132	14 2253	1	89
14 0768	1	48	14 1325	1	132	14 2270	1	89
14 0770	1	48	14 1330	1	186	14 2271	1	89
14 0772	1	48	14 1340	1	186	14 2272	1	89
14 0774	1	48	14 1420	1	86	14 2273	1	89
14 0778	1	48	14 1430	1	86	14 2274	1	89
14 0779	1	48	14 1450	1	86	14 2275	1	89
14 0850	1	124	14 1796	1	87	14 2276	1	89
14 0852	1	124	14 1802	1	87	14 2277	1	89
14 0854	1	124	14 1806	1	87	14 2278	1	89
14 0856	1	124	14 1808	1	87	14 2279	1	89
14 0858	1	124	14 1812	1	87	14 2280	1	89
14 0860	1	124	14 1816	1	87	14 2281	1	89
14 0862	1	124	14 1842	1	88	14 2285	1	89
14 0864	1	124	14 1844	1	88	14 2286	1	89
14 0869	1	125	14 1846	1	88	14 2290	1	89
14 0870	1	125	14 2006	1	178	14 2291	1	89
14 0871	1	125	14 2007	1	178	14 2292	1	89
14 0872	1	125	14 2008	1	178	14 2293	1	89
14 0873	1	125	14 2009	1	178	14 2300	1	90
14 0874	1	125	14 2012	1	177	14 2301	1	90
14 0875	1	125	14 2014	1	177	14 2302	1	90
14 0876	1	125	14 2016	1	179	14 2303	1	90
14 0884	1	125	14 2020	1	86	14 2304	1	90
14 0886	1	125	14 2024	1	86	14 2310	1	89
14 0887	1	125	14 2028	1	86	14 2320	1	80
14 0888	1	125	14 2030	1	86	14 2322	1	80
14 0889	1	125	14 2031	1	86	14 2323	1	80
14 0890	1	125	14 2034	1	86	14 2324	1	80
14 0891	1	125	14 2035	1	86	14 2325	1	81
14 0892	1	125	14 2038	1	86	14 2326	1	80
14 0893	1	125	14 2039	1	86	14 2328	1	80
14 0894	1	125	14 2040	1	86	14 2330	1	81
14 0895	1	125	14 2120	1	86	14 2331	1	81
14 0896	1	125	14 2122	1	86	14 2332	1	81
14 0900	1	125	14 2124	1	86	14 2335	1	81
14 0902	1	125	14 2130	1	87	14 2336	1	81
14 0904	1	125	14 2132	1	87	14 2350	1	88
14 0910	1	125	14 2134	1	87	14 2352	1	88
14 0912	1	125	14 2136	1	86	14 2500	1	88
14 0914	1	125	14 2137	1	87	14 2501	1	88
14 0916	1	125	14 2138	1	87	14 2502	1	88
14 0918	1	125	14 2139	1	87	14 2503	1	88
14 0920	1	125	14 2140	1	87	14 2504	1	88
14 0922	1	125	14 2142	1	87	14 2505	1	88
14 0924	1	125	14 2144	1	87	14 2506	1	90
14 0926	1	125	14 2146	1	87	14 2507	1	90
14 0928	1	125	14 2150	1	87	14 2508	1	90
14 0930	1	125	14 2152	1	87	14 2509	1	90
14 0932	1	125	14 2160	1	90	14 2510	1	90
14 0934	1	125	14 2161	1	90	14 2511	1	90
14 0936	1	125	14 2162	1	90	14 2520	1	90
14 0938	1	125	14 2163	1	88	14 2521	1	90
14 0940	1	125	14 2180	1	86	14 2522	1	90
14 0942	1	125	14 2182	1	82	14 2523	1	90
14 0950	1	125	14 2184	1	82	14 2524	1	90
14 0952	1	125	14 2186	1	82	14 2700	1	79
14 0960	1	125	14 2188	1	82	14 2702	1	79
14 0964	1	125	14 2190	1	90	14 2703	1	79
14 0966	1	125	14 2192	1	91	14 2732	1	79
14 0968	1	125	14 2193	1	91	14 2740	1	79
14 0970	1	124	14 2194	1	91	14 2745	1	80/156
14 0972	1	124	14 2195	1	91	14 2748	1	80
14 0974	1	124	14 2196	1	91	14 2750	1	79
14 0976	1	124	14 2197	1	91	14 2752	1	79
14 0978	1	124	14 2220	1	88	14 2754	1	79
14 0980	1	124	14 2221	1	88	14 2760	1	81
14 0982	1	124	14 2222	1	88	14 2762	1	81
14 0984	1	124	14 2223	1	88	14 2764	1	81
14 0986	1	124	14 2224	1	88	14 2766	1	81
14 0988	1	124	14 2225	1	88	14 2768	1	81
14 1000	1	123	14 2226	1	88	14 3024	1	199

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
16 2511	1	280	17 5110	1	16	18 0222	100	242
16 2521	1	280	17 5112	1	16	18 0224	100	242
16 2810	1	278	17 5114	1	17	18 0226	100	242
16 2820	1	278	17 5120	1	17	18 0227	100	242
16 2830	1	278	17 5130	1	17	18 0228	100	242
16 2831	1	278	17 5132	1	17	18 0230	100	243
16 2840	1	278	17 5134	1	17	18 0232	100	243
16 2841	1	278	17 5150	1	15	18 0234	100	243
16 2861	1	281	17 5230	1	28	18 0235	100	243
16 2862	1	281	17 5331	1	21	18 0236	100	243
16 2863	1	281	17 5333	1	19	18 0238	100	243
16 2900	1	280	17 5370	1	25/169	18 0240	100	243
16 2950	1	280	17 5410	1	19	18 0241	100	243
			17 5431	1	20	18 0242	100	243
17 0004	1	14	17 6000	1	14	18 0243	100	243
17 0060	1	14	17 6020	1	14	18 0244	100	243
17 0070	1	8	17 6024	1	14	18 0245	100	243
17 0071	1	10	17 6025	1	14	18 0246	100	243
17 0072	1	10	17 6027	1	14	18 0247	100	243
17 0073	1	8	17 6028	1	14	18 0248	100	243
17 0074	1	9	17 6326	1	28	18 0249	100	243
17 0075	1	8	17 6328	1	28	18 0250	100	243
17 0076	1	9	17 6350	1	28	18 0252	100	243
17 0078	1	14	17 6410	1	19	18 0254	100	243
17 0082	1	12	17 8010	1	11	18 0256	100	243
17 0084	1	12	17 8015	1	11	18 0258	100	243
17 0085	1	12	17 8075	1	11	18 0260	100	243
17 0086	1	12	17 8077	1	11	18 0270	100	243
17 0088	1	12	17 8175	1	11	18 0272	100	243
17 0120	1	263	17 8177	1	11	18 0274	100	243
17 0142	1	15	17 8178	1	11	18 0280	100	244
17 0144	1	15				18 0282	100	244
17 0173	1	28	18 0000	100	253	18 0284	100	244
17 0175	1	23	18 0003	1	253	18 0286	100	244
17 0182	1	12	18 0004	1	253	18 0288	100	244
17 0184	1	12	18 0005	1	253	18 0290	100	244
17 0185	1	12	18 0006	1	253	18 0291	100	244
17 0186	1	12	18 0008	100	241	18 0292	100	244
17 0188	1	12	18 0010	100	241	18 0294	100	244
17 0194	1	12	18 0014	100	241	18 0300	100	245
17 0212	1	15	18 0016	100	241	18 0302	100	245
17 0252	1	15	18 0020	100	241	18 0304	100	245
17 0300	1	22	18 0024	100	241	18 0310	100	214
17 0310	1	27	18 0026	100	241	18 0312	100	214
17 0331	1	21	18 0027	100	241	18 0314	100	214
17 0333	1	19	18 0028	100	241	18 0318	100	245
17 0334	1	26	18 0029	100	241	18 0320	100	245
17 0340	1	25/169	18 0030	100	241	18 0322	100	245
17 0360	1	25/169	18 0034	100	241	18 0324	100	245
17 0362	1	170	18 0036	100	241	18 0328	100	245
17 0366	1	176	18 0038	100	241	18 0330	100	245
17 0370	1	24/168	18 0040	100	241	18 0332	100	245
17 0372	1	25/169	18 0042	100	241	18 0334	100	245
17 0374	1	21	18 0050	100	241	18 0340	100	246
17 0376	1	21	18 0052	100	241	18 0342	100	246
17 0378	1	25/169	18 0054	100	241	18 0346	50	246
17 0420	1	23	18 0056	100	241	18 0400	100	238
17 0430	1	14	18 0058	100	241	18 0402	100	238
17 0431	1	20	18 0070	100	241	18 0403	100	238
17 0440	1	15	18 0072	100	241	18 0407	100	238
17 0500	1	23	18 0074	50	241	18 0408	100	238
17 0705	1	15	18 0076	50	241	18 0410	100	238
17 0780	1	15	18 0078	50	241	18 0412	100	238
17 0782	1	16	18 0080	50	241	18 0413	100	238
17 0924	1	14	18 0082	100	241	18 0416	100	238
17 0930	1	8	18 0084	100	241	18 0418	100	238
17 0932	1	8	18 0086	50	241	18 0420	100	238
17 0935	1	8	18 0088	50	241	18 0422	100	238
17 0996	1	23	18 0118	100	242	18 0423	100	238
17 0998	1	27	18 0120	100	242	18 0426	100	238
17 1000	1	9	18 0124	100	242	18 0428	100	238
17 1004	1	9	18 0126	100	242	18 0430	100	238
17 1006	1	9	18 0128	100	242	18 0432	100	238
17 1076	1	21	18 0140	100	242	18 0434	100	238
17 2004	1	23	18 0144	100	242	18 0436	100	238
17 3200	1	10	18 0146	100	242	18 0438	100	238
17 3210	1	27	18 0148	100	242	18 0440	100	238
17 3310	1	27	18 0160	100	242	18 0442	100	238
17 3316	1	27	18 0162	100	242	18 0444	100	238
17 5075	1	10	18 0164	100	242	18 0446	100	238
17 5076	1	10	18 0166	100	242	18 0448	100	238
17 5078	1	10	18 0168	100	242	18 0450	100	238
17 5102	1	16	18 0170	100	242	18 0452	50	238
17 5104	1	16	18 0172	100	242	18 0454	100	238
17 5106	1	16	18 0174	100	242	18 0456	100	238
17 5108	1	16	18 0220	100	242	18 0458	1	238



Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
18 0460	1	238	18 0724	50	226	18 0962	1	284
18 0462	1	238	18 0725	50	226	18 0964	1	284
18 0464	1	238	18 0726	50	226	18 0966	1	284
18 0466	1	238	18 0730	1	226	18 0968	1	284
18 0468	1	238	18 0732	1	226	18 0988	100	249
18 0470	1	238	18 0734	1	226	18 0990	100	249
18 0472	1	238	18 0735	1	226	18 0992	100	249
18 0474	1	238	18 0736	1	226	18 0994	100	249
18 0476	1	238	18 0737	1	226	18 0996	100	249
18 0478	1	238	18 0739	1	226	18 0998	100	249
18 0480	1	238	18 0740	1	226	18 0999	100	249
18 0482	1	238	18 0742	1	226	18 1000	100	249
18 0484	1	238	18 0744	1	226	18 1001	100	249
18 0486	1	238	18 0745	1	226	18 1002	100	249
18 0488	1	238	18 0746	1	226	18 1003	100	249
18 0490	1	238	18 0747	1	226	18 1004	100	249
18 0492	1	238	18 0749	1	227	18 1005	100	250
18 0494	1	238	18 0750	1	227	18 1006	100	250
18 0496	1	238	18 0752	1	227	18 1007	100	250
18 0498	1	238	18 0754	1	227	18 1008	100	250
18 0500	1	238	18 0755	1	227	18 1009	100	250
18 0502	1	238	18 0756	1	227	18 1010	100	250
18 0504	1	238	18 0758	1	227	18 1012	100	250
18 0506	1	238	18 0759	1	227	18 1014	100	250
18 0508	1	238	18 0760	1	227	18 1016	100	250
18 0510	1	238	18 0762	1	227	18 1018	100	250
18 0512	1	238	18 0763	1	227	18 1020	100	250
18 0514	1	238	18 0764	1	227	18 1022	50	250
18 0516	1	238	18 0766	1	227	18 1023	50	250
18 0520	100	239	18 0768	1	227	18 1300	1	255
18 0522	100	239	18 0770	1	227	18 1302	1	255
18 0524	100	239	18 0772	1	227	18 1303	1	286
18 0530	100	239	18 0773	1	227	18 1305	1	286
18 0532	100	239	18 0774	1	227	18 1307	1	286
18 0534	100	239	18 0776	1	227	18 1311	1	286
18 0536	100	239	18 0778	1	227	18 1313	1	286
18 0540	100	239	18 0780	1	227	18 1317	1	286
18 0542	100	239	18 0782	1	227	18 1318	1	286
18 0544	100	239	18 0783	1	227	18 1319	1	286
18 0546	100	239	18 0784	1	227	18 1327	1	286
18 0550	100	239	18 0786	1	227	18 1330	1	286
18 0552	100	239	18 0788	1	227	18 1331	1	286
18 0560	100	239	18 0790	1	227	18 1332	1	286
18 0562	100	239	18 0791	1	227	18 1333	1	286
18 0590	100	239	18 0792	1	227	18 1334	1	286
18 0592	100	239	18 0794	1	227	18 1335	1	286
18 0594	100	239	18 0798	1	227	18 1336	100	260
18 0600	100	239	18 0800	1	227	18 1337	100	260
18 0602	100	239	18 0801	1	227	18 1338	100	260
18 0604	100	239	18 0802	1	227	18 1339	100	260
18 0606	1	239	18 0804	1	227	18 1340	100	260
18 0608	1	239	18 0818	1	227	18 1341	100	260
18 0610	1	239	18 0819	1	227	18 1342	100	260
18 0612	1	239	18 0820	1	227	18 1343	100	260
18 0650	100	226	18 0822	1	227	18 1344	100	260
18 0652	100	226	18 0826	1	227	18 1345	100	260
18 0654	100	226	18 0828	1	227	18 1347	50	260
18 0660	100	226	18 0830	1	227	18 1348	50	260
18 0662	100	226	18 0832	1	227	18 1351	1	288
18 0664	100	226	18 0900	100	229	18 1360	100	257
18 0670	100	226	18 0902	100	229	18 1361	100	257
18 0672	100	226	18 0904	100	229	18 1362	100	257
18 0674	100	226	18 0906	100	229	18 1363	100	257
18 0676	100	226	18 0908	100	229	18 1364	100	257
18 0680	100	226	18 0910	100	229	18 1365	100	257
18 0682	100	226	18 0912	100	229	18 1366	100	257
18 0684	100	226	18 0914	100	229	18 1367	100	257
18 0686	100	226	18 0916	1	229	18 1368	100	257
18 0692	100	226	18 0918	1	229	18 1369	100	257
18 0694	100	226	18 0920	1	229	18 1371	100	257
18 0696	100	226	18 0922	1	229	18 1372	100	257
18 0697	100	226	18 0924	1	229	18 1373	100	257
18 0698	100	226	18 0926	1	229	18 1374	100	257
18 0700	100	226	18 0928	1	229	18 1375	100	257
18 0702	100	226	18 0930	1	229	18 1376	100	257
18 0704	100	226	18 0932	1	229	18 1377	100	257
18 0705	100	226	18 0934	1	229	18 1378	100	257
18 0706	100	226	18 0940	100	249	18 1379	100	257
18 0709	100	226	18 0942	100	249	18 1380	100	262
18 0710	100	226	18 0944	100	249	18 1381	100	262
18 0712	100	226	18 0946	100	249	18 1382	100	262
18 0714	100	226	18 0948	100	249	18 1383	100	262
18 0715	100	226	18 0949	100	249	18 1384	100	262
18 0718	50	226	18 0950	100	250	18 1385	100	262
18 0720	50	226	18 0952	100	250	18 1386	100	262
18 0722	50	226	18 0960	1	284	18 1389	100	262

- 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

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
18 1390	100	257	18 1869	100	258	18 2116	100	247
18 1391	100	257	18 1871	100	258	18 2118	100	247
18 1392	50	257	18 1872	100	258	18 2119	100	247
18 1393	50	257	18 1873	100	258	18 2120	100	247
18 1394	100	257	18 1874	100	258	18 2121	100	247
18 1395	50	257	18 1875	100	258	18 2122	25	247
18 1400	1	192	18 1876	100	258	18 2123	100	247
18 1401	1	192	18 1877	100	258	18 2124	100	247
18 1402	100	257	18 1878	100	258	18 2125	100	247
18 1404	100	257	18 1879	100	258	18 2126	25	247
18 1408	100	257	18 1890	100	258	18 2127	100	247
18 1420	100	259	18 1891	100	258	18 2128	25	247
18 1422	100	259	18 1892	50	258	18 2129	25	247
18 1424	100	259	18 1893	50	258	18 2131	25	247
18 1426	100	259	18 1894	100	258	18 2132	25	247
18 1450	100	259	18 1895	50	258	18 2133	25	247
18 1452	100	259	18 1900	10	265	18 2134	25	247
18 1454	100	259	18 1902	10	265	18 2135	25	247
18 1456	100	259	18 1904	10	265	18 2140	100	250
18 1460	100	259	18 1910	25	265	18 2188	100	250
18 1462	100	259	18 1912	25	265	18 2190	100	250
18 1464	100	259	18 1914	25	265	18 2192	100	250
18 1466	100	259	18 1920	1	265	18 2194	100	250
18 1470	100	259	18 1922	1	265	18 2196	100	250
18 1472	100	259	18 1924	1	265	18 2198	100	250
18 1474	100	259	18 1926	1	265	18 2199	100	250
18 1476	100	259	18 1928	1	265	18 2200	100	250
18 1480	100	259	18 1970	1	266	18 2201	100	250
18 1482	100	259	18 1971	1	265	18 2202	100	250
18 1484	100	259	18 1972	1	265	18 2203	100	250
18 1486	100	259	18 1973	1	265	18 2204	100	250
18 1487	100	261	18 1975	1	266	18 2205	100	250
18 1488	100	261	18 1976	1	265	18 2206	100	250
18 1489	50	261	18 1977	1	265	18 2207	100	250
18 1490	100	258	18 1978	1	265	18 2208	100	251
18 1491	100	258	18 1980	1	266	18 2209	100	251
18 1492	100	258	18 1982	1	266	18 2210	100	251
18 1495	100	258	18 2040	1000	247	18 2212	100	251
18 1496	100	258	18 2042	1000	247	18 2214	100	251
18 1497	100	258	18 2046	1000	247	18 2216	100	251
18 1502	1	252	18 2048	1000	247	18 2218	100	251
18 1520	1	252	18 2049	1000	247	18 2220	100	251
18 1530	1	246	18 2050	1000	247	18 2222	50	251
18 1540	1	246	18 2051	1000	247	18 2223	50	251
18 1545	1	140	18 2052	1000	247	18 2224	50	251
18 1546	1	140	18 2054	1000	247	18 2225	50	251
18 1710	100	261	18 2055	1000	247	18 2226	50	251
18 1712	100	261	18 2056	1000	247	18 2227	50	251
18 1713	100	261	18 2057	1000	247	18 2242	100	250
18 1714	100	261	18 2058	1000	247	18 2244	100	250
18 1716	100	261	18 2059	1000	247	18 2246	100	250
18 1720	100	261	18 2060	1000	247	18 2248	100	250
18 1722	100	261	18 2062	1000	247	18 2249	100	250
18 1723	100	261	18 2064	1000	247	18 2250	100	250
18 1724	100	261	18 2066	1000	247	18 2252	100	251
18 1726	100	261	18 2067	1000	247	18 2310	100	248
18 1728	100	261	18 2070	1000	247	18 2312	100	248
18 1730	100	261	18 2071	1000	247	18 2314	100	248
18 1731	100	261	18 2072	1000	247	18 2316	100	248
18 1732	100	261	18 2074	1000	247	18 2318	100	248
18 1734	100	261	18 2075	1000	247	18 2320	100	248
18 1736	100	260	18 2078	1000	247	18 2322	100	248
18 1737	100	260	18 2080	1000	247	18 2324	100	248
18 1738	100	260	18 2082	1000	247	18 2326	100	248
18 1739	100	260	18 2083	250	247	18 2328	100	248
18 1740	100	260	18 2085	250	247	18 2330	100	248
18 1741	100	260	18 2086	250	247	18 2332	100	248
18 1742	100	260	18 2088	100	247	18 2334	100	248
18 1743	100	260	18 2089	250	247	18 2335	100	248
18 1744	100	260	18 2092	100	247	18 2336	100	248
18 1745	100	260	18 2094	250	247	18 2338	100	249
18 1746	50	260	18 2096	100	247	18 2340	100	249
18 1747	50	260	18 2097	250	247	18 2342	100	249
18 1748	50	260	18 2100	250	247	18 2344	100	249
18 1802	100	258	18 2102	250	247	18 2346	100	249
18 1804	100	258	18 2103	250	247	18 2348	100	249
18 1850	100	259	18 2104	100	247	18 2350	100	249
18 1860	100	258	18 2105	250	247	18 2352	100	249
18 1861	100	258	18 2106	100	247	18 2354	100	249
18 1862	100	258	18 2108	100	247	18 2356	100	249
18 1863	100	258	18 2110	100	247	18 2358	100	249
18 1864	100	258	18 2111	100	247	18 2360	100	249
18 1865	100	258	18 2112	100	247	18 2362	50	249
18 1866	100	258	18 2113	100	247	18 2364	50	249
18 1867	100	258	18 2114	100	247	18 2366	50	249
18 1868	100	258	18 2115	100	247	18 2368	50	249

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
18 2370	50	249	18 3010	50	254	18 3167	100	228
18 2372	50	249	18 3012	50	254	18 3168	100	228
18 2374	25	249	18 3020	1	255	18 3169	100	228
18 2376	25	249	18 3022	1	255	18 3170	100	228
18 2378	25	249	18 3024	1	255	18 3171	100	228
18 2380	25	249	18 3026	1	255	18 3172	100	228
18 2400	100	251	18 3028	1	255	18 3173	100	228
18 2402	100	251	18 3030	1	228	18 3174	100	228
18 2404	100	251	18 3031	1	228	18 3175	100	228
18 2406	100	251	18 3032	1	228	18 3176	100	228
18 2408	100	251	18 3033	1	228	18 3177	100	228
18 2410	100	251	18 3034	100	228	18 3180	100	229
18 2412	100	251	18 3035	100	228	18 3182	100	229
18 2414	100	251	18 3036	1	228	18 3184	100	229
18 2416	100	251	18 3037	1	228	18 3186	100	229
18 2418	100	251	18 3038	1	228	18 3188	100	229
18 2420	100	251	18 3039	1	228	18 3190	50	229
18 2422	50	251	18 3040	1	228	18 3192	1	229
18 2424	100	251	18 3041	1	228	18 3194	1	229
18 2430	100	251	18 3042	1	228	18 3196	1	229
18 2432	100	251	18 3043	1	228	18 3198	1	229
18 2434	100	251	18 3044	1	228	18 3200	1	229
18 2436	100	251	18 3045	1	228	18 3202	1	229
18 2438	100	251	18 3046	1	228	18 3204	1	229
18 2440	100	251	18 3047	1	228	18 3206	1	229
18 2442	100	251	18 3048	1	228	18 3255	100	231
18 2444	100	251	18 3050	1	228	18 3256	100	229
18 2446	100	251	18 3051	1	228	18 3258	100	229
18 2448	100	251	18 3052	100	228	18 3260	100	229
18 2450	100	251	18 3053	100	228	18 3262	100	229
18 2452	100	251	18 3056	1	228	18 3265	50	229
18 2454	100	251	18 3057	1	228	18 3266	50	229
18 2460	100	251	18 3058	1	228	18 3268	50	229
18 2462	100	251	18 3059	1	228	18 3270	50	229
18 2464	100	251	18 3060	100	228	18 3272	50	229
18 2466	100	251	18 3061	100	228	18 3275	50	229
18 2468	100	251	18 3062	100	228	18 3276	50	229
18 2470	100	251	18 3063	100	228	18 3278	50	229
18 2472	100	251	18 3064	100	228	18 3280	50	229
18 2474	100	251	18 3065	100	228	18 3282	50	229
18 2476	100	251	18 3066	100	228	18 3286	1	229
18 2478	100	251	18 3067	100	228	18 3288	1	229
18 2480	100	251	18 3068	100	228	18 3290	1	229
18 2482	100	251	18 3069	100	228	18 3292	1	229
18 2484	100	251	18 3070	100	228	18 3294	1	229
18 2500	100	252	18 3071	100	228	18 3296	1	229
18 2502	100	252	18 3072	100	228	18 3298	1	229
18 2504	100	252	18 3073	100	228	18 3300	1	229
18 2506	100	252	18 3074	100	228	18 3302	1	229
18 2508	100	252	18 3075	100	228	18 3304	1	229
18 2510	100	252	18 3130	1	228	18 3306	1	232
18 2512	100	252	18 3131	1	228	18 3308	1	232
18 2514	100	252	18 3132	1	228	18 3310	1	232
18 2600	5	180	18 3133	1	228	18 3312	1	232
18 2610	1	180	18 3134	100	228	18 3314	1	232
18 2612	1	180	18 3135	100	228	18 3316	1	232
18 2614	1	180	18 3136	1	228	18 3318	1	232
18 2616	1	180	18 3137	1	228	18 3320	1	232
18 2620	1	267	18 3138	1	228	18 3322	1	232
18 2622	1	267	18 3139	1	228	18 3324	1	232
18 2624	1	267	18 3140	1	228	18 3326	1	232
18 2626	1	267	18 3141	1	228	18 3328	1	232
18 2628	1	267	18 3142	1	228	18 3330	1	232
18 2630	1	267	18 3143	1	228	18 3332	1	232
18 2632	1	267	18 3144	1	228	18 3334	1	232
18 2634	1	267	18 3145	1	228	18 3336	1	232
18 2650	1	266	18 3146	1	228	18 3338	1	232
18 2652	1	266	18 3147	1	228	18 3340	1	232
18 2654	1	266	18 3148	1	228	18 3342	1	232
18 2656	1	266	18 3149	1	228	18 3344	1	232
18 2658	1	266	18 3150	1	228	18 3346	1	232
18 2660	1	266	18 3152	1	228	18 3348	1	232
18 2662	1	266	18 3153	1	228	18 3350	1	232
18 2670	10	267	18 3154	1	228	18 3352	1	232
18 2672	10	267	18 3155	1	228	18 3354	1	232
18 2682	8	267	18 3156	1	228	18 3356	1	232
18 2683	8	267	18 3157	1	228	18 3360	1	232
18 2684	8	267	18 3158	1	228	18 3362	1	232
18 2685	8	267	18 3159	1	228	18 3364	1	232
18 2686	8	267	18 3160	100	228	18 3366	1	232
18 2690	1	267	18 3161	100	228	18 3370	1	232
18 2980	1	208	18 3162	100	228	18 3372	1	232
18 3000	100	254	18 3163	100	228	18 3374	1	232
18 3002	100	254	18 3164	100	228	18 3376	1	232
18 3004	100	254	18 3165	100	228	18 3380	1	232
18 3008	50	254	18 3166	100	228	18 3400	100	231

- 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

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
18 3401	100	231	18 3530	1	233	18 3808	1	230
18 3402	1	231	18 3531	1	233	18 3810	1	230
18 3403	1	231	18 3532	1	233	18 3812	1	230
18 3404	1	231	18 3533	1	233	18 3814	1	230
18 3405	1	231	18 3534	1	233	18 3816	1	230
18 3406	1	231	18 3535	1	233	18 3818	1	230
18 3407	1	231	18 3536	1	233	18 3820	1	230
18 3408	1	231	18 3537	1	233	18 3822	1	230
18 3409	1	231	18 3538	1	233	18 3824	1	230
18 3410	1	231	18 3539	1	233	18 3826	1	230
18 3411	1	231	18 3540	1	233	18 3828	1	230
18 3420	4	237	18 3541	1	233	18 3830	1	230
18 3421	4	237	18 3542	1	233	18 3832	1	230
18 3422	4	237	18 3543	1	233	18 3834	1	230
18 3423	4	237	18 3544	1	233	18 3836	1	230
18 3424	4	237	18 3545	1	233	18 3838	1	230
18 3425	4	237	18 3546	1	233	18 3840	1	230
18 3426	4	237	18 3547	1	233	18 3842	1	230
18 3430	4	237	18 3548	1	233	18 3844	1	230
18 3431	4	237	18 3549	1	233	18 3846	1	230
18 3432	4	237	18 3550	1	233	18 3848	1	230
18 3433	4	237	18 3551	1	233	18 3850	1	230
18 3434	4	237	18 3552	1	233	18 3860	10	236
18 3435	4	237	18 3553	1	233	18 3861	10	236
18 3436	4	237	18 3554	1	233	18 3862	10	236
18 3440	4	237	18 3555	1	233	18 3863	10	236
18 3441	4	237	18 3556	1	233	18 3864	10	236
18 3442	4	237	18 3557	1	233	18 3865	10	236
18 3443	4	237	18 3558	1	233	18 3866	5	236
18 3444	4	237	18 3559	1	233	18 3867	5	236
18 3450	4	237	18 3570	100	233	18 3868	1	236
18 3451	4	237	18 3572	1	233	18 3869	1	236
18 3452	4	237	18 3574	1	233	18 3910	10	236
18 3453	4	237	18 3617	4	235	18 3911	10	236
18 3454	4	237	18 3618	4	235	18 3912	10	236
18 3455	4	237	18 3619	4	235	18 3914	10	236
18 3456	4	237	18 3622	4	235	18 3915	10	236
18 3457	4	237	18 3623	4	235	18 3918	10	236
18 3460	1	237	18 3624	4	235	18 3919	10	236
18 3461	1	237	18 3627	4	235	18 3923	10	236
18 3462	1	237	18 3628	4	235	18 3924	10	236
18 3463	1	237	18 3630	4	235	18 3928	10	236
18 3464	1	237	18 3631	4	235	18 3930	10	236
18 3465	1	237	18 3632	4	235	18 3932	10	236
18 3470	1	237	18 3634	4	235	18 3934	10	236
18 3471	1	237	18 3636	4	235	18 3937	5	236
18 3472	1	237	18 3637	4	235	18 3939	5	236
18 3473	1	237	18 3639	4	235	18 3942	5	236
18 3474	1	237	18 3640	4	235	18 3944	5	236
18 3475	1	237	18 3641	4	235	18 3946	5	236
18 3476	1	237	18 3642	4	235	18 3948	5	236
18 3480	1	237	18 3644	4	235	18 3951	1	236
18 3481	1	237	18 3645	4	235	18 3952	1	236
18 3482	1	237	18 3646	4	235	18 4002	1	285
18 3483	1	237	18 3647	4	235	18 4004	1	285
18 3484	1	237	18 3648	4	235	18 4006	1	285
18 3500	100	233	18 3649	4	235	18 4008	1	285
18 3501	100	233	18 3650	1	235	18 4010	1	285
18 3502	100	233	18 3651	1	235	18 4012	1	285
18 3503	100	233	18 3652	1	235	18 4014	1	285
18 3504	100	233	18 3653	1	235	18 4016	1	285
18 3505	100	233	18 3654	1	235	18 4018	1	285
18 3506	100	233	18 3655	1	235	18 4020	1	285
18 3507	100	233	18 3656	1	235	18 4022	1	285
18 3508	100	233	18 3657	1	235	18 4024	1	285
18 3509	50	233	18 3658	1	235	18 4026	1	285
18 3510	50	233	18 3700	100	234	18 4028	1	285
18 3511	50	233	18 3701	100	234	18 4060	1	283
18 3512	25	233	18 3702	100	234	18 4062	1	283
18 3513	1	233	18 3703	50	234	18 4064	1	283
18 3514	1	233	18 3704	1	234	18 4066	1	283
18 3515	1	233	18 3705	1	234	18 4068	1	283
18 3516	1	233	18 3706	1	234	18 4070	1	283
18 3517	1	233	18 3707	1	234	18 4106	1	286
18 3518	1	233	18 3708	1	234	18 4108	1	286
18 3519	1	233	18 3709	1	234	18 4110	1	286
18 3520	1	233	18 3710	1	234	18 4112	1	286
18 3521	1	233	18 3711	1	234	18 4114	1	286
18 3522	1	233	18 3712	1	234	18 4116	1	286
18 3523	1	233	18 3713	1	234	18 4118	1	286
18 3524	1	233	18 3714	1	234	18 4120	1	286
18 3525	1	233	18 3715	1	234	18 4122	1	286
18 3526	1	233	18 3800	1	230	18 4124	1	286
18 3527	1	233	18 3802	1	230	18 4126	1	286
18 3528	1	233	18 3804	1	230	18 4128	1	286
18 3529	1	233	18 3806	1	230	18 4136	1	287

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
18 4138	1	287	18 6006	25	264	19 0093	200	269
18 4140	1	287	18 6010	100	264	19 0098	200	269
18 4142	1	287	18 6011	100	264	19 0099	200	269
18 4144	1	287	18 6012	100	264	19 0100	200	269
18 4146	1	287	18 6013	25	264	19 0101	200	269
18 4148	1	287	18 6014	25	264	19 0102	200	269
18 4150	1	287	18 6015	25	264	19 0103	200	269
18 4160	1	282	18 6016	25	264	19 0104	200	269
18 4162	1	282	18 6020	25	264	19 0108	200	269
18 4166	1	282	18 6021	25	264	19 0109	200	269
18 4168	1	282	18 6022	25	264	19 0110	200	269
18 4204	1	287	18 6023	25	264	19 0111	200	269
18 4206	1	287	18 6024	25	264	19 0112	200	269
18 4208	1	287	18 6025	25	264	19 0113	200	269
18 4210	1	287	18 6100	100	264	19 0118	200	269
18 4212	1	287	18 6102	100	264	19 0119	200	269
18 4214	1	287	18 6103	100	264	19 0120	200	269
18 4216	1	287	18 6104	100	264	19 0121	200	269
18 4218	1	287	18 6105	100	264	19 0122	200	269
18 4220	1	287	18 6106	25	264	19 0126	100	269
18 4222	1	287	18 6110	100	264	19 0149	200	272
18 4224	1	287	18 6111	100	264	19 0160	200	272
18 4234	1	287	18 6112	100	264	19 0161	200	272
18 4236	1	287	18 6113	25	264	19 0162	200	272
18 4238	1	287	18 6114	25	264	19 0164	200	272
18 4240	1	287	18 6115	25	264	19 0182	200	272
18 4242	1	287	18 6116	25	264	19 0183	200	272
18 4244	1	287	18 6120	25	264	19 0184	200	272
18 4246	1	287	18 6121	25	264	19 0186	200	272
18 4306	1	288	18 6122	25	264	19 0187	100	272
18 4308	1	288	18 6123	25	264	19 0210	50	271
18 4310	1	288	18 6124	25	264	19 0211	25	271
18 4312	1	288	18 6125	25	264	19 0212	25	271
18 4314	1	288	18 6200	1	262	19 0222	50	271
18 4316	1	288	18 6202	1	262	19 0223	25	271
18 4318	1	288	18 6204	1	262	19 0224	25	271
18 4320	1	288	18 6206	1	262	19 0225	25	271
18 4460	500	248	18 6208	1	262	19 0226	25	271
18 4462	500	248	18 6210	1	262	19 0235	10	271
18 4464	500	248	18 6220	1	262	19 0236	10	271
18 4466	500	248	18 6222	1	262	19 0237	10	271
18 4468	400	248	18 6224	1	262	19 0238	10	271
18 4480	500	248	18 6226	1	262	19 0300	100	272
18 4482	500	248	18 6228	1	262	19 0301	100	272
18 4484	500	248	18 6230	1	262	19 0302	100	272
18 4486	500	248	18 8012	100	252	19 0303	100	272
18 4488	400	248	18 8014	100	254	19 0304	100	272
18 4500	500	248	18 8016	100	254	19 0305	100	272
18 4502	500	248	18 8018	100	254	19 0313	100	272
18 4504	500	248	18 8686	100	254	19 0314	100	272
18 4506	500	248	18 8704	100	254	19 0315	100	272
18 4508	400	248	18 8705	100	254	19 0317	100	272
18 4660	1	283	18 8712	50	254	19 0318	100	272
18 4662	1	283	18 8714	50	254	19 0324	100	272
18 4664	1	283				19 0325	100	272
18 4666	1	283	19 0005	200	269	19 0326	100	272
18 4668	1	283	19 0006	200	269	19 0327	100	272
18 4680	1	283	19 0014	200	269	19 0328	100	272
18 4682	1	283	19 0015	200	269	19 0329	100	272
18 4760	1	282	19 0016	200	269	19 0336	100	272
18 4762	1	282	19 0017	200	269	19 0337	100	272
18 4764	1	282	19 0019	200	269	19 0338	100	272
18 4766	1	282	19 0026	200	269	19 0339	100	272
18 4768	1	282	19 0027	200	269	19 0340	100	272
18 4770	1	283	19 0028	200	269	19 0341	100	272
18 4998	500	249	19 0029	200	269	19 0342	100	272
18 5000	500	249	19 0030	200	269	19 0410	100	271
18 5002	500	249	19 0031	200	269	19 0411	100	271
18 5004	500	249	19 0040	200	269	19 0412	100	271
18 5005	500	250	19 0041	200	269	19 0413	100	271
18 5006	500	250	19 0042	200	269	19 0416	100	271
18 5007	500	250	19 0043	100	269	19 0417	100	271
18 5008	500	250	19 0044	100	269	19 0418	100	271
18 5009	500	250	19 0051	200	269	19 0419	100	271
18 5010	500	250	19 0053	200	269	19 0422	100	271
18 5012	500	250	19 0054	100	269	19 0423	100	271
18 5014	500	250	19 0055	100	269	19 0424	100	271
18 5016	500	250	19 0056	100	269	19 0425	100	271
18 5018	500	250	19 0062	100	269	19 0426	100	271
18 5020	500	250	19 0063	100	269	19 0432	100	271
18 6000	100	264	19 0064	100	269	19 0433	100	271
18 6001	100	264	19 0088	200	269	19 0434	100	271
18 6002	100	264	19 0089	200	269	19 0435	100	271
18 6003	100	264	19 0090	200	269	19 0436	100	271
18 6004	100	264	19 0091	200	269	19 0500	100	273
18 6005	100	264	19 0092	200	269	19 0504	100	273

- 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

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
19 0506	100	273	19 1538	200	270	20 0457	1	114
19 0514	100	273	19 2000	100	274	20 0463	1	114
19 0516	100	273	19 2001	100	274	20 0469	1	114
19 0520	100	273	19 2002	100	274	20 0472	1	114
19 0522	100	273	19 2003	100	274	20 0476	1	114
19 0524	100	273	19 2005	100	274	20 1200	1	120
19 0528	100	273	19 2006	100	274	20 1201	1	120
19 0535	100	273	19 2007	50	274	20 1205	1	120
19 0538	100	273	19 2600	100	274	20 1206	1	120
19 0542	100	273	19 2602	100	274	20 1207	1	120
19 0545	100	273	19 2603	100	274	20 1208	1	120
19 0547	100	273	19 2604	100	274	20 1209	1	120
19 0562	100	273	19 2606	100	274	20 1210	1	120
19 0564	100	273	19 2607	100	274	20 1212	1	121/149
19 0566	100	273	19 2608	100	274	20 1214	1	121/149
19 0567	100	273	19 2650	100	274	20 1216	1	121/149
19 0568	100	273	19 2651	100	274	20 1218	1	121/149
19 0570	100	273	19 2652	100	274	20 1240	1	126
19 0572	100	273	19 2654	100	274	20 1242	1	126
19 0588	100	273	19 2656	100	274	20 1244	1	126
19 0592	100	273	19 2700	100	274	20 1245	1	124
19 0594	100	273	19 2702	100	274	20 1250	1	126
19 0596	50	273	19 2703	100	274	20 1273	1	120
19 0600	25	273	19 2704	100	274	20 1274	1	120
19 0614	50	273	19 2706	100	274	20 1275	1	121
19 0616	50	273	19 2708	100	274	20 1280	1	121
19 0618	50	273	19 2710	100	274	20 1282	1	121
19 0620	50	273	19 2750	100	274	20 1284	1	121
19 0622	50	273	19 2752	100	274	20 1286	1	121
19 0800	100	273	19 2754	100	274	20 1290	1	121
19 0806	100	273	19 2756	100	274	20 1293	1	121
19 0808	100	273	19 2758	100	274	20 1294	1	121
19 0811	100	273	19 2760	100	274	20 1295	1	121
19 0828	100	273	19 2762	100	274	20 1298	1	121
19 0832	100	273	19 3027	200	270	20 1300	1	121
19 0834	100	273	19 3028	200	270	20 1307	1	121
19 0836	100	273	19 3029	200	270	20 1320	1	114
19 0837	100	273	19 3042	200	270	20 1340	1	114
19 0839	100	273	19 3054	200	270	20 1352	1	114
19 0848	100	273	19 3089	200	270	20 1354	1	114
19 0862	100	273	19 3099	200	270	20 1358	1	114
19 0864	100	273	19 3100	200	270	20 1360	1	114
19 0866	100	273	19 3101	200	270	20 1380	1	115
19 0867	100	273	19 3102	200	270	20 1395	1	116
19 0869	100	273	19 3103	200	270	20 1604	1	115
19 0878	100	273	19 3104	200	270	20 1610	1	115
19 0882	100	273	19 3111	200	270	20 1614	1	115
19 0884	100	273	19 3112	200	270	20 1618	1	115
19 0887	100	273	19 3113	200	270	20 1622	1	115
19 0888	100	273	19 3120	200	270	20 1630	1	115
19 0890	100	273	19 3121	100	270	20 1634	1	115
19 0908	50	273	19 3122	100	270	20 1638	1	115
19 0910	50	273	19 4212	1	271	20 1702	1	115
19 1037	100	274				20 1752	1	115
19 1104	1	274	20 0314	1	114	20 1758	1	115
19 1105	1	274	20 0324	1	114	20 1760	1	115
19 1106	1	274	20 0334	1	114	20 1762	1	115
19 1108	1	274	20 0342	1	114	20 1854	1	115
19 1110	1	274	20 0344	1	114	20 1856	1	115
19 1112	1	274	20 0350	1	114	20 1858	1	115
19 1201	200	270	20 0354	1	114	20 1862	1	115
19 1205	200	270	20 0356	1	114	20 1880	1	118
19 1206	200	270	20 0358	1	114	20 1882	1	118
19 1208	200	270	20 0360	1	114	20 1884	1	118
19 1210	200	270	20 0364	1	114	20 1886	1	118
19 1215	200	270	20 0373	1	114	20 1888	1	118
19 1216	200	270	20 0374	1	114	20 1890	1	118
19 1217	200	270	20 0375	1	114	20 1892	1	118
19 1219	200	270	20 0379	1	114	20 1982	1	121
19 1227	200	270	20 0383	1	114	20 1983	1	121
19 1228	200	270	20 0385	1	114	20 1984	1	121
19 1229	200	270	20 0386	1	114	20 1985	1	121
19 1235	200	270	20 0387	1	114	20 1986	1	121
19 1237	200	270	20 0391	1	114	20 1987	1	121
19 1238	200	270	20 0397	1	114	20 1989	1	122
19 1500	200	270	20 0403	1	114	20 2100	1	122
19 1501	200	270	20 0407	1	114	20 2110	1	122
19 1507	200	270	20 0409	1	114	20 2112	1	122
19 1508	200	270	20 0415	1	114	20 2114	1	122
19 1510	200	270	20 0421	1	114	20 2116	1	122
19 1515	200	270	20 0427	1	114	20 2118	1	122
19 1516	200	270	20 0433	1	114	20 2120	1	122
19 1517	200	270	20 0439	1	114	20 2123	1	122
19 1528	200	270	20 0445	1	114	20 2124	1	122
19 1535	200	270	20 0447	1	114	20 2125	1	122
19 1537	200	270	20 0451	1	114	20 2126	1	122

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
20 2127	1	122	20 6571	1	131	20 7425	1	127
20 2128	1	122	20 6572	1	131	20 7427	1	127
20 2129	1	122	20 6573	1	131	20 7429	1	127
20 2130	1	122	20 6574	1	131	20 7430	1	127
20 3050	1	123	20 6581	1	131	20 7432	1	128
20 3051	1	123	20 6582	1	131	20 7435	1	128
20 3052	1	123	20 6583	1	131	20 7437	1	128
20 3053	1	123	20 6584	1	131	20 7438	1	128
20 3054	1	123	20 6592	1	132	20 7440	1	128
20 3055	1	123	20 6593	1	132	20 7441	1	128
20 3060	1	123	20 6594	1	132	20 7443	1	128
20 3070	1	122	20 6595	1	132	20 7444	1	128
20 3610	1	123	20 6602	1	132	20 7445	1	128
20 3612	1	123	20 6603	1	132	20 7446	1	128
20 3614	1	123	20 6604	1	132	20 7448	1	128
20 3616	1	123	20 6605	1	132	20 7450	1	128
20 3618	1	123	20 6612	1	132	20 7451	1	128
20 3620	1	123	20 6613	1	132	20 7452	1	128
20 3623	1	123	20 6614	1	132	20 7454	1	128
20 3624	1	123	20 6615	1	132	20 7455	1	128
20 3625	1	123	20 6622	1	132	20 7457	1	128
20 3626	1	123	20 6623	1	132	20 7459	1	128
20 3627	1	123	20 6624	1	132	20 7460	1	128
20 3628	1	123	20 6625	1	132	20 7464	1	128
20 3629	1	123	20 6632	1	132	20 7465	1	128
20 3630	1	123	20 6633	1	132	20 7467	1	128
20 3920	1	122	20 6634	1	132	20 7468	1	128
20 3924	1	122	20 6635	1	132	20 7470	1	128
20 3930	1	123	20 6642	1	132	20 7473	1	128
20 4815	1	126	20 6643	1	132	20 7475	1	128
20 6306	1	127	20 6644	1	132	20 7476	1	128
20 6308	1	127	20 6645	1	132	20 7479	1	128
20 6310	1	127	20 6701	1	132	20 7483	1	128
20 6312	1	127	20 6711	1	132	20 7486	1	128
20 6314	1	127	20 6750	1	132	20 7489	1	128
20 6316	1	127	20 6760	1	132	20 7492	1	128
20 6318	1	127	20 6806	1	131/185	20 7495	1	128
20 6320	1	127	20 6850	1	132	20 7498	1	128
20 6322	1	127	20 6852	1	132	20 7500	1	128
20 6324	1	127	20 6854	1	132	20 7502	1	128
20 6325	1	127	20 6856	1	132	20 7505	1	128
20 6326	1	127	20 6857	1	132	20 7511	1	128
20 6328	1	127	20 7150	1	123	20 7514	1	128
20 6330	1	127	20 7151	1	123	20 7521	1	128
20 6346	1	127	20 7152	1	123	20 7527	1	128
20 6348	1	127	20 7153	1	123	20 7540	1	128
20 6350	1	127	20 7154	1	123	20 7546	1	128
20 6352	1	127	20 7155	1	123	20 7552	1	128
20 6354	1	127	20 7170	1	123	20 7562	1	128
20 6356	1	127	20 7172	1	123	20 7563	1	128
20 6358	1	127	20 7200	1	124	20 7573	1	129
20 6360	1	127	20 7201	1	124	20 7580	1	129
20 6362	1	127	20 7202	1	124	20 7581	1	129
20 6364	1	127	20 7203	1	124	20 7584	1	129
20 6365	1	127	20 7204	1	124	20 7586	1	129
20 6366	1	127	20 7206	1	124	20 7588	1	129
20 6368	1	127	20 7311	1	120	20 7589	1	129
20 6370	1	127	20 7315	1	120	20 7590	1	129
20 6502	1	131	20 7321	1	120	20 7592	1	129
20 6503	1	131	20 7325	1	120	20 7596	1	129
20 6504	1	131	20 7330	1	120	20 7598	1	129
20 6505	1	131	20 7334	1	120	20 7700	1	130
20 6512	1	131	20 7340	1	120	20 7714	1	130
20 6513	1	131	20 7360	1	122	20 7728	1	130
20 6514	1	131	20 7372	1	122	20 7730	1	130
20 6515	1	131	20 7373	1	122	20 7732	1	130
20 6522	1	131	20 7374	1	122	20 7740	1	130
20 6523	1	131	20 7375	1	122	20 7744	1	130
20 6524	1	131	20 7376	1	122	20 7750	1	130
20 6525	1	131	20 7377	1	122	20 7760	1	130
20 6532	1	131	20 7378	1	131	20 7764	1	130
20 6533	1	131	20 7379	1	131	20 7770	1	130
20 6534	1	131	20 7380	1	130	20 7950	1	126
20 6535	1	131	20 7382	1	130	20 7952	1	126
20 6542	1	131	20 7384	1	130	20 7960	1	126
20 6543	1	131	20 7388	1	131	20 7962	1	126
20 6544	1	131	20 7389	1	131	20 7964	1	126
20 6545	1	131	20 7400	1	129	20 7966	1	126
20 6552	1	131	20 7414	1	127	20 7968	1	126
20 6553	1	131	20 7416	1	127	20 7970	1	126
20 6554	1	131	20 7417	1	127	20 7972	1	126
20 6555	1	131	20 7419	1	127	20 7974	1	126
20 6561	1	131	20 7420	1	127	20 7976	1	126
20 6562	1	131	20 7421	1	127	20 7978	1	126
20 6563	1	131	20 7422	1	127	20 7980	1	126
20 6564	1	131	20 7424	1	127	20 7982	1	126

- 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

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
20 7984	1	126	20 8357	1	115	20 8656	1	116
20 8000	1	119	20 8360	1	115	20 8657	1	116
20 8002	1	119	20 8362	1	115	20 8662	1	116
20 8004	1	119	20 8364	1	115	20 8664	1	116
20 8006	1	119	20 8366	1	115	20 8666	1	116
20 8008	1	119	20 8368	1	115	20 8668	1	116
20 8010	1	119	20 8372	1	115	20 8672	1	116
20 8012	1	119	20 8373	1	115	20 8673	1	116
20 8014	1	119	20 8378	1	115	20 8680	1	116
20 8016	1	119	20 8380	1	115	20 8682	1	116
20 8018	1	119	20 8382	1	115	20 8684	1	116
20 8020	1	119	20 8384	1	115	20 8686	1	116
20 8030	1	119	20 8386	1	115	20 8690	1	116
20 8032	1	119	20 8388	1	115			
20 8034	1	119	20 8390	1	115	21 0004	1	155
20 8036	1	119	20 8400	1	117	21 0008	1	155
20 8038	1	119	20 8402	1	117	21 0065	1	155
20 8040	1	119	20 8404	1	117	21 0104	1	155
20 8042	1	119	20 8406	1	117	21 0106	1	155
20 8044	1	119	20 8408	1	117	21 0202	1	156
20 8046	1	119	20 8410	1	117	21 0300	1	156
20 8050	1	119	20 8412	1	117	21 1420	1	155
20 8052	1	120	20 8414	1	117	21 1422	1	155
20 8054	1	120	20 8416	1	117	21 1423	1	155
20 8056	1	120	20 8418	1	117	21 1424	1	155
20 8058	1	120	20 8420	1	117	21 1435	1	155
20 8060	1	119	20 8422	1	117	21 1436	1	155
20 8100	1	118	20 8424	1	117	21 1437	1	155
20 8102	1	118	20 8426	1	117	21 1440	1	155
20 8104	1	118	20 8428	1	117	21 1442	1	155
20 8106	1	118	20 8430	1	117	21 1452	1	155
20 8108	1	118	20 8432	1	117	21 2000	1	156
20 8110	1	118	20 8434	1	117	21 2002	1	156
20 8112	1	118	20 8436	1	117	21 2062	1	156
20 8114	1	118	20 8438	1	117	21 2100	1	156
20 8116	1	118	20 8440	1	117	21 2102	1	156
20 8118	1	118	20 8442	1	117	21 2140	1	156
20 8120	1	118	20 8444	1	117	21 2150	1	157
20 8122	1	118	20 8446	1	117	21 2168	1	156
20 8124	1	118	20 8448	1	117	21 2170	1	156
20 8126	1	118	20 8450	1	117	21 2172	1	157
20 8128	1	118	20 8452	1	117	21 2173	1	157
20 8130	1	118	20 8454	1	117	21 2176	1	157
20 8132	1	118	20 8456	1	117	21 2179	1	157
20 8134	1	118	20 8458	1	117	21 2180	1	157
20 8136	1	118	20 8460	1	117	21 2182	1	157
20 8138	1	118	20 8462	1	117	21 2184	1	157
20 8140	1	118	20 8464	1	117	21 2186	1	157
20 8142	1	118	20 8466	1	117	21 2190	1	157
20 8144	1	118	20 8468	1	117			
20 8146	1	118	20 8470	1	117	30 0046	1	201
20 8150	1	118	20 8472	1	117	30 0047	1	201
20 8152	1	118	20 8474	1	117	30 0048	1	201
20 8154	1	118	20 8476	1	117	30 0050	1	201
20 8156	1	118	20 8478	1	117	30 0051	1	201
20 8158	1	118	20 8480	1	117	30 0052	1	201
20 8160	1	118	20 8482	1	117	30 0053	1	201
20 8162	1	118	20 8484	1	117	30 0054	1	201
20 8164	1	118	20 8500	1	133	30 0055	1	201
20 8166	1	118	20 8506	1	133	30 0056	1	201
20 8168	1	118	20 8507	1	133	30 0057	1	201
20 8170	1	118	20 8522	1	133	30 0058	1	201
20 8172	1	118	20 8523	1	133	30 0060	1	201
20 8174	1	118	20 8602	1	116	30 0061	1	201
20 8302	1	115	20 8604	1	116	30 0062	1	201
20 8304	1	115	20 8605	1	116	30 0146	1	201
20 8308	1	115	20 8606	1	116	30 0147	1	201
20 8310	1	115	20 8608	1	116	30 0148	1	201
20 8316	1	115	20 8610	1	116	30 0150	1	201
20 8318	1	115	20 8616	1	116	30 0151	1	201
20 8320	1	115	20 8618	1	116	30 0152	1	201
20 8322	1	115	20 8620	1	116	30 0153	1	201
20 8324	1	115	20 8622	1	116	30 0154	1	201
20 8328	1	115	20 8624	1	116	30 0155	1	201
20 8330	1	115	20 8628	1	116	30 0156	1	201
20 8332	1	115	20 8630	1	116	30 0157	1	201
20 8334	1	115	20 8632	1	116	30 0158	1	201
20 8336	1	115	20 8634	1	116	30 0160	1	201
20 8342	1	115	20 8636	1	116	30 0161	1	201
20 8343	1	115	20 8642	1	116	30 0162	1	201
20 8344	1	115	20 8643	1	116	30 0246	1	201
20 8346	1	115	20 8644	1	116	30 0247	1	201
20 8348	1	115	20 8646	1	116	30 0248	1	201
20 8354	1	115	20 8648	1	116	30 0250	1	201
20 8355	1	115	20 8654	1	116	30 0251	1	201
20 8356	1	115	20 8655	1	116	30 0252	1	201

Article no.	PU	Page	Article no.	PU	Page	Article no.	PU	Page
30 0253	1	201	40 1943	1	34	41 8743	1	33
30 0254	1	201	40 1981	1	37	41 8774	1	33
30 0255	1	201	40 1998	1	37	41 8958	1	33
30 0256	1	201	40 2032	1	37	41 9191	1	33
30 0257	1	201	40 2049	1	37	41 9207	1	33
30 0258	1	201	40 2582	1	38	41 9276	1	33
30 0260	1	201	40 2780	1	38	41 9283	1	33
30 0261	1	201	40 3404	1	38	41 9290	1	33
30 0262	1	201	40 3114	1	37	41 9306	1	33
30 0346	1	202	40 3695	1	33	41 9313	1	33
30 0347	1	202	40 3732	1	37	41 9320	1	33
30 0348	1	202	40 4562	1	35			
30 0350	1	202	40 4692	1	37	42 5833	1	35
30 0351	1	202	40 4708	1	37	42 5840	1	35
30 0352	1	202	40 4715	1	37			
30 0353	1	202	40 4883	1	34	43 0899	1	34
30 0354	1	202	40 5576	1	33	43 1009	1	31
30 0355	1	202	40 5583	1	33	43 1016	1	31
30 0356	1	202	40 5590	1	33	43 1023	1	31
30 0357	1	202	40 6757	1	37	43 1030	1	31
30 0358	1	202	40 6764	1	37	43 1047	1	31
30 0360	1	202	40 7242	1	36	43 1054	1	31
30 0361	1	202	40 7259	1	37	43 1061	1	31
30 0362	1	202	40 7273	1	37	43 1078	1	31
30 0502	1	202	40 7297	1	36	43 3067	1	33
30 0504	1	202	40 7303	1	36	43 4224	1	32
30 0506	1	202	40 7341	1	36	43 4231	1	32
30 0508	1	202	40 7761	1	37	43 4248	1	32
30 0510	1	202	40 7778	1	37	43 4255	1	32
30 0512	1	202	40 7785	1	37	43 4262	1	32
30 0514	1	202	40 7792	1	38	43 4279	1	32
30 0516	1	202	40 7815	1	38	43 4286	1	32
30 0518	1	202	40 7822	1	38	43 4293	1	32
30 0520	1	202	40 8065	1	36	43 4309	1	32
30 0522	1	202	40 8188	1	34	43 4316	1	32
30 0524	1	202	40 8423	1	34	43 4323	1	32
30 0526	1	202	40 8560	1	37	43 4330	1	32
30 0528	1	202	40 8577	1	37	43 4347	1	32
30 0530	1	202	40 8928	1	35	43 4354	1	32
30 0532	1	202	40 8980	1	37	43 4361	1	32
30 0534	1	202	40 9017	1	37	43 4378	1	32
30 0536	1	202	40 9024	1	37	43 4385	1	32
30 0538	1	202	40 9048	1	37	43 4392	1	32
30 0540	1	202	40 9178	1	37	43 4408	1	32
30 0602	1	202	40 9215	1	36	43 4446	1	32
30 0604	1	202	40 9666	1	36	43 4453	1	32
30 0606	1	202	40 9963	1	34	43 4460	1	32
30 0608	1	202				43 4569	1	33
30 0610	1	202	41 0631	1	35	43 4576	1	33
30 0612	1	202	41 0648	1	35	43 4583	1	32
30 0614	1	202	41 0655	1	35	43 6006	1	31
30 0616	1	202	41 0709	1	34	43 6013	1	31
30 0618	1	202	41 0716	1	34	43 6020	1	31
30 0620	1	202	41 0747	1	35	43 6037	1	31
30 0622	1	202	41 0778	1	34	43 6631	1	38
30 0624	1	202	41 0792	1	35	43 6679	1	38
30 0626	1	202	41 0808	1	35	43 7935	1	32
30 0628	1	202	41 0815	1	35	43 7942	1	32
30 0630	1	202	41 1898	1	34	43 7959	1	32
30 0632	1	202	41 2004	1	34	43 7966	1	32
30 0634	1	202	41 2369	1	36			
30 0636	1	202	41 2970	1	34			
30 0638	1	202	41 2987	1	34			
30 0640	1	202	41 3656	1	30			
30 0702	1	202	41 4059	1	30			
30 0704	1	202	41 4165	1	35			
30 0706	1	202	41 4172	1	35			
30 0708	1	202	41 4578	1	33			
30 0710	1	202	41 4585	1	33			
30 0712	1	202	41 4592	1	33			
30 0714	1	202	41 4608	1	33			
30 0716	1	202	41 4653	1	33			
30 0718	1	202	41 5384	1	34			
30 0720	1	202	41 5407	1	34			
30 0722	1	202	41 5414	1	34			
30 0724	1	202	41 6398	1	38			
30 0726	1	202	41 7173	1	30			
30 0728	1	202	41 7180	1	30			
30 0730	1	202	41 7197	1	30			
30 0732	1	202	41 7203	1	30			
30 0734	1	202	41 7227	1	30			
30 0736	1	202	41 7494	1	33			
30 0738	1	202	41 7500	1	33			
30 0740	1	202	41 8330	1	38			
			41 8347	1	35			
40 0274	1	33	41 8354	1	38			

- 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



Article	Page	Article	Page	Article	Page
Index					
Aluminium cable lugs 235, 236					
Adhesive tapes	276 - 282	Cable tie clamping and cutting tool	263	Desoldering pump	189
Adjustable spanners	68	Cable tie with steel tongue	260	Diagonal pliers	40 - 49
Aerial drill	121	Cable ties	257 - 265	Diagonal pliers DIAMANT	42, 162
Allen wrench	55, 56	Cable ties with labelling surface	259	Diagonal sealing pliers	41, 48, 49
ALPA Gel	284	Cable winding aids	81	Diamant Plus	159, 161
Aluminium foil adhesive tape	280	Callipers	156	Diamond core drill	130, 131
Aluminium runner	79	Carpenter's pencil	156	Diamond cutting disk	114
Aluminium spray	191	Carrying strap for COMPACT	30	Direktschneider	122, 123
Apprentice case	22 - 23	CARRY-LITE	33, 34	Display screen cleaners	190
Awls	58	Cartridge gun	192	Double open-ended spanner	67
Backpack 14					
Backpack trolley	14	Cased drill	127	Double-sided adhesive foam tape	281
Ball-end hex keys (Allen)	55, 56	Cast resin joints	284	Drain cleaner	186
Base stickers	267	Cellugraph universal pencil	156	Drain cleaning snakes	186
Basin wrench	182	Chalk holder	157	Drawer cabinet	36 - 38
Battery-operated cutting tools	96	Chalk line roller	153	Drift punch	152
Battery-operated hydraulic		Chisel	119, 120	Drill	114 - 131
Belt pouches	15, 16	Chubby screwdrivers	55	Drilling paste	121
Bevelled edge chisel	152	Circlip pliers	49	Drum axles	81
Bit cases	63 - 66	Circular sockets	244	Dungaree overalls	201
BITDRIVE screwdriver	64	Clamping tool for steel ties	263 - 264	DUSPOL	74
Bits	62 - 66	Cleaning brush	172	Dustpan	200
Blade receptacles	243, 244	Cleaning cloths	198	Ear muffs 282	
Blade terminals	244	click 'n' crimp	205	Ear muffs	173
Bolt cutters	49, 184	Clip-on measuring instrument	75	Ear plugs	173
Bonding gypsum plaster	193	Clockmaker's screwdriver	58	Edge countersinker	129
Boots	175	Club hammer	151	Electric master case	19 - 21
Bow compass	156	Coaxial cables sheath stripper	100	Electrician belt bag	16
Boxxser assortment box	32	Coloured cable ties	259	Electrician scissors	97
Branch and connector terminals	284	Combi thread taps set	122	Electrician screwdriver	52 - 54, 163 - 165
Breaker switch locks	179	Combination pliers	41, 44, 131, 160, 162	Electrician shoulder bag	17
Brooms	199	Combination spanner	68	Electronic pliers	45
Building and electrician plaster	192	COMPACT	30	Electronic screwdriver	59, 60, 165
Bump cap	172	Component boxes	34	Electronic solder	188
Butt connectors	229, 245, 246	Compressed air spray	190	End cutter	41, 43, 45, 49, 160, 161
Cabinet spirit level 155					
Cable and lead knife	106	Compression cable lugs according		End sleeve	87, 88
Cable clips	262	Compression connectors	208	Engineers pliers	42
Cable coil dispenser	79	Compression connectors	234	Excelsior spanner	186
Cable connectors	226 - 246	Connecting sleeve	88, 89	Explorer case	12
Cable detective	76	Construction bucket	199	Express spanner	183
Cable draw grip	90	Contact brush	132	F compression connectors 208	
Cable drum	198	Contact files	132	Face guard	173
Cable drum hoists	80, 81	Contact spray	190	Fall arrester MAGIC	176
Cable drum spindle hoist	80	Continuity and circuit tester	74	Fall damping belt Shockyard	177
Cable drum unroller TROMMELFIX	79	Control mirror	47	Fastening element for cable ties	262
Cable duct cutter	149	Control pliers	50, 267	Fender washers	274
Cable laying aid TAXIFIX	81	Cordless screwdriver	113	Ferrules for compressed conductors	231
Cable laying aid TAXIMAX	81	Cordless screwdriver bag	16	Fibre glass woven adhesive tapes	280
Cable lubricant	91	Corrosion protection tapes	277	File brush	132
Cable lug	87	Corrugated pipe cutter	109, 184	Files	131, 132
Cable lug set	246	Countersink bit	121, 122	Fine dust mask	174
Cable marker, self-laminating	266	Cover cloths	172	First aid case	177
Cable or wire gauge	155	Cover sheets	200	Fitting pliers	182
Cable pilot set	82	Crampons	177	Fitting pliers	182
Cable shears	93 - 97	Crimp inserts for crimping pliers	219 - 224	Flat nose pliers	41, 43, 45, 46, 50, 160 - 163
Cable sheath cutter	99	Crimping pliers	208	Flexible guide head	86
Cable sheath stripper	99 - 101	Crimping pliers SUPER-LIGHT	207	Folding pliers	50
Cable stripping knife	105, 106	Crimping pliers system	206	Folding ruler	155
Cable stripping knife SAFETY STRIP	103	Crimping pliers, set	208, 211	Fork-shaped cable lugs	239, 242
		Crimping tools	207, 209, 210	Four-way socket wrench	183
		Crocodile clips	76	Freeze spray	190
		Cross peen hammer	151	Front crimping pliers FLEXI-CRIMP	209
		Crosshead screwdriver	52 - 57	Gas soldering set 189	
		Cylinder head screws	273	Gel	284
		Deburrer 133			
		Deep hole marker	157		

Article	Page	Article	Page	Article	Page
Glass fibre fix adhesive	91, 191	Lining gloves	174	Pipe eel	89
Glass fibre special adhesive	91, 191	L-key	186	Pipe milling cutter internal and external	184
Gloves	174	Locking pliers	49	Pipe wrenches	182
Grit	199	Magnetic holder	62	Plaster and assembly cement	193
Guide head	87	Magnetic pick-up tool	47	Plaster cup	153
Hall broom	199	Magnetic welding mirror	186	Plaster pan	153
Hammer drill	115 - 118	Marking chalk	157	Plasterer's spatula	153
Hammer drill	112	Marking gauge	156	Plastic flat nose pliers	41, 43, 45, 46, 161 - 163
Hammers	151	Marking spirit level for switch boxes	155	Plastic hammer	151
Hand brush	199	Marking spray	157	Plastic ladders	195
Hand cleaner	198	Markings	266	Plastic pliers	44, 162
Hand cleaner dispenser	198	Mast key	69	Plastic seals	48
Hand thread tap	122	Master case BOMBER	9	Plastic shears	97
Hand-held cable length		Master case CHAMPION	8	Plastic tube cutter	109, 184
Hand-hydraulic cutting tools	95	Master case CHAMPION roller case	8	Plastic tube shears	109
HANDYBOX	34	Master case KLASSIK	8	Plastic winding rods	81
Hard metal hole saws	130	Master case MEGA-WHEEL	9	Plier set	39 - 43, 162
Hardhats	173	Master case MODULAR	21, 9	Plier wrench POWER GRIP	182
Hardshell tool cases	8 - 12, 19 - 28, 168, 169	Master case PERFEKT	10, 21	Pliers	36 - 46, 130 - 133, 148
Heat shrink tubes, set	285 - 289	Mats	176	Plug-in cable ties	259
Heat-resistant cable ties	261	Measuring and testing instruments	74 - 77	Plumbing tools	182 - 186
Heat-shrink tubes	285 - 289	measuring tool	80, 89, 156	Pneumatic rotary drill hammer	112
Heavy duty diagonal pliers	40, 42, 43, 44, 46	Measuring tools	155 - 156	Pocket saws	108
Hex key (Allen)	59, 60	Mechanical coupling sleeves.	282	Pocket slide calliper	156
Hex nuts	274	Metal and voltage detector	76	Pointed punch	152
Hex-head wood screws (key screws)	271	Metal saw bow	108, 184	Precision electronic pliers	45
Hole and disc cutter	110	Metal shears	185	Precision screwdriver	59
Hole saw set	129	Metre rules	155	pressing tools	214, 215
Hole saws	127 - 130	Milling drill	121	Pressing tools	205 - 225
Hot air blower range	288	Mobile phone bag	16	Punch pliers	50
Hot glue gun set	192	Modular plugs	254	Push rod	83, 84
Hydraulic drive unit	217	Module bits	62	Push-out spring	116
Hydraulic punch	139, 140, 146, 147	Multi-Key	69	PVC adhesive tapes	276, 277
Identification of conductors	267	Multimeter	75	raaco	30, 31, 32, 33
Impact core bits	120	Multi-purpose drills	118	Rabbit pliers	49
Insertion tool for LSA-Plus terminals	103, 207	Multi-purpose screws	269 - 271	Radiator spud wrench	183
Inserts for CARRY-LITE	33	Multi-purpose shears	97	Radio solder	188
Inspection stickers	267	Multi-transport box	12	Rasps	132
Instant adhesive	191	Nail setter	152	Ratchet cable cutter	69
Insulated safety tools	159 - 180	New construction key	71	Ratchet pipe cutter	110, 184
Insulating protective cap	172	NH safety handle	175	Ratchet ring spanner	170
Insulating tapes	276 - 278	Nipple threading die	123	Ratchet-ring and open-end spanners	66
Jigsaw blades	133	Nozzle reamer bit	126	Receiver shafts	129, 130
Kabeljet	88	Nut drivers	52, 54 - 56	Re-openable cable ties	258
Kabelmax	87	Offset screwdriver	58	Rescue case	175
KAIMAN cable sheath stripper	99	One-hand cable shears	93	Ring cable lugs	238, 241
KATI Blitz compact	86	Open-end spanner	66	Ring spanner	66 - 68
KATIBLITZ	86	Open-end spanner	67	Roll-up cases	15
KATIGRIP handle	90	Overshoes	200	Rotary drill hammer	112
KATIMEX	85 - 88	Painter's spatula	153	Round nose pliers	41, 43, 45, 50, 132, 160
Key files	132	Paper masking tape	281	Rung extension ladder with cable pull	196
Keyway pliers	209	Parallel connectors	227, 245	Rung step ladder and extension ladder	195
Kink protection sleeve for modular plugs	255	Perforated panels for SUPERCLIPS	35	Rust remover and contact spray	190
Knives	105, 106	Personal protective equipment	172 - 177	Safe box for CARRY-LITE	33
Labels	266	Photovoltaic connector	253	Safety belt	177
Lead seals	48	Pickaxe	198	Safety bits	64
Leaning ladder	195	Pick-up tool	47	Safety BOX	179
LED lamps	178	Pin punch	152	Safety glasses	173
Lever pressure pliers	45, 182	Pin terminal	245	Safety gloves	174
Lever shears for sheet metal	185	Pincers (nippers)	49	Safety harness	177
		Pin-type cable lugs	239, 242	Safety knife	105
		Pipe cutter	185	Safety lanyard	176
				Sand shovel	198

Article	Page	Article	Page	Article	Page
Saw blades	108, 109	Step ladder	196	Twist drill	114
Saw bow	108	Step thread tap	126	Universal knife	106
Saws	108	Stone drill	115	Universal shears	96, 97
Screw connectors	284	Storage bag for laptop computers	15	Universal switch cabinet key	71
Screw dies	125	Storage bins	38	Universal wrench for screwed cable glands	69
Screw locker	191	Straight cutting shears	185	Valve seat milling cutter	185
Screw puncher	135 - 146	Street broom	199	Varnish stripper	103
Screwdriver	52 - 60	Stripping diagonal pliers	41, 43, 160, 161	VDE house connection set	170
Screw-holding screwdriver	57	Subkey	71	Velcro strap system	265, 266
Screws	269 - 273	Subkey „Bau“	72	Velcro tape	265
Scriber with steel tips	156	Subkey „Elektro PLUS“	72	Velcro ties	265
SDS drill, SDS-plus drill / chisel	115, 119	Submaster	70	Ventil-Quick	183
Seal wire	48	SUPERCLIPS	34 - 36	Voltage tester	77
Sealing compound	283, 284	SUPERCLIPS workshop system	34	Voltage tester	74 - 76
Sealing pliers	41 - 49	Switch cabinet key	70	Voltage tester Drei-Ve	77
Seals	48	Syphon pliers	182	Warning triangle	177
Seeger pliers	49	Tap wrench	123	Warning vest	177
Self-amalgamating insulating tapes	278	Tape measure	155	Washers	274
Serrated washers	274	Telephone pliers	41, 43, 131, 160, 161	Waste bag	200
Service bag	27	Telescopic ladder	197	Water brush	153
Service case CARRY-LITE	33, 34	Telescopic magnetic pick-up tool	47	Water pump pliers	42, 40, 160, 162
Service set for Cabeljet and pipe eel	90	Test leads	75	Welding mirror	186
Service set for Cablemax	88	Test probes	76	Wet.Protect	192
Service set for KatiBlitz	87	T-handle magnetic bit holder	63	Winding spirals EFLEX	82
Set of castors for COMPACT	30	T-handle screwdriver	64	Wire end ferrules	247 - 252
Shackle	89	Thread repair assortment	122	Wire stripper	41, 42, 44, 160, 162
Shaft cover lifter	90	Thread tap	122 - 126	Wire stripper Outlet Special 55	101
Shears	93 - 97	Thread tap bits	122	Wire stripping tools	99 - 106
Sheath stripper for flat cables	99	Threaded rods	274	Wood screws	271, 272
Sheet metal screws	271, 272	Threading die	123	Work clothes	201 - 203
Sheet taper drill	121	Threading die holder	124	Work gloves	174
Shoulder bag	17	to DIN 46235	233, 240	Work jacket	201, 202
Shoulder strap	14	Tool and document bag	17	Working platform	197
Shrink-on coupling sleeve	284	Tool backpack	14, 15	Workshop screwdriver	54, 57
Silicone	191	Tool body bag	17	Woven insulation tapes	279, 280
Silicone spray	91, 190	Tool box	15	Wrench for set screws for fuses	72, 172
Skin care cream	198	Tool case	8 - 12, 19 - 28, 168, 169	Zinc spray	192
Slip-on snouts	172	Tool case DELUXE	10		
Slot-head screwdriver	52 - 57	Tool case JUMBO	10		
Smoke detector test spray	191	Tool case made of solid cowhide	14		
Snow shovel	199	Tool case METRO	8		
Socket cutter	128, 129	Tool holder	123		
Sockets	166, 167	Tool rack TRD	36		
SOLAR cable stripping tool	102	Tool set for compression connectors	208		
SOLAR click'n'crimp	205	Tool sets	19 - 28		
Solder	188	Tool Taco	31		
Soldering devices	189	Tool vest	17		
Soldering grease	188	Torches	178		
Soldering paste	189	Torque screwdriver	58		
Soldering tools and accessories	188 - 189	Torque wrench	167		
Solderless cable connectors	262	TORX key set	65		
S-opening pipe pliers	182	TORX screwdriver	52 - 56		
Spatulas	153	Tracks for cable drums	79		
Special bit set	64	Transporter box for CARRY-LITE	34		
Special screwdrivers with combination profile	52	Trapezoidal hole punch	110		
Spiral bands	262	Triangle nut driver	69		
Spirit level	155	TripleX SDS-plus drill bit	117		
Spreading wedge	172	Trolley for master case MODULAR	9		
Spring lock washers	274	TROMMELFIX	79		
Stainless steel spray	191	Trousers	201		
Steel cable ties	264	Tubular cable lugs	226 - 232, 240		
Steel winding rods	82	Tubular cable lugs for switch gear	230		
Steel wire brush	186	Tweezers	47, 163		
Step drill	120	Twin wire end ferrules	251		
Step ladder	195 - 197				

Sales national and international

Sales Germany

CIMCO-Werkzeugfabrik GmbH & Co. KG

CIMCO-Werkzeugfabrik
Hohenhagener Straße 1-5
42855 Remscheid
Phone: 0049 (0) 2191 371801
E-Mail: info@cimco.de

Baden-Württemberg

Hans-Jürgen Zweigle
Mobile: 0049 (0) 162 25 29 006
E-Mail: hans-juergen.zweigle@cimco.de

Bavaria (North)

Horst Rock
Phone: 0049 (0) 91 22 6 11 79
E-Mail: info@RockundRoll.de

Bavaria (South)

Helmut Haimerl
Phone: 0049 (0) 89 3090 409 0
E-Mail: info@elka-krischke.de

Berlin-Brandenburg

Industrievertretung R. Krause GmbH
Phone: +49 (0) 30 / 56 230 34
E-Mail: info@iv-krause.de

Bremen

Mike Klaiber
Phone: 0049 (0) 4 21 8 78 69 91
E-Mail: info@mike-klaiber.de

Hamburg

Hans J. Möller
Phone: 0049 (0) 40 2 51 40 61
E-Mail: info@hjmoeller.de

Hessen

Christian Weber
Mobile: 0049 (0) 162 25 29 014
E-Mail: christian.weber@cimco.de

Mecklenburg-Vorpommern

Thomas Lüneburg
Mobile: 0049 (0) 162 25 29 010
E-Mail: thomas.lueenburg@cimco.de

Saarland

Frank Pötschke
Mobile: 0049 (0) 162 25 29 007
E-Mail: frank.poetschke@cimco.de

Sachsen

Werner Ott
Phone: 0049 (0) 3 72 07 405 0
E-Mail: info@iv-ott.de

Sachsen-Anhalt

Thomas Lüneburg
Mobile: 0049 (0) 162 25 29 010
E-Mail: thomas.lueenburg@cimco.de

Thüringen

Mario Wanitschek
Mobile: 0049 (0) 162 25 29 009
E-Mail: mario.wanitschek@cimco.de

Sales Europe

Belgium/Luxemburg, Grimbergen

Vander Elst NV-SA
Phone: 0032 2 242 79 59
E-Mail: info@vanderelst-electric.eu

Bulgaria, Kostinbrod

Popp EOOD
Phone: 00359 700 44 000
E-Mail: salesoffice@popp.bg

Denmark

Cimtools Scandinavia AB
Phone: 0046 40 40 01 50
Mobile: 0046 70 21 82 108
E-Mail: daniel@cimtools.com

Estonia, Tallinn

SLO Eesti AS
Phone: 00372 6 272 200
E-Mail: info@slo.ee

Finnland, Vantaa

SLO OY
Phone: 00358 10 28311
E-Mail: kaarlo.tarkka@slo.fi

Greece, Thessaloniki

Getil S.A.
Phone: 0030 2310 28 95 50
E-Mail: info@getil.gr

Iceland, Reykjavik

Johan Rönnig hf
Phone: 00354 5200 800
E-Mail: ronning@ronning.is

Israel, Petach Tikva

A.U. Shay Ltd.
Phone: 00972 3 923 3601
E-Mail: shay@uriel-shay.com

Italia, Neive

Gianni Dellapiana
Phone: 0039 348 6414566
E-Mail: giannidellapiana@libero.it

Kazakhstan, Almaty

Sea Star International LLP
Phone: 007 727 313 7662
E-Mail: info@seastargroup.com

Croatia, Zagreb

Daljinsko Upravljanje d.o.o.
Phone: 00385 1 388 66 77
E-Mail: daljinsko-upravljanje@inet.hr

Latvia, Riga

SLO Latvia
Phone: 00371 6711 4444
E-Mail: slo-latvia@slo.lv

Lithuania, Vilnius

SLO Lithuania
Phone: 00370 5 215 00 70
E-Mail: biuras@slo.lt

Netherlands, Driebergen

Hirsch Driebergen BV
Phone: 0031 343 515534
E-Mail: info@hirsch-driebergen.nl

Norway, Oslo

Viking Elektro AS
Phone: 0047 22 07 26 70
E-Mail: ordre@viking-elektro.no

Austria, Vienna

Peter Samer
Mobile: +43 6 76 37 66 850
E-Mail: peter.samer@cimco.de

Poland, Warsaw

CIMCO-Poland s.c.
Phone: 0048 22 815 6808
E-Mail: cimco@cimco.pl

Portugal, Venda do Pinheiro

Duarte Neves, L.da
Phone: 00351 2 1966 8100
E-Mail: info@duarteneves.pt

Russia, Moscow

Rothenberger-Euroequipment LLC
Phone: 007 495 788 7178
E-Mail: info@ro-tools.ru

Sweden, Svedala

Cimtools Scandinavia AB
Phone: 0046 40 40 01 50
Mobile: 0046 70 21 82 108
E-Mail: daniel@cimtools.com

Switzerland, Rafz

Stephan Merkt
Mobile: 0041 79 342 74 33
Phone: 0041 52 533 06 35
E-Mail: cimco.ch@gmail.com

Slovakia, Ostrov

NARADI CIMCO s.r.o.
Phone: 00420 353 540 200
E-Mail: info@cimco.cz

Slovenia

ProCon d.o.o.
Phone: 00386 1 436 5900
E-Mail: info@procon.si

Spain, Madrid

Guijarro Hermanos S.L.
Phone: 0034 91 64 93 799
E-Mail: info@guijarrohermanos.es

Czech Republic, Ostrov

NARADI CIMCO s.r.o.
Phone: 00420 353 540 200
E-Mail: info@cimco.cz

Ukraine, Kiev

Lapp Ukraine LLC
Phone: 0038 044 495 6000
E-Mail: sales@lappukraine.com

Hungary, Budapest

Burisch Villanyzerelési
Phone: 0036 1 399 8020
E-Mail: burischkft@burisch.hu

Belarus, Minsk

Eximelektro
Phone: 00375 17 21 05 390
E-Mail: eximelektro@tut.by

Sales North America

Canada, Ontario

PMMI International Ltd.
Phone: 001 416-289-0588
Toll Free: 888-283-7664
E-Mail: cspafford@pmmiintl.com

Sales Asia

Philippines, Manila

Dr. Jochen K. Langguth Inc.
Phone: 00632 725 6275
E-Mail: office@dr-langguth.com



cimco[®]
INTERNATIONAL

CIMCO-International GmbH

Hohenhagener Straße 1-5 · 42855 Remscheid Germany

Postfach 10 02 63 · 42802 Remscheid Germany

Phone +49 (0)2191 3718 01 · Fax Switchboard +49 (0)2191 3718 85

Fax Sales +49 (0)21 91 37 18-85 · E-Mail: info@cimco.de

Internet: www.cimco.de