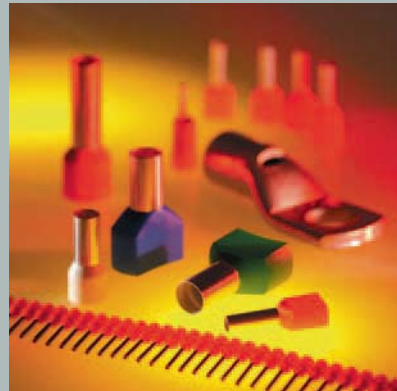
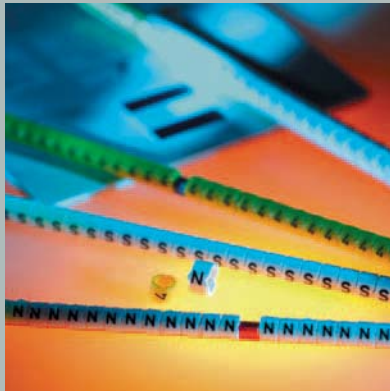
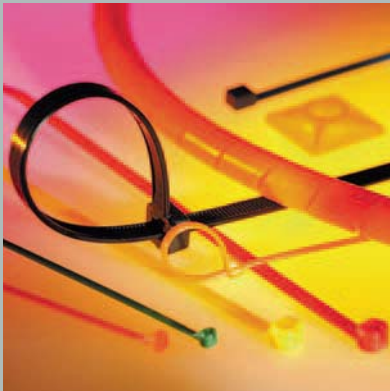
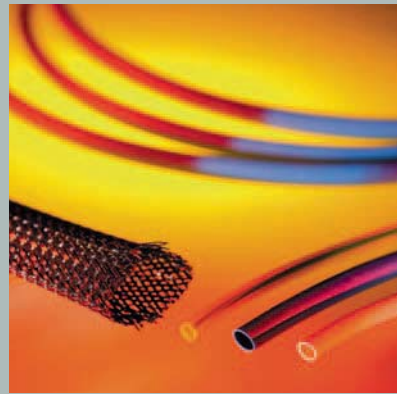




**HELUKABEL®**



## **CABLE ACCESSORIES** *2013/2014*

# Welcome



Photo: HELUKABEL® – Headquarters Hemmingen

HELUKABEL® are today one of Germany's leading cable companies, boasting an extensive range of cables, wires, special cables, media technology, cable accessories, as well as Data, Network & Bus Technology and cable protection systems for robotics and handling systems.

Today, we produce for all markets and for every purpose. Our extensive warehouse stock, containing over 33,000 articles, enables us to deliver your order within extremely short delivery times.

The catalogue provides a full overview of cables according to overseas standards, which is constantly being expanded according to the market's requirements. The employees of our internal and field sales teams are happy to advise and assist you in finding the best solution for your needs.

You can reach us at:

HELUKABEL® GmbH · Headquarters  
Dieselstr. 8-12 · 71282 Hemmingen · Germany  
Phone +49 7150 9209-0  
Fax +49 7150 81786  
info@helukabel.de · www.helukabel.de

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| Domestic sales: Monday to Friday | 7:00 a.m. to 6:00 p.m.                  |
| Export:                          | 7:00 a.m. to 6:00 p.m.<br>(German time) |

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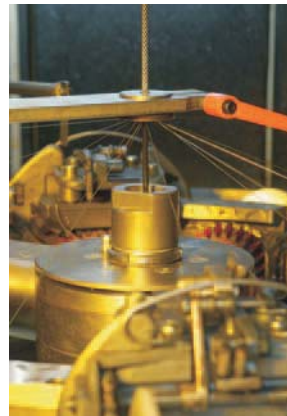
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# The production Windsbach/Nuremberg

**Here we are realizing standard cables, special cables and customer-specific special solutions.**



The annual production of our own plant in Windsbach/Nuremberg, which has a production surface area over 10,000 m<sup>2</sup> and approx. 145 employees, this equates to approx. 50,000 km of cable or 340,000 core kilometres.

The products include shielded, unshielded and steel wire reinforced control cables with PVC/PUR sheath or thermoplastic elastomers and halogen-free, flame-resistant and heat-resistant shielded and unshielded cables. Our range is rounded off by special-purpose cables produced to customer requirements.



# The logistics centre

**A large part of the product assortment, which has over 33,000 articles, is held starting from the Hemmingen storage.**



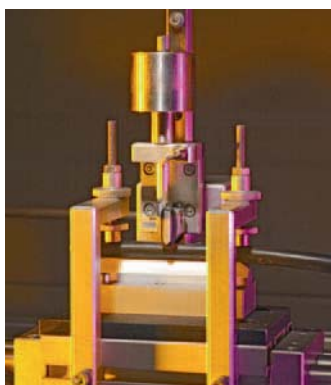
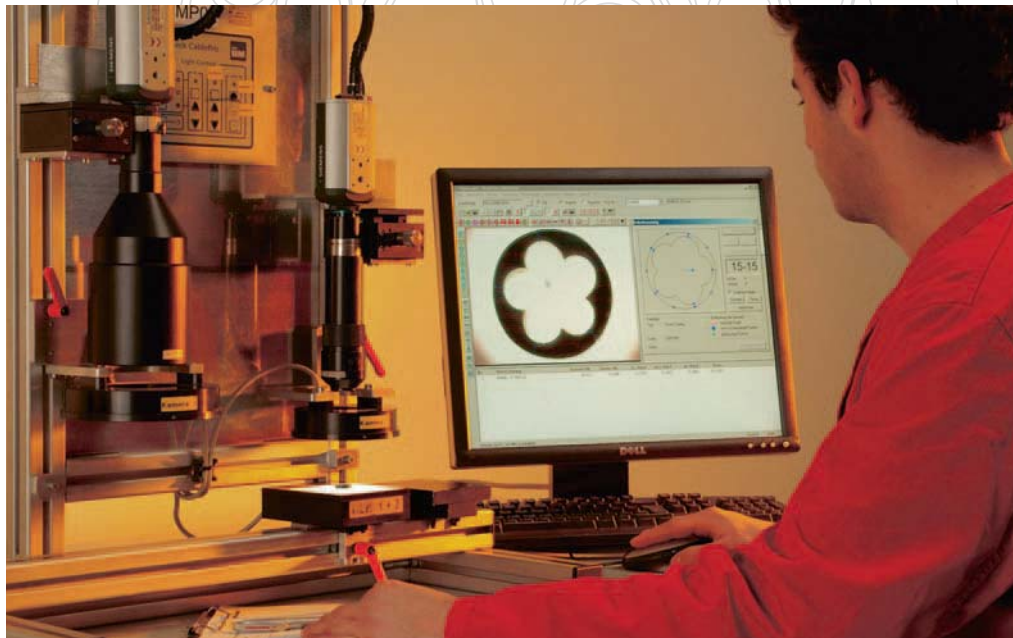
To meet the increasing demands of the market, HELUKABEL® opened a logistics centre. The goal of the logistics centre is to increase the order to delivery process through automation.

Innovative warehouse engineering and high-tech information techniques make this installation unique in the cable business.

"State of the Art" automation allows hundreds of orders to be filled daily. Our "Just in Time" system pulls product from over 16,000 pallet storage locations.

# Research & development

**We devise optimised cable solutions  
for our customers.**

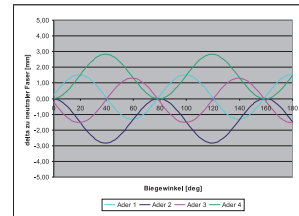


Photos: HELUKABEL®

The focus is very much on products for mobile use with a high level of vertical integration. Our customers expect extreme resistance to chemical, electrical and mechanical stresses combined with small bending radii, a high number of flexing cycles and outstanding service lives – we are happy to comply.



Our design engineers rely on the latest software to develop our cables. This software makes the cores' movement scenarios in the cable sheath visible.



Once these prerequisites are met, we can optimize the products - according to the type of stranding, lay-length and material - and the corresponding manufacturing technique.

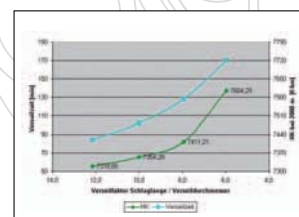
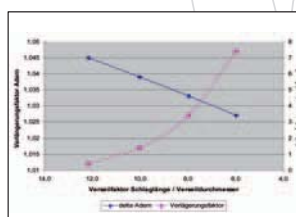


| HELUKABEL GMBH             |          |                               |                      |       |
|----------------------------|----------|-------------------------------|----------------------|-------|
| Schleppketten-Testergebnis |          |                               |                      |       |
| Typen: JZ-HF / -CY         |          |                               |                      |       |
|                            | Art. Nr. | Aderzahl x Nennquerschnitt mm | Außen-durchmesser mm | grün  |
| 7                          | 15003    | 7x0,75                        | 8,30                 | 7,30  |
| 8                          | 15005    | 7x0,5                         | 8,60                 | 7,60  |
| 9                          | 15041    | 7x1                           | 8,90                 | 7,90  |
| 10                         | 15008    | 5x1,5                         | 9,30                 | 8,30  |
| 11                         | 15006    | 10x0,5                        | 9,80                 | 8,80  |
| 12                         | 15075    | 4x2,5                         | 10,40                | 9,40  |
| 13                         | 15067    | 18x1                          | 13,30                | 12,30 |
| 14                         | 15066    | 14x1,25                       | 13,40                | 12,40 |
| 15                         | 15066    | 10x2,5                        | 14,40                | 13,40 |
| 16                         | 15038    | 5x2,5                         | 14,50                | 13,50 |

New products are tested in the state-of-the-art Test Center in Windsbach/Nuremberg to ensure their suitability for daily use and readiness for standard production. Our stringent quality standard is also upheld with measurements and random sample checks carried out during production.

In order to provide information on the service life, we document the real-life tests we carry out on our cables suitable for use in drag chains.

The effect of changing the lay-length





# Our product ranges

## CABLES & WIRES

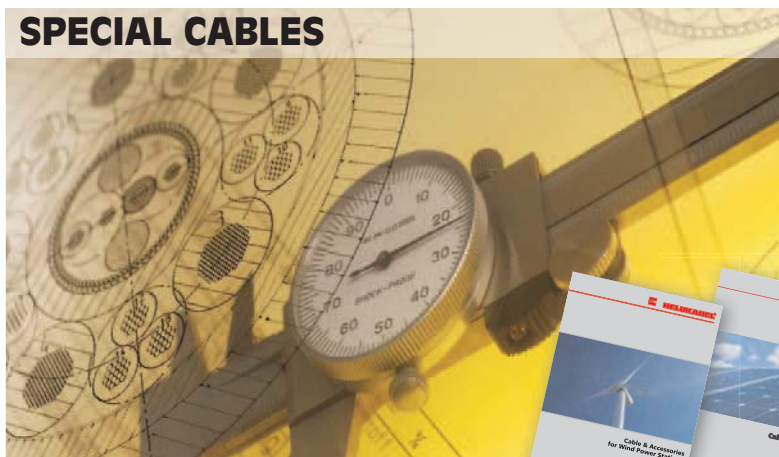


HELUKABEL® can deliver cables and wires for any industrial application. Our extensive warehouse stock, containing over 33,000 articles, enables us to deliver order within extremely short delivery times.

You can find more information about this in our actually catalogue CABLES & WIRES.



## SPECIAL CABLES



We supply cables and wires for both standard applications and bespoke solutions to meet customers' individual and application-specific requirements. Those cables can be designed, constructed and produced in our own factory, enclosed cables for photovoltaic and wind power.

Just give us a call – our team will be happy to advise you.



## CABLE ACCESSORIES



As a significant addition to the extensive program of cables and wires, HELUKABEL® provides a cables accessories program according to the latest guidelines and standards. For example: Cable glands, cable glands accessories, protective tubes, drag and guidance chains.

More information and all products in our catalogue CABLE ACCESSORIES.



If you require additional copies of any catalogues or brochures below, simply fill out the request from provided at the back of this catalogue or at the internet.

## DATA, NETWORK & BUS TECHNOLOGY



HELUKABEL® can offer an extensive range of equipment for networking heterogeneous systems using fibre optic and copper techniques. HELUKABEL® is able to meet with its brands HELUCOM®, HELUCOM Connecting Systems®, HELUKAT® and HELUKAT Connecting Systems® all of your cable and accessories you needs.

All products to find in the catalogue DATA, NETWORK & BUS TECHNOLOGY.



## MEDIA TECHNOLOGY



For years, our cables have ensured perfect performances on Europe's leading musical and theatrical stages. They are also used in professional television, radio and studio equipment and at large-scale events such as the football world championships.

Our product range for media equipment encompasses cables for both indoor and outdoor use. It guarantees high transmission quality for fixed installations or for mobile use.

More information in our new catalogue MEDIA TECHNOLOGY.





# Our registered trademarks

## CABLES AND WIRES

|                                 |                                               |
|---------------------------------|-----------------------------------------------|
| <b>BIOFLEX-500®</b>             | Bio-Oil resistant Cables                      |
| <b>DATAFLAMM®</b>               | Data and Computer Cables halogen-free         |
| <b>DATAPUR-C®</b>               | Data and Computer Cables                      |
| <b>GALVANICABLE®</b>            | High-current cathode Cables                   |
| <b>HELUFLON®</b>                | Heat resistant Cables                         |
| <b>HELUTHERM®</b>               | Heat resistant Cables                         |
| <b>HELUTRAIN®</b>               | Train Cables                                  |
| <b>HELUTRUCK®</b>               | Vehicle Cables / Truck Cables                 |
| <b>HELUWIND®</b>                | Cables for Wind Power                         |
| <b>KOMPOFLEX®</b>               | Microbial resistant Cables                    |
| <b>KOMPOSPEED®</b>              | Bio-Oil resistant Cables for Drag Chains      |
| <b>LIFT-TRAGO®</b>              | Lift hoist control Cables                     |
| <b>MEGAFLEX®</b>                | Flexible Control Cables halogen-free (UL/CSA) |
| <b>MULTIFLEX 512®</b>           | Cables for Drag Chains PUR                    |
| <b>MULTISPEED®</b>              | Cables for Drag Chains                        |
| <b>SENSORFLEX®</b>              | Sensor Cables                                 |
| <b>SOLARFLEX®</b>               | Cables for photovoltaic                       |
| <b>SUPER-PAAR-TRONIC-C-PUR®</b> | Cables for Drag Chains halogen-free           |
| <b>SUPERTRONIC®</b>             | Cables for Drag Chains                        |
| <b>THERMFLEX®</b>               | Heat resistant Cables                         |
| <b>TOPFLEX®</b>                 | Servo, Feedback and Motor Cables              |
| <b>TOPSERV®</b>                 | Servo, Feedback and Motor Cables              |
| <b>TRAYCONTROL®</b>             | Cable for open installation, exposed run      |
| <b>TROMMPUR®</b>                | Trailing Cables                               |
| <b>UNIPUR®</b>                  | Flexible Control Cables PUR                   |

## DATA, NETWORK AND BUS TECHNOLOGY

|                                                                                     |                                  |
|-------------------------------------------------------------------------------------|----------------------------------|
| <b>HELUCOM®</b>                                                                     | Fibre optic Cables               |
|  | Fibre optic connecting equipment |
| <b>HELUKAT®</b>                                                                     | Copper data Cables               |
|  | Copper connecting equipment      |

## MEDIA TECHNOLOGY

|                  |                          |
|------------------|--------------------------|
| <b>HELULIGHT</b> | Cables for light control |
| <b>HELUSOUND</b> | Audio Cables             |

## CABLE ACCESSORIES

|                   |                                |
|-------------------|--------------------------------|
| <b>HELUCHAIN®</b> | Cables for Drag Chains program |
| <b>HELUTEC®</b>   | Industrial connectors series   |
| <b>HELUTOP®</b>   | Cable glands program           |

## HELUROBOTICS

|                      |                                                  |
|----------------------|--------------------------------------------------|
| <b>HELUROBOTICS®</b> | Pre-assembled dress package systems for Robotics |
|----------------------|--------------------------------------------------|

# Achieving success through quality and innovation

## Product certificates document the tested quality level of our products

ISO 9000ff is used as the basis for quality management processes carried out at HELUKABEL®. Product certificates issued by accredited institutions also make it easier for you to evaluate your suppliers.



Our continuous quality improvement process enables us not only to maintain a consistently high quality standard, it also ensures continued development and new product development.

**Our commitment to protecting the environment can be seen in our-rate environment management systems.**





# Contact – Germany

## Sales office

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**Bahnhofstraße 9**

Telephone +49 4821 40394-0 • Fax +49 4821 40394-29



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**Zum Mühlenfließ 1**

Telephone +49 3342 2397-0 • Fax +49 3342 80033

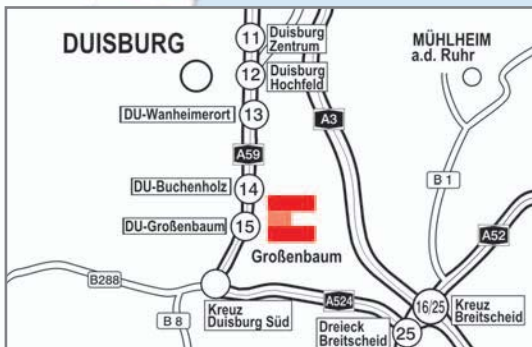


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Telephone +49 203 73995-0 • Fax +49 203 73995-210

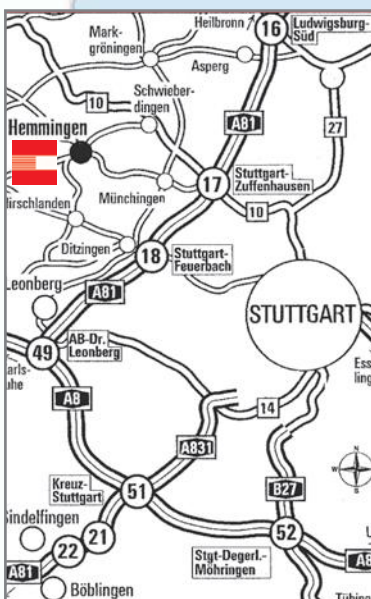
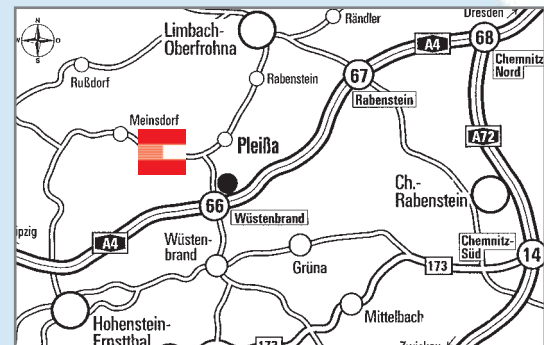


## Sales office and stock

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## Headquarters

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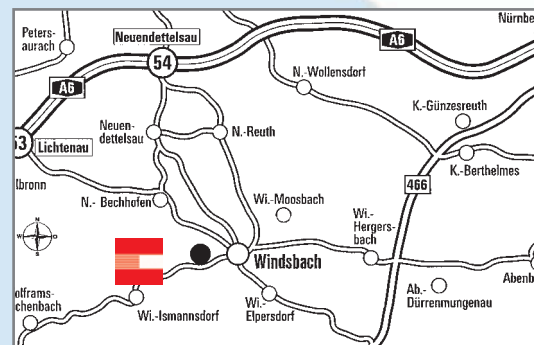
Fax +49 7150 81786

## Development & production

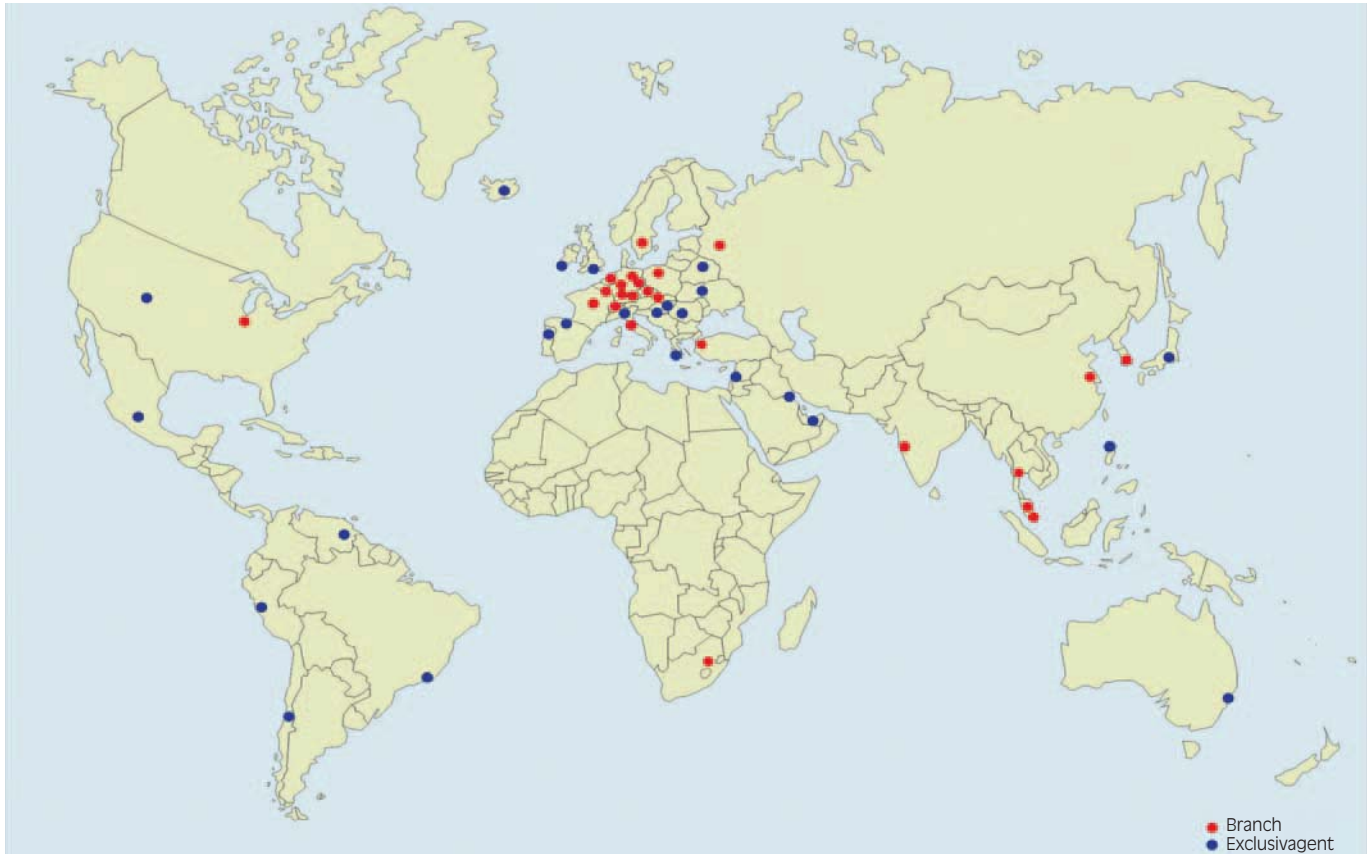
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[sales@helukabel.com.my](mailto:sales@helukabel.com.my)



## The system provider for winding, measuring & warehouse systems



Kabelmat® Wickeltechnik GmbH's history goes back to the sixties and for a long time, the company has been among the market leaders for winding systems for the cable and wire industry and/or processing. Customers include manufacturers, retailers and processors of cables and wires as well as fitters, electrical installers, machine construction companies and many more.

The product portfolio includes almost all devices and machines for storage, winding and hanging of cables and wires, steel cables, pipes, hoses and profiles. The tasks completed worldwide by Kabelmat® products include winding from and to drums, as well as from drums to rings.



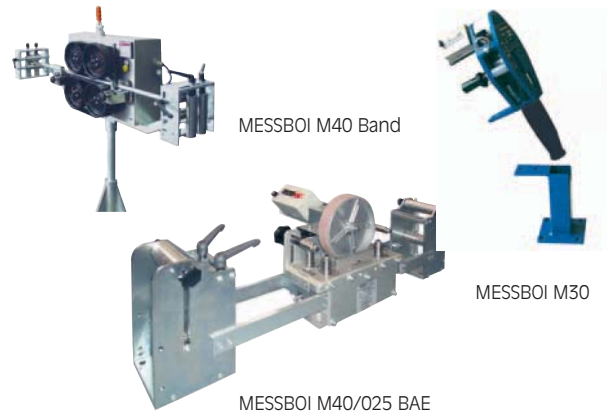


## Manual winding systems

These are Kabelmat® winding devices and machines without electromotive actuation. When it comes to winding systems, Kabelmat® differentiates between rewinding and unwinding. Kabelmat® offers different designs and sizes for rewinders as well as unwinders, for drums and rings.

## Measuring systems

Our length measuring devices are available in different designs and sizes. The size depends on the maximum diameter of the material to be measured. The MESSBOI 40, for example, is qualified for measuring round material up to a diameter of 40 mm. Flat materials can also be measured. We currently have measuring devices for a maximum of 100 mm diameters in our program.



## Machine winding systems

These are Kabelmat® winding devices and machines with electromotive actuation. Efficient, cost-effective cutting, measuring and winding of cables and wires, steel cables, pipes, hoses and profiles requires high-performing but easily operatable machines. Modern control systems and drive technologies of well-known German suppliers are used by Kabelmat® in the field.

## Warehouse systems

These are Kabelmat® cable drum or cable ring storage and unwinding systems. With its warehouse systems MATBOI, SPULBOI®, LAGBOI® and LAGROL®, Kabelmat® offers to organize your cable warehouse. In addition, the LAGROL system provides the option to use a manual or machine-driven winder for direct unwinding.



Become acquainted with our complete winding, measuring & warehouse product range. Just download our catalogue via [www.kabelmat.com](http://www.kabelmat.com)



# Contents

## A Cable glands

17 – 192

### Cable glands for standard applications

- made of plastic
- made of brass
- Accessories / Components

### Cable glands for special usage conditions

- for electromagnetic compatibility (EMC)
- for robust applications and special chemical resistance
- for increased usage temperature
- for potentially explosive atmospheres
- for special installation conditions
- for special pressure conditions
- Accessories / Components



## B Cable protection tubes

193 – 297

### Corrugated tubes

- for standard applications
- in oversize
- dividable
- tube connectors

### High flexible protection tubes

- made of plastic with coil springs
- made of metal, spiral wound
- tube connectors

### Cable protection tubes for heavy-duty applications

- metal protection tubes, with plastic jacket
- plastic protection tube
- tube connectors for metal protection tube



## C Cable drag chains

299 – 324

### Open chains

### Closed chains

### Accessories

### Installation notes

### Selection tables



## D Insulating, shrunk, braided and high temperature tubes

325 – 350

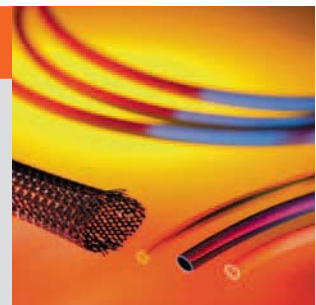
### Braided sleeves

### High temperature protection

### Insulating tubes

### Shrink-on sleeves

### End caps

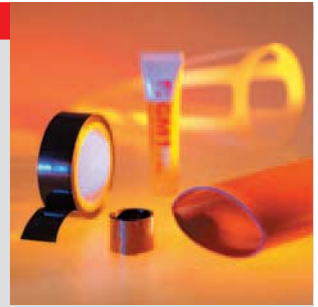




# Contents

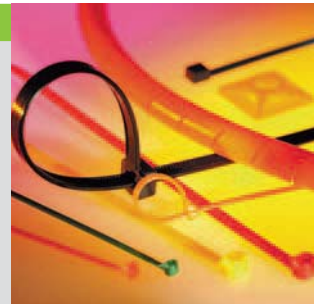
## **E Termination and connection sleeves 351 – 366**

Telecommunications cables  
Low voltage  
Medium voltage  
Accessories / Components



## **F Bundling, binding and fixing 367 – 384**

Plastic helix  
Cable binders  
Velcro fastener  
Mounting base



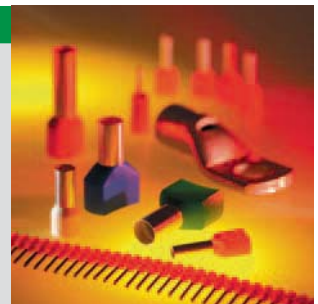
## **G Identification and marking 385 – 392**

Marking rings  
Cable markers



## **H Core end sleeves and cable lugs 393 – 446**

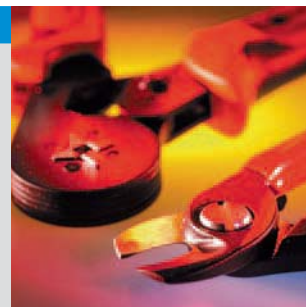
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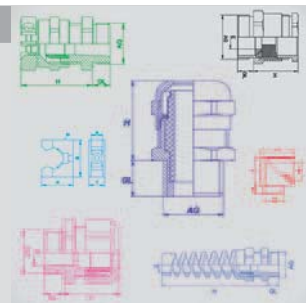
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## Cable glands



# Cable glands overview

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# Cable glands overview

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# General information

## Basic functions of a cable gland

### Transferring cables and wires

- Power (electricity)
- Signals and data (current, voltage, light)

### Cable protection

If a wire is to be connected in a housing, the housing must have a protective lead-through. Otherwise there is a danger that the wire will become damaged in case of movement.

### Strain relief

A wire always moves to a greater or lesser extent – both during installation, and in long-term use. It is important to protect it against tensile loads. The movements may be either constant or intermittent. For this reason, a cable gland with strain relief is necessary. Strain reliefs are described in EN 50262. A distinction is made between retention, strain relief A and strain relief B. Generally, cable glands have strain relief A.

### Protection classification

The lead-through in the wall of the housing must be sealed. This is described by ingress protection IP. The cable glands presented here have protection classification IP 68 – 5 bar. The 6 stands for “No dust penetration”, while the 8 stands for “Protected when permanently submerged in water” – this is tested at a water pressure of 5 bar (corresponds to 50 m water depth) for a duration of 30 min.

### Seal with insert

A seal is compressed by tightening the cap nut. A particularly high quality seal and strain relief are achieved.

### Sealing with clamping plates

When the cap nuts are screwed tight, lamellae press against the moulded seal – the wire is thereby sealed and the strain is relieved. The particular advantage of the clamping lamellae is that they make a large clamping range possible, to allow for different wire diameters.

### Resistance

Different applications demand different degrees of resistance. Plastic cable glands made from polyamide can be used at a temperature range of between -20 °C and +100 °C. They are abrasion- and impact resistant as well as being resistant against hydrocarbons/fuels and cleaning agents.

Stainless steel glands are suitable for heavy-duty use– they are waterproof and resistant to a large number of disinfectants used in food production. Brass glands are used when a long-lasting metal gland is required. Cable glands for EMC applications are also made from brass (EMC = Electro-magnetic Compatibility).

### Compact design

- No disassembly during final assembly. Simply loosening the cap nuts is sufficient.
- No losing components
- Quick assembly

### Standard EN 50262

Cable glands are produced and tested according to the standard EN 50262. This stipulates the dimensions of the connection threads (“metric threaded connection”) as well as a series of safety-relevant parameters, e.g. strain relief. Cable glands are also available with another threaded connection (PG, NPT, etc.).

### RoHS

Directive 2002/95/EC defines environment-relevant standards for electrical and electronic components and devices. This is known as RoHS for short: „Restriction of the use of certain hazardous substances in electrical and electronic equipment”. The use of heavy metals (lead, cadmium, etc.) and a number of other hazardous substances is forbidden.



# Installation notes

## No disassembly

Disassembly of the glands HELUTOP® HT, HSK, Helufast, UNI-DICHT, KVA, SD are not necessary – provided that the cap nut is applied in such a way as to allow smooth running, there is no problem with subsequent insertion of the cable.

## Screwing in

When screwing, observe the necessary tightening torque. If only one through-hole without thread is available, a lock nut must be used.

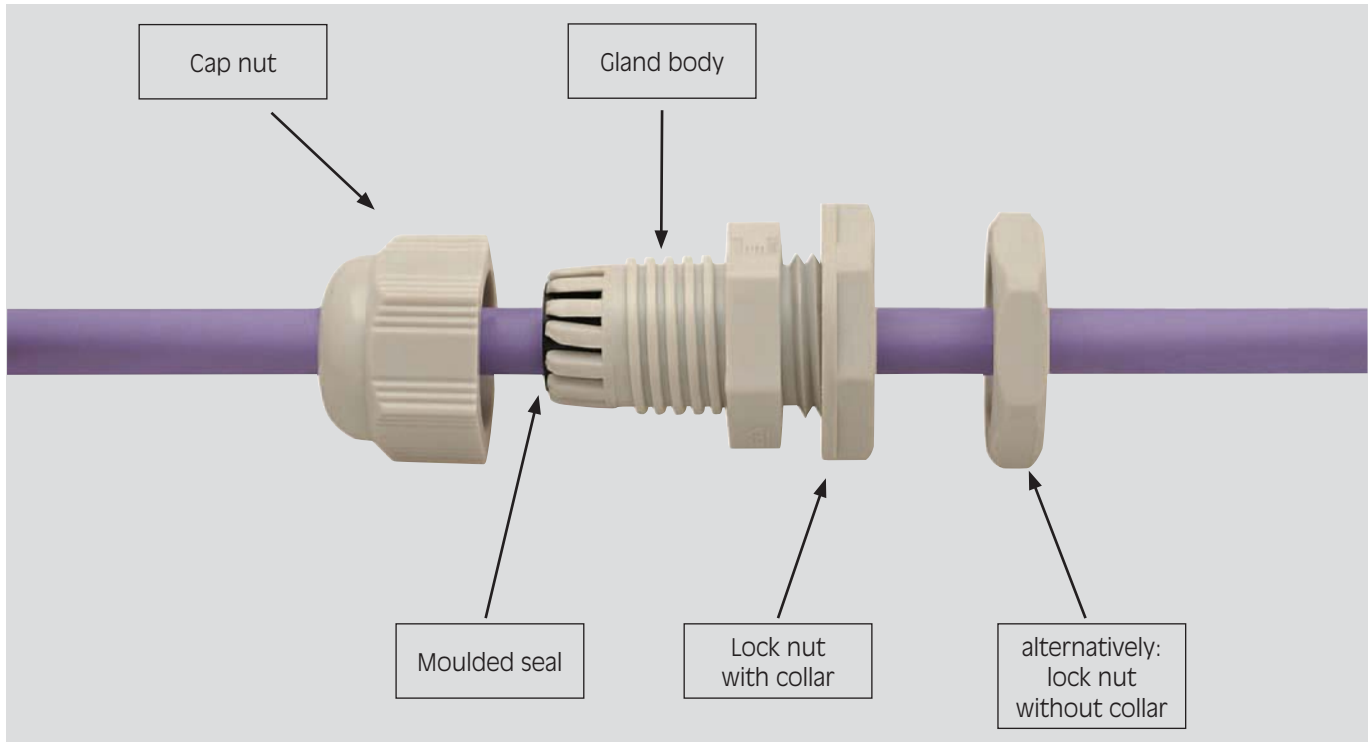
## Protection classification

In order to achieve the desired protection classification even when working with an unfavourable surface, it may be necessary to use an O-ring or a connection thread gasket. To ensure a consistently high-quality seal, we recommend re-tightening the gland some time after assembly.

**Lead through cable – turn cap nut – that's all there is to it!**



# Plastic cable glands



## Cable gland

Cap nut and gland body are made of polyamide PA6 in the following colours:

- light grey RAL 7035
- dark grey RAL 7001
- black RAL 9005.

Polyamide PA6 is abrasion- and impact resistant, and resistant against hydrocarbons/fuels and cleaning agents. It is tried-and-tested as a material for cable glands in standard applications.

The moulded seal is made from CR.

The cable glands HELUTOP® HT and HSK are fitted with vibration protection for secure attachment in mobile applications.

## Lock nut

The lock nuts with or without collar are made from polyamide PA6.

## Accessories

Accessories suitable for use with the plastic cable glands:

- Lock nuts
- Adapters
- Extenders
- Reducers

Accessories suitable for use with all HELUTOP® cable glands:

- Sealing plugs
- Multiple sealing inserts / lock bolts
- O-rings
- Connection thread gaskets
- Blind plates



# Cable glands made of plastic for standard applications

## Seal with clamping plates

### Series HELUTOP® HT

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# Cable glands made of plastic for standard applications

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## HELUTOP® HT

The plastic cable gland with vibration protection

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

### Properties

- Optimum strain relief through clamping plates
- Easy to assemble
- Large clamping areas

### Note

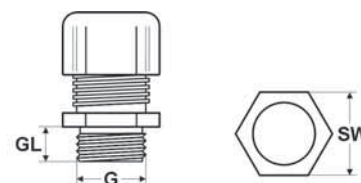
Details on the individual tests appear in section "Technical Information".  
UV-resistant (RAL 9005)

### Technical data

Protection class: IP 68 - 5 bar / IP 69K

Temperature range: -20°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93908                              | 93923                             | 93937                         | M12 x 1,5     | 3,0 - 6,5                  | 6,0                    | 15                    | 100  | o. r.                              | o. r.     | o. r.      |
| 93909                              | 93924                             | 93938                         | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92667                              | 92668                             | 92669                         | M16 x 1,5     | 5,0 - 10,0                 | 10,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93910                              | 93925                             | 93939                         | M20 x 1,5     | 6,0 - 12,0                 | 10,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93911                              | 93926                             | 93940                         | M25 x 1,5     | 11,0 - 17,0                | 8,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93912                              | 93927                             | 93941                         | M32 x 1,5     | 15,0 - 21,0                | 10,0                   | 36                    | 25   | o. r.                              | o. r.     | o. r.      |
| 93913                              | 93928                             | 93942                         | M40 x 1,5     | 19,0 - 28,0                | 10,0                   | 46                    | 20   | o. r.                              | o. r.     | o. r.      |
| 93914                              | 93929                             | 93943                         | M50 x 1,5     | 30,0 - 38,0                | 18,0                   | 60                    | 10   | o. r.                              | o. r.     | o. r.      |
| 93915                              | 93930                             | 93944                         | M63 x 1,5     | 34,0 - 44,0                | 18,0                   | 65                    | 10   | o. r.                              | o. r.     | o. r.      |

### metric thread - with reducing seal

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903532                             | 903542                            | 903552                        | M12 x 1,5     | 2,0 - 5,0                  | 8,0                    | 15                    | 100  | o. r.                              | o. r.     | o. r.      |
| 903533                             | 903543                            | 903553                        | M16 x 1,5     | 2,0 - 6,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903534                             | 903544                            | 903554                        | M20 x 1,5     | 5,0 - 9,0                  | 10,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903535                             | 903545                            | 903555                        | M25 x 1,5     | 9,0 - 13,0                 | 8,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903536                             | 903546                            | 903556                        | M32 x 1,5     | 11,0 - 15,0                | 10,0                   | 36                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903537                             | 903547                            | 903557                        | M40 x 1,5     | 16,0 - 23,0                | 10,0                   | 46                    | 20   | o. r.                              | o. r.     | o. r.      |
| 903538                             | 903548                            | 903558                        | M50 x 1,5     | 25,0 - 31,0                | 18,0                   | 60                    | 10   | o. r.                              | o. r.     | o. r.      |
| 903539                             | 903549                            | 903559                        | M63 x 1,5     | 29,0 - 35,0                | 18,0                   | 65                    | 10   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request



# HELUTOP® HT cable gland



## PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99300                              | 99310                             | 99320                         | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 100  | o. r.                              | o. r.     | o. r.      |
| 99301                              | 99311                             | 99321                         | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99302                              | 99312                             | 99322                         | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99303                              | 99313                             | 99323                         | 13,5       | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99304                              | 99314                             | 99324                         | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99305                              | 99315                             | 99325                         | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 25   | o. r.                              | o. r.     | o. r.      |
| 99306                              | 99316                             | 99326                         | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 20   | o. r.                              | o. r.     | o. r.      |
| 99307                              | 99317                             | 99327                         | 36         | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 99308                              | 99318                             | 99328                         | 42         | 30,0 - 38,0                | 13,0                   | 60                    | 10   | o. r.                              | o. r.     | o. r.      |
| 99309                              | 99319                             | 99329                         | 48         | 34,0 - 44,0                | 14,0                   | 65                    | 10   | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92780                              | 92790                             | 92800                         | 3/8"        | 5,0 - 10,0                 | 15,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92781                              | 92791                             | 92801                         | 1/2"        | 6,0 - 12,0                 | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92782                              | 92792                             | 92802                         | 1/2"        | 10,0 - 14,0                | 15,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92783                              | 92793                             | 92803                         | 3/4"        | 14,0 - 18,0                | 15,0                   | 33                    | 25   | o. r.                              | o. r.     | o. r.      |
| 92784                              | 92794                             | 92804                         | 1"          | 18,0 - 25,0                | 18,0                   | 42                    | 20   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOP® HT-BS cable gland

with dust protection



## HELUTOP® HT-BS

The plastic cable gland with vibration protection and pre-assembled dust protection

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)  
Dust protection: foam rubber

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

### Properties

- Optimum strain relief through clamping plates
- Easy to assemble
- Large clamping areas

### Note

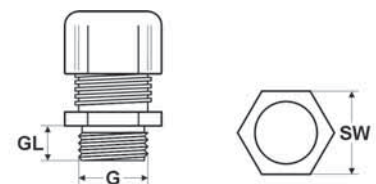
Details on the individual tests appear in section "Technical Information".  
UV-resistant (RAL 9005).  
The information of the protection classification applies only by use as cable gland, but not for the blind plugs.

### Technical data

Protection class: IP 68 - 5 bar / IP 69K

Temperature range: -20°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94530                              | 94540                             | 94550                         | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 100  | o. r.                              | o. r.     | o. r.      |
| 94531                              | 94541                             | 94551                         | M16 x 1,5     | 5,0 - 10,0                 | 10,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94532                              | 94542                             | 94552                         | M20 x 1,5     | 6,0 - 12,0                 | 10,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94533                              | 94543                             | 94553                         | M25 x 1,5     | 11,0 - 17,0                | 8,0                    | 29                    | 25   | o. r.                              | o. r.     | o. r.      |
| 94534                              | 94544                             | 94554                         | M32 x 1,5     | 15,0 - 21,0                | 10,0                   | 36                    | 25   | o. r.                              | o. r.     | o. r.      |
| 94535                              | 94545                             | 94555                         | M40 x 1,5     | 19,0 - 28,0                | 10,0                   | 46                    | 20   | o. r.                              | o. r.     | o. r.      |
| 94536                              | 94546                             | 94556                         | M50 x 1,5     | 30,0 - 38,0                | 18,0                   | 60                    | 10   | o. r.                              | o. r.     | o. r.      |
| 94537                              | 94547                             | 94557                         | M63 x 1,5     | 34,0 - 44,0                | 18,0                   | 65                    | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOP® sealing inserts



## HELUTOP® HT protection tab

Protection tab HT for sealing of empty cable glands HELUTOP® HT

## Material

Polyamide 6

Colours: black

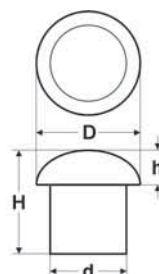
## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Note

UV-resistant (RAL 9005).

\*Protection tab 903492 only for cable glands type HT and HT-MS with clamping range 5-10mm.



## Dimensions

|   |                       |
|---|-----------------------|
| D | Outer diameter head   |
| d | Outer diameter insert |
| H | Height total          |
| h | Height head           |

| Part no. | Size metric | Outer diameter head mm | Outer diameter insert mm | Height total mm | Height head mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-------------|------------------------|--------------------------|-----------------|----------------|------|------------------------------------|-----------|------------|
|          |             |                        |                          |                 |                |      | 5 - 100                            | 105 - 500 | 505 - 1000 |
| 903492*  | M16 x 1,5   | 13,5                   | 10,0                     | 20,5            | 5,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 903493   | M20 x 1,5   | 16,0                   | 12,0                     | 18,0            | 8,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 903494   | M25 x 1,5   | 20,0                   | 16,5                     | 18,5            | 7,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 903495   | M32 x 1,5   | 24,0                   | 20,5                     | 21,0            | 9,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 903496   | M40 x 1,5   | 32,0                   | 27,5                     | 25,0            | 9,0            | 100  | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOP® HT-MFDE multiple sealing inserts



**HELUTOP® HT-MFDE**  
for HELUTOP® HT gland shells

**Material**  
NBR

**Technical data**  
Temperature range: -20°C up to +100°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

Colours: black

## Note

Inserts for size M16 are suitable for cable glands M16x1,5 with clamping range 5-10mm.

| Part no. | Size metric | Insert colour | Number x Ø borehole mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-------------|---------------|------------------------|------|------------------------------------|-----------|------------|
|          |             |               |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905773   | M16 x 1,5   | black         | 2x 2,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920102   | M16 x 1,5   | black         | 2x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905776   | M16 x 1,5   | black         | 3x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905775   | M16 x 1,5   | black         | 2x 5,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905774   | M16 x 1,5   | black         | 2x 3,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920103   | M20 x 1,5   | black         | 2x 5,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920105   | M20 x 1,5   | black         | 3x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920104   | M20 x 1,5   | black         | 2x 6,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905777   | M20 x 1,5   | black         | 4x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920109   | M20 x 1,5   | black         | 4x 3,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920106   | M20 x 1,5   | black         | 3x 5,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920113   | M25 x 1,5   | black         | 3x 7,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905779   | M25 x 1,5   | black         | 5x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905778   | M25 x 1,5   | black         | 3x 5,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905529   | M25 x 1,5   | black         | 7x 3,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920114   | M25 x 1,5   | black         | 4x 5,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920112   | M25 x 1,5   | black         | 3x 6,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920117   | M25 x 1,5   | black         | 6x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920110   | M25 x 1,5   | black         | 2x 6,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920119   | M32 x 1,5   | black         | 2x 8,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920129   | M32 x 1,5   | black         | 9x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905781   | M32 x 1,5   | black         | 3x 7,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 904926   | M32 x 1,5   | black         | 4x 8,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920126   | M32 x 1,5   | black         | 6x 5,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905783   | M32 x 1,5   | black         | 8x 4,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905782   | M32 x 1,5   | black         | 4x 7,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 903531   | M32 x 1,5   | black         | 9x 3,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905780   | M32 x 1,5   | black         | 2x 7,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920122   | M32 x 1,5   | black         | 3x 8,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 903530   | M32 x 1,5   | black         | 6x 6,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920120   | M32 x 1,5   | black         | 2x 9,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920123   | M32 x 1,5   | black         | 4x 6,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905784   | M32 x 1,5   | black         | 8x 5,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 920125   | M32 x 1,5   | black         | 5x 6,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905788   | M40 x 1,5   | black         | 5x 8,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905786   | M40 x 1,5   | black         | 3x 10,0                | 1    | o. r.                              | o. r.     | o. r.      |
| 905789   | M40 x 1,5   | black         | 6x 7,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905785   | M40 x 1,5   | black         | 2x 10,0                | 1    | o. r.                              | o. r.     | o. r.      |
| 905791   | M40 x 1,5   | black         | 9x 7,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905790   | M40 x 1,5   | black         | 8x 6,0                 | 1    | o. r.                              | o. r.     | o. r.      |
| 905787   | M40 x 1,5   | black         | 4x 8,0                 | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# Sealing billets



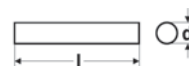
**Sealing billets**  
for empty penetrations.

**Material**  
Polyethylene

**Technical data**  
Temperature range: -20°C up to +100°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



**Dimensions**  
l Length  
d Diameter

| Part no.<br>black | Diameter<br>x Length | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|----------------------|------|------------------------------------|-----------|------------|
|                   |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903515            | 3,0 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903516            | 4,0 x 20,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903517            | 4,0 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903518            | 5,3 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903519            | 6,0 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903520            | 6,4 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903521            | 7,0 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903522            | 7,5 x 20,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903523            | 8,0 x 20,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903524            | 9,0 x 20,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903525            | 9,3 x 20,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903526            | 10,0 x 20,0          | 100  | o. r.                              | o. r.     | o. r.      |

| Part no.<br>white | Diameter<br>x Length | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|----------------------|------|------------------------------------|-----------|------------|
|                   |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903502            | 3,0 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903503            | 4,0 x 20,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903504            | 4,0 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903505            | 5,0 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903506            | 6,0 x 28,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903507            | 6,4 x 25,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903508            | 7,0 x 28,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903509            | 7,5 x 20,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903510            | 8,0 x 30,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903511            | 9,0 x 30,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 903512            | 10,0 x 30,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 903513            | 11,0 x 30,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 903514            | 12,0 x 30,0          | 100  | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOP® HT-K cable gland

with anti-bend spirals



## HELUTOP® HT-K

With anti-kink spirals for movable, flexible lines.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology

### Material

Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

### Properties

- Optimum strain relief through clamping plates
- Easy to assemble

### Note

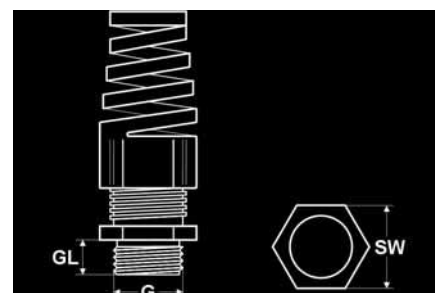
Details on the individual tests appear in section "Technical Information".  
UV-resistant (RAL 9005).

### Technical data

Protection class: IP 68 - 5 bar / IP 69K

Temperature range: -20°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93867                              | 93856                             | 93878                         | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 100  | o. r.                              | o. r.     | o. r.      |
| 93868                              | 93857                             | 93879                         | M16 x 1,5     | 5,0 - 10,0                 | 10,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93869                              | 93858                             | 93880                         | M20 x 1,5     | 6,0 - 12,0                 | 10,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93870                              | 93859                             | 93881                         | M20 x 1,5     | 10,0 - 14,0                | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93871                              | 93860                             | 93882                         | M25 x 1,5     | 13,0 - 18,0                | 10,0                   | 33                    | 25   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93861                              | 93850                             | 93872                         | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 100  | o. r.                              | o. r.     | o. r.      |
| 93862                              | 93851                             | 93873                         | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93863                              | 93852                             | 93874                         | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93864                              | 93853                             | 93875                         | 13,5       | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93865                              | 93854                             | 93876                         | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93866                              | 93855                             | 93877                         | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 25   | o. r.                              | o. r.     | o. r.      |

### NPT thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99804                              | 99901                             | 99905                         | 3/8"        | 5,0 - 10,0                 | 15,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99805                              | 99902                             | 99906                         | 1/2"        | 6,0 - 12,0                 | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99806                              | 99903                             | 99907                         | 3/4"        | 14,0 - 18,0                | 15,0                   | 33                    | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HSK-METRICA-P

The cable gland to meet stringent requirements in technology

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Clamping areas with metric dimensions

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide  
Moulded seal: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

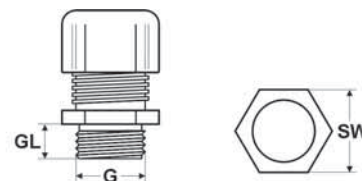
For the intrinsically safe area type "i" cable glands in blue, RAL 5012, are used.

## Technical data

Protection class: IP 68 - 10 bar / IP 69K (within the specific clamping range with additional o-ring)

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99520                              | 99530                            | M12 x 1,5     | 4,0 - 7,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99521                              | 99531                            | M16 x 1,5     | 6,0 - 10,0                 | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99522                              | 99532                            | M20 x 1,5     | 8,0 - 13,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99523                              | 99533                            | M25 x 1,5     | 11,0 - 17,0                | 10,0                   | 30                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99524                              | 99534                            | M32 x 1,5     | 11,0 - 21,0                | 10,0                   | 36                    | 25   | o. r.                              | o. r.     | o. r.      |
| 99525                              | 99535                            | M40 x 1,5     | 19,0 - 28,0                | 12,0                   | 46                    | 10   | o. r.                              | o. r.     | o. r.      |
| 99526                              | 99536                            | M50 x 1,5     | 27,0 - 35,0                | 12,0                   | 55                    | 5    | o. r.                              | o. r.     | o. r.      |
| 99527                              | 99537                            | M63 x 1,5     | 34,0 - 48,0                | 12,0                   | 68                    | 5    | o. r.                              | o. r.     | o. r.      |

### metric thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99540                        | M12 x 1,5     | 4,0 - 7,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99541                        | M16 x 1,5     | 6,0 - 10,0                 | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99542                        | M20 x 1,5     | 8,0 - 13,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99543                        | M25 x 1,5     | 11,0 - 17,0                | 10,0                   | 30                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99544                        | M32 x 1,5     | 11,0 - 21,0                | 10,0                   | 36                    | 25   | o. r.                              | o. r.     | o. r.      |
| 99545                        | M40 x 1,5     | 19,0 - 28,0                | 12,0                   | 46                    | 10   | o. r.                              | o. r.     | o. r.      |
| 99546                        | M50 x 1,5     | 27,0 - 35,0                | 12,0                   | 55                    | 5    | o. r.                              | o. r.     | o. r.      |
| 99547                        | M63 x 1,5     | 34,0 - 48,0                | 12,0                   | 68                    | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HSK

The cable gland to meet stringent requirements in technology

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide  
Moulded seal: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

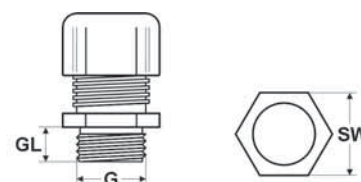
For the intrinsically safe area type "i" cable glands in blue, RAL 5012, are used.

## Technical data

Protection class: IP 68 - 10 bar / IP 69K (within the specific clamping range with additional o-ring)

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97558                              | 97550                            | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96967                              | 97551                            | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97956                              | 97960                            | M16 x 1,5     | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96968                              | 97552                            | M20 x 1,5     | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97957                              | 97961                            | M20 x 1,5     | 10,0 - 14,0                | 9,0                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96969                              | 97553                            | M25 x 1,5     | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96970                              | 97554                            | M32 x 1,5     | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96971                              | 97555                            | M40 x 1,5     | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 96972                              | 97556                            | M50 x 1,5     | 32,0 - 38,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 96973                              | 97557                            | M63 x 1,5     | 37,0 - 44,0                | 14,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

## metric thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97967                        | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97968                        | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97969                        | M16 x 1,5     | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97970                        | M20 x 1,5     | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97971                        | M20 x 1,5     | 10,0 - 14,0                | 9,0                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97972                        | M25 x 1,5     | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97973                        | M32 x 1,5     | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 97974                        | M40 x 1,5     | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 97975                        | M50 x 1,5     | 32,0 - 38,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 97976                        | M63 x 1,5     | 37,0 - 44,0                | 14,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request



## metric thread - with reducing seal

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97873                              | 98205                            | M12 x 1,5     | 2,0 - 5,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96974                              | 97977                            | M16 x 1,5     | 2,0 - 6,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96975                              | 97979                            | M20 x 1,5     | 5,0 - 9,0                  | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96976                              | 97981                            | M25 x 1,5     | 9,0 - 16,0                 | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96977                              | 97982                            | M32 x 1,5     | 13,0 - 20,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96978                              | 97983                            | M40 x 1,5     | 20,0 - 26,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 96979                              | 97984                            | M50 x 1,5     | 25,0 - 31,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 96980                              | 97985                            | M63 x 1,5     | 29,0 - 35,0                | 14,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

## metric thread - with reducing seal - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91826                        | M12 x 1,5     | 2,0 - 5,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91827                        | M16 x 1,5     | 2,0 - 6,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91828                        | M20 x 1,5     | 5,0 - 9,0                  | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91829                        | M25 x 1,5     | 9,0 - 16,0                 | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91830                        | M32 x 1,5     | 13,0 - 20,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91831                        | M40 x 1,5     | 20,0 - 26,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 91832                        | M50 x 1,5     | 25,0 - 31,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 91833                        | M63 x 1,5     | 29,0 - 35,0                | 14,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90000                              | 90020                            | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90001                              | 90021                            | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90002                              | 90022                            | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90003                              | 90023                            | 13,5       | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90004                              | 90024                            | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90005                              | 90025                            | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90006                              | 90026                            | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90007                              | 90027                            | 36         | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 90008                              | 90028                            | 42         | 32,0 - 38,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 90009                              | 90029                            | 48         | 37,0 - 44,0                | 14,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96106                        | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96107                        | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96108                        | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96456                        | 13,5       | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96455                        | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96912                        | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97802                        | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 97803                        | 36         | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 97965                        | 42         | 32,0 - 38,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 97966                        | 48         | 37,0 - 44,0                | 14,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread - with reducing seal

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90010                              | 98290                            | 7          | 2,0 - 5,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90011                              | 96883                            | 9          | 2,0 - 6,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90012                              | 96104                            | 11         | 3,0 - 7,0                  | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90013                              | 96544                            | 13,5       | 5,0 - 9,0                  | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90014                              | 96105                            | 16         | 7,0 - 12,0                 | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90015                              | 97306                            | 21         | 9,0 - 16,0                 | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90016                              | 96403                            | 29         | 13,0 - 20,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90017                              | 98202                            | 36         | 20,0 - 26,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 90018                              | 98203                            | 42         | 25,0 - 31,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 90019                              | 98204                            | 48         | 29,0 - 35,0                | 14,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread - with reducing seal - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91816                        | 7          | 2,0 - 5,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91817                        | 9          | 2,0 - 6,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91818                        | 11         | 3,0 - 7,0                  | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91819                        | 13,5       | 5,0 - 9,0                  | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91820                        | 16         | 7,0 - 12,0                 | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91821                        | 21         | 9,0 - 16,0                 | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91822                        | 29         | 13,0 - 20,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91823                        | 36         | 20,0 - 26,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 91824                        | 42         | 25,0 - 31,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 91825                        | 48         | 29,0 - 35,0                | 14,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

## NPT thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91630                              | 91637                            | 3/8"        | 4,0 - 8,0                  | 15,0                   | 19 / 22               | 50   | o. r.                              | o. r.     | o. r.      |
| 91631                              | 91638                            | 1/2"        | 6,0 - 12,0                 | 13,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91632                              | 91639                            | 1/2"        | 10,0 - 14,0                | 13,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91633                              | 91640                            | 3/4"        | 13,0 - 18,0                | 14,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91634                              | 91641                            | 1"          | 18,0 - 25,0                | 19,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91635                              | 91642                            | 1,25"       | 18,0 - 25,0                | 16,0                   | 42 / 46               | 10   | o. r.                              | o. r.     | o. r.      |
| 91636                              | 91643                            | 1,5"        | 22,0 - 32,0                | 20,0                   | 53                    | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91644                        | 3/8"        | 4,0 - 8,0                  | 15,0                   | 19 / 22               | 50   | o. r.                              | o. r.     | o. r.      |
| 91645                        | 1/2"        | 6,0 - 12,0                 | 13,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91646                        | 1/2"        | 10,0 - 14,0                | 13,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91647                        | 3/4"        | 13,0 - 18,0                | 14,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91648                        | 1"          | 18,0 - 25,0                | 19,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91649                        | 1,25"       | 18,0 - 25,0                | 16,0                   | 42 / 46               | 10   | o. r.                              | o. r.     | o. r.      |
| 91650                        | 1,5"        | 22,0 - 32,0                | 20,0                   | 53                    | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread - with reducing seal

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92610                              | 92620                            | 3/8"        | 2,0 - 6,0                  | 15,0                   | 19 / 22               | 50   | o. r.                              | o. r.     | o. r.      |
| 92611                              | 92621                            | 1/2"        | 5,0 - 9,0                  | 13,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92612                              | 92622                            | 1/2"        | 7,0 - 12,0                 | 13,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92613                              | 92623                            | 3/4"        | 9,0 - 16,0                 | 14,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92614                              | 92624                            | 1"          | 13,0 - 20,0                | 19,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 92615                              | 92625                            | 1,25"       | 13,0 - 20,0                | 16,0                   | 42 / 46               | 10   | o. r.                              | o. r.     | o. r.      |
| 92616                              | 92626                            | 1,5"        | 20,0 - 26,0                | 20,0                   | 53                    | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread - with reducing seal - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92630                        | 3/8"        | 2,0 - 6,0                  | 15,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92631                        | 1/2"        | 5,0 - 9,0                  | 13,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92632                        | 1/2"        | 7,0 - 12,0                 | 13,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92633                        | 3/4"        | 9,0 - 16,0                 | 14,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92634                        | 1"          | 13,0 - 20,0                | 19,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 92635                        | 1,25"       | 13,0 - 20,0                | 16,0                   | 42 / 46               | 10   | o. r.                              | o. r.     | o. r.      |
| 92636                        | 1,5"        | 20,0 - 26,0                | 20,0                   | 53                    | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSK-EW cable gland

expanded design



## HSK-EW

EW – expanded design

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

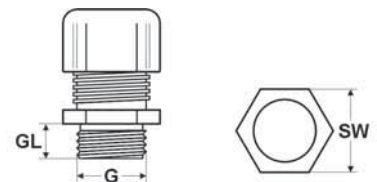
PA 6, VO acc. to UL 94  
Moulded seal: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

### Technical data

Protection class: IP 68 - 10 bar / IP 69K (within the specific clamping range with additional o-ring)

Temperature range: -40°C up to +100°C



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93010                              | 93020                         | 7          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93012                              | 93022                         | 9          | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93014                              | 93024                         | 11         | 6,0 - 12,0                 | 8,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93016                              | 93026                         | 13,5       | 10,0 - 14,0                | 9,0                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93018                              | 93028                         | 16         | 13,0 - 18,0                | 10,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93011                              | 93021                         | 7          | 2,0 - 6,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93013                              | 93023                         | 9          | 3,0 - 7,0                  | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93015                              | 93025                         | 11         | 5,0 - 9,0                  | 8,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93017                              | 93027                         | 13,5       | 7,0 - 12,0                 | 9,0                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93019                              | 93029                         | 16         | 9,0 - 16,0                 | 10,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSK-RE cable gland

reduced design



## HSK-RE

RE - reduced design

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

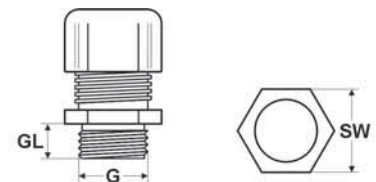
PA 6, VO acc. to UL 94  
Moulded seal: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

### Technical data

Protection class: IP 68 - 10 bar / IP 69K (within the specific clamping range with additional o-ring)

Temperature range: -40°C up to +100°C



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91925                              | 91935                         | 9          | 3,0 - 6,5                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91927                              | 91937                         | 11         | 4,0 - 8,0                  | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91929                              | 91939                         | 13,5       | 5,0 - 10,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91931                              | 91941                         | 16         | 6,0 - 12,0                 | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91933                              | 91943                         | 21         | 10,0 - 14,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91926                              | 91936                         | 9          | 2,0 - 5,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91928                              | 91938                         | 11         | 2,0 - 6,0                  | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91930                              | 91940                         | 13,5       | 3,0 - 7,0                  | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91932                              | 91942                         | 16         | 5,0 - 9,0                  | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91934                              | 91944                         | 21         | 7,0 - 12,0                 | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HSK-L cable gland

long thread



## HSK-L

With long threaded connection

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

PA 6, VO acc. to UL 94  
Moulded seal: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

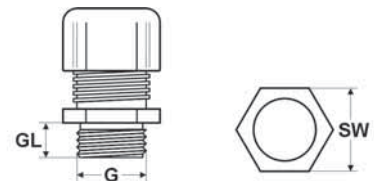
For the intrinsically safe area type "i" cable glands in blue, RAL 5012, are used.

## Technical data

Protection class: IP 68 - 10 bar / IP 69K (within the specific clamping range with additional o-ring)

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91690                              | 91700                            | M12 x 1,5     | 3,0 - 6,5                  | 15,0                   | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91691                              | 91701                            | M16 x 1,5     | 4,0 - 8,0                  | 15,0                   | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99841                              | 99849                            | M16 x 1,5     | 5,0 - 10,0                 | 15,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99842                              | 99850                            | M20 x 1,5     | 6,0 - 12,0                 | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99843                              | 99851                            | M20 x 1,5     | 10,0 - 14,0                | 15,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99844                              | 99852                            | M25 x 1,5     | 13,0 - 18,0                | 15,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99845                              | 99853                            | M32 x 1,5     | 18,0 - 25,0                | 15,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 99846                              | 99854                            | M40 x 1,5     | 22,0 - 32,0                | 18,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 99847                              | 99855                            | M50 x 1,5     | 32,0 - 38,0                | 18,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 99848                              | 99856                            | M63 x 1,5     | 37,0 - 44,0                | 18,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

| Part no.<br>blue<br>RAL 5012 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91710                        | M12 x 1,5     | 3,0 - 6,5                  | 15,0                   | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91711                        | M16 x 1,5     | 4,0 - 8,0                  | 15,0                   | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99857                        | M16 x 1,5     | 5,0 - 10,0                 | 15,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99858                        | M20 x 1,5     | 6,0 - 12,0                 | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99859                        | M20 x 1,5     | 10,0 - 14,0                | 15,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99860                        | M25 x 1,5     | 13,0 - 18,0                | 15,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99861                        | M32 x 1,5     | 18,0 - 25,0                | 15,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 99862                        | M40 x 1,5     | 22,0 - 32,0                | 18,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 99863                        | M50 x 1,5     | 32,0 - 38,0                | 18,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 99864                        | M63 x 1,5     | 37,0 - 44,0                | 18,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

### metric thread - with reducing seal

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91692                              | 91702                            | M20 x 1,5     | 5,0 - 9,0                  | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91693                              | 91703                            | M25 x 1,5     | 9,0 - 16,0                 | 15,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91694                              | 91704                            | M32 x 1,5     | 13,0 - 20,0                | 15,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91695                              | 91705                            | M40 x 1,5     | 20,0 - 26,0                | 18,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 91696                              | 91706                            | M50 x 1,5     | 25,0 - 31,0                | 18,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 91697                              | 91707                            | M63 x 1,5     | 29,0 - 35,0                | 18,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

### metric thread - with reducing seal - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91712                        | M20 x 1,5     | 5,0 - 9,0                  | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91713                        | M25 x 1,5     | 9,0 - 16,0                 | 15,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91714                        | M32 x 1,5     | 13,0 - 20,0                | 15,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91715                        | M40 x 1,5     | 20,0 - 26,0                | 18,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 91716                        | M50 x 1,5     | 25,0 - 31,0                | 18,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 91717                        | M63 x 1,5     | 29,0 - 35,0                | 18,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90040                              | 97418                            | 7          | 3,0 - 6,5                  | 15,0                   | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90041                              | 97419                            | 9          | 4,0 - 8,0                  | 15,0                   | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90042                              | 96405                            | 11         | 5,0 - 10,0                 | 15,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90043                              | 96404                            | 13,5       | 6,0 - 12,0                 | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90044                              | 96003                            | 16         | 10,0 - 14,0                | 15,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90045                              | 97767                            | 21         | 13,0 - 18,0                | 15,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90046                              | 96004                            | 29         | 18,0 - 25,0                | 15,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90047                              | 96253                            | 36         | 22,0 - 32,0                | 18,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 90048                              | 96254                            | 42         | 32,0 - 38,0                | 18,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 90049                              | 96256                            | 48         | 37,0 - 44,0                | 18,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91680                        | 7          | 3,0 - 6,5                  | 15,0                   | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91681                        | 9          | 4,0 - 8,0                  | 15,0                   | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91682                        | 11         | 5,0 - 10,0                 | 15,0                   | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91683                        | 13,5       | 6,0 - 12,0                 | 15,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91684                        | 16         | 10,0 - 14,0                | 15,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91685                        | 21         | 13,0 - 18,0                | 15,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91686                        | 29         | 18,0 - 25,0                | 15,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91687                        | 36         | 22,0 - 32,0                | 18,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 91688                        | 42         | 32,0 - 38,0                | 18,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 91689                        | 48         | 37,0 - 44,0                | 18,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSK-B cable gland

anti-kink



## HSK-B

With anti-bend spirals

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide  
Moulded seal: NBR

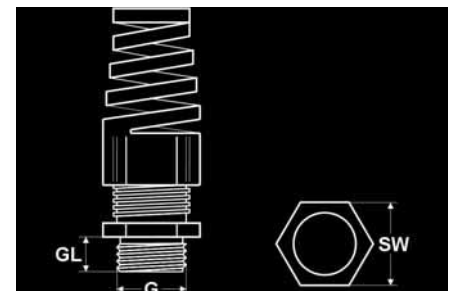
- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Technical data

Protection class: IP 68 - 10 bar / IP 69K (within the specific clamping range with additional o-ring)

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98005                              | 98011                         | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98006                              | 98012                         | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98008                              | 98014                         | M20 x 1,5     | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98009                              | 98015                         | M20 x 1,5     | 10,0 - 14,0                | 9,0                    | 27                    | 25   | o. r.                              | o. r.     | o. r.      |
| 98010                              | 98016                         | M25 x 1,5     | 13,0 - 18,0                | 11,0                   | 33                    | 20   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90320                              | 90326                         | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90321                              | 90327                         | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90322                              | 90328                         | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90323                              | 90329                         | 13,5       | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90324                              | 90330                         | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90325                              | 90331                         | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 20   | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92300                              | 92305                         | 3/8"        | 4,0 - 8,0                  | 15,0                   | 22 / 19               | 50   | o. r.                              | o. r.     | o. r.      |
| 92301                              | 92306                         | 1/2"        | 6,0 - 12,0                 | 13,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92302                              | 92307                         | 1/2"        | 10,0 - 14,0                | 13,0                   | 27                    | 25   | o. r.                              | o. r.     | o. r.      |
| 92303                              | 92308                         | 3/4"        | 13,0 - 18,0                | 14,0                   | 33                    | 20   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HSK-WI

Folding profile gland for simple cable insertion.  
The profile can be re-opened at any time.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide  
Moulded seal: NBR  
O-ring: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

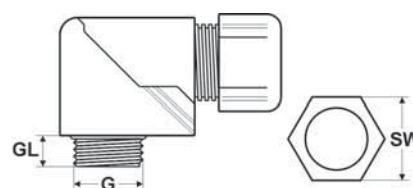
Elbow gland with NPT thread without O-Ring

## Technical data

Protection class: IP 68

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91284                              | 91840                         | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91285                              | 91841                         | M20 x 1,5     | 6,0 - 12,0                 | 9,0                    | 24                    | 25   | o. r.                              | o. r.     | o. r.      |
| 91286                              | 91842                         | M25 x 1,5     | 13,0 - 18,0                | 11,0                   | 33                    | 10   | o. r.                              | o. r.     | o. r.      |
| 91287                              | 91843                         | M32 x 1,5     | 18,0 - 25,0                | 11,0                   | 42                    | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96981                              | 96581                         | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96982                              | 96103                         | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96983                              | 96582                         | 13,5       | 6,0 - 12,0                 | 9,0                    | 24                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96984                              | 96583                         | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96985                              | 96584                         | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 10   | o. r.                              | o. r.     | o. r.      |
| 96986                              | 96406                         | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                               |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92690                              | 92700                         | 3/8"        | 4,0 - 8,0                  | 15,0                   | 19                    | 25   | o. r.                              | o. r.     | o. r.      |
| 92691                              | 92701                         | 1/2"        | 6,0 - 12,0                 | 13,0                   | 24                    | 25   | o. r.                              | o. r.     | o. r.      |
| 92692                              | 92702                         | 1/2"        | 10,0 - 14,0                | 13,0                   | 27                    | 25   | o. r.                              | o. r.     | o. r.      |
| 92693                              | 92703                         | 3/4"        | 13,0 - 18,0                | 13,0                   | 33                    | 20   | o. r.                              | o. r.     | o. r.      |
| 92694                              | 92704                         | 1"          | 18,0 - 25,0                | 19,0                   | 42                    | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HELUF<sup>FAST</sup> – The threadless cable gland

**3 seconds** which change everything.  
Assembly in a few seconds!

**VDE tested\***



- Simple and extremely quick assembly
- Can be installed next to each other and also in constrained locations
- Optimum price / performance ratio
- No lock nut needed
- No slackening due to vibration is possible as it is firmly clamped and not screwed together
- Infinitely variable insert for all usual wall thickness ranges; Identification using the colour of the rings
- The HELUF<sup>FAST</sup> cable gland meets all requirements for cable glands, strain relief, protection class etc.
- Tested according to EN 50262
- \*VDE test (for M16, M20 and M25 for wall thicknesses 1 – 2.5 mm)

**RoHS**

## Areas of application:

- Switch cabinet construction
- Installation technology
- Applications with high density mounting
- Applications with frequent, fast and permanent mounting



## HELUFAST

The plain plastic cable gland.

### Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

### Material

PA 6, V2 acc. to UL 94  
Moulded seal: NBR

- halogen-free

### Properties

- Quick and simple assembly
- Can be mounted close together
- No locknut required
- Optimum strain relief
- Large clamping areas
- Infinitely applicable for different wall thicknesses

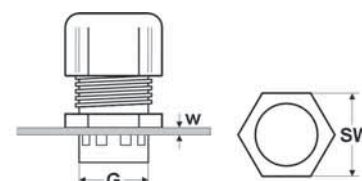
### Note

Wall thickness 2,5-4,0 mm.  
Color of clamping ring: green

### Technical data

Protection class: IP 68 - 5 bar

Temperature range: -20°C up to +100°C



### Dimensions

G Size  
w Wall thickness  
SW Spanner size

#### wall thickness range from 1mm to 2,5mm

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|----------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                            |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903120                             | 903140                            | 903130                        | M12           | 4,0 - 6,5                  | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903121                             | 903141                            | 903131                        | M16           | 6,0 - 9,5                  | 20                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903122                             | 903142                            | 903132                        | M20           | 7,0 - 12,0                 | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903123                             | 903143                            | 903133                        | M25           | 11,0 - 16,0                | 28                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903124                             | 903144                            | 903134                        | M32           | 14,0 - 21,0                | 36                    | 25   | o. r.                              | o. r.     | o. r.      |

#### wall thickness range from 2,5mm to 4mm

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|----------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                            |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903125                             | 903145                            | 903135                        | M12           | 4,0 - 6,5                  | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903126                             | 903146                            | 903136                        | M16           | 6,0 - 9,5                  | 20                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903127                             | 903147                            | 903137                        | M20           | 7,0 - 12,0                 | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903128                             | 903148                            | 903138                        | M25           | 11,0 - 16,0                | 28                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903129                             | 903149                            | 903139                        | M32           | 14,0 - 21,0                | 36                    | 25   | o. r.                              | o. r.     | o. r.      |

#### wall thickness range from 1mm to 4mm

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|----------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                            |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 900015                             | 904278                            | 904280                        | M40           | 19,0 - 27,5                | 46                    | 10   | o. r.                              | o. r.     | o. r.      |
| 900016                             | 904279                            | 904281                        | M50           | 26,0 - 34,0                | 55                    | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUFAST circlip pliers



## HELUFAST circlip pliers

Pliers for threadless plastic cable gland.

Combined with the correct insert, the pliers can be used for all HELUFAST cable glands.

The metal plier insert is simple to change by hand.

| pliers   |      |      |                               |       |        |
|----------|------|------|-------------------------------|-------|--------|
| Part no. | Size | Unit | Net EUR/item at a purchase of |       |        |
|          |      |      | 1                             | 2 - 5 | 6 - 10 |
| 980000   | -    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

new

# HELUFAST circlip pliers

storage battery-hydraulic systems



## HELUFAST circlip pliers, storage battery-hydraulic systems

Electro-hydraulic circlip pliers for threadless plastic cable gland.

Combined with the correct insert, the pliers can be used for all HELUFAST cable glands.

With rechargeable NIMH battery adjustable compression and automatic return.

The metal plier insert is simple to change by hand.



| pliers   |      |      |                               |       |        |  |
|----------|------|------|-------------------------------|-------|--------|--|
| Part no. | Size | Unit | Net EUR/item at a purchase of |       |        |  |
|          |      |      | 1                             | 2 - 5 | 6 - 10 |  |
| 905332   | -    | 1    | o. r.                         | o. r. | o. r.  |  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# HELUFAST<sup>®</sup> inserts



## HELUFAST

Inserts for the new, threadless plastic cable gland.  
Combined with the correct insert, the pliers can be used for all HELUFAST glands.  
The metal plier insert is simple to change by hand.

### inserts

| Part no. | Size      | Unit | Net EUR/item at a purchase of |       |        |
|----------|-----------|------|-------------------------------|-------|--------|
|          |           |      | 1                             | 2 - 5 | 6 - 10 |
| 980010   | M12 x 1,5 | 1    | o. r.                         | o. r. | o. r.  |
| 980011   | M16 x 1,5 | 1    | o. r.                         | o. r. | o. r.  |
| 980012   | M20 x 1,5 | 1    | o. r.                         | o. r. | o. r.  |
| 980013   | M25 x 1,5 | 1    | o. r.                         | o. r. | o. r.  |
| 980014   | M32 x 1,5 | 1    | o. r.                         | o. r. | o. r.  |
| 980015   | M40 x 1,5 | 1    | o. r.                         | o. r. | o. r.  |
| 980016   | M50 x 1,5 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request





## UNI-DICHT-PA

Plastic sealing cable gland with colour-coded inserts made by TPE

## Material

Polyamide PA6-3  
Moulded seal: TPE

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Properties

- Large-area cable sealing
- Easy to assemble
- Large clamping areas

## Note

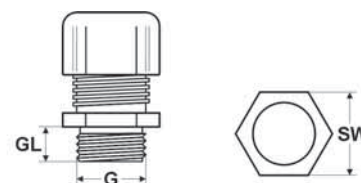
Cable glands in black colour on request.  
UL- and CSA- approval for use with TPE-V inserts, TPE-V inserts on request.

## Technical data

Protection class: IP 68 - 10 bar

Temperature range: -20°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903800   | M12 x 1,5  | yellow                | 4,0 - 6,5            | 8,0              | 15              | 50   | o. r.                              | o. r.     | o. r.      |
| 903801   | M16 x 1,5  | yellow                | 4,0 - 6,5            | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 903802   | M16 x 1,5  | grey                  | 5,0 - 8,0            | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 903803   | M16 x 1,5  | black                 | 6,5 - 9,5            | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 903804   | M20 x 1,5  | yellow                | 4,0 - 6,5            | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903805   | M20 x 1,5  | grey                  | 5,0 - 8,0            | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903806   | M20 x 1,5  | black                 | 6,5 - 9,5            | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903807   | M20 x 1,5  | green                 | 7,0 - 10,5           | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903808   | M20 x 1,5  | red                   | 9,0 - 13,0           | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903809   | M25 x 1,5  | yellow                | 4,0 - 6,5            | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 903810   | M25 x 1,5  | grey                  | 5,0 - 8,0            | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 903811   | M25 x 1,5  | black                 | 6,5 - 9,5            | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 903812   | M25 x 1,5  | green                 | 7,0 - 10,5           | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 903813   | M25 x 1,5  | red                   | 9,0 - 13,0           | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 903814   | M25 x 1,5  | white                 | 11,5 - 15,5          | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 903815   | M32 x 1,5  | green                 | 7,0 - 10,5           | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 903816   | M32 x 1,5  | red                   | 9,0 - 13,0           | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 903817   | M32 x 1,5  | white                 | 11,5 - 15,5          | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 903818   | M32 x 1,5  | blue                  | 14,0 - 18,0          | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 903819   | M32 x 1,5  | brown                 | 17,0 - 20,5          | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 903820   | M40 x 1,5  | blue                  | 14,0 - 18,0          | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 903821   | M40 x 1,5  | brown                 | 17,0 - 20,5          | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 903822   | M40 x 1,5  | orange                | 20,0 - 25,0          | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 903823   | M40 x 1,5  | light yellow          | 24,0 - 28,0          | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 903824   | M50 x 1,5  | anthracite            | 27,0 - 32,0          | 14,0             | 56              | 5    | o. r.                              | o. r.     | o. r.      |
| 903825   | M50 x 1,5  | light blue            | 29,0 - 34,0          | 14,0             | 56              | 5    | o. r.                              | o. r.     | o. r.      |
| 904295   | M50 x 1,5  | pink                  | 32,0 - 36,0          | 14,0             | 56              | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# UNI-DICHT-PA cable gland



## PG thread

| Part no. | Size PG | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903826   | 9       | yellow                | 4,0 - 6,5            | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 903827   | 9       | grey                  | 5,0 - 8,0            | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 903828   | 9       | black                 | 6,5 - 9,5            | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 903829   | 11      | yellow                | 4,0 - 6,5            | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 903830   | 11      | grey                  | 5,0 - 8,0            | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 903831   | 11      | black                 | 6,5 - 9,5            | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 903832   | 11      | green                 | 7,0 - 10,5           | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 903833   | 13,5    | yellow                | 4,0 - 6,5            | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903834   | 13,5    | grey                  | 5,0 - 8,0            | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903835   | 13,5    | black                 | 6,5 - 9,5            | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903836   | 13,5    | green                 | 7,0 - 10,5           | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903837   | 13,5    | red                   | 9,0 - 13,0           | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903838   | 16      | yellow                | 4,0 - 6,5            | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 903839   | 16      | grey                  | 5,0 - 8,0            | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 903840   | 16      | black                 | 6,5 - 9,5            | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 903841   | 16      | green                 | 7,0 - 10,5           | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 903842   | 16      | red                   | 9,0 - 13,0           | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 903843   | 16      | white                 | 11,5 - 15,5          | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 903844   | 21      | green                 | 7,0 - 10,5           | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 903845   | 21      | red                   | 9,0 - 13,0           | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 903846   | 21      | white                 | 11,5 - 15,5          | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 903847   | 21      | blue                  | 14,0 - 18,0          | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 903848   | 21      | brown                 | 17,0 - 20,5          | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 903849   | 29      | blue                  | 14,0 - 18,0          | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 903850   | 29      | brown                 | 17,0 - 20,5          | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 903851   | 29      | orange                | 20,0 - 25,0          | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 903852   | 29      | light yellow          | 24,0 - 28,0          | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 903853   | 36      | anthracite            | 27,0 - 32,0          | 14,0             | 53              | 5    | o. r.                              | o. r.     | o. r.      |
| 903854   | 36      | light blue            | 29,0 - 34,0          | 14,0             | 53              | 5    | o. r.                              | o. r.     | o. r.      |
| 903855   | 36      | pink                  | 32,0 - 36,0          | 14,0             | 53              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UNI-DICHT-MFD-PA cable gland

with multiple sealing inserts



## UNI-DICHT-MFD-PA

Plastic sealing cable gland with multiple sealing inserts made by TPE.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA6-3  
Moulded seal: TPE

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

### Properties

- Large-area cable sealing
- Easy to assemble

### Note

IP 68, subject to the bore diameter in the sealing insert area and cable diameter being identical.

### Technical data

Protection class: IP 68

Temperature range: -20°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no.<br>light grey<br>RAL 7032 | Size<br>Metr. | Number<br>holes x<br>cable-Ø<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|---------------|------------------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |               |                                    |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903856                             | M16 x 1,5     | 2 x 1,2                            | 9,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903857                             | M16 x 1,5     | 2 x 3,0                            | 9,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903858                             | M16 x 1,5     | 4 x 3,0                            | 9,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903859                             | M16 x 1,5     | 2 x 4,0                            | 9,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903860                             | M16 x 1,5     | 1 x 5,0                            | 9,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903861                             | M20 x 1,5     | 6 x 2,0                            | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903862                             | M20 x 1,5     | 2 x 2,3                            | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903863                             | M20 x 1,5     | 6 x 2,5                            | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903864                             | M20 x 1,5     | 2 x 3,0                            | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903865                             | M20 x 1,5     | 3 x 3,0                            | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903866                             | M20 x 1,5     | 2 x 5,0                            | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903867                             | M25 x 1,5     | 7 x 2,0                            | 9,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903868                             | M25 x 1,5     | 2 x 4,0                            | 9,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903869                             | M25 x 1,5     | 4 x 4,0                            | 9,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903870                             | M25 x 1,5     | 6 x 4,0                            | 9,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903871                             | M25 x 1,5     | 2 x 6,0                            | 9,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903872                             | M25 x 1,5     | 3 x 7,0                            | 9,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903873                             | M32 x 1,5     | 21 x 2,0                           | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903874                             | M32 x 1,5     | 8 x 3,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903875                             | M32 x 1,5     | 6 x 4,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903876                             | M32 x 1,5     | 8 x 4,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903877                             | M32 x 1,5     | 4 x 5,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903878                             | M32 x 1,5     | 4 x 6,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903879                             | M32 x 1,5     | 6 x 6,5                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903880                             | M32 x 1,5     | 3 x 7,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903881                             | M32 x 1,5     | 4 x 8,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 903882                             | M32 x 1,5     | 2 x 9,0                            | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# UNI-DICHT-MFD-PA cable gland



with multiple sealing inserts

## metric thread

| Part no.<br>light grey<br>RAL 7032 | Size<br>Metr. | Number<br>holes x<br>cable-Ø<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|---------------|------------------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |               |                                    |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903883                             | M40 x 1,5     | 6 x 6,0                            | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903884                             | M40 x 1,5     | 10 x 6,0                           | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903885                             | M40 x 1,5     | 4 x 6,5                            | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903886                             | M40 x 1,5     | 6 x 8,0                            | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903887                             | M40 x 1,5     | 4 x 9,0                            | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903888                             | M40 x 1,5     | 5 x 9,0                            | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903889                             | M40 x 1,5     | 5 x 10,0                           | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903890                             | M40 x 1,5     | 2 x 11,0                           | 11,5                   | 46                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903891                             | M50 x 1,5     | 15 x 5,0                           | 14,0                   | 55                    | 5    | O. r.                              | O. r.     | O. r.      |
| 903892                             | M50 x 1,5     | 8 x 9,0                            | 14,0                   | 55                    | 5    | O. r.                              | O. r.     | O. r.      |
| 903893                             | M50 x 1,5     | 3 x 10,0                           | 14,0                   | 55                    | 5    | O. r.                              | O. r.     | O. r.      |
| 903894                             | M50 x 1,5     | 2 x 15,0                           | 14,0                   | 55                    | 5    | O. r.                              | O. r.     | O. r.      |

## PG thread

| Part no.<br>light grey<br>RAL 7032 | Size<br>PG | Number<br>holes x<br>cable-Ø<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|------------|------------------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |            |                                    |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903895                             | 9          | 2 x 1,2                            | 9,0                    | 19                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903896                             | 9          | 2 x 3,0                            | 9,0                    | 19                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903897                             | 9          | 4 x 3,0                            | 9,0                    | 19                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903898                             | 9          | 2 x 4,0                            | 9,0                    | 19                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903899                             | 9          | 1 x 5,0                            | 9,0                    | 19                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903900                             | 11         | 6 x 2,0                            | 9,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903901                             | 11         | 2 x 2,3                            | 9,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903902                             | 11         | 6 x 2,5                            | 9,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903903                             | 11         | 2 x 3,0                            | 9,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903904                             | 11         | 3 x 3,0                            | 9,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903905                             | 11         | 2 x 5,0                            | 9,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903906                             | 13,5       | 3 x 2,0                            | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903907                             | 13,5       | 10 x 2,0                           | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903908                             | 13,5       | 2 x 3,0                            | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903909                             | 13,5       | 3 x 3,0                            | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903910                             | 13,5       | 6 x 3,5                            | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903911                             | 13,5       | 2 x 5,0                            | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903912                             | 13,5       | 2 x 6,0                            | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903913                             | 16         | 7 x 2,0                            | 9,0                    | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903914                             | 16         | 2 x 4,0                            | 9,0                    | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903915                             | 16         | 4 x 4,0                            | 9,0                    | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903916                             | 16         | 6 x 4,0                            | 9,0                    | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903917                             | 16         | 2 x 6,0                            | 9,0                    | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903918                             | 16         | 3 x 7,0                            | 9,0                    | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 903919                             | 21         | 21 x 2,0                           | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903920                             | 21         | 8 x 3,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903921                             | 21         | 6 x 4,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903922                             | 21         | 8 x 4,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903923                             | 21         | 4 x 5,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903924                             | 21         | 4 x 6,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903925                             | 21         | 6 x 6,5                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903926                             | 21         | 3 x 7,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903927                             | 21         | 4 x 8,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903928                             | 21         | 2 x 9,0                            | 11,0                   | 33                    | 25   | O. r.                              | O. r.     | O. r.      |
| 903929                             | 29         | 6 x 6,0                            | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903930                             | 29         | 10 x 6,0                           | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903931                             | 29         | 4 x 6,5                            | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903932                             | 29         | 6 x 8,0                            | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903933                             | 29         | 4 x 9,0                            | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903934                             | 29         | 5 x 9,0                            | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903935                             | 29         | 5 x 10,0                           | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903936                             | 29         | 2 x 11,0                           | 11,0                   | 43                    | 10   | O. r.                              | O. r.     | O. r.      |
| 903937                             | 36         | 8 x 9,0                            | 14,0                   | 53                    | 5    | O. r.                              | O. r.     | O. r.      |
| 903938                             | 36         | 15 x 5,0                           | 14,0                   | 53                    | 5    | O. r.                              | O. r.     | O. r.      |
| 903939                             | 36         | 3 x 10,0                           | 14,0                   | 53                    | 5    | O. r.                              | O. r.     | O. r.      |
| 903940                             | 36         | 2 x 15,0                           | 14,0                   | 53                    | 5    | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# UNI-DICHT-VK-PA gland body



## UNI-DICHT-VK-PA

Gland body made of polyamide for populating with sealing inserts made by TPE.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA6-3

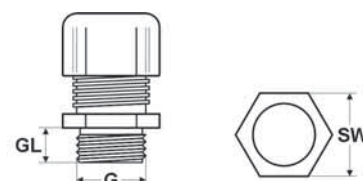
### Note

The gland body M20x1,5 part no. 903941 is used with inserts PG 11; also part no. 90831 is used with inserts PG 13,5.

### Technical data

Temperature range: -20°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no.<br>RAL 7032 | Size<br>Metr. | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|---------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                      |               |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90829                | M12 x 1,5     | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90830                | M16 x 1,5     | 9,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903941               | M20 x 1,5     | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90831                | M20 x 1,5     | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90832                | M25 x 1,5     | 9,0                    | 29                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90833                | M32 x 1,5     | 11,0                   | 38                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90834                | M40 x 1,5     | 11,5                   | 46                    | 10   | o. r.                              | o. r.     | o. r.      |
| 90835                | M50 x 1,5     | 14,0                   | 55                    | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no.<br>RAL 7032 | Size<br>PG | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                      |            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96043                | 9          | 9,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96044                | 11         | 9,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96045                | 13,5       | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96046                | 16         | 9,0                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96047                | 21         | 11,0                   | 33                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96048                | 29         | 11,0                   | 43                    | 10   | o. r.                              | o. r.     | o. r.      |
| 96049                | 36         | 14,0                   | 53                    | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# UNI-DICHT sealing insert

closed



## UNI-DICHT sealing insert, closed

Closed inserts made by TPE-V. For use with UNI-DICHT gland bodies made by polyamide or by brass.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

TPE-V

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

UNI-DICHT sealing insert M20 (part no. 903944) can be used only with UNI-DICHT gland body made by polyamide M20x1,5 (part no. 90831). The sealing insert M20 (part no. 903945) can be used only with UNI-DICHT gland body made by brass M20x1,5 (part no. 904213).

## Technical data

Temperature range: -40°C up to +135°C

| Part no. | Size<br>PG | Size<br>metric | Sealing<br>insert<br>colour | Cable Ø<br>from / to<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------|-----------------------------|----------------------------|------|------------------------------------|-----------|------------|
|          |            |                |                             |                            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903942   | 9          | M16 x 1,5      | white                       | -                          | 100  | o. r.                              | o. r.     | o. r.      |
| 903943   | 11         | M20 x 1,5      | white                       | -                          | 100  | o. r.                              | o. r.     | o. r.      |
| 903944   | -          | M20 x 1,5      | white/short                 | -                          | 100  | o. r.                              | o. r.     | o. r.      |
| 903945   | 13,5       | M20 x 1,5      | white                       | -                          | 100  | o. r.                              | o. r.     | o. r.      |
| 903946   | 16         | M25 x 1,5      | white                       | -                          | 100  | o. r.                              | o. r.     | o. r.      |
| 903947   | 21         | M32 x 1,5      | white                       | -                          | 50   | o. r.                              | o. r.     | o. r.      |
| 903948   | 29         | M40 x 1,5      | white                       | -                          | 25   | o. r.                              | o. r.     | o. r.      |
| 903949   | 36         | M50 x 1,5      | white                       | -                          | 10   | o. r.                              | o. r.     | o. r.      |
| 903950   | 42         | -              | white                       | -                          | 10   | o. r.                              | o. r.     | o. r.      |
| 903951   | 48         | M63 x 1,5      | white                       | -                          | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UNI-DICHT sealing insert

standard



## UNI-DICHT sealing insert, standard

Colour coded sealing inserts made by TPE for use with UNI-DICHT gland bodies made by polyamide or by brass.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

TPE

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

UNI-DICHT sealing inserts M20 (part nos. 903961 up to 903965) can be used only with UNI-DICHT gland body made by polyamide M20x1,5 (part no. 90831). UNI-DICHT sealing inserts M20 (part nos. 903966 up to 903970) can be used only with UNI-DICHT gland body made by brass M20x1,5 (part no. 904213). UNI-DICHT sealing insert PG21 (part no. 903981) can be used only with UNI-DICHT gland body made by brass (part no. 904226). UNI-DICHT sealing insert M32 (part no. 903981) can be used only with UNI-DICHT gland body made by brass (part no. 904216).

## Technical data

Temperature range: -40°C up to +130°C

| Part no. | Size PG | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |         |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903952   | -       | M12 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903953   | 7       | -           | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903954   | 9       | M16 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903955   | 9       | M16 x 1,5   | grey                  | 5,0 - 8,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 903956   | 9       | M16 x 1,5   | black                 | 6,5 - 9,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903957   | 11      | M20 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903958   | 11      | M20 x 1,5   | grey                  | 5,0 - 8,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 903959   | 11      | M20 x 1,5   | black                 | 6,5 - 9,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903960   | 11      | M20 x 1,5   | green                 | 7,0 - 10,5           | 50   | o. r.                              | o. r.     | o. r.      |
| 903961   | -       | M20 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903962   | -       | M20 x 1,5   | grey                  | 5,0 - 8,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 903963   | -       | M20 x 1,5   | black                 | 6,5 - 9,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903964   | -       | M20 x 1,5   | green                 | 7,0 - 10,5           | 50   | o. r.                              | o. r.     | o. r.      |
| 903965   | -       | M20 x 1,5   | red                   | 9,0 - 13,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 903966   | 13,5    | M20 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903967   | 13,5    | M20 x 1,5   | grey                  | 5,0 - 8,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 903968   | 13,5    | M20 x 1,5   | black                 | 6,5 - 9,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 903969   | 13,5    | M20 x 1,5   | green                 | 7,0 - 10,5           | 50   | o. r.                              | o. r.     | o. r.      |
| 903970   | 13,5    | M20 x 1,5   | red                   | 9,0 - 13,0           | 50   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# UNI-DICHT sealing insert

standard

| Part no. | Size<br>PG | Size<br>metric | Sealing<br>insert<br>colour | Cable Ø<br>from / to<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------|-----------------------------|----------------------------|------|------------------------------------|-----------|------------|
|          |            |                |                             |                            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903971   | 16         | M25 x 1,5      | yellow                      | 4,0 - 6,5                  | 50   | o. r.                              | o. r.     | o. r.      |
| 903972   | 16         | M25 x 1,5      | grey                        | 5,0 - 8,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 903973   | 16         | M25 x 1,5      | black                       | 6,5 - 9,5                  | 50   | o. r.                              | o. r.     | o. r.      |
| 903974   | 16         | M25 x 1,5      | green                       | 7,0 - 10,5                 | 50   | o. r.                              | o. r.     | o. r.      |
| 903975   | 16         | M25 x 1,5      | red                         | 9,0 - 13,0                 | 50   | o. r.                              | o. r.     | o. r.      |
| 903976   | 16         | M25 x 1,5      | white                       | 11,5 - 15,5                | 50   | o. r.                              | o. r.     | o. r.      |
| 903977   | 21         | M32 x 1,5      | green                       | 7,0 - 10,5                 | 25   | o. r.                              | o. r.     | o. r.      |
| 903978   | 21         | M32 x 1,5      | red                         | 9,0 - 13,0                 | 25   | o. r.                              | o. r.     | o. r.      |
| 903979   | 21         | M32 x 1,5      | white                       | 11,5 - 15,5                | 25   | o. r.                              | o. r.     | o. r.      |
| 903980   | 21         | M32 x 1,5      | blue                        | 14,0 - 18,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 903981   | 21         | M32 x 1,5      | brown                       | 17,0 - 20,5                | 25   | o. r.                              | o. r.     | o. r.      |
| 903982   | 29         | M40 x 1,5      | white                       | 11,5 - 15,5                | 10   | o. r.                              | o. r.     | o. r.      |
| 903983   | 29         | M40 x 1,5      | blue                        | 14,0 - 18,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 903984   | 29         | M40 x 1,5      | brown                       | 17,0 - 20,5                | 10   | o. r.                              | o. r.     | o. r.      |
| 903985   | 29         | M40 x 1,5      | orange                      | 20,0 - 25,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 903986   | 29         | M40 x 1,5      | light yellow                | 24,0 - 28,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 903987   | 36         | M50 x 1,5      | anthracite                  | 27,0 - 32,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 903988   | 36         | M50 x 1,5      | light blue                  | 29,0 - 34,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 903989   | 36         | M50 x 1,5      | pink                        | 32,0 - 36,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 903990   | 42         | M50 x 1,5      | white                       | 36,0 - 40,0                | 5    | o. r.                              | o. r.     | o. r.      |
| 903991   | 48         | M63 x 1,5      | white                       | 39,0 - 44,0                | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Classification

## UNI-DICHT sealing insert/gland body

### UNI-DICHT sealing insert

### UNI-DICHT gland body

| Part No. | Size PG | Size metrisch | Sealing insert colour | Size PG            |                          | Size metrical           |                           |
|----------|---------|---------------|-----------------------|--------------------|--------------------------|-------------------------|---------------------------|
|          |         |               |                       | Polyamide          | Brass                    | Polyamide               | Brass                     |
| 903952   | -       | M12 x 1,5     | yellow                |                    |                          | 90829 VK PA M12         | 904210 VK MS M12          |
| 903953   | 7       | -             | yellow                |                    | 904220 VK MS PG7         |                         |                           |
| 903954   | 9       | M16 x 1,5     | yellow                | 96043 VK PA PG9    | 904221 VK MS PG9         | 90830 VK PA M16         | 904211 VK MS M16          |
| 903955   | 9       | M16 x 1,5     | grey                  |                    |                          |                         |                           |
| 903956   | 9       | M16 x 1,5     | black                 |                    |                          |                         |                           |
| 903957   | 11      | M20 x 1,5     | yellow                | 96044 VK PA PG11   | 904222 VK MS PG11        | 903941 VK PA M20 (PG11) |                           |
| 903958   | 11      | M20 x 1,5     | grey                  |                    |                          |                         |                           |
| 903959   | 11      | M20 x 1,5     | black                 |                    |                          |                         |                           |
| 903960   | 11      | M20 x 1,5     | green                 |                    |                          |                         |                           |
| 903961   | -       | M20 x 1,5     | yellow                |                    |                          | 90831 VK PA M20         |                           |
| 903962   | -       | M20 x 1,5     | grey                  |                    |                          |                         |                           |
| 903963   | -       | M20 x 1,5     | black                 |                    |                          |                         |                           |
| 903964   | -       | M20 x 1,5     | green                 |                    |                          |                         |                           |
| 903965   | -       | M20 x 1,5     | red                   |                    |                          |                         |                           |
| 903966   | 13,5    | M20 x 1,5     | yellow                | 96045 VK PA PG13,5 | 904223 VK MS PG13,5      |                         | 904213 VK MS M20 (PG13,5) |
| 903967   | 13,5    | M20 x 1,5     | grey                  |                    |                          |                         |                           |
| 903968   | 13,5    | M20 x 1,5     | black                 |                    |                          |                         |                           |
| 903969   | 13,5    | M20 x 1,5     | green                 |                    |                          |                         |                           |
| 903970   | 13,5    | M20 x 1,5     | red                   |                    |                          |                         |                           |
| 903971   | 16      | M25 x 1,5     | yellow                | 96046 VK PA PG16   | 904224 VK MS PG16        | 90832 VK PA M25         | 904214 VK MS M25          |
| 903972   | 16      | M25 x 1,5     | grey                  |                    |                          |                         |                           |
| 903973   | 16      | M25 x 1,5     | black                 |                    |                          |                         |                           |
| 903974   | 16      | M25 x 1,5     | green                 |                    |                          |                         |                           |
| 903975   | 16      | M25 x 1,5     | red                   |                    |                          |                         |                           |
| 903976   | 16      | M25 x 1,5     | white                 |                    |                          |                         |                           |
| 903977   | 21      | M32 x 1,5     | green                 | 96047 VK PA PG21   | 904225 VK MS PG21 (18mm) | 90833 VK PA M32         | 904215 VK MS M32 (18 mm)  |
| 903978   | 21      | M32 x 1,5     | red                   |                    |                          |                         |                           |
| 903979   | 21      | M32 x 1,5     | white                 |                    |                          |                         | 904216 VK MS M32 (21 mm)  |
| 903980   | 21      | M32 x 1,5     | blue                  |                    |                          |                         |                           |
| 903981   | 21      | M32 x 1,5     | brown                 |                    |                          |                         |                           |
| 903982   | 29      | M40 x 1,5     | white                 | 96048 VK PA PG29   | 904227 VK MS PG29        | 90834 VK PA M40         | 904217 VK MS M40          |
| 903983   | 29      | M40 x 1,5     | blue                  |                    |                          |                         |                           |
| 903984   | 29      | M40 x 1,5     | brown                 |                    |                          |                         |                           |
| 903985   | 29      | M40 x 1,5     | orange                |                    |                          |                         |                           |
| 903986   | 29      | M40 x 1,5     | light yellow          |                    |                          |                         |                           |
| 903987   | 36      | M50 x 1,5     | anthracite            | 96049 VK PA PG36   | 904228 VK MS PG36        | 90835 VK PA M50         | 904218 VK MS M50          |
| 903988   | 36      | M50 x 1,5     | light blue            |                    |                          |                         |                           |
| 903989   | 36      | M50 x 1,5     | pink                  |                    |                          |                         |                           |
| 903990   | 42      | M50 x 1,5     | white                 |                    | 904229 VK MS PG42        |                         | 904219 VK MS M63          |
| 903991   | 48      | M63 x 1,5     | white                 |                    | 904230 VK MS PG48        |                         |                           |

# UNI-DICHT ZUG sealing inserts

for increased strain relief



new

## UNI-DICHT ZUG

Colour coded sealing inserts made by TPE for increased strain relief. For populating UNI-DICHT body glands made of plastic or brass.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

TPE

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

Assignment to gland body: see table

## Technical data

Temperature range: -20°C up to +100°C

| Part no. | Size PG | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |         |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905690   | -       | M12 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 905691   | 7       | -           | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 905692   | 9       | M16 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 905693   | 9       | M16 x 1,5   | black                 | 5,5 - 9,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905694   | 11      | -           | black                 | 5,5 - 9,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905695   | 11      | -           | green                 | 6,0 - 10,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 905696   | -       | M20 x 1,5   | black                 | 5,5 - 9,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905697   | -       | M20 x 1,5   | green                 | 6,0 - 10,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 905698   | -       | M20 x 1,5   | red                   | 8,0 - 12,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 905699   | 13,5    | M20 x 1,5   | black                 | 5,5 - 9,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905700   | 13,5    | M20 x 1,5   | green                 | 6,0 - 10,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 905701   | 13,5    | M20 x 1,5   | red                   | 8,0 - 12,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 905702   | 16      | M25 x 1,5   | green                 | 6,0 - 10,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 905703   | 16      | M25 x 1,5   | red                   | 8,0 - 12,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 905704   | 16      | M25 x 1,5   | white                 | 12,0 - 15,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 905705   | 21      | M32 x 1,5   | red                   | 8,0 - 12,0           | 25   | o. r.                              | o. r.     | o. r.      |
| 905706   | 21      | M32 x 1,5   | white                 | 12,0 - 15,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 905707   | 21      | M32 x 1,5   | blue                  | 14,0 - 17,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 905708   | 21      | M32 x 1,5   | brown                 | 16,0 - 20,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 905709   | 29      | M40 x 1,5   | brown                 | 16,0 - 20,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 905710   | 29      | M40 x 1,5   | orange                | 20,0 - 24,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 905711   | 29      | M40 x 1,5   | light yellow          | 23,0 - 27,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 905712   | 36      | M50 x 1,5   | anthracite            | 27,0 - 31,5          | 5    | o. r.                              | o. r.     | o. r.      |
| 905713   | 36      | M50 x 1,5   | pink                  | 32,0 - 36,0          | 5    | o. r.                              | o. r.     | o. r.      |
| 905714   | 42      | -           | white                 | 34,0 - 40,0          | 5    | o. r.                              | o. r.     | o. r.      |
| 905715   | 48      | M63 x 1,5   | white                 | 39,0 - 43,0          | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# Classification

## UNI-DICHT-ZUG sealing insert/gland body

### UNI-DICHT-ZUG sealing insert UNI-DICHT-ZUG gland body

| Part No. | Size PG | Size metrical | Sealing insert colour | Size PG            |                           | Size metrical   |                           |
|----------|---------|---------------|-----------------------|--------------------|---------------------------|-----------------|---------------------------|
|          |         |               |                       | Polyamide          | Brass                     | Polyamide       | Brass                     |
| 905690   | -       | M12 x 1,5     | yellow                |                    |                           | 90829 VK PA M12 | 904210 VK MS M12          |
| 905691   | 7       | -             | yellow                |                    | 904220 VK MS PG7          |                 |                           |
| 905692   | 9       | M16 x 1,5     | yellow                | 96043 VK PA PG9    | 904221 VK MS PG9          | 90830 VK PA M16 | 904211 VK MS M16          |
| 905693   | 9       | M16 x 1,5     | black                 |                    |                           |                 |                           |
| 905694   | 11      | -             | black                 | 96044 VK PA PG11   | 904222 VK MS PG11         |                 |                           |
| 905695   | 11      | -             | green                 |                    |                           |                 |                           |
| 905696   | -       | M20 x 1,5     | black                 |                    |                           | 90831 VK PA M20 |                           |
| 905697   | -       | M20 x 1,5     | green                 |                    |                           |                 |                           |
| 905698   | -       | M20 x 1,5     | red                   |                    |                           |                 |                           |
| 905699   | 13,5    | M20 x 1,5     | black                 |                    |                           |                 |                           |
| 905700   | 13,5    | M20 x 1,5     | green                 | 96045 VK PA PG13,5 | 904223 VK MS PG13,5       |                 | 904213 VK MS M20 (PG13,5) |
| 905701   | 13,5    | M20 x 1,5     | red                   |                    |                           |                 |                           |
| 905702   | 16      | M25 x 1,5     | green                 |                    |                           |                 |                           |
| 905703   | 16      | M25 x 1,5     | red                   | 96046 VK PA PG16   | 904224 VK MS PG16         | 90832 VK PA M25 | 904214 VK MS M25          |
| 905704   | 16      | M25 x 1,5     | white                 |                    |                           |                 |                           |
| 905705   | 21      | M32 x 1,5     | red                   |                    |                           |                 |                           |
| 905706   | 21      | M32 x 1,5     | white                 | 96047 VK PA PG21   | 904225 VK MS PG21 (18 mm) | 90833 VK PA M32 | 904215 VK MS M32 (18 mm)  |
| 905707   | 21      | M32 x 1,5     | blue                  |                    |                           |                 |                           |
| 905708   | 21      | M32 x 1,5     | brown                 |                    | 904226 VK MS PG21 (21 mm) |                 | 904216 VK MS M32 (21 mm)  |
| 905709   | 29      | M40 x 1,5     | brown                 |                    |                           |                 |                           |
| 905710   | 29      | M40 x 1,5     | orange                | 96048 VK PA PG29   | 904227 VK MS PG29         | 90834 VK PA M40 | 904217 VK MS M40          |
| 905711   | 29      | M40 x 1,5     | light yellow          |                    |                           |                 |                           |
| 905712   | 36      | M50 x 1,5     | anthracite            |                    |                           |                 |                           |
| 905713   | 36      | M50 x 1,5     | pink                  | 96049 VK PA PG36   | 904228 VK MS PG36         | 90835 VK PA M50 | 904218 VK MS M50          |
| 905714   | 42      | -             | white                 |                    | 904229 VK MS PG42         |                 |                           |
| 905715   | 48      | M63 x 1,5     | white                 |                    | 904230 VK MS PG48         |                 | 904219 VK MS M63          |

# UNI-DICHT MFDE multiple sealing insert



## UNI-DICHT multiple sealing insert

Multiple sealing inserts made by TPE for populating the UNI-DICHT gland bodies made by polyamide or by brass.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

TPE

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

UNI-DICHT sealing inserts M20 (part nos. 904004 to 904010) can be used only with UNI-DICHT gland body made by polyamide M20x1,5 (part no. 90831). The sealing inserts M20 (part nos. 904011 to 904017) can only be used with UNI-DICHT gland body made by brass M20x1,5 (part no. 904213) and with UNI-DICHT gland body PG 13,5 (PA and brass).

## Technical data

Temperature range: -40°C up to +130°C

| Part no. | Size PG | Size metric | Insert colour | Number x Ø borehole mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|---------------|------------------------|------|------------------------------------|-----------|------------|
|          |         |             |               |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903994   | 9       | M16 x 1,5   | white         | 2 x 1,2                | 50   | o. r.                              | o. r.     | o. r.      |
| 903995   | 9       | M16 x 1,5   | white         | 2 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 903996   | 9       | M16 x 1,5   | white         | 4 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 903997   | 9       | M16 x 1,5   | white         | 2 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 903998   | 9       | M16 x 1,5   | white         | 1 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 903999   | 11      | M20 x 1,5   | white         | 6 x 2,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904000   | 11      | M20 x 1,5   | white         | 2 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904001   | 11      | M20 x 1,5   | white         | 3 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904002   | 11      | M20 x 1,5   | white         | 2 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904003   | 11      | M20 x 1,5   | white         | 2 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904004   | -       | M20 x 1,5   | white         | 3 x 2,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904006   | -       | M20 x 1,5   | white         | 2 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904007   | -       | M20 x 1,5   | white         | 3 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904008   | -       | M20 x 1,5   | white         | 3 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904009   | -       | M20 x 1,5   | white         | 2 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904010   | -       | M20 x 1,5   | white         | 2 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904011   | 13,5    | M20 x 1,5   | white         | 3 x 2,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904012   | 13,5    | M20 x 1,5   | white         | 10 x 2,0               | 50   | o. r.                              | o. r.     | o. r.      |
| 904013   | 13,5    | M20 x 1,5   | white         | 2 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904014   | 13,5    | M20 x 1,5   | white         | 3 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904015   | 13,5    | M20 x 1,5   | white         | 3 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904016   | 13,5    | M20 x 1,5   | white         | 2 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904017   | 13,5    | M20 x 1,5   | white         | 2 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# UNI-DICHT MFDE multiple sealing insert

| Part no. | Size PG | Size metric | Insert colour | Number x Ø borehole mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|---------------|------------------------|------|------------------------------------|-----------|------------|
|          |         |             |               |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904018   | 16      | M25 x 1,5   | white         | 7 x 2,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904019   | 16      | M25 x 1,5   | white         | 3 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904020   | 16      | M25 x 1,5   | white         | 2 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904021   | 16      | M25 x 1,5   | white         | 4 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904022   | 16      | M25 x 1,5   | white         | 6 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904023   | 16      | M25 x 1,5   | white         | 2 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904024   | 16      | M25 x 1,5   | white         | 3 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904025   | 16      | M25 x 1,5   | white         | 4 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904026   | 16      | M25 x 1,5   | white         | 3 x 7,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904027   | 16      | M25 x 1,5   | white         | 2 x 8,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904028   | 21      | M32 x 1,5   | white         | 21 x 2,0               | 50   | o. r.                              | o. r.     | o. r.      |
| 904029   | 21      | M32 x 1,5   | white         | 8 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904030   | 21      | M32 x 1,5   | white         | 6 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904031   | 21      | M32 x 1,5   | white         | 8 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904032   | 21      | M32 x 1,5   | white         | 4 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904033   | 21      | M32 x 1,5   | white         | 8 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904034   | 21      | M32 x 1,5   | white         | 6 x 5,5                | 50   | o. r.                              | o. r.     | o. r.      |
| 904035   | 21      | M32 x 1,5   | white         | 4 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904036   | 21      | M32 x 1,5   | white         | 4 x 6,5                | 50   | o. r.                              | o. r.     | o. r.      |
| 904037   | 21      | M32 x 1,5   | white         | 6 x 6,5                | 50   | o. r.                              | o. r.     | o. r.      |
| 904038   | 21      | M32 x 1,5   | white         | 3 x 7,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904039   | 21      | M32 x 1,5   | white         | 2 x 8,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904040   | 21      | M32 x 1,5   | white         | 4 x 8,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904041   | 21      | M32 x 1,5   | white         | 2 x 9,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904042   | 21      | M32 x 1,5   | white         | 3 x 9,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 904043   | 29      | M40 x 1,5   | white         | 6 x 6,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 904044   | 29      | M40 x 1,5   | white         | 10 x 6,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 904045   | 29      | M40 x 1,5   | white         | 4 x 6,5                | 25   | o. r.                              | o. r.     | o. r.      |
| 904046   | 29      | M40 x 1,5   | white         | 7 x 7,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 904047   | 29      | M40 x 1,5   | white         | 6 x 8,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 904048   | 29      | M40 x 1,5   | white         | 4 x 9,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 904049   | 29      | M40 x 1,5   | white         | 5 x 9,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 904050   | 29      | M40 x 1,5   | white         | 5 x 10,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 904051   | 29      | M40 x 1,5   | white         | 2 x 11,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 904052   | 29      | M40 x 1,5   | white         | 3 x 11,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 904053   | 29      | M40 x 1,5   | white         | 2 x 13,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 904054   | 36      | M50 x 1,5   | white         | 15 x 5,0               | 10   | o. r.                              | o. r.     | o. r.      |
| 904055   | 36      | M50 x 1,5   | white         | 13 x 7,0               | 10   | o. r.                              | o. r.     | o. r.      |
| 904056   | 36      | M50 x 1,5   | white         | 7 x 9,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 904057   | 36      | M50 x 1,5   | white         | 8 x 9,0                | 10   | o. r.                              | o. r.     | o. r.      |
| 904058   | 36      | M50 x 1,5   | white         | 3 x 10,0               | 10   | o. r.                              | o. r.     | o. r.      |
| 904059   | 36      | M50 x 1,5   | white         | 4 x 13,0               | 10   | o. r.                              | o. r.     | o. r.      |
| 904060   | 36      | M50 x 1,5   | white         | 2 x 15,0               | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## Matching accessory



### Sealing billets

for empty penetrations.

confer page 31

# UNI-DICHT-ASI-PA cable gland



profile fits to ASI-bus line



## UNI-DICHT-ASI-PA

Plastic sealing cable gland with inserts made by TPE-V. Profile fitting to ASI-bus line.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Installation technology
- Control cabinet construction

### Material

Polyamide  
Moulded seal: TPE-V

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

### Properties

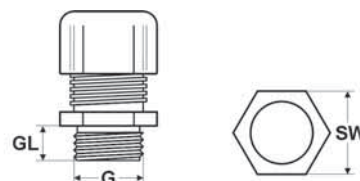
- Large-area cable sealing
- Easy to assemble

### Technical data

Protection class: IP 68 - 10 bar

Temperature range: -20°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

#### metric thread

| Part no. | Size Metr. | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903796   | M20 x 1,5  | grey, left            | -                    | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903797   | M20 x 1,5  | grey, right           | -                    | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |

#### PG thread

| Part no. | Size PG | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903798   | 13,5    | grey, left            | -                    | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903799   | 13,5    | grey, right           | -                    | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UNI-DICHT sealing insert

profile fits to ASI-bus line



## UNI-DICHT Sealing insert ASI

Sealing inserts made of TPE-V for populating UNI-DICHT gland bodies made of polyamide or of brass. Profile fits to ASI- bus line.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

TPE-V

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Properties

- Large-area cable sealing
- Easy to assemble

## Technical data

Temperature range: -20°C up to +100°C

## Note

UNI-DICHT inserts M20 with part nos. 905910 and 905911 are suitable for UNI-DICHT gland body made of polyamide. The part nos. 903992 and 903993 are suitable for UNI-DICHT gland body M20 made of brass and for UNI-DICHT body gland PG 13,5.

| Part no. | Size PG | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |         |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903992   | 13,5    | M20 x 1,5   | grau, links           | -                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903993   | 13,5    | M20 x 1,5   | grau, rechts          | -                    | 50   | o. r.                              | o. r.     | o. r.      |
| 905910   | -       | M20 x 1,5   | grau, links           | -                    | 50   | o. r.                              | o. r.     | o. r.      |
| 905911   | -       | M20 x 1,5   | grau, rechts          | -                    | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# STK-PA cable gland to DIN



## STK-PA

The polyamide cable gland to DIN 46320.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide  
Moulded seal: SBR/NBR

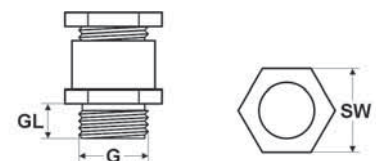
- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Technical data

Protection class: IP 54

Temperature range: -30°C up to +80°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no.<br>light grey<br>RAL 7035 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92819                              | M12 x 1,5     | 5,0 - 8,0                  | 11,0                   | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92820                              | M16 x 1,5     | 7,0 - 9,0                  | 11,0                   | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92821                              | M20 x 1,5     | 8,0 - 12,0                 | 11,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92823                              | M25 x 1,5     | 11,0 - 14,0                | 11,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92824                              | M25 x 1,5     | 13,0 - 17,0                | 11,0                   | 32                    | 50   | o. r.                              | o. r.     | o. r.      |
| 92825                              | M32 x 1,5     | 18,0 - 26,0                | 11,0                   | 42                    | 10   | o. r.                              | o. r.     | o. r.      |
| 92826                              | M40 x 1,5     | 23,0 - 26,0                | 11,0                   | 42                    | 10   | o. r.                              | o. r.     | o. r.      |
| 92827                              | M50 x 1,5     | 25,0 - 33,0                | 11,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 92828                              | M50 x 1,5     | 32,0 - 40,0                | 11,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 92829                              | M63 x 1,5     | 38,0 - 44,0                | 11,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no.<br>light grey<br>RAL 7035 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90559                              | 7          | 3,0 - 6,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90560                              | 9          | 4,5 - 7,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90561                              | 11         | 6,0 - 9,0                  | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90562                              | 13,5       | 9,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90563                              | 16         | 11,0 - 14,0                | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90564                              | 21         | 14,0 - 18,0                | 11,0                   | 33                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90565                              | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90566                              | 36         | 25,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 90567                              | 42         | 30,0 - 38,0                | 13,0                   | 60 / 55               | 5    | o. r.                              | o. r.     | o. r.      |
| 90568                              | 48         | 34,0 - 42,0                | 14,0                   | 65 / 60               | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# STK-PA cable gland

with incision sealing ring



## STK-PA with incision ring

The polyamide cable gland to DIN 46320 with incision sealing ring.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide  
Moulded seal: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

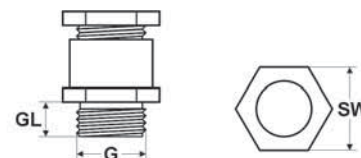
### Note

Protection classification IP 65 with an additional O-ring on the external thread

### Technical data

Protection class: IP 54

Temperature range: -20°C up to +60°C



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### PG thread

| Part no.<br>grey<br>RAL 7035 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904231                       | 9          | 4,0 - 10,0                 | 8,0                    | 19 / 16               | 50   | o. r.                              | o. r.     | o. r.      |
| 904232                       | 11         | 6,5 - 12,0                 | 8,0                    | 22 / 19               | 50   | o. r.                              | o. r.     | o. r.      |
| 904233                       | 13,5       | 6,5 - 13,5                 | 9,0                    | 24 / 21               | 50   | o. r.                              | o. r.     | o. r.      |
| 904234                       | 16         | 6,5 - 16,0                 | 10,0                   | 27 / 23               | 50   | o. r.                              | o. r.     | o. r.      |
| 904235                       | 21         | 9,0 - 20,0                 | 11,0                   | 33 / 30               | 50   | o. r.                              | o. r.     | o. r.      |
| 904236                       | 29         | 17,0 - 28,0                | 11,0                   | 42 / 40               | 25   | o. r.                              | o. r.     | o. r.      |
| 904237                       | 36         | 23,0 - 34,0                | 13,0                   | 53 / 50               | 10   | o. r.                              | o. r.     | o. r.      |
| 904238                       | 42         | 29,0 - 40,0                | 13,0                   | 60 / 55               | 5    | o. r.                              | o. r.     | o. r.      |
| 904239                       | 48         | 35,0 - 46,0                | 14,0                   | 65 / 60               | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# STK-F flat cable gland



## STK-F

The plastic flat cable gland.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide  
Moulded seal: SBR  
Thrust washers: Galvanised steel

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

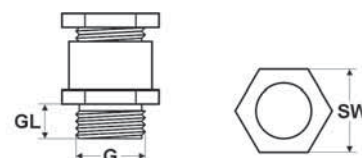
## Note

Protection classification IP 65 with an additional O-ring on the external thread

## Technical data

Protection class: IP 54

Temperature range: -30°C up to +80°C



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric

| Part no.<br>light grey<br>RAL 7035 | Size<br>Metr. | Cable<br>thickness<br>from / to<br>mm | Cable<br>width<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|---------------|---------------------------------------|-----------------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |               |                                       |                                   |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904996                             | M25 x 1,5     | 3,0 - 8,0                             | 9,0 - 21,0                        | 11,0                   | 32                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904997                             | M32 x 1,5     | 4,0 - 11,5                            | 14,0 - 30,0                       | 11,0                   | 42                    | 50   | o. r.                              | o. r.     | o. r.      |
| 905067                             | M40 x 1,5     | 4,0 - 11,5                            | 14,0 - 30,0                       | 11,0                   | 42                    | 20   | o. r.                              | o. r.     | o. r.      |
| 904998                             | M50 x 1,5     | 4,0 - 11,5                            | 24,0 - 40,0                       | 11,0                   | 60                    | 20   | o. r.                              | o. r.     | o. r.      |
| 905068                             | M63 x 1,5     | 5,0 - 12,0                            | 34,0 - 50,0                       | 11,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# WN blanking plug

closed



## WN closed

Self-sealing grommet with flexible plastic lead-through diaphragm for simple cable inlet.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet technology

## Material

Polyethylene

- halogen-free

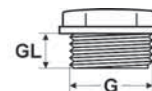
## Note

Open blanking plugs: on request.

## Technical data

Protection class: IP 54

Temperature range: -20°C up to +70°C



## Dimensions

G Thread size  
GL Thread length

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94120    | M12 x 1,5  | 3,0 - 5,0            | 10,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 94121    | M16 x 1,5  | 5,0 - 10,0           | 10,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 94122    | M20 x 1,5  | 8,0 - 13,5           | 12,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 94123    | M25 x 1,5  | 9,0 - 16,0           | 12,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 94124    | M32 x 1,5  | 11,0 - 22,0          | 14,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 94125    | M40 x 1,5  | 17,0 - 24,0          | 16,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 94126    | M50 x 1,5  | 22,0 - 35,0          | 18,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 94127    | M63 x 1,5  | 24,0 - 43,0          | 20,0             | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90116    | 9       | 6,0 - 8,0            | 12,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 90117    | 11      | 7,0 - 10,0           | 14,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 90118    | 13,5    | 9,0 - 12,0           | 17,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 90119    | 16      | 9,0 - 14,0           | 19,0             | 100  | o. r.                              | o. r.     | o. r.      |
| 90120    | 21      | 11,0 - 17,0          | 24,0             | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Adapter PA



## Adapter PA

The adapter made of polyamide for solving problems when converting from PG to metric.

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

Polyamide

Colours: light grey  
RAL: 7035

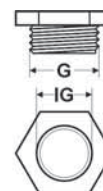
- halogen-free
- phosphor-free
- silicone-free

## Note

Black on request.

## Technical data

Temperature range: -40°C up to +100°C



## Dimensions

G Thread size outside  
IG Thread size inside

### from metric to PG

| Part no. | Size metr. outside | Size PG inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|----------------|------|------------------------------------|-----------|------------|
|          |                    |                |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93670    | M12 x 1,5          | 7              | 100  | o. r.                              | o. r.     | o. r.      |
| 93671    | M12 x 1,5          | 9              | 100  | o. r.                              | o. r.     | o. r.      |
| 93672    | M16 x 1,5          | 9              | 100  | o. r.                              | o. r.     | o. r.      |
| 93673    | M20 x 1,5          | 11             | 100  | o. r.                              | o. r.     | o. r.      |
| 93674    | M20 x 1,5          | 13,5           | 100  | o. r.                              | o. r.     | o. r.      |
| 93675    | M20 x 1,5          | 16             | 100  | o. r.                              | o. r.     | o. r.      |
| 93676    | M25 x 1,5          | 16             | 50   | o. r.                              | o. r.     | o. r.      |
| 93677    | M25 x 1,5          | 21             | 50   | o. r.                              | o. r.     | o. r.      |
| 93678    | M32 x 1,5          | 29             | 25   | o. r.                              | o. r.     | o. r.      |
| 93679    | M40 x 1,5          | 29             | 10   | o. r.                              | o. r.     | o. r.      |
| 93680    | M50 x 1,5          | 36             | 10   | o. r.                              | o. r.     | o. r.      |
| 93681    | M50 x 1,5          | 42             | 10   | o. r.                              | o. r.     | o. r.      |
| 93682    | M63 x 1,5          | 48             | 10   | o. r.                              | o. r.     | o. r.      |

### from PG to metric

| Part no. | Size PG outside | Size metr. inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------|-------------------|------|------------------------------------|-----------|------------|
|          |                 |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93650    | 7               | M12 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93651    | 7               | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93652    | 9               | M12 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93653    | 9               | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93654    | 9               | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93655    | 11              | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93656    | 11              | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93657    | 13,5            | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93658    | 13,5            | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93659    | 13,5            | M25 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93660    | 16              | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 93661    | 16              | M25 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 93662    | 21              | M25 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 93663    | 21              | M32 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 93664    | 29              | M32 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 93665    | 29              | M40 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# EW-PA<sub>extender</sub>



## EW-PA

The extender made of polyamide.  
Transition from small to large thread.

## Material

Polyamide

Colours: light grey  
RAL: 7035

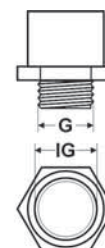
- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

Black on request.

## Technical data

Temperature range: -40°C up to +100°C



## Dimensions

G Thread size outside  
IG Thread size inside

### from metric to metric

| Part no. | Size metr. outside | Size metr. inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------|------------------------------------|-----------|------------|
|          |                    |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98585    | M12 x 1,5          | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 98586    | M16 x 1,5          | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 95099    | M20 x 1,5          | M25 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 98587    | M25 x 1,5          | M32 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 98588    | M32 x 1,5          | M40 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 98589    | M40 x 1,5          | M50 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |

### from PG to PG

| Part no. | Size PG outside | Size PG inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------|----------------|------|------------------------------------|-----------|------------|
|          |                 |                |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90076    | 7               | 9              | 100  | o. r.                              | o. r.     | o. r.      |
| 90077    | 9               | 11             | 100  | o. r.                              | o. r.     | o. r.      |
| 90078    | 11              | 13,5           | 100  | o. r.                              | o. r.     | o. r.      |
| 96618    | 11              | 16             | 100  | o. r.                              | o. r.     | o. r.      |
| 90079    | 13,5            | 16             | 100  | o. r.                              | o. r.     | o. r.      |
| 90080    | 16              | 21             | 50   | o. r.                              | o. r.     | o. r.      |
| 90081    | 21              | 29             | 25   | o. r.                              | o. r.     | o. r.      |
| 90082    | 29              | 36             | 20   | o. r.                              | o. r.     | o. r.      |
| 90083    | 36              | 42             | 10   | o. r.                              | o. r.     | o. r.      |
| 90084    | 42              | 48             | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# RE-PA reducer



## RE-PA

The reducer made of polyamide.  
Transition from large to small thread.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide

Colours: light grey  
RAL: 7035

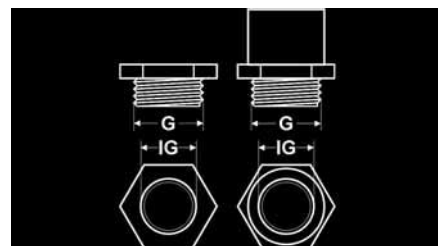
- halogen-free
- phosphor-free
- silicone-free

## Note

Black on request.

## Technical data

Temperature range: -30°C up to +100°C



## Dimensions

G Thread size outside  
IG Thread size inside

## from metric to metric

| Part no. | Size metr. outside | Size metr. inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------|------------------------------------|-----------|------------|
|          |                    |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97829    | M20 x 1,5          | M12 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 97830    | M20 x 1,5          | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 97831    | M25 x 1,5          | M12 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 97832    | M25 x 1,5          | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 97833    | M25 x 1,5          | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 97834    | M32 x 1,5          | M12 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97835    | M32 x 1,5          | M16 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97836    | M32 x 1,5          | M20 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97837    | M32 x 1,5          | M25 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97838    | M40 x 1,5          | M16 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97839    | M40 x 1,5          | M20 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97840    | M40 x 1,5          | M25 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97841    | M40 x 1,5          | M32 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 97842    | M50 x 1,5          | M20 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 97843    | M50 x 1,5          | M25 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 97844    | M50 x 1,5          | M32 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 97845    | M50 x 1,5          | M40 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 97846    | M63 x 1,5          | M25 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 97847    | M63 x 1,5          | M32 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 97848    | M63 x 1,5          | M40 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 97849    | M63 x 1,5          | M50 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# RE-PA reducer

## from PG to PG

| Part no. | Size<br>PG<br>outside | Size<br>PG<br>inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96187    | 11                    | 7                    | 100  | O. r.                              | O. r.     | O. r.      |
| 96189    | 13,5                  | 7                    | 100  | O. r.                              | O. r.     | O. r.      |
| 90069    | 13,5                  | 9                    | 100  | O. r.                              | O. r.     | O. r.      |
| 90070    | 16                    | 9                    | 100  | O. r.                              | O. r.     | O. r.      |
| 90071    | 16                    | 11                   | 100  | O. r.                              | O. r.     | O. r.      |
| 96192    | 21                    | 11                   | 100  | O. r.                              | O. r.     | O. r.      |
| 90072    | 21                    | 13,5                 | 100  | O. r.                              | O. r.     | O. r.      |
| 90073    | 21                    | 16                   | 100  | O. r.                              | O. r.     | O. r.      |
| 97007    | 29                    | 13,5                 | 50   | O. r.                              | O. r.     | O. r.      |
| 96193    | 29                    | 16                   | 50   | O. r.                              | O. r.     | O. r.      |
| 90074    | 29                    | 21                   | 50   | O. r.                              | O. r.     | O. r.      |
| 97008    | 36                    | 16                   | 50   | O. r.                              | O. r.     | O. r.      |
| 97009    | 36                    | 21                   | 50   | O. r.                              | O. r.     | O. r.      |
| 90075    | 36                    | 29                   | 50   | O. r.                              | O. r.     | O. r.      |
| 97010    | 42                    | 21                   | 25   | O. r.                              | O. r.     | O. r.      |
| 97011    | 42                    | 29                   | 25   | O. r.                              | O. r.     | O. r.      |
| 96194    | 42                    | 36                   | 25   | O. r.                              | O. r.     | O. r.      |
| 97012    | 48                    | 29                   | 25   | O. r.                              | O. r.     | O. r.      |
| 97013    | 48                    | 36                   | 25   | O. r.                              | O. r.     | O. r.      |
| 96195    | 48                    | 42                   | 25   | O. r.                              | O. r.     | O. r.      |

## from PG to PG - high-profile design

| Part no. | Size<br>PG<br>outside | Size<br>PG<br>inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96186    | 9                     | 7                    | 100  | O. r.                              | O. r.     | O. r.      |
| 96188    | 11                    | 9                    | 100  | O. r.                              | O. r.     | O. r.      |
| 96190    | 13,5                  | 11                   | 100  | O. r.                              | O. r.     | O. r.      |
| 96191    | 16                    | 13,5                 | 100  | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# KMK-PA-MB counternut with collar



## KMK-PA-MB

The counternut made of polyamide.  
The counternut with collar has a bigger sealing area - sealing with an additional O-ring will be simplified.

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

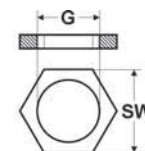
- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

UV-resistant (RAL 9005).

## Technical data

Temperature range: -40°C up to +100°C



## Dimensions

G Thread size inside  
SW Spanner size

### metric thread

| Part no.<br>RAL 7035 | Part no.<br>RAL 7001 | Part no.<br>RAL 9005 | Size<br>Metr. | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|----------------------|----------------------|---------------|-----------------------|------|------------------------------------|-----------|------------|
|                      |                      |                      |               |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97816                | 94260                | 98163                | M12 x 1,5     | 18                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97817                | 94261                | 98164                | M16 x 1,5     | 22                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97818                | 94262                | 98165                | M20 x 1,5     | 26                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97819                | 94263                | 98166                | M25 x 1,5     | 32                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97820                | 94264                | 98167                | M32 x 1,5     | 41                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97821                | 94265                | 98168                | M40 x 1,5     | 50                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97822                | 94266                | 98169                | M50 x 1,5     | 60                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97823                | 94267                | 98170                | M63 x 1,5     | 75                    | 25   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no.<br>RAL 7035 | Part no.<br>RAL 7001 | Part no.<br>RAL 9005 | Size<br>PG | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|----------------------|----------------------|------------|-----------------------|------|------------------------------------|-----------|------------|
|                      |                      |                      |            |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90710                | 94250                | 96458                | 7          | 19                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90711                | 94251                | 96228                | 9          | 22                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90712                | 94252                | 96459                | 11         | 24                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90713                | 94253                | 96460                | 13,5       | 27                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90714                | 94254                | 96461                | 16         | 30                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90715                | 94255                | 96176                | 21         | 36                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90716                | 94256                | 96177                | 29         | 46                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90717                | 94257                | 96462                | 36         | 60                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90718                | 94258                | 96463                | 42         | 65                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90719                | 94259                | 96464                | 48         | 70                    | 25   | o. r.                              | o. r.     | o. r.      |

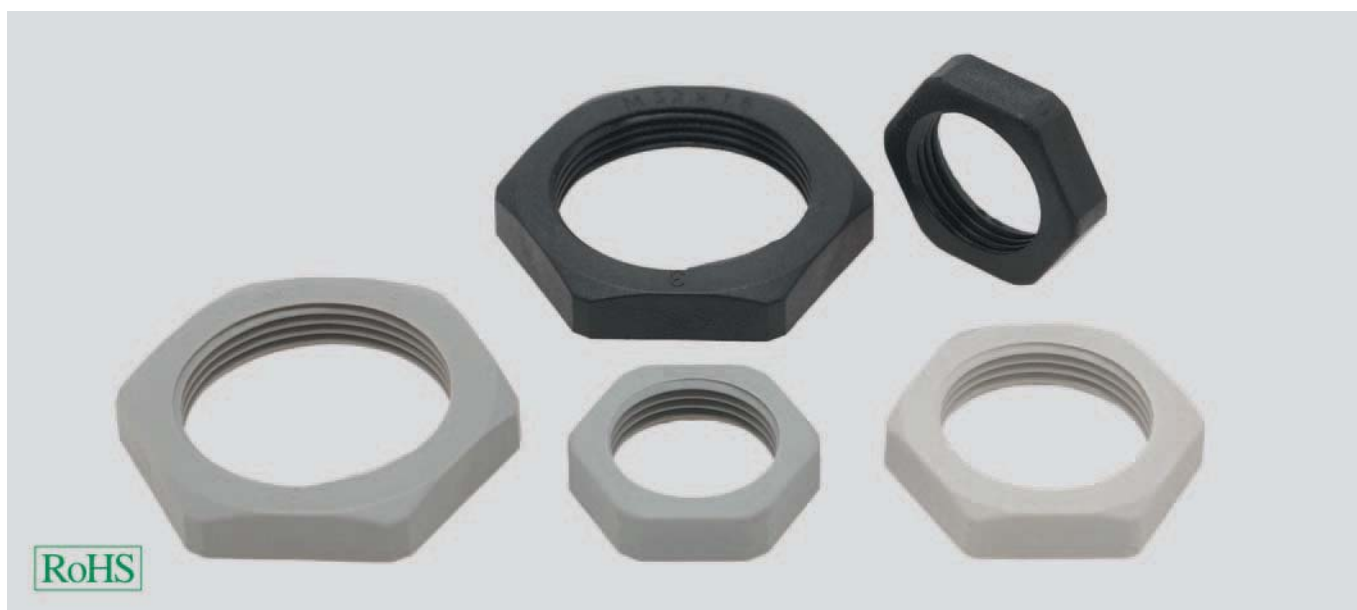
### NPT thread

| Part no.<br>RAL 7035 | Part no.<br>RAL 7001 | Part no.<br>RAL 9005 | Size<br>NPT | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|----------------------|----------------------|-------------|-----------------------|------|------------------------------------|-----------|------------|
|                      |                      |                      |             |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97317                | 90870                | 90875                | 3/8"        | 22                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97316                | 90871                | 90876                | 1/2"        | 27                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97315                | 90872                | 90877                | 3/4"        | 33                    | 100  | o. r.                              | o. r.     | o. r.      |
| 98366                | 90873                | 90878                | 1"          | 47                    | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KMK-PA-OB counternut without collar



## KMK-PA-OB

The locknut made of polyamide with collar.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide

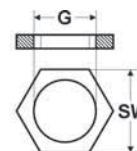
- halogen-free
- phosphor-free
- silicone-free

## Note

UV-resistant (RAL 9005).

## Technical data

Temperature range: -40°C up to +100°C



## Dimensions

G Thread size inside  
SW Spanner size

## metric thread

| Part no.<br>RAL 7035 | Part no.<br>RAL 7001 | Part no.<br>RAL 9005 | Size<br>Metr. | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|----------------------|----------------------|---------------|-----------------------|------|------------------------------------|-----------|------------|
|                      |                      |                      |               |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94630                | 94640                | 94650                | M12 x 1,5     | 18                    | 100  | o. r.                              | o. r.     | o. r.      |
| 94631                | 94641                | 94651                | M16 x 1,5     | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94632                | 94642                | 94652                | M20 x 1,5     | 26                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94633                | 94643                | 94653                | M25 x 1,5     | 32                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94634                | 94644                | 94654                | M32 x 1,5     | 41                    | 25   | o. r.                              | o. r.     | o. r.      |
| 94635                | 94645                | 94655                | M40 x 1,5     | 50                    | 10   | o. r.                              | o. r.     | o. r.      |
| 94636                | 94646                | 94656                | M50 x 1,5     | 60                    | 10   | o. r.                              | o. r.     | o. r.      |
| 94637                | 94647                | 94657                | M63 x 1,5     | 75                    | 10   | o. r.                              | o. r.     | o. r.      |

## PG tread

| Part no.<br>RAL 7035 | Part no.<br>RAL 7001 | Part no.<br>RAL 9005 | Size<br>PG | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|----------------------|----------------------|------------|-----------------------|------|------------------------------------|-----------|------------|
|                      |                      |                      |            |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94270                | 94280                | 94290                | 7          | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94271                | 94281                | 94291                | 9          | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94272                | 94282                | 94292                | 11         | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94273                | 94283                | 94293                | 13,5       | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94274                | 94284                | 94294                | 16         | 30                    | 50   | o. r.                              | o. r.     | o. r.      |
| 94275                | 94285                | 94295                | 21         | 36                    | 25   | o. r.                              | o. r.     | o. r.      |
| 94276                | 94286                | 94296                | 29         | 46                    | 20   | o. r.                              | o. r.     | o. r.      |
| 94277                | 94287                | 94297                | 36         | 60                    | 10   | o. r.                              | o. r.     | o. r.      |
| 94278                | 94288                | 94298                | 42         | 65                    | 10   | o. r.                              | o. r.     | o. r.      |
| 94279                | 94289                | 94299                | 48         | 70                    | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# VSK-PA screw plug



## VSK-PA

The screw plug made of polyamide.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

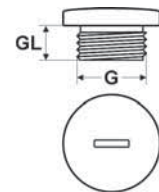
Polyamide

- halogen-free
- phosphor-free

## Technical data

Protection class: IP 54

Temperature range: -40°C up to +100°C



## Dimensions

G Thread size  
GL Thread length

### metric thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|---------------|------------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |               |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94700                              | 94980                             | 94750                         | M12 x 1,5     | 6,0                    | 100  | o. r.                              | o. r.     | o. r.      |
| 94701                              | 94981                             | 94751                         | M16 x 1,5     | 7,0                    | 100  | o. r.                              | o. r.     | o. r.      |
| 94702                              | 94982                             | 94752                         | M20 x 1,5     | 7,0                    | 100  | o. r.                              | o. r.     | o. r.      |
| 94703                              | 94983                             | 94753                         | M25 x 1,5     | 10,0                   | 100  | o. r.                              | o. r.     | o. r.      |
| 94704                              | 94984                             | 94754                         | M32 x 1,5     | 11,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 94705                              | 94985                             | 94755                         | M40 x 1,5     | 13,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 94706                              | 94986                             | 94756                         | M50 x 1,5     | 14,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 94707                              | 94987                             | 94757                         | M63 x 1,5     | 15,0                   | 25   | o. r.                              | o. r.     | o. r.      |

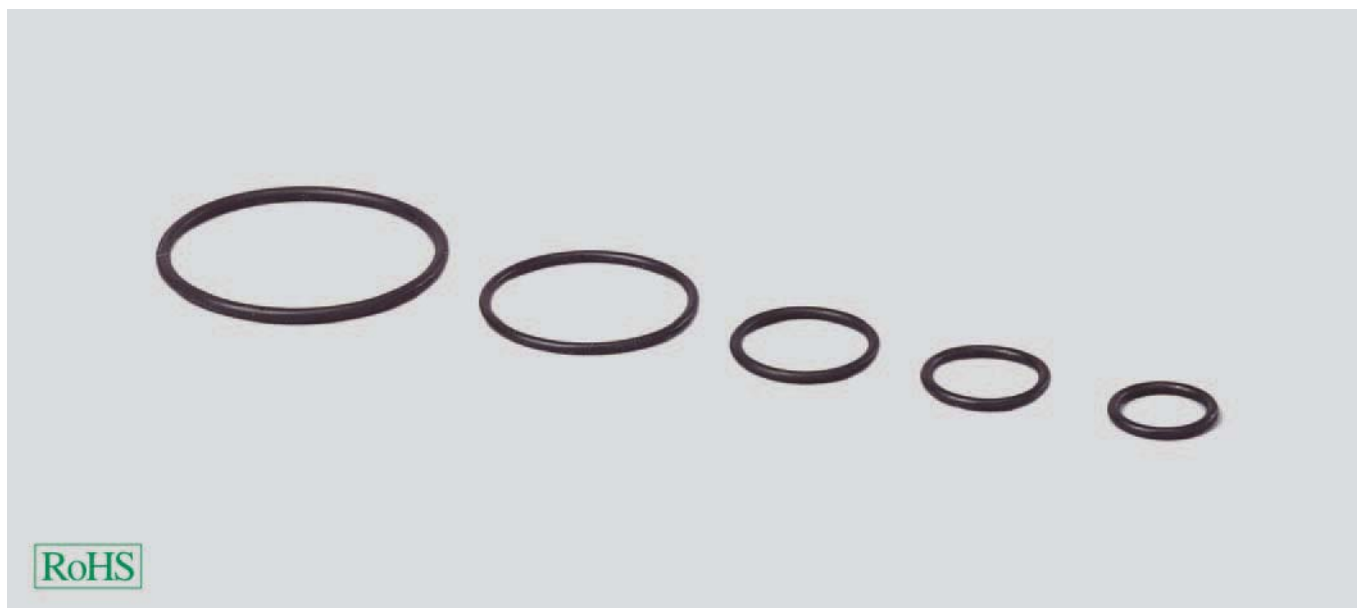
### PG thread

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>dark grey<br>RAL 7001 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-----------------------------------|-------------------------------|------------|------------------------|------|------------------------------------|-----------|------------|
|                                    |                                   |                               |            |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96593                              | 94970                             | 96997                         | 7          | 6,0                    | 100  | o. r.                              | o. r.     | o. r.      |
| 96179                              | 94971                             | 96998                         | 9          | 6,5                    | 100  | o. r.                              | o. r.     | o. r.      |
| 96180                              | 94972                             | 96999                         | 11         | 6,5                    | 100  | o. r.                              | o. r.     | o. r.      |
| 96181                              | 94973                             | 97000                         | 13,5       | 6,5                    | 100  | o. r.                              | o. r.     | o. r.      |
| 96182                              | 94974                             | 97001                         | 16         | 6,5                    | 100  | o. r.                              | o. r.     | o. r.      |
| 96183                              | 94975                             | 97002                         | 21         | 8,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96184                              | 94976                             | 96527                         | 29         | 8,0                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96185                              | 94977                             | 97004                         | 36         | 10,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 96960                              | 94978                             | 97005                         | 42         | 10,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 96961                              | 94979                             | 97006                         | 48         | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# O-ring



## O-ring

O-rings for sealing against water, dust and oil.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

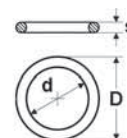
## Material

NBR

- halogen-free
- phosphor-free
- silicone-free

## Technical data

Temperature range: -30°C up to +120°C



## Dimensions

D Outer diameter  
d Inner diameter  
s Thickness

### for metric thread

| Part no. | Size      | Inner Ø mm | Outer Ø mm | Thickness mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|------------|------------|--------------|------|------------------------------------|-----------|------------|
|          |           |            |            |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90263    | M12 x 1,5 | 9,0        | 12,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 90264    | M16 x 1,5 | 13,0       | 16,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 90265    | M20 x 1,5 | 17,0       | 20,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 90266    | M25 x 1,5 | 22,0       | 26,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 90267    | M32 x 1,5 | 29,0       | 33,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 90268    | M40 x 1,5 | 35,0       | 39,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 90269    | M50 x 1,5 | 45,0       | 49,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 90270    | M63 x 1,5 | 59,0       | 63,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |

### for PG thread

| Part no. | Size | Inner Ø mm | Outer Ø mm | Thickness mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|------------|------------|--------------|------|------------------------------------|-----------|------------|
|          |      |            |            |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96366    | 7    | 10,0       | 13,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 96367    | 9    | 13,0       | 16,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 96368    | 11   | 16,0       | 19,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 96369    | 13,5 | 18,0       | 21,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 96370    | 16   | 20,0       | 23,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 96371    | 21   | 25,0       | 29,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96372    | 29   | 33,0       | 37,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96373    | 36   | 43,0       | 47,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96374    | 42   | 50,0       | 54,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96375    | 48   | 55,0       | 59,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# AGDR-PE connecting thread sealing ring



## AGDR-PE

Threaded connection rings for sealing against water and dust.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

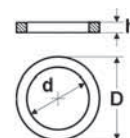
## Material

Polyethylene

- halogen-free
- phosphor-free
- cadmium-free

## Technical data

Temperature range: -30°C up to +70°C



## Dimensions

D Outer diameter  
d Inner diameter  
h Thickness

### for metric thread

| Part no. | Size      | Inner Ø<br>mm | Outer Ø<br>mm | Thickness<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|---------------|---------------|-----------------|------|------------------------------------|-----------|------------|
|          |           |               |               |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90890    | M12 x 1,5 | 12,0          | 16,0          | 2,0             | 500  | o. r.                              | o. r.     | o. r.      |
| 90891    | M16 x 1,5 | 16,0          | 20,0          | 2,0             | 500  | o. r.                              | o. r.     | o. r.      |
| 90892    | M20 x 1,5 | 20,0          | 25,0          | 2,0             | 500  | o. r.                              | o. r.     | o. r.      |
| 90893    | M25 x 1,5 | 25,0          | 31,0          | 2,0             | 500  | o. r.                              | o. r.     | o. r.      |
| 90894    | M32 x 1,5 | 32,0          | 38,0          | 2,0             | 250  | o. r.                              | o. r.     | o. r.      |
| 90896    | M50 x 1,5 | 50,0          | 58,0          | 2,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 90897    | M63 x 1,5 | 63,0          | 72,0          | 2,0             | 50   | o. r.                              | o. r.     | o. r.      |

### for PG thread

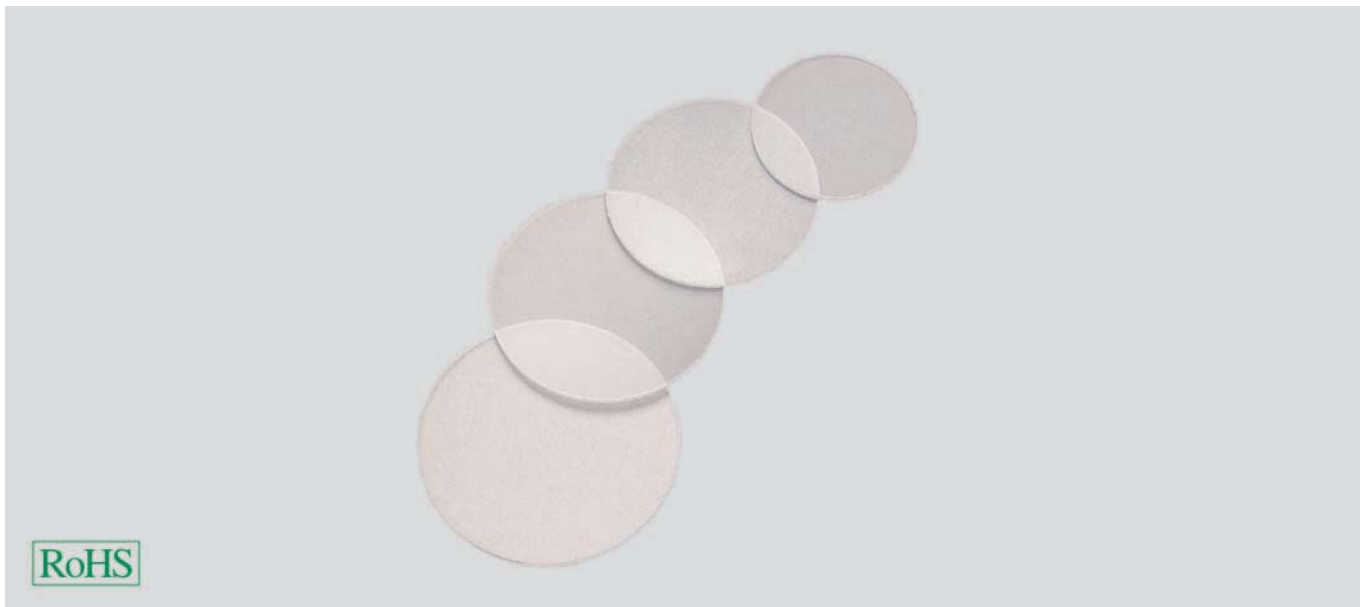
| Part no. | Size | Inner Ø<br>mm | Outer Ø<br>mm | Thickness<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|---------------|---------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |               |               |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96529    | 7    | 12,5          | 16,5          | 1,5             | 500  | o. r.                              | o. r.     | o. r.      |
| 96530    | 9    | 15,2          | 19,0          | 1,5             | 500  | o. r.                              | o. r.     | o. r.      |
| 96531    | 11   | 18,6          | 22,5          | 1,5             | 500  | o. r.                              | o. r.     | o. r.      |
| 96532    | 13,5 | 20,4          | 25,0          | 1,5             | 500  | o. r.                              | o. r.     | o. r.      |
| 96533    | 16   | 22,5          | 27,0          | 1,5             | 500  | o. r.                              | o. r.     | o. r.      |
| 96534    | 21   | 28,3          | 33,5          | 2,0             | 500  | o. r.                              | o. r.     | o. r.      |
| 96535    | 29   | 37,0          | 43,5          | 2,0             | 250  | o. r.                              | o. r.     | o. r.      |
| 96537    | 42   | 54,0          | 63,0          | 2,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 96538    | 48   | 59,3          | 69,0          | 2,0             | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# BL-H blind plug

hard



## Blind plug BL-H

Blind plates as dust cap for HSK cable glands.

## Material

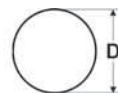
Hard PVC

## Technical data

Temperature range: -20°C up to +70°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

D Outer diameter

## BL-H hard

| Part no.<br>clear | Size<br>PG | Size<br>metric | Size<br>NPT | Outer Ø<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|------------|----------------|-------------|---------------|------|------------------------------------|-----------|------------|
|                   |            |                |             |               |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96416             | 7          | -              | -           | 11,0          | 500  | o. r.                              | o. r.     | o. r.      |
| 96417             | 9          | M16 x 1,5      | 3/8"        | 13,5          | 500  | o. r.                              | o. r.     | o. r.      |
| 96418             | 11         | -              | -           | 17,0          | 500  | o. r.                              | o. r.     | o. r.      |
| 96419             | 13,5       | M20 x 1,5      | 1/2"        | 18,5          | 500  | o. r.                              | o. r.     | o. r.      |
| 96420             | 16         | -              | -           | 20,5          | 500  | o. r.                              | o. r.     | o. r.      |
| 96421             | 21         | M25 x 1,5      | 3/4"        | 26,0          | 500  | o. r.                              | o. r.     | o. r.      |
| 96422             | 29         | M32 x 1,5      | 1"          | 35,0          | 250  | o. r.                              | o. r.     | o. r.      |
| 96423             | 36         | M40 x 1,5      | 1 1/2"      | 45,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96424             | 42         | M50 x 1,5      | -           | 52,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 96425             | 48         | M63 x 1,5      | -           | 57,0          | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# BL-W blind plug

soft



## Blind plug BL-W

Blind plates as dust cap for HSK cable glands.

## Material

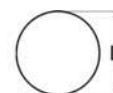
Foam

## Technical data

Temperature range: -20°C up to +70°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

D Outer diameter

## BL-W flexible

| Part no.<br>black | Size<br>PG | Size<br>metric | Size<br>NPT | Outer Ø<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|------------|----------------|-------------|---------------|------|------------------------------------|-----------|------------|
|                   |            |                |             |               |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96376             | 7          | -              | -           | 11,0          | 500  | o. r.                              | o. r.     | o. r.      |
| 96377             | 9          | M16 x 1,5      | 3/8"        | 13,5          | 500  | o. r.                              | o. r.     | o. r.      |
| 96378             | 11         | -              | -           | 17,0          | 500  | o. r.                              | o. r.     | o. r.      |
| 96915             | 13,5       | M20 x 1,5      | 1/2"        | 18,8          | 500  | o. r.                              | o. r.     | o. r.      |
| 96379             | 16         | -              | -           | 20,9          | 500  | o. r.                              | o. r.     | o. r.      |
| 96380             | 21         | M25 x 1,5      | 3/4"        | 26,5          | 500  | o. r.                              | o. r.     | o. r.      |
| 96381             | 29         | M32 x 1,5      | 1"          | 35,0          | 250  | o. r.                              | o. r.     | o. r.      |
| 96382             | 36         | M40 x 1,5      | 1 1/2"      | 45,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96383             | 42         | M50 x 1,5      | -           | 52,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 96384             | 48         | M63 x 1,5      | -           | 57,4          | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Incision sealing ring



## Incision sealing ring

Incision sealing rings for universal cable inlet through large cable clamping areas.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

chloroprene-rubber (CR)

Colours: black

## Note

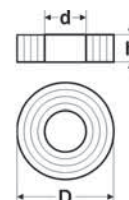
Incision sealing rings for PG thread:

Material: NR

Temperature range: -40°C up to +90°C

## Technical data

Temperature range: -30°C up to +120°C



## Dimensions

D Outer diameter

d Inner diameter

h Thickness

## for metric thread

| Part no. | Size      | Inner Ø mm | Outer Ø mm | incisions mm | Thickness mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|------------|------------|--------------|--------------|------|------------------------------------|-----------|------------|
|          |           |            |            |              |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94860    | M12 x 1,5 | 5,0        | 10,7       | -            | 5,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 94861    | M16 x 1,5 | 3,0        | 13,8       | 39938        | 5,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 94863    | M20 x 1,5 | 4,0        | 17,7       | 7/10/13      | 6,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 94865    | M25 x 1,5 | 8,5        | 22,5       | 11/14/17     | 8,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 94866    | M32 x 1,5 | 16,0       | 29,5       | 19/21/24     | 9,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 94867    | M40 x 1,5 | 23,0       | 37,5       | 26/29/32     | 11,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 94868    | M50 x 1,5 | 32,0       | 47,5       | 35/38/41     | 12,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 94869    | M63 x 1,5 | 41,0       | 60,3       | 44/47/50     | 14,0         | 50   | o. r.                              | o. r.     | o. r.      |

## for PG thread

| Part no. | Size | Inner Ø mm | Outer Ø mm | incisions mm | Thickness mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|------------|------------|--------------|--------------|------|------------------------------------|-----------|------------|
|          |      |            |            |              |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96357    | 9    | 5,0        | 13,3       | 7,5/10       | 5,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 96358    | 11   | 7,5        | 16,5       | 10/12,5      | 6,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96359    | 13,5 | 7,5        | 18,3       | 10/12,5      | 6,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96360    | 16   | 7,5        | 20,4       | 10/12,5/15   | 7,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96361    | 21   | 10,0       | 25,9       | 13/16/19     | 8,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 96362    | 29   | 18,0       | 34,7       | 21/24/27     | 9,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 96363    | 36   | 24,0       | 44,7       | 27/30/33     | 12,0         | 100  | o. r.                              | o. r.     | o. r.      |
| 96364    | 42   | 30,0       | 51,7       | 33/36/39     | 14,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 96365    | 48   | 36,0       | 56,9       | 39/42/45     | 14,0         | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request





## OF

Open folding profile for simple cable insertion.  
The profile can be re-opened at any time.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

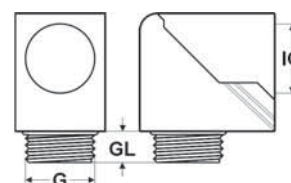
Polyamide  
O-ring: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Technical data

Protection class: IP 68

Temperature range: -20°C up to +80°C



## Dimensions

G Thread size outside  
GL Thread length  
IG Thread size inside

### from metric to metric

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|---------------|------------------------|------|------------------------------------|-----------|------------|
|                                    |                               |               |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90271                              | 91835                         | M16 x 1,5     | 8,0                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90272                              | 91836                         | M20 x 1,5     | 9,0                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90273                              | 91837                         | M25 x 1,5     | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |

### from PG to PG

| Part no.<br>light grey<br>RAL 7035 | Part no.<br>black<br>RAL 9005 | Size<br>PG | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|-------------------------------|------------|------------------------|------|------------------------------------|-----------|------------|
|                                    |                               |            |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90383                              | 97110                         | 9          | 8,0                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90384                              | 97502                         | 11         | 8,0                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90385                              | 97073                         | 13,5       | 9,0                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90386                              | 94781                         | 16         | 10,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90387                              | 94782                         | 21         | 11,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90388                              | 96102                         | 29         | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HSSV-KF folding flange

Opening flange angle for connection glands or cable glands.

- Flange angle opened to enable simple insertion of pre-assembled cables
- Simple assembly
- Highly stable

## Material

Polyamide PA 6

Flammability acc. to UL 94: VO

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

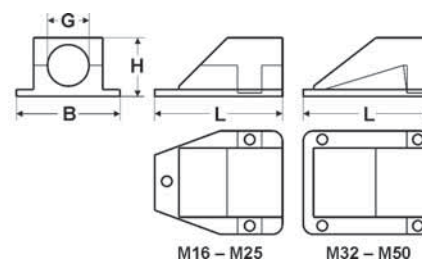
- UR-tested
- Threaded connection:  
metric to EN 60423

## Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

Temperature range temporary up to +140°C



## Dimensions

- G Thread size inside  
H Height  
B Width  
L Length

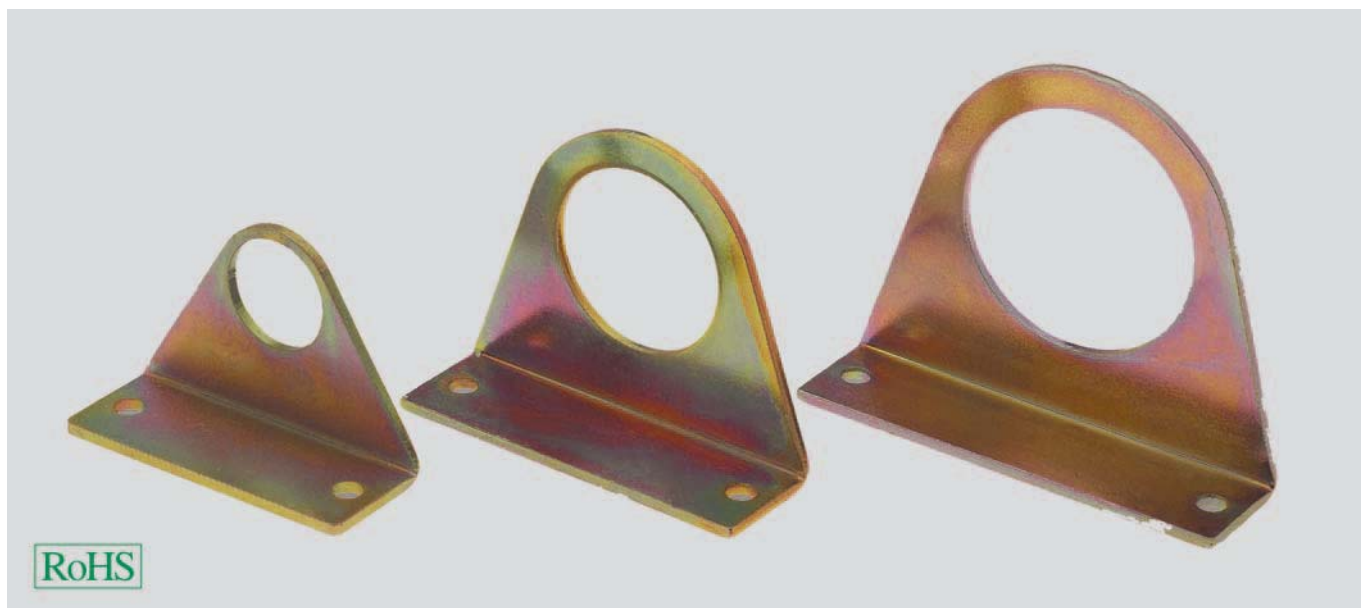
## metric thread - female

| Part no.<br>grey | Part no.<br>black | Size<br>metr.<br>inside | Height<br>mm | Width<br>mm | Length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-------------------------|--------------|-------------|--------------|------|------------------------------------|-----------|------------|
|                  |                   |                         |              |             |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920507           | 920513            | M16 x 1,5               | 35           | 47          | 49           | 10   | o. r.                              | o. r.     | o. r.      |
| 920508           | 920514            | M20 x 1,5               | 35           | 47          | 49           | 10   | o. r.                              | o. r.     | o. r.      |
| 920509           | 920515            | M25 x 1,5               | 44           | 65          | 69           | 10   | o. r.                              | o. r.     | o. r.      |
| 920510           | 920516            | M32 x 1,5               | 55           | 78          | 90           | 10   | o. r.                              | o. r.     | o. r.      |
| 920511           | 920517            | M40 x 1,5               | 66           | 94          | 99           | 10   | o. r.                              | o. r.     | o. r.      |
| 920512           | 920518            | M50 x 1,5               | 76           | 101         | 116          | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# BW fastening elbow



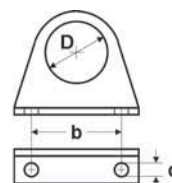
## BW

Mounting bracket with penetration and two fastening bores.

For mounting in a door or door elements, as earthing connection and also to equalise potentials in metallic glands.

## Material

Steel, chromated yellow



## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Dimensions

- D Inner diameter  
d Boring diameter  
b Distance boring (center/center)

### for metric thread

| Part no. | Size      | Inner Ø mm | Boring mm | Boring spacing mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|------------|-----------|-------------------|------|------------------------------------|-----------|------------|
|          |           |            |           |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93720    | M16 x 1,5 | 17,0       | 4,5       | 40                | 25   | o. r.                              | o. r.     | o. r.      |
| 93721    | M20 x 1,5 | 21,0       | 4,5       | 40                | 25   | o. r.                              | o. r.     | o. r.      |
| 93722    | M25 x 1,5 | 26,0       | 4,5       | 50                | 25   | o. r.                              | o. r.     | o. r.      |
| 93723    | M32 x 1,5 | 33,0       | 4,5       | 60                | 25   | o. r.                              | o. r.     | o. r.      |
| 93724    | M40 x 1,5 | 41,0       | 4,5       | 70                | 25   | o. r.                              | o. r.     | o. r.      |
| 93725    | M50 x 1,5 | 51,0       | 4,5       | 80                | 25   | o. r.                              | o. r.     | o. r.      |

### for PG thread

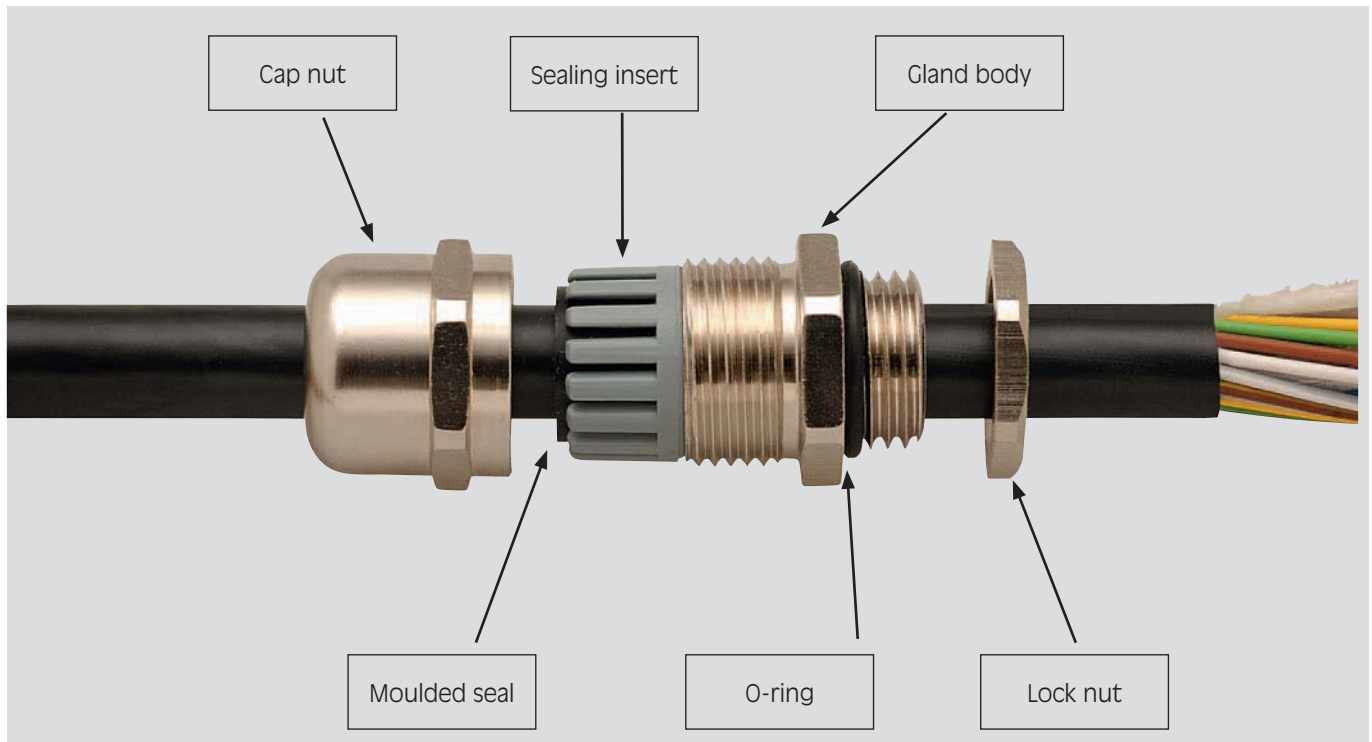
| Part no. | Size | Inner Ø mm | Boring mm | Boring spacing mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|------------|-----------|-------------------|------|------------------------------------|-----------|------------|
|          |      |            |           |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93715    | 16   | 23,0       | 4,5       | 40                | 25   | o. r.                              | o. r.     | o. r.      |
| 93716    | 21   | 29,0       | 4,5       | 50                | 25   | o. r.                              | o. r.     | o. r.      |
| 93717    | 29   | 37,5       | 4,5       | 60                | 25   | o. r.                              | o. r.     | o. r.      |
| 93718    | 36   | 47,5       | 4,5       | 70                | 25   | o. r.                              | o. r.     | o. r.      |
| 93719    | 48   | 60,0       | 4,5       | 80                | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# Brass cable glands



## Cable gland

Cap nut and gland body are made from nickel-plated brass. These glands are used for those standard applications where metal glands are needed.

The terminal insert is made from polyamide PA6.

The moulded seal is made from CR.

The O-ring is made from NBR.

The lock nuts are made from nickel-plated brass.

## Lock nut

## Accessories

Accessories suitable for use with the brass cable glands:

- Lock nuts
- Adapters
- Extenders
- Reducers

Accessories suitable for use with all cable glands:

- Sealing plugs
- Multiple sealing inserts / lock bolts
- O-rings
- Connection thread gaskets
- Blind plates

# Cable glands made of brass for standard applications

## Seal with clamping plates

Series HELUTOP® HT

Standard

**HELUTOP® HT-MS** ..... 86

Dust protection / sealing

**HELUTOP® Sealing inserts** ..... 88

Multiple sealing inserts

**HELUTOP® HT-MFDE** ..... 88

**Sealing billets** ..... 88

Series HSK

Standard

**HSK-MS** ..... 89

Long threaded connection

**HSK-MS-L** ..... 91

Kink protection

**HSK-MS-B** ..... 92

## Seal with insert

Series HELUTOP® HT

Strain relief class B

**HELUTOP® HT-MS Plus** ..... 93

**HELUTOP® HT-MS c Plus** ..... 94

Series UNI-DICHT

Standard

**UNI-DICHT-MS** ..... 95

With pre-assembled multiple sealing inserts

**UNI-DICHT-MFD-MS** ..... 97

Gland body

**UNI-DICHT-VK-MS** ..... 99

Sealing inserts

**UNI-DICHT sealing insert, closed** ..... 100

**UNI-DICHT sealing insert, single** ..... 100

**UNI-DICHT ZUG** Sealing insert for high strain relief ..... 100

**UNI-DICHT ZUG Sealing insert silicone** ..... 100

**UNI-DICHT MFDE** Multiple sealing insert ..... 100

**Sealing billets** ..... 101

For ASI-bus line

**UNI-DICHT-ASI-MS** ..... 102

**UNI-DICHT sealing insert** for ASI-bus line ..... 102

Series KVA

Standard

**KVA-MS** ..... 103

With pre-assembled multiple sealing inserts

**KVA-MFD-MS** ..... 105

Gland body

**KVA-VK-MS** ..... 107

Sealing inserts

**KVA sealing insert, closed** ..... 108

**KVA sealing insert, single** ..... 109

**KVA MFDE** Multiple sealing insert ..... 110

**Sealing billets** ..... 111

for ASI-bus line

**KVA-ASI-MS** ..... 112

**KVA sealing insert** for ASI-bus line ..... 113



# Cable glands made of brass for standard applications

## Series KVA-XXL

For particularly large cable diameters

|                                              |     |
|----------------------------------------------|-----|
| <b>KVA-XXL-MS</b> Cable gland .....          | 114 |
| <b>KVA-XXL-VK-MS</b> Gland body .....        | 115 |
| <b>KVA-XXL sealing insert</b> , single ..... | 116 |

## Series SD

Standard

|                 |     |
|-----------------|-----|
| <b>SD</b> ..... | 117 |
|-----------------|-----|

For particularly large cable diameters

|                     |     |
|---------------------|-----|
| <b>SD-XXL</b> ..... | 118 |
|---------------------|-----|

## Conventional design

Cable gland according to DIN

|                  |     |
|------------------|-----|
| <b>STS</b> ..... | 119 |
| <b>STV</b> ..... | 120 |
| <b>STR</b> ..... | 121 |

Flat cable gland

|                    |     |
|--------------------|-----|
| <b>STS-F</b> ..... | 122 |
|--------------------|-----|

Strain relief gland

|                  |     |
|------------------|-----|
| <b>ZE</b> .....  | 123 |
| <b>ZES</b> ..... | 124 |
| <b>ZEI</b> ..... | 125 |

## Thread adapter

Adapter

|                                |     |
|--------------------------------|-----|
| <b>Adapter</b> hexagonal ..... | 126 |
| <b>Adapter</b> round .....     | 128 |

Enhancement

|                       |     |
|-----------------------|-----|
| <b>EW</b> round ..... | 130 |
|-----------------------|-----|

Reducers

|                           |     |
|---------------------------|-----|
| <b>RE</b> hexagonal ..... | 131 |
| <b>RE</b> round .....     | 133 |

## Accessories / Parts

Counter nut

|                 |     |
|-----------------|-----|
| <b>KM</b> ..... | 134 |
|-----------------|-----|

Screw plug

|                   |     |
|-------------------|-----|
| <b>VS</b> .....   | 136 |
| <b>VS-O</b> ..... | 137 |

Reinforced wall sealing

|                      |     |
|----------------------|-----|
| <b>O-ring</b> .....  | 138 |
| <b>AGDR-PE</b> ..... | 138 |

Dust protection / sealing

|                   |     |
|-------------------|-----|
| <b>BL-H</b> ..... | 138 |
| <b>BL-W</b> ..... | 138 |

Sealing insert

|                                    |     |
|------------------------------------|-----|
| <b>Incision sealing ring</b> ..... | 138 |
|------------------------------------|-----|

Elbow

|                  |     |
|------------------|-----|
| <b>WV</b> .....  | 139 |
| <b>WVF</b> ..... | 140 |

Fastening

|                 |     |
|-----------------|-----|
| <b>BW</b> ..... | 141 |
|-----------------|-----|



## HELUTOP® HT-MS

The nickel-coated brass cable gland.

### Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Clamp: Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)  
O-ring: NBR

### Properties

- Optimum strain relief through clamping plates
- Easy to assemble
- Large clamping areas

### Note

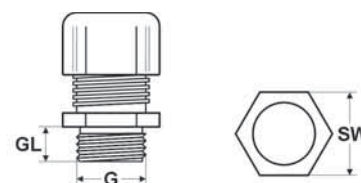
Details on the individual tests appear in section "Technical Information".

### Technical data

Protection class: IP 68 - 5 bar / IP 69K

Temperature range: -40°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90760    | M12 x 1,5  | 3,0 - 6,5            | 6,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 99960    | M16 x 1,5  | 5,0 - 10,0           | 7,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90762    | M20 x 1,5  | 6,0 - 12,0           | 8,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99961    | M25 x 1,5  | 11,0 - 17,0          | 8,0              | 27              | 25   | o. r.                              | o. r.     | o. r.      |
| 94624    | M32 x 1,5  | 15,0 - 21,0          | 8,0              | 34              | 20   | o. r.                              | o. r.     | o. r.      |
| 99962    | M40 x 1,5  | 19,0 - 28,0          | 9,0              | 43              | 5    | o. r.                              | o. r.     | o. r.      |
| 99963    | M50 x 1,5  | 30,0 - 38,0          | 9,0              | 58              | 5    | o. r.                              | o. r.     | o. r.      |
| 90767    | M63 x 1,5  | 34,0 - 44,0          | 14,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |
| 906199   | M63 x 1,5  | 44,0 - 55,0          | 10,0             | 75              | 5    | o. r.                              | o. r.     | o. r.      |

### metric thread - with reducing seal

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903560   | M12 x 1,5  | 2,0 - 5,0            | 6,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 903561   | M16 x 1,5  | 3,0 - 7,0            | 7,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 903562   | M20 x 1,5  | 5,0 - 9,0            | 8,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 903563   | M25 x 1,5  | 9,0 - 13,0           | 8,0              | 27              | 25   | o. r.                              | o. r.     | o. r.      |
| 903564   | M32 x 1,5  | 11,0 - 15,5          | 8,0              | 34              | 20   | o. r.                              | o. r.     | o. r.      |
| 903565   | M40 x 1,5  | 16,0 - 23,0          | 9,0              | 43              | 5    | o. r.                              | o. r.     | o. r.      |
| 903566   | M50 x 1,5  | 25,0 - 31,0          | 9,0              | 58              | 5    | o. r.                              | o. r.     | o. r.      |
| 903567   | M63 x 1,5  | 29,0 - 35,0          | 14,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# HELUTOP® HT-MS cable gland



## PG thread

| Part no. | Size | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|          | PG   |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90750    | 7    | 3,0 - 6,5                  | 5,0                    | 14                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90751    | 9    | 4,0 - 8,0                  | 6,0                    | 17                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90752    | 11   | 5,0 - 10,0                 | 6,0                    | 20                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90753    | 13,5 | 6,0 - 12,0                 | 6,5                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90754    | 16   | 10,0 - 14,0                | 6,5                    | 24                    | 25   | O. r.                              | O. r.     | O. r.      |
| 90755    | 21   | 13,0 - 18,0                | 7,0                    | 30                    | 25   | O. r.                              | O. r.     | O. r.      |
| 90756    | 29   | 18,0 - 25,0                | 8,0                    | 40                    | 20   | O. r.                              | O. r.     | O. r.      |
| 90757    | 36   | 22,0 - 32,0                | 9,0                    | 50                    | 5    | O. r.                              | O. r.     | O. r.      |
| 90758    | 42   | 32,0 - 38,0                | 14,0                   | 58                    | 5    | O. r.                              | O. r.     | O. r.      |
| 90759    | 48   | 37,0 - 44,0                | 14,0                   | 64                    | 5    | O. r.                              | O. r.     | O. r.      |

## NPT thread

| Part no. | Size | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|          | NPT  |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99965    | 3/8" | 5,0 - 10,0                 | 15,0                   | 20                    | 50   | O. r.                              | O. r.     | O. r.      |
| 99966    | 1/2" | 6,0 - 12,0                 | 15,0                   | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 99967    | 3/4" | 13,0 - 18,0                | 15,0                   | 27                    | 25   | O. r.                              | O. r.     | O. r.      |
| 99968    | 1"   | 18,0 - 25,0                | 17,0                   | 34                    | 10   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# HELUTOP® sealing inserts, multiple sealing inserts, sealing billets



## Sealing billets

for empty penetrations.

confer page 31



## UNI-DICHT sealing insert, closed

Closed inserts made by TPE-V. For use with UNI-DICHT gland bodies made by polyamide or by brass.

confer page 53



## HELUTOP® HT-MFDE

for HELUTOP® HT gland shells

confer page 30



## HSK-MS

The cable gland to meet stringent requirements in technology

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

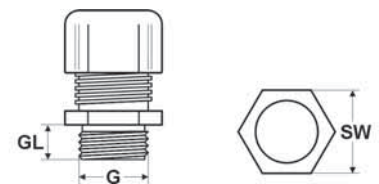
Brass, nickel plated  
Clamp: Polyamide  
Moulded seal: NBR  
O-ring: NBR

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98285    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90292    | M16 x 1,5  | 4,0 - 8,0            | 6,0              | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 98033    | M16 x 1,5  | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90293    | M20 x 1,5  | 6,0 - 12,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98034    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90294    | M25 x 1,5  | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90295    | M32 x 1,5  | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90296    | M40 x 1,5  | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90297    | M50 x 1,5  | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90298    | M63 x 1,5  | 37,0 - 44,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

## metric thread - with reducing seal

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98035    | M12 x 1,5  | 2,0 - 5,0            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 98036    | M16 x 1,5  | 2,0 - 6,0            | 6,0              | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 98038    | M20 x 1,5  | 5,0 - 9,0            | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98040    | M25 x 1,5  | 9,0 - 16,0           | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 98041    | M32 x 1,5  | 13,0 - 20,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 98042    | M40 x 1,5  | 20,0 - 26,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 98043    | M50 x 1,5  | 25,0 - 31,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 98044    | M63 x 1,5  | 29,0 - 35,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# HSK-MS cable gland



## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90300    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90301    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 90302    | 11      | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90303    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90304    | 16      | 10,0 - 14,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90305    | 21      | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90306    | 29      | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90307    | 36      | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90308    | 42      | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90309    | 48      | 37,0 - 44,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread - with reducing seal

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99208    | 7       | 2,0 - 5,0            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 99209    | 9       | 2,0 - 6,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 99210    | 11      | 3,0 - 7,0            | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 99211    | 13,5    | 5,0 - 9,0            | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99212    | 16      | 7,0 - 12,0           | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 99213    | 21      | 9,0 - 16,0           | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 99214    | 29      | 13,0 - 20,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 99215    | 36      | 20,0 - 26,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 99216    | 42      | 25,0 - 31,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 99217    | 48      | 29,0 - 35,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91845    | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 91846    | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |
| 91847    | 3/4"     | 13,0 - 18,0          | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 91848    | 1"       | 18,0 - 25,0          | 19,0             | 40              | 25   | o. r.                              | o. r.     | o. r.      |

## NPT thread - with reducing seal

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96678    | 3/8"     | 2,0 - 6,0            | 15,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 97103    | 1/2"     | 5,0 - 9,0            | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |
| 97661    | 3/4"     | 9,0 - 16,0           | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 97662    | 1"       | 13,0 - 20,0          | 19,0             | 40              | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HSK-MS-L cable gland

long thread



## HSK-MS-L

With long threaded connection

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Material

Brass, nickel plated  
Clamp: Polyamide  
Moulded seal: NBR  
O-ring: NBR

## Technical data

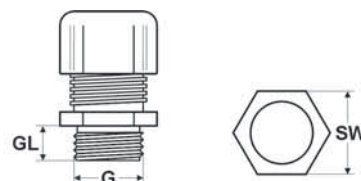
Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -40°C up to +100°C

Test standard: EN50262

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91720    | M12 x 1,5  | 3,0 - 6,5            | 10,0             | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 91721    | M16 x 1,5  | 4,0 - 8,0            | 10,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 94559    | M20 x 1,5  | 10,0 - 14,0          | 10,0             | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 903527   | M25 x 1,5  | 13,0 - 18,0          | 12,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 93539    | M32 x 1,5  | 18,0 - 25,0          | 12,0             | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 91725    | M40 x 1,5  | 20,0 - 26,0          | 15,0             | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 91726    | M50 x 1,5  | 25,0 - 31,0          | 15,0             | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 91727    | M63 x 1,5  | 29,0 - 35,0          | 15,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

### metric thread - with reducing seal

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91722    | M20 x 1,5  | 5,0 - 9,0            | 10,0             | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 91723    | M25 x 1,5  | 9,0 - 16,0           | 12,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 91724    | M32 x 1,5  | 13,0 - 20,0          | 12,0             | 40              | 25   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90310    | 7       | 3,0 - 6,5            | 10,0             | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90311    | 9       | 4,0 - 8,0            | 10,0             | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 90312    | 11      | 5,0 - 10,0           | 10,0             | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90313    | 13,5    | 6,0 - 12,0           | 10,0             | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90314    | 16      | 10,0 - 14,0          | 10,0             | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90315    | 21      | 13,0 - 18,0          | 12,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90316    | 29      | 18,0 - 25,0          | 12,0             | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90317    | 36      | 22,0 - 32,0          | 15,0             | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90318    | 42      | 32,0 - 38,0          | 15,0             | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90319    | 48      | 37,0 - 44,0          | 15,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSK-MS-B cable gland

anti-kink



RoHS

## HSK-MS-B

With anti-bend spirals

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated

Clamp: Polyamide PA 6

Moulded seal: NBR

O-ring: NBR

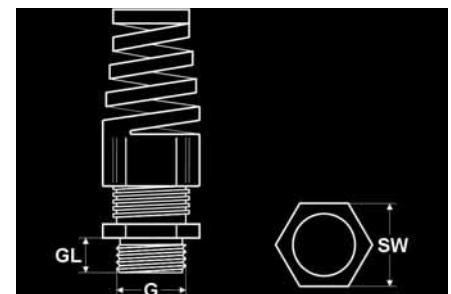
Kinking protection spring: Stainless steel  
(1.4310)

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92917    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 92918    | M16 x 1,5  | 4,0 - 8,0            | 6,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 92919    | M16 x 1,5  | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 92920    | M20 x 1,5  | 6,0 - 12,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 92921    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 25   | o. r.                              | o. r.     | o. r.      |
| 92922    | M25 x 1,5  | 13,0 - 18,0          | 7,0              | 30              | 20   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92911    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 92912    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 92913    | 11      | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 92914    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 92915    | 16      | 10,0 - 14,0          | 6,5              | 24              | 25   | o. r.                              | o. r.     | o. r.      |
| 92916    | 21      | 13,0 - 18,0          | 7,0              | 30              | 20   | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92923    | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 92924    | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |
| 92925    | 3/4"     | 13,0 - 18,0          | 13,0             | 33              | 20   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOP® HT-MS Plus cable gland

for increased strain relief



new

## HELUTOP® HT-MS Plus

The nickel-coated brass cable gland for very high density and strain relief.

### Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Moulded seal: NBR  
O-ring: NBR

### Properties

- Optimum strain relief through clamping plates (strain relief B to EN 50262 over the entire clamping region)
- Easy to assemble
- Large clamping areas

### Note

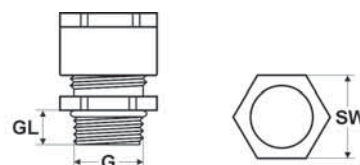
For rotating the cap nut use tool. Note tightening torque!  
Details on the individual tests appear in section "Technical Information".

### Technical data

Protection class: IP 68 - 40 bar / IP 69K

Temperature range: -40°C up to +120°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905720   | M16 x 1,5  | grey                  | 4,0 - 11,0           | 8,0              | 21              | 100  | o. r.                              | o. r.     | o. r.      |
| 905721   | M20 x 1,5  | grey                  | 5,0 - 13,0           | 10,0             | 24              | 100  | o. r.                              | o. r.     | o. r.      |
| 905722   | M25 x 1,5  | grey                  | 6,5 - 15,5           | 10,0             | 28              | 50   | o. r.                              | o. r.     | o. r.      |
| 905723   | M32 x 1,5  | grey                  | 10,0 - 20,0          | 10,0             | 30              | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOP® HT-MS c Plus cable gland

for increased strain relief, chromated



## HELUTOP® HT-MS c Plus

The black-chromated brass cable gland for very high density and strain relief.

### Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

### Material

Brass  
Moulded seal: NBR  
O-ring: NBR

### Properties

- Optimum strain relief through clamping plates (strain relief B to EN 50262 over the entire clamping region)
- Easy to assemble
- Large clamping areas

### Note

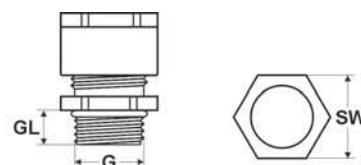
For rotating the cap nut use tool. Note tightening torque!  
Details on the individual tests appear in section "Technical Information".

### Technical data

Protection class: IP 68 - 40 bar / IP 69K

Temperature range: -40°C up to +120°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905724   | M16 x 1,5  | grey                  | 4,0 - 11,0           | 8,0              | 21              | 100  | o. r.                              | o. r.     | o. r.      |
| 905725   | M20 x 1,5  | grey                  | 5,0 - 13,0           | 9,0              | 24              | 100  | o. r.                              | o. r.     | o. r.      |
| 905726   | M25 x 1,5  | grey                  | 6,5 - 15,5           | 10,0             | 28              | 50   | o. r.                              | o. r.     | o. r.      |
| 905727   | M25 x 1,5  | grey                  | 10,0 - 20,0          | 10,0             | 30              | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## UNI-DICHT-MS

Sealing cable gland. Brass, nickel coated with colour-coded inserts made by TPE.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet technology

## Material

Brass, nickel plated  
Moulded seal: TPE

## Properties

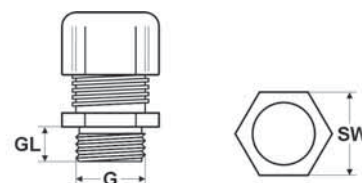
- Large-area cable sealing
- Easy to assemble
- Large clamping areas

## Technical data

Protection class: IP 68 - 10 bar

Temperature range: -40°C up to +130°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size<br>Metr. | Sealing<br>insert<br>colour | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------------|-----------------------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|          |               |                             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904061   | M12 x 1,5     | yellow/short                | 4,0 - 6,5                  | 5,0                    | 14                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904062   | M16 x 1,5     | yellow                      | 4,0 - 6,5                  | 6,0                    | 18                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904063   | M16 x 1,5     | grey                        | 5,0 - 8,0                  | 6,0                    | 18                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904064   | M16 x 1,5     | black                       | 6,5 - 9,5                  | 6,0                    | 18                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904065   | M20 x 1,5     | yellow                      | 4,0 - 6,5                  | 6,5                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904066   | M20 x 1,5     | grey                        | 5,0 - 8,0                  | 6,5                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904067   | M20 x 1,5     | black                       | 6,5 - 9,5                  | 6,5                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904068   | M20 x 1,5     | green                       | 7,0 - 10,5                 | 6,5                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904069   | M20 x 1,5     | red                         | 9,0 - 13,0                 | 6,5                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904070   | M25 x 1,5     | yellow                      | 4,0 - 6,5                  | 7,5                    | 28                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904071   | M25 x 1,5     | grey                        | 5,0 - 8,0                  | 7,5                    | 28                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904072   | M25 x 1,5     | black                       | 6,5 - 9,5                  | 7,5                    | 28                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904073   | M25 x 1,5     | green                       | 7,0 - 10,5                 | 7,5                    | 28                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904074   | M25 x 1,5     | red                         | 9,0 - 13,0                 | 7,5                    | 28                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904075   | M25 x 1,5     | white                       | 11,5 - 15,5                | 7,5                    | 28                    | 50   | o. r.                              | o. r.     | o. r.      |
| 904076   | M32 x 1,5     | green                       | 7,0 - 10,5                 | 8,0                    | 35                    | 25   | o. r.                              | o. r.     | o. r.      |
| 904077   | M32 x 1,5     | red                         | 9,0 - 13,0                 | 8,0                    | 35                    | 25   | o. r.                              | o. r.     | o. r.      |
| 904078   | M32 x 1,5     | white                       | 11,5 - 15,5                | 8,0                    | 35                    | 25   | o. r.                              | o. r.     | o. r.      |
| 904079   | M32 x 1,5     | blue                        | 14,0 - 18,0                | 8,0                    | 35                    | 25   | o. r.                              | o. r.     | o. r.      |
| 904080   | M32 x 1,5     | brown                       | 17,0 - 20,5                | 8,0                    | 35                    | 25   | o. r.                              | o. r.     | o. r.      |
| 904081   | M40 x 1,5     | blue                        | 14,0 - 18,0                | 8,0                    | 43                    | 10   | o. r.                              | o. r.     | o. r.      |
| 904082   | M40 x 1,5     | brown                       | 17,0 - 20,5                | 8,0                    | 43                    | 10   | o. r.                              | o. r.     | o. r.      |
| 904083   | M40 x 1,5     | orange                      | 20,0 - 25,0                | 8,0                    | 43                    | 10   | o. r.                              | o. r.     | o. r.      |
| 904084   | M40 x 1,5     | light yellow                | 24,0 - 28,0                | 8,0                    | 43                    | 10   | o. r.                              | o. r.     | o. r.      |
| 904085   | M50 x 1,5     | anthracite                  | 27,0 - 32,0                | 10,0                   | 54                    | 5    | o. r.                              | o. r.     | o. r.      |
| 904086   | M50 x 1,5     | light blue                  | 29,0 - 34,0                | 10,0                   | 54                    | 5    | o. r.                              | o. r.     | o. r.      |
| 904087   | M50 x 1,5     | pink                        | 32,0 - 36,0                | 10,0                   | 54                    | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# UNI-DICHT-MS cable gland



## PG thread

| Part no. | Size PG | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|---------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904088   | 7       | yellow                | 4,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 904089   | 9       | yellow                | 4,0 - 6,5            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 904090   | 9       | grey                  | 5,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 904091   | 9       | black                 | 6,5 - 9,5            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 904092   | 11      | yellow                | 4,0 - 6,5            | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 904093   | 11      | grey                  | 5,0 - 8,0            | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 904094   | 11      | black                 | 6,5 - 9,5            | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 904095   | 11      | green                 | 7,0 - 10,5           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 904096   | 13,5    | yellow                | 4,0 - 6,5            | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904097   | 13,5    | grey                  | 5,0 - 8,0            | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904098   | 13,5    | black                 | 6,5 - 9,5            | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904099   | 13,5    | green                 | 7,0 - 10,5           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904100   | 13,5    | red                   | 9,0 - 13,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904101   | 16      | yellow                | 4,0 - 6,5            | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904102   | 16      | grey                  | 5,0 - 8,0            | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904103   | 16      | black                 | 6,5 - 9,5            | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904104   | 16      | green                 | 7,0 - 10,5           | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904105   | 16      | red                   | 9,0 - 13,0           | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904106   | 16      | white                 | 11,5 - 15,5          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904107   | 21      | green                 | 7,0 - 10,5           | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 904108   | 21      | red                   | 9,0 - 13,0           | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 904109   | 21      | white                 | 11,5 - 15,5          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 904110   | 21      | blue                  | 14,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 904111   | 21      | brown                 | 17,0 - 20,5          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 904112   | 29      | blue                  | 14,0 - 18,0          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 904113   | 29      | brown                 | 17,0 - 20,5          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 904114   | 29      | orange                | 20,0 - 25,0          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 904115   | 29      | light yellow          | 24,0 - 28,0          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 904116   | 36      | anthracite            | 27,0 - 32,0          | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 904117   | 36      | light blue            | 29,0 - 34,0          | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 904118   | 36      | pink                  | 32,0 - 36,0          | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 904119   | 42      | white                 | 36,0 - 40,0          | 10,0             | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 904120   | 48      | white                 | 39,0 - 44,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# UNI-DICHT-MFD-MS cable gland

with multiple sealing inserts



## UNI-DICHT-MFD-MS

Sealing cable gland made of brass with multiple sealing inserts made by TPE.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Moulded seal: TPE

### Properties

- Large-area cable seal
- Easy to assemble

### Note

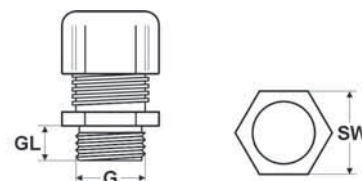
Protection classification IP 68, subject to the bore diameter in the sealing insert area and cable diameter being identical.

### Technical data

Protection class: IP 65

Temperature range: -40°C up to +130°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Number holes x cable-Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|---------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                           |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904125   | M16 x 1,5  | 2 x 1,2                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904126   | M16 x 1,5  | 2 x 3,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 905024   | M16 x 1,5  | 3 x 3,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904127   | M16 x 1,5  | 4 x 3,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904128   | M16 x 1,5  | 2 x 4,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904129   | M16 x 1,5  | 1 x 5,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904130   | M20 x 1,5  | 6 x 2,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904131   | M20 x 1,5  | 2 x 2,3                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904132   | M20 x 1,5  | 6 x 2,5                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904133   | M20 x 1,5  | 2 x 3,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904134   | M20 x 1,5  | 3 x 3,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904135   | M20 x 1,5  | 2 x 5,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904136   | M25 x 1,5  | 7 x 2,0                   | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 904137   | M25 x 1,5  | 2 x 4,0                   | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 904138   | M25 x 1,5  | 4 x 4,0                   | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 904139   | M25 x 1,5  | 6 x 4,0                   | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 904140   | M25 x 1,5  | 2 x 6,0                   | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 904141   | M25 x 1,5  | 3 x 7,0                   | 9,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 904142   | M32 x 1,5  | 21 x 2,0                  | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904143   | M32 x 1,5  | 8 x 3,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904144   | M32 x 1,5  | 6 x 4,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904145   | M32 x 1,5  | 8 x 4,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904146   | M32 x 1,5  | 4 x 5,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904147   | M32 x 1,5  | 4 x 6,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904148   | M32 x 1,5  | 6 x 6,5                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904149   | M32 x 1,5  | 3 x 7,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904150   | M32 x 1,5  | 4 x 8,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904151   | M32 x 1,5  | 2 x 9,0                   | 11,0             | 36              | 25   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# UNI-DICHT-MFD-MS cable gland



with multiple sealing inserts

## metric thread

| Part no. | Size Metr. | Number holes x cable-Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|---------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                           |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904152   | M40 x 1,5  | 6 x 6,0                   | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904153   | M40 x 1,5  | 10 x 6,0                  | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904154   | M40 x 1,5  | 4 x 6,5                   | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904155   | M40 x 1,5  | 6 x 8,0                   | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904156   | M40 x 1,5  | 4 x 9,0                   | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904157   | M40 x 1,5  | 5 x 9,0                   | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904158   | M40 x 1,5  | 5 x 10,0                  | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904159   | M40 x 1,5  | 2 x 11,0                  | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904160   | M50 x 1,5  | 15 x 5,0                  | 14,0             | 55              | 5    | o. r.                              | o. r.     | o. r.      |
| 904161   | M50 x 1,5  | 8 x 9,0                   | 14,0             | 55              | 5    | o. r.                              | o. r.     | o. r.      |
| 904162   | M50 x 1,5  | 3 x 10,0                  | 14,0             | 55              | 5    | o. r.                              | o. r.     | o. r.      |
| 904163   | M50 x 1,5  | 2 x 15,0                  | 14,0             | 55              | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Number holes x cable-Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|---------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                           |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904164   | 9       | 2 x 1,2                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904165   | 9       | 2 x 3,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904166   | 9       | 4 x 3,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904167   | 9       | 2 x 4,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904168   | 9       | 1 x 5,0                   | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904169   | 11      | 6 x 2,0                   | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904170   | 11      | 2 x 2,3                   | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904171   | 11      | 6 x 2,5                   | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904172   | 11      | 2 x 3,0                   | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904173   | 11      | 3 x 3,0                   | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904174   | 11      | 2 x 5,0                   | 9,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904175   | 13,5    | 3 x 2,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904176   | 13,5    | 10 x 2,0                  | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904177   | 13,5    | 2 x 3,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904178   | 13,5    | 3 x 3,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904179   | 13,5    | 6 x 3,5                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904180   | 13,5    | 2 x 5,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904181   | 13,5    | 2 x 6,0                   | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904182   | 16      | 7 x 2,0                   | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904183   | 16      | 2 x 4,0                   | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904184   | 16      | 4 x 4,0                   | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904185   | 16      | 6 x 4,0                   | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904186   | 16      | 2 x 6,0                   | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904187   | 16      | 3 x 7,0                   | 9,0              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904188   | 21      | 21 x 2,0                  | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904189   | 21      | 8 x 3,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904190   | 21      | 6 x 4,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904191   | 21      | 8 x 4,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904192   | 21      | 4 x 5,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904193   | 21      | 4 x 6,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904194   | 21      | 6 x 6,5                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904195   | 21      | 3 x 7,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904196   | 21      | 4 x 8,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904197   | 21      | 2 x 9,0                   | 11,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 904198   | 29      | 6 x 6,0                   | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904199   | 29      | 10 x 6,0                  | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904200   | 29      | 4 x 6,5                   | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904201   | 29      | 6 x 8,0                   | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904202   | 29      | 4 x 9,0                   | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904203   | 29      | 5 x 9,0                   | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904204   | 29      | 5 x 10,0                  | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904205   | 29      | 2 x 11,0                  | 11,0             | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904206   | 36      | 8 x 9,0                   | 14,0             | 53              | 10   | o. r.                              | o. r.     | o. r.      |
| 904207   | 36      | 15 x 5,0                  | 14,0             | 53              | 10   | o. r.                              | o. r.     | o. r.      |
| 904208   | 36      | 3 x 10,0                  | 14,0             | 53              | 10   | o. r.                              | o. r.     | o. r.      |
| 904209   | 36      | 2 x 15,0                  | 14,0             | 53              | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UNI-DICHT-VK-MS gland body



## UNI-DICHT gland body MS

Gland body made of brass for populating with inserts made by TPE.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated

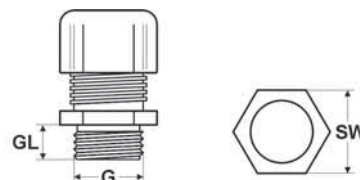
### Note

Gland body M20x1.5 (part No. 904212) is populated by inserts PG11; part No. 9042313 is used with inserts PG13.5.  
Part Nos. 904215 and 904225 cap aperture 18mm.  
Part Nos. 904216 and 904226 cap aperture 21mm.

### Technical data

Temperature range: up to +200°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904210   | M12 x 1,5  | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 904211   | M16 x 1,5  | 6,0              | 18              | 50   | o. r.                              | o. r.     | o. r.      |
| 904212   | M20 x 1,5  | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904213   | M20 x 1,5  | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904214   | M25 x 1,5  | 7,5              | 28              | 50   | o. r.                              | o. r.     | o. r.      |
| 904215   | M32 x 1,5  | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 904216   | M32 x 1,5  | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 904217   | M40 x 1,5  | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904218   | M50 x 1,5  | 10,0             | 54              | 5    | o. r.                              | o. r.     | o. r.      |
| 904219   | M63 x 1,5  | 10,0             | 68              | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904220   | 7       | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 904221   | 9       | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 904222   | 11      | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 904223   | 13,5    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904224   | 16      | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904225   | 21      | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 904226   | 21      | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 904227   | 29      | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 904228   | 36      | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 904229   | 42      | 10,0             | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 904230   | 48      | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UNI-DICHT sealing inserts



## UNI-DICHT sealing insert, closed

Closed inserts made by TPE-V. For use with UNI-DICHT gland bodies made by polyamide or by brass.

confer page 53



## UNI-DICHT sealing insert, standard

Colour coded sealing inserts made by TPE for use with UNI-DICHT gland bodies made by polyamide or by brass.

confer page 54



## UNI-DICHT ZUG

Colour coded sealing inserts made by TPE for increased strain relief. For populating UNI-DICHT body glands made of plastic or brass.

confer page 57



## UNI-DICHT sealing insert silicone

Sealing inserts made by silicone for populating of UNI-DICHT gland bodies. For use in chemical industry and at high temperatures.

confer page 168



## UNI-DICHT multiple sealing insert

Multiple sealing inserts made by TPE for populating the UNI-DICHT gland bodies made by polyamide or by brass.

confer page 59

# Sealing billets



**Sealing billets**  
for empty penetrations.  
confer page 31

# UNI-DICHT-ASI-MS cable gland

profile fits to ASI-bus line



## UNI-DICHT-ASI-MS

Sealing cable gland. Nickel-coated brass with inserts made by TPE-V. Profile fitting to ASI- bus line.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Moulded seal: TPE-V  
UV-resistant

### Properties

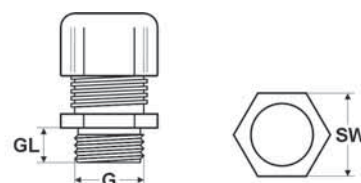
- Large-area cable sealing
- Easy to assemble

### Technical data

Protection class: IP 68 - 10 bar

Temperature range: -40°C up to +135°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904121   | M20 x 1,5  | grey, left            | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904122   | M20 x 1,5  | grey, right           | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904123   | 13,5    | grey, left            | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904124   | 13,5    | grey, right           | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## Matching accessory



### UNI-DICHT Sealing insert ASI

Sealing inserts made of TPE-V for populating UNI-DICHT gland bodies made of polyamide or of brass. Profile fits to ASI- bus line.

confer page 62



# KVA-MS cable gland



## KVA-MS

Sealing cable gland  
Nickel-coated brass with colour-coded inserts.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Moulded seal: Soft PVC  
O-ring: NBR

## Properties

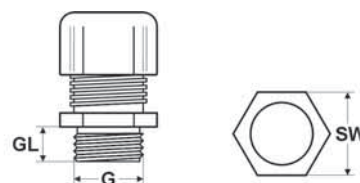
- Large-area cable sealing
- Easy to assemble
- Large clamping areas

## Technical data

Protection class: IP 68 - 10 bar

Temperature range: -20°C up to +105°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90800    | M12 x 1,5  | yellow                | 4,0 - 6,5            | 6,0              | 14              | 100  | o. r.                              | o. r.     | o. r.      |
| 90801    | M16 x 1,5  | yellow                | 4,0 - 6,5            | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 90802    | M16 x 1,5  | grey                  | 5,0 - 8,0            | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 90803    | M16 x 1,5  | black                 | 6,5 - 9,5            | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 90804    | M20 x 1,5  | yellow                | 4,0 - 6,5            | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90805    | M20 x 1,5  | grey                  | 5,0 - 8,0            | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90807    | M20 x 1,5  | black                 | 6,5 - 9,5            | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90808    | M20 x 1,5  | green                 | 7,0 - 10,5           | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90809    | M20 x 1,5  | red                   | 9,0 - 13,0           | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90811    | M25 x 1,5  | yellow                | 4,0 - 6,5            | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 90812    | M25 x 1,5  | grey                  | 5,0 - 8,0            | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 90813    | M25 x 1,5  | black                 | 6,5 - 9,5            | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 90814    | M25 x 1,5  | green                 | 7,0 - 10,5           | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 90815    | M25 x 1,5  | red                   | 9,0 - 13,0           | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 90816    | M25 x 1,5  | white                 | 11,5 - 15,5          | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 90817    | M32 x 1,5  | green                 | 7,0 - 10,5           | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 90818    | M32 x 1,5  | red                   | 9,0 - 13,0           | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 90819    | M32 x 1,5  | white                 | 11,5 - 15,5          | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 90820    | M32 x 1,5  | blue                  | 14,0 - 18,0          | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 90821    | M32 x 1,5  | brown                 | 17,0 - 21,0          | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 90822    | M40 x 1,5  | blue                  | 14,0 - 18,0          | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 90823    | M40 x 1,5  | brown                 | 17,0 - 21,0          | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 90824    | M40 x 1,5  | orange                | 20,0 - 25,0          | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 90825    | M40 x 1,5  | light yellow          | 24,0 - 28,0          | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 90826    | M50 x 1,5  | anthracite            | 27,0 - 32,0          | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 90827    | M50 x 1,5  | light blue            | 29,0 - 34,0          | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 90828    | M50 x 1,5  | pink                  | 32,0 - 37,0          | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# KVA-MS cable gland

## PG thread

| Part no. | Size PG | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|---------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90354    | 7       | yellow                | 4,0 - 6,5            | 5,0              | 14              | 100  | o. r.                              | o. r.     | o. r.      |
| 90355    | 9       | yellow                | 4,0 - 6,5            | 6,0              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 90356    | 9       | grey                  | 5,0 - 8,0            | 6,0              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 90357    | 9       | black                 | 6,5 - 9,5            | 6,0              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 96149    | 11      | yellow                | 4,0 - 6,5            | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90358    | 11      | grey                  | 5,0 - 8,0            | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90359    | 11      | black                 | 6,5 - 9,5            | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90360    | 11      | green                 | 7,0 - 10,5           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 97119    | 13,5    | yellow                | 4,0 - 6,5            | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 97120    | 13,5    | grey                  | 5,0 - 8,0            | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90361    | 13,5    | black                 | 6,5 - 9,5            | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90362    | 13,5    | green                 | 7,0 - 10,5           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90363    | 13,5    | red                   | 9,0 - 13,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90364    | 13,5    | white                 | 11,0 - 15,5          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 91974    | 16      | yellow                | 4,0 - 6,5            | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 92093    | 16      | grey                  | 5,0 - 8,0            | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90365    | 16      | black                 | 6,5 - 9,5            | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90366    | 16      | green                 | 7,0 - 10,5           | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90367    | 16      | red                   | 9,0 - 13,0           | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90368    | 16      | white                 | 11,5 - 15,5          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90369    | 21      | green                 | 7,0 - 10,5           | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90370    | 21      | red                   | 9,0 - 13,0           | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90371    | 21      | white                 | 11,5 - 15,5          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90372    | 21      | blue                  | 14,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90373    | 21      | brown                 | 17,0 - 21,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90374    | 29      | blue                  | 14,0 - 18,0          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 90375    | 29      | brown                 | 17,0 - 21,0          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 90376    | 29      | orange                | 20,0 - 25,0          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 96526    | 29      | light yellow          | 24,0 - 28,0          | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 90390    | 36      | anthracite            | 27,0 - 32,0          | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90391    | 36      | light blue            | 29,0 - 34,0          | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90392    | 36      | pink                  | 32,0 - 37,0          | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90393    | 42      | white                 | 36,0 - 41,0          | 10,0             | 60              | 10   | o. r.                              | o. r.     | o. r.      |
| 90394    | 48      | white                 | 39,0 - 45,0          | 10,0             | 65              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KVA-MFD-MS cable gland

with multiple sealing inserts



## KVA-MFD-MS

Sealing cable gland with multiple sealing inserts.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Moulded seal: Soft PVC  
O-ring: NBR

### Properties

- Large-area cable sealing
- Easy to assemble

### Note

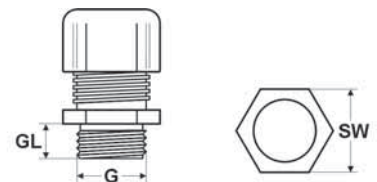
IP 68, subject to the bore diameter in the sealing insert area and cable diameter being identical.

### Technical data

Protection class: IP 68 - 10 bar

Temperature range: -20°C up to +105°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Number holes x cable-Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|---------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                           |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93400    | M16 x 1,5  | 2 x 1,0                   | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 93401    | M16 x 1,5  | 2 x 3,0                   | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 93402    | M16 x 1,5  | 4 x 3,0                   | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 93403    | M16 x 1,5  | 2 x 4,0                   | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 93404    | M16 x 1,5  | 1 x 5,0                   | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 93405    | M20 x 1,5  | 6 x 2,0                   | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 93406    | M20 x 1,5  | 2 x 2,3                   | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 93407    | M20 x 1,5  | 6 x 2,5                   | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 93408    | M20 x 1,5  | 2 x 3,0                   | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 93409    | M20 x 1,5  | 3 x 3,0                   | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 93410    | M20 x 1,5  | 2 x 5,0                   | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 93411    | M25 x 1,5  | 7 x 2,0                   | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 93412    | M25 x 1,5  | 2 x 4,0                   | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 93413    | M25 x 1,5  | 4 x 4,0                   | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 93414    | M25 x 1,5  | 6 x 4,0                   | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 93415    | M25 x 1,5  | 2 x 6,0                   | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 93416    | M25 x 1,5  | 3 x 7,0                   | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 93417    | M32 x 1,5  | 21 x 2,0                  | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93418    | M32 x 1,5  | 8 x 3,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93419    | M32 x 1,5  | 6 x 4,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93420    | M32 x 1,5  | 8 x 4,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93421    | M32 x 1,5  | 4 x 5,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93422    | M32 x 1,5  | 4 x 6,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93423    | M32 x 1,5  | 6 x 6,5                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93424    | M32 x 1,5  | 3 x 7,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93425    | M32 x 1,5  | 4 x 8,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 93426    | M32 x 1,5  | 2 x 9,0                   | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# KVA-MFD-MS cable gland

with multiple sealing inserts

## metric thread

| Part no. | Size Metr. | Number holes x cable-Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|---------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                           |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93429    | M40 x 1,5  | 6 x 6,0                   | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93427    | M40 x 1,5  | 10 x 6,0                  | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93428    | M40 x 1,5  | 4 x 6,5                   | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93430    | M40 x 1,5  | 6 x 8,0                   | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93431    | M40 x 1,5  | 4 x 9,0                   | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93432    | M40 x 1,5  | 5 x 9,0                   | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93433    | M40 x 1,5  | 5 x 10,0                  | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93434    | M40 x 1,5  | 2 x 11,0                  | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 93436    | M50 x 1,5  | 15 x 5,0                  | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 93435    | M50 x 1,5  | 8 x 9,0                   | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 93437    | M50 x 1,5  | 3 x 10,0                  | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 93438    | M50 x 1,5  | 2 x 15,0                  | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Number holes x cable-Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|---------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                           |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92094    | 9       | 2 x 1,0                   | 6,0              | 17 / 20         | 100  | o. r.                              | o. r.     | o. r.      |
| 92039    | 9       | 2 x 3,0                   | 6,0              | 17 / 20         | 100  | o. r.                              | o. r.     | o. r.      |
| 92041    | 9       | 4 x 3,0                   | 6,0              | 17 / 20         | 100  | o. r.                              | o. r.     | o. r.      |
| 92042    | 9       | 2 x 4,0                   | 6,0              | 17 / 20         | 100  | o. r.                              | o. r.     | o. r.      |
| 92043    | 9       | 1 x 5,0                   | 6,0              | 17 / 20         | 100  | o. r.                              | o. r.     | o. r.      |
| 92044    | 11      | 6 x 2,0                   | 6,0              | 20 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 92045    | 11      | 2 x 2,3                   | 6,0              | 20 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 92046    | 11      | 6 x 2,5                   | 6,0              | 20 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 92047    | 11      | 2 x 3,0                   | 6,0              | 20 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 92048    | 11      | 3 x 3,0                   | 6,0              | 20 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 96881    | 11      | 2 x 5,0                   | 6,0              | 20 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 92052    | 13,5    | 3 x 2,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92053    | 13,5    | 10 x 2,0                  | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92054    | 13,5    | 2 x 3,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92055    | 13,5    | 3 x 3,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92095    | 13,5    | 6 x 3,5                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92096    | 13,5    | 2 x 5,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92057    | 13,5    | 2 x 6,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92058    | 16      | 7 x 2,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92097    | 16      | 2 x 4,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92060    | 16      | 4 x 4,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92061    | 16      | 6 x 4,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92062    | 16      | 2 x 6,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 96434    | 16      | 3 x 7,0                   | 6,5              | 24 / 30         | 50   | o. r.                              | o. r.     | o. r.      |
| 92064    | 21      | 21 x 2,0                  | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 92065    | 21      | 8 x 3,0                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 92066    | 21      | 6 x 4,0                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 92067    | 21      | 8 x 4,0                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 96956    | 21      | 4 x 5,0                   | 7,0              | 30 / 40         | 50   | o. r.                              | o. r.     | o. r.      |
| 92069    | 21      | 4 x 6,0                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 92068    | 21      | 6 x 6,5                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 92070    | 21      | 3 x 7,0                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 92072    | 21      | 4 x 8,0                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 92098    | 21      | 2 x 9,0                   | 7,0              | 30 / 40         | 25   | o. r.                              | o. r.     | o. r.      |
| 96430    | 29      | 6 x 6,0                   | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 97327    | 29      | 10 x 6,0                  | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 92099    | 29      | 4 x 6,5                   | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 96710    | 29      | 6 x 8,0                   | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 92074    | 29      | 4 x 9,0                   | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 96564    | 29      | 5 x 9,0                   | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 92075    | 29      | 5 x 10,0                  | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 92076    | 29      | 2 x 11,0                  | 8,0              | 40              | 10   | o. r.                              | o. r.     | o. r.      |
| 92077    | 36      | 15 x 5,0                  | 8,5              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 96336    | 36      | 8 x 9,0                   | 8,5              | 50              | 25   | o. r.                              | o. r.     | o. r.      |
| 92079    | 36      | 3 x 10,0                  | 8,5              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 96397    | 36      | 2 x 15,0                  | 8,5              | 50              | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KVA-VK-MS body gland



## KVA gland body MS

Gland made of brass for populating with KVA and multiple sealing inserts.

## Material

Brass, nickel plated  
O-ring: NBR

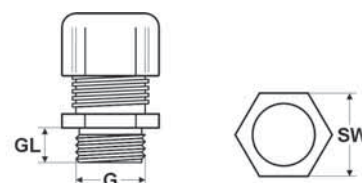
## Technical data

Temperature range: -30°C up to +100°C

Test standard: EN50262

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size<br>Metr. | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|          |               |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90788    | M12 x 1,5     | 6,0                    | 14                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90789    | M16 x 1,5     | 6,5                    | 17                    | 100  | o. r.                              | o. r.     | o. r.      |
| 90790    | M20 x 1,5     | 7,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 90792    | M25 x 1,5     | 7,5                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91367    | M32 x 1,5     | 8,0                    | 35                    | 25   | o. r.                              | o. r.     | o. r.      |
| 90794    | M40 x 1,5     | 8,0                    | 43                    | 10   | o. r.                              | o. r.     | o. r.      |
| 90795    | M50 x 1,5     | 10,0                   | 54                    | 10   | o. r.                              | o. r.     | o. r.      |
| 90796    | M63 x 1,5     | 10,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size<br>PG | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|          |            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96033    | 7          | 5,0                    | 14                    | 100  | o. r.                              | o. r.     | o. r.      |
| 96034    | 9          | 6,0                    | 17                    | 100  | o. r.                              | o. r.     | o. r.      |
| 96035    | 11         | 6,0                    | 20                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96036    | 13,5       | 6,5                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96037    | 16         | 6,5                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96038    | 21         | 7,0                    | 30                    | 25   | o. r.                              | o. r.     | o. r.      |
| 96039    | 29         | 8,0                    | 40                    | 10   | o. r.                              | o. r.     | o. r.      |
| 96040    | 36         | 9,0                    | 50                    | 10   | o. r.                              | o. r.     | o. r.      |
| 96041    | 42         | 10,0                   | 57                    | 5    | o. r.                              | o. r.     | o. r.      |
| 96042    | 48         | 10,0                   | 64                    | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KVA sealing insert

closed



## KVA sealing inserts closed

Colour-coded sealing inserts for populating the KVA glands.

## Material

Soft PVC

## Technical data

Temperature range: -20°C up to +105°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

| Part no. | Size PG | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |         |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97087    | 9       | M16 x 1,5   | white                 | -                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97088    | 11      | -           | white                 | -                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97089    | 13,5    | M20 x 1,5   | white                 | -                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97090    | 16      | M25 x 1,5   | white                 | -                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97091    | 21      | M32 x 1,5   | white                 | -                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97092    | 29      | M40 x 1,5   | white                 | -                    | 25   | o. r.                              | o. r.     | o. r.      |
| 97093    | 36      | M50 x 1,5   | white                 | -                    | 25   | o. r.                              | o. r.     | o. r.      |
| 97094    | 42      | -           | white                 | -                    | 10   | o. r.                              | o. r.     | o. r.      |
| 97095    | 48      | M63 x 1,5   | white                 | -                    | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# KVA sealing insert

## standard



### KVA standard sealing inserts

Colour-coded sealing inserts for populating KVA gland bodies.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Soft PVC

### Note

Thread size M12x1,5:

\*\* Part No. 90291 only for KVA **polyamide** cable glands

\* Part No. 90299 only for KVA **brass** cable glands

### Technical data

Temperature range: -20°C up to +105°C

| Part no. | Size PG | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |         |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96005    | 7       | -           | yellow                | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 90299*   | -       | M12 x 1,5   | yellow                | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 90291**  | -       | M12 x 1,5   | yellow                | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 96006    | 9       | M16 x 1,5   | yellow                | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 96007    | 9       | M16 x 1,5   | grey                  | 5,0 - 8,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 96008    | 9       | M16 x 1,5   | black                 | 6,5 - 9,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 96387    | 11      | M20 x 1,5   | yellow                | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 96009    | 11      | M20 x 1,5   | grey                  | 5,0 - 8,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 96010    | 11      | M20 x 1,5   | black                 | 6,5 - 9,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 96011    | 11      | M20 x 1,5   | green                 | 7,0 - 10,5           | 100  | o. r.                              | o. r.     | o. r.      |
| 96389    | 13,5    | M20 x 1,5   | yellow                | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 96388    | 13,5    | M20 x 1,5   | grey                  | 5,0 - 8,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 96012    | 13,5    | M20 x 1,5   | black                 | 6,5 - 9,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 96013    | 13,5    | M20 x 1,5   | green                 | 7,0 - 10,5           | 100  | o. r.                              | o. r.     | o. r.      |
| 96014    | 13,5    | M20 x 1,5   | red                   | 9,0 - 13,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 96391    | 16      | M25 x 1,5   | yellow                | 4,0 - 6,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 96390    | 16      | M25 x 1,5   | grey                  | 5,0 - 8,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 96016    | 16      | M25 x 1,5   | black                 | 6,5 - 9,5            | 50   | o. r.                              | o. r.     | o. r.      |
| 96017    | 16      | M25 x 1,5   | green                 | 7,0 - 10,5           | 50   | o. r.                              | o. r.     | o. r.      |
| 96018    | 16      | M25 x 1,5   | red                   | 9,0 - 13,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 96019    | 16      | M25 x 1,5   | white                 | 11,5 - 15,5          | 50   | o. r.                              | o. r.     | o. r.      |
| 96020    | 21      | M32 x 1,5   | green                 | 7,0 - 10,5           | 50   | o. r.                              | o. r.     | o. r.      |
| 96021    | 21      | M32 x 1,5   | red                   | 9,0 - 13,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 96022    | 21      | M32 x 1,5   | white                 | 11,5 - 15,5          | 50   | o. r.                              | o. r.     | o. r.      |
| 96023    | 21      | M32 x 1,5   | blue                  | 14,0 - 18,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 96024    | 21      | M32 x 1,5   | brown                 | 17,0 - 21,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 96025    | 29      | M40 x 1,5   | blue                  | 14,0 - 18,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 96026    | 29      | M40 x 1,5   | brown                 | 17,0 - 21,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 96027    | 29      | M40 x 1,5   | orange                | 20,0 - 25,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 96393    | 29      | M40 x 1,5   | light yellow          | 24,0 - 28,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 96028    | 36      | M50 x 1,5   | anthracite            | 27,0 - 32,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 96029    | 36      | M50 x 1,5   | light blue            | 29,0 - 34,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 96030    | 36      | M50 x 1,5   | pink                  | 32,0 - 37,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 96031    | 42      | M50 x 1,5   | white                 | 36,0 - 41,0          | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KVA MFDE multiple sealing insert



## KVA multiple sealing inserts

Multiple sealing inserts for populating KVA gland bodies.

## Material

Soft PVC

## Technical data

Temperature range: -20°C up to +105°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

| Part no. | Size PG | Size metric | Insert colour | Number x Ø borehole mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|---------------|------------------------|------|------------------------------------|-----------|------------|
|          |         |             |               |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96050    | 9       | M16 x 1,5   | white         | 2 x 1,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96051    | 9       | M16 x 1,5   | white         | 2 x 3,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96052    | 9       | M16 x 1,5   | white         | 4 x 3,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96053    | 9       | M16 x 1,5   | white         | 2 x 4,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96054    | 9       | M16 x 1,5   | white         | 1 x 5,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96055    | 11      | M20 x 1,5   | white         | 6 x 2,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96058    | 11      | M20 x 1,5   | white         | 2 x 3,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96059    | 11      | M20 x 1,5   | white         | 3 x 3,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96485    | 11      | M20 x 1,5   | white         | 2 x 4,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 97277    | 11      | M20 x 1,5   | white         | 4 x 4,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96060    | 11      | M20 x 1,5   | white         | 2 x 5,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96062    | 13,5    | M20 x 1,5   | white         | 3 x 2,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96063    | 13,5    | M20 x 1,5   | white         | 10 x 2,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 96064    | 13,5    | M20 x 1,5   | white         | 2 x 3,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96065    | 13,5    | M20 x 1,5   | white         | 3 x 3,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96621    | 13,5    | M20 x 1,5   | white         | 3 x 4,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96067    | 13,5    | M20 x 1,5   | white         | 2 x 5,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96068    | 13,5    | M20 x 1,5   | white         | 2 x 6,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 96069    | 16      | M25 x 1,5   | white         | 7 x 2,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96438    | 16      | M25 x 1,5   | white         | 3 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 97512    | 16      | M25 x 1,5   | white         | 5 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 97513    | 16      | M25 x 1,5   | white         | 7 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96436    | 16      | M25 x 1,5   | white         | 8 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96070    | 16      | M25 x 1,5   | white         | 2 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 97472    | 16      | M25 x 1,5   | white         | 3 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96071    | 16      | M25 x 1,5   | white         | 4 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 97473    | 16      | M25 x 1,5   | white         | 5 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96072    | 16      | M25 x 1,5   | white         | 6 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96073    | 16      | M25 x 1,5   | white         | 2 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96723    | 16      | M25 x 1,5   | white         | 3 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96443    | 16      | M25 x 1,5   | white         | 4 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96074    | 16      | M25 x 1,5   | white         | 3 x 7,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96075    | 16      | M25 x 1,5   | white         | 2 x 8,0                | 50   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# KVA MFDE multiple sealing insert

| Part no. | Size PG | Size metric | Insert colour | Number x Ø borehole mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|---------------|------------------------|------|------------------------------------|-----------|------------|
|          |         |             |               |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96076    | 21      | M32 x 1,5   | white         | 21 x 2,0               | 50   | o. r.                              | o. r.     | o. r.      |
| 96077    | 21      | M32 x 1,5   | white         | 8 x 3,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96078    | 21      | M32 x 1,5   | white         | 6 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96079    | 21      | M32 x 1,5   | white         | 8 x 4,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96080    | 21      | M32 x 1,5   | white         | 4 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96926    | 21      | M32 x 1,5   | white         | 8 x 5,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96714    | 21      | M32 x 1,5   | white         | 6 x 5,5                | 25   | o. r.                              | o. r.     | o. r.      |
| 96439    | 21      | M32 x 1,5   | white         | 2 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96081    | 21      | M32 x 1,5   | white         | 4 x 6,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96230    | 21      | M32 x 1,5   | white         | 4 x 6,5                | 50   | o. r.                              | o. r.     | o. r.      |
| 96231    | 21      | M32 x 1,5   | white         | 5 x 6,5                | 50   | o. r.                              | o. r.     | o. r.      |
| 96082    | 21      | M32 x 1,5   | white         | 6 x 6,5                | 50   | o. r.                              | o. r.     | o. r.      |
| 96083    | 21      | M32 x 1,5   | white         | 3 x 7,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96441    | 21      | M32 x 1,5   | white         | 4 x 7,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96445    | 21      | M32 x 1,5   | white         | 2 x 8,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96638    | 21      | M32 x 1,5   | white         | 3 x 8,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96084    | 21      | M32 x 1,5   | white         | 4 x 8,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96085    | 21      | M32 x 1,5   | white         | 2 x 9,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96232    | 21      | M32 x 1,5   | white         | 3 x 9,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 96088    | 29      | M40 x 1,5   | white         | 6 x 6,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96086    | 29      | M40 x 1,5   | white         | 10 x 6,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 96087    | 29      | M40 x 1,5   | white         | 4 x 6,5                | 25   | o. r.                              | o. r.     | o. r.      |
| 97289    | 29      | M40 x 1,5   | white         | 8 x 6,5                | 25   | o. r.                              | o. r.     | o. r.      |
| 96238    | 29      | M40 x 1,5   | white         | 7 x 7,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96089    | 29      | M40 x 1,5   | white         | 6 x 8,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96090    | 29      | M40 x 1,5   | white         | 4 x 9,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96091    | 29      | M40 x 1,5   | white         | 5 x 9,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96092    | 29      | M40 x 1,5   | white         | 5 x 10,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 96093    | 29      | M40 x 1,5   | white         | 2 x 11,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 97448    | 29      | M40 x 1,5   | white         | 3 x 11,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 96237    | 29      | M40 x 1,5   | white         | 2 x 13,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 96095    | 36      | M50 x 1,5   | white         | 15 x 5,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 97853    | 36      | M50 x 1,5   | white         | 13 x 7,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 96235    | 36      | M50 x 1,5   | white         | 7 x 9,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96094    | 36      | M50 x 1,5   | white         | 8 x 9,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 96096    | 36      | M50 x 1,5   | white         | 3 x 10,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 96236    | 36      | M50 x 1,5   | white         | 4 x 13,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 96097    | 36      | M50 x 1,5   | white         | 2 x 15,0               | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## Matching accessory



### Sealing billets

for empty penetrations.

confer page 31

# KVA-ASI-MS cable gland

to ASI-bus-line



## KVA-ASI-MS

Sealing cable gland made by brass with PVC inserts. Profile fits to ASI bus-line.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

Brass  
Moulded seal: Soft PVC  
UV-resistant

## Properties

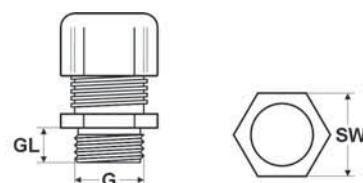
- Large-area cable sealing
- Easy to assemble

## Technical data

Protection class: IP 68 - 10 bar

Temperature range: -20°C up to +105°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904686   | M20 x 1,5  | black, left           | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904687   | M20 x 1,5  | white, right          | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Sealing insert colour | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-----------------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                       |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97390    | 13,5    | black, left           | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 97408    | 13,5    | white, right          | -                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KVA sealing insert

to ASI-bus-line



**KVA sealing insert ASI**  
 Sealing inserts made of PVC for populating KVA gland bodies made of polyamide or of brass. Profile fits to ASI- bus line.

- Application**
- Plant and machine construction
  - Robot construction
  - Automation technology
  - Installation technology
  - Control cabinet construction

- Material**  
 Soft PVC
- Properties**
- Large-area cable sealing
  - Easy to assemble

**Technical data**  
 Temperature range: -20°C up to +105°C

| Part no. | Size PG | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |         |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97389    | 11      | M20 x 1,5   | black/left-hand       | -                    | 100  | o. r.                              | o. r.     | o. r.      |
| 97396    | 11      | M20 x 1,5   | white/right-hand      | -                    | 100  | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# KVA-XXL-MS cable gland

for particularly large cable diameters



## KVA-XXL-MS

Cable gland made of brass for very large cable diameters.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Moulded seal: TPE-V  
O-ring: NBR

## Properties

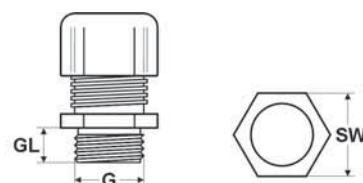
- Large-area cable sealing
- Easy to assemble
- Large clamping range

## Technical data

Protection class: IP 68 - 10 bar

Temperature range: -40°C up to +135°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905957   | M63 x 1,5  | 42,0 - 48,0          | 10,0             | 70              | 1    | o. r.                              | o. r.     | o. r.      |
| 93569    | M63 x 1,5  | 45,0 - 51,0          | 10,0             | 70              | 1    | o. r.                              | o. r.     | o. r.      |
| 92779    | M72 x 2,0  | 46,0 - 52,0          | 15,0             | 80              | 1    | o. r.                              | o. r.     | o. r.      |
| 93727    | M72 x 2,0  | 51,0 - 55,0          | 15,0             | 80              | 1    | o. r.                              | o. r.     | o. r.      |
| 905958   | M75 x 1,5  | 51,0 - 55,0          | 15,0             | 80              | 1    | o. r.                              | o. r.     | o. r.      |
| 905959   | M75 x 1,5  | 54,0 - 58,0          | 15,0             | 80              | 1    | o. r.                              | o. r.     | o. r.      |
| 93105    | M80 x 2,0  | 58,0 - 64,0          | 15,0             | 95              | 1    | o. r.                              | o. r.     | o. r.      |
| 905960   | M80 x 2,0  | 63,0 - 70,0          | 15,0             | 95              | 1    | o. r.                              | o. r.     | o. r.      |
| 905961   | M90 x 2,0  | 69,0 - 75,0          | 20,0             | 110             | 1    | o. r.                              | o. r.     | o. r.      |
| 905962   | M90 x 2,0  | 74,0 - 80,0          | 20,0             | 110             | 1    | o. r.                              | o. r.     | o. r.      |
| 905963   | M100 x 2,0 | 79,0 - 85,0          | 20,0             | 110             | 1    | o. r.                              | o. r.     | o. r.      |
| 905964   | M105 x 2,0 | 84,0 - 90,0          | 20,0             | 120             | 1    | o. r.                              | o. r.     | o. r.      |
| 905965   | M110 x 2,0 | 89,0 - 95,0          | 20,0             | 120             | 1    | o. r.                              | o. r.     | o. r.      |
| 905966   | M115 x 2,0 | 89,0 - 95,0          | 20,0             | 120             | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# KVA-XXL-VK-MS body gland

for particularly large cable diameter



## KVA-XXL-VK-MS

Gland body made of brass for populating with inserts for large cable diameters.

## Material

Brass, nickel plated  
O-ring: NBR

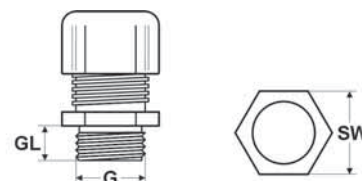
## Technical data

Temperature range: -30°C up to +100°C

Test standard: EN50262

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size<br>Metr. | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|          |               |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920144   | M72 x 2,0     | 8,0                    | 80                    | 1    | o. r.                              | o. r.     | o. r.      |
| 920145   | M75 x 1,5     | 8,0                    | 80                    | 1    | o. r.                              | o. r.     | o. r.      |
| 920146   | M80 x 2,0     | 8,0                    | 95                    | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KVA-XXL sealing insert standard

for particularly large cable diameters



## KVA-XXL Sealing inserts

Sealing inserts made by PVC for populating KVA-XXL-MS gland bodies. Used for large cable diameters.

## Material

Soft PVC

## Technical data

Temperature range: -20°C up to +105°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

| Part no. | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96032    | M63 x 1,5   | white                 | 39,0 - 45,0          | 1    | o. r.                              | o. r.     | o. r.      |
| 99434    | M72 x 2,0   | white                 | 45,0 - 51,0          | 1    | o. r.                              | o. r.     | o. r.      |
| 99435    | M72 x 2,0   | white                 | 51,0 - 55,0          | 1    | o. r.                              | o. r.     | o. r.      |
| 99436    | M75 x 1,5   | white                 | 51,0 - 55,0          | 1    | o. r.                              | o. r.     | o. r.      |
| 99437    | M75 x 1,5   | white                 | 54,0 - 58,0          | 1    | o. r.                              | o. r.     | o. r.      |
| 99438    | M80 x 2,0   | white                 | 58,0 - 64,0          | 1    | o. r.                              | o. r.     | o. r.      |
| 99439    | M80 x 2,0   | white                 | 63,0 - 70,0          | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## SD cable gland



### SD

The gas and water-tight gland. The finish, similar to that of an incision sealing ring, guarantees very large clamping areas.

### Application

- Plant and machine construction
- Automation and installation technology
- Vehicle construction and shipbuilding

### Material

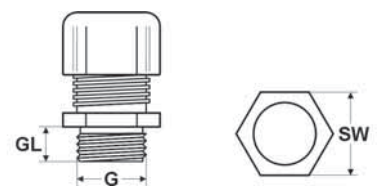
Brass, nickel plated  
Moulded seal: NBR  
O-ring: NBR

### Technical data

Protection class: IP 68 - 5 bar

Temperature range: -40°C up to +120°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98108    | M12 x 1,5  | 5,0 - 7,0            | 5,0              | 14              | 100  | o. r.                              | o. r.     | o. r.      |
| 98109    | M16 x 1,5  | 5,0 - 10,0           | 5,5              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 98110    | M20 x 1,5  | 8,0 - 14,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98111    | M25 x 1,5  | 12,0 - 19,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 98112    | M32 x 1,5  | 15,0 - 22,0          | 8,0              | 34              | 25   | o. r.                              | o. r.     | o. r.      |
| 98113    | M40 x 1,5  | 22,0 - 28,0          | 8,0              | 44              | 10   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90586    | 7       | 5,0 - 7,0            | 5,0              | 14              | 100  | o. r.                              | o. r.     | o. r.      |
| 90587    | 9       | 5,0 - 10,0           | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 90588    | 11      | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90589    | 13,5    | 9,0 - 14,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90590    | 16      | 10,0 - 15,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90591    | 21      | 12,0 - 19,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90592    | 29      | 22,0 - 28,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90593    | 36      | 28,0 - 36,0          | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90594    | 42      | 35,0 - 45,0          | 10,0             | 60              | 10   | o. r.                              | o. r.     | o. r.      |
| 90595    | 48      | 34,0 - 49,0          | 11,0             | 65              | 10   | o. r.                              | o. r.     | o. r.      |

### BSP thread

| Part no. | Size BSP | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90596    | G 3/8"   | 4,0 - 12,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90597    | G 1/2"   | 7,0 - 15,0           | 8,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90598    | G 3/4"   | 9,0 - 20,0           | 10,0             | 32              | 25   | o. r.                              | o. r.     | o. r.      |
| 90599    | G 1"     | 18,0 - 28,0          | 11,0             | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90600    | G 1 1/2" | 25,0 - 35,0          | 12,0             | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90601    | G 2"     | 34,0 - 49,0          | 12,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SD-XXL cable gland

for particularly large cable diameters



## SD-XXL

For very large cable diameters. The gas and water-tight gland. The finish, similar to that of an incision sealing ring, guarantees very large clamping areas.

## Material

Brass, nickel plated  
Moulded seal: NBR  
O-ring: NBR

## Properties

- Large-area cable sealing
- Easy to assemble
- Large clamping range

## Note

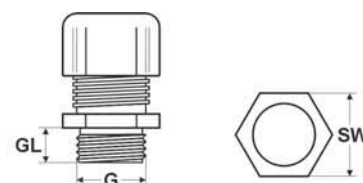
BSP-variant: Without O-ring at threaded connection. Sealing insert made by TPE.

## Technical data

Protection class: IP 68 - 10 bar

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905570   | M72 x 2,0  | 56,0 - 61,0          | 16,0             | 77              | 1    | o. r.                              | o. r.     | o. r.      |
| 905506   | M75 x 1,5  | 56,0 - 61,0          | 16,0             | 77              | 1    | o. r.                              | o. r.     | o. r.      |
| 905571   | M75 x 2,0  | 56,0 - 61,0          | 16,0             | 77              | 1    | o. r.                              | o. r.     | o. r.      |
| 905573   | M80 x 2,0  | 50,0 - 56,0          | 18,0             | 90              | 1    | o. r.                              | o. r.     | o. r.      |
| 905572   | M80 x 2,0  | 60,0 - 66,0          | 18,0             | 90              | 1    | o. r.                              | o. r.     | o. r.      |
| 905575   | M85 x 2,0  | 63,0 - 70,0          | 22,0             | 96              | 1    | o. r.                              | o. r.     | o. r.      |
| 905574   | M85 x 2,0  | 68,0 - 76,0          | 22,0             | 96              | 1    | o. r.                              | o. r.     | o. r.      |
| 905576   | M90 x 2,0  | 68,0 - 76,0          | 22,0             | 98 / 96         | 1    | o. r.                              | o. r.     | o. r.      |
| 905577   | M110 x 2,0 | 75,0 - 82,0          | 25,0             | 125 / 110       | 1    | o. r.                              | o. r.     | o. r.      |
| 905578   | M120 x 2,0 | 88,0 - 95,0          | 25,0             | 120 / 116       | 1    | o. r.                              | o. r.     | o. r.      |

## BSP thread

| Part no. | Size BSP | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90602    | G 2 1/2" | 48,0 - 55,0          | 18,0             | 90              | 1    | o. r.                              | o. r.     | o. r.      |
| 90603    | G 2 1/2" | 53,0 - 60,0          | 18,0             | 90              | 1    | o. r.                              | o. r.     | o. r.      |
| 90604    | G 3"     | 58,0 - 65,0          | 18,0             | 100             | 1    | o. r.                              | o. r.     | o. r.      |
| 90605    | G 3"     | 63,0 - 70,0          | 18,0             | 100             | 1    | o. r.                              | o. r.     | o. r.      |
| 90606    | G 4"     | 68,0 - 75,0          | 22,0             | 125             | 1    | o. r.                              | o. r.     | o. r.      |
| 90607    | G 4"     | 73,0 - 80,0          | 22,0             | 125             | 1    | o. r.                              | o. r.     | o. r.      |
| 90608    | G 4"     | 78,0 - 85,0          | 22,0             | 125             | 1    | o. r.                              | o. r.     | o. r.      |
| 90609    | G 4"     | 83,0 - 90,0          | 22,0             | 125             | 1    | o. r.                              | o. r.     | o. r.      |
| 93440    | G 5"     | 91,0 - 97,0          | 22,0             | 150             | 1    | o. r.                              | o. r.     | o. r.      |
| 93441    | G 5"     | 97,0 - 104,0         | 22,0             | 150             | 1    | o. r.                              | o. r.     | o. r.      |
| 93442    | G 5"     | 102,0 - 109,0        | 22,0             | 150             | 1    | o. r.                              | o. r.     | o. r.      |
| 93443    | G 5"     | 109,0 - 116,0        | 22,0             | 150             | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# STS cable gland to DIN

## hexagonal



### STS

The hexagonal brass gland to DIN 46320.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Moulded seal: NR  
Thrust rings: Galvanised steel

### Note

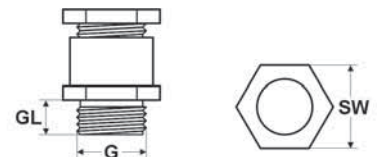
Protection classification IP 65 with additional O-ring mounted at the thread.

### Technical data

Protection class: IP 54

Temperature range: -20°C up to +60°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98098    | M12 x 1,5  | 4,0 - 6,0            | 5,0              | 14              | 100  | o. r.                              | o. r.     | o. r.      |
| 98099    | M16 x 1,5  | 8,0 - 10,0           | 5,0              | 18              | 100  | o. r.                              | o. r.     | o. r.      |
| 98100    | M20 x 1,5  | 8,0 - 10,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98101    | M20 x 1,5  | 10,0 - 12,0          | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98102    | M20 x 1,5  | 12,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 98103    | M25 x 1,5  | 17,0 - 19,0          | 7,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 98104    | M32 x 1,5  | 26,0 - 27,0          | 8,0              | 39              | 25   | o. r.                              | o. r.     | o. r.      |
| 98105    | M40 x 1,5  | 33,0 - 35,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 98106    | M50 x 1,5  | 39,0 - 41,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 98107    | M63 x 1,5  | 43,0 - 45,0          | 10,0             | 66              | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90540    | 7       | 6,0 - 8,0            | 5,0              | 14 / 13         | 50   | o. r.                              | o. r.     | o. r.      |
| 90541    | 9       | 8,0 - 10,0           | 6,0              | 17 / 15         | 50   | o. r.                              | o. r.     | o. r.      |
| 90542    | 11      | 10,0 - 12,0          | 6,0              | 20 / 18         | 50   | o. r.                              | o. r.     | o. r.      |
| 90543    | 13,5    | 12,0 - 14,0          | 6,5              | 22 / 20         | 50   | o. r.                              | o. r.     | o. r.      |
| 90544    | 16      | 14,0 - 16,0          | 6,5              | 24 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 90545    | 21      | 17,0 - 19,0          | 7,0              | 30 / 28         | 25   | o. r.                              | o. r.     | o. r.      |
| 90546    | 29      | 26,0 - 28,0          | 8,0              | 40 / 37         | 25   | o. r.                              | o. r.     | o. r.      |
| 90547    | 36      | 33,0 - 35,0          | 9,0              | 50 / 47         | 10   | o. r.                              | o. r.     | o. r.      |
| 90548    | 42      | 39,0 - 41,0          | 10,0             | 57 / 54         | 5    | o. r.                              | o. r.     | o. r.      |
| 90549    | 48      | 45,0 - 47,0          | 10,0             | 64 / 60         | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# STV cable gland to DIN

hexagonal - with incision sealing ring



## STV

The hexagonal brass gland with incision sealing ring to DIN 46320.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Moulded seal: cutable sealing ring (NR)  
Thrust rings: Galvanised steel

## Note

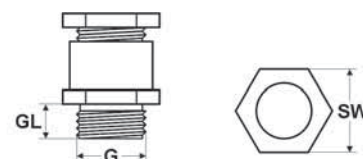
Protection classification IP 65 with additional O-ring mounted at the thread.

## Technical data

Protection class: IP 54

Temperature range: -30°C up to +80°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø incisions from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|--------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                                |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90090    | M16 x 1,5  | 5/7,5/10                       | 5,0              | 18              | 100  | o. r.                              | o. r.     | o. r.      |
| 90091    | M20 x 1,5  | 7,5/10/12,5                    | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90092    | M20 x 1,5  | 7,5/10/12,5/15                 | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90093    | M25 x 1,5  | 10/13/16/19                    | 6,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 90094    | M32 x 1,5  | 18/21/24/27                    | 6,0              | 39              | 25   | o. r.                              | o. r.     | o. r.      |
| 90095    | M40 x 1,5  | 24/27/30/33                    | 7,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90096    | M50 x 1,5  | 30/33/36/39                    | 8,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90097    | M63 x 1,5  | 36/39/42/45                    | 9,0              | 66              | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø incisions from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|--------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                                |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90550    | 9       | 5/7,5/10                       | 6,0              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 90551    | 11      | 7,5/10/12,5                    | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90552    | 13,5    | 7,5/10/12,5                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90553    | 16      | 7,5/10/12,5/15                 | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90554    | 21      | 10/13/16/19                    | 7,0              | 30              | 50   | o. r.                              | o. r.     | o. r.      |
| 90555    | 29      | 18/21/24/27                    | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90556    | 36      | 24/27/30/33                    | 9,0              | 50              | 20   | o. r.                              | o. r.     | o. r.      |
| 90557    | 42      | 30/33/36/39                    | 10,0             | 57              | 10   | o. r.                              | o. r.     | o. r.      |
| 90558    | 48      | 36/39/42/45                    | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# STR cable gland to DIN

round



## STR

The round brass gland to DIN 46320.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Moulded seal: NR

## Note

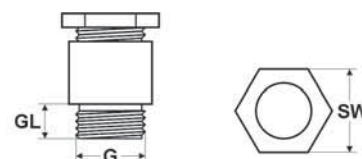
Protection classification IP 65 with additional  
O-ring mounted at the thread.

## Technical data

Protection class: IP 54

Temperature range: -30°C up to +80°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98088    | M12 x 1,5  | 4,0 - 6,0            | 5,0              | 13              | 100  | o. r.                              | o. r.     | o. r.      |
| 98089    | M16 x 1,5  | 8,0 - 10,0           | 5,0              | 15              | 100  | o. r.                              | o. r.     | o. r.      |
| 98090    | M20 x 1,5  | 8,0 - 10,0           | 6,0              | 18              | 50   | o. r.                              | o. r.     | o. r.      |
| 98091    | M20 x 1,5  | 10,0 - 12,0          | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 98092    | M20 x 1,5  | 12,0 - 14,0          | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98093    | M25 x 1,5  | 17,0 - 19,0          | 6,0              | 28              | 50   | o. r.                              | o. r.     | o. r.      |
| 98094    | M32 x 1,5  | 26,0 - 27,0          | 6,0              | 37              | 25   | o. r.                              | o. r.     | o. r.      |
| 98095    | M40 x 1,5  | 33,0 - 35,0          | 7,0              | 47              | 10   | o. r.                              | o. r.     | o. r.      |
| 98096    | M50 x 1,5  | 39,0 - 41,0          | 8,0              | 54              | 5    | o. r.                              | o. r.     | o. r.      |
| 98097    | M63 x 1,5  | 43,0 - 45,0          | 9,0              | 60              | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90530    | 7       | 4,0 - 6,0            | 5,0              | 13              | 50   | o. r.                              | o. r.     | o. r.      |
| 90531    | 9       | 8,0 - 10,0           | 6,0              | 15              | 50   | o. r.                              | o. r.     | o. r.      |
| 90532    | 11      | 8,0 - 10,0           | 6,0              | 18              | 50   | o. r.                              | o. r.     | o. r.      |
| 90533    | 13,5    | 10,0 - 12,0          | 6,5              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90534    | 16      | 12,0 - 14,0          | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90535    | 21      | 17,0 - 19,0          | 7,0              | 28              | 25   | o. r.                              | o. r.     | o. r.      |
| 90536    | 29      | 26,0 - 28,0          | 8,0              | 37              | 25   | o. r.                              | o. r.     | o. r.      |
| 90537    | 36      | 33,0 - 35,0          | 9,0              | 47              | 10   | o. r.                              | o. r.     | o. r.      |
| 90538    | 42      | 39,0 - 41,0          | 10,0             | 54              | 5    | o. r.                              | o. r.     | o. r.      |
| 90539    | 48      | 45,0 - 47,0          | 10,0             | 60              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# STS-F flat cable gland



## STS-F

The brass flat cable gland.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Moulded seal: SBR  
Thrust rings: Galvanised steel  
Thrust washers: Galvanised steel

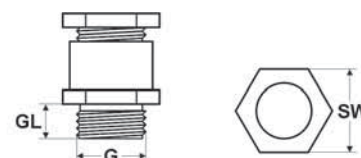
### Note

Protection classification IP 65 with an additional O-ring on the external thread

### Technical data

Protection class: IP 54

Temperature range: -30°C up to +80°C



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable thickness from / to mm | Cable width from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------------------------|--------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                              |                          |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94484    | M20 x 1,5  | 1,0 - 5,0                    | 3,0 - 16,0               | 6,0              | 24 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 94485    | M25 x 1,5  | 3,0 - 8,0                    | 9,0 - 21,0               | 7,0              | 30 / 28         | 50   | o. r.                              | o. r.     | o. r.      |
| 94486    | M32 x 1,5  | 4,0 - 11,5                   | 14,0 - 30,0              | 8,0              | 39 / 37         | 25   | o. r.                              | o. r.     | o. r.      |
| 94487    | M40 x 1,5  | 4,0 - 11,5                   | 24,0 - 40,0              | 8,0              | 50 / 47         | 10   | o. r.                              | o. r.     | o. r.      |
| 94488    | M50 x 1,5  | 5,0 - 12,0                   | 29,0 - 45,0              | 9,0              | 57 / 54         | 5    | o. r.                              | o. r.     | o. r.      |
| 94489    | M63 x 1,5  | 5,0 - 12,0                   | 34,0 - 50,0              | 10,0             | 66 / 60         | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Cable thickness from / to mm | Cable width from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|------------------------------|--------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                              |                          |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90100    | 16      | 1,0 - 5,0                    | 3,0 - 16,0               | 6,5              | 24 / 22         | 50   | o. r.                              | o. r.     | o. r.      |
| 90101    | 21      | 3,0 - 8,0                    | 9,0 - 21,0               | 7,0              | 30 / 28         | 50   | o. r.                              | o. r.     | o. r.      |
| 90102    | 29      | 4,0 - 11,5                   | 14,0 - 30,0              | 8,0              | 40 / 37         | 25   | o. r.                              | o. r.     | o. r.      |
| 90103    | 36      | 4,0 - 11,5                   | 24,0 - 40,0              | 9,0              | 50 / 47         | 20   | o. r.                              | o. r.     | o. r.      |
| 90104    | 42      | 5,0 - 12,0                   | 29,0 - 45,0              | 10,0             | 57 / 54         | 10   | o. r.                              | o. r.     | o. r.      |
| 90105    | 48      | 5,0 - 12,0                   | 34,0 - 50,0              | 10,0             | 64 / 60         | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



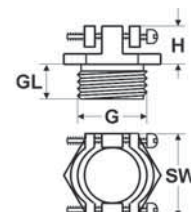
**ZE**  
For relieving strain on lines.

**Material**  
Brass, nickel plated

**Technical data**  
Temperature range: up to +200°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size  
H Height without thread

## metric thread

| Part no. | Size Metr. | Thread length mm | Spanner size mm | Height mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------------|-----------------|-----------|------|------------------------------------|-----------|------------|
|          |            |                  |                 |           |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905877   | M12 x 1,5  | 5,5              | 16              | 9,5       | 100  | o. r.                              | o. r.     | o. r.      |
| 905878   | M16 x 1,5  | 6,0              | 19              | 10,0      | 100  | o. r.                              | o. r.     | o. r.      |
| 905879   | M20 x 1,5  | 6,5              | 24              | 11,5      | 50   | o. r.                              | o. r.     | o. r.      |
| 905880   | M25 x 1,5  | 8,0              | 34              | 13,0      | 50   | o. r.                              | o. r.     | o. r.      |
| 905881   | M32 x 1,5  | 8,0              | 42              | 14,0      | 25   | o. r.                              | o. r.     | o. r.      |
| 905882   | M40 x 1,5  | 9,5              | 52              | 16,0      | 25   | o. r.                              | o. r.     | o. r.      |
| 905883   | M50 x 1,5  | 9,5              | 52              | 16,0      | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Thread length mm | Spanner size mm | Height mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|------------------|-----------------|-----------|------|------------------------------------|-----------|------------|
|          |         |                  |                 |           |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99049    | 7       | 5,5              | 16              | 9,3       | 100  | o. r.                              | o. r.     | o. r.      |
| 99050    | 9       | 6,0              | 19              | 10,6      | 100  | o. r.                              | o. r.     | o. r.      |
| 99051    | 11      | 6,0              | 22              | 10,7      | 100  | o. r.                              | o. r.     | o. r.      |
| 99052    | 13,5    | 6,5              | 24              | 11,3      | 50   | o. r.                              | o. r.     | o. r.      |
| 99053    | 16      | 6,5              | 26              | 11,8      | 50   | o. r.                              | o. r.     | o. r.      |
| 99054    | 21      | 7,5              | 33              | 13,3      | 50   | o. r.                              | o. r.     | o. r.      |
| 99055    | 29      | 8,0              | 42              | 13,8      | 25   | o. r.                              | o. r.     | o. r.      |
| 99056    | 36      | 9,5              | 52              | 15,8      | 10   | o. r.                              | o. r.     | o. r.      |
| 99057    | 42      | 10,0             | 59              | 16,3      | 10   | o. r.                              | o. r.     | o. r.      |
| 99058    | 48      | 11,0             | 64              | 16,3      | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# ZES cable gland

with strain relief and incision sealing ring



## ZES

The hexagonal brass strain relief gland with incision sealing ring.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

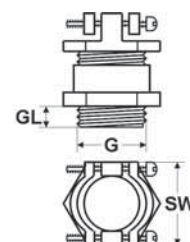
Brass, nickel plated  
Moulded seal: NBR  
Thrust rings: Galvanised steel

## Technical data

Protection class: IP 54

Temperature range: -20°C up to +60°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø incisions from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|--------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                                |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90275    | M12 x 1,5  | 5/7                            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90276    | M16 x 1,5  | 5,5/9                          | 5,0              | 18              | 50   | o. r.                              | o. r.     | o. r.      |
| 90278    | M20 x 1,5  | 7/10/13                        | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90279    | M20 x 1,5  | 9/11/13                        | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90280    | M25 x 1,5  | 11/14/17                       | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90281    | M32 x 1,5  | 19/21/24                       | 8,0              | 39              | 20   | o. r.                              | o. r.     | o. r.      |
| 90282    | M40 x 1,5  | 26/29/32                       | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90283    | M50 x 1,5  | 35/38/41                       | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90284    | M63 x 1,5  | 44/47/50                       | 10,0             | 66              | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø incisions from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|--------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                                |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90569    | 7       | 7                              | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90570    | 9       | 5/7,5/10                       | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 90571    | 11      | 7,5/10/12,5                    | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90572    | 13,5    | 7,5/10/12,5                    | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90573    | 16      | 7,5/10/12,5/15                 | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90574    | 21      | 10/13/16/19                    | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90575    | 29      | 18/21/24/27                    | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90576    | 36      | 24/27/30/33                    | 9,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90577    | 42      | 30/33/36/39                    | 10,0             | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90578    | 48      | 36/39/42/45                    | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



**ZEI**

Strain relief with female thread. For relieving strain on lines where protection tubes are used.

**Material**

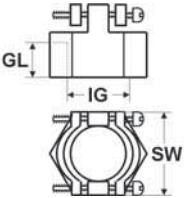
Brass, nickel plated

**Technical data**

Temperature range: up to +200°C

**Application**

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



**Dimensions**

- IG Thread size inside  
GL Thread length  
SW Spanner size

**PG thread - female**

| Part no. | Size PG | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94240    | 7       | 7,0              | 16              | 100  | o. r.                              | o. r.     | o. r.      |
| 94241    | 9       | 7,0              | 19              | 100  | o. r.                              | o. r.     | o. r.      |
| 94242    | 11      | 7,0              | 22              | 100  | o. r.                              | o. r.     | o. r.      |
| 94244    | 16      | 7,0              | 26              | 50   | o. r.                              | o. r.     | o. r.      |
| 94245    | 21      | 10,0             | 33              | 25   | o. r.                              | o. r.     | o. r.      |
| 94246    | 29      | 10,0             | 42              | 10   | o. r.                              | o. r.     | o. r.      |
| 94247    | 36      | 10,0             | 52              | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Adapter hexagonal



## Adapter hexagonal brass

Hexagonal adapters made by brass for solving the transition from PG to metric thread.

## Material

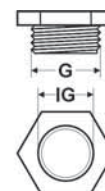
Brass, nickel plated

## Technical data

Temperature range: up to +200°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size outside  
IG Thread size inside  
GL Thread length  
SW Spanner size

## from metric to PG

| Part no. | Size metr. outside | Size PG inside | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |                    |                |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904296   | M16 x 1,5          | 7              | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 904297   | M20 x 1,5          | 7              | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904298   | M20 x 1,5          | 9              | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904299   | M25 x 1,5          | 9              | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904300   | M25 x 1,5          | 11             | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904301   | M25 x 1,5          | 13,5           | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904302   | M25 x 1,5          | 16             | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904303   | M32 x 1,5          | 13,5           | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 904304   | M32 x 1,5          | 16             | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 904305   | M32 x 1,5          | 21             | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 904306   | M40 x 1,5          | 16             | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904307   | M40 x 1,5          | 21             | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904308   | M50 x 1,5          | 21             | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 904309   | M50 x 1,5          | 29             | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 904310   | M63 x 1,5          | 29             | 10,0             | 65              | 5    | o. r.                              | o. r.     | o. r.      |
| 904311   | M63 x 1,5          | 36             | 10,0             | 65              | 5    | o. r.                              | o. r.     | o. r.      |
| 904312   | M63 x 1,5          | 42             | 10,0             | 65              | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request



# Adapter hexagonal

## from metric to PG - high-profile design

| Part no. | Size metr. outside | Size PG inside | Thread length mm | Spanner size mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|--------------------|----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |                    |                |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904313   | M12 x 1,5          | 7              | 5,0              | 14              | 100  | O. r.                              | O. r.     | O. r.      |
| 904314   | M12 x 1,5          | 9              | 6,0              | 17              | 100  | O. r.                              | O. r.     | O. r.      |
| 904315   | M16 x 1,5          | 9              | 6,0              | 18              | 100  | O. r.                              | O. r.     | O. r.      |
| 904316   | M16 x 1,5          | 11             | 5,0              | 20              | 100  | O. r.                              | O. r.     | O. r.      |
| 904317   | M20 x 1,5          | 11             | 6,0              | 22              | 100  | O. r.                              | O. r.     | O. r.      |
| 904318   | M20 x 1,5          | 13,5           | 6,5              | 22              | 100  | O. r.                              | O. r.     | O. r.      |
| 904319   | M20 x 1,5          | 16             | 6,5              | 24              | 100  | O. r.                              | O. r.     | O. r.      |
| 904320   | M25 x 1,5          | 21             | 7,0              | 30              | 50   | O. r.                              | O. r.     | O. r.      |
| 904321   | M32 x 1,5          | 29             | 8,0              | 40              | 25   | O. r.                              | O. r.     | O. r.      |
| 904322   | M40 x 1,5          | 29             | 8,0              | 43              | 25   | O. r.                              | O. r.     | O. r.      |
| 904323   | M40 x 1,5          | 36             | 9,0              | 50              | 25   | O. r.                              | O. r.     | O. r.      |
| 904324   | M50 x 1,5          | 36             | 10,0             | 54              | 10   | O. r.                              | O. r.     | O. r.      |
| 904325   | M50 x 1,5          | 42             | 10,0             | 57              | 10   | O. r.                              | O. r.     | O. r.      |
| 904326   | M63 x 1,5          | 48             | 10,0             | 66              | 5    | O. r.                              | O. r.     | O. r.      |

## from metric to NPT - high-profile design

| Part no. | Size metr. outside | Size NPT inside | Thread length mm | Spanner size mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|--------------------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |                    |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94166    | M16 x 1,5          | 1/2"            | 6,0              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 94167    | M20 x 1,5          | 1/2"            | 6,0              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 94168    | M25 x 1,5          | 1/2"            | 7,0              | 30              | 50   | O. r.                              | O. r.     | O. r.      |
| 94169    | M25 x 1,5          | 3/4"            | 7,0              | 30              | 50   | O. r.                              | O. r.     | O. r.      |

## from PG to metric

| Part no. | Size PG outside | Size metr. inside | Thread length mm | Spanner size mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|-----------------|-------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |                 |                   |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904327   | 13,5            | M16 x 1,5         | 6,5              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 904328   | 16              | M20 x 1,5         | 6,5              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 904329   | 21              | M25 x 1,5         | 7,0              | 30              | 25   | O. r.                              | O. r.     | O. r.      |
| 904330   | 29              | M32 x 1,5         | 8,0              | 40              | 10   | O. r.                              | O. r.     | O. r.      |
| 904331   | 36              | M40 x 1,5         | 9,0              | 50              | 10   | O. r.                              | O. r.     | O. r.      |

## from PG to metric - high profile design

| Part no. | Size PG outside | Size metr. inside | Thread length mm | Spanner size mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|-----------------|-------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |                 |                   |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904332   | 7               | M12 x 1,5         | 5,0              | 14              | 100  | O. r.                              | O. r.     | O. r.      |
| 904333   | 9               | M16 x 1,5         | 6,0              | 19              | 100  | O. r.                              | O. r.     | O. r.      |
| 904334   | 11              | M16 x 1,5         | 6,0              | 22              | 50   | O. r.                              | O. r.     | O. r.      |
| 904335   | 13,5            | M20 x 1,5         | 6,5              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 904336   | 16              | M20 x 1,5         | 6,5              | 27              | 50   | O. r.                              | O. r.     | O. r.      |
| 904337   | 16              | M25 x 1,5         | 6,5              | 30              | 50   | O. r.                              | O. r.     | O. r.      |
| 904338   | 21              | M25 x 1,5         | 7,0              | 32              | 50   | O. r.                              | O. r.     | O. r.      |
| 904339   | 21              | M32 x 1,5         | 7,0              | 36              | 25   | O. r.                              | O. r.     | O. r.      |
| 904340   | 29              | M40 x 1,5         | 8,0              | 43              | 25   | O. r.                              | O. r.     | O. r.      |
| 904341   | 36              | M50 x 1,5         | 9,0              | 55              | 10   | O. r.                              | O. r.     | O. r.      |
| 904342   | 42              | M63 x 1,5         | 10,0             | 65              | 10   | O. r.                              | O. r.     | O. r.      |

## from PG to NPT - high profile design

| Part no. | Size PG outside | Size NPT inside | Thread length mm | Spanner size mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|-----------------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |                 |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94174    | 11              | 1/2"            | 6,0              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 94175    | 13,5            | 1/2"            | 6,5              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 94176    | 16              | 1/2"            | 6,5              | 24              | 50   | O. r.                              | O. r.     | O. r.      |
| 94177    | 21              | 1/2"            | 7,0              | 30              | 50   | O. r.                              | O. r.     | O. r.      |
| 94178    | 21              | 3/4"            | 7,0              | 30              | 25   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# Adapter round



## Adapter round brass

Round adapters made by brass for solving the transition from PG to metric thread.

## Material

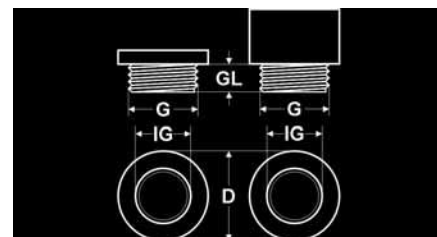
Brass, nickel plated

## Technical data

Temperature range: up to +200°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size outside  
IG Thread size inside  
GL Thread length  
D Outer diameter

## from metric to PG

| Part no. | Size metr. outside | Size PG inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|----------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                    |                |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904343   | M16 x 1,5          | 7              | 6,5              | 18,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 904344   | M20 x 1,5          | 7              | 7,0              | 22,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904345   | M20 x 1,5          | 9              | 7,0              | 22,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904346   | M25 x 1,5          | 9              | 7,5              | 27,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904347   | M25 x 1,5          | 11             | 7,5              | 27,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904348   | M25 x 1,5          | 13,5           | 7,5              | 27,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904349   | M25 x 1,5          | 16             | 7,5              | 27,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904350   | M32 x 1,5          | 13,5           | 8,0              | 34,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 904351   | M32 x 1,5          | 16             | 8,0              | 34,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 904352   | M32 x 1,5          | 21             | 8,0              | 34,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 904353   | M40 x 1,5          | 16             | 8,0              | 43,0       | 10   | o. r.                              | o. r.     | o. r.      |
| 904354   | M40 x 1,5          | 21             | 8,0              | 43,0       | 10   | o. r.                              | o. r.     | o. r.      |
| 904355   | M50 x 1,5          | 21             | 9,0              | 53,0       | 10   | o. r.                              | o. r.     | o. r.      |
| 904356   | M50 x 1,5          | 29             | 9,0              | 53,0       | 10   | o. r.                              | o. r.     | o. r.      |
| 904357   | M63 x 1,5          | 29             | 10,0             | 66,0       | 5    | o. r.                              | o. r.     | o. r.      |
| 904358   | M63 x 1,5          | 36             | 10,0             | 66,0       | 5    | o. r.                              | o. r.     | o. r.      |
| 904359   | M63 x 1,5          | 42             | 10,0             | 66,0       | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# Adapter round

## from metric to PG - high-profile design

| Part no. | Size metr. outside | Size PG inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|--------------------|----------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                    |                |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904360   | M12 x 1,5          | 7              | 5,0              | 14,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904361   | M12 x 1,5          | 9              | 6,0              | 18,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904362   | M16 x 1,5          | 9              | 5,0              | 18,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904363   | M16 x 1,5          | 11             | 5,0              | 20,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904364   | M20 x 1,5          | 11             | 6,0              | 22,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904365   | M20 x 1,5          | 13,5           | 6,0              | 22,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904366   | M20 x 1,5          | 16             | 6,0              | 24,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904367   | M25 x 1,5          | 21             | 7,0              | 30,0       | 50   | O. r.                              | O. r.     | O. r.      |
| 904368   | M32 x 1,5          | 29             | 8,0              | 39,0       | 50   | O. r.                              | O. r.     | O. r.      |
| 904369   | M40 x 1,5          | 29             | 8,0              | 43,0       | 10   | O. r.                              | O. r.     | O. r.      |
| 904370   | M40 x 1,5          | 36             | 8,0              | 50,0       | 25   | O. r.                              | O. r.     | O. r.      |
| 904371   | M50 x 1,5          | 36             | 9,0              | 53,0       | 0    | O. r.                              | O. r.     | O. r.      |
| 904372   | M50 x 1,5          | 42             | 9,0              | 57,0       | 25   | O. r.                              | O. r.     | O. r.      |
| 904373   | M63 x 1,5          | 48             | 10,0             | 68,0       | 10   | O. r.                              | O. r.     | O. r.      |

## from PG to metric

| Part no. | Size PG outside | Size metr. inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|-----------------|-------------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                 |                   |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904374   | 11              | M20 x 1,5         | 6,0              | 22,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904375   | 13,5            | M20 x 1,5         | 6,5              | 24,0       | 50   | O. r.                              | O. r.     | O. r.      |
| 94098    | 16              | M20 x 1,5         | 6,5              | 24,0       | 50   | O. r.                              | O. r.     | O. r.      |
| 94102    | 21              | M25 x 1,5         | 7,0              | 30,0       | 100  | O. r.                              | O. r.     | O. r.      |

## from PG to metric - high-profile design

| Part no. | Size PG outside | Size metr. inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|-----------------|-------------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                 |                   |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904376   | 9               | M16 x 1,5         | 6,0              | 20,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904377   | 11              | M20 x 1,5         | 6,5              | 22,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904378   | 13,5            | M20 x 1,5         | 6,5              | 22,0       | 100  | O. r.                              | O. r.     | O. r.      |
| 904379   | 16              | M25 x 1,5         | 6,5              | 27,0       | 50   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# EW round extender



## EW

The extender made of brass. Transition from small to large thread.

## Material

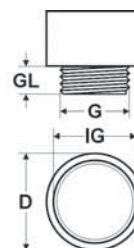
Brass, nickel plated

## Technical data

Temperature range: up to +200°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size outside  
IG Thread size inside  
GL Thread length  
D Outer diameter

### from metric to metric

| Part no. | Size metr. outside | Size metr. inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                    |                   |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94064    | M12 x 1,5          | M16 x 1,5         | 5,0              | 18,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 94066    | M16 x 1,5          | M20 x 1,5         | 5,0              | 22,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 94069    | M20 x 1,5          | M25 x 1,5         | 6,0              | 27,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 94072    | M25 x 1,5          | M32 x 1,5         | 7,0              | 34,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 94075    | M32 x 1,5          | M40 x 1,5         | 8,0              | 42,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 94078    | M40 x 1,5          | M50 x 1,5         | 8,0              | 52,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 94081    | M50 x 1,5          | M63 x 1,5         | 9,0              | 66,0       | 10   | o. r.                              | o. r.     | o. r.      |

### from PG to PG

| Part no. | Size PG outside | Size PG inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------|----------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                 |                |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90630    | 7               | 9              | 5,0              | 17,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 90631    | 9               | 11             | 6,0              | 20,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 90632    | 9               | 13,5           | 6,0              | 22,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 90633    | 11              | 13,5           | 6,0              | 22,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 90634    | 11              | 16             | 6,0              | 24,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 90635    | 13,5            | 16             | 6,5              | 24,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 90636    | 13,5            | 21             | 6,5              | 30,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 90637    | 16              | 21             | 6,5              | 30,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 90638    | 21              | 29             | 7,0              | 39,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 90639    | 29              | 36             | 8,0              | 50,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 90640    | 36              | 42             | 9,0              | 57,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 90641    | 42              | 48             | 10,0             | 64,0       | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# RE hexagonal reducer



## RE reducer hexagonal brass

The reducer made of brass. Transition from large to small thread.

## Material

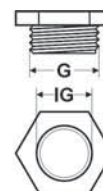
Brass, nickel plated

## Technical data

Temperature range: up to +200°C

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology



## Abmessungen

G Größe des Außengewindes  
IG Größe des Innengewindes  
GL Gewindelänge  
SW Schlüsselweite

## from metric to metric

| Part no. | Size metr. outside | Size metr. inside | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |                    |                   |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904380   | M16 x 1,5          | M12 x 1,5         | 6,5              | 17              | 100  | o. r.                              | o. r.     | o. r.      |
| 904381   | M20 x 1,5          | M12 x 1,5         | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904382   | M20 x 1,5          | M16 x 1,5         | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904383   | M25 x 1,5          | M16 x 1,5         | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904384   | M25 x 1,5          | M20 x 1,5         | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 94073    | M32 x 1,5          | M20 x 1,5         | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 94946    | M32 x 1,5          | M25 x 1,5         | 8,0              | 35              | 25   | o. r.                              | o. r.     | o. r.      |
| 94076    | M40 x 1,5          | M25 x 1,5         | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 90909    | M40 x 1,5          | M32 x 1,5         | 8,0              | 43              | 10   | o. r.                              | o. r.     | o. r.      |
| 904385   | M50 x 1,5          | M32 x 1,5         | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 90865    | M50 x 1,5          | M40 x 1,5         | 10,0             | 54              | 10   | o. r.                              | o. r.     | o. r.      |
| 94947    | M63 x 1,5          | M40 x 1,5         | 10,0             | 65              | 5    | o. r.                              | o. r.     | o. r.      |
| 904386   | M63 x 1,5          | M50 x 1,5         | 10,0             | 65              | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# RE hexagonal reducer

from PG to PG

| Part no. | Size<br>PG<br>outside | Size<br>PG<br>inside | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------------|----------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|          |                       |                      |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904387   | 9                     | 7                    | 6,0                    | 17                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904388   | 11                    | 7                    | 6,0                    | 20                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904389   | 11                    | 9                    | 6,0                    | 20                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904390   | 13,5                  | 7                    | 6,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 904391   | 13,5                  | 9                    | 6,5                    | 22                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904392   | 13,5                  | 11                   | 6,5                    | 22                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904393   | 16                    | 7                    | 6,5                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 904394   | 16                    | 9                    | 6,5                    | 24                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904395   | 16                    | 11                   | 6,5                    | 24                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904396   | 16                    | 13,5                 | 6,5                    | 24                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904397   | 21                    | 11                   | 7,0                    | 30                    | 100  | O. r.                              | O. r.     | O. r.      |
| 904398   | 21                    | 13,5                 | 7,0                    | 30                    | 50   | O. r.                              | O. r.     | O. r.      |
| 904399   | 21                    | 16                   | 7,0                    | 30                    | 50   | O. r.                              | O. r.     | O. r.      |
| 92888    | 29                    | 16                   | 8,0                    | 40                    | 50   | O. r.                              | O. r.     | O. r.      |
| 904400   | 29                    | 21                   | 8,0                    | 40                    | 50   | O. r.                              | O. r.     | O. r.      |
| 904401   | 36                    | 21                   | 9,0                    | 50                    | 25   | O. r.                              | O. r.     | O. r.      |
| 904402   | 36                    | 29                   | 9,0                    | 50                    | 25   | O. r.                              | O. r.     | O. r.      |
| 904403   | 42                    | 29                   | 10,0                   | 57                    | 25   | O. r.                              | O. r.     | O. r.      |
| 904404   | 42                    | 36                   | 10,0                   | 57                    | 25   | O. r.                              | O. r.     | O. r.      |
| 904405   | 48                    | 36                   | 10,0                   | 64                    | 25   | O. r.                              | O. r.     | O. r.      |
| 904406   | 48                    | 42                   | 10,0                   | 64                    | 25   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request



# RE round reducer



## RE

The reducer made of brass. Transition from large to small thread.

## Material

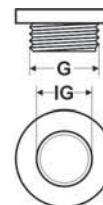
Brass, nickel plated

## Technical data

Temperature range: up to +200°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size outside  
IG Thread size inside  
GL Thread length  
D Outer diameter

## from metric to metric

| Part no. | Size metr. outside | Size metr. inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                    |                   |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94065    | M16 x 1,5          | M12 x 1,5         | 5,0              | 18,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 94067    | M20 x 1,5          | M12 x 1,5         | 6,0              | 22,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 94068    | M20 x 1,5          | M16 x 1,5         | 6,0              | 22,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 94070    | M25 x 1,5          | M16 x 1,5         | 7,0              | 27,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904407   | M25 x 1,5          | M20 x 1,5         | 7,0              | 27,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 904408   | M32 x 1,5          | M20 x 1,5         | 8,0              | 34,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 94074    | M32 x 1,5          | M25 x 1,5         | 8,0              | 34,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904409   | M40 x 1,5          | M25 x 1,5         | 8,0              | 43,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 94077    | M40 x 1,5          | M32 x 1,5         | 8,0              | 43,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 94079    | M50 x 1,5          | M32 x 1,5         | 9,0              | 53,0       | 10   | o. r.                              | o. r.     | o. r.      |
| 94080    | M50 x 1,5          | M40 x 1,5         | 9,0              | 53,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 94082    | M63 x 1,5          | M40 x 1,5         | 10,0             | 66,0       | 10   | o. r.                              | o. r.     | o. r.      |
| 94083    | M63 x 1,5          | M50 x 1,5         | 10,0             | 66,0       | 10   | o. r.                              | o. r.     | o. r.      |

## from PG to PG

| Part no. | Size PG outside | Size PG inside | Thread length mm | Outer Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------|----------------|------------------|------------|------|------------------------------------|-----------|------------|
|          |                 |                |                  |            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904410   | 9               | 7              | 6,0              | 17,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 904411   | 11              | 7              | 6,0              | 20,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 904412   | 11              | 9              | 6,0              | 20,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 904413   | 13,5            | 9              | 6,5              | 22,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 904414   | 16              | 7              | 6,5              | 24,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904415   | 16              | 13,5           | 6,5              | 24,0       | 100  | o. r.                              | o. r.     | o. r.      |
| 904416   | 21              | 13,5           | 7,0              | 30,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904417   | 21              | 16             | 7,0              | 30,0       | 50   | o. r.                              | o. r.     | o. r.      |
| 904418   | 29              | 16             | 8,0              | 39,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 904419   | 29              | 21             | 8,0              | 39,0       | 25   | o. r.                              | o. r.     | o. r.      |
| 904420   | 42              | 29             | 10,0             | 57,0       | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## KM

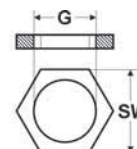
The counternut from galvanic nickel-coated brass.

## Material

Brass, nickel plated

## Technical data

Temperature range: up to +200°C



## Dimensions

G Thread size inside  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90175    | M12 x 1,5  | 15,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90176    | M16 x 1,5  | 19,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90177    | M20 x 1,5  | 24,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90178    | M25 x 1,5  | 30,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90179    | M32 x 1,5  | 36,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90180    | M40 x 1,5  | 46,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 90181    | M50 x 1,5  | 60,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 90182    | M63 x 1,5  | 70,0            | 25   | o. r.                              | o. r.     | o. r.      |

### metric thread - KM-XXL - for large cable diameters

| Part no. | Size Metr. | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98314    | M72 x 2,0  | 80,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 90067    | M75 x 1,5  | 80,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 90489    | M80 x 2,0  | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90610    | 7       | 15,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90611    | 9       | 18,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90612    | 11      | 21,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90613    | 13,5    | 23,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90614    | 16      | 26,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90615    | 21      | 32,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90616    | 29      | 41,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90617    | 36      | 51,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 90618    | 42      | 60,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 90619    | 48      | 64,0            | 50   | o. r.                              | o. r.     | o. r.      |

### NPT thread

| Part no. | Size Inches | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-------------|-----------------|------|------------------------------------|-----------|------------|
|          |             |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905870   | 1/2"        | 27,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905871   | 3/4"        | 32,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905872   | 1"          | 36,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 905873   | 1 1/4"      | 46,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 905874   | 1 1/2"      | 54,0            | 10   | o. r.                              | o. r.     | o. r.      |
| 905875   | 2"          | 70,0            | 10   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# KM counternut

## BSP thread

| Part no. | Size<br>Inches | Spanner size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------------|--------------------|------|------------------------------------|-----------|------------|
|          |                |                    |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90186    |                | 19,0               | 100  | O. r.                              | O. r.     | O. r.      |
| 90187    |                | 24,0               | 100  | O. r.                              | O. r.     | O. r.      |
| 90189    |                | 30,0               | 100  | O. r.                              | O. r.     | O. r.      |
| 90190    |                | 38,0               | 100  | O. r.                              | O. r.     | O. r.      |
| 90193    |                | 51,0               | 50   | O. r.                              | O. r.     | O. r.      |
| 90195    |                | 66,0               | 50   | O. r.                              | O. r.     | O. r.      |

## BSP thread - KM-XXL - for large cable diameters

| Part no. | Size<br>Inches | Spanner size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------------|--------------------|------|------------------------------------|-----------|------------|
|          |                |                    |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90197    |                | 80,0               | 1    | O. r.                              | O. r.     | O. r.      |
| 90198    |                | 95,0               | 1    | O. r.                              | O. r.     | O. r.      |
| 90199    |                | 125,0              | 1    | O. r.                              | O. r.     | O. r.      |
| 97785    |                | 150,0              | 1    | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# VS screw plug



## VS

The screwed plug made of brass.

## Material

Brass, nickel plated

## Technical data

Protection class: IP 54

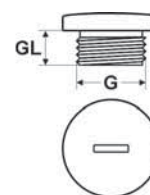
## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Note

Screw plugs for metric threads larger than M63x1,5 on request.

Temperature range: up to +200°C



## Dimensions

G Thread size  
GL Thread length

### metric thread

| Part no. | Size Metr. | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------------|------|------------------------------------|-----------|------------|
|          |            |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98128    | M12 x 1,5  | 5,0              | 100  | o. r.                              | o. r.     | o. r.      |
| 98129    | M16 x 1,5  | 5,0              | 100  | o. r.                              | o. r.     | o. r.      |
| 98130    | M20 x 1,5  | 6,5              | 100  | o. r.                              | o. r.     | o. r.      |
| 98131    | M25 x 1,5  | 7,0              | 100  | o. r.                              | o. r.     | o. r.      |
| 98132    | M32 x 1,5  | 8,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 98133    | M40 x 1,5  | 8,5              | 50   | o. r.                              | o. r.     | o. r.      |
| 98134    | M50 x 1,5  | 9,0              | 25   | o. r.                              | o. r.     | o. r.      |
| 98135    | M63 x 1,5  | 10,0             | 10   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|------------------|------|------------------------------------|-----------|------------|
|          |         |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90620    | 7       | 5,0              | 100  | o. r.                              | o. r.     | o. r.      |
| 90621    | 9       | 6,0              | 100  | o. r.                              | o. r.     | o. r.      |
| 90622    | 11      | 6,0              | 100  | o. r.                              | o. r.     | o. r.      |
| 90623    | 13,5    | 6,5              | 100  | o. r.                              | o. r.     | o. r.      |
| 90624    | 16      | 6,5              | 100  | o. r.                              | o. r.     | o. r.      |
| 90625    | 21      | 7,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 90626    | 29      | 8,0              | 25   | o. r.                              | o. r.     | o. r.      |
| 90627    | 36      | 9,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 90628    | 42      | 10,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90629    | 48      | 10,0             | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# VS-O screw plug with O-ring



## VS-O

The screwed plug made of brass with an O-ring.

## Material

Brass, nickel plated  
O-ring: NBR

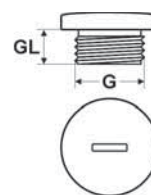
## Technical data

Protection class: IP 68

Temperature range: -40°C up to +80°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size  
GL Thread length

### metric thread

| Part no. | Size<br>Metr. | Thread length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------------|---------------------|------|------------------------------------|-----------|------------|
|          |               |                     |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92600    | M12 x 1,5     | 5,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 92601    | M16 x 1,5     | 5,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 92602    | M20 x 1,5     | 6,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 92603    | M25 x 1,5     | 7,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 92604    | M32 x 1,5     | 8,0                 | 50   | o. r.                              | o. r.     | o. r.      |
| 92605    | M40 x 1,5     | 8,0                 | 50   | o. r.                              | o. r.     | o. r.      |
| 92606    | M50 x 1,5     | 9,0                 | 25   | o. r.                              | o. r.     | o. r.      |
| 92607    | M63 x 1,5     | 10,0                | 10   | o. r.                              | o. r.     | o. r.      |

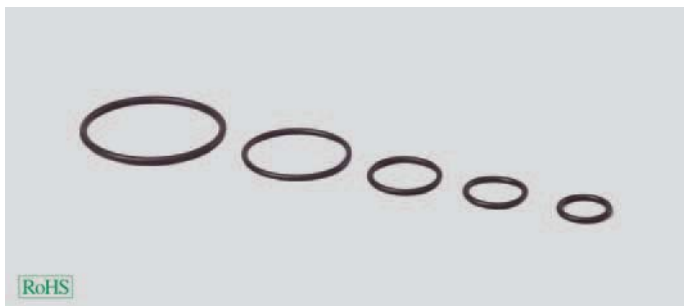
### PG thread

| Part no. | Size<br>PG | Thread length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|---------------------|------|------------------------------------|-----------|------------|
|          |            |                     |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96763    | 7          | 5,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 96169    | 9          | 5,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 96889    | 11         | 5,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 96654    | 13,5       | 6,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 96170    | 16         | 6,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 96171    | 21         | 6,0                 | 100  | o. r.                              | o. r.     | o. r.      |
| 96650    | 29         | 8,0                 | 50   | o. r.                              | o. r.     | o. r.      |
| 96649    | 36         | 9,0                 | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Wall sealing, dust protection, sealing inserts



## **O-ring**

O-rings for sealing against water, dust and oil.

confer page 74



## **AGDR-PE**

Threaded connection rings for sealing against water and dust.

confer page 75



## **Blind plug BL-H**

Blind plates as dust cap for HSK cable glands.

confer page 76



## **Blind plug BL-W**

Blind plates as dust cap for HSK cable glands.

confer page 77



## **Incision sealing ring**

Incision sealing rings for universal cable inlet through large cable clamping areas.

confer page 78




**WV**

Profile for simple cable insertion.

**Material**

Die-cast zinc  
O-ring: chloroprene-rubber (CR)

**Technical data**

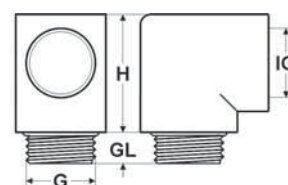
Protection class: IP 65

Temperature range: -20°C up to +100°C

Test standard: EN50262

**Application**

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction


**Dimensions**

G Thread size outside  
GL Thread length  
IG Thread size inside  
H Height without thread

**from metric to metric**

| Part no. | Size<br>Metr.<br>outside | Thread<br>length<br>mm | Size<br>Metr.<br>inside | Height<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------------|------------------------|-------------------------|--------------|------|------------------------------------|-----------|------------|
|          |                          |                        |                         |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98561    | M16 x 1,5                | 7,0                    | M16 x 1,5               | 25,0         | 25   | o. r.                              | o. r.     | o. r.      |
| 98562    | M20 x 1,5                | 7,0                    | M20 x 1,5               | 30,0         | 25   | o. r.                              | o. r.     | o. r.      |
| 98563    | M25 x 1,5                | 7,0                    | M25 x 1,5               | 35,0         | 25   | o. r.                              | o. r.     | o. r.      |
| 98564    | M32 x 1,5                | 10,0                   | M32 x 1,5               | 45,0         | 10   | o. r.                              | o. r.     | o. r.      |

**from PG to PG**

| Part no. | Size<br>PG<br>outside | Thread<br>length<br>mm | Size<br>PG<br>inside | Height<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------------|------------------------|----------------------|--------------|------|------------------------------------|-----------|------------|
|          |                       |                        |                      |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99020    | 9                     | 7,0                    | 9                    | 23,0         | 25   | o. r.                              | o. r.     | o. r.      |
| 99021    | 11                    | 7,0                    | 11                   | 28,0         | 25   | o. r.                              | o. r.     | o. r.      |
| 99022    | 13,5                  | 7,0                    | 13,5                 | 32,0         | 25   | o. r.                              | o. r.     | o. r.      |
| 99023    | 16                    | 7,0                    | 16                   | 27,0         | 25   | o. r.                              | o. r.     | o. r.      |
| 99024    | 21                    | 10,0                   | 21                   | 38,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 99025    | 29                    | 11,0                   | 29                   | 46,0         | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## WVF

Profile for simple cable insertion.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

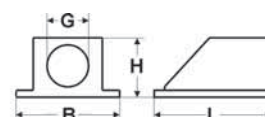
Die-cast zinc  
O-ring: chloroprene-rubber (CR)

## Technical data

Protection class: IP 68 - 10 bar

Temperature range: -20°C up to +100°C

Test standard: EN50262



## Abmessungen

G Thread size inside  
H Height  
B Width  
L Length

## metric female thread

| Part no. | Size<br>Metr.<br>innen | Height<br>mm | Width<br>mm | Length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------------------|--------------|-------------|--------------|------|------------------------------------|-----------|------------|
|          |                        |              |             |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91730    | M20 x 1,5              | 35,0         | 53,0        | 56,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 91731    | M25 x 1,5              | 42,0         | 63,0        | 65,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 91732    | M32 x 1,5              | 52,0         | 70,0        | 75,0         | 5    | o. r.                              | o. r.     | o. r.      |
| 91733    | M40 x 1,5              | 52,0         | 71,0        | 75,0         | 5    | o. r.                              | o. r.     | o. r.      |
| 91734    | M50 x 1,5              | 69,0         | 89,0        | 93,0         | 2    | o. r.                              | o. r.     | o. r.      |
| 91735    | M63 x 1,5              | 74,0         | 96,0        | 114,0        | 1    | o. r.                              | o. r.     | o. r.      |

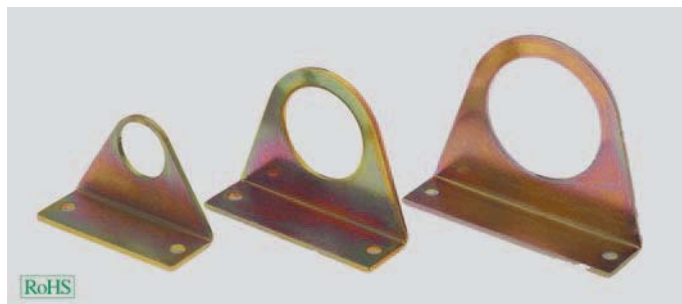
## PG thread

| Part no. | Size<br>PG<br>innen | Height<br>mm | Width<br>mm | Length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------------------|--------------|-------------|--------------|------|------------------------------------|-----------|------------|
|          |                     |              |             |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92930    | 9                   | 30,0         | 45,0        | 48,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 92931    | 11                  | 30,0         | 45,0        | 48,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 92932    | 13,5                | 35,0         | 53,0        | 56,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 92933    | 16                  | 35,0         | 53,0        | 56,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 92934    | 21                  | 42,0         | 63,0        | 65,0         | 5    | o. r.                              | o. r.     | o. r.      |
| 92935    | 29                  | 52,0         | 71,0        | 75,0         | 5    | o. r.                              | o. r.     | o. r.      |
| 92936    | 36                  | 69,0         | 89,0        | 94,0         | 2    | o. r.                              | o. r.     | o. r.      |
| 92937    | 42                  | 74,0         | 96,0        | 114,0        | 1    | o. r.                              | o. r.     | o. r.      |
| 92938    | 48                  | 74,0         | 96,0        | 114,0        | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Fastening elbow



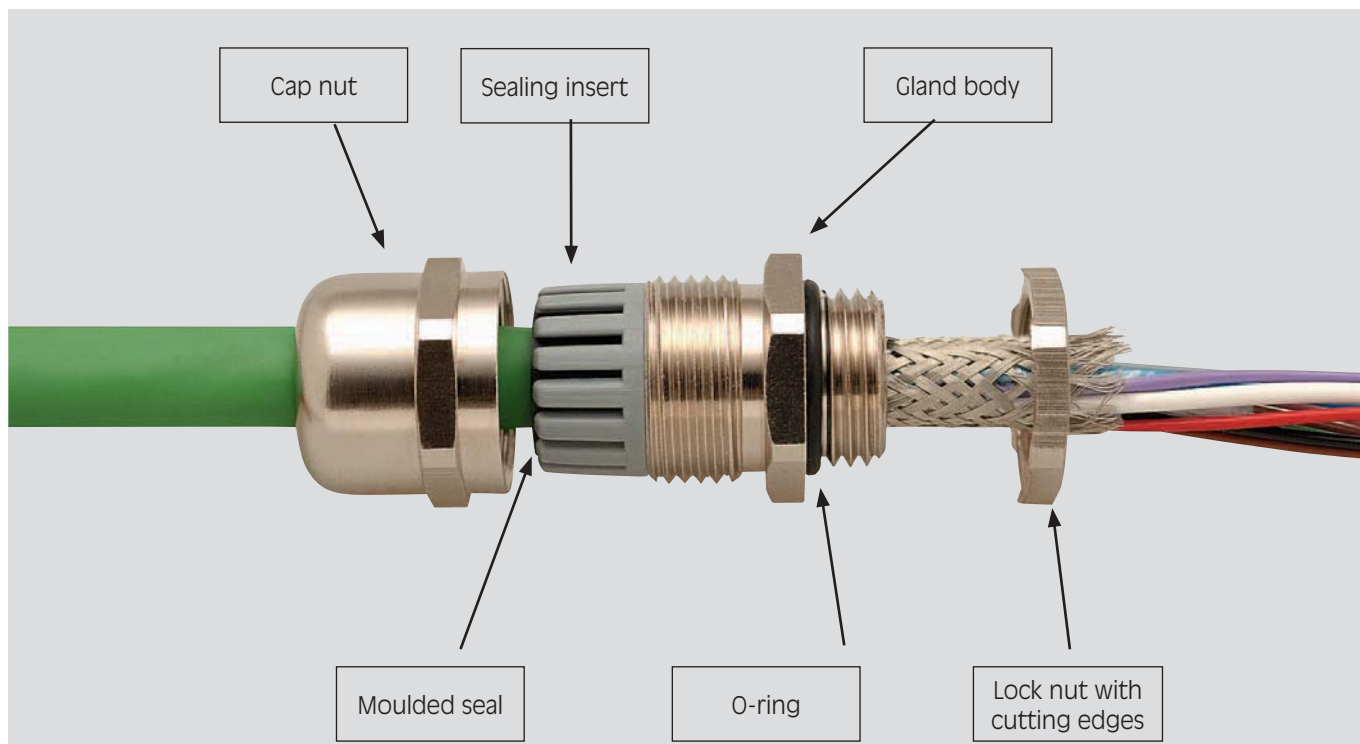
## **BW**

Mounting bracket with penetration and two fastening bores.  
For mounting in a door or door elements, as earthing connection  
and also to equalise potentials in metallic glands.

confer page 81



# Cable glands for electromagnetic compatibility (EMC)



## Cable gland

These cable glands are used in high-quality EMC applications.

Cap nut and gland body are made from nickel-plated brass.

The contact springs form a safe and reliable contact with the screened braiding of the cable. They are made from copper-beryllium – this material ensures a good conductivity and a strong spring force in the long term. The spring ring is movable prior to the cap nut being tightened – damage to the screened braiding during assembly is thus prevented.

The terminal insert is made from polyamide PA6.

The moulded seal is made from CBR.

The O-ring is made from NBR.

## Lock nut

The lock nuts are made from nickel-plated brass. They have cutting edges for cutting through coated surfaces.

## Accessories

Accessories suitable for use with the brass cable glands:

- Lock nuts

Accessories suitable for use with all cable glands:

- Sealing plugs
- O-rings
- Connection thread gaskets
- Blind plates

# Cable glands for electromagnetic compatibility (EMC)

## Contact: Clamp springs

|                              |     |
|------------------------------|-----|
| Series HELUTOP® HT           |     |
| <b>HELUTOP® MS-EP4</b> ..... | 147 |
| <b>HELUTOP® MS-EP</b> .....  | 148 |
| <b>HELUTOP® MS-E</b> .....   | 149 |
| Series HSK                   |     |
| <b>HSK-MS-E-D</b> .....      | 150 |

## Contact: Wound screen

|                       |     |
|-----------------------|-----|
| Series HSK            |     |
| <b>HSK-MS-E</b> ..... | 151 |
| <b>HSK-MZ-E</b> ..... | 152 |

## Contact: Circlips

|                           |     |
|---------------------------|-----|
| Series KVA-XXL            |     |
| <b>KVA-XXL-MS-E</b> ..... | 153 |

## Accessories / Parts

|                                    |     |
|------------------------------------|-----|
| Counter nut                        |     |
| <b>KM-EMV</b> .....                | 154 |
| Tool                               |     |
| <b>Electricians scissors</b> ..... | 155 |
| Accessories                        |     |
| <b>Copper band</b> .....           | 156 |



# Electromagnetic compatibility

The subject of electromagnetic compatibility covers everything connected with intentional and unintentional malfunctions in electrical operating materials caused by electrical, magnetic or electromagnetic fields and processes.

Technically, a distinction is made between “conducted” and “non-conducted” faults:

**Conducted interference** are transferred directly from the source of the fault to the sink via power or signal lines.

**Radiative interference** is coupled with the sink by means of an electromagnetic field, i.e. as electromagnetic radiation, and is received there by a wire functioning as an antenna.

## Faults should not occur

In the European **EMC Directive**, electromagnetic compatibility is defined as follows:

The ability of a device, unit of equipment or system to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbances to any device, unit of equipment or system in that environment.

The power companies and the EU legislator require that manufacturers of electrical devices adhere to appropriate “protection requirements”.

The EMC Directive is generally applied in conjunction with the Low Voltage Directive.

## Important components for preventing faults

### **Screened cables:**

The screen over the inner sheath of the cable is designed to keep out external disturbances and keep in internally-generated disturbances.

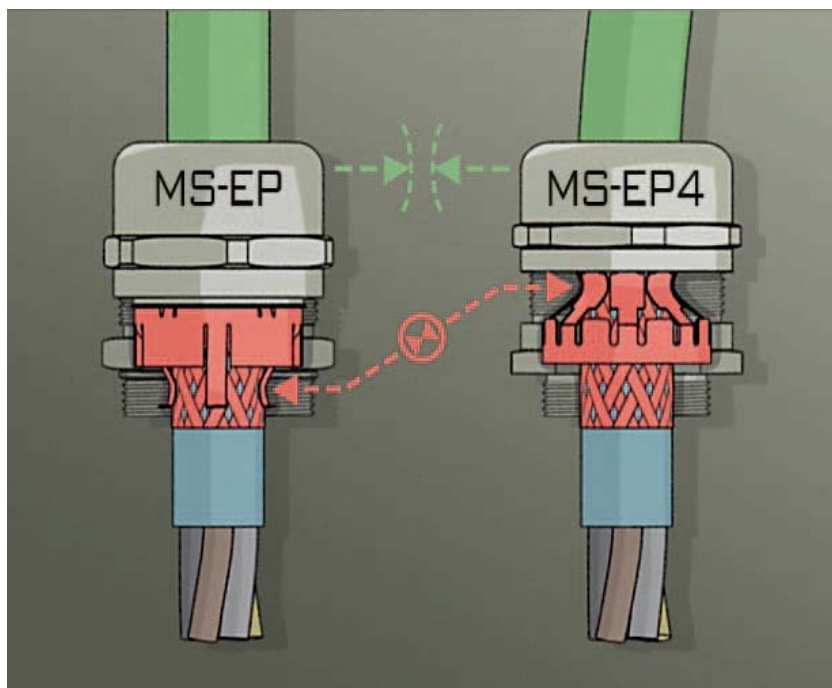
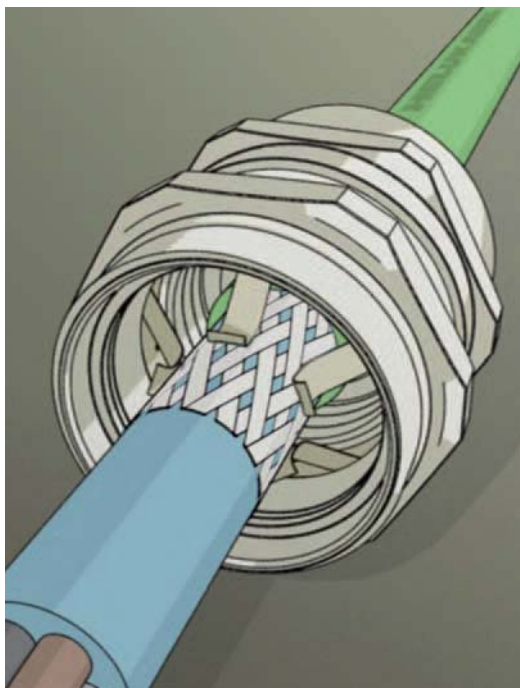
### **Sheet shielding** or

**Screened braiding** – a coverage of more than 85% is considered necessary.

# Electromagnetic compatibility

## EMC glands:

The screen of the cable is contacted with the housing of the control / motor via appropriate cable glands.



If the screen is applied at both ends, then one has the additional benefit of potential equalisation at both ends, and effective screening. Here it should be ensured that the two grounds are not different, otherwise a flow of disturbing equalising currents could occur.

The contact in the gland is generally created by means of a contact spring. This gives a good contact but also allows rapid assembly. Our HELUTOP® MS-EP4 and HELUTOP® MS-EP have a simultaneously-rotating spring ring. Provided that the cable is not yet fixed, it is still possible to turn the cable in the gland. Only when it is fixed by turning the cap nut is the screen contact also finally fixed.

The particularly simple cable assembly and disassembly conditions, the gentle spring contact on the cable shield and the EMC shield's excellent resistance to vibrations are also outstanding characteristics that distinguish the new HELUTOP® MS-EP4.

Most important accessories: Lock nut with cutting edges. Painted, anodised or contaminated surfaces are cut through by the cutting edges and the contact between the cable gland and the housing is thereby securely made.



## HELUTOP® MS-EP4

The EMC- cable gland with integrated contact system.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Contact system: Copper-Beryllium  
Clamp: Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)  
O-ring: NBR

### Properties

- Easy installation
- Secure contact
- High vibration resistance

### Note

Details on the individual tests appear in section "Technical Information".

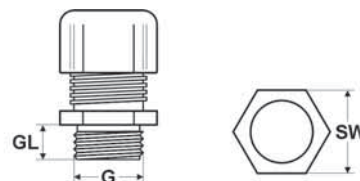
### Technical data

Protection class: IP 68 - 5 bar

Temperature range: -40°C up to +100°C

Test standard: EN50262

Contact system: patented



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905181   | M12 x 1,5  | 3,0 - 6,5            | 6,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 905182   | M16 x 1,5  | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 905183   | M20 x 1,5  | 6,0 - 12,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 905184   | M20 x 1,5  | 7,5 - 14,0           | 8,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 905185   | M25 x 1,5  | 10,0 - 18,0          | 8,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 905186   | M32 x 1,5  | 16,0 - 25,0          | 9,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 905187   | M40 x 1,5  | 22,0 - 32,0          | 9,0              | 50              | 20   | o. r.                              | o. r.     | o. r.      |
| 905188   | M50 x 1,5  | 30,0 - 38,0          | 9,0              | 60 / 58         | 10   | o. r.                              | o. r.     | o. r.      |
| 905189   | M63 x 1,5  | 34,0 - 44,0          | 14,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |
| 905248   | M63 x 1,5  | 37,0 - 53,0          | 10,0             | 75              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HELUTOP® MS-EP

The EMC- and earthing gland with integrated contact system for safe, quick assembly and contacting.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Contact system: Copper-Beryllium  
Clamp: Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)  
O-ring: NBR

### Properties

- Optimum strain relief through clamping plates
- No damage of shield during assembly or disassembly by moving contact ring.
- Contact made automatically when the gland is closed
- Excellent shield damping and current deflection
- High savings achieved in time and assembly costs

### Note

Details on the individual tests appear in section "Technical Information".

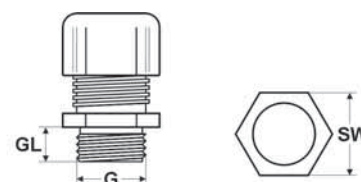
### Technical data

Protection class: IP 68 - 5 bar

Temperature range: -40°C up to +100°C

Test standard: EN50262

Contact system: patented



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99950    | M12 x 1,5  | 3,0 - 6,5            | 6,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 99951    | M16 x 1,5  | 5,0 - 10,0           | 7,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 99952    | M20 x 1,5  | 6,0 - 12,0           | 8,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99953    | M25 x 1,5  | 11,0 - 17,0          | 8,0              | 27              | 25   | o. r.                              | o. r.     | o. r.      |
| 99954    | M32 x 1,5  | 15,0 - 21,0          | 8,0              | 34              | 25   | o. r.                              | o. r.     | o. r.      |
| 99955    | M40 x 1,5  | 19,0 - 28,0          | 9,0              | 43              | 20   | o. r.                              | o. r.     | o. r.      |
| 99956    | M50 x 1,5  | 27,0 - 38,0          | 9,0              | 58              | 5    | o. r.                              | o. r.     | o. r.      |
| 99957    | M63 x 1,5  | 34,0 - 44,0          | 14,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HELUTOP® MS-E

The EMC cable gland with clamping fingers from spring steel for quick assembly and contacting.

## Material

Brass, nickel plated  
Contact system: Copper-Beryllium  
Clamp: Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)  
O-ring: NBR

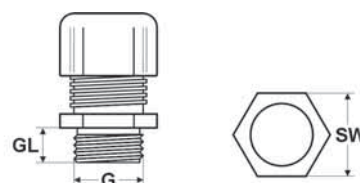
## Note

Details on the individual tests appear in section "Technical Information".

## Technical data

Protection class: IP 68 - 5 bar

Temperature range: -40°C up to +100°C



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90770    | 7       | 3,0 - 6,5            | 6,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90771    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 90772    | 11      | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90773    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90774    | 16      | 10,0 - 14,0          | 6,5              | 24              | 25   | o. r.                              | o. r.     | o. r.      |
| 90775    | 21      | 13,0 - 18,0          | 7,2              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90776    | 29      | 18,0 - 25,0          | 8,0              | 40              | 20   | o. r.                              | o. r.     | o. r.      |
| 90777    | 36      | 22,0 - 32,0          | 9,0              | 50              | 5    | o. r.                              | o. r.     | o. r.      |
| 90778    | 42      | 30,0 - 38,0          | 12,0             | 58              | 5    | o. r.                              | o. r.     | o. r.      |
| 90779    | 48      | 34,0 - 44,0          | 14,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

### NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99808    | 3/8"     | 5,0 - 10,0           | 11,5             | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 99809    | 1/2"     | 6,0 - 12,0           | 13,0             | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99810    | 3/4"     | 13,0 - 18,0          | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 99811    | 1"       | 18,0 - 25,0          | 13,0             | 40              | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HSK-MS-E-D

The EMC cable gland to meet stringent requirements in technology. Time-saving and simple handling through metallised terminal insert, which is automatically contacted when the gland is closed.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Clamp: PA, metal-plated  
Moulded seal: NBR  
O-ring: NBR

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -40°C up to +100°C



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98055    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 98056    | M16 x 1,5  | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 98057    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 98058    | M25 x 1,5  | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 98059    | M32 x 1,5  | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 98060    | M40 x 1,5  | 24,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90160    | M50 x 1,5  | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90161    | M63 x 1,5  | 37,0 - 44,0          | 10,0             | 68              | 5    | o. r.                              | o. r.     | o. r.      |

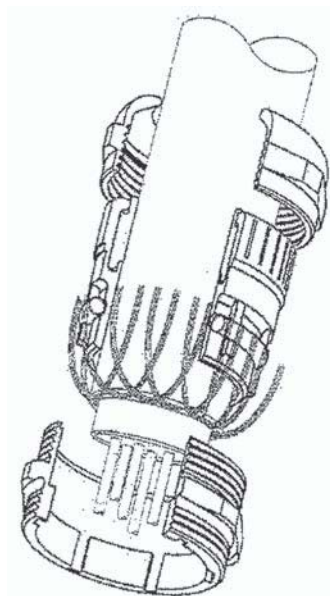
## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97655    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 97656    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 97657    | 11      | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 97658    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 97659    | 16      | 10,0 - 14,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 97660    | 21      | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 97752    | 29      | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 97788    | 36      | 24,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request





## HSK-MS-E

The EMC cable gland for sheathed lines

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology

## Material

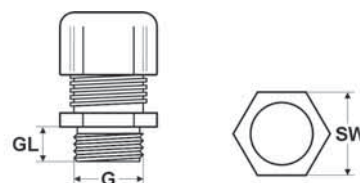
Brass, nickel plated  
Clamp: Polyamide PA 6  
Moulded seal: NBR  
O-ring: NBR

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97335    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 97336    | M16 x 1,5  | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 97337    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 97338    | M25 x 1,5  | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 97339    | M32 x 1,5  | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 97340    | M40 x 1,5  | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90397    | M50 x 1,5  | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90398    | M63 x 1,5  | 37,0 - 44,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90423    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90424    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 90425    | 11      | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90426    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90427    | 16      | 10,0 - 14,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90428    | 21      | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90429    | 29      | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90430    | 36      | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90431    | 42      | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90432    | 48      | 37,0 - 44,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92905    | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 92906    | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |
| 92907    | 3/4"     | 13,0 - 18,0          | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |

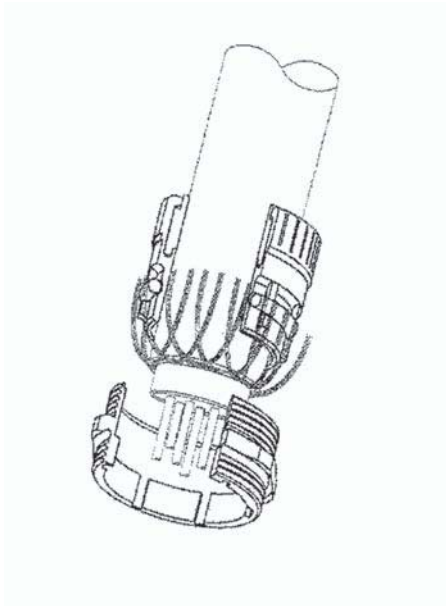
Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HSK-MZ-E EMC - cable gland

with strain relief



## HSK-MZ-E

The EMC cable gland with double bracket strain relief

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology

## Material

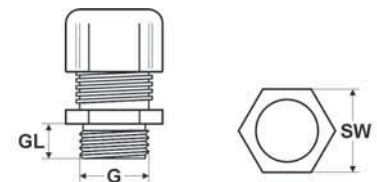
Brass, nickel plated  
Clamp: Polyamide  
Moulded seal: NBR  
O-ring: NBR

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -40°C up to +100°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98070    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 98071    | M16 x 1,5  | 6,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 98072    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 98073    | M25 x 1,5  | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 98074    | M32 x 1,5  | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 98075    | M40 x 1,5  | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90162    | M50 x 1,5  | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90163    | M63 x 1,5  | 37,0 - 44,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98061    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 98062    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 98063    | 11      | 6,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 98064    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98065    | 16      | 10,0 - 14,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 98201    | 21      | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 98066    | 29      | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 98067    | 36      | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 98068    | 42      | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 98069    | 48      | 37,0 - 44,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

### NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92908    | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 92909    | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |
| 92910    | 3/4"     | 13,0 - 18,0          | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KVA-XXL-MS-E EMC cable gland



for particularly large diameters



## KVA-XXL-MS-E

EMC and sealing cable gland made by brass for particularly large cable diameters.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

### Material

Brass, nickel plated  
Contact system: stainless steel 1.4310

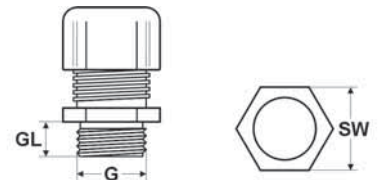
### Properties

- Large-area cable sealing
- Easy to assemble
- Large clamping range

### Technical data

Protection class: IP 68 - 10 bar

Temperature range: -40°C up to +135°C



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Outer Ø Shielding from / up to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of size |           |            |
|----------|------------|----------------------|-----------------------------------|------------------|-----------------|------|-----------------------------------------|-----------|------------|
|          |            |                      |                                   |                  |                 |      | up to 100                               | 101 - 500 | 501 - 1000 |
| 98257    | M63 x 1,5  | 40,0 - 45,0          | 36,0 - 41,0                       | 10,0             | 65              | 1    | O. r.                                   | O. r.     | O. r.      |
| 96560    | M63 x 1,5  | 45,0 - 51,0          | 36,0 - 45,0                       | 10,0             | 70              | 1    | O. r.                                   | O. r.     | O. r.      |
| 94218    | M63 x 1,5  | 45,0 - 51,0          | 40,0 - 48,0                       | 10,0             | 70              | 1    | O. r.                                   | O. r.     | O. r.      |
| 98725    | M63 x 1,5  | 51,0 - 55,0          | 40,0 - 48,0                       | 10,0             | 80              | 1    | O. r.                                   | O. r.     | O. r.      |
| 94189    | M72 x 2,0  | 40,0 - 45,0          | 36,0 - 41,0                       | 15,0             | 70              | 1    | O. r.                                   | O. r.     | O. r.      |
| 94847    | M72 x 2,0  | 45,0 - 51,0          | 40,0 - 48,0                       | 15,0             | 70              | 1    | O. r.                                   | O. r.     | O. r.      |
| 905498   | M72 x 2,0  | 51,0 - 55,0          | 40,0 - 48,5                       | 15,0             | 80              | 1    | O. r.                                   | O. r.     | O. r.      |
| 94208    | M72 x 2,0  | 51,0 - 55,0          | 46,0 - 54,0                       | 15,0             | 80              | 1    | O. r.                                   | O. r.     | O. r.      |
| 94188    | M72 x 2,0  | 54,0 - 58,0          | 40,0 - 48,0                       | 15,0             | 80              | 1    | O. r.                                   | O. r.     | O. r.      |
| 93728    | M75 x 1,5  | 42,0 - 48,0          | 40,0 - 48,0                       | 15,0             | 70              | 1    | O. r.                                   | O. r.     | O. r.      |
| 91600    | M75 x 1,5  | 45,0 - 51,0          | 40,0 - 48,0                       | 15,0             | 70              | 1    | O. r.                                   | O. r.     | O. r.      |
| 90068    | M75 x 1,5  | 54,0 - 58,0          | 46,0 - 54,0                       | 15,0             | 80              | 1    | O. r.                                   | O. r.     | O. r.      |
| 97066    | M80 x 2,0  | 58,0 - 64,0          | 46,0 - 54,0                       | 15,0             | 95              | 1    | O. r.                                   | O. r.     | O. r.      |
| 98908    | M80 x 2,0  | 63,0 - 70,0          | 46,0 - 54,0                       | 15,0             | 95              | 1    | O. r.                                   | O. r.     | O. r.      |
| 905303   | M80 x 2,0  | 63,0 - 70,0          | 46,0 - 58,0                       | 15,0             | 95              | 1    | O. r.                                   | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request



## KM-EMV

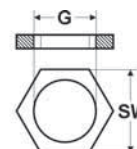
- The counternut with cutting edges for secure fixing of EMC cable glands
- for cutting through painted surfaces to ensure optimum contact with equipotential bonding
- increased vibration resistance.

## Material

Brass, nickel plated

## Technical data

Temperature range: up to +200°C



## Dimensions

G Thread size inside  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90165    | M12 x 1,5  | 15,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90166    | M16 x 1,5  | 19,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90167    | M20 x 1,5  | 24,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90168    | M25 x 1,5  | 30,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90169    | M32 x 1,5  | 36,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 90170    | M40 x 1,5  | 46,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 90171    | M50 x 1,5  | 60,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 90172    | M63 x 1,5  | 70,0            | 25   | o. r.                              | o. r.     | o. r.      |

### metric thread - KM-EMV-XXL - for large cable diameters

| Part no. | Size Metr. | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99875    | M72 x 2,0  | 80,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 93209    | M75 x 1,5  | 80,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 98698    | M80 x 2,0  | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97243    | 7       | 15,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 97244    | 9       | 18,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 97166    | 11      | 21,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 97167    | 13,5    | 23,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 97168    | 16      | 26,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 97169    | 21      | 32,0            | 100  | o. r.                              | o. r.     | o. r.      |
| 97170    | 29      | 41,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 97171    | 36      | 51,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 97245    | 42      | 60,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 97246    | 48      | 64,0            | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Electricians scissors for screened cables and wires



new

## Electricians scissors

- cuts copper braid shielded cables and wires
- clean cut with serrated edge
- with round wire cutter
- very stable version
- cut from special stainless steel, nickel plated
- handy
- Length 125 mm
- Weight 65 g

| Part no. | Type           | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------------|------|-------------------------------|-------|--------|
|          |                |      | 1                             | 2 - 4 | 5 - 10 |
| 905120   | Geflechtschere | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Copper band suitable for EMC



new



## Copper band

Stabilizes the braided ends of shielded cables and wires.

## Material

rolled copper foil

## Properties

- self-adhesive
- with protective cover for the adhesive
- electrically conductive adhesive
- adhesive strength 900g/inch (according to KS A 1107)
- thickness approx 40µm
- thickness incl. adhesive approx 70µm

## Note

Other dimensions on request.

| Part no. | Width<br>mm | Length<br>m | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------------|-------------|------|-------------------------------|-------|--------|
|          |             |             |      | 1                             | 2 - 5 | 6 - 10 |
| 905122   | 10          | 33          | 1    | o. r.                         | o. r. | o. r.  |
| 905116   | 15          | 33          | 1    | o. r.                         | o. r. | o. r.  |
| 905117   | 20          | 33          | 1    | o. r.                         | o. r. | o. r.  |
| 905118   | 25          | 33          | 1    | o. r.                         | o. r. | o. r.  |
| 905119   | 50          | 33          | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

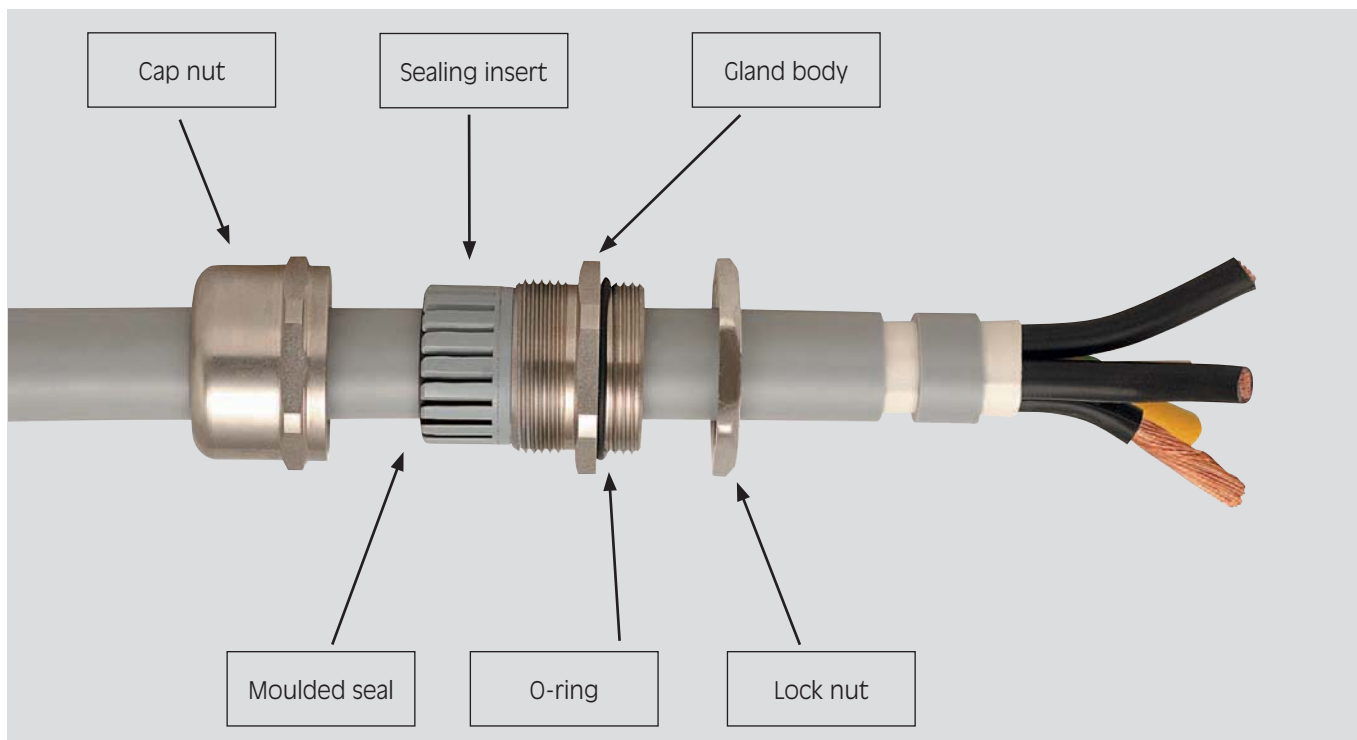
o. r. = on request







# Stainless steel cable glands



## Cable gland

Cap nut and gland body are made from stainless steel. Due to their high degree of corrosion resistance and longevity, these glands are suitable for tough conditions:

- Heavy chemical loads
- Cleaning agents (e.g. in the food industry)
- Weather-resistant when used outdoors.

The terminal insert is made from polyamide PA6.

The moulded seal is made from CR.

The O-ring is made from NBR

## Lock nut

The lock nuts are made from stainless steel.

## Accessories

Accessories suitable for use with the stainless steel cable glands:

- Lock nuts

Accessories suitable for use with all cable glands:

- Sealing plugs
- Multiple sealing inserts / lock bolts
- O-rings
- Connection thread gaskets
- Blind plates

# Cable glands

for robust applications and special chemical resistance

## Cable glands

Series HELUTOP® HT

Stainless steel

**HELUTOP® HT-E** ..... 160

Series HSK

PVDF (polyvinylidene fluoride)

**HSK-PVDF** ..... 161

Brass with PVDF-insert

**HSK-MS-PVDF** ..... 163

Stainless steel

**HSK-INOX** ..... 164

Series UNI-DICHT

PVDF-gland body

**UNI-DICHT-VK-PVDF** ..... 166

Stainless steel gland body

**UNI-DICHT-VK-stainless steel** ..... 167

Silicone sealing insert

**UNI-DICHT sealing insert, silicone** ..... 168

## Accessories / Parts

Counter nut

**KM-INOX** ..... 169

Screw plug

**VS-O stainless steel** ..... 170

Reinforced wall sealing

**O-ring FKM** ..... 171

# HELUTOP® HT-E cable gland

stainless steel



## HELUTOP® HT-E

The stainless steel cable gland for heavy load

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Stainless steel 1.4305 / AISI 303  
Clamp: Polyamide PA 6  
Moulded seal: chloroprene-rubber (CR)  
O-ring: NBR

### Properties

- Optimum strain relief through clamping plates
- Highly corrosion-resistant
- Highly durable
- Easy to assemble
- Large clamping areas

### Note

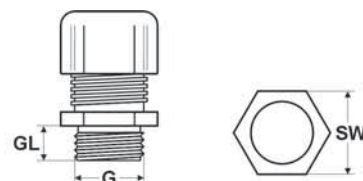
Details on the individual tests appear in section "Technical Information".

### Technical data

Protection class: IP 68 - 5 bar

Temperature range: -40°C up to +100°C

Test standard: EN50262



### Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99980    | M12 x 1,5  | 3,0 - 6,5            | 6,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 99981    | M16 x 1,5  | 5,0 - 10,0           | 7,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99982    | M20 x 1,5  | 6,0 - 12,0           | 8,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99983    | M25 x 1,5  | 11,0 - 17,0          | 8,0              | 27              | 25   | o. r.                              | o. r.     | o. r.      |
| 99984    | M32 x 1,5  | 15,0 - 21,0          | 8,0              | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 99985    | M40 x 1,5  | 19,0 - 28,0          | 9,0              | 46              | 20   | o. r.                              | o. r.     | o. r.      |
| 99986    | M50 x 1,5  | 30,0 - 38,0          | 9,0              | 60              | 12   | o. r.                              | o. r.     | o. r.      |
| 99987    | M63 x 1,5  | 34,0 - 44,0          | 14,0             | 65 / 68         | 12   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99970    | 7       | 3,0 - 6,5            | 6,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 99971    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 99972    | 11      | 5,0 - 10,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99973    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99974    | 16      | 10,0 - 14,0          | 6,5              | 24              | 25   | o. r.                              | o. r.     | o. r.      |
| 99975    | 21      | 13,0 - 18,0          | 7,2              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 99976    | 29      | 18,0 - 25,0          | 8,0              | 41              | 20   | o. r.                              | o. r.     | o. r.      |
| 99977    | 36      | 22,0 - 32,0          | 9,0              | 50              | 15   | o. r.                              | o. r.     | o. r.      |
| 99978    | 42      | 30,0 - 38,0          | 12,0             | 60              | 12   | o. r.                              | o. r.     | o. r.      |
| 99979    | 48      | 34,0 - 44,0          | 14,0             | 65              | 12   | o. r.                              | o. r.     | o. r.      |

### NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99800    | 3/8"     | 5,0 - 10,0           | 11,5             | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 99801    | 1/2"     | 6,0 - 12,0           | 13,0             | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 99802    | 3/4"     | 13,0 - 18,0          | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 99803    | 1"       | 18,0 - 25,0          | 13,0             | 40 / 43         | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSK-PVDF cable gland

Polyvinylidene fluoride



## HSK-PVDF

Polyvinylidene fluoride for use in the chemical industry, at high temperatures, under long-term UV exposure.

The cable gland to meet stringent requirements in technology

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Material

PVDF

Clamp: PVDF

Moulded seal: FKM

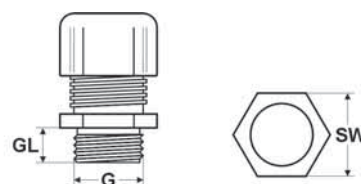
- phosphor-free
- silicone-free
- cadmium-free

## Technical data

Protection class: IP 68 - 10 bar / IP 69K (within the specific clamping range with additional o-ring)

Temperature range: -35°C up to +150°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

### metric thread

| Part no.<br>natural | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                     |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97527               | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97528               | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97529               | M20 x 1,5     | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97530               | M25 x 1,5     | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97531               | M32 x 1,5     | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |

### metric thread - with reducing seal

| Part no.<br>natural | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                     |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99630               | M12 x 1,5     | 2,0 - 5,0                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99631               | M16 x 1,5     | 2,0 - 6,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99632               | M20 x 1,5     | 5,0 - 9,0                  | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99633               | M25 x 1,5     | 9,0 - 16,0                 | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 99634               | M32 x 1,5     | 13,0 - 20,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# HSK-PVDF cable gland



Polyvinylidene fluoride

## PG thread

| Part no.<br>natural | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                     |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97184               | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96748               | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97185               | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97186               | 13,5       | 6,0 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97187               | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97188               | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97189               | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 97190               | 36         | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 97191               | 42         | 32,0 - 38,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 97192               | 48         | 37,0 - 44,0                | 14,0                   | 65                    | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no.<br>natural | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                     |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91675               | 3/8"        | 4,0 - 8,0                  | 15,0                   | 19 / 22               | 50   | o. r.                              | o. r.     | o. r.      |
| 91676               | 1/2"        | 6,0 - 12,0                 | 13,0                   | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91677               | 1/2"        | 10,0 - 14,0                | 13,0                   | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 91678               | 3/4"        | 13,0 - 18,0                | 14,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSK-MS-PVDF cable gland

brass and polyvinylidene fluoride



## HSK-MS-PVDF

Polyvinylidene fluoride for use in the chemical industry, at high temperatures, under long-term UV exposure.

The cable gland to meet stringent requirements in technology

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Material

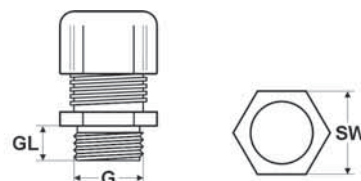
Brass, nickel plated  
Clamp: PVDF  
Moulded seal: FKM  
O-ring: FKM

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -35°C up to +150°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97571    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 97572    | M16 x 1,5  | 4,0 - 8,0            | 6,0              | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 905084   | M16 x 1,5  | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 97573    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 97574    | M25 x 1,5  | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 97575    | M32 x 1,5  | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 97576    | M40 x 1,5  | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97565    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 97500    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 97445    | 11      | 5,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 97446    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 97447    | 16      | 10,0 - 14,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 97566    | 21      | 13,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 97567    | 29      | 18,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 97568    | 36      | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 97569    | 42      | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 97570    | 48      | 37,0 - 44,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97663    | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 25   | o. r.                              | o. r.     | o. r.      |
| 97664    | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HSK-INOX cable gland

stainless steel



RoHS

## HSK-INOX

The stainless steel cable gland

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Material

Stainless steel 1.4305 / AISI 303

Clamp: Polyamide

Moulded seal: NBR

O-ring: NBR

## Technical data

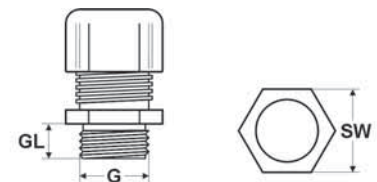
Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -40°C up to +100°C

Test standard: EN50262

## Application

- Plant and machine construction
- Automation technology
- Installation technology



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98076    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 10   | o. r.                              | o. r.     | o. r.      |
| 98078    | M16 x 1,5  | 5,0 - 10,0           | 6,0              | 22              | 10   | o. r.                              | o. r.     | o. r.      |
| 98080    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 10   | o. r.                              | o. r.     | o. r.      |
| 98082    | M25 x 1,5  | 13,0 - 18,0          | 7,0              | 30              | 10   | o. r.                              | o. r.     | o. r.      |
| 98084    | M32 x 1,5  | 18,0 - 25,0          | 8,0              | 41              | 5    | o. r.                              | o. r.     | o. r.      |
| 98086    | M40 x 1,5  | 22,0 - 32,0          | 8,0              | 50              | 5    | o. r.                              | o. r.     | o. r.      |
| 905734   | M50 x 1,5  | 32,0 - 38,0          | 9,0              | 60              | 5    | o. r.                              | o. r.     | o. r.      |
| 905736   | M63 x 1,5  | 37,0 - 44,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

## metric thread - with reducing seal

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98077    | M12 x 1,5  | 2,0 - 5,0            | 6,5              | 14              | 10   | o. r.                              | o. r.     | o. r.      |
| 98079    | M16 x 1,5  | 3,0 - 7,0            | 6,0              | 22              | 10   | o. r.                              | o. r.     | o. r.      |
| 98081    | M20 x 1,5  | 7,0 - 12,0           | 6,0              | 24              | 10   | o. r.                              | o. r.     | o. r.      |
| 98083    | M25 x 1,5  | 9,0 - 16,0           | 7,0              | 30              | 10   | o. r.                              | o. r.     | o. r.      |
| 98085    | M32 x 1,5  | 13,0 - 20,0          | 8,0              | 41              | 5    | o. r.                              | o. r.     | o. r.      |
| 98087    | M40 x 1,5  | 20,0 - 26,0          | 8,0              | 50              | 5    | o. r.                              | o. r.     | o. r.      |
| 905733   | M50 x 1,5  | 25,0 - 31,0          | 9,0              | 60              | 5    | o. r.                              | o. r.     | o. r.      |
| 905735   | M63 x 1,5  | 29,0 - 35,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# HSK-INOX cable gland

stainless steel



## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90210    | 7       | 3,0 - 6,5            | 5,0              | 14              | 10   | O. r.                              | O. r.     | O. r.      |
| 90212    | 9       | 4,0 - 8,0            | 6,0              | 17              | 10   | O. r.                              | O. r.     | O. r.      |
| 90214    | 11      | 5,0 - 10,0           | 6,0              | 22              | 10   | O. r.                              | O. r.     | O. r.      |
| 90216    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 10   | O. r.                              | O. r.     | O. r.      |
| 90218    | 16      | 10,0 - 14,0          | 6,5              | 24              | 10   | O. r.                              | O. r.     | O. r.      |
| 90377    | 21      | 13,0 - 18,0          | 7,0              | 30              | 10   | O. r.                              | O. r.     | O. r.      |
| 98286    | 29      | 18,0 - 25,0          | 8,0              | 41              | 5    | O. r.                              | O. r.     | O. r.      |
| 98288    | 36      | 22,0 - 32,0          | 8,0              | 50              | 5    | O. r.                              | O. r.     | O. r.      |
| 905738   | 42      | 32,0 - 38,0          | 9,0              | 57              | 5    | O. r.                              | O. r.     | O. r.      |
| 905740   | 48      | 37,0 - 44,0          | 10,0             | 64              | 5    | O. r.                              | O. r.     | O. r.      |

## PG thread - with reducing seal

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90211    | 7       | 2,0 - 5,0            | 5,0              | 14              | 10   | O. r.                              | O. r.     | O. r.      |
| 90213    | 9       | 2,0 - 6,0            | 6,0              | 17              | 10   | O. r.                              | O. r.     | O. r.      |
| 90215    | 11      | 3,0 - 7,0            | 6,0              | 22              | 10   | O. r.                              | O. r.     | O. r.      |
| 90217    | 13,5    | 5,0 - 9,0            | 6,5              | 22              | 10   | O. r.                              | O. r.     | O. r.      |
| 90219    | 16      | 7,0 - 12,0           | 6,5              | 24              | 10   | O. r.                              | O. r.     | O. r.      |
| 90378    | 21      | 9,0 - 16,0           | 7,0              | 30              | 10   | O. r.                              | O. r.     | O. r.      |
| 98287    | 29      | 13,0 - 20,0          | 8,0              | 41              | 5    | O. r.                              | O. r.     | O. r.      |
| 98289    | 36      | 20,0 - 26,0          | 8,0              | 50              | 5    | O. r.                              | O. r.     | O. r.      |
| 905737   | 42      | 25,0 - 31,0          | 9,0              | 57              | 5    | O. r.                              | O. r.     | O. r.      |
| 905739   | 48      | 29,0 - 35,0          | 10,0             | 64              | 5    | O. r.                              | O. r.     | O. r.      |

## NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905742   | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 5    | O. r.                              | O. r.     | O. r.      |
| 905744   | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 10   | O. r.                              | O. r.     | O. r.      |
| 905746   | 3/4"     | 13,0 - 18,0          | 13,0             | 30              | 5    | O. r.                              | O. r.     | O. r.      |
| 905748   | 1"       | 18,0 - 25,0          | 19,0             | 41              | 10   | O. r.                              | O. r.     | O. r.      |

## NPT thread - with reducing seal

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905741   | 3/8"     | 2,0 - 6,0            | 15,0             | 17 / 19         | 5    | O. r.                              | O. r.     | O. r.      |
| 905743   | 1/2"     | 5,0 - 9,0            | 13,0             | 22 / 24         | 5    | O. r.                              | O. r.     | O. r.      |
| 905745   | 3/4"     | 9,0 - 16,0           | 13,0             | 30              | 5    | O. r.                              | O. r.     | O. r.      |
| 905747   | 1"       | 13,0 - 20,0          | 19,0             | 41              | 10   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# UNI-DICHT-VK-PVDF body gland

Polyvinylidene fluoride



## UNI-DICHT-VK gland body PVDF

Gland body made of PVDF for populating with inserts made by TPE or silicone. For use in chemical industry, at high temperatures, or long lasting UV-stress.

## Application

- Chemical industry
- Food industry
- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

PVDF

- phosphor-free
- cadmium-free

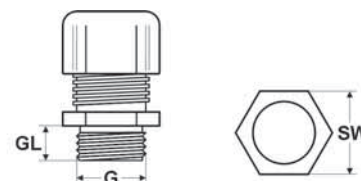
## Note

Use short-sized inserts when using gland bodies of size M12x1.5 or M20x1.5.

## Technical data

Temperature range: -40°C up to +150°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904240   | M12 x 1,5  | 8,0              | 15              | 50   | o. r.                              | o. r.     | o. r.      |
| 904241   | M16 x 1,5  | 9,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904242   | M20 x 1,5  | 9,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 904243   | M25 x 1,5  | 9,0              | 29              | 50   | o. r.                              | o. r.     | o. r.      |
| 904244   | M32 x 1,5  | 11,0             | 38              | 25   | o. r.                              | o. r.     | o. r.      |
| 904245   | M40 x 1,5  | 11,5             | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904246   | M50 x 1,5  | 13,0             | 56              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UNI-DICHT-VK-stainless steel body gland

stainless steel



## UNI-DICHT-VK gland body stainless steel

Gland body made of stainless steel for populating with inserts made by TPE. For use in chemical industry, at high temperatures, or long lasting UV-stress.

## Material

Stainless steel 1.4305 / AISI 303

## Note

When using inserts made by silicone temperature range: -60°C to +200°C.

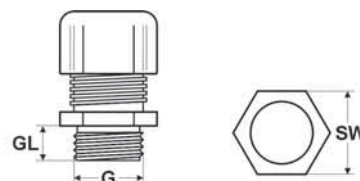
## Technical data

Temperature range: up to +200°C

Test standard: EN50262

## Application

- Chemical industry
- Food industry
- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904247   | M12 x 1,5  | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 904248   | M16 x 1,5  | 6,0              | 19              | 50   | o. r.                              | o. r.     | o. r.      |
| 904249   | M20 x 1,5  | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 904250   | M25 x 1,5  | 7,5              | 27              | 50   | o. r.                              | o. r.     | o. r.      |
| 904251   | M32 x 1,5  | 8,0              | 36              | 25   | o. r.                              | o. r.     | o. r.      |
| 904252   | M40 x 1,5  | 8,0              | 46              | 10   | o. r.                              | o. r.     | o. r.      |
| 904253   | M50 x 1,5  | 10,0             | 55              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UNI-DICHT sealing insert

standard, silicone



## UNI-DICHT sealing insert silicone

Sealing inserts made by silicone for populating of UNI-DICHT gland bodies. For use in chemical industry and at high temperatures.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Silicone

- halogen-free
- phosphor-free
- cadmium-free

## Note

Short-size inserts are used with gland bodies made of PVDF. Standard size inserts are used with gland bodies made of stainless steel.

## Technical data

Temperature range: -60°C up to +200°C

| Part no. | Size metric | Sealing insert colour | Cable Ø from / to mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-------------|-----------------------|----------------------|------|------------------------------------|-----------|------------|
|          |             |                       |                      |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904254   | M12 x 1,5   | transparent/short     | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904255   | M12 x 1,5   | transparent           | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904256   | M16 x 1,5   | transparent           | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904257   | M16 x 1,5   | transparent           | 6,5 - 9,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904258   | M20 x 1,5   | transparent/short     | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904259   | M20 x 1,5   | transparent           | 4,0 - 6,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904260   | M20 x 1,5   | transparent/short     | 6,5 - 9,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904261   | M20 x 1,5   | transparent           | 6,5 - 9,5            | 100  | o. r.                              | o. r.     | o. r.      |
| 904262   | M20 x 1,5   | transparent/short     | 7,0 - 10,5           | 100  | o. r.                              | o. r.     | o. r.      |
| 904263   | M20 x 1,5   | transparent           | 7,0 - 10,5           | 100  | o. r.                              | o. r.     | o. r.      |
| 904264   | M20 x 1,5   | transparent           | 9,0 - 13,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 904265   | M25 x 1,5   | transparent           | 7,0 - 10,5           | 100  | o. r.                              | o. r.     | o. r.      |
| 904266   | M25 x 1,5   | transparent           | 9,0 - 13,0           | 100  | o. r.                              | o. r.     | o. r.      |
| 904267   | M25 x 1,5   | transparent           | 11,5 - 15,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 904268   | M32 x 1,5   | transparent           | 9,0 - 13,0           | 50   | o. r.                              | o. r.     | o. r.      |
| 904269   | M32 x 1,5   | transparent           | 11,5 - 15,5          | 50   | o. r.                              | o. r.     | o. r.      |
| 904270   | M32 x 1,5   | transparent           | 14,0 - 18,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 904271   | M40 x 1,5   | transparent           | 14,0 - 18,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 904272   | M40 x 1,5   | transparent           | 17,0 - 20,5          | 25   | o. r.                              | o. r.     | o. r.      |
| 904273   | M40 x 1,5   | transparent           | 20,0 - 25,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 904274   | M40 x 1,5   | transparent           | 24,0 - 28,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 904275   | M50 x 1,5   | transparent           | 27,0 - 32,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 904276   | M50 x 1,5   | transparent           | 29,0 - 34,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 904277   | M50 x 1,5   | transparent           | 32,0 - 36,0          | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KM-INOX<sup>counternut</sup>

stainless steel



## KM INOX

The counternut made of stainless steel.

## Material

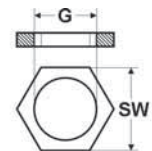
Stainless steel 1.4305 / AISI 303

## Technical data

Temperature range: up to +200°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size inside  
SW Spanner size

### metric thread

| Part no. | Size<br>Metr. | Spanner size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------------|--------------------|------|------------------------------------|-----------|------------|
|          |               |                    |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920605   | M12 x 1,5     | 15,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 920606   | M16 x 1,5     | 19,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 920607   | M20 x 1,5     | 24,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 920608   | M25 x 1,5     | 30,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 920609   | M32 x 1,5     | 36,0               | 50   | o. r.                              | o. r.     | o. r.      |
| 920610   | M40 x 1,5     | 46,0               | 50   | o. r.                              | o. r.     | o. r.      |
| 920611   | M50 x 1,5     | 60,0               | 10   | o. r.                              | o. r.     | o. r.      |
| 920612   | M63 x 1,5     | 70,0               | 10   | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size<br>PG | Spanner size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|--------------------|------|------------------------------------|-----------|------------|
|          |            |                    |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92970    | 7          | 17,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 92971    | 9          | 19,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 92972    | 11         | 22,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 92973    | 13,5       | 24,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 92974    | 16         | 27,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 92975    | 21         | 32,0               | 100  | o. r.                              | o. r.     | o. r.      |
| 92976    | 29         | 41,0               | 50   | o. r.                              | o. r.     | o. r.      |
| 92977    | 36         | 60,0               | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# VS-O stainless steel screw plug



## VS-O Stainless Steel

The screw plug made of stainless steel with an O-ring made by FKM.

## Material

Stainless steel 1.4305 / AISI 303  
O-ring: FKM

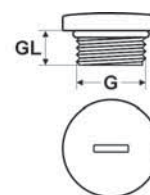
## Technical data

Protection class: IP 68

Temperature range: -15°C up to +200°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction



## Dimensions

G Thread size  
GL Thread length  
D Outer diameter  
H Height

## metric thread

| Part no. | Size<br>Metr. | Thread<br>length<br>mm | Outer Ø<br>ca. mm | Height<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------------|------------------------|-------------------|--------------|------|------------------------------------|-----------|------------|
|          |               |                        |                   |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905946   | M12 x 1,5     | 5,0                    | 14,0              | 7,5          | 10   | o. r.                              | o. r.     | o. r.      |
| 905947   | M16 x 1,5     | 5,0                    | 18,0              | 8,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 905948   | M20 x 1,5     | 6,5                    | 22,0              | 9,5          | 10   | o. r.                              | o. r.     | o. r.      |
| 905949   | M25 x 1,5     | 7,0                    | 28,0              | 11,0         | 10   | o. r.                              | o. r.     | o. r.      |
| 905950   | M32 x 1,5     | 8,0                    | 35,0              | 12,0         | 5    | o. r.                              | o. r.     | o. r.      |
| 905951   | M40 x 1,5     | 8,5                    | 44,0              | 13,0         | 5    | o. r.                              | o. r.     | o. r.      |
| 905952   | M50 x 1,5     | 9,0                    | 54,0              | 15,0         | 2    | o. r.                              | o. r.     | o. r.      |
| 905953   | M63 x 1,5     | 10,0                   | 67,0              | 16,0         | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# O-ring FKM



## O-ring FKM

O-rings for sealing against water, dust, and oil. Made by FKM for large temperature range.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

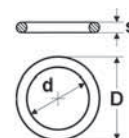
## Material

FKM

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Technical data

Temperature range: -40°C up to +200°C



## Dimensions

D Outer diameter  
d Inner diameter  
s Thickness

### for metric thread

| Part no. | Size metr. | Inner Ø mm | Outer Ø mm | Thickness mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|------------|------------|--------------|------|------------------------------------|-----------|------------|
|          |            |            |            |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98594    | M12 x 1,5  | 10,0       | 13,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 98595    | M16 x 1,5  | 12,0       | 15,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 98596    | M20 x 1,5  | 17,0       | 20,6       | 1,8          | 100  | o. r.                              | o. r.     | o. r.      |
| 904282   | M25 x 1,5  | 22,0       | 26,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 904283   | M32 x 1,5  | 29,0       | 33,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 904284   | M40 x 1,5  | 35,0       | 39,0       | 2,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 904285   | M50 x 1,5  | 43,0       | 47,0       | 2,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 904286   | M63 x 1,5  | 55,0       | 59,0       | 2,0          | 50   | o. r.                              | o. r.     | o. r.      |

### for PG thread

| Part no. | Size PG | Inner Ø mm | Outer Ø mm | Thickness mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|------------|------------|--------------|------|------------------------------------|-----------|------------|
|          |         |            |            |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97753    | 7       | 10,0       | 13,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 904287   | 9       | 12,0       | 15,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 904288   | 11      | 16,0       | 19,6       | 1,8          | 100  | o. r.                              | o. r.     | o. r.      |
| 904289   | 13,5    | 17,0       | 20,6       | 1,8          | 100  | o. r.                              | o. r.     | o. r.      |
| 96662    | 16      | 18,0       | 21,0       | 1,5          | 100  | o. r.                              | o. r.     | o. r.      |
| 904290   | 21      | 26,0       | 30,0       | 2,0          | 100  | o. r.                              | o. r.     | o. r.      |
| 904291   | 29      | 33,0       | 37,0       | 2,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 904292   | 36      | 43,0       | 47,0       | 2,0          | 50   | o. r.                              | o. r.     | o. r.      |
| 904293   | 42      | 50,0       | 54,0       | 2,0          | 25   | o. r.                              | o. r.     | o. r.      |
| 904294   | 48      | 55,0       | 59,0       | 2,0          | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## Product information

With product-flyers HELUKABEL® is giving informations forward to customers and business-partners about news, offers or just worth knowing around Data, Network & Bus Technology.





Photo: HELUKABEL®

## **Cable glands for increased usage temperature**

# Cable glands for increased usage temperature

## Cable glands

Series HELUTOP® HT

Brass

|                                    |        |    |
|------------------------------------|--------|----|
| <b>HELUTOP® HT-MS Plus</b> .....   | 120 °C | 93 |
| <b>HELUTOP® HT-MS c Plus</b> ..... | 120 °C | 94 |

Series HSK

PVDF (polyvinylidene fluoride)

|                       |        |     |
|-----------------------|--------|-----|
| <b>HSK-PVDF</b> ..... | 150 °C | 161 |
|-----------------------|--------|-----|

Brass with PVDF-insert

|                          |        |     |
|--------------------------|--------|-----|
| <b>HSK-MS-PVDF</b> ..... | 150 °C | 164 |
|--------------------------|--------|-----|

Series UNI-DICHT

Brass, for ASI-bus line

|                               |        |     |
|-------------------------------|--------|-----|
| <b>UNI-DICHT-ASI-MS</b> ..... | 135 °C | 102 |
|-------------------------------|--------|-----|

Brass gland bodies

|                              |        |    |
|------------------------------|--------|----|
| <b>UNI-DICHT-VK-MS</b> ..... | 200 °C | 99 |
|------------------------------|--------|----|

PVDF gland bodies

|                                |        |     |
|--------------------------------|--------|-----|
| <b>UNI-DICHT-VK-PVDF</b> ..... | 150 °C | 166 |
|--------------------------------|--------|-----|

Stainless steel gland body

|                                           |        |     |
|-------------------------------------------|--------|-----|
| <b>UNI-DICHT-VK-stainless steel</b> ..... | 200 °C | 167 |
|-------------------------------------------|--------|-----|

Sealing insert

|                                             |        |    |
|---------------------------------------------|--------|----|
| <b>UNI-DICHT</b> sealing insert closed..... | 135 °C | 53 |
|---------------------------------------------|--------|----|

|                                                     |        |    |
|-----------------------------------------------------|--------|----|
| <b>UNI-DICHT MFDE</b> multiple sealing insert ..... | 130 °C | 59 |
|-----------------------------------------------------|--------|----|

|                                             |        |    |
|---------------------------------------------|--------|----|
| <b>Sealing billets</b> (PVDF / black) ..... | 150 °C | 31 |
|---------------------------------------------|--------|----|

|                                                |        |     |
|------------------------------------------------|--------|-----|
| <b>UNI-DICHT Sealing insert silicone</b> ..... | 200 °C | 168 |
|------------------------------------------------|--------|-----|

|                                                        |        |    |
|--------------------------------------------------------|--------|----|
| <b>UNI-DICHT Sealing insert for ASI-bus line</b> ..... | 135 °C | 62 |
|--------------------------------------------------------|--------|----|

Series KVA

Brass, for ASI-bus line

|                         |        |     |
|-------------------------|--------|-----|
| <b>KVA-ASI-MS</b> ..... | 135 °C | 112 |
|-------------------------|--------|-----|

Brass-Gland body

|                        |        |     |
|------------------------|--------|-----|
| <b>KVA-VK-MS</b> ..... | 200 °C | 107 |
|------------------------|--------|-----|

Series KVA-XXL

Brass, for particularly large cable diameters

|                                    |        |     |
|------------------------------------|--------|-----|
| <b>KVA-XXL-MS</b> cable glant..... | 135 °C | 114 |
|------------------------------------|--------|-----|

|                                       |        |     |
|---------------------------------------|--------|-----|
| <b>KVA-XXL-VK-MS</b> gland body ..... | 200 °C | 115 |
|---------------------------------------|--------|-----|

Series SD

Brass

|                 |        |     |
|-----------------|--------|-----|
| <b>SD</b> ..... | 120 °C | 117 |
|-----------------|--------|-----|

## Cable gland EMC

Series KVA-XXL

|                           |        |     |
|---------------------------|--------|-----|
| <b>KVA-XXL-MS-E</b> ..... | 135 °C | 153 |
|---------------------------|--------|-----|

Counter nut

|                     |        |     |
|---------------------|--------|-----|
| <b>KM-EMV</b> ..... | 200 °C | 154 |
|---------------------|--------|-----|

# Cable glands for increased usage temperature

## Accessories / Parts

|                                    |        |  |  |        |     |
|------------------------------------|--------|--|--|--------|-----|
| Strain relief                      |        |  |  |        |     |
| <b>ZE</b> .....                    |        |  |  | 200 °C | 123 |
| <b>ZEI</b> .....                   |        |  |  | 200 °C | 125 |
| Thread adaption                    |        |  |  |        |     |
| Adapter                            |        |  |  |        |     |
| <b>Adapter</b> hexagonal .....     |        |  |  | 200 °C | 126 |
| <b>Adapter</b> round .....         |        |  |  | 200 °C | 128 |
| Extension                          |        |  |  |        |     |
| <b>EW</b> round .....              |        |  |  | 200 °C | 130 |
| Reduction                          |        |  |  |        |     |
| <b>RE</b> hexagonal .....          |        |  |  | 200 °C | 131 |
| <b>RE</b> round .....              |        |  |  | 200 °C | 133 |
| Counter nut                        |        |  |  |        |     |
| <b>KM</b> .....                    |        |  |  | 200 °C | 134 |
| <b>KM-INOX</b> .....               |        |  |  | 200 °C | 169 |
| Screw plug                         |        |  |  |        |     |
| <b>VS-O stainless steel</b> .....  |        |  |  | 200 °C | 170 |
| Sealing ring                       |        |  |  |        |     |
| <b>Incision sealing ring</b> ..... | 120 °C |  |  |        | 78  |
| Reinforced wall sealing            |        |  |  |        |     |
| <b>O-ring</b> .....                | 120 °C |  |  |        | 74  |
| <b>O-ring FKM</b> .....            |        |  |  | 200 °C | 171 |





Photo: HELUKABEL®

## **Cable glands for potentially explosive atmospheres**



# Cable glands for potentially explosive atmospheres

## Cable glands

|                          |     |
|--------------------------|-----|
| Series HSK               |     |
| Plastic                  |     |
| <b>HSK-EX</b> .....      | 178 |
| Brass                    |     |
| <b>HSK-MS-EX</b> .....   | 180 |
| Brass EMC                |     |
| <b>HSK-MS-EX-E</b> ..... | 181 |

## Thread adapter

|                              |     |
|------------------------------|-----|
| Adapter                      |     |
| <b>Adapter PA-ATEX</b> ..... | 182 |
| Extension                    |     |
| <b>EW PA-ATEX</b> .....      | 184 |
| Reducer                      |     |
| <b>RE PA-ATEX</b> .....      | 185 |

## Accessories / Parts

|                     |     |
|---------------------|-----|
| Screw plug          |     |
| <b>VSK-EX</b> ..... | 186 |

# HSK-EX cable gland

explosive area



## HSK-EX

Use in explosive areas

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

PA 6, VO acc. to UL 94  
Moulded seal: NBR  
O-ring: NBR

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

## Note

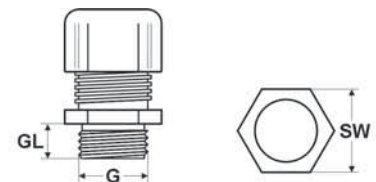
Certificate of Conformity:  
EExII DMT 02 ATEX E 047 X

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -20°C up to +95°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97995                              | 97986                            | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97996                              | 97987                            | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97997                              | 97988                            | M16 x 1,5     | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97998                              | 97156                            | M20 x 1,5     | 6,5 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97999                              | 97989                            | M20 x 1,5     | 10,0 - 14,0                | 9,0                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98000                              | 97990                            | M25 x 1,5     | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98001                              | 97991                            | M32 x 1,5     | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 98002                              | 97992                            | M40 x 1,5     | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 98003                              | 97993                            | M50 x 1,5     | 32,0 - 38,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 98004                              | 97994                            | M63 x 1,5     | 37,0 - 44,0                | 14,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

## metric thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>Metr. | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|---------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |               |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97962                        | M12 x 1,5     | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97559                        | M16 x 1,5     | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97963                        | M16 x 1,5     | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | o. r.                              | o. r.     | o. r.      |
| 96805                        | M20 x 1,5     | 6,5 - 12,0                 | 9,0                    | 24                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97964                        | M20 x 1,5     | 10,0 - 14,0                | 9,0                    | 27                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97560                        | M25 x 1,5     | 13,0 - 18,0                | 11,0                   | 33                    | 50   | o. r.                              | o. r.     | o. r.      |
| 97561                        | M32 x 1,5     | 18,0 - 25,0                | 11,0                   | 42                    | 25   | o. r.                              | o. r.     | o. r.      |
| 97562                        | M40 x 1,5     | 22,0 - 32,0                | 13,0                   | 53                    | 10   | o. r.                              | o. r.     | o. r.      |
| 97563                        | M50 x 1,5     | 32,0 - 38,0                | 13,0                   | 60                    | 5    | o. r.                              | o. r.     | o. r.      |
| 97564                        | M63 x 1,5     | 37,0 - 44,0                | 14,0                   | 65 / 68               | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# HSK-EX cable gland

explosive area

## PG thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96110                              | 96116                            | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | O. r.                              | O. r.     | O. r.      |
| 96111                              | 96117                            | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | O. r.                              | O. r.     | O. r.      |
| 96112                              | 96225                            | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 96113                              | 96226                            | 13,5       | 6,5 - 12,0                 | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 96114                              | 96119                            | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 96115                              | 96120                            | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 50   | O. r.                              | O. r.     | O. r.      |
| 96597                              | 96121                            | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 25   | O. r.                              | O. r.     | O. r.      |
| 96598                              | 96122                            | 36         | 22,0 - 32,0                | 13,0                   | 53                    | 10   | O. r.                              | O. r.     | O. r.      |
| 96599                              | 96601                            | 42         | 32,0 - 38,0                | 13,0                   | 60                    | 5    | O. r.                              | O. r.     | O. r.      |
| 96600                              | 96602                            | 48         | 37,0 - 44,0                | 14,0                   | 65                    | 5    | O. r.                              | O. r.     | O. r.      |

## PG thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>PG | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |            |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90030                        | 7          | 3,0 - 6,5                  | 8,0                    | 15                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90031                        | 9          | 4,0 - 8,0                  | 8,0                    | 19                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90032                        | 11         | 5,0 - 10,0                 | 8,0                    | 22                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90033                        | 13,5       | 6,5 - 12,0                 | 9,0                    | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90034                        | 16         | 10,0 - 14,0                | 10,0                   | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90035                        | 21         | 13,0 - 18,0                | 11,0                   | 33                    | 50   | O. r.                              | O. r.     | O. r.      |
| 90036                        | 29         | 18,0 - 25,0                | 11,0                   | 42                    | 25   | O. r.                              | O. r.     | O. r.      |
| 90037                        | 36         | 22,0 - 32,0                | 13,0                   | 53                    | 10   | O. r.                              | O. r.     | O. r.      |
| 90038                        | 42         | 32,0 - 38,0                | 13,0                   | 60                    | 5    | O. r.                              | O. r.     | O. r.      |
| 90039                        | 48         | 37,0 - 44,0                | 14,0                   | 65                    | 5    | O. r.                              | O. r.     | O. r.      |

## NPT thread

| Part no.<br>light grey<br>RAL 7035 | Artikel-Nr.<br>black<br>RAL 9005 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------------|----------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                    |                                  |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92640                              | 92650                            | 3/8"        | 4,0 - 8,0                  | 15,0                   | 19 / 22               | 50   | O. r.                              | O. r.     | O. r.      |
| 92641                              | 92651                            | 1/2"        | 6,5 - 12,0                 | 13,0                   | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 92642                              | 92652                            | 1/2"        | 10,0 - 14,0                | 13,0                   | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 92643                              | 92653                            | 3/4"        | 13,0 - 18,0                | 14,0                   | 33                    | 50   | O. r.                              | O. r.     | O. r.      |
| 92644                              | 92654                            | 1"          | 18,0 - 25,0                | 19,0                   | 42                    | 25   | O. r.                              | O. r.     | O. r.      |
| 92645                              | 92655                            | 1,25"       | 18,0 - 25,0                | 16,0                   | 42 / 46               | 25   | O. r.                              | O. r.     | O. r.      |
| 92646                              | 92656                            | 1,5"        | 22,0 - 32,0                | 20,0                   | 53                    | 10   | O. r.                              | O. r.     | O. r.      |

## NPT thread - for intrinsically safe application

| Part no.<br>blue<br>RAL 5012 | Size<br>NPT | Cable Ø<br>from / to<br>mm | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------------------|-------------|----------------------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                              |             |                            |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92660                        | 3/8"        | 4,0 - 8,0                  | 15,0                   | 19 / 22               | 50   | O. r.                              | O. r.     | O. r.      |
| 92661                        | 1/2"        | 6,5 - 12,0                 | 13,0                   | 24                    | 50   | O. r.                              | O. r.     | O. r.      |
| 92662                        | 1/2"        | 10,0 - 14,0                | 13,0                   | 27                    | 50   | O. r.                              | O. r.     | O. r.      |
| 92663                        | 3/4"        | 13,0 - 18,0                | 14,0                   | 33                    | 50   | O. r.                              | O. r.     | O. r.      |
| 92664                        | 1"          | 18,0 - 25,0                | 19,0                   | 42                    | 25   | O. r.                              | O. r.     | O. r.      |
| 92665                        | 1,25"       | 18,0 - 25,0                | 16,0                   | 42 / 46               | 25   | O. r.                              | O. r.     | O. r.      |
| 92666                        | 1,5"        | 22,0 - 32,0                | 20,0                   | 53                    | 10   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# HSK-MS-EX cable gland

brass - explosive area



## HSK-MS-EX

Use in explosive areas

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Automation technology
- Control cabinet construction
- Installation technology

## Material

Brass, nickel plated  
Clamp: Polyamide PA 6  
Moulded seal: NBR  
O-ring: NBR

## Note

Certificate of Conformity:  
EExell DMT 03 ATEX E 051 X

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -20°C up to +95°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98045    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 98046    | M16 x 1,5  | 4,0 - 8,0            | 6,0              | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 98047    | M16 x 1,5  | 6,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 98048    | M20 x 1,5  | 6,0 - 12,0           | 6,0              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 98049    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 98050    | M25 x 1,5  | 14,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 98051    | M32 x 1,5  | 20,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 98052    | M40 x 1,5  | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 98053    | M50 x 1,5  | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 98054    | M63 x 1,5  | 37,0 - 44,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90200    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 90201    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 90202    | 11      | 6,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 90203    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 90204    | 16      | 10,0 - 14,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 90205    | 21      | 14,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 90206    | 29      | 20,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 90207    | 36      | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 90208    | 42      | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 90209    | 48      | 37,0 - 44,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

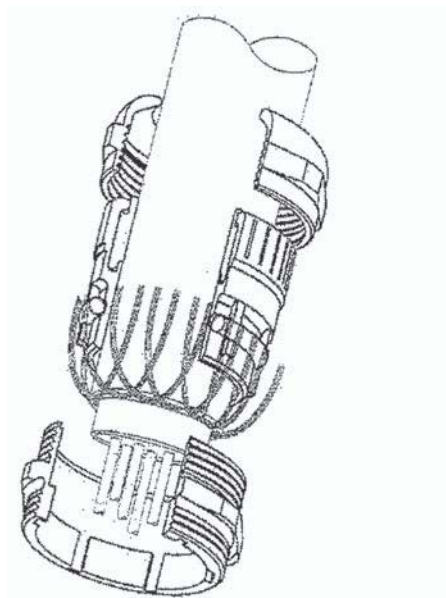
| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92900    | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 92901    | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |
| 92902    | 3/4"     | 14,0 - 18,0          | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 92903    | 1"       | 20,0 - 25,0          | 19,0             | 40              | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSK-MS-EX-E cable gland

brass - explosive area - EMC



## HSK-MS-EX-E

The EMC cable gland for use in explosive areas

- Easy to assemble
- Completely water-tight
- Optimum strain relief
- Large clamping areas

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology

## Material

Brass, nickel plated  
Clamp: Polyamide PA 6  
Moulded seal: NBR  
O-ring: NBR

## Note

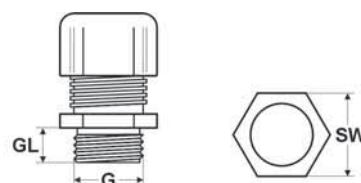
Certificate of Conformity:  
EExell DMT 03 ATEX E 051 X

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -20°C up to +95°C

Test standard: EN50262



## Dimensions

G Thread size  
GL Thread length  
SW Spanner size

## metric thread

| Part no. | Size Metr. | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |            |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92880    | M12 x 1,5  | 3,0 - 6,5            | 6,5              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 92881    | M16 x 1,5  | 6,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 92882    | M20 x 1,5  | 10,0 - 14,0          | 6,0              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 92883    | M25 x 1,5  | 14,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 92884    | M32 x 1,5  | 20,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 92885    | M40 x 1,5  | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 92886    | M50 x 1,5  | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 92887    | M63 x 1,5  | 37,0 - 44,0          | 10,0             | 64 / 68         | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size PG | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |         |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92870    | 7       | 3,0 - 6,5            | 5,0              | 14              | 50   | o. r.                              | o. r.     | o. r.      |
| 92871    | 9       | 4,0 - 8,0            | 6,0              | 17              | 50   | o. r.                              | o. r.     | o. r.      |
| 92872    | 11      | 6,0 - 10,0           | 6,0              | 20              | 50   | o. r.                              | o. r.     | o. r.      |
| 92873    | 13,5    | 6,0 - 12,0           | 6,5              | 22              | 50   | o. r.                              | o. r.     | o. r.      |
| 92874    | 16      | 10,0 - 14,0          | 6,5              | 24              | 50   | o. r.                              | o. r.     | o. r.      |
| 92875    | 21      | 14,0 - 18,0          | 7,0              | 30              | 25   | o. r.                              | o. r.     | o. r.      |
| 92876    | 29      | 20,0 - 25,0          | 8,0              | 40              | 25   | o. r.                              | o. r.     | o. r.      |
| 92877    | 36      | 22,0 - 32,0          | 8,0              | 50              | 10   | o. r.                              | o. r.     | o. r.      |
| 92878    | 42      | 32,0 - 38,0          | 9,0              | 57              | 5    | o. r.                              | o. r.     | o. r.      |
| 92879    | 48      | 37,0 - 44,0          | 10,0             | 64              | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no. | Size NPT | Cable Ø from / to mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|----------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |          |                      |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92890    | 3/8"     | 4,0 - 8,0            | 15,0             | 17 / 19         | 50   | o. r.                              | o. r.     | o. r.      |
| 92891    | 1/2"     | 6,0 - 12,0           | 13,0             | 22 / 24         | 50   | o. r.                              | o. r.     | o. r.      |
| 92892    | 3/4"     | 14,0 - 18,0          | 13,0             | 30              | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Adapter PA-ATEX

explosive area



## Adapter PA-ATEX

For use in explosive areas.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

Polyamide

Colours: black  
RAL: 9005

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

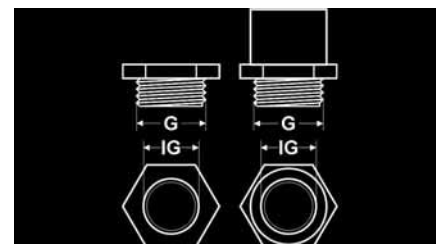
## Note

Approval: PTB 04 ATEX 1040 X

## Technical data

Protection class: IP 66

Temperature range: -20°C up to +70°C



## Dimensions

G Thread size outside  
IG Thread size inside

### from PG to metric

| Part no. | Size<br>PG<br>outside | Size<br>metr.<br>inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------------|-------------------------|------|------------------------------------|-----------|------------|
|          |                       |                         |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904449   | 21                    | M20 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904450   | 29                    | M20 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904451   | 29                    | M25 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904452   | 29                    | M32 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904454   | 36                    | M25 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904455   | 36                    | M32 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904456   | 36                    | M40 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904457   | 42                    | M20 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904458   | 42                    | M25 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904459   | 42                    | M32 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904460   | 42                    | M40 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904461   | 48                    | M20 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904462   | 48                    | M25 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904463   | 48                    | M32 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904464   | 48                    | M40 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904465   | 48                    | M50 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request



# Adapter PA-ATEX



explosive area

from PG to metric - high-profile design

| Part no. | Size<br>PG<br>outside | Size<br>metr.<br>inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------------|-------------------------|------|------------------------------------|-----------|------------|
|          |                       |                         |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904466   | 7                     | M12 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904467   | 7                     | M16 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904468   | 9                     | M12 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904469   | 9                     | M16 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904470   | 9                     | M20 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904471   | 11                    | M16 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904472   | 11                    | M20 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904473   | 11                    | M25 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904474   | 13,5                  | M16 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904475   | 13,5                  | M20 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904476   | 13,5                  | M25 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904477   | 16                    | M20 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904478   | 16                    | M25 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904479   | 16                    | M32 x 1,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 904480   | 21                    | M25 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904481   | 21                    | M32 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904482   | 21                    | M40 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904483   | 29                    | M40 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904484   | 29                    | M50 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904485   | 36                    | M50 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904486   | 36                    | M63 x 1,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 904487   | 42                    | M50 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904488   | 42                    | M63 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |
| 904489   | 48                    | M63 x 1,5               | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# EW PA-ATEX extender

explosive area



## Extender EW-PA-ATEX

For use in explosive areas.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

Polyamide

Colours: black  
RAL: 9005

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

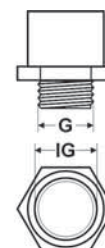
## Note

Approval: PTB 04 ATEX 1040X

## Technical data

Protection class: IP 66

Temperature range: -20°C up to +70°C



## Dimensions

G Thread size outside  
IG Thread size inside

## from metric to metric

| Part no. | Size metr. outside | Size metr. inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------|------------------------------------|-----------|------------|
|          |                    |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904421   | M12 x 1,5          | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904422   | M16 x 1,5          | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904423   | M20 x 1,5          | M25 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904424   | M25 x 1,5          | M32 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904425   | M32 x 1,5          | M40 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 904426   | M40 x 1,5          | M50 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 904427   | M50 x 1,5          | M63 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# RE PA-ATEX reducer

explosive area



## Reducer RE-PA-ATEX

For use in explosive areas.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

Polyamide

Colours: black  
RAL: 9005

- halogen-free
- phosphor-free
- silicone-free
- cadmium-free

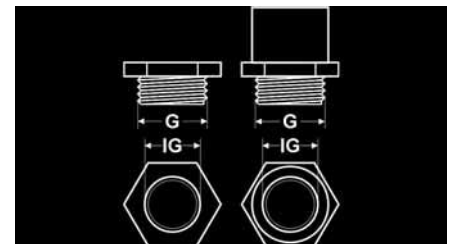
## Note

Approval: PTB 04 ATEX 1040X

## Technical data

Protection class: IP 66

Temperature range: -20°C up to +70°C



## from metric to metric

| Part no. | Size metr. outside | Size metr. inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------|------------------------------------|-----------|------------|
|          |                    |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904428   | M25 x 1,5          | M12 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904429   | M25 x 1,5          | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904430   | M25 x 1,5          | M20 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904431   | M32 x 1,5          | M16 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 904432   | M32 x 1,5          | M20 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 904433   | M32 x 1,5          | M25 x 1,5         | 50   | o. r.                              | o. r.     | o. r.      |
| 904434   | M40 x 1,5          | M20 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 904435   | M40 x 1,5          | M25 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 904436   | M40 x 1,5          | M32 x 1,5         | 25   | o. r.                              | o. r.     | o. r.      |
| 904437   | M50 x 1,5          | M20 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904438   | M50 x 1,5          | M25 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904439   | M50 x 1,5          | M32 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904440   | M50 x 1,5          | M40 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904441   | M63 x 1,5          | M20 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904442   | M63 x 1,5          | M25 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904443   | M63 x 1,5          | M32 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904444   | M63 x 1,5          | M40 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |
| 904445   | M63 x 1,5          | M50 x 1,5         | 5    | o. r.                              | o. r.     | o. r.      |

## from metric to metric - high-profile design

| Part no. | Size metr. outside | Size metr. inside | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------------------|-------------------|------|------------------------------------|-----------|------------|
|          |                    |                   |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904446   | M16 x 1,5          | M12 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |
| 904448   | M20 x 1,5          | M16 x 1,5         | 100  | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# VSK-EX screw plug

explosive area



## VSK-EX

The screwed plug for explosive area to DIN EN 50014 and DIN EN 50019.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide  
O-ring: NBR

Colours: black  
RAL: 9005

- halogen-free
- phosphor-free

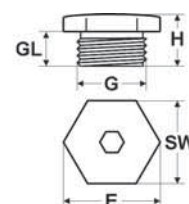
## Note

Approval: DMT 03 ATEX E 049

## Technical data

Protection class: IP 68 - 10 bar / IP 69K

Temperature range: -20°C up to +90°C



## Dimensions

G Thread size  
GL Thread length  
H Height  
SW Spanner size  
E Angle size

## metric thread

| Part no.<br>black<br>RAL 9005 | Size<br>Metr. | Thread<br>length<br>mm | Height<br>mm | Spanner<br>size<br>mm | Angle<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------------------|---------------|------------------------|--------------|-----------------------|---------------------|------|------------------------------------|-----------|------------|
|                               |               |                        |              |                       |                     |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98114                         | M12 x 1,5     | 8,5                    | 13,0         | 15                    | 16,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 98115                         | M16 x 1,5     | 8,5                    | 13,0         | 19                    | 20,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 96793                         | M20 x 1,5     | 9,0                    | 14,5         | 24                    | 25,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 98116                         | M25 x 1,5     | 10,5                   | 16,0         | 28                    | 30,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 97763                         | M32 x 1,5     | 11,5                   | 17,5         | 36                    | 38,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 98117                         | M40 x 1,5     | 11,5                   | 18,0         | 46                    | 48,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 98118                         | M50 x 1,5     | 13,5                   | 20,0         | 55                    | 60,0                | 20   | o. r.                              | o. r.     | o. r.      |
| 98119                         | M63 x 1,5     | 14,5                   | 21,0         | 70                    | 75,0                | 20   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no.<br>black<br>RAL 9005 | Size<br>PG | Thread<br>length<br>mm | Height<br>mm | Spanner<br>size<br>mm | Angle<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------------------|------------|------------------------|--------------|-----------------------|---------------------|------|------------------------------------|-----------|------------|
|                               |            |                        |              |                       |                     |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91447                         | 7          | 8,5                    | 13,0         | 15                    | 16,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 91448                         | 9          | 8,5                    | 13,0         | 19                    | 20,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 91449                         | 11         | 9,0                    | 14,5         | 24                    | 25,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 91450                         | 13,5       | 9,0                    | 14,5         | 24                    | 25,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 91451                         | 16         | 10,5                   | 16,0         | 28                    | 30,5                | 100  | o. r.                              | o. r.     | o. r.      |
| 91452                         | 21         | 11,5                   | 17,5         | 36                    | 38,0                | 100  | o. r.                              | o. r.     | o. r.      |
| 91453                         | 29         | 11,5                   | 18,0         | 46                    | 48,0                | 50   | o. r.                              | o. r.     | o. r.      |
| 91454                         | 36         | 13,5                   | 20,0         | 55                    | 60,0                | 25   | o. r.                              | o. r.     | o. r.      |
| 91455                         | 42         | 13,5                   | 20,0         | 60                    | 65,0                | 20   | o. r.                              | o. r.     | o. r.      |
| 91456                         | 48         | 14,5                   | 21,0         | 70                    | 75,0                | 20   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



Photo: HELUKABEL®

## **Cable glands for special installation conditions**

# Cable glands for special installation conditions

## High packing density - cable glands for adjacent installation

|                                                                               |    |
|-------------------------------------------------------------------------------|----|
| <b>HELUFAST</b> - threadless cable gland .....                                | 44 |
| <b>HELUFAST</b> - assembly pliers .....                                       | 45 |
| <b>HELUFAST</b> - assembly pliers with storage battery-hydraulic systems..... | 46 |
| <b>HELUFAST</b> - inserts .....                                               | 47 |

## Cable glands with pre-assembled multiple seal

|                               |     |
|-------------------------------|-----|
| <b>UNI-DICHT-MFD-PA</b> ..... | 50  |
| <b>UNI-DICHT-MFD-MS</b> ..... | 97  |
| <b>KVA-MFD-MS</b> .....       | 105 |
| Sealing billets .....         | 31  |

## Cable glands with kink protection

|                            |    |
|----------------------------|----|
| <b>HELUTOP® HT-K</b> ..... | 32 |
| <b>HSK-B</b> .....         | 41 |
| <b>HSK-MS-B</b> .....      | 92 |

## Cable glands with strain relief class B

|                                    |    |
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Photo: HELUKABEL®

## **Cable glands for special pressure conditions**

# Cable glands for special pressure conditions

## Pressure balance elements

Plastic

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# PBE-K pressure balance element

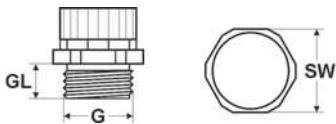


**PBE-K**  
 Pressure balance element made by polyamide. With semi permeable membrane that allows air flow but blocks moisture.

- Application**
- Plant and machine construction
  - Installation technology
  - Control cabinet construction

**Material**  
 Polyamide PA 6

**Technical data**  
 Protection class: IP 68 / IP 69K  
 Temperature range: -20°C up to +105°C



**Dimensions**  
 G Thread size  
 GL Thread length  
 SW Spanner size

| metric thread |          |            |                 |                  |      |                                    |           |            |
|---------------|----------|------------|-----------------|------------------|------|------------------------------------|-----------|------------|
| Part no.      | Part no. | Size Metr. | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|               |          |            |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904492        | 904494   | M12 x 1,5  | 17,0            | 6,6              | 100  | o. r.                              | o. r.     | o. r.      |
| 904493        | 904495   | M12 x 1,5  | 17,0            | 10,0             | 100  | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice. o. r. = on request

## The partner for cables and wires in media technology



Photo: Helukabel®

For years, our cables have ensured perfect performances on Europe's leading musical and theatrical stages. They are also used in professional television, radio and studio equipment and at large-scale events such as the football world championships. Our product range for media equipment encompasses cables for both indoor and outdoor use. It guarantees high transmission quality for fixed installations or for mobile use. Our comprehensive range of products includes:

- AES/EBU audio cables
- DMX cables
- Round und multicore loudspeaker cables
- Instrument cables
- Microphone cables
- Video cables
- Connection equipment
- Special cables as per your requirements

Our activities are highlighted

**HELUSound**

**HELULight**



Photo: HELUKABEL®

## Cable protection tubes

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# Corrugated tubes

## Corrugated tubes for standard applications

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# Corrugated tubes

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# HELUcond PE corrugated tubes, polyethylene

weak stress



## HELUcond PE-F / PE-B

Cable protection tube for weak stress applications.

### Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

### Material

Mod. Polyethylene

Flammability acc. to UL 94: HB

- halogen-free

### Properties

- Resistant to bases.

### Note

Suitable connection glands:  
HELUquick.

### Technical data

Temperature range: -40°C up to +70°C

Temperature range temporary up to +90°C

Capacity/100mm NW 17: approx. 200 N

### fine profile / PE-F

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91621            | 90448             | 10,0             | 9,8           | 12,7          | 50            | o. r.                               | o. r.     | o. r.      |
| 90433            | 90449             | 12,0             | 11,6          | 15,6          | 50            | o. r.                               | o. r.     | o. r.      |
| 90435            | 90451             | 17,0             | 16,3          | 20,8          | 50            | o. r.                               | o. r.     | o. r.      |
| 90436            | 90452             | 23,0             | 22,9          | 27,9          | 50            | o. r.                               | o. r.     | o. r.      |
| 90437            | 90453             | 29,0             | 28,9          | 34,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 90438            | 90454             | 37,0             | 33,5          | 41,5          | 25            | o. r.                               | o. r.     | o. r.      |
| 90439            | 90455             | 50,0             | 45,2          | 53,4          | 25            | o. r.                               | o. r.     | o. r.      |

### coarse profile / PE-B

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 93781            | 93786             | 21,0             | 21,7          | 28,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 93782            | 93787             | 29,0             | 28,5          | 34,5          | 25            | o. r.                               | o. r.     | o. r.      |
| 93783            | 93788             | 36,0             | 36,0          | 42,4          | 25            | o. r.                               | o. r.     | o. r.      |
| 93784            | 93789             | 48,0             | 47,7          | 54,5          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUcond PA6-L corrugated tubes, polyamide

weak stress



## HELUcond PA6-L

Cable protection tube for weak to medium stress applications.

### Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

### Material

Mod. Polyamide PA 6

Flammability acc. to UL 94: V2

- halogen-free
- phosphor-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Suitable connection glands:  
HELUquick, HSSV.

### Technical data

Temperature range: -40°C up to +120°C  
Temperature range temporary up to +150°C

Capacity/100mm NW 17: approx. 250 N

### fine profile

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of<br>up to 100 | 101 - 500 | 501 - 1000 |
|------------------|-------------------|------------------|---------------|---------------|---------------|--------------------------------------------------|-----------|------------|
| 99610            | 99620             | 7,5              | 6,8           | 10,0          | 50            | o. r.                                            | o. r.     | o. r.      |
| 99611            | 99621             | 10,0             | 10,0          | 12,8          | 50            | o. r.                                            | o. r.     | o. r.      |
| 99612            | 99622             | 12,0             | 12,5          | 15,7          | 50            | o. r.                                            | o. r.     | o. r.      |
| 99613            | 99623             | 14,0             | 14,4          | 18,5          | 50            | o. r.                                            | o. r.     | o. r.      |
| 99614            | 99624             | 17,0             | 16,8          | 21,1          | 50            | o. r.                                            | o. r.     | o. r.      |
| 99615            | 99625             | 23,0             | 23,4          | 28,4          | 50            | o. r.                                            | o. r.     | o. r.      |
| 99616            | 99626             | 29,0             | 29,2          | 34,5          | 25            | o. r.                                            | o. r.     | o. r.      |
| 99617            | 99627             | 37,0             | 34,0          | 41,8          | 25            | o. r.                                            | o. r.     | o. r.      |
| 99618            | 99628             | 50,0             | 46,0          | 53,8          | 25            | o. r.                                            | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUcond PA6-S corrugated tubes, polyamide

medium stress



## HELUcond PA6-S

Cable protection tube for medium to heavy-duty applications.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Mod. Polyamide PA 6

Flammability acc. to UL 94: V2

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Suitable connection glands:  
HELUquick, HSSV.

### Technical data

Temperature range: -40°C up to +120°C

Temperature range temporary up to +150°C

Capacity/100mm NW 17: approx. 350 N

### fine profile

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of<br>up to 100 | 101 - 500 | 501 - 1000 |
|------------------|-------------------|------------------|---------------|---------------|---------------|--------------------------------------------------|-----------|------------|
| 920154           | 920155            | 4,5              | 4,5           | 7,1           | 100           | o. r.                                            | o. r.     | o. r.      |
| 92724            | 92723             | 7,5              | 6,6           | 10,0          | 50            | o. r.                                            | o. r.     | o. r.      |
| 92676            | 92713             | 10,0             | 9,8           | 12,8          | 50            | o. r.                                            | o. r.     | o. r.      |
| 92677            | 92714             | 12,0             | 12,3          | 15,7          | 50            | o. r.                                            | o. r.     | o. r.      |
| 92678            | 92715             | 17,0             | 16,6          | 21,1          | 50            | o. r.                                            | o. r.     | o. r.      |
| 92679            | 92716             | 23,0             | 23,1          | 28,4          | 50            | o. r.                                            | o. r.     | o. r.      |
| 92685            | 92717             | 29,0             | 28,9          | 34,5          | 25            | o. r.                                            | o. r.     | o. r.      |
| 92686            | 92718             | 37,0             | 34,0          | 42,2          | 25            | o. r.                                            | o. r.     | o. r.      |
| 92687            | 92719             | 50,0             | 45,6          | 53,8          | 25            | o. r.                                            | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HELUcond PA6 corrugated tubes, polyamide

medium stress



## HELUcond PA6-F / PA6-B

Cable protection tube for medium to heavy-duty applications.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Mod. Polyamide PA 6

Flammability acc. to UL 94: HB

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

UL recognized / UR  
Suitable connection glands:  
HELUquick, HSSV.

### Technical data

Temperature range: -40°C up to +120°C  
Temperature range temporary up to +150°C

Capacity/100mm NW 16/17: approx. 350 N

#### fine profile / PA6-F

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 92675            | 96806             | 7,5              | 6,7           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90440            | 90456             | 10,0             | 9,9           | 13,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90441            | 90457             | 12,0             | 12,2          | 15,7          | 50            | o. r.                               | o. r.     | o. r.      |
| 90443            | 90459             | 17,0             | 16,6          | 21,2          | 50            | o. r.                               | o. r.     | o. r.      |
| 90444            | 90460             | 23,0             | 23,2          | 28,3          | 50            | o. r.                               | o. r.     | o. r.      |
| 90445            | 90461             | 29,0             | 29,0          | 34,5          | 25            | o. r.                               | o. r.     | o. r.      |
| 90446            | 90462             | 37,0             | 36,0          | 42,4          | 25            | o. r.                               | o. r.     | o. r.      |
| 90447            | 90463             | 50,0             | 48,1          | 53,8          | 25            | o. r.                               | o. r.     | o. r.      |

#### coarse profile / PA6-B

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 93790            | 93795             | 16,0             | 15,8          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 93791            | 93796             | 21,0             | 22,4          | 28,5          | 50            | o. r.                               | o. r.     | o. r.      |
| 93792            | 93797             | 29,0             | 28,5          | 34,5          | 25            | o. r.                               | o. r.     | o. r.      |
| 93793            | 93798             | 36,0             | 36,0          | 42,5          | 25            | o. r.                               | o. r.     | o. r.      |
| 93794            | 93799             | 48,0             | 46,5          | 54,5          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HELUcond PA6 UL corrugated tubes, polyamide

heavy duty



## HELUcond PA6-UL-F/B

Heavy-duty cable protection tube for heavy-duty mechanical applications.

- high load rating

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Mod. Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

UL recognized / UR  
Suitable connection glands:  
HELUquick, HSSV.

### Technical data

Temperature range: -40°C up to +140°C  
Temperature range temporary up to +160°C

Capacity/100mm NW 16/17: approx. 750 N

#### fine profile / PA6-UL-F

| Part no. grey  |               |            |            |            |                                     |           |            |       |
|----------------|---------------|------------|------------|------------|-------------------------------------|-----------|------------|-------|
| Part no. black | trade size mm | inner Ø mm | Outer Ø mm | Per metres | Net EUR/100 metres at a purchase of |           |            |       |
|                |               |            |            |            | up to 100                           | 101 - 500 | 501 - 1000 |       |
| 920384         | 920394        | 7,5        | 6,4        | 10,0       | 50                                  | o. r.     | o. r.      | o. r. |
| 920385         | 920395        | 10,0       | 9,0        | 13,0       | 50                                  | o. r.     | o. r.      | o. r. |
| 920386         | 920396        | 12,0       | 11,0       | 15,8       | 50                                  | o. r.     | o. r.      | o. r. |
| 920387         | 920397        | 17,0       | 16,6       | 21,0       | 50                                  | o. r.     | o. r.      | o. r. |
| 920388         | 920398        | 23,0       | 21,6       | 28,5       | 50                                  | o. r.     | o. r.      | o. r. |

#### coarse profile / PA6-UL-B

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 920389           | 920399            | 16,0             | 15,3          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 920390           | 920400            | 21,0             | 21,6          | 28,5          | 50            | o. r.                               | o. r.     | o. r.      |
| 920391           | 920401            | 29,0             | 27,5          | 34,5          | 25            | o. r.                               | o. r.     | o. r.      |
| 920392           | 920402            | 36,0             | 35,0          | 42,5          | 25            | o. r.                               | o. r.     | o. r.      |
| 920393           | 920403            | 48,0             | 45,5          | 54,5          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUcond PA12 corrugated tubes, polyamide PA12

high flexible and high load rating



## HELUcond PA12-F / PA12-B

Cable protection tube for heavy-duty applications.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Rail technology
- Installation technology

### Material

Mod. Polyamide 12

Flammability acc. to UL 94: HB

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Suitable connection glands:  
HELUquick, HSSV.

### Technical data

Temperature range: -50°C up to +120°C  
Temperature range temporary up to +150°C

Capacity/100mm NW 17: approx. 350 N

#### fine profile / PA12-F

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 920156           | 920163            | 10,0             | 9,9           | 13,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 920157           | 920164            | 12,0             | 12,2          | 15,7          | 50            | o. r.                               | o. r.     | o. r.      |
| 920158           | 920165            | 17,0             | 16,6          | 21,2          | 50            | o. r.                               | o. r.     | o. r.      |

#### coarse profile / PA12-B

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 920159           | 920166            | 21,0             | 22,4          | 28,3          | 50            | o. r.                               | o. r.     | o. r.      |
| 920160           | 920167            | 29,0             | 28,0          | 34,3          | 25            | o. r.                               | o. r.     | o. r.      |
| 920161           | 920168            | 36,0             | 35,5          | 42,3          | 25            | o. r.                               | o. r.     | o. r.      |
| 920162           | 905796            | 48,0             | 46,5          | 54,2          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUcond PP corrugated tubes, polypropylene

medium stress



## HELUcond PP

Cable protection tube for medium stress applications.

### Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Chemical plants
- Heating and air-conditioning technology

## Material

Polypropylene  
UV-resistant

Flammability acc. to UL 94: HB

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Suitable connection glands:  
HELUquick, HSSV.

## Technical data

Temperature range: -40°C up to +130°C  
Temperature range temporary up to +150°C

Capacity/100mm NW 17: approx. 350 N

## fine profile

| Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 920170            | 7,5              | 6,7           | 10,0          | 100           | o. r.                               | o. r.     | o. r.      |
| 920171            | 10,0             | 9,7           | 12,8          | 50            | o. r.                               | o. r.     | o. r.      |
| 920172            | 12,0             | 11,6          | 15,7          | 50            | o. r.                               | o. r.     | o. r.      |
| 920173            | 14,0             | 14,1          | 18,4          | 50            | o. r.                               | o. r.     | o. r.      |
| 920174            | 17,0             | 16,5          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 920175            | 23,0             | 23,0          | 28,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 920176            | 29,0             | 28,8          | 34,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 920177            | 37,0             | 33,5          | 41,6          | 25            | o. r.                               | o. r.     | o. r.      |
| 920178            | 50,0             | 44,8          | 53,4          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUcond PFA corrugated tubes, PFA

high temperature



new

## HELUcond PFA

Excellent thermal, electrical and chemical properties; abrasion resistance and dimensionally stable.

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Chemical plants
- Heating and air-conditioning technology

## Material

PFA  
UV-resistant

Flammability acc. to UL 94: V0

## Properties

resistant to a multitude of

- fuels
- cleaning agents
- lubricants
- acids and alkalis

## Note

Suitable connection glands:  
HELUquick, HSSV

## Technical data

Temperature range: -200°C up to +260°C

## fine profile

| Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 905584            | 4,5              | 4,4           | 6,8           | 100           | o. r.                               | o. r.     | o. r.      |
| 905585            | 7,5              | 7,6           | 10,7          | 50            | o. r.                               | o. r.     | o. r.      |
| 905586            | 10,0             | 9,8           | 13,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 905587            | 13,0             | 12,4          | 16,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 905588            | 14,0             | 13,8          | 17,8          | 50            | o. r.                               | o. r.     | o. r.      |
| 905589            | 17,0             | 16,6          | 21,1          | 50            | o. r.                               | o. r.     | o. r.      |
| 905590            | 23,0             | 23,0          | 28,6          | 50            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUquick corrugated tubes conduit gland - straight

plastic male thread



new



## HELUquick gland straight

Quick-insert glands with metallic female thread for a reliable, quick connection. Suitable for parallel-coiled HELUcond protection tubes.

## Material

Polyamide PA 6

- halogen-free
- silicone-free
- cadmium-free

## Properties

resistant to a multitude of

- oil
- gasoline
- weak bases
- weak acids

## Note

UR-tested.

Disassembly without additional opener.

Also available angled (45° and 90°).

## Technical data

Protection class: IP 68

Temperature range: -40°C up to +115°C

## metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904797           | 904820            | M12 x 1,5      | 7,5             | 11,5                   | 16,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 904798           | 904821            | M12 x 1,5      | 10,0            | 12,0                   | 18,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 904799           | 904822            | M16 x 1,5      | 10,0            | 11,5                   | 18,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 904800           | 904823            | M16 x 1,5      | 12,0            | 11,5                   | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 904801           | 904824            | M20 x 1,5      | 12,0            | 13,0                   | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 904802           | 904825            | M20 x 1,5      | 17,0            | 13,0                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 904803           | 904826            | M25 x 1,5      | 17,0            | 13,0                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 904804           | 904827            | M25 x 1,5      | 23,0            | 13,0                   | 34,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 904861           | 904828            | M32 x 1,5      | 23,0            | 15,0                   | 34,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 904862           | 904829            | M32 x 1,5      | 29,0            | 15,0                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 904863           | 904830            | M40 x 1,5      | 29,0            | 15,0                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 904864           | 904831            | M40 x 1,5      | 37,0            | 17,0                   | 55,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 904865           | 904832            | M50 x 1,5      | 37,0            | 17,0                   | 60,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 904866           | 904833            | M50 x 1,5      | 50,0            | 17,0                   | 65,0                  | 10   | o. r.                              | o. r.     | o. r.      |
| 904867           | 904834            | M63 x 1,5      | 50,0            | 17,0                   | 70,0                  | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HELUquick corrugated tubes conduit gland - elbow 90°

male thread, plastic



new



## HELUquick gland elbow 90°

Quick-insert glands for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

- halogen-free
- silicone-free
- cadmium-free

## Properties

resistant to a multitude of

- oil
- gasoline
- weak bases
- weak acids

## Note

- UR-tested

Disassembly without additional opener.  
Also available straight and angled 45°.

## Technical data

Protection class: IP 68

Temperature range: -40°C up to +115°C

### metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904805           | 904835            | M10 x 1,0      | 7,5             | 12,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904806           | 904836            | M12 x 1,5      | 10,0            | 10,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904807           | 904837            | M16 x 1,5      | 10,0            | 12,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904808           | 904838            | M16 x 1,5      | 12,0            | 12,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904809           | 904839            | M20 x 1,5      | 12,0            | 13,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904810           | 904840            | M20 x 1,5      | 17,0            | 13,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904811           | 904841            | M25 x 1,5      | 17,0            | 13,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904812           | 904842            | M25 x 1,5      | 23,0            | 13,0                   | -                     | 50   | o. r.                              | o. r.     | o. r.      |
| 904813           | 904843            | M32 x 1,5      | 23,0            | 15,0                   | -                     | 25   | o. r.                              | o. r.     | o. r.      |
| 904814           | 904844            | M32 x 1,5      | 29,0            | 15,0                   | -                     | 10   | o. r.                              | o. r.     | o. r.      |
| 904815           | 904845            | M40 x 1,5      | 29,0            | 15,0                   | -                     | 10   | o. r.                              | o. r.     | o. r.      |
| 904816           | 904846            | M40 x 1,5      | 37,0            | 15,0                   | -                     | 10   | o. r.                              | o. r.     | o. r.      |
| 904817           | 904847            | M50 x 1,5      | 37,0            | 15,5                   | -                     | 10   | o. r.                              | o. r.     | o. r.      |
| 904818           | 904848            | M50 x 1,5      | 50,0            | 15,0                   | -                     | 5    | o. r.                              | o. r.     | o. r.      |
| 904819           | 904849            | M63 x 1,5      | 50,0            | 16,0                   | -                     | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HSSV HELUcond quick insert glands



### Insert tube - assembly is complete

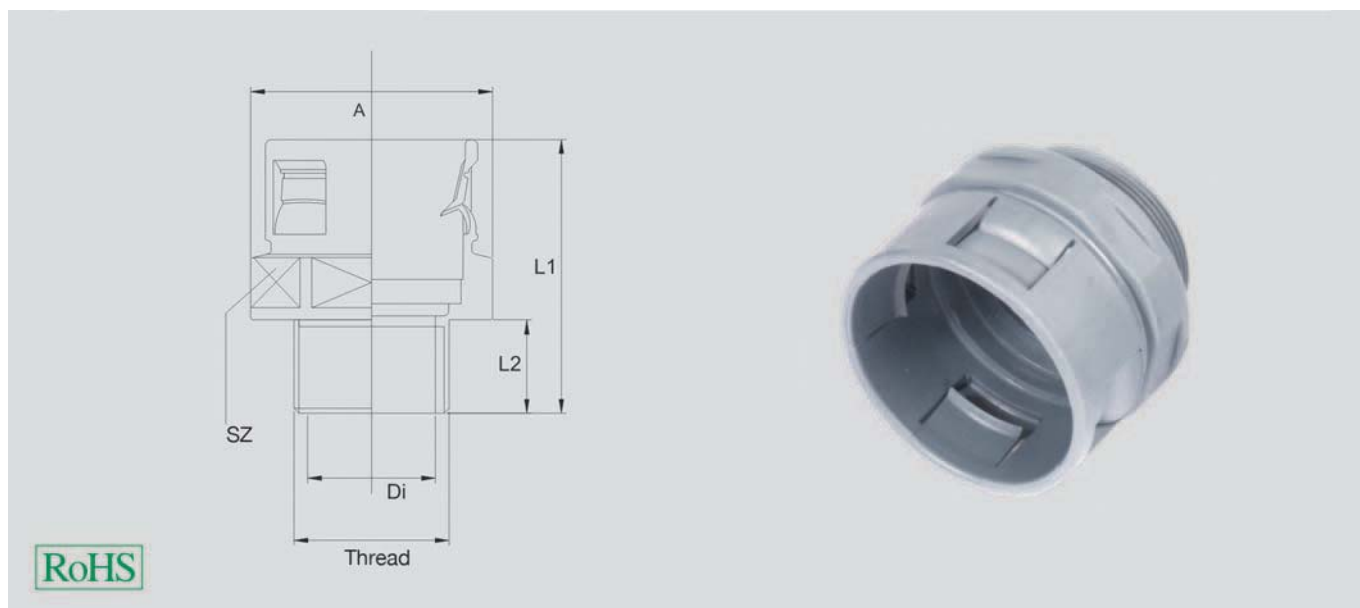
These quick, simple and single-handed assembly and disassembly operations are efficient time-savers. Insert the corrugated conduit into the gland and assembly is complete. The connection is released by sliding a special opener over the corrugated conduit until the raster unit is pushed outwards from the recesses in the conduit. Pull out the corrugated conduit. This operation is completed by hand in just a few seconds.

### The BENEFITS of this system

- Captive components from one piece
- Insert system enables quick, simple, single-handed assembly
  - even in constrained locations
- Compact gland design enables adjacent installation
  - extremely high packing density
- Yellow safety opener enables simple disassembly from the front
- Universal installation applications
  - universal gland installation for a number of different shaft profiles
- Protection classification: IP 65 to IP 68
  - Seating surface in gland (corrugated conduit seat) is cylindrical, improving tightness
- Extremely reliable, especially in robot construction
  - vibrations do not cause connection to self-release
  - High extraction forces
  - corrugated conduit can be released only using the Yellow safety opener
  - cannot be opened accidentally
  - corrugated conduit can rotate in the gland, thus preventing torsion
- Environmentally-friendly
  - halogen-free polyamide PA 6, combustibility to UL 94: V0
  - material is UL and CSA-listed
  - gland is 100% recyclable
- Very cost-effective
  - optimum price/performance ratio thanks to one gland providing entire function

# HSSV corrugated tubes conduit gland - straight

male thread, plastic



## HSSV gland straight

Quick-insert glands for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

- UR-tested
- Protection classification:
- IP 66 with outer seal
- Threaded connection:  
metric to EN 60423  
Each unit includes 1 safety opener

## Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

## metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905858           | 905859            | M10 x 1,0      | 7,5             | 8,5                    | 14,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94180            | 94190             | M12 x 1,5      | 10,0            | 8,9                    | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920183           | 920184            | M16 x 1,5      | 10,0            | 9,3                    | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94181            | 94191             | M16 x 1,5      | 12,0            | 8,6                    | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94182            | 94192             | M20 x 1,5      | 16,0 / 17,0     | 13,0                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94183            | 94193             | M25 x 1,5      | 21,0 / 23,0     | 14,3                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94184            | 94194             | M32 x 1,5      | 29,0            | 14,2                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 94185            | 94195             | M40 x 1,5      | 36,0 / 37,0     | 15,0                   | 50,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 94186            | 94196             | M50 x 1,5      | 48,0 / 50,0     | 15,5                   | 65,0                  | 10   | o. r.                              | o. r.     | o. r.      |
| 920185           | 920186            | M63 x 1,5      | 48,0 / 50,0     | 15,5                   | 65,0                  | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread

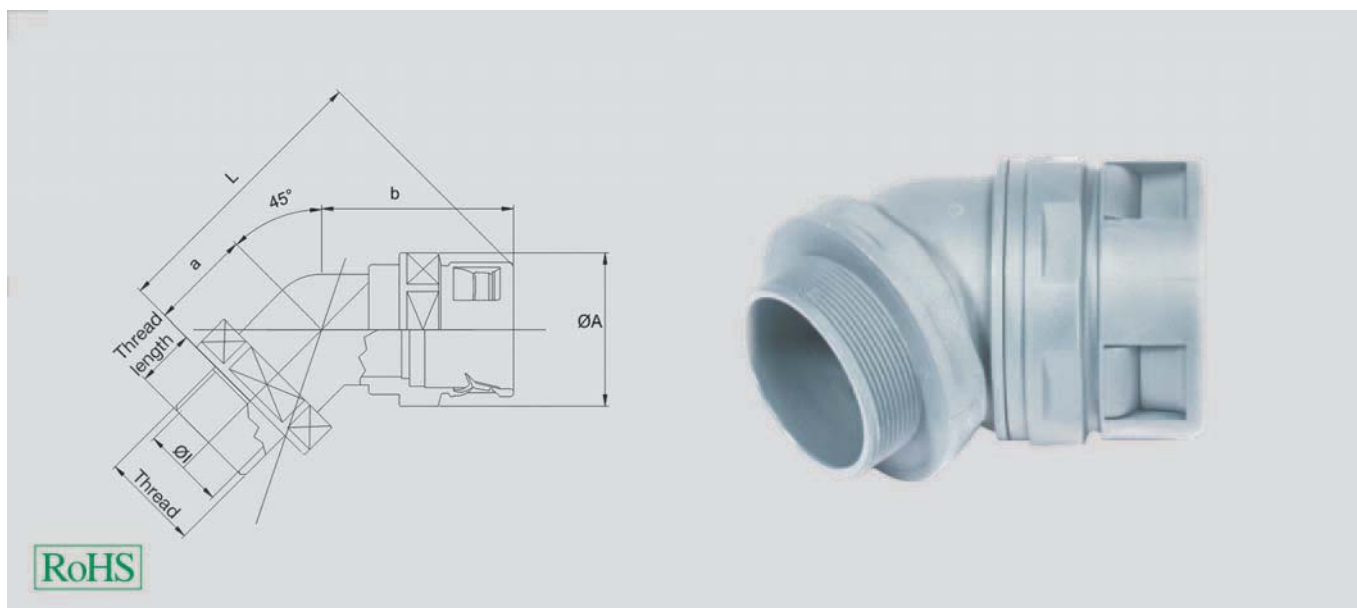
| Part no.<br>grey | Part no.<br>black | Size<br>PG | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |            |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90480            | 90490             | 7          | 7,5             | 7,0                    | 14,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 90481            | 90491             | 9          | 10,0            | 7,6                    | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 90482            | 90492             | 11         | 12,0            | 8,5                    | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 90483            | 90493             | 13,5       | 16,0 / 17,0     | 9,8                    | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 90484            | 90494             | 16         | 16,0 / 17,0     | 9,9                    | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 90485            | 90495             | 21         | 21,0 / 23,0     | 11,7                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 90486            | 90496             | 29         | 29,0            | 11,7                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 90487            | 90497             | 36         | 36,0 / 37,0     | 15,0                   | 50,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 90488            | 90498             | 48         | 48,0 / 50,0     | 15,0                   | 65,0                  | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV corrugated tubes conduit gland - elbow 45°

male thread, plastic



## HSSV gland 45°

Quick-insert glands for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

- UR-tested

Protection classification:

- IP 66 with outer seal

Threaded connection:

metric to EN 60423

Each unit includes 1 safety opener.  
With PG thread on request.

## Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

## metric thread

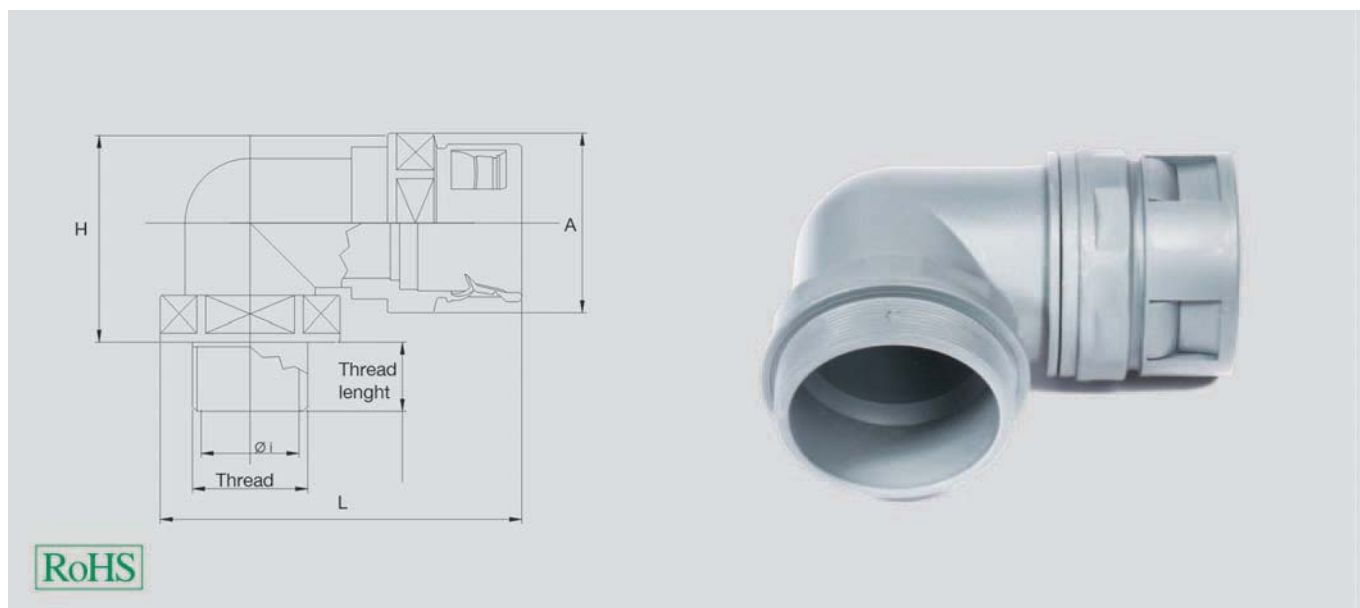
| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920196           | 920204            | M25 x 1,5      | 21,0 / 23,0     | 15,5                   | 50   | o. r.                              | o. r.     | o. r.      |
| 920197           | 920205            | M32 x 1,5      | 29,0            | 13,6                   | 25   | o. r.                              | o. r.     | o. r.      |
| 920198           | 920206            | M40 x 1,5      | 36,0 / 37,0     | 15,8                   | 25   | o. r.                              | o. r.     | o. r.      |
| 920199           | 920207            | M50 x 1,5      | 48,0 / 50,0     | 16,3                   | 10   | o. r.                              | o. r.     | o. r.      |
| 920200           | 920208            | M63 x 1,5      | 48,0 / 50,0     | 15,4                   | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV corrugated tubes conduit gland - elbow 90°

male thread, plastic



## HSSV gland 90°

Quick-insert glands for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

- UR-tested
- Protection classification:
- IP 66 with outer seal
- Threaded connection:
- metric to EN 60423

Each unit includes 1 safety opener.

## Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

## metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Unit | Net EUR/100 Items at a purchase of<br>up to 100 | 101 - 500 | 501 - 1000 |
|------------------|-------------------|----------------|-----------------|------------------------|------|-------------------------------------------------|-----------|------------|
| 94200            | 94210             | M12 x 1,5      | 10,0            | 9,5                    | 50   | o. r.                                           | o. r.     | o. r.      |
| 98983            | 920190            | M16 x 1,5      | 10,0            | 9,0                    | 50   | o. r.                                           | o. r.     | o. r.      |
| 94201            | 94211             | M16 x 1,5      | 12,0            | 8,0                    | 50   | o. r.                                           | o. r.     | o. r.      |
| 94202            | 94212             | M20 x 1,5      | 16,0 / 17,0     | 10,5                   | 50   | o. r.                                           | o. r.     | o. r.      |
| 94203            | 94213             | M25 x 1,5      | 21,0 / 23,0     | 14,8                   | 50   | o. r.                                           | o. r.     | o. r.      |
| 94204            | 94214             | M32 x 1,5      | 29,0            | 13,8                   | 25   | o. r.                                           | o. r.     | o. r.      |
| 94205            | 94215             | M40 x 1,5      | 36,0 / 37,0     | 15,6                   | 25   | o. r.                                           | o. r.     | o. r.      |
| 94206            | 94216             | M50 x 1,5      | 48,0 / 50,0     | 16,0                   | 10   | o. r.                                           | o. r.     | o. r.      |
| 920191           | 920192            | M63 x 1,5      | 48,0 / 50,0     | 15,5                   | 5    | o. r.                                           | o. r.     | o. r.      |

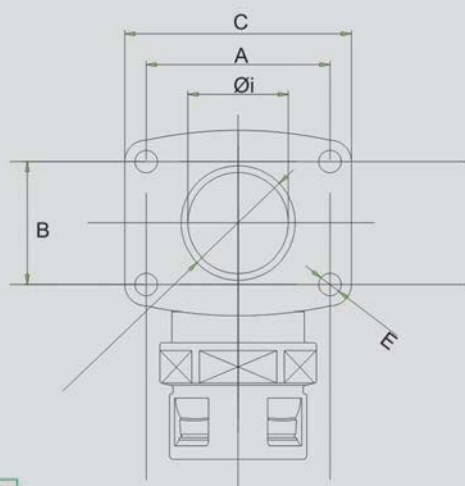
## PG-thread

| Part no.<br>grey | Part no.<br>black | Size<br>PG | Suitable for ND | Thread<br>length<br>mm | Unit | Net EUR/100 Items at a purchase of<br>up to 100 | 101 - 500 | 501 - 1000 |
|------------------|-------------------|------------|-----------------|------------------------|------|-------------------------------------------------|-----------|------------|
| 98440            | 98363             | 9          | 10,0            | 9,0                    | 50   | o. r.                                           | o. r.     | o. r.      |
| 98441            | 97382             | 11         | 12,0            | 7,7                    | 50   | o. r.                                           | o. r.     | o. r.      |
| 98442            | 98435             | 13,5       | 16,0 / 17,0     | 10,0                   | 50   | o. r.                                           | o. r.     | o. r.      |
| 98443            | 97944             | 16         | 16,0 / 17,0     | 10,0                   | 50   | o. r.                                           | o. r.     | o. r.      |
| 98444            | 98436             | 21         | 21,0 / 23,0     | 11,8                   | 50   | o. r.                                           | o. r.     | o. r.      |
| 98445            | 98437             | 29         | 29,0            | 11,5                   | 25   | o. r.                                           | o. r.     | o. r.      |
| 98446            | 98438             | 36         | 36,0 / 37,0     | 15,5                   | 25   | o. r.                                           | o. r.     | o. r.      |
| 98447            | 98439             | 48         | 48,0 / 50,0     | 16,0                   | 10   | o. r.                                           | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV corrugated tubes conduit gland - elbow 90° flange



## HSSV gland 90° flange

Quick-insert glands for a reliable, quick connection.

Suitable for parallel-coiled HELUcond protection tubes.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

- UR-tested
- Protection classification:
- IP 66 with outer seal
- Each unit includes 1 safety opener

## Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

## flange

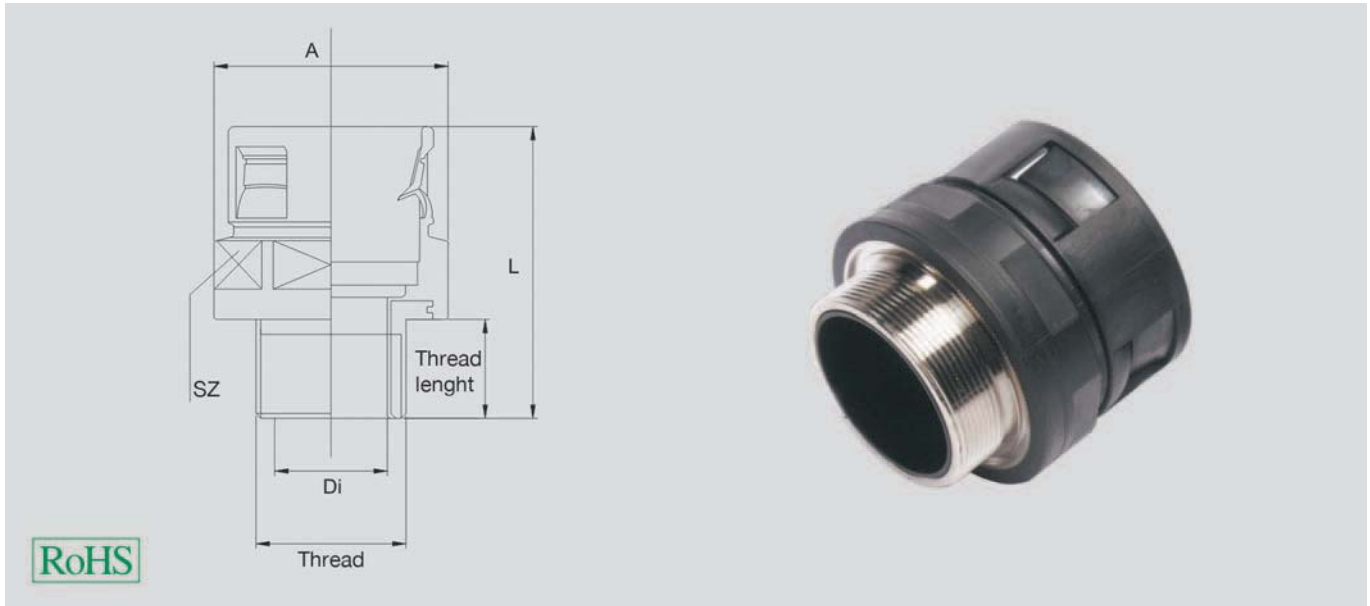
| Part no.<br>grey | Part no.<br>black | Suitable for ND | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-----------------|------|------------------------------------|-----------|------------|
|                  |                   |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920209           | 920214            | 17,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920210           | 920215            | 21,0 / 23,0     | 50   | o. r.                              | o. r.     | o. r.      |
| 920211           | 920216            | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 920212           | 920217            | 36,0 / 37,0     | 25   | o. r.                              | o. r.     | o. r.      |
| 920213           | 920218            | 48,0 / 50,0     | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV corrugated tubes conduit gland - straight

## metal male thread



### HSSV gland straight

Quick-insert glands with metallic male thread for a reliable, quick connection. Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Protection classification:

- IP 66 with outer seal

Threaded connection:  
metric to EN 60423

Each unit includes 1 safety opener

### Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

### metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920229           | 920238            | M12 x 1,5      | 10,0            | 10,0                   | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920230           | 920239            | M16 x 1,5      | 10,0            | 10,5                   | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920231           | 920240            | M16 x 1,5      | 12,0            | 10,5                   | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920232           | 920241            | M20 x 1,5      | 16,0 / 17,0     | 12,0                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920233           | 920242            | M25 x 1,5      | 21,0 / 23,0     | 15,0                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920234           | 920243            | M32 x 1,5      | 29,0            | 15,0                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 920235           | 920244            | M40 x 1,5      | 36,0 / 37,0     | 16,0                   | 50,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 920236           | 920245            | M50 x 1,5      | 48,0 / 50,0     | 16,0                   | 65,0                  | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HSSV corrugated tubes conduit gland - elbow 45°

metal male thread



## HSSV gland 45°

Quick-insert glands with metallic male thread for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

- halogen-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

- UR-tested
- Protection classification:
- IP 66 with outer seal

Threaded connection:  
metric to EN 60423  
Each unit includes 1 safety opener

## Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

## metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920265           | 920269            | M25 x 1,5      | 21,0 / 23,0     | 15,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 920266           | 920270            | M32 x 1,5      | 29,0            | 15,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 920267           | 920271            | M40 x 1,5      | 36,0 / 37,0     | 16,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 920268           | 920272            | M50 x 1,5      | 48,0 / 50,0     | 16,0                   | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV corrugated tubes conduit gland - elbow 90°

metal male thread



## HSSV gland 90° with metallic male thread

Quick-insert glands with metallic male thread for a reliable, quick connection. Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

- UR-tested
- Protection classification:
- IP 66 with outer seal

Threaded connection:  
metric to EN 60423  
Each unit includes 1 safety opener.

### Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

### metric thread

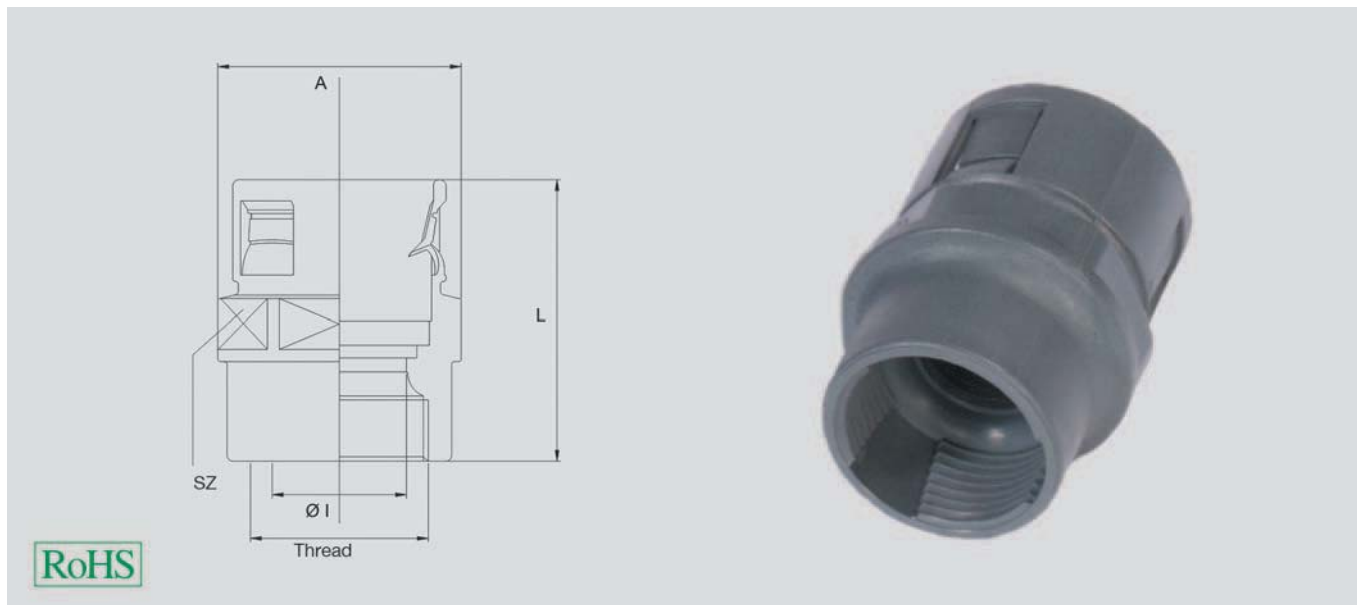
| Part no. grey | Part no. black | Size Metric | Suitable for ND | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------|----------------|-------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|               |                |             |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920247        | 920256         | M12 x 1,5   | 10,0            | 10,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 920248        | 920257         | M16 x 1,5   | 10,0            | 10,5             | 50   | o. r.                              | o. r.     | o. r.      |
| 920249        | 920258         | M16 x 1,5   | 12,0            | 10,5             | 50   | o. r.                              | o. r.     | o. r.      |
| 920250        | 920259         | M20 x 1,5   | 17,0            | 12,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 920251        | 920260         | M25 x 1,5   | 21,0 / 23,0     | 15,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 920252        | 920261         | M32 x 1,5   | 29,0            | 15,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 920253        | 920262         | M40 x 1,5   | 36,0 / 37,0     | 16,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 920254        | 920263         | M50 x 1,5   | 48,0 / 50,0     | 16,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 920255        | 920264         | M63 x 1,5   | 48,0 / 50,0     | 16,0             | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV corrugated tubes conduit gland - straight

## plastic female thread



### HSSV gland straight

Quick-insert glands for a reliable, quick connection.

Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Protection classification:

- IP 66 with outer seal

Threaded connection:

metric to EN 60423

Each unit includes 1 safety opener

### Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

### metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920220           | 920225            | M16 x 1,5      | 12,0            | 10,5                   | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920221           | 920226            | M20 x 1,5      | 17,0            | 12,6                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920222           | 920227            | M25 x 1,5      | 23,0            | 12,6                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920223           | 920228            | M32 x 1,5      | 29,0            | 12,0                   | 40,0 / 34,5           | 25   | o. r.                              | o. r.     | o. r.      |

### PG female thread

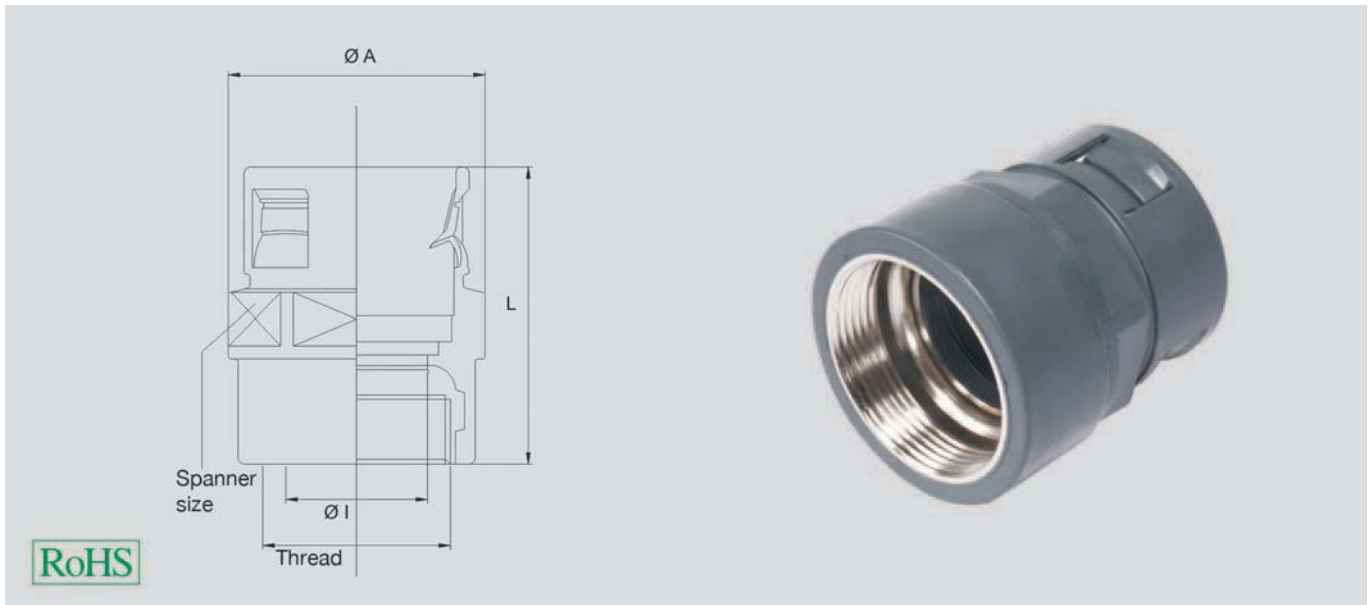
| Part no.<br>grey | Part no.<br>black | Size<br>PG | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |            |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94220            | 94230             | 9          | 10,0            | 10,2                   | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94221            | 94231             | 11         | 12,0            | 10,5                   | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94222            | 94232             | 13,5       | 17,0            | 11,0                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94223            | 94233             | 16         | 17,0            | 10,2                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94224            | 94234             | 21         | 23,0            | 13,5                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 94225            | 94235             | 29         | 29,0            | 12,2                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV corrugated tubes conduit gland - straight

## metal female thread



### HSSV gland straight

Quick-insert glands with metallic female thread for a reliable, quick connection. Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Protection classification:

- IP 66 with outer seal

Threaded connection:

metric to EN 60423

Each unit includes 1 safety opener

### Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

### metric female thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920273           | 920281            | M12 x 1,5      | 10,0            | 8,0                    | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920274           | 920282            | M16 x 1,5      | 10,0            | 9,0                    | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920275           | 920283            | M16 x 1,5      | 12,0            | 9,0                    | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920276           | 920284            | M20 x 1,5      | 16,0 / 17,0     | 11,0                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920277           | 920285            | M25 x 1,5      | 21,0 / 23,0     | 11,5                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920278           | 920286            | M32 x 1,5      | 29,0            | 11,5                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 920279           | 920287            | M40 x 1,5      | 36,0 / 37,0     | 13,0                   | 50,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 920280           | 920288            | M50 x 1,5      | 48,0 / 50,0     | 14,0                   | 65,0                  | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV-ZE corrugated tubes cable gland with strain relief

plastic male thread



## Conduit gland HSSV with strain relief

Combined quick-insert cable glands for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Threaded connection:  
metric to EN 60423  
Each unit includes 1 safety opener

## Technical data

Protection class by tube: IP 65

Temperature range: -25°C up to +100°C

### metric thread

| Part no.<br>grey | Part no.<br>black | Size      | Suitable for<br>tube ND | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-----------|-------------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                   |           |                         |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 903459           | 903466            | M16 x 1,5 | 10,0                    | 7,5                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903460           | 903467            | M16 x 1,5 | 12,0                    | 7,5                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903461           | 903468            | M20 x 1,5 | 17,0                    | 8,5                    | 50   | o. r.                              | o. r.     | o. r.      |
| 903462           | 903469            | M25 x 1,5 | 23,0                    | 10,5                   | 50   | o. r.                              | o. r.     | o. r.      |
| 903463           | 903470            | M32 x 1,5 | 29,0                    | 10,5                   | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV combination corrugated tubes cable gland



## Conduit gland HSSV, combined

Combined with brass cable gland.

Combined quick-insert cable glands without sealing insert for a reliable, quick connection. Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Protection classification on cable with UNI-DICHT sealing insert:

- with colour-coded sealing insert: IP 68 -10 bar in indicated clamping area
- with multiple sealing inserts to IP 65 and/or IP 68, when bore diameter in seal insert and cable diameter are identical

Threaded connection:  
metric to EN 60423

Each unit includes 1 safety opener  
Gland also available with PG thread on request.  
Suitable UNI-DICHT sealing inserts are detailed in Section "Cable glands".

## Technical data

Protection class by tube: IP 65

Temperature range: -40°C up to +110°C

### metric thread

| Part no.<br>grey | Part no.<br>black | Size      | Suitable for<br>tube ND | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-----------|-------------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                   |           |                         |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920289           | 920294            | M16 x 1,5 | 10,0                    | 6,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 920290           | 920295            | M20 x 1,5 | 16,0 / 17,0             | 6,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 920291           | 920296            | M25 x 1,5 | 16,0 / 17,0             | 6,5                    | 50   | o. r.                              | o. r.     | o. r.      |
| 920292           | 920297            | M32 x 1,5 | 21,0 / 23,0             | 7,0                    | 25   | o. r.                              | o. r.     | o. r.      |
| 920293           | 920298            | M40 x 1,5 | 29,0                    | 8,0                    | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HSSV IP68 corrugated tubes conduit gland - straight

plastic male thread



## HSSV gland straight IP 68

Quick-insert glands for a reliable, quick connection.

Suitable for parallel-coiled HELUcond protection tubes.

## Application

- Plant and machine construction
- Robot and control cabinet construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Interior seal made of PUR.

Threaded connection:

- metric to EN 60423
- with flat seal made by NBR

Each unit includes 1 safety opener

## Technical data

Protection class: IP 68

Temperature range: -40°C up to +110°C

## metric thread

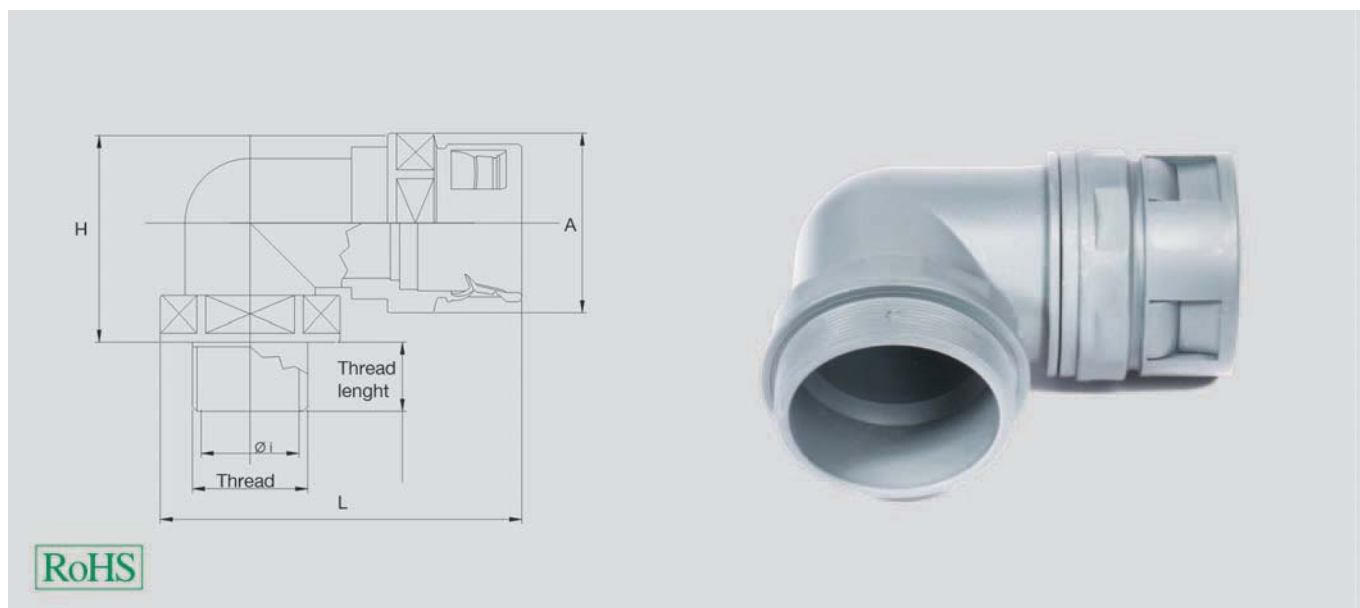
| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920404           | 920413            | M12 x 1,5      | 10,0            | 8,9                    | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920405           | 920414            | M16 x 1,5      | 10,0            | 9,3                    | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920406           | 920415            | M16 x 1,5      | 12,0            | 8,6                    | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920407           | 920416            | M20 x 1,5      | 16,0 / 17,0     | 13,0                   | 27,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920408           | 920417            | M25 x 1,5      | 21,0 / 23,0     | 14,3                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 920409           | 920418            | M32 x 1,5      | 29,0            | 14,2                   | 40,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 920410           | 920419            | M40 x 1,5      | 36,0 / 37,0     | 15,0                   | 50,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 920411           | 920420            | M50 x 1,5      | 48,0 / 50,0     | 15,5                   | 65,0                  | 10   | o. r.                              | o. r.     | o. r.      |
| 920412           | 920421            | M63 x 1,5      | 48,0 / 50,0     | 15,5                   | 65,0                  | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV IP68 corrugated tubes conduit gland - elbow 90°

plastic male thread



## Conduit gland HSSV 90° angle IP 68

Quick-insert glands for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Interior seal made of PUR.

Threaded connection:

- metric to EN 60423
- with flat seal made by NBR

Each item includes 1 safety opener

## Technical data

Protection class: IP 68

Temperature range: -40°C up to +110°C

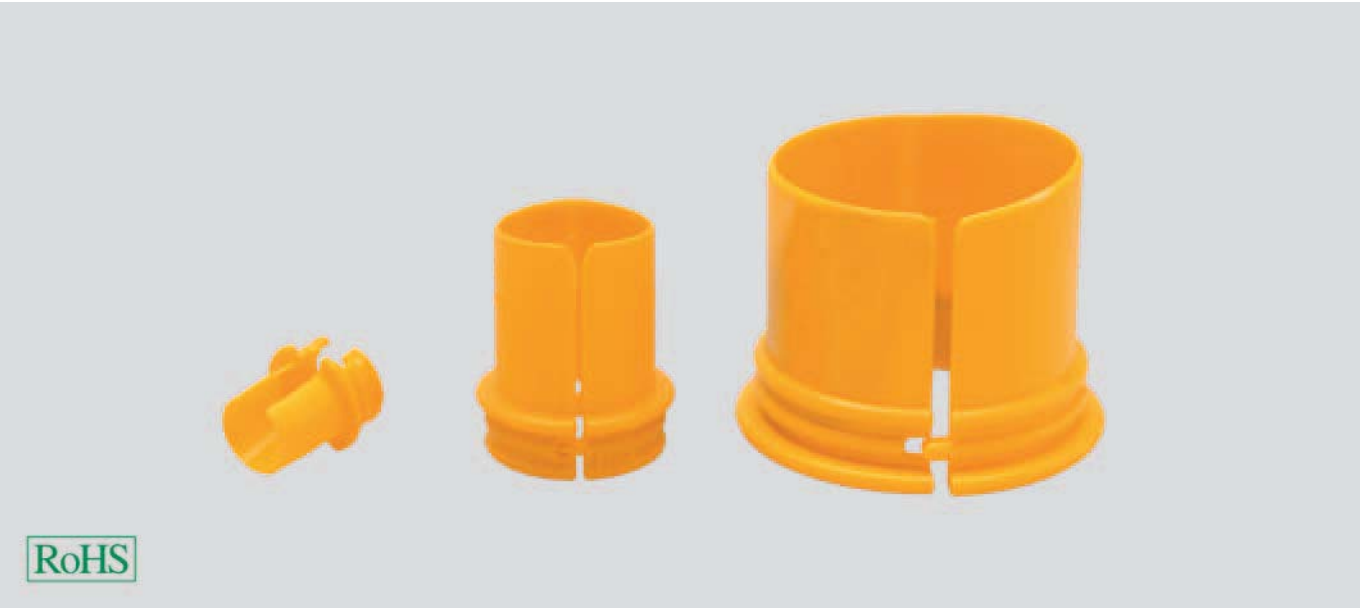
### metric thread

| Part no.<br>grey | Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|----------------|-----------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                   |                |                 |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920422           | 920431            | M12 x 1,5      | 10,0            | 9,5                    | 50   | o. r.                              | o. r.     | o. r.      |
| 920423           | 920432            | M16 x 1,5      | 10,0            | 9,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 920424           | 920433            | M16 x 1,5      | 12,0            | 8,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 920425           | 920434            | M20 x 1,5      | 17,0            | 10,5                   | 50   | o. r.                              | o. r.     | o. r.      |
| 920426           | 920435            | M25 x 1,5      | 21,0 / 23,0     | 14,8                   | 50   | o. r.                              | o. r.     | o. r.      |
| 920427           | 920436            | M32 x 1,5      | 29,0            | 13,8                   | 25   | o. r.                              | o. r.     | o. r.      |
| 920428           | 920437            | M40 x 1,5      | 36,0 / 37,0     | 15,6                   | 25   | o. r.                              | o. r.     | o. r.      |
| 920429           | 920438            | M50 x 1,5      | 48,0 / 50,0     | 16,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 920430           | 920439            | M63 x 1,5      | 48,0 / 50,0     | 15,5                   | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV opener



## HSSV opener

To open HSSV conduit glands. Simply slip over the conduit - press against the gland - open detent.

## Material

Polyamide PA 6

## Technical data

Temperature range: -20°C up to +100°C

## Note

Colour: yellow

| Part no. | Suitable for ND | Unit | Net EUR/100 items at a purchase of |       |        |
|----------|-----------------|------|------------------------------------|-------|--------|
|          |                 |      | 1                                  | 2 - 5 | 6 - 10 |
| 99891    | 7,5             | 10   | o. r.                              | o. r. | o. r.  |
| 99892    | 10,0            | 10   | o. r.                              | o. r. | o. r.  |
| 99893    | 12,0            | 10   | o. r.                              | o. r. | o. r.  |
| 98744    | 17,0            | 10   | o. r.                              | o. r. | o. r.  |
| 98745    | 23,0            | 5    | o. r.                              | o. r. | o. r.  |
| 99894    | 29,0            | 5    | o. r.                              | o. r. | o. r.  |
| 99895    | 37,0            | 5    | o. r.                              | o. r. | o. r.  |
| 99896    | 50,0            | 5    | o. r.                              | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSSV outer seal



## HSSV outer seals

Outer seal for quick-insert glands. Suitable for HSSV glands.

## Material

TPE-V

## Properties

resistant to a multitude of

- oils
- solvents
- chemicals

## Note

- HSSV + outer seal: IP 66

## Technical data

Temperature range: -40°C up to +110°C

| Part no.<br>grey | Suitable for ND | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-----------------|------|------------------------------------|-----------|------------|
|                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920307           | 7,5             | 50   | o. r.                              | o. r.     | o. r.      |
| 920308           | 10,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920309           | 12,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920310           | 17,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920311           | 23,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920312           | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 920313           | 37,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 920314           | 50,0            | 10   | o. r.                              | o. r.     | o. r.      |

| Part no.<br>black | Suitable for ND | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|-----------------|------|------------------------------------|-----------|------------|
|                   |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920315            | 7,5             | 50   | o. r.                              | o. r.     | o. r.      |
| 920316            | 10,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920317            | 12,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920318            | 17,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920319            | 23,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 920320            | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 920321            | 37,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 920322            | 50,0            | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HSSV-KF folding flange

Opening flange angle for connection glands or cable glands.

- Flange angle opened to enable simple insertion of pre-assembled cables
- Simple assembly
- Highly stable

## Material

Polyamide PA 6

Flammability acc. to UL 94: VO

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

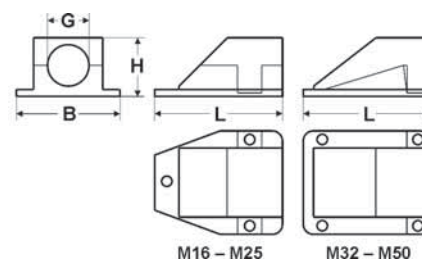
- UR-tested
- Threaded connection:  
metric to EN 60423

## Technical data

Protection class: IP 65

Temperature range: -40°C up to +110°C

Temperature range temporary up to +140°C



M16 – M25

M32 – M50

## Dimensions

- G Thread size inside
- H Height
- B Width
- L Length

## metric thread - female

| Part no.<br>grey | Part no.<br>black | Size<br>metr.<br>inside | Height<br>mm | Width<br>mm | Length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-------------------------|--------------|-------------|--------------|------|------------------------------------|-----------|------------|
|                  |                   |                         |              |             |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920507           | 920513            | M16 x 1,5               | 35           | 47          | 49           | 10   | o. r.                              | o. r.     | o. r.      |
| 920508           | 920514            | M20 x 1,5               | 35           | 47          | 49           | 10   | o. r.                              | o. r.     | o. r.      |
| 920509           | 920515            | M25 x 1,5               | 44           | 65          | 69           | 10   | o. r.                              | o. r.     | o. r.      |
| 920510           | 920516            | M32 x 1,5               | 55           | 78          | 90           | 10   | o. r.                              | o. r.     | o. r.      |
| 920511           | 920517            | M40 x 1,5               | 66           | 94          | 99           | 10   | o. r.                              | o. r.     | o. r.      |
| 920512           | 920518            | M50 x 1,5               | 76           | 101         | 116          | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SH, SHV corrugated tube holder

## system holder



### SH, SHV- system holder

System holder for HELUcond protection tubes.  
Universal system holder with optional clips for extreme loads.  
Quick assembly through single-hole fastening.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide PA 6

Flammability acc. to UL 94

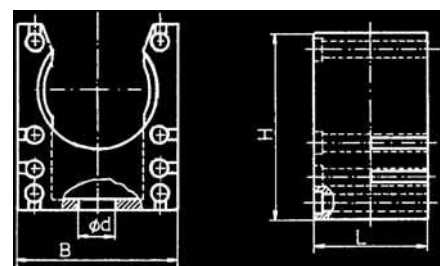
- halogen-free

### Properties

- Resistant to fuels, mineral oils, greases, weak bases, weak acids

### Technical data

Temperature range: -40°C up to +110°C



### SH holder

| Part no. grey | Part no. black | Suitable for tube ND mm | Width mm | Height mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------|----------------|-------------------------|----------|-----------|------|------------------------------------|-----------|------------|
|               |                |                         |          |           |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94663         | 99270          | 7,0                     | 20,0     | 18,0      | 100  | o. r.                              | o. r.     | o. r.      |
| 94664         | 99271          | 10,0                    | 20,0     | 23,0      | 100  | o. r.                              | o. r.     | o. r.      |
| 94665         | 99272          | 12,0                    | 22,0     | 26,0      | 50   | o. r.                              | o. r.     | o. r.      |
| 920323        | 920324         | 14,0                    | 28,0     | 33,0      | 50   | o. r.                              | o. r.     | o. r.      |
| 94666         | 99273          | 17,0                    | 28,0     | 33,0      | 50   | o. r.                              | o. r.     | o. r.      |
| 94667         | 99274          | 23,0                    | 35,0     | 40,0      | 50   | o. r.                              | o. r.     | o. r.      |
| 94668         | 99275          | 29,0                    | 43,0     | 45,0      | 30   | o. r.                              | o. r.     | o. r.      |
| 94669         | 99276          | 36,0                    | 54,0     | 53,0      | 20   | o. r.                              | o. r.     | o. r.      |
| 94670         | 99277          | 48,0                    | 68,0     | 66,0      | 20   | o. r.                              | o. r.     | o. r.      |

### SHV holder with rotary protection

| Part no. grey | Part no. black | Suitable for tube ND mm | Width mm | Height mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------|----------------|-------------------------|----------|-----------|------|------------------------------------|-----------|------------|
|               |                |                         |          |           |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920325        | 920330         | 16/17                   | 28,0     | 33,0      | 50   | o. r.                              | o. r.     | o. r.      |
| 920326        | 920331         | 21/23                   | 35,0     | 40,0      | 50   | o. r.                              | o. r.     | o. r.      |
| 920327        | 920332         | 29,0                    | 43,0     | 45,0      | 30   | o. r.                              | o. r.     | o. r.      |
| 920328        | 920333         | 36/37                   | 54,0     | 53,0      | 20   | o. r.                              | o. r.     | o. r.      |
| 920329        | 920334         | 48/50                   | 68,0     | 66,0      | 20   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# SD, VS, HT corrugated tube holder

## system holder accessories



### SD/ VS/ HT

Accessories for system holder SH/SHV

### Material

Polyamide PA 6

### Technical data

Temperature range: -40°C up to +110°C

- halogen-free

### Properties

Resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### SD cap for holder

| Part no.<br>grey | Part no.<br>black | Suitable for<br>tube ND<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-------------------------------|------|------------------------------------|-----------|------------|
|                  |                   |                               |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94671            | 99278             | 7,5/10                        | 100  | O. r.                              | O. r.     | O. r.      |
| 94672            | 99279             | 12,0                          | 50   | O. r.                              | O. r.     | O. r.      |
| 94673            | 99280             | 14/16/17                      | 50   | O. r.                              | O. r.     | O. r.      |
| 94674            | 99281             | 21/23                         | 50   | O. r.                              | O. r.     | O. r.      |
| 94675            | 99282             | 29,0                          | 30   | O. r.                              | O. r.     | O. r.      |
| 94676            | 99283             | 36/37                         | 20   | O. r.                              | O. r.     | O. r.      |
| 94677            | 99284             | 48/50                         | 20   | O. r.                              | O. r.     | O. r.      |

### VS bond bridge for holder

| Part no.<br>grey | Part no.<br>black | Suitable for<br>tube ND<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-------------------------------|------|------------------------------------|-----------|------------|
|                  |                   |                               |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94679            | 99286             | any                           | 100  | O. r.                              | O. r.     | O. r.      |

### HT hut-rail clip for holder

| Part no.<br>grey | Part no.<br>black | Suitable for<br>tube ND<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-------------------------------|------|------------------------------------|-----------|------------|
|                  |                   |                               |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94678            | 99285             | any                           | 50   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# USH corrugated tube holder

with flange pipe holder



## USH

Tube holder for HELUcond protection tube.  
Universal, high-strength tube holder with  
double struts.  
Fastening bores suitable for horizontal and  
vertical rail systems in control cabinet.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

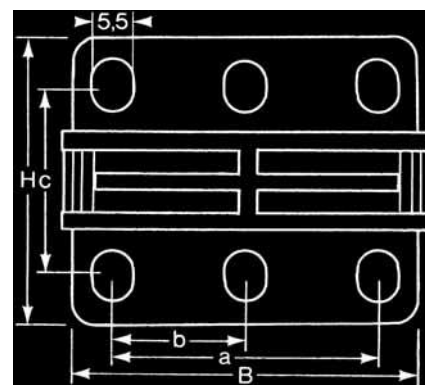
Polycarbonate

Flammability acc. to UL 94

- halogen-free
- phosphor-free
- cadmium-free

## Technical data

Temperature range: -30°C up to +100°C



## USH with flange pipe holder

| Part no.<br>grey | Part no.<br>black | Suitable for<br>tube with<br>outer Ø | Width<br>mm | Height<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|--------------------------------------|-------------|--------------|------|------------------------------------|-----------|------------|
|                  |                   |                                      |             |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91200            | 93497             | 21,0                                 | 38,0        | 40,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 91201            | 93498             | 28,5                                 | 38,0        | 40,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 91202            | 93499             | 34,5                                 | 46,0        | 48,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 91203            | 93507             | 42,5                                 | 52,0        | 59,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 91204            | 93508             | 54,5                                 | 68,0        | 77,0         | 50   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUcond protective tube distributors



## Protective tube distributors

Protective tube distributors for a reliable, quick connection. Suitable for parallel-coiled HELUcond protection tubes.

### Areas of application:

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material properties

### Material:

- Polyamide PA6
- Halogen-free, cadmium-free
- UV-resistant in black

### Property:

- Resistant to a multitude of:  
Fuels, mineral oils, greases,  
weak bases, weak acids

## Technical data

### Protection classification:

- IP 54

### Application temperature:

- -40°C to +110°C

### Recommended storage:

- Storage temperature +20°C ±5°C
- Humidity from 55% to 75%

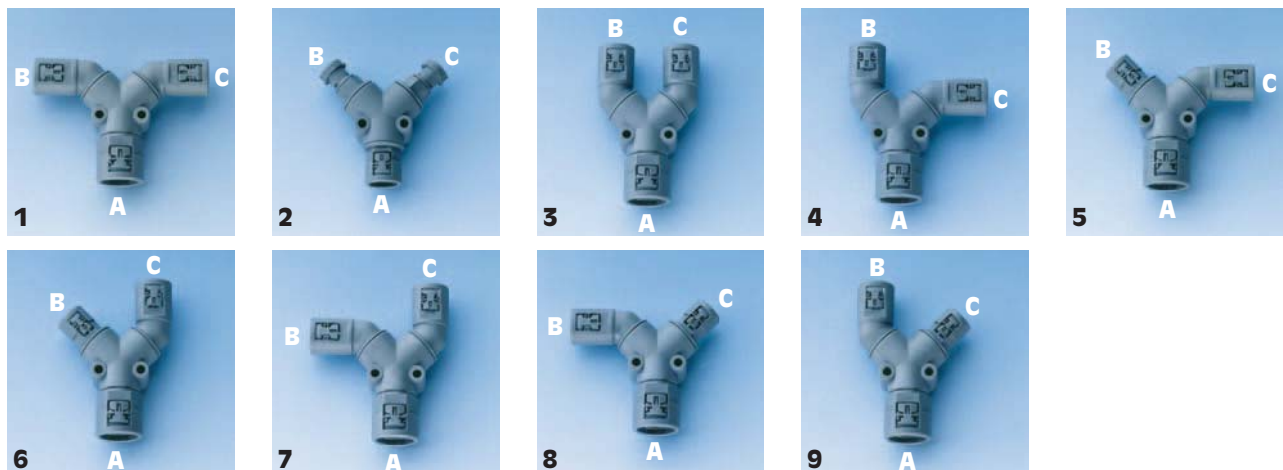
## The variable HELUcond protective tube distributor for nominal sizes 17 reduced to 7.5

1 basic model = 9 variation options

The different variations are numbered from 1 to 9. Select the version you require and indicate the corresponding corrugated conduit widths for connections A, B and C.

The corrugated conduit connections will be factory-mounted to the basic model in line with your requirements after the order is placed. This ensures you receive a customised distributor.

**Bore interval: 24 mm / bore diameter: 5.2 mm**



# HELUcond protective tube distributors



## Protective tube distributors

Protective tube distributors for a reliable, quick connection.  
Suitable for parallel-coiled HELUcond protection tubes.

### Areas of application:

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material properties

### Material:

- Polyamide PA6
- Halogen-free, cadmium-free
- UV-resistant in black

### Property:

- Resistant to a multitude of:  
Fuels, mineral oils, greases,  
weak bases, weak acids

## Technical data

### Protection classification:

- IP 54

### Application temperature:

- -40°C to +110°C

### Recommended storage:

- Storage temperature +20°C ±5°C
- Humidity from 55% to 75%

## The variable HELUcond protective tube distributor for nominal sizes from 29 reduced to 7.5

1 basic model = 2 x 3 variation options

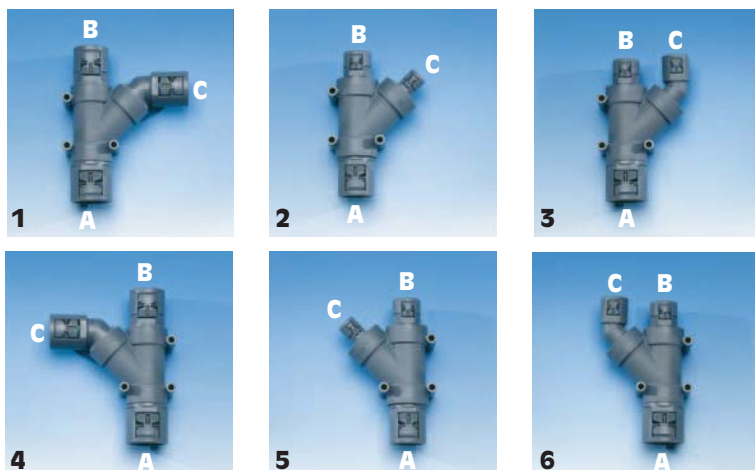
The basic model is the same on both sides and enables 2 x 3 variations.

The different variation options are numbered from 1 to 6.

Select the version you require and indicate the corresponding corrugated conduit widths for connections A, B and C.

The corrugated conduit connections will be factory-mounted to the basic model in line with your requirements after the order is placed.  
This ensures you receive a customised distributor.

**Bore interval: 47 mm / bore diameter: 6.2 mm**



# JUMBO assembly instructions

## JUMBO

One-piece flange connection.  
Suitable for parallel-coiled **JUMBO** protection tubes.



## Saves time and money when having to install lines and cables to machines and systems.

There are often many lines and cables to be installed around machines or systems. These lines are for compressed air or hydraulic liquids or used for power supply or control purposes and should be installed as bundles in cable bunchers for protection safety reasons. So far it has been difficult to replace a damaged cable or to add a new one as the connecting parts – especially those with an angle profile – made it almost impossible to assemble or disassemble the particular cable. This problem has now been solved by the Multi-Cable-Buncher from the **JUMBO** series. It features straight and angle single-part profiles.

The **JUMBO** Multi-tubing is pushed by pressure into the threaded joint at an angle of 30° until it clicks in and is now already pre-fixed. This can be done with and without tools, and you will then benefit from a safe, flexible, and optically appealing cable protection system.

Another advantage of the **JUMBO** Systems is that **additional cables can be added and damaged cables can be replaced quite easily** and without any problems.

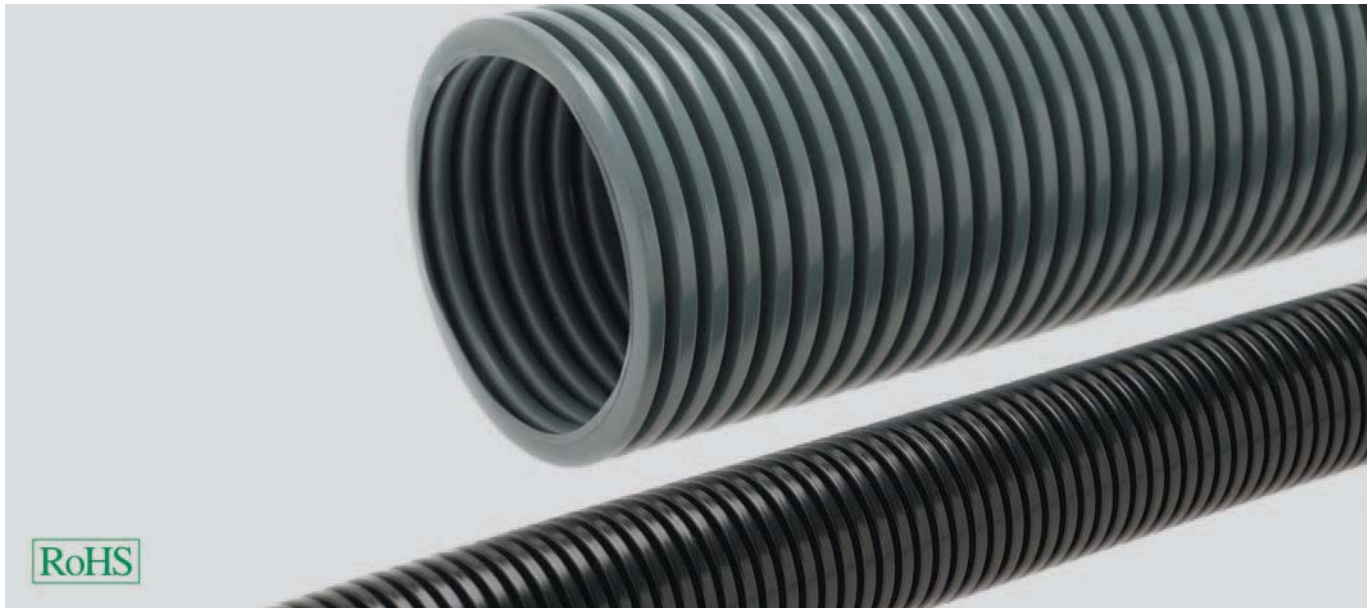
You just need customary tools to disengage the notch opposite the film flange. The tube is still held. The tubing is dismantled from the joint by pulling the safety fish at the lever extension of the safety notch.

## Easy mounting with pre-locking mechanism



# JUMBO PA6 oversize corrugated tubes, polyamide

for heavy-duty mechanical applications



## JUMBO PA6

Cable protection tube for medium to heavy-duty applications.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Mod. Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Suitable connection glands:  
JUMBO gland  
Bending behaviour: very good

### Technical data

Temperature range: -40°C up to +140°C  
Temperature range temporary up to +160°C

Capacity/100mm: approx. 1200 N / 800 N

| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Bending<br>radius<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|-------------------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |                         |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 90408            | 91362             | 70               | 66,2          | 79,0          | 160,0                   | 10            | o. r.                               | o. r.     | o. r.      |
| 90409            | 91363             | 95               | 88,5          | 105,2         | 200,0                   | 10            | o. r.                               | o. r.     | o. r.      |

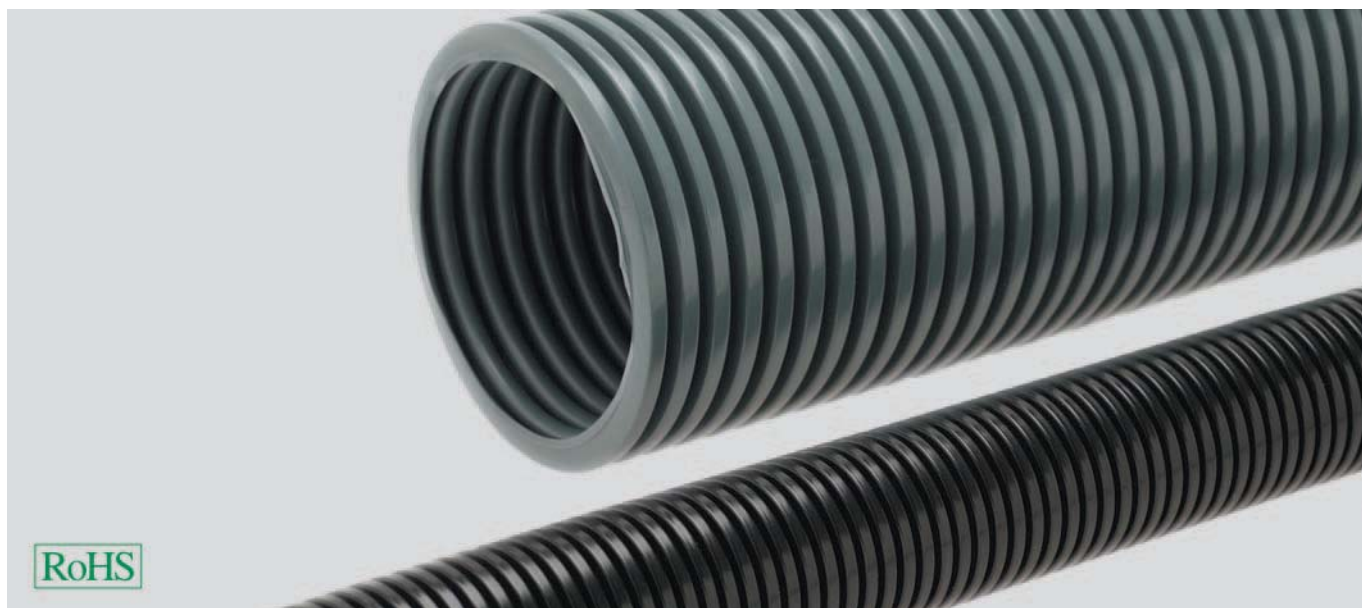
Dimensions and specifications may be changed without prior notice.

o. r. = on request



# JUMBO PA12 oversize corrugated tubes, polyamide PA12

for heavy-duty mechanical applications



## JUMBO PA12

Cable protection tube for heavy-duty applications.

### Application

- Robots
- Handling systems
- Vehicle construction
- Drag chains

### Material

Mod. Polyamide 12

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

### Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

### Note

Suitable connection glands:

JUMBO gland

Bending behaviour: very good

### Technical data

Temperature range: -50°C up to +120°C

Temperature range temporary up to +150°C

Capacity/100mm: approx. 700 N / 800 N

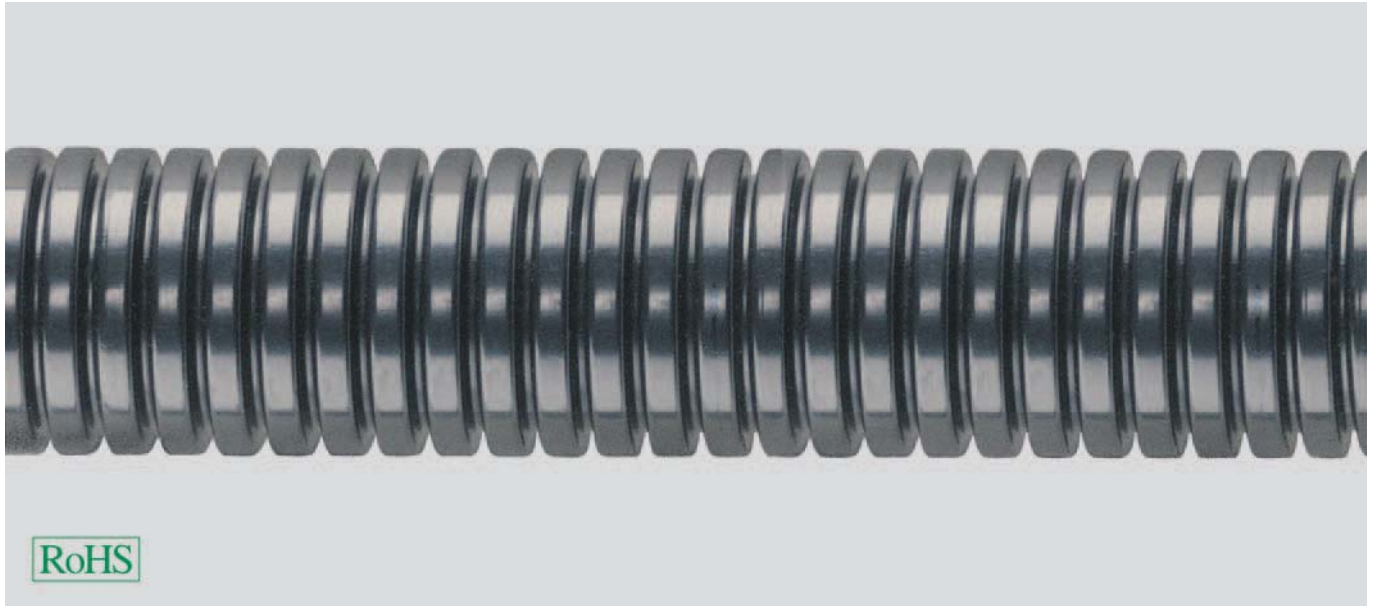
| Part no.<br>grey | Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Bending<br>radius<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|------------------|---------------|---------------|-------------------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                  |               |               |                         |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 920378           | 920380            | 70               | 66,6          | 80,0          | 200,0                   | 10            | o. r.                               | o. r.     | o. r.      |
| 920379           | 920381            | 95               | 91,0          | 106,0         | 265,0                   | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# JUMBO PUR oversize corrugated tubes, polyurethane

for maximum mechanical applications



## JUMBO PUR

Cable protection tube for maximum duty robot applications.

- Lowest reset quality
- High abrasion resistance

## Application

- Robots
- Handling systems
- Vehicle construction
- Drag chains

## Material

Mod. Polyurethane PUR

Flammability acc. to UL 94: HB

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Suitable connection glands:  
JUMBO gland  
Bending behaviour: very good

## Technical data

Temperature range: -40°C up to +125°C  
Temperature range temporary up to +140°C

Capacity/100mm: approx. 500 N / 800 N

| Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Bending<br>radius<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|------------------|---------------|---------------|-------------------------|---------------|-------------------------------------|-----------|------------|
|                   |                  |               |               |                         |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 920382            | 70               | 66,5          | 79,9          | 160,0                   | 10            | o. r.                               | o. r.     | o. r.      |
| 920383            | 95               | 91,0          | 105,9         | 210,0                   | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# JUMBO-FP flange connection



## JUMBO-FP

One-piece straight flange connection.  
Suitable for parallel-coiled JUMBO protection tubes.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94: VO

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Additional seal increases protection  
classification to IP 65

JUMBO sealing set:

Set contains 1 x O-ring and 1x cellular rubber  
seal

## Technical data

Protection class: IP 54

Temperature range: -40°C up to +115°C

### flange connection

| Part no.<br>grey | Part no.<br>black | Suitable for ND | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-----------------|------|------------------------------------|-----------|------------|
|                  |                   |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90402            | 920368            | 70,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 90403            | 920369            | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |

### seal inserts

| Part no. | Colour | Suitable for ND | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------|-----------------|------|------------------------------------|-----------|------------|
|          |        |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90406    | black  | 70,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 90407    | black  | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# JUMBO-WFP flange connection angled 90°



## JUMBO-WFP

One-piece flange connection, 90° angle.  
Suitable for parallel-coiled HELUcond Jumbo protection tubes.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94: V0

- halogen-free
- cadmium-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Additional seal increases protection classification to IP 65.

JUMBO sealing set:

Set contains 1 x O-ring and 1 x cellular rubber seal.

## Technical data

Protection class: IP 54

Temperature range: -40°C up to +115°C

## flange connection - angle 90°

| Range connection |                   | Angle 60        |      | Net EUR/100 items at a purchase of |           |            |
|------------------|-------------------|-----------------|------|------------------------------------|-----------|------------|
| Part no.<br>grey | Part no.<br>black | Suitable for ND | Unit | up to 100                          | 101 - 500 | 501 - 1000 |
| 90404            | 920372            | 70,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 90405            | 920373            | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |

## sealing set

| Part no. | Colour | Suitable for ND | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------|-----------------|------|------------------------------------|-----------|------------|
|          |        |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90406    | black  | 70,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 90407    | black  | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Split protection tubes

**Split protection tubes are very well suited for subsequent protection.**



Cables and wires are often already wired with their connectors. If protection then becomes necessary later, HELUcond CO-PA and HELUcond CO-PP are the right solution.

The wires are cleanly inserted into the inner protection tube using the KE cable puller. The second protection tube closes and finally protects. The split COV connector with the split lock nut secures the case connection. COS tube holders and the USH flanged tube holder are used for fastening the protection tube.

# HELUcond CO-PA corrugated tubes, polyamide

dividable



## HELUcond CO-PA

The dividable and reclosable cable protection tube for subsequent mechanical protection of the cables.

- Trouble-free retrofitting
- High mechanical strength
- Simple installation of pre-fabricated lines
- Repair of existing systems

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide 6  
UV-resistant

Flammability acc. to UL 94: V2

- halogen-free

## Properties

Resistant to a multitude of:

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Suitable connection glands:  
COV

## Technical data

Temperature range: -40°C up to +120°C  
Temperature range temporary up to +150°C

| Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 90061             | 10,0             | 8,8           | 13,5          | 50            | o. r.                               | o. r.     | o. r.      |
| 90062             | 14,0             | 13,2          | 18,7          | 50            | o. r.                               | o. r.     | o. r.      |
| 90063             | 20,0             | 20,2          | 25,7          | 50            | o. r.                               | o. r.     | o. r.      |
| 90064             | 23,0             | 23,9          | 31,3          | 50            | o. r.                               | o. r.     | o. r.      |
| 90065             | 37,0             | 32,5          | 43,2          | 25            | o. r.                               | o. r.     | o. r.      |
| 90066             | 45,0             | 43,1          | 54,2          | 25            | o. r.                               | o. r.     | o. r.      |
| 920179            | 70,0             | 67,0          | 79,8          | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# HELUcond CO-PP corrugated tubes, polypropylene

dividable



## HELUcond CO-PP

The dividable and reclosable cable protection tube for subsequent mechanical protection of the cables.

- Trouble-free retrofitting
- High mechanical strength
- Simple installation of pre-fabricated lines
- Repair of existing systems

## Application

- Plant and machine construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polypropylene

Flammability acc. to UL 94: HB

- halogen-free

## Properties

resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Note

Suitable connection glands:  
COV

## Technical data

Temperature range: -40°C up to +135°C

Temperature range temporary up to +150°C

| Part no.<br>black | trade size<br>mm | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97496             | 10,0             | 8,4           | 13,4          | 50            | o. r.                               | o. r.     | o. r.      |
| 97134             | 14,0             | 12,5          | 18,5          | 50            | o. r.                               | o. r.     | o. r.      |
| 97135             | 20,0             | 19,2          | 25,3          | 50            | o. r.                               | o. r.     | o. r.      |
| 97205             | 23,0             | 23,4          | 30,8          | 50            | o. r.                               | o. r.     | o. r.      |
| 96732             | 37,0             | 31,0          | 41,4          | 25            | o. r.                               | o. r.     | o. r.      |
| 90054             | 45,0             | 42,7          | 54,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 920180            | 70,0             | 67,5          | 79,8          | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# COV corrugated tubes-conduit gland

dividable



## COV tube gland

Tube gland for HELUcond CO protection tubes.

Axial fold-up and reclosable connection gland with shaped locking rods. Split nut with safety lock to prevent accidental opening.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94: HB

- halogen-free

## Properties

Resistant to a multitude of

- fuels
- mineral oils
- greases
- weak bases
- weak acids

## Technical data

Protection class: IP 43 ohne Dichtung

Temperature range: -40°C up to +125°C  
Temperature range temporary up to +150°C

## metric thread - dividable conduit gland

| Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905031            | M16 x 1,5      | 10,0            | 11,0                   | 19,0                  | 100  | o. r.                              | o. r.     | o. r.      |
| 905032            | M20 x 1,5      | 14,0            | 11,0                   | 27,0                  | 100  | o. r.                              | o. r.     | o. r.      |
| 905033            | M25 x 1,5      | 20,0            | 12,0                   | 30,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 905034            | M32 x 1,5      | 23,0            | 15,0                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 905035            | M40 x 1,5      | 37,0            | 19,0                   | 46,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 905036            | M50 x 1,5      | 45,0            | 19,0                   | 55,0                  | 25   | o. r.                              | o. r.     | o. r.      |

## metric thread - dividable counternut

| Part no.<br>black | Size<br>Metric | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|----------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                   |                |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905037            | M16 x 1,5      | 10,0            | 8,0                    | 19,0                  | 100  | o. r.                              | o. r.     | o. r.      |
| 905038            | M20 x 1,5      | 14,0            | 8,0                    | 27,0                  | 100  | o. r.                              | o. r.     | o. r.      |
| 905039            | M25 x 1,5      | 20,0            | 9,0                    | 30,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 905040            | M32 x 1,5      | 23,0            | 12,0                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 905041            | M40 x 1,5      | 37,0            | 15,0                   | 46,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 905042            | M50 x 1,5      | 45,0            | 15,0                   | 55,0                  | 25   | o. r.                              | o. r.     | o. r.      |

## PG thread - dividable conduit gland wit counternut

| Part no.<br>black | Size<br>PG | Suitable for ND | Thread<br>length<br>mm | Spanner<br>size<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|------------|-----------------|------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                   |            |                 |                        |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93514             | 9          | 10,0            | 12,0                   | 22,0                  | 100  | o. r.                              | o. r.     | o. r.      |
| 93515             | 13,5       | 14,0            | 17,0                   | 30,0                  | 100  | o. r.                              | o. r.     | o. r.      |
| 93516             | 21         | 20,0            | 17,0                   | 36,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 93517             | 29         | 23,0            | 21,0                   | 46,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 93518             | 29         | 37,0            | 22,0                   | 55,0                  | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# COS corrugated tubes holder

for dividable corrugated tubes



## Tubing clamp COS

Tube holder for dividible HELUcond CO protection tube

- Quick fastening with integrated rib, which also fixes the protection tube in an axial direction

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide PA 6

Flammability acc. to UL 94

- halogen-free
- cadmium-free

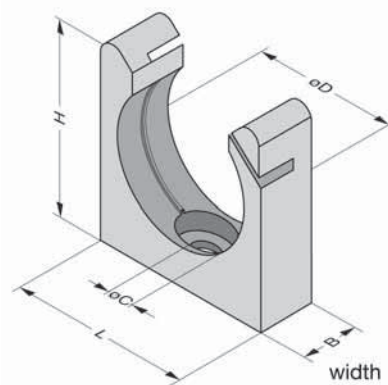
## Properties

- Resistant to a multitude of fuels, mineral oils, greases, weak bases, weak acids

## Technical data

Temperature range: -40°C up to +120°C

Temperature range temporary up to +140°C

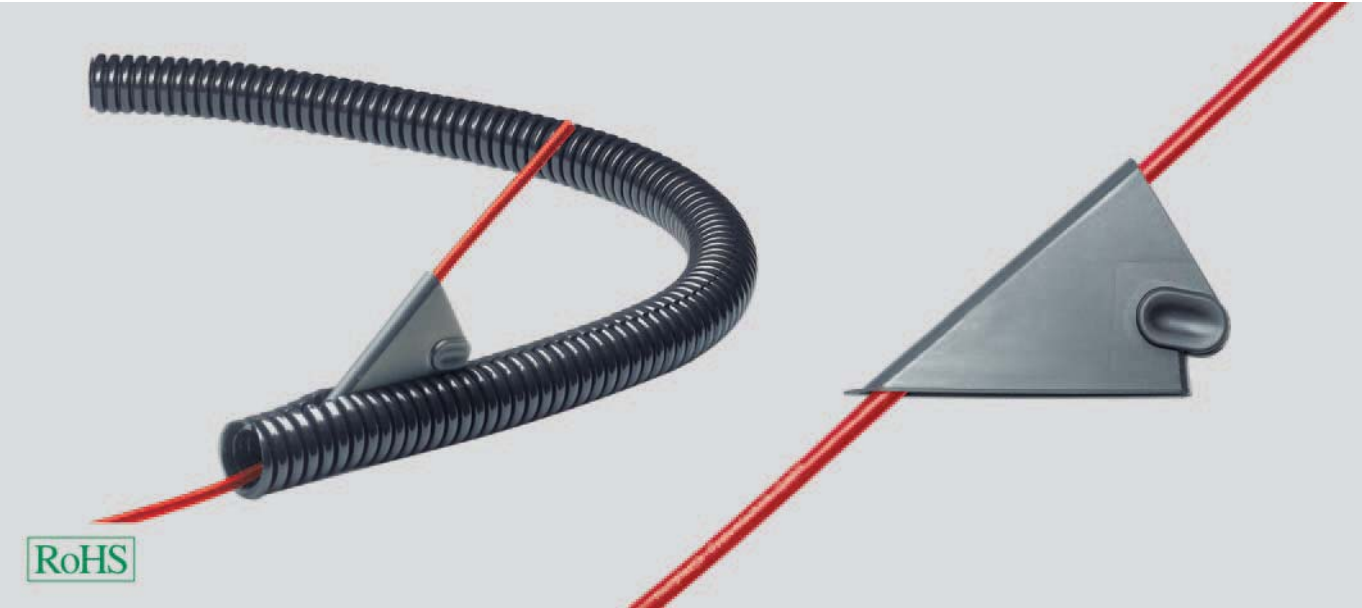


| Part no.<br>black | Suitable for<br>tube ND<br>mm | Width<br>mm | Height<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-------------------|-------------------------------|-------------|--------------|------|------------------------------------|-----------|------------|
|                   |                               |             |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 920375            | 10,0                          | 20,0        | 23,0         | 100  | o. r.                              | o. r.     | o. r.      |
| 920557            | 14,0                          | 20,0        | 27,0         | 100  | o. r.                              | o. r.     | o. r.      |
| 920358            | 20,0                          | 20,0        | 40,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 920359            | 23,0                          | 20,0        | 45,0         | 50   | o. r.                              | o. r.     | o. r.      |
| 920360            | 37,0                          | 20,0        | 52,0         | 20   | o. r.                              | o. r.     | o. r.      |
| 920361            | 45,0                          | 20,0        | 66,0         | 20   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KE insertion aid



**KE insertion aid**  
Quick and simple insertion of lines into  
splitted conduits, resp. cable chain openings

| Part no. | Type | Cross-section<br>mm² | Unit | Net EUR/Item at a purchase of |       |        |
|----------|------|----------------------|------|-------------------------------|-------|--------|
| 901006   | KE   | -                    | 1    | 1                             | 2 - 4 | 5 - 10 |
|          |      |                      |      | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# Highly flexible cable protection tubes



# High flexible protection tubes

## Cable protection tubes

|                                                                 |     |
|-----------------------------------------------------------------|-----|
| Plastic with spiral spring                                      |     |
| Steel spring with PVC sheath                                    |     |
| <b>S</b> .....                                                  | 244 |
| Steel spring with PUR sheath                                    |     |
| <b>S-PU</b> .....                                               | 245 |
| Plastic spring with PVC sheath                                  |     |
| <b>K</b> .....                                                  | 246 |
| Metal, spiral wound                                             |     |
| with agraff profile                                             |     |
| <b>M</b> .....                                                  | 247 |
| with latched profile                                            |     |
| <b>SPR-AS</b> .....                                             | 248 |
| with plastic sheath                                             |     |
| <b>SPR-PVC-AS</b> .....                                         | 249 |
| <b>SPR-PU-AS</b> .....                                          | 250 |
| with steel wire braiding                                        |     |
| <b>SPR-EDU-AS</b> .....                                         | 251 |
| stainless steel with agraff profile                             |     |
| <b>UI</b> .....                                                 | 252 |
| <b>Assignment</b> flexible protection tube / conduit gland..... | 253 |

## Tube connectors

|                                              |     |
|----------------------------------------------|-----|
| for plastic cable protection tubes           |     |
| with high protection class                   |     |
| <b>USK</b> .....                             | 257 |
| for flexible installation                    |     |
| <b>LK-I</b> .....                            | 259 |
| for metal and plastic cable protection tubes |     |
| with high protection class                   |     |
| <b>US</b> .....                              | 261 |
| with retaining ring                          |     |
| <b>LI</b> .....                              | 263 |
| for stainless steel protection tubes         |     |
| <b>LT-E-UI</b> straight.....                 | 265 |
| <b>LT-E-UI</b> elbow 90° .....               | 266 |

## Accessories / Parts

|                  |     |
|------------------|-----|
| Interior sockets |     |
| made by PVC      |     |
| <b>EEK</b> ..... | 267 |
| made by brass    |     |
| <b>EEM</b> ..... | 268 |



# S spiral spring by steel with outer sheath by PVC



## Type S

Cable protection tube type S with integrated spring steel wire, extremely flexible, expandable and compressible.

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

PVC

- silicone-free
- cadmium-free

## Note

Suitable connection glands:  
USK, LK-I, US and LI

## Technical data

Temperature range: -25°C up to +80°C  
Temperature range temporary up to +100°C

| Part no.<br>grey | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91219            | 7,0           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91220            | 10,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91221            | 13,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91222            | 15,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91223            | 16,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91224            | 22,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91225            | 29,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 91226            | 38,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 91228            | 48,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

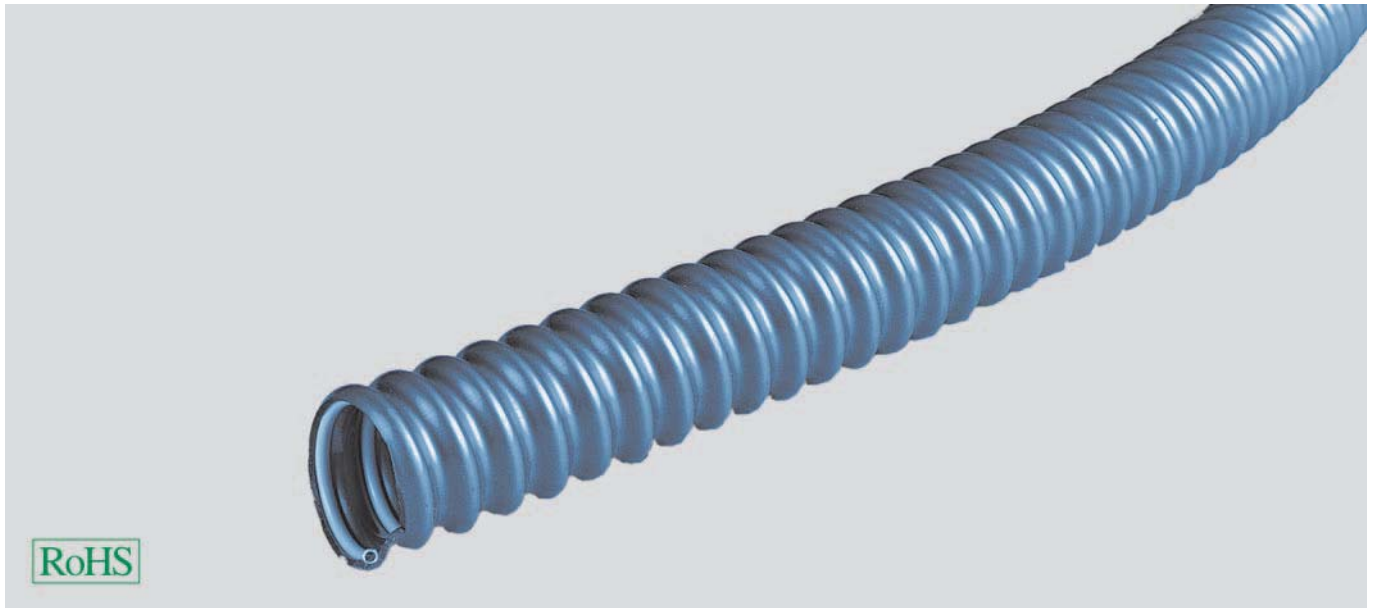
## small package

| Part no.<br>grey | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91270            | 7,0           | 10,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91271            | 10,0          | 14,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91272            | 13,0          | 17,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91273            | 15,0          | 19,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91274            | 16,0          | 21,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91275            | 22,0          | 27,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91276            | 29,0          | 36,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91277            | 38,0          | 45,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 91279            | 48,0          | 56,0          | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# S-PU spiral spring by steel with outer sheath by PUR



## Type S-PU

Cable protection tube type S-PU with PUR outer sheath and integrated spring steel wire, extremely flexible, expandable and compressible.

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

Polyurethane  
UV-resistant

- halogen-free
- silicone-free
- cadmium-free

## Properties

Resistant to

- Oil
- Gasoline
- Microbial attack
- UV-radiation
- Weathering
- Extensively to acids and alkalis

## Technical data

Temperature range: -40°C up to +80°C

| Part no.<br>blue | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 90464            | 7,0           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90465            | 10,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90466            | 13,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90467            | 15,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90468            | 16,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90469            | 21,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 90470            | 29,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 90471            | 38,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 90473            | 48,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

## small pack

| Part no.<br>blue | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94870            | 7,0           | 10,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94871            | 10,0          | 14,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94872            | 13,0          | 17,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94873            | 15,0          | 19,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94874            | 16,0          | 21,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94875            | 22,0          | 27,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94876            | 29,0          | 36,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94877            | 38,0          | 45,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94879            | 48,0          | 56,0          | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## K plastic spring with PVC sheath



### Type K

Type K cable protection tube with integrated hard plastic winding.

### Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

### Material

PVC

- silicone-free
- cadmium-free

### Note

Suitable connection glands:  
USK, LK-I, US and LI

### Technical data

Temperature range: -20°C up to +70°C

Temperature range temporary up to +80°C

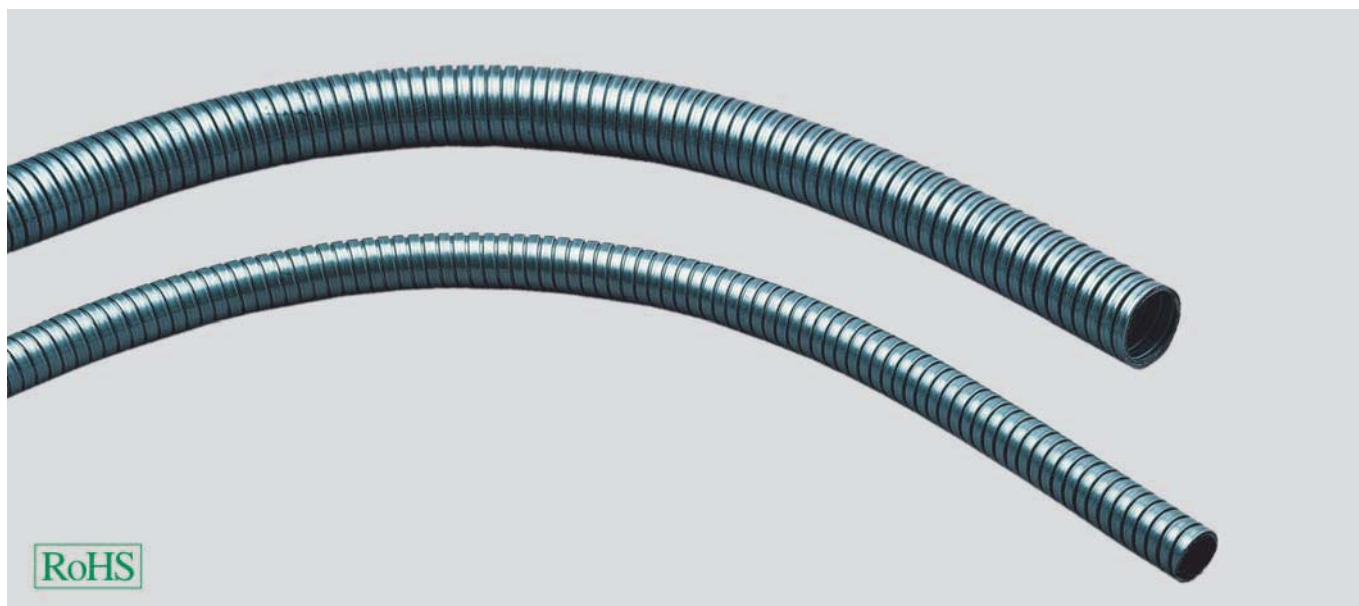
| Part no.<br>grey | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91209            | 10,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91210            | 13,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91211            | 15,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91212            | 16,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91213            | 22,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91214            | 30,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 91215            | 38,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 91216            | 45,0          | 52,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 91217            | 49,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# M metal cable tubes

fully inter-locked



## Type M

Spiral wound metallic tube with double-folded profile (Agraft profile). High tensile and torsional strength.

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

Cold strip DC 03 acc. to EN10139, galvanised, Fe/Zn 3 or rustproof steel

## Note

Suitable connection glands:  
US, LI

## Technical data

Temperature range: up to +220°C

| Part no. | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|          |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97014    | 8,0           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97015    | 12,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97016    | 14,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97017    | 16,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97018    | 18,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97019    | 24,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97020    | 31,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 97021    | 40,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 97022    | 51,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SPR-AS metal cable tubes

with latched profile



## Type SPR-AS

Spiral wound metal sleeve with hooked profile.  
High tensile and transverse pressure load rating.

## Application

- Plant- and machine construction
- Automation and installation technology
- control cabinet construction

## Material

Galvanised steel

## Note

Suitable connection glands:  
US, LI

## Technical data

Temperature range: up to +220°C

| Part no. | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|          |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97023    | 8,0           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97024    | 11,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97025    | 14,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97026    | 16,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97027    | 18,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97028    | 23,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97029    | 31,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 97030    | 40,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 97031    | 51,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

## small package

| Part no. | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|          |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94880    | 8,0           | 10,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94881    | 11,0          | 14,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94882    | 14,0          | 17,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94883    | 16,0          | 19,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94884    | 18,0          | 21,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94885    | 23,0          | 27,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94886    | 31,0          | 36,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94887    | 40,0          | 45,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94888    | 51,0          | 56,0          | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SPR-PVC-AS metal cable tubes with plastic sheath

with latches profile



## Type SPR-PVC-AS

Spiral wound metallic tube with latched profile and PVC sheath.  
Weather-resistant, high tensile and transverse pressure load rating.

## Application

- Plant and machine construction
- Automation technology
- Control cabinet construction

## Material

Cold strip DC 03 acc. to EN 10139, galvanised, Fe/Zn 3

Outer sheath material: PVC

## Note

Suitable connection glands:  
US, LI

## Technical data

Temperature range: -25°C up to +80°C  
Temperature range temporary up to +100°C

| Part no.<br>grey | Part no.<br>black | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97032            | 97702             | 7,0           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97033            | 97685             | 10,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97034            | 97703             | 13,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97035            | 97704             | 15,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97036            | 97705             | 17,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97037            | 97706             | 22,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97038            | 97707             | 29,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 97039            | 97708             | 38,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 97040            | 97709             | 49,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

## small package

| Part no.<br>grey | Part no.<br>black | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94890            | 94934             | 7,0           | 10,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94891            | 94935             | 10,0          | 14,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94892            | 94936             | 13,0          | 17,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94893            | 94937             | 15,0          | 19,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94894            | 94938             | 17,0          | 21,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94895            | 94939             | 22,0          | 27,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94896            | 94940             | 29,0          | 36,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94897            | 94941             | 38,0          | 45,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94898            | 94942             | 49,0          | 56,0          | 10            | o. r.                               | o. r.     | o. r.      |

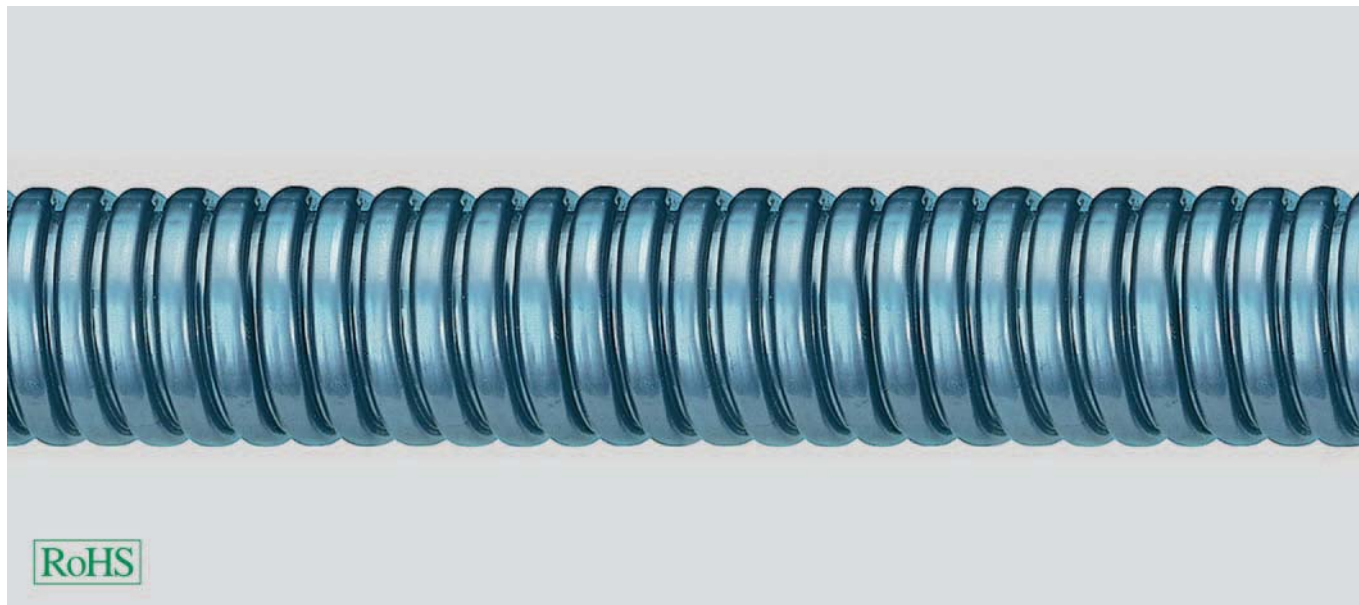
Dimensions and specifications may be changed without prior notice.

o. r. = on request



# SPR-PU-AS metal cable tube with PUR sheath

with latched profile



## Type SPR-PU-AS

Spiral wound metallic tube with latched profile and steel wire braiding.  
High tensile and transverse pressure load rating.

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

Cold strip DC 03 acc. to EN 10139, galvanised, Fe/Zn 3

Outer sheath material: Polyurethane

## Technical data

Temperature range: -40°C up to +80°C

## Note

Suitable connection glands:  
US, LI

## blue

| Part no.<br>blue | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97793            | 7,0           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97794            | 10,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 91131            | 13,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 905912           | 15,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 94738            | 17,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97941            | 22,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 94739            | 29,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 94714            | 38,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 90399            | 49,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SPR-EDU-AS metal cable tubes with steel wire braiding

with latched profile



## Type SPR-EDU-AS

Spiral wound metallic tube with latched profile and steel wire braiding.  
High tensile and transverse pressure load rating.

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

## Material

Cold strip DC 03 acc. to EN10139, galvanised, Fe/Zn 3 or rustproof steel

With steel wire braiding

## Technical data

Temperature range: up to +220°C

## Note

Suitable connection glands:  
US, LI

| Part no. | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|          |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97584    | 7,0           | 10,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97585    | 10,0          | 14,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97586    | 13,0          | 17,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97510    | 15,0          | 19,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97377    | 17,0          | 21,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97378    | 22,0          | 27,0          | 50            | o. r.                               | o. r.     | o. r.      |
| 97379    | 29,0          | 36,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 96784    | 38,0          | 45,0          | 25            | o. r.                               | o. r.     | o. r.      |
| 97587    | 49,0          | 56,0          | 25            | o. r.                               | o. r.     | o. r.      |

## small package

| Part no. | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|          |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94920    | 7,0           | 10,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94921    | 10,0          | 14,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94922    | 13,0          | 17,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94923    | 15,0          | 19,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94924    | 17,0          | 21,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94925    | 22,0          | 27,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94926    | 29,0          | 36,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94927    | 38,0          | 45,0          | 10            | o. r.                               | o. r.     | o. r.      |
| 94928    | 49,0          | 56,0          | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# UI metal cable tube, stainless steel

with agraft-profile



new



## Type UI

Spiral wound tube made by stainless steel with double-folded profile (Agraft profile). High tensile and torsional strength.

## Application

- Robot construction
- Steel and aluminium foundry industry
- Maschine and apparatus building
- Off-shore-industry
- Security
- Metal, glass and ceramics industry

## Material

Stainless steel

## Note

Suitable connection glands:  
LT-E-UI

## Technical data

Temperature range: -100°C up to +600°C

| Part no. | Trade size<br>inch | Size<br>PG | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|--------------------|------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|          |                    |            |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 905804   | 5/16"              | -          | 9,5           | 12,5          | 30            | o. r.                               | o. r.     | o. r.      |
| 905805   | 3/8"               | -          | 13,0          | 16,0          | 30            | o. r.                               | o. r.     | o. r.      |
| 905806   | 1/2"               | -          | 17,0          | 21,0          | 30            | o. r.                               | o. r.     | o. r.      |
| 905807   | 3/4"               | -          | 22,0          | 26,0          | 30            | o. r.                               | o. r.     | o. r.      |
| 905808   | 1"                 | -          | 26,0          | 30,0          | 30            | o. r.                               | o. r.     | o. r.      |
| 905809   | 1 1/4"             | -          | 34,0          | 39,0          | 30            | o. r.                               | o. r.     | o. r.      |
| 905810   | 1 1/2"             | -          | 40,3          | 44,4          | 15            | o. r.                               | o. r.     | o. r.      |
| 905811   | 2"                 | -          | 51,6          | 55,7          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Selection table

## Flexible protection tube/conduit gland

### Flexible protection tube

### Conduit gland

#### USK, plastic, high protection class

| S     | small package | S-PU  | small package | K     | tube outer-Ø mm | size metric     | small package | size PG | small package |       |
|-------|---------------|-------|---------------|-------|-----------------|-----------------|---------------|---------|---------------|-------|
| 91219 | 91270         | 90464 | 94870         |       | 10              | M10 x 1,0 97594 | 93460         | 7       | 90664         | 93450 |
| 91220 | 91271         | 90465 | 94871         | 91209 | 14              | M12 x 1,5 97595 | 93461         | 9       | 90665         | 93451 |
| 91221 | 91272         | 90466 | 94872         | 91210 | 17              | M16 x 1,5 97596 | 93462         | 11      | 90666         | 93452 |
| 91222 | 91273         | 90467 | 94873         | 91211 | 19              |                 |               | 13,5    | 90667         | 93453 |
| 91223 | 91274         | 90468 | 94874         | 91212 | 21              | M20 x 1,5 97597 | 93463         | 16      | 90668         | 93454 |
| 91224 | 91275         | 90469 | 94875         | 91213 | 27              | M25 x 1,5 97598 | 93464         | 21      | 90669         | 93455 |
| 91225 | 91276         | 90470 | 94876         | 91214 | 36              | M32 x 1,5 97599 | 93465         | 29      | 90670         | 93456 |
| 91226 | 91277         | 90471 | 94877         | 91215 | 45              | M40 x 1,5 97600 | 93466         | 36      | 90671         | 93457 |
|       |               |       |               | 91216 | 52              |                 |               |         |               |       |
| 91228 | 91279         | 90473 | 94879         | 91217 | 56              | M50 x 1,5 97601 | 93467         | 48      | 90673         | 93458 |

#### LK-I, plastic

| S     | small package | S-PU  | small package | K     | tube outer-Ø mm | size metric     | small package | size PG | small package |       |
|-------|---------------|-------|---------------|-------|-----------------|-----------------|---------------|---------|---------------|-------|
| 91219 | 91270         | 90464 | 94870         |       | 10              | M10 x 1,0 97602 | 93480         | 7       | 90720         | 93470 |
| 91220 | 91271         | 90465 | 94871         | 91209 | 14              | M12 x 1,5 97603 | 93481         | 9       | 90721         | 93471 |
| 91221 | 91272         | 90466 | 94872         | 91210 | 17              | M16 x 1,5 97604 | 93482         | 11      | 90722         | 93472 |
| 91222 | 91273         | 90467 | 94873         | 91211 | 19              |                 |               | 13,5    | 90723         | 93473 |
| 91223 | 91274         | 90468 | 94874         | 91212 | 21              | M20 x 1,5 97605 | 93483         | 16      | 90724         | 93474 |
| 91224 | 91275         | 90469 | 94875         | 91213 | 27              | M25 x 1,5 97606 | 93484         | 21      | 90725         | 93475 |
| 91225 | 91276         | 90470 | 94876         | 91214 | 36              | M32 x 1,5 97607 | 93485         | 29      | 90726         | 93476 |
| 91226 | 91277         | 90471 | 94877         | 91215 | 45              | M40 x 1,5 97608 | 93486         | 36      | 90727         | 93477 |
|       |               |       |               | 91216 | 52              |                 |               |         |               |       |
| 91228 | 91279         | 90473 | 94879         | 91217 | 56              | M50 x 1,5 97609 | 93487         | 48      | 90729         | 93478 |

#### US, brass, high protection class

| S     | small package | S-PU  | small package | K     | tube outer-Ø mm | size metric     | small package | size PG | small package | suitable interior sockets EEK |
|-------|---------------|-------|---------------|-------|-----------------|-----------------|---------------|---------|---------------|-------------------------------|
| 91219 | 91270         | 90464 | 94870         |       | 10              | M10 x 1,0 98331 | 93530         | 7       | 98322         | 93520 96342                   |
| 91220 | 91271         | 90465 | 94871         | 91209 | 14              | M12 x 1,5 98332 | 93531         | 9       | 98323         | 93521 96449                   |
| 91221 | 91272         | 90466 | 94872         | 91210 | 17              | M16 x 1,5 98333 | 93532         | 11      | 98324         | 93522 96343                   |
| 91222 | 91273         | 90467 | 94873         | 91211 | 19              |                 |               | 13,5    | 98325         | 93523 96450                   |
| 91223 | 91274         | 90468 | 94874         | 91212 | 21              | M20 x 1,5 98334 | 93533         | 16      | 98326         | 93524 96451                   |
| 91224 | 91275         | 90469 | 94875         | 91213 | 27              | M25 x 1,5 98335 | 93534         | 21      | 98327         | 93525 96344                   |
| 91225 | 91276         | 90470 | 94876         | 91214 | 36              | M32 x 1,5 98336 | 93535         | 29      | 98328         | 93526 96447                   |
| 91226 | 91277         | 90471 | 94877         | 91215 | 45              | M40 x 1,5 98337 | 93536         | 36      | 98329         | 93527 96345                   |
|       |               |       |               | 91216 | 52              |                 |               |         |               |                               |
| 91228 | 91279         | 90473 | 94879         | 91217 | 56              | M50 x 1,5 98338 | 93537         | 48      | 98330         | 93528 96347                   |

#### LI, brass, with retaining ring

| S     | small package | S-PU  | small package | K     | tube outer-Ø mm | size metric     | small package | size PG | small package |       |
|-------|---------------|-------|---------------|-------|-----------------|-----------------|---------------|---------|---------------|-------|
| 91219 | 91270         | 90464 | 94870         |       | 10              | M10 x 1,0 97619 | 93610         | 7       | 90730         | 93600 |
| 91220 | 91271         | 90465 | 94871         | 91209 | 14              | M12 x 1,5 97620 | 93611         | 9       | 90731         | 93601 |
| 91221 | 91272         | 90466 | 94872         | 91210 | 17              | M16 x 1,5 97621 | 93612         | 11      | 90732         | 93602 |
| 91222 | 91273         | 90467 | 94873         | 91211 | 19              |                 |               | 13,5    | 90733         | 93603 |
| 91223 | 91274         | 90468 | 94874         | 91212 | 21              | M20 x 1,5 97622 | 93613         | 16      | 90734         | 93604 |
| 91224 | 91275         | 90469 | 94875         | 91213 | 27              | M25 x 1,5 97623 | 93614         | 21      | 90735         | 93605 |
| 91225 | 91276         | 90470 | 94876         | 91214 | 36              | M32 x 1,5 97624 | 93615         | 29      | 90736         | 93606 |
| 91226 | 91277         | 90471 | 94877         | 91215 | 45              | M40 x 1,5 97625 | 93616         | 36      | 90737         | 93607 |
|       |               |       |               | 91216 | 52              |                 |               |         |               |       |
| 91228 | 91279         | 90473 | 94879         | 91217 | 56              | M50 x 1,5 97626 | 93617         | 48      | 90738         | 93608 |

# Selection table

## Flexible protection tube/conduit gland

### Flexible protection tube

### Conduit gland

#### US, brass, high protection class

| M     |  |  | tube<br>outer-Ø mm | size<br>metric  | size<br>PG | suitable<br>interior<br>sockets EEM |
|-------|--|--|--------------------|-----------------|------------|-------------------------------------|
| 97014 |  |  | 10                 | M10 x 1,0 98233 | 7 98206    | 906006                              |
| 97015 |  |  | 14                 | M12 x 1,5 98234 | 9 98207    | 906007                              |
| 97016 |  |  | 17                 | M16 x 1,5 98235 | 11 98208   | 906008                              |
| 97017 |  |  | 19                 |                 | 13,5 98209 | 906009                              |
| 97018 |  |  | 21                 | M20 x 1,5 98236 | 16 98210   | 906010                              |
| 97019 |  |  | 27                 | M25 x 1,5 98237 | 21 98211   | 906011                              |
| 97020 |  |  | 36                 | M32 x 1,5 98238 | 29 98212   | 906012                              |
| 97021 |  |  | 45                 | M40 x 1,5 98239 | 36 98213   | 906013                              |
|       |  |  | 52                 |                 |            |                                     |
| 97022 |  |  | 56                 | M50 x 1,5 98240 | 48 98214   | 906014                              |

#### LI, brass, with retaining ring

| M     |  |  | tube<br>outer-Ø mm | size<br>metric  | small<br>package | size<br>PG | small<br>package |  |
|-------|--|--|--------------------|-----------------|------------------|------------|------------------|--|
| 97014 |  |  | 10                 | M10 x 1,0 97619 | 93610            | 7 90730    | 93600            |  |
| 97015 |  |  | 14                 | M12 x 1,5 97620 | 93611            | 9 90731    | 93601            |  |
| 97016 |  |  | 17                 | M16 x 1,5 97621 | 93612            | 11 90732   | 93602            |  |
| 97017 |  |  | 19                 |                 |                  | 13,5 90733 | 93603            |  |
| 97018 |  |  | 21                 | M20 x 1,5 97622 | 93613            | 16 90734   | 93604            |  |
| 97019 |  |  | 27                 | M25 x 1,5 97623 | 93614            | 21 90735   | 93605            |  |
| 97020 |  |  | 36                 | M32 x 1,5 97624 | 93615            | 29 90736   | 93606            |  |
| 97021 |  |  | 45                 | M40 x 1,5 97625 | 93616            | 36 90737   | 93607            |  |
|       |  |  | 52                 |                 |                  |            |                  |  |
| 97022 |  |  | 56                 | M50 x 1,5 97626 | 93617            | 48 90738   | 93608            |  |

#### US, brass, high protection class

| SPR-AS | small<br>package |  | tube<br>outer-Ø mm | size<br>metric  | small<br>package | size<br>PG | small<br>package | suitable<br>interior<br>sockets EEM |
|--------|------------------|--|--------------------|-----------------|------------------|------------|------------------|-------------------------------------|
| 97023  | 94880            |  | 10                 | M10 x 1,0 98241 | 93570            | 7 98215    | 93560            | 99510                               |
| 97024  | 94881            |  | 14                 | M12 x 1,5 98242 | 93571            | 9 98216    | 93561            | 99511                               |
| 97025  | 94882            |  | 17                 | M16 x 1,5 98243 | 93572            | 11 98217   | 93562            | 99512                               |
| 97026  | 94883            |  | 19                 |                 |                  | 13,5 98218 | 93563            | 99513                               |
| 97027  | 94884            |  | 21                 | M20 x 1,5 98244 | 93573            | 16 98219   | 93564            | 99514                               |
| 97028  | 94885            |  | 27                 | M25 x 1,5 98245 | 93574            | 21 98220   | 93565            | 99515                               |
| 97029  | 94886            |  | 36                 | M32 x 1,5 98246 | 93575            | 29 98221   | 93566            | 99516                               |
| 97030  | 94887            |  | 45                 | M40 x 1,5 98247 | 93576            | 36 98222   | 93567            | 99517                               |
|        |                  |  | 52                 |                 |                  |            |                  |                                     |
| 97031  | 94888            |  | 56                 | M50 x 1,5 98248 | 93577            | 48 98223   | 93568            | 99518                               |

#### LI, brass, with retaining ring

| SPR-AS | small<br>package |  | tube<br>outer-Ø mm | size<br>metric  | small<br>package | size<br>PG | small<br>package |  |
|--------|------------------|--|--------------------|-----------------|------------------|------------|------------------|--|
| 97023  | 94880            |  | 10                 | M10 x 1,0 97619 | 93610            | 7 90730    | 93600            |  |
| 97024  | 94881            |  | 14                 | M12 x 1,5 97620 | 93611            | 9 90731    | 93601            |  |
| 97025  | 94882            |  | 17                 | M16 x 1,5 97621 | 93612            | 11 90732   | 93602            |  |
| 97026  | 94883            |  | 19                 |                 |                  | 13,5 90733 | 93603            |  |
| 97027  | 94884            |  | 21                 | M20 x 1,5 97622 | 93613            | 16 90734   | 93604            |  |
| 97028  | 94885            |  | 27                 | M25 x 1,5 97623 | 93614            | 21 90735   | 93605            |  |
| 97029  | 94886            |  | 36                 | M32 x 1,5 97624 | 93615            | 29 90736   | 93606            |  |
| 97030  | 94887            |  | 45                 | M40 x 1,5 97625 | 93616            | 36 90737   | 93607            |  |
|        |                  |  | 52                 |                 |                  |            |                  |  |
| 97031  | 94888            |  | 56                 | M50 x 1,5 97626 | 93617            | 48 90738   | 93608            |  |

# Selection table

## Flexible protection tube/conduit gland

### Flexible protection tube

### Conduit gland

#### US, brass, high protection class

| SPR-PVC-AS |       | small package |       | S-PU-AS | tube<br>outer-Ø mm | size<br>metric |       | small<br>package | size<br>PG | small<br>package | suitable<br>interior<br>sockets EEK |       |
|------------|-------|---------------|-------|---------|--------------------|----------------|-------|------------------|------------|------------------|-------------------------------------|-------|
| grey       | black | grey          | black |         |                    |                |       |                  |            |                  |                                     |       |
| 97032      | 97702 | 94890         | 94934 | 97793   | 10                 | M10 x 1,0      | 98249 | 93590            | 7          | 98224            | 93580                               | 97580 |
| 97033      | 97685 | 94935         | 94891 | 97794   | 14                 | M12 x 1,5      | 98250 | 93591            | 9          | 98225            | 93581                               | 97680 |
| 97034      | 97703 | 94892         | 94936 | 91131   | 17                 | M16 x 1,5      | 98251 | 93592            | 11         | 98226            | 93582                               | 97691 |
| 97035      | 97704 | 94893         | 94937 |         | 19                 |                |       |                  | 13,5       | 98227            | 93583                               | 97692 |
| 97036      | 97705 | 94938         | 94894 | 94738   | 21                 | M20 x 1,5      | 98252 | 93593            | 16         | 98228            | 93584                               | 97693 |
| 97037      | 97706 | 94895         | 94939 | 97941   | 27                 | M25 x 1,5      | 98253 | 93594            | 21         | 98229            | 93585                               | 97681 |
| 97038      | 97707 | 94896         | 94940 | 94714   | 36                 | M32 x 1,5      | 98254 | 93595            | 29         | 98230            | 93586                               | 97682 |
| 97039      | 97708 | 94941         | 94897 | 90399   | 45                 | M40 x 1,5      | 98255 | 93596            | 36         | 98231            | 93587                               | 97694 |
|            |       |               |       |         | 52                 |                |       |                  |            |                  |                                     |       |
| 97040      | 97709 | 94898         | 94942 | 94739   | 56                 | M50 x 1,5      | 98256 | 93597            | 48         | 98232            | 93588                               | 97684 |

#### LI, brass, with retaining ring

| SPR-PVC-AS |       | small package |       | S-PU-AS | tube<br>outer-Ø mm | size<br>metric |       | small<br>package | size<br>PG | small<br>package |       |
|------------|-------|---------------|-------|---------|--------------------|----------------|-------|------------------|------------|------------------|-------|
| grey       | black | grey          | black |         |                    |                |       |                  |            |                  |       |
| 97032      | 97702 | 94890         | 94934 | 97793   | 10                 | M10 x 1,0      | 97619 | 93610            | 7          | 90730            | 93600 |
| 97033      | 97685 | 94935         | 94891 | 97794   | 14                 | M12 x 1,5      | 97620 | 93611            | 9          | 90731            | 93601 |
| 97034      | 97703 | 94892         | 94936 | 91131   | 17                 | M16 x 1,5      | 97621 | 93612            | 11         | 90732            | 93602 |
| 97035      | 97704 | 94893         | 94937 |         | 19                 |                |       |                  | 13,5       | 90733            | 93603 |
| 97036      | 97705 | 94938         | 94894 | 94738   | 21                 | M20 x 1,5      | 97622 | 93613            | 16         | 90734            | 93604 |
| 97037      | 97706 | 94895         | 94939 | 97941   | 27                 | M25 x 1,5      | 97623 | 93614            | 21         | 90735            | 93605 |
| 97038      | 97707 | 94896         | 94940 | 94714   | 36                 | M32 x 1,5      | 97624 | 93615            | 29         | 90736            | 93606 |
| 97039      | 97708 | 94941         | 94897 | 90399   | 45                 | M40 x 1,5      | 97625 | 93616            | 36         | 90737            | 93607 |
|            |       |               |       |         | 52                 |                |       |                  |            |                  |       |
| 97040      | 97709 | 94898         | 94942 | 94739   | 56                 | M50 x 1,5      | 97626 | 93617            | 48         | 90738            | 93608 |

#### US, brass, high protection class

| SPR-EDU-AS | small package |  | tube<br>outer-Ø mm | size<br>metric |        | size<br>PG |        | suitable<br>interior<br>sockets EEK |
|------------|---------------|--|--------------------|----------------|--------|------------|--------|-------------------------------------|
| 97584      | 94920         |  | 10                 | M10 x 1,0      | 905989 | 7          | 905997 | 97580                               |
| 97585      | 94921         |  | 14                 | M12 x 1,5      | 905990 | 9          | 905998 | 97680                               |
| 97586      | 94922         |  | 17                 | M16 x 1,5      | 905991 | 11         | 905999 | 97691                               |
| 97510      | 94923         |  | 19                 |                |        | 13,5       | 906000 | 97692                               |
| 97377      | 94924         |  | 21                 | M20 x 1,5      | 905992 | 16         | 906001 | 97693                               |
| 97378      | 94925         |  | 27                 | M25 x 1,5      | 905993 | 21         | 906002 | 97681                               |
| 97379      | 94926         |  | 36                 | M32 x 1,5      | 905994 | 29         | 906003 | 97682                               |
| 96784      | 94927         |  | 45                 | M40 x 1,5      | 905995 | 36         | 906004 | 97694                               |
|            |               |  | 52                 |                |        |            |        |                                     |
| 97587      | 94928         |  | 56                 | M50 x 1,5      | 905996 | 48         | 906005 | 97684                               |

#### LI, brass, with retaining ring

| SPR-EDU-AS |  | small package |  |  | tube<br>outer-Ø mm | size<br>metric |       | small<br>package | size<br>PG | small<br>package |       |
|------------|--|---------------|--|--|--------------------|----------------|-------|------------------|------------|------------------|-------|
|            |  |               |  |  |                    |                |       |                  |            |                  |       |
| 97584      |  | 94920         |  |  | 10                 | M10 x 1,0      | 97619 | 93610            | 7          | 90730            | 93600 |
| 97585      |  | 94921         |  |  | 14                 | M12 x 1,5      | 97620 | 93611            | 9          | 90731            | 93601 |
| 97586      |  | 94922         |  |  | 17                 | M16 x 1,5      | 97621 | 93612            | 11         | 90732            | 93602 |
| 97510      |  | 94923         |  |  | 19                 |                |       |                  | 13,5       | 90733            | 93603 |
| 97377      |  | 94924         |  |  | 21                 | M20 x 1,5      | 97622 | 93613            | 16         | 90734            | 93604 |
| 97378      |  | 94925         |  |  | 27                 | M25 x 1,5      | 97623 | 93614            | 21         | 90735            | 93605 |
| 97379      |  | 94926         |  |  | 36                 | M32 x 1,5      | 97624 | 93615            | 29         | 90736            | 93606 |
| 96784      |  | 94927         |  |  | 45                 | M40 x 1,5      | 97625 | 93616            | 36         | 90737            | 93607 |
|            |  |               |  |  | 52                 |                |       |                  |            |                  |       |
| 97587      |  | 94928         |  |  | 56                 | M50 x 1,5      | 97626 | 93617            | 48         | 90738            | 93608 |



# Selection table

## Flexible protection tube/conduit gland

### Flexible protection tube

### Conduit gland

#### LT-E-UI straight, stainless steel

| UI     | tube<br>outer-Ø mm | size<br>metric |        |           |        | size<br>PG |        | size<br>NPT |        |
|--------|--------------------|----------------|--------|-----------|--------|------------|--------|-------------|--------|
| 905804 | 12,5               | M16 x 1,5      | 905812 | M20 x 1,5 | 905814 | 11         | 905820 | 1/2"        | 905826 |
| 905805 | 16                 | M16 x 1,5      | 905813 | M20 x 1,5 | 905815 | 11         | 905821 | 1/2"        | 905827 |
| 905806 | 21                 | M20 x 1,5      | 905816 |           |        | 16         | 905822 | 1/2"        | 905828 |
| 905807 | 26                 | M25 x 1,5      | 905817 |           |        | 21         | 905823 | 3/4"        | 905829 |
| 905808 | 30                 | M32 x 1,5      | 905818 |           |        | 29         | 905824 | 1"          | 905830 |
| 905809 | 39                 | M40 x 1,5      | 905819 |           |        | 36         | 905825 | 1 1/4"      | 905831 |
| 905810 | 44,4               |                |        |           |        |            |        |             |        |
| 905811 | 55,7               |                |        |           |        |            |        |             |        |

#### LT-E-UI angled 90°, stainless steel

| UI     | tube<br>outer-Ø mm | size<br>metric |        |           |        | size<br>PG |        | size<br>NPT |        |
|--------|--------------------|----------------|--------|-----------|--------|------------|--------|-------------|--------|
| 905804 | 12,5               | M16 x 1,5      | 905832 | M20 x 1,5 | 905834 | 11         | 905838 | 1/2"        | 905843 |
| 905805 | 16                 | M16 x 1,5      | 905833 | M20 x 1,5 | 905835 | 11         | 905839 | 1/2"        | 905844 |
| 905806 | 21                 | M20 x 1,5      | 905836 |           |        | 16         | 905840 | 1/2"        | 905845 |
| 905807 | 26                 | M25 x 1,5      | 905837 |           |        | 21         | 905841 | 3/4"        | 905846 |
| 905808 | 30                 |                |        |           |        | 29         | 905842 | 1"          | 905847 |
| 905809 | 39                 |                |        |           |        |            |        |             |        |
| 905810 | 44,4               |                |        |           |        |            |        |             |        |
| 905811 | 55,7               |                |        |           |        |            |        |             |        |

# USK tube connectors, plastic

with high degree of protection



## USK

Tube gland for type S, S-PU and K protection tubes.

## Material

polypropylene

## Technical data

Protection class: IP 65

Temperature range: -10°C up to +110°C

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

### metric thread

| Part no.<br>grey | Size<br>Metric | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|----------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97594            | M10 x 1,0      | 10,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97595            | M12 x 1,5      | 14,0                  | 12,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97596            | M16 x 1,5      | 17,0                  | 12,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97597            | M20 x 1,5      | 21,0                  | 13,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97598            | M25 x 1,5      | 27,0                  | 13,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 97599            | M32 x 1,5      | 36,0                  | 15,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 97600            | M40 x 1,5      | 45,0                  | 15,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 97601            | M50 x 1,5      | 56,0                  | 16,0                   | 10   | o. r.                              | o. r.     | o. r.      |

### metric thread - small package

| Part no.<br>grey | Size<br>Metric | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|----------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93460            | M10 x 1,0      | 10,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93461            | M12 x 1,5      | 14,0                  | 12,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93462            | M16 x 1,5      | 17,0                  | 12,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93463            | M20 x 1,5      | 21,0                  | 13,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93464            | M25 x 1,5      | 27,0                  | 13,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93465            | M32 x 1,5      | 36,0                  | 15,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93466            | M40 x 1,5      | 45,0                  | 15,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93467            | M50 x 1,5      | 56,0                  | 16,0                   | 2    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# USK tube connectors, plastic



with high degree of protection

## PG thread

| Part no.<br>grey | Size<br>PG | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |            |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90664            | 7          | 10,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90665            | 9          | 14,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90666            | 11         | 17,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90667            | 13,5       | 19,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90668            | 16         | 21,0                  | 11,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90669            | 21         | 27,0                  | 11,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90670            | 29         | 36,0                  | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90671            | 36         | 45,0                  | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90673            | 48         | 56,0                  | 15,0                   | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread - small package

| Part no.<br>grey | Size<br>PG | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |            |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93450            | 7          | 10,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93451            | 9          | 14,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93452            | 11         | 17,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93453            | 13,5       | 19,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93454            | 16         | 21,0                  | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93455            | 21         | 27,0                  | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93456            | 29         | 36,0                  | 12,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93457            | 36         | 45,0                  | 12,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93458            | 48         | 56,0                  | 15,0                   | 2    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# LK-I tube connectors, plastic

for flexible use



## LK-I

Tube gland for protection tubes type S, S-PU and K.

## Material

polypropylene

## Technical data

Protection class: IP 54

Temperature range: -10°C up to +110°C

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

### metric thread

| Part no.<br>grey | Size<br>Metric | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|----------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97602            | M12 x 1,5      | 10,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97603            | M16 x 1,5      | 14,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97604            | M20 x 1,5      | 17,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97605            | M25 x 1,5      | 21,0                  | 11,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 97606            | M32 x 1,5      | 27,0                  | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 97607            | M40 x 1,5      | 36,0                  | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 97608            | M50 x 1,5      | 45,0                  | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 97609            | M63 x 1,5      | 56,0                  | 15,0                   | 10   | o. r.                              | o. r.     | o. r.      |

### metric thread - small packages

| Part no.<br>grey | Size<br>Metric | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|----------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |                |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93480            | M12 x 1,5      | 10,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93481            | M16 x 1,5      | 14,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93482            | M20 x 1,5      | 17,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93483            | M25 x 1,5      | 21,0                  | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93484            | M32 x 1,5      | 27,0                  | 12,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93485            | M40 x 1,5      | 36,0                  | 12,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93486            | M50 x 1,5      | 45,0                  | 12,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93487            | M63 x 1,5      | 56,0                  | 15,0                   | 2    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# LK-I tube connectors, plastic



for flexible use

## PG thread

| Part no.<br>grey | Size<br>PG | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |            |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90720            | 7          | 10,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90721            | 9          | 14,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90722            | 11         | 17,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90723            | 13,5       | 19,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90724            | 16         | 21,0                  | 11,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 90725            | 21         | 27,0                  | 11,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90726            | 29         | 36,0                  | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90727            | 36         | 45,0                  | 12,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 90729            | 48         | 56,0                  | 15,0                   | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread - small packages

| Part no.<br>grey | Size<br>PG | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|------------------|------------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                  |            |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93470            | 7          | 10,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93471            | 9          | 14,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93472            | 11         | 17,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93473            | 13,5       | 19,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93474            | 16         | 21,0                  | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93475            | 21         | 27,0                  | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93476            | 29         | 36,0                  | 12,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93477            | 36         | 45,0                  | 12,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93478            | 48         | 56,0                  | 15,0                   | 2    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# US tube gland brass nickel plated

with high degree of protection



## US

Tube gland for protection tubes type S, S-PU, M, SPR-AS, SPR-PVC-AS, SPR-PU-AS, SPR-EDU-AS.

## Material

Brass, nickel plated  
Grounding sleeve: Brass, bare  
Seal: plastic

## Technical data

Temperature range: -25°C up to +100°C

## Application

- Plant and machine construction
- Automation technology
- Installation technology
- Control cabinet construction

## Note

Protection classification:  
IP 65 - type: SPR-PVC-AS, SPR-PU-AS  
IP 54 - type: S, S-PU  
IP 40 - type: M, SPR-AS, SPR-EDU-AS

### metric thread

| Part no.<br>S<br>S-PU | Part no.<br>M | Part no.<br>SPR-AS | Part no.<br>SPR-PVC-AS<br>SPR-PU-AS | Part no.<br>SPR-EDU-AS | Size      | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-----------------------|---------------|--------------------|-------------------------------------|------------------------|-----------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                       |               |                    |                                     |                        |           |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98331                 | 98233         | 98241              | 98249                               | 905989                 | M10 x 1,0 | 10,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 98332                 | 98234         | 98242              | 98250                               | 905990                 | M12 x 1,5 | 14,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 98333                 | 98235         | 98243              | 98251                               | 905991                 | M16 x 1,5 | 17,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 98334                 | 98236         | 98244              | 98252                               | 905992                 | M20 x 1,5 | 21,0                  | 10,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 98335                 | 98237         | 98245              | 98253                               | 905993                 | M25 x 1,5 | 27,0                  | 11,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 98336                 | 98238         | 98246              | 98254                               | 905994                 | M32 x 1,5 | 36,0                  | 13,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 98337                 | 98239         | 98247              | 98255                               | 905995                 | M40 x 1,5 | 45,0                  | 13,0                   | 20   | o. r.                              | o. r.     | o. r.      |
| 98338                 | 98240         | 98248              | 98256                               | 905996                 | M50 x 1,5 | 56,0                  | 14,0                   | 10   | o. r.                              | o. r.     | o. r.      |

### metric thread - small package

| Part no.<br>S<br>S-PU | Part no.<br>M | Part no.<br>SPR-AS | Part no.<br>SPR-PVC-AS<br>SPR-PU-AS | Part no.<br>SPR-EDU-AS | Size      | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|-----------------------|---------------|--------------------|-------------------------------------|------------------------|-----------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|                       |               |                    |                                     |                        |           |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93530                 |               | 93570              | 93590                               |                        | M10 x 1,0 | 10,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93531                 |               | 93571              | 93591                               |                        | M12 x 1,5 | 14,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93532                 |               | 93572              | 93592                               |                        | M16 x 1,5 | 17,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93533                 |               | 93573              | 93593                               |                        | M20 x 1,5 | 21,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93534                 |               | 93574              | 93594                               |                        | M25 x 1,5 | 27,0                  | 11,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93535                 |               | 93575              | 93595                               |                        | M32 x 1,5 | 36,0                  | 13,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93536                 |               | 93576              | 93596                               |                        | M40 x 1,5 | 45,0                  | 13,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93537                 |               | 93577              | 93597                               |                        | M50 x 1,5 | 56,0                  | 14,0                   | 2    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request



# US tube gland brass nickel plated

with high degree of protection

## PG thread

| Part no.<br>S | Part no.<br>M | Part no.<br>SPR-AS | Part no.<br>SPR-PVC-AS<br>SPR-PU-AS | Part no.<br>SPR-EDU-AS | Size | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------|---------------|--------------------|-------------------------------------|------------------------|------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|               |               |                    |                                     |                        |      |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98322         | 98206         | 98215              | 98224                               | 905997                 | 7    | 10,0                  | 7,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98323         | 98207         | 98216              | 98225                               | 905998                 | 9    | 14,0                  | 7,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98324         | 98208         | 98217              | 98226                               | 905999                 | 11   | 17,0                  | 7,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98325         | 98209         | 98218              | 98227                               | 906000                 | 13,5 | 19,0                  | 7,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98326         | 98210         | 98219              | 98228                               | 906001                 | 16   | 21,0                  | 7,0                    | 50   | o. r.                              | o. r.     | o. r.      |
| 98327         | 98211         | 98220              | 98229                               | 906002                 | 21   | 27,0                  | 10,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 98328         | 98212         | 98221              | 98230                               | 906003                 | 29   | 36,0                  | 10,0                   | 25   | o. r.                              | o. r.     | o. r.      |
| 98329         | 98213         | 98222              | 98231                               | 906004                 | 36   | 45,0                  | 10,0                   | 20   | o. r.                              | o. r.     | o. r.      |
| 98330         | 98214         | 98223              | 98232                               | 906005                 | 48   | 56,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread - small package

| Part no.<br>S | Part no.<br>M | Part no.<br>SPR-AS | Part no.<br>SPR-PVC-AS<br>SPR-PU-AS | Part no.<br>SPR-EDU-AS | Size | Tube<br>outer Ø<br>mm | Thread<br>length<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------|---------------|--------------------|-------------------------------------|------------------------|------|-----------------------|------------------------|------|------------------------------------|-----------|------------|
|               |               |                    |                                     |                        |      |                       |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93520         |               | 93560              | 93580                               |                        | 7    | 10,0                  | 7,0                    | 10   | o. r.                              | o. r.     | o. r.      |
| 93521         |               | 93561              | 93581                               |                        | 9    | 14,0                  | 7,0                    | 10   | o. r.                              | o. r.     | o. r.      |
| 93522         |               | 93562              | 93582                               |                        | 11   | 17,0                  | 7,0                    | 10   | o. r.                              | o. r.     | o. r.      |
| 93523         |               | 93563              | 93583                               |                        | 13,5 | 19,0                  | 7,0                    | 10   | o. r.                              | o. r.     | o. r.      |
| 93524         |               | 93564              | 93584                               |                        | 16   | 21,0                  | 7,0                    | 10   | o. r.                              | o. r.     | o. r.      |
| 93525         |               | 93565              | 93585                               |                        | 21   | 27,0                  | 10,0                   | 10   | o. r.                              | o. r.     | o. r.      |
| 93526         |               | 93566              | 93586                               |                        | 29   | 36,0                  | 10,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93527         |               | 93567              | 93587                               |                        | 36   | 45,0                  | 10,0                   | 2    | o. r.                              | o. r.     | o. r.      |
| 93528         |               | 93568              | 93588                               |                        | 48   | 56,0                  | 10,0                   | 2    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# LI tube gland, metal with retaining ring



**LI**  
Tube gland for protection tubes type S, S-PU, M, SPR-AS, SPR-EDU-AS, SPR-PVC-AS.  
The rotating interior sockets with tube rotation lock is inserted into the gland and secured against tearing by the spring steel ring.

**Material**  
Brass, nickel plated  
Grounding sleeve: Brass, bare  
Retaining ring: ex spring steel

**Technical data**  
Protection class: IP 40  
Temperature range: -40°C up to +250°C

## metric thread

| Part no. | Size      | Tube outer Ø mm | Thread length mm | Unit | Net EUR/100 items at a purchase of up to 100 | 101 - 500 | 501 - 1000 |
|----------|-----------|-----------------|------------------|------|----------------------------------------------|-----------|------------|
| 97619    | M10 x 1,0 | 10,0            | 10,0             | 50   | o. r.                                        | o. r.     | o. r.      |
| 97620    | M12 x 1,5 | 14,0            | 10,0             | 50   | o. r.                                        | o. r.     | o. r.      |
| 97621    | M16 x 1,5 | 17,0            | 10,0             | 50   | o. r.                                        | o. r.     | o. r.      |
| 97622    | M20 x 1,5 | 21,0            | 10,0             | 50   | o. r.                                        | o. r.     | o. r.      |
| 97623    | M25 x 1,5 | 27,0            | 11,0             | 25   | o. r.                                        | o. r.     | o. r.      |
| 97624    | M32 x 1,5 | 36,0            | 13,0             | 25   | o. r.                                        | o. r.     | o. r.      |
| 97625    | M40 x 1,5 | 45,0            | 13,0             | 25   | o. r.                                        | o. r.     | o. r.      |
| 97626    | M50 x 1,5 | 56,0            | 14,0             | 25   | o. r.                                        | o. r.     | o. r.      |

## metric thread - small packages

| Part no. | Size      | Tube outer Ø mm | Thread length mm | Unit | Net EUR/100 items at a purchase of up to 100 | 101 - 500 | 501 - 1000 |
|----------|-----------|-----------------|------------------|------|----------------------------------------------|-----------|------------|
| 93610    | M10 x 1,0 | 10,0            | 10,0             | 10   | o. r.                                        | o. r.     | o. r.      |
| 93611    | M12 x 1,5 | 14,0            | 10,0             | 10   | o. r.                                        | o. r.     | o. r.      |
| 93612    | M16 x 1,5 | 17,0            | 10,0             | 10   | o. r.                                        | o. r.     | o. r.      |
| 93613    | M20 x 1,5 | 21,0            | 10,0             | 10   | o. r.                                        | o. r.     | o. r.      |
| 93614    | M25 x 1,5 | 27,0            | 11,0             | 10   | o. r.                                        | o. r.     | o. r.      |
| 93615    | M32 x 1,5 | 36,0            | 13,0             | 2    | o. r.                                        | o. r.     | o. r.      |
| 93616    | M40 x 1,5 | 45,0            | 13,0             | 2    | o. r.                                        | o. r.     | o. r.      |
| 93617    | M50 x 1,5 | 56,0            | 14,0             | 2    | o. r.                                        | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# LI tube gland, metal

with retaining ring

## PG thread

| Part no. | Size | Tube outer Ø mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |      |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90730    | 7    | 10,0            | 7,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 90731    | 9    | 14,0            | 7,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 90732    | 11   | 17,0            | 7,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 90733    | 13,5 | 19,0            | 7,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 90734    | 16   | 21,0            | 7,0              | 50   | o. r.                              | o. r.     | o. r.      |
| 90735    | 21   | 27,0            | 10,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90736    | 29   | 36,0            | 10,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90737    | 36   | 45,0            | 10,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90738    | 48   | 56,0            | 10,0             | 10   | o. r.                              | o. r.     | o. r.      |

## PG thread - small packages

| Part no. | Size | Tube outer Ø mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |      |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93600    | 7    | 10,0            | 7,0              | 10   | o. r.                              | o. r.     | o. r.      |
| 93601    | 9    | 14,0            | 7,0              | 10   | o. r.                              | o. r.     | o. r.      |
| 93602    | 11   | 17,0            | 7,0              | 10   | o. r.                              | o. r.     | o. r.      |
| 93603    | 13,5 | 19,0            | 7,0              | 10   | o. r.                              | o. r.     | o. r.      |
| 93604    | 16   | 21,0            | 7,0              | 10   | o. r.                              | o. r.     | o. r.      |
| 93605    | 21   | 27,0            | 10,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 93606    | 29   | 36,0            | 10,0             | 2    | o. r.                              | o. r.     | o. r.      |
| 93607    | 36   | 45,0            | 10,0             | 2    | o. r.                              | o. r.     | o. r.      |
| 93608    | 48   | 56,0            | 10,0             | 2    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# LT-E-UI conduit gland - straight

stainless steel



new

## LT-E-UI straight

LIQUIDTIGHT gland for stainless steel protection tubes UI.  
The conical earthing sleeve offers maximum surface contact for optimum sealing and earthing.

## Material

stainless steel  
Grounding sleeve: Brass, nickel plated  
Seal: Brass, nickel plated  
Moulded seal: NBR

## Technical data

Protection class: IP 40

Temperature range: -55°C up to +260°C

## Application

- Robot construction
- Steel and aluminium foundry industry
- Machine and apparatus building
- Off-shore industry
- Security
- Metal, glass and ceramics industry

## metric thread

| Part no. | Size      | Tube outer Ø mm | Thread length mm | Min. inner Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |           |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905812   | M16 x 1,5 | 12,5            | 12,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905813   | M16 x 1,5 | 16,0            | 12,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905814   | M20 x 1,5 | 12,5            | 13,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905815   | M20 x 1,5 | 16,0            | 13,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905816   | M20 x 1,5 | 21,0            | 13,0             | 13,9            | 50   | o. r.                              | o. r.     | o. r.      |
| 905817   | M25 x 1,5 | 26,0            | 15,0             | 18,5            | 25   | o. r.                              | o. r.     | o. r.      |
| 905818   | M32 x 1,5 | 30,0            | 15,0             | 22,8            | 10   | o. r.                              | o. r.     | o. r.      |
| 905819   | M40 x 1,5 | 39,0            | 16,0             | 30,8            | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size | Tube outer Ø mm | Thread length mm | Min. inner Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905820   | 11   | 12,5            | 12,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905821   | 11   | 16,0            | 12,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905822   | 16   | 21,0            | 13,0             | 13,9            | 50   | o. r.                              | o. r.     | o. r.      |
| 905823   | 21   | 26,0            | 15,0             | 18,5            | 25   | o. r.                              | o. r.     | o. r.      |
| 905824   | 29   | 30,0            | 15,0             | 22,8            | 10   | o. r.                              | o. r.     | o. r.      |
| 905825   | 36   | 39,0            | 16,0             | 30,8            | 5    | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no. | Size   | Tube outer Ø mm | Thread length mm | Min. inner Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |        |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905826   | 1/2"   | 12,5            | 12,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905827   | 1/2"   | 16,0            | 12,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905828   | 1/2"   | 21,0            | 13,0             | 13,9            | 50   | o. r.                              | o. r.     | o. r.      |
| 905829   | 3/4"   | 26,0            | 15,0             | 18,5            | 25   | o. r.                              | o. r.     | o. r.      |
| 905830   | 1"     | 30,0            | 15,0             | 22,8            | 10   | o. r.                              | o. r.     | o. r.      |
| 905831   | 1 1/4" | 39,0            | 16,0             | 30,8            | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# LT-E-UI conduit gland - 90°

stainless steel



## LT-E-UI 90°

LIQUIDTIGHT conduit gland for stainless steel protection tubes UI.  
The conical earthing sleeve offers maximum surface contact for optimum sealing and earthing.

## Material

stainless steel  
Grounding sleeve: Brass, nickel plated  
Seal: Brass, nickel plated  
Moulded seal: NBR

## Technical data

Protection class: IP 40

Temperature range: -55°C up to +260°C

## Application

- Robot construction
- Steel and aluminium foundry industry
- Machine and apparatus building
- Off-shore industry
- Security
- Metal, glass and ceramics industry

## metric thread

| Part no. | Size      | Tube outer Ø mm | Thread length mm | Min. inner Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |           |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905832   | M16 x 1,5 | 12,5            | 12,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905833   | M16 x 1,5 | 16,0            | 12,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905834   | M20 x 1,5 | 12,5            | 13,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905835   | M20 x 1,5 | 16,0            | 13,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905836   | M20 x 1,5 | 21,0            | 13,0             | 13,9            | 50   | o. r.                              | o. r.     | o. r.      |
| 905837   | M25 x 1,5 | 26,0            | 15,0             | 18,5            | 25   | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size | Tube outer Ø mm | Thread length mm | Min. inner Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905838   | 11   | 12,5            | 12,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905839   | 11   | 16,0            | 12,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905840   | 16   | 21,0            | 13,0             | 13,9            | 50   | o. r.                              | o. r.     | o. r.      |
| 905841   | 21   | 26,0            | 15,0             | 18,5            | 25   | o. r.                              | o. r.     | o. r.      |
| 905842   | 29   | 30,0            | 15,0             | 22,8            | 10   | o. r.                              | o. r.     | o. r.      |

## NPT thread

| Part no. | Size | Tube outer Ø mm | Thread length mm | Min. inner Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |                 |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905843   | 1/2" | 12,5            | 12,0             | 6,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905844   | 1/2" | 16,0            | 12,0             | 9,8             | 50   | o. r.                              | o. r.     | o. r.      |
| 905845   | 1/2" | 21,0            | 13,0             | 13,9            | 50   | o. r.                              | o. r.     | o. r.      |
| 905846   | 3/4" | 26,0            | 15,0             | 18,5            | 25   | o. r.                              | o. r.     | o. r.      |
| 905847   | 1"   | 30,0            | 15,0             | 22,8            | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# EEK interior protective sleeve

PVC



## EEK

Interior sockets EEK made by PVC for plastic conduits type K, S and S-PU.

## Material

PVC

## Technical data

Temperature range: -25°C up to +100°C

### EEK - PVC

| Part no. | Tube outer Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------|------|------------------------------------|-----------|------------|
|          |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96342    | 10,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 96449    | 14,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 96343    | 17,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 96450    | 19,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 96451    | 21,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 96344    | 27,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 96447    | 36,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 96345    | 45,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 96347    | 56,0            | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# EEM grounding sleeve

brass



## EEM

Interior sockets EEM made by brass for metal conduits type M, SPR-AS, SPR-PVC-AS, SPR-PU-AS und SPR-EDU-AS.

## Material

Brass

## Technical data

Temperature range: -40°C up to +150°C

### EEM - brass

| Part no.<br>M | Tube<br>outer Ø<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------|-----------------------|------|------------------------------------|-----------|------------|
|               |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 906006        | 10,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 906007        | 14,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 906008        | 17,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 906009        | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 906010        | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 906011        | 27,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 906012        | 36,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 906013        | 45,0                  | 20   | o. r.                              | o. r.     | o. r.      |
| 906014        | 56,0                  | 10   | o. r.                              | o. r.     | o. r.      |

| Part no.<br>SPR-AS | Tube<br>outer Ø<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|--------------------|-----------------------|------|------------------------------------|-----------|------------|
|                    |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99510              | 10,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 99511              | 14,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 99512              | 17,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 99513              | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 99514              | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 99515              | 27,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 99516              | 36,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 99517              | 45,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 99518              | 56,0                  | 10   | o. r.                              | o. r.     | o. r.      |

| Part no.<br>SPR-PVC-AS<br>SPR-PU-AS<br>SPR-EDU-AS | Tube<br>outer Ø<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|---------------------------------------------------|-----------------------|------|------------------------------------|-----------|------------|
|                                                   |                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97580                                             | 10,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 97680                                             | 14,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 97691                                             | 17,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 97692                                             | 19,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 97693                                             | 21,0                  | 50   | o. r.                              | o. r.     | o. r.      |
| 97681                                             | 27,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 97682                                             | 36,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 97694                                             | 45,0                  | 25   | o. r.                              | o. r.     | o. r.      |
| 97684                                             | 56,0                  | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# Protection tubes for heavy mechanical stress





Large cabling machine with backtwist at our Windsbach factory

Photo: Helukabel®

# Heavy mechanical stress

## Cable protection tubes

Metal protection tubes, with plastic sheath  
for standard applications

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## EF

Universal applications.

Protection tube from reinforced, galvanised steel band with spiral wound, latched profile, a continuous cord seal and extruded plastic sheath.

This complex construction method keeps the plastic sheath and the internal tube flush together.

## Material

Galvanised steel

Outer sheath material: PVC

## Note

Suitable connection glands:  
LT straight, LT angled, T&B straight, T&B angled.

Dimensions 2 1/2", 3", 4", 5" and 6" available on request.

## Technical data

Protection class: IP 67

Temperature range: -25°C up to +70°C

Temperature range temporary up to +90°C

| Part no.<br>grey | Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91229            | 96939             | 1/4"               | 6,4           | 11,5          | 50            | o. r.                               | o. r.     | o. r.      |
| 91230            | 96248             | 5/16"              | 10,1          | 14,4          | 50            | o. r.                               | o. r.     | o. r.      |
| 91231            | 96249             | 3/8"               | 12,6          | 17,8          | 75            | o. r.                               | o. r.     | o. r.      |
| 91232            | 97153             | 1/2"               | 16,0          | 21,1          | 60            | o. r.                               | o. r.     | o. r.      |
| 91233            | 96718             | 3/4"               | 21,0          | 26,4          | 50            | o. r.                               | o. r.     | o. r.      |
| 91234            | 96250             | 1"                 | 26,5          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 91235            | 96251             | 1 1/4"             | 35,1          | 41,8          | 30            | o. r.                               | o. r.     | o. r.      |
| 91236            | 97175             | 1 1/2"             | 40,3          | 47,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 91237            | 96252             | 2"                 | 51,6          | 59,9          | 15            | o. r.                               | o. r.     | o. r.      |

## small package

| Single package   |                   |                    |               |               |               |                                     |           |            |
|------------------|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
| Part no.<br>grey | Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|                  |                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94915            | 94930             | 5/16"              | 10,1          | 14,4          | 10            | o. r.                               | o. r.     | o. r.      |
| 94916            | 94931             | 3/8"               | 12,6          | 17,8          | 10            | o. r.                               | o. r.     | o. r.      |
| 94917            | 94932             | 1/2"               | 16,0          | 21,1          | 10            | o. r.                               | o. r.     | o. r.      |
| 94918            | 94933             | 3/4"               | 21,0          | 26,4          | 10            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# Anaconda Sealtite® OR for extensive chemical resistance



## OR

Resistant to oil, grease, alkalis and acids.  
Protection tubes from reinforced, galvanised steel band with spiral wound, latched profile, a continuous cord seal and extruded plastic sheath.

This complex construction method keeps the plastic sheath and the internal tube flush together.

## Material

Galvanised steel  
UV-resistant

Outer sheath material: Special PVC

## Note

Suitable connection glands:  
LT straight, LT angled, T&B straight, T&B angled.

## Technical data

Protection class: IP 67

Temperature range: -15°C up to +100°C  
Temperature range temporary up to +120°C

| Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91245             | 3/8"               | 12,6          | 17,8          | 75            | o. r.                               | o. r.     | o. r.      |
| 91246             | 1/2"               | 16,0          | 21,1          | 60            | o. r.                               | o. r.     | o. r.      |
| 91247             | 3/4"               | 21,0          | 26,4          | 50            | o. r.                               | o. r.     | o. r.      |
| 91248             | 1"                 | 26,5          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 91249             | 1 1/4"             | 35,1          | 41,8          | 30            | o. r.                               | o. r.     | o. r.      |
| 91250             | 1 1/2"             | 40,3          | 47,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 91251             | 2"                 | 51,6          | 59,9          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request





## HTDL

UL/CSA approval, good EMC properties.

Protection tube from reinforced, galvanised steel band with spiral wound, latched profile, a continuous copper conductor and extruded plastic sheath.

This complex construction method keeps the plastic sheath and the internal tube flush together.

## Material

Galvanised steel  
UV-resistant

Outer sheath material: PVC

## Note

Suitable connection glands:  
LT straight, LT angled, T&B straight, T&B angled.  
Up to 1 1/4" with copper conductor.

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C  
Temperature range temporary up to +120°C

| Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 98149             | 3/8"               | 12,6          | 17,8          | 60            | o. r.                               | o. r.     | o. r.      |
| 98150             | 1/2"               | 16,1          | 21,1          | 60            | o. r.                               | o. r.     | o. r.      |
| 98151             | 3/4"               | 21,1          | 26,4          | 45            | o. r.                               | o. r.     | o. r.      |
| 98152             | 1"                 | 26,8          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 98153             | 1 1/4"             | 35,4          | 41,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 98154             | 1 1/2"             | 40,3          | 47,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 98155             | 2"                 | 51,6          | 59,9          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Anaconda Sealtite® HC for extensive temperature ranges



## HC

For extensive temperature ranges.  
Protection tubes from reinforced, galvanised steel band with spiral wound, latched profile, a continuous cord seal and extruded plastic sheath.

This complex construction method keeps the plastic sheath and the internal tube flush together.

## Material

Galvanised steel  
UV-resistant

Outer sheath material: PVC

## Note

Suitable connection glands:  
LT straight, LT angled, T&B straight, T&B angled.

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C  
Temperature range temporary up to +120°C

| Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91238             | 3/8"               | 12,6          | 17,8          | 75            | o. r.                               | o. r.     | o. r.      |
| 91239             | 1/2"               | 16,0          | 21,1          | 60            | o. r.                               | o. r.     | o. r.      |
| 91240             | 3/4"               | 21,0          | 26,4          | 50            | o. r.                               | o. r.     | o. r.      |
| 91241             | 1"                 | 26,5          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 91242             | 1 1/4"             | 35,1          | 41,8          | 30            | o. r.                               | o. r.     | o. r.      |
| 91243             | 1 1/2"             | 40,3          | 47,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 91244             | 2"                 | 51,6          | 59,9          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HCX

For extensive temperature ranges.  
Protection tubes from reinforced, galvanised steel band with spiral wound, latched profile, a continuous cord seal and extruded plastic sheath.

This complex construction method keeps the plastic sheath and the internal tube flush together.

## Material

Galvanised steel  
UV-resistant

Outer sheath material: Elastomer

## Note

Suitable connection glands:  
LT straight, LT angled, T&B straight, T&B angled

## Technical data

Protection class: IP 67

Temperature range: -55°C up to +145°C

Temperature range temporary up to +160°C

| Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94735             | 3/8"               | 12,6          | 17,8          | 30            | o. r.                               | o. r.     | o. r.      |
| 96410             | 1/2"               | 16,0          | 21,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 96954             | 3/4"               | 21,0          | 26,4          | 30            | o. r.                               | o. r.     | o. r.      |
| 97945             | 1"                 | 26,5          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 96247             | 1 1/4"             | 35,1          | 41,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 97668             | 1 1/2"             | 40,3          | 47,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 97811             | 2"                 | 51,6          | 59,9          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## ZHLS

Halogen-free, low smoke generation.  
Protection tube from reinforced, galvanised steel band with spiral wound, latched profile, a continuous cord seal and extruded plastic sheath.

This complex construction method keeps the plastic sheath and the internal tube flush together.

## Material

UV-resistant

Outer sheath material: Polyolefine

- halogen-free

## Note

Suitable connection glands:  
LT straight, LT angled, T&B straight, T&B angled

## Technical data

Protection class: IP 67

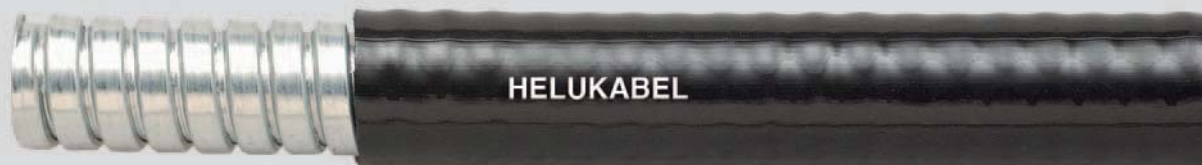
Temperature range: -25°C up to +80°C

Temperature range temporary up to +100°C

| Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94988             | 5/16"              | 10,1          | 14,4          | 30            | o. r.                               | o. r.     | o. r.      |
| 94989             | 3/8"               | 12,6          | 17,8          | 30            | o. r.                               | o. r.     | o. r.      |
| 94990             | 1/2"               | 16,0          | 21,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 94991             | 3/4"               | 21,0          | 26,4          | 30            | o. r.                               | o. r.     | o. r.      |
| 94992             | 1"                 | 26,5          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 94993             | 1 1/4"             | 35,1          | 41,8          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## HFX

Halogen-free, low smoke generation, UV-resistant, oil-resistant, weather-resistant. Protection tube from reinforced, galvanised steel band with spiral wound, latched profile, a continuous cord seal and extruded plastic sheath.

This complex construction method keeps the plastic sheath and the internal tube flush together.

## Material

Galvanised steel  
UV-resistant

Outer sheath material: Polyurethane

- halogen-free

## Properties

Low toxicity in case of fire.  
Flexible at low temperatures, very good UV-resistance and oil resistance.  
EN standard approved tube, for the railways, tunnels, ships, public buildings.

## Note

Suitable connection glands:  
T&B straight, T&B angled, Anamet straight, Anamet angled

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C  
Temperature range temporary up to +125°C

| Part no.<br>black | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|-------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                   |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94994             | 5/16"              | 10,1          | 14,4          | 30            | o. r.                               | o. r.     | o. r.      |
| 94995             | 3/8"               | 12,6          | 17,8          | 30            | o. r.                               | o. r.     | o. r.      |
| 94996             | 1/2"               | 16,0          | 21,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 94997             | 3/4"               | 21,0          | 26,4          | 30            | o. r.                               | o. r.     | o. r.      |
| 94998             | 1"                 | 26,5          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 94999             | 1 1/4"             | 35,1          | 41,8          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## EMP

EMI / EMC screening  
Protection tube from spiral wound bronze  
Agraft profile.  
This provides very good screening from  
electromagnetic fields.

## Material

Bronze  
UV-resistant  
  
Outer sheath material: PVC

## Technical data

Protection class: IP 67  
  
Temperature range: -45°C up to +105°C  
Temperature range temporary up to +120°C

## Note

Suitable connection glands:  
T&B straight, T&B angled, LT straight, LT  
angled

| Part no.<br>grey | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                  |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 98156            | 3/8"               | 12,6          | 17,8          | 30            | o. r.                               | o. r.     | o. r.      |
| 98157            | 1/2"               | 16,0          | 21,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 98158            | 3/4"               | 21,0          | 26,4          | 30            | o. r.                               | o. r.     | o. r.      |
| 98159            | 1"                 | 26,5          | 33,1          | 30            | o. r.                               | o. r.     | o. r.      |
| 98160            | 1 1/4"             | 35,1          | 41,8          | 15            | o. r.                               | o. r.     | o. r.      |
| 98161            | 1 1/2"             | 40,3          | 47,8          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request





## CNP

Fully plastic, UL/CSA approval.  
Extremely abrasion-resistant plastic tube for heavy-duty applications.  
A neoprene internal tube with nylon weave and abrasion-proof special PVC sheath.  
Very good UV- and oil-resistance

## Material

PVC  
UV-resistant  
  
Outer sheath material: PVC  
With woven nylon insert

## Technical data

Protection class: IP 67  
  
Temperature range: -20°C up to +60°C  
Temperature range temporary up to +80°C

## Note

Suitable connection glands:  
LT-CNP and LT-CNP-E

| Part no.<br>orange | Trade size<br>inch | Inner Ø<br>mm | Outer Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|--------------------|--------------------|---------------|---------------|---------------|-------------------------------------|-----------|------------|
|                    |                    |               |               |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91259              | 3/8"               | 12,6          | 19,4          | 76            | o. r.                               | o. r.     | o. r.      |
| 91260              | 1/2"               | 16,1          | 23,4          | 60            | o. r.                               | o. r.     | o. r.      |
| 91261              | 3/4"               | 21,0          | 29,5          | 53            | o. r.                               | o. r.     | o. r.      |
| 91262              | 1"                 | 26,5          | 36,3          | 30            | o. r.                               | o. r.     | o. r.      |
| 91263              | 1 1/4"             | 35,1          | 46,0          | 15            | o. r.                               | o. r.     | o. r.      |
| 91264              | 1 1/2"             | 40,7          | 52,4          | 15            | o. r.                               | o. r.     | o. r.      |
| 91265              | 2"                 | 52,4          | 66,6          | 15            | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## Conduit gland LT straight

LIQUIDTIGHT gland for plastic-coated metallic protection tubes and high temperature protection tubes HTP (An additional clamping ring is required). UL/CSA approval.

The conical earthing sleeve offers maximum surface contact for optimum sealing and earthing.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Grounding sleeve: Steel  
Seal: Polyamide

## Properties

- halogen-free

## Note

Suitable for metallic protection tubes:  
EF, HTDL, OR, HC, HCX, ZHLS, HFX, EMP

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C

## metric thread

| Part no. | Size      | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |           |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94151    | M16 x 1,5 | 3/8"                 | 17,8                         | 26,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 94152    | M20 x 1,5 | 1/2"                 | 21,1                         | 29,0            | 14,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 94153    | M25 x 1,5 | 3/4"                 | 26,4                         | 35,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 94154    | M32 x 1,5 | 1"                   | 33,1                         | 45,0            | 16,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 94155    | M40 x 1,5 | 1 1/4"               | 41,8                         | 54,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 94156    | M50 x 1,5 | 1 1/2"               | 47,8                         | 63,0            | 23,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 920522   | M63 x 1,5 | 2"                   | 59,9                         | 77,0            | 26,0             | 4    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |      |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91006    | 11   | 3/8"                 | 17,8                         | 26,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91007    | 13,5 | 3/8"                 | 17,8                         | 26,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91008    | 16   | 1/2"                 | 21,1                         | 29,0            | 14,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91009    | 21   | 3/4"                 | 26,4                         | 35,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 91010    | 29   | 1"                   | 33,1                         | 45,0            | 16,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 91011    | 36   | 1 1/4"               | 41,8                         | 54,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 91012    | 42   | 1 1/2"               | 47,8                         | 63,0            | 23,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 91013    | 48   | 2"                   | 59,9                         | 77,0            | 26,0             | 4    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# LT conduit gland - straight



## NPT thread

| Part no. | Size   | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|--------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |        |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905749   | 1/2"   | 3/8"                 | 17,8                         | 26,0            | 12,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 905750   | 1/2"   | 1/2"                 | 21,1                         | 29,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 905751   | 3/4"   | 3/4"                 | 26,4                         | 35,0            | 15,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 905752   | 1"     | 1"                   | 33,1                         | 45,0            | 15,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 905753   | 1 1/4" | 1 1/4"               | 49,0                         | 54,0            | 16,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 905754   | 1 1/2" | 1 1/2"               | 61,0                         | 63,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 905755   | 2"     | 2"                   | 66,0                         | 77,0            | 20,0             | 4    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## Conduit gland LT 45°

LIQUIDTIGHT gland for plastic-coated metallic protection tubes and high temperature protection tubes HTP. (An additional clamping ring is required). UL/CSA approval.

The conical earthing sleeve offers maximum surface contact for optimum sealing and earthing.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Grounding sleeve: Steel  
Seal: Polyamide

## Properties

- halogen-free

## Note

Suitable for metallic protection tubes:  
EF, HTDL, OR, HC, HX, ZHLS, HFX, EMP

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C

### metric thread

| Part no. | Size      | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |           |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94160    | M16 x 1,5 | 3/8"                 | 17,8                         | 26,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 94161    | M20 x 1,5 | 1/2"                 | 21,1                         | 29,0            | 14,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 94162    | M25 x 1,5 | 3/4"                 | 26,4                         | 35,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 94163    | M32 x 1,5 | 1"                   | 33,1                         | 45,0            | 16,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 920526   | M40 x 1,5 | 1 1/4"               | 41,8                         | 54,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 920527   | M50 x 1,5 | 1 1/2"               | 47,8                         | 63,0            | 23,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 920528   | M63 x 1,5 | 2"                   | 59,9                         | 77,0            | 26,0             | 4    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |      |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91014    | 11   | 3/8"                 | 17,8                         | 26,0            | 16,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91015    | 13,5 | 3/8"                 | 17,8                         | 26,0            | 16,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91016    | 16   | 1/2"                 | 21,1                         | 29,0            | 16,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91017    | 21   | 3/4"                 | 26,4                         | 35,0            | 16,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 91018    | 29   | 1"                   | 33,1                         | 45,0            | 19,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 91019    | 36   | 1 1/4"               | 41,8                         | 54,0            | 16,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 91020    | 42   | 1 1/2"               | 47,8                         | 63,0            | 16,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 91021    | 48   | 2"                   | 59,9                         | 77,0            | 18,0             | 4    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# LT conduit gland - 45°



## NPT thread

| Part no. | Size   | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|--------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |        |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905756   | 1/2"   | 3/8"                 | 17,8                         | 26,0            | 12,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 905757   | 1/2"   | 1/2"                 | 21,1                         | 29,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 905758   | 3/4"   | 3/4"                 | 26,4                         | 35,0            | 15,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 905759   | 1"     | 1"                   | 33,1                         | 45,0            | 15,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 905760   | 1 1/4" | 1 1/4"               | 49,0                         | 54,0            | 16,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 905761   | 1 1/2" | 1 1/2"               | 61,0                         | 63,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 905762   | 2"     | 2"                   | 66,0                         | 77,0            | 20,0             | 4    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## Conduit gland LT 90°

LIQUIDTIGHT gland for plastic-coated metallic protection tubes and high temperature protection tubes HTP. (An additional clamping ring ist required). UL/CSA approval.

The conical earthing sleeve offers maximum surface contact for optimum sealing and earthing.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Brass, nickel plated  
Grounding sleeve: Steel  
Seal: Polyamide

## Properties

- halogen-free

## Note

Suitable for metallic protection tubes:  
EF, HTDL, OR, HC, HXC, ZHLS, HFX, EMP

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C

## metric thread

| Part no. | Size      | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |           |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 94170    | M16 x 1,5 | 3/8"                 | 17,8                         | 26,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 94171    | M20 x 1,5 | 1/2"                 | 21,1                         | 29,0            | 14,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 94172    | M25 x 1,5 | 3/4"                 | 26,4                         | 35,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 94173    | M32 x 1,5 | 1"                   | 33,1                         | 45,0            | 16,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 920523   | M40 x 1,5 | 1 1/4"               | 41,8                         | 54,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 920524   | M50 x 1,5 | 1 1/2"               | 47,8                         | 63,0            | 23,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 920525   | M63 x 1,5 | 2"                   | 59,9                         | 77,0            | 26,0             | 4    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Size | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |      |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 91022    | 11   | 3/8"                 | 17,8                         | 26,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91023    | 13,5 | 3/8"                 | 17,8                         | 26,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91024    | 16   | 1/2"                 | 21,1                         | 29,0            | 14,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 91025    | 21   | 3/4"                 | 26,4                         | 35,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 91026    | 29   | 1"                   | 33,1                         | 45,0            | 16,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 91027    | 36   | 1 1/4"               | 41,8                         | 54,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 91028    | 42   | 1 1/2"               | 47,8                         | 63,0            | 23,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 91029    | 48   | 2"                   | 59,9                         | 77,0            | 26,0             | 4    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request



# LT conduit gland - 90°



## NPT thread

| Part no. | Size   | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|--------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |        |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905763   | 1/2"   | 3/8"                 | 17,8                         | 26,0            | 12,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 905764   | 1/2"   | 1/2"                 | 21,1                         | 29,0            | 13,0             | 50   | o. r.                              | o. r.     | o. r.      |
| 905765   | 3/4"   | 3/4"                 | 26,4                         | 35,0            | 15,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 905766   | 1"     | 1"                   | 33,1                         | 45,0            | 15,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 905767   | 1 1/4" | 1 1/4"               | 49,0                         | 54,0            | 16,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 905768   | 1 1/2" | 1 1/2"               | 36,8                         | 63,0            | 18,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 905769   | 2"     | 2"                   | 66,0                         | 77,0            | 20,0             | 4    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## T&B straight

Hose gland for Anaconda protection tubes.  
The specific construction prevents the tubes becoming deformed during assembly.

## Material

Galvanised steel chromate finish  
Grounding sleeve: Steel  
Seal: Polyamide

## Technical data

Protection class: IP 67

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### metric thread

| Part no. | Size      | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |           |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98173    | M16 x 1,5 | 1/4"                 | 11,5                         | 22,0            | 12,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98174    | M20 x 1,5 | 1/4"                 | 11,5                         | 22,0            | 12,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98171    | M16 x 1,5 | 5/16"                | 14,4                         | 22,0            | 12,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98172    | M20 x 1,5 | 5/16"                | 14,4                         | 22,0            | 12,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98175    | M16 x 1,5 | 3/8"                 | 17,8                         | 29,0            | 16,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98176    | M20 x 1,5 | 3/8"                 | 17,8                         | 29,0            | 16,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98177    | M20 x 1,5 | 1/2"                 | 21,1                         | 35,0            | 16,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98178    | M25 x 1,5 | 3/4"                 | 26,4                         | 42,0            | 16,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98179    | M32 x 1,5 | 1"                   | 33,1                         | 47,0            | 15,0             | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Size | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |      |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90684    | 9    | 5/16"                | 14,4                         | 26,0            | 12,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90685    | 11   | 3/8"                 | 17,8                         | 29,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90686    | 13,5 | 3/8"                 | 17,8                         | 29,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90687    | 16   | 1/2"                 | 21,1                         | 35,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90688    | 21   | 3/4"                 | 26,4                         | 42,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90689    | 29   | 1"                   | 33,1                         | 47,0            | 19,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 90690    | 36   | 1 1/4"               | 41,8                         | 58,0            | 21,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 90691    | 42   | 1 1/2"               | 47,8                         | 69,0            | 21,0             | 2    | o. r.                              | o. r.     | o. r.      |
| 90692    | 48   | 2"                   | 59,9                         | 83,0            | 21,0             | 1    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# T&B conduit gland - straight



## NPT thread

| Part no. | Size   | Suitable for tube ND | Suitable for tube outer Ø mm | Spanner size mm | Thread length mm | Unit | Net EUR/100 Items at a purchase of |           |            |
|----------|--------|----------------------|------------------------------|-----------------|------------------|------|------------------------------------|-----------|------------|
|          |        |                      |                              |                 |                  |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98190    | 1/4"   | 1/4"                 | 11,5                         | 21,0            | 12,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 98191    | 3/8"   | 5/16"                | 14,4                         | 25,0            | 12,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 96737    | 1/2"   | 3/8"                 | 17,8                         | 29,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 90810    | 1/2"   | 1/2"                 | 21,1                         | 35,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 96465    | 3/4"   | 3/4"                 | 26,4                         | 42,0            | 14,0             | 25   | o. r.                              | o. r.     | o. r.      |
| 96205    | 1"     | 1"                   | 33,1                         | 48,0            | 19,0             | 10   | o. r.                              | o. r.     | o. r.      |
| 98192    | 1 1/4" | 1 1/4"               | 41,8                         | 58,0            | 21,0             | 5    | o. r.                              | o. r.     | o. r.      |
| 96206    | 1 1/2" | 1 1/2"               | 47,8                         | 69,0            | 21,0             | 2    | o. r.                              | o. r.     | o. r.      |
| 96207    | 2"     | 2"                   | 59,9                         | 83,0            | 22,0             | 1    | o. r.                              | o. r.     | o. r.      |
| 98193    | 2 1/2" | 2 1/2"               | 72,6                         | 95,0            | 25,0             | 1    | o. r.                              | o. r.     | o. r.      |
| 98194    | 3"     | 3"                   | 88,4                         | 114,0           | 25,0             | 1    | o. r.                              | o. r.     | o. r.      |
| 98195    | 4"     | 4"                   | -                            | 140,0           | 29,0             | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## T&B 45° angled

Hose gland for Anaconda protection tubes.  
The specific construction prevents the tubes becoming deformed during assembly.

## Material

Galvanised steel chromate finish  
Grounding sleeve: Steel  
Seal: Polyamide

## Technical data

Protection class: IP 67

## Application

- Plant and machine construction,  
Automation and installation technology,  
Vehicle construction and shipbuilding

### metric thread

| Part no. | Type | Size      | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |           |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98180    | 9340 | M16 x 1,5 | 3/8"                 | 17,8                         | 16,0             | 28,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 98181    | 9341 | M20 x 1,5 | 3/8"                 | 17,8                         | 16,0             | 28,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 98182    | 9342 | M20 x 1,5 | 1/2"                 | 21,1                         | 16,0             | 34,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 98183    | 9343 | M25 x 1,5 | 3/4"                 | 26,4                         | 16,0             | 42,0            | 10   | o. r.                              | o. r.     | o. r.      |
| 98184    | 9344 | M32 x 1,5 | 1"                   | 33,1                         | 23,0             | 47,0            | 5    | o. r.                              | o. r.     | o. r.      |

### PG thread

| Part no. | Type | Size | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |      |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90693    | 7341 | 11   | 3/8"                 | 17,8                         | 14,0             | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 90694    | 7342 | 13,5 | 3/8"                 | 17,8                         | 14,0             | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 90695    | 7343 | 16   | 1/2"                 | 21,1                         | 14,0             | -               | 25   | o. r.                              | o. r.     | o. r.      |
| 90696    | 7344 | 21   | 3/4"                 | 26,4                         | 14,0             | 42,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 90697    | 7345 | 29   | 1"                   | 33,1                         | 21,0             | 47,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 90698    | 7346 | 36   | 1 1/4"               | 41,8                         | 21,0             | 58,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 90699    | 7347 | 42   | 1 1/2"               | 47,8                         | 21,0             | 69,0            | 2    | o. r.                              | o. r.     | o. r.      |
| 90700    | 7348 | 48   | 2"                   | 59,9                         | 24,0             | 83,0            | 1    | o. r.                              | o. r.     | o. r.      |

### NPT thread

| Part no. | Type | Size   | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|--------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |        |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96739    | 5341 | 1/2"   | 3/8"                 | 17,8                         | 14,0             | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 96208    | 5342 | 1/2"   | 1/2"                 | 21,1                         | 14,0             | 35,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 96209    | 5343 | 3/4"   | 3/4"                 | 26,4                         | 14,0             | 42,0            | 10   | o. r.                              | o. r.     | o. r.      |
| 96210    | 5344 | 1"     | 1"                   | 33,1                         | 19,0             | 48,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 98196    | 5345 | 1 1/4" | 1 1/4"               | 41,8                         | 21,0             | 58,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 98197    | 5346 | 1 1/2" | 1 1/2"               | 47,8                         | 21,0             | 69,0            | 2    | o. r.                              | o. r.     | o. r.      |
| 96211    | 5347 | 2"     | 2"                   | 59,9                         | 22,0             | 83,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 98198    | 5348 | 2 1/2" | 2 1/2"               | 72,6                         | 25,0             | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 98199    | 5349 | 3"     | 3"                   | 88,4                         | 25,0             | 114,0           | 1    | o. r.                              | o. r.     | o. r.      |
| 98200    | 5350 | 4"     | 4"                   | -                            | 29,0             | 140,0           | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## T&B 90° angled

Hose gland for Anaconda protection tubes.  
The specific construction prevents the tubes becoming deformed during assembly.

## Material

Galvanised steel chromate finish  
Grounding sleeve: Steel  
Seal: Polyamide

## Technical data

Protection class: IP 67

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## metric thread

| Part no. | Type | Size      | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |           |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98185    | 9350 | M16 x 1,5 | 3/8"                 | 17,8                         | 16,0             | 28,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 98186    | 9351 | M20 x 1,5 | 3/8"                 | 17,8                         | 16,0             | 28,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 98187    | 9352 | M20 x 1,5 | 1/2"                 | 21,1                         | 16,0             | 34,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 98188    | 9353 | M25 x 1,5 | 3/4"                 | 26,4                         | 16,0             | 42,0            | 10   | o. r.                              | o. r.     | o. r.      |
| 98189    | 9354 | M32 x 1,5 | 1"                   | 33,1                         | 23,0             | 47,0            | 5    | o. r.                              | o. r.     | o. r.      |

## PG thread

| Part no. | Type | Size | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |      |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90701    | 7351 | 11   | 3/8"                 | 17,8                         | 14,0             | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 90702    | 7352 | 13,5 | 3/8"                 | 17,8                         | 14,0             | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 90703    | 7353 | 16   | 1/2"                 | 21,1                         | 14,0             | 35,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 90704    | 7354 | 21   | 3/4"                 | 26,4                         | 14,0             | 42,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 90705    | 7355 | 29   | 1"                   | 33,1                         | 21,0             | 47,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 90706    | 7356 | 36   | 1 1/4"               | 41,8                         | 21,0             | 58,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 90707    | 7357 | 42   | 1 1/2"               | 47,8                         | 21,0             | 69,0            | 2    | o. r.                              | o. r.     | o. r.      |
| 90708    | 7358 | 48   | 2"                   | 59,9                         | 24,0             | 83,0            | 1    | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# T&B conduit gland - 90°



## NPT thread

| Part no. | Type | Size   | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|--------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |        |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97300    | 5351 | 1/2"   | 3/8"                 | 17,8                         | 14,0             | 29,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 96212    | 5352 | 1/2"   | 1/2"                 | 21,1                         | 14,0             | 35,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 96213    | 5353 | 3/4"   | 3/4"                 | 26,4                         | 14,0             | 42,0            | 10   | o. r.                              | o. r.     | o. r.      |
| 97671    | 5354 | 1"     | 1"                   | 33,1                         | 19,0             | 48,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 98291    | 5355 | 1 1/4" | 1 1/4"               | 41,8                         | 21,0             | 58,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 96214    | 5356 | 1 1/2" | 1 1/2"               | 47,8                         | 21,0             | 69,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 96215    | 5357 | 2"     | 2"                   | 59,9                         | 22,0             | 83,0            | 2    | o. r.                              | o. r.     | o. r.      |
| 98292    | 5358 | 2 1/2" | 2 1/2"               | 72,6                         | 25,0             | 95,0            | 1    | o. r.                              | o. r.     | o. r.      |
| 98293    | 5359 | 3"     | 3"                   | 88,4                         | 25,0             | 114,0           | 1    | o. r.                              | o. r.     | o. r.      |
| 98294    | 5360 | 4"     | 4"                   | -                            | 29,0             | 140,0           | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# LT-CNP conduit gland

for Anaconda Sealtite® CNP



RoHS

## Conduit gland LT-CNP straight

LIQUIDTIGHT gland made of galvanised steel for plastic-coated metallic protection tubes CNP.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Galvanised steel

## Note

UL/CSA approval  
The ferrule and insert are from PA 6

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C

### NPT thread

| Part no. | Type | Size   | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|--------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |        |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 904907   | -    | 1/2"   | 3/8                  | 19,4                         | 15,0             | 27,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 904908   | -    | 1/2"   | 1/2                  | 23,4                         | 15,0             | 32,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 904909   | -    | 3/4"   | 3/4                  | 29,5                         | 15,0             | 39,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 904910   | -    | 1"     | 1                    | 36,3                         | 18,0             | 45,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 904911   | -    | 1 1/4" | 1 1/4                | 46,0                         | 19,0             | 59,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 904912   | -    | 1 1/2" | 1 1/2                | 52,4                         | 19,0             | 67,0            | 2    | o. r.                              | o. r.     | o. r.      |
| 904913   | -    | 2"     | 2                    | 66,6                         | 19,0             | 82,0            | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# LT-CNP-E conduit gland, stainless steel

for Anaconda Sealite® CNP



new

## Conduit gland LT-CNP-E straight

LIQUIDTIGHT gland made of stainless steel for plastic-coated metallic protection tubes CNP.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

stainless steel

## Note

The ferrule and insert are from PA6.

## Technical data

Protection class: IP 67

Temperature range: -45°C up to +105°C

## metric thread

| Part no. | Type | Size      | Suitable for tube ND | Suitable for tube outer Ø mm | Thread length mm | Spanner size mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------|-----------|----------------------|------------------------------|------------------|-----------------|------|------------------------------------|-----------|------------|
|          |      |           |                      |                              |                  |                 |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 905913   | -    | M16 x 1,5 | 3/8                  | 19,4                         | 13,0             | 30,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905914   | -    | M20 x 1,5 | 1/2                  | 23,4                         | 13,0             | 36,0            | 50   | o. r.                              | o. r.     | o. r.      |
| 905058   | -    | M25 x 1,5 | 3/4                  | 29,5                         | 15,0             | 41,0            | 25   | o. r.                              | o. r.     | o. r.      |
| 905059   | -    | M32 x 1,5 | 1                    | 36,3                         | 15,0             | 50,0            | 10   | o. r.                              | o. r.     | o. r.      |
| 905060   | -    | M40 x 1,5 | 1 1/4                | 46,0                         | 16,0             | 60,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 905061   | -    | M50 x 1,5 | 1 1/2                | 52,4                         | 19,0             | 66,0            | 5    | o. r.                              | o. r.     | o. r.      |
| 905062   | -    | M63 x 1,5 | 1 1/2                | 52,4                         | 19,0             | 81,0            | 4    | o. r.                              | o. r.     | o. r.      |
| 905063   | -    | M63 x 1,5 | 2                    | 66,6                         | 19,0             | 81,0            | 4    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# EES grounding sleeve

galvanised steel



new



## EES

Interior sockets EES made by galvanised steel for plastic-coated metal protection tubes type Anaconda.

## Material

Galvanised steel

## Note

Suitable to LT glands

## Technical data

Well-fitting to protection tubes: Anaconda

### EES - cold rolled strip St 2 acc.to DIN 1624, galvanised, Fe/Zn 3

| Part no.<br>Anaconda | Suitable<br>for tube<br>outer Ø<br>mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------------------|---------------------------------------|------|------------------------------------|-----------|------------|
|                      |                                       |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 96839                | 17,8                                  | 250  | O. r.                              | O. r.     | O. r.      |
| 97480                | 21,1                                  | 250  | O. r.                              | O. r.     | O. r.      |
| 96580                | 26,4                                  | 100  | O. r.                              | O. r.     | O. r.      |
| 96803                | 33,1                                  | 50   | O. r.                              | O. r.     | O. r.      |
| 96880                | 41,8                                  | 25   | O. r.                              | O. r.     | O. r.      |
| 98364                | 47,8                                  | 25   | O. r.                              | O. r.     | O. r.      |
| 905027               | 59,9                                  | 25   | O. r.                              | O. r.     | O. r.      |
| 905028               | 72,6                                  | 25   | O. r.                              | O. r.     | O. r.      |
| 905029               | 88,4                                  | 25   | O. r.                              | O. r.     | O. r.      |
| 905030               | 113,8                                 | 25   | O. r.                              | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# Selection table

## Anaconda Sealite/conduit gland

### Anaconda Sealite

### Conduit gland

#### LT straight

| EF<br>grey | black | small package<br>grey | black | OR    | HTDL  | HC    | HCX   | ZHLS  | HFX   | Shieldtite<br>EMP | tube<br>ND | size<br>metric   | size<br>PG | size<br>NPT   | suitable<br>interior<br>socket EES |
|------------|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------------------|------------|------------------|------------|---------------|------------------------------------|
| 91229      | 96939 |                       |       |       |       |       |       |       |       |                   | 1/4        |                  |            |               |                                    |
| 91230      | 96248 | 94915                 | 94930 |       |       |       |       | 94988 | 94994 |                   | 5/16       |                  |            |               |                                    |
| 91231      | 96249 | 94916                 | 94931 | 91245 | 98149 | 91238 | 94735 | 94989 | 94995 | 98156             | 3/8        | M16 x 1,5 94151  | 11 91006   | 1/2" 905749   | 96839                              |
|            |       |                       |       |       |       |       |       |       |       |                   |            |                  | 13,5 91007 |               |                                    |
| 91232      | 97153 | 94917                 | 94932 | 91246 | 98150 | 91239 | 96410 | 94990 | 94996 | 98157             | 1/2        | M20 x 1,5 94152  | 16 91008   | 1/2" 905750   | 97480                              |
| 91233      | 96718 | 94918                 | 94933 | 91247 | 98151 | 91240 | 96954 | 94991 | 94997 | 98158             | 3/4        | M25 x 1,5 94153  | 21 91009   | 3/4" 905751   | 96580                              |
| 91234      | 96250 |                       |       | 91248 | 98152 | 91241 | 97945 | 94992 | 94998 | 98159             | 1          | M32 x 1,5 94154  | 29 91010   | 1" 905752     | 96803                              |
| 91235      | 96251 |                       |       | 91249 | 98153 | 91242 | 96247 | 94993 | 94999 | 98160             | 1 1/4      | M40 x 1,5 94155  | 36 91011   | 1 1/4" 905753 | 96880                              |
| 91236      | 97175 |                       |       | 91250 | 98154 | 91243 | 97668 |       |       | 98161             | 1 1/2      | M50 x 1,5 94156  | 42 91012   | 1 1/2" 905754 | 98364                              |
| 91237      | 96252 |                       |       | 91251 | 98155 | 91244 | 97811 |       |       |                   | 2          | M63 x 1,5 920522 | 48 91013   | 2" 905755     | 905027                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 2 1/2      |                  |            |               | 905028                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 3          |                  |            |               | 905029                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 4          |                  |            |               | 905030                             |

#### LT angled 45°

| EF<br>grey | black | small package<br>grey | black | OR    | HTDL  | HC    | HCX   | ZHLS  | HFX   | Shieldtite<br>EMP | tube<br>ND | size<br>metric   | size<br>PG | size<br>NPT   | suitable<br>interior<br>socket EES |
|------------|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------------------|------------|------------------|------------|---------------|------------------------------------|
| 91229      | 96939 |                       |       |       |       |       |       |       |       |                   | 1/4        |                  |            |               |                                    |
| 91230      | 96248 | 94915                 | 94930 |       |       |       |       | 94988 | 94994 |                   | 5/16       |                  |            |               |                                    |
| 91231      | 96249 | 94916                 | 94931 | 91245 | 98149 | 91238 | 94735 | 94989 | 94995 | 98156             | 3/8        | M16 x 1,5 94160  | 11 91014   | 1/2" 905756   | 96839                              |
|            |       |                       |       |       |       |       |       |       |       |                   |            |                  | 13,5 91015 |               |                                    |
| 91232      | 97153 | 94917                 | 94932 | 91246 | 98150 | 91239 | 96410 | 94990 | 94996 | 98157             | 1/2        | M20 x 1,5 94161  | 16 91016   | 1/2" 905757   | 97480                              |
| 91233      | 96718 | 94918                 | 94933 | 91247 | 98151 | 91240 | 96954 | 94991 | 94997 | 98158             | 3/4        | M25 x 1,5 94162  | 21 91017   | 3/4" 905758   | 96580                              |
| 91234      | 96250 |                       |       | 91248 | 98152 | 91241 | 97945 | 94992 | 94998 | 98159             | 1          | M32 x 1,5 94163  | 29 91018   | 1" 905759     | 96803                              |
| 91235      | 96251 |                       |       | 91249 | 98153 | 91242 | 96247 | 94993 | 94999 | 98160             | 1 1/4      | M40 x 1,5 920526 | 36 91019   | 1 1/4" 905760 | 96880                              |
| 91236      | 97175 |                       |       | 91250 | 98154 | 91243 | 97668 |       |       | 98161             | 1 1/2      | M50 x 1,5 920527 | 42 91020   | 1 1/2" 905761 | 98364                              |
| 91237      | 96252 |                       |       | 91251 | 98155 | 91244 | 97811 |       |       |                   | 2          | M63 x 1,5 920528 | 48 91021   | 2" 905762     | 905027                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 2 1/2      |                  |            |               | 905028                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 3          |                  |            |               | 905029                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 4          |                  |            |               | 905030                             |

#### LT angled 90°

| EF<br>grey | black | small package<br>grey | black | OR    | HTDL  | HC    | HCX   | ZHLS  | HFX   | Shieldtite<br>EMP | tube<br>ND | size<br>metric   | size<br>PG | size<br>NPT   | suitable<br>interior<br>socket EES |
|------------|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------------------|------------|------------------|------------|---------------|------------------------------------|
| 91229      | 96939 |                       |       |       |       |       |       |       |       |                   | 1/4        |                  |            |               |                                    |
| 91230      | 96248 | 94915                 | 94930 |       |       |       |       | 94988 | 94994 |                   | 5/16       |                  |            |               |                                    |
| 91231      | 96249 | 94916                 | 94931 | 91245 | 98149 | 91238 | 94735 | 94989 | 94995 | 98156             | 3/8        | M16 x 1,5 94170  | 11 91022   | 1/2" 905763   | 96839                              |
|            |       |                       |       |       |       |       |       |       |       |                   |            |                  | 13,5 91023 |               |                                    |
| 91232      | 97153 | 94917                 | 94932 | 91246 | 98150 | 91239 | 96410 | 94990 | 94996 | 98157             | 1/2        | M20 x 1,5 94171  | 16 91024   | 1/2" 905764   | 97480                              |
| 91233      | 96718 | 94918                 | 94933 | 91247 | 98151 | 91240 | 96954 | 94991 | 94997 | 98158             | 3/4        | M25 x 1,5 94172  | 21 91025   | 3/4" 905765   | 96580                              |
| 91234      | 96250 |                       |       | 91248 | 98152 | 91241 | 97945 | 94992 | 94998 | 98159             | 1          | M32 x 1,5 94173  | 29 91026   | 1" 905766     | 96803                              |
| 91235      | 96251 |                       |       | 91249 | 98153 | 91242 | 96247 | 94993 | 94999 | 98160             | 1 1/4      | M40 x 1,5 920523 | 36 91027   | 1 1/4" 905767 | 96880                              |
| 91236      | 97175 |                       |       | 91250 | 98154 | 91243 | 97668 |       |       | 98161             | 1 1/2      | M50 x 1,5 920524 | 42 91028   | 1 1/2" 905768 | 98364                              |
| 91237      | 96252 |                       |       | 91251 | 98155 | 91244 | 97811 |       |       |                   | 2          | M63 x 1,5 920525 | 48 91029   | 2" 905769     | 905027                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 2 1/2      |                  |            |               | 905028                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 3          |                  |            |               | 905029                             |
|            |       |                       |       |       |       |       |       |       |       |                   | 4          |                  |            |               | 905030                             |

# Selection table

## Anaconda Sealite/conduit gland

### Anaconda Sealite

| EF    |       | small package |       | OR    | HTDL  | HC    | HCX   | ZHLS  | HFX   | Shieldtite | tube  | size      |       | size | size  | suitable interior socket EES |
|-------|-------|---------------|-------|-------|-------|-------|-------|-------|-------|------------|-------|-----------|-------|------|-------|------------------------------|
| grey  | black | grey          | black |       |       |       |       |       |       | EMP        | ND    | metric    |       | PG   | NPT   |                              |
| 91229 | 96939 |               |       |       |       |       |       |       |       |            | 1/4   | M16 x 1,5 | 98173 |      |       |                              |
|       |       |               |       |       |       |       |       |       |       |            |       | M20 x 1,5 | 98174 |      | 1/4"  | 98190                        |
| 91230 | 96248 | 94915         | 94930 |       |       |       |       | 94988 | 94994 |            | 5/16  | M16 x 1,5 | 98171 |      | 3/8"  | 98191                        |
|       |       |               |       |       |       |       |       |       |       |            |       | M20 x 1,5 | 98172 | 9    | 90684 |                              |
| 91231 | 96249 | 94916         | 94931 | 91245 | 98149 | 91238 | 94735 | 94989 | 94995 | 98156      | 3/8   | M16 x 1,5 | 98175 | 11   | 90685 | 1/2" 96737                   |
|       |       |               |       |       |       |       |       |       |       |            | 3/8   | M20 x 1,5 | 98176 | 13,5 | 90686 | 1/2"                         |
| 91232 | 97153 | 94917         | 94932 | 91246 | 98150 | 91239 | 96410 | 94990 | 94996 | 98157      | 1/2   | M20 x 1,5 | 98177 | 16   | 90687 | 1/2" 90810                   |
| 91233 | 96718 | 94918         | 94933 | 91247 | 98151 | 91240 | 96954 | 94991 | 94997 | 98158      | 3/4   | M25 x 1,5 | 98178 | 21   | 90688 | 3/4" 96465                   |
| 91234 | 96250 |               |       | 91248 | 98152 | 91241 | 97945 | 94992 | 94998 | 98159      | 1     | M32 x 1,5 | 98179 | 29   | 90689 | 1" 96205                     |
| 91235 | 96251 |               |       | 91249 | 98153 | 91242 | 96247 | 94993 | 94999 | 98160      | 1 1/4 |           |       | 36   | 90690 | 1 1/4" 98192                 |
| 91236 | 97175 |               |       | 91250 | 98154 | 91243 | 97668 |       |       | 98161      | 1 1/2 |           |       | 42   | 90691 | 1 1/2" 96206                 |
| 91237 | 96252 |               |       | 91251 | 98155 | 91244 | 97811 |       |       |            | 2     |           |       | 48   | 90692 | 2" 96207                     |
|       |       |               |       |       |       |       |       |       |       |            | 2 1/2 |           |       |      |       | 2 1/2" 98193                 |
|       |       |               |       |       |       |       |       |       |       |            | 3     |           |       |      |       | 3" 98194                     |
|       |       |               |       |       |       |       |       |       |       |            | 4     |           |       |      |       | 4" 98195                     |

### T&B conduit gland straight

### T&B conduit gland angled 45°

| EF    |       | small package |       | OR    | HTDL  | HC    | HCX   | ZHLS  | HFX   | Shieldtite | tube  | size      |       | size | size  | suitable interior socket EES |
|-------|-------|---------------|-------|-------|-------|-------|-------|-------|-------|------------|-------|-----------|-------|------|-------|------------------------------|
| grey  | black | grey          | black |       |       |       |       |       |       | EMP        | ND    | metric    |       | PG   | NPT   |                              |
| 91229 | 96939 |               |       |       |       |       |       |       |       |            | 1/4   |           |       |      |       |                              |
|       |       |               |       |       |       |       |       |       |       |            |       |           |       |      |       |                              |
| 91230 | 96248 | 94915         | 94930 |       |       |       |       | 94988 | 94994 |            | 5/16  |           |       |      |       |                              |
|       |       |               |       |       |       |       |       |       |       |            |       |           |       |      |       |                              |
| 91231 | 96249 | 94916         | 94931 | 91245 | 98149 | 91238 | 94735 | 94989 | 94995 | 98156      | 3/8   | M16 x 1,5 | 98180 | 11   | 90693 | 1/2" 96739                   |
|       |       |               |       |       |       |       |       |       |       |            | 3/8   | M20 x 1,5 | 98181 | 13,5 | 90694 |                              |
| 91232 | 97153 | 94917         | 94932 | 91246 | 98150 | 91239 | 96410 | 94990 | 94996 | 98157      | 1/2   | M20 x 1,5 | 98182 | 16   | 90695 | 1/2" 96208                   |
| 91233 | 96718 | 94918         | 94933 | 91247 | 98151 | 91240 | 96954 | 94991 | 94997 | 98158      | 3/4   | M25 x 1,5 | 98183 | 21   | 90696 | 3/4" 96209                   |
| 91234 | 96250 |               |       | 91248 | 98152 | 91241 | 97945 | 94992 | 94998 | 98159      | 1     | M32 x 1,5 | 98184 | 29   | 90697 | 1" 96210                     |
| 91235 | 96251 |               |       | 91249 | 98153 | 91242 | 96247 | 94993 | 94999 | 98160      | 1 1/4 |           |       | 36   | 90698 | 1 1/4" 98196                 |
| 91236 | 97175 |               |       | 91250 | 98154 | 91243 | 97668 |       |       | 98161      | 1 1/2 |           |       | 42   | 90699 | 1 1/2" 98197                 |
| 91237 | 96252 |               |       | 91251 | 98155 | 91244 | 97811 |       |       |            | 2     |           |       | 48   | 90700 | 2" 96211                     |
|       |       |               |       |       |       |       |       |       |       |            | 2 1/2 |           |       |      |       | 2 1/2" 98198                 |
|       |       |               |       |       |       |       |       |       |       |            | 3     |           |       |      |       | 3" 98199                     |
|       |       |               |       |       |       |       |       |       |       |            | 4     |           |       |      |       | 4" 98200                     |

### T&B conduit gland angled 90°

| EF    |       | small package |       | OR    | HTDL  | HC    | HCX   | ZHLS  | HFX   | Shieldtite | tube  | size      |       | size | size  | suitable interior socket EES |
|-------|-------|---------------|-------|-------|-------|-------|-------|-------|-------|------------|-------|-----------|-------|------|-------|------------------------------|
| grey  | black | grey          | black |       |       |       |       |       |       | EMP        | ND    | metric    |       | PG   | NPT   |                              |
| 91229 | 96939 |               |       |       |       |       |       |       |       |            | 1/4   |           |       |      |       |                              |
|       |       |               |       |       |       |       |       |       |       |            |       |           |       |      |       |                              |
| 91230 | 96248 | 94915         | 94930 |       |       |       |       | 94988 | 94994 |            | 5/16  |           |       |      |       |                              |
|       |       |               |       |       |       |       |       |       |       |            |       |           |       |      |       |                              |
| 91231 | 96249 | 94916         | 94931 | 91245 | 98149 | 91238 | 94735 | 94989 | 94995 | 98156      | 3/8   | M16 x 1,5 | 98185 | 11   | 90701 | 1/2" 97300                   |
|       |       |               |       |       |       |       |       |       |       |            | 3/8   | M20 x 1,5 | 98186 | 13,5 | 90702 |                              |
| 91232 | 97153 | 94917         | 94932 | 91246 | 98150 | 91239 | 96410 | 94990 | 94996 | 98157      | 1/2   | M20 x 1,5 | 98187 | 16   | 90703 | 1/2" 96212                   |
| 91233 | 96718 | 94918         | 94933 | 91247 | 98151 | 91240 | 96954 | 94991 | 94997 | 98158      | 3/4   | M25 x 1,5 | 98188 | 21   | 90704 | 3/4" 96213                   |
| 91234 | 96250 |               |       | 91248 | 98152 | 91241 | 97945 | 94992 | 94998 | 98159      | 1     | M32 x 1,5 | 98189 | 29   | 90705 | 1" 97671                     |
| 91235 | 96251 |               |       | 91249 | 98153 | 91242 | 96247 | 94993 | 94999 | 98160      | 1 1/4 |           |       | 36   | 90706 | 1 1/4" 98291                 |
| 91236 | 97175 |               |       | 91250 | 98154 | 91243 | 97668 |       |       | 98161      | 1 1/2 |           |       | 42   | 90707 | 1 1/2" 96214                 |
| 91237 | 96252 |               |       | 91251 | 98155 | 91244 | 97811 |       |       |            | 2     |           |       | 48   | 90708 | 2" 96215                     |
|       |       |               |       |       |       |       |       |       |       |            | 2 1/2 |           |       |      |       | 2 1/2" 98292                 |
|       |       |               |       |       |       |       |       |       |       |            | 3     |           |       |      |       | 3" 98293                     |
|       |       |               |       |       |       |       |       |       |       |            | 4     |           |       |      |       | 4" 98294                     |

# Selection table

## Anaconda Sealtite/conduit gland

### Anaconda Sealtite

### Conduit gland

#### T&B conduit gland angled 90°

| EF<br>grey | black | small package<br>grey | black | OR    | HTDL  | HC    | HCX   | ZHLS  | HFX   | Shieldtite<br>EMP | tube<br>ND | size<br>metric | size<br>PG | size<br>NPT | suitable<br>interior<br>socket EES |
|------------|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------------------|------------|----------------|------------|-------------|------------------------------------|
| 91229      | 96939 |                       |       |       |       |       |       |       |       |                   | 1/4        |                |            |             |                                    |
| 91230      | 96248 | 94915                 | 94930 |       |       |       |       | 94988 | 94994 |                   | 5/16       |                |            |             |                                    |
| 91231      | 96249 | 94916                 | 94931 | 91245 | 98149 | 91238 | 94735 | 94989 | 94995 | 98156             | 3/8        | M16 x 1,5      | 98185      | 11          | 90701 1/2" 97300                   |
|            |       |                       |       |       |       |       |       |       |       |                   | 3/8        | M20 x 1,5      | 98186      | 13,5        | 90702                              |
| 91232      | 97153 | 94917                 | 94932 | 91246 | 98150 | 91239 | 96410 | 94990 | 94996 | 98157             | 1/2        | M20 x 1,5      | 98187      | 16          | 90703 1/2" 96212                   |
| 91233      | 96718 | 94918                 | 94933 | 91247 | 98151 | 91240 | 96954 | 94991 | 94997 | 98158             | 3/4        | M25 x 1,5      | 98188      | 21          | 90704 3/4" 96213                   |
| 91234      | 96250 |                       |       | 91248 | 98152 | 91241 | 97945 | 94992 | 94998 | 98159             | 1          | M32 x 1,5      | 98189      | 29          | 90705 1" 97671                     |
| 91235      | 96251 |                       |       | 91249 | 98153 | 91242 | 96247 | 94993 | 94999 | 98160             | 1 1/4      |                |            | 36          | 90706 1 1/4" 98291                 |
| 91236      | 97175 |                       |       | 91250 | 98154 | 91243 | 97668 |       |       | 98161             | 1 1/2      |                |            | 42          | 90707 1 1/2" 96214                 |
| 91237      | 96252 |                       |       | 91251 | 98155 | 91244 | 97811 |       |       |                   | 2          |                |            | 48          | 90708 2" 96215                     |
|            |       |                       |       |       |       |       |       |       |       |                   | 2 1/2      |                |            |             | 2 1/2" 98292                       |
|            |       |                       |       |       |       |       |       |       |       |                   | 3          |                |            |             | 3" 98293                           |
|            |       |                       |       |       |       |       |       |       |       |                   | 4          |                |            |             | 4" 98294                           |

#### LT-CNP

| CNP   | tube<br>ND | size<br>NPT |        |
|-------|------------|-------------|--------|
| 91259 | 3/8        | 1/2"        | 904907 |
| 91260 | 1/2        | 1/2"        | 904908 |
| 91261 | 3/4        | 3/4w        | 904909 |
| 91262 | 1          | 1"          | 904910 |
| 91263 | 1 1/4      | 1 1/4"      | 904911 |
| 91264 | 1 1/2      | 1 1/2"      | 904912 |
| 91265 | 2          | 2"          | 904913 |

#### LT-CNP-E

| CNP   | tube<br>ND | size<br>metric |        |
|-------|------------|----------------|--------|
| 91259 | 3/8        | M16 x 1,5      | 905913 |
| 91260 | 1/2        | M20 x 1,5      | 905914 |
| 91261 | 3/4        | M25 x 1,5      | 905058 |
| 91262 | 1          | M32 x 1,5      | 905059 |
| 91263 | 1 1/4      | M40 x 1,5      | 905060 |
| 91264 | 1 1/2      | M50 x 1,5      | 905061 |
|       | 1 1/2      | M63 x 1,5      | 905062 |
| 91265 | 2          | M63 x 1,5      | 905063 |

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**The complete program, from delivery  
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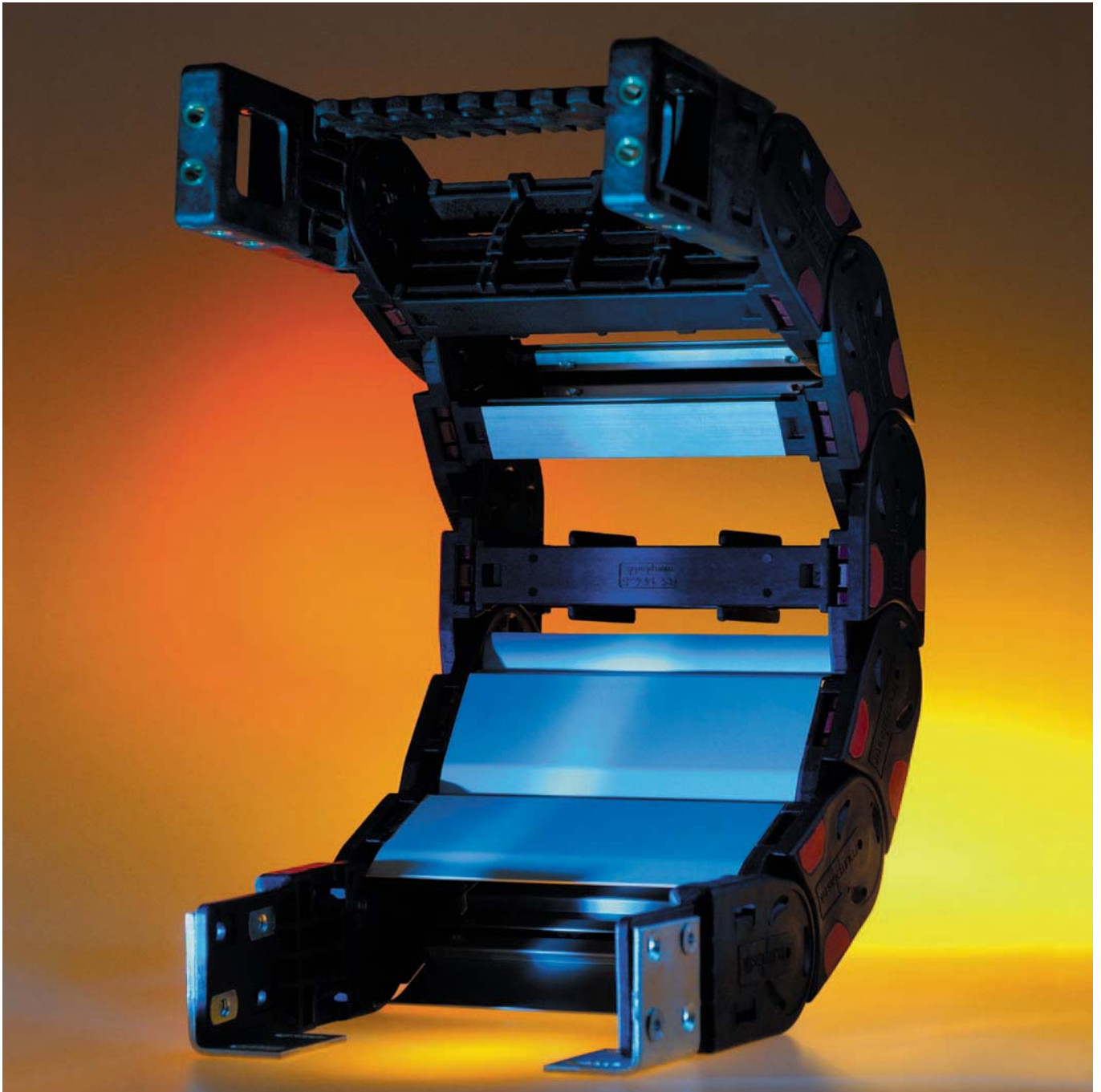
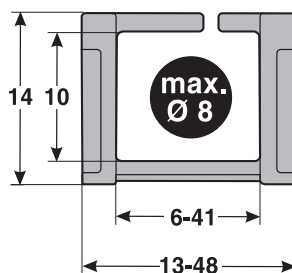


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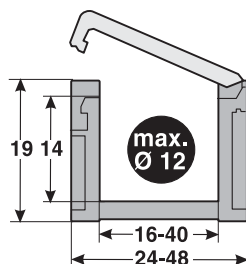
## Cable drag chains

## Cable drag chain systems open



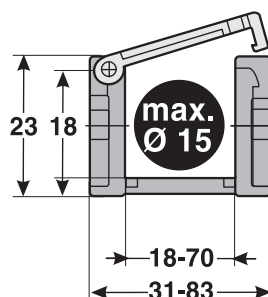
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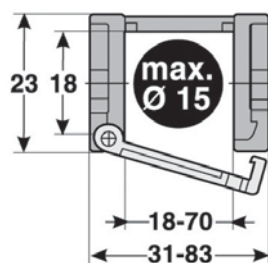
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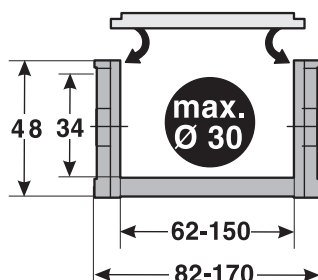
### MultiLine EFK 18.1

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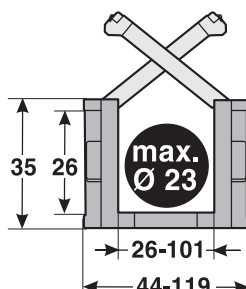
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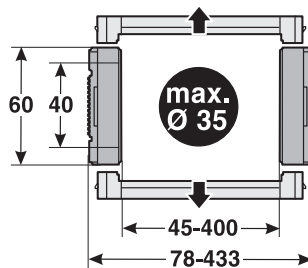
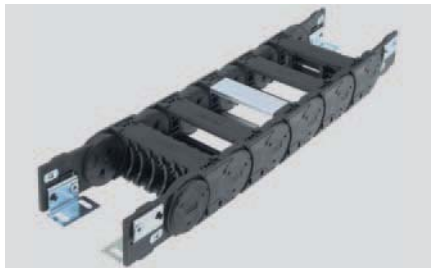
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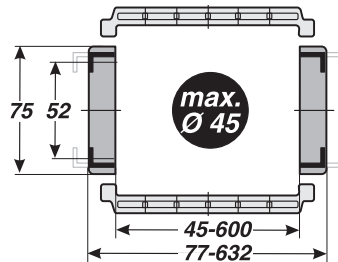
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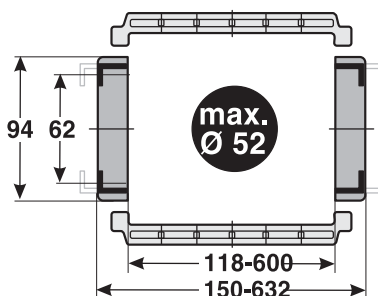
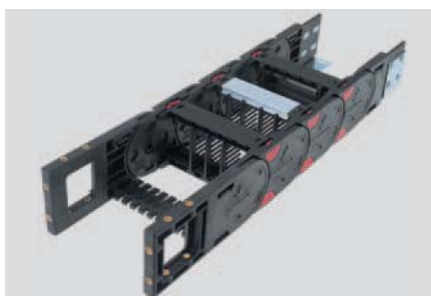
## MultiLine EFK 44

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## PowerLine EFK 52.2

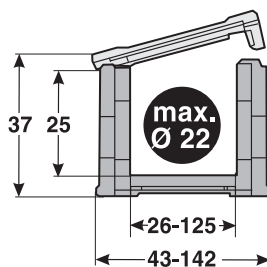
page 315



## HeavyLine EFK 62.2

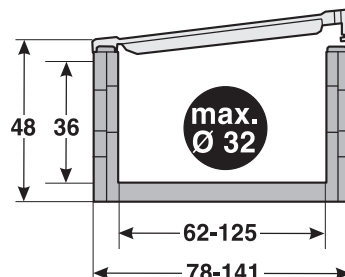
page 316

### Cable drag chain systems closed



## SafeLine EFK 25G

page 317



## SafeLine EFK 36G

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**Please use our selection table  
Cables for cable drag chains  
which follows after the cable drag chains.**

- a) Control cables, screened and unscreened
- b) Elektronik data bus cables, screened and unscreened
- c) Servo and motor connection cables, screened and unscreened
- d) Environmentally-compatible cables, screened and unscreened

**All cables are also in our main catalogue  
"Cables and Wires"**

### **Advantages:**

- **Subsequent laying of cables or changing the assignment:**  
The chain must be opened from the inside and outside curve.  
Pre-assembled cables can then be inserted easily.
- **High stability:**  
Due to multiple and large stops. Large connecting bolts ensure better force absorbing capacity.
- **Easy handling:**  
Only a screwdriver is needed to open the cable carrier.
- **Quick adjustment of the chain lengths:**  
A simple length modification is also possible at any time in the installed condition.
- **Fastening secured using metal inserts:**  
The cold flow characteristics are prevented in this way.
- **Strain relief in the chain connector:**  
The strain relief is integrated in the chain connector. The cables are fixed using cable binders.
- **Fastening variant using rotating chain connector:**  
Many variants are made possible using this option.
- **Dividers:**  
Guarantee optimum cable routing.
- **Can be recycled:**  
The plastic of the chain is completely recyclable.

# Drag Chain Systems

to  
**HELUKABEL®** GmbH  
 Sales department  
 Dieselstraße 8 – 12  
 D-71282 Hemmingen/Germany  
 Phone +49 7150 9209-393  
 Fax +49 7150 959225  
 E-Mail: vk\_zubehoer@helukabel.de  
 www.helukabel.de

Sender

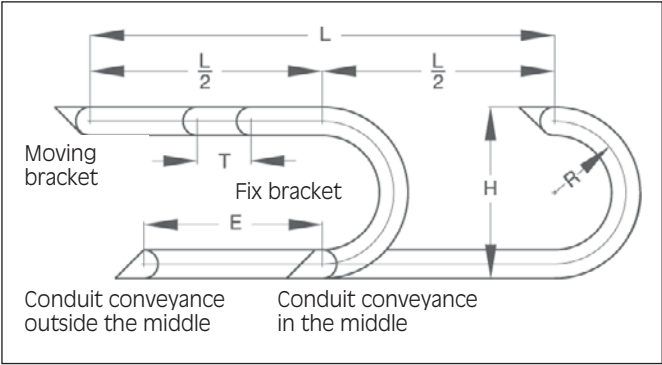
Contact \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

**Inquiry** No. \_\_\_\_\_  
 Date \_\_\_\_\_

**Requirement** \_\_\_\_\_ pieces

## User parameters



L = Total travel, R = Radius, H = Installation hight, T = Separation, E = Distance of the conduit conveyance to the middle of the total travel

Internal height: \_\_\_\_\_ mm  
 Internal width: \_\_\_\_\_ mm

If the inner height or width are not known:

Filling

| Cable type | Quantity | Outer diameter |
|------------|----------|----------------|
|            |          |                |
|            |          |                |

Radius: \_\_\_\_\_ mm  
 If not known: Maximum overall height \_\_\_\_\_ mm

Incoming supply:: ☐ in the middle of the traverse path  
 or: \_\_\_\_\_ mm from the middle of the traverse path

Length \_\_\_\_\_ mm  
 If not known: Traverse path \_\_\_\_\_ mm

Installation variants (see right) \_\_\_\_\_

Total stroke speed \_\_\_\_\_ m/s

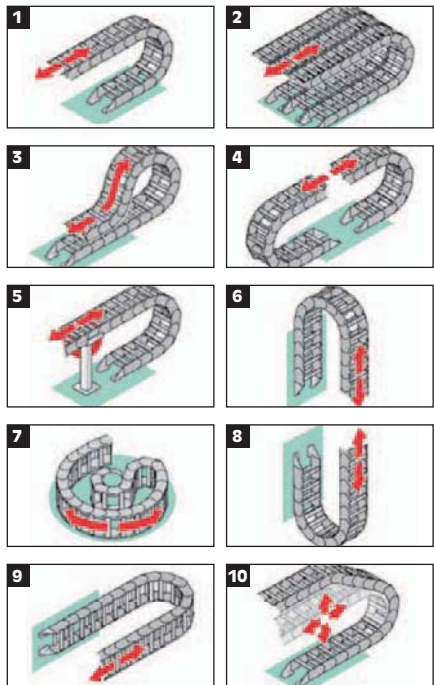
Speed up \_\_\_\_\_ m/s²

Total stroke frequency \_\_\_\_\_ x/h

Environmental effects \_\_\_\_\_

Tub existing ☐ yes Internal width \_\_\_\_\_ mm  
☐ no

## Installation variants





# Installation manual

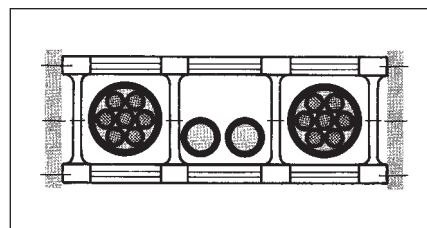
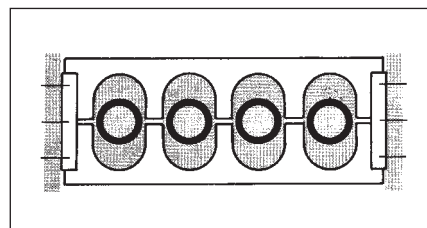
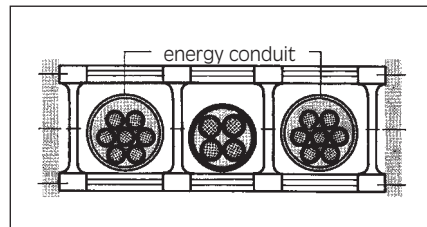
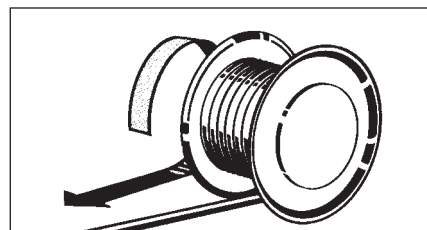
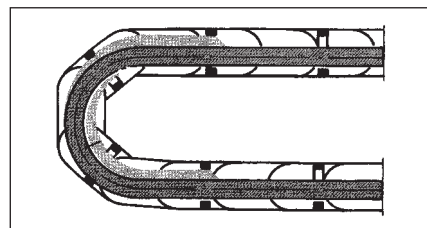
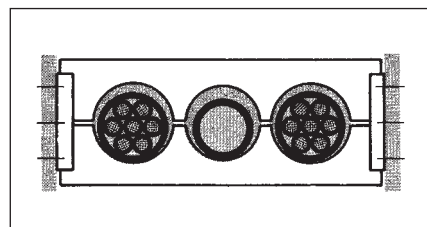
## Cable installation in drag chains

The control cables in drag chains undertake an important task for the controlling and power technique, must be good synchronized with each other in the power chain systems. Further the installation of the cables and predetection tubes in the power drag chains must be conducted with great care. An efficient usage upon accurate and exact cable installation. The following basic points should be noticed:

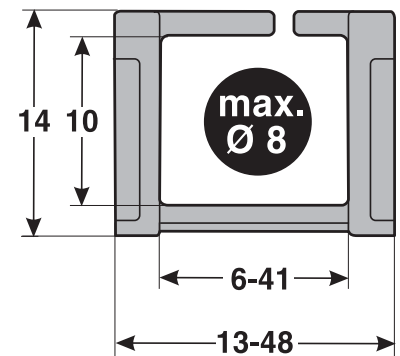
1. Where flat and round cables are mixed in one drag tray, then these should be installed loosely next to one another. The guide stays should be installed between the cables laid side by side. Try and avoid placing different sizes of round cables next to one another. Due to the limited space relationship cables arranged one above the other, frame stays are to be installed.
2. The cables must be installed with guide stays, dividers or in separate hole stays so as to move freely in the drag tray guides. As free space for the cables in the guide stay should be at least 10% of the cable  $\varnothing$ .
3. Always ensure that the cable can follow the drag trays motions without appearing to be forced.
4. If the cables are to be installed in the drag tray in layers then it is important to check upon installation that the cables are laid in such a way that they do not block each other when the drag tray alters direction.
5. Cables should always be installed in nonkinking and nontwisting flat position into the drag trays. The cables must be reeled down tangential from the reels or drums; the cables should not be lifted up in twisted or looping form over head. Before the installation, the cables must be laid in straight and non-twisted form on plane surface. The cables must have an additional length of at least 10% of the whole length so that these can be laid freely without twisting in drag chains.
6. In case that is not possible to lay the cables as described under 5, in order to lay several multi core high flexible cables with an outer diameter  $< 10$  mm, we recommend the use of a guiding tube, in which these cables should loosely laid. This tube is than integrated into the drag system.  
The cross section of this tube has to be much larger as the sum of the cross sections of the cables. For the free movement of the flexible energy conduits, the guide or divider stays must be installed.
7. In case that pressure- or hydraulic tubes are integrated in a power drag system, those should be able to expand and to shrink under alternating charges without interrupting the functionality of the drag system.
8. In order to maintain a balanced running of the drag chain it is necessary to ensure that the weight of the cables inside is divided up evenly, with the heavier cables installed on the edges and the lighter types in the middle.  
All cables must be securely fixed at one end of the drag chain. Thus assuring that the cores are securely fastened to one side with the other, open, side allowing enough slack to take up the drag chain's motion.

Generally it is recommended, if possible, not to use cables with a multi layer construction, e.g.  $>25$  cores, but to split the necessary number of conductors over several cables.

**If you have any further questions  
please call our special cable department.**



# EasyLine EFK 10.1



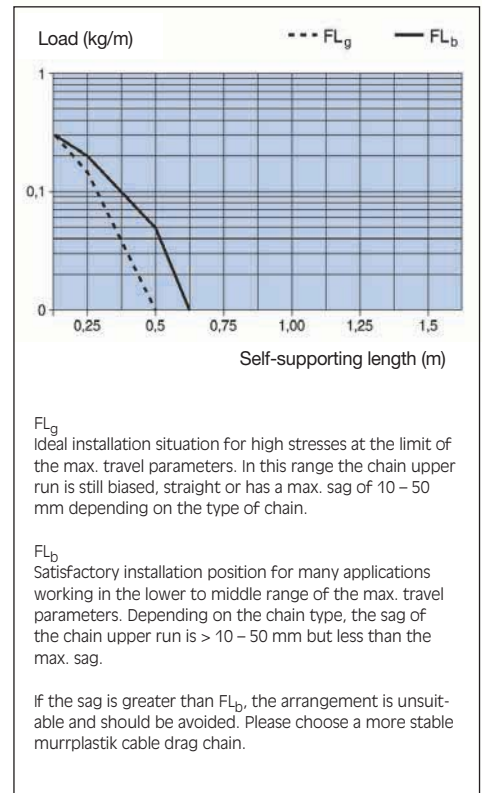
## Product range:

- Internal height 10 mm
- Internal width 6-41 mm
- Loading side slotted on outside of radius
- Links per metre: 67
- Chain separation: 15 mm
- Maximum cable diameter: 8 mm
- Maximum procedure path: 10 m
- Material: modified polyamide

## Advantages:

- **Open cross bar:**  
The slit cross bars on the outer radius allow easy cable installation. Due to the diagonal slit configuration, cables falling out is avoided.
- **Wire insertion tool:**  
The wire insertion tool allows the easy insertion of cable, wires and hoses.
- **High stability:**  
Multiple large stops ensure high stability, while large diameter pins provide a high strenght connection between links.
- **Quick adaptation of the chain length:**  
The chain can be easily modified in terms of length without the use of tools.
- **Subsequent strain relief:**  
Strain relief is integrated into the chain end brackets. Cable ties provide secure strain relief.
- **Integrated separators:**  
Integrated separators ensure optimal cable guiding.
- **Recyclable:**  
The plastic used in the chain is fully recyclable.

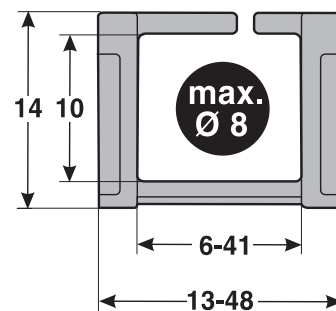
## Unsupported length



Technical modifications are subject to change without prior notice.



# EasyLine EFK 10.1



|                                   |
|-----------------------------------|
| Style (order code)                |
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R  | HS  | HMA |
|----|-----|-----|
| mm | mm  | mm  |
| 18 | 60  | 50  |
| 28 | 80  | 70  |
| 38 | 100 | 90  |
| 48 | 120 | 110 |
| 58 | 140 | 130 |

Open built-in height:  $HS = 2xR + HG + S$

Connecting height bottom/top:  $HMA = 2xR + HG$

External height of chain link:  $HG = 14 \text{ mm}$

Safety:  $S = 10 \text{ mm}$

Length of chain link:  $T = 15 \text{ mm}$

|    |    |     |    |     |  |   |
|----|----|-----|----|-----|--|---|
| 13 | 6  | 006 | 18 | 018 |  |   |
| 16 | 9  | 009 | 28 | 028 |  |   |
| 22 | 15 | 015 | 38 | 038 |  |   |
| 28 | 21 | 021 | 48 | 048 |  | 0 |
| 38 | 31 | 031 | 58 | 058 |  | 7 |
| 48 | 41 | 041 |    |     |  | 9 |

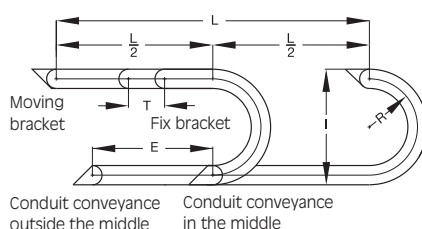
Configuration: 0 crossbar every link; w/bias

Style: 0 Standard (PA)  
7 ESD (PA)  
9 Special version

**Order Number:** 0101    0   0

Sample order: Inside width = 6 mm, Radius = 18 mm, Configuration = 0, Style = 0

**Order number: 0101 006 018 0000**



$L$  = Travel distance,  $R$  = Radius,  
 $I$  = Installation height,  $T$  = Pitch,  
 $E$  = Distance between entry point  
and middle of travel distance

## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

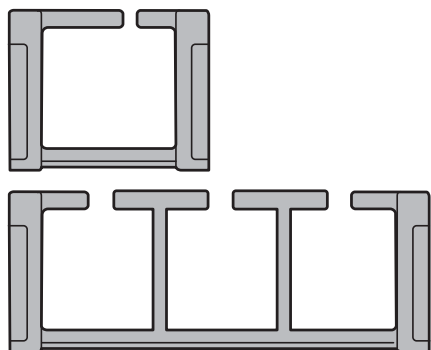
≈ 1 m chain = 67 x 15 mm links

The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

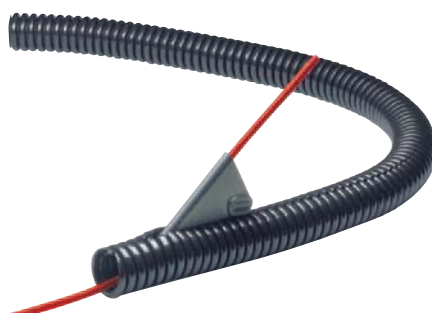
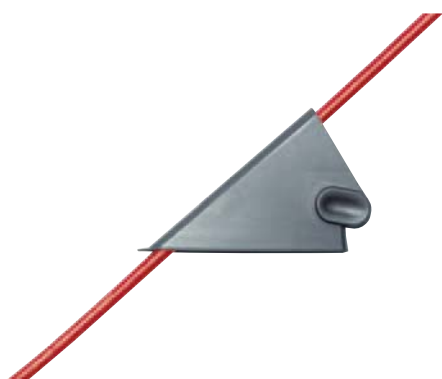
Technical modifications are subject to change without prior notice.

# EasyLine EFK 10.1 / Accessories

## Insertion aid



| Chamber size<br>Type | Order no. | Description           | Pack |
|----------------------|-----------|-----------------------|------|
| KE                   | 901006    | KE wire insertion aid | 1    |



The wire insertion aid facilitates quick and simple installation of cables in the cable chain openings.

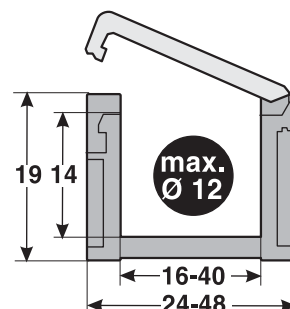
Technical modifications are subject to change without prior notice.

# MultiLine EFK 14



## Product range:

- Internal height 14 mm
- Internal width 16-40 mm
- Loading side slotted on outside of radius
- Links per metre: 38
- Chain separation: 26 mm
- Maximum cable diameter: 12 mm
- Maximum procedure path: max. 20 m
- Material: modified polyamide



|                                   |
|-----------------------------------|
| Style (order code)                |
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R  | HS  | HMA |
|----|-----|-----|
| mm | mm  | mm  |
| 25 | 89  | 69  |
| 38 | 115 | 69  |
| 48 | 135 | 115 |
| 78 | 189 | 169 |

Open built-in height:  $HS = 2 \times R + HG + S$

Connecting height bottom/top:  $HMA = 2 \times R + HG$

External height of chain link:  $HG = 19 \text{ mm}$

Safety:  $SK = 20 \text{ mm}$

Length of chain link:  $T = 26 \text{ mm}$

|    |    |     |    |     |   |   |
|----|----|-----|----|-----|---|---|
| 24 | 16 | 016 | 25 | 025 |   |   |
| 28 | 20 | 020 | 38 | 038 |   | 0 |
| 38 | 30 | 030 | 48 | 048 |   | 7 |
| 48 | 40 | 040 | 75 | 075 | 0 | 9 |

Configuration: 0 crossbar every link; w/bias

Style: 0 Standard (PA)  
7 ESD (PA)  
9 Special version

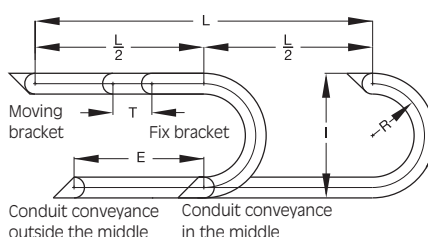
**Order number:** 0140 [ ] [ ] 0 [ ] [ ] 0

Sample order: Inside width = 16 mm, Radius = 25 mm, Configuration = 0, Style = 0

**Order number: 0140 016 025 0000**

**Please order (per chain) 2 chain connectors. You will automatically receive 1 with a drill-hole and 1 with a bolt.**

Technical modifications are subject to change without prior notice.



$L$  = Travel distance,  $R$  = Radius,  
 $I$  = Installation height,  $T$  = Pitch,  
 $E$  = Distance between entry point and middle of travel distance

## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

≈ 1 m chain = 38 x 26 mm links

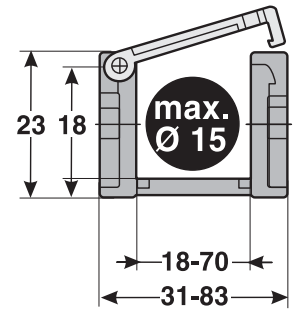
The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

# MultiLine MP 18.1



### Product range:

- Internal height 18 mm
- Internal width 18-70 mm
- Loading side slotted on outside of radius
- Links per metre: 30
- Chain separation: 33 mm
- Maximum cable diameter: 15 mm
- Maximum procedure path: max. 30 m
- Material: modified polyamide



|                                   |
|-----------------------------------|
| Style (order code)                |
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R  | HS  | HMA |
|----|-----|-----|
| mm | mm  | mm  |
| 28 | 109 | 79  |
| 38 | 129 | 99  |
| 48 | 149 | 119 |
| 78 | 209 | 179 |

Open built-in height:  $HS = 2 \times R + HG + S$   
Connecting height bottom/top:  $HMA = 2 \times R + HG$   
External height of chain link:  $HG = 23 \text{ mm}$   
Safety:  $S = 30 \text{ mm}$   
Length of chain link:  $T = 33 \text{ mm}$

|    |    |     |    |     |
|----|----|-----|----|-----|
| 31 | 18 | 018 |    |     |
| 38 | 25 | 025 | 25 | 028 |
| 50 | 37 | 037 | 38 | 038 |
| 63 | 50 | 050 | 48 | 048 |
| 83 | 70 | 070 | 78 | 078 |

|   |   |
|---|---|
|   | 0 |
|   | 7 |
|   | 9 |
| 0 |   |

Configuration: 0 crossbar every link; w/bias  
Style: 0 Standard (PA)  
7 ESD (PA)  
9 Special version

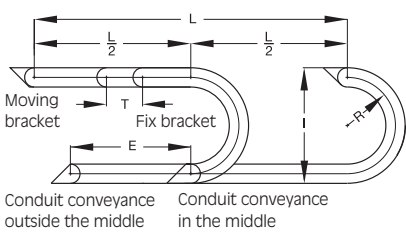
|               |      |  |  |   |  |  |   |
|---------------|------|--|--|---|--|--|---|
| Order number: | 0181 |  |  | 0 |  |  | 0 |
|---------------|------|--|--|---|--|--|---|

Sample order: Inside width = 18 mm, Radius = 28 mm, Configuration = 0, Style = 0

Order number: 0181 018 028 0000

Please order (per chain)  
2 chain connectors.  
You will automatically receive  
1 with a drill-hole  
and 1 with a bolt.

Prices on request  
Technical modifications are subject  
to change without prior notice.



L = Travel distance, R = Radius,  
l = Installation height, T = Pitch,  
E = Distance between entry point  
and middle of travel distance

### Determining the chain length

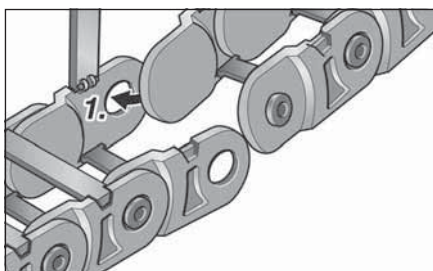
$$\text{Length} = \frac{1}{2} \times \pi \times R + 2 \times T + E$$

≈ 1 m chain = 30 x 33 mm links

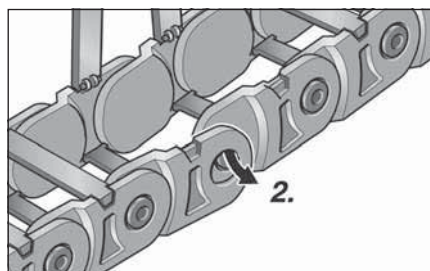
The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

# MultiLine MP 18.1

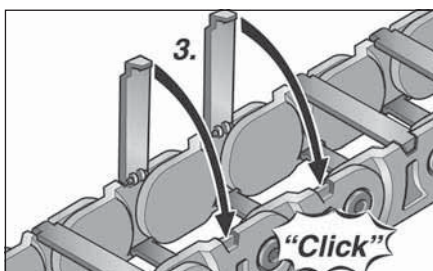
## Assembly



Step 1

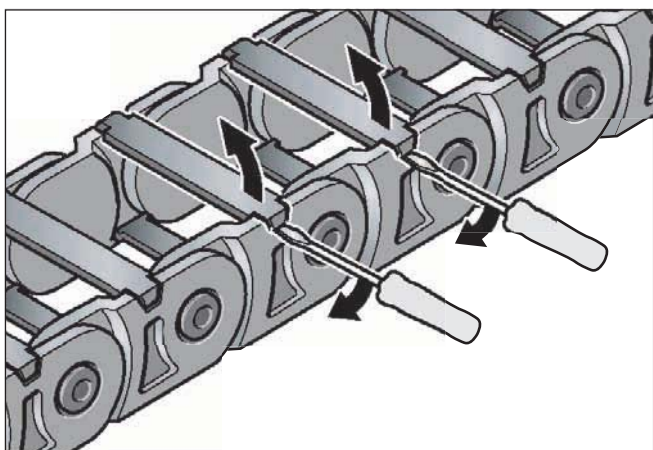


Step 2

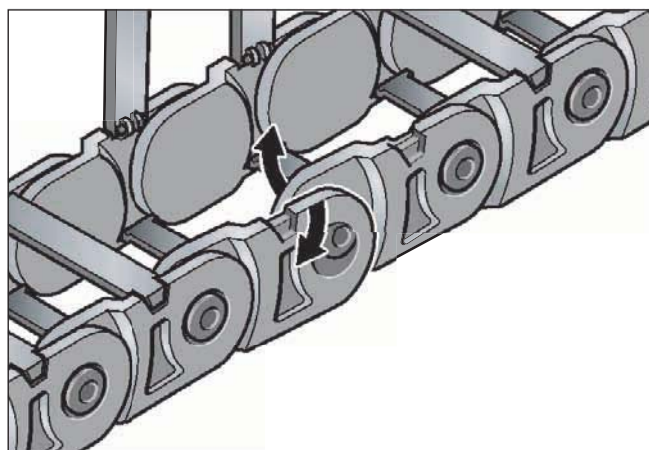


Step 3

## Disassembly



Step 1



Step 2

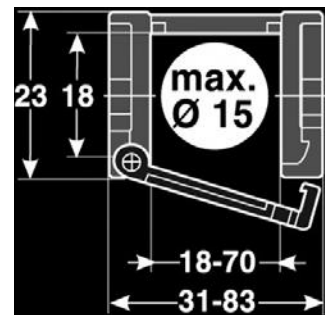
Technical modifications are subject to change without prior notice.

# MultiLine EFK 18.2



## Product range:

- Internal height 18 mm
- Internal width 18-70 mm
- Loading side slotted on outside of radius
- Links per metre: 30
- Chain separation: 33 mm
- Maximum cable diameter: 15 mm
- Maximum procedure path: max. 30 m
- Material: modified polyamide



|                                   |
|-----------------------------------|
| Style (order code)                |
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R  | HS  | HMA |
|----|-----|-----|
| mm | mm  | mm  |
| 28 | 109 | 79  |
| 38 | 129 | 99  |
| 48 | 149 | 119 |
| 78 | 209 | 179 |

Open built-in height:  $HS = 2 \times R + HG + S$   
 Connecting height bottom/top:  $HMA = 2 \times R + HG$   
 External height of chain link:  $HG = 23 \text{ mm}$   
 Safety:  $S = 30 \text{ mm}$   
 Length of chain link:  $T = 33 \text{ mm}$

|    |    |     |    |     |
|----|----|-----|----|-----|
| 31 | 18 | 018 | 28 | 028 |
| 38 | 25 | 025 | 38 | 038 |
| 50 | 37 | 037 | 48 | 048 |
| 63 | 50 | 050 | 78 | 078 |
| 83 | 70 | 070 |    |     |

|   |   |
|---|---|
| 0 | 7 |
| 0 | 9 |

Configuration: 0 crossbar every link; w/bias  
 Style: 0 Standard (PA)  
 7 ESD (PA)  
 9 Special version

## Order number:

0182



0



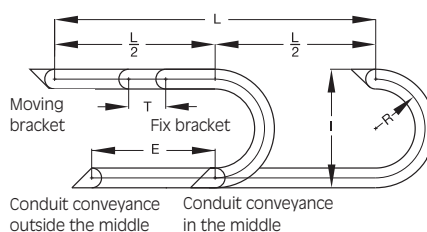
0

Sample order: Inside width = 18 mm, Radius = 28 mm, Configuration = 0, Style = 0

Order number: 0182 018 028 0000

**Please order (per chain)  
 2 chain connectors.  
 You will automatically receive  
 1 with a drill-hole  
 and 1 with a bolt.**

Technical modifications are subject to change without prior notice.



$L$  = Travel distance,  $R$  = Radius,  
 $I$  = Installation height,  $T$  = Pitch,  
 $E$  = Distance between entry point  
 and middle of travel distance

## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

$\approx 1 \text{ m chain} = 30 \times 33 \text{ mm links}$

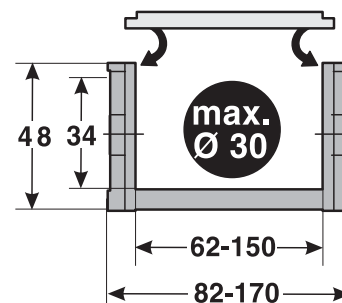
The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

# MultiLine EFK 35



## Product range:

- Internal height 34 mm
- Internal width 62-150 mm
- Loading side slotted on outside of radius
- Links per metre: 17
- Chain separation: 58 mm
- Maximum cable diameter: 30 mm
- Maximum procedure path: max. 80 m
- Material: modified polyamide



### Style (order code)

### Configuration (order code)

### Radius (order code) in mm

### Internal width (order code) in mm

### External width in mm

| R   | HSK | HSV | HMA |
|-----|-----|-----|-----|
| mm  | mm  | mm  | mm  |
| 70  | 203 | 228 | 188 |
| 100 | 263 | 288 | 248 |
| 150 | 363 | 388 | 348 |
| 200 | 463 | 488 | 448 |
| 300 | 663 | 688 | 648 |

Open built-in height  
without pre-tension:

$$HSK = 2xR + HG + SK$$

Open built-in height  
with pre-tension:

$$HSV = 2xR + HG + SV$$

Connecting height bottom/top:

$$HMA = 2xR + HG$$

External height of chain link:

$$HG = 48 \text{ mm}$$

Safety without pre-tension:

$$SK = 15 \text{ mm}$$

Safety with pre-tension:

$$SV = 40 \text{ mm}$$

Length of chain link:

$$T = 58 \text{ mm}$$

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 82  | 62  | 062 | 70  | 070 |
| 106 | 86  | 086 | 100 | 100 |
| 122 | 102 | 102 | 150 | 150 |
| 145 | 125 | 125 | 200 | 200 |
| 170 | 150 | 150 | 300 | 300 |

|   |   |
|---|---|
| 1 | 0 |
| 0 | 7 |
|   | 9 |

Configuration:

0 crossbar every  
link; w/bias

1 crossbar every  
link; w/o bias

Style:

0 Standard (PA)  
7 ESD (PA)

9 Special version

**Order  
number:**

0350

0

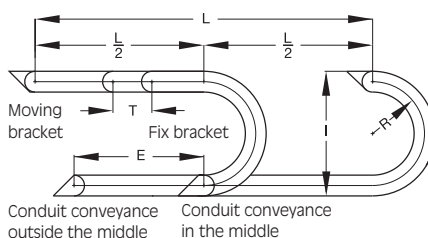
0

Sample order: Inside width = 62 mm, Radius = 70 mm, Configuration = 0, Style = 0

**Order number: 0350 062 070 0000**

**Please order (per chain)  
2 chain connectors.  
You will automatically receive  
1 with a drill-hole  
and 1 with a bolt.**

Technical modifications are subject  
to change without prior notice.



L = Travel distance, R = Radius  
I = Installation height, T = Pitch  
E = Distance between entry point  
and middle of travel distance

## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

$$\approx 1 \text{ m chain} = 17 \times 58 \text{ mm links}$$

The fixed point of the cable drag chain should be  
connected in the middle of the travel distance.  
This arrangement gives the shortest connection  
between the fixed point and the moving consumer  
and thus the most efficient chain length.

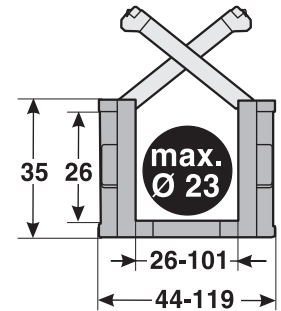


# MultiLine EFK 3000



## Product range:

- Internal height 26 mm
- Internal width 26-101 mm
- Loading side slotted on inside of radius
- Links per metre: 22
- Chain separation: 45 mm
- Maximum cable diameter: 23 mm
- Maximum procedure path: max. 60 m
- Material: modified polyamide



| Style (order code)                |
|-----------------------------------|
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R   | HSK | HSV | HMA |
|-----|-----|-----|-----|
| mm  | mm  | mm  | mm  |
| 50  | 145 | 180 | 135 |
| 70  | 185 | 220 | 175 |
| 95  | 235 | 270 | 225 |
| 120 | 285 | 320 | 275 |
| 150 | 345 | 380 | 335 |
| 200 | 445 | 480 | 435 |
| 300 | 645 | 680 | 635 |

Open built-in height without pre-tension: HSK = 2xR+HG+SK  
 Open built-in height with pre-tension: HSV = 2xR+HG+SV  
 Connecting height bottom/top: HMA = 2xR+ HG

External height of chain link: HG = 35 mm  
 Safety without pre-tension: SK = 10 mm  
 Safety with pre-tension: SV = 45 mm  
 Length of chain link: T = 45 mm

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 44  | 26  | 026 | 50  | 050 |
| 55  | 37  | 037 | 70  | 070 |
| 74  | 56  | 056 | 95  | 095 |
| 80  | 62  | 062 | 120 | 120 |
| 94  | 76  | 076 | 150 | 150 |
| 105 | 87  | 087 | 200 | 200 |
| 119 | 101 | 101 | 300 | 300 |

|   |   |
|---|---|
| 1 | 0 |
| 0 | 9 |

Configuration: 0 crossbar every link; w/bias  
 1 crossbar every link; w/o bias

Style: 0 Standard (PA)  
 7 ESD (PA)  
 9 Special version

**Order number:**

0300



0



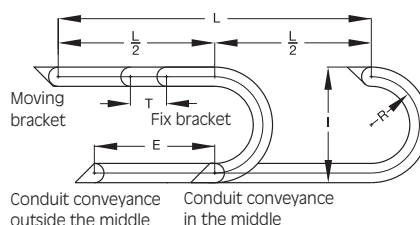
0

Sample order: Inside width = 26 mm, Radius = 50 mm, Configuration = 0, Style = 0

**Order number: 0300 026 050 0000**

**Please order (per chain) 2 chain connectors. You will automatically receive 1 with a drill-hole and 1 with a bolt.**

Technical modifications are subject to change without prior notice.



L = Travel distance, R = Radius,  
 I = Installation height, T = Pitch,  
 E = Distance between entry point and middle of travel distance

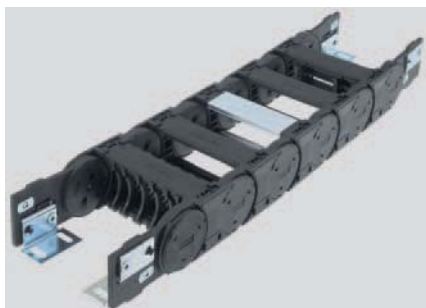
## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

≈ 1 m chain = 22 x 45 mm links

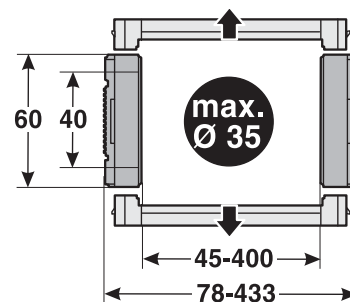
The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

# MultiLine EFK 44



## Product range:

- Internal height 40 mm
- Internal width 45-400 mm
- Loading side slotted on outside of radius
- Links per metre: 13
- Chain separation: 75,5 mm
- Maximum cable diameter: 35 mm
- Maximum procedure path: max. 50 m
- Material: modified polyamide



|                                   |
|-----------------------------------|
| Style (order code)                |
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R   | HSK | HSV | HMA |
|-----|-----|-----|-----|
| mm  | mm  | mm  | mm  |
| 90  | 253 | 278 | 240 |
| 125 | 323 | 348 | 310 |
| 150 | 373 | 398 | 360 |
| 200 | 473 | 498 | 460 |
| 250 | 573 | 598 | 560 |

Open built-in height without pre-tension: HSK = 2xR+HG+SK  
 Open built-in height with pre-tension: HSV = 2xR+HG+SV  
 Connecting height bottom/top: HMA = 2xR+HG

External height of chain link: HG = 60 mm  
 Safety without pre-tension: SK = 13 mm  
 Safety with pre-tension: SV = 38 mm  
 Length of chain link: T = 75,5 mm

|       |      |     |     |     |   |   |
|-------|------|-----|-----|-----|---|---|
| 78    | 45   | 045 |     |     | 0 |   |
| 95    | 62   | 062 |     |     | 1 |   |
| 117   | 84   | 084 |     |     | 2 |   |
| 138   | 105  | 105 | 90  | 090 | 3 |   |
| 177   | 144  | 144 | 125 | 125 | 4 |   |
| 215   | 182  | 182 | 150 | 150 | 5 |   |
| Innen | 118- |     | 200 | 200 | 6 | 0 |
| +33   | 600  | ALU | 250 | 250 | 7 | 7 |
|       |      |     |     |     | 9 | 9 |

|                                    |                   |
|------------------------------------|-------------------|
| Configuration:                     | Style:            |
| 0 crossbar every link; w/bias      | 0 Standard (PA)   |
| 1 crossbar every link; w/o bias    | 7 ESD (PA)        |
| 2 crossbar EOL; w/bias             | 9 Special version |
| 3 crossbar EOL; w/o bias           |                   |
| 4 AL crossbar every link; w/bias   |                   |
| 5 AL crossbar every link; w/o bias |                   |
| 6 AL crossbar EOL; w/bias          |                   |
| 7 AL crossbar EOL; w/o bias        |                   |
| 9 Customer order                   |                   |

**Please order (per chain)**  
**2 chain connectors.**  
**You will automatically receive**  
**1 with a drill-hole**  
**and 1 with a bolt.**

Technical modifications are subject to change without prior notice.

## Order number:

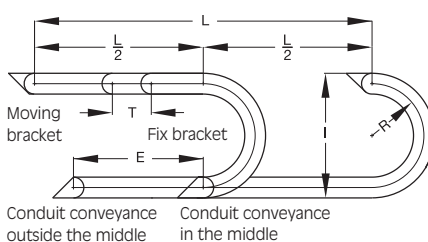
0440

0

0

Sample order: Inside width = 45 mm, Radius = 90 mm, Configuration = 0, Style = 0

**Order number: 0440 045 090 0000**



L = Travel distance, R = Radius  
 I = Installation height, T = Pitch  
 E = Distance between entry point and middle of travel distance

## Determining the chain length

$$Länge = \frac{L}{2} + \pi \times R + 2 \times T + E$$

≈ 1 m chain = 13 x 75.5 mm links

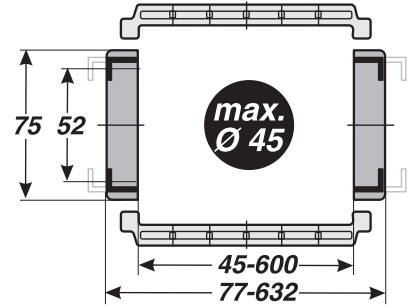
The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

# PowerLine EFK 52.2



### Product range:

- **Internal height 52 mm**
- **Internal width 45-546 mm**
- **Loading side slotted on outside of radius**
- **Links per metre: 11**
- **Chain separation: 91 mm**
- **Maximum cable diameter: 45 mm**
- **Maximum procedure path: max. 150 m**
- **Material: modified polyamide**



**Style (order code)**

**Configuration (order code)**

**Radius (order code) in mm**

**Internal width (order code) in mm**

**External width in mm**

| R   | HSK | HSV | HMA |
|-----|-----|-----|-----|
| mm  | mm  | mm  | mm  |
| 100 | 290 | 320 | 274 |
| 150 | 390 | 420 | 374 |
| 200 | 490 | 520 | 474 |
| 250 | 590 | 620 | 574 |
| 300 | 690 | 720 | 674 |
| 350 | 790 | 820 | 774 |

Open built-in height without pre-tension: HSK = 2xR+HG+SK

Open built-in height with pre-tension: HSV = 2xR+HG+SV

Connecting height bottom/top: HMA = 2xR+HG

External height of chain link: HG = 74 mm

Safety without pre-tension: SK = 16 mm

Safety with pre-tension: SV = 46 mm

Length of chain link: T = 91 mm

|       |     |     |     |     |  |  |
|-------|-----|-----|-----|-----|--|--|
| 77    | 45  | 045 |     |     |  |  |
| 94    | 62  | 062 |     |     |  |  |
| 103   | 71  | 071 |     |     |  |  |
| 116   | 84  | 084 |     |     |  |  |
| 128   | 96  | 096 |     |     |  |  |
| 139   | 107 | 107 |     |     |  |  |
| 153   | 121 | 121 |     |     |  |  |
| 176   | 144 | 144 |     |     |  |  |
| 178   | 146 | 146 |     |     |  |  |
| 203   | 171 | 171 |     |     |  |  |
| 214   | 182 | 182 |     |     |  |  |
| 228   | 196 | 196 |     |     |  |  |
| 252   | 220 | 220 |     |     |  |  |
| 278   | 246 | 246 |     |     |  |  |
| 328   | 296 | 296 |     |     |  |  |
| 378   | 346 | 346 |     |     |  |  |
| 428   | 396 | 396 | 100 | 100 |  |  |
| 478   | 446 | 446 | 150 | 150 |  |  |
| 528   | 496 | 496 | 200 | 200 |  |  |
| 578   | 546 | 546 | 250 | 250 |  |  |
| Innen | 80- | 300 | 300 | 300 |  |  |
| +32   | 600 | 350 | 350 | 350 |  |  |

Configuration: 0 crossbar every link; w/bias

1 crossbar every link; w/o bias

2 crossbar EOL; w/bias

3 crossbar EOL; w/o bias

4 AL crossbar every link; w/bias

5 AL crossbar every link; w/o bias

6 AL crossbar EOL; w/bias

7 AL crossbar EOL; w/o bias

9 Customer order

Style: 0 Standard (PA)

7 ESD (PA)

9 Special version

**Order number:**

0522

0

0

Sample order: Inside width = 45 mm, Radius = 100 mm, Configuration = 0, Style = 0

**Order number: 0522 045 100 0000**

Conduit conveyance outside the middle

Conduit conveyance in the middle

**Determining the chain length**

$$Länge = \frac{L}{2} + \pi \times R + 2 \times T + E$$

≈ 1 m chain = 11 x 91 mm links

The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

**Please order (per chain)**

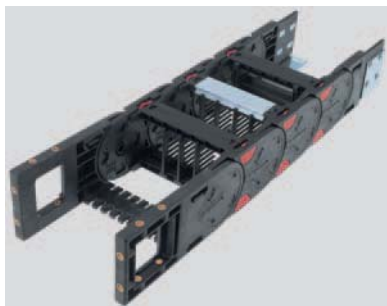
**2 chain connectors.**

**You will automatically receive**

**1 with a drill-hole**

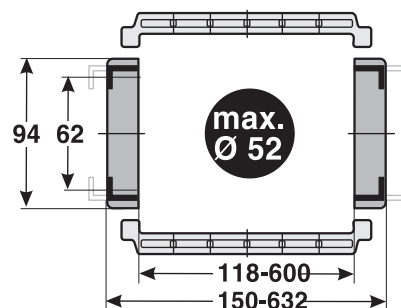
**and 1 with a bolt.**

# HeavyLine MP 62.2



## Product range:

- Internal height 62 mm
- Internal width 118-518 mm
- Loading side slotted on outside of radius
- Links per metre: 10
- Chain separation: 100 mm
- Maximum cable diameter: 52 mm
- Maximum procedure path: max. 180 m
- Material: modified polyamide



### Style (order code)

### Configuration (order code) \*= standard

### Radius (order code) in mm

### Internal width (order code) in mm

### External width in mm

| R   | HSK  | HSV  | HMA  |
|-----|------|------|------|
| mm  | mm   | mm   | mm   |
| 150 | 414  | 444  | 394  |
| 200 | 514  | 544  | 494  |
| 250 | 614  | 644  | 594  |
| 300 | 714  | 744  | 694  |
| 400 | 914  | 944  | 894  |
| 500 | 1114 | 1144 | 1094 |

Open built-in height without pre-tension: HSK = 2xR+HG+SK  
 Open built-in height with pre-tension: HSV = 2xR+HG+SV  
 Connecting height bottom/top: HMA = 2xR+HG  
 External height of chain link: HG = 94 mm  
 Safety without pre-tension: SK = 20 mm  
 Safety with pre-tension: SV = 50 mm  
 Length of chain link: T = 100 mm

|        |      |     |     |     |   |   |
|--------|------|-----|-----|-----|---|---|
| 150    | 118  | 118 |     |     |   |   |
| 175    | 143  | 143 |     |     |   |   |
| 200    | 168  | 168 |     |     |   |   |
| 225    | 193  | 193 |     |     |   |   |
| 250    | 218  | 218 |     |     |   |   |
| 275    | 243  | 243 |     |     |   |   |
| 300    | 268  | 268 |     |     |   |   |
| 325    | 293  | 293 |     |     |   |   |
| 350    | 318  | 318 |     |     |   |   |
| 375    | 343  | 343 |     |     |   |   |
| 400    | 368  | 368 | 150 | 150 |   |   |
| 450    | 418  | 418 | 200 | 200 |   |   |
| 500    | 468  | 468 | 250 | 250 |   |   |
| 550    | 518  | 518 | 300 | 300 |   |   |
| inside | 118- |     | 400 | 400 |   |   |
| +32    | 600  | ALU | 500 | 500 |   |   |
|        |      |     |     |     | 0 |   |
|        |      |     |     |     | 1 |   |
|        |      |     |     |     | 2 |   |
|        |      |     |     |     | 3 |   |
|        |      |     |     |     | 4 |   |
|        |      |     |     |     | 5 |   |
|        |      |     |     |     | 6 | 0 |
|        |      |     |     |     | 7 | 7 |
|        |      |     |     |     | 9 | 9 |

Configuration:  
 0 crossbar every link; w/bias  
 1 crossbar every link; w/o bias  
 2\* crossbar EOL; w/bias  
 3\* crossbar EOL; w/o bias  
 4 AL crossbar every link; w/bias  
 5 AL crossbar every link; w/o bias  
 6 AL crossbar EOL; w/bias  
 7 AL crossbar EOL; w/o bias  
 9 Customer order

Style:  
 0 Standard (PA)  
 7 ESD (PA)  
 9 Special version

**Please order (per chain)**  
**2 chain connectors.**  
**You will automatically receive**  
**1 with a drill-hole**  
**and 1 with a bolt.**

Technical modifications are subject to change without prior notice.

## Order number:

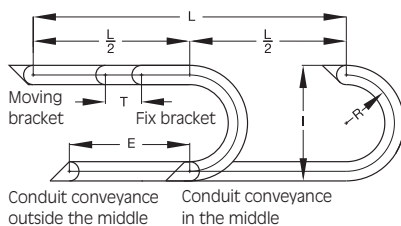
0622

0

0

Inside width = 118 mm, Radius = 150 mm, Configuration = 0, Style = 0

**Sample order 0622 118 150 0000**



L = Travel distance, R = Radius,  
 I = Installation height, T = Pitch,  
 E = Distance between entry point  
 and middle of travel distance

## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

≈ 1 m chain = 10 x 100 mm links

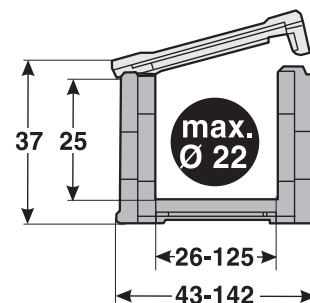
The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

# SafeLine EFK 25G



## Product range:

- Internal height 25 mm
- Internal width 26-125 mm
- Loading inside
- Links per metre: 33
- Chain separation: 30 mm
- Maximum cable diameter: 22 mm
- Maximum procedure path: max. 40 m
- Material: modified polyamide



|                                   |
|-----------------------------------|
| Style (order code)                |
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R   | HS  | HMA |
|-----|-----|-----|
| mm  | mm  | mm  |
| 60  | 190 | 157 |
| 75  | 220 | 187 |
| 100 | 270 | 237 |
| 125 | 320 | 287 |
| 150 | 370 | 337 |
| 200 | 470 | 437 |
| 250 | 570 | 537 |

Open built-in height:  $HS = 2 \times R + HG + S$   
 Connecting height bottom/top:  $HMA = 2 \times R + HG$   
 External height of chain link:  $HG = 37 \text{ mm}$   
 Safety:  $S = 33 \text{ mm}$   
 Length of chain link:  $T = 30 \text{ mm}$

Configuration: 0 crossbar every link; w/bias  
 Style: 0 Standard (PA)  
 7 ESD (PA)  
 9 Special version

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 44  | 26  | 026 | 60  | 060 |
| 55  | 37  | 037 | 75  | 075 |
| 80  | 62  | 062 | 100 | 100 |
| 105 | 87  | 087 | 125 | 125 |
| 119 | 101 | 101 | 150 | 150 |
| 143 | 125 | 125 | 200 | 200 |
|     |     |     | 250 | 250 |

|   |   |
|---|---|
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
| 0 | 0 |
|   | 9 |

## Order number:

0250



0



0

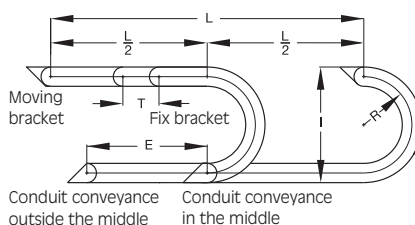
Sample order: Inside width = 26 mm, Radius = 60 mm, Configuration = 0, Style = 0

**Order number: 0250 026 060 0000**

**Please order (per chain)  
 2 chain connectors.  
 You will automatically receive  
 1 with a drill-hole  
 and 1 with a bolt.**

Prices on request

Technical modifications are subject  
 to change without prior notice.



$L$  = Travel distance,  $R$  = Radius,  
 $I$  = Installation height,  $T$  = Pitch,  
 $E$  = Distance between entry point  
 and middle of travel distance

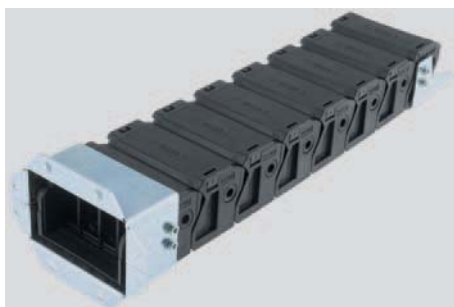
## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

≈ 1 m chain = 33 x 30 mm links

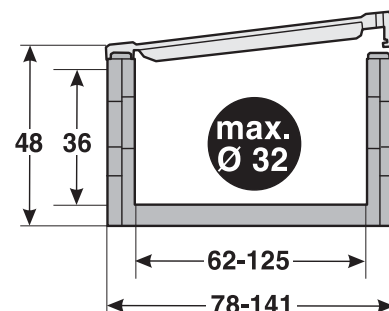
The fixed point of the cable drag chain should be  
 connected in the middle of the travel distance. This  
 arrangement gives the shortest connection between  
 the fixed point and the moving consumer and thus  
 the most efficient chain length.

# SafeLine EFK 36G



## Product range:

- Internal height 36 mm
- Internal width 62-125 mm
- Loading inside
- Links per metre: 25
- Chain separation: 40 mm
- Maximum cable diameter: 32 mm
- Maximum procedure path: max. 80 m
- Material: modified polyamide



|                                   |
|-----------------------------------|
| Style (order code)                |
| Configuration (order code)        |
| Radius (order code) in mm         |
| Internal width (order code) in mm |
| External width in mm              |

| R   | HS  | HMA |
|-----|-----|-----|
| mm  | mm  | mm  |
| 80  | 240 | 208 |
| 100 | 280 | 248 |
| 125 | 330 | 298 |
| 200 | 380 | 348 |
| 200 | 480 | 448 |

Open built-in height:  $HS = 2xR + HG + S$

Connecting height bottom/top:  $HMA = 2xR + HG$

External height of chain link:  $HG = 48 \text{ mm}$

Safety:  $S = 32 \text{ mm}$

Length of chain link:  $T = 40 \text{ mm}$

|     |     |     |     |     |   |   |
|-----|-----|-----|-----|-----|---|---|
| 82  | 62  | 062 | 80  | 080 |   |   |
| 106 | 86  | 086 | 100 | 100 |   |   |
| 122 | 102 | 102 | 125 | 125 |   |   |
| 145 | 125 | 125 | 150 | 150 |   |   |
|     |     |     | 200 | 200 | 0 | 0 |
|     |     |     |     |     |   | 9 |

Configuration: 0 crossbar every link; w/bias

Style: 0 Standard (PA)  
7 ESD (PA)  
9 Special version

## Order number:

0360

0

0

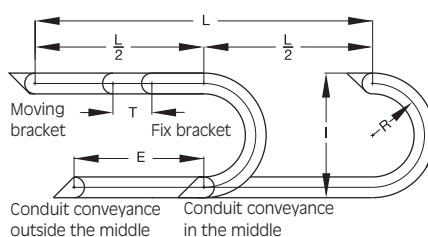
Sample order: Inside width = 62 mm, Radius = 80 mm, Configuration = 0, Style = 0

**Order number: 0360 062 080 0000**

**Please order (per chain)  
2 chain connectors.  
You will automatically receive  
1 with a drill-hole  
and 1 with a bolt.**

Prices on request

Technical modifications are subject to change without prior notice.



## Determining the chain length

$$\text{Length} = \frac{L}{2} + \pi \times R + 2 \times T + E$$

≈ 1 m chain = 25 x 40 mm links

The fixed point of the cable drag chain should be connected in the middle of the travel distance. This arrangement gives the shortest connection between the fixed point and the moving consumer and thus the most efficient chain length.

L = Travel distance, R = Radius  
I = Installation height, T = Pitch  
E = Distance between entry point and middle of travel distance

Other Technical Details can be found in the Product Pages of our Catalogue.

## Control cable, screened and unscreened

The table indicates the main application.  
In case of moving cables at higher speeds, over longer distances or higher cycling rates please contact our Technical Support.  
Phone +49 7150 9209-0 or [techsupport@helukabel.de](mailto:techsupport@helukabel.de).

A cycle is a double lift: a representative sample has been tested and measured in our Test Workshop. The cycle count is only valid when appropriate and professionally installed (see the installation advice; rules for connections, page 304, and under permitted environment conditions).



## Selection table cables in drag chains

Other Technical Details can be found in the Product Pages of our Catalogue.

### Control Cable, screened and unscreened

[illegible]

The table indicates the main application.

The cable indicates the main application. In case of moving cables at higher speeds, over longer distances or higher cycling rates please contact our Technical Support.

Phone +49 7150 9209-0 or [techsupport@helukabel.de](mailto:techsupport@helukabel.de).

A cycle is a double lift: a representative sample has been tested and measured in our Test Workshop.

The cycle count is only valid when appropriately installed (see the installation chapter, page 304, and under permitted environment conditions).

Other Technical Details can be found in the Product Pages of our Catalogue.

# Elektronic-Data-BUS-Cables, screened and unscreened

[illegible]

in case of moving cables at higher speeds, over longer distances or higher cycling rates please contact our Technical Support.

phone +49 7150 9209-0 or [techsupport@helukabel.de](mailto:techsupport@helukabel.de).

The cycle count is only valid when appropriately and professionally installed (see the installation advice; rules for connections, page 304, and under permitted environment conditions).

## Selection table Cables in drag chains

Other Technical Details can be found in the Product Pages of our Catalogue.

## Servo Cables and Motor Cables, screened and unscreened

[illegible]

The table indicates the main application.

in case of moving cables at higher speeds, over longer distances or higher cycling rates please contact our Technical Support.

phone +49 7150 9209-0 or [techsupport@helukabel.de](mailto:techsupport@helukabel.de).

A cycle is a double lift: a representative sample has been tested and measured in our Test Workshop.

The cycle count is only valid when appropriate and professionally installed (see the installation appendix); rules for connections, page 304, and under permitted environment conditions).

# Selection table cables in drag chains

Other Technical Details can be found in the Product Pages of our Catalogue.

## Environment friendly cables, screened and unscreened

| Type | Application       |                    |                     |       |              |       |                 |         |              |          | Cable Structure |                            |       |              | Technical Data            |               |                        |          |         |         |                                 | Resistance |                  | standards   |                 |              |                    |             |             |             |           |           |              |        |     |     |     |     |    |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|      | Movement Distance |                    | Min. Bending Radius | Speed | Acceleration | Cycle | Core Insulation |         | Outer Sheath |          | Nominal Voltage | Temperature Range<br>in C° |       | halogen-free | extensively oil resistant | oil resistant | jacket flame retardant | microbes | lye     | coolant | radiation resistant 80/100 Mrad | uv-rays    | VDE-Register-No. |             | UL/CSA-approved | DESINMA      |                    |             |             |             |           |           |              |        |     |     |     |     |    |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      | 5 m               | 10 m (to 25 cores) | 15 m                | 30 m  | 100 m        | 450 m | 5 x D           | 7,5 x D | 10 x D       | 12,5 x D | 15 x D          | 2 m/s                      | 3 m/s |              |                           | 4 m/s         | 5 m/s                  | 10 m/s²  | 50 m/s² | 1 Mio   | 5 Mio                           | 10 Mio     | PVC special      | TPE special | PUR special     | inner sheath | Cu-braid, Cu-layer | PVC special | PUR special | TPE special | 300/300 V | 300/500 V | 600 V/UL-CSA | 1000 V | -40 | -30 | -20 | -10 | -5 | 70 | 80 | 90 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Ship Cables

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHIPLEX 512 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| SHIPLEX 330 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| SHIPLEX 340 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| SHIPLEX 109 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| SHIPLEX 109 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| SHIPLEX 113 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| SHIPLEX 121 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

The table indicates the main application.

In case of moving cables at higher speeds, over longer distances or higher cycling rates please contact our Technical Support.

Phone +49 7150 9209-0 or [techsupport@helukabel.de](mailto:techsupport@helukabel.de).

A cycle is a double lift: a representative sample has been tested and measured in our Test Workshop.

The cycle count is only valid when appropriate and professionally installed (see the installation advice; rules for connections, page 304, and under permitted environment conditions).





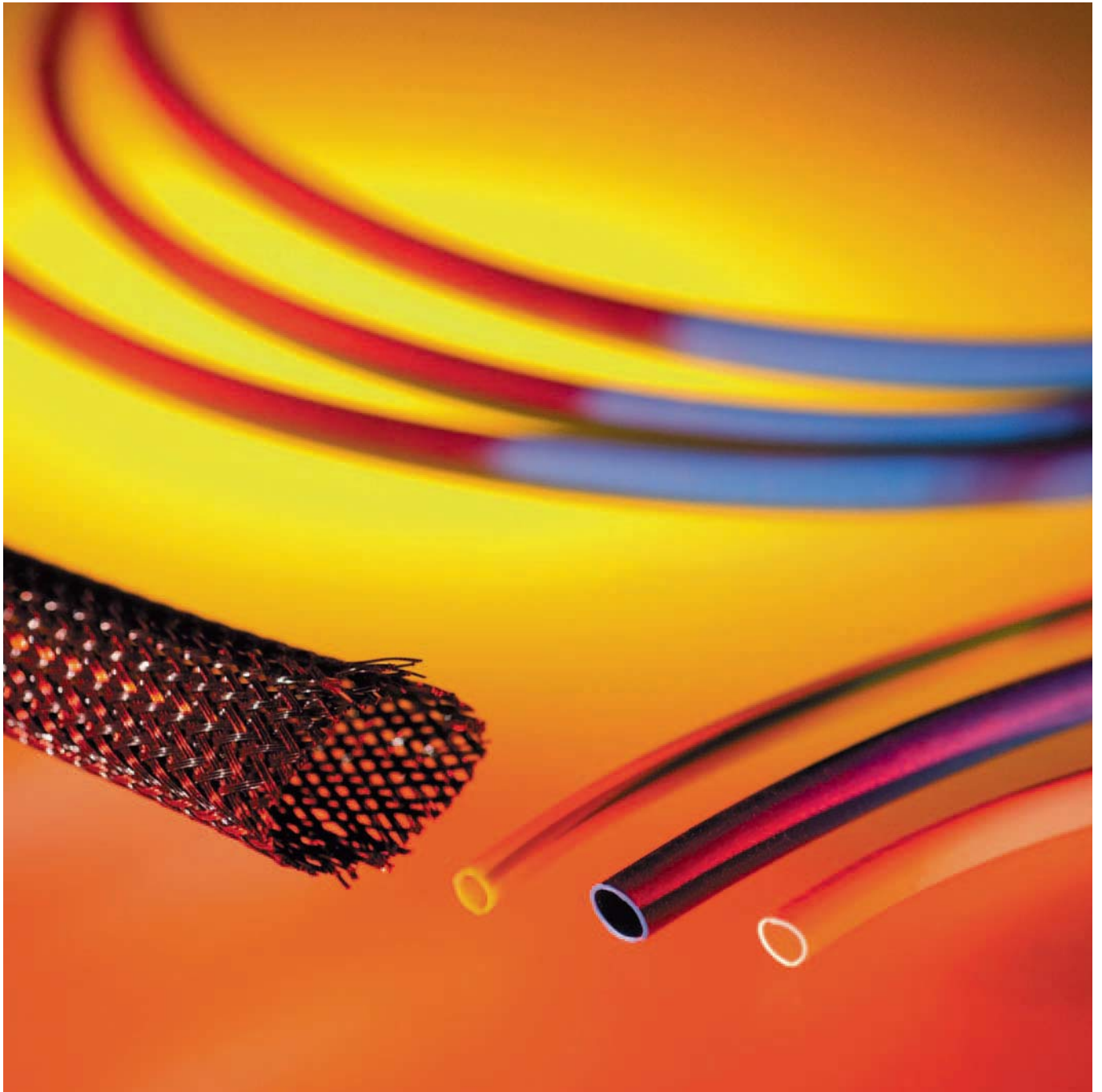


Photo: HELUKABEL®

## **Insulating, shrunk, braided and high temperature tubes**

# Insulating, shrunk, braided and high temperature tubes

## Braided sleeves

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## Insulation

|                                 |     |
|---------------------------------|-----|
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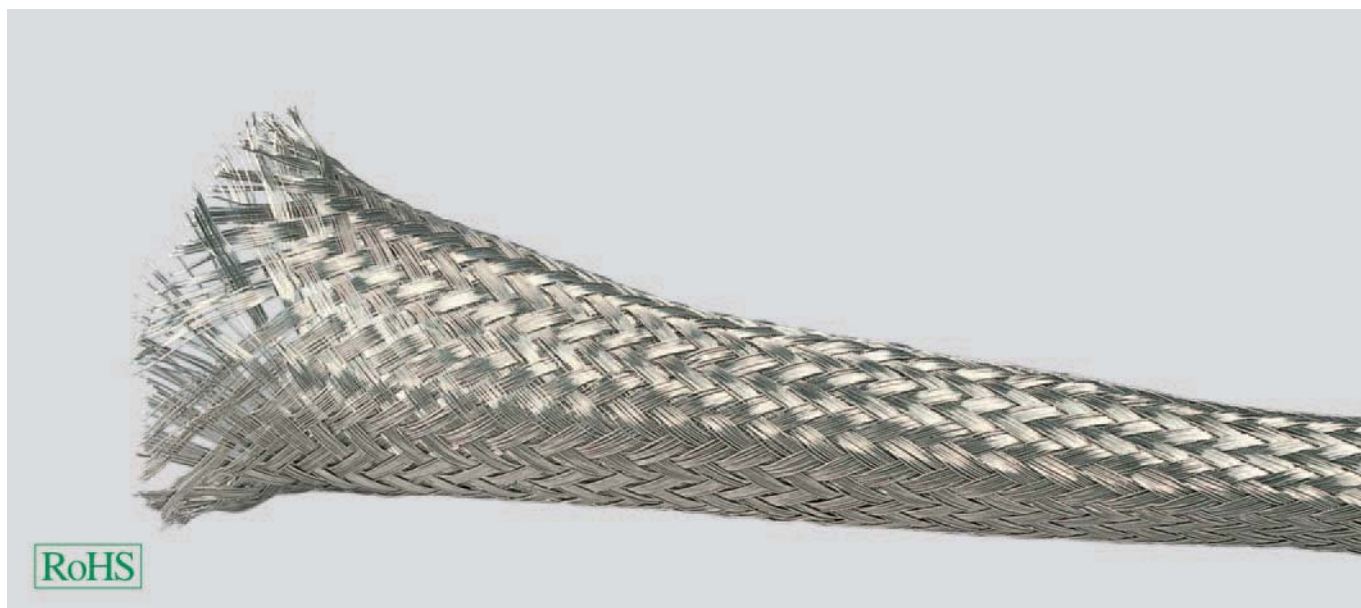
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|                                          |     |
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## End caps

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|---------------------------|-----|
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|---------------------------|-----|





### Braided hose CU

The screened and interference suppression braided sleeve for directionality and for the mechanical protection of electrical cables and lines.

### Material

Copper, tinned

### Properties

Axially compressible

### Technical data

Temperature range: -75°C up to +150°C

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### copper, tinned

| Part no. | Min. inner Ø<br>mm | Max. inner Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|--------------------|--------------------|---------------|-------------------------------------|-----------|------------|
|          |                    |                    |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97397    | 5,0                | 12,0               | 100,0         | o. r.                               | o. r.     | o. r.      |
| 97399    | 8,0                | 17,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 97400    | 12,0               | 22,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 97402    | 16,0               | 27,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 97403    | 20,0               | 35,0               | 25,0          | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Steel braided hose

## galvanised steel



### Braided hose steel

The screened braided sleeve for directionality and for the mechanical protection of electrical cables and lines.

### Material

Galvanised steel

### Technical data

Temperature range: -75°C up to +300°C

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### galvanised steel

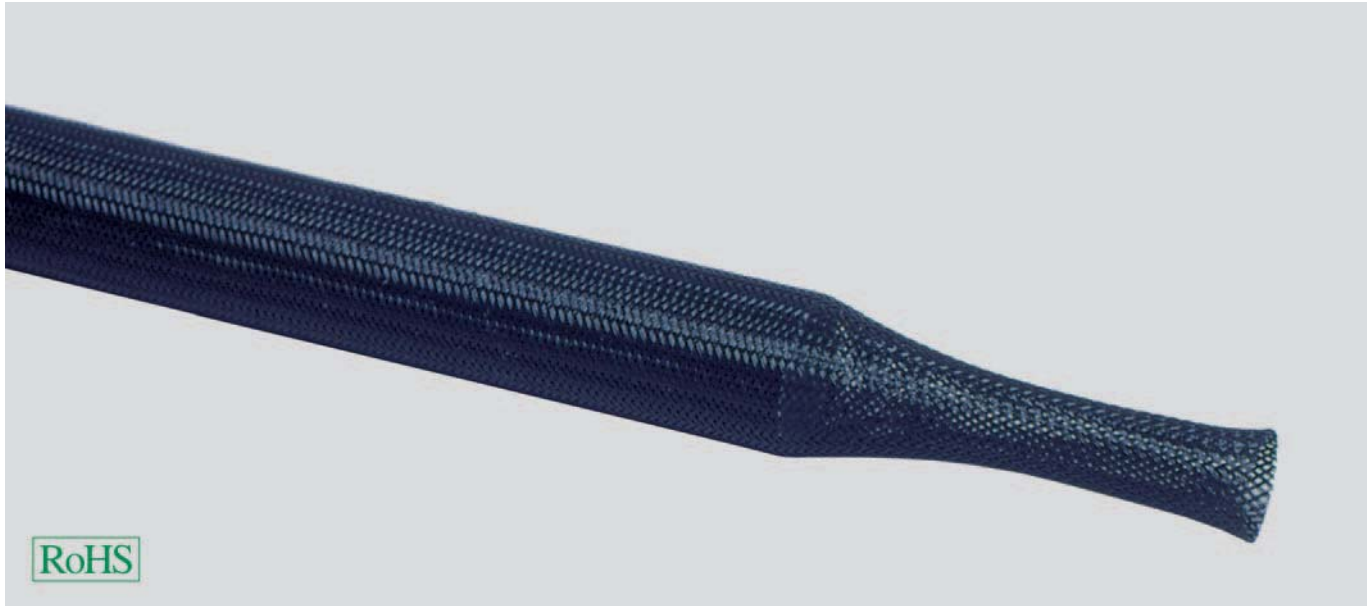
| Part no. | Min. inner Ø<br>mm | Max. inner Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|--------------------|--------------------|---------------|-------------------------------------|-----------|------------|
|          |                    |                    |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 97197    | 5,0                | 12,0               | 100,0         | o. r.                               | o. r.     | o. r.      |
| 97199    | 8,0                | 17,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 97200    | 12,0               | 22,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 97202    | 16,0               | 27,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 96561    | 20,0               | 35,0               | 25,0          | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HGP braided hose

polyester



## HGP

The polyester braided sleeve for directionality and for the mechanical protection of electrical cables and lines.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyester

- halogen-free

## Properties

Axially compressible

## Technical data

Temperature range: -50°C up to +150°C  
Temperature range temporary up to +220°C

## Polyester

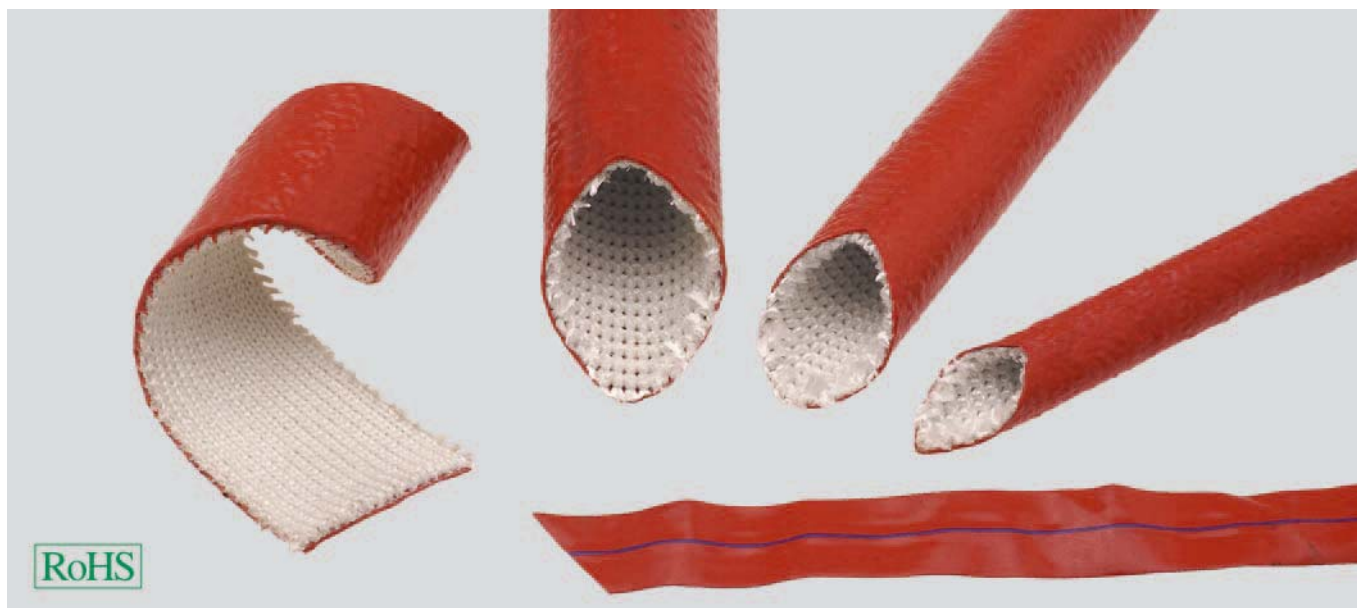
| Part no.<br>grey | Part no.<br>black | Min. inner Ø<br>mm | Max. inner Ø<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|------------------|-------------------|--------------------|--------------------|---------------|-------------------------------------|-----------|------------|
|                  |                   |                    |                    |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94900            | 98136             | 1,0                | 5,0                | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94901            | 98137             | 2,0                | 7,0                | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94902            | 98138             | 3,0                | 9,0                | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94903            | 98139             | 4,0                | 11,0               | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94904            | 98140             | 5,0                | 12,0               | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94905            | 98141             | 7,0                | 15,0               | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94906            | 98142             | 8,0                | 17,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 94907            | 98143             | 10,0               | 20,0               | 50,0          | o. r.                               | o. r.     | o. r.      |
| 94908            | 98144             | 14,0               | 26,0               | 25,0          | o. r.                               | o. r.     | o. r.      |
| 94909            | 98145             | 18,0               | 34,0               | 25,0          | o. r.                               | o. r.     | o. r.      |
| 94910            | 98146             | 20,0               | 40,0               | 25,0          | o. r.                               | o. r.     | o. r.      |
| 94911            | 98147             | 30,0               | 50,0               | 25,0          | o. r.                               | o. r.     | o. r.      |
| 94912            | 98148             | 40,0               | 66,0               | 25,0          | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HTP protection tube

high temperature protection



## HTP

This product is extremely heat resistant. HTP has a high insulation factor and, due to the iron oxide containing silicone sheath, is resistant to small quantities of liquid steel. HTP also protects against burn injuries from steam tubes, hot air or hot water lines.

## Material

Interior sheath of knitted glass-fibre braid

Silicone sheath (contains iron oxide)

Colour: orange

## Technical data

Permanent load: +260°C  
Short-time load: +1090°C  
(up to approx. 20 minutes)  
Loading moment: +1640°C  
(approx. 15-30 seconds)

## protection tube

| Part no. | Inner Ø<br>mm | Width<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|-------------|---------------|-------------------------------------|-----------|------------|
|          |               |             |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 93630    | 6,0           | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93632    | 10,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 904924   | 13,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93634    | 19,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93635    | 22,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93636    | 25,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93637    | 32,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93638    | 38,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93639    | 44,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93640    | 57,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93641    | 64,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93642    | 76,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93643    | 89,0          | -           | 15,0          | o. r.                               | o. r.     | o. r.      |
| 93644    | 102,0         | -           | 15,0          | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HTP wrapping tape

high temperature protection



## HTP

This product is extremely heat resistant. HTP has a high insulation factor and, due to the iron oxide containing silicone sheath, is resistant to small quantities of liquid steel. HTP also protects against burn injuries from steam tubes, hot air or hot water lines.

## Material

Interior sheath of knitted glass-fibre braid

Silicone sheath (contains iron oxide)

Colour: orange

## Technical data

Permanent load: +260°C  
Short-time load: +1090°C  
(up to approx. 20 minutes)  
Loading moment: +1640°C  
(approx. 15-30 seconds)

## Wrapping tape

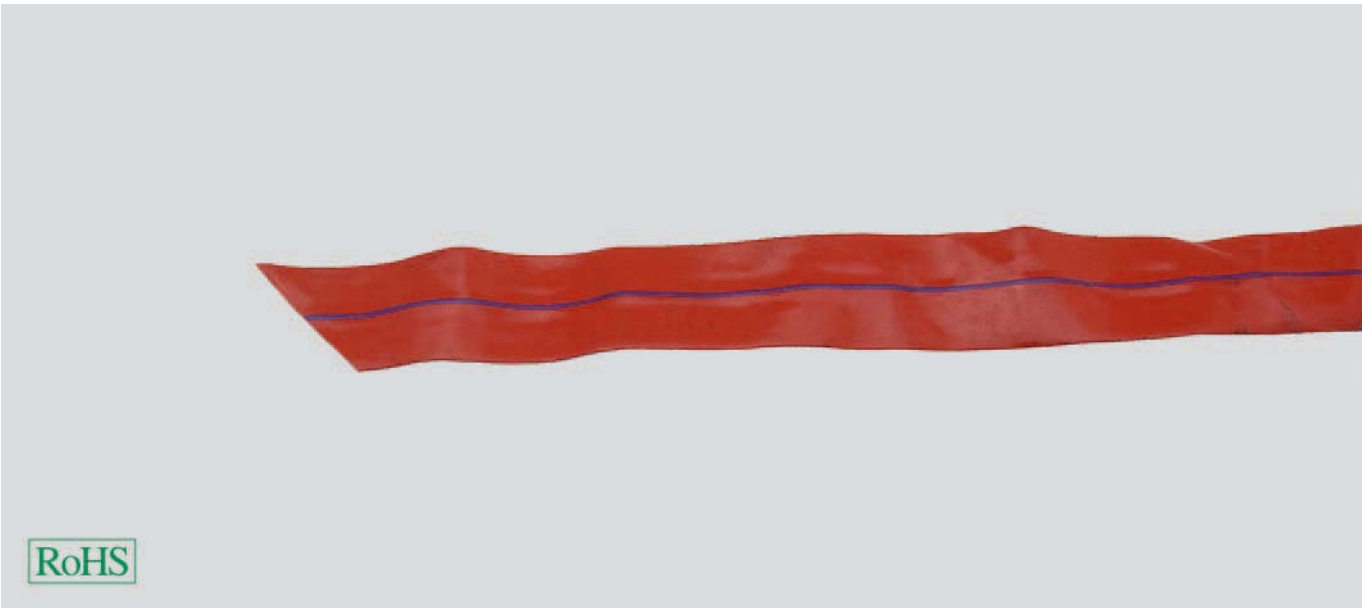
| Part no. | Inner Ø<br>mm | Width<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|-------------|---------------|-------------------------------------|-----------|------------|
|          |               |             |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94721    | -             | 25,0        | 15,0          | o. r.                               | o. r.     | o. r.      |
| 94722    | -             | 51,0        | 15,0          | o. r.                               | o. r.     | o. r.      |
| 94723    | -             | 76,0        | 15,0          | o. r.                               | o. r.     | o. r.      |
| 94724    | -             | 102,0       | 15,0          | o. r.                               | o. r.     | o. r.      |
| 94758    | -             | 127,0       | 15,0          | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HTP adhesive tape

high temperature protection



**HTP**

This product is extremely heat resistant. HTP has a high insulation factor and, due to the iron oxide containing silicone sheath, is resistant to small quantities of liquid steel. HTP also protects against burn injuries from steam tubes, hot air or hot water lines.

**Material**

Interior sheath of knitted glass-fibre braid

Silicone sheath (contains iron oxide)

Colour: orange

**Technical data**

Permanent load: +260°C

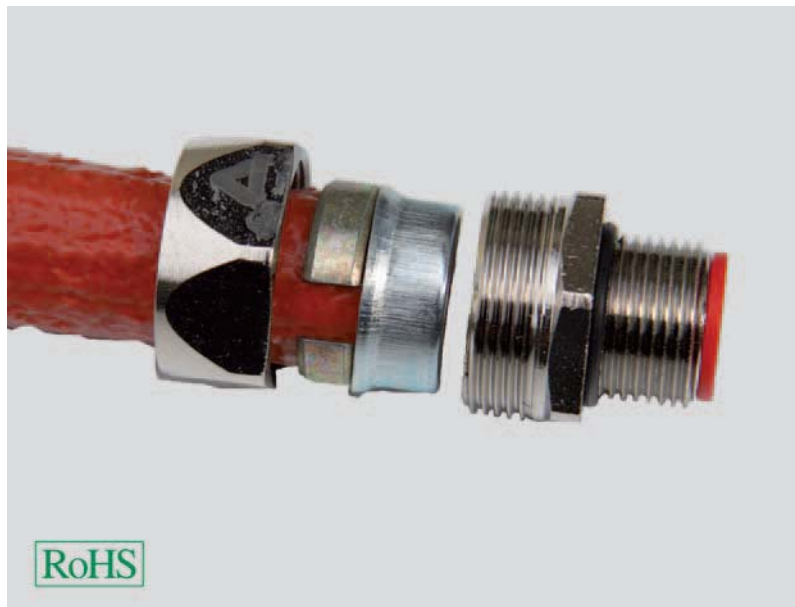
| adhesive tape |            |          |            |                                     |           |            |
|---------------|------------|----------|------------|-------------------------------------|-----------|------------|
| Part no.      | Inner Ø mm | Width mm | Per metres | Net EUR/100 metres at a purchase of |           |            |
|               |            |          |            | up to 100                           | 101 - 500 | 501 - 1000 |
| 93645         | -          | 25,0     | 11,0       | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice. o. r. = on request



# HTP clamp ring

high temperature protection



new

## Clamping rings for braided sleeve HTP

To assemble the tube connectors LT to the high temperature protection tube HTP. The plastic clamp ring is replaced by the brass clamp ring.

## Material

Brass, nickel plated

## Note

In conjunction with the tube connectors LT: Protection classification IP 54

## Technical data

Temperature range: -45°C up to +105°C

## Clamp ring

| Part no. | Size      | trade size mm | Unit | Net EUR/100 items at a purchase of up to 100 | 101 - 500 | 501 - 1000 |
|----------|-----------|---------------|------|----------------------------------------------|-----------|------------|
| 905439   | M16 x 1,5 | 13            | 50   | o. r.                                        | o. r.     | o. r.      |
| 905555   | M20 x 1,5 | 16            | 50   | o. r.                                        | o. r.     | o. r.      |
| 905440   | M25 x 1,5 | 22            | 25   | o. r.                                        | o. r.     | o. r.      |
| 905557   | M32 x 1,5 | 25            | 10   | o. r.                                        | o. r.     | o. r.      |
| 905558   | M40 x 1,5 | 35            | 5    | o. r.                                        | o. r.     | o. r.      |
| 905559   | M50 x 1,5 | 38            | 5    | o. r.                                        | o. r.     | o. r.      |
| 905441   | M63 x 1,5 | 51            | 4    | o. r.                                        | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## Matching conduit glands



## Conduit gland LT straight

LIQUIDTIGHT gland for plastic-coated metallic protection tubes and high temperature protection tubes HTP (An additional clamping ring is required). UL/CSA approval.

The conical earthing sleeve offers maximum surface contact for optimum sealing and earthing.

confer page 281



## Conduit gland LT 45°

LIQUIDTIGHT gland for plastic-coated metallic protection tubes and high temperature protection tubes HTP. (An additional clamping ring is required). UL/CSA approval.

The conical earthing sleeve offers maximum surface contact for optimum sealing and earthing.

confer page 283



# IB insulating tube

PVC



## IB

PVC insulated tube for retrospective insulating and bundling wires and lines.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

PVC

Colour: black

Flammability acc. to UL 94: V0

- silicone-free

## Technical data

DIN 40621

Temperature range: -20°C up to +85°C

Temperature range temporary up to +90°C

| Part no. | Inner Ø<br>mm | Wall<br>thickness<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|-------------------------|---------------|-------------------------------------|-----------|------------|
|          |               |                         |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 91310    | 1,0           | 0,3                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 91311    | 2,0           | 0,4                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 905179   | 3,5           | 0,4                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 91312    | 3,0           | 0,4                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 905180   | 4,5           | 0,5                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 91313    | 4,0           | 0,5                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 91314    | 5,0           | 0,6                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 91315    | 6,0           | 0,6                     | 200,0         | O. r.                               | O. r.     | O. r.      |
| 91316    | 7,0           | 0,7                     | 100,0         | O. r.                               | O. r.     | O. r.      |
| 91317    | 8,0           | 0,7                     | 100,0         | O. r.                               | O. r.     | O. r.      |
| 91318    | 9,0           | 0,7                     | 100,0         | O. r.                               | O. r.     | O. r.      |
| 91319    | 10,0          | 0,7                     | 100,0         | O. r.                               | O. r.     | O. r.      |
| 91320    | 12,0          | 0,8                     | 100,0         | O. r.                               | O. r.     | O. r.      |
| 97228    | 14,0          | 1,0                     | 100,0         | O. r.                               | O. r.     | O. r.      |
| 96795    | 16,0          | 1,0                     | 100,0         | O. r.                               | O. r.     | O. r.      |
| 97281    | 18,0          | 1,0                     | 25,0          | O. r.                               | O. r.     | O. r.      |
| 97162    | 20,0          | 1,2                     | 25,0          | O. r.                               | O. r.     | O. r.      |
| 97282    | 22,0          | 1,2                     | 25,0          | O. r.                               | O. r.     | O. r.      |
| 97283    | 26,0          | 1,0                     | 25,0          | O. r.                               | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# IC insulating tube

PVC



## IC

PVC insulating tube for insulating and bundling wires and lines.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

PVC

Flammability acc. to UL 94: V2

- silicone-free

## Note

### Colour code:

Replace the "x" in the table with the following figures to obtain the product number of your required colour.

0=white, 1=blue, 2=yellow, 3=red,

4=transparent

5=green, 6=orange, 7=violet, 8=grey,

9=brown

## Technical data

DIN 40621

Temperature range: -20°C up to +90°C

## green/yellow

| Part no. | Inner Ø mm | Wall thickness mm | Per metres | Net EUR/100 metres at a purchase of |           |            |
|----------|------------|-------------------|------------|-------------------------------------|-----------|------------|
|          |            |                   |            | up to 100                           | 101 - 500 | 501 - 1000 |
| 92280    | 1,0        | 0,4               | 250,0      | o. r.                               | o. r.     | o. r.      |
| 92281    | 1,5        | 0,4               | 250,0      | o. r.                               | o. r.     | o. r.      |
| 92282    | 2,0        | 0,4               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 92286    | 4,0        | 0,5               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 92289    | 6,0        | 0,55              | 25,0       | o. r.                               | o. r.     | o. r.      |
| 92291    | 8,0        | 0,62              | 25,0       | o. r.                               | o. r.     | o. r.      |
| 92292    | 10,0       | 0,75              | 25,0       | o. r.                               | o. r.     | o. r.      |
| 92293    | 14,0       | 0,8               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 92294    | 16,0       | 0,8               | 25,0       | o. r.                               | o. r.     | o. r.      |

## coloured

| Part no. | Inner Ø mm | Wall thickness mm | Per metres | Net EUR/100 metres at a purchase of |           |            |
|----------|------------|-------------------|------------|-------------------------------------|-----------|------------|
|          |            |                   |            | up to 100                           | 101 - 500 | 501 - 1000 |
| 9210x    | 1,0        | 0,4               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 9211x    | 1,5        | 0,4               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 9212x    | 2,0        | 0,4               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 9213x    | 2,5        | 0,4               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 9214x    | 3,0        | 0,4               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 9215x    | 3,5        | 0,4               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 9216x    | 4,0        | 0,5               | 50,0       | o. r.                               | o. r.     | o. r.      |
| 9217x    | 4,5        | 0,5               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9218x    | 5,0        | 0,52              | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9219x    | 6,0        | 0,55              | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9220x    | 7,0        | 0,6               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9221x    | 8,0        | 0,62              | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9222x    | 10,0       | 0,7               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9223x    | 14,0       | 0,8               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9224x    | 16,0       | 0,8               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9225x    | 20,0       | 0,8               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9226x    | 26,0       | 1,0               | 25,0       | o. r.                               | o. r.     | o. r.      |
| 9227x    | 36,0       | 1,0               | 25,0       | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SI insulating tube

silicone



**SI**  
Silicone insulating tube for insulating and bundling wires and lines.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Properties

Softener and heavy metal free, physiologically and toxicologically safe with good chemical resistance.

## Technical data

DIN 40628

Temperature range: -50°C up to +180°C

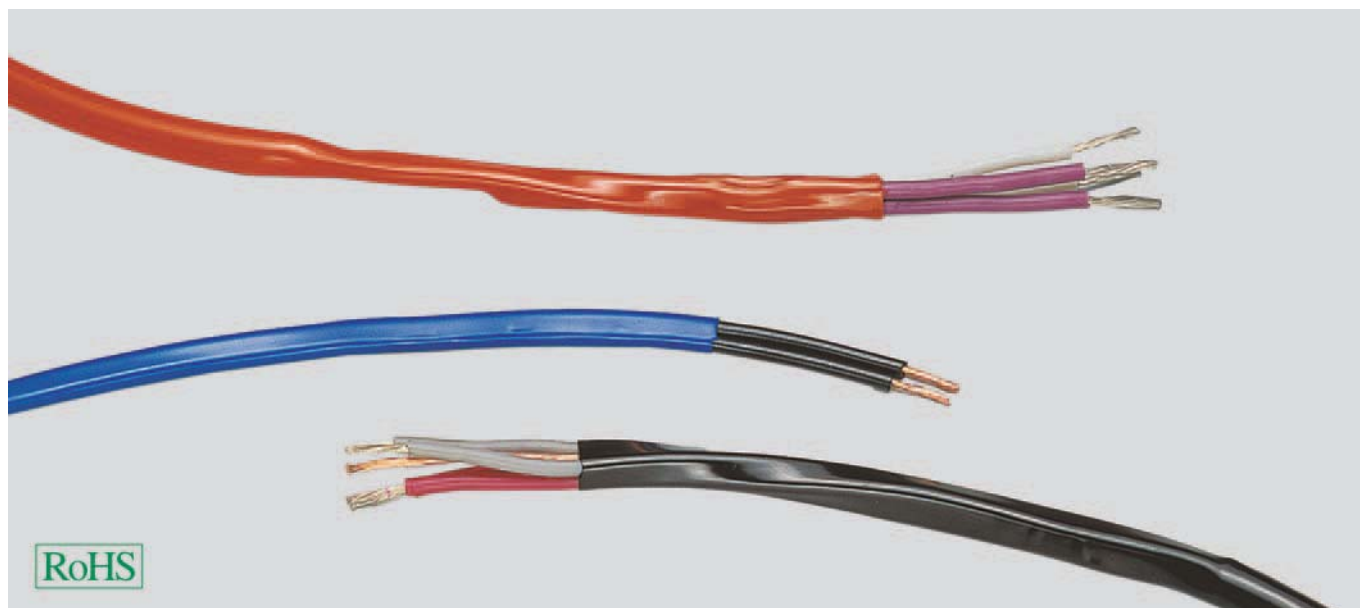
| Part no. | Inner Ø<br>mm | Wall<br>thickness<br>mm | Per<br>metres | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|-------------------------|---------------|-------------------------------------|-----------|------------|
|          |               |                         |               | up to 100                           | 101 - 500 | 501 - 1000 |
| 94741    | 1,0           | 0,4                     | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94742    | 2,0           | 0,4                     | 100,0         | o. r.                               | o. r.     | o. r.      |
| 97203    | 3,0           | 0,4                     | 100,0         | o. r.                               | o. r.     | o. r.      |
| 97426    | 4,0           | 0,5                     | 100,0         | o. r.                               | o. r.     | o. r.      |
| 97427    | 5,0           | 0,6                     | 100,0         | o. r.                               | o. r.     | o. r.      |
| 97757    | 6,0           | 0,6                     | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94743    | 8,0           | 0,7                     | 100,0         | o. r.                               | o. r.     | o. r.      |
| 94744    | 10,0          | 0,7                     | 50,0          | o. r.                               | o. r.     | o. r.      |
| 94745    | 12,0          | 0,8                     | 50,0          | o. r.                               | o. r.     | o. r.      |
| 94746    | 14,0          | 0,8                     | 50,0          | o. r.                               | o. r.     | o. r.      |
| 94747    | 16,0          | 0,8                     | 50,0          | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SCH heat-shrink tubing

PVC



## SCH

PVC shrunk tube for repairing insulation and sealing electrical components.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

PVC

Colour: black

Flammability acc. to UL 94: V0

- silicone-free

## Note

**Attention:** Do not store tubes at over 18°C!  
Otherwise properties are changed!  
Length shrinkage approx. 20-30%  
The colours orange, yellow, white, blue, green, brown, red on request.

## Technical data

Temperature range: -20°C up to +90°C

## black

| Part no. | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Net EUR/100 metres at a purchase of |           |            |
|----------|-----------------------------|-------------------|----------------------------|-----------|-------------------------------------|-----------|------------|
|          |                             |                   |                            |           | up to 100                           | 101 - 500 | 501 - 1000 |
| 91300    | 2,5                         | 0,2               | 1,2                        | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91301    | 4,0                         | 0,25              | 2,0                        | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91302    | 6,0                         | 0,25              | 3,0                        | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91303    | 7,0                         | 0,25              | 4,0                        | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91304    | 11,0                        | 0,3               | 6,0                        | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91305    | 14,0                        | 0,3               | 8,0                        | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91306    | 17,0                        | 0,4               | 10,0                       | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91307    | 20,0                        | 0,5               | 13,0                       | 100,0     | o. r.                               | o. r.     | o. r.      |
| 91308    | 25,0                        | 0,5               | 16,0                       | 50,0      | o. r.                               | o. r.     | o. r.      |
| 91309    | 31,0                        | 0,5               | 20,0                       | 50,0      | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HSB - Boxes heat shrink 2:1

polyolefine



## HSB boxes

Polyolefine shrunk tube for repairing insulation and sealing electrical components.  
A Thomas & Betts product.

## Material

PO (Polyolefine)

## Technical data

Temperature range: -55°C up to +125°C

## Note

Form of shipment: HSB box  
Other colours on request.

### black

| Part no. | Type T & B | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Unit | Net EUR/item at a purchase of |        |         |
|----------|------------|-----------------------------|-------------------|----------------------------|-----------|------|-------------------------------|--------|---------|
|          |            |                             |                   |                            |           |      | up to 5                       | 6 - 10 | 11 - 20 |
| 91321    | HSB 46     | 1,2                         | 0,4               | 0,6                        | 12,0      | 1    | o. r.                         | o. r.  | o. r.   |
| 91322    | HSB 63     | 1,6                         | 0,4               | 0,8                        | 12,0      | 1    | o. r.                         | o. r.  | o. r.   |
| 91323    | HSB 93     | 2,4                         | 0,5               | 1,2                        | 11,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91324    | HSB 125    | 3,2                         | 0,5               | 1,6                        | 11,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91325    | HSB 187    | 4,7                         | 0,5               | 2,4                        | 9,5       | 1    | o. r.                         | o. r.  | o. r.   |
| 91326    | HSB 250    | 6,4                         | 0,6               | 3,2                        | 7,5       | 1    | o. r.                         | o. r.  | o. r.   |
| 91327    | HSB 375    | 9,5                         | 0,6               | 4,7                        | 6,5       | 1    | o. r.                         | o. r.  | o. r.   |
| 91328    | HSB 500    | 12,7                        | 0,7               | 6,4                        | 6,0       | 1    | o. r.                         | o. r.  | o. r.   |
| 91329    | HSB 750    | 19,1                        | 0,7               | 9,5                        | 5,0       | 1    | o. r.                         | o. r.  | o. r.   |
| 91330    | HSB 1000   | 25,4                        | 0,8               | 12,7                       | 3,3       | 1    | o. r.                         | o. r.  | o. r.   |

### transparent

| Part no. | Type T & B | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Unit | Net EUR/item at a purchase of |        |         |
|----------|------------|-----------------------------|-------------------|----------------------------|-----------|------|-------------------------------|--------|---------|
|          |            |                             |                   |                            |           |      | up to 5                       | 6 - 10 | 11 - 20 |
| 98519    | HSB 46-C   | 1,2                         | 0,4               | 0,6                        | 12,0      | 1    | o. r.                         | o. r.  | o. r.   |
| 97085    | HSB 63-C   | 1,6                         | 0,4               | 0,8                        | 12,0      | 1    | o. r.                         | o. r.  | o. r.   |
| 96277    | HSB 93-C   | 2,4                         | 0,5               | 1,2                        | 11,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 97485    | HSB 125-C  | 3,2                         | 0,5               | 1,6                        | 11,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 96687    | HSB 187-C  | 4,7                         | 0,5               | 2,4                        | 9,5       | 1    | o. r.                         | o. r.  | o. r.   |
| 96830    | HSB 250-C  | 6,4                         | 0,6               | 3,2                        | 7,5       | 1    | o. r.                         | o. r.  | o. r.   |
| 96761    | HSB 375-C  | 9,5                         | 0,6               | 4,7                        | 6,5       | 1    | o. r.                         | o. r.  | o. r.   |
| 96752    | HSB 500-C  | 12,7                        | 0,7               | 6,4                        | 6,0       | 1    | o. r.                         | o. r.  | o. r.   |
| 96751    | HSB 750-C  | 19,1                        | 0,7               | 9,5                        | 5,0       | 1    | o. r.                         | o. r.  | o. r.   |
| 97107    | HSB 1000-C | 25,4                        | 0,8               | 12,7                       | 3,3       | 1    | o. r.                         | o. r.  | o. r.   |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# CMP heat shrink 2:1

polyolefine



## CMP

Polyolefine shrunk tube for repairing insulation and sealing electrical components. A Thomas & Betts product.

## Material

PO (Polyolefine)

Colour: black

## Technical data

Temperature range: -55°C up to +125°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Note

Form of shipment:  
CMP box (1.2m sections) (25 sections = 30.5m;  
10 sections = 12.2m)  
CMP rolls

## box

| Part no. | Type T & B   | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Unit | Net EUR/unit at a purchase of |        |         |
|----------|--------------|-----------------------------|-------------------|----------------------------|-----------|------|-------------------------------|--------|---------|
|          |              |                             |                   |                            |           |      | up to 5                       | 6 - 10 | 11 - 20 |
| 91290    | CMP 46-0-A   | 1,2                         | 0,2               | 0,6                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91291    | CMP 63-0-A   | 1,6                         | 0,2               | 0,8                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91292    | CMP 93-0-A   | 2,4                         | 0,25              | 1,2                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91293    | CMP 125-0-A  | 3,2                         | 0,25              | 1,6                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91294    | CMP 187-0-A  | 4,7                         | 0,25              | 2,4                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91295    | CMP 250-0-A  | 6,4                         | 0,3               | 3,2                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91296    | CMP 375-0-A  | 9,5                         | 0,3               | 4,8                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91297    | CMP 500-0-A  | 12,7                        | 0,3               | 6,4                        | 30,5      | 1    | o. r.                         | o. r.  | o. r.   |
| 91298    | CMP 750-0-A  | 19,1                        | 0,4               | 9,5                        | 12,2      | 1    | o. r.                         | o. r.  | o. r.   |
| 91299    | CMP 1000-0-A | 25,4                        | 0,45              | 12,7                       | 12,2      | 1    | o. r.                         | o. r.  | o. r.   |

## coil

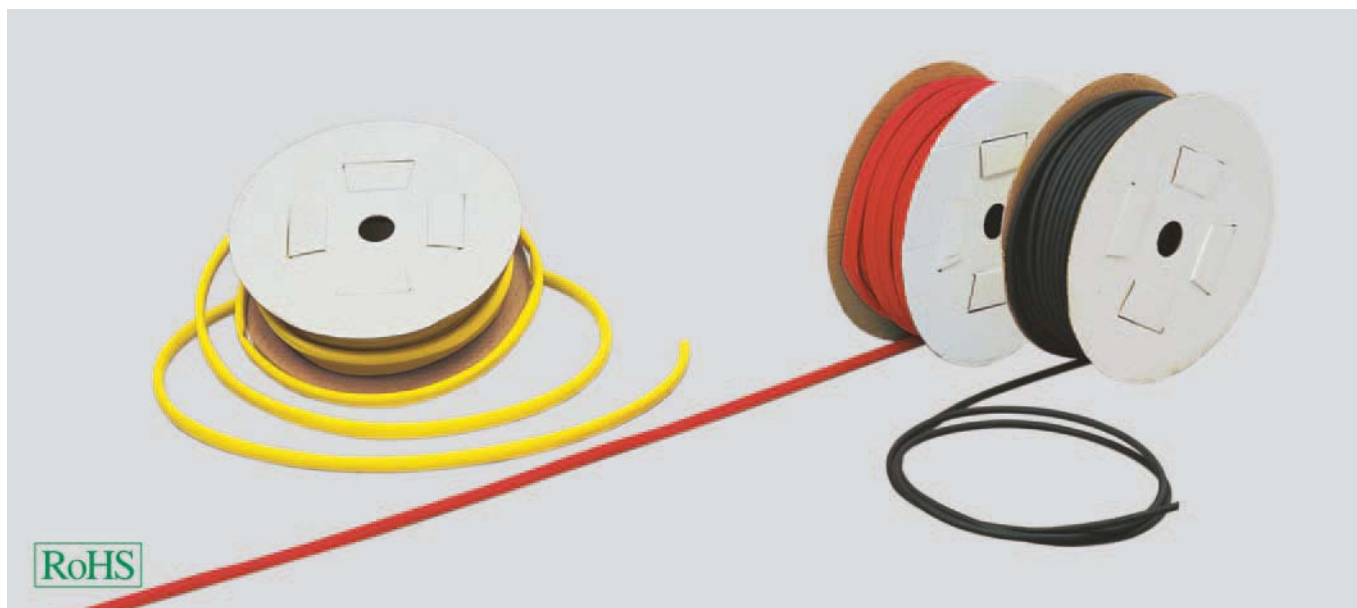
| Part no. | Type T & B    | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Unit | Net EUR/100 metres at a purchase of |           |            |
|----------|---------------|-----------------------------|-------------------|----------------------------|-----------|------|-------------------------------------|-----------|------------|
|          |               |                             |                   |                            |           |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 91331    | CMP 46-0-BG   | 1,2                         | 0,2               | 0,6                        | 300,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91332    | CMP 63-0-BG   | 1,6                         | 0,2               | 0,8                        | 300,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91333    | CMP 93-0-BG   | 2,4                         | 0,25              | 1,2                        | 300,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91334    | CMP 125-0-BG  | 3,2                         | 0,25              | 1,6                        | 300,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91335    | CMP 187-0-BG  | 4,7                         | 0,25              | 2,4                        | 300,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91336    | CMP 250-0-BG  | 6,4                         | 0,3               | 3,2                        | 300,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91337    | CMP 375-0-BG  | 9,5                         | 0,3               | 4,8                        | 150,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91338    | CMP 500-0-BG  | 12,7                        | 0,3               | 6,4                        | 100,0     | -    | o. r.                               | o. r.     | o. r.      |
| 91339    | CMP 750-0-BG  | 19,1                        | 0,4               | 9,5                        | 50,0      | -    | o. r.                               | o. r.     | o. r.      |
| 91340    | CMP 1000-0-BG | 25,4                        | 0,45              | 12,7                       | 50,0      | -    | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SPSP - spools heat shrink 2:1

polyolefine



## SPSP spools

Polyolefine shrunk tube for repairing insulation and sealing electrical components.

## Material

PO (Polyolefine)

## Technical data

Temperature range: -55°C up to +135°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Note

Replace the "x" in the table with the following figures to obtain the product number of your required colour.

Colour code:

0=white

1=blue

2=yellow

3=red

4=transparent

6=brown

7=orange

8=grey

9=green

## black

| Part no. | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Unit | Net EUR/100 metres at a purchase of |        |         |
|----------|-----------------------------|-------------------|----------------------------|-----------|------|-------------------------------------|--------|---------|
|          |                             |                   |                            |           |      | up to 5                             | 6 - 10 | 11 - 20 |
| 91777    | 1,2                         | 0,4               | 0,6                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91778    | 1,6                         | 0,4               | 0,8                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91779    | 2,4                         | 0,5               | 1,2                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91780    | 3,2                         | 0,5               | 1,6                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91781    | 4,8                         | 0,5               | 2,4                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91782    | 6,4                         | 0,6               | 3,2                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91783    | 9,5                         | 0,6               | 4,7                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91784    | 12,7                        | 0,6               | 6,4                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91785    | 19,1                        | 0,8               | 9,5                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 91786    | 25,4                        | 0,9               | 12,7                       | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |

## green/yellow

| Part no. | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Unit | Net EUR/100 metres at a purchase of |        |         |
|----------|-----------------------------|-------------------|----------------------------|-----------|------|-------------------------------------|--------|---------|
|          |                             |                   |                            |           |      | up to 5                             | 6 - 10 | 11 - 20 |
| 92335    | 2,4                         | 0,5               | 1,2                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 92345    | 3,2                         | 0,5               | 1,6                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 92355    | 4,8                         | 0,5               | 2,4                        | 20,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 92365    | 6,4                         | 0,6               | 3,2                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 92375    | 9,5                         | 0,6               | 4,7                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 92385    | 12,7                        | 0,6               | 6,4                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 92395    | 19,1                        | 0,8               | 9,5                        | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |
| 92405    | 25,4                        | 0,9               | 12,7                       | 10,0      | 1    | o. r.                               | o. r.  | o. r.   |

Continuation ►

o. r. = on request



# SPSP - spools heat shrink 2:1



polyolefine

coloured

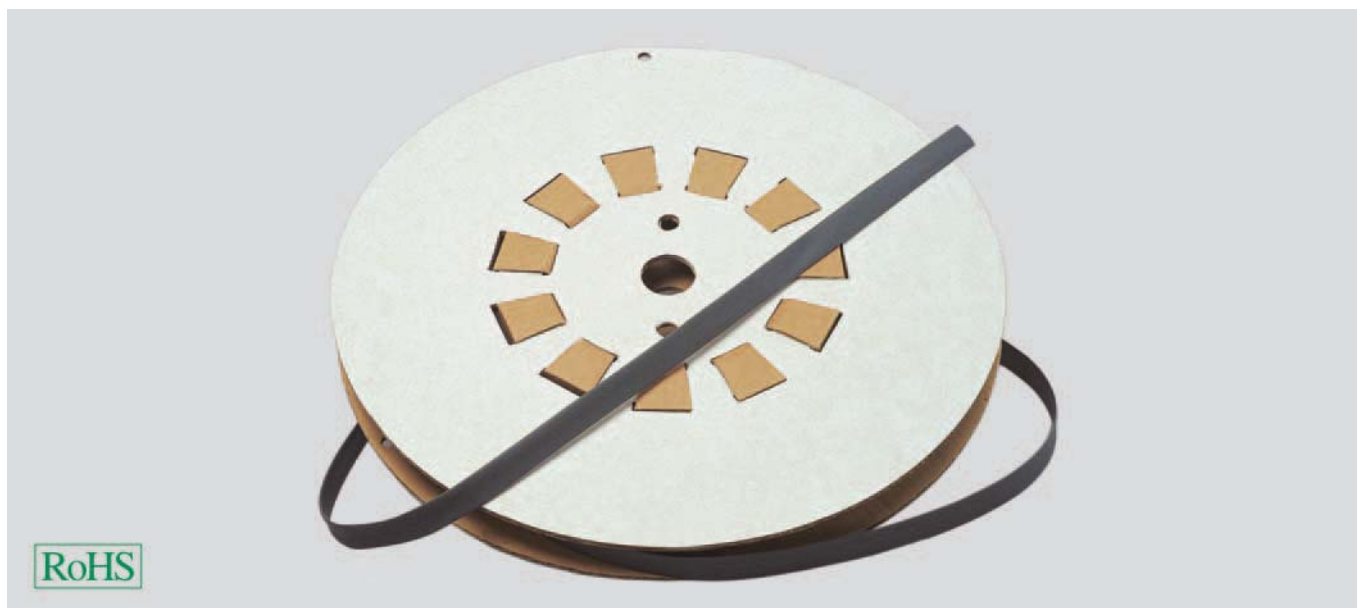
| Part no. | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |        |         |
|----------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|--------|---------|
|          |                                   |                         |                                  |              |      | up to 5                             | 6 - 10 | 11 - 20 |
| 9231x    | 1,2                               | 0,4                     | 0,6                              | 20,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9232x    | 1,6                               | 0,4                     | 0,8                              | 20,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9233x    | 2,4                               | 0,5                     | 1,2                              | 20,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9234x    | 3,2                               | 0,5                     | 1,6                              | 20,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9235x    | 4,8                               | 0,5                     | 2,4                              | 20,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9236x    | 6,4                               | 0,6                     | 3,2                              | 10,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9237x    | 9,5                               | 0,6                     | 4,7                              | 10,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9238x    | 12,7                              | 0,6                     | 6,4                              | 10,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9239x    | 19,1                              | 0,8                     | 9,5                              | 10,0         | 1    | o. r.                               | o. r.  | o. r.   |
| 9240x    | 25,4                              | 0,9                     | 12,7                             | 10,0         | 1    | o. r.                               | o. r.  | o. r.   |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SPRO - rolls heat shrink 2:1

polyolefine



## SPRO rolls 2:1

Polyolefine shrink tube for repairing insulation and sealing electrical components.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

PO (Polyolefine)

## Note

Replace the "x" in the table with the following figures to obtain the product number of your required colour.

Colour code:

0=white

1=blue

2=yellow

3=red

4=transparent

6=brown

7=orange

8=grey

9=green

## Technical data

Temperature range: -55°C up to +135°C

## black

| Part no.<br>Roll | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |           |            |
|------------------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|-----------|------------|
|                  |                                   |                         |                                  |              |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 91788            | 1,2                               | 0,4                     | 0,6                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 91789            | 1,6                               | 0,4                     | 0,8                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 91790            | 2,4                               | 0,5                     | 1,2                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 91791            | 3,2                               | 0,5                     | 1,6                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 91792            | 4,8                               | 0,5                     | 2,4                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91793            | 6,4                               | 0,6                     | 3,2                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91794            | 9,5                               | 0,6                     | 4,7                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91795            | 12,7                              | 0,6                     | 6,4                              | 50,0         | -    | o. r.                               | o. r.     | o. r.      |
| 90058            | 16,0                              | 0,6                     | 8,0                              | 50,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91796            | 19,1                              | 0,8                     | 9,5                              | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91797            | 25,4                              | 0,9                     | 12,7                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 904771           | 32,0                              | 0,9                     | 16,0                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91798            | 38,1                              | 1,0                     | 19,0                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91799            | 50,8                              | 1,1                     | 25,4                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 96828            | 76,2                              | 1,3                     | 38,1                             | 15,0         | -    | o. r.                               | o. r.     | o. r.      |
| 96929            | 101,0                             | 1,4                     | 50,8                             | 15,0         | -    | o. r.                               | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# SPRO - rolls heat shrink 2:1



polyolefine

green/yellow

| Part no.<br>Roll | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |           |            |
|------------------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|-----------|------------|
|                  |                                   |                         |                                  |              |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 92435            | 2,4                               | 0,5                     | 1,2                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 92445            | 3,2                               | 0,5                     | 1,6                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 92455            | 4,8                               | 0,5                     | 2,4                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 92465            | 6,4                               | 0,6                     | 3,2                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 92475            | 9,5                               | 0,6                     | 4,7                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 92485            | 12,7                              | 0,6                     | 6,4                              | 100,0        | -    | o. r.                               | o. r.     | o. r.      |
| 92495            | 19,1                              | 0,8                     | 9,5                              | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 92505            | 25,4                              | 0,9                     | 12,7                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 92515            | 38,1                              | 1,0                     | 19,0                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 92425            | 50,8                              | 1,0                     | 25,4                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |

## coloured

| Part no.<br>Roll | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |           |            |
|------------------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|-----------|------------|
|                  |                                   |                         |                                  |              |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 9241x            | 1,2                               | 0,4                     | 0,6                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 9242x            | 1,6                               | 0,4                     | 0,8                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 9243x            | 2,4                               | 0,5                     | 1,2                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 9244x            | 3,2                               | 0,5                     | 1,6                              | 150,0        | -    | o. r.                               | o. r.     | o. r.      |
| 9245x            | 4,8                               | 0,5                     | 2,4                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 9246x            | 6,4                               | 0,6                     | 3,2                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 9247x            | 9,5                               | 0,6                     | 4,7                              | 75,0         | -    | o. r.                               | o. r.     | o. r.      |
| 9248x            | 12,7                              | 0,6                     | 6,4                              | 100,0        | -    | o. r.                               | o. r.     | o. r.      |
| 9249x            | 19,1                              | 0,8                     | 9,5                              | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 9250x            | 25,4                              | 0,9                     | 12,7                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 9251x            | 38,1                              | 1,0                     | 19,0                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

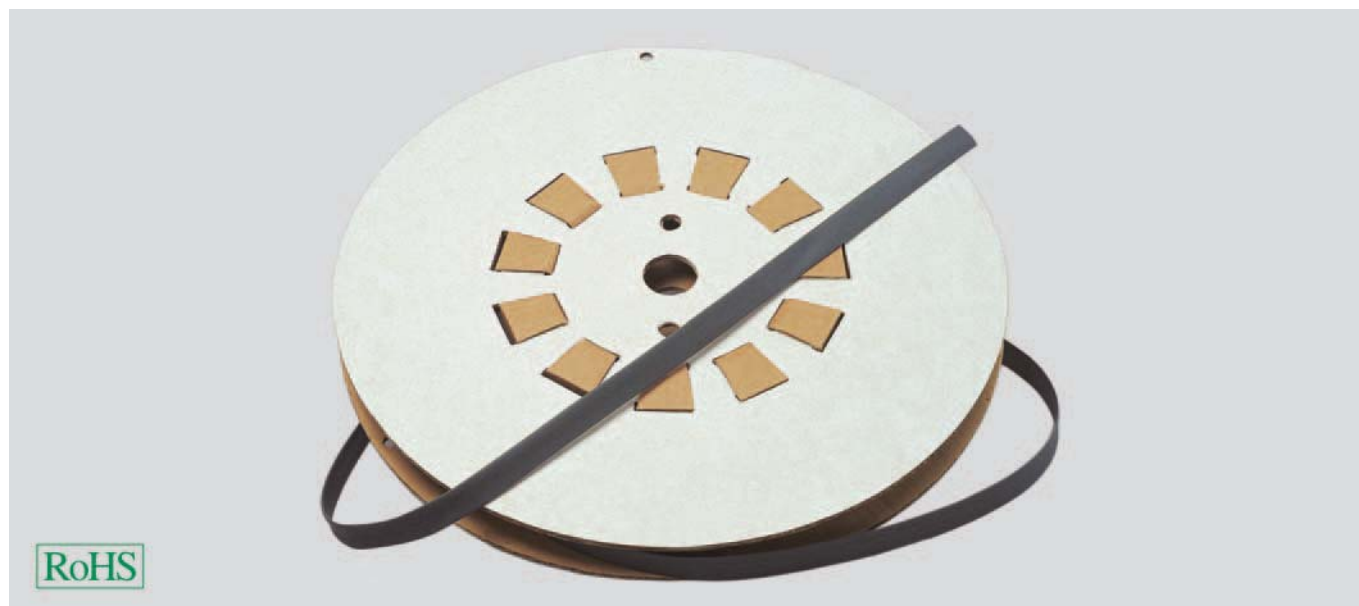
o. r. = on request

# SPRO - rolls heat shrink 3:1

polyolefine



new



## SPRO rolls 3:1

Polyolefine shrunk tube for repairing insulation and sealing electrical components. Shrink rate 3:1

## Material

PO (Polyolefine)

## Technical data

Temperature range: -55°C up to +135°C

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Note

Replace the "x" in the table with the following figures to obtain the product number of your required colour.

Colour code:

1=blue

2=yellow

3=red

9=green

## black

| Part no.<br>Roll | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |           |            |
|------------------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|-----------|------------|
|                  |                                   |                         |                                  |              |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 903035           | 6,4                               | 0,65                    | 2,0                              | 75,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903045           | 9,5                               | 0,75                    | 3,0                              | 75,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903055           | 12,7                              | 0,75                    | 4,0                              | 50,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903065           | 19,0                              | 0,85                    | 6,0                              | 30,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903075           | 25,4                              | 1,0                     | 8,0                              | 30,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903085           | 39,0                              | 1,15                    | 13,0                             | 30,0         | -    | O. r.                               | O. r.     | O. r.      |

## green/yellow

| Part no.<br>Roll | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |           |            |
|------------------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|-----------|------------|
|                  |                                   |                         |                                  |              |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 903093           | 6,4                               | 0,65                    | 2,0                              | 75,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903094           | 9,5                               | 0,75                    | 3,0                              | 75,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903095           | 12,7                              | 0,75                    | 4,0                              | 50,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903096           | 19,0                              | 0,85                    | 6,0                              | 30,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903097           | 25,4                              | 1,0                     | 8,0                              | 30,0         | -    | O. r.                               | O. r.     | O. r.      |
| 903098           | 39,0                              | 1,15                    | 13,0                             | 30,0         | -    | O. r.                               | O. r.     | O. r.      |

## coloured

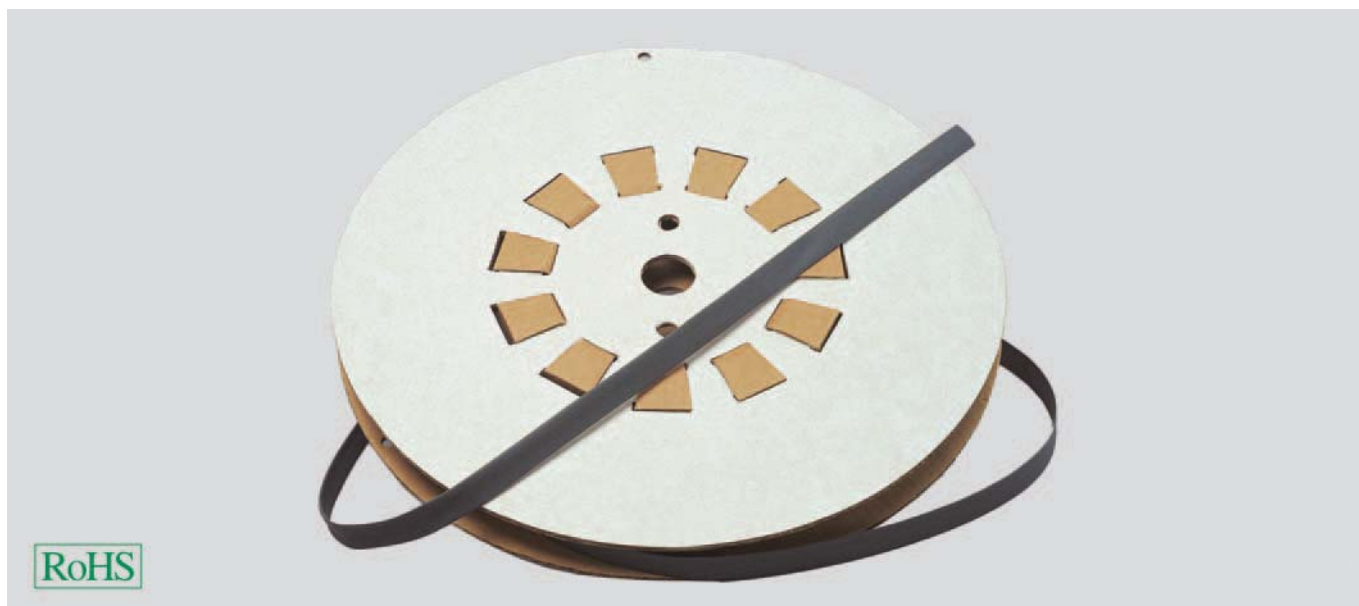
| Part no.<br>Roll | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |           |            |
|------------------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|-----------|------------|
|                  |                                   |                         |                                  |              |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 90303x           | 6,4                               | 0,65                    | 2,0                              | 75,0         | -    | O. r.                               | O. r.     | O. r.      |
| 90304x           | 9,5                               | 0,75                    | 3,0                              | 75,0         | -    | O. r.                               | O. r.     | O. r.      |
| 90305x           | 12,7                              | 0,75                    | 4,0                              | 50,0         | -    | O. r.                               | O. r.     | O. r.      |
| 90306x           | 19,0                              | 0,85                    | 6,0                              | 30,0         | -    | O. r.                               | O. r.     | O. r.      |
| 90307x           | 25,4                              | 1,0                     | 8,0                              | 30,0         | -    | O. r.                               | O. r.     | O. r.      |
| 90308x           | 39,0                              | 1,15                    | 13,0                             | 30,0         | -    | O. r.                               | O. r.     | O. r.      |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# HFS heat-shrink 2:1 - halogen free

polyolefine



## HFS rolls

Halogen-free polyolefine shrunk tube for repairing insulation and sealing electrical components.

Used in machine and plant construction, installation technology, control cabinet construction, automation technology.

## Material

PO (Polyolefine)

Colour: black

- halogen-free

## Technical data

Temperature range: -55°C up to +105°C

### black

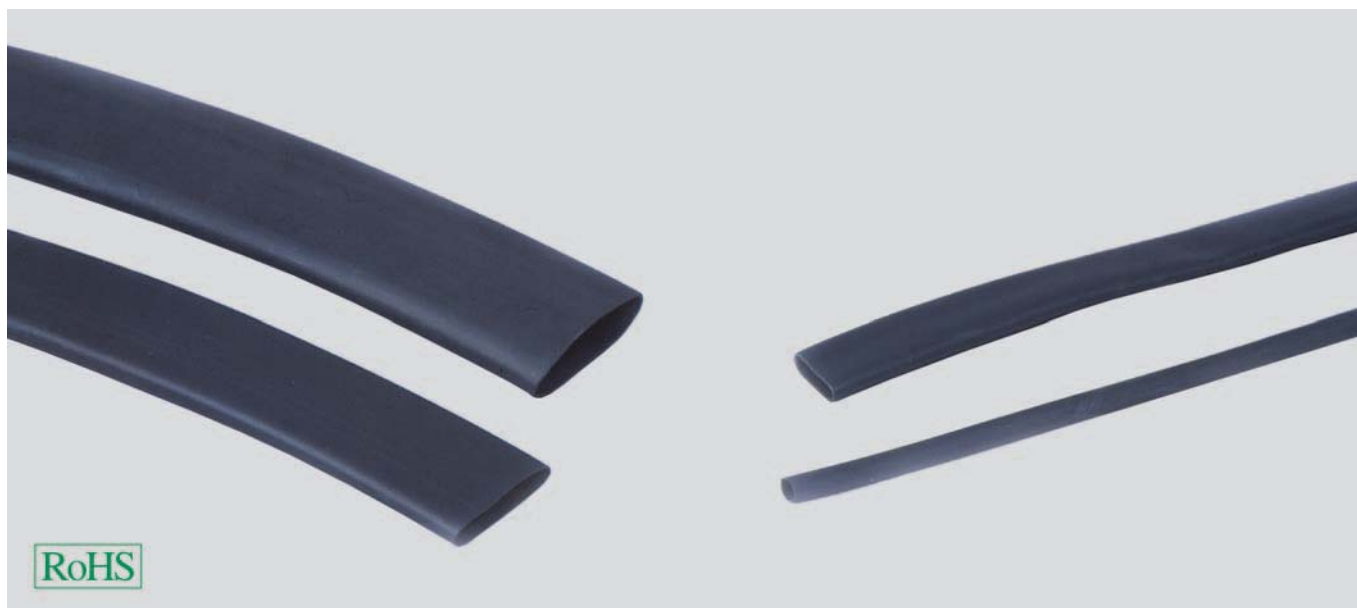
| Part no. | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m | Unit | Net EUR/100 metres at a purchase of |           |            |
|----------|-----------------------------|-------------------|----------------------------|-----------|------|-------------------------------------|-----------|------------|
|          |                             |                   |                            |           |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 99550    | 1,2                         | 0,45              | 0,6                        | 150,0     | -    | o. r.                               | o. r.     | o. r.      |
| 99551    | 1,6                         | 0,45              | 0,8                        | 150,0     | -    | o. r.                               | o. r.     | o. r.      |
| 99552    | 2,4                         | 0,51              | 1,2                        | 150,0     | -    | o. r.                               | o. r.     | o. r.      |
| 99553    | 3,2                         | 0,51              | 1,6                        | 150,0     | -    | o. r.                               | o. r.     | o. r.      |
| 99554    | 4,8                         | 0,51              | 2,4                        | 75,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99555    | 6,4                         | 0,64              | 3,2                        | 75,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99556    | 9,5                         | 0,64              | 4,8                        | 75,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99557    | 12,7                        | 0,64              | 6,4                        | 50,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99558    | 16,0                        | 0,64              | 8,0                        | 50,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99559    | 19,0                        | 0,76              | 9,5                        | 30,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99560    | 25,4                        | 0,89              | 12,7                       | 30,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99561    | 32,0                        | 0,89              | 16,0                       | 30,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99562    | 38,1                        | 1,02              | 19,0                       | 30,0      | -    | o. r.                               | o. r.     | o. r.      |
| 99563    | 50,8                        | 1,14              | 25,4                       | 30,0      | -    | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SK heat-shrink 3:1 - with interior adhesive

polyolefine - thin - walled



## SK

Polyolefine shrunk tube with internal adhesive for repairing insulation and sealing electrical components.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

PO (Polyolefine) with internal adhesive

Colour: black

## Note

Form of shipment:  
Box

## Technical data

Temperature range: -55°C up to +110°C

## black

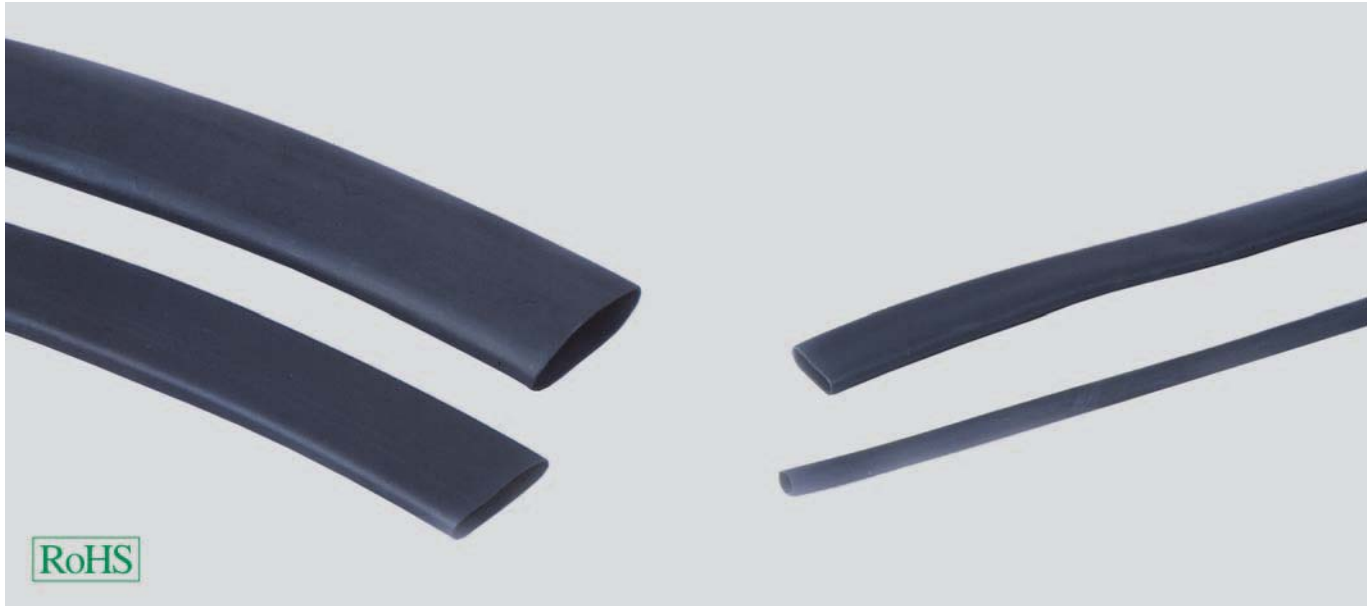
| Part no. | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/item at a purchase of |        |         |
|----------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------|--------|---------|
|          |                                   |                         |                                  |              |      | up to 5                       | 6 - 10 | 11 - 20 |
| 98258    | 3,2                               | 1,0                     | 1,0                              | 5,0          | 1    | o. r.                         | o. r.  | o. r.   |
| 98259    | 6,4                               | 1,0                     | 2,0                              | 3,5          | 1    | o. r.                         | o. r.  | o. r.   |
| 98260    | 9,5                               | 1,5                     | 3,2                              | 3,0          | 1    | o. r.                         | o. r.  | o. r.   |
| 98261    | 12,7                              | 1,8                     | 4,1                              | 2,5          | 1    | o. r.                         | o. r.  | o. r.   |
| 98262    | 19,1                              | 1,8                     | 6,4                              | 2,0          | 1    | o. r.                         | o. r.  | o. r.   |
| 98263    | 25,4                              | 2,5                     | 8,1                              | 1,5          | 1    | o. r.                         | o. r.  | o. r.   |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SK-M shrink on tube 3:1 with interior adhesive

polyolefine - medium walled



## SK-M

Polyolefine shrunk tube with internal adhesive for repairing insulation and sealing electrical components.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

PO (Polyolefine) with internal adhesive

Colour: black

## Note

Form of shipment:  
1.2 m rods

## Technical data

Temperature range: -55°C up to +110°C

## black

| Part no. | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m  | Unit | Net EUR/100 items at a purchase of |        |         |
|----------|-----------------------------------|-------------------------|----------------------------------|---------------|------|------------------------------------|--------|---------|
|          |                                   |                         |                                  |               |      | up to 5                            | 6 - 10 | 11 - 20 |
| 99788    | 10,2                              | 2,0                     | 3,8                              | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99789    | 19,1                              | 2,0                     | 5,6                              | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99790    | 27,9                              | 2,0                     | 10,2                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99791    | 33,0                              | 2,0                     | 10,2                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99792    | 38,1                              | 2,0                     | 12,7                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99793    | 43,2                              | 2,0                     | 12,7                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99794    | 52,1                              | 2,0                     | 19,0                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99795    | 69,9                              | 2,0                     | 25,0                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99796    | 88,9                              | 2,4                     | 30,0                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99797    | 119,4                             | 2,7                     | 40,0                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99798    | 152,0                             | 2,8                     | 48,0                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99799    | 170,2                             | 2,8                     | 58,0                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 99678    | 228,6                             | 3,0                     | 77,0                             | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |

Dimensions and specifications may be changed without prior notice.

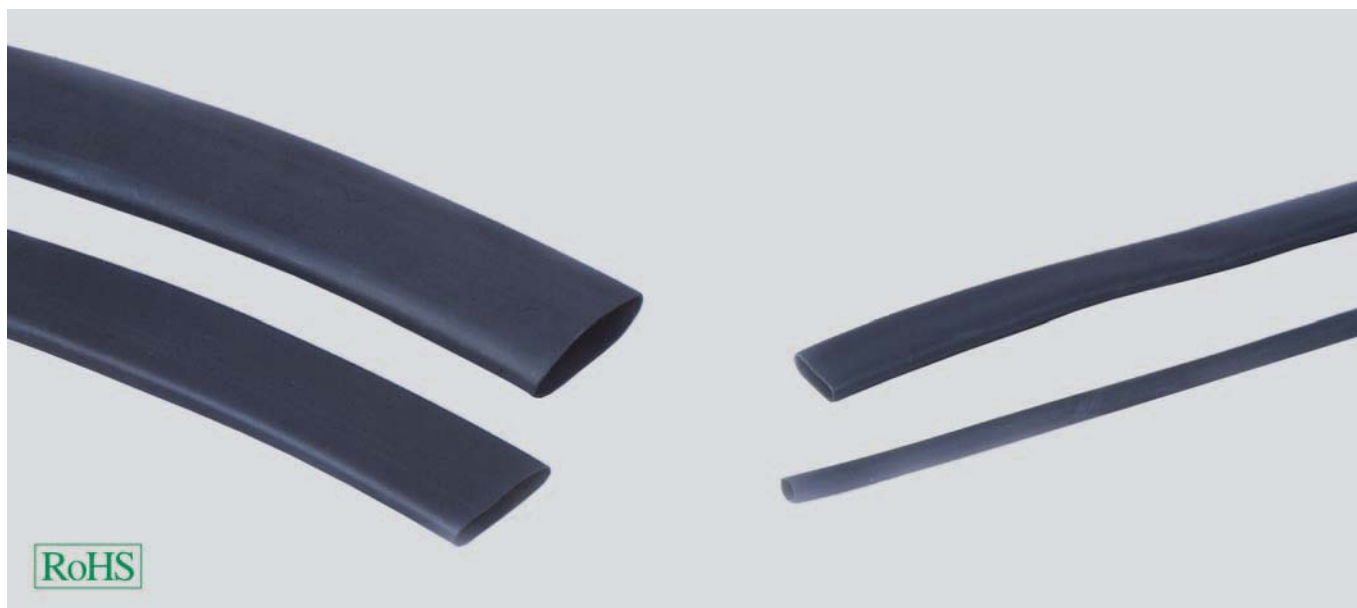
o. r. = on request



# SK-D heat shrink 3:1 - with interior adhesive

polyolefine - thick walled

new



## SK-D

Polyolefine shrunk tube with internal adhesive for repairing insulation and sealing electrical components.

For the protection of cable sleeves and terminations for low-voltage applications (600V).

Good protection against impact and abrasion.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

PO (Polyolefine) with internal adhesive

Colour: black

- halogen-free

## Note

Form of shipment:

1.2 m rods

Approval:

UR-listed up to size 68,1mm

## Technical data

Temperature range: -55°C up to +110°C

## black

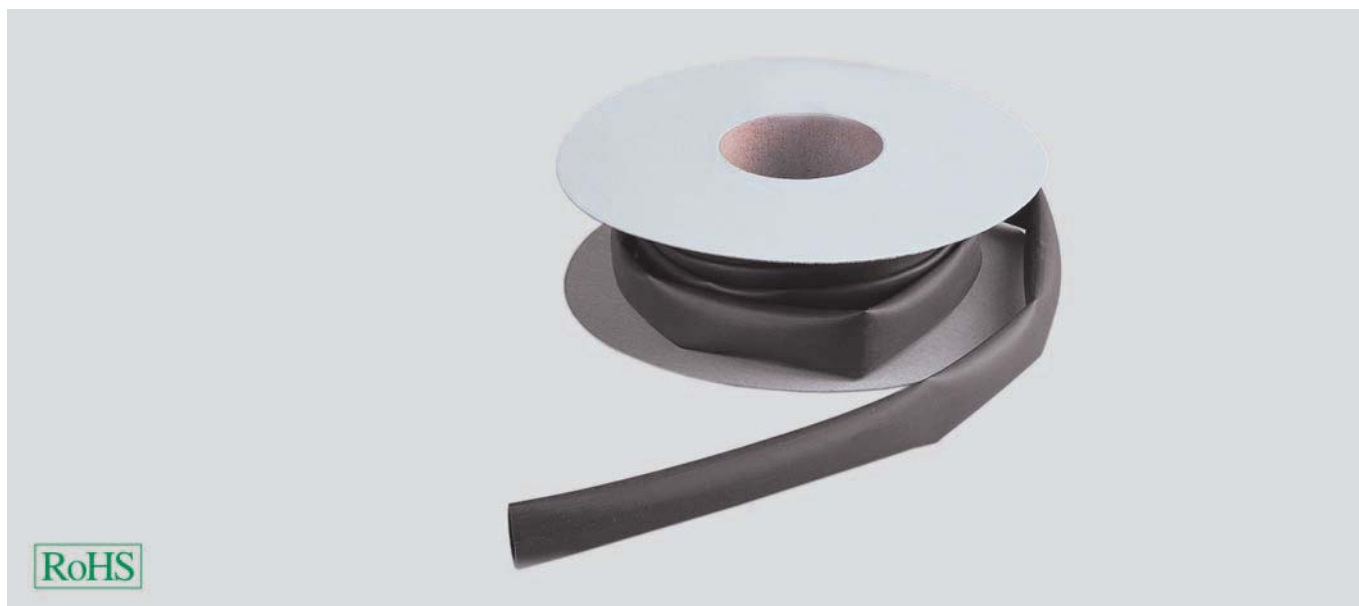
| Part no. | Inner Ø before shrinkage mm | Wall thickness mm | Inner Ø after shrinkage mm | Content m     | Unit | Net EUR/100 items at a purchase of |        |         |
|----------|-----------------------------|-------------------|----------------------------|---------------|------|------------------------------------|--------|---------|
|          |                             |                   |                            |               |      | up to 5                            | 6 - 10 | 11 - 20 |
| 905344   | 8,9                         | 1,8               | 3,0                        | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905335   | 13,0                        | 2,4               | 4,1                        | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905336   | 19,1                        | 2,4               | 6,1                        | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905337   | 27,9                        | 3,0               | 8,9                        | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905338   | 38,1                        | 4,1               | 11,9                       | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905339   | 50,8                        | 4,1               | 16,0                       | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905340   | 68,1                        | 4,1               | 22,1                       | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905731   | 89,9                        | 4,1               | 30,0                       | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |
| 905732   | 119,9                       | 2,0               | 39,9                       | rods of 1,22m | 1    | o. r.                              | o. r.  | o. r.   |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SVRO heat shrink 2:1 - high resistant

FKM



## SVRO

FKM shrunk tube to protect against aggressive media.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Installation technology
- Control cabinet construction

## Material

FKM

Colour: black

## Properties

Weather, flame and chemical resistant

## Note

MIL-I-23053

## Technical data

Temperature range: -55°C up to +220°C

## black

| Part no. | Inner Ø<br>before shrinkage<br>mm | Wall<br>thickness<br>mm | Inner Ø<br>after shrinkage<br>mm | Content<br>m | Unit | Net EUR/100 metres at a purchase of |           |            |
|----------|-----------------------------------|-------------------------|----------------------------------|--------------|------|-------------------------------------|-----------|------------|
|          |                                   |                         |                                  |              |      | up to 100                           | 101 - 500 | 501 - 1000 |
| 96796    | 3,2                               | 0,0                     | 1,6                              | 50,0         | -    | o. r.                               | o. r.     | o. r.      |
| 97385    | 4,8                               | 0,0                     | 2,4                              | 50,0         | -    | o. r.                               | o. r.     | o. r.      |
| 97774    | 6,4                               | 0,0                     | 3,2                              | 50,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91165    | 9,5                               | 0,0                     | 4,8                              | 50,0         | -    | o. r.                               | o. r.     | o. r.      |
| 91166    | 12,7                              | 0,0                     | 6,4                              | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 93690    | 19,0                              | 0,0                     | 9,5                              | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 93691    | 25,4                              | 0,0                     | 12,7                             | 30,0         | -    | o. r.                               | o. r.     | o. r.      |
| 93692    | 38,0                              | 0,0                     | 19,0                             | 15,0         | -    | o. r.                               | o. r.     | o. r.      |
| 93693    | 50,8                              | 0,0                     | 25,4                             | 15,0         | -    | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# EKI end caps 2:1

polyethylene



## EKI

End caps with internal adhesive protect cable ends from the ingress of water.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyethylene

Colour: black

## Properties

Weather-resistant

## Technical data

Temperature range: -40°C up to +70°C

## black

| Part no. | Inner Ø before shrinkage mm | Length mm | Inner Ø after shrinkage mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------------------------|-----------|----------------------------|------|------------------------------------|-----------|------------|
|          |                             |           |                            |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 97642    | 12,0                        | 35        | 4,0                        | 10   | o. r.                              | o. r.     | o. r.      |
| 97782    | 13,0                        | 30        | 6,5                        | 10   | o. r.                              | o. r.     | o. r.      |
| 98264    | 22,0                        | 60        | 8,0                        | 10   | o. r.                              | o. r.     | o. r.      |
| 97643    | 20,0                        | 65        | 10,0                       | 10   | o. r.                              | o. r.     | o. r.      |
| 97644    | 20,0                        | 125       | 9,0                        | 10   | o. r.                              | o. r.     | o. r.      |
| 97783    | 40,0                        | 85        | 15,0                       | 10   | o. r.                              | o. r.     | o. r.      |
| 97645    | 35,0                        | 90        | 17,5                       | 5    | o. r.                              | o. r.     | o. r.      |
| 97812    | 50,0                        | 125       | 25,0                       | 5    | o. r.                              | o. r.     | o. r.      |
| 97648    | 55,0                        | 125       | 22,0                       | 2    | o. r.                              | o. r.     | o. r.      |
| 97784    | 75,0                        | 120       | 45,0                       | 2    | o. r.                              | o. r.     | o. r.      |
| 97649    | 75,0                        | 120       | 34,0                       | 2    | o. r.                              | o. r.     | o. r.      |
| 97650    | 75,0                        | 200       | 34,0                       | 2    | o. r.                              | o. r.     | o. r.      |
| 98265    | 100,0                       | 120       | 42,0                       | 2    | o. r.                              | o. r.     | o. r.      |
| 97652    | 100,0                       | 130       | 59,0                       | 1    | o. r.                              | o. r.     | o. r.      |
| 97651    | 100,0                       | 225       | 59,0                       | 1    | o. r.                              | o. r.     | o. r.      |
| 97653    | 115,0                       | 140       | 59,0                       | 1    | o. r.                              | o. r.     | o. r.      |
| 98266    | 125,0                       | 130       | 70,0                       | 1    | o. r.                              | o. r.     | o. r.      |
| 97654    | 145,0                       | 155       | 71,0                       | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



Photo: HELUKABEL®

## Termination and connection sleeves

# Termination and connection sleeves

## Telecommunications cables

### Sleeves

|                  |     |
|------------------|-----|
| <b>MFF</b> ..... | 353 |
|------------------|-----|

### Core connectors

|                                        |     |
|----------------------------------------|-----|
| <b>AV</b> Core connectors .....        | 354 |
| <b>AVZ</b> Core connection pliers..... | 354 |

## Low voltage

### Shrink-on

#### Low voltage connection sleeves NSVM-S

|                                   |     |
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| <b>NSVM-S</b> single-core .....   | 355 |
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## Medium voltage

### Shrink-on

#### Medium voltage connection sleeves MSVM-S

|                                 |     |
|---------------------------------|-----|
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#### Indoors-end closures IREV-S

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|                                 |     |
|---------------------------------|-----|
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### Push-on

#### Medium voltage connection sleeves MSVM-A

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|---------------------|-----|
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|---------------------|-----|

#### Indoors-end closures IREV-A

|                     |     |
|---------------------|-----|
| <b>IREV-A</b> ..... | 363 |
|---------------------|-----|

#### Outdoors-end closures FLEV-A

|                     |     |
|---------------------|-----|
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### Accessories / Parts

|                                                |     |
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| <b>HSIB</b> high-voltage insulating tape ..... | 365 |
| <b>Channel warning tape</b> .....              | 365 |

# MfF VASMI - straight-through joint for telephone cable



## MfF

Connection and branch sleeve for telecommunication cables. For connecting telecommunication cables and producing cable branches for telecommunication cables.

## Application

- Outdoors
- Indoors
- Underground
- Water

## Properties

- high electrical insulation values
- water-tight and moisture-protected
- good mechanical strength
- highly resistant to UV rays, earth alkalis and chemical influences
- with temperature indicator colour
- suitable for cut and uncut cables
- dismantlable
- unrestricted storage

## Scope of delivery

- shielding connection conductor with special clamp
- desiccant
- protection inlay
- flame protection film
- shrink-on sleeve
- insulating band
- cleaning agent
- sanding
- assembly instruction

| Part no. | Type          | Length mm | Cable Ø from - to mm | Converter-fed with core connectors 0,4 mm no. of twin-cores | Converter-fed with core connectors 0,6 mm no. of twin-cores | Converter-fed with core connectors 0,8 mm no. of twin-cores | Net EUR/item at a purchase of |       |        |
|----------|---------------|-----------|----------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|-------------------------------|-------|--------|
|          |               |           |                      |                                                             |                                                             |                                                             | 1                             | 2 - 5 | 6 - 10 |
| 94330    | VASMI 1 SRT   | 330       | 8,0 - 35,0           | 30                                                          | 20                                                          | 10                                                          | o. r.                         | o. r. | o. r.  |
| 94331    | VASMI 1/L SRT | 390       | 8,0 - 35,0           | 70                                                          | 40                                                          | 20                                                          | o. r.                         | o. r. | o. r.  |
| 94332    | VASMI 2 SRT   | 380       | 15,0 - 55,0          | 100                                                         | 50                                                          | 30                                                          | o. r.                         | o. r. | o. r.  |
| 94333    | VASMI 2/L SRT | 450       | 15,0 - 55,0          | 150                                                         | 100                                                         | 50                                                          | o. r.                         | o. r. | o. r.  |
| 94334    | VASMI 3 SRT   | 400       | 25,0 - 68,0          | 150                                                         | 100                                                         | 70                                                          | o. r.                         | o. r. | o. r.  |
| 94335    | VASMI 3/L SRT | 500       | 25,0 - 68,0          | 200                                                         | 200                                                         | 100                                                         | o. r.                         | o. r. | o. r.  |
| 94336    | VASMI 4 SRT   | 430       | 28,0 - 94,0          | 200                                                         | 200                                                         | 150                                                         | o. r.                         | o. r. | o. r.  |
| 94337    | VASMI 5 SRT   | 600       | 28,0 - 94,0          | 400                                                         | 300                                                         | 200                                                         | o. r.                         | o. r. | o. r.  |
| 94338    | VASMI 6 SRT   | 725       | 34,0 - 101,0         | 600                                                         | 500                                                         | 300                                                         | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# AV core connectors for communication and signal cables



## AV core connectors

Core connectors type **AV** connect plastic-insulated telecommunication and signal cable cores. They are characterised by their space-saving and assembly-friendly structure.

Satisfy the requirements of DIN 47627 (solder-free core connections in sleeves for telecommunication cables).

When clamping with the **AVZ** tool, the vertical forces are transferred evenly to the core connectors, thus guaranteeing reliable contacting of the copper lines to be processed.

## Properties

- high electrical insulation values
- high mechanical and thermal strength
- impact-proof plastic housing
- corrosion protection through grease charge
- improved contacting through U-contact principle
- core diameters up to 2.0 mm possible
- larger application range from 0.4 - 0.9 mm conductor diameter
- stripping, connection and insulation in one action

## Note

The parallel-clamping core binding pliers or equivalent are suitable for flush clamping core connectors.  
Use core connection pliers AVZ or equal tool.

## Scope of delivery

Colour: transparent

### AV core connector

| Part no. | Type | No. cores | Conductor Ø from - to mm | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|------|-----------|--------------------------|------|------------------------------------|------------|-------------|
|          |      |           |                          |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 93147    | AV2  | 2         | 0,4 - 0,9                | 100  | o. r.                              | o. r.      | o. r.       |
| 93148    | AV3  | 3         | 0,4 - 0,9                | 100  | o. r.                              | o. r.      | o. r.       |
| 93149    | AVT3 | 3         | 0,4 - 0,9                | 100  | o. r.                              | o. r.      | o. r.       |

### AVZ core connecting pliers

| Part no. | Type | No. cores | Conductor Ø from - to mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|-----------|--------------------------|------|-------------------------------|-------|--------|
|          |      |           |                          |      | 1                             | 2 - 5 | 6 - 10 |
| 93150    | AVZ  | -         | -                        | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# NSVM-S low voltage straight-through joint heat-shrinking type

single core



## NSVM-S (single-core coupling sleeve)

Coupling sleeve for single-core plastic-insulated power cables to 0.6/1(1.2)kV, universal applications for connecting cables and lines made of PVC, PE and VPE, e.g. N(A)YY, N(A)2XY, NYM, NYY.

### Application

- Interior
- Outdoors
- Underground
- Water

### Properties

- halogen-free
- high electrical insulation values
- laterally water-tight
- good mechanical strength
- compact dimensions
- unrestricted storage
- large line and cable cross-sections
- highly resistant to chemical influences, alkaline earths and UV rays

### Scope of delivery

- inner seal
- outer seal
- illustrated assembly instruction

### Test

According to CENELEC HD 623 (VDE0278, Part 623)

### single core

| Part no. | Type    | Nominal voltage<br>U <sub>0</sub> /U <sub>(Um)</sub> | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------|------------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |         |                                                      |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 93890    | NSVM-S1 | 0.6/1kV                                              | 1x 10,0 - 1x 25,0                | 1    | o. r.                         | o. r. | o. r.  |
| 93891    | NSVM-S1 | 0.6/1kV                                              | 1x 35,0 - 1x 70,0                | 1    | o. r.                         | o. r. | o. r.  |
| 93892    | NSVM-S1 | 0.6/1kV                                              | 1x 95,0 - 1x 240,0               | 1    | o. r.                         | o. r. | o. r.  |
| 93893    | NSVM-S1 | 0.6/1kV                                              | 1x 150,0 - 1x 300,0              | 1    | o. r.                         | o. r. | o. r.  |
| 93894    | NSVM-S1 | 0.6/1kV                                              | 1x 300,0 - 1x 500,0              | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# NSVM-S low voltage straight-through joint heat-shrinking type

multiple core



## NSVM-S (multi-core coupling sleeve)

Coupling sleeve for multi-core plastic-insulated power cables to 0.6/1(1.2)kV, universal applications for connecting cables and lines from PVC, PE and VPE, e.g. N(A)YY, N(A)2XY, N(A)YCWY, NYM, NYY.

### Application

- Indoors
- Outdoors
- Underground
- Water

### Properties

- halogen-free
- high electrical insulation values
- laterally water-tight
- good mechanical strength
- compact dimensions
- unrestricted storage
- large line and cable cross-sections
- highly resistant to chemical influences, earth alkalis and UV rays

### Scope of delivery

- inner seal
- outer seal
- illustrated assembly instruction

### Test

According to CENELEC HD 623 (VDE0278, Part 623)

### multiple core

| Part no. | Type    | Nominal voltage<br>U <sub>0</sub> /U <sub>(Um)</sub> | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------|------------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |         |                                                      |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 94400    | NSVM-S3 | 0.6/1kV                                              | 3x 1,5 - 3x 16,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 94401    | NSVM-S3 | 0.6/1kV                                              | 3x 6,0 - 3x 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 94402    | NSVM-S3 | 0.6/1kV                                              | 3x 25,0 - 3x 70,0                | 1    | o. r.                         | o. r. | o. r.  |
| 94403    | NSVM-S3 | 0.6/1kV                                              | 3x 95,0 - 3x 150,0               | 1    | o. r.                         | o. r. | o. r.  |
| 94404    | NSVM-S3 | 0.6/1kV                                              | 3x 185,0 - 3x 300,0              | 1    | o. r.                         | o. r. | o. r.  |
| 93382    | NSVM-S4 | 0.6/1kV                                              | 4x 1,5 - 4x 6,0                  | 1    | o. r.                         | o. r. | o. r.  |
| 93388    | NSVM-S4 | 0.6/1kV                                              | 4x 1,5 - 4x 16,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93383    | NSVM-S4 | 0.6/1kV                                              | 4x 6,0 - 4x 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93384    | NSVM-S4 | 0.6/1kV                                              | 4x 16,0 - 4x 50,0                | 1    | o. r.                         | o. r. | o. r.  |
| 93385    | NSVM-S4 | 0.6/1kV                                              | 4x 25,0 - 4x 95,0                | 1    | o. r.                         | o. r. | o. r.  |
| 93386    | NSVM-S4 | 0.6/1kV                                              | 4x 25,0 - 4x 150,0               | 1    | o. r.                         | o. r. | o. r.  |
| 93389    | NSVM-S4 | 0.6/1kV                                              | 4x 95,0 - 4x 300,0               | 1    | o. r.                         | o. r. | o. r.  |
| 94405    | NSVM-S5 | 0.6/1kV                                              | 5x 1,5 - 5x 6,0                  | 1    | o. r.                         | o. r. | o. r.  |
| 94406    | NSVM-S5 | 0.6/1kV                                              | 5x 1,5 - 5x 10,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 94407    | NSVM-S5 | 0.6/1kV                                              | 5x 1,5 - 5x 16,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 94408    | NSVM-S5 | 0.6/1kV                                              | 5x 16,0 - 5x 25,0                | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# NSVM-S E90 low voltage straight-through joint heat-shrinking type



## NSVM-S E90

Flame-resistant heat-shrinkable low-voltage connecting sleeve. For connecting type (N)HX(HX) and (N)HXCHX safety cables wherever specified.

## Application

Power stations, tunnels, airports, elevators, stairways etc.

## Properties

- flame-resistant
- halogen-free
- very low smoke generation
- self-extinguishing
- suitable for all installation types

## Scope of delivery

- inner seal
- insulation tube
- outer seal
- illustrated assembly instruction

## Test

DIN4102, part 12,  
status february 1996 (E90)  
DIN VDE 0472, part 814 (FE 180)  
IEC 332

### for cable type (N) HXHX

| Part no. | Type     | Nominal voltage<br>U <sub>0</sub> /U <sub>m</sub> | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------|---------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |          |                                                   |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 94460    | NSVM-SE4 | 0.6/1kV                                           | 4x 1,5 - 4x 4,0                  | 1    | o. r.                         | o. r. | o. r.  |
| 94461    | NSVM-SE4 | 0.6/1kV                                           | 4x 6,0 - 4x 10,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 94462    | NSVM-SE4 | 0.6/1kV                                           | 4x 16,0 - 4x 25,0                | 1    | o. r.                         | o. r. | o. r.  |
| 94463    | NSVM-SE4 | 0.6/1kV                                           | 4x 35,0 - 4x 50,0                | 1    | o. r.                         | o. r. | o. r.  |
| 94464    | NSVM-SE4 | 0.6/1kV                                           | 4x 70,0 - 4x 95,0                | 1    | o. r.                         | o. r. | o. r.  |
| 94465    | NSVM-SE4 | 0.6/1kV                                           | 4x 120,0 - 4x 150,0              | 1    | o. r.                         | o. r. | o. r.  |
| 94466    | NSVM-SE4 | 0.6/1kV                                           | 4x 185,0 - 4x 240,0              | 1    | o. r.                         | o. r. | o. r.  |
| 94467    | NSVM-SE5 | 0.6/1kV                                           | 5x 1,5 - 5x 4,0                  | 1    | o. r.                         | o. r. | o. r.  |
| 94468    | NSVM-SE5 | 0.6/1kV                                           | 5x 6,0 - 5x 10,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 94469    | NSVM-SE5 | 0.6/1kV                                           | 5x 16,0 - 5x 25,0                | 1    | o. r.                         | o. r. | o. r.  |

### for cable type (N) HXCHX

| Part no. | Type       | Nominal voltage<br>U <sub>0</sub> /U <sub>m</sub> | Cross-section<br>mm <sup>2</sup>   | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|---------------------------------------------------|------------------------------------|------|-------------------------------|-------|--------|
|          |            |                                                   |                                    |      | 1                             | 2 - 5 | 6 - 10 |
| 94470    | NSVM-SE4/1 | 0.6/1kV                                           | 4x 1,5 / 1,5 - 4x 4,0 / 4,0        | 1    | o. r.                         | o. r. | o. r.  |
| 94471    | NSVM-SE4/1 | 0.6/1kV                                           | 4x 6,0 / 6,0 - 4x 10,0 / 10,0      | 1    | o. r.                         | o. r. | o. r.  |
| 94472    | NSVM-SE4/1 | 0.6/1kV                                           | 4x 16,0 / 16,0 - 4x 25,0 / 16,0    | 1    | o. r.                         | o. r. | o. r.  |
| 94473    | NSVM-SE4/1 | 0.6/1kV                                           | 4x 35,0 / 16,0 - 4x 50,0 / 25,0    | 1    | o. r.                         | o. r. | o. r.  |
| 94474    | NSVM-SE4/1 | 0.6/1kV                                           | 4x 70,0 / 35,0 - 4x 95,0 / 50,0    | 1    | o. r.                         | o. r. | o. r.  |
| 94475    | NSVM-SE4/1 | 0.6/1kV                                           | 4x 120,0 / 70,0 - 4x 150,0 / 70,0  | 1    | o. r.                         | o. r. | o. r.  |
| 94476    | NSVM-SE4/1 | 0.6/1kV                                           | 4x 185,0 / 95,0 - 4x 240,0 / 120,0 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# MSVM-S medium voltage straight-through joint heat-shrinking type

single core



## MSVM-S

The centre tension transition sleeve suitable for connecting all single-core plastic power cables with external conductor layer up to 18/30(36)kV.

For connecting cables with differing cross-sections, conductor materials and cable designs with regard to external conductor layer and sheathing.

## Properties

- safe field effect
- simple assembly
- large cross-sections
- unlimited conductivity
- immediately operational

## Scope of delivery

- unit: 1
- two suspensible silicone control elements
- field effect filler tape (blue)
- thick-walled heat shrink-on tube
- copper fabric shielding
- heat shrink-on tube as an outside protection
- assembly instruction

## single core

| Part no. | Type       | Nominal voltage<br>U <sub>0</sub> /U <sub>i</sub> (Um) | Cross-section<br>mm <sup>2</sup> | Diameter<br>from - to<br>mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|--------------------------------------------------------|----------------------------------|-----------------------------|------|-------------------------------|-------|--------|
|          |            |                                                        |                                  |                             |      | 1                             | 2 - 5 | 6 - 10 |
| 93107    | MSVM-S12/1 | 6/10kV                                                 | 35,0 - 95,0                      | 13,2 - 20,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93108    | MSVM-S12/1 | 6/10kV                                                 | 95,0 - 240,0                     | 18,2 - 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93109    | MSVM-S12/1 | 6/10kV                                                 | 150,0 - 300,0                    | 20,9 - 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93110    | MSVM-S12/1 | 6/10kV                                                 | 300,0 - 400,0                    | 28,6 - 45,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93111    | MSVM-S12/1 | 6/10kV                                                 | 500,0 - 800,0                    | 28,6 - 60,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93117    | MSVM-S24/1 | 12/20kV                                                | 10,0 - 35,0                      | 13,2 - 15,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93118    | MSVM-S24/1 | 12/20kV                                                | 50,0 - 150,0                     | 18,2 - 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93119    | MSVM-S24/1 | 12/20kV                                                | 70,0 - 240,0                     | 20,9 - 30,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93120    | MSVM-S24/1 | 12/20kV                                                | 150,0 - 300,0                    | 24,2 - 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93379    | MSVM-S24/1 | 12/20kV                                                | 400,0 - 630,0                    | 28,6 - 45,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93398    | MSVM-S24/1 | 12/20kV                                                | 630,0 - 1000,0                   | 28,6 - 45,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93121    | MSVM-S36/1 | 18/30kV                                                | 35,0 - 70,0                      | 20,9 - 18,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93122    | MSVM-S36/1 | 18/30kV                                                | 50,0 - 150,0                     | 24,2 - 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93123    | MSVM-S36/1 | 18/30kV                                                | 150,0 - 300,0                    | 28,6 - 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93124    | MSVM-S36/1 | 18/30kV                                                | 300,0 - 500,0                    | 28,6 - 45,0                 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# MSVM-S medium voltage straight-through joint heat-shrinking type

triple core



## MSVM-S

The centre tension transition sleeve is suitable for connecting all 3-core plastic power cables with external conductor layer up to 18/30(36)kV.

For connecting cables with differing cross-sections, conductor materials and cable designs with regard to external conductor layer and sheathing.

Special solutions enable a 3-core plastic power cable to be connected to 3 single-core plastic power cables.

## Properties

- safe field effect
- simple assembly
- large cross-sections
- unlimited conductivity
- immediately operational

## Scope of delivery

- unit: 1
- two suspensible silicone control elements
- field effect filler tape (blue)
- thick-walled heat shrink-on tube
- copper fabric shielding
- heat shrink-on tube as an outside protection
- assembly instruction

## triple core

| Part no. | Type       | Nominal voltage<br>U <sub>o</sub> /U <sub>m</sub> | Cross-section<br>mm <sup>2</sup> | Diameter<br>from - to<br>mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|---------------------------------------------------|----------------------------------|-----------------------------|------|-------------------------------|-------|--------|
|          |            |                                                   |                                  |                             |      | 1                             | 2 - 5 | 6 - 10 |
| 93135    | MSVM-S12/3 | 6/10kV                                            | 3x 10,0 - 3x 25,0                | 13,2 - 20,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93136    | MSVM-S12/3 | 6/10kV                                            | 3x 35,0 - 3x 95,0                | 18,2 - 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93137    | MSVM-S12/3 | 6/10kV                                            | 3x 95,0 - 3x 240,0               | 20,9 - 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93142    | MSVM-S24/3 | 12/20kV                                           | 3x 10,0 - 3x 35,0                | 13,2 - 15,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93143    | MSVM-S24/3 | 12/20kV                                           | 3x 50,0 - 3x 150,0               | 18,2 - 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93144    | MSVM-S24/3 | 12/20kV                                           | 3x 70,0 - 3x 240,0               | 20,9 - 30,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93145    | MSVM-S24/3 | 12/20kV                                           | 3x 150,0 - 3x 300,0              | 24,2 - 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93186    | MSVM-S36/3 | 18/30kV                                           | 3x 35,0 - 3x 70,0                | 20,9 - 18,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93187    | MSVM-S36/3 | 18/30kV                                           | 3x 50,0 - 3x 150,0               | 24,2 - 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93188    | MSVM-S36/3 | 18/30kV                                           | 3x 150,0 - 3x 300,0              | 28,6 - 35,0                 | 1    | o. r.                         | o. r. | o. r.  |

## triple core - special solutions

| Part no. | Type         | Nominal voltage<br>U <sub>o</sub> /U <sub>m</sub> | Cross-section<br>mm <sup>2</sup> | Diameter<br>from - to<br>mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|---------------------------------------------------|----------------------------------|-----------------------------|------|-------------------------------|-------|--------|
|          |              |                                                   |                                  |                             |      | 1                             | 2 - 5 | 6 - 10 |
| 93138    | MSVM-S12/3 S | 6/10kV                                            | 3x 35,0 - 3x 70,0                | 13,2 - 20,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93139    | MSVM-S12/3 S | 6/10kV                                            | 3x 95,0 - 3x 150,0               | 18,2 - 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 93140    | MSVM-S12/3 S | 6/10kV                                            | 3x 185,0 - 3x 300,0              | 20,9 - 35,0                 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# IREV-S indoor termination, shrinking type



## IREV-S

The interior end seals are suitable for all single-conductor and three-conductor. Medium-range voltage plastic cables with differing conductor layers and sheath designs up to 18/30(36)kV.

## Properties

- safe field effect
- simple assembly
- wider application range
- excellent external layer behaviour
- unlimited conductivity
- immediately operational

## Scope of delivery

- unit: 1
- suspensible silicone control element
- sealing band
- creeping current resistant, weather-proof heat shrink-on tube
- assembly instruction
- suspensible silicone sheds

## Note

- An additional earthing kit is required for cables with copper sheath.
- Without terminals.
- 1 unit = 1 set with 3 items.

## single core

| Part no. | Type       | Nominal voltage<br>U <sub>0</sub> /U(U <sub>m</sub> ) | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|-------------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |            |                                                       |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 93190    | IREV-S12/1 | 6/10kV                                                | 10,0 - 25,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93191    | IREV-S12/1 | 6/10kV                                                | 25,0 - 95,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94420    | IREV-S12/1 | 6/10kV                                                | 95,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93192    | IREV-S12/1 | 6/10kV                                                | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 93193    | IREV-S12/1 | 6/10kV                                                | 240,0 - 500,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94421    | IREV-S12/1 | 6/10kV                                                | 400,0 - 800,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94422    | IREV-S12/1 | 6/10kV                                                | 800,0 - 1000,0                   | 1    | o. r.                         | o. r. | o. r.  |
| 94423    | IREV-S24/1 | 12/20kV                                               | 10,0 - 35,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93194    | IREV-S24/1 | 12/20kV                                               | 25,0 - 150,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93195    | IREV-S24/1 | 12/20kV                                               | 70,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93196    | IREV-S24/1 | 12/20kV                                               | 120,0 - 300,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 93197    | IREV-S24/1 | 12/20kV                                               | 240,0 - 500,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94424    | IREV-S24/1 | 12/20kV                                               | 630,0 - 1000,0                   | 1    | o. r.                         | o. r. | o. r.  |
| 93198    | IREV-S36/1 | 18/30kV                                               | 35,0 - 70,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94425    | IREV-S36/1 | 18/30kV                                               | 50,0 - 150,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93199    | IREV-S36/1 | 18/30kV                                               | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 93200    | IREV-S36/1 | 18/30kV                                               | 500,0 - 800,0                    | 1    | o. r.                         | o. r. | o. r.  |

## 3-core

| Part no. | Type       | Nominal voltage<br>U <sub>0</sub> /U(U <sub>m</sub> ) | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|-------------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |            |                                                       |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 94435    | IREV-S12/3 | 6/10kV                                                | 10,0 - 25,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93201    | IREV-S12/3 | 6/10kV                                                | 25,0 - 95,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93202    | IREV-S12/3 | 6/10kV                                                | 95,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93203    | IREV-S12/3 | 6/10kV                                                | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94436    | IREV-S24/3 | 12/20kV                                               | 10,0 - 35,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94437    | IREV-S24/3 | 12/20kV                                               | 25,0 - 95,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94438    | IREV-S24/3 | 12/20kV                                               | 70,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94439    | IREV-S24/3 | 12/20kV                                               | 120,0 - 300,0                    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# FLEV-S outdoor termination, shrinking type



## FLEV-S

The outside end seals are suitable for all single-conductor and three-conductor medium-range voltage plastic cables with differing conductor layers and sheath designs up to 18/30(36)kV.

## Properties

- Safe field effect
- Simple assembly
- Wider application range
- Excellent external layer behaviour
- Unlimited conductivity
- Immediately operational

## Note

- An additional earthing kit is required for cables with copper sheath.
- Without terminals.
- 1 unit = 1 set with 3 items.

## Scope of delivery

- unit: 1
- suspensible silicone control element
- sealing band
- creeping current resistant, weather-proof heat shrink-on tube
- assembly instruction
- suspensible silicone sheds

## single core

| Part no. | Type       | Nominal voltage<br>U <sub>0</sub> /U <sub>m</sub> | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|---------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |            |                                                   |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 93360    | FLEV-S12/1 | 6/10kV                                            | 10,0 - 25,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93361    | FLEV-S12/1 | 6/10kV                                            | 25,0 - 95,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94426    | FLEV-S12/1 | 6/10kV                                            | 95,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93362    | FLEV-S12/1 | 6/10kV                                            | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 93363    | FLEV-S12/1 | 6/10kV                                            | 240,0 - 500,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94427    | FLEV-S12/1 | 6/10kV                                            | 400,0 - 800,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94428    | FLEV-S12/1 | 6/10kV                                            | 800,0 - 1000,0                   | 1    | o. r.                         | o. r. | o. r.  |
| 94429    | FLEV-S24/1 | 12/20kV                                           | 10,0 - 35,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93364    | FLEV-S24/1 | 12/20kV                                           | 25,0 - 150,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93365    | FLEV-S24/1 | 12/20kV                                           | 70,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93366    | FLEV-S24/1 | 12/20kV                                           | 120,0 - 300,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 93380    | FLEV-S24/1 | 12/20kV                                           | 240,0 - 500,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94430    | FLEV-S24/1 | 12/20kV                                           | 630,0 - 1000,0                   | 1    | o. r.                         | o. r. | o. r.  |
| 93367    | FLEV-S36/1 | 18/30kV                                           | 35,0 - 70,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93368    | FLEV-S36/1 | 18/30kV                                           | 50,0 - 150,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93369    | FLEV-S36/1 | 18/30kV                                           | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 93370    | FLEV-S36/1 | 18/30kV                                           | 500,0 - 800,0                    | 1    | o. r.                         | o. r. | o. r.  |

## 3-core

| Part no. | Type       | Nominal voltage<br>U <sub>0</sub> /U <sub>m</sub> | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|---------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |            |                                                   |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 94443    | FLEV-S12/3 | 6/10kV                                            | 10,0 - 25,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93371    | FLEV-S12/3 | 6/10kV                                            | 25,0 - 95,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 93372    | FLEV-S12/3 | 6/10kV                                            | 95,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 93373    | FLEV-S12/3 | 6/10kV                                            | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94444    | FLEV-S24/3 | 12/20kV                                           | 10,0 - 35,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94445    | FLEV-S24/3 | 12/20kV                                           | 25,0 - 95,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94446    | FLEV-S24/3 | 12/20kV                                           | 70,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94447    | FLEV-S24/3 | 12/20kV                                           | 120,0 - 300,0                    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



## MSVM-A medium voltage straight-through joint with slip-on method

single core



## MSVM-A

The medium voltage straight-through joint with slip-on method is suitable for connecting single-core plastic power cables up to 12/20(24)kV. For connecting cables with differing cross-sections, conductor materials and cable designs with regard to external conductor layer and shielding.

## Properties

- Quick and simple assembly
- Large cross-sections
- Unlimited conductivity
- Immediately operational

## Scope of delivery

- unit: 1
- two suspensible silicone control elements
- one-piece silicon insulating body with integrated conductor smoothing
- thick-walled heat shrink-on tube
- copper fabric shielding
- assembly instruction

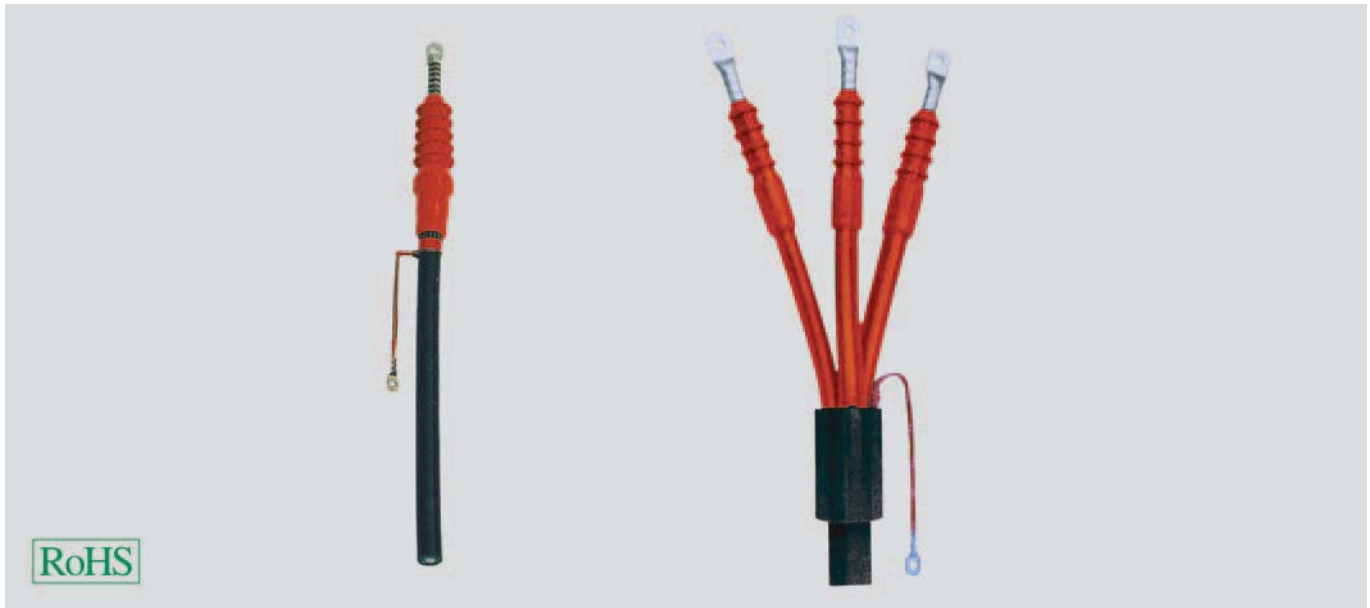
**single core**

| Part no. | Type     | Nominal voltage<br>Uo/U(Um) | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------|-----------------------------|----------------------|------|-------------------------------|-------|--------|
|          |          |                             |                      |      | 1                             | 2 - 5 | 6 - 10 |
| 94350    | MSVM-A12 | 6/10kV                      | 25,0 - 95,0          | 1    | o. r.                         | o. r. | o. r.  |
| 94351    | MSVM-A12 | 6/10kV                      | 95,0 - 240,0         | 1    | o. r.                         | o. r. | o. r.  |
| 94352    | MSVM-A12 | 6/10kV                      | 50,0 - 240,0         | 1    | o. r.                         | o. r. | o. r.  |
| 94353    | MSVM-A12 | 6/10kV                      | 150,0 - 400,0        | 1    | o. r.                         | o. r. | o. r.  |
| 94355    | MSVM-A24 | 12/20kV                     | 16,0 - 120,0         | 1    | o. r.                         | o. r. | o. r.  |
| 94356    | MSVM-A24 | 12/20kV                     | 35,0 - 95,0          | 1    | o. r.                         | o. r. | o. r.  |
| 94357    | MSVM-A24 | 12/20kV                     | 70,0 - 240,0         | 1    | o. r.                         | o. r. | o. r.  |
| 94358    | MSVM-A24 | 12/20kV                     | 70,0 - 240,0         | 1    | o. r.                         | o. r. | o. r.  |
| 94359    | MSVM-A24 | 12/20kV                     | 35,0 - 240,0         | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# IREV-A, FLEV-A termination with slip-on method



## IREV-A/FLEV-A

The interior end seals and outside end seals in push-on technology are suitable for all single-conductor medium-range voltage plastic cables with differing conductor layers and sheath designs up to 18/30(36)kV.

## Properties

- simple, quick assembly
- large cross-sections
- unlimited conductivity
- no pre-expansion
- no flame or heat source required
- immediately operational

## Scope of delivery

- unit: 1
- one-piece suspensible silicon end lock
- integrated field control
- assembly instruction

## IREV-A - indoor termination with slip-on method

| Part no. | Type     | Nominal voltage<br>U <sub>o</sub> /U <sub>(Um)</sub> | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------|------------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |          |                                                      |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 94371    | IREV-A12 | 6/10kV                                               | 95,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94372    | IREV-A12 | 6/10kV                                               | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94373    | IREV-A12 | 6/10kV                                               | 240,0 - 500,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94374    | IREV-A12 | 6/10kV                                               | 300,0 - 800,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94375    | IREV-A24 | 12/20kV                                              | 10,0 - 35,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94376    | IREV-A24 | 12/20kV                                              | 35,0 - 120,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94377    | IREV-A24 | 12/20kV                                              | 70,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94378    | IREV-A24 | 12/20kV                                              | 120,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94379    | IREV-A24 | 12/20kV                                              | 240,0 - 630,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94380    | IREV-A36 | 18/30kV                                              | 16,0 - 95,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94381    | IREV-A36 | 18/30kV                                              | 50,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94382    | IREV-A36 | 18/30kV                                              | 120,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |

## FLEV-A - outdoor termination with slip-on method

| Part no. | Type     | Nominal voltage<br>U <sub>o</sub> /U <sub>(Um)</sub> | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------|------------------------------------------------------|----------------------------------|------|-------------------------------|-------|--------|
|          |          |                                                      |                                  |      | 1                             | 2 - 5 | 6 - 10 |
| 94384    | FLEV-A12 | 6/10kV                                               | 95,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94385    | FLEV-A12 | 6/10kV                                               | 150,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94386    | FLEV-A12 | 6/10kV                                               | 240,0 - 500,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94387    | FLEV-A12 | 6/10kV                                               | 300,0 - 800,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94388    | FLEV-A24 | 12/20kV                                              | 10,0 - 35,0                      | 1    | o. r.                         | o. r. | o. r.  |
| 94389    | FLEV-A24 | 12/20kV                                              | 35,0 - 120,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94390    | FLEV-A24 | 12/20kV                                              | 70,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94391    | FLEV-A24 | 12/20kV                                              | 120,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94392    | FLEV-A24 | 12/20kV                                              | 240,0 - 630,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 94393    | FLEV-A36 | 18/30kV                                              | 50,0 - 240,0                     | 1    | o. r.                         | o. r. | o. r.  |
| 94394    | FLEV-A36 | 18/30kV                                              | 120,0 - 400,0                    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Medium voltage accessories



## Medium-range voltage accessories

**KMRS:** for a fast, reliable repair of sheath damage up to 1000 V. Consisting of cable sheath repair tape, emery cloth, cleaning cloth.

**Sealant:** for cable penetration, halogen-free dual-component PUR cast resin, practical dual chamber mixing bag.

**Sealing tape, black:** for sealing cable and line gussets, repair of damaged cable sheaths, water-tight sealing of cable penetrations.

## Properties

**KMRS:** vulcanising, extremely good electrical properties; outstanding tensile strength, absolute moisture tight.

**Sealant:** good adhesion to metals, plastic, concrete, plastic and natural stones; removable, environmentally compatible, gas and water-tight to 1.5 bar, soft-elastic following hardening.

**Sealing tape:** very good adhesion to metal, glass, rubber, plastic, good dielectric and physical properties.

### KMRS repair set

| Part no. | Type | Description             | Thickness x Width<br>mm x mm | Content   | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|-------------------------|------------------------------|-----------|------|-------------------------------|-------|--------|
|          |      |                         |                              |           |      | 1                             | 2 - 5 | 6 - 10 |
| 93141    | KMRS | Cable sheath repair set | -                            | Mixed bag | 1    | o. r.                         | o. r. | o. r.  |

### LG sealing compound

| Part no. | Type    | Description            | Thickness x Width<br>mm x mm | Content  | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------|------------------------|------------------------------|----------|------|-------------------------------|-------|--------|
|          |         |                        |                              |          |      | 1                             | 2 - 5 | 6 - 10 |
| 93125    | Sealant | LG 250 (incl. spatula) | -                            | 250,0 ml | 1    | o. r.                         | o. r. | o. r.  |
| 93126    | Sealant | LG 500 (incl. spatula) | -                            | 500,0 ml | 1    | o. r.                         | o. r. | o. r.  |

### sealing tape

| Part no. | Type         | Description | Thickness x Width<br>mm x mm | Content | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|-------------|------------------------------|---------|------|-------------------------------|-------|--------|
|          |              |             |                              |         |      | 1                             | 2 - 5 | 6 - 10 |
| 93127    | Sealing tape | -           | 3,2 x 38,0                   | 1,5 m   | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Medium voltage accessories



## Medium-range voltage accessories

**HSIB, black:** as conductor insulation for plastic-insulated cables to 69kV, repair and connection of numerous insulating and cable materials, for sealing casting moulds and stuffing cable insulation.

**Line warning tape, yellow with black marking:** used as an early warning device for excavation work. It should be placed approx. 40 cm above the supply line, PE laminated film.

## Properties

**HSIB:** good electric and physical properties guarantee long tool life, good dielectric properties, highly weather-resistant, extremely expandable, non-adhesive, welds quickly to form homogenous, cavity-free mass, easy to handle, easy to process, completely removable.

**Line warning tape:** Good warning effect through more than 400% expansion, colour-fast, age and cold-resistant, expansion remains unchanged, permanently legible through crystal clear film coating over lettering.

## HSIB high voltage insulation tape

| Part no. | Type | Description                  | Thickness x Width<br>mm x mm | Content | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|------------------------------|------------------------------|---------|------|-------------------------------|-------|--------|
|          |      |                              |                              |         |      | 1                             | 2 - 5 | 6 - 10 |
| 93128    | HSIB | High-voltage insulating tape | 0,5 x 19,0                   | 10 m    | 1    | o. r.                         | o. r. | o. r.  |
| 93129    | HSIB | High-voltage insulating tape | 0,75 x 19,0                  | 10 m    | 1    | o. r.                         | o. r. | o. r.  |

## channel warning tape

| Part no. | Type                 | Description                 | Thickness x Width<br>mm x mm | Content | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------------------|-----------------------------|------------------------------|---------|------|-------------------------------|-------|--------|
|          |                      |                             |                              |         |      | 1                             | 2 - 5 | 6 - 10 |
| 93130    | Channel warning tape | Caution: cable              | 0,15 x 40,0                  | 250 m   | 1    | o. r.                         | o. r. | o. r.  |
| 93131    | Channel warning tape | Caution: high-voltage cable | 0,15 x 40,0                  | 250 m   | 1    | o. r.                         | o. r. | o. r.  |
| 93132    | Channel warning tape | Caution: telephone cable    | 0,15 x 40,0                  | 250 m   | 1    | o. r.                         | o. r. | o. r.  |
| 93133    | Channel warning tape | Caution: street lighting    | 0,15 x 40,0                  | 250 m   | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Cables & wires

**We design, manufacture and supply  
for all markets and every application.**



HELUKABEL® provides cables and wires for all markets and for all applications. The comprehensive standard and warehouse stock leaves hardly anything to be desired and comprises:

- Control cables
- Data and computer cables
- Heat-resistant cables
- Cables for foreign standards
- Halogen-free cables
- Coaxial cables
- Fibre optics
- Flat cables
- Vehicle cables
- Installation cables
- High-voltage / medium voltage cables
- Servo and sensor cables
- Drag chain cables
- Robot cables
- Network cables
- Spiral and pre-assembled cables



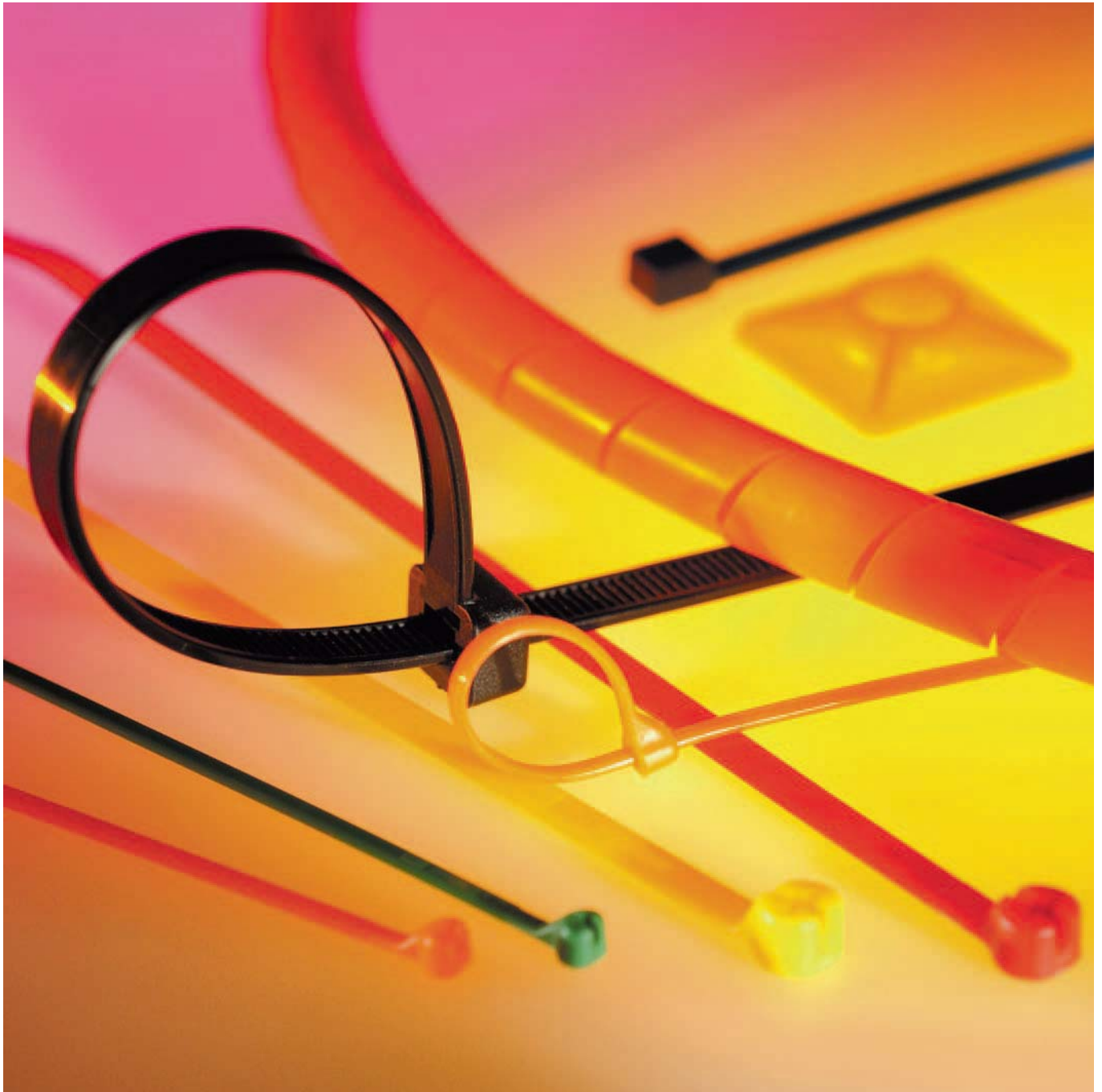


Photo: HELUKABEL®

## **Bundling, binding and fixing**

# Bundling, binding and fixing

## Plastic helix

|                 |     |
|-----------------|-----|
| <b>KW</b> ..... | 369 |
|-----------------|-----|

## Cable binders

### Series Thomas & Betts

#### for standard applications

|                                |     |
|--------------------------------|-----|
| Cable tie <b>TY-RAP®</b> ..... | 370 |
|--------------------------------|-----|

#### UV-stabilised

|                              |     |
|------------------------------|-----|
| Cable tie <b>TY-MX</b> ..... | 371 |
|------------------------------|-----|

#### highly stabilised

|                            |     |
|----------------------------|-----|
| Cable tie <b>TYH</b> ..... | 372 |
|----------------------------|-----|

#### highly resistant

|                            |     |
|----------------------------|-----|
| Cable tie <b>TYZ</b> ..... | 373 |
|----------------------------|-----|

#### with additional fastening

|                          |     |
|--------------------------|-----|
| with mounting hole ..... | 374 |
|--------------------------|-----|

|                         |     |
|-------------------------|-----|
| with plug-in clip ..... | 374 |
|-------------------------|-----|

#### with marking area

|                                   |     |
|-----------------------------------|-----|
| underneath the sealing head ..... | 375 |
|-----------------------------------|-----|

|                              |     |
|------------------------------|-----|
| above the sealing head ..... | 375 |
|------------------------------|-----|

### Series Standard

#### for standard applications

|                          |     |
|--------------------------|-----|
| Cable tie <b>T</b> ..... | 376 |
|--------------------------|-----|

#### weatherproof

|                             |     |
|-----------------------------|-----|
| Cable tie <b>T-WS</b> ..... | 377 |
|-----------------------------|-----|

#### detachable

|                          |     |
|--------------------------|-----|
| Cable tie <b>W</b> ..... | 378 |
|--------------------------|-----|

#### robust application - stainless steel

|                          |     |
|--------------------------|-----|
| Cable tie <b>E</b> ..... | 379 |
|--------------------------|-----|

## Velcro fastener

#### with punched hole

|                                  |     |
|----------------------------------|-----|
| velcro fastener <b>KLL</b> ..... | 380 |
|----------------------------------|-----|

#### with plastic grommet

|                                  |     |
|----------------------------------|-----|
| velcro fastener <b>KLÖ</b> ..... | 380 |
|----------------------------------|-----|

## Mounting base

### Series BS

|                               |     |
|-------------------------------|-----|
| Mounting base <b>BS</b> ..... | 381 |
|-------------------------------|-----|

### Series T&B

#### Mounting base **TC**

|                          |     |
|--------------------------|-----|
| for band fastening ..... | 382 |
|--------------------------|-----|

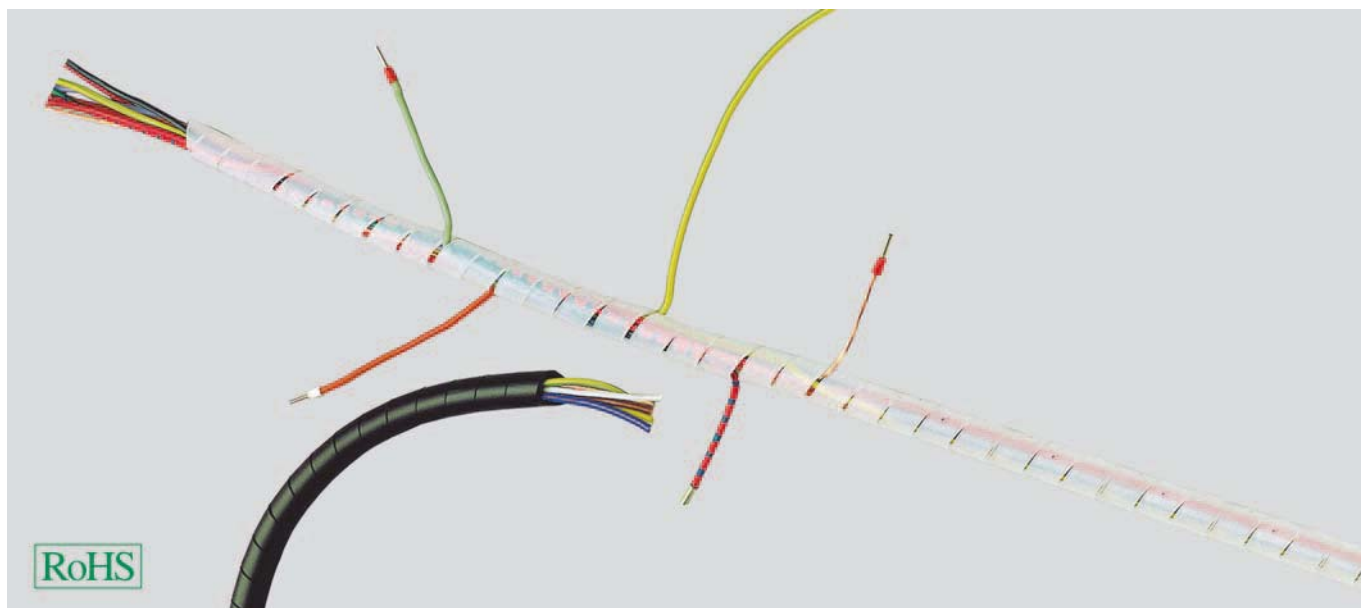
|                        |     |
|------------------------|-----|
| as mounting base ..... | 382 |
|------------------------|-----|

|                     |     |
|---------------------|-----|
| as screw base ..... | 383 |
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|                   |     |
|-------------------|-----|
| with saddle ..... | 383 |
|-------------------|-----|

|                        |     |
|------------------------|-----|
| as adhesive base ..... | 384 |
|------------------------|-----|





## KW

Plastic helix made of polyethylene.  
Protects wiring harnesses, wires and lines.  
Bundles and binds single wires and provides mechanical protection for loosely installed or moving cables and lines.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyethylene

- halogen-free

## Note

Other materials or colours on request.

## Technical data

Temperature range: -30°C up to +80°C

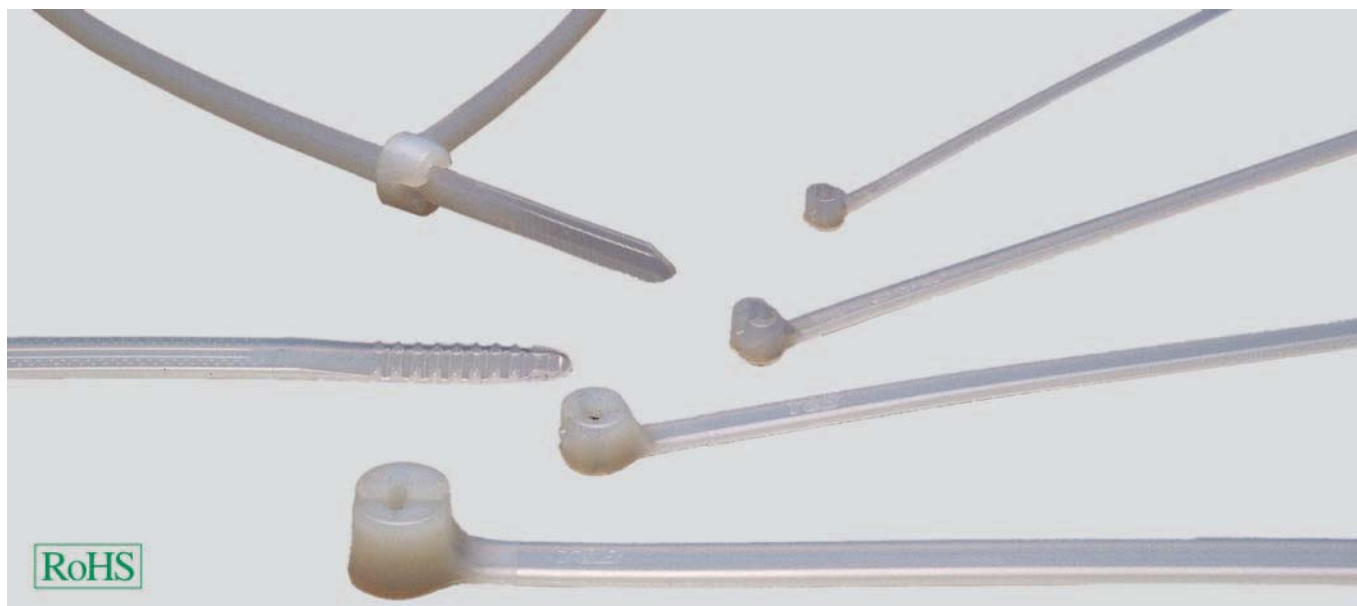
| Part no. | Size | Colour      | Bundle Ø mm  | Per metres | Net EUR/100 metres at a purchase of |           |            |
|----------|------|-------------|--------------|------------|-------------------------------------|-----------|------------|
|          |      |             |              |            | up to 100                           | 101 - 500 | 501 - 1000 |
| 91000    | 6    | transparent | 5,0 - 20,0   | 25         | o. r.                               | o. r.     | o. r.      |
| 91001    | 6    | black       | 5,0 - 20,0   | 25         | o. r.                               | o. r.     | o. r.      |
| 96659    | 6    | yellow      | 5,0 - 20,0   | 25         | o. r.                               | o. r.     | o. r.      |
| 96891    | 6    | orange      | 5,0 - 20,0   | 25         | o. r.                               | o. r.     | o. r.      |
| 91002    | 12   | transparent | 12,0 - 40,0  | 25         | o. r.                               | o. r.     | o. r.      |
| 91003    | 12   | black       | 12,0 - 40,0  | 25         | o. r.                               | o. r.     | o. r.      |
| 96658    | 12   | yellow      | 10,0 - 40,0  | 25         | o. r.                               | o. r.     | o. r.      |
| 97042    | 12   | orange      | 10,0 - 40,0  | 25         | o. r.                               | o. r.     | o. r.      |
| 96300    | 22   | transparent | 20,0 - 150,0 | 25         | o. r.                               | o. r.     | o. r.      |
| 96299    | 22   | black       | 20,0 - 150,0 | 25         | o. r.                               | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TY-RAP® cable tie with steel lug lock

a product by Thomas & Betts



## TY-RAP® transparent

TY-RAP® cable tie with steel lug lock made of corrosion-resistant, non-magnetic steel.

This technology enables the cable tie to offer excellent binding properties even under the most rigorous conditions such as heat, cold, humidity etc. and makes it insensitive to vibrations and external influences.

## Material

Polyamide 6.6

- halogen-free

## Note

Brown, red, orange, yellow, green, purple or grey available on request.

## Technical data

Temperature range: -40°C up to +85°C

Flammability acc. to UL 94: V2

| Part no.<br>transparent | Type T & B | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------------|------------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|                         |            |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 91051                   | TYB 23M    | 92,0         | 2,4         | 16,0           | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 91055                   | TY 232M    | 203,0        | 2,4         | 50,0           | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 91058                   | TY 234M    | 356,0        | 2,4         | 102,0          | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 91061                   | TYB 24M    | 140,0        | 3,6         | 29,0           | 180,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91064                   | TY 242M    | 204,0        | 3,6         | 50,0           | 180,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91067                   | TY 26M     | 284,0        | 3,6         | 76,0           | 130,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91070                   | TY 244M    | 368,0        | 3,6         | 103,0          | 130,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91073                   | TYB 25M    | 186,0        | 4,8         | 45,0           | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91076                   | TY 253M    | 295,0        | 4,8         | 78,0           | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91079                   | TY 28M     | 361,0        | 4,8         | 102,0          | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91082                   | TY 272M    | 223,0        | 6,9         | 50,0           | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |
| 91085                   | TY 27M     | 340,0        | 6,9         | 90,0           | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |
| 91088                   | TY 29M     | 771,0        | 6,9         | 229,0          | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |

## small package

| Part no.<br>transparent | Type T & B | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------------|------------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|                         |            |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 91050                   | TY 5-23M   | 92,0         | 2,4         | 16,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 91054                   | TY 5-232M  | 203,0        | 2,4         | 50,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 91057                   | TY 5-234M  | 356,0        | 2,4         | 102,0          | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 91060                   | TY 5-24M   | 140,0        | 3,6         | 29,0           | 180,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 91063                   | TY 5-242M  | 204,0        | 3,6         | 50,0           | 180,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 91066                   | TY 5-26M   | 284,0        | 3,6         | 76,0           | 130,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 91069                   | TY 5-244M  | 368,0        | 3,6         | 103,0          | 130,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 91072                   | TY 5-25M   | 186,0        | 4,8         | 45,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 91075                   | TY 5-253M  | 295,0        | 4,8         | 78,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 91078                   | TY 5-28M   | 361,0        | 4,8         | 102,0          | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 91081                   | TY 5-272M  | 223,0        | 6,9         | 50,0           | 540,0         | 50   | o. r.                              | o. r.       | o. r.        |
| 91084                   | TY 5-27M   | 340,0        | 6,9         | 90,0           | 540,0         | 50   | o. r.                              | o. r.       | o. r.        |
| 91087                   | TY 5-29M   | 771,0        | 6,9         | 229,0          | 540,0         | 50   | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TY-MX cable tie with steel lug lock

a product by Thomas & Betts



## TY-RAP® (UV-stabilised)

TY-RAP® cable tie with steel lug lock made of corrosion-resistant, non-magnetic steel.

This technology enables the cable tie to offer excellent binding properties even under the most rigorous conditions such as heat, cold, humidity etc. and makes it insensitive to vibrations and external influences.

## Material

Polyamide 6.6  
UV-resistant

- halogen-free

## Note

Other colours and materials available on request.

## Technical data

Temperature range: -40°C up to +85°C

Flammability acc. to UL 94: V2

## UV-stabilised

| Part no.<br>black | Type T & B | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------|------------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|                   |            |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 91052             | TYB 23MX   | 92,0         | 2,4         | 16,0           | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 91056             | TY 232MX   | 203,0        | 2,4         | 50,0           | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 91059             | TY 234MX   | 356,0        | 2,4         | 102,0          | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 91062             | TYB 24MX   | 140,0        | 3,6         | 29,0           | 180,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91065             | TY 242MX   | 204,0        | 3,6         | 50,0           | 180,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91068             | TY 26MX    | 284,0        | 3,6         | 76,0           | 130,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91071             | TY 244MX   | 368,0        | 3,6         | 103,0          | 130,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91074             | TYB 25MX   | 186,0        | 4,8         | 45,0           | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91077             | TY 253MX   | 295,0        | 4,8         | 78,0           | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91080             | TY 28MX    | 361,0        | 4,8         | 102,0          | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 91083             | TY 272MX   | 223,0        | 6,9         | 50,0           | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |
| 91086             | TY 27MX    | 340,0        | 6,9         | 90,0           | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |
| 91089             | TY 29MX    | 771,0        | 6,9         | 229,0          | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |

## UV-stabilised - small package

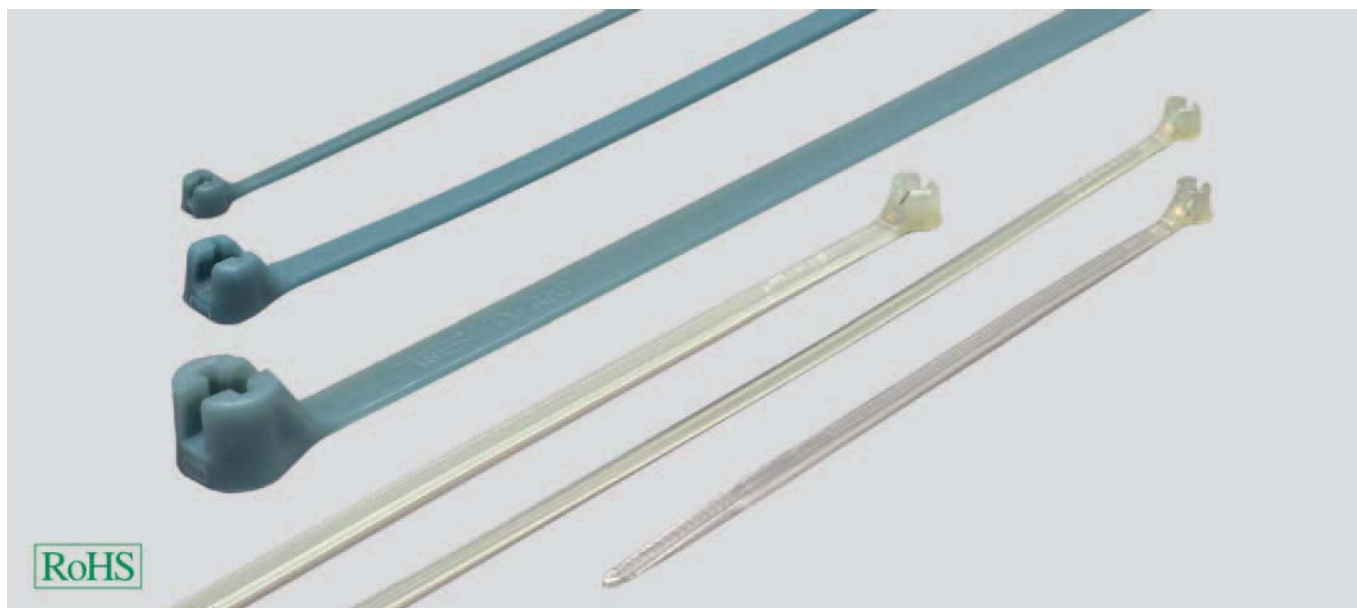
| Part no.<br>black | Type T & B | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------|------------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|                   |            |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 97310             | TY 5-23MX  | 92,0         | 2,4         | 16,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 97311             | TY 5-232MX | 203,0        | 2,4         | 50,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 97312             | TY 5-234MX | 356,0        | 2,4         | 102,0          | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 97313             | TYB 5-24MX | 140,0        | 3,6         | 29,0           | 180,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 97314             | TY 5-242MX | 204,0        | 3,6         | 50,0           | 180,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 97436             | TY 5-26MX  | 284,0        | 3,6         | 76,0           | 130,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 97437             | TY 5-244MX | 368,0        | 3,6         | 103,0          | 130,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 93694             | TY 5-25MX  | 186,0        | 4,8         | 45,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 93695             | TY 5-253MX | 295,0        | 4,8         | 78,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 93696             | TY 5-28MX  | 361,0        | 4,8         | 102,0          | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 93697             | TY 5-272MX | 223,0        | 6,9         | 50,0           | 540,0         | 50   | o. r.                              | o. r.       | o. r.        |
| 93698             | TY 5-27MX  | 340,0        | 6,9         | 90,0           | 540,0         | 50   | o. r.                              | o. r.       | o. r.        |
| 93699             | TY 5-29MX  | 771,0        | 6,9         | 229,0          | 540,0         | 50   | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TYH cable tie with steel lug lock

a product by Thomas & Betts



## TY-RAP®

TY-RAP® cable tie with steel lug lock made of corrosion-resistant, non-magnetic steel.

This technology enables the cable tie to offer excellent binding properties even under the most rigorous conditions such as heat, cold, humidity etc. and makes it insensitive to vibrations and external influences.

## Material

H = Polyamide 6.6 (heat-stabilised)

- halogen-free

## Technical data

Temperature range: -40°C up to +105°C

Flammability acc. to UL 94: V2

## high stabilized

| Part no. | Type T & B | Colour      | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|----------|------------|-------------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|          |            |             |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 97280    | TYH 23M    | transparent | 92,0         | 2,4         | 16,0           | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 96481    | TYH 232M   | transparent | 203,0        | 2,4         | 50,0           | 80,0          | 1000 | o. r.                              | o. r.       | o. r.        |
| 96577    | TYH 24M    | transparent | 140,0        | 3,6         | 29,0           | 130,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 98520    | TYH 242M   | transparent | 208,0        | 3,6         | 50,0           | 130,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 97249    | TYH 26M    | transparent | 284,0        | 3,6         | 76,0           | 130,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 97213    | TYH 25M    | transparent | 186,0        | 4,8         | 45,0           | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 98521    | TYH 253M   | transparent | 290,0        | 4,8         | 78,0           | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 96291    | TYH 28M    | transparent | 360,0        | 4,8         | 102,0          | 220,0         | 1000 | o. r.                              | o. r.       | o. r.        |
| 98522    | TYH 272M   | transparent | 222,0        | 7,6         | 50,0           | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |
| 97154    | TYH 27M    | transparent | 340,0        | 7,0         | 90,0           | 540,0         | 500  | o. r.                              | o. r.       | o. r.        |
| 97250    | TYH 29M    | transparent | 771,0        | 6,9         | 229,0          | 530,0         | 500  | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TYZ cable tie with steel lug lock

a product by Thomas & Betts



## TY-RAP®

TY-RAP® cable tie with steel lug lock made of corrosion-resistant, non-magnetic steel.

This technology enables the tie to offer excellent binding properties even under the most rigorous conditions such as heat, cold, humidity etc. and makes it insensitive to vibrations and external influences.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

- halogen-free

## Technical data

Temperature range: -46°C up to +150°C

Flammability acc. to UL 94: V0

## high resistant

| Part no. | Type T & B | Colour     | Length mm | Width mm | Bundle Ø mm | Capacity N | Unit | Net EUR/100 items at a purchase of |             |              |
|----------|------------|------------|-----------|----------|-------------|------------|------|------------------------------------|-------------|--------------|
|          |            |            |           |          |             |            |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 96909    | TYZ 23M    | aquamarine | 92,0      | 2,4      | 16,0        | 80,0       | 1000 | o. r.                              | o. r.       | o. r.        |
| 96290    | TYZ 25M    | aquamarine | 186,0     | 4,8      | 45,0        | 220,0      | 1000 | o. r.                              | o. r.       | o. r.        |
| 96724    | TYZ 28M    | aquamarine | 360,0     | 4,8      | 102,0       | 220,0      | 500  | o. r.                              | o. r.       | o. r.        |
| 94800    | TYZ 27M    | aquamarine | 340,0     | 7,0      | 90,0        | 540,0      | 100  | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TY-RAP® special cable tie cable tie with steel lug lock

a product by Thomas & Betts



## TY-RAP® (special types)

TY-RAP® cable tie with steel lug lock made of corrosion-resistant, non-magnetic steel. This technology enables the cable tie to offer excellent binding properties even under the most rigorous conditions such as heat, cold, humidity etc. and makes it insensitive to vibrations and external influences.

## Material

Polyamide 6.6

- halogen-free

## Technical data

Temperature range: -40°C up to +85°C

Flammability acc. to UL 94: V2

### with assembly hole

| Part no.    | Type T & B | Colour      | Length mm | Width mm | Bundle Ø mm | Capacity N | Hole Ø mm | Field W x H | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------|------------|-------------|-----------|----------|-------------|------------|-----------|-------------|------|------------------------------------|-------------|--------------|
| transparent |            |             |           |          |             |            |           |             |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 91093       | TY 33M     | transparent | 102,0     | 2,3      | 16,0        | 80         | 3         | -           | 1000 | o. r.                              | o. r.       | o. r.        |
| 91094       | TY 34M     | transparent | 151,0     | 3,5      | 29,0        | 180        | 4,4       | -           | 1000 | o. r.                              | o. r.       | o. r.        |
| 91095       | TY 635M    | transparent | 198,0     | 4,7      | 45,0        | 220        | 4         | -           | 1000 | o. r.                              | o. r.       | o. r.        |
| 91096       | TY 35M     | transparent | 199,0     | 4,7      | 45,0        | 220        | 5,1       | -           | 1000 | o. r.                              | o. r.       | o. r.        |
| 91098       | TY 37M     | transparent | 356,0     | 7,7      | 90,0        | 540        | 6,7       | -           | 500  | o. r.                              | o. r.       | o. r.        |

### with plug-in clip

| Part no.    | Type T & B | Colour      | Length mm | Width mm | Bundle Ø mm | Capacity N | Hole Ø mm | Field W x H | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------|------------|-------------|-----------|----------|-------------|------------|-----------|-------------|------|------------------------------------|-------------|--------------|
| transparent |            |             |           |          |             |            |           |             |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 91103       | TY 38M     | transparent | 200,0     | 4,7      | 44,0        | 220        | -         | -           | 1000 | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TY-RAP® with label cable tie with steel lug lock

a product by Thomas & Betts



## TY-RAP®

TY-RAP® cable tie with steel lug lock made of corrosion-resistant, non-magnetic steel.

This technology enables the cable tie to offer excellent binding properties even under the most rigorous conditions such as heat, cold, humidity etc. and makes it insensitive to vibrations and external influences.

## Material

Polyamide 6.6

- halogen-free

## Note

TY-RAP® (special types)

## Technical data

Temperature range: -40°C up to +85°C

Flammability acc. to UL 94: V2

### marking area below the latch

| Part no.<br>transparent | Type T & B | Colour      | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Hole Ø<br>mm | Field<br>W x H | Unit | Net EUR/100 items at a purchase of<br>up to 1000 | 1001 - 5000 | 5001 - 10000 |
|-------------------------|------------|-------------|--------------|-------------|----------------|---------------|--------------|----------------|------|--------------------------------------------------|-------------|--------------|
| 91108                   | TY 51M     | transparent | 92,0         | 2,4         | 16,0           | 80            | -            | 25.4 x 7.9     | 500  | o. r.                                            | o. r.       | o. r.        |
| 91109                   | TY 512M    | transparent | 210,0        | 2,4         | 51,0           | 80            | -            | 25.4 x 7.9     | 1000 | o. r.                                            | o. r.       | o. r.        |
| 91110                   | TY 48M     | transparent | 360,0        | 4,8         | 102,0          | 220           | -            | 13.1 x 57.2    | 1000 | o. r.                                            | o. r.       | o. r.        |
| 91111                   | TY 46M     | transparent | 184,0        | 4,8         | 45,0           | 220           | -            | 13.1 x 27      | 1000 | o. r.                                            | o. r.       | o. r.        |
| 91112                   | TY 46MD    | transparent | 184,0        | 4,8         | 45,0           | 2 x 220       | -            | 29.7 x 27      | 500  | o. r.                                            | o. r.       | o. r.        |
| 91113                   | TY 46MT    | transparent | 184,0        | 4,8         | 45,0           | 3 x 220       | -            | 46 x 27        | 500  | o. r.                                            | o. r.       | o. r.        |
| 91114                   | TY 46MF    | transparent | 184,0        | 4,8         | 45,0           | 4 x 220       | -            | 63.1 x 27      | 250  | o. r.                                            | o. r.       | o. r.        |

### marking area above the latch

| Part no.<br>transparent | Type T & B | Colour      | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Hole Ø<br>mm | Field<br>W x H | Unit | Net EUR/100 items at a purchase of<br>up to 1000 | 1001 - 5000 | 5001 - 10000 |
|-------------------------|------------|-------------|--------------|-------------|----------------|---------------|--------------|----------------|------|--------------------------------------------------|-------------|--------------|
| 91106                   | TY 53M     | transparent | 102,0        | 2,4         | 16,0           | 80            | -            | 20.6 x 9.3     | 500  | o. r.                                            | o. r.       | o. r.        |
| 91107                   | TY 532M    | transparent | 212,0        | 2,4         | 51,0           | 80            | -            | 20.6 x 9.3     | 1000 | o. r.                                            | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# T cable tie



## Cable binders

Cable tie with plastic lug for directionality and mounting cables and lines.

## Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

## Material

Polyamide 6.6

- halogen-free
- silicone-free

## Technical data

Temperature range: -40°C up to +80°C

Flammability acc. to UL 94: V2

| Part no.<br>transparent | Part no.<br>black | Type    | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------------|-------------------|---------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|                         |                   |         |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 90150                   | 90140             | T 2-20  | 100,0        | 2,5         | 20,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 90151                   | 90141             | T 2-50  | 200,0        | 2,5         | 50,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 90152                   | 90142             | T 3-35  | 140,0        | 3,5         | 35,0           | 130,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90153                   | 90143             | T 3-50  | 200,0        | 3,5         | 55,0           | 130,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90154                   | 90144             | T 3-75  | 280,0        | 3,5         | 76,0           | 130,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90157                   | 90147             | T 5-85  | 200,0        | 4,5         | 47,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90156                   | 90146             | T 5-75  | 280,0        | 4,5         | 76,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90158                   | 90148             | T 5-100 | 360,0        | 4,5         | 109,0          | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90159                   | 90149             | T 8-100 | 360,0        | 7,5         | 100,0          | 530,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 96491                   | 96492             | T 9-165 | 550,0        | 8,9         | 155,0          | 790,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 97219                   | 97223             | T 9-230 | 775,0        | 8,9         | 230,0          | 790,0         | 100  | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# T-WS cable tie

weather-proof



new

## Cable tie T-WS

Cable tie with plastic lug for bundling and mounting cables and lines.

## Application

- Outdoor use

## Material

Polyamide 6.6  
UV-resistant

- halogen-free

## Properties

- weather- stabilised

## Technical data

Temperature range: -40°C up to +85°C  
Temperature range temporary up to +105°C

Flammability acc. to UL 94: V2

| Part no.<br>black | Type            | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------|-----------------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|                   |                 |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 905525            | T-WS 25/100 BK  | 100,0        | 2,5         | 22,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 905527            | T-WS 25/140 BK  | 145,0        | 2,5         | 35,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 905526            | T-WS 25/205 BK  | 205,0        | 2,5         | 55,0           | 80,0          | 100  | o. r.                              | o. r.       | o. r.        |
| 905528            | T-WS 28/330 BK  | 330,0        | 2,8         | 95,0           | 110,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905529            | T-WS 35/150 BK  | 150,0        | 3,5         | 35,0           | 135,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905530            | T-WS 35/190 BK  | 190,0        | 3,5         | 50,0           | 135,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905531            | T-WS 35/290 BK  | 285,0        | 3,5         | 80,0           | 135,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905532            | T-WS 40/175 BK  | 175,0        | 4,0         | 40,0           | 180,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905535            | T-WS 46/150 BK  | 150,0        | 4,6         | 35,0           | 225,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905533            | T-WS 46/200 BK  | 210,0        | 4,7         | 55,0           | 355,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905536            | T-WS 46/245 BK  | 245,0        | 4,6         | 65,0           | 225,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 906682            | T-WS 46/390 BK  | 390,0        | 4,7         | 110,0          | 355,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905537            | T-WS 47/300 BK  | 300,0        | 4,7         | 85,0           | 355,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905542            | T-WS 76/225 BK  | 225,0        | 7,6         | 55,0           | 535,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905539            | T-WS 76/300 BK  | 300,0        | 7,6         | 80,0           | 535,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905543            | T-WS 76/365 BK  | 365,0        | 7,6         | 100,0          | 670,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 906683            | T-WS 76/380 BK  | 387,0        | 7,6         | 100,0          | 535,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905541            | T-WS 76/460 BK  | 460,0        | 7,6         | 130,0          | 535,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 906684            | T-WS 76/760 BK  | 760,0        | 7,6         | 225,0          | 535,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 906685            | T-WS 88/820 BK  | 820,0        | 8,8         | 245,0          | 780,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 906686            | T-WS 89/530 BK  | 525,0        | 8,9         | 150,0          | 780,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 905546            | T-WS 132/535 BK | 535,0        | 13,2        | 150,0          | 1115,0        | 100  | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

**W cable tie**  
unlockable



**Cable tie**  
Detachable cable tie for temporary assembly.  
This cable tie can be opened by hand without  
using a tool.

**Material**  
Polyamide 6.6

- halogen-free
- silicone-free

**Technical data**  
Temperature range: -40°C up to +80°C

Flammability acc. to UL 94: V2

| Part no.<br>black | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|                   |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 97633             | 120,0        | 7,6         | 26,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 97634             | 200,0        | 7,6         | 50,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 97635             | 300,0        | 7,6         | 80,0           | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 97636             | 370,0        | 7,6         | 102,0          | 220,0         | 100  | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# E cable tie

## stainless steel



### Cable binder

Cable tie made of stainless steel with ball lock for use in extreme conditions, such as high temperatures, aggressive environment, high tensile load.

### Material

Stainless steel 1.4401 / AISI 316

### Technical data

Temperature range: -80°C up to +538°C

### Properties

Corrosion and radiation resistant, anti-magnetic, resistant to high temperatures and aggressive chemicals

### Note

Approvals: GL, DNV, Lloyd's, UL

| Part no. | Length<br>mm | Width<br>mm | Bundle Ø<br>mm | Capacity<br>N | Unit | Net EUR/100 items at a purchase of |             |              |
|----------|--------------|-------------|----------------|---------------|------|------------------------------------|-------------|--------------|
|          |              |             |                |               |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 90900    | 150,0        | 4,6         | 44,0           | 445,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90901    | 200,0        | 4,6         | 50,0           | 445,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90902    | 290,0        | 4,6         | 75,0           | 445,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90903    | 360,0        | 4,6         | 102,0          | 445,0         | 100  | o. r.                              | o. r.       | o. r.        |
| 90904    | 200,0        | 7,9         | 50,0           | 1112,0        | 100  | o. r.                              | o. r.       | o. r.        |
| 90905    | 290,0        | 7,9         | 75,0           | 1112,0        | 100  | o. r.                              | o. r.       | o. r.        |
| 90906    | 360,0        | 7,9         | 102,0          | 1112,0        | 100  | o. r.                              | o. r.       | o. r.        |
| 90907    | 520,0        | 7,9         | 152,0          | 1112,0        | 25   | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KLL/KLÖ hook and loop cable tie



## Velcro tie

Particularly suited for sensitive cables and lines that are to be bundled or fastened without kinking or pinching.

Velcro binders exert only low pressure on the lines and lie evenly and flush.  
Suitable for up to 10,000 actuations in reusable bundling applications.

## Material

KLL - Polyamide sleeve / PE mushroom head tape / with punched hole

## Note

KLL – pre-punched on rolls  
KLÖ – Packed small in poly bags

## Technical data

Temperature range: -40°C up to +85°C

### KLL with punched hole

| Part no. | Colour | Length mm | Width mm | Bundle Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------|-----------|----------|-------------|------|------------------------------------|-----------|------------|
|          |        |           |          |             |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93730    | black  | 150,0     | 20,0     | 45,0        | 1000 | o. r.                              | o. r.     | o. r.      |
| 93731    | black  | 200,0     | 20,0     | 60,0        | 750  | o. r.                              | o. r.     | o. r.      |
| 93732    | black  | 330,0     | 20,0     | 100,0       | 450  | o. r.                              | o. r.     | o. r.      |

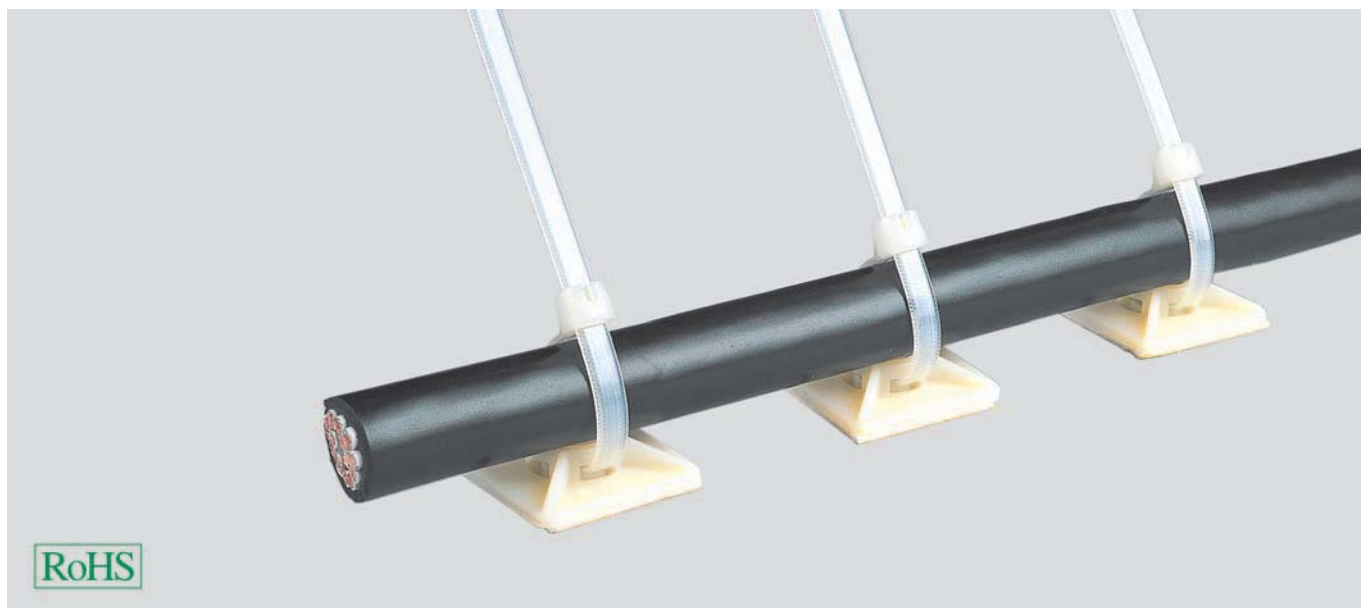
### KLÖ with plastic eye

| Part no. | Colour    | Length mm | Width mm | Bundle Ø mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|-----------|----------|-------------|------|------------------------------------|-----------|------------|
|          |           |           |          |             |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93735    | red-black | 195,0     | 25,0     | 55,0        | 10   | o. r.                              | o. r.     | o. r.      |
| 93736    | red-black | 240,0     | 25,0     | 70,0        | 10   | o. r.                              | o. r.     | o. r.      |
| 93737    | red-black | 360,0     | 25,0     | 110,0       | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## BS mounting base



### BS

BS mounting base self-adhesive and screwable for installing cables, lines, tubes and pipes.  
Simple handling by the combination with cable ties.

### Application

- Plant and machine construction
- Robot construction
- Automation technology
- Vehicle construction and shipbuilding
- Rail technology
- Installation technology
- Control cabinet construction

### Material

Polyamide 6.6

Colour: transparent

### Note

Foamed self-adhesive foil adheres to smooth and grease-free surfaces and smooths out slightly uneven surfaces.

### Technical data

Temperature range: -40°C up to +85°C

### as adhesive base

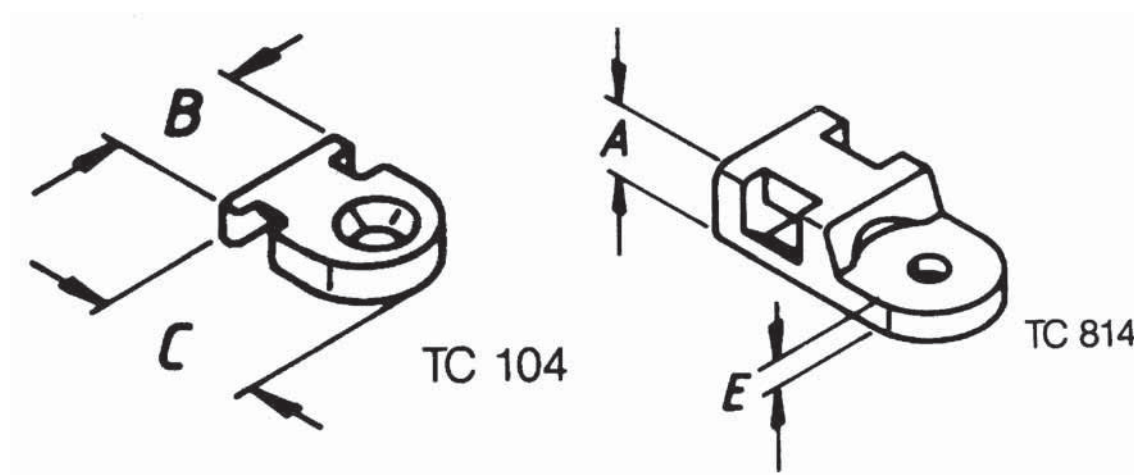
| Part no.<br>transparent | Type | Size<br>l x w | Cable tie<br>max. width<br>mm | Drill hole<br>mm | Unit | Net EUR/100 items at a purchase of |             |              |
|-------------------------|------|---------------|-------------------------------|------------------|------|------------------------------------|-------------|--------------|
|                         |      |               |                               |                  |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 91090                   | BS 1 | 19,0 x 19,0   | 3,6                           | 4,0              | 100  | o. r.                              | o. r.       | o. r.        |
| 91091                   | BS 2 | 28,0 x 28,0   | 5                             | 5,0              | 100  | o. r.                              | o. r.       | o. r.        |
| 91092                   | BS 3 | 26,5 x 26,5   | 4,8                           | 4,0              | 100  | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TC mounting base

a product by Thomas & Betts



## TC for band fastening

Small base for band fastening with countersunk screws, cylinder bolts or rivet assembly.

## Material

Polyamide 6.6  
Colour: transparent

## Technical data

Temperature range: -40°C up to +85°C  
Temperature range temporary up to +105°C

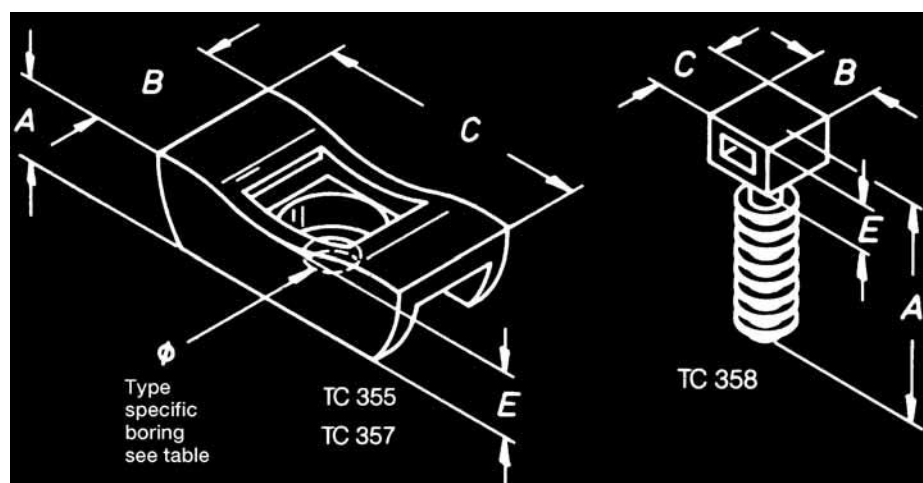
### for band fastening

| Part no. | Type   | Fixing   | A mm | B mm | C mm | D mm | E mm | F mm | Boring mm | Tie width max. mm | Unit | Net EUR/100 items at a purchase of up to 1000 | 1001 - 5000 | 5001 - 10000 |
|----------|--------|----------|------|------|------|------|------|------|-----------|-------------------|------|-----------------------------------------------|-------------|--------------|
| 91039    | TC 102 | Screw-in | 3,2  | 12,7 | 19,1 | -    | -    | -    | 4,4       | 4,8               | 100  | o. r.                                         | o. r.       | o. r.        |
| 91040    | TC 104 | Screw-in | 2,4  | 7,9  | 10,3 | -    | -    | -    | 3,4       | 2,4               | 100  | o. r.                                         | o. r.       | o. r.        |
| 91042    | TC 112 | Screw-in | 4,8  | 9,5  | 19,1 | -    | 2,0  | -    | 4,4       | 4,8               | 100  | o. r.                                         | o. r.       | o. r.        |
| 91043    | TC 812 | Screw-in | 4,8  | 9,5  | 19,1 | -    | 2,0  | -    | 5,1       | 4,8               | 100  | o. r.                                         | o. r.       | o. r.        |
| 93006    | TC 814 | Screw-in | 4,8  | 9,5  | 19,1 | -    | 2,0  | -    | 3,3       | 4,8               | 100  | o. r.                                         | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## mounting base



## TC as mounting base

Mounting base for robust fastening of lines, pipes and tubes - outdoor applications included.

## Material

Polyamide 6.6  
Colour: black

## Technical data

Temperature range: -40°C up to +85°C  
Temperature range temporary up to +105°C

### as mounting base

| Part no. | Type   | Fixing                     | A mm | B mm | C mm | D mm | E mm | F mm | Boring mm | Tie width max. mm | Unit | Net EUR/100 items at a purchase of up to 1000 | 1001 - 5000 | 5001 - 10000 |
|----------|--------|----------------------------|------|------|------|------|------|------|-----------|-------------------|------|-----------------------------------------------|-------------|--------------|
| 91046    | TC 355 | Screw-in                   | 15,9 | 19,1 | 44,5 | -    | 11,1 | -    | 4,6       | 12,7              | 25   | o. r.                                         | o. r.       | o. r.        |
| 91047    | TC 357 | Screw-in                   | 15,9 | 19,1 | 44,5 | -    | 11,1 | -    | 6,7       | 12,7              | 25   | o. r.                                         | o. r.       | o. r.        |
| 91048    | TC 358 | For fastening with anchors | 31,8 | 9,9  | 9,9  | -    | 7,1  | -    | 6,4       | 4,8               | 100  | o. r.                                         | o. r.       | o. r.        |

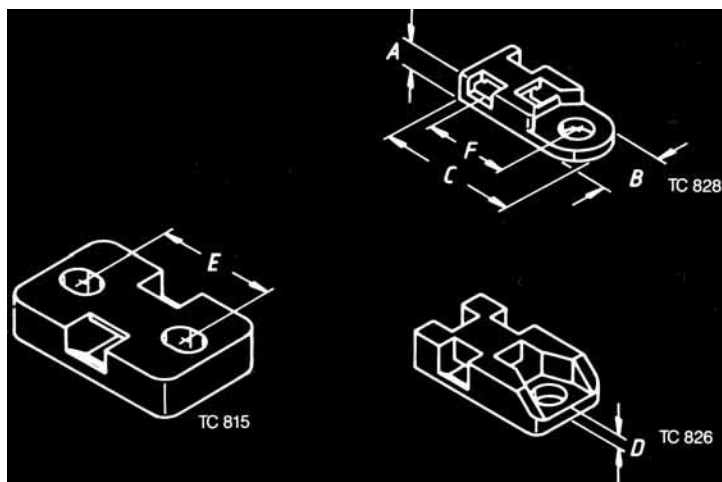
Dimensions and specifications may be changed without prior notice.

o. r. = on request



# TC mounting base

a product by Thomas & Betts



## TC as screw base

Mounting base for bolting or riveting. Cable binder can be inserted from 4 sides.

## Material

Polyamide 6.6  
Colour: transparent

## Technical data

Temperature range: -40°C up to +85°C  
Temperature range temporary up to +105°C

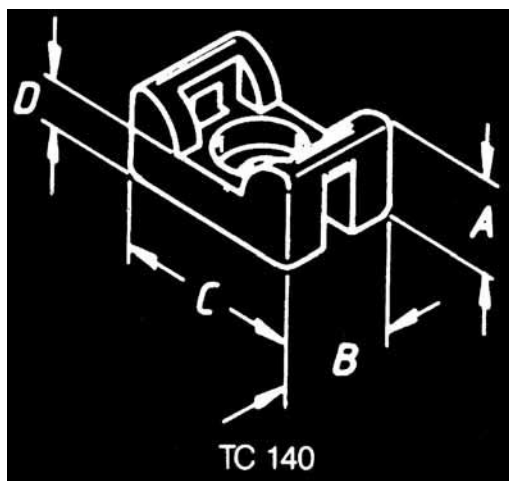
## as screwing socket

| Part no.<br>transparent | Type   | Fixing   | A<br>mm | B<br>mm | C<br>mm | D<br>mm | E<br>mm | F<br>mm | Boring<br>mm | Tie width<br>max. mm | Unit | Net EUR/100 items at a purchase of<br>up to 1000 | 1001 - 5000 | 5001 - 10000 |
|-------------------------|--------|----------|---------|---------|---------|---------|---------|---------|--------------|----------------------|------|--------------------------------------------------|-------------|--------------|
| 93007                   | TC 815 | Screw-in | 6,4     | 19,1    | 31,2    | -       | 19,9    | -       | 5,3          | 7,6                  | 500  | o. r.                                            | o. r.       | o. r.        |
| 93044                   | TC 826 | Screw-in | 5,7     | 12,7    | 23,8    | -       | -       | -       | 4,4          | 4,8                  | 1000 | o. r.                                            | o. r.       | o. r.        |
| 93045                   | TC 828 | Screw-in | 3,8     | 10,1    | 22,5    | -       | -       | -       | 4,3          | 4,8                  | 1000 | o. r.                                            | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## mounting base



## TC with saddle

Mounting base with support saddle.

## Material

Polyamide 6.6  
Colour: transparent

## Technical data

Temperature range: -40°C up to +85°C  
Temperature range temporary up to +105°C

## with saddle

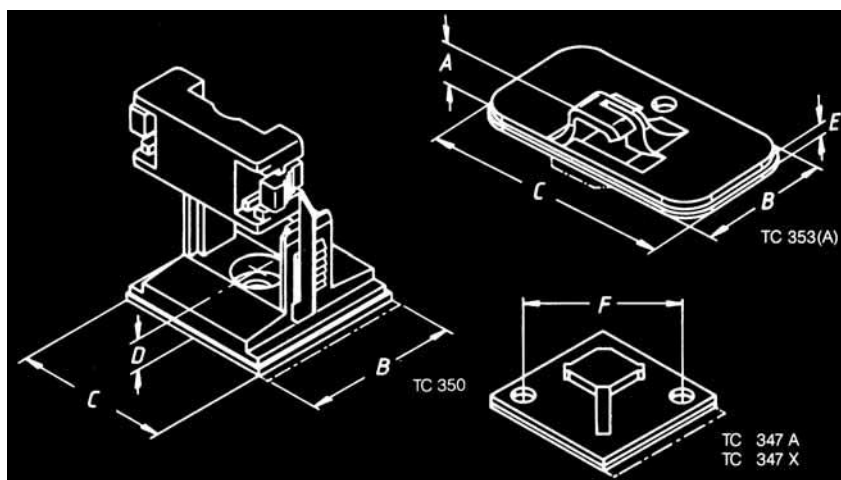
| Part no.<br>transparent | Type   | Fixing   | A<br>mm | B<br>mm | C<br>mm | D<br>mm | E<br>mm | F<br>mm | Boring<br>mm | Tie width<br>max. mm | Unit | Net EUR/100 items at a purchase of<br>up to 1000 | 1001 - 5000 | 5001 - 10000 |
|-------------------------|--------|----------|---------|---------|---------|---------|---------|---------|--------------|----------------------|------|--------------------------------------------------|-------------|--------------|
| 93005                   | TC 140 | Screw-in | 6,7     | 8,7     | 14,2    | 3,6     | -       | -       | 3,0          | 2,4                  | 500  | o. r.                                            | o. r.       | o. r.        |
| 93003                   | TC 141 | Screw-in | 7,5     | 11,1    | 17,0    | 4,0     | -       | -       | 3,8          | 4,8                  | 500  | o. r.                                            | o. r.       | o. r.        |
| 93004                   | TC 142 | Screw-in | 10,7    | 14,2    | 23,4    | 5,2     | -       | -       | 5,2          | 7,6                  | 500  | o. r.                                            | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TC mounting base

a product by Thomas & Betts



## TC as adhesive base

Adhesive base with foamed adhesive foil for smoothing out slightly uneven surfaces.  
Adheres to smooth, grease-free surfaces.

## Material

Polyamide 6.6  
Colour: transparent

## Technical data

Temperature range: -40°C up to +85°C  
Temperature range temporary up to +105°C

## Note

Part no. 91036 is black and UV-resistant.

## as adhesive base

| Part no. | Type     | Fixing        | A mm | B mm | C mm | D mm | E mm | F mm | Boring mm | Tie width max. mm | Unit | Net EUR/100 items at a purchase of |             |              |
|----------|----------|---------------|------|------|------|------|------|------|-----------|-------------------|------|------------------------------------|-------------|--------------|
|          |          |               |      |      |      |      |      |      |           |                   |      | up to 1000                         | 1001 - 5000 | 5001 - 10000 |
| 93000    | TC 344 A | Self-adhesive | 4,9  | 19,1 | 19,1 | -    | -    | -    | -         | 3,6               | 1000 | o. r.                              | o. r.       | o. r.        |
| 93001    | TC 347 A | Self-adhesive | 8,5  | 29,0 | 29,0 | -    | -    | -    | -         | 7,6               | 1000 | o. r.                              | o. r.       | o. r.        |
| 91036    | TC 347 X | Screw-in      | 7,8  | 28,6 | 28,6 | -    | -    | -    | -         | 7,6               | 1000 | o. r.                              | o. r.       | o. r.        |
| 93002    | TC 353 A | Self-adhesive | 9,1  | 25,4 | 50,9 | -    | -    | -    | -         | 4,8               | 100  | o. r.                              | o. r.       | o. r.        |
| 91037    | TC 349A  | Self-adhesive | 14,5 | 25,0 | 25,0 | 2,7  | -    | 2,7  | -         | -                 | 100  | o. r.                              | o. r.       | o. r.        |
| 91038    | TC 350   | Screw-in      | 21,3 | 25,0 | 25,0 | 4,0  | -    | 4,0  | -         | -                 | 100  | o. r.                              | o. r.       | o. r.        |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

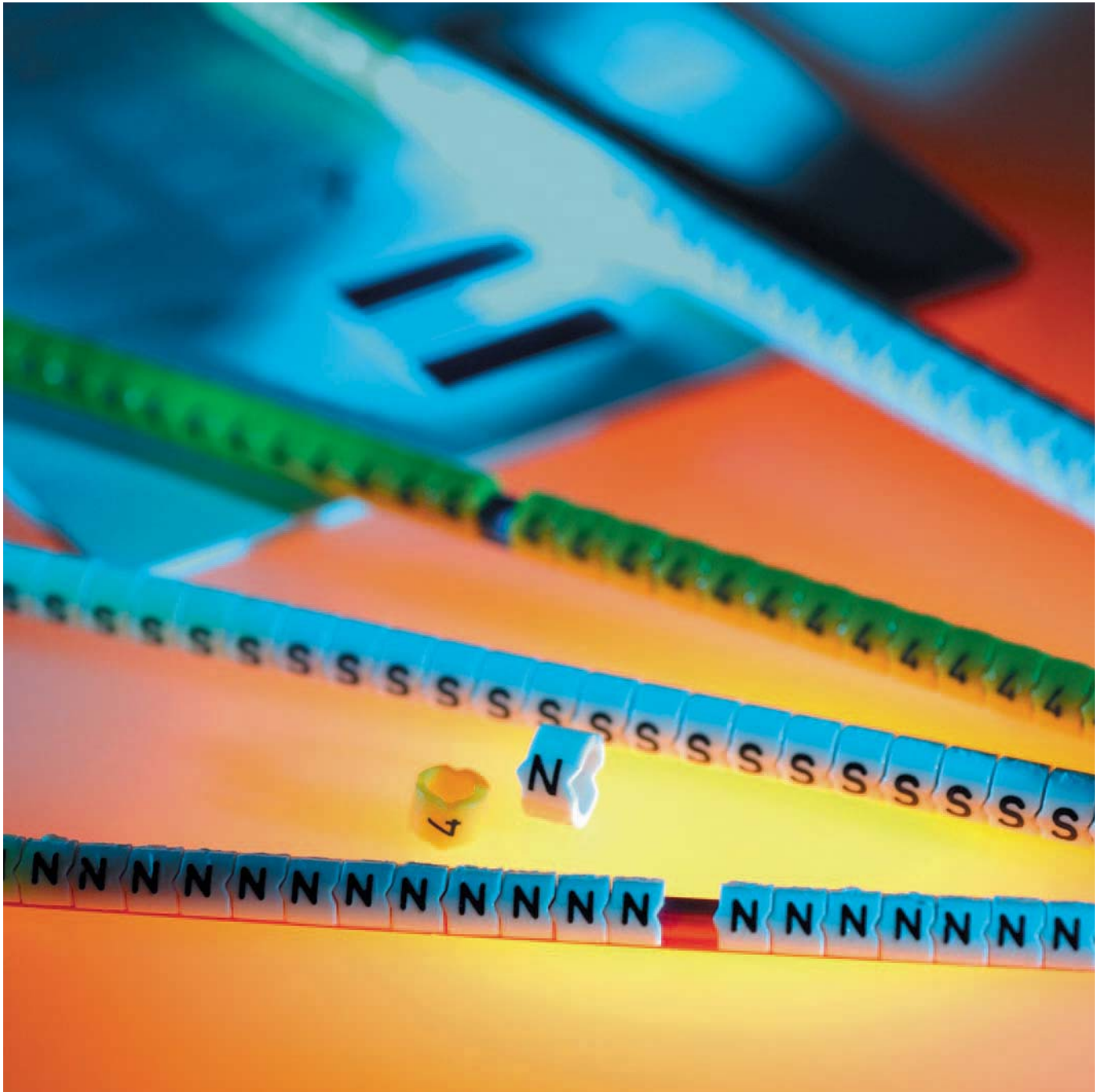


Photo: HELUKABEL®

## Identification and marking

# Identification and marking

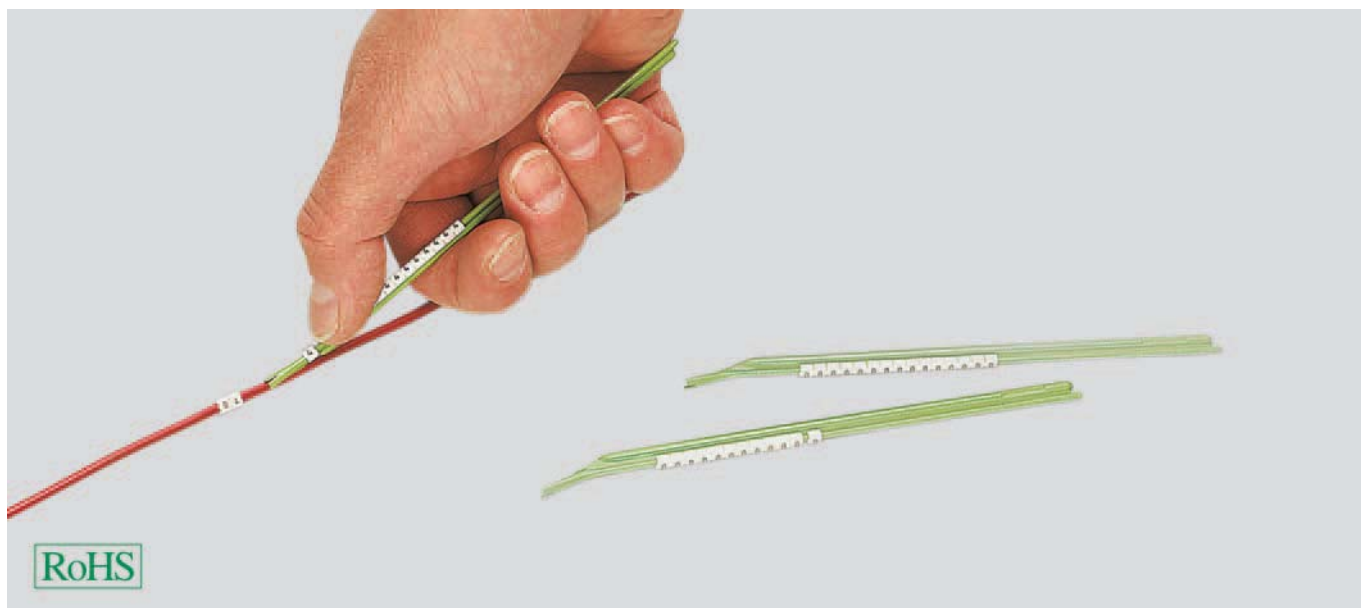
## Marking rings

|                         |     |
|-------------------------|-----|
| <b>SR</b>               |     |
| Mounting rod .....      | 387 |
| Marking rings.....      | 388 |
| Symbol allocation ..... | 389 |

## Cable markers

|                                |     |
|--------------------------------|-----|
| printed                        |     |
| Cable marker <b>E WM</b> ..... | 390 |
| writeable                      |     |
| Cable marker <b>WMBW</b> ..... | 391 |
| Cable marker <b>TM</b> .....   | 392 |

## SR assembly rod



### SR assembly rods

Simple handling afforded by marking rods characterise these marking rings. The nozzle-shaped marking rod is forced onto the line and the snap-on sleeve pushed with the thumb. The marker sits tight on the line without slip.

### Material

Copolymer

- halogen-free

### Technical data

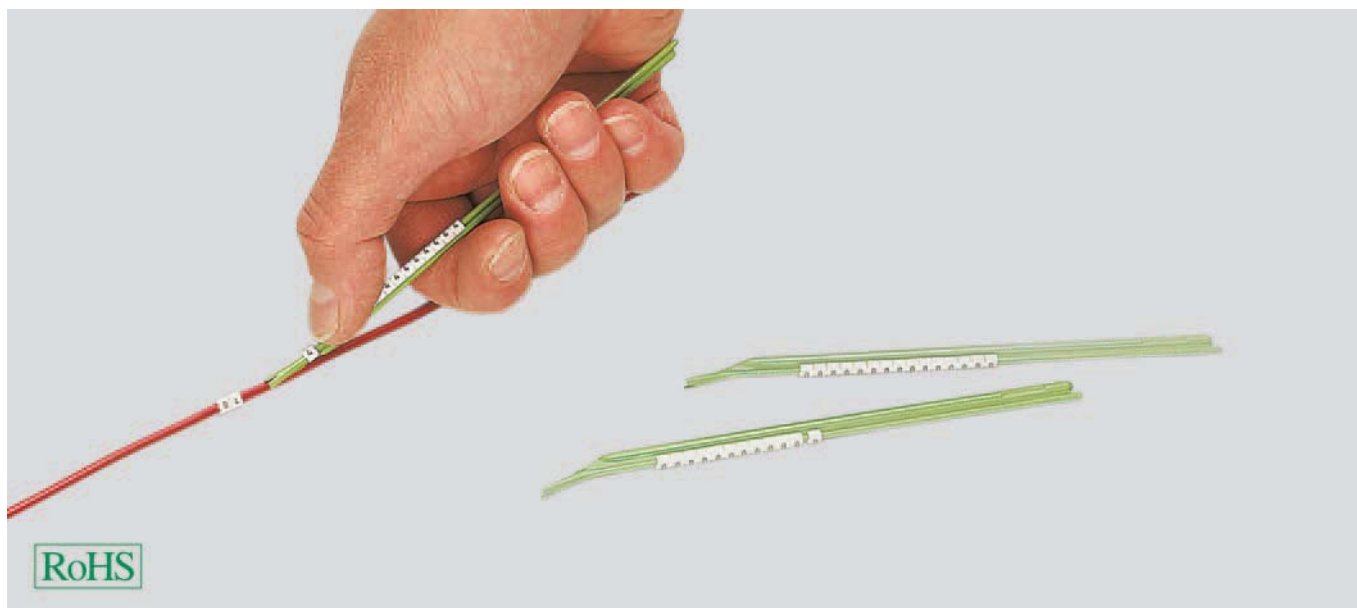
Temperature range: -40°C up to +105°C

| Part no. | Colour with inscription | Type                   | Cross section from - to mm <sup>2</sup> | Cable Ø from - to mm | Stick colour | Unit | Net EUR/100 unit at a purchase of |       |        |
|----------|-------------------------|------------------------|-----------------------------------------|----------------------|--------------|------|-----------------------------------|-------|--------|
|          |                         |                        |                                         |                      |              |      | 1                                 | 2 - 5 | 6 - 10 |
| 95697    | -                       | Assembly rod for SR 15 | 10 - 16                                 | 5,8 - 8,5            | orange       | 5    | o. r.                             | o. r. | o. r.  |
| 95797    | -                       | Assembly rod for SR 17 | 16 - 25                                 | 8,5 - 11,5           | orange       | 5    | o. r.                             | o. r. | o. r.  |
| 99821    | -                       | Assembly rod for SR 21 | 25 - 70                                 | 11,5 - 15,5          | grey         | 2    | o. r.                             | o. r. | o. r.  |
| 99822    | -                       | Assembly rod for SR 24 | 70 - 100                                | 15 - 19              | grey         | 2    | o. r.                             | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# SR marking rings



## SR

Simple handling afforded by assembly rods characterise these marking rings. The nozzle-shaped assembly rod is forced onto the line and the snap-on sleeve pushed with the thumb. The marker sits tight on the line without slip. Available in white or yellow with black marking.

## Application

1.0 mm to 19.0 mm  
0.10 mm<sup>2</sup> - 100 mm<sup>2</sup>

## Material

Copolymer

- halogen-free

## Properties

Halogen-free, resistant to oils, cleaning agents, fuels and alkalis.

## Technical data

Temperature range: -40°C up to +105°C

## Note

Code:

Replace the XX by the number of your required letter, figure or symbol.

1 unit = 10 rods with each 30 rings.

Product 956xx up to 959xx without rod. The rod can be ordered separately.

| Part no. | Colour with inscription | Type  | Cross section from - to mm <sup>2</sup> | Cable Ø from - to mm | Stick colour | Unit | Net EUR/100 unit at a purchase of |       |        |
|----------|-------------------------|-------|-----------------------------------------|----------------------|--------------|------|-----------------------------------|-------|--------|
|          |                         |       |                                         |                      |              |      | 1                                 | 2 - 5 | 6 - 10 |
| 950xx    | white/yellow with black | SR 01 | 0,1 - 0,5                               | 1 - 1,4              | brown        | 300  | o. r.                             | o. r. | o. r.  |
| 951xx    | white/yellow with black | SR 02 | 0,5 - 0,7                               | 1,4 - 1,8            | grey         | 300  | o. r.                             | o. r. | o. r.  |
| 952xx    | white/yellow with black | SR 03 | 0,8 - 1                                 | 1,9 - 2,6            | green        | 300  | o. r.                             | o. r. | o. r.  |
| 953xx    | white/yellow with black | SR 06 | 1,5 - 3,4                               | 2,6 - 3,5            | red          | 300  | o. r.                             | o. r. | o. r.  |
| 954xx    | white/yellow with black | SR 09 | 2,5 - 6                                 | 3,3 - 4,5            | blue         | 300  | o. r.                             | o. r. | o. r.  |
| 955xx    | white/yellow with black | SR 12 | 6 - 10                                  | 4,5 - 6              | yellow       | 300  | o. r.                             | o. r. | o. r.  |
| 956xx    | white/yellow with black | SR 15 | 10 - 16                                 | 5,8 - 8,5            | -            | 50   | o. r.                             | o. r. | o. r.  |
| 957xx    | white/yellow with black | SR 17 | 16 - 25                                 | 8,5 - 11,5           | -            | 50   | o. r.                             | o. r. | o. r.  |
| 958xx    | white/yellow with black | SR 21 | 25 - 70                                 | 11 - 15,5            | -            | 50   | o. r.                             | o. r. | o. r.  |
| 959xx    | white/yellow with black | SR 24 | 70 - 100                                | 15 - 19              | -            | 50   | o. r.                             | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Marking rings SR

## How to find the correct product code.

Replace the XX by the number of your required letter, figure or symbol.

### Basic colour: white

|               |   |     |     |    |
|---------------|---|-----|-----|----|
| e. g.         | A | △   | ... | 00 |
|               | B | △   | ... | 01 |
|               | C | △   | ... | 02 |
|               | D | △   | ... | 03 |
|               | E | △   | ... | 04 |
|               | F | △   | ... | 05 |
|               | G | △   | ... | 06 |
|               | H | △   | ... | 07 |
|               | I | △   | ... | 08 |
|               | J | △   | ... | 09 |
|               | K | △   | ... | 10 |
|               | L | △   | ... | 11 |
|               | M | △   | ... | 12 |
|               | N | △   | ... | 13 |
|               | O | △   | ... | 14 |
|               | P | △   | ... | 15 |
|               | Q | △   | ... | 16 |
|               | R | △   | ... | 17 |
|               | S | △   | ... | 18 |
|               | T | △   | ... | 19 |
|               | U | △   | ... | 20 |
|               | V | △   | ... | 21 |
|               | W | △   | ... | 22 |
|               | X | △   | ... | 23 |
|               | Y | △   | ... | 24 |
| Z             | △ | ... | 25  |    |
|               | 0 | △   | ... | 60 |
|               | 1 | △   | ... | 61 |
|               | 2 | △   | ... | 62 |
|               | 3 | △   | ... | 63 |
|               | 4 | △   | ... | 64 |
|               | 5 | △   | ... | 65 |
|               | 6 | △   | ... | 66 |
|               | 7 | △   | ... | 67 |
|               | 8 | △   | ... | 68 |
|               | 9 | △   | ... | 69 |
|               |   | △   | ... | 80 |
|               |   | △   | ... | 81 |
|               |   | △   | ... | 82 |
| al slash)     |   | △   | ... | 83 |
| ting current) |   | △   | ... | 84 |
| g)            |   | △   | ... | 85 |
|               |   | △   | ... | 86 |

### Basic colour: yellow

|      |   |     |    |
|------|---|-----|----|
| A    | △ | ... | 30 |
| B    | △ | ... | 31 |
| C    | △ | ... | 32 |
| D    | △ | ... | 33 |
| E    | △ | ... | 34 |
| F    | △ | ... | 35 |
| G    | △ | ... | 36 |
| H    | △ | ... | 37 |
| I    | △ | ... | 38 |
| J    | △ | ... | 39 |
| K    | △ | ... | 40 |
| L    | △ | ... | 41 |
| M    | △ | ... | 42 |
| N    | △ | ... | 43 |
| O    | △ | ... | 44 |
| P    | △ | ... | 45 |
| Q    | △ | ... | 46 |
| R    | △ | ... | 47 |
| S    | △ | ... | 48 |
| T    | △ | ... | 49 |
| U    | △ | ... | 50 |
| V    | △ | ... | 51 |
| W    | △ | ... | 52 |
| X    | △ | ... | 53 |
| Y    | △ | ... | 54 |
| Z    | △ | ... | 55 |
|      |   |     |    |
| 0    | △ | ... | 70 |
| 1    | △ | ... | 71 |
| 2    | △ | ... | 72 |
| 3    | △ | ... | 73 |
| 4    | △ | ... | 74 |
| 5    | △ | ... | 75 |
| 6    | △ | ... | 76 |
| 7    | △ | ... | 77 |
| 8    | △ | ... | 78 |
| 9    | △ | ... | 79 |
|      |   |     |    |
|      | △ | ... | 90 |
|      | △ | ... | 91 |
|      | △ | ... | 92 |
|      | △ | ... | 93 |
| ent) | △ | ... | 94 |
|      | △ | ... | 95 |
|      | △ | ... | 96 |

Example: Product code 95435 indicates ring type SR 09, letter „F“ in yellow.



# E WM cable marker

a product by Thomas & Betts



### E WM

Self-adhesive cable marker in practical pocket book size.  
10 side marker on siliconised carrier cards.  
Installation applications, for repair and maintenance.  
Book dimension: 15 x 8 cm  
Marker: 5 x 31 mm  
Perforated individual characters, 5 x 5 mm

### Material

Fibre tape  
  
self-adhesive  
  
Covering: carton

### Properties

Permanently self-adhesive, insensitive to moisture and oils.

### Technical data

Temperature range: -35°C up to +95°C

### Cable marker

| Part no. | Type       | Book content | Marker                                                                | Unit | Net EUR/100 items at a purchase of |       |        |
|----------|------------|--------------|-----------------------------------------------------------------------|------|------------------------------------|-------|--------|
|          |            |              |                                                                       |      | 1                                  | 2 - 5 | 6 - 10 |
| 91148    | E WM 0-9   | 40           | Marker: 0 to 9                                                        | 1    | O. r.                              | O. r. | O. r.  |
| 91149    | E WM 0-45  | 10           | Marker: 0 to 45                                                       | 1    | O. r.                              | O. r. | O. r.  |
| 91150    | E WM 46-90 | 10           | Marker: 46 to 90                                                      | 1    | O. r.                              | O. r. | O. r.  |
| 91151    | E WM A-Z   | 10           | Marker: A to Z, +, -, 0 to 15                                         | 1    | O. r.                              | O. r. | O. r.  |
| 91152    | E WM 123   | 150          | Marker: 1, 2, 3                                                       | 1    | O. r.                              | O. r. | O. r.  |
| 91153    | E WM ABC   | 150          | Marker: A, B, C                                                       | 1    | O. r.                              | O. r. | O. r.  |
| 91154    | E WM ABC   | 10           | Marker: 1 to 33, A, B, C, +, -, ; and for each 20 markers: T1, T2, T3 | 1    | O. r.                              | O. r. | O. r.  |
| 91155    | E WM A-90  | 4            | Marker: 0 to 90, and for each 2 markers: A - Z, +, -, 0 to 15         | 1    | O. r.                              | O. r. | O. r.  |

Dimensions and specifications may be changed without prior notice.

O. r. = on request



# TM cable marker



## TM

Self-adhesive, writable cable marker in practical pocket book size.  
10 side marker on siliconised carrier cards.  
Installation applications, for repair and maintenance.  
Book dimension: 15 x 8 cm

## Material

PVC  
self-adhesive  
self-extinguishing  
UV-resistant  
oil-resistant

Adhesive: acrylate  
Covering: carton

## Properties

Resistant to:

- Water
- Alcohol
- Oils
- Greases
- Fuels
- Aliphatic solvents
- Weak acids
- Salts
- Alkalis

## Technical data

Temperature range: -40°C up to +80°C  
Temperature range temporary up to +120°C

## TM

| Part no. | Type   | Book content | Size mm      | Description field mm | Unit | Net EUR/100 items at a purchase of |       |        |
|----------|--------|--------------|--------------|----------------------|------|------------------------------------|-------|--------|
|          |        |              |              |                      |      | 1                                  | 2 - 5 | 6 - 10 |
| 91146    | TM 50  | 90           | 15,0 x 50,0  | 15,0 x 25,0          | 1    | o. r.                              | o. r. | o. r.  |
| 91180    | TM 75  | 60           | 25,0 x 75,0  | 25,0 x 25,0          | 1    | o. r.                              | o. r. | o. r.  |
| 91181    | TM 150 | 30           | 25,0 x 150,0 | 25,0 x 25,0          | 1    | o. r.                              | o. r. | o. r.  |
| 91147    | TM 230 | 30           | 25,0 x 230,0 | 25,0 x 25,0          | 1    | o. r.                              | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



Photo: HELUKABEL®

## Core end sleeves and cable lugs

# Core end sleeves and cable lugs

|                                                                                        |            |
|----------------------------------------------------------------------------------------|------------|
| <b>Assignment tools to compression cable lugs, core end sleeves / cable lugs .....</b> | <b>396</b> |
|----------------------------------------------------------------------------------------|------------|

## Core end sleeves

### insulated

|                                            |            |
|--------------------------------------------|------------|
| <b>Colour code</b> of the insulation ..... | <b>398</b> |
| for single conductors                      |            |
| <b>ADI</b> .....                           | <b>399</b> |
| reel products                              |            |
| <b>ADI-B</b> .....                         | <b>401</b> |
| assortment box                             |            |
| <b>ESD-ADI</b> .....                       | <b>402</b> |
| for short-circuit proof lines              |            |
| <b>ADI-K</b> .....                         | <b>403</b> |
| for two conductors                         |            |
| <b>DUO</b> .....                           | <b>404</b> |
| assortment box                             |            |
| <b>ESD-DUO</b> .....                       | <b>405</b> |

### not insulated

|                       |            |
|-----------------------|------------|
| for single conductors |            |
| <b>ADU</b> .....      | <b>406</b> |

## Shield connectors

### insulated

|                              |            |
|------------------------------|------------|
| Series Thomas&Betts          |            |
| <b>Shield-Kon® RSK</b> ..... | <b>407</b> |

## Solderless terminals

### insulated

|                                         |            |
|-----------------------------------------|------------|
| eye-type .....                          | <b>408</b> |
| forked .....                            | <b>409</b> |
| round pattern .....                     | <b>409</b> |
| round pin plugs .....                   | <b>410</b> |
| butt connectors .....                   | <b>411</b> |
| closed end-splices .....                | <b>411</b> |
| blade receptacles .....                 | <b>412</b> |
| blade terminals .....                   | <b>412</b> |
| blade receptacles - all-insulated ..... | <b>413</b> |
| flat distributors .....                 | <b>413</b> |
| Reel products                           |            |
| eye-type .....                          | <b>414</b> |
| forked .....                            | <b>414</b> |

### not insulated

|                               |            |
|-------------------------------|------------|
| Solderless terminals <b>B</b> |            |
| eye-type .....                | <b>415</b> |
| forked .....                  | <b>416</b> |
| round pattern .....           | <b>417</b> |

# Core end sleeves and cable lugs

## Tubular cable lugs

### Copper

#### not insulated

##### for normal conductors

|                                                  |     |
|--------------------------------------------------|-----|
| tubular cable lug <b>T</b> - straight .....      | 418 |
| tubular cable lug <b>W</b> - angulated 45° ..... | 420 |
| tubular cable lug <b>W</b> - angulated 90° ..... | 422 |
| tubular cable lug <b>S</b> - small flange .....  | 424 |

##### for fine stranded wires

|                                  |     |
|----------------------------------|-----|
| tubular cable lug <b>F</b> ..... | 425 |
|----------------------------------|-----|

##### compression cable lugs

|                                       |     |
|---------------------------------------|-----|
| compression cable lug <b>DC</b> ..... | 427 |
|---------------------------------------|-----|

#### not insulated - Series K

##### for normal conductors

|                                   |     |
|-----------------------------------|-----|
| tubular cable lug <b>K1</b> ..... | 428 |
| tubular cable lug <b>K2</b> ..... | 429 |

##### for fine-wire conductors

|                                   |     |
|-----------------------------------|-----|
| tubular cable lug <b>KF</b> ..... | 431 |
|-----------------------------------|-----|

##### sleeves for compacted conductors

|                                                                     |     |
|---------------------------------------------------------------------|-----|
| sleeves for compacted conductors <b>KH-R</b> round .....            | 433 |
| sleeves for compacted conductors <b>KH-3</b> for 3-core cable ..... | 434 |
| sleeves for compacted conductors <b>KH-4</b> for 4-core cable ..... | 434 |

### Aluminium

#### not insulated

##### for normal conductors

|                                       |     |
|---------------------------------------|-----|
| compression cable lug <b>KA</b> ..... | 435 |
|---------------------------------------|-----|

### Aluminium with copper connection

#### not insulated

##### for normal conductors

|                                              |     |
|----------------------------------------------|-----|
| compression cable lug <b>KAC</b> Al/Cu ..... | 436 |
|----------------------------------------------|-----|

#### Washer

|                               |     |
|-------------------------------|-----|
| washer <b>KAC</b> Al/Cu ..... | 437 |
|-------------------------------|-----|

### Nickel

#### not insulated

##### for normal conductors

|                            |     |
|----------------------------|-----|
| tubular lug <b>N</b> ..... | 438 |
|----------------------------|-----|

## Compression joints

### low voltage copper

#### not insulated

|                                                      |     |
|------------------------------------------------------|-----|
| compression joint <b>PV-C</b> .....                  | 439 |
| compression joint <b>PV-CÖ</b> - with oil stop ..... | 440 |

### low voltage aluminium

#### not insulated

|                                     |     |
|-------------------------------------|-----|
| compression joint <b>PV-A</b> ..... | 441 |
|-------------------------------------|-----|

### medium voltage copper

#### not insulated

|                                                       |     |
|-------------------------------------------------------|-----|
| compression joint <b>PV-CM</b> .....                  | 442 |
| compression joint <b>PV-CMÖ</b> - with oil stop ..... | 443 |

### medium voltage aluminium

#### not insulated

|                                                       |     |
|-------------------------------------------------------|-----|
| compression joint <b>PV-AM</b> .....                  | 444 |
| compression joint <b>PV-AMÖ</b> - with oil stop ..... | 445 |

# Assignment tools to compression cable lugs, core end sleeves/cable lugs

|                                                       | 0,14                                                                                                 | 0,34 | 0,5                                           | 0,75                                  | 1                                       | 1,5                                     | 2,5 | 4                                                           | 6 | 10                                                                              | 16                                                                   | 25 | 35 | 50 | 70 | 95 | 120 | 150 | 185 | 240 | 300 |  |  |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------|------|-----------------------------------------------|---------------------------------------|-----------------------------------------|-----------------------------------------|-----|-------------------------------------------------------------|---|---------------------------------------------------------------------------------|----------------------------------------------------------------------|----|----|----|----|----|-----|-----|-----|-----|-----|--|--|
| ADI                                                   | PEW 8.84 Part no. 906324<br>square crimping                                                          |      |                                               |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      | 803/0 Part no. 91602<br>indent crimping       |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      | DEB 0560 Part no. 97343<br>indent crimping    |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               | 804 Part no. 91601<br>indent crimping |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       | 803/5 Part no. 91603<br>indent crimping |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         |                                         |     |                                                             |   | K22 Part no. 904736<br>and appropriate inserts trapezoid                        |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| ADI-B                                                 |                                                                                                      |      | Stripax-Plus Part no. 91923<br>strip products |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       | Automatic crimpers on request coil products                                                          |      |                                               |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| ADI-K                                                 | PEW 8.84 Part no. 903624<br>square pressing                                                          |      |                                               |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      | 803/0 Part no. 91602<br>indent crimping       |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      | DEB 0560 Part no. 97343<br>indent crimping    |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               | 804 Part no. 91601<br>indent crimping |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         | 803/5 Part no. 91603<br>indent crimping |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| DUO                                                   |                                                                                                      |      | PEW 8.84 Part no. 903624<br>square crimping   |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         |                                         |     | K22 Part no. 904736<br>and appropriate inserts<br>trapezoid |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| ADU                                                   | PEW 8.84 Part no. 903624<br>square crimping                                                          |      |                                               |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      | DEB 0560 Part no. 97343<br>indent crimping    |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         |                                         |     |                                                             |   | K22 Part no. 904736<br>and appropriate inserts                                  |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| Shield Kon                                            | ERG 740 96757 and appropriate tool inserts                                                           |      |                                               |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| solderless<br>terminals,<br>insulated                 |                                                                                                      |      | 802/0 Part no. 91612<br>oval crimping         |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      | 802/1 Part no. 91163<br>oval crimping         |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         |                                         |     |                                                             |   | K22 Part no.<br>904736 and<br>appropriate in-<br>serts indent<br>crimping       |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         |                                         |     |                                                             |   | EK35/4<br>Part no.<br>904897 and<br>appropriate in-<br>serts indent<br>crimping |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| solderless termi-<br>nals, insulated,<br>tape product | on request – when machine is present must be clarified previously whether our tape product is usable |      |                                               |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
| B solderless<br>terminals,<br>non insulated           |                                                                                                      |      | 805/2 Part no. 91606<br>indent crimping       |                                       |                                         |                                         |     |                                                             |   |                                                                                 |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         |                                         |     |                                                             |   | K22 Part no. 904736<br>and appropriate inserts indent crimping                  |                                                                      |    |    |    |    |    |     |     |     |     |     |  |  |
|                                                       |                                                                                                      |      |                                               |                                       |                                         |                                         |     |                                                             |   |                                                                                 | HK 120/30 Part no. 906440<br>and appropriate inserts indent crimping |    |    |    |    |    |     |     |     |     |     |  |  |

mechanical

hydraulic

Appropriate inserts on request



# Assignment tools to compression cable lugs, core end sleeves/cable lugs

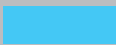
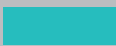
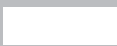
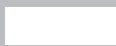
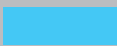
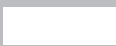
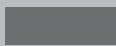
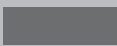
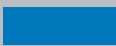
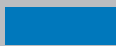
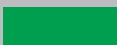
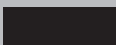
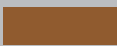
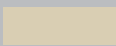
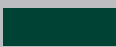
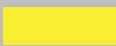
|                                                                   | 0,14 | 0,34 | 0,5                                 | 0,75                               | 1 | 1,5 | 2,5 | 4 | 6                                                                  | 10                                                                        | 16 | 25 | 35                                                                | 50 | 70                                                              | 95                                   | 120 | 150 | 185 | 240 | 300 |  |  |  |
|-------------------------------------------------------------------|------|------|-------------------------------------|------------------------------------|---|-----|-----|---|--------------------------------------------------------------------|---------------------------------------------------------------------------|----|----|-------------------------------------------------------------------|----|-----------------------------------------------------------------|--------------------------------------|-----|-----|-----|-----|-----|--|--|--|
| T and W and S and K2 tubular cable lugs                           |      |      |                                     | K2 Part no. 904732 indent crimping |   |     |     |   |                                                                    |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K5 Part no. 904733 indent crimping                                 |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K05 Part no. 904734 hexagonal crimping                             |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    | K06 Part no. 904735 hexagonal crimping                                    |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts hexagonal crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | EK35/4 Part no. 904897 and appropriate inserts indent crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    | HK 120/30 Part no. 906440 and appropriate inserts (HQ) hexagonal crimping |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
| F tubular cable lug                                               |      |      |                                     |                                    |   |     |     |   | K5 Part no. 904733 indent crimping                                 |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | EK35/4 Part no. 904897 and appropriate inserts indent crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts indent crimping        |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    | 806/4 Part no. 91616 indent crimping                              |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    |                                                                   |    |                                                                 | 806/8 Part no. 91618 indent crimping |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    | HK 120/30 Part no. 906440 and appropriate inserts indent crimping |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    | HK25/2 Part no. 906441 and appropriate insert indent crimping     |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
| K1 tubular cable lug                                              |      |      |                                     | K2 Part no. 904732 indent crimping |   |     |     |   |                                                                    |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
| KF tubular cable lug                                              |      |      |                                     |                                    |   |     |     |   | K5 Part no. 904733 indent crimping                                 |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | EK35/4 Part no. 904897 and appropriate inserts indent crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts indent crimping        |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | HK 120/30 Part no. 906440 and appropriate inserts indent crimping  |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | HK25/2 Part no. 906441 and appropriate insert indent crimping      |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
| KH-3, KH-4                                                        |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts for pressing roundly   |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
| KA compression cable lug                                          |      |      |                                     |                                    |   |     |     |   | EK35/4 Part no. 904897 with appropriate inserts hexagonal crimping |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts hexagonal crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | HK25/2 Part no. 906441 and appropriate inserts hexagonal crimping  |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
| KAC compression cable lug                                         |      |      |                                     |                                    |   |     |     |   | EK35/4 Part no. 904897 hexagonal crimping                          |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts hexagonal crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
| N tubular cable lug                                               |      |      | K25 Part no. 905561 indent crimping |                                    |   |     |     |   |                                                                    |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts hexagonal crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    |                                                                   |    | HK 120/30 Part no. 906440 and appropriate inserts (HF1370/1395) |                                      |     |     |     |     |     |  |  |  |
| compression joint PV-C, PV-CÖ, PV-A, PV-CM, PV-CMÖ, PV-AM, PV-AMÖ |      |      |                                     |                                    |   |     |     |   | K22 Part no. 904736 and appropriate inserts hexagonal crimping     |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   | EK35/4 Part no. 904897 and appropriate inserts hexagonal crimping  |                                                                           |    |    |                                                                   |    |                                                                 |                                      |     |     |     |     |     |  |  |  |
|                                                                   |      |      |                                     |                                    |   |     |     |   |                                                                    |                                                                           |    |    | HK25/2 Part no. 906441 and appropriate inserts hexagonal crimping |    |                                                                 |                                      |     |     |     |     |     |  |  |  |

mechanical

hydraulic

Appropriate inserts on request

# Colour code of the insulation of the wire end sleeve

| Cross-section<br>mm <sup>2</sup> | Inside-Ø<br>mm | Colour code<br>Telemechanique                                                                | Z+F                                                                                           | DIN                                                                                          |
|----------------------------------|----------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| 0,14                             |                | brown       | grey        |                                                                                              |
| 0,25                             |                | violet      | light blue  |                                                                                              |
| 0,34                             |                | pink        | turquoise   |                                                                                              |
| 0,5                              |                | white       | orange      | white     |
| 0,75                             |                | light blue  | white       | grey      |
| 1,0                              |                | red         | yellow      | red       |
| 1,5                              |                | black       | red         | black     |
| 2,5                              |                | grey        | blue        | blue      |
| 4                                |                | orange     | grey       | grey     |
| 6                                |                | green     | black     | yellow  |
| 10                               |                | brown     | ivory     | red     |
| 16                               |                | ivory     | green     | blue    |
| 25                               |                | black     | brown     | yellow  |
| 35                               |                | red       | beige     | red     |
| 50                               |                | blue      | olive     | blue    |
| 70                               | 13,5           |                                                                                              | yellow    |                                                                                              |
| 95                               | 14,5           |                                                                                              | red       |                                                                                              |
| 120                              | 16,5           |                                                                                              | blue      |                                                                                              |
| 150                              | 19,5           |                                                                                              | yellow    |                                                                                              |

# ADI core end sleeves

insulated



## ADI

Insulated core end sleeves prevent stripped wires from fanning.

The hopper-shaped plastic collar enables them to be pushed easily onto the wires. To DIN, ZF, and Telemecanique colour code.

## Material

Sleeve: copper  
Surface: tinned

Insulating shroud: polypropylene

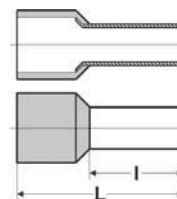
## Note

Versions:  
K = short  
N = normal  
HL = semi-long  
L = long

Assignment to cable cross section according to DIN 46228: up to 50mm<sup>2</sup> to nominal size an DIN color code - over 50mm<sup>2</sup> no specification; Assignment to suitable size possible.

## Technical data

Temperature range: up to +105°C  
Temperature range temporary up to +120°C



## Dimensions

L Total length  
I Stick length

| Part no. | Size mm <sup>2</sup> | Colour     | Colour code   | Total length mm | Stick length mm | Unit | Net EUR/100 items at a purchase of |              |               |  |
|----------|----------------------|------------|---------------|-----------------|-----------------|------|------------------------------------|--------------|---------------|--|
|          |                      |            |               |                 |                 |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |  |
| 91850    | 0,14 / normal        | brown      | Telemecanique | 10,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91851    | 0,14 / long          | brown      | Telemecanique | 12,4            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91852    | 0,25 / normal        | violet     | Telemecanique | 10,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91853    | 0,25 / normal        | light blue | Z+F           | 10,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91855    | 0,25 / long          | light blue | Z+F           | 12,4            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91854    | 0,25 / long          | violet     | Telemecanique | 12,4            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91857    | 0,34 / normal        | turquoise  | Z+F           | 10,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91856    | 0,34 / normal        | pink       | Telemecanique | 10,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91858    | 0,34 / long          | pink       | Telemecanique | 12,4            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91859    | 0,34 / long          | turquoise  | Z+F           | 12,4            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91860    | 0,5 / short          | white      | DIN           | 12,0            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91861    | 0,5 / short          | orange     | Z+F           | 12,0            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91383    | 0,5 / normal         | orange     | Z+F           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91350    | 0,5 / normal         | white      | DIN           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91863    | 0,5 / semi-long      | orange     | Z+F           | 16,0            | 10,0            | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91862    | 0,5 / semi-long      | white      | DIN           | 16,0            | 10,0            | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91865    | 0,75 / short         | white      | Z+F           | 12,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91864    | 0,75 / short         | light blue | Telemecanique | 12,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 94023    | 0,75 / short         | grey       | DIN           | 12,4            | 6,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91351    | 0,75 / normal        | light blue | Telemecanique | 14,6            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 93030    | 0,75 / normal        | grey       | DIN           | 14,6            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91384    | 0,75 / normal        | white      | Z+F           | 14,6            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91868    | 0,75 / semi-long     | grey       | DIN           | 16,4            | 10,0            | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91866    | 0,75 / semi-long     | light blue | Telemecanique | 16,4            | 10,0            | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91867    | 0,75 / semi-long     | white      | Z+F           | 16,4            | 10,0            | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91871    | 0,75 / long          | grey       | DIN           | 18,4            | 12,0            | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91870    | 0,75 / long          | white      | Z+F           | 18,4            | 12,0            | 500  | o. r.                              | o. r.        | o. r.         |  |

Continuation ►

o. r. = on request

# ADI core end sleeves

## insulated

| Part no. | Size<br>mm <sup>2</sup> | Colour     | Colour code   | Total length<br>mm | Stick length<br>mm | Unit | Net EUR/100 items at a purchase of |              |               |
|----------|-------------------------|------------|---------------|--------------------|--------------------|------|------------------------------------|--------------|---------------|
|          |                         |            |               |                    |                    |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |
| 91869    | 0,75 / long             | light blue | Telemecanique | 18,4               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91872    | 1,0 / short             | red        | DIN           | 12,4               | 6,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91873    | 1,0 / short             | yellow     | Z+F           | 12,4               | 6,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91352    | 1,0 / normal            | red        | DIN           | 14,6               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91385    | 1,0 / normal            | yellow     | Z+F           | 14,6               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91874    | 1,0 / semi-long         | red        | DIN           | 16,4               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91875    | 1,0 / semi-long         | yellow     | Z+F           | 16,4               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91876    | 1,0 / long              | red        | DIN           | 18,4               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91877    | 1,0 / long              | yellow     | Z+F           | 18,4               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91353    | 1,5 / normal            | black      | DIN           | 14,6               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91386    | 1,5 / normal            | red        | Z+F           | 14,6               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91879    | 1,5 / semi-long         | red        | Z+F           | 16,4               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91878    | 1,5 / semi-long         | black      | DIN           | 16,4               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91881    | 1,5 / long              | red        | Z+F           | 24,4               | 18,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91880    | 1,5 / long              | black      | DIN           | 24,4               | 18,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91387    | 2,5 / normal            | blue       | DIN           | 15,2               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91354    | 2,5 / normal            | grey       | Telemecanique | 15,2               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |
| 91882    | 2,5 / semi-long         | grey       | Telemecanique | 19,0               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91883    | 2,5 / semi-long         | blue       | DIN           | 19,0               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91885    | 2,5 / long              | blue       | DIN           | 25,0               | 18,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91884    | 2,5 / long              | grey       | Telemecanique | 25,0               | 18,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91388    | 4,0 / normal            | grey       | DIN           | 16,5               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91355    | 4,0 / normal            | orange     | Telemecanique | 16,5               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91886    | 4,0 / semi-long         | orange     | Telemecanique | 19,5               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91887    | 4,0 / semi-long         | grey       | DIN           | 19,5               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91888    | 4,0 / long              | orange     | Telemecanique | 25,5               | 18,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91889    | 4,0 / long              | grey       | DIN           | 25,5               | 18,0               | 500  | o. r.                              | o. r.        | o. r.         |
| 91356    | 6,0 / normal            | green      | Telemecanique | 20,0               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 93031    | 6,0 / normal            | yellow     | DIN           | 20,0               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91389    | 6,0 / normal            | black      | Z+F           | 20,0               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91891    | 6,0 / long              | black      | Z+F           | 26,0               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91892    | 6,0 / long              | yellow     | DIN           | 26,0               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91890    | 6,0 / long              | green      | Telemecanique | 26,0               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91357    | 10,0 / normal           | brown      | Telemecanique | 21,5               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 93032    | 10,0 / normal           | red        | DIN           | 21,5               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91390    | 10,0 / normal           | ivory      | Z+F           | 21,5               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91894    | 10,0 / long             | ivory      | Z+F           | 27,5               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 94024    | 10,0 / long             | red        | DIN           | 27,5               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91893    | 10,0 / long             | brown      | Telemecanique | 27,5               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91897    | 16,0 / normal           | blue       | DIN           | 22,2               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91896    | 16,0 / normal           | green      | Z+F           | 22,2               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91895    | 16,0 / normal           | ivory      | Telemecanique | 22,2               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91898    | 16,0 / long             | ivory      | Telemecanique | 28,2               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91899    | 16,0 / long             | green      | Z+F           | 28,2               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91900    | 16,0 / long             | blue       | DIN           | 28,2               | 18,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91392    | 25,0 / normal           | brown      | Z+F           | 29,0               | 16,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 93034    | 25,0 / normal           | yellow     | DIN           | 29,0               | 16,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91359    | 25,0 / normal           | black      | Telemecanique | 29,0               | 16,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91901    | 25,0 / long             | black      | Telemecanique | 35,0               | 22,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91903    | 25,0 / long             | yellow     | DIN           | 35,0               | 22,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91902    | 25,0 / long             | brown      | Z+F           | 35,0               | 22,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91394    | 35,0 / normal           | beige      | Z+F           | 30,0               | 16,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91393    | 35,0 / normal           | red        | DIN           | 30,0               | 16,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91904    | 35,0 / long             | red        | DIN           | 39,0               | 25,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91905    | 35,0 / long             | beige      | Z+F           | 39,0               | 25,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91396    | 50,0 / normal           | oliv       | Z+F           | 36,4               | 20,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91395    | 50,0 / normal           | blue       | DIN           | 36,4               | 20,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91907    | 50,0 / long             | oliv       | Z+F           | 41,0               | 25,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91906    | 50,0 / long             | blue       | DIN           | 41,0               | 25,0               | 50   | o. r.                              | o. r.        | o. r.         |
| 91908    | 70,0 / normal           | yellow     | DIN           | 37,0               | 21,0               | 25   | o. r.                              | o. r.        | o. r.         |
| 91397    | 70,0 / long             | yellow     | DIN           | 43,0               | 27,0               | 25   | o. r.                              | o. r.        | o. r.         |
| 91909    | 95,0 / normal           | red        | DIN           | 44,0               | 25,0               | 25   | o. r.                              | o. r.        | o. r.         |
| 91910    | 120,0 / normal          | blue       | DIN           | 48,0               | 27,0               | 25   | o. r.                              | o. r.        | o. r.         |
| 91911    | 150,0 / normal          | yellow     | DIN           | 58,0               | 32,0               | 25   | o. r.                              | o. r.        | o. r.         |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# ADI-B core end sleeves



## ADI-B

Tape products for processing with Stripax-Plus (strip products) or automatic crimpers (coil products).

Insulated core end sleeves prevent stripped wires from fanning.  
The hopper-shaped plastic collar enables them to be pushed easily onto the wires.

## Material

Sleeve: copper  
Surface: tinned

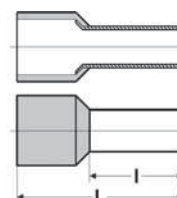
Insulating shroud: polypropylene

## Note

Delivery formats:  
Strips: 1 item = 10 strips x 50 pcs.  
Coils: Endless on cardboard coil

## Technical data

Temperature range: up to +105°C  
Temperature range temporary up to +120°C



## Dimensions

L Total length  
I Stick length

## strip

| Part no. | Size mm <sup>2</sup> | Colour     | Colour code   | Total length mm | Stick length mm | Unit | Net EUR/100 items at a purchase of |              |               |  |
|----------|----------------------|------------|---------------|-----------------|-----------------|------|------------------------------------|--------------|---------------|--|
|          |                      |            |               |                 |                 |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |  |
| 91912    | 0,5                  | white      | DIN           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91913    | 0,5                  | orange     | Z+F           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91914    | 0,75                 | grey       | DIN           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91915    | 0,75                 | white      | Z+F           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91916    | 0,75                 | light blue | Telemecanique | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91917    | 1,0                  | red        | DIN           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91918    | 1,0                  | yellow     | Z+F           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91919    | 1,5                  | black      | DIN           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91920    | 1,5                  | red        | Z+F           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91921    | 2,5                  | blue       | DIN           | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91922    | 2,5                  | grey       | Telemecanique | 14,0            | 8,0             | 500  | o. r.                              | o. r.        | o. r.         |  |

## coils

| Part no. | Size mm <sup>2</sup> | Colour     | Colour code   | Total length mm | Stick length mm | Unit  | Net EUR/100 items at a purchase of |              |               |  |
|----------|----------------------|------------|---------------|-----------------|-----------------|-------|------------------------------------|--------------|---------------|--|
|          |                      |            |               |                 |                 |       | up to 5000                         | 5001 - 10000 | 10001 - 50000 |  |
| 93036    | 0,5                  | white      | DIN           | 14,0            | 8,0             | 10000 | o. r.                              | o. r.        | o. r.         |  |
| 93037    | 0,5                  | orange     | Z+F           | 14,0            | 8,0             | 10000 | o. r.                              | o. r.        | o. r.         |  |
| 93038    | 0,75                 | light blue | Telemecanique | 14,0            | 8,0             | 10000 | o. r.                              | o. r.        | o. r.         |  |
| 93039    | 0,75                 | white      | Z+F           | 14,0            | 8,0             | 10000 | o. r.                              | o. r.        | o. r.         |  |
| 93040    | 0,75                 | grey       | DIN           | 14,0            | 8,0             | 10000 | o. r.                              | o. r.        | o. r.         |  |
| 93041    | 1,0                  | red        | DIN           | 14,0            | 8,0             | 7500  | o. r.                              | o. r.        | o. r.         |  |
| 93042    | 1,0                  | yellow     | Z+F           | 14,0            | 8,0             | 7500  | o. r.                              | o. r.        | o. r.         |  |
| 93043    | 1,5                  | black      | DIN           | 14,0            | 8,0             | 7500  | o. r.                              | o. r.        | o. r.         |  |
| 93046    | 1,5                  | red        | Z+F           | 14,0            | 8,0             | 7500  | o. r.                              | o. r.        | o. r.         |  |
| 93047    | 2,5                  | grey       | Telemecanique | 14,0            | 8,0             | 5000  | o. r.                              | o. r.        | o. r.         |  |
| 93048    | 2,5                  | blue       | DIN           | 14,0            | 8,0             | 5000  | o. r.                              | o. r.        | o. r.         |  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# ESD-ADI assortment box

insulated



## ESD-ADI

Practical pocket sized assortment box.  
Refillable, split into 4 or 5 compartments,  
with cross-section lettering.  
Refilling with ADI core end sleeves.

## Material

Assortment box: PVC  
Sleeve: copper  
Surface: tinned

Insulating shroud: polypropylene

## Note

Empty cans:

- ESD 3: 5-part with lettering 0.5 mm<sup>2</sup> / 0.75 mm<sup>2</sup> / 1.0 mm<sup>2</sup> / 1.5 mm<sup>2</sup> / 2.5 mm<sup>2</sup>
- ESD 4: 4-part with lettering 4.0 mm<sup>2</sup> / 6.0 mm<sup>2</sup> / 10.0 mm<sup>2</sup> / 16.0 mm<sup>2</sup>

All sizes in regular length.

| Part no. | Type    | Colour code   | Filling case 1 | Filling case 2 | Filling case 3 | Filling case 4 | Filling case 5 | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------|---------------|----------------|----------------|----------------|----------------|----------------|------|-------------------------------|-------|--------|
|          |         |               |                |                |                |                |                |      | 1                             | 2 - 5 | 6 - 10 |
| 96753    | ESD 1   | Telemecanique | 50x0,5         | 100x0,75       | 100x1,0        | 100x1,5        | 50x2,5         | 1    | o. r.                         | o. r. | o. r.  |
| 96604    | ESD 11  | Z+F           | 50x0,5         | 100x0,75       | 100x1,0        | 100x1,5        | 50x2,5         | 1    | o. r.                         | o. r. | o. r.  |
| 96688    | ESD 111 | DIN           | 50x0,5         | 100x0,75       | 100x1,0        | 100x1,5        | 50x2,5         | 1    | o. r.                         | o. r. | o. r.  |
| 96764    | ESD 2   | Telemecanique | 50x4,0         | 20x6,0         | 20x10,0        | 10x16,0        | Empty          | 1    | o. r.                         | o. r. | o. r.  |
| 96749    | ESD 22  | Z+F           | 50x4,0         | 20x6,0         | 20x10,0        | 10x16,0        | Empty          | 1    | o. r.                         | o. r. | o. r.  |
| 96736    | ESD 222 | DIN           | 50x4,0         | 20x6,0         | 20x10,0        | 10x16,0        | Empty          | 1    | o. r.                         | o. r. | o. r.  |
| 96671    | ESD 3   | -             | Empty          | Empty          | Empty          | Empty          | Empty          | 1    | o. r.                         | o. r. | o. r.  |
| 96727    | ESD 4   | -             | Empty          | Empty          | Empty          | Empty          | Empty          | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# ADI-K core end sleeves - for short-circuit proof lines

insulated



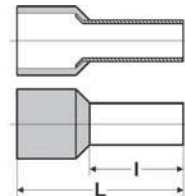
## ADI-K

The core end sleeve is suitable for short circuit-proof lines. It prevents stripped wires from fanning. The hopper-shaped plastic collar enables them to be pushed easily onto the wires.

## Material

Sleeve: copper  
Surface: tinned

Insulating shroud: polypropylene



## Dimensions

L Total length  
I Stick length

| Part no. | Size<br>mm <sup>2</sup> | Colour | Colour code | Total length<br>mm | Stick length<br>mm | Unit | Net EUR/100 Items at a purchase of |              |               |
|----------|-------------------------|--------|-------------|--------------------|--------------------|------|------------------------------------|--------------|---------------|
|          |                         |        |             |                    |                    |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |
| 91589    | 1,5 / normal            | black  | DIN         | 17,5               | 8,0                | 100  | o. r.                              | o. r.        | o. r.         |
| 91590    | 1,5 / long              | black  | DIN         | 19,5               | 10,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91591    | 2,5 / normal            | blue   | DIN         | 17,5               | 8,0                | 100  | o. r.                              | o. r.        | o. r.         |
| 91592    | 2,5 / long              | blue   | DIN         | 21,5               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 97479    | 4,0 / normal            | grey   | DIN         | 19,5               | 10,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91593    | 6,0 / normal            | yellow | DIN         | 23,0               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91595    | 10,0 / normal           | red    | DIN         | 24,0               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |
| 91598    | 16,0 / normal           | blue   | DIN         | 25,5               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# DUO core end sleeves

insulated - for 2 conductors



## DUO

Insulated DUO core end sleeves for insertion of 2 conductors prevent stripped wires from fanning.

The hopper-shaped plastic collar enables them to be pushed easily onto the wires.

To DIN, ZF, and Telemecanique colour code.

## Material

Sleeve: copper  
Surface: tinned

Insulating shroud: polypropylene

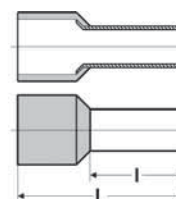
## Note

Versions:  
N = normal  
L = long

## Technical data

Temperature range: up to +105°C

Temperature range temporary up to +120°C



## Dimensions

L Total length  
l Stick length

| Part no. | Size<br>mm <sup>2</sup> | Colour     | Colour code   | Total length<br>mm | Stick length<br>mm | Unit | Net EUR/100 items at a purchase of |              |               |  |
|----------|-------------------------|------------|---------------|--------------------|--------------------|------|------------------------------------|--------------|---------------|--|
|          |                         |            |               |                    |                    |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |  |
| 91622    | 2x 0.5 / N              | white      | DIN           | 15,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91623    | 2x 0.5 / N              | orange     | Z+F           | 15,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91652    | 2x 0.75 / L             | grey       | DIN           | 17,0               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91671    | 2x 0.75 / L             | light blue | Telemecanique | 17,0               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91651    | 2x 0.75 / L             | white      | Z+F           | 17,0               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |  |
| 90125    | 2x 0.75 / N             | grey       | DIN           | 15,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91661    | 2x 0.75 / N             | light blue | DIN           | 15,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91624    | 2x 0.75 / N             | white      | Z+F           | 15,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91653    | 2x 1 / L                | red        | DIN           | 17,0               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91654    | 2x 1 / L                | yellow     | Z+F           | 17,0               | 10,0               | 500  | o. r.                              | o. r.        | o. r.         |  |
| 90126    | 2x 1 / N                | red        | DIN           | 15,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91625    | 2x 1 / N                | yellow     | Z+F           | 15,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91655    | 2x 1.5 / L              | black      | DIN           | 20,0               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91672    | 2x 1.5 / L              | red        | Z+F           | 20,0               | 12,0               | 500  | o. r.                              | o. r.        | o. r.         |  |
| 90127    | 2x 1.5 / N              | black      | DIN           | 16,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91662    | 2x 1.5 / N              | red        | Z+F           | 16,0               | 8,0                | 500  | o. r.                              | o. r.        | o. r.         |  |
| 91656    | 2x 2.5 / L              | blue       | DIN           | 21,5               | 13,0               | 250  | o. r.                              | o. r.        | o. r.         |  |
| 91673    | 2x 2.5 / L              | grey       | Telemecanique | 21,5               | 13,0               | 250  | o. r.                              | o. r.        | o. r.         |  |
| 90128    | 2x 2.5 / N              | blue       | DIN           | 18,5               | 10,0               | 250  | o. r.                              | o. r.        | o. r.         |  |
| 91663    | 2x 2.5 / N              | grey       | Telemecanique | 18,5               | 10,0               | 250  | o. r.                              | o. r.        | o. r.         |  |
| 91626    | 2x 4 / N                | grey       | DIN           | 23,0               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91664    | 2x 4 / N                | orange     | Telemecanique | 23,0               | 12,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91627    | 2x 6 / N                | yellow     | DIN           | 26,0               | 14,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91665    | 2x 6 / N                | green      | Telemecanique | 26,0               | 14,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91666    | 2x 6 / N                | black      | Z+F           | 26,0               | 14,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91628    | 2x 10 / N               | red        | DIN           | 26,0               | 14,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91667    | 2x 10 / N               | brown      | Telemecanique | 26,0               | 14,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91668    | 2x 10 / N               | ivory      | Z+F           | 26,0               | 14,0               | 100  | o. r.                              | o. r.        | o. r.         |  |
| 91629    | 2x 16 / N               | blue       | DIN           | 30,0               | 14,0               | 50   | o. r.                              | o. r.        | o. r.         |  |
| 91669    | 2x 16 / N               | ivory      | Telemecanique | 30,0               | 14,0               | 50   | o. r.                              | o. r.        | o. r.         |  |
| 91670    | 2x 16 / N               | green      | Z+F           | 30,0               | 14,0               | 50   | o. r.                              | o. r.        | o. r.         |  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# ESD-DUO assortment box

insulated - for 2 conductors



**ESD-DUO**  
 Practical pocket sized assortment box. Refillable, split into 4 or 5 compartments, with cross-section lettering. Refilling with DUO core end sleeves.

**Material**  
 Assortment box: PVC  
 Sleeve: copper  
 Surface: tinned  
 Insulating shroud: polypropylene

**Note**  
 Empty cans:  
 • ESD 7: 4-part with lettering 2x0.75 mm² / 2x1.0 mm² / 2x1.5 mm² / 2x2.5 mm²  
 • ESD 8: 4-part with lettering 2x4.0 mm² / 2x6.0 mm² / 2x1.0 mm² / 2x16.0 mm²  
 All sizes in regular length.

| Part no. | Type  | Colour code | Filling case 1 | Filling case 2 | Filling case 3 | Filling case 4 | Filling case 5 | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------|-------------|----------------|----------------|----------------|----------------|----------------|------|-------------------------------|-------|--------|
|          |       |             |                |                |                |                |                |      | 1                             | 2 - 5 | 6 - 10 |
| 96617    | ESD 5 | DIN         | 50x0,75        | 50x1,0         | 50x1,5         | 50x2,5         | Empty          | 1    | o. r.                         | o. r. | o. r.  |
| 96648    | ESD 6 | DIN         | 20x4,0         | 10x6,0         | 10x10,0        | 5x16,0         | Empty          | 1    | o. r.                         | o. r. | o. r.  |
| 96629    | ESD 7 | -           | Empty          | Empty          | Empty          | Empty          | Empty          | 1    | o. r.                         | o. r. | o. r.  |
| 96652    | ESD 8 | -           | Empty          | Empty          | Empty          | Empty          | Empty          | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# ADU core end sleeves

non insulated



## ADU

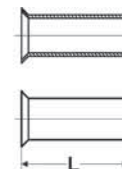
Non-insulated core end sleeves prevent stripped wires from fanning. The hopper-shaped socket enables them to be pushed easily onto the wires.

## Material

Sleeve: copper

## Note

Assignment to cable cross section according to DIN 46228: up to 50mm<sup>2</sup> to nominal size - over 50mm<sup>2</sup> no specificatin; Assignment to suitable size possible.



## Dimensions

L Total length

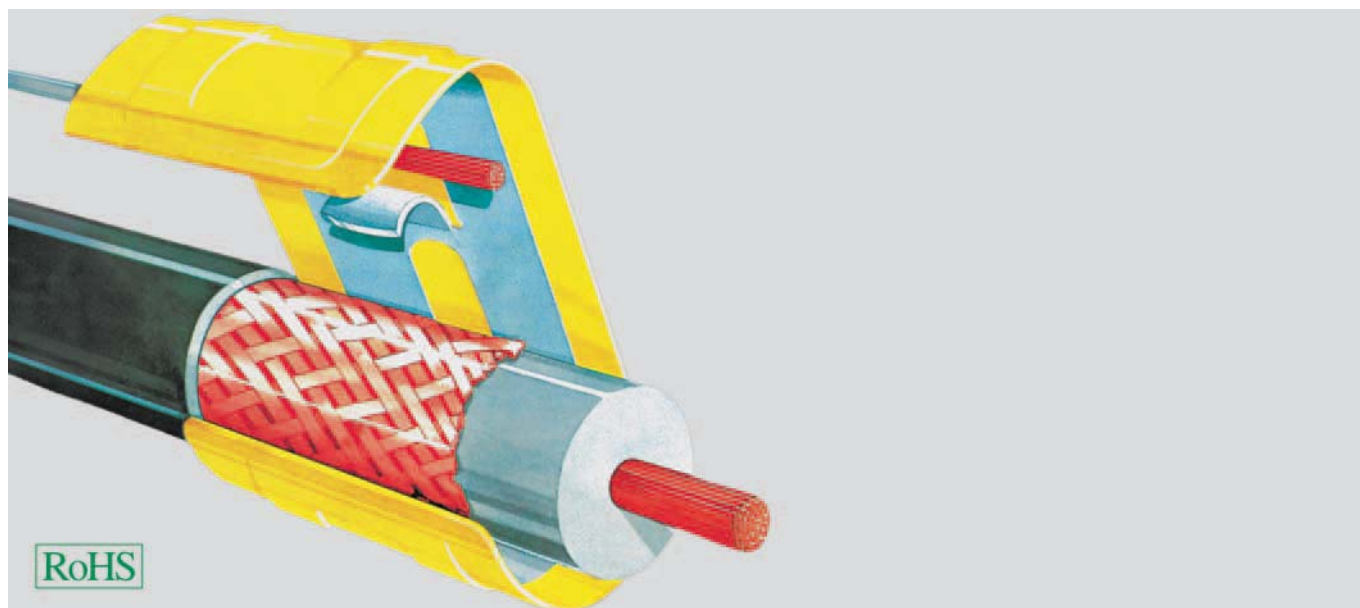
| Part no. | Size<br>mm <sup>2</sup> | Length<br>mm | Unit | Net EUR/100 items at a purchase of |              |               |
|----------|-------------------------|--------------|------|------------------------------------|--------------|---------------|
|          |                         |              |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |
| 91368    | 0,5                     | 6,0          | 1000 | o. r.                              | o. r.        | o. r.         |
| 91370    | 0,5                     | 10,0         | 1000 | o. r.                              | o. r.        | o. r.         |
| 91371    | 0,75                    | 6,0          | 1000 | o. r.                              | o. r.        | o. r.         |
| 91372    | 0,75                    | 8,0          | 1000 | o. r.                              | o. r.        | o. r.         |
| 91373    | 1,0                     | 6,0          | 1000 | o. r.                              | o. r.        | o. r.         |
| 91374    | 1,0                     | 10,0         | 1000 | o. r.                              | o. r.        | o. r.         |
| 91375    | 1,5                     | 7,0          | 1000 | o. r.                              | o. r.        | o. r.         |
| 91376    | 1,5                     | 10,0         | 1000 | o. r.                              | o. r.        | o. r.         |
| 93096    | 2,5                     | 7,0          | 1000 | o. r.                              | o. r.        | o. r.         |
| 93097    | 2,5                     | 10,0         | 1000 | o. r.                              | o. r.        | o. r.         |
| 93099    | 4,0                     | 9,0          | 1000 | o. r.                              | o. r.        | o. r.         |
| 94000    | 4,0                     | 12,0         | 1000 | o. r.                              | o. r.        | o. r.         |
| 94001    | 6,0                     | 10,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94002    | 6,0                     | 12,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94003    | 6,0                     | 15,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94004    | 10,0                    | 12,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94005    | 10,0                    | 15,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94006    | 10,0                    | 18,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94007    | 16,0                    | 12,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94008    | 16,0                    | 15,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94009    | 16,0                    | 18,0         | 250  | o. r.                              | o. r.        | o. r.         |
| 94010    | 25,0                    | 12,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94011    | 25,0                    | 15,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94012    | 25,0                    | 18,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94013    | 25,0                    | 25,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94014    | 25,0                    | 32,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94015    | 35,0                    | 18,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94016    | 35,0                    | 25,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94018    | 35,0                    | 32,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94019    | 50,0                    | 18,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94020    | 50,0                    | 22,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94021    | 70,0                    | 25,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 94022    | 70,0                    | 32,0         | 100  | o. r.                              | o. r.        | o. r.         |
| 91030    | 95,0                    | 25,0         | 50   | o. r.                              | o. r.        | o. r.         |
| 91031    | 95,0                    | 32,0         | 50   | o. r.                              | o. r.        | o. r.         |
| 96841    | 120,0                   | 32,0         | 50   | o. r.                              | o. r.        | o. r.         |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Shield Kon® RSK shield connectors

a product by Thomas & Betts



## Shield Kon®

Shield connectors are crimped like a cable lug. The special crimping technique using ERG tools enables the connector to roll around the sheath.

Inside the connector is a clevis-type connector for the connector strip and a support for the sheathed cable. ERG 740 processing tool

## Material

copper  
Surface: tinned

Insulation: polyester film

## Technical data

Temperature range: -40°C up to +125°C

| Part no. | Type    | Colour code | Shield Ø mm | Tool insets | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|---------|-------------|-------------|-------------|------|------------------------------------|------------|-------------|
|          |         |             |             |             |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91280    | RSK 101 | red         | 1,27 - 1,79 | D-101 A     | 100  | o. r.                              | o. r.      | o. r.       |
| 91280    | RSK 101 | red         | 1,80 - 2,28 | D-101 B     | 100  | o. r.                              | o. r.      | o. r.       |
| 91281    | RSK 201 | blue        | 2,29 - 2,55 | D-201 C     | 100  | o. r.                              | o. r.      | o. r.       |
| 91281    | RSK 201 | blue        | 2,56 - 3,00 | D-201 D     | 100  | o. r.                              | o. r.      | o. r.       |
| 91281    | RSK 201 | blue        | 3,01 - 3,34 | D-201 E     | 100  | o. r.                              | o. r.      | o. r.       |
| 91281    | RSK 201 | blue        | 3,35 - 3,65 | D-201 F     | 100  | o. r.                              | o. r.      | o. r.       |
| 91282    | RSK 301 | yellow      | 3,66 - 4,13 | D-301 G     | 100  | o. r.                              | o. r.      | o. r.       |
| 91282    | RSK 301 | yellow      | 4,14 - 4,71 | D-301 H     | 100  | o. r.                              | o. r.      | o. r.       |
| 91282    | RSK 301 | yellow      | 4,72 - 5,12 | D-301 J     | 100  | o. r.                              | o. r.      | o. r.       |
| 91283    | RSK 401 | green       | 5,13 - 5,86 | D-401 K     | 100  | o. r.                              | o. r.      | o. r.       |
| 91283    | RSK 401 | green       | 5,87 - 6,36 | D-401 L     | 100  | o. r.                              | o. r.      | o. r.       |
| 91283    | RSK 401 | green       | 6,37 - 7,00 | D-401 M     | 100  | o. r.                              | o. r.      | o. r.       |
| 91283    | RSK 401 | green       | 7,01 - 7,62 | D-401 N     | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Solderless terminals

insulated - eye type



## Insulated solderless terminals

PA insulated solderless terminals for cross sections of 0.1 to 16.0mm².

Simple cable inlet through Easy-Entry (expanded sleeve).

Insulated with high dielectric strength.

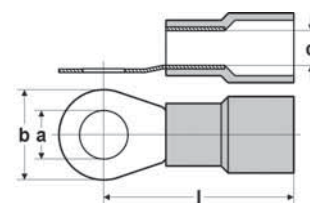
## Material

Sleeve: Copper  
Surface: tinned

Insulation: Partially-insulated, PA

## Technical data

Temperature range: -60°C up to +125°C



## Dimensions

a Diameter of the boring  
d Inner diameter of the cable insertion  
b Flange width  
l Length till middle of the boring

## eye type

| Part no. | Type   | Colour | Cross-section mm² | Connection bolts M | Design      | Unit | Net EUR/100 Items at a purchase of |            |             |
|----------|--------|--------|-------------------|--------------------|-------------|------|------------------------------------|------------|-------------|
|          |        |        |                   |                    |             |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91475    | HZ 3   | yellow | 0,1 - 0,5         | 3,2                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91476    | HZ 4   | yellow | 0,1 - 0,5         | 4,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91477    | HZ 5   | yellow | 0,1 - 0,5         | 5,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91478    | HA 3   | red    | 0,5 - 1,5         | 3,2                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91479    | HA 3,5 | red    | 0,5 - 1,5         | 3,7                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91480    | HA 4   | red    | 0,5 - 1,5         | 4,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91481    | HA 5   | red    | 0,5 - 1,5         | 5,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91849    | HA 5S  | red    | 0,5 - 1,5         | 5,7                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91482    | HA 6   | red    | 0,5 - 1,5         | 6,5                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 96776    | HA 8   | red    | 0,5 - 1,5         | 8,4                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91483    | HB 3   | blue   | 1,5 - 2,5         | 3,2                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91484    | HB 4   | blue   | 1,5 - 2,5         | 4,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91485    | HB 5   | blue   | 1,5 - 2,5         | 5,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 94944    | HB 5S  | blue   | 1,5 - 2,5         | 5,7                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91486    | HB 6   | blue   | 1,5 - 2,5         | 6,5                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91487    | HB 8   | blue   | 1,5 - 2,5         | 8,4                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 97696    | HB 10  | blue   | 1,5 - 2,5         | 10,5               | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91488    | HC 4   | yellow | 2,5 - 6,0         | 4,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91489    | HC 5   | yellow | 2,5 - 6,0         | 5,3                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91490    | HC 6   | yellow | 2,5 - 6,0         | 6,5                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91491    | HC 8   | yellow | 2,5 - 6,0         | 8,4                | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 91492    | HC 10  | yellow | 2,5 - 6,0         | 10,5               | Ring-shaped | 100  | o. r.                              | o. r.      | o. r.       |
| 96607    | HD 5   | red    | 10,0              | 5,3                | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 90055    | HD 6   | red    | 10,0              | 6,5                | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 96400    | HD 8   | red    | 10,0              | 8,4                | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 96616    | HD 10  | red    | 10,0              | 10,5               | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 96620    | HE 5   | blue   | 16,0              | 5,3                | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 96401    | HE 6   | blue   | 16,0              | 6,5                | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 96402    | HE 8   | blue   | 16,0              | 8,4                | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 90056    | HE 10  | blue   | 16,0              | 10,5               | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |
| 90057    | HE 12  | blue   | 16,0              | 13                 | Ring-shaped | 50   | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Solderless terminals

insulated



## Insulated solderless terminals

PA insulated solderless terminals for cross sections of 0.25 to 6.0mm<sup>2</sup>.

Simple cable inlet through Easy-Entry (expanded sleeve).

Insulated with high dielectric strength.

## Material

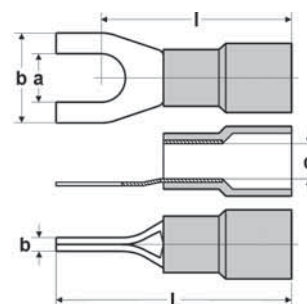
Sleeve: Copper

Surface: tinned

Insulation: Partially-insulated, PA

## Technical data

Temperature range: -60°C up to +125°C



### forked

| Part no. | Type   | Colour | Cross-section mm <sup>2</sup> | Connection bolts M | Design              | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|--------|--------|-------------------------------|--------------------|---------------------|------|------------------------------------|------------|-------------|
|          |        |        |                               |                    |                     |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91403    | HA 35F | red    | 0,5 - 1,5                     | 3,7                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91404    | HA 4F  | red    | 0,5 - 1,5                     | 4,3                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91405    | HA 5F  | red    | 0,5 - 1,5                     | 5,3                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91406    | HA 6F  | red    | 0,5 - 1,5                     | 6,5                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91408    | HB 3F  | blue   | 1,5 - 2,5                     | 3,2                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91409    | HB 35F | blue   | 1,5 - 2,5                     | 3,7                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91410    | HB 4F  | blue   | 1,5 - 2,5                     | 4,3                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91411    | HB 5F  | blue   | 1,5 - 2,5                     | 5,3                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91412    | HB 6F  | blue   | 1,5 - 2,5                     | 6,5                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91415    | HC 4F  | yellow | 2,5 - 6,0                     | 4,3                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91416    | HC 5F  | yellow | 2,5 - 6,0                     | 5,3                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91417    | HC 6F  | yellow | 2,5 - 6,0                     | 6,5                | Fork-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |

### round pattern

| Part no. | Type | Colour | Cross-section mm <sup>2</sup> | Connection bolts M | Design             | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|------|--------|-------------------------------|--------------------|--------------------|------|------------------------------------|------------|-------------|
|          |      |        |                               |                    |                    |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91418    | HZP  | yellow | 0,1 - 0,5                     | -                  | Pin-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91419    | HAP  | red    | 0,5 - 1,5                     | -                  | Pin-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91420    | HBP  | blue   | 1,5 - 2,5                     | -                  | Pin-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 91421    | HCP  | yellow | 2,5 - 6,0                     | -                  | Pin-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 96575    | HDP  | red    | 10,0                          | -                  | Pin-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |
| 96576    | HEP  | blue   | 16,0                          | -                  | Pin-type cable lug | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Solderless terminals

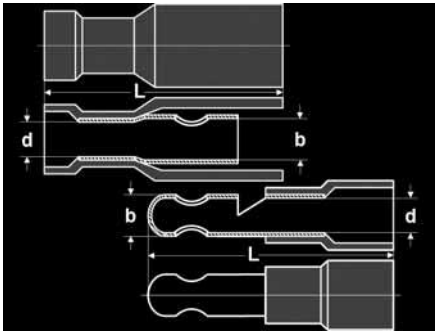
insulated



**Insulated solderless terminals**  
 PA insulated solderless terminals for cross sections of 0.25 to 6.0mm².  
 Simple cable inlet through Easy-Entry (expanded sleeve).  
 Insulated with high dielectric strength.

**Material**  
 Sleeve: Copper  
 Surface: tinned  
  
 Insulation: Partially-insulated, PA

**Technical data**  
 Temperature range: -60°C up to +125°C



**round pin plugs**

| Part no. | Type   | Colour | Cross-section<br>mm² | Connection<br>bolts<br>M | Design | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|--------|--------|----------------------|--------------------------|--------|------|------------------------------------|------------|-------------|
|          |        |        |                      |                          |        |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91422    | HABM   | red    | 0,5 - 1,5            | -                        | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 91423    | HAB    | red    | 0,5 - 1,5            | -                        | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91424    | HB 5BM | blue   | 1,5 - 2,5            | -                        | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 91425    | HB 5B  | blue   | 1,5 - 2,5            | -                        | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96594    | HC 5BM | yellow | 2,5 - 6,0            | -                        | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 96595    | HC 5B  | yellow | 2,5 - 6,0            | -                        | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice. o. r. = on request



# Solderless terminals

insulated



## Insulated solderless terminals

Insulated solderless terminals for cross sections of 0.25 to 6.0 mm<sup>2</sup>.

Simple cable inlet through Easy-Entry (expanded sleeve).

Insulated with high dielectric strength.

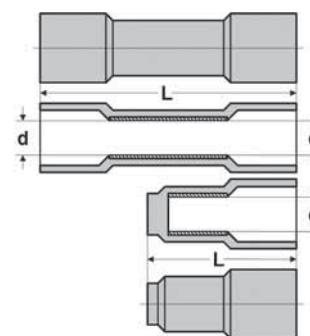
## Material

Sleeve: Copper  
Surface: tinned

Insulation: Partially-insulated, PA

## Technical data

Temperature range: -60°C up to +125°C



### butt connector

| Part no. | Type   | Colour | Cross-section mm <sup>2</sup> | Connection bolts M | Design    | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|--------|--------|-------------------------------|--------------------|-----------|------|------------------------------------|------------|-------------|
|          |        |        |                               |                    |           |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91426    | HAA 15 | red    | 0,5 - 1,5                     | -                  | Connector | 100  | o. r.                              | o. r.      | o. r.       |
| 91427    | HBB 25 | blue   | 1,5 - 2,5                     | -                  | Connector | 100  | o. r.                              | o. r.      | o. r.       |
| 91429    | HCC 6  | yellow | 2,5 - 6,0                     | -                  | Connector | 100  | o. r.                              | o. r.      | o. r.       |

### closed end-splices

| Part no. | Type | Colour      | Cross-section mm <sup>2</sup> | Connection bolts M | Design             | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|------|-------------|-------------------------------|--------------------|--------------------|------|------------------------------------|------------|-------------|
|          |      |             |                               |                    |                    |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91398    | HAI  | transparent | 0,5 - 1,5                     | -                  | Terminal connector | 100  | o. r.                              | o. r.      | o. r.       |
| 91428    | HBJ  | transparent | 1,5 - 2,5                     | -                  | Terminal connector | 100  | o. r.                              | o. r.      | o. r.       |
| 91430    | HCI  | transparent | 2,5 - 6,0                     | -                  | Terminal connector | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Solderless terminals

insulated



## Insulated solderless terminals

PA insulated solderless terminals for cross sections of 0.5 to 6.0mm<sup>2</sup>.  
Simple cable inlet through Easy-Entry.

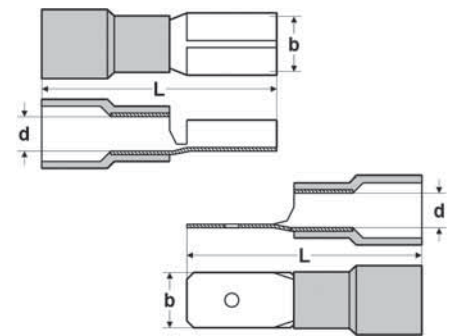
## Material

Sleeve: copper  
Surface: tinned

Insulation: PA

## Technical data

Temperature range: -25°C up to +105°C



## blade receptacle

| Part no. | Type  | Colour | Cross-section mm <sup>2</sup> | Flat plug size mm  | Design | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|-------|--------|-------------------------------|--------------------|--------|------|------------------------------------|------------|-------------|
|          |       |        |                               |                    |        |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91432    | RA 29 | red    | 0,5 - 1,5                     | flat, 2,8 x 0,5 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91431    | RA 28 | red    | 0,5 - 1,5                     | flat, 2,8 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91434    | RA 48 | red    | 0,5 - 1,5                     | flat, 4,8 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91433    | RA 49 | red    | 0,5 - 1,5                     | flat, 4,8 x 0,5 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91435    | RA 63 | red    | 0,5 - 1,5                     | flat, 6,3 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96428    | RB 28 | blue   | 1,5 - 2,5                     | flat, 2,8 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96415    | RB 29 | blue   | 1,5 - 2,5                     | flat, 2,8 x 0,5 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91438    | RB 48 | blue   | 1,5 - 2,5                     | flat, 4,8 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91439    | RB 49 | blue   | 1,5 - 2,5                     | flat, 4,8 x 0,5 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91440    | RB 63 | blue   | 1,5 - 2,5                     | flat, 6,3 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91443    | RC 63 | yellow | 2,5 - 6,0                     | flat, 6,3 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 91445    | RC 95 | yellow | 2,5 - 6,0                     | flat, 9,5 x 1,2 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |

## blade terminal

| Part no. | Type    | Colour | Cross-section mm <sup>2</sup> | Flat plug size mm  | Design | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|---------|--------|-------------------------------|--------------------|--------|------|------------------------------------|------------|-------------|
|          |         |        |                               |                    |        |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 98700    | RA 29 M | red    | 0,5 - 1,5                     | flat, 2,8 x 0,5 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 98701    | RA 28 M | red    | 0,5 - 1,5                     | flat, 2,8 x 0,8 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 98584    | RA 48 M | red    | 0,5 - 1,5                     | flat, 4,8 x 0,8 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 98577    | RA 49 M | red    | 0,5 - 1,5                     | flat, 4,8 x 0,5 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 91437    | RA 63 M | red    | 0,5 - 1,5                     | flat, 6,3 x 0,8 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 98599    | RB 48 M | blue   | 1,5 - 2,5                     | flat, 4,8 x 0,8 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 98598    | RB 49 M | blue   | 1,5 - 2,5                     | flat, 4,8 x 0,5 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 91442    | RB 63 M | blue   | 1,5 - 2,5                     | flat, 6,3 x 0,8 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |
| 91444    | RC 63 M | yellow | 2,5 - 6,0                     | flat, 6,3 x 0,8 mm | Plug   | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Solderless terminals

insulated



## Insulated squeeze snap-on connection

Insulated squeeze snap-on connection for cross sections of 0.5 to 6.0 mm<sup>2</sup>. Simple cable inlet through Easy-Entry (expanded sleeve). Insulated with high dielectric strength.

## Material

Sleeve: copper  
Surface: tinned

Insulation: fully-insulated

## Note

Versions:  
Flat connector (insulated / fully insulated)  
Flat connector sleeves (insulated / fully insulated)  
Flat connector distributor

## Technical data

Temperature range: -25°C up to +105°C

## blade receptacle, all-insulated

| Part no. | Type     | Colour | Cross-section mm <sup>2</sup> | Flat plug size mm  | Design | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|--------|-------------------------------|--------------------|--------|------|------------------------------------|------------|-------------|
|          |          |        |                               |                    |        |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 96574    | RA 28 V0 | red    | 0,5 - 1,5                     | flat, 2,8 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96328    | RA 29 V0 | red    | 0,5 - 1,5                     | flat, 2,8 x 0,5 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96329    | RA 48 V0 | red    | 0,5 - 1,5                     | flat, 4,8 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96330    | RA 49 V0 | red    | 0,5 - 1,5                     | flat, 4,8 x 0,5 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96334    | RA 63 V0 | red    | 0,5 - 1,5                     | flat, 6,3 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96331    | RB 48 V0 | blue   | 1,5 - 2,5                     | flat, 4,8 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96332    | RB 49 V0 | blue   | 1,5 - 2,5                     | flat, 4,8 x 0,5 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96335    | RB 63 V0 | blue   | 1,5 - 2,5                     | flat, 6,3 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |
| 96333    | RC 63 V0 | yellow | 2,5 - 6,0                     | flat, 6,3 x 0,8 mm | Sleeve | 100  | o. r.                              | o. r.      | o. r.       |

## flat distributor

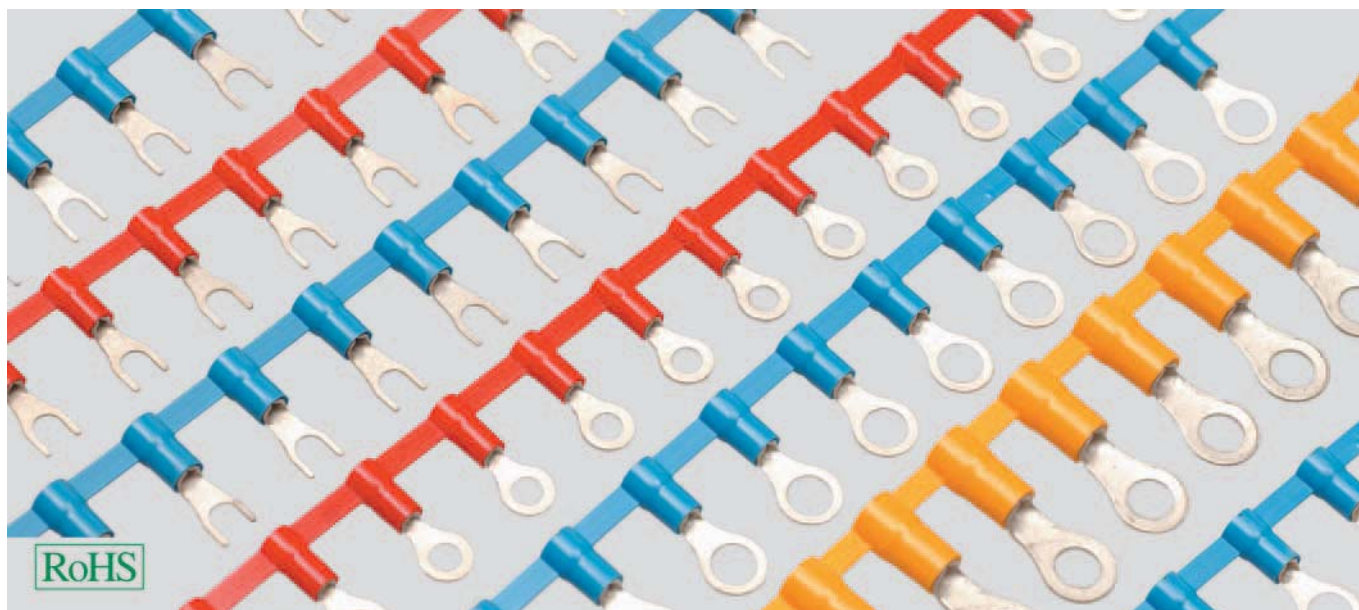
| Part no. | Type    | Colour | Cross-section mm <sup>2</sup> | Flat plug size mm  | Design      | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|---------|--------|-------------------------------|--------------------|-------------|------|------------------------------------|------------|-------------|
|          |         |        |                               |                    |             |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91436    | RA 63 T | red    | 0,5 - 1,5                     | flat, 6,3 x 0,8 mm | Distributor | 100  | o. r.                              | o. r.      | o. r.       |
| 91441    | RB 63 T | blue   | 1,5 - 2,5                     | flat, 6,3 x 0,8 mm | Distributor | 100  | o. r.                              | o. r.      | o. r.       |
| 94929    | RC 63 T | yellow | 2,5 - 6,0                     | flat, 6,3 x 0,8 mm | Distributor | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Solderless terminals

insulated - tape product



## Solderless terminals, tape product

Polycarbonate-insulated connection material on tape has been developed as a cost-effective solution for medium and large pre-fabricated cables.

## Material

Sleeve: Brass  
Surface: tinned

Insulation: partially-insulated

## Note

Roll diameter 450mm  
Inner diameter of inclusion 27mm  
Blade terminal / blade receptacle / pin-type cable lug on tape on request.

## Technical data

Temperature range: -20°C up to +115°C  
Temperature range temporary up to +130°C  
Self-extinguishing acc. to UL 94 V0

## eye type

| Part no. | Type   | Colour | Cross-section mm <sup>2</sup> | Unit | Net EUR/100 items at a purchase of |              |               |
|----------|--------|--------|-------------------------------|------|------------------------------------|--------------|---------------|
|          |        |        |                               |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |
| 93740    | BHA 3  | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93741    | BHA 35 | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93742    | BHA 4  | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93743    | BHA 5  | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93744    | BHA 6  | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93745    | BHB 3  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93746    | BHB 4  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93747    | BHB 5  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93748    | BHB 6  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93749    | BHB 8  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93750    | BHC 4  | yellow | 4,0 - 6,0                     | 1250 | o. r.                              | o. r.        | o. r.         |
| 93751    | BHC 5  | yellow | 4,0 - 6,0                     | 1250 | o. r.                              | o. r.        | o. r.         |
| 93752    | BHC 6  | yellow | 4,0 - 6,0                     | 1250 | o. r.                              | o. r.        | o. r.         |
| 93753    | BHC 8  | yellow | 4,0 - 6,0                     | 1250 | o. r.                              | o. r.        | o. r.         |

## forked

| Part no. | Type     | Colour | Cross-section mm <sup>2</sup> | Unit | Net EUR/100 items at a purchase of |              |               |
|----------|----------|--------|-------------------------------|------|------------------------------------|--------------|---------------|
|          |          |        |                               |      | up to 5000                         | 5001 - 10000 | 10001 - 50000 |
| 93754    | BHA 35 F | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93755    | BHA 4 F  | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93756    | BHA 5 F  | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93757    | BHA 6 F  | red    | 0,25 - 1,5                    | 2000 | o. r.                              | o. r.        | o. r.         |
| 93758    | BHB 3 F  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93759    | BHB 35 F | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93760    | BHB 4 F  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93761    | BHB 5 F  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93762    | BHB 6 F  | blue   | 1,5 - 2,5                     | 1750 | o. r.                              | o. r.        | o. r.         |
| 93763    | BHC 4 F  | yellow | 4,0 - 6,0                     | 1250 | o. r.                              | o. r.        | o. r.         |
| 93764    | BHC 5 F  | yellow | 4,0 - 6,0                     | 1250 | o. r.                              | o. r.        | o. r.         |
| 93765    | BHC 6 F  | yellow | 4,0 - 6,0                     | 1250 | o. r.                              | o. r.        | o. r.         |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## B solderless terminals

non insulated



### Solderless terminals type B

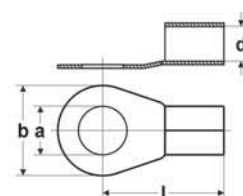
Non-insulated solderless terminals in eye type design.

### Material

Copper  
Surface: tinned

### Technical data

Temperature range: up to +125°C



### Dimensions

a Diameter of the boring  
d Inner diameter of the cable insertion  
b Flange width  
l Length till middle of the boring

### eye type

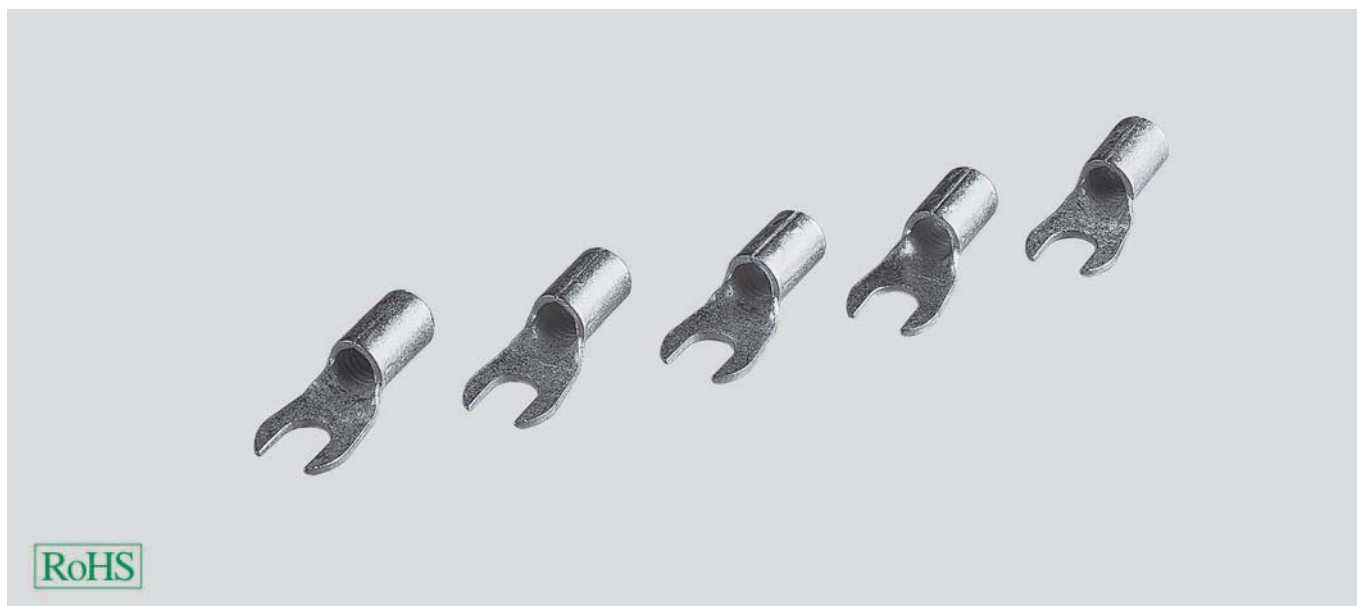
| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | a<br>mm | b<br>mm | d<br>mm | t<br>mm | l<br>mm | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|----------------------------------|---------|---------|---------|---------|---------|------------------------------|------|------------------------------------|------------|-------------|
|          |          |                                  |         |         |         |         |         |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91514    | B 1-3    | 0,5-1,5                          | 3,2     | 6,0     | 1,6     | 1,0     | 11,0    | 0,7                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91515    | B 1-4    | 0,5-1,5                          | 4,3     | 8,0     | 1,6     | 1,0     | 12,0    | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91516    | B 1-5    | 0,5-1,5                          | 5,3     | 10,0    | 1,6     | 1,0     | 13,0    | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91517    | B 2,5-3  | 1,5-2,5                          | 3,2     | 6,0     | 2,3     | 1,0     | 11,0    | 0,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91518    | B 2,5-4  | 1,5-2,5                          | 4,3     | 8,0     | 2,3     | 1,0     | 12,0    | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91519    | B 2,5-5  | 1,5-2,5                          | 5,3     | 10,0    | 2,3     | 1,0     | 14,0    | 0,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91520    | B 2,5-6  | 1,5-2,5                          | 6,5     | 11,0    | 2,3     | 1,0     | 16,0    | 1,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91521    | B 6-4    | 2,5-6,0                          | 4,3     | 8,0     | 3,6     | 1,0     | 14,0    | 1,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91522    | B 6-5    | 2,5-6,0                          | 5,3     | 10,0    | 3,6     | 1,0     | 15,0    | 1,5                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91523    | B 6-6    | 2,5-6,0                          | 6,5     | 11,0    | 3,6     | 1,0     | 16,0    | 1,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91524    | B 6-8    | 2,5-6,0                          | 8,4     | 14,0    | 3,6     | 1,0     | 19,0    | 2,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91525    | B 10-5   | 10                               | 5,3     | 10,0    | 4,5     | 1,1     | 16,0    | 2,3                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91526    | B 10-6   | 10                               | 6,5     | 11,0    | 4,5     | 1,1     | 17,0    | 2,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91527    | B 10-8   | 10                               | 8,4     | 14,0    | 4,5     | 1,1     | 20,0    | 2,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91528    | B 16-5   | 16                               | 5,3     | 11,0    | 5,8     | 1,2     | 20,0    | 3,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91529    | B 16-6   | 16                               | 6,5     | 11,0    | 5,8     | 1,2     | 20,0    | 3,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91530    | B 16-8   | 16                               | 8,4     | 14,0    | 5,8     | 1,2     | 22,0    | 4,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91531    | B 16-10  | 16                               | 10,5    | 18,0    | 5,8     | 1,2     | 24,0    | 4,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91532    | B 25-6   | 25                               | 6,5     | 12,0    | 7,5     | 1,5     | 25,0    | 7,1                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91533    | B 25-8   | 25                               | 8,4     | 16,0    | 7,5     | 1,5     | 25,0    | 7,6                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91534    | B 25-10  | 25                               | 10,5    | 18,0    | 7,5     | 1,5     | 26,0    | 7,4                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91535    | B 35-8   | 35                               | 8,4     | 16,0    | 9,0     | 1,6     | 26,0    | 9,7                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91536    | B 35-10  | 35                               | 10,5    | 18,0    | 9,0     | 1,6     | 27,0    | 9,9                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91537    | B 35-12  | 35                               | 13,0    | 22,0    | 9,0     | 1,6     | 31,0    | 11,0                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91538    | B 50-8   | 50                               | 8,4     | 18,0    | 11,0    | 1,8     | 34,0    | 7,9                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91539    | B 50-10  | 50                               | 10,5    | 18,0    | 11,0    | 1,8     | 34,0    | 16,7                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91540    | B 50-12  | 50                               | 13,0    | 22,0    | 11,0    | 1,8     | 36,0    | 17,7                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91541    | B 70-10  | 70                               | 10,5    | 22,0    | 13,0    | 2,0     | 38,0    | 25,2                         | 25   | o. r.                              | o. r.      | o. r.       |
| 91542    | B 70-12  | 70                               | 13,0    | 22,0    | 13,0    | 2,0     | 38,0    | 21,8                         | 25   | o. r.                              | o. r.      | o. r.       |
| 91543    | B 70-16  | 70                               | 17,0    | 28,0    | 13,0    | 2,0     | 42,0    | 25,6                         | 25   | o. r.                              | o. r.      | o. r.       |
| 91544    | B 95-10  | 95                               | 10,5    | 24,0    | 15,0    | 2,5     | 42,0    | 40,0                         | 25   | o. r.                              | o. r.      | o. r.       |
| 91545    | B 95-12  | 95                               | 13,0    | 24,0    | 15,0    | 2,5     | 42,0    | 35,7                         | 25   | o. r.                              | o. r.      | o. r.       |
| 91546    | B 95-16  | 95                               | 17,0    | 28,0    | 15,0    | 2,5     | 44,0    | 40,0                         | 25   | o. r.                              | o. r.      | o. r.       |
| 97765    | B 120-10 | 120                              | 10,5    | 24,0    | 17,0    | 3,0     | 44,0    | 56,0                         | 25   | o. r.                              | o. r.      | o. r.       |
| 97766    | B 120-12 | 120                              | 13,0    | 24,0    | 17,0    | 3,0     | 44,0    | 54,0                         | 25   | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## B solderless terminals

non insulated



### Solderless terminals type B

Non-insulated solderless terminals in fork design.

### Material

Sleeve: Copper  
Surface: tinned

### Technical data

Temperature range: up to +125°C



### Dimensions

- a Diameter of the boring
- d Inner diameter of the cable insertion
- b Flange width
- l Length till middle of the boring

### forked

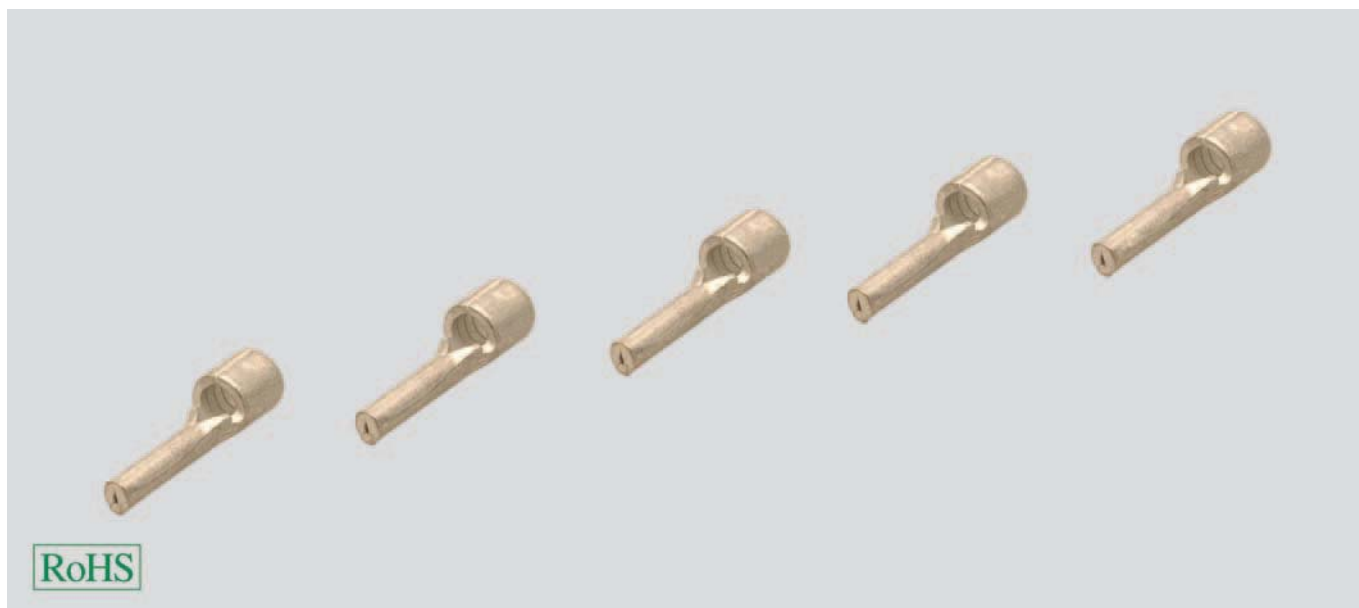
| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | a<br>mm | b<br>mm | d<br>mm | t<br>mm | l<br>mm | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|----------------------------------|---------|---------|---------|---------|---------|------------------------------|------|------------------------------------|------------|-------------|
|          |          |                                  |         |         |         |         |         |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91547    | B 1-4F   | 0,5-1,5                          | 4,3     | 7,0     | 1,6     | 0,8     | 12,0    | 0,7                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91548    | B 1-5F   | 0,5-1,5                          | 5,3     | 9,6     | 1,6     | 0,8     | 13,0    | 0,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91550    | B 2,5-4F | 1,5-2,5                          | 4,3     | 7,0     | 2,3     | 0,8     | 12,0    | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91551    | B 2,5-5F | 1,5-2,5                          | 5,3     | 9,6     | 2,3     | 0,8     | 13,0    | 0,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91552    | B 2,5-6F | 1,5-2,5                          | 6,5     | 12,0    | 2,3     | 0,8     | 13,0    | 1,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91553    | B 6-4F   | 2,5-6,0                          | 4,3     | 8,5     | 3,6     | 1,0     | 14,0    | 1,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91554    | B 6-5F   | 2,5-6,0                          | 5,3     | 9,0     | 3,6     | 1,0     | 14,0    | 1,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91555    | B 6-6F   | 2,5-6,0                          | 6,5     | 12,5    | 3,6     | 1,0     | 18,0    | 1,7                          | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

## B solderless terminals

non insulated



### Solderless terminals B

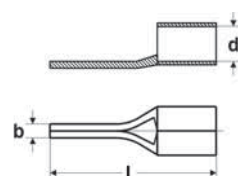
Non-insulated squeeze snap-on connection in pin design.

### Material

Copper  
Surface: tinned

### Technical data

Temperature range: up to +125°C



### Dimensions

a Stick length  
d Inner diameter of the cable insertion  
b Stick width  
L Total length

### round pattern

| Part no. | Type   | Cross-section<br>mm <sup>2</sup> | a<br>mm | b<br>mm | d<br>mm | t<br>mm | l<br>mm | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|--------|----------------------------------|---------|---------|---------|---------|---------|------------------------------|------|------------------------------------|------------|-------------|
|          |        |                                  |         |         |         |         |         |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91556    | B 0,5P | 0,5-1,5                          | 10,0    | 1,9     | -       | -       | 17,0    | 0,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91557    | B 2,5P | 1,5-2,5                          | 10,0    | 1,9     | -       | -       | 17,0    | 0,7                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91558    | B 6P   | 2,5-6,0                          | 11,0    | 2,7     | -       | -       | 20,0    | 1,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91559    | B 10P  | 10                               | 11,0    | 4,3     | -       | -       | 24,5    | 2,7                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91560    | B 16P  | 16                               | 15,0    | 5,8     | -       | -       | 29,5    | 3,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91378    | B 25P  | 25                               | 15,0    | 6,8     | -       | -       | 33,5    | 6,3                          | 1    | o. r.                              | o. r.      | o. r.       |
| 91379    | B 35P  | 35                               | 20,0    | 8,0     | -       | -       | 40,5    | 11,7                         | 1    | o. r.                              | o. r.      | o. r.       |
| 91380    | B 50P  | 50                               | 20,0    | 9,5     | -       | -       | 45,0    | 17,9                         | 1    | o. r.                              | o. r.      | o. r.       |
| 91381    | B 70P  | 70                               | 23,0    | 11,0    | -       | -       | 55,0    | 28,2                         | 1    | o. r.                              | o. r.      | o. r.       |
| 91377    | B 95P  | 95                               | 23,0    | 12,5    | -       | -       | 55,0    | 43,0                         | 1    | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# T tubular cable lug - straight

not insulated - with inspection hole



## Tubular cable lugs T

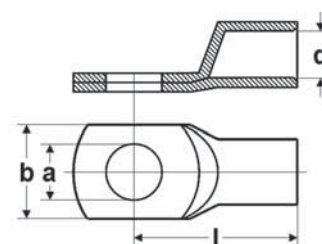
Non-insulated tubular cable lugs in eye type design.

## Material

Copper  
Surface: tinned

## Technical data

Temperature range: up to +125°C



## Dimensions

- a Diameter of the boring
- d Inner diameter of the cable insertion
- b Flange width
- l Length till middle of the boring

## eye type

| Part no. | Type    | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|---------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |         |                                  |         |         |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91458    | T 1,5-4 | 1,5                              | 4,3     | 2,3     | 8,0     | 15,2    | -            | 1,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91459    | T 1,5-5 | 1,5                              | 5,3     | 2,3     | 8,0     | 15,2    | -            | 1,7                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91460    | T 2,5-4 | 2,5                              | 4,3     | 2,6     | 6,9     | 15,2    | -            | 1,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91461    | T 2,5-5 | 2,5                              | 5,3     | 2,6     | 7,6     | 15,2    | -            | 1,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91462    | T 2,5-6 | 2,5                              | 6,4     | 2,6     | 9,1     | 16,7    | -            | 1,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91463    | T 4-4   | 4,0                              | 4,3     | 3,3     | 8,0     | 19,4    | -            | 2,5                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91464    | T 4-5   | 4,0                              | 5,3     | 3,3     | 10,0    | 19,9    | -            | 2,7                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91465    | T 4-6   | 4,0                              | 6,4     | 3,3     | 11,0    | 20,9    | -            | 2,8                          | 50   | o. r.                              | o. r.      | o. r.       |
| 91467    | T 6-5   | 6,0                              | 5,3     | 3,5     | 10,0    | 20,5    | -            | 5,5                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91468    | T 6-6   | 6,0                              | 6,4     | 3,5     | 12,0    | 20,5    | -            | 5,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91469    | T 10-6  | 10,0                             | 6,4     | 4,5     | 12,0    | 22,5    | -            | 5,3                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91470    | T 10-8  | 10,0                             | 8,4     | 4,5     | 15,0    | 25,0    | -            | 6,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91471    | T 10-10 | 10,0                             | 10,5    | 4,5     | 17,0    | 27,0    | -            | 7,0                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91472    | T 16-6  | 16,0                             | 6,4     | 5,5     | 12,0    | 27,0    | -            | 9,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 91473    | T 16-8  | 16,0                             | 8,4     | 5,5     | 15,0    | 29,0    | -            | 10,1                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91474    | T 16-10 | 16,0                             | 10,5    | 5,5     | 17,0    | 31,0    | -            | 10,9                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91561    | T 25-6  | 25,0                             | 6,4     | 7,0     | 14,0    | 30,0    | -            | 12,7                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91562    | T 25-8  | 25,0                             | 8,4     | 7,0     | 16,0    | 32,5    | -            | 15,9                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91563    | T 25-10 | 25,0                             | 10,5    | 7,0     | 18,0    | 34,5    | -            | 15,2                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91564    | T 25-12 | 25,0                             | 13,2    | 7,0     | 19,0    | 35,5    | -            | 15,0                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91565    | T 35-6  | 35,0                             | 6,4     | 8,5     | 17,0    | 32,5    | -            | 19,3                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91566    | T 35-8  | 35,0                             | 8,4     | 8,5     | 17,0    | 35,0    | -            | 21,4                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91567    | T 35-10 | 35,0                             | 10,5    | 8,5     | 19,0    | 37,0    | -            | 22,9                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91568    | T 35-12 | 35,0                             | 13,2    | 8,5     | 21,0    | 38,0    | -            | 22,3                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91569    | T 50-6  | 50,0                             | 6,4     | 10,0    | 20,0    | 37,0    | -            | 30,9                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91570    | T 50-8  | 50,0                             | 8,4     | 10,0    | 20,0    | 37,0    | -            | 30,1                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91571    | T 50-10 | 50,0                             | 10,5    | 10,0    | 20,0    | 39,0    | -            | 31,7                         | 100  | o. r.                              | o. r.      | o. r.       |
| 91572    | T 50-12 | 50,0                             | 13,2    | 10,0    | 23,0    | 40,0    | -            | 31,8                         | 100  | o. r.                              | o. r.      | o. r.       |

Continuation ►

o. r. = on request

# T tubular cable lug - straight

not insulated - with inspection hole

## eye type

| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |          |                                  |         |         |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 91573    | T 70-8   | 70,0                             | 8,4     | 12,0    | 23,0    | 43,0    | -            | 45,5                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91574    | T 70-10  | 70,0                             | 10,5    | 12,0    | 23,0    | 45,0    | -            | 48,8                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91575    | T 70-12  | 70,0                             | 13,2    | 12,0    | 23,0    | 46,0    | -            | 48,0                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91577    | T 95-8   | 95,0                             | 8,4     | 13,5    | 26,0    | 48,0    | -            | 58,4                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91578    | T 95-10  | 95,0                             | 10,5    | 13,5    | 26,0    | 48,0    | -            | 57,2                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91493    | T 95-12  | 95,0                             | 13,2    | 13,5    | 26,0    | 49,0    | -            | 56,7                         | 50   | o. r.                              | o. r.      | o. r.       |
| 96317    | T 120-8  | 120,0                            | 8,4     | 15,0    | 28,0    | 51,0    | -            | 68,9                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91495    | T 120-10 | 120,0                            | 10,5    | 15,0    | 28,0    | 51,0    | -            | 67,7                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91496    | T 120-12 | 120,0                            | 13,2    | 15,0    | 28,0    | 51,0    | -            | 65,8                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91498    | T 120-16 | 120,0                            | 17,0    | 15,0    | 30,0    | 53,0    | -            | 66,6                         | 50   | o. r.                              | o. r.      | o. r.       |
| 97690    | T 120-20 | 120,0                            | 21,0    | 15,0    | 36,0    | 59,0    | -            | 77,6                         | 50   | o. r.                              | o. r.      | o. r.       |
| 97872    | T 150-8  | 150,0                            | 8,4     | 16,5    | 31,0    | 58,0    | -            | 77,9                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91499    | T 150-10 | 150,0                            | 10,5    | 16,5    | 31,0    | 58,0    | -            | 76,8                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91500    | T 150-12 | 150,0                            | 13,2    | 16,5    | 31,0    | 58,0    | -            | 75,1                         | 50   | o. r.                              | o. r.      | o. r.       |
| 91502    | T 150-16 | 150,0                            | 17,0    | 16,5    | 31,0    | 58,0    | -            | 71,9                         | 50   | o. r.                              | o. r.      | o. r.       |
| 96318    | T 185-10 | 185,0                            | 10,5    | 19,0    | 35,0    | 65,0    | -            | 119,8                        | 50   | o. r.                              | o. r.      | o. r.       |
| 91503    | T 185-12 | 185,0                            | 13,2    | 19,0    | 35,0    | 65,0    | -            | 117,7                        | 50   | o. r.                              | o. r.      | o. r.       |
| 91505    | T 185-16 | 185,0                            | 17,0    | 19,0    | 35,0    | 65,0    | -            | 113,9                        | 50   | o. r.                              | o. r.      | o. r.       |
| 91506    | T 185-20 | 185,0                            | 21,0    | 19,0    | 39,0    | 69,0    | -            | 118,0                        | 50   | o. r.                              | o. r.      | o. r.       |
| 93669    | T 240-10 | 240,0                            | 10,5    | 21,0    | 39,0    | 72,0    | -            | 173,6                        | 50   | o. r.                              | o. r.      | o. r.       |
| 96962    | T 240-12 | 240,0                            | 13,2    | 21,0    | 39,0    | 72,0    | -            | 171,2                        | 50   | o. r.                              | o. r.      | o. r.       |
| 91508    | T 240-16 | 240,0                            | 17,0    | 21,0    | 39,0    | 72,0    | -            | 166,7                        | 50   | o. r.                              | o. r.      | o. r.       |
| 91509    | T 240-20 | 240,0                            | 21,0    | 21,0    | 39,0    | 72,0    | -            | 160,8                        | 50   | o. r.                              | o. r.      | o. r.       |
| 96319    | T 300-12 | 300,0                            | 13,2    | 23,4    | 43,0    | 77,3    | -            | 228,6                        | 10   | o. r.                              | o. r.      | o. r.       |
| 91510    | T 300-16 | 300,0                            | 17,0    | 23,4    | 43,0    | 80,3    | -            | 249,3                        | 10   | o. r.                              | o. r.      | o. r.       |
| 91511    | T 300-20 | 300,0                            | 21,0    | 23,4    | 43,0    | 86,3    | -            | 253,2                        | 10   | o. r.                              | o. r.      | o. r.       |
| 91512    | T 400-20 | 400,0                            | 21,0    | 26,7    | 49,5    | 90,3    | -            | 349,7                        | 10   | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# W tubular cable lug - angulated 45°

not insulated



## Elbow tubular lugs W45°

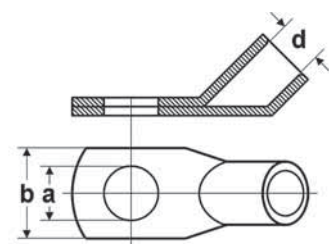
Non-insulated tubular lugs in eye type design, 45° angled.

## Material

Copper  
Surface: tinned

## Technical data

Temperature range: up to +120°C



## Dimensions

- a Diameter of the boring
- d Inner diameter of the cable insertion
- b Flange width

## eye type

| Part no.<br>45° | Type    | Cross-section<br>mm² | a<br>mm | d<br>mm | b<br>mm | Weight<br>kg / 1000<br>Stück | Unit | Net EUR/100 items at a purchase of |           |            |
|-----------------|---------|----------------------|---------|---------|---------|------------------------------|------|------------------------------------|-----------|------------|
|                 |         |                      |         |         |         |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92520           | W 6-5   | 6,0                  | 5,3     | 3,5     | 10,0    | 6,0                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92521           | W 6-6   | 6,0                  | 6,4     | 3,5     | 12,0    | 5,9                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92522           | W 6-8   | 6,0                  | 8,4     | 3,5     | 15,0    | 6,7                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92523           | W 6-10  | 6,0                  | 10,5    | 3,5     | 17,0    | 7,2                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92524           | W 6-12  | 6,0                  | 13,2    | 3,5     | 19,0    | 7,7                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92525           | W 10-5  | 10,0                 | 5,3     | 4,5     | 12,0    | 6,0                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92526           | W 10-6  | 10,0                 | 6,4     | 4,5     | 12,0    | 5,9                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92527           | W 10-8  | 10,0                 | 8,4     | 4,5     | 15,0    | 6,7                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92528           | W 10-10 | 10,0                 | 10,5    | 4,5     | 17,0    | 7,2                          | 50   | o. r.                              | o. r.     | o. r.      |
| 92529           | W 10-12 | 10,0                 | 13,2    | 4,5     | 19,0    | 7,6                          | 100  | o. r.                              | o. r.     | o. r.      |
| 92530           | W 16-5  | 16,0                 | 5,3     | 5,5     | 12,0    | 10,1                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92531           | W 16-6  | 16,0                 | 6,4     | 5,5     | 12,0    | 10,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92532           | W 16-8  | 16,0                 | 8,4     | 5,5     | 15,0    | 11,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92533           | W 16-10 | 16,0                 | 10,5    | 5,5     | 17,0    | 11,7                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92534           | W 16-12 | 16,0                 | 13,2    | 5,5     | 19,0    | 12,3                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92535           | W 25-5  | 25,0                 | 5,3     | 7,0     | 14,0    | 13,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92536           | W 25-6  | 25,0                 | 6,4     | 7,0     | 14,0    | 13,1                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92537           | W 25-8  | 25,0                 | 8,4     | 7,0     | 16,0    | 14,7                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92538           | W 25-10 | 25,0                 | 10,5    | 7,0     | 18,0    | 15,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92539           | W 25-12 | 25,0                 | 13,2    | 7,0     | 19,0    | 16,0                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92541           | W 35-6  | 35,0                 | 6,4     | 8,5     | 17,0    | 20,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92542           | W 35-8  | 35,0                 | 8,5     | 8,5     | 17,0    | 22,8                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92543           | W 35-10 | 35,0                 | 10,5    | 8,5     | 19,0    | 23,9                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92544           | W 35-12 | 35,0                 | 13,2    | 8,5     | 21,0    | 25,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92546           | W 35-16 | 35,0                 | 17,0    | 8,5     | 26,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 92547           | W 50-6  | 50,0                 | 6,4     | 10,0    | 20,0    | 31,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92548           | W 50-8  | 50,0                 | 8,4     | 10,0    | 20,0    | 34,5                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92549           | W 50-10 | 50,0                 | 10,5    | 10,0    | 20,0    | 35,8                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92550           | W 50-12 | 50,0                 | 13,2    | 10,0    | 23,0    | 37,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 92552           | W 50-16 | 50,0                 | 17,0    | 10,0    | 28,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 92553           | W 50-20 | 50,0                 | 21,0    | 10,0    | 30,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# W tubular cable lug - angulated 45°

not insulated

eye type

| Part no.<br>45° | Type     | Cross-section<br>mm² | a<br>mm | d<br>mm | b<br>mm | Weight<br>kg / 1000<br>Stück | Unit | Net EUR/100 items at a purchase of |           |            |
|-----------------|----------|----------------------|---------|---------|---------|------------------------------|------|------------------------------------|-----------|------------|
|                 |          |                      |         |         |         |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92554           | W 70-6   | 70,0                 | 6,5     | 12,0    | 23,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 92555           | W 70-8   | 70,0                 | 8,4     | 12,0    | 23,0    | 52,4                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92556           | W 70-10  | 70,0                 | 10,5    | 12,0    | 23,0    | 54,5                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92557           | W 70-12  | 70,0                 | 13,2    | 12,0    | 23,0    | 56,9                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92559           | W 70-16  | 70,0                 | 17,0    | 12,0    | 26,0    | 59,4                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92560           | W 70-20  | 70,0                 | 21,0    | 12,0    | 30,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 92561           | W 95-8   | 95,0                 | 8,4     | 13,5    | 26,0    | 63,0                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92562           | W 95-10  | 95,0                 | 10,5    | 13,5    | 26,0    | 64,6                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92563           | W 95-12  | 95,0                 | 13,2    | 13,5    | 26,0    | 66,8                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92565           | W 95-16  | 95,0                 | 17,0    | 13,5    | 28,0    | 70,6                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92566           | W 95-20  | 95,0                 | 21,0    | 13,5    | 30,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 92567           | W 120-8  | 120,0                | 8,4     | 15,0    | 28,0    | 68,7                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92568           | W 120-10 | 120,0                | 10,5    | 15,0    | 28,0    | 72,9                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92569           | W 120-12 | 120,0                | 13,2    | 15,0    | 28,0    | 77,1                         | 50   | o. r.                              | o. r.     | o. r.      |
| 92571           | W 120-16 | 120,0                | 17,0    | 15,0    | 30,0    | 80,3                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92572           | W 120-20 | 120,0                | 21,0    | 15,0    | 36,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92573           | W 150-8  | 150,0                | 8,5     | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92574           | W 150-10 | 150,0                | 10,5    | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92575           | W 150-12 | 150,0                | 13,0    | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92577           | W 150-16 | 150,0                | 17,0    | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92578           | W 150-20 | 150,0                | 21,0    | 16,5    | 36,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92579           | W 185-10 | 185,0                | 10,5    | 19,0    | 35,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92580           | W 185-12 | 185,0                | 13,0    | 19,0    | 35,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92582           | W 185-16 | 185,0                | 17,0    | 19,0    | 35,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92583           | W 185-20 | 185,0                | 21,0    | 19,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92584           | W 240-10 | 240,0                | 10,5    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92585           | W 240-12 | 240,0                | 13,0    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92587           | W 240-16 | 240,0                | 17,0    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92588           | W 240-20 | 240,0                | 21,0    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 92589           | W 300-12 | 300,0                | 13,0    | 23,5    | 43,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 92591           | W 300-16 | 300,0                | 17,0    | 23,5    | 43,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 92592           | W 300-20 | 300,0                | 21,0    | 23,5    | 43,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 92593           | W 400-12 | 400,0                | 13,0    | 27,0    | 49,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 92595           | W 400-16 | 400,0                | 17,0    | 27,0    | 49,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 92596           | W 400-20 | 400,0                | 21,0    | 27,0    | 49,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# W tubular cable lug - angulated 90°

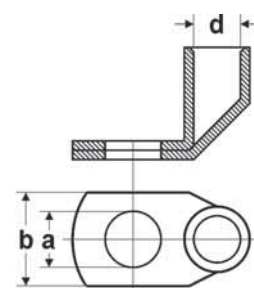
not insulated



**Elbow tubular lugs W 90°**  
Non-insulated tubular lugs in eye type design, 90° angled.

**Material**  
Copper  
Surface: tinned

**Technical data**  
Temperature range: up to +120°C



**Dimensions**  
a Diameter of boring  
d Inner diameter of the cable insertion  
b Flange width

## eye type

| Part no.<br>90° | Type    | Cross-section<br>mm² | a<br>mm | d<br>mm | b<br>mm | Weight<br>kg / 1000<br>Stück | Unit | Net EUR/100 items at a purchase of |           |            |
|-----------------|---------|----------------------|---------|---------|---------|------------------------------|------|------------------------------------|-----------|------------|
|                 |         |                      |         |         |         |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90866           | W 6-5   | 6,0                  | 5,3     | 3,5     | 10,0    | 6,0                          | 100  | o. r.                              | o. r.     | o. r.      |
| 96303           | W 6-6   | 6,0                  | 6,4     | 3,5     | 12,0    | 5,9                          | 100  | o. r.                              | o. r.     | o. r.      |
| 90867           | W 6-8   | 6,0                  | 8,4     | 3,5     | 15,0    | 6,7                          | 100  | o. r.                              | o. r.     | o. r.      |
| 90868           | W 6-10  | 6,0                  | 10,5    | 3,5     | 17,0    | 7,2                          | 100  | o. r.                              | o. r.     | o. r.      |
| 90869           | W 6-12  | 6,0                  | 13,2    | 3,5     | 19,0    | 7,7                          | 100  | o. r.                              | o. r.     | o. r.      |
| 90939           | W 10-5  | 10,0                 | 5,3     | 4,5     | 12,0    | 6,0                          | 100  | o. r.                              | o. r.     | o. r.      |
| 96309           | W 10-6  | 10,0                 | 6,4     | 4,5     | 12,0    | 5,9                          | 100  | o. r.                              | o. r.     | o. r.      |
| 96908           | W 10-8  | 10,0                 | 8,4     | 4,5     | 15,0    | 6,7                          | 100  | o. r.                              | o. r.     | o. r.      |
| 90940           | W 10-10 | 10,0                 | 10,5    | 4,5     | 17,0    | 7,2                          | 100  | o. r.                              | o. r.     | o. r.      |
| 90941           | W 10-12 | 10,0                 | 13,2    | 4,5     | 19,0    | 7,6                          | 100  | o. r.                              | o. r.     | o. r.      |
| 90942           | W 16-5  | 16,0                 | 5,3     | 5,5     | 12,0    | 10,1                         | 100  | o. r.                              | o. r.     | o. r.      |
| 96308           | W 16-6  | 16,0                 | 6,4     | 5,5     | 12,0    | 10,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 96907           | W 16-8  | 16,0                 | 8,4     | 5,5     | 15,0    | 11,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 96310           | W 16-10 | 16,0                 | 10,5    | 5,5     | 17,0    | 11,7                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90943           | W 16-12 | 16,0                 | 13,2    | 5,5     | 19,0    | 12,3                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90944           | W 25-5  | 25,0                 | 5,3     | 7,0     | 14,0    | 13,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 98377           | W 25-6  | 25,0                 | 6,4     | 7,0     | 14,0    | 13,1                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90945           | W 25-8  | 25,0                 | 8,4     | 7,0     | 16,0    | 14,7                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90946           | W 25-10 | 25,0                 | 10,5    | 7,0     | 18,0    | 15,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90947           | W 25-12 | 25,0                 | 13,2    | 7,0     | 19,0    | 16,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90949           | W 35-6  | 35,0                 | 6,4     | 8,5     | 17,0    | 20,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90950           | W 35-8  | 35,0                 | 8,4     | 8,5     | 17,0    | 22,8                         | 100  | o. r.                              | o. r.     | o. r.      |
| 96313           | W 35-10 | 35,0                 | 10,5    | 8,5     | 19,0    | 23,9                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90951           | W 35-12 | 35,0                 | 13,2    | 8,5     | 21,0    | 25,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90953           | W 35-16 | 35,0                 | 17,0    | 8,5     | 26,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 90954           | W 50-6  | 50,0                 | 6,4     | 10,0    | 20,0    | 31,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 96314           | W 50-8  | 50,0                 | 8,4     | 10,0    | 20,0    | 33,8                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90955           | W 50-10 | 50,0                 | 10,5    | 10,0    | 20,0    | 35,2                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90956           | W 50-12 | 50,0                 | 13,2    | 10,0    | 23,0    | 38,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90958           | W 50-16 | 50,0                 | 17,0    | 10,0    | 28,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 90959           | W 50-20 | 50,0                 | 21,0    | 10,0    | 30,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# W tubular cable lug - angulated 90°

not insulated

eye type

| Part no.<br>90° | Type     | Cross-section<br>mm² | a<br>mm | d<br>mm | b<br>mm | Weight<br>kg / 1000<br>Stück | Unit | Net EUR/100 items at a purchase of |           |            |
|-----------------|----------|----------------------|---------|---------|---------|------------------------------|------|------------------------------------|-----------|------------|
|                 |          |                      |         |         |         |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90960           | W 70-6   | 70,0                 | 6,5     | 12,0    | 23,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 90961           | W 70-8   | 70,0                 | 8,4     | 12,0    | 23,0    | 50,9                         | 100  | o. r.                              | o. r.     | o. r.      |
| 96315           | W 70-10  | 70,0                 | 10,5    | 12,0    | 23,0    | 53,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 96316           | W 70-12  | 70,0                 | 13,2    | 12,0    | 23,0    | 54,4                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90963           | W 70-16  | 70,0                 | 17,0    | 12,0    | 26,0    | 58,5                         | 100  | o. r.                              | o. r.     | o. r.      |
| 90964           | W 70-20  | 70,0                 | 21,0    | 12,0    | 30,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 90965           | W 95-8   | 95,0                 | 8,4     | 13,5    | 26,0    | 61,1                         | 50   | o. r.                              | o. r.     | o. r.      |
| 97672           | W 95-10  | 95,0                 | 10,5    | 13,5    | 26,0    | 62,7                         | 50   | o. r.                              | o. r.     | o. r.      |
| 90966           | W 95-12  | 95,0                 | 13,2    | 13,5    | 26,0    | 64,8                         | 50   | o. r.                              | o. r.     | o. r.      |
| 90968           | W 95-16  | 95,0                 | 17,0    | 13,5    | 28,0    | 71,2                         | 50   | o. r.                              | o. r.     | o. r.      |
| 90969           | W 95-20  | 95,0                 | 21,0    | 13,5    | 30,0    | 0,0                          | 25   | o. r.                              | o. r.     | o. r.      |
| 90970           | W 120-8  | 120,0                | 8,4     | 15,0    | 28,0    | 66,9                         | 50   | o. r.                              | o. r.     | o. r.      |
| 90971           | W 120-10 | 120,0                | 10,5    | 15,0    | 28,0    | 71,0                         | 50   | o. r.                              | o. r.     | o. r.      |
| 90972           | W 120-12 | 120,0                | 13,2    | 15,0    | 28,0    | 72,3                         | 50   | o. r.                              | o. r.     | o. r.      |
| 90974           | W 120-16 | 120,0                | 17,0    | 15,0    | 30,0    | 78,1                         | 50   | o. r.                              | o. r.     | o. r.      |
| 90975           | W 120-20 | 120,0                | 21,0    | 15,0    | 36,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90976           | W 150-8  | 150,0                | 8,5     | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90977           | W 150-10 | 150,0                | 10,5    | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90978           | W 150-12 | 150,0                | 13,0    | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90980           | W 150-16 | 150,0                | 17,0    | 16,5    | 31,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90981           | W 150-20 | 150,0                | 21,0    | 16,5    | 36,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90982           | W 185-10 | 185,0                | 10,5    | 19,0    | 35,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90983           | W 185-12 | 185,0                | 13,0    | 19,0    | 35,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90985           | W 185-16 | 185,0                | 17,0    | 19,0    | 35,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90986           | W 185-20 | 185,0                | 21,0    | 19,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90987           | W 240-10 | 240,0                | 10,5    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90988           | W 240-12 | 240,0                | 13,0    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90990           | W 240-16 | 240,0                | 17,0    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90991           | W 240-20 | 240,0                | 21,0    | 21,0    | 39,0    | 0,0                          | 10   | o. r.                              | o. r.     | o. r.      |
| 90992           | W 300-12 | 300,0                | 13,0    | 23,5    | 43,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 90994           | W 300-16 | 300,0                | 17,0    | 23,5    | 43,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 90995           | W 300-20 | 300,0                | 21,0    | 23,5    | 43,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 90996           | W 400-12 | 400,0                | 13,0    | 27,0    | 49,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 90998           | W 400-16 | 400,0                | 17,0    | 27,0    | 49,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |
| 90999           | W 400-20 | 400,0                | 21,0    | 27,0    | 49,0    | 0,0                          | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

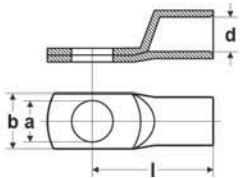
# S tubular cable lug - straight - small flange

not insulated



**Tubular cable lugs S**  
Non-insulated tubular cable lugs in eye type design with small flange.  
For screwing in switch cabinets with reduced connecting space.

**Material**  
Sleeve: Copper  
Surface: tinned



**Dimensions**  
a Diameter of the boring  
d Inner diameter of the cable insertion  
b Flange width  
l Length till middle of the boring

| eye type |          |               |      |      |      |                    |      |                                    |           |            |
|----------|----------|---------------|------|------|------|--------------------|------|------------------------------------|-----------|------------|
| Part no. | Type     | Cross-section | a    | d    | b    | Weight             | Unit | Net EUR/100 items at a purchase of |           |            |
| straight |          | mm²           | mm   | mm   | mm   | kg / 1000<br>Stück |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 90910    | S 35-6   | 35,0          | 6,5  | 8,5  | 15,0 | 17,8               | 25   | o. r.                              | o. r.     | o. r.      |
| 90911    | S 50-6   | 50,0          | 6,5  | 10,0 | 15,0 | 29,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 90912    | S 50-8   | 50,0          | 8,5  | 10,0 | 17,0 | 28,2               | 25   | o. r.                              | o. r.     | o. r.      |
| 90913    | S 50-10  | 50,0          | 10,5 | 10,0 | 19,0 | 30,8               | 25   | o. r.                              | o. r.     | o. r.      |
| 90914    | S 70-6   | 70,0          | 6,5  | 12,0 | 17,0 | 42,2               | 25   | o. r.                              | o. r.     | o. r.      |
| 90915    | S 70-8   | 70,0          | 8,5  | 12,0 | 17,0 | 41,0               | 25   | o. r.                              | o. r.     | o. r.      |
| 90916    | S 70-10  | 70,0          | 10,5 | 12,0 | 19,0 | 44,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 90917    | S 70-12  | 70,0          | 13,0 | 12,0 | 19,0 | 42,2               | 25   | o. r.                              | o. r.     | o. r.      |
| 90918    | S 95-6   | 95,0          | 6,5  | 13,5 | 19,0 | 54,9               | 25   | o. r.                              | o. r.     | o. r.      |
| 90919    | S 95-8   | 95,0          | 8,5  | 13,5 | 19,0 | 54,6               | 25   | o. r.                              | o. r.     | o. r.      |
| 90920    | S 95-10  | 95,0          | 10,5 | 13,5 | 19,0 | 51,3               | 25   | o. r.                              | o. r.     | o. r.      |
| 90921    | S 95-12  | 95,0          | 13,0 | 13,5 | 19,0 | 51,5               | 25   | o. r.                              | o. r.     | o. r.      |
| 90922    | S 120-6  | 120,0         | 6,5  | 15,0 | 19,0 | 61,6               | 10   | o. r.                              | o. r.     | o. r.      |
| 90923    | S 120-8  | 120,0         | 8,5  | 15,0 | 19,0 | 59,4               | 10   | o. r.                              | o. r.     | o. r.      |
| 90924    | S 120-10 | 120,0         | 10,5 | 15,0 | 19,0 | 58,1               | 10   | o. r.                              | o. r.     | o. r.      |
| 90925    | S 120-12 | 120,0         | 13,0 | 15,0 | 19,0 | 59,2               | 10   | o. r.                              | o. r.     | o. r.      |
| 90926    | S 150-6  | 150,0         | 6,5  | 16,5 | 19,0 | 68,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 90927    | S 150-8  | 150,0         | 8,5  | 16,5 | 19,0 | 68,0               | 10   | o. r.                              | o. r.     | o. r.      |
| 90928    | S 150-10 | 150,0         | 10,5 | 16,5 | 19,0 | 67,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 90929    | S 150-12 | 150,0         | 13,0 | 16,5 | 19,0 | 71,5               | 10   | o. r.                              | o. r.     | o. r.      |
| 90930    | S 185-10 | 185,0         | 10,5 | 19,0 | 24,5 | 105,9              | 10   | o. r.                              | o. r.     | o. r.      |
| 90931    | S 185-12 | 185,0         | 13,0 | 19,0 | 31,0 | 110,9              | 10   | o. r.                              | o. r.     | o. r.      |
| 90932    | S 185-16 | 185,0         | 17,0 | 19,0 | 31,0 | 97,6               | 10   | o. r.                              | o. r.     | o. r.      |
| 90933    | S 240-10 | 240,0         | 10,5 | 21,0 | 31,0 | 127,0              | 5    | o. r.                              | o. r.     | o. r.      |
| 90934    | S 240-12 | 240,0         | 13,0 | 21,0 | 31,0 | 137,2              | 5    | o. r.                              | o. r.     | o. r.      |
| 90935    | S 240-16 | 240,0         | 17,0 | 21,0 | 31,0 | 132,8              | 5    | o. r.                              | o. r.     | o. r.      |
| 90936    | S 300-10 | 300,0         | 10,5 | 23,5 | 31,0 | 197,0              | 5    | o. r.                              | o. r.     | o. r.      |
| 90937    | S 300-12 | 300,0         | 13,0 | 23,5 | 31,0 | 227,2              | 5    | o. r.                              | o. r.     | o. r.      |
| 90938    | S 300-16 | 300,0         | 17,0 | 23,5 | 31,0 | 225,0              | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice. o. r. = on request



# F tubular cable lug for fine stranded wires - straight not insulated



## Tubular cable lugs F

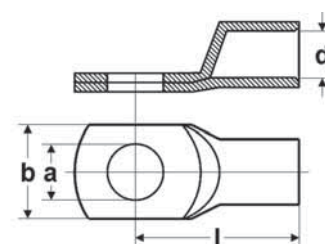
Non-insulated tubular cable lugs in eye type design for fine-wire flexible lines.  
The expanded sleeve facilitates cable inlet.

## Material

copper  
Surface: tinned

## Technical data

Temperature range: up to +125°C



## Dimensions

a Diameter of the boring  
d Inner diameter of the cable insertion  
b Flange width  
l Length till middle of the boring

## eye type

| Part no. | Type   | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|--------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |        |                                  |         |         |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99360    | F6-5   | 6,0                              | 5,3     | 4,35    | 10,8    | 25,0    | -            | 5,6                          | 100  | o. r.                              | o. r.     | o. r.      |
| 99361    | F6-6   | 6,0                              | 6,4     | 4,35    | 10,8    | 25,0    | -            | 5,5                          | 100  | o. r.                              | o. r.     | o. r.      |
| 99362    | F6-8   | 6,0                              | 8,4     | 4,35    | 14,0    | 27,5    | -            | 5,5                          | 100  | o. r.                              | o. r.     | o. r.      |
| 99363    | F10-6  | 10,0                             | 6,4     | 5,5     | 12,0    | 28,5    | -            | 10,8                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99364    | F10-8  | 10,0                             | 8,4     | 5,5     | 16,0    | 33,5    | -            | 12,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99365    | F10-10 | 10,0                             | 10,5    | 5,5     | 16,0    | 33,5    | -            | 8,6                          | 100  | o. r.                              | o. r.     | o. r.      |
| 99366    | F16-6  | 16,0                             | 6,4     | 6,75    | 14,0    | 30,0    | -            | 10,8                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99367    | F16-8  | 16,0                             | 8,4     | 6,75    | 16,0    | 35,0    | -            | 12,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99368    | F16-10 | 16,0                             | 10,5    | 6,75    | 16,0    | 35,0    | -            | 12,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99369    | F25-6  | 25,0                             | 6,4     | 8,05    | 16,0    | 32,5    | -            | 14,7                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99370    | F25-8  | 25,0                             | 8,4     | 8,05    | 17,0    | 32,5    | -            | 14,5                         | 150  | o. r.                              | o. r.     | o. r.      |
| 99371    | F25-10 | 25,0                             | 10,5    | 8,05    | 17,0    | 36,0    | -            | 16,3                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99372    | F35-8  | 35,0                             | 8,4     | 9,35    | 18,5    | 36,0    | -            | 20,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99373    | F35-10 | 35,0                             | 10,5    | 9,35    | 18,5    | 40,5    | -            | 22,7                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99374    | F35-12 | 35,0                             | 12,8    | 9,35    | 18,5    | 40,5    | -            | 23,0                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99380    | F50-8  | 50,0                             | 8,4     | 11,0    | 21,8    | 41,5    | -            | 34,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99381    | F50-10 | 50,0                             | 10,5    | 11,0    | 21,8    | 41,5    | -            | 33,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99375    | F50-12 | 50,0                             | 12,8    | 11,0    | 21,8    | 43,0    | -            | 35,8                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99382    | F70-8  | 70,0                             | 8,4     | 13,25   | 24,4    | 43,5    | -            | 42,9                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99383    | F70-10 | 70,0                             | 10,5    | 13,25   | 24,4    | 43,5    | -            | 41,9                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99384    | F70-12 | 70,0                             | 12,8    | 13,25   | 24,4    | 46,0    | -            | 42,5                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99385    | F95-8  | 95,0                             | 8,4     | 14,65   | 27,0    | 53,0    | -            | 69,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99386    | F95-10 | 95,0                             | 10,5    | 14,65   | 27,0    | 53,0    | -            | 67,6                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99387    | F95-12 | 95,0                             | 12,8    | 14,65   | 27,0    | 53,0    | -            | 66,0                         | 100  | o. r.                              | o. r.     | o. r.      |

Continuation ►

o. r. = on request

# F tubular cable lug for fine stranded wires - straight

not insulated

eye type

| Part no. | Type    | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |         |                                  |         |         |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99388    | F120-10 | 120,0                            | 10,5    | 16,2    | 30,0    | 59,0    | -            | 94,5                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99389    | F120-12 | 120,0                            | 12,8    | 16,2    | 30,0    | 59,0    | -            | 93,3                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99390    | F120-16 | 120,0                            | 16,5    | 16,2    | 30,0    | 62,0    | -            | 94,3                         | 100  | o. r.                              | o. r.     | o. r.      |
| 99391    | F150-10 | 150,0                            | 10,5    | 18,0    | 33,0    | 63,0    | -            | 114,8                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99392    | F150-12 | 150,0                            | 12,8    | 18,0    | 33,0    | 63,0    | -            | 113,5                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99393    | F150-16 | 150,0                            | 16,5    | 18,0    | 33,0    | 66,0    | -            | 114,7                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99376    | F185-12 | 185,0                            | 12,8    | 20,6    | 37,0    | 70,5    | -            | 157,4                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99377    | F185-16 | 185,0                            | 16,5    | 20,6    | 37,0    | 75,0    | -            | 165,2                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99378    | F185-20 | 185,0                            | 21,0    | 20,6    | 37,0    | 75,0    | -            | 160,4                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99394    | F240-12 | 240,0                            | 12,8    | 23,1    | 41,0    | 77,5    | -            | 178,9                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99395    | F240-16 | 240,0                            | 16,5    | 23,1    | 41,0    | 82,0    | -            | 183,8                        | 100  | o. r.                              | o. r.     | o. r.      |
| 99379    | F240-20 | 240,0                            | 21,0    | 23,1    | 41,0    | 82,0    | -            | 179,1                        | 100  | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# DC compression cable lug - straight

not insulated



## Tubular cable lug DC

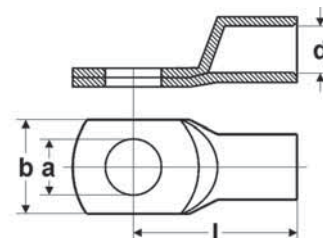
Non-insulated tubular cable lugs in eye type design for conductor arrangement RM, to DIN 46235.

## Material

Copper  
Surface: tinned

## Note

Code type indicates the required hexagonal clamping insert.  
Part No. 93223 and 93211 are not manufactured to DIN.



## Diameter

- a Diameter of the boring
- d Inner diameter of the canle insertion
- b Flange width
- l Length till middle of the boring

## eye type

| Part no. | Type      | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |           |                                  |         |         |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93221    | DC 6-6    | 6,0                              | 6,4     | 3,8     | 8,5     | 24,0    | 10,0         | 3,2                          | 50   | o. r.                              | o. r.     | o. r.      |
| 93222    | DC 10-6   | 10,0                             | 6,4     | 4,5     | 9,0     | 27,0    | 10,0         | 3,8                          | 50   | o. r.                              | o. r.     | o. r.      |
| 93223    | DC 10-8   | 10,0                             | 8,4     | 4,5     | 13,0    | 27,0    | 10,0         | 3,8                          | 50   | o. r.                              | o. r.     | o. r.      |
| 93234    | DC 16-6   | 16,0                             | 6,4     | 5,5     | 13,0    | 36,0    | 20,0         | 13,2                         | 50   | o. r.                              | o. r.     | o. r.      |
| 93210    | DC 16-10  | 16,0                             | 10,5    | 5,5     | 17,0    | 36,0    | 20,0         | 13,1                         | 50   | o. r.                              | o. r.     | o. r.      |
| 93211    | DC 25-12  | 25,0                             | 13,0    | 7,0     | 19,0    | 38,0    | 20,0         | 16,5                         | 50   | o. r.                              | o. r.     | o. r.      |
| 98919    | DC 35-10  | 35,0                             | 10,5    | 8,2     | 19,0    | 42,0    | 20,0         | 33,4                         | 50   | o. r.                              | o. r.     | o. r.      |
| 93212    | DC 35-12  | 35,0                             | 13,0    | 8,2     | 21,0    | 42,0    | 20,0         | 32,1                         | 50   | o. r.                              | o. r.     | o. r.      |
| 93213    | DC 50-12  | 50,0                             | 13,0    | 10,0    | 24,0    | 52,0    | 28,0         | 50,6                         | 50   | o. r.                              | o. r.     | o. r.      |
| 93214    | DC 70-12  | 70,0                             | 13,0    | 11,5    | 24,0    | 55,0    | 28,0         | 68,0                         | 25   | o. r.                              | o. r.     | o. r.      |
| 93215    | DC 95-12  | 95,0                             | 13,0    | 13,5    | 28,0    | 65,0    | 35,0         | 93,3                         | 25   | o. r.                              | o. r.     | o. r.      |
| 93246    | DC 95-16  | 95,0                             | 17,0    | 13,5    | 32,0    | 65,0    | 35,0         | 95,8                         | 25   | o. r.                              | o. r.     | o. r.      |
| 93247    | DC 120-10 | 120,0                            | 10,5    | 15,5    | 32,0    | 70,0    | 35,0         | 113,6                        | 25   | o. r.                              | o. r.     | o. r.      |
| 93216    | DC 120-12 | 120,0                            | 13,0    | 15,5    | 32,0    | 70,0    | 35,0         | 112,8                        | 25   | o. r.                              | o. r.     | o. r.      |
| 93248    | DC 120-16 | 120,0                            | 17,0    | 15,5    | 32,0    | 70,0    | 35,0         | 116,3                        | 25   | o. r.                              | o. r.     | o. r.      |
| 93249    | DC 150-10 | 150,0                            | 10,5    | 17,0    | 34,0    | 78,0    | 35,0         | 169,7                        | 10   | o. r.                              | o. r.     | o. r.      |
| 93217    | DC 150-12 | 150,0                            | 13,0    | 17,0    | 34,0    | 78,0    | 35,0         | 151,6                        | 10   | o. r.                              | o. r.     | o. r.      |
| 93250    | DC 150-16 | 150,0                            | 17,0    | 17,0    | 34,0    | 78,0    | 35,0         | 166,8                        | 10   | o. r.                              | o. r.     | o. r.      |
| 93251    | DC 185-10 | 185,0                            | 10,5    | 19,0    | 37,0    | 82,0    | 40,0         | 189,6                        | 5    | o. r.                              | o. r.     | o. r.      |
| 93218    | DC 185-12 | 185,0                            | 13,0    | 19,0    | 37,0    | 82,0    | 40,0         | 188,9                        | 5    | o. r.                              | o. r.     | o. r.      |
| 93252    | DC 185-16 | 185,0                            | 17,0    | 19,0    | 37,0    | 82,0    | 40,0         | 199,2                        | 5    | o. r.                              | o. r.     | o. r.      |
| 98918    | DC 240-12 | 240,0                            | 13,0    | 21,5    | 42,0    | 92,0    | 40,0         | 275,5                        | 1    | o. r.                              | o. r.     | o. r.      |
| 93253    | DC 240-16 | 240,0                            | 17,0    | 21,5    | 42,0    | 92,0    | 40,0         | 284,4                        | 1    | o. r.                              | o. r.     | o. r.      |
| 93220    | DC 300-16 | 300,0                            | 17,0    | 24,5    | 48,0    | 100,0   | 50,0         | 324,6                        | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# K1 tubular cable lug - straight

not insulated - with inspection hole



## Tubular cable lug K1

Non-insulated, straight tubular cable lugs in eye type design. High definition version for reliable crimping.

## Material

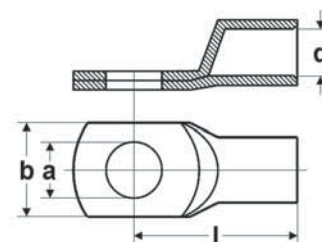
Copper  
Surface: tinned

## Properties

- With inspection hole

## Technical data

Temperature range: up to +120°C



## Diameter

- a Diameter of the boring
- d Inner diameter of the cable insertion
- b Flange width
- l Length till middle of the boring

## eye type

| Part no. | Type      | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|-----------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |           |                                  |         |         |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904497   | K1 0,75-3 | 0,75                             | 3,2     | 1,3     | 6,0     | 12,0    | -            | 0,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904498   | K1 0,75-4 | 0,75                             | 4,3     | 1,3     | 6,5     | 13,0    | -            | 0,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904499   | K1 0,75-5 | 0,75                             | 5,5     | 1,3     | 7,5     | 14,0    | -            | 0,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904500   | K1 1,5-3  | 1,5                              | 3,2     | 1,8     | 6,5     | 12,0    | -            | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904501   | K1 1,5-4  | 1,5                              | 4,3     | 1,8     | 6,5     | 13,0    | -            | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904502   | K1 1,5-5  | 1,5                              | 5,3     | 1,8     | 7,5     | 14,0    | -            | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904503   | K1 1,5-6  | 1,5                              | 6,5     | 1,8     | 9,0     | 16,0    | -            | 0,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904504   | K1 2,5-3  | 2,5                              | 3,2     | 2,3     | 7,5     | 12,0    | -            | 1,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904505   | K1 2,5-4  | 2,5                              | 4,3     | 2,3     | 7,5     | 13,0    | -            | 1,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904506   | K1 2,5-5  | 2,5                              | 5,3     | 2,3     | 8,5     | 14,0    | -            | 1,3                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904507   | K1 2,5-6  | 2,5                              | 6,5     | 2,3     | 9,5     | 16,0    | -            | 1,5                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904508   | K1 2,5-8  | 2,5                              | 8,5     | 2,3     | 13,0    | 20,0    | -            | 1,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904509   | K1 4-4    | 4,0                              | 4,3     | 3,0     | 8,5     | 18,0    | -            | 2,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904510   | K1 4-5    | 4,0                              | 5,3     | 3,0     | 9,0     | 18,0    | -            | 2,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904511   | K1 4-6    | 4,0                              | 6,5     | 3,0     | 10,0    | 19,0    | -            | 2,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904512   | K1 4-8    | 4,0                              | 8,5     | 3,0     | 13,0    | 22,0    | -            | 2,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904513   | K1 6-4    | 6,0                              | 4,3     | 4,0     | 9,5     | 18,0    | -            | 2,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904514   | K1 6-5    | 6,0                              | 5,3     | 4,0     | 9,5     | 19,0    | -            | 3,0                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904515   | K1 6-6    | 6,0                              | 6,5     | 4,0     | 10,0    | 19,0    | -            | 3,0                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904516   | K1 6-8    | 6,0                              | 8,8     | 4,0     | 14,0    | 22,0    | -            | 3,2                          | 100  | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# K2 tubular cable lug - straight

not insulated



## Tubular cable lug K2

Non-insulated tubular cable lugs in eye type design. High definition version for reliable crimping.

## Material

Copper  
Surface: tinned

## Properties

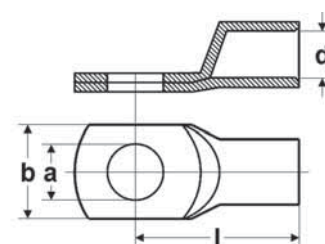
- Without inspection hole

## Note

Also available in angulated version (45° and 90°).

## Technical data

Temperature range: up to +120°C



## Abmessungen

- a Diameter of the boring  
d Inner diameter of the cable insertion  
b Flange width  
l Length till middle of the boring

## eye type

| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |          |                                  |         |         |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904517   | K2 6-5   | 6,0                              | 5,5     | 3,5     | 10,0    | 21,0    | -            | 5,0                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904518   | K2 6-6   | 6,0                              | 6,5     | 3,5     | 12,0    | 21,0    | -            | 4,7                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904519   | K2 6-8   | 6,0                              | 8,5     | 3,5     | 15,0    | 23,0    | -            | 5,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904520   | K2 6-10  | 6,0                              | 10,5    | 3,5     | 17,0    | 25,0    | -            | 5,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904521   | K2 6-12  | 6,0                              | 13,0    | 3,5     | 19,0    | 28,0    | -            | 6,3                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904522   | K2 10-5  | 10,0                             | 5,5     | 4,5     | 12,0    | 22,0    | -            | 5,0                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904523   | K2 10-6  | 10,0                             | 6,5     | 4,5     | 12,0    | 22,0    | -            | 4,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904524   | K2 10-8  | 10,0                             | 8,5     | 4,5     | 15,0    | 25,0    | -            | 5,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904525   | K2 10-10 | 10,0                             | 10,5    | 4,5     | 17,0    | 27,0    | -            | 6,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904526   | K2 10-12 | 10,0                             | 13,0    | 4,5     | 19,0    | 29,0    | -            | 6,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904527   | K2 16-5  | 16,0                             | 5,5     | 5,5     | 12,0    | 26,0    | -            | 8,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904528   | K2 16-6  | 16,0                             | 6,5     | 5,5     | 12,0    | 27,0    | -            | 8,6                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904529   | K2 16-8  | 16,0                             | 8,5     | 5,5     | 15,0    | 29,0    | -            | 9,3                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904530   | K2 16-10 | 16,0                             | 10,5    | 5,5     | 17,0    | 31,0    | -            | 9,9                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904531   | K2 16-12 | 16,0                             | 13,0    | 5,5     | 19,0    | 33,0    | -            | 10,2                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904532   | K2 25-5  | 25,0                             | 5,5     | 7,0     | 14,0    | 30,0    | -            | 12,2                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904533   | K2 25-6  | 25,0                             | 6,5     | 7,0     | 14,0    | 30,0    | -            | 12,0                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904534   | K2 25-8  | 25,0                             | 8,5     | 7,0     | 16,0    | 32,0    | -            | 13,1                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904535   | K2 25-10 | 25,0                             | 10,5    | 7,0     | 18,0    | 34,0    | -            | 15,7                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904536   | K2 25-12 | 25,0                             | 13,0    | 7,0     | 19,0    | 35,0    | -            | 13,9                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904537   | K2 25-14 | 25,0                             | 15,0    | 7,0     | 21,0    | 38,0    | -            | 14,9                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904538   | K2 35-6  | 35,0                             | 6,5     | 8,5     | 17,0    | 32,0    | -            | 18,5                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904539   | K2 35-8  | 35,0                             | 8,5     | 8,5     | 17,0    | 34,0    | -            | 20,0                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904540   | K2 35-10 | 35,0                             | 10,5    | 8,5     | 19,0    | 37,0    | -            | 21,3                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904541   | K2 35-12 | 35,0                             | 13,0    | 8,5     | 21,0    | 38,0    | -            | 21,2                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904542   | K2 35-14 | 35,0                             | 15,0    | 8,5     | 21,0    | 40,0    | -            | 21,8                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904543   | K2 35-16 | 35,0                             | 17,0    | 8,5     | 26,0    | 42,0    | -            | 22,4                         | 25   | o. r.                              | o. r.      | o. r.       |

Continuation ►

o. r. = on request

# K2 tubular cable lug - straight



not insulated

eye type

| Part no. | Type      | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|-----------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |           |                                  |         |         |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904544   | K2 50-6   | 50,0                             | 6,5     | 10,0    | 20,0    | 37,0    | -            | 30,0                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904545   | K2 50-8   | 50,0                             | 8,5     | 10,0    | 20,0    | 37,0    | -            | 29,3                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904546   | K2 50-10  | 50,0                             | 10,5    | 10,0    | 20,0    | 39,0    | -            | 30,8                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904547   | K2 50-12  | 50,0                             | 13,0    | 10,0    | 23,0    | 43,0    | -            | 32,3                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904548   | K2 50-14  | 50,0                             | 15,0    | 10,0    | 23,0    | 45,0    | -            | 33,2                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904549   | K2 50-16  | 50,0                             | 17,0    | 10,0    | 28,0    | 46,0    | -            | 33,8                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904550   | K2 50-20  | 50,0                             | 21,0    | 10,0    | 30,0    | 48,0    | -            | 34,6                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904551   | K2 70-6   | 70,0                             | 6,5     | 12,0    | 23,0    | 43,0    | -            | 44,9                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904552   | K2 70-8   | 70,0                             | 8,5     | 12,0    | 23,0    | 43,0    | -            | 43,8                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904553   | K2 70-10  | 70,0                             | 10,5    | 12,0    | 23,0    | 44,0    | -            | 45,4                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904554   | K2 70-12  | 70,0                             | 13,0    | 12,0    | 23,0    | 46,0    | -            | 46,3                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904555   | K2 70-14  | 70,0                             | 15,0    | 12,0    | 23,0    | 48,0    | -            | 47,6                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904556   | K2 70-16  | 70,0                             | 17,0    | 12,0    | 28,0    | 50,0    | -            | 42,4                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904557   | K2 70-20  | 70,0                             | 21,0    | 12,0    | 30,0    | 53,0    | -            | 50,9                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904558   | K2 95-8   | 95,0                             | 8,5     | 13,5    | 26,0    | 48,0    | -            | 54,4                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904559   | K2 95-10  | 95,0                             | 10,5    | 13,5    | 26,0    | 48,0    | -            | 54,0                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904560   | K2 95-12  | 95,0                             | 13,0    | 13,5    | 26,0    | 49,0    | -            | 55,6                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904561   | K2 95-14  | 95,0                             | 15,0    | 13,5    | 26,0    | 51,0    | -            | 56,2                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904562   | K2 95-16  | 95,0                             | 17,0    | 13,5    | 28,0    | 54,0    | -            | 58,2                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904563   | K2 95-20  | 95,0                             | 21,0    | 13,5    | 36,0    | 60,0    | -            | 67,1                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904564   | K2 120-8  | 120,0                            | 8,5     | 15,0    | 28,0    | 51,0    | -            | 67,2                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904565   | K2 120-10 | 120,0                            | 10,5    | 15,0    | 28,0    | 51,0    | -            | 65,7                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904566   | K2 120-12 | 120,0                            | 13,0    | 15,0    | 28,0    | 51,0    | -            | 63,8                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904567   | K2 120-14 | 120,0                            | 15,0    | 15,0    | 28,0    | 52,0    | -            | 64,5                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904568   | K2 120-16 | 120,0                            | 17,0    | 15,0    | 30,0    | 54,0    | -            | 65,1                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904569   | K2 120-20 | 120,0                            | 21,0    | 15,0    | 36,0    | 63,0    | -            | 77,4                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904570   | K2 150-8  | 150,0                            | 8,5     | 16,5    | 31,0    | 56,0    | -            | 77,8                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904571   | K2 150-10 | 150,0                            | 10,5    | 16,5    | 31,0    | 56,0    | -            | 76,2                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904572   | K2 150-12 | 150,0                            | 13,0    | 16,5    | 31,0    | 57,0    | -            | 77,3                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904573   | K2 150-14 | 150,0                            | 15,0    | 16,5    | 31,0    | 57,0    | -            | 76,4                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904574   | K2 150-16 | 150,0                            | 17,0    | 16,5    | 31,0    | 58,0    | -            | 75,3                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904575   | K2 150-20 | 150,0                            | 21,0    | 16,5    | 36,0    | 66,0    | -            | 88,0                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904576   | K2 185-10 | 185,0                            | 10,5    | 19,0    | 35,0    | 65,0    | -            | 117,5                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904577   | K2 185-12 | 185,0                            | 13,0    | 19,0    | 35,0    | 65,0    | -            | 118,2                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904578   | K2 185-14 | 185,0                            | 15,0    | 19,0    | 35,0    | 65,0    | -            | 113,9                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904579   | K2 185-16 | 185,0                            | 17,0    | 19,0    | 35,0    | 65,0    | -            | 112,4                        | 25   | o. r.                              | o. r.      | o. r.       |
| 904580   | K2 185-20 | 185,0                            | 21,0    | 19,0    | 39,0    | 69,0    | -            | 120,0                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904581   | K2 240-10 | 240,0                            | 10,5    | 21,0    | 39,0    | 72,0    | -            | 147,2                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904582   | K2 240-12 | 240,0                            | 13,0    | 21,0    | 39,0    | 72,0    | -            | 145,5                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904583   | K2 240-14 | 240,0                            | 15,0    | 21,0    | 39,0    | 72,0    | -            | 142,4                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904584   | K2 240-16 | 240,0                            | 17,0    | 21,0    | 39,0    | 72,0    | -            | 140,9                        | 25   | o. r.                              | o. r.      | o. r.       |
| 904585   | K2 240-20 | 240,0                            | 21,0    | 21,0    | 39,0    | 72,0    | -            | 136,0                        | 10   | o. r.                              | o. r.      | o. r.       |
| 904586   | K2 300-12 | 300,0                            | 13,0    | 23,5    | 43,0    | 87,0    | -            | 233,3                        | 5    | o. r.                              | o. r.      | o. r.       |
| 904587   | K2 300-14 | 300,0                            | 15,0    | 23,5    | 43,0    | 87,0    | -            | 231,4                        | 5    | o. r.                              | o. r.      | o. r.       |
| 904588   | K2 300-16 | 300,0                            | 17,0    | 23,5    | 43,0    | 87,0    | -            | 227,4                        | 5    | o. r.                              | o. r.      | o. r.       |
| 904589   | K2 300-20 | 300,0                            | 21,0    | 23,5    | 43,0    | 87,0    | -            | 221,9                        | 5    | o. r.                              | o. r.      | o. r.       |
| 904590   | K2 400-12 | 400,0                            | 13,0    | 27,0    | 49,0    | 90,0    | -            | 324,1                        | 5    | o. r.                              | o. r.      | o. r.       |
| 904591   | K2 400-14 | 400,0                            | 15,0    | 27,0    | 49,0    | 90,0    | -            | 322,4                        | 5    | o. r.                              | o. r.      | o. r.       |
| 904592   | K2 400-16 | 400,0                            | 17,0    | 27,0    | 49,0    | 90,0    | -            | 319,8                        | 5    | o. r.                              | o. r.      | o. r.       |
| 904593   | K2 400-20 | 400,0                            | 21,0    | 27,0    | 49,0    | 90,0    | -            | 314,1                        | 5    | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KF tubular cable lug for fine stranded wires - straight not insulated



## Tubular cable lug KF

Non-insulated, straight tubular cable lugs in eye type design. High definition version for reliable crimping of fine stranded wires. The expanded sleeve facilitates cable inlet.

## Material

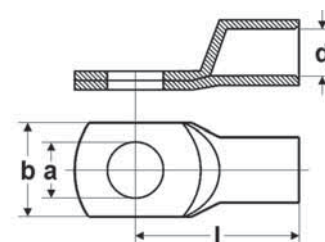
Copper  
Surface: tinned

## Properties

- without inspection hole

## Technical data

Temperature range: up to +120°C



## Dimensions

- a Diameter of the boring  
d Inner diameter of the cable insertion  
b Flange width  
l Length till middle of the boring

## eye type

| Part no. | Type    | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 Items at a purchase of |            |             |
|----------|---------|----------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |         |                                  |         |         |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904594   | KF10-5  | 10,0                             | 5,3     | 5,5     | 12,0    | 27,0    | -            | 7,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904595   | KF10-6  | 10,0                             | 6,5     | 5,5     | 12,0    | 27,0    | -            | 7,1                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904596   | KF10-8  | 10,0                             | 8,5     | 5,5     | 16,0    | 29,0    | -            | 7,7                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904597   | KF10-10 | 10,0                             | 10,5    | 5,5     | 16,0    | 31,0    | -            | 8,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904598   | KF10-12 | 10,0                             | 13,0    | 5,5     | 19,0    | 32,0    | -            | 8,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904599   | KF16-5  | 16,0                             | 5,3     | 6,6     | 13,0    | 30,0    | -            | 11,0                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904600   | KF16-6  | 16,0                             | 6,5     | 6,6     | 13,0    | 30,0    | -            | 10,7                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904601   | KF16-8  | 16,0                             | 8,5     | 6,6     | 16,0    | 32,0    | -            | 12,1                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904602   | KF16-10 | 16,0                             | 10,5    | 6,6     | 17,0    | 34,0    | -            | 12,8                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904603   | KF16-12 | 16,0                             | 13,0    | 6,6     | 19,0    | 35,0    | -            | 12,8                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904604   | KF25-5  | 25,0                             | 5,3     | 7,9     | 15,0    | 32,0    | -            | 15,2                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904605   | KF25-6  | 25,0                             | 6,5     | 7,9     | 15,0    | 32,0    | -            | 15,0                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904606   | KF25-8  | 25,0                             | 8,5     | 7,9     | 17,0    | 34,0    | -            | 16,1                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904607   | KF25-10 | 25,0                             | 10,5    | 7,9     | 17,0    | 37,0    | -            | 17,1                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904608   | KF25-12 | 25,0                             | 13,0    | 7,9     | 19,0    | 38,0    | -            | 17,4                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904609   | KF35-6  | 35,0                             | 6,5     | 9,2     | 17,0    | 35,0    | -            | 19,1                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904610   | KF35-8  | 35,0                             | 8,5     | 9,2     | 18,0    | 37,0    | -            | 20,8                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904611   | KF35-10 | 35,0                             | 10,5    | 9,2     | 18,0    | 40,0    | -            | 22,4                         | 100  | o. r.                              | o. r.      | o. r.       |
| 904612   | KF35-12 | 35,0                             | 13,0    | 9,2     | 19,0    | 41,0    | -            | 22,2                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904613   | KF35-14 | 35,0                             | 15,0    | 9,2     | 21,0    | 43,0    | -            | 24,1                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904614   | KF50-6  | 50,0                             | 6,5     | 11,0    | 21,0    | 41,0    | -            | 35,4                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904615   | KF50-8  | 50,0                             | 8,5     | 11,0    | 21,0    | 41,0    | -            | 34,4                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904616   | KF50-10 | 50,0                             | 10,5    | 11,0    | 21,0    | 43,0    | -            | 36,4                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904617   | KF50-12 | 50,0                             | 13,0    | 11,0    | 21,0    | 46,0    | -            | 37,3                         | 50   | o. r.                              | o. r.      | o. r.       |
| 904618   | KF50-14 | 50,0                             | 15,0    | 11,0    | 23,0    | 48,0    | -            | 38,9                         | 25   | o. r.                              | o. r.      | o. r.       |
| 904619   | KF50-16 | 50,0                             | 17,0    | 11,0    | 28,0    | 50,0    | -            | 40,2                         | 25   | o. r.                              | o. r.      | o. r.       |

Continuation ►

o. r. = on request



# KF tubular cable lug for fine stranded wires - straight

not insulated

eye type

| Part no. | Type     | Cross-section<br>mm² | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of<br>up to 500 | 501 - 1000 | 1001 - 5000 |
|----------|----------|----------------------|---------|---------|---------|---------|--------------|------------------------------|------|-------------------------------------------------|------------|-------------|
| 904620   | KF70-8   | 70,0                 | 8,5     | 13,0    | 25,0    | 46,0    | -            | 44,6                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904621   | KF70-10  | 70,0                 | 10,5    | 13,0    | 25,0    | 48,0    | -            | 46,2                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904622   | KF70-12  | 70,0                 | 13,0    | 13,0    | 25,0    | 50,0    | -            | 47,1                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904623   | KF70-14  | 70,0                 | 15,0    | 13,0    | 25,0    | 52,0    | -            | 48,7                         | 25   | o. r.                                           | o. r.      | o. r.       |
| 904624   | KF70-16  | 70,0                 | 17,0    | 13,0    | 25,0    | 54,0    | -            | 58,5                         | 25   | o. r.                                           | o. r.      | o. r.       |
| 904625   | KF95-8   | 95,0                 | 8,5     | 14,5    | 28,0    | 52,0    | -            | 63,5                         | 25   | o. r.                                           | o. r.      | o. r.       |
| 904626   | KF95-10  | 95,0                 | 10,5    | 14,5    | 28,0    | 52,0    | -            | 62,3                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904627   | KF95-12  | 95,0                 | 13,0    | 14,5    | 28,0    | 53,0    | -            | 63,1                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904628   | KF95-14  | 95,0                 | 15,0    | 14,5    | 28,0    | 55,0    | -            | 64,6                         | 25   | o. r.                                           | o. r.      | o. r.       |
| 904629   | KF95-16  | 95,0                 | 17,0    | 14,5    | 28,0    | 56,0    | -            | 65,6                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904630   | KF120-10 | 120,0                | 10,5    | 16,2    | 30,0    | 57,0    | -            | 83,1                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904631   | KF120-12 | 120,0                | 13,0    | 16,2    | 30,0    | 58,0    | -            | 83,9                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904632   | KF120-14 | 120,0                | 15,0    | 16,2    | 30,0    | 58,0    | -            | 80,6                         | 25   | o. r.                                           | o. r.      | o. r.       |
| 904633   | KF120-16 | 120,0                | 17,0    | 16,2    | 30,0    | 59,0    | -            | 81,7                         | 50   | o. r.                                           | o. r.      | o. r.       |
| 904634   | KF120-20 | 120,0                | 21,0    | 16,2    | 36,0    | 66,0    | -            | 95,6                         | 25   | o. r.                                           | o. r.      | o. r.       |
| 904635   | KF150-10 | 150,0                | 10,5    | 18,0    | 34,0    | 64,0    | -            | 109,1                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904636   | KF150-12 | 150,0                | 13,0    | 18,0    | 34,0    | 65,0    | -            | 108,9                        | 25   | o. r.                                           | o. r.      | o. r.       |
| 904637   | KF150-14 | 150,0                | 15,0    | 18,0    | 34,0    | 67,0    | -            | 114,2                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904638   | KF150-16 | 150,0                | 17,0    | 18,0    | 34,0    | 68,0    | -            | 113,0                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904639   | KF150-20 | 150,0                | 21,0    | 18,0    | 40,0    | 70,0    | -            | 113,6                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904640   | KF185-12 | 185,0                | 13,0    | 20,6    | 39,0    | 72,0    | -            | 154,0                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904641   | KF185-14 | 185,0                | 15,0    | 20,6    | 39,0    | 72,0    | -            | 152,0                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904642   | KF185-16 | 185,0                | 17,0    | 20,6    | 39,0    | 72,0    | -            | 150,0                        | 25   | o. r.                                           | o. r.      | o. r.       |
| 904643   | KF185-20 | 185,0                | 21,0    | 20,6    | 39,0    | 72,0    | -            | 142,0                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904644   | KF240-12 | 240,0                | 13,0    | 23,1    | 41,0    | 80,0    | -            | 163,0                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904645   | KF240-14 | 240,0                | 15,0    | 23,1    | 41,0    | 83,0    | -            | 168,0                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904646   | KF240-16 | 240,0                | 17,0    | 23,1    | 41,0    | 83,0    | -            | 167,1                        | 25   | o. r.                                           | o. r.      | o. r.       |
| 904647   | KF240-20 | 240,0                | 21,0    | 23,1    | 41,0    | 85,0    | -            | 171,2                        | 10   | o. r.                                           | o. r.      | o. r.       |
| 904648   | KF300-12 | 300,0                | 13,0    | 26,1    | 47,0    | 96,0    | -            | 256,0                        | 5    | o. r.                                           | o. r.      | o. r.       |
| 904649   | KF300-14 | 300,0                | 15,0    | 26,1    | 47,0    | 96,0    | -            | 265,6                        | 5    | o. r.                                           | o. r.      | o. r.       |
| 904650   | KF300-16 | 300,0                | 17,0    | 26,1    | 47,0    | 96,0    | -            | 256,0                        | 5    | o. r.                                           | o. r.      | o. r.       |
| 904651   | KF300-20 | 300,0                | 21,0    | 26,1    | 47,0    | 96,0    | -            | 262,4                        | 5    | o. r.                                           | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KH-R sleeves for compacted conductors

not insulated



## Sleeve KH-R

Sleeves for compressed strands. Sleeves will be slipped over the strand before crimping with cable lugs type K1 or K2.

## Material

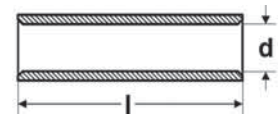
Sleeve: Copper  
Surface: tinned

## Note

For circular conductors

## Technical data

Temperature range: up to +120°C



## Dimensions

d Inner diameter of the cable insertion  
l Length

## KH-R for circular conductors

| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|----------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |          |                                  |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904652   | KH-R 16  | 16,0                             | 5,0     | 11,0    | -            | 0,2                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904653   | KH-R 25  | 25,0                             | 6,4     | 14,0    | -            | 0,4                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904654   | KH-R 35  | 35,0                             | 7,7     | 15,0    | -            | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904655   | KH-R 50  | 50,0                             | 9,0     | 18,0    | -            | 1,2                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904656   | KH-R 70  | 70,0                             | 10,6    | 19,0    | -            | 1,7                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904657   | KH-R 95  | 95,0                             | 12,4    | 21,0    | -            | 2,2                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904658   | KH-R 120 | 120,0                            | 13,9    | 22,0    | -            | 2,6                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904659   | KH-R 150 | 150,0                            | 15,4    | 26,0    | -            | 3,4                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904660   | KH-R 185 | 185,0                            | 17,6    | 26,0    | -            | 4,0                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904661   | KH-R 240 | 240,0                            | 19,9    | 30,0    | -            | 5,1                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904662   | KH-R 300 | 300,0                            | 22,4    | 38,0    | -            | 7,2                          | 10   | o. r.                              | o. r.      | o. r.       |
| 904663   | KH-R 400 | 400,0                            | 25,4    | 38,0    | -            | 11,1                         | 10   | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KH-3, KH-4 sleeves for compacted conductors

not insulated



## Sleeves KH-3, KH-4

Sleeves for compressed strands.

KH-3: 120°-sleeves for 3-core-cables.

KH-4: 90°-sleeves for 4-core-cables.

Sleeves will be slipped over the strand and circularly pressed, before crimping with cable lugs type K1 or K2.

## Material

Sleeve: Copper

Surface: tinned

## Technical data

Temperature range: up to +120°C



## Dimensions

l Length

### KH-3 for 3-core cable

| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|----------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |          |                                  |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904664   | KH-3 35  | 35,0                             | -       | 14,0    | -            | 0,8                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904665   | KH-3 50  | 50,0                             | -       | 17,0    | -            | 1,7                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904666   | KH-3 70  | 70,0                             | -       | 18,0    | -            | 2,9                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904667   | KH-3 95  | 95,0                             | -       | 22,0    | -            | 4,5                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904668   | KH-3 120 | 120,0                            | -       | 23,0    | -            | 4,9                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904669   | KH-3 150 | 150,0                            | -       | 25,0    | -            | 5,8                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904670   | KH-3 185 | 185,0                            | -       | 25,0    | -            | 8,0                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904671   | KH-3 240 | 240,0                            | -       | 30,0    | -            | 10,4                         | 25   | o. r.                              | o. r.      | o. r.       |

### KH-4 for 4-core cable

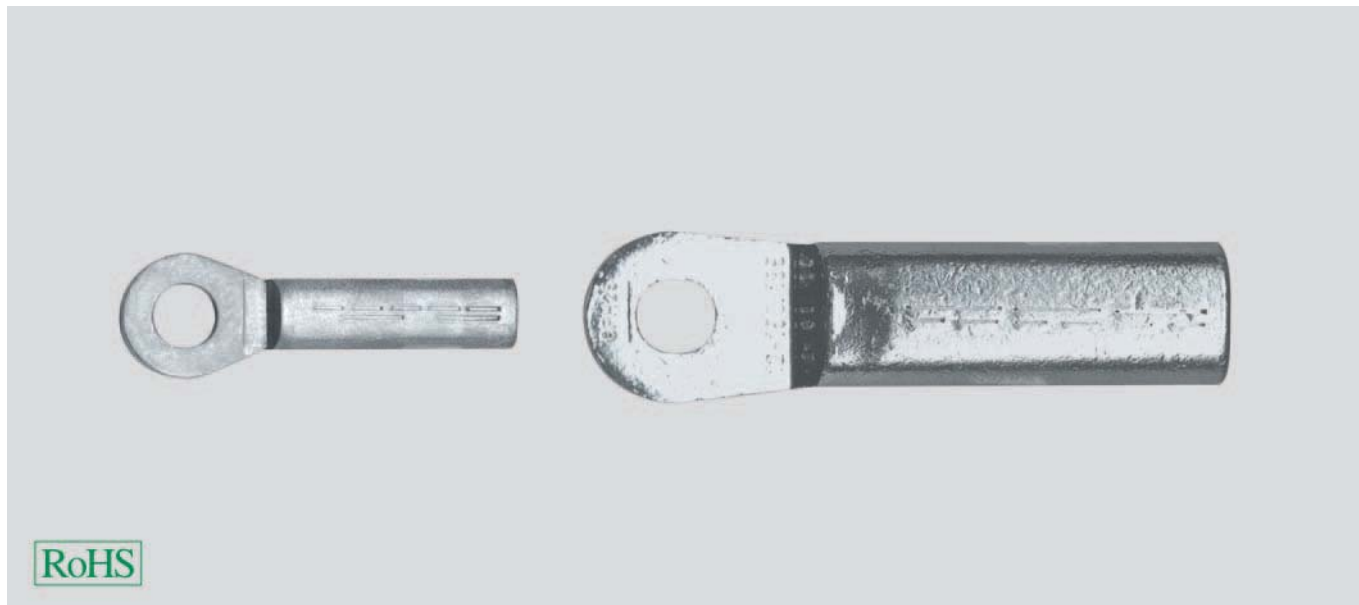
| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|----------|----------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |          |                                  |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904672   | KH-4 35  | 35,0                             | -       | 14,0    | -            | 1,3                          | 100  | o. r.                              | o. r.      | o. r.       |
| 904673   | KH-4 50  | 50,0                             | -       | 17,0    | -            | 1,7                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904674   | KH-4 70  | 70,0                             | -       | 18,0    | -            | 2,8                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904675   | KH-4 95  | 95,0                             | -       | 22,0    | -            | 4,0                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904676   | KH-4 120 | 120,0                            | -       | 23,0    | -            | 5,1                          | 50   | o. r.                              | o. r.      | o. r.       |
| 904677   | KH-4 150 | 150,0                            | -       | 25,0    | -            | 5,7                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904678   | KH-4 185 | 185,0                            | -       | 25,0    | -            | 7,8                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904679   | KH-4 240 | 240,0                            | -       | 30,0    | -            | 8,5                          | 25   | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KA aluminum compression cable lug - straight

not insulated



## Tubular cable lug KA

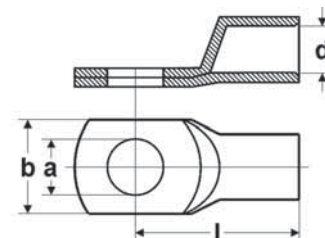
Non-insulated, straight tubular cable lugs in eye type design made by aluminum. High definition version for reliable crimping. Designed for conductor type RM acc. to DIN 48201 and circular reshaped conductors.

## Material

Aluminium  
Surface: bare

## Note

Code type indicates the required hexagonal clamping insert.



## Dimensions

- a Diameter of the boring
- d Inner diameter of the cable inclusion
- b Flange width
- l Length till middle of the boring

## eye type

| Part no. | Type      | Cross-section<br>RM/SM - SE<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|-----------|------------------------------------------------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|------------|-------------|
|          |           |                                                |         |         |         |         |              |                              |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 904695   | KA 10-6   | 10,0                                           | 6,5     | 5,0     | 16,0    | 52,0    | 10,0         | 8,6                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904696   | KA 10-8   | 10,0                                           | 8,5     | 5,0     | 18,0    | 52,0    | 10,0         | 8,8                          | 25   | o. r.                              | o. r.      | o. r.       |
| 904697   | KA 16-8   | 16,0 - 25,0                                    | 8,5     | 5,8     | 18,0    | 52,0    | 12,0         | 13,7                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904698   | KA 16-10  | 16,0 - 25,0                                    | 10,5    | 5,8     | 18,0    | 52,0    | 12,0         | 13,9                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904699   | KA 25-8   | 25,0 - 35,0                                    | 8,5     | 6,8     | 18,0    | 60,0    | 12,0         | 14,1                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904700   | KA 25-10  | 25,0 - 35,0                                    | 10,5    | 6,8     | 18,0    | 60,0    | 12,0         | 14,6                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904701   | KA 35-10  | 35,0 - 50,0                                    | 10,5    | 8,0     | 21,0    | 67,0    | 14,0         | 20,8                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904702   | KA 35-12  | 35,0 - 50,0                                    | 13,0    | 8,0     | 21,0    | 67,0    | 14,0         | 20,5                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904703   | KA 50-10  | 50,0 - 70,0                                    | 10,5    | 9,8     | 25,0    | 72,0    | 16,0         | 26,8                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904704   | KA 50-12  | 50,0 - 70,0                                    | 13,0    | 9,8     | 25,0    | 72,0    | 16,0         | 27,3                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904705   | KA 70-10  | 70,0 - 95,0                                    | 10,5    | 11,2    | 28,0    | 86,0    | 18,0         | 44,2                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904706   | KA 70-12  | 70,0 - 95,0                                    | 13,0    | 11,2    | 28,0    | 86,0    | 18,0         | 42,7                         | 10   | o. r.                              | o. r.      | o. r.       |
| 904707   | KA 95-10  | 95,0 - 120,0                                   | 10,5    | 13,2    | 32,0    | 90,0    | 22,0         | 74,0                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904708   | KA 95-12  | 95,0 - 120,0                                   | 13,0    | 13,2    | 32,0    | 90,0    | 22,0         | 75,0                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904709   | KA 95-16  | 95,0 - 120,0                                   | 17,0    | 13,2    | 34,0    | 90,0    | 22,0         | 73,0                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904710   | KA 120-12 | 120,0 - 150,0                                  | 13,0    | 14,7    | 32,0    | 91,0    | 22,0         | 66,8                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904711   | KA 120-16 | 120,0 - 150,0                                  | 17,0    | 14,7    | 34,0    | 91,0    | 22,0         | 64,1                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904712   | KA 150-12 | 150,0 - 185,0                                  | 13,0    | 16,3    | 35,0    | 103,0   | 25,0         | 96,4                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904713   | KA 150-16 | 150,0 - 185,0                                  | 17,0    | 16,3    | 35,0    | 103,0   | 25,0         | 92,4                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904714   | KA 150-20 | 150,0 - 185,0                                  | 21,0    | 16,3    | 41,0    | 103,0   | 25,0         | 94,0                         | 4    | o. r.                              | o. r.      | o. r.       |
| 904715   | KA 185-12 | 185,0 - 240,0                                  | 13,0    | 18,3    | 40,0    | 106,0   | 28,0         | 126,1                        | 1    | o. r.                              | o. r.      | o. r.       |
| 904716   | KA 185-16 | 185,0 - 240,0                                  | 17,0    | 18,3    | 40,0    | 106,0   | 28,0         | 119,2                        | 1    | o. r.                              | o. r.      | o. r.       |
| 904717   | KA 185-20 | 185,0 - 240,0                                  | 21,0    | 18,3    | 40,0    | 106,0   | 28,0         | 131,0                        | 1    | o. r.                              | o. r.      | o. r.       |
| 904718   | KA 240-12 | 240,0 - 300,0                                  | 13,0    | 21,0    | 45,0    | 116,0   | 32,0         | 183,0                        | 1    | o. r.                              | o. r.      | o. r.       |
| 904719   | KA 240-16 | 240,0 - 300,0                                  | 17,0    | 21,0    | 45,0    | 116,0   | 32,0         | 176,0                        | 1    | o. r.                              | o. r.      | o. r.       |
| 904720   | KA 240-20 | 240,0 - 300,0                                  | 21,0    | 21,0    | 45,0    | 116,0   | 32,0         | 173,0                        | 1    | o. r.                              | o. r.      | o. r.       |
| 904721   | KA 300-16 | 300,0                                          | 17,0    | 23,3    | 49,0    | 124,0   | 34,0         | 175,0                        | 1    | o. r.                              | o. r.      | o. r.       |
| 904722   | KA 300-20 | 300,0                                          | 21,0    | 23,3    | 49,0    | 124,0   | 34,0         | 173,0                        | 1    | o. r.                              | o. r.      | o. r.       |

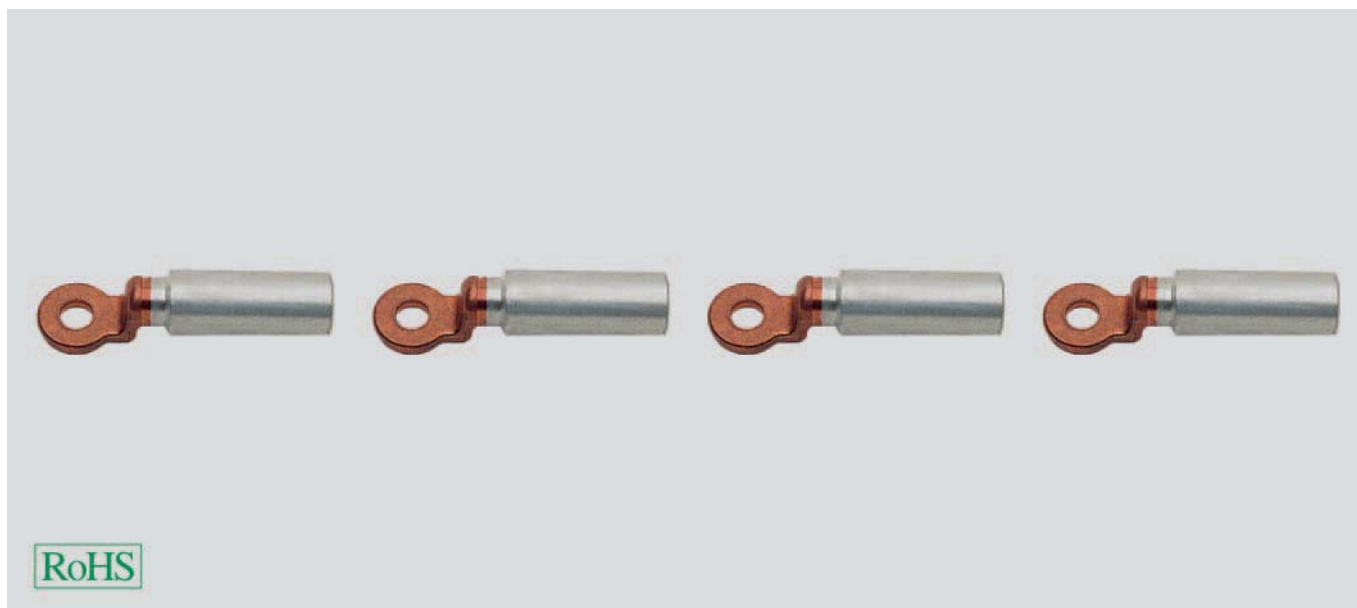
Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KAC AL/CU-compression cable lug - straight

not insulated

new



## Tubular cable lug KAC

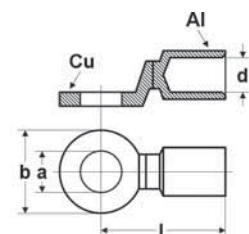
Non-insulated, straight tubular cable lugs in eye type design made by aluminium. High definition version for reliable crimping. Barrier design with oil stop with solid copper screw-on palm.

## Material

Aluminium / copper  
Surface: bare

## Note

Code type indicates the required hexagonal clamping insert.



## Diameter

- a Diameter of the boring
- d Inner diameter of the cable inclusion
- b Flange width
- l Length till middle of the boring

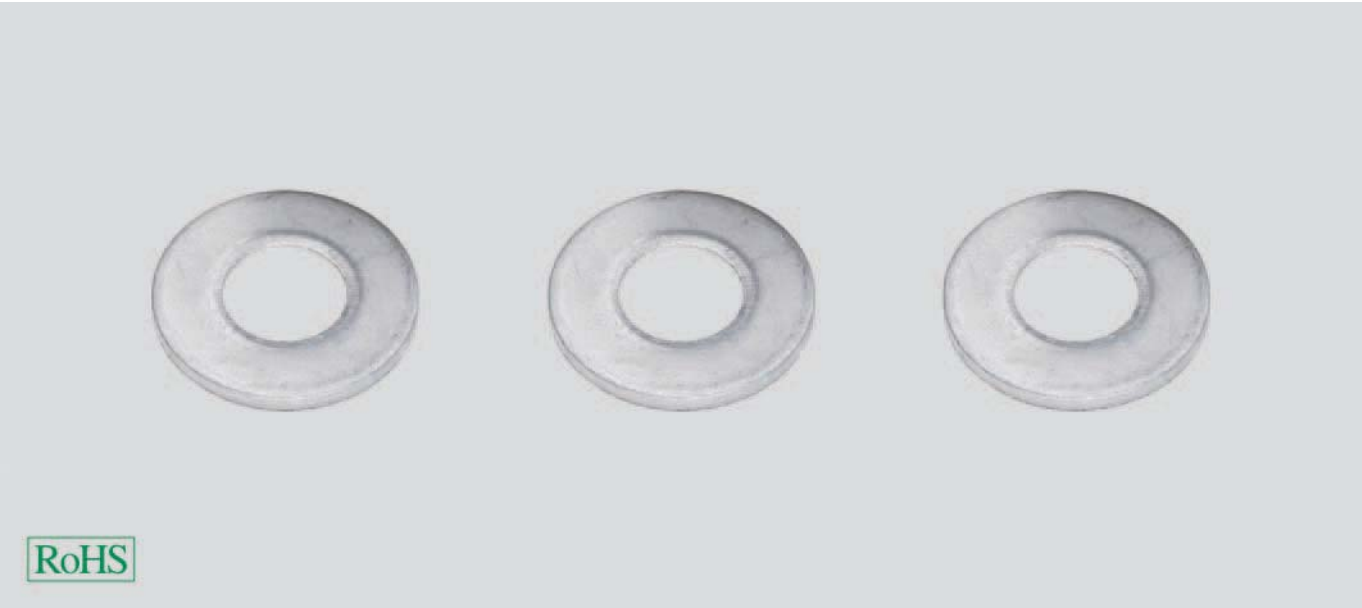
## eye type

| Part no. | Type       | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | l<br>mm | Code<br>type | Cu-Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |            |             |
|----------|------------|----------------------------------|---------|---------|---------|---------|--------------|---------------------------------|------|------------------------------------|------------|-------------|
|          |            |                                  |         |         |         |         |              |                                 |      | up to 500                          | 501 - 1000 | 1001 - 5000 |
| 906021   | KAC 16-8   | 16,0                             | 8,5     | 6,0     | 25,0    | 67,5    | 12,0         | 44,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906022   | KAC 16-10  | 16,0                             | 10,5    | 6,0     | 25,0    | 67,5    | 12,0         | 42,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906023   | KAC 25-8   | 25,0                             | 8,5     | 6,8     | 25,0    | 67,5    | 12,0         | 44,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906024   | KAC 25-10  | 25,0                             | 10,5    | 6,8     | 25,0    | 67,5    | 12,0         | 42,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906025   | KAC 25-12  | 25,0                             | 13,0    | 6,8     | 25,0    | 67,5    | 12,0         | 39,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906026   | KAC 35-8   | 35,0                             | 8,5     | 8,0     | 25,0    | 76,5    | 14,0         | 44,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906027   | KAC 35-10  | 35,0                             | 10,5    | 8,0     | 25,0    | 76,5    | 14,0         | 42,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906028   | KAC 35-12  | 35,0                             | 13,0    | 8,0     | 25,0    | 76,5    | 14,0         | 38,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906030   | KAC 50-10  | 50,0                             | 10,5    | 9,8     | 25,0    | 76,5    | 16,0         | 42,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906029   | KAC 50-8   | 50,0                             | 8,5     | 9,8     | 25,0    | 76,5    | 16,0         | 44,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906031   | KAC 50-12  | 50,0                             | 13,0    | 9,8     | 25,0    | 76,5    | 16,0         | 39,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906032   | KAC 70-10  | 70,0                             | 10,5    | 11,2    | 25,0    | 84,5    | 18,0         | 42,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906033   | KAC 70-12  | 70,0                             | 13,0    | 11,2    | 25,0    | 84,5    | 18,0         | 39,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906035   | KAC 95-12  | 95,0                             | 13,0    | 13,2    | 30,0    | 90,5    | 22,0         | 68,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906034   | KAC 95-10  | 95,0                             | 10,5    | 13,2    | 30,0    | 90,5    | 22,0         | 74,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906036   | KAC 95-16  | 95,0                             | 17,0    | 13,2    | 30,0    | 90,5    | 22,0         | 64,0                            | 10   | o. r.                              | o. r.      | o. r.       |
| 906037   | KAC 120-12 | 120,0                            | 13,0    | 14,7    | 30,0    | 92,0    | 22,0         | 68,0                            | 5    | o. r.                              | o. r.      | o. r.       |
| 906038   | KAC 120-16 | 120,0                            | 17,0    | 14,7    | 30,0    | 92,0    | 22,0         | 64,0                            | 5    | o. r.                              | o. r.      | o. r.       |
| 906039   | KAC 150-12 | 150,0                            | 13,0    | 16,3    | 30,0    | 104,0   | 25,0         | 68,0                            | 5    | o. r.                              | o. r.      | o. r.       |
| 906040   | KAC 150-16 | 150,0                            | 17,0    | 16,3    | 30,0    | 104,0   | 25,0         | 64,0                            | 5    | o. r.                              | o. r.      | o. r.       |
| 906041   | KAC 150-20 | 150,0                            | 21,0    | 16,3    | 35,0    | 107,5   | 25,0         | 101,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 906042   | KAC 185-10 | 185,0                            | 10,5    | 18,3    | 30,0    | 105,0   | 28,0         | 103,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 905020   | KAC 185-12 | 185,0                            | 13,0    | 18,3    | 30,0    | 105,0   | 28,0         | 101,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 905383   | KAC 185-16 | 185,0                            | 17,0    | 18,3    | 30,0    | 105,0   | 28,0         | 93,0                            | 5    | o. r.                              | o. r.      | o. r.       |
| 906043   | KAC 185-20 | 185,0                            | 21,0    | 18,3    | 35,0    | 107,5   | 28,0         | 101,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 906044   | KAC 240-10 | 240,0                            | 10,5    | 21,0    | 35,0    | 118,5   | 32,0         | 121,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 905294   | KAC 240-12 | 240,0                            | 13,0    | 21,0    | 35,0    | 118,5   | 32,0         | 118,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 906045   | KAC 240-16 | 240,0                            | 17,0    | 21,0    | 35,0    | 118,5   | 32,0         | 110,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 906046   | KAC 240-20 | 240,0                            | 21,0    | 21,0    | 35,0    | 118,5   | 32,0         | 101,0                           | 5    | o. r.                              | o. r.      | o. r.       |
| 904850   | KAC 300-12 | 300,0                            | 13,0    | 23,3    | 40,0    | 123,5   | 34,0         | 177,0                           | 1    | o. r.                              | o. r.      | o. r.       |
| 906047   | KAC 300-16 | 300,0                            | 17,0    | 23,3    | 40,0    | 123,5   | 34,0         | 169,0                           | 1    | o. r.                              | o. r.      | o. r.       |
| 906048   | KAC 300-20 | 300,0                            | 21,0    | 23,3    | 40,0    | 123,5   | 34,0         | 160,0                           | 1    | o. r.                              | o. r.      | o. r.       |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KAC-U AL/CU-bi-metallic washer



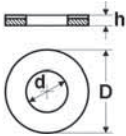
new

### Washer KAC-U

Bi-metallic washer for the processing of aluminium-copper materials.  
Only for use in dry areas.

### Material

E-Al, one side copper plated



### Dimensions

- D Outer diameter
- d Inner diameter
- h Height

| Part no. | Size      | Inner Ø mm | Outer Ø mm | Thickness mm | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|------------|------------|--------------|------|------------------------------------|-----------|------------|
|          |           |            |            |              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 906049   | M8 x 1,5  | 8,5        | 18,0       | 1,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 906050   | M10 x 1,5 | 11,0       | 22,0       | 2,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 906051   | M12 x 1,5 | 13,0       | 28,0       | 2,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 906052   | M14 x 1,5 | 15,0       | 28,0       | 2,0          | 10   | o. r.                              | o. r.     | o. r.      |
| 906053   | M16 x 1,5 | 17,0       | 35,0       | 2,0          | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# N nickel tubular cable lug - straight

not insulated



## Tubular cable lug K2

Non-insulated tubular cable lugs in eye type design. High definition version for reliable crimping.

## Material

nickel

## Properties

- Without inspection hole

## Note

- a diameter hole
- d clearance
- b width
- t wall thickness
- l length to center of hole

## Technical data

Temperature range: up to +500°C

## eye type

| Part no. | Type    | Cross-section<br>mm <sup>2</sup> | a<br>mm | d<br>mm | b<br>mm | t<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|---------|----------------------------------|---------|---------|---------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |         |                                  |         |         |         |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 98267    | N 1-4   | 0,5 - 1                          | 4,3     | 1,6     | 6,5     | 0,8     | 13,0    | -            | 0,8                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98268    | N 1-5   | 0,5 - 1                          | 5,3     | 1,6     | 7,5     | 0,8     | 14,0    | -            | 0,8                          | 100  | o. r.                              | o. r.     | o. r.      |
| 97805    | N 2,5-4 | 1,5 - 2,5                        | 4,3     | 2,3     | 7,0     | 0,8     | 13,0    | -            | 1,1                          | 100  | o. r.                              | o. r.     | o. r.      |
| 97806    | N 2,5-5 | 1,5 - 2,5                        | 5,3     | 2,3     | 7,5     | 0,8     | 14,0    | -            | 1,1                          | 100  | o. r.                              | o. r.     | o. r.      |
| 97807    | N 2,5-6 | 1,5 - 2,5                        | 6,5     | 2,3     | 9,5     | 0,8     | 16,0    | -            | 1,3                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98269    | N 6-4   | 4 - 6                            | 4,3     | 3,6     | 9,5     | 1,0     | 18,0    | -            | 2,8                          | 100  | o. r.                              | o. r.     | o. r.      |
| 97808    | N 6-5   | 4 - 6                            | 5,3     | 3,6     | 9,5     | 1,0     | 19,0    | -            | 2,8                          | 100  | o. r.                              | o. r.     | o. r.      |
| 97809    | N 6-6   | 4 - 6                            | 6,5     | 3,6     | 9,5     | 1,0     | 19,0    | -            | 2,6                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98270    | N 10-5  | 10,0                             | 5,5     | 4,5     | 12,0    | 1,0     | 21,0    | -            | 3,4                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98271    | N 10-6  | 10,0                             | 6,5     | 4,5     | 12,0    | 1,0     | 22,0    | -            | 3,6                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98272    | N 16-5  | 16,0                             | 5,5     | 5,5     | 12,0    | 1,0     | 26,0    | -            | 4,7                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98273    | N 16-6  | 16,0                             | 6,5     | 5,5     | 12,0    | 1,0     | 27,0    | -            | 4,8                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98274    | N 16-8  | 16,0                             | 8,5     | 5,5     | 13,5    | 1,0     | 29,0    | -            | 5,6                          | 100  | o. r.                              | o. r.     | o. r.      |
| 98275    | N 25-6  | 25,0                             | 6,5     | 7,0     | 14,0    | 1,5     | 30,0    | -            | 12,0                         | 50   | o. r.                              | o. r.     | o. r.      |
| 98276    | N 25-8  | 25,0                             | 8,5     | 7,0     | 16,0    | 1,5     | 32,0    | -            | 13,2                         | 50   | o. r.                              | o. r.     | o. r.      |
| 98277    | N 35-6  | 35,0                             | 6,5     | 8,5     | 17,0    | 1,75    | 32,0    | -            | 18,5                         | 50   | o. r.                              | o. r.     | o. r.      |
| 98278    | N 35-8  | 35,0                             | 8,5     | 8,5     | 17,0    | 1,75    | 34,0    | -            | 20,0                         | 50   | o. r.                              | o. r.     | o. r.      |
| 98279    | N 50-8  | 50,0                             | 8,5     | 10,0    | 20,0    | 2,0     | 37,0    | -            | 29,0                         | 50   | o. r.                              | o. r.     | o. r.      |
| 98280    | N 50-10 | 50,0                             | 10,5    | 10,0    | 20,0    | 2,0     | 39,0    | -            | 31,0                         | 50   | o. r.                              | o. r.     | o. r.      |
| 98281    | N 70-10 | 70,0                             | 10,5    | 12,0    | 23,0    | 2,25    | 44,0    | -            | 46,0                         | 25   | o. r.                              | o. r.     | o. r.      |
| 98282    | N 70-12 | 70,0                             | 13,0    | 12,0    | 23,0    | 2,25    | 46,0    | -            | 46,6                         | 25   | o. r.                              | o. r.     | o. r.      |
| 98283    | N 95-10 | 95,0                             | 10,5    | 13,5    | 26,0    | 2,25    | 48,0    | -            | 55,5                         | 25   | o. r.                              | o. r.     | o. r.      |
| 98284    | N 95-12 | 95,0                             | 13,0    | 13,5    | 26,0    | 2,25    | 49,0    | -            | 56,0                         | 25   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# PV-C compression joint

not insulated



## Compression joint PV-C

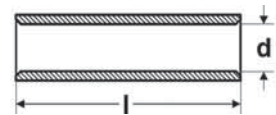
Clamping connection sleeves for unstrained clamping of conductors built to DIN 46267.

## Material

copper  
Surface: bare or tinned

## Note

Code type indicates the required hexagonal clamping insert.



## Dimensions

d Inner diameter of the cable inclusion  
l Länge

### bare

| Part no. | Type      | Cross-section mm <sup>2</sup> | d mm | l mm | Code type | Weight kg / 1000 items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|-------------------------------|------|------|-----------|------------------------|------|------------------------------------|-----------|------------|
|          |           |                               |      |      |           |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93276    | PV-C 6B   | 6,0                           | 3,8  | 30,0 | 5,0       | 3,1                    | 100  | o. r.                              | o. r.     | o. r.      |
| 93277    | PV-C 10B  | 10,0                          | 4,5  | 30,0 | 6,0       | 3,4                    | 100  | o. r.                              | o. r.     | o. r.      |
| 93278    | PV-C 16B  | 16,0                          | 5,5  | 50,0 | 8,0       | 14,5                   | 100  | o. r.                              | o. r.     | o. r.      |
| 93279    | PV-C 25B  | 25,0                          | 7,0  | 50,0 | 10,0      | 17,7                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93280    | PV-C 35B  | 35,0                          | 8,2  | 50,0 | 12,0      | 28,9                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93281    | PV-C 50B  | 50,0                          | 10,0 | 56,0 | 14,0      | 42,6                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93282    | PV-C 70B  | 70,0                          | 11,5 | 56,0 | 16,0      | 54,1                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93283    | PV-C 95B  | 95,0                          | 13,5 | 70,0 | 18,0      | 86,2                   | 25   | o. r.                              | o. r.     | o. r.      |
| 93284    | PV-C 120B | 120,0                         | 15,5 | 70,0 | 20,0      | 96,6                   | 25   | o. r.                              | o. r.     | o. r.      |
| 93285    | PV-C 150B | 150,0                         | 17,0 | 80,0 | 22,0      | 145,0                  | 10   | o. r.                              | o. r.     | o. r.      |
| 93286    | PV-C 185B | 185,0                         | 19,0 | 85,0 | 25,0      | 170,0                  | 10   | o. r.                              | o. r.     | o. r.      |
| 93287    | PV-C 240B | 240,0                         | 21,5 | 90,0 | 28,0      | 234,1                  | 10   | o. r.                              | o. r.     | o. r.      |

### tinned

| Part no. | Type      | Cross-section mm <sup>2</sup> | d mm | l mm  | Code type | Weight kg / 1000 items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|-------------------------------|------|-------|-----------|------------------------|------|------------------------------------|-----------|------------|
|          |           |                               |      |       |           |                        |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93263    | PV-C 6V   | 6,0                           | 3,8  | 30,0  | 5,0       | 3,4                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93264    | PV-C 10V  | 10,0                          | 4,5  | 30,0  | 6,0       | 3,4                    | 50   | o. r.                              | o. r.     | o. r.      |
| 93265    | PV-C 16V  | 16,0                          | 5,5  | 50,0  | 8,0       | 14,9                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93266    | PV-C 25V  | 25,0                          | 7,0  | 50,0  | 10,0      | 18,0                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93267    | PV-C 35V  | 35,0                          | 8,2  | 50,0  | 12,0      | 31,5                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93268    | PV-C 50V  | 50,0                          | 10,0 | 56,0  | 14,0      | 43,7                   | 50   | o. r.                              | o. r.     | o. r.      |
| 93269    | PV-C 70V  | 70,0                          | 11,5 | 56,0  | 16,0      | 55,4                   | 25   | o. r.                              | o. r.     | o. r.      |
| 93270    | PV-C 95V  | 95,0                          | 13,5 | 70,0  | 18,0      | 88,4                   | 25   | o. r.                              | o. r.     | o. r.      |
| 93271    | PV-C 120V | 120,0                         | 15,5 | 70,0  | 20,0      | 99,2                   | 25   | o. r.                              | o. r.     | o. r.      |
| 93272    | PV-C 150V | 150,0                         | 17,0 | 80,0  | 22,0      | 148,6                  | 10   | o. r.                              | o. r.     | o. r.      |
| 93273    | PV-C 185V | 185,0                         | 19,0 | 85,0  | 25,0      | 173,5                  | 10   | o. r.                              | o. r.     | o. r.      |
| 93274    | PV-C 240V | 240,0                         | 21,5 | 90,0  | 28,0      | 240,3                  | 10   | o. r.                              | o. r.     | o. r.      |
| 93275    | PV-C 300V | 300,0                         | 24,5 | 100,0 | 32,0      | 298,6                  | 10   | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# PV-CÖ compression joints - with oil stop

not insulated - tinned



## Compression joint PV-CÖ

Clamping connection sleeves for clamping conductors built to DIN 46267.

For unstrained connections.

The centre web achieves a total oil stop.

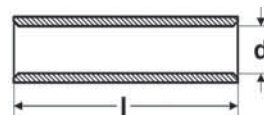
## Material

copper

Surface: tinned

## Note

Code type indicates the required hexagonal clamping insert.



## Dimensions

d Inner diameter of the cable inclusion  
l Length

## tinned

| Part no. | Type      | Cross-section<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|----------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |           |                                  |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 92768    | PV-CÖ 16  | 16,0                             | 5,5     | 50,0    | 8,0          | 15,4                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92769    | PV-CÖ 25  | 25,0                             | 7,0     | 50,0    | 10,0         | 18,4                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92770    | PV-CÖ 35  | 35,0                             | 8,2     | 50,0    | 12,0         | 29,9                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92771    | PV-CÖ 50  | 50,0                             | 10,0    | 56,0    | 14,0         | 44,6                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92772    | PV-CÖ 70  | 70,0                             | 11,5    | 56,0    | 16,0         | 56,1                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92773    | PV-CÖ 95  | 95,0                             | 13,5    | 70,0    | 18,0         | 88,8                         | 25   | o. r.                              | o. r.     | o. r.      |
| 92774    | PV-CÖ 120 | 120,0                            | 15,5    | 70,0    | 20,0         | 100,6                        | 25   | o. r.                              | o. r.     | o. r.      |
| 92775    | PV-CÖ 150 | 150,0                            | 17,0    | 80,0    | 22,0         | 148,9                        | 5    | o. r.                              | o. r.     | o. r.      |
| 92776    | PV-CÖ 185 | 185,0                            | 19,0    | 85,0    | 25,0         | 175,7                        | 5    | o. r.                              | o. r.     | o. r.      |
| 92777    | PV-CÖ 240 | 240,0                            | 21,5    | 90,0    | 28,0         | 242,3                        | 5    | o. r.                              | o. r.     | o. r.      |
| 92778    | PV-CÖ 300 | 300,0                            | 24,5    | 100,0   | 32,0         | 301,5                        | 5    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# PV-A aluminium compression joint

not insulated



## Compression joint PV-A

Clamping connection sleeves for unstrained clamping of conductors built to DIN 46267.

RM/SM and SE conductor

## Material

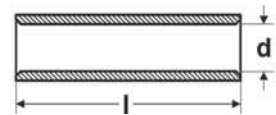
Aluminium  
Surface: bare

## Note

Code type indicates the required hexagonal clamping insert.  
Part No. 93444 and Part No. 93445 are not standardised.

## Technical data

Temperature range: up to +120°C



## Dimensions

d Inner diameter of the cable inclusion  
l Length

## bare

| Part no. | Type     | Cross-section<br>RM/SM<br>mm <sup>2</sup> | Cross-section<br>SE<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|----------|-------------------------------------------|----------------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |          |                                           |                                        |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 93444    | PV-A 10  | 10,0                                      | -                                      | 5,0     | 55,0    | 10,0         | 9,5                          | 10   | o. r.                              | o. r.     | o. r.      |
| 93445    | PV-A 16  | 16,0                                      | 25,0                                   | 5,8     | 55,0    | 12,0         | 14,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 93446    | PV-A 25  | 25,0                                      | 35,0                                   | 6,8     | 70,0    | 12,0         | 16,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 93290    | PV-A 35  | 35,0                                      | 50,0                                   | 8,0     | 85,0    | 14,0         | 26,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 93291    | PV-A 50  | 50,0                                      | 70,0                                   | 9,8     | 85,0    | 16,0         | 32,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 93292    | PV-A 70  | 70,0                                      | 95,0                                   | 11,2    | 105,0   | 18,0         | 53,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 93293    | PV-A 95  | 95,0                                      | 120,0                                  | 13,2    | 105,0   | 22,0         | 76,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 93294    | PV-A 120 | 120,0                                     | 150,0                                  | 14,7    | 105,0   | 22,0         | 78,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 93295    | PV-A 150 | 150,0                                     | 185,0                                  | 16,3    | 125,0   | 25,0         | 107,0                        | 10   | o. r.                              | o. r.     | o. r.      |
| 93296    | PV-A 185 | 185,0                                     | 240,0                                  | 18,3    | 125,0   | 28,0         | 143,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 93297    | PV-A 240 | 240,0                                     | 300,0                                  | 21,0    | 145,0   | 32,0         | 203,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 93298    | PV-A 300 | 300,0                                     | -                                      | 23,3    | 145,0   | 34,0         | 222,0                        | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# PV-CM compression joint

not insulated



## Compression joint PV-CM

Clamping connection sleeves for unstrained clamping of Cu medium-range voltage cables 10-30 kV.

## Material

copper  
Surface: bare

## Note

Code type indicates the required hexagonal clamping insert.



## Dimensions

d Inner diameter of the cable inclusion  
l Length

## bare

| Part no. | Type      | Cross-section<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|-----------|----------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |           |                                  |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99440    | PV-CM 25  | 25,0                             | 7,5     | 60,0    | 12,0         | 40,8                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99441    | PV-CM 35  | 35,0                             | 8,2     | 60,0    | 12,0         | 35,6                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99442    | PV-CM 50  | 50,0                             | 10,0    | 65,0    | 14,0         | 49,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99443    | PV-CM 70  | 70,0                             | 11,5    | 65,0    | 16,0         | 61,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99444    | PV-CM 95  | 95,0                             | 13,5    | 90,0    | 18,0         | 109,8                        | 10   | o. r.                              | o. r.     | o. r.      |
| 99445    | PV-CM 120 | 120,0                            | 15,5    | 90,0    | 20,0         | 126,8                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99446    | PV-CM 150 | 150,0                            | 17,0    | 105,0   | 22,0         | 180,9                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99447    | PV-CM 185 | 185,0                            | 19,0    | 105,0   | 25,0         | 203,5                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99448    | PV-CM 240 | 240,0                            | 21,5    | 125,0   | 28,0         | 316,4                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99449    | PV-CM 300 | 300,0                            | 24,5    | 125,0   | 32,0         | 354,0                        | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# PV-CMÖ compression joint - with oil stop

not insulated



## Compression joint PV-CMÖ

Clamping connection sleeves for unstrained clamping of Cu medium-range voltage cables 10-30 kV.

On the PV-CMÖ, the centre web achieves a total oil stop.

## Material

Sleeve: copper  
Surface: bare

## Note

Code type indicates the required hexagonal clamping insert.



## bare - with oil stop

| Part no. | Type       | Cross-section<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|----------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |            |                                  |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99450    | PV-CMÖ 25  | 25,0                             | 7,5     | 60,0    | 12,0         | 40,8                         | 25   | o. r.                              | o. r.     | o. r.      |
| 99451    | PV-CMÖ 35  | 35,0                             | 8,2     | 60,0    | 12,0         | 35,6                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99452    | PV-CMÖ 50  | 50,0                             | 10,0    | 65,0    | 14,0         | 49,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99453    | PV-CMÖ 70  | 70,0                             | 11,5    | 65,0    | 16,0         | 64,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99454    | PV-CMÖ 95  | 95,0                             | 13,5    | 90,0    | 18,0         | 109,8                        | 10   | o. r.                              | o. r.     | o. r.      |
| 99455    | PV-CMÖ 120 | 120,0                            | 15,5    | 90,0    | 20,0         | 126,8                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99456    | PV-CMÖ 150 | 150,0                            | 17,0    | 105,0   | 22,0         | 188,4                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99457    | PV-CMÖ 185 | 185,0                            | 19,0    | 105,0   | 25,0         | 203,5                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99458    | PV-CMÖ 240 | 240,0                            | 21,5    | 125,0   | 28,0         | 316,4                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99459    | PV-CMÖ 300 | 300,0                            | 24,5    | 125,0   | 32,0         | 354,0                        | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# PV-AM aluminium compression joint

not insulated



## Compression joint PV-AM

Clamping connection sleeves for unstrained clamping of Al medium-range voltage cables 10-30 kV.

## Material

Aluminium  
Surface: bare

## Note

Code type indicates the required hexagonal clamping insert.

## Technical data

Temperature range: up to +120°C



## Dimensions

d Inner diameter of the cable inclusion  
l Length

| bare     |           |                               |                            |         |         |              |                              |      |                                    |           |            |
|----------|-----------|-------------------------------|----------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
| Part no. | Type      | Cross-section<br>RM/SM<br>mm² | Cross-section<br>SE<br>mm² | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|          |           |                               |                            |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99460    | PV-AM 35  | 35,0                          | 50,0                       | 8,2     | 90,0    | 14,0         | 27,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99461    | PV-AM 50  | 50,0                          | 70,0                       | 10,0    | 90,0    | 16,0         | 34,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99462    | PV-AM 70  | 70,0                          | 95,0                       | 11,5    | 95,0    | 18,0         | 46,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99463    | PV-AM 95  | 95,0                          | 120,0                      | 13,5    | 100,0   | 22,0         | 68,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99464    | PV-AM 120 | 120,0                         | 150,0                      | 15,0    | 105,0   | 22,0         | 74,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99465    | PV-AM 150 | 150,0                         | 185,0                      | 16,5    | 105,0   | 25,0         | 87,0                         | 10   | o. r.                              | o. r.     | o. r.      |
| 99466    | PV-AM 185 | 185,0                         | 240,0                      | 18,5    | 125,0   | 28,0         | 134,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99467    | PV-AM 240 | 240,0                         | 300,0                      | 21,3    | 125,0   | 32,0         | 157,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99468    | PV-AM 300 | 300,0                         | -                          | 23,6    | 125,0   | 34,0         | 163,0                        | 1    | o. r.                              | o. r.     | o. r.      |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# PV-AMÖ aluminium compression joint

not insulated



## Compression joint PV-AMÖ

Clamping connection sleeves for unstrained clamping of Al medium-range voltage cables 10-30 kV.

On the PV-AMÖ, the centre web achieves a total oil stop.

## Material

Sleeve: Aluminium  
Surface: bare

## Note

Code type indicates the required hexagonal clamping insert.

## Technical data

Temperature range: up to +120°C



## bare - with oil stop

| Part no. | Type       | Cross-section<br>RM/SM<br>mm <sup>2</sup> | Cross-section<br>SE<br>mm <sup>2</sup> | d<br>mm | l<br>mm | Code<br>type | Weight<br>kg / 1000<br>items | Unit | Net EUR/100 items at a purchase of |           |            |
|----------|------------|-------------------------------------------|----------------------------------------|---------|---------|--------------|------------------------------|------|------------------------------------|-----------|------------|
|          |            |                                           |                                        |         |         |              |                              |      | up to 100                          | 101 - 500 | 501 - 1000 |
| 99470    | PV-AMÖ 35  | 35,0                                      | 50,0                                   | 8,0     | 95,0    | 14,0         | 31,0                         | 5    | o. r.                              | o. r.     | o. r.      |
| 99471    | PV-AMÖ 50  | 50,0                                      | 70,0                                   | 9,8     | 95,0    | 16,0         | 56,0                         | 5    | o. r.                              | o. r.     | o. r.      |
| 99472    | PV-AMÖ 70  | 70,0                                      | 95,0                                   | 11,2    | 100,0   | 18,0         | 61,0                         | 5    | o. r.                              | o. r.     | o. r.      |
| 99473    | PV-AMÖ 95  | 95,0                                      | 120,0                                  | 13,2    | 105,0   | 22,0         | 92,0                         | 5    | o. r.                              | o. r.     | o. r.      |
| 99474    | PV-AMÖ 120 | 120,0                                     | 150,0                                  | 14,7    | 110,0   | 22,0         | 103,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99475    | PV-AMÖ 150 | 150,0                                     | 185,0                                  | 16,3    | 110,0   | 25,0         | 120,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99476    | PV-AMÖ 185 | 185,0                                     | 240,0                                  | 18,3    | 130,0   | 28,0         | 156,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99477    | PV-AMÖ 240 | 240,0                                     | 300,0                                  | 21,0    | 130,0   | 32,0         | 191,0                        | 5    | o. r.                              | o. r.     | o. r.      |
| 99478    | PV-AMÖ 300 | 300,0                                     | -                                      | 23,3    | 135,0   | 34,0         | 307,0                        | 1    | o. r.                              | o. r.     | o. r.      |

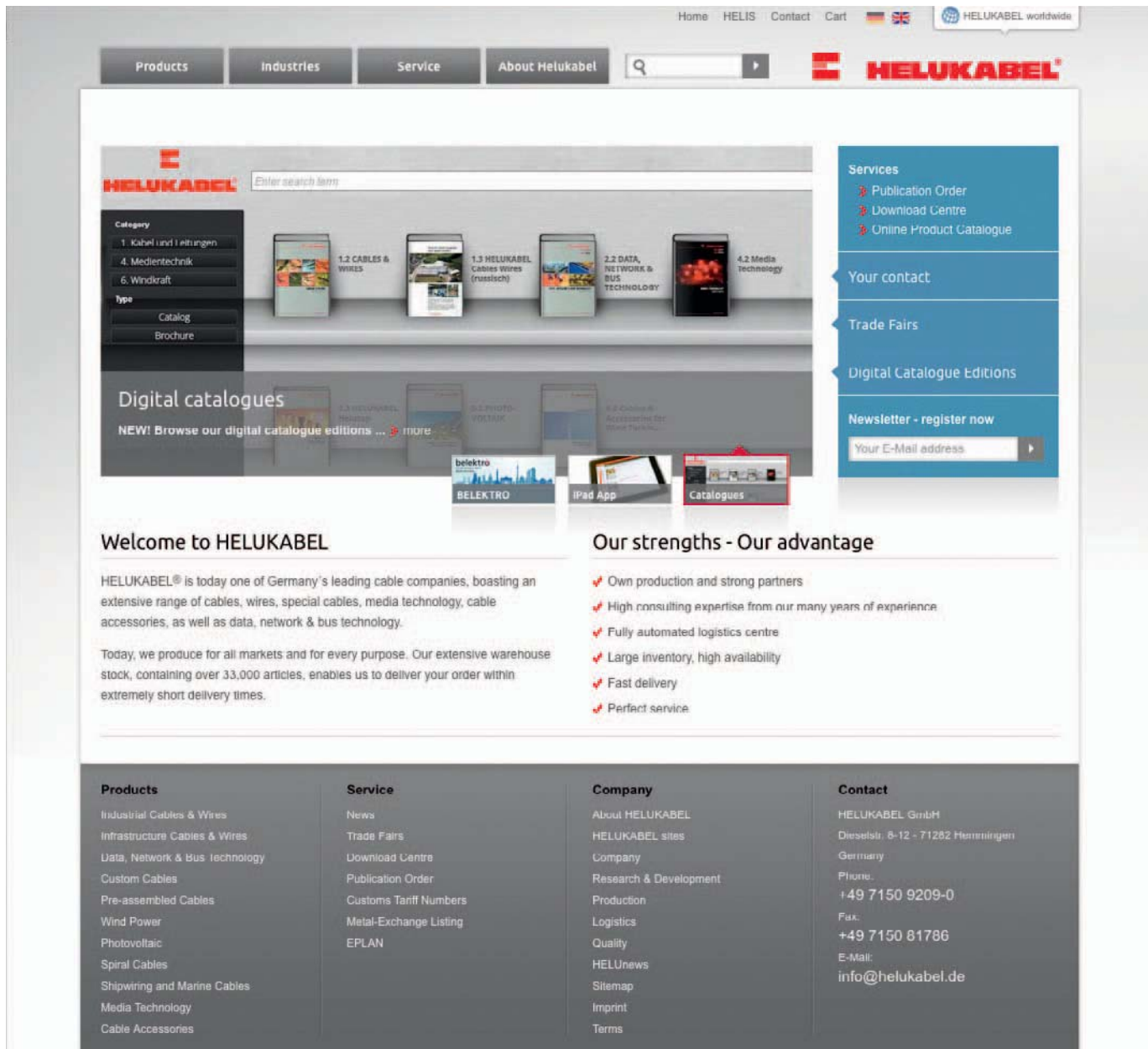
Dimensions and specifications may be changed without prior notice.

o. r. = on request



# Internet presence

**You will find everything concerning cable, lines and accessories at [www.helukabel.de](http://www.helukabel.de)**



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Photo: HELUKABEL®

## Tools

# Tools

## Cable shears

|                                       |     |
|---------------------------------------|-----|
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## Stripping / peeling

|                                               |     |
|-----------------------------------------------|-----|
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## Crimping / pressing

|                                              |     |
|----------------------------------------------|-----|
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### Pliers with convertible inserts

|                           |     |
|---------------------------|-----|
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| inserts <b>N22</b> .....  | 482 |

# Tools

|                                                                      |     |
|----------------------------------------------------------------------|-----|
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## Shield-Kon® tools

|                                            |     |
|--------------------------------------------|-----|
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## Fastening

|                                          |     |
|------------------------------------------|-----|
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## Cable tie tools

|                                    |     |
|------------------------------------|-----|
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## Handling

|                                  |     |
|----------------------------------|-----|
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## Mounting

|                                      |     |
|--------------------------------------|-----|
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| <b>cable grips to fleet</b> .....    | 503 |
| <b>cable grips to assemble</b> ..... | 504 |

# HELUTOOL D15 cable shear



## Cable shear HELUTOOL D15

- for cutting cables with diameters up to 15mm.
- forged
- tempered blade with precise finish
- burnished
- plastic coated handle
- Length 170mm
- Weight 210g

### cable shear

| Part no. | Type         | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|------|-------------------------------|-------|--------|
|          |              |      | 1                             | 2 - 4 | 5 - 10 |
| 903620   | HELUTOOL D15 | 1    | O. r.                         | O. r. | O. r.  |

Dimensions and specifications may be changed without prior notice. O. r. = on request

# HELUTOOL D20 cable shear



new

### Cable shear HELUTOOL D20

- VDE approved, 1000V
- for cutting copper and aluminium cables, single and multi-core
- low handforce required due to favourable lever ratio and special blade geometry
- clean and smooth cut without crushing and deformation
- initial and final cut (upper and lower blade)
- allows cables of up to 20 mm dia. to be cut
- with guard
- handles plastic coated
- precision ground , hardened blades
- adjustable bolted joint, self-retaining screw
- high-grade special tool steel, forged, oil-hardened
- Length 200 mm
- Weight 340 g

### cable shear

| Part no. | Type         | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|------|-------------------------------|-------|--------|
|          |              |      | 1                             | 2 - 4 | 5 - 10 |
| 904933   | HELUTOOL D20 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# KST 1 cable shear



- Cable shear KST 1**
- with telescopic handles
  - for Cu- uad Al-cables, single and multi-core
  - cutting ranges up to 26mm
  - Length 350 - 520 mm stepless
  - Weight 1400 g

| cable shear |       |      |                               |       |        |
|-------------|-------|------|-------------------------------|-------|--------|
| Part no.    | Type  | Unit | Net EUR/item at a purchase of |       |        |
|             |       |      | 1                             | 2 - 4 | 5 - 10 |
| 99087       | KST 1 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request



# KT3, KT4 cable shear



### Cable shears

#### KT3

- For cutting cables with diameters up to 32mm
- Length 255mm
- Weight 590g

#### KT4

- For cutting cables with diameters up to 52mm
- Length 310mm
- Weight 890g

### cable shear

| Part no. | Type | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|------|-------------------------------|-------|--------|
|          |      |      | 1                             | 2 - 4 | 5 - 10 |
| 904728   | KT 3 | 1    | o. r.                         | o. r. | o. r.  |
| 904729   | KT 4 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# B-TC051 hydraulic shear



## Hydraulic shear B-TC051

- Battery operated dual pistons hydraulic shear. Can be used for cables with diameters up to 50mm.
- Long service life
- Revolving head (up to 90°)
- Excess pressure valve as overload protection
- Pressure relief switch
- SOC indicator
- Hinged head for cutting ceaseless material
- Included in delivery: tool, 2 batteries, charger, carrying strap
- Weight hydraulic shear 5,4 kg
- Weight case 2,2 g

### hydraulic shear

| Part no. | Type    | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------|------|-------------------------------|-------|--------|
|          |         |      | 1                             | 2 - 4 | 5 - 10 |
| 904730   | B-TC051 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# Electricians scissors for screened cables and wires



new

## Electricians scissors

- cuts copper braid shielded cables and wires
- clean cut with serrated edge
- with round wire cutter
- very stable version
- cut from special stainless steel, nickel plated
- handy
- Length 125 mm
- Weight 65 g

### electricians scissors

| Part no. | Type           | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------------|------|-------------------------------|-------|--------|
|          |                |      | 1                             | 2 - 4 | 5 - 10 |
| 905120   | Geflechtschere | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Jokari stripping knife



## Jokari stripping knife

- for small and large cable diameters

### stripping knife

| Part no. | Type | Diameter<br>from - to<br>mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|-----------------------------|------|-------------------------------|-------|--------|
|          |      |                             |      | 1                             | 2 - 4 | 5 - 10 |
| 98718    | J 16 | 4,0 - 16,0                  | 1    | O. r.                         | O. r. | O. r.  |
| 98719    | J 27 | 8,0 - 28,0                  | 1    | O. r.                         | O. r. | O. r.  |
| 98720    | J 35 | 27,0 - 35,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 98721    | J 50 | 35,0 - 50,0                 | 1    | O. r.                         | O. r. | O. r.  |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# Jokari with hook stripping knife



## Jokari stripping knife

- Practical hook knife for peeling all standard round cables.
- Working range: 8 – 28 mm

### stripping knife

| Part no. | Type   | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------|------|-------------------------------|-------|--------|
|          |        |      | 1                             | 2 - 4 | 5 - 10 |
| 98303    | J 28 H | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Jokari round stripping knife



## Jokari round stripping knife

Practical and handy knife for peeling all standard round cables.

- J15 for peeling and stripping (0.2-4.0mm<sup>2</sup>) with integrated slide-out blade.
- J12 for peeling.

### stripping knife

| Part no. | Type | Diameter from - to mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|-----------------------|------|-------------------------------|-------|--------|
|          |      |                       |      | 1                             | 2 - 4 | 5 - 10 |
| 98716    | J 15 | 8,0 - 13,0            | 1    | o. r.                         | o. r. | o. r.  |
| 98717    | J 12 | 8,0 - 13,0            | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# Stripax-Plus processing tool for core end sleeves



## Stripax - Plus

- Processing tool for core end sleeves in strip format.
- Universal tool for cutting, stripping and crimping.
- Crimping to DIN 46228
- Length 210 mm
- Weight 260 g

### processing tool for core end sleeves

| Part no. | Type         | Cross-section<br>min. - max.<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|-------------------------------------|------|-------------------------------|-------|--------|
|          |              |                                     |      | 1                             | 2 - 4 | 5 - 10 |
| 91923    | Stripax-Plus | 0,5 - 2,5                           | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# High Strip stripper



## High Strip wire strippers

- Automatic wire strippers for conductors with problematic insulation, e.g.: Silicone, rubber, TPE.

| Stripper |            |                               |      |                               |       |        |
|----------|------------|-------------------------------|------|-------------------------------|-------|--------|
| Part no. | Type       | Cross-section min. - max. mm² | Unit | Net EUR/item at a purchase of |       |        |
|          |            |                               |      | 1                             | 2 - 4 | 5 - 10 |
| 98448    | High Strip | 0,5 - 4,0                     | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# Multistrip 10stripper



## Stripper Multistrip 10

- Self adjusting
- For single and multi-core lines made of PVC, rubber etc.
- Adjustable stripping length up to 18mm
- Robust metal clamps
- Ergonomic two-component handle
- Length 195 mm
- Weight 200 g

### Stripper

| Part no. | Type          | Cross-section<br>min. - max.<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------------|-------------------------------------|------|-------------------------------|-------|--------|
|          |               |                                     |      | 1                             | 2 - 4 | 5 - 10 |
| 904731   | Multistrip 10 | 0,03 - 10,0                         | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# DUO Stripper 200 peeling and stripping



### Duo Stripper 200

The Duo Stripper 200, one tool with 2 functions:

Peeling and stripping.

- Peels all standard round cables from 4-28mm, with adjustable cutting depth and rotating knife for automatic conversion from round to longitudinal sections.
- Stripping from 0.5 to 6.0m².

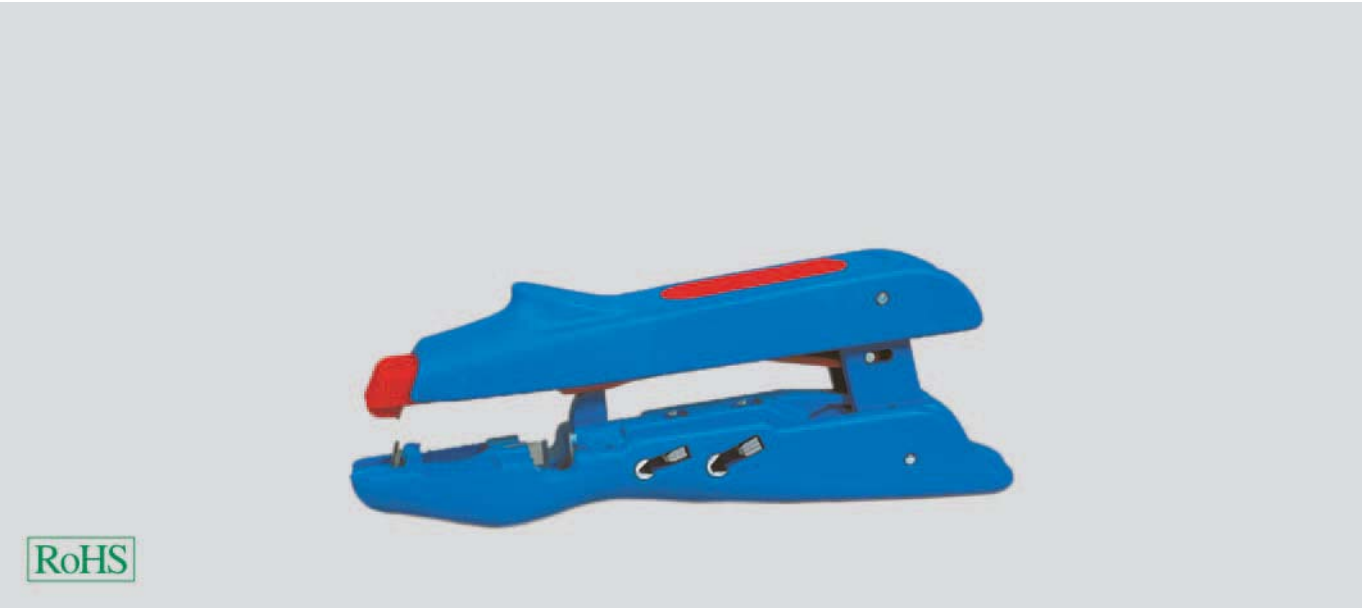
### peeling and stripping

| Part no. | Type    | Unit | Net EUR/Item at a purchase of |       |        |
|----------|---------|------|-------------------------------|-------|--------|
|          |         |      | 1                             | 2 - 4 | 5 - 10 |
| 91924    | DUO 200 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# DUO Crimp 300 stripping, crimping, shearing



## DUO Crimp 300

The Duo Crimp 300, one tool with 3 functions:

Stripping, crimping, shearing.

- Stripping from 0.5 to 6.0mm<sup>2</sup>.
- Crimping in 2 clamping ranges (0.5 to 2.5mm<sup>2</sup> and 4,0 to 6.0mm<sup>2</sup>)
- Shearing with integrated side cutter

### stripping, crimping, shearing

| Part no. | Type          | Unit | Net EUR/Item at a purchase of |       |        |
|----------|---------------|------|-------------------------------|-------|--------|
|          |               |      | 1                             | 2 - 4 | 5 - 10 |
| 97388    | DUO-Crimp 300 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOOL PEW 8.84 crimping tool



## Crimping tool HELUTOOL PEW 8.84

- burnished
- square crimp profile realized by synchronously driven crimp jaws
- 4 serrated crimp surfaces
- ergonomic two-component handle
- Length 180mm
- Weight 380g

### crimping tool

| Part no. | Type              | Cross-section<br>min. - max.<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------------------|-------------------------------------|------|-------------------------------|-------|--------|
|          |                   |                                     |      | 1                             | 2 - 4 | 5 - 10 |
| 903624   | HELUTOOL PEW 8.84 | 0,08 - 10,0                         | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# 803/0, 803/5, 804 pliers



## Crimping pliers type

### 3/0; 803/5; 804

**Type 803** crimping pliers for core end sleeves to DIN 46228 in cross-section 0.25 to 6.0mm<sup>2</sup>.

**Type 804** for core end sleeves to DIN 46228 and tubular lugs.

- Cross-section for core end sleeves 0.75 to 16.0mm<sup>2</sup>.
- Cross-section for tubular lugs 0.75 to 2.5mm<sup>2</sup>.

## pliers

| Part no. | Type  | Cross-section<br>min. - max.<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------|-------------------------------------------------|------|-------------------------------|-------|--------|
|          |       |                                                 |      | 1                             | 2 - 4 | 5 - 10 |
| 91602    | 803/0 | 0,25 - 2,5                                      | 1    | o. r.                         | o. r. | o. r.  |
| 91603    | 803/5 | 1,5 - 6,0                                       | 1    | o. r.                         | o. r. | o. r.  |
| 91601    | 804   | 0,5 - 16,0                                      | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

802/0 pliers



**Jointing clamp type 802/0**  
For insulated cable lug, with positive lock.  
Clamping range 0.5 to 6.0mm².

| pliers   |       |                                     |      |                               |       |        |
|----------|-------|-------------------------------------|------|-------------------------------|-------|--------|
| Part no. | Type  | Cross-section<br>min. - max.<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|          |       |                                     |      | 1                             | 2 - 4 | 5 - 10 |
| 91612    | 802/0 | 0,5 - 6,0                           | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request



# 802/1 pliers



## Jointing clamp type 802/1

For insulated cable lugs, with positive lock and mechanism for reducing the hand force by 50% to 250N.  
(Durable life, min. 50,000 clampings).  
Clamping range 0.5 to 6.0mm<sup>2</sup>.

### pliers

| Part no. | Type  | Cross-section<br>min. - max.<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of<br>1 | 2 - 4 | 5 - 10 |
|----------|-------|-------------------------------------------------|------|------------------------------------|-------|--------|
| 91163    | 802/1 | 0,5 - 6,0                                       | 1    | o. r.                              | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# DEB 0560 pliers



## Jointing clamp type DEB 0560

For insulated and non-insulated core end sleeves, for completely safe clamping with positive lock.  
Clamping range 0.5 to 6.0mm<sup>2</sup>.

| pliers   |          |                                                 |      |                               |       |        |
|----------|----------|-------------------------------------------------|------|-------------------------------|-------|--------|
| Part no. | Type     | Cross-section<br>min. - max.<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|          |          |                                                 |      | 1                             | 2 - 4 | 5 - 10 |
| 97343    | DEB 0560 | 0,5 - 6,0                                       | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# 805/0, 805/2 pliers



## Crimping pliers type 805/0; 805/2

For non-insulated tubular lugs (standard design) and solderless terminals to DIN 46234, with positive lock.

- Cross-section for tubular lugs 0.75 to 16.0mm<sup>2</sup>.
- Cross-section for solderless terminals 0.5 to 16.0mm<sup>2</sup>.

### pliers

| Part no. | Type  | Cross-section<br>min. - max.<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------|-------------------------------------------------|------|-------------------------------|-------|--------|
|          |       |                                                 |      | 1                             | 2 - 4 | 5 - 10 |
| 91605    | 805/0 | 0,75 - 16,0                                     | 1    | o. r.                         | o. r. | o. r.  |
| 91606    | 805/2 | 0,5 - 16,0                                      | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# 806/0, 806/4, 806/8 pliers



## Crimping pliers type 806/0, 806/4 and 806/8

For non-insulated terminal lugs (standard design) with rotating profile disk, arbour clamping.

| pliers   |       |                               |      |                               |       |        |
|----------|-------|-------------------------------|------|-------------------------------|-------|--------|
| Part no. | Type  | Cross-section min. - max. mm² | Unit | Net EUR/item at a purchase of |       |        |
|          |       |                               |      | 1                             | 2 - 4 | 5 - 10 |
| 91607    | 806/0 | 6,0 - 50,0                    | 1    | o. r.                         | o. r. | o. r.  |
| 91616    | 806/4 | 50,0 - 120,0                  | 1    | o. r.                         | o. r. | o. r.  |
| 91618    | 806/8 | 120,0 - 240,0                 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# 807/1, 807/2 pliers



## Jointing clamps type 807/1; 807/2

For non-insulated tubular lugs (standard design) with rotating profile disk, hexagonal clamping.

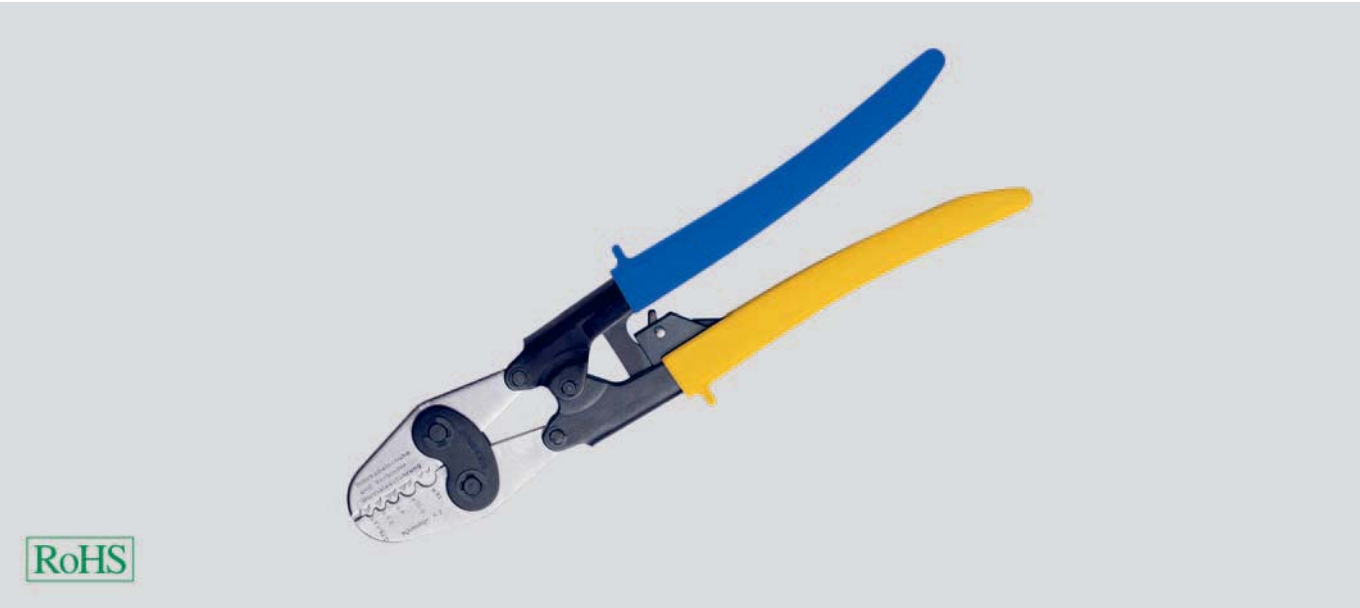
### pliers

| Part no. | Type  | Cross-section<br>min. - max.<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------|-------------------------------------|------|-------------------------------|-------|--------|
|          |       |                                     |      | 1                             | 2 - 4 | 5 - 10 |
| 91610    | 807/1 | 6,0 - 50,0                          | 1    | o. r.                         | o. r. | o. r.  |
| 91611    | 807/2 | 10,0 - 120,0                        | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# K2 pliers



## Pliers K2

For terminal lugs and connection sleeves in standard design

- Crimping profile with notch, fixed with lock
- Length 325mm
- Weight 600g

| pliers   |      |                               |      |                               |       |        |
|----------|------|-------------------------------|------|-------------------------------|-------|--------|
| Part no. | Type | Cross-section min. - max. mm² | Unit | Net EUR/item at a purchase of |       |        |
|          |      |                               |      | 1                             | 2 - 4 | 5 - 10 |
| 904732   | K2   | 0,75 - 16,0                   | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# K5 pliers



## Pliers K5

For terminal lugs and connection sleeves in standard design

- Crimping profile with notch, fixed in revolving profile
- Length 600mm
- Weight 2,4kg

### pliers

| Part no. | Type | Cross-section min. - max. mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|-------------------------------|------|-------------------------------|-------|--------|
|          |      |                               |      | 1                             | 2 - 4 | 5 - 10 |
| 904733   | K5   | 6,0 - 50,0                    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



K05 pliers



Pliers K05

For terminal lugs and connection sleeves in standard design

- Hexagonal crimping profile, fixed in revolving profile
- Length 390mm
- Weight 1,1kg

| pliers   |      |                               |      |                               |       |        |
|----------|------|-------------------------------|------|-------------------------------|-------|--------|
| Part no. | Type | Cross-section min. - max. mm² | Unit | Net EUR/item at a purchase of |       |        |
|          |      |                               |      | 1                             | 2 - 4 | 5 - 10 |
| 904734   | K05  | 6,0 - 50,0                    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# K06 pliers



## Pliers K06

For terminal lugs and connection sleeves in standard design

- Hexagonal crimping profile, fixed in revolving profile
- Length 650mm
- Weight 2,9kg

### pliers

| Part no. | Type | Cross-section<br>min. - max.<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|-------------------------------------|------|-------------------------------|-------|--------|
|          |      |                                     |      | 1                             | 2 - 4 | 5 - 10 |
| 904735   | K06  | 10,0 - 120,0                        | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

K25 Pliers



- Pliers K25**
- indent crimping
  - spring-supported tool opening
  - for nickel tubular cable lugs
  - Length 325 mm
  - Weight 0,6 kg

| pliers   |      |                                     |      |                               |       |        |
|----------|------|-------------------------------------|------|-------------------------------|-------|--------|
| Part no. | Type | Cross-section<br>min. - max.<br>mm² | Unit | Net EUR/Item at a purchase of |       |        |
|          |      |                                     |      | 1                             | 2 - 4 | 5 - 10 |
| 905561   | K25  | 0,5 - 16,0                          | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# K22 pliers



### Pliers K22

- crown revolving by 360°
- hinged
- convertible inserts
- telescopic handle
- Length 560mm to 860mm
- Weight 2,5kg

### Pliers

| Part no. | Type | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|----------------------|------|-------------------------------|-------|--------|
|          |      |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 904736   | K22  | -                    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# K22

inserts R22 for copper tubular cable lugs



## Inserts R22 for pliers K22

Convertible inserts for pliers K22.  
Inserts type R22 for terminal lugs and connection sleeves in standard design (esp. terminal lugs of types K1, K2); pressing width 5mm.

### inserts R22 for copper tubular cable lugs

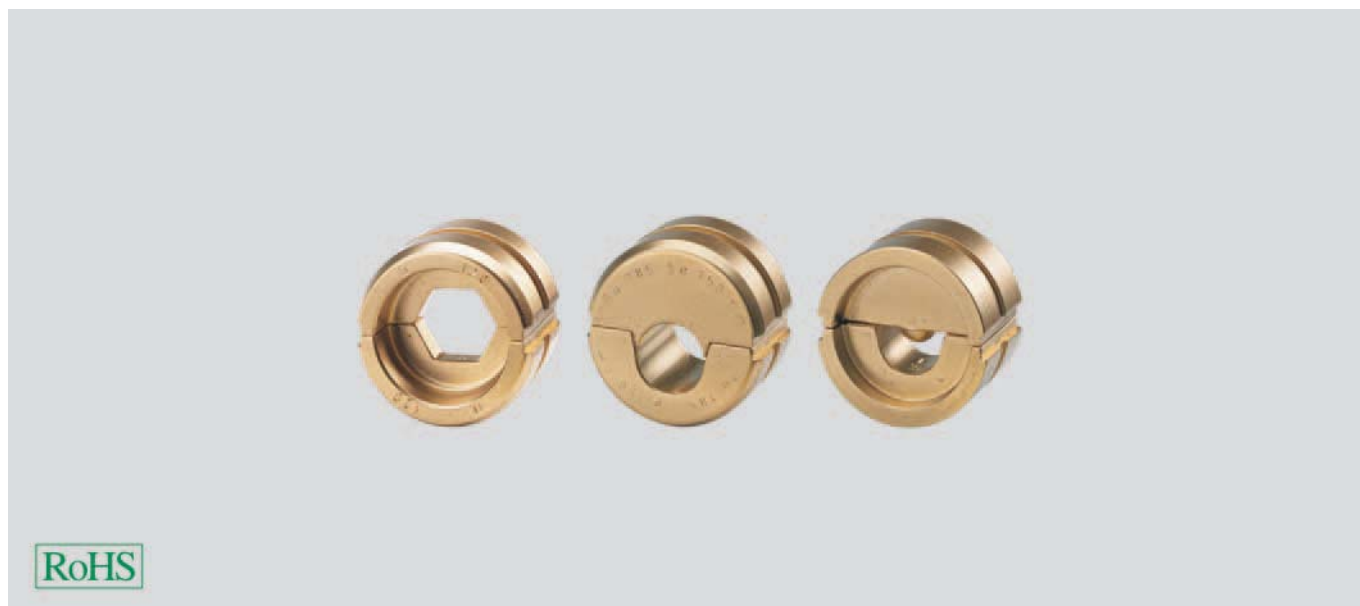
| Part no. | Type   | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------|----------------------|------|-------------------------------|-------|--------|
|          |        |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 904737   | R2250  | 50,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904738   | R2270  | 70,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904739   | R2295  | 95,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904740   | R22120 | 120,0                | 1    | o. r.                         | o. r. | o. r.  |
| 904741   | R22150 | 150,0                | 1    | o. r.                         | o. r. | o. r.  |
| 904742   | R22185 | 185,0                | 1    | o. r.                         | o. r. | o. r.  |
| 904743   | R22240 | 240,0                | 1    | o. r.                         | o. r. | o. r.  |
| 904744   | R22300 | 300,0                | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# K22

inserts RU22 for pressing sleeves roundly



## Inserts RU22 for pliers K22

Convertible inserts for pliers K22.

Inserts type RU22 for pressing sleeves roundly  
(esp. KH-R, KH-3, KH-4); pressing width  
19,5mm.

### inserts RU22 for pressing sleeves roundly

| Part no. | Type       | Cross-section<br>SE<br>mm <sup>2</sup> | Cross-section<br>SM<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|----------------------------------------|----------------------------------------|------|-------------------------------|-------|--------|
|          |            |                                        |                                        |      | 1                             | 2 - 4 | 5 - 10 |
| 904745   | RU223525   | 35,0                                   | 25,0                                   | 1    | o. r.                         | o. r. | o. r.  |
| 904746   | RU225035   | 50,0                                   | 35,0                                   | 1    | o. r.                         | o. r. | o. r.  |
| 904747   | RU227050   | 70,0                                   | 50,0                                   | 1    | o. r.                         | o. r. | o. r.  |
| 904748   | RU229570   | 95,0                                   | 70,0                                   | 1    | o. r.                         | o. r. | o. r.  |
| 904749   | RU2212095  | 120,0                                  | 95,0                                   | 1    | o. r.                         | o. r. | o. r.  |
| 904750   | RU22150120 | 150,0                                  | 120,0                                  | 1    | o. r.                         | o. r. | o. r.  |
| 904751   | RU22185150 | 185,0                                  | 150,0                                  | 1    | o. r.                         | o. r. | o. r.  |
| 904752   | RU22240185 | 240,0                                  | 185,0                                  | 1    | o. r.                         | o. r. | o. r.  |
| 904753   | RU22300240 | 300,0                                  | 240,0                                  | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# K22

inserts F22 for tubular cable lugs, copper for fine-wire lines



## Inserts F22 for pliers K22

Convertible inserts for pliers K22.  
Inserts type F22 for terminal lugs and connection sleeves applied to fine stranded lines (esp. terminal lugs of type KF).

### Inserts F22 for tubular cable lugs, copper for fine-wire lines

| Part no. | Type  | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------|----------------------|------|-------------------------------|-------|--------|
|          |       |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 904754   | F2210 | 10,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904755   | F2216 | 16,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904756   | F2225 | 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904757   | F2235 | 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904758   | F2250 | 50,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904759   | F2270 | 70,0                 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# K22

inserts A22 for aluminium compression cable lugs



new

### Inserts A22 for pliers K22

Convertible inserts for pliers K22.  
Inserts type A22 for compression cable lugs and connectors made from aluminium (esp. cable lugs KA) or aluminium / copper (esp. cable lugs KAC).  
Up to 185mm<sup>2</sup> press width 7mm, if greater 5 mm.

### Note

Crimping dies for 25 mm<sup>2</sup> is also suitable for 16 mm<sup>2</sup>.  
Crimping dies for 120 mm<sup>2</sup> is also suitable for 95 mm<sup>2</sup>.

### inserts A22 for aluminium compression cable lugs

| Part no. | Type     | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------|----------------------------------|------|-------------------------------|-------|--------|
|          |          |                                  |      | 1                             | 2 - 4 | 5 - 10 |
| 906054   | A221625  | 25,0                             | 1    | O. r.                         | O. r. | O. r.  |
| 906055   | A2235    | 35,0                             | 1    | O. r.                         | O. r. | O. r.  |
| 906056   | A2250    | 50,0                             | 1    | O. r.                         | O. r. | O. r.  |
| 906057   | A2270    | 70,0                             | 1    | O. r.                         | O. r. | O. r.  |
| 906058   | A2295120 | 120,0                            | 1    | O. r.                         | O. r. | O. r.  |
| 906059   | A22150   | 150,0                            | 1    | O. r.                         | O. r. | O. r.  |
| 906060   | A22185   | 185,0                            | 1    | O. r.                         | O. r. | O. r.  |
| 906061   | A22240   | 240,0                            | 1    | O. r.                         | O. r. | O. r.  |
| 906062   | A22300   | 300,0                            | 1    | O. r.                         | O. r. | O. r.  |

Dimensions and specifications may be changed without prior notice.

O. r. = on request

# K22

inserts N22 for tubular cable lug, nickel



## Inserts N22 for pliers K22

Convertible inserts for pliers K22.  
Suitable for cable lugs made by nickel.  
Indent crimping.

### inserts N22 for tubular cable lug, nickel

| Part no. | Type  | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------|----------------------|------|-------------------------------|-------|--------|
|          |       |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 905549   | N2210 | 10,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 905550   | N2216 | 16,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 905551   | N2225 | 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 905552   | N2235 | 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 905553   | N2250 | 50,0                 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# EK 35/4 pliers

storage battery-hydraulic systems



new

## Battery powered crimping tool EK 35/4

- Large cross section range 6-150 mm²
- Slim crimping head
- Closed crimping head, flip top style, rotatable
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Automatic retraction when crimping ist complete
- Charge level indicator of the batteries.
- Delivery in plastic case (tool, battery, charger)
- Press capacity 35 kN
- Weight 1,7 kg



| pliers   |         |                      |      |                               |       |        |
|----------|---------|----------------------|------|-------------------------------|-------|--------|
| Part no. | Type    | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|          |         |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 904897   | EK 35/4 | -                    | 1    | 0. r.                         | 0. r. | 0. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# EK 35/4

inserts HR 4 for tubular cable lugs, copper



## Convertible inserts for pliers EK 35/4

Inserts type HR4 for tubular cable lugs and connectors made by copper in standard design (esp. cable lugs K1, K2)

- crimp width 5 mm
- hexagonal profile

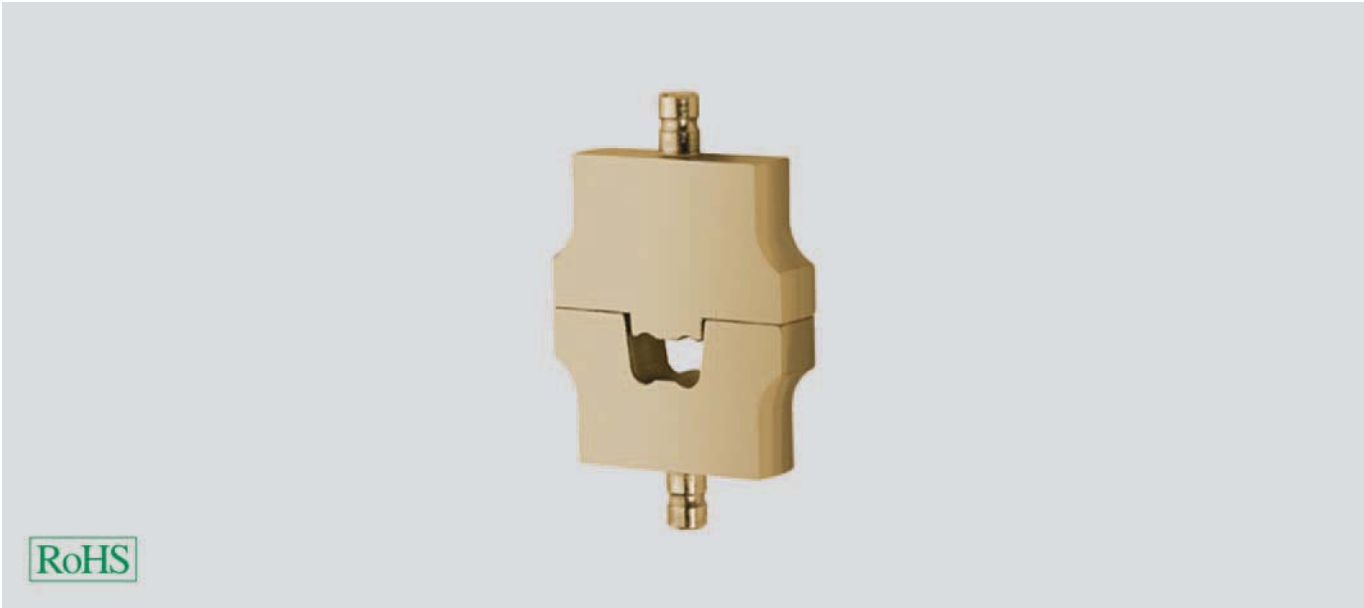
### inserts HR 4 for tubular cable lugs, copper

| Part no. | Type   | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------|----------------------|------|-------------------------------|-------|--------|
|          |        |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 904925   | HR46   | 6,0                  | 1    | O. r.                         | O. r. | O. r.  |
| 904899   | HR410  | 10,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 904900   | HR416  | 16,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 904901   | HR425  | 25,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 904902   | HR435  | 35,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 904903   | HR450  | 50,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 904904   | HR470  | 70,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 904914   | HR495  | 95,0                 | 1    | O. r.                         | O. r. | O. r.  |
| 906063   | HR4120 | 120,0                | 1    | O. r.                         | O. r. | O. r.  |
| 906064   | HR4150 | 150,0                | 1    | O. r.                         | O. r. | O. r.  |

Dimensions and specifications may be changed without prior notice. O. r. = on request

# EK 35/4

inserts HAES4 for insulated core end sleeves for compacted fine-wire-lines



new

## Convertible inserts for pliers EK 35/4

Inserts type HAES 4 for insulated core end sleeves for compacted fine-wire-lines.

- crimp width 10 mm

### inserts HAES4 for insulated core end sleeves for compacted fine-wire-lines

| Part no. | Type    | Cross-section<br>mm² | Unit | Net EUR/Item at a purchase of |       |        |
|----------|---------|----------------------|------|-------------------------------|-------|--------|
|          |         |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 904928   | HAES410 | 10,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904929   | HAES416 | 16,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904930   | HAES425 | 25,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904931   | HAES435 | 35,0                 | 1    | o. r.                         | o. r. | o. r.  |
| 904932   | HAES450 | 50,0                 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

new

# HPZ 80.1 pliers

hand-hydraulic



## Crimping pliers HPZ 80.1

- for insulated core end sleeves
- 180° rotatable head
- hinged
- convertible inserts
- two-stage hydraulic
- press capacity up to 80kN
- for conductors cross-sections up to 240 mm².
- scope of delivery: in plastic suitcase without crimping dies
- Length 600 mm
- Weight incl. case 9,4 kg

| pliers   |          |                      |      |                               |       |        |
|----------|----------|----------------------|------|-------------------------------|-------|--------|
| Part no. | Type     | Cross-section<br>mm² | Unit | Net EUR/item at a purchase of |       |        |
|          |          |                      |      | 1                             | 2 - 4 | 5 - 10 |
| 906081   | HPZ 80.1 | -                    | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HPZ 80.1

inserts PAE 80.1 for core end sleeves



new

## Convertible inserts for pliers

### HPZ 80.1

Inserts type PAE 80.1 for core end sleeves. Suitable particularly for compacted conductors. Prismatic crimping profile with lateral grooves.

#### inserts PAE 80.1 for core end sleeves

| Part no. | Type        | Cross-section<br>mm <sup>2</sup> | Unit | Net EUR/item at a purchase of |       |        |
|----------|-------------|----------------------------------|------|-------------------------------|-------|--------|
|          |             |                                  |      | 1                             | 2 - 4 | 5 - 10 |
| 906082   | PAE80.1-10  | 10,0                             | 1    | o. r.                         | o. r. | o. r.  |
| 906083   | PAE80.1-16  | 16,0                             | 1    | o. r.                         | o. r. | o. r.  |
| 906084   | PAE80.1-25  | 25,0                             | 1    | o. r.                         | o. r. | o. r.  |
| 906085   | PAE80.1-35  | 35,0                             | 1    | o. r.                         | o. r. | o. r.  |
| 906086   | PAE80.1-50  | 50,0                             | 1    | o. r.                         | o. r. | o. r.  |
| 906087   | PAE80.1-70  | 70,0                             | 1    | o. r.                         | o. r. | o. r.  |
| 906088   | PAE80.1-95  | 95,0                             | 1    | o. r.                         | o. r. | o. r.  |
| 906089   | PAE80.1-120 | 120,0                            | 1    | o. r.                         | o. r. | o. r.  |
| 906090   | PAE80.1-150 | 150,0                            | 1    | o. r.                         | o. r. | o. r.  |
| 906091   | PAE80.1-185 | 185,0                            | 1    | o. r.                         | o. r. | o. r.  |
| 906092   | PAE80.1-240 | 240,0                            | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request



# ERG 740 compression tool

a product by Thomas & Betts



**ERG 740 hand compression tool**  
 Hand compression tool suitable for clamping Shield-Kon connectors.  
 Processing range for single-piece Shield-Kon connectors from 1.27 to 7.62mm.

| Compression tool |            |             |                               |       |        |
|------------------|------------|-------------|-------------------------------|-------|--------|
| Part no.         | Type T & B | Shield Ø mm | Net EUR/item at a purchase of |       |        |
|                  |            |             | 1                             | 2 - 4 | 5 - 10 |
| 96757            | ERG 740    | 7,62        | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# ERG 740 tool inserts

a product by Thomas & Betts



## Tool inserts for ERG 740

The tool inserts are simple and quick to change by hand.

### tool inserts

| Part no. | Type T & B | Shield Ø<br>mm | Corr.<br>connector | Unit | Net EUR/item at a purchase of |       |        |
|----------|------------|----------------|--------------------|------|-------------------------------|-------|--------|
|          |            |                |                    |      | 1                             | 2 - 4 | 5 - 10 |
| 904774   | D-101 A    | 1,27 - 1,79    | RSK 101            | 1    | o. r.                         | o. r. | o. r.  |
| 904775   | D-101 B    | 1,80 - 2,28    | RSK 101            | 1    | o. r.                         | o. r. | o. r.  |
| 904776   | D-201 C    | 2,29 - 2,55    | RSK 101            | 1    | o. r.                         | o. r. | o. r.  |
| 904777   | D-201 D    | 2,56 - 3,00    | RSK 201            | 1    | o. r.                         | o. r. | o. r.  |
| 903718   | D-201 E    | 3,01 - 3,34    | RSK 201            | 1    | o. r.                         | o. r. | o. r.  |
| 904778   | D-201 F    | 3,35 - 3,65    | RSK 201            | 1    | o. r.                         | o. r. | o. r.  |
| 904779   | D-301 G    | 3,66 - 4,13    | RSK 301            | 1    | o. r.                         | o. r. | o. r.  |
| 903735   | D-301 H    | 4,14 - 4,71    | RSK 301            | 1    | o. r.                         | o. r. | o. r.  |
| 904692   | D-301 J    | 4,72 - 5,12    | RSK 301            | 1    | o. r.                         | o. r. | o. r.  |
| 904780   | D-401 K    | 5,13 - 5,86    | RSK 401            | 1    | o. r.                         | o. r. | o. r.  |
| 904693   | D-401 L    | 5,87 - 6,36    | RSK 401            | 1    | o. r.                         | o. r. | o. r.  |
| 903731   | D-401 M    | 6,37 - 7,00    | RSK 401            | 1    | o. r.                         | o. r. | o. r.  |
| 903685   | D-401 N    | 7,01 - 7,62    | RSK 401            | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# ST Box spanners



## Socket wrench ST

Special socket wrench, slotted.  
For professional installation of glands in extremely restricted spaces.  
The guide slot also makes it suitable for glands with integral cables.

## Material

Steel  
Surface: tinned

## box spanners

| Part no. | Spanner size<br>mm | l<br>mm | c<br>mm | D<br>mm | Unit | Net EUR/100 items at a purchase of |       |        |
|----------|--------------------|---------|---------|---------|------|------------------------------------|-------|--------|
|          |                    |         |         |         |      | 1                                  | 2 - 4 | 5 - 10 |
| 97356    | 14,0               | 60,0    | 8,5     | 19,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97535    | 15,0               | 60,0    | 8,5     | 19,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97536    | 17,0               | 60,0    | 10,0    | 23,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97148    | 19,0               | 60,0    | 10,0    | 25,3    | 1    | o. r.                              | o. r. | o. r.  |
| 97537    | 20,0               | 60,0    | 12,0    | 27,0    | 1    | o. r.                              | o. r. | o. r.  |
| 97149    | 22,0               | 60,0    | 12,0    | 29,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97538    | 24,0               | 60,0    | 14,0    | 31,9    | 1    | o. r.                              | o. r. | o. r.  |
| 98726    | 26,0               | 60,0    | 16,0    | 34,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97417    | 27,0               | 60,0    | 16,0    | 35,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97539    | 30,0               | 60,0    | 20,0    | 40,8    | 1    | o. r.                              | o. r. | o. r.  |
| 97150    | 33,0               | 60,0    | 20,0    | 43,8    | 1    | o. r.                              | o. r. | o. r.  |
| 97540    | 36,0               | 60,0    | 24,0    | 47,8    | 1    | o. r.                              | o. r. | o. r.  |
| 97541    | 40,0               | 100,0   | 27,0    | 52,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97542    | 41,0               | 100,0   | 27,0    | 53,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97151    | 42,0               | 100,0   | 27,0    | 54,7    | 1    | o. r.                              | o. r. | o. r.  |
| 98727    | 46,0               | 100,0   | 34,0    | 56,0    | 1    | o. r.                              | o. r. | o. r.  |
| 97543    | 50,0               | 100,0   | 34,0    | 64,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97152    | 53,0               | 100,0   | 34,0    | 69,0    | 1    | o. r.                              | o. r. | o. r.  |
| 98728    | 55,0               | 100,0   | 35,0    | 75,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97544    | 57,0               | 100,0   | 35,0    | 76,5    | 1    | o. r.                              | o. r. | o. r.  |
| 97545    | 60,0               | 100,0   | 40,0    | 78,0    | 1    | o. r.                              | o. r. | o. r.  |
| 97546    | 64,0               | 100,0   | 40,0    | 84,0    | 1    | o. r.                              | o. r. | o. r.  |
| 98729    | 68,0               | 100,0   | 40,0    | 85,0    | 1    | o. r.                              | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOOL MZ circlip pliers



new

## HELUTOOL MZ

- assembly pliers for cable glands
- fast and reliable installation of cable glands
  - automatic progressively adjustable size of the jaw
  - ratchet-like function with pivoting angle 60°
  - with fixed adjustment for continuous working
  - good applicable even in constricted working areas
  - stable for professional use
  - extremely handy
  - two-components-plastic handles

### circlip pliers

| Part no. | Type     | Unit | Net EUR/item at a purchase of |       |        |
|----------|----------|------|-------------------------------|-------|--------|
|          |          |      | 1                             | 2 - 4 | 5 - 10 |
| 904892   | MZ 13/23 | 1    | o. r.                         | o. r. | o. r.  |
| 904893   | MZ 24/36 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

new

# ERG 50, ERG 120

circlip pliers for cable tie made of plastic

a product by Thomas & Betts



## Assembly tool for plastic cable ties ERG50 / ERG120

Ergonomic hand tool with adjustable tension setting and automatic cutting. 360° degree rotating nose enables operation from any position. An impact damper absorbs the rear shocks, that occur when cutting the tie ends.

- adjustable tension settings
- automatic cutting mechanism
- Length 200 mm
- Height 25 mm
- Width 125 mm
- Weight 240 mm

### circlip pliers for cable tie made of plastic

| Part no. | Type    | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------|------|-------------------------------|-------|--------|
|          |         |      | 1                             | 2 - 4 | 5 - 10 |
| 905663   | ERG 50  | 1    | o. r.                         | o. r. | o. r.  |
| 905849   | ERG 120 | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# CT5 circlip pliers for cable ties made of stainless steel



new

## Assembly tool CT5 for stainless steel cable ties

- Ergonomic and stable clamping tool by steel for clamping of ball valves and shaped head and steel girders with and without coating, with tape cutter
- Length 210mm

### circlip pliers for cable ties made of stainless steel

| Part no. | Type | Tie width mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|------|--------------|------|-------------------------------|-------|--------|
|          |      |              |      | 1                             | 2 - 4 | 5 - 10 |
| 904787   | CT5  | up to 12,0   | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# HELUTOOL 250 pocket, 190 drum unwinder



## Drum unwinder HELUTOOL

For simple reeling of cable drums.

- Dynamic brake for constant traction: retarding effect corresponds to the weight bearing on.
- Small weight
- Small size
- Can be used with broken drums

### drum unwinder

| Part no. | Type                | Weight     |     | Load capacity | Diameter approx. mm | Reel width mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------------------|------------|-----|---------------|---------------------|---------------|------|-------------------------------|-------|--------|
|          |                     | approx. kg | kg  |               |                     |               |      | 1                             | 2 - 4 | 5 - 10 |
| 903716   | HELUTOOL 250 pocket | 1,0        | 190 | 250           | -                   | -             | 1    | o. r.                         | o. r. | o. r.  |
| 93529    | HELUTOOL 190        | 7,0        | 380 | 500           | -                   | -             | 1    | o. r.                         | o. r. | o. r.  |

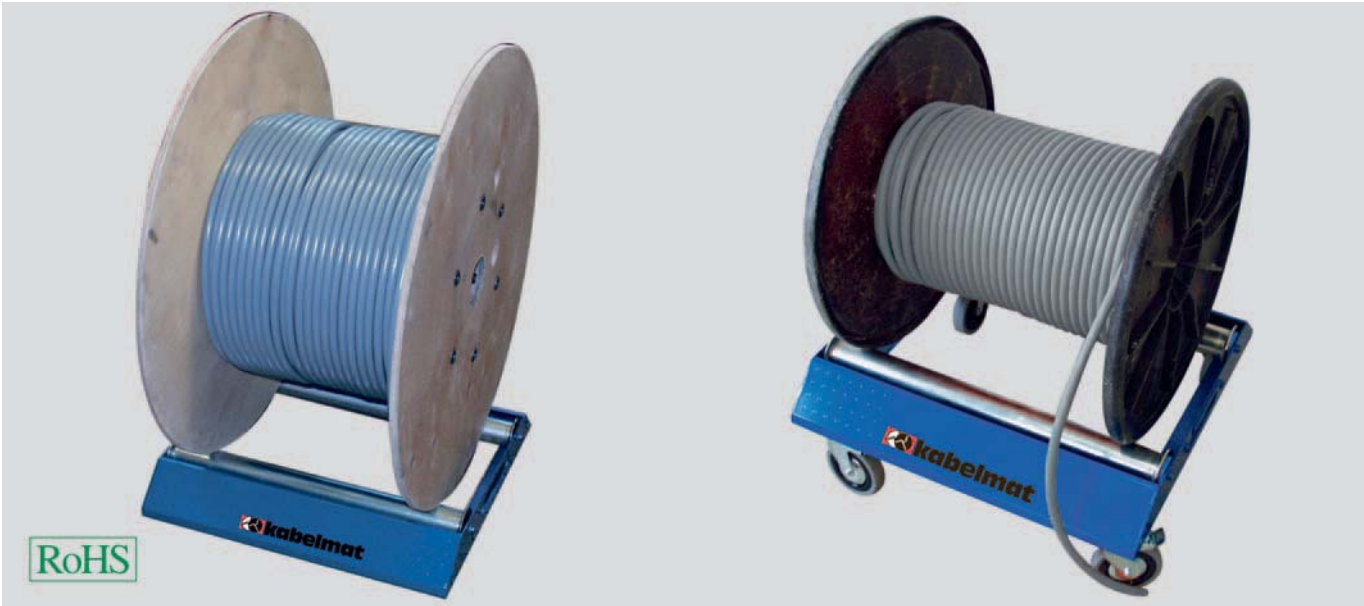
Dimensions and specifications may be changed without prior notice.

o. r. = on request



# TROMBOI 500 drum decoiler

shaftless



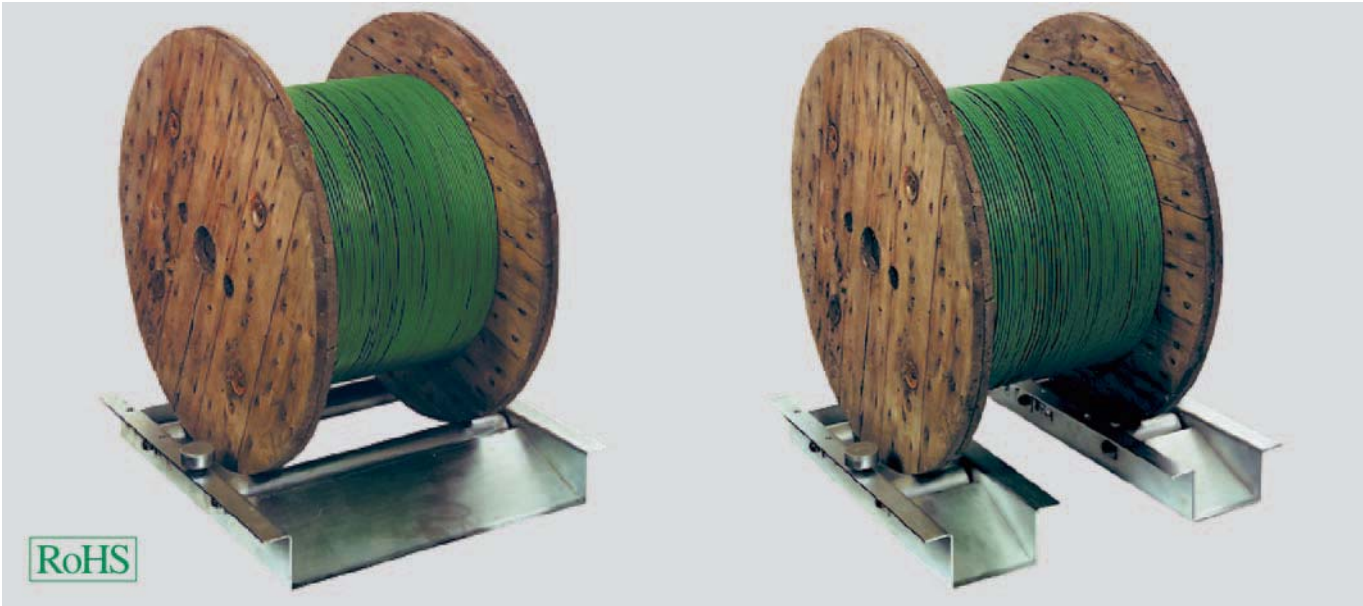
- Shaftless drum decoiler**  
**TROMBOI 500**  
 Pay-off for drums for different diameters and weights.
- solid construction
  - loading ramp
  - sturdy welded steel construction
  - specially suitable for one-way drums
  - ball bearing axles

| drum decoiler |                                      |                   |                  |                   |               |      |                               |       |        |
|---------------|--------------------------------------|-------------------|------------------|-------------------|---------------|------|-------------------------------|-------|--------|
| Part no.      | Type                                 | Weight approx. kg | Load capacity kg | Reel-Ø approx. mm | Reel width mm | Unit | Net EUR/item at a purchase of |       |        |
|               |                                      |                   |                  |                   |               |      | 1                             | 2 - 4 | 5 - 10 |
| 904760        | TROMBOI 500                          | 8,0               | 140              | 150 - 700         | 520           | 1    | o. r.                         | o. r. | o. r.  |
| 904761        | TROMBOI 500 castor (1 set = 4 items) | -                 | -                | -                 | -             | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice. o. r. = on request

# TROMBOI 800 / TROMBOI 1400 drum decoiler

shaftless



## Shaftless drum decoiler TROMBOI 800 / 1400

Pay-off for drums for different diameters and weights.

- compact design
- loading ramp
- sturdy welded steel construction
- specially suitable for one-way drums
- ball bearing axles

### drum decoiler

| Part no. | Type         | Weight approx. kg | Load capacity kg | Reel-Ø approx. mm | Reel width mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|-------------------|------------------|-------------------|---------------|------|-------------------------------|-------|--------|
|          |              |                   |                  |                   |               |      | 1                             | 2 - 4 | 5 - 10 |
| 904762   | TROMBOI 800  | 21,0              | 500              | 400 - 1000        | 580           | 1    | o. r.                         | o. r. | o. r.  |
| 904763   | TROMBOI 1400 | 25,1              | 1500             | 500 - 1800        | -             | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TROMBOI 7-10 / TROMBOI 9-14 drum decoiler

with axis



## Drum decoiler with axis TROMBOI 7-10 / 9-14

For drum handling at construction sites, when installing cables, at stock or shipping.

- Solid welded construction
- The sturdy axle holders have to be inserted and locked in a height suitable for the workable drum dimension.
- The drum axle has to be pushed through the drum.
- After having been rolled into the axle holder the drum has to be lifted by means of the manual hydraulic pump.

### Note

Additional axis on request

### drum decoiler

| Part no. | Type         | Weight approx. kg | Load capacity kg | Reel-Ø approx. mm | Reel width mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|-------------------|------------------|-------------------|---------------|------|-------------------------------|-------|--------|
|          |              |                   |                  |                   |               |      | 1                             | 2 - 4 | 5 - 10 |
| 904764   | TROMBOI 7-10 | 22,5              | 1000             | 700 - 1000        | -             | 1    | o. r.                         | o. r. | o. r.  |
| 904765   | TROMBOI 9-14 | 41,5              | 1700             | 900 - 1400        | -             | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TROMBOI 2003 drum decoiler

with axis



### Drum decoiler with axis TROMBOI 2003

For drum handling at construction sites, when installing cables, at stock or shipping.

- Solid welded construction
- The sturdy axle holders have to be inserted and locked in a height suitable for the workable drum dimension.
- The drum axle has to be pushed through the drum.
- After having been rolled into the axle holder the drum has to be lifted by means of the manual hydraulic pump.

### Note

Additional axis on request

### drum decoiler

| Part no. | Type         | Weight approx. kg | Load capacity kg | Reel-Ø approx. mm | Reel width mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|-------------------|------------------|-------------------|---------------|------|-------------------------------|-------|--------|
|          |              |                   |                  |                   |               |      | 1                             | 2 - 4 | 5 - 10 |
| 904766   | TROMBOI 2003 | 132,0             | 4000             | 710 - 2000        | -             | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TROMCAR 1000 / TROMCAR 1250 movable drum decoiler

with axis



## Movable drum decoiler with axis TROMCAR 1000 / 1250

Application: stock, construction site, installation department etc.

- Moving cable drums with robust lift-up tool. The drums are lifted and loaded by leverage.
- Lift-up clamp as handle.
- Extra sized wheels.

TROMCAR 1000 with 2 wheels and 2 footholds.

TROMCAR 1250 with 3 wheels.

### movable drum decoiler

| Part no. | Type         | Weight approx. kg | Load capacity kg | Reel-Ø approx. mm | Reel width mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|--------------|-------------------|------------------|-------------------|---------------|------|-------------------------------|-------|--------|
|          |              |                   |                  |                   |               |      | 1                             | 2 - 4 | 5 - 10 |
| 904767   | TROMCAR 1000 | 50,0              | 1000             | 500 - 1000        | 710           | 1    | o. r.                         | o. r. | o. r.  |
| 904768   | TROMCAR 1250 | 52,0              | 700              | 500 - 1250        | 1000          | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# TROMTRAK 1250

movable drum decoiler

with axis



## Movable drum decoiler with axis TROMTRAK 1250

For handling of cable drums.

- Two-fold embedded axis.
- Smooth operation by adjustable brake.
- Build-on lockable castors.

### movable drum decoiler

| Part no. | Type          | Weight<br>approx. kg | Load capacity<br>kg | Reel-Ø<br>approx. mm | Reel width<br>mm | Unit | Net EUR/item at a purchase of |       |        |
|----------|---------------|----------------------|---------------------|----------------------|------------------|------|-------------------------------|-------|--------|
|          |               |                      |                     |                      |                  |      | 1                             | 2 - 4 | 5 - 10 |
| 904769   | TROMTRAK 1250 | 58,0                 | 1000                | 630 - 1250           | 890              | 1    | o. r.                         | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# MESSBOI longimetry devices



## Longimetry devices MESSBOI M10, MESSBOI M30

To avoid material loss.

- simple design
- easy to operate
- calibration optional
- counter 9999,99m, with rest button
- repeat accuracy +/-2%

MESSBOI M10 stationary.

MESSBOI M30 stationary and portable.

### longimetry devices

| Part no. | Type            | Weight approx. kg | Cable Ø approx. mm | Unit | Net EUR/Item at a purchase of |       |        |
|----------|-----------------|-------------------|--------------------|------|-------------------------------|-------|--------|
|          |                 |                   |                    |      | 1                             | 2 - 4 | 5 - 10 |
| 97924    | MESSBOI M10     | 0,5               | 1 - 15             | 1    | o. r.                         | o. r. | o. r.  |
| 97775    | MESSBOI M30/012 | 2,2               | 1 - 30             | 1    | o. r.                         | o. r. | o. r.  |

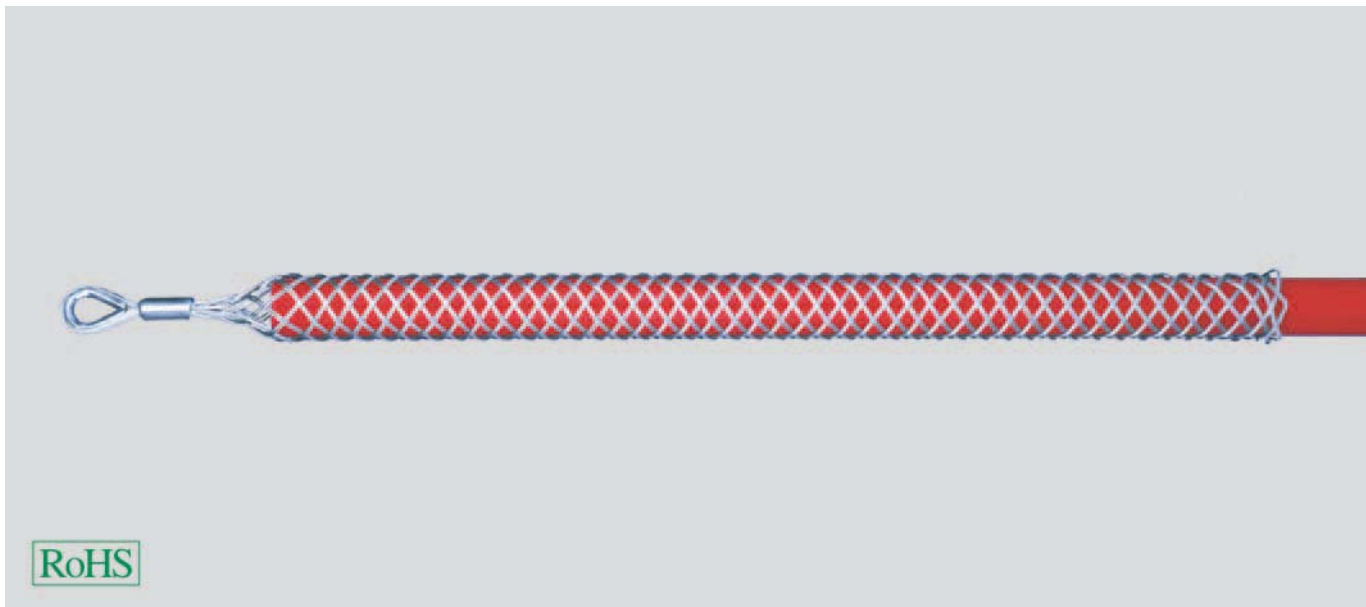
Dimensions and specifications may be changed without prior notice.

o. r. = on request



# cable grips to tape

new



## Cable grips with thimble and press clamp, closed

### Material

Stahl, verzinkt

This cable grip is used wherever cables with high tensile forces are routed.

- with thimble and press clamp
- self-tightening under tension load
- back-woven

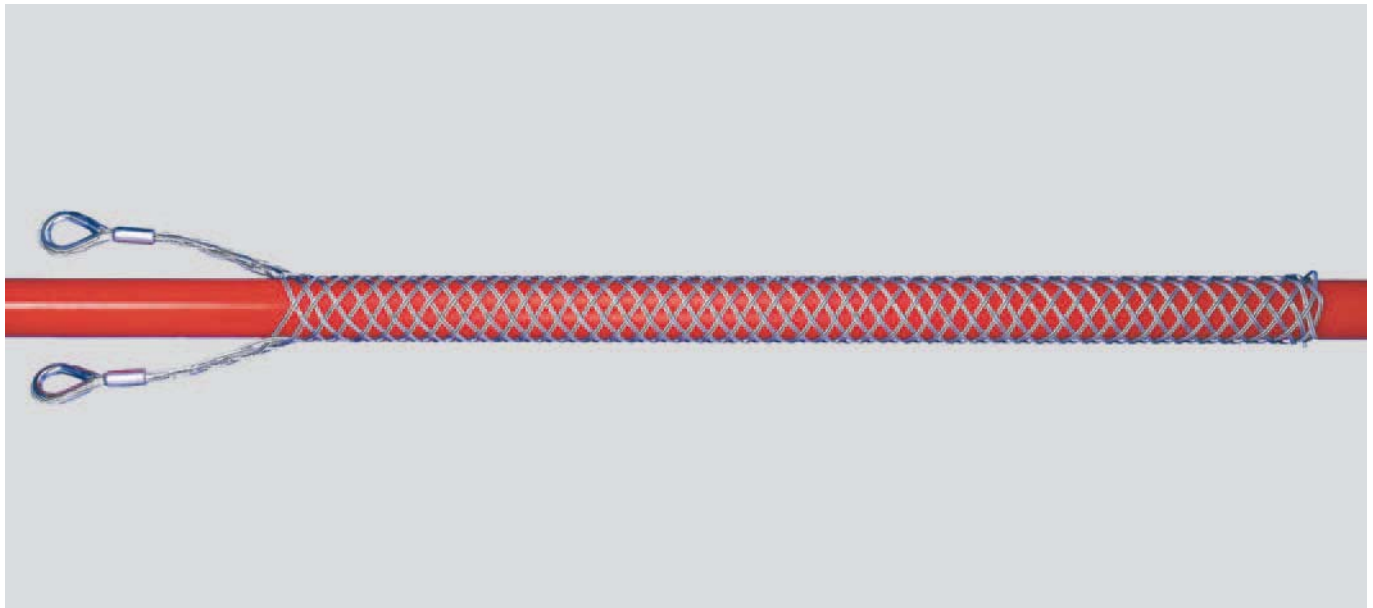
### cable grips with thimble

| Part no. | Min. inner Ø<br>mm | Max. inner Ø<br>mm | Unit | Net EUR/items at a purchase of |       |        |
|----------|--------------------|--------------------|------|--------------------------------|-------|--------|
|          |                    |                    |      | 1                              | 2 - 4 | 5 - 10 |
| 905891   | 6,0                | 10,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905892   | 10,0               | 15,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905893   | 15,0               | 20,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905375   | 20,0               | 25,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905371   | 30,0               | 40,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905376   | 25,0               | 30,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905894   | 40,0               | 50,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905163   | 50,0               | 60,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905895   | 60,0               | 70,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905896   | 70,0               | 90,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905897   | 90,0               | 110,0              | 1    | o. r.                          | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# cable grips to fleet



new

## Cable fleeting grips

This cable grip is used as a cable installation grip e.g., wherever cables are suspended vertically. Previously drawn cables can be re-drawn.

- with thimble and press clamp
- self-tightening under tension load
- back-woven

## Material

Stahl, verzinkt

## cable fleeting grips

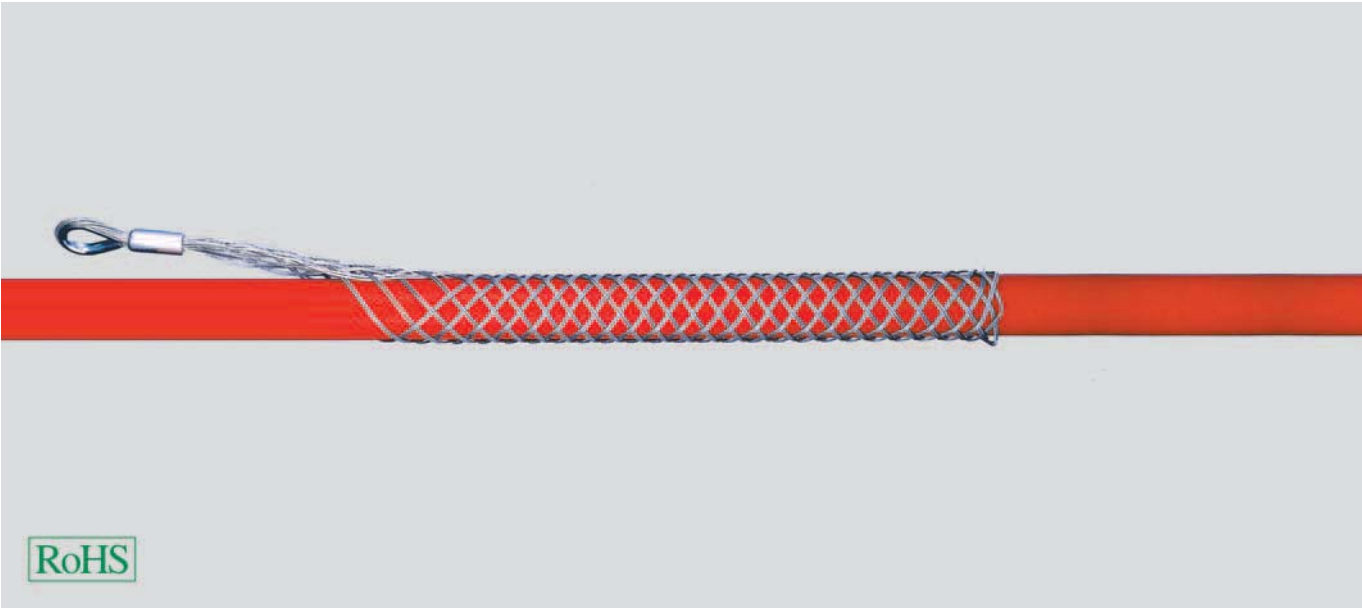
| Part no. | Min. inner Ø<br>mm | Max. inner Ø<br>mm | Unit | Net EUR/items at a purchase of |       |        |
|----------|--------------------|--------------------|------|--------------------------------|-------|--------|
|          |                    |                    |      | 1                              | 2 - 4 | 5 - 10 |
| 905898   | 6,0                | 10,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905899   | 10,0               | 15,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905900   | 15,0               | 20,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905901   | 20,0               | 25,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905902   | 25,0               | 30,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905903   | 30,0               | 40,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905904   | 40,0               | 50,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905905   | 50,0               | 60,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905906   | 60,0               | 70,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905907   | 70,0               | 90,0               | 1    | o. r.                          | o. r. | o. r.  |
| 905908   | 90,0               | 110,0              | 1    | o. r.                          | o. r. | o. r.  |

Dimensions and specifications may be changed without prior notice.

o. r. = on request

# cable grips to assemble

new



## Cable installation grips

Employed as a cable installation grip. For anti-slip installation of vertically attached cables.

- with thimble and press clamp
- self-tightening under tension load
- back-woven

## Material

Edelstahl 1.4401 / AISI 316

## cable grips

| Part no. | Min. inner Ø<br>mm | Max. inner Ø<br>mm | Unit | Net EUR/items at a purchase of |       |        |
|----------|--------------------|--------------------|------|--------------------------------|-------|--------|
|          |                    |                    |      | 1                              | 2 - 4 | 5 - 10 |
| 905909   | 8,0                | 10,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905601   | 10,0               | 15,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905602   | 15,0               | 20,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905603   | 20,0               | 25,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905604   | 25,0               | 30,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905597   | 30,0               | 40,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905605   | 40,0               | 50,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905606   | 50,0               | 60,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905607   | 60,0               | 70,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905918   | 70,0               | 90,0               | 1    | O. r.                          | O. r. | O. r.  |
| 905919   | 90,0               | 110,0              | 1    | O. r.                          | O. r. | O. r.  |

Dimensions and specifications may be changed without prior notice.

O. r. = on request



Photo: HELUKABEL®

## **HELUTECH®**

### **Signal and power connectors**

# HELUTEC® Signal and power connectors

|                                                           |     |
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# HELUTEC® – Quick and safe: Three technologies for easy handling



EMC  
IP 66/67  
-20G-  
VIBRATION PROOF



EMC  
IP 66/67  
-20G-  
VIBRATION PROOF

## The innovative HELUTEC®-system

This sensational quick connect system is as stable as it is reliable and saves precious time and installation costs. The vibration proof system was designed for connectors size M17, M23 and M40, which are included in the HELUTEC®-Series 617, 917, 623, 723, 923 and 940. HELUTEC® receptacle connectors are always compatible with a standard thread connector or alternatively with the innovative speedtec system – downward compatibility is guaranteed.

Slide on, turn, perfect fit!

Patented perfection included.

## The patented special development for the HELUTEC®-Serie 615/915

Is perfect when space is tight. The selflocking system can be connected comfortably even in confined space. The spring system in the coupling nut lets it slide on the mating connector and the prestressed spring mechanism locks securely. For disconnection it requires just a quarter turn and a slight pull on the connector. The connection is absolutely vibration proof. Accidental loosening is impossible. Specifically designed and patented for HELUTEC®-Series 615/915 connectors.



## The assembly-ready „overmold“ solution

The bond for life. Once the connector housing and the shell are united in the assembly process they can not be separated anymore. This would destroy the connector. Like any other standard overmold connector locktec connectors are manipulation proof and can not be tampered with in the field. It is compatible with all standard cable sizes and length. There are two types of connection techniques available: A standard thread or the patented proprietary fast-lock system. The overmold without overmold, bend relief already integrated. A great variety of pin layouts available.

# HELUTEC® – Functional design for harsh environments



## Frost protection down to -50 °C

A cool thing: HELUTEC® Connectors are temperature-resistant way down below freezing point and therefore predestined for special tasks in extreme climate zones. The electrical and mechanical characteristics remain stable, even when it gets hot. Intercontec connectors do not have a problem with 130 °C, they do not sweat. No matter if you are using a large size connector or a model from the smaller series. They withstand harsh conditions and keep their unique design.



## Protection classes IP 66/67 & 69K

Perfect for wetlands: Generally all HELUTEC® connectors are protected against water spray and temporary immersion. Every cable assembly with an is IP 66/67 protected. For special application in water or steam Intercontec offers a special qualification to reach IP 69K. In this process the cable clamp is fine tuned to the individual cable. Moisture does not have a chance.



## Protection class IP 68

Working under pressure: The HELUTEC® Series 615/915 are also capable of long-term missions under water. 120 hours at 15 meters under water with 1.5 bar pressure do not cause any problems, as tests have shown. Therefore the system is rated IP 68.



# HELUTEC®-Series 617 / 623 / 627

Signal connectors – Controlling and monitoring



Well-engineered, versatile, safe:  
Complicated applications where space is limited are a speciality of HELUTEC®. Wherever you need to transmit signals, control motors or monitor the functions of complex machines, HELUTEC® connectors Series 617, 623 and 627 do the job. A great variety of pin layouts in various kinds of connector housings are available. Even the classic HELUTEC® connector lines show time and again their innovative side when confronted with new applications.

## Properties:

- Drive Systems
- Robotics
- Mechanical Engineering
- Automation Mechatronics
- Medical/Chemical Engineering
- Packaging and Printing
- Aerospace
- Equipment Construction Machinery
- Railroad/ Transportation
- Shipbuilding
- Renewable Energies
- Lightning Sound Staging
- Food Industry
- Textile Industry

Technical data see table selection signal and power / hybrid on page 520 and 521  
For more detailed information and our online configurator see [www.helukabel.de](http://www.helukabel.de).

# HELUTEC®-Series 917 / 923 / 932 / 940 / 958

Powerful & safe: Power connectors



Extremely durable: HELUTEC®-power connectors reliably rev up drive motors, spindle drives and servomotors to high speed. With ease they can handle millions of start-stop manoeuvres. Voltage up to 630V and currents up to 200A are transmitted dependably in continuous operation and in the roughest of environments. Depending on the particular application the integration of 50mm<sup>2</sup> wires as well as small installation sizes are available from HELUTEC®, perfectly EMC shielded. Strong vibrations and sudden shocks do not pose a problem during daily operation, neither do heat, cold, moisture, dust and dirt. All connectors are tested in the test lab to safeguard the long-term durability in the field. Besides special stress tests (vibrations up to 50G) individual customer requirements are analysed in terms of adjustments to the installation situation and integrated system solutions.

## Properties:

- Drive Systems
- Robotics
- Mechanical Engineering
- Automation Mechatronics
- Medical/Chemical Engineering
- Packaging and Printing
- Aerospace
- Equipment Construction Machinery
- Railroad/ Transportation
- Shipbuilding
- Renewable Energies
- Lightning Sound Staging
- Food Industry
- Textile Industry

Technical data see table selection signal and power / hybrid on page 520 and 521  
For more detailed information and our online configurator see [www.helukabel.de](http://www.helukabel.de).

# HELUTEC®-Series 723

The unique and first hybrid connector with bus modul



Full speed ahead with five power and six signal contacts plus one quadrax element. The latter provides for fast Industrial Ethernet connections in real time mode and opens completely new possibilities with its ready-to-assemble, separately shielded Ethernet element. For the first time this system meets requirements for higher electric strength. When daisy-chaining decentrally controlled servo motors for example, it is possible to run 850VDC. Therefore the super-hybrid connector size M23 can also handle 30A of current and a wire cross section up to 4mm<sup>2</sup>.

The superior technical data speak for themselves as well as the many versions that are available: No matter if you prefer straight, angled or continuously rotatable connector housings – the HELUTEC® connector is the new star on the horizon for applications in automation technology.

## Hinweise:

High-speed data transmission at a variety of field bus systems is possible.



**CANopen**

**DeviceNet**

**EtherCAT**  
Technology Group

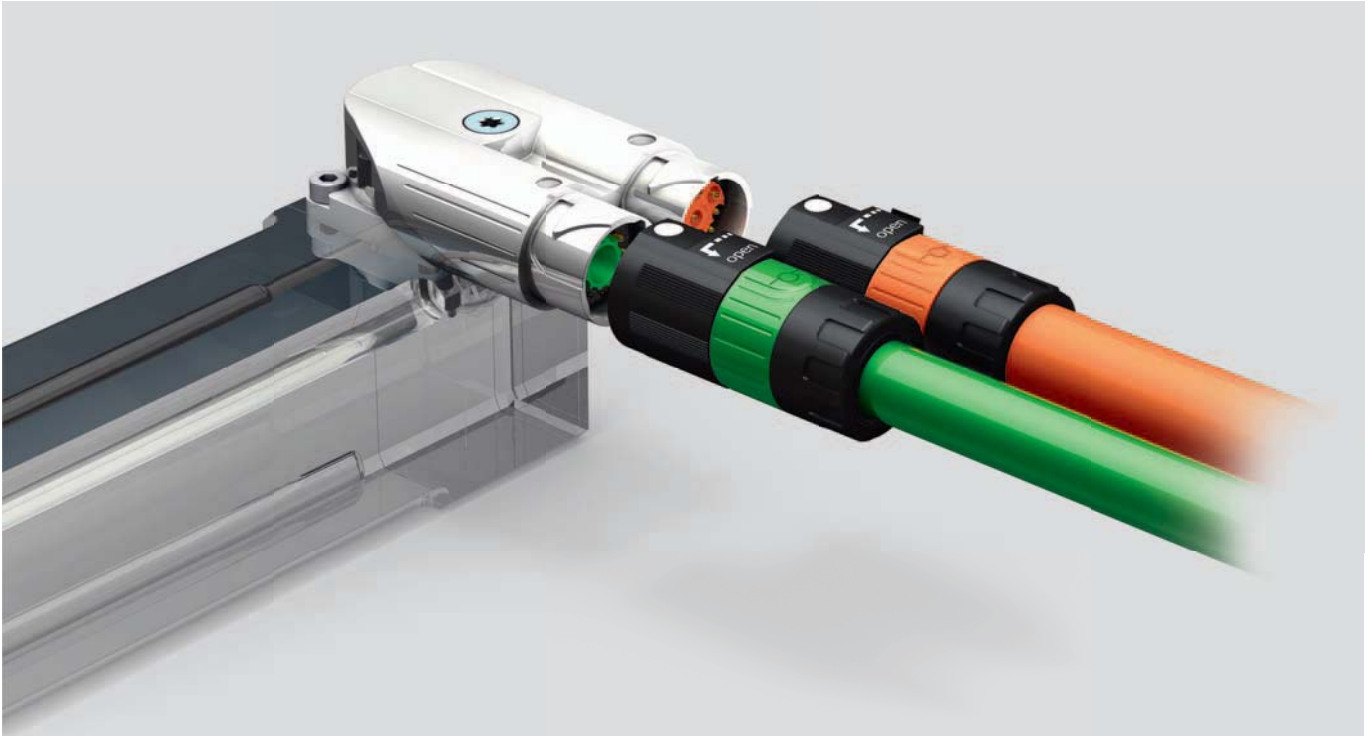


**PROFI**  
**BUS**

Technical data see table selection signal and power / hybrid on page 520 and 521  
For more detailed information and our online configurator see [www.helukabel.de](http://www.helukabel.de).

# HELUTEC®-Series 615 / 915

Tiny connectors for small space



Small in size yet great in performance: The system impresses with high performance in a small format. Only one mounting hole is required to realize a combination of power and signal connection or power and bus connection on a small motor. The optimal partition of connector lid and connector housing creates a lot of room inside the connector for the assembly process. Mechanical as well as color codings provide additional safety. Contact assembly has never been easier. Except for crimping the system requires no special tools. After installation the system remains 300° continuously rotatable thus allowing the user to choose the most convenient direction of cable outlet.

The single version offers the same characteristics as its big brother and is available as signal or power connector. Thus it is perfectly suitable for miniaturized applications, where space is critical and room for cabling limited. There is no easier way to establish safe connections today.

## Properties:

- EMC
- IP 66/67
- -20G-  
VI-BRATION PROOF
-  **UL** US

# HELUTEC®-Series 926

A plastic connector for stage and lightning



Curtains up for the Series 926 and for everybody who stands in the limelight treading the boards! These connectors are a shining example for an innovative, reliable and easy to use plastic connector. They proudly serve and make sure everybody and everything appears in the right light.

Safety is a top-priority: Lightning and stage technicians must be protected from electric shock when handling cables and equipment.

The solid plastic design, flame retardant according to UL 94 VO and the modern connection method with a one hand push-pull mechanism point the way into the future. Connectors are also clearly coded facilitating fast and intuitive handling. But the Series 926 connectors are not limited to the show biz.

With 630 V rated voltage and 66 A rated current while ready to take on 16 mm<sup>2</sup> wires and protecting everything IP 66/67 they have the power to shine in other areas as well. Offshore and marine applications from oil rigs and wind turbines to any kind of seafaring vessel are only examples for the capabilities of this system.

## Properties:

- IP 66/67

# Tools and accessories

## Crimping pliers



### CRIMPING PLIERS A, B AND F SERIES

#### Manual crimping pliers

for Ø 1 mm contacts  
max. crimping range 1 mm<sup>2</sup>  
including positioning insert  
[Order-no C0.101.00](#)



### CRIMPING PLIERS A, B, C, D AND F SERIES

#### Manual crimping pliers

for Ø 1 mm contacts and Ø 2 mm  
contacts max. crimping range 4 mm<sup>2</sup>  
[Order-no. C0.201.00](#)



**Positioning insert**  
for Ø 1 mm contacts  
[Order-no. C0.003.00](#)



**Positioning insert**  
for Ø 2 mm contacts  
[Order-no. C0.004.00](#)



**Positioning insert**  
for Ø 1 mm and  
Ø 2 mm contacts  
[Order-no. C0.009.00](#)



# Tools and accessories

## Crimping pliers



### CRIMPING PLIERS M17 SERIES

#### Manual crimping pliers

for Ø 0.6 mm contacts  
max. crimping range 0.5 mm<sup>2</sup>  
including positioning insert

Order-no. C0.231.00



#### Positioning insert

for Ø 0.6 mm contacts suitable  
for crimping pliers C0.101.00

Order-no. C0.228.00



### CRIMPING PLIERS C SERIES

#### Manual crimping pliers

for Ø 3.6 mm contacts  
max. crimping range 16 mm<sup>2</sup>

Order-no. C0.008.00



#### Positioniereinsatz

für Ø 3,6 mm Kontakte

Order-no. C0.010.00



# Tools and accessories

## Crimping pliers



### PNEUMATIC CRIMPER

for Ø 3.6 mm and Ø 2.0 mm contacts,  
crimping range 1.5 - 16 mm<sup>2</sup>

Order-no. C0.044.00



**Crimping Insert**  
for crimper C0.044.00



**Locator**  
for crimper C0.044.00

| Order-no. | Contact              | Crimping range            |
|-----------|----------------------|---------------------------|
| C0.042.00 | Male Ø 2.0 mm        | 1.5 / 2.5 mm <sup>2</sup> |
| C0.041.00 | Female Ø 3.6 mm      | 1.5 / 2.5 mm <sup>2</sup> |
| C0.040.00 | Male/female Ø 3.6 mm | 4.0 / 6.0 mm <sup>2</sup> |
| C0.043.00 | Male/female Ø 3.6 mm | 10.0 mm <sup>2</sup>      |
| C0.233.00 | Male/female Ø 3.6 mm | 16.0 mm <sup>2</sup>      |

| Order-no. | Contact              | Crimping range             |
|-----------|----------------------|----------------------------|
| C0.036.00 | Male/female Ø 2.0 mm | 1.5 / 2.5 mm <sup>2</sup>  |
| C0.037.00 | Male/female Ø 3.6 mm | 1.5 - 10.0 mm <sup>2</sup> |
| C0.038.00 | Male/female Ø 3.6 mm | 1.5 - 16.0 mm <sup>2</sup> |



### BATTERY POWERED CRIMPING PLIERS S AND D SERIES

**B131-C**

Order-no. C0.207.00



**Crimping inserts**  
max. 10 mm<sup>2</sup>, 16 mm<sup>2</sup>  
Order-no. C0.211.00



**Crimping inserts**  
max. 25 mm<sup>2</sup>  
Order-no. C0.210.00



**Crimping inserts**  
max. 35 mm<sup>2</sup>  
Order-no. C0.209.00



**Crimping inserts**  
max. 50 mm<sup>2</sup>  
Order-no. C0.208.00

# Tools and accessories

## Crimping pliers



### CRIMPING PLIERS FOR REEL FEED CONTACTS FOR A AND F SERIES

**Manual crimping pliers for reel feed Ø 1 mm**

Crimping range: 0.03 - 1.0 mm<sup>2</sup>

Order-no. [C0.237.00](#)



Reel feed male contacts 1 mm

| Order-no.     | Crimping range              |
|---------------|-----------------------------|
| 61.170.80.025 | 0.03 - 0.08 mm <sup>2</sup> |
| 61.171.80.025 | 0.08 - 0.20 mm <sup>2</sup> |
| 61.172.80.025 | 0.20 - 0.52 mm <sup>2</sup> |
| 61.173.80.025 | 0.75 - 1.00 mm <sup>2</sup> |

Unit: 10 x 25 pcs.



Reel feed female contacts 1 mm

| Order-no.     | Crimping range              |
|---------------|-----------------------------|
| 60.198.80.021 | 0.03 - 0.08 mm <sup>2</sup> |
| 60.199.80.021 | 0.08 - 0.20 mm <sup>2</sup> |
| 60.200.80.021 | 0.20 - 0.52 mm <sup>2</sup> |
| 60.201.80.021 | 0.75 - 1.00 mm <sup>2</sup> |

Unit: 10 x 25 pcs.



### CRIMPING PLIERS FOR REEL FEED FEMALE CONTACTS B UND C SERIES

**Manual crimping pliers for reel feed contacts Ø 2 mm**

Crimping range: 1.5 - 2.5 mm<sup>2</sup>

Order-no. [C0.073.00](#)

**Manual crimping pliers for reel feed contacts Ø 2 mm**

Crimping range: 0.5 - 1.0 mm<sup>2</sup>

Order-no. [C0.072.00](#)

■ Unit not included



**Reel feed female contact Ø 2 mm**

Crimping range: 0.5 - 2.5 mm<sup>2</sup>

Order-no. [60.046.21.015](#)

**Packaging unit:**

200 pcs. reel feed female contacts per unit

# Tools and accessories

Stripping and crimping machine



**STRIPPING AND CRIMPING MACHINE  
STRIPCRIMP 750 FOR A, B, C AND F SERIES  
B131-C**  
Order-no. WA10043

| Order-no.                                             | Reel feed      | Crimping range              | Crimping size | Tool-no. |
|-------------------------------------------------------|----------------|-----------------------------|---------------|----------|
| contacts 1 mm                                         |                |                             |               |          |
| 60.198.80                                             | female contact | 0.03 - 0.08 mm <sup>2</sup> | 1             | WM10241  |
| 60.199.80                                             | female contact | 0.08 - 0.20 mm <sup>2</sup> | 2             | WM10242  |
| 60.200.80                                             | female contact | 0.20 - 0.52 mm <sup>2</sup> | 3             | WM10243  |
| 60.201.80                                             | female contact | 0.75 - 1.00 mm <sup>2</sup> | 4             | WM10244  |
| 61.170.80                                             | male contact   | 0.03 - 0.08 mm <sup>2</sup> | 1             | WM10241  |
| 61.171.80                                             | male contact   | 0.08 - 0.20 mm <sup>2</sup> | 2             | WM10242  |
| 61.172.80                                             | male contact   | 0.20 - 0.52 mm <sup>2</sup> | 3             | WM10243  |
| 61.173.80                                             | male contact   | 0.75 - 1.00 mm <sup>2</sup> | 4             | WM10244  |
| Packaging unit: 7000 pcs. reel feed contacts per unit |                |                             |               |          |
| contacts 2 mm                                         |                |                             |               |          |
| 60.046.21                                             | female contact | 0.50 - 2.50 mm <sup>2</sup> |               | WM10246  |
| Packaging unit: 3000 pcs. reel feed contacts per unit |                |                             |               |          |



## HELUTECH® Hightech connector solutions

HELUTECH® – the new cable accessory program from HELUKABEL®. Signal and power circular connector series for industrial applications.

### Our Online Service: [www.helutec.de](http://www.helutec.de)

Test our **Connector Configurator** at [www.helutec.de](http://www.helutec.de). This online service allows you to configure standard types of HELUTECH® industrial connectors.



**HELUTECH®**  
Industrial connectors

**HELUTECH® is  
also available  
pre-assembled.**

Any questions? Please contact us directly:

For further information, please order our detailed HELUTECH® technical documentation.

# Selection Guide

| Application   | Technical Data  |                        |                 |                          |                                                 |                                                             | Series | Type       |
|---------------|-----------------|------------------------|-----------------|--------------------------|-------------------------------------------------|-------------------------------------------------------------|--------|------------|
|               | Ampacity (in A) | Nominal voltage (in V) | Pin arrangement | Contact diameter (in mm) | Max. termination diameter (in mm <sup>2</sup> ) | Max cable clamp diameter (in mm)<br>special sizes on demand |        |            |
| <b>Signal</b> | 5               | 63                     | 12              | 1                        | 1                                               | 4.5 - 12                                                    | 615    | on request |
|               | 5 / 14          | 63                     | 15 (12+3)       | 1                        | 0.75/1.5                                        | 4.5 - 12                                                    |        | on request |
|               | 9               | 40                     | 7               | 1                        | 1                                               | 4 - 8                                                       |        | on request |
| <b>Signal</b> | 7               | 32                     | 12              | 1                        | 1                                               | 3.5 - 12                                                    | 617    | M17        |
|               | 3.6             | 63                     | 17              | 0.6                      | 0.5                                             | 3.5 - 12                                                    |        | M17        |
| <b>Signal</b> | 20              | 32                     | 6/7             | 2                        | 2.5                                             | 3.5 - 17                                                    | 623    | M23        |
|               | 10              | 160                    | 9 (8+1)         | 1/2                      | 1/2.5                                           | 3.5 - 17                                                    |        | M23        |
|               | 10              | 160                    | 9               | 1                        | 1                                               | 3.5 - 17                                                    |        | M23        |
|               | 9               | 125                    | 10              | 1                        | 1                                               | 3.5 - 17                                                    |        | M23        |
|               | 7               | 160                    | 12              | 1                        | 1                                               | 3.5 - 17                                                    |        | M23        |
|               | 7               | 125                    | 17              | 1                        | 1                                               | 3.5 - 17                                                    |        | M23        |
|               | 7               | 63                     | 19 (16+3)       | 1/1.5                    | 1/1.5                                           | 3.5 - 17                                                    |        | M23        |
|               | 7               | 63                     | 19 (15+4)       | 1                        | 1                                               | 4.2 - 17                                                    |        | twintec B  |
| <b>Signal</b> | 9               | 60                     | 26              | 1                        | 1.5                                             | 4.2 - 17                                                    | 627    | M27        |

# Selection Guide

| Application  | Technical Data  |                        |                 |                          |                                                 |                                                             | Series | Type       |
|--------------|-----------------|------------------------|-----------------|--------------------------|-------------------------------------------------|-------------------------------------------------------------|--------|------------|
|              | Ampacity (in A) | Nominal voltage (in V) | Pin arrangement | Contact diameter (in mm) | Max. termination diameter (in mm <sup>2</sup> ) | Max cable clamp diameter (in mm)<br>special sizes on demand |        |            |
| <b>Power</b> | 14/3.6          | 630/63                 | 9 (4+5)         | 1                        | 0.75/1.5                                        | 4.5 - 12                                                    | 915    | on request |
| <b>Power</b> | 20              | 630                    | 4               | 1.5                      | 2.5                                             | 3.5 - 12                                                    | 917    | M17        |
|              | 14              | 630                    | 7               | 1                        | 1.5                                             | 3.5 - 12                                                    |        | M17        |
|              | 14/3.6          | 630/63                 | 9 (4+5)         | 1                        | 0.75/1.5                                        | 3.5 - 12                                                    |        | M17        |
|              | 64              | 630                    | 1               | 3.6                      | 10                                              | 3.5 - 12                                                    |        | singletec  |
| <b>Power</b> | 30              | 630                    | 6               | 2                        | 4                                               | 4.2 - 17                                                    | 623    | M23        |
|              | 30              | 630/250                | 8 (4+4)         | 2/1                      | 4/1.5                                           | 4.2 - 17                                                    |        | M23        |
|              | 30              | 630/250                | 9 (4+5)         | 2/1                      | 4/1.5                                           | 4.2 - 17                                                    |        | M23        |
|              | 200             | 630                    | 1               | 8                        | 50                                              | 4.2 - 17                                                    |        | singletec  |
| <b>Power</b> | 66              | 630                    | 3               | 3                        | 16                                              | 4.2 - 14.5                                                  | 926    | eltec      |
| <b>Power</b> | 75/30           | 630/250                | 6 (4+2)         | 3.6/2                    | 16/4                                            | 7 - 25                                                      | 940    | M40        |
|              | 75/30           | 630/250                | 8 (4+4)         | 3.6/2                    | 16/4                                            | 7 - 25                                                      |        | M40        |
|              | 75/30           | 630/250                | 9 (4+5)         | 3.6/2                    | 16/4                                            | 7 - 25                                                      |        | M40        |
| <b>Power</b> | 150/12          | 630/250                | 8 (4+4)         | 10/1.6                   | 50/1.5                                          | 17 - 36                                                     | 958    | M58        |



# **HELUTEC® industrial plug connectors – also available from us pre-assembled.**

Simply ask – we are happy to help.  
Tel. +49 7150/9209-756, -140





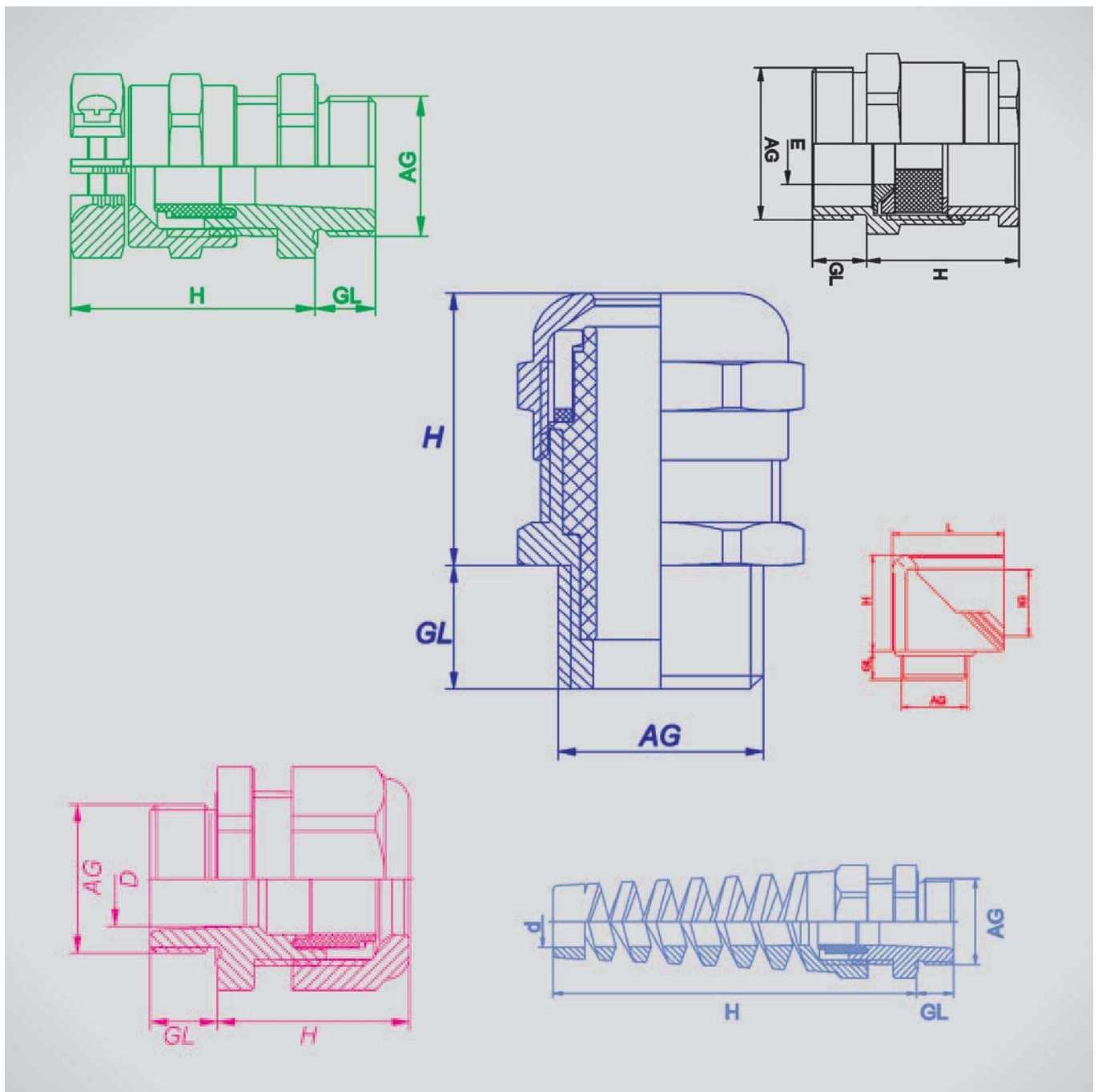


Photo: HELUKABEL®

## Technical information

# Technical information

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# General information

## Basic functions of a cable gland

### Transferring cables and wires

- Power (electricity)
- Signals and data (current, voltage, light)

### Cable protection

If a wire is to be connected in a housing, the housing must have a protective lead-through. Otherwise there is a danger that the wire will become damaged in case of movement.

### Strain relief

A wire always moves to a greater or lesser extent – both during installation, and in long-term use. It is important to protect it against tensile loads. The movements may be either constant or intermittent. For this reason, a cable gland with strain relief is necessary.

Strain reliefs are described in EN 50262. A distinction is made between retention, strain relief A and strain relief B. Generally, cable glands have strain relief A.

### Protection classification

The lead-through in the wall of the housing must be sealed. This is described by ingress protection IP. The cable glands presented here have protection classification IP 68 – 5 bar. The 6 stands for “No dust penetration”, while the 8 stands for “Protected when permanently submerged in water” – this is tested at a water pressure of 5 bar (corresponds to 50 m water depth) for a duration of 30 min.

### Seal with insert

A seal is compressed by tightening the cap nut. A particularly high quality seal and strain relief are achieved.

### Sealing with clamping plates

When the cap nuts are screwed tight, lamellae press against the moulded seal – the wire is thereby sealed and the strain is relieved. The particular advantage of the clamping lamellae is that they make a large clamping range possible, to allow for different wire diameters.

### Resistance

Different applications demand different degrees of resistance.

Plastic cable glands made from polyamide can be used at a temperature range of between -20 °C and +100 °C. They are abrasion- and impact resistant as well as being resistant against hydrocarbons/fuels and cleaning agents.

Stainless steel glands are suitable for heavy-duty use– they are waterproof and resistant to a large number of disinfectants used in food production. Brass glands are used when a long-lasting metal gland is required. Cable glands for EMC applications are also made from brass (EMC = Electro-magnetic Compatibility).

### Compact design

- No disassembly during final assembly. Simply loosening the cap nuts is sufficient.
- No losing components
- Quick assembly

### Standard EN 50262

Cable glands are produced and tested according to the standard EN 50262. This stipulates the dimensions of the connection threads (“metric threaded connection”) as well as a series of safety-relevant parameters, e.g. strain relief. Cable glands are also available with another threaded connection (PG, NPT, etc.).

### RoHS

Directive 2002/95/EC defines environment-relevant standards for electrical and electronic components and devices. This is known as RoHS for short: „Restriction of the use of certain hazardous substances in electrical and electronic equipment”. The use of heavy metals (lead, cadmium, etc.) and a number of other hazardous substances is forbidden.

# Installation notes

## **No disassembly**

Disassembly of the glands HELUTOP® HT, HSK, Helufast, UNI-DICHT, KVA, SD are not necessary – provided that the cap nut is applied in such a way as to allow smooth running, there is no problem with subsequent insertion of the cable.

## **Screwing in**

When screwing, observe the necessary tightening torque. If only one through-hole without thread is available, a lock nut must be used.

## **Protection classification**

In order to achieve the desired protection classification even when working with an unfavourable surface, it may be necessary to use an O-ring or a connection thread gasket. To ensure a consistently high-quality seal, we recommend re-tightening the gland some time after assembly.

**Lead through cable – turn cap nut – that's all there is to it!**

# Approval to HELUTOP® HT

## HELUTOP® HT-M cable gland from polyamide, metric thread

Approval certificate no. 138040

Approval certificate no. 134171

Type designation BM (corresponding to HELUTOP® HT-M)

For all products:

Temperature range: -20°C / +80°

Protection classification: IP 68 - 5bar (30min.)

| Size<br>metric | Sealing range<br>mm | Clamping range of<br>Strain relief<br>mm | Category of<br>Strain relief | Installation torque<br>tested to EN 50262*<br>Nm | Category of<br>Impact effect |
|----------------|---------------------|------------------------------------------|------------------------------|--------------------------------------------------|------------------------------|
| M12x1,5        | 3-6                 | 3-6                                      | A                            | 1,7/2,5                                          | 2                            |
| M16x1,5        | 4-8                 | 4-8                                      | A                            | 2,5/3,75                                         | 2                            |
| M16x1,5        | 5-10                | 5-10                                     | A                            | 2,5/3,75                                         | 2                            |
| M20x1,5        | 6-12                | 6-12                                     | A                            | 3,3/3,75                                         | 2                            |
| M20x1,5        | 10-14               | 10-14                                    | A                            | 3,3/3,75                                         | 2                            |
| M25x1,5        | 12-17               | 12-17                                    | A                            | 5,0/7,5                                          | 2                            |
| M25x1,5        | 13-18               | 13-18                                    | A                            | 5,0/7,5                                          | 2                            |
| M32x1,5        | 15-21               | 15-21                                    | A                            | 12/7,5                                           | 4                            |
| M32x1,5        | 18-25               | 18-25                                    | A                            | 12/7,5                                           | 4                            |
| M40x1,5        | 19-28               | 19-28                                    | A                            | 12/7,5                                           | 4                            |
| M40x1,5        | 22-31               | 22-31                                    | A                            | 12/7,5                                           | 4                            |
| M50x1,5        | 30-36               | 30-36                                    | A                            | 12/7,5                                           | 4                            |
| M63x1,5        | 34-44               | 34-44                                    | A                            | 12/7,5                                           | 4                            |
| M63x1,5        | 35-44               | 35-44                                    | A                            | 12/7,5                                           | 4                            |

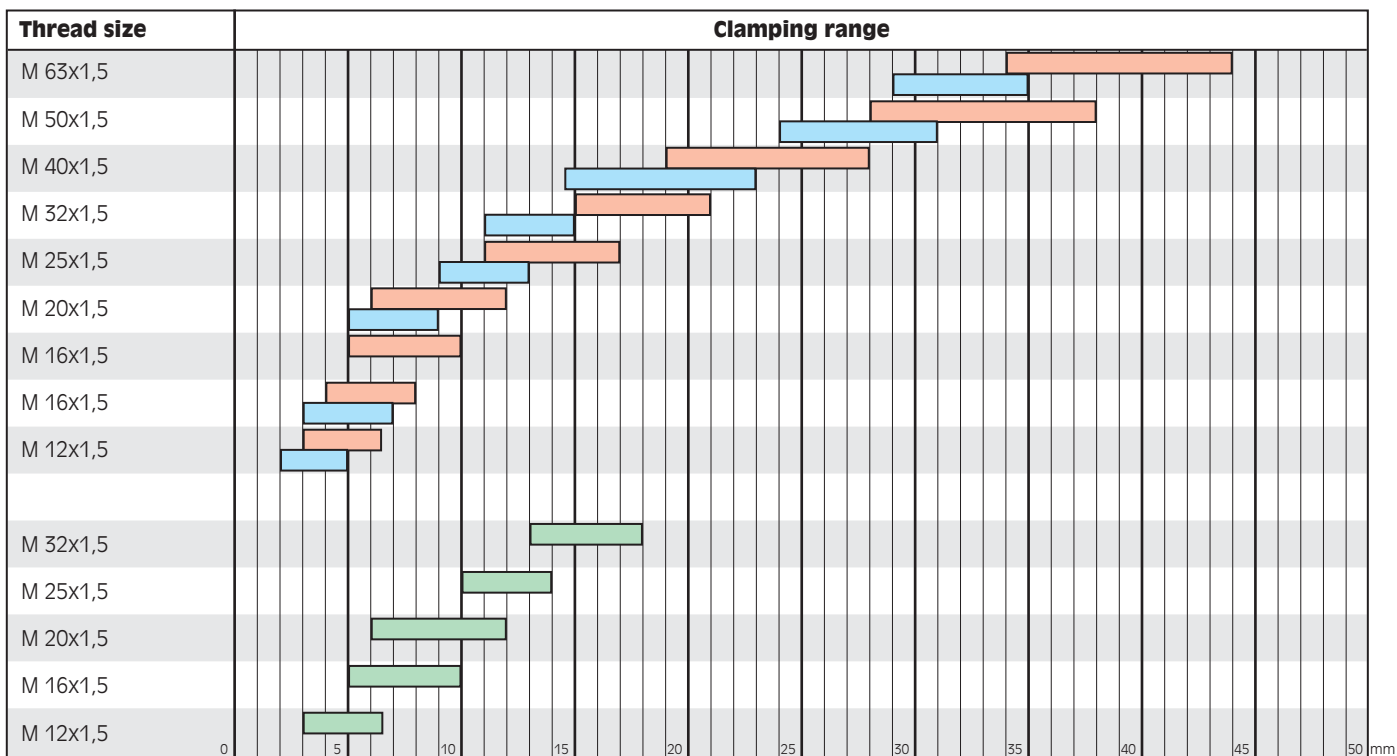
\*Cap nut/gland and/or locknut

|                          |                   |             | VDE | UR/UL | CSA(US) |
|--------------------------|-------------------|-------------|-----|-------|---------|
| Helutop HT               | metrical          | M12 - M16   | VDE | -     | CSA(US) |
|                          |                   | M20         |     | UL    |         |
|                          |                   | M32 - M63   |     | -     |         |
|                          | PG                |             | -   |       |         |
|                          | NPT               | 1/4" - 1"   | -   | -     |         |
| Helutop HT-R             | metrical, reduced | M12 - M63   | -   | -     | CSA(US) |
| Helutop HT-BS            | metrical          | M12 - M16   | VDE | -     | CSA(US) |
|                          |                   | M20         |     | UL    |         |
|                          |                   | M32 - M63   |     | -     |         |
| Helutop HT-K             | metrical          | M12 - M63   | -   | -     | CSA(US) |
|                          | PG                |             | -   | -     |         |
|                          | NPT               | 1/4" - 1"   | -   | -     |         |
| Helutop-HT-MS            | metrical          | M12 - M16   | -   | UR    | -       |
|                          |                   | M20 - M63   |     | UL    |         |
|                          | PG                |             | -   | -     |         |
|                          | NPT               | 1/4" - 3/8" | -   | UR    |         |
|                          |                   | 1/2"        |     | UL    |         |
|                          |                   | 3/4" - 1"   |     | -     |         |
| Helutop MS-EP            | metrical          | M12 - M16   | -   | UR    | -       |
|                          |                   | M20 - M63   |     | UL    |         |
|                          | NPT               | 1/4" - 3/8" | -   | UR    |         |
|                          |                   | 1/2"        |     | UL    |         |
|                          |                   | 3/4" - 1"   |     | -     |         |
| Helutop MS-E             | PG                |             | -   | -     | -       |
| Helutop HT-E             | metrical          | M12 - M16   | -   | UR    | -       |
|                          |                   | M20 - M63   |     | UL    |         |
|                          | PG                |             | -   | -     |         |
|                          | NPT               | 1/4" - 3/8" | -   | UR    |         |
|                          |                   | 1/2"        |     | UL    |         |
|                          |                   | 3/4" - 1"   |     | -     |         |
| Updated: 15 October 2007 |                   |             |     |       |         |

# Clamping ranges HELUTOP® HT

## Clamping ranges

|                                                                                                                  | Gland type                                                                            |                                       |                           |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------|---------------------------|
| Polyamide<br>Polyamide, with pre-assembled blind plug<br>Stainless steel<br>Brass<br>Brass, for EMC applications | HELUTOP® HT<br>HELUTOP® HT-BS<br>HELUTOP® HT-E<br>HELUTOP® HT-MS<br>HELUTOP® HT-MS-EP | HELUTOP® HT-R<br><br>HELUTOP® HT-MS-R | HELUTOP® HT-K             |
| Thread size                                                                                                      | Standard                                                                              | reduced sealing                       | with anti-kink protection |
| M 12x1,5                                                                                                         | 3,0 - 6,5 mm                                                                          | 2,0 - 5,0 mm                          | 3,0 - 6,5 mm              |
| M 16x1,5                                                                                                         | 4,0 - 8,0 mm                                                                          | 3,0 - 7,0 mm                          |                           |
| M 16x1,5                                                                                                         | 5,0 - 10,0 mm                                                                         |                                       | 5,0 - 10,0 mm             |
| M 20x1,5                                                                                                         | 6,0 - 12,0 mm                                                                         | 5,0 - 9,0 mm                          | 6,0 - 12,0 mm             |
| M 25x1,5                                                                                                         | 11,0 - 17,0 mm                                                                        | 9,0 - 13,0 mm                         | 10,0 - 14,0 mm            |
| M 32x1,5                                                                                                         | 15,0 - 21,0 mm                                                                        | 11,0 - 15,0 mm                        | 13,0 - 18,0 mm            |
| M 40x1,5                                                                                                         | 19,0 - 28,0 mm                                                                        | 14,5 - 23,0 mm                        |                           |
| M 50x1,5                                                                                                         | 28,0 - 38,0 mm                                                                        | 24,0 - 31,0 mm                        |                           |
| M 63x1,5                                                                                                         | 34,0 - 44,0 mm                                                                        | 29,0 - 35,0 mm                        |                           |



# Protection classifications to EN 60529

## Definition of protection classifications to EN 60529

The protection classifications are indicated by a code, which always begins with the letters IP and ends with the number for the protection level, e.g. IP 54.

| Protection level against solid foreign bodies                                                                                                                                                                                                         |                                                                       |                                                                                                                                         | Protection level against water |                                                                           |                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| First number                                                                                                                                                                                                                                          | Short description                                                     | Definition                                                                                                                              | Second number                  | Short description                                                         | Definition                                                                                                                                          |
| 0                                                                                                                                                                                                                                                     | Not protected                                                         | The object sensor, a 50 mm ball, must not fully penetrate.                                                                              | 0                              | Not protected                                                             | Vertically-falling droplets must not have a damaging effect.                                                                                        |
| 1                                                                                                                                                                                                                                                     | Protected against solid foreign bodies of 50 mm diameter and larger   | The object sensor, a 12.5 mm ball, must not fully penetrate.                                                                            | 1                              | Protected against dripping water                                          | Vertically-falling droplets must not have a damaging effect if the housing is tilted by an angle of up to 150° on both sides of the perpendiculars. |
| 2                                                                                                                                                                                                                                                     | Protected against solid foreign bodies of 12.5 mm diameter and larger | The object sensor, a 2.5 mm diameter ball, must not penetrate at all.                                                                   | 2                              | Protection against dripping water if the housing is tilted by up to 150°. | Water sprayed at both sides of the perpendiculars at an angle of up to 60° must not have a damaging effect.                                         |
| 3                                                                                                                                                                                                                                                     | Protected against solid foreign bodies of 2.5 mm diameter and larger  | The object sensor, a 2.5 mm diameter ball, must not penetrate at all.                                                                   | 3                              | Protected against spray water                                             | Water sprayed against the housing from one direction must not have a damaging effect.                                                               |
| 4                                                                                                                                                                                                                                                     | Protected against solid foreign bodies of 1.0 mm diameter and larger  | The object sensor, a 1.0 mm diameter ball, must not penetrate at all.                                                                   | 4                              | Protected against spray water                                             | Water sprayed against the housing in a jet from every direction must not have a damaging effect.                                                    |
| 5                                                                                                                                                                                                                                                     | Dust protected                                                        | Dust penetration is not prevented completely. The amount of penetration, however, must not impair the function or safety of the device. | 5                              | Protected against                                                         | Water sprayed against the housing in a strong jet from every direction must not have a damaging effect.                                             |
| 6                                                                                                                                                                                                                                                     | Dust protected                                                        | No dust penetration                                                                                                                     | 6                              | Protected against strong hose water                                       | Water sprayed against the housing in a strong jet from every direction must not have a damaging effect.                                             |
| <div> <div>Example:<br/>Letters</div> <div>IP 65</div> <div> <div>First index:</div> <div>Second index:</div> </div> <div> <div>Protection against contact and penetration by foreign bodies</div> <div>Protection against liquid</div> </div> </div> |                                                                       |                                                                                                                                         | 7                              | Protected against the effect when temporarily submerged under water       | The volume of penetrating water must not have a damaging effect when the housing is temporarily submerged under water at a certain pressure.        |
|                                                                                                                                                                                                                                                       |                                                                       |                                                                                                                                         | 8                              | Protected against the effect when permanently submerged under water       | The volume of penetrating water must not have a damaging effect when the housing is permanently submerged under water.                              |
|                                                                                                                                                                                                                                                       |                                                                       |                                                                                                                                         | 9k                             | Protected against the effect of water from high-pressure cleaners.        | Water sprayed against the enclosure in a jet at increased pressure from every direction must not have any damaging effects.                         |



# Description of fire protection acc. to UL 94

## Description of Fire Protection acc. to UL 94

### Fire protection HB

In the horizontal combustion test, the material combusts slowly. Must not exceed a combustion speed of 3 inch/min. up to 3 mm wall thickness and 1.5 inch/7 min at over 3 mm wall thickness. Materials exceeding this combustion speed are not UL listed.

### Fire protection V2

In the vertical combustion test, the material must self-extinguish after an average of 25 seconds (no single values over 30 seconds). Material drips can ignite wool placed underneath it. The afterglow, however, must not exceed 60 seconds.

### Fire protection V1

In the vertical combustion test, the material must also self-extinguish after an average of 25 seconds (no single values over 30 seconds). By contrast, any drips must not ignite the wool. The afterglow must not exceed 30 seconds.

### Fire protection V0

In the vertical combustion test, the material must self-extinguish in less than an average of 5 seconds (no single values over 10 seconds). Any drips must not ignite wool and the afterglow must not exceed 30 seconds.

# Size comparison and metric/PG/NPT/BSP installation dimensions

## Metric threaded connections to EN 60423

| Nominal size | Outer diameter | Through-hole |
|--------------|----------------|--------------|
| M12x1,5      | 12,0           | 12,5         |
| M16x1,5      | 16,0           | 16,5         |
| M20x1,5      | 20,0           | 20,5         |
| M25x1,5      | 25,0           | 25,5         |
| M32x1,5      | 32,0           | 32,5         |
| M40x1,5      | 40,0           | 40,5         |
| M50x1,5      | 50,0           | 50,5         |
| M63x1,5      | 63,0           | 63,5         |

## PG threaded connection to DIN 40430

| Nominal size | Outer diameter | Through-hole |
|--------------|----------------|--------------|
| PG7          | 12,5           | 12,7         |
| PG9          | 15,2           | 15,4         |
| PG11         | 18,6           | 18,8         |
| PG13,5       | 20,4           | 20,6         |
| PG16         | 22,5           | 22,7         |
| PG21         | 28,3           | 28,5         |
| PG29         | 37,0           | 37,2         |
| PG36         | 47,0           | 47,2         |
| PG42         | 54,0           | 54,2         |
| PG48         | 59,3           | 59,5         |

## American pipe thread NPT (conical)

| Nominal size | Outer diameter | Through-hole |
|--------------|----------------|--------------|
| 1/4"         | 13,616         |              |
| 3/8"         | 17,055         |              |
| 1/2"         | 21,223         |              |
| 3/4"         | 26,568         |              |
| 1"           | 33,227         |              |
| 1 1/4"       | 41,984         |              |
| 1 1/2"       | 48,053         |              |
| 2"           | 60,091         |              |
| 2 1/2"       | 72,699         |              |
| 3"           | 88,608         |              |
| 3 1/2"       | 100,013        |              |

## Gas pipe thread BSP (British Standard Pipe)

| Nominal size | Outer diameter | Through-hole |
|--------------|----------------|--------------|
| 1/4"         | 13,157         | 13,4         |
| 3/8"         | 16,662         | 17,0         |
| 1/2"         | 20,955         | 21,3         |
| 5/8"         | 26,441         | 26,8         |
| 1"           | 33,249         | 33,7         |
| 1 1/4"       | 41,910         | 42,2         |
| 1 1/2"       | 47,803         | 48,3         |
| 2"           | 59,614         | 60,2         |
| 2 1/2"       | 75,184         | 75,5         |
| 3"           | 87,884         | 88,5         |
| 3 1/2"       | 100,330        | 101,0        |
| 4"           | 113,030        | 114,0        |

# Size comparison AWG / mm

| AWG-no. | Cross-section | Diameter mm |
|---------|---------------|-------------|
| 500     | 253           | 17,96       |
| 350     | 177           | 15,03       |
| 250     | 127           | 12,07       |
| 4/0     | 107,2         | 11,68       |
| 3/0     | 85,0          | 10,40       |
| 2/0     | 67,5          | 9,27        |
| 1/0     | 53,5          | 8,25        |
| 1       | 42,4          | 7,35        |
| 2       | 33,6          | 6,54        |
| 4       | 21,2          | 5,19        |
| 6       | 13,3          | 4,12        |
| 8       | 8,37          | 3,26        |
| 10      | 5,26          | 2,59        |
| 12      | 3,31          | 2,05        |
| 14      | 2,08          | 1,63        |
| 16      | 1,31          | 1,29        |
| 18      | 0,823         | 1,024       |
| 20      | 0,519         | 0,813       |
| 22      | 0,324         | 0,643       |
| 24      | 0,205         | 0,511       |
| 26      | 2,128         | 0,405       |
| 28      | 0,0804        | 0,320       |
| 30      | 0,0507        | 0,255       |
| 32      | 0,0324        | 0,203       |
| 34      | 0,0200        | 0,160       |
| 36      | 0,0127        | 0,127       |
| 40      | 0,00487       | 0,079       |
| 42      | 0,00317       | 0,064       |
| 44      | 0,00203       | 0,051       |

## Inch/mm conversion

| Inches | mm    |
|--------|-------|
| 1/8    | 3,2   |
| 1/4    | 6,4   |
| 3/8    | 9,5   |
| 1/2    | 12,7  |
| 3/4    | 19,0  |
| 1      | 25,4  |
| 1 1/4  | 31,8  |
| 1 1/2  | 38,0  |
| 2      | 50,8  |
| 2 1/2  | 64,0  |
| 3      | 76,0  |
| 4      | 101,6 |



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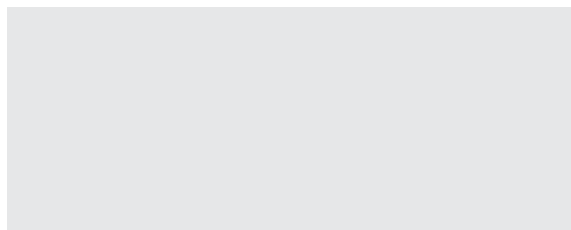
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