

Fittings and accessories for lubrication systems

Product catalogue 2021

2021 EDITION
WITH FULLY
REVISED AND
IMPROVED
ASSORTMENT!



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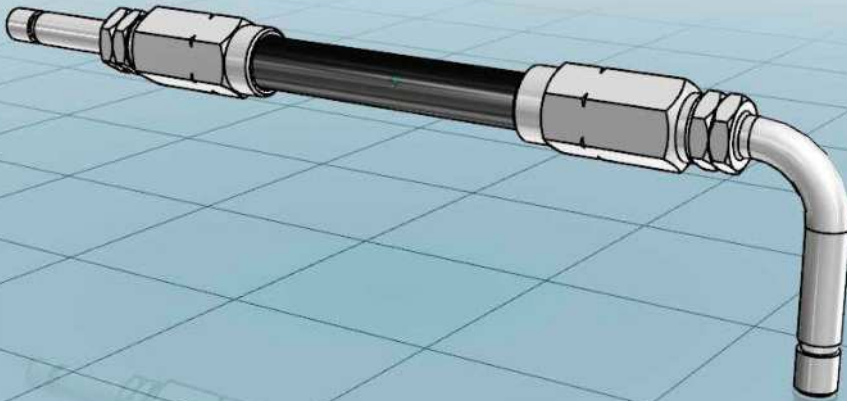
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Electronic part library

CAD product data



Find your parts online

3D CAD data, technical drawings and data sheets of SKF fittings and accessories are now available in native format in the online parts library. In addition to enjoying easy CAD downloads, you can configure more complex lubrication system products and integrate them into your design process – completely free of charge. Integrate CAD data seamlessly into your layout plans without any delay.



<https://skf-lubrication.partcommunity.com>

Use the parts library app

In addition to the electronic parts library, SKF offers a mobile app that allows you to use the SKF CAD download portal for lubrication systems. The LubCAD app lets you view, configure and download products and parts in the most common CAD file formats. You can also download related product brochures or find an authorized SKF Lubrication Systems Distributor in your area.

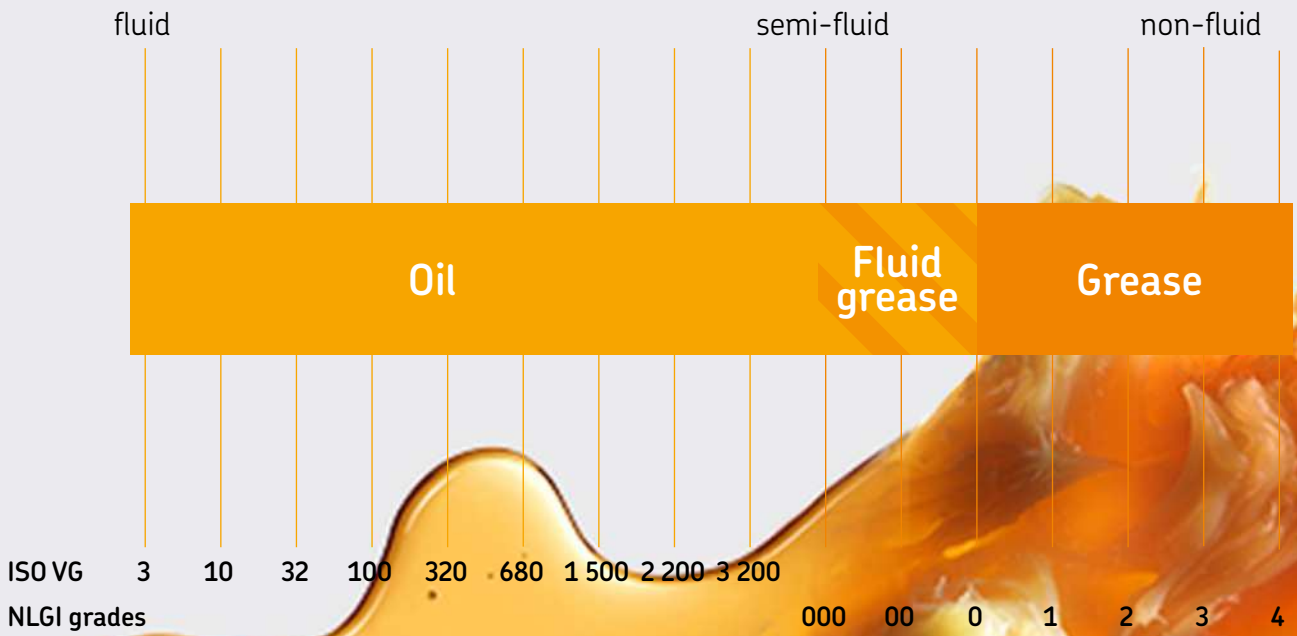


Apple App Store



Google Play

Lubricants suitable for lubrication systems



Oil and fluid grease

The viscosity is an expression of a fluid's internal friction. Oils are classified in ISO VG viscosity classes from 2 to 3 200. NLGI grade 000, 00 and 0 greases are called fluid greases. Different types of oils are available, including mineral oils, organic oils and synthetic oils. A compatibility check is recommended prior to using any oil with SKF lubrication systems.

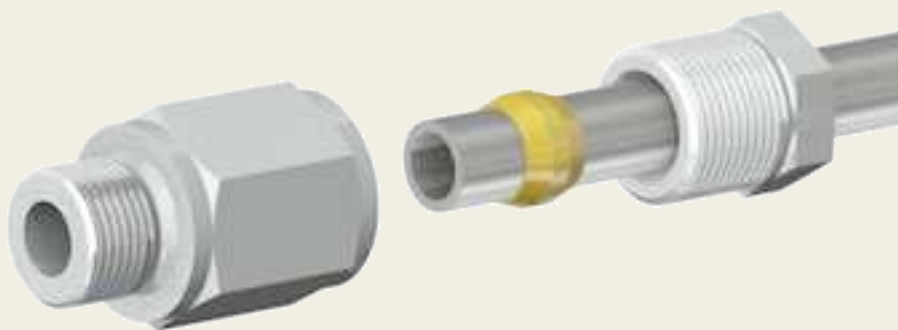


Grease

Greases are consistent lubricants (NLGI grade 1–6). They are soft to hard, triple-component mixtures of a base oil as the lubricating fluid, a thickening agent and additives. In most instances, greases of NLGI grade 1 up to 3 are suitable for use in a lubrication system. A compatibility check should be made prior to using any grease with SKF lubrication systems.

Tapered sleeve fittings acc. to DIN 3854/DIN 3862

Low-pressure fittings for max. 45 bar



Description

Solderless pipe unions for metal and plastic pipes are designed for low pressure oil, fluid grease and grease lubrication systems with pressures up to 45 bar and an operating temperature range from -25 to 80 °C. Depending on the selection of metering pipe material, there are two different types of tapered sleeve fittings with different components available: Tapered sleeve fittings for plastic pipes and double-cone sleeve fittings for metal pipes. For both types of unions, a counterbore acc. to DIN 3862 is necessary.

Features and benefits

- Cost-efficient connection solution for low-pressure systems
- Suitable for oil, fluid grease and grease
- Simple and user-friendly assembly
- Virtually leakage-free union



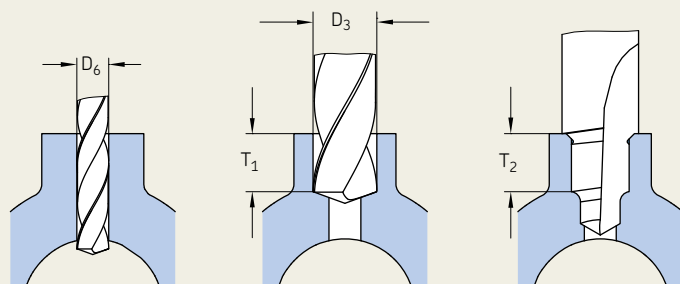
Tapered sleeve unions

Applications

- Paper and packaging industry
- Food and beverage industry
- Assembly and automation
- Part assembly lines
- Injection molding
- Mobile on-road
- Machine tools
- Etc.

Tapered sleeve fittings acc. to DIN 3854/DIN 3862

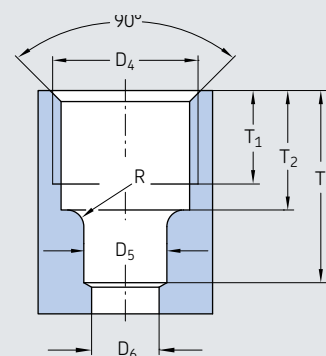
Provision of counterbore



- 1 predrill holes
 - 2 predrill hole to be tapped
 - 3 counterbore with form counterbore up to the stop
- Form counterbore enlarges bore hole diam. D_4 to core hole for ISO thread.



Counterbores for solderless tube connection (DIN 3854/DIN 3862)



Description of counterbores

SKF offers a wide range of tapered sleeve fittings with counterbores according to DIN 3862. In addition, it is also possible also to create counterbores by using offered tools as form counterbores.

Applications

- Small-to-medium machine tools
- Mobile on-road (fleet vehicles, on-road transport)
- Assembly and automation
- Food packaging
- Part assembly lines
- Injection molding

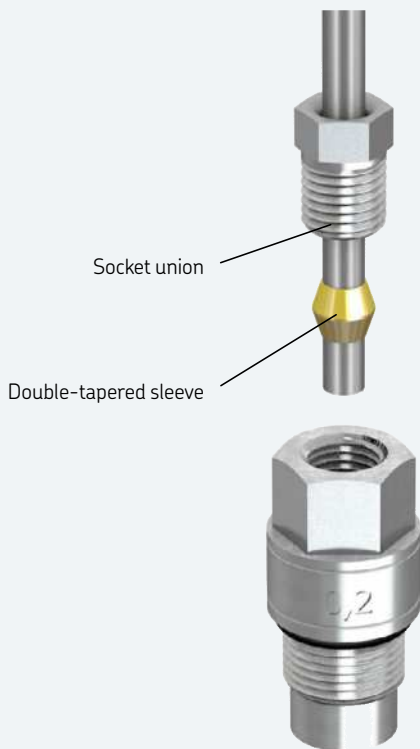
| Description | Tube \varnothing | $\varnothing D_5^{B11}$ | $\varnothing D_6$ | $\varnothing D_4$ | T_1 | T_2 | T_3 | R |
|---------------------------|--------------------|-------------------------|-------------------|-------------------|-------|-------|-------|-----|
| | mm | mm | mm | mm | mm | mm | mm | mm |
| 1102 ¹⁾ | 2,5 | 2,5 | 1,5 | M6×0,75 | 4,5 | 5,5 | 8,5 | 1,3 |
| 1404 | 4 | 4 | 3 | M8×1 | 6,5 | 8,5 | 12,5 | 1,6 |
| 1406 | 6 | 6 | 4,5 | M10×1 | 7 | 9 | 14 | 1,6 |
| 1408 | 8 | 8 | 6,5 | M14×1,5 | 9 | 11,5 | 18,5 | 1,6 |
| 1410 | 10 | 10 | 8,5 | M16×1,5 | 9 | 11,5 | 19,5 | 1,6 |
| 1412 | 12 | 12 | 10,5 | M18×1,5 | 9,5 | 12 | 22 | 1,6 |

1) not shown in DIN standard

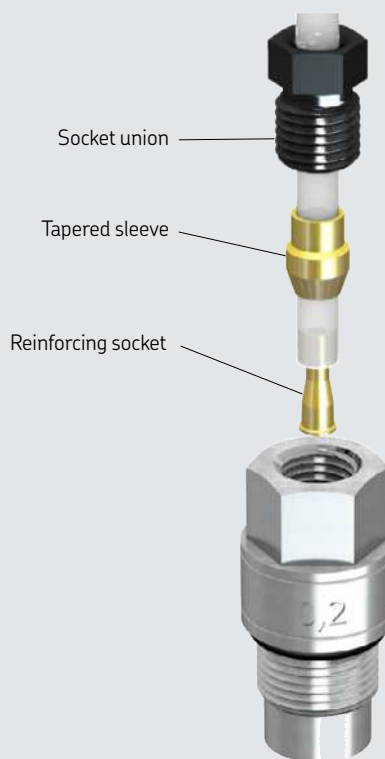
! Important note for provision of counterbore:
 When using a hand drill, take care not to tilt the counterbore out of the drill axis. To avoid damage, drill steadily without interruption. Increase pressure slightly at the stop.

Tapered sleeve fittings

Unions for metal pipes



Unions for plastic pipes



Solderless pipe unions for metal pipes

Description

Solderless pipe unions for metal pipes consist of a socket union, a double-cone sleeve and a fitting with counterbore according to DIN 2862.

Initial assembly

Cut the metal pipe straight to length using a suitable tool, e.g., a pipe cutter. Push the socket union and the double-cone sleeve onto the end of the metal pipe. Insert the end of the metal pipe into the depression until the stop and tighten the socket union finger-tight. Then tighten the socket union again by a maximum of $1\frac{1}{2}$ revolutions.

Repeat assembly

After each time the screw union is loosened, the socket union must be firmly retightened (with the same force) as in the initial assembly.

Solderless pipe unions for plastic pipes

Description

Solderless pipe unions for plastic pipes consist of a socket union, a tapered sleeve, a reinforcing socket and a fitting with counterbore according to DIN 2862.

Initial assembly

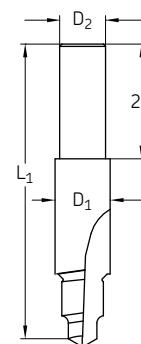
Cut the plastic pipe straight to length using a suitable tool, e.g., a hose cutter. Insert the reinforcing socket into the end of the plastic pipe to stabilize the end of the pipe being assembled. This prevents the plastic pipe from being constricted during assembly. Push the socket union and the tapered sleeve onto the end of the plastic pipe. Insert the end of the plastic pipe into the depression until the stop and tighten the socket union finger-tight. Then tighten the socket union again by a maximum of $1\frac{1}{2}$ revolutions.

Repeat assembly

Each time after the screw union is loosened, the socket union must be firmly retightened (with the same force) as in the initial assembly.

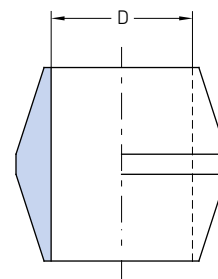
Solderless pipe union with tapered sleeve

Form counterbores



| Order number | TubeØ | for counterbores | L ₁ | D ₁ | D ₂ | Twistdrill D ₆ | D ₃ | T ₁ | T ₂ |
|--------------|-------|------------------|----------------|----------------|----------------|------------------------------|----------------|----------------|----------------|
| | mm | | mm | mm | mm | mm | mm | mm | mm |
| 902-111 | 2,5 | 1102 | 60,5 | 10 | 10 | 1,5 | 5 | 4,5 | 5,5 |
| 904-411 | 4 | 1404 | 65 | 10 | 10 | 3 | 6,5 | 7,5 | 8,5 |
| 906-411 | 6 | 1406 | 66 | 12 | 10 | 4,5 | 8,5 | 8 | 9 |
| 908-411 | 8 | 1408 | 70 | 16 | 10 | 6,5 | 12 | 10,5 | 11,5 |
| 910-411 | 10 | 1410 | 72 | 18 | 10 | 8,5 | 14 | 10,5 | 11,5 |
| 912-411 | 12 | 1412 | 75 | 20 | 10 | 10,5 | 16 | 11 | 12 |

Double-tapered sleeves for metal pipes

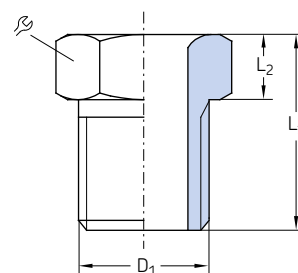


| Order number | Designation | TubeØ D | Material | Weight | |
|-----------------------|---------------------------|---------|-----------------|--------|------|
| | | mm | | g | lb |
| Brass | | | | | |
| 402-001 ¹⁾ | DOUBLE CONE RING MS D 2,5 | 2,5 | Brass | 21 | 0.05 |
| 404-001 | DOUBLE CONE RING MS D 4,0 | 4 | Brass | 34 | 0.07 |
| 406-001 | DOUBLE CONE RING MS D 6,0 | 6 | Brass | 66 | 0.15 |
| 408-001 | DOUBLE CONE RING MS D 8,0 | 8 | Brass | 80 | 0.18 |
| 410-001 | DOUBLE CONE RING MS D10,0 | 10 | Brass | 100 | 0.22 |
| 412-001 | DOUBLE CONE RING MS D12,0 | 12 | Brass | 120 | 0.26 |
| Stainless steel | | | | | |
| 404-001-S3 | DOUBLE CONE RING VA D 4,0 | 4 | Stainless steel | 34 | 0.07 |
| 406-001-S3 | DOUBLE CONE RING VA D 6,0 | 6 | Stainless steel | 66 | 0.15 |
| 408-001-S3 | DOUBLE CONE RING VA D 8,0 | 8 | Stainless steel | 80 | 0.18 |

¹⁾ not shown in DIN standard

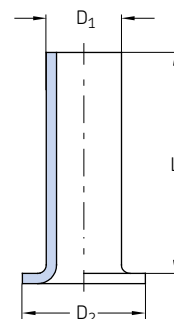
Solderless pipe union with tapered sleeve

Socket unions for metal pipes acc. to DIN 3871



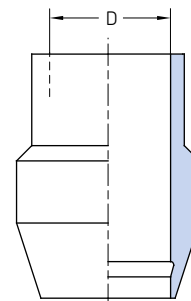
| Order number | Designation | TubeØ | D ₁ | L ₁ | L ₂ | β | Material | Weight (100 pcs) | | |
|-------------------|-------------|----------------------|----------------|----------------|----------------|-----|----------|-------------------|-------|------|
| | | | | | | | | mm | mm | mm |
| Steel, galvanized | | | | | | | | | | |
| 402-002 | COMP.NUT | ST D 2,5 M 6x0,75 ZN | 2,5 | M6x0,75 | 9 | 3 | 7 | Steel, galvanized | 166 | 0.37 |
| 404-002 | COMP.NUT | ST D 4,0 M 8x1,0 ZN | 4 | M8x1 | 12 | 4 | 8 | Steel, galvanized | 300 | 0.66 |
| 406-002 | COMP.NUT | ST D 6,0 M10x1,0 ZN | 6 | M10x1 | 13 | 4 | 10 | Steel, galvanized | 400 | 0.88 |
| 408-202 | COMP.NUT | ST D 8,0 M14x1,5 ZN | 8 | M14x1,5 | 16 | 4,5 | 14 | Steel, galvanized | 1 000 | 2.21 |
| 410-002 | COMP.NUT | ST D10,0M16x1,5 ZN | 10 | M16x1,5 | 17 | 5,5 | 17 | Steel, galvanized | 1 400 | 3.09 |
| 412-002 | COMP.NUT | ST D12,0 M18x1,5 ZN | 12 | M18x1,5 | 18 | 6 | 19 | Steel, galvanized | 1 800 | 3.97 |
| Stainless steel | | | | | | | | | | |
| 404-002-S3 | COMP.NUT | VA D 4,0 M 8x1,0 | 4 | M8x1 | 12 | 4 | 8 | Stainless steel | 300 | 0.66 |
| 406-002-S3 | COMP.NUT | VA D 6,0 M10x1,0 | 6 | M10x1 | 13 | 4 | 10 | Stainless steel | 400 | 0.88 |
| 408-202-S3 | COMP.NUT | VA D 8,0 M14x1,5 | 8 | M14x1,5 | 16 | 4,5 | 14 | Stainless steel | 1 000 | 2.21 |

Reinforcing sockets for plastic tubes

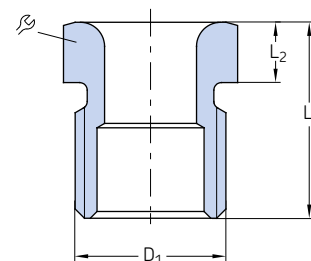


| Order number | Designation | TubeØ | D ₁ | D ₂ | L | Material | Weight | |
|--------------|------------------------------------|---------|----------------|----------------|----|----------|--------|------|
| | | | | | | | mm | mm |
| 402-603 | INLET BUSHING MS F.TUBE D 2,5x0,5 | 2,5x0,5 | 1,4 | 2,3 | 8 | Brass | 5 | 0.01 |
| 404-603 | INLET BUSHING MS F.TUBE D 4,0x0,85 | 4x0,85 | 2,2 | 3,8 | 10 | Brass | 8 | 0.02 |
| 406-603 | INLET BUSHING MS F.TUBE D 6x1,0 | 6x1 | 3,9 | 5,8 | 12 | Brass | 12 | 0.03 |
| 406-613 | INLET BUSHING MS F.TUBE D 6x1,25 | 6x1,25 | 3,4 | 5,8 | 12 | Brass | 15 | 0.03 |
| 408-603 | INLET BUSHING MS F.TUBE D 8x1,25 | 8x1,25 | 5,4 | 7,8 | 15 | Brass | 20 | 0.04 |
| 410-603 | INLET BUSHING MS F.TUBE D10x1,5 | 10x1,5 | 6,9 | 9,8 | 18 | Brass | 24 | 0.05 |
| 412-603 | INLET BUSHING MS F.TUBE D12x1,5 | 12x1,5 | 8,9 | 11,8 | 20 | Brass | 26 | 0.06 |

Solderless pipe union with tapered sleeve

Tapered sleeves for plastic tubes
acc. to DIN 3862

| Order number | Designation | Tube Ø D | Material | Weight (100 pcs) | |
|--------------|--------------------------|----------|----------|------------------|------|
| | | | | g | lb |
| | | mm | | | |
| 402-611 | TAPER CUTT.RING MS D 2,5 | 2,5 | Brass | 100 | 0.22 |
| 404-611 | TAPER CUTT.RING MS D 4,0 | 4 | Brass | 120 | 0.26 |
| 406-611 | TAPER CUTT.RING MS D 6,0 | 6 | Brass | 160 | 0.35 |
| 408-611 | TAPER CUTT.RING MS D 8,0 | 8 | Brass | 200 | 0.44 |
| 410-611 | TAPER CUTT.RING MS D10,0 | 10 | Brass | 250 | 0.55 |
| 412-611 | TAPER CUTT.RING MS D12,0 | 12 | Brass | 300 | 0.66 |

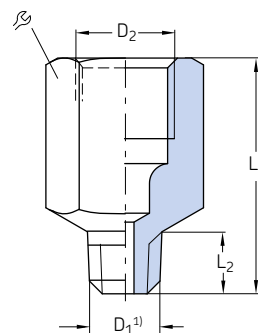
Socket unions for plastic tubes
acc. to DIN 3871

| Order number | Designation | Tube Ø | D ₁ | L ₁ | L ₂ | ⌀ | Material | Weight (100 pcs) | |
|-------------------|-------------------------------|--------|----------------|----------------|----------------|----|-------------------|------------------|------|
| | | | | | | | | mm | mm |
| Steel, galvanized | | | | | | | | | |
| 402-612 | COMP.NUT ST D 2,5 M 6x0,75 ZN | 2,5 | M6x0,75 | 9 | 3 | 7 | Steel, galvanized | 100 | 0.22 |
| 404-612 | COMP.NUT ST D 4,0 M 8x1,0 ZN | 4 | M8x1 | 12 | 4 | 8 | Steel, galvanized | 200 | 0.44 |
| 406-612 | COMP.NUT ST D 6,0 M10x1,0 ZN | 6 | M10x1 | 13 | 4 | 10 | Steel, galvanized | 300 | 0.66 |
| 408-612 | COMP.NUT ST D 8,0 M14x1,5 ZN | 8 | M14x1,5 | 16 | 4,5 | 14 | Steel, galvanized | 900 | 1.98 |
| 410-612 | COMP.NUT ST D10,0 M16x1,5 ZN | 10 | M16x1,5 | 17 | 5,5 | 17 | Steel, galvanized | 1 300 | 2.87 |
| 412-612 | COMP.NUT ST D12,0 M18x1,5 ZN | 12 | M18x1,5 | 18 | 6 | 19 | Steel, galvanized | 1 700 | 3.75 |
| Brass | | | | | | | | | |
| 404-612-MS | COMP.NUT MS D 4,0 M 8x1,0 | 4 | M8x1 | 12 | 4 | 8 | Brass | 200 | 0.44 |
| 406-612-MS | COMP.NUT MS D 6,0 M10x1,0 | 6 | M10x1 | 13 | 4 | 10 | Brass | 300 | 0.66 |
| 408-612-MS | COMP.NUT MS D 8,0 M14x1,5 | 8 | M14x1,5 | 16 | 4,5 | 14 | Brass | 900 | 1.98 |
| 410-612-MS | COMP.NUT MS D10,0 M16x1,5 | 10 | M16x1,5 | 17 | 5,5 | 17 | Brass | 1 300 | 2.87 |

Solderless pipe union with tapered sleeve

Connectors with tapered thread

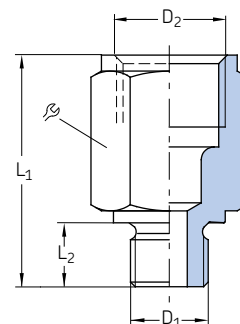
Tapered threads are used without washers; sealed by tapered outer thread and sealant according to DIN 3852-1.



| Order number | Designation | TubeØ | D ₁ ¹⁾ | D ₂ | L ₁ | L ₂ | ⊂ | Material | Weight |
|--------------|--|-------|------------------------------|----------------|----------------|----------------|----|-------------------|----------|
| | | mm | mm | mm | mm | mm | mm | | g lb |
| 402-003K | CONNECTING PIECE ST D 2,5 M 6x0,75K ZN | 2,5 | M6x0,75 tap. | M6x0,75 | 11,5 | 4,5 | 8 | Steel, galvanized | 2 0.004 |
| 402-006K | CONNECTING PIECE ST D 2,5 M 8x1,0K ZN | 2,5 | M8x1 tap. | M6x0,75 | 15 | 8 | 9 | Steel, galvanized | 5 0.011 |
| 402-008K | CONNECTING PIECE ST D 2,5 M10x1,0K ZN | 2,5 | M10x1 tap. | M6x0,75 | 16 | 7,5 | 12 | Steel, galvanized | 11 0.024 |
| 404-662K | CONNECTING PIECE ST D 4,0 M 6K ZN | 4 | M6 tap. | M8x1 | 19 | 5 | 11 | Steel, galvanized | 8 0.018 |
| 404-663K | CONNECTING PIECE ST D 4,0 M 6K ZN | 4 | M6 tap. | M8x1 | 20 | 6 | 11 | Steel, galvanized | 8 0.018 |
| 404-673K | CONNECTING PIECE ST D 4,0 M 6x0,75K ZN | 4 | M6x0,75 tap. | M8x1 | 20 | 6 | 11 | Steel, galvanized | 8 0.018 |
| 404-047K | CONNECTING PIECE ST D 4,0 M 7K ZN | 4 | M7 tap. | M8x1 | 20 | 6 | 11 | Steel, galvanized | 9 0.02 |
| 404-003K | CONNECTING PIECE ST D 4,0 M 8x1,0K ZN | 4 | M8x1 tap. | M8x1 | 17 | 7,4 | 11 | Steel, galvanized | 6 0.013 |
| 404-045 | CONNECTING PIECE ST D 4,0 M 8x1,0K ZN | 4 | M8x1 tap. | M8x1 | 62,5 | 7,4 | 11 | Steel, galvanized | 40 0.088 |
| 404-006K | CONNECTING PIECE ST D 4,0 M10x1,0K ZN | 4 | M10x1 tap. | M8x1 | 16 | 7,4 | 11 | Steel, galvanized | 7 0.015 |
| 401-004-512 | CONNECTING PIECE ST D 4,0 M10x1,0K ZN | 4 | M10x1 tap. | M8x1 | 25 | 7,4 | 11 | Steel, galvanized | 14 0.031 |
| 404-040K | CONNECTING PIECE ST D 4,0 R1/8K ZN | 4 | R 1/8 | M8x1 | 16 | 6 | 11 | Steel, galvanized | 7 0.015 |
| 404-040K-US | CONNECTING PIECE ST D 4,0 1/8NPTF ZN | 4 | 1/8 NPTF | M8x1 | 20 | 6,7 | 11 | Steel, galvanized | 10 0.022 |
| 404-054K | CONNECTING PIECE ST D 4,0 R1/4K ZN | 4 | R 1/4 | M8x1 | 14 | 9 | 14 | Steel, galvanized | 11 0.024 |
| 404-072 | CONNECTING PIECE ST D 4,0 1/4 28UNF ZN | 4 | 1/4-28 UNF | M8x1 | 20 | 5,6 | 11 | Steel, galvanized | 9 0.02 |
| 401-004-903 | CONNECTING PIECE ST D 4,0 1/4BSF ZN | 4 | 1/4 BSF | M8x1 | 20 | 5 | 11 | Steel, galvanized | 9 0.02 |
| 401-004-904 | CONNECTING PIECE ST D 4,0 3/16BSF ZN | 4 | 1/16 BSF | M8x1 | 18 | 5 | 11 | Steel, galvanized | 7 0.015 |
| 406-004K | CONNECTING PIECE ST D 6,0 M10x1,0K ZN | 6 | M10x1 tap. | M10x1 | 23 | 7,4 | 14 | Steel, galvanized | 20 0.044 |
| 456-004K | CONNECTING PIECE ST D 6,0 R1/8K ZN | 6 | R 1/8 | M10x1 | 21 | 6 | 14 | Steel, galvanized | 15 0.033 |
| 406-054K | CONNECTING PIECE ST D 6,0 R1/4K ZN | 6 | R 1/4 | M10x1 | 20 | 9 | 17 | Steel, galvanized | 22 0.049 |

¹⁾ Tapered thread according to DIN 158, short, resp. according to DIN 2999.

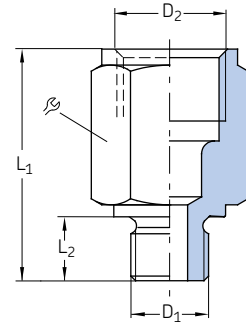
Solderless pipe union with tapered sleeve

Connectors with cylindrical thread
acc. to DIN 71428

| Order number | Designation | Tube Ø | D ₁ | D ₂ | L ₁ | L ₂ | R | Material | Weight | |
|-------------------|---------------------------------------|--------|----------------|----------------|----------------|----------------|----|-------------------|--------|-------|
| | | | | | | | | | mm | mm |
| Steel, galvanized | | | | | | | | | | |
| 402-004 | CONNECTING PIECE ST D 2,5 M 6 ZN | 2,5 | M6 | M6×0,75 | 13 | 5,5 | 9 | Steel, galvanized | 3 | 0.007 |
| 402-003 | CONNECTING PIECE ST D 2,5 M 6×0,75 ZN | 2,5 | M6×0,75 | M6×0,75 | 13 | 5,5 | 9 | Steel, galvanized | 3 | 0.007 |
| 402-006 | CONNECTING PIECE ST D 2,5 M 8×1,0 ZN | 2,5 | M8×1 | M6×0,75 | 15 | 7,5 | 11 | Steel, galvanized | 7 | 0.015 |
| 404-004 | CONNECTING PIECE ST D 4,0 M 8×1,0 ZN | 4 | M8×1 | M8×1 | 24 | 14 | 11 | Steel, galvanized | 9 | 0.02 |
| 404-005 | CONNECTING PIECE ST D 4,0 M 8×1,0 ZN | 4 | M8×1 | M8×1 | 32 | 22 | 11 | Steel, galvanized | 14 | 0.031 |
| 404-061 | CONNECTING PIECE ST D 4,0 M 5 ZN | 4 | M5 | M8×1 | 20 | 5,5 | 11 | Steel, galvanized | 9 | 0.02 |
| 404-063 | CONNECTING PIECE ST D 4,0 M 8 ZN | 4 | M8 | M8×1 | 22 | 8 | 11 | Steel, galvanized | 10 | 0.022 |
| 404-003 | CONNECTING PIECE ST D 4,0 M 8×1,0 ZN | 4 | M8×1 | M8×1 | 18 | 7,5 | 11 | Steel, galvanized | 6 | 0.013 |
| 404-006 | CONNECTING PIECE ST D 4,0 M10×1,0 ZN | 4 | M10×1 | M8×1 | 18 | 7,5 | 14 | Steel, galvanized | 13 | 0.029 |
| 404-040 | CONNECTING PIECE ST D 4,0 G1/8A ZN | 4 | G 1/8A | M8×1 | 18 | 8 | 14 | Steel, galvanized | 13 | 0.029 |
| 404-162 | CONNECTING PIECE ST D 4,0 M12×1,0 ZN | 4 | M12×1 | M8×1 | 18 | 9 | 17 | Steel, galvanized | 19 | 0.042 |
| 404-164 | CONNECTING PIECE ST D 4,0 M14×1,5 ZN | 4 | M14×1,5 | M8×1 | 18 | 9 | 17 | Steel, galvanized | 21 | 0.046 |
| 406-158 | CONNECTING PIECE ST D 6,0 M 8×1,0 ZN | 6 | M8×1 | M10×1 | 23 | 7,5 | 14 | Steel, galvanized | 38 | 0.084 |
| 406-004 | CONNECTING PIECE ST D 6,0 M10×1 ZN | 6 | M10×1 | M10×1 | 18 | 7,5 | 14 | Steel, galvanized | 10 | 0.022 |
| 406-162 | CONNECTING PIECE ST D 6,0 M12×1,0 ZN | 6 | M12×1 | M10×1 | 19 | 9 | 17 | Steel, galvanized | 18 | 0.04 |
| 406-054 | CONNECTING PIECE ST D 6,0 G1/4A ZN | 6 | G 1/4A | M10×1 | 20 | 10 | 17 | Steel, galvanized | 20 | 0.044 |
| 301-005 | CONNECTING PIECE ST D 6,0 M14×1,5 ZN | 6 | M14×1,5 | M10×1 | 18 | 9 | 17 | Steel, galvanized | 18 | 0.04 |
| 406-166 | CONNECTING PIECE ST D 6,0 M16×1,5 ZN | 6 | M16×1,5 | M10×1 | 19 | 9 | 19 | Steel, galvanized | 28 | 0.062 |
| 406-055 | CONNECTING PIECE ST D 6,0 G3/8A ZN | 6 | G 3/8A | M10×1 | 21 | 10 | 22 | Steel, galvanized | 41 | 0.09 |
| 408-004 | CONNECTING PIECE ST D 8,0 M10×1 ZN | 8 | M10×1 | M14×1,5 | 28 | 7,5 | 17 | Steel, galvanized | 25 | 0.055 |
| 408-154 | CONNECTING PIECE ST D 8,0 G1/8A ZN | 8 | G 1/8A | M14×1,5 | 29 | 8 | 17 | Steel, galvanized | 26 | 0.057 |
| 408-160 | CONNECTING PIECE ST D 8,0 G1/4A ZN | 8 | G 1/4A | M14×1,5 | 30 | 16 | 17 | Steel, galvanized | 22 | 0.049 |
| 408-162 | CONNECTING PIECE ST D 8,0 M12×1 ZN | 8 | M12×1 | M14×1,5 | 29 | 9 | 17 | Steel, galvanized | 26 | 0.057 |
| 301-020 | CONNECTING PIECE ST D 8,0 G1/4A ZN | 8 | G 1/4A | M14×1,5 | 23 | 10 | 17 | Steel, galvanized | 16 | 0.035 |
| 301-001 | CONNECTING PIECE ST D 8,0 M14×1,5 ZN | 8 | M14×1,5 | M14×1,5 | 26 | 9 | 17 | Steel, galvanized | 23 | 0.051 |
| 408-005 | CONNECTING PIECE ST D 8,0 M16×1,5 ZN | 8 | M16×1,5 | M14×1,5 | 22 | 9 | 19 | Steel, galvanized | 30 | 0.066 |
| 408-006 | CONNECTING PIECE ST D 8,0 M18×1,5 ZN | 8 | M18×1,5 | M14×1,5 | 22 | 10 | 22 | Steel, galvanized | 40 | 0.088 |
| 408-022 | CONNECTING PIECE ST D 8,0 M22×1,5 ZN | 8 | M22×1,5 | M14×1,5 | 24 | 12 | 27 | Steel, galvanized | 71 | 0.157 |
| Brass | | | | | | | | | | |
| 267-001.17 | CONNECTING PIECE MS D 6,0 G1/4A | 6 | G 1/8A | M10×1 | 24 | 8 | 14 | Brass | 18 | 0.04 |
| 406-163 | CONNECTING PIECE MS D 6,0 M12×1 | 6 | M12×1 | M10×1 | 19 | 9 | 17 | Brass | 20 | 0.044 |
| D301-005-MS | CONNECTING PIECE MS D 6,0 M14×1,5 | 6 | M14×1,5 | M10×1 | 20 | 9 | 17 | Brass | 24 | 0.053 |
| 406-167 | CONNECTING PIECE MS D 6,0 M16×1,5 | 6 | M16×1,5 | M10×1 | 19 | 9 | 19 | Brass | 31 | 0.068 |
| 267-001.19 | CONNECTING PIECE MS D 6,0 M18×1,5 | 6 | M18×1,5 | M10×1 | 21 | 10 | 22 | Brass | 71 | 0.157 |
| D408-004-MS | CONNECTING PIECE MS D 8,0 M10×1 | 8 | M10×1 | M14×1,5 | 29 | 7,5 | 17 | Brass | 29 | 0.064 |
| D301-001-MS | CONNECTING PIECE MS D 8,0 M14×1,5 | 8 | M14×1,5 | M14×1,5 | 28 | 9 | 17 | Brass | 29 | 0.064 |
| D301-020-MS | CONNECTING PIECE MS D 8,0 G1/4A | 8 | G 1/4A | M14×1,5 | 30 | 10 | 17 | Brass | 30 | 0.066 |
| 267-001.13 | CONNECTING PIECE MS D 8,0 G1/8A | 8 | G 1/8A | M14×1,5 | 24 | 12 | 27 | Brass | 71 | 0.157 |
| Stainless steel | | | | | | | | | | |
| 301-005-S3 | CONNECTING PIECE VA D 6,0 M14×1,5 | 6 | M14×1,5 | M10×1 | 18 | 9 | 17 | Stainless steel | 19 | 0.042 |
| 406-004-S3 | CONNECTING PIECE VA D 6,0 M10×1,0 | 6 | M10×1 | M10×1 | 18 | 7,5 | 14 | Stainless steel | 10 | 0.022 |
| 406-158-S3 | CONNECTING PIECE VA D 6,0 M 8×1,0 | 6 | M8×1 | M10×1 | 23 | 7,5 | 14 | Stainless steel | 15 | 0.033 |
| 301-020-S3 | CONNECTING PIECE VA D 6,0 G1/4A | 8 | G 1/4A | M14×1,5 | 23 | 10 | 17 | Stainless steel | 17 | 0.037 |

Solderless pipe union with tapered sleeve

Connectors with cylindrical thread acc. to DIN 71428



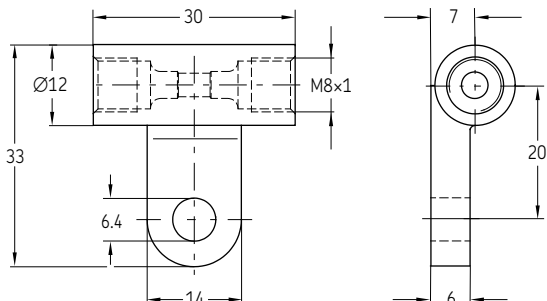
Tapered sleeve unions

| Order number | Designation | Tube Ø | D ₁ | D ₂ | L ₁ | L ₂ | ⌀ | Material | Weight | |
|--------------|--------------------------------------|-----------|----------------|----------------|----------------|----------------|----|-------------------|--------|-------|
| | | | | | | | | | g | lb |
| | | mm | mm | mm | mm | mm | mm | | | |
| 410-160 | CONNECTING PIECE ST D10,0 M10x1,0 ZN | 10 | M10x1 | M16x1,5 | 30 | 7.5 | 19 | Steel, galvanized | 32 | 0.071 |
| 410-162 | CONNECTING PIECE ST D10,0 M12x1,0 ZN | 10 | M12x1 | M16x1,5 | 31 | 9 | 19 | Steel, galvanized | 30 | 0.066 |
| 410-163 | CONNECTING PIECE ST D10,0 G1/4A ZN | 10 | G 1/4A | M16x1,5 | 30 | 10 | 19 | Steel, galvanized | 30 | 0.066 |
| 410-164 | CONNECTING PIECE ST D10,0 M14x1,5 ZN | 10 | M14x1,5 | M16x1,5 | 29 | 9 | 19 | Steel, galvanized | 30 | 0.066 |
| 410-169 | CONNECTING PIECE ST D10,0 G1/4A ZN | 10 | G 1/4A | M16x1,5 | 52 | 16 | 19 | Steel, galvanized | 32 | 0.071 |
| 410-004 | CONNECTING PIECE ST D10,0 M16x1,5 ZN | 10 | M16x1,5 | M16x1,5 | 23 | 9 | 19 | Steel, galvanized | 21 | 0.046 |
| 410-018 | CONNECTING PIECE ST D10,0 M18x1,5 ZN | 10 | M18x1,5 | M16x1,5 | 24 | 10 | 22 | Steel, galvanized | 37 | 0.082 |
| 410-171 | CONNECTING PIECE ST D10,0 G1/2A ZN | 10 | G 1/2A | M16x1,5 | 24 | 12 | 27 | Steel, galvanized | 58 | 0.128 |
| 410-022 | CONNECTING PIECE ST D10,0 M22x1,5 ZN | 10 | M22x1,5 | M16x1,5 | 24 | 12 | 27 | Steel, galvanized | 64 | 0.141 |
| 412-162 | CONNECTING PIECE ST D12,0 M12x1,0 ZN | 12 | M12x1 | M18x1,5 | 35 | 9 | 22 | Steel, galvanized | 52 | 0.115 |
| 412-163 | CONNECTING PIECE ST D12,0 G1/4A ZN | 12 | G 1/4A | M18x1,5 | 35 | 10 | 22 | Steel, galvanized | 51 | 0.112 |
| 412-164 | CONNECTING PIECE ST D12,0 M14x1,5 ZN | 12 | M14x1,5 | M18x1,5 | 33 | 9 | 22 | Steel, galvanized | 46 | 0.101 |
| 412-169 | CONNECTING PIECE ST D12,0 G1/4A ZN | 12 | G 1/4A | M18x1,5 | 41 | 16 | 22 | Steel, galvanized | 49 | 0.108 |
| 412-004 | CONNECTING PIECE ST D12,0 M18x1,5 ZN | 12 | M18x1,5 | M18x1,5 | 24 | 10 | 22 | Steel, galvanized | 28 | 0.062 |
| 412-014 | CONNECTING PIECE ST D12,0 M22x1,5 ZN | 12 | M22x1,5 | M18x1,5 | 26 | 12 | 27 | Steel, galvanized | 63 | 0.139 |

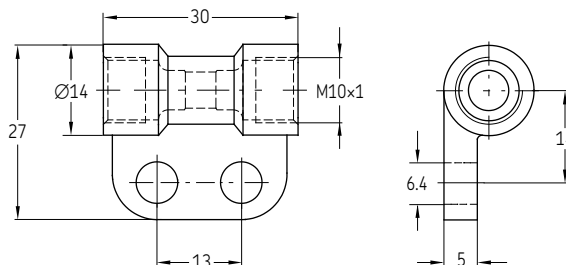
Solderless pipe union with tapered sleeve

Bracketed connectors

504-004

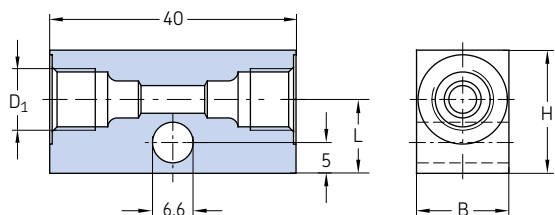


506-010

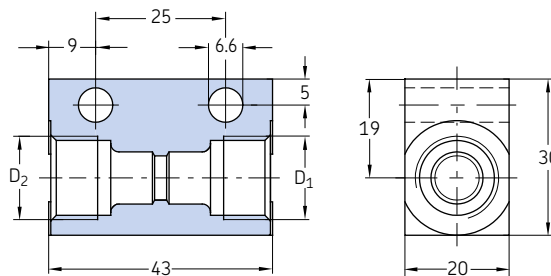


| Order number | Designation | TubeØ | Material | Weight | |
|---------------------------------|----------------------------|-------|---------------|--------|------|
| | | | | g | lb |
| Die-cast zinc 504-004 | TUBE FITTING ZN G4+BRACKET | 4 | Die-cast zinc | 26 | 0.06 |
| Brass 506-010 | TUBE FITTING MS G6+BRACKET | 6 | Brass | 30 | 0.07 |

DAR506, DAR508



DAR510, DAR510-S1

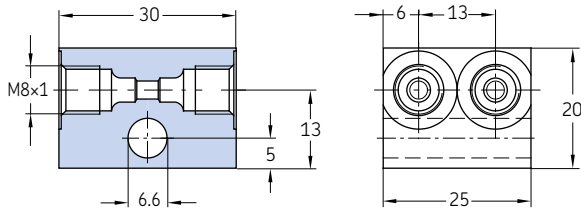


| Order number | Designation | TubeØ | D ₁ | D ₂ | B | H | L ₁ | Material | Weight | |
|------------------------------------|--|-------|----------------|----------------|----|----|----------------|-------------------|--------|------|
| | | | | | | | | | g | lb |
| Aluminum DAR506 | TUBE CONNECTOR,AL 2x M10x1 | 6 | M10x1 | - | 15 | 20 | 12 | Aluminum | 26 | 0.06 |
| DAR508 | TUBE CONNECTOR,AL 2x M14x1 | 8 | M14x1,5 | - | 20 | 25 | 15 | Aluminum | 41 | 0.09 |
| Steel, galvanized DAR510 | TUBE CONNECTOR,ST 2x M16x1 ZN | 10 | M16x1,5 | M16x1,5 | - | - | - | Steel, galvanized | 140 | 0.31 |
| DAR510-S1 | TUBE CONNECT.,ST 1x M14x1,5/1x M16x1,5ZN | 8/10 | M14x1,5 | M16x1,5 | - | - | - | Steel, galvanized | 150 | 0.33 |

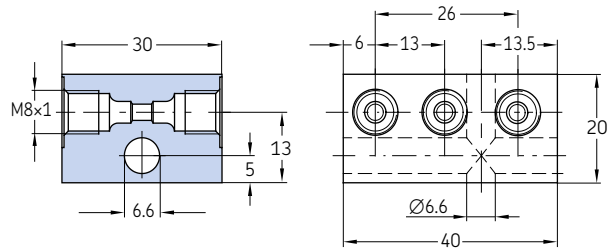
Solderless pipe union with tapered sleeve

Bracketed connectors

DAR524

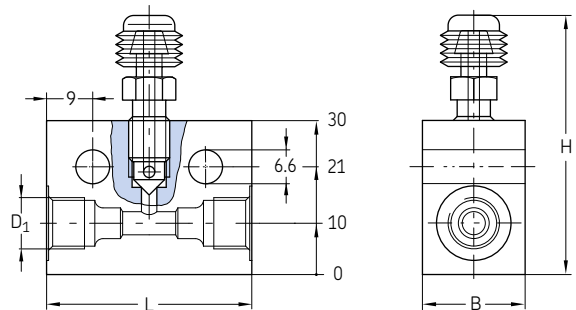


DAR534



| Order number | Designation | TubeØ | Material | Weight | |
|--------------|--------------------------------------|-------|-------------------|--------|------|
| | | | | g | lb |
| DAR524 | TUBE CONNECTOR,ST DOUBLE 4x M 8x1 ZN | 4 | Steel, galvanized | 90 | 0.2 |
| DAR534 | TUBE CONNECTOR,ST TRIPLE 6x M 8x1 ZN | 4 | Steel, galvanized | 150 | 0.33 |

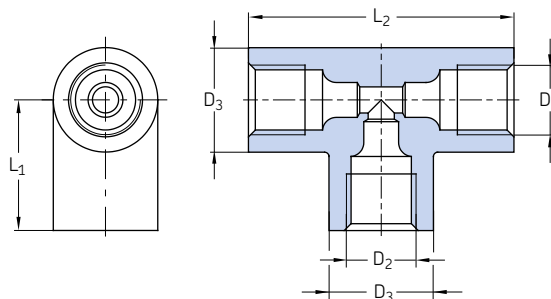
Tube-to-tube connector with air vent acc. to DIN 3862



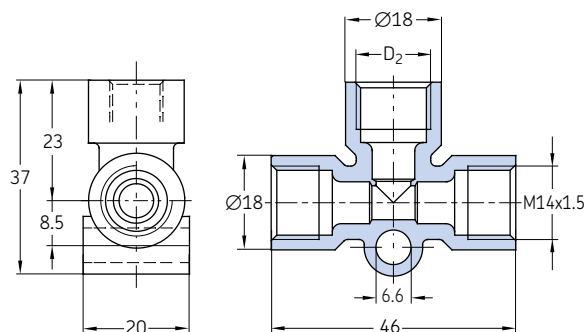
| Order number | Designation | TubeØ | D ₁ | B | H | L ₁ | Material | Weight | |
|--------------|--|-------|----------------|----|----|----------------|----------|--------|------|
| | | | | | | | | g | lb |
| 995-001-104 | TUBE FITTING AL G4 M 8x1,0 VENT.DEVICE | 4 | M8x1 | 20 | 50 | 40 | Aluminum | 68 | 0.15 |
| 995-001-106 | TUBE FITTING AL G6 M10x1,0 VENT.DEVICE | 6 | M10x1 | 20 | 50 | 40 | Aluminum | 49 | 0.11 |

Solderless pipe union with tapered sleeve

T-connectors acc. to DIN 71433



| Order number | Designation | TubeØ | D ₁ | D ₂ | D ₃ | L ₁ | L ₂ | Form | Material | Weight | |
|--------------|-------------------------------|-------|----------------|----------------|----------------|----------------|----------------|------|---------------|--------|------|
| | | | mm | mm | mm | mm | mm | | | mm | g |
| 504-008 | TUBE FITTING ZN T4 M 8x1,0 | 4 | M8x1 | M8x1 | 12 | 15 | 30,5 | A | Die-cast zinc | 20 | 0.04 |
| 506-008 | TUBE FITTING ZN T6 M10x1,0 | 6 | M10x1 | M10x1 | 14 | 18 | 36 | A | Die-cast zinc | 31 | 0.07 |
| 510-102 | TUBE FITTING ZN T10 M16x1,5 | 10 | M16x1,5 | M16x1,5 | 20 | 25 | 50 | A | Die-cast zinc | 62 | 0.14 |
| 506-408 | TUBE FITTING ZN TR6/4 M10x1,0 | 6/4 | M10x1 | M8x1 | 14 | 18 | 36 | B | Die-cast zinc | 33 | 0.07 |

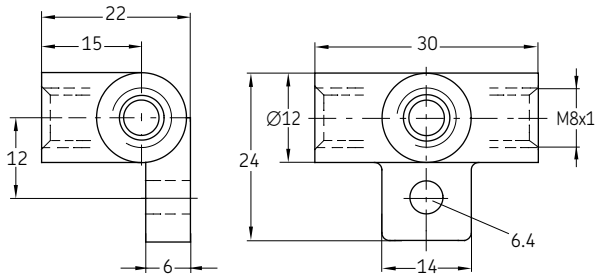


| Order number | Designation | TubeØ | D ₂ | Form | Material | Weight | |
|--------------|-----------------------|-------|----------------|------|---------------|--------|------|
| | | | mm | | | mm | g |
| 508-602-2 | TUBE FITTING ZN TR8/6 | 8/6 | M10x1 | B | Die-cast zinc | 58 | 0.13 |
| 508-002-2 | TUBE FITTING ZN TR8 | 8 | M14x1,5 | A | Die-cast zinc | 50 | 0.11 |

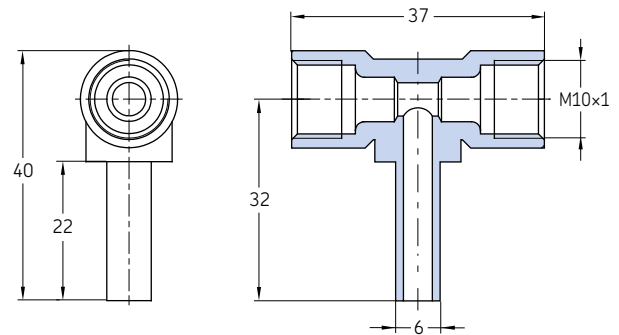
Solderless pipe union with tapered sleeve

T-connectors acc. to DIN 71433

504-045

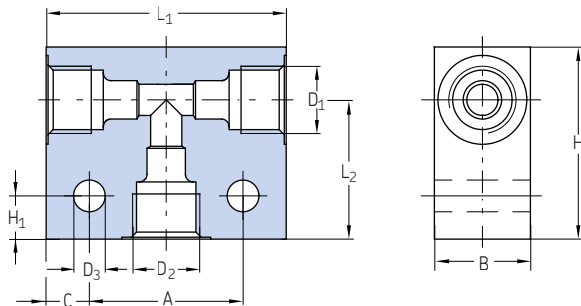


DY964

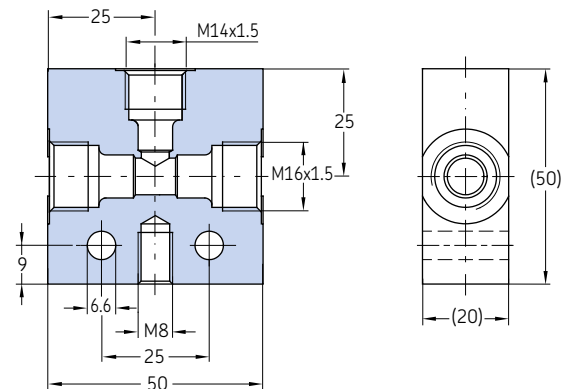


| Order number | Designation | Tube Ø | Material | | Weight | |
|--------------|--------------------|--------|---------------|----|--------|--|
| | | | g | lb | | |
| 504-045 | TUBE FITTING ZN T4 | 4 | Die-cast zinc | 26 | 0.06 | |
| DY964 | TUBE FITTING MST 6 | 6 | Brass | 38 | 0.08 | |

DAT506 – DAT510



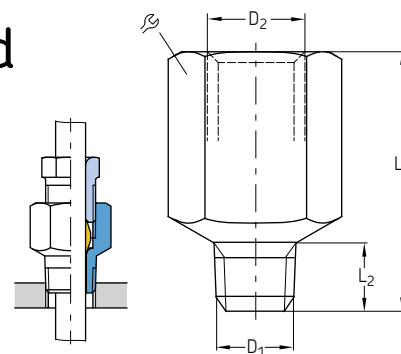
DAT510-S1



| Order number | Designation | Tube Ø | D ₁ | D ₂ | D ₃ | A | B | C | H | H ₁ | L ₁ | L ₂ | Form | Material | Weight | |
|-------------------|----------------------------------|-----------------|----------------|----------------|----------------|----|----|------|----|----------------|----------------|----------------|------|--------------|--------|------|
| | | | | | | | | | | | | | | | g | lb |
| Aluminum | | | | | | | | | | | | | | | | |
| DAT506 | TEE, AL 3x M10x1 | 6 | M10x1 | M10x1 | 6,6 | 22 | 20 | 9 | 30 | 9 | 40 | 20 | A | Aluminum | 55 | 0.12 |
| DAT508 | TEE, AL 3x M14x1,5 | 8 | M14x1,5 | M14x1,5 | 6,6 | 32 | 20 | 9 | 40 | 9 | 50 | 29 | A | Aluminum | 90 | 0.2 |
| DAT512 | TEE, AL 3x M18x1,5 | 12 | M18x1,5 | M18x1,5 | 6,6 | 42 | 25 | 9 | 40 | 9 | 60 | 29 | A | Aluminum | 123 | 0.27 |
| DAT510-S5 | TEE, AL 2x M16x1,5/1x M14x1,5 | 6 | M16x1,5 | M10x1 | 7 | 25 | 25 | 13,5 | 40 | 15 | 52 | 29 | B | Aluminum | 120 | 0.26 |
| Steel, galvanized | | | | | | | | | | | | | | | | |
| DAT510 | TEE, ST 3x M16x1,5 ZN | 10 | M16x1,5 | M16x1,5 | 7 | 25 | 20 | 13,5 | 40 | 15 | 52 | 29 | A | Steel, galv. | 230 | 0.51 |
| DAT510-S1 | TEE, ST 2x M16x1,5/1x M14x1,5 ZN | 8 (1x), 10 (2x) | M16x1,5 | M14x1,5 | 6,6 | 25 | 20 | 12,5 | 50 | 9 | 50 | 25 | B | Steel, galv. | 306 | 0.67 |

Solderless pipe union with tapered sleeve

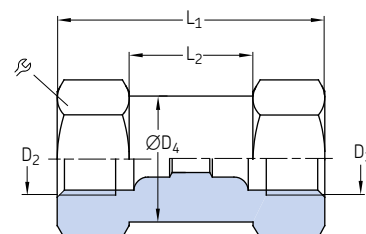
Bulkhead connectors with tapered thread



| Order number | Designation | TubeØ | D ₁ ¹⁾ | D ₂ | L ₁ | L ₂ | β | Material | Weight | |
|--------------|-------------------------|-------|------------------------------|----------------|----------------|----------------|----|-------------------|--------|-------|
| | | | | | | | | | mm | mm |
| 404-003DK | ADAPTER ST 4 M 8x1,0 ZN | 4 | M8x1 tap. | M8x1 | 17 | 7,4 | 11 | Steel, galvanized | 6 | 0.013 |
| 404-006DK | ADAPTER ST 4 M10x1,0 ZN | 4 | M10x1 tap. | M8x1 | 16 | 7,4 | 11 | Steel, galvanized | 7 | 0.015 |
| 406-004DK | ADAPTER ST 6 M10x1,0 ZN | 6 | M10x1 tap. | M10x1 | 18 | 7,4 | 14 | Steel, galvanized | 10 | 0.022 |
| 301-001DK | ADAPTER ST 8 M14x1,5 ZN | 8 | M14x1,5 tap. | M14x1,5 | 24 | 11 | 17 | Steel, galvanized | 19 | 0.042 |
| 410-004DK | ADAPTER ST10 M16x1,5 ZN | 10 | M16x1,5 tap. | M16x1,5 | 24 | 11 | 19 | Steel, galvanized | 22 | 0.049 |

¹⁾ Tapered thread according to DIN 158 tap. short.

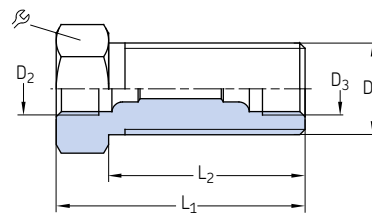
Tube-to-tube connectors



| Order number | Designation | TubeØ | D ₂ | D ₃ | ØD ₄ | L ₁ | L ₂ | β | Material | Weight | |
|--------------|---------------------------|-------|----------------|----------------|-----------------|----------------|----------------|----|-------------------|--------|------|
| | | | | | | | | | | mm | mm |
| 404-010 | TUBE FITTING ST G 4 ZN | 4 | M8x1 | M8x1 | 10,8 | 27 | 13 | 11 | Steel, galvanized | 14 | 0.03 |
| 406-010 | TUBE FITTING ST G 6 ZN | 6 | M10x1 | M10x1 | 13,8 | 30 | 10 | 14 | Steel, galvanized | 25 | 0.06 |
| 406-805 | TUBE FITTING ST GR 6/8 ZN | 6/8 | M14x1,5 | M10x1 | 16,8 | 35 | 11 | 17 | Steel, galvanized | 43 | 0.09 |
| 408-010 | TUBE FITTING ST G 8 ZN | 8 | M14x1,5 | M14x1,5 | 16,8 | 40 | 14 | 17 | Steel, galvanized | 40 | 0.09 |
| 410-010 | TUBE FITTING ST G 10 ZN | 10 | M16x1,5 | M16x1,5 | 18,8 | 42 | 13 | 19 | Steel, galvanized | 54 | 0.12 |
| 412-010 | TUBE FITTING ST G 12 ZN | 12 | M18x1,5 | M18x1,5 | 21,8 | 48 | 18 | 22 | Steel, galvanized | 85 | 0.19 |

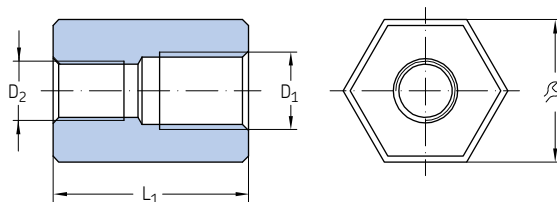
Solderless pipe union with tapered sleeve

Straight bulkhead fittings acc. to DIN 71429



| Order number | Designation | TubeØ | | D ₂ | D ₃ | L ₁ | L ₂ | R | Material | Weight | |
|--------------|-----------------------------------|------------------------------|---------|----------------|----------------|----------------|----------------|----|-------------------|--------|------|
| | | D ₁ ¹⁾ | | | | | | | | g | lb |
| | | mm | mm | mm | mm | mm | mm | mm | | | |
| 404-008 | TUBE FITTING ST SV 4 M14x1,5 ZN | 4 | M14x1,5 | M8x1 | M8x1 | 27 | 19 | 17 | Steel, galvanized | 30 | 0.07 |
| 404-009 | TUBE FITTING ST SV 4 M14x1,5 ZN | 4 | M14x1,5 | M8x1 | M8x1 | 38 | 30 | 17 | Steel, galvanized | 39 | 0.09 |
| 406-008 | TUBE FITTING ST SV 6 M14x1,5 ZN | 6 | M14x1,5 | M10x1 | M10x1 | 30 | 20 | 17 | Steel, galvanized | 30 | 0.07 |
| 406-005 | TUBE FITTING ST SV 6/8 M16x1,5 ZN | 6/8 | M16x1,5 | M14x1,5 | M10x1 | 35 | 23 | 19 | Steel, galvanized | 38 | 0.08 |
| 408-008 | TUBE FITTING ST SV 8 M20x1,5 ZN | 8 | M20x1,5 | M14x1,5 | M14x1,5 | 40 | 28 | 24 | Steel, galvanized | 75 | 0.17 |
| 410-008 | TUBE FITTING ST SV10 M20x1,5 ZN | 10 | M20x1,5 | M16x1,5 | M16x1,5 | 42 | 27 | 24 | Steel, galvanized | 73 | 0.16 |
| 412-008 | TUBE FITTING ST SV12 M24x1,5 ZN | 12 | M24x1,5 | M18x1,5 | M18x1,5 | 48 | 33 | 27 | Steel, galvanized | 114 | 0.25 |

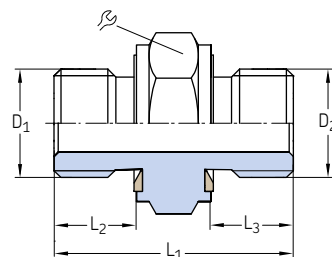
Reducing piece



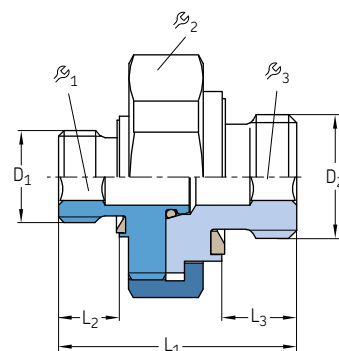
| Order number | Designation | TubeØ | | D ₂ | L ₁ | R | Material | Weight | |
|--------------|--|----------------|-------|----------------|----------------|----|-------------------|--------|------|
| | | D ₁ | | | | | | g | lb |
| | | mm | in | mm | mm | mm | | | |
| 44-1755-2019 | TB.STUD RED ST 4 G1/4I xM10x1I SW24 ZN | 4 | G 1/4 | M10x1 | 33 | 24 | Steel, galvanized | 100 | 0.22 |

Solderless pipe union with tapered sleeve

Threaded sockets



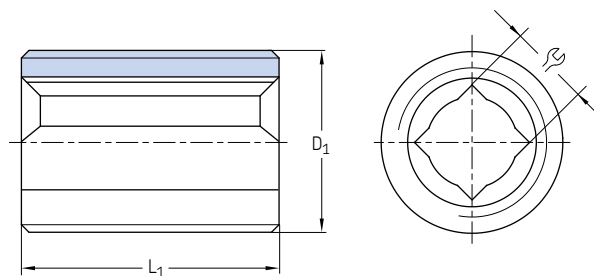
| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | L ₃ | ϕ | Seals | Material | Weight | |
|--------------------|-------------------------------|----------------|----------------|----------------|----------------|----------------|----|-------|-------------------|--------|------|
| | | in | in | mm | mm | mm | | | | mm | g |
| 402-116-161 | THREADED PIECE ST L29 G1/4AZN | G 1/4 A | G 1/4 A | 29 | 10 | 10 | 19 | NBR | Steel, galvanized | 30 | 0.07 |
| 402-116-165 | THREADED PIECE ST L37 G1/2ZN | G 1/2 | G 1/2 | 37 | 10 | 12 | 32 | NBR | Steel, galvanized | 100 | 0.22 |



| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | L ₃ | ϕ ₁ | ϕ ₂ | ϕ ₃ | Seals | Material | Weight | |
|-----------------------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------|-------------------|--------|------|
| | | | | mm | mm | mm | mm | mm | mm | | | mm | g |
| Steel, galvanized | | | | | | | | | | | | | |
| 995-014-014 | CONNECTOR ST G1/4A-G1/4AZN | G 1/4 A | G 1/4 A | 26 | 8 | 8 | 4 | 24 | 5 | NBR | Steel, galvanized | 40 | 0.09 |
| Brass | | | | | | | | | | | | | |
| 995-340-000 | CONNECTOR MS M10x1,M10x1 | M10×1 | M10×1 | 19,5 | 6,5 | 6,5 | 4 | 16 | 4 | FKM | Brass | 13 | 0.03 |
| 995-340-350 | CONNECTOR MS M10x1,M12x1 | M10×1 | M12×1 | 21 | 6,5 | 7,2 | 4 | 19 | 5 | FKM | Brass | 20 | 0.04 |
| 995-350-000 | CONNECTOR MS M12x1,M12x1 | M12×1 | M12×1 | 21,5 | 7 | 7,2 | 5 | 19 | 5 | FKM | Brass | 20 | 0.04 |
| 995-340-000-S8 | CONNECTOR MS M10x1,M10x1 | M10×1 | M10×1 | 19,5 | 6,5 | 6,5 | 4 | 16 | 4 | FKM | Brass | 13 | 0.03 |
| 995-340-350-S8 | CONNECTOR MS M10x1,M12x1 | M10×1 | M12×1 | 21 | 6,5 | 7,2 | 4 | 19 | 5 | FKM | Brass | 18 | 0.04 |
| 995-350-000-S8 | CONNECTOR MS M12x1,M12x1 | M12×1 | M12×1 | 21,5 | 7 | 7,2 | 5 | 19 | 5 | FKM | Brass | 22 | 0.05 |

Solderless pipe union with tapered sleeve

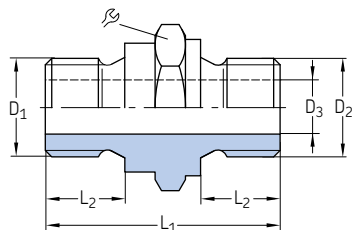
Threaded sockets



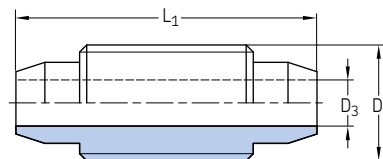
| Order number | Designation | D ₁ | L ₁ | β | Material | Weight | |
|-------------------------|-------------------------------|----------------|----------------|-----|-----------------|--------|-------|
| | | | | | | g | lb |
| Steel | | | | | | | |
| 404-203 | THREADED PIECE ST L13 M 8x1,0 | M8x1 | 13 | 3,5 | Steel | 3 | 0.007 |
| 406-203 | THREADED PIECE ST L15 M10x1,0 | M10x1 | 15 | 3,5 | Steel | 6 | 0.013 |
| 406-243-B ¹⁾ | THREADED PIECE ST L18 M10x1,0 | M10x1 | 18 | 3,5 | Steel | 7 | 0.015 |
| 408-243-B ¹⁾ | THREADED PIECE ST L19 M12x1,0 | M12x1 | 19 | 5,5 | Steel | 9 | 0.02 |
| 458-012 | THREADED PIECE ST L17 M12x1,0 | M12x1 | 17 | 5,5 | Steel | 8 | 0.018 |
| 458-012-B ¹⁾ | THREADED PIECE ST L17 M12x1,0 | M12x1 | 17 | 5,5 | Steel | 8 | 0.018 |
| 408-023 | THREADED PIECE ST L18 M14x1,5 | M14x1,5 | 18 | 5,5 | Steel | 13 | 0.029 |
| 410-003 | THREADED PIECE ST L19 M16x1,5 | M16x1,5 | 19 | 7 | Steel | 16 | 0.035 |
| 410-003-B ¹⁾ | THREADED PIECE ST L19 M16x1,5 | M16x1,5 | 19 | 7 | Steel | 17 | 0.037 |
| Stainless steel | | | | | | | |
| 408-033-S3 | THREADED PIECE VA L15 G1/4A | G 1/4 A | 15 | 5,5 | Stainless steel | 9 | 0.02 |

¹⁾ Coated with microencapsulated adhesive

406-103, 408-103, 853-750-024



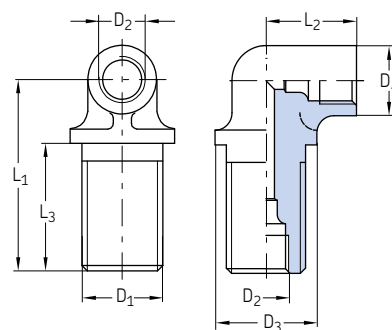
406-233



| Order number | Designation | D ₁ | D ₂ | D ₃ | L ₁ | L ₂ | β | Material | Weight | |
|-------------------|--|----------------|----------------|----------------|----------------|----------------|----|-------------------|--------|------|
| | | | | | | | | | g | lb |
| Steel, galvanized | | | | | | | | | | |
| 406-103 | THREADED PIECE ST L20 M10x1,0xM12x1,0 ZN | M10x1 | M12x1 | 5 | 20 | 6 | 14 | Steel, galvanized | 14 | 0.03 |
| 408-103 | THREADED PIECE ST L21 M12x1,0xM14x1,5 ZN | M12x1 | M14x1,5 | 6 | 21 | 7 | 17 | Steel, galvanized | 21 | 0.05 |
| 853-750-024 | THREADED PIECE ST L31 G1/4Ax G1/4A ZN | G 1/4 A | G 1/4 A | 7 | 31 | 10,5 | 19 | Steel, galvanized | 29 | 0.06 |
| Brass | | | | | | | | | | |
| 406-233 | THREADED PIECE MS L26 M10x1,0 | M10x1 | - | 4 | 26 | - | - | Brass | 8 | 0.02 |

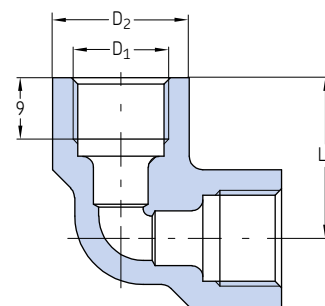
Solderless pipe union with tapered sleeve

Elbow bulkhead fittings acc. to DIN 71429



| Order number | Designation | TubeØ | D ₁ | D ₂ | D ₃ | D ₄ | L ₁ | L ₂ | L ₃ | Material | Weight | |
|---------------------------------|-------------------------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|--------|------|
| | | | | | | | | | | | mm | mm |
| Die-cast zinc 504-003 | TUBE FITTING ZN WSV 4 M14x1,5 | 4 | M14x1,5 | M8x1 | 18 | 12 | 33 | 16 | 22 | Die-cast zinc | 30 | 0.07 |
| Brass 504-103 | TUBE FITTING MS WSV 4 M14x1,5 | 4 | M14x1,5 | M8x1 | 18 | 12 | 33 | 18 | 22 | Brass | 46 | 0.1 |
| 506-004 | TUBE FITTING MS WSV 6 M14x1,5 | 6 | M14x1,5 | M10x1 | 16,5 | 14 | 27 | 17,5 | 15 | Brass | 41 | 0.09 |

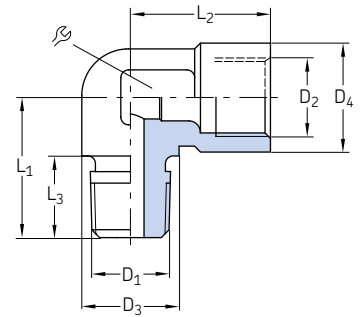
Elbows with cylindrical thread acc. to DIN 71433



| Order number | Designation | TubeØ | D ₁ | D ₂ | L ₁ | Material | Weight | |
|----------------|-------------------------------|-------|----------------|----------------|----------------|---------------|--------|------|
| | | | | | | | mm | mm |
| 408-013 | TUBE FITTING ZN WSV 4 M14x1,5 | 8 | M14x1,5 | 20 | 23,5 | Die-cast zinc | 40 | 0.09 |
| 410-013 | TUBE FITTING ZN WSV 6 M14x1,5 | 10 | M16x1,5 | 21 | 26 | Die-cast zinc | 58 | 0.13 |

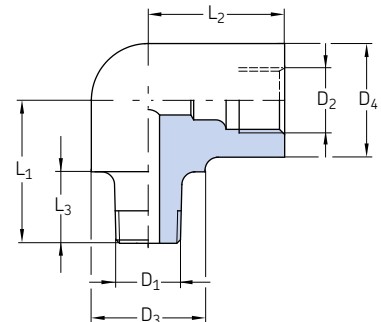
Solderless pipe union with tapered sleeve

Elbows with tapered thread acc. to DIN 71429



| Order number | Designation | TubeØ | D ₁ ¹⁾ | D ₂ | D ₃ | D ₄ | L ₁ | L ₂ | L ₃ | ∅ | Material | Weight | |
|-----------------|--------------------------|-------|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----|---------------|--------|------|
| | | | | | | | | | | | | mm | mm |
| 504-510K | ELBOW PIPE ZN 4 M10x1,0K | 4 | M10x1 tap. | M8x1 | 13 | 13 | 21 | 16 | 10 | 14 | Die-cast zinc | 24 | 0.05 |
| 514-018K | ELBOW PIPE ZN 4 R1/8K | 4 | R 1/8 | M8x1 | 13 | 13 | 21 | 16 | 10 | 14 | Die-cast zinc | 23 | 0.05 |
| 506-508K | ELBOW PIPE ZN 6 M 8x1,0K | 6 | M8x1 tap. | M10x1 | 12,5 | 14 | 18 | 18 | 10,5 | 14 | Die-cast zinc | 18 | 0.04 |
| 506-510K | ELBOW PIPE ZN 6 M10x1,0K | 6 | M10x1 tap. | M10x1 | 12,5 | 14 | 18 | 18 | 10,5 | 14 | Die-cast zinc | 20 | 0.04 |
| 506-512K | ELBOW PIPE ZN 6 M12x1,0K | 6 | M12x1 tap. | M10x1 | 12,5 | 14 | 18 | 18 | 10,5 | 14 | Die-cast zinc | 21 | 0.05 |
| 508-512K | ELBOW PIPE ZN 8 M12x1,0K | 8 | M12x1 tap. | M14x1,5 | 14 | 19,5 | 19,5 | 24 | 10 | 14 | Die-cast zinc | 34 | 0.07 |

¹⁾ Tapered thread according to DIN 158 tap. short, resp. according to DIN 2999.

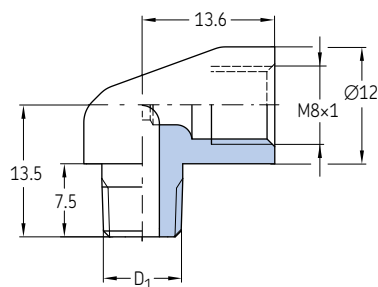


| Order number | Designation | TubeØ | D ₁ ¹⁾ | D ₂ | D ₃ | D ₄ | L ₁ | L ₂ | L ₃ | Material | Weight | |
|--------------------|--------------------------|-------|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|--------|------|
| | | | | | | | | | | | mm | mm |
| Steel | | | | | | | | | | | | |
| 502-206K | ELBOW PIPE ST 2,5 M 6K | 2,5 | M6 tap. | M6x0,75 | – | 8 | 10 | 9,5 | 6 | Steel | 6 | 0.01 |
| 403-006-651 | ELBOW PIPE ST 6 R1/4K | 6 | R 1/4 | M10x1 | 14 | 14 | 17 | 17,5 | 8,5 | Steel | 32 | 0.07 |
| Brass | | | | | | | | | | | | |
| 506-202K | ELBOW PIPE MS 6 M10x1,0K | 6 | M10x1 tap. | M10x1 | 17 | 17 | 22 | 21 | 11 | Brass | 60 | 0.13 |

¹⁾ Tapered thread according to DIN 158 tap. short, resp. according to DIN 2999.

Solderless pipe union with tapered sleeve

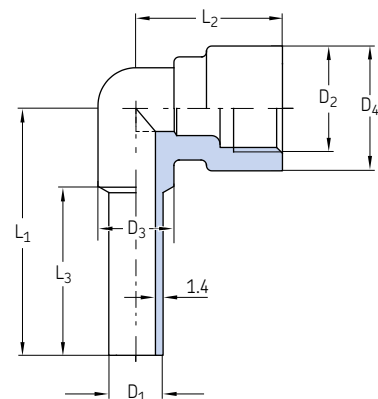
Elbows with tapered thread acc. to DIN 71429



| Order number | Designation | TubeØ | D ₁ ¹⁾ | Material | Weight | |
|--------------|---------------------------|-------|------------------------------|----------|--------|------|
| | | | | | g | lb |
| | | mm | | | | |
| 504-200K | ELBOW PIPE MS 4 M 6K | 4 | M6 tap. | Brass | 14 | 0.03 |
| 504-201K | ELBOW PIPE MS 4 M 8x1,0K | 4 | M8x1 tap. | Brass | 20 | 0.04 |
| 504-202K | ELBOW PIPE MS 4 M10x1,0K | 4 | M10x1 tap. | Brass | 16 | 0.04 |
| 504-203K | ELBOW PIPE MS 4 M 6x0,75K | 4 | M6x0.75 tap. | Brass | 14 | 0.03 |
| 514-018K-S1 | ELBOW PIPE MS 4 R1/8K | 4 | R 1/8 | Brass | 20 | 0.04 |

¹⁾Tapered thread according to DIN 158. short, resp. according to DIN 2999.

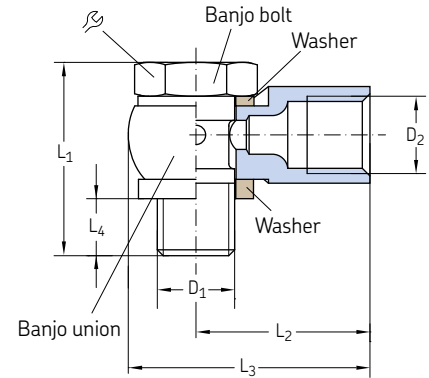
Elbows with tube end for pipe union for installation in counterbores acc. to DIN 3854/DIN 3862



| Order number | Designation | TubeØ | D ₁ | D ₂ | D ₃ | D ₄ | L ₁ | L ₂ | L ₃ | Material | Weight | |
|--------------|-------------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|--------|------|
| | | | | | | | | | | | g | lb |
| | | mm | mm | mm | mm | mm | mm | mm | mm | | | |
| DY958 | ELBOW PIPE MS D6 | 6 | 6 | M10x1 | 8 | 14 | 30,8 | 21 | 22 | Brass | 23 | 0.05 |
| DY960 | ELBOW PIPE MS D8 | 8 | 8 | M14x1,5 | 11 | 18 | 37 | 24,5 | 27 | Brass | 37 | 0.08 |
| DY961 | ELBOW PIPE MS D10 | 10 | 10 | M16x1,5 | 15 | 23 | 42,5 | 26,5 | 29 | Brass | 73 | 0.16 |
| DY962 | ELBOW PIPE MS D12 | 12 | 12 | M18x1,5 | 15 | 23 | 46 | 26,5 | 32 | Brass | 62 | 0.14 |

Solderless pipe union with tapered sleeve

Banjo fittings acc. to DIN 71430 Form A

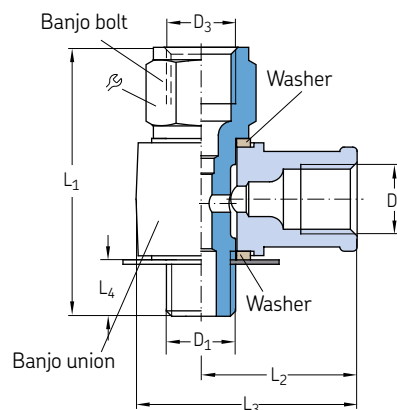


| Order number | Designation | Tube Ø D ₁ | D ₂ | L ₁ | L ₂ | L ₃ | L ₄ | ⌀ | Banjo bolt | Banjo union | Weight (total) | |
|--|--------------------------------|-----------------------|----------------|----------------|----------------|----------------|----------------|------|------------|-------------|----------------|---------|
| | | mm | mm | mm | mm | mm | mm | mm | | | g lb | |
| Steel, galvanized | | | | | | | | | | | | |
| 502-161 ¹⁾ | TUBE FITTING SWVE 2,5 M 6 | 2,5 | M6 | M6×0,75 | 20 | 13 | 19 | 4,5 | 9 | 502-056 | 502-051 | 11 0.02 |
| 502-101 ¹⁾ | TUBE FITTING SWVE 2,5 M 6×0,75 | 2,5 | M6×0,75 | M6×0,75 | 18 | 13 | 19 | 5 | 9 | 502-053 | 502-051 | 10 0.02 |
| 502-102 ¹⁾ | TUBE FITTING SWVE 2,5 M 8×1,0 | 2,5 | M8×1 | M6×0,75 | 20 | 14 | 21 | 6,5 | 11 | 502-054 | 502-052 | 15 0.03 |
| 504-161 ¹⁾ | TUBE FITTING SWVE 4 M 6 | 4 | M6 | M8×1 | 20 | 17 | 24 | 4,1 | 9 | 502-056 | 504-651 | 15 0.03 |
| 504-162 ¹⁾ | TUBE FITTING SWVE 4 M 6×0,75 | 4 | M6×0,75 | M8×1 | 18 | 17 | 24 | 4,5 | 9 | 502-053 | 504-651 | 14 0.03 |
| 504-411 ¹⁾ | TUBE FITTING SWVE 4 M 8 | 4 | M8 | M8×1 | 23 | 18 | 25 | 7,5 | 11 | 502-154 | 504-851 | 20 0.04 |
| 504-401 ¹⁾ | TUBE FITTING SWVE 4 M 8×1,0 | 4 | M8×1 | M8×1 | 20 | 18 | 25 | 7 | 11 | 502-054 | 504-851 | 17 0.04 |
| Steel, galvanized bolt and die-cast zinc union | | | | | | | | | | | | |
| 504-101 | TUBE FITTING SWVE 4 M 8×1,0 | 4 | M8×1 | M8×1 | 26 | 18 | 25 | 6,5 | 11 | 504-073 | 504-072 | 23 0.05 |
| 504-102 | TUBE FITTING SWVE 4 M10×1,0 | 4 | M10×1 | M8×1 | 26 | 19 | 27,5 | 6,5 | 14 | 504-054 | 504-052 | 30 0.07 |
| 504-108 | TUBE FITTING SWVE 4 G1/8A | 4 | G 1/8 A | M8×1 | 27 | 19 | 27,5 | 6,8 | 14 | 504-027 | 504-052 | 32 0.07 |
| 506-140 | TUBE FITTING SWVE 6 M10×1,0 | 6 | M10×1 | M10×1 | 26 | 21 | 28,5 | 6,5 | 14 | 504-054 | 506-033 | 33 0.07 |
| 506-142 | TUBE FITTING SWVE 6 M12×1,0 | 6 | M12×1 | M10×1 | 34 | 25 | 35,2 | 7,5 | 17 | 558-012 | 506-030 | 60 0.13 |
| 506-012 | TUBE FITTING SWVE 6 M14×1,5 | 6 | M14×1,5 | M10×1 | 34 | 25 | 35,2 | 7,5 | 17 | 508-006 | 506-005 | 60 0.13 |
| 506-145 | TUBE FITTING SWVE 6 M16×1,5 | 6 | M16×1,5 | M10×1 | 35 | 30 | 41 | 8,7 | 19 | 510-017 | 506-034 | 90 0.20 |
| 506-108 | TUBE FITTING SWVE 6 G1/8A | 6 | G 1/8 A | M10×1 | 27 | 21 | 28,5 | 7 | 14 | 504-027 | 506-033 | 33 0.07 |
| 506-214 | TUBE FITTING SWVE 6 G1/4A | 6 | G 1/4 A | M10×1 | 35 | 25 | 35,2 | 8,5 | 17 | 508-023 | 506-005 | 60 0.13 |
| 508-142 | TUBE FITTING SWVE 8 M12×1,0 | 8 | M12×1 | M14×1,5 | 34 | 27 | 37 | 7,5 | 17 | 558-012 | 508-030 | 63 0.14 |
| 508-144 | TUBE FITTING SWVE 8 M14×1,5 | 8 | M14×1,5 | M14×1,5 | 34 | 27 | 37 | 7,5 | 17 | 508-006 | 508-007 | 61 0.13 |
| 508-145 | TUBE FITTING SWVE 8 M16×1,5 | 8 | M16×1,5 | M14×1,5 | 35 | 30 | 41 | 8,7 | 19 | 510-017 | 508-054 | 80 0.18 |
| 508-024 | TUBE FITTING SWVE 8 G1/4A | 8 | G 1/4 A | M14×1,5 | 35 | 27 | 37 | 8,5 | 17 | 508-023 | 508-007 | 59 0.13 |
| 510-142 | TUBE FITTING SWVE 10 M12×1,0 | 10 | M12×1 | M16×1,5 | 34 | 30 | 40 | 7,5 | 17 | 558-012 | 510-041 | 70 0.15 |
| 510-145 | TUBE FITTING SWVE 10 M16×1,5 | 10 | M16×1,5 | M16×1,5 | 35 | 30 | 41 | 10,7 | 19 | 510-017 | 510-044 | 80 0.18 |
| 510-024 | TUBE FITTING SWVE 10 G1/4A | 10 | G 1/4 A | M16×1,5 | 35 | 30 | 40 | 7,5 | 17 | 508-023 | 510-023 | 65 0.14 |

¹⁾ Miniature design, banjo union steel

Solderless pipe union with tapered sleeve

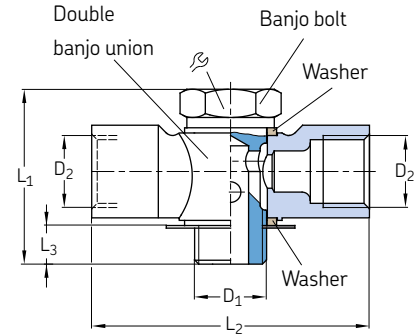
Banjo fittings
acc. to DIN 71430 Form B



| Order number | Designation | Tube Ø | D ₁ | D ₂ | D ₃ | L ₁ | L ₂ | L ₃ | L ₄ | Banjo bolt | Banjo union | Weight (total) | | |
|--|------------------------------|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------|-------------|----------------|-----|------|
| | | | mm | mm | mm | mm | mm | mm | mm | | | mm | g | lb |
| Steel, galvanized bolt and die-cast zinc union | | | | | | | | | | | | | | |
| 504-114 | TUBE FITTING LE 4 M 8x1,0 | 4 | M8x1 | M8x1 | M8x1 | 31 | 18 | 25,5 | 6,5 | 11 | 504-075 | 504-072 | 24 | 0.05 |
| 504-115 | TUBE FITTING LE 4 M10x1,0 | 4 | M10x1 | M8x1 | M8x1 | 31 | 19 | 27,5 | 6,5 | 14 | 504-056 | 504-052 | 34 | 0.07 |
| 504-105 | TUBE FITTING LE 4/6 M10x1,0 | 4/6 | M10x1 | M8x1 | M10x1 | 33 | 19 | 27,5 | 6,5 | 14 | 506-006 | 504-052 | 34 | 0.07 |
| 405-619-061 | TUBE FITTING LE 4/6 G1/8A | 4/6 | G 1/8 A | M8x1 | M10x1 | 33 | 19 | 27,5 | 6,3 | 14 | 402-606-191 | 504-052 | 33 | 0.07 |
| 506-114 | TUBE FITTING LE 6 M10x1,0 | 6 | M10x1 | M10x1 | M10x1 | 33 | 21 | 28,5 | 6,3 | 14 | 506-006 | 506-033 | 35 | 0.08 |
| 506-342 | TUBE FITTING LE 6 M12x1,0 | 6 | M12x1 | M10x1 | M10x1 | 38 | 25 | 35,2 | 7,5 | 17 | 558-612 | 506-030 | 62 | 0.14 |
| 506-101 | TUBE FITTING LE 6 M14x1,5 | 6 | M14x1,5 | M10x1 | M10x1 | 40 | 25 | 35,2 | 7,5 | 17 | 508-303 | 506-005 | 70 | 0.15 |
| 586-342 | TUBE FITTING LE 6/8 M12x1,0 | 6/8 | M12x1 | M10x1 | M14x1,5 | 44 | 25 | 35,2 | 7,5 | 17 | 558-812 | 506-030 | 64 | 0.14 |
| 506-013 | TUBE FITTING LE 6/8 M14x1,5 | 6/8 | M14x1,5 | M10x1 | M14x1,5 | 43 | 25 | 35,2 | 7,5 | 17 | 508-008 | 506-005 | 61 | 0.13 |
| 506-345 | TUBE FITTING LE 6/10 M12x1,0 | 6/10 | M12x1 | M10x1 | M16x1,5 | 48,5 | 25 | 35 | 7,7 | 19 | 558-912 | 506-030 | 77 | 0.17 |
| 506-346 | TUBE FITTING LE 6/10 M16x1,5 | 6/10 | M16x1,5 | M10x1 | M16x1,5 | 50 | 30 | 41 | 8,7 | 19 | 510-010 | 506-034 | 100 | 0.22 |
| 508-342 | TUBE FITTING LE 8 M12x1,0 | 8 | M12x1 | M14x1,5 | M14x1,5 | 44 | 27 | 37 | 7,5 | 17 | 558-812 | 508-030 | 67 | 0.15 |
| 508-012 | TUBE FITTING LE 8 M14x1,5 | 8 | M14x1,5 | M14x1,5 | M14x1,5 | 43 | 27 | 37 | 7,5 | 17 | 508-008 | 508-007 | 63 | 0.14 |
| 508-034 | TUBE FITTING LE 8 G1/4A | 8 | G 1/4 A | M14x1,5 | M14x1,5 | 44 | 27 | 37 | 7,5 | 17 | 508-033 | 508-007 | 65 | 0.14 |
| 568-342 | TUBE FITTING LE 8/6 M12x1,0 | 8/6 | M12x1 | M14x1,5 | M10x1 | 38 | 27 | 37 | 7,5 | 17 | 558-612 | 508-030 | 65 | 0.14 |
| 508-304 | TUBE FITTING LE 8/6 M14x1,5 | 8/6 | M14x1,5 | M14x1,5 | M10x1 | 40 | 27 | 37 | 7,5 | 17 | 508-303 | 508-007 | 66 | 0.15 |
| 508-345 | TUBE FITTING LE 8/10 M12x1,0 | 8/10 | M12x1 | M14x1,5 | M16x1,5 | 48,5 | 27 | 37 | 7,7 | 19 | 558-912 | 508-030 | 80 | 0.18 |
| 508-346 | TUBE FITTING LE 8/10 M16x1,5 | 8/10 | M16x1,5 | M14x1,5 | M16x1,5 | 50 | 30 | 41 | 8,7 | 19 | 510-010 | 508-054 | 93 | 0.21 |
| 510-342 | TUBE FITTING LE 10 M12x1,0 | 10 | M12x1 | M16x1,5 | M16x1,5 | 48,5 | 30 | 40 | 7,5 | 19 | 558-912 | 510-041 | 81 | 0.18 |
| 510-344 | TUBE FITTING LE 10 M16x1,5 | 10 | M16x1,5 | M16x1,5 | M16x1,5 | 50 | 30 | 41 | 8,7 | 19 | 510-010 | 510-044 | 89 | 0.20 |
| 510-343 | TUBE FITTING LE 10 G1/4A | 10 | G 1/4 A | M16x1,5 | M16x1,5 | 48,5 | 30 | 40 | 7,5 | 19 | 558-913 | 510-023 | 78 | 0.17 |
| 510-346 | TUBE FITTING LE 10/6 M16x1,5 | 10/6 | M16x1,5 | M16x1,5 | M10x1 | 50 | 30 | 41 | 8,7 | 19 | 506-018 | 510-044 | 96 | 0.21 |
| 510-341 | TUBE FITTING LE 10/8 M12x1,0 | 10/8 | M12x1 | M16x1,5 | M14x1,5 | 44 | 30 | 40 | 7,5 | 17 | 558-812 | 510-041 | 69 | 0.15 |

Solderless pipe union with tapered sleeve

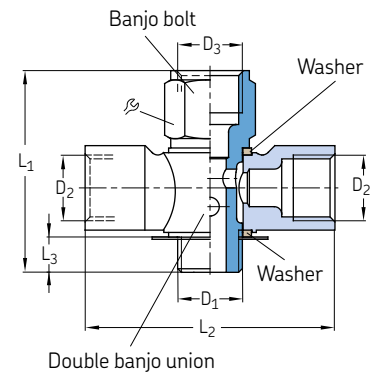
Banjo fittings acc. to DIN 71430 Form C



Tapered sleeve unions

| Order number | Designation | Tube | | D ₁ | D ₂ | L ₁ | L ₂ | L ₃ | ∩ | Banjo bolt | Material | Double banjo union | Material | Weight (total) | |
|--------------|---------------------------|------|---------|----------------|----------------|----------------|----------------|----------------|---|------------|--------------|--------------------|---------------|----------------|------|
| | | ∅ | | | | | | | | | | | | mm | mm |
| 504-109 | TUBE FITTING TH4 M 8x1,0 | 4 | M8x1 | M8x1 | 26 | 38 | 6,5 | 11 | | 504-073 | Steel, galv. | 504-071 | Die-cast zinc | 31 | 0.07 |
| 504-112 | TUBE FITTING TH4 M10x1,0 | 4 | M10x1 | M8x1 | 26 | 38 | 6,5 | 14 | | 504-054 | Steel, galv. | 504-051 | Die-cast zinc | 35 | 0.08 |
| 506-242 | TUBE FITTING TH6 M12x1,0 | 6 | M12x1 | M10x1 | 34 | 48 | 7,5 | 17 | | 558-012 | Steel, galv. | 506-032 | Die-cast zinc | 71 | 0.16 |
| 506-025 | TUBE FITTING TH6 M14x1,5 | 6 | M14x1,5 | M10x1 | 34 | 48 | 7,5 | 17 | | 508-006 | Steel, galv. | 506-007 | Die-cast zinc | 70 | 0.15 |
| 508-242 | TUBE FITTING TH8 M12x1,0 | 8 | M12x1 | M14x1,5 | 34 | 54 | 7,5 | 17 | | 558-012 | Steel, galv. | 508-032 | Die-cast zinc | 77 | 0.17 |
| 508-013 | TUBE FITTING TH8 M14x1,5 | 8 | M14x1,5 | M14x1,5 | 34 | 54 | 7,5 | 17 | | 508-006 | Steel, galv. | 508-005 | Die-cast zinc | 77 | 0.17 |
| 508-025 | TUBE FITTING TH8 G1/4A | 8 | G 1/4A | M14x1,5 | 35 | 54 | 7,5 | 17 | | 508-023 | Steel, galv. | 508-005 | Die-cast zinc | 77 | 0.17 |
| 510-242 | TUBE FITTING TH10 M12x1,0 | 10 | M12x1 | M16x1,5 | 34 | 60 | 7,5 | 17 | | 558-012 | Steel, galv. | 510-042 | Die-cast zinc | 83 | 0.18 |

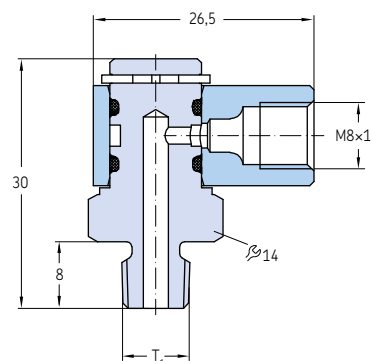
Banjo fittings acc. to DIN 71430 Form D



| Order number | Designation | Tube ∅ | D ₁ | D ₂ | D ₃ | L ₁ | L ₂ | L ₃ | ∩ | Banjo bolt | Double banjo union | Weight (total) | |
|--|----------------------------|--------|----------------|----------------|----------------|----------------|----------------|----------------|----|------------|--------------------|----------------|------|
| | | | | | | | | | | | | mm | mm |
| Steel, galvanized bolt and die-cast zinc union | | | | | | | | | | | | | |
| 504-110 | TUBE FITTING TH4 M 8x1,0 | 4 | M8x1 | M8x1 | M8x1 | 31 | 38 | 6,5 | 11 | 504-071 | 504-071 | 32 | 0.07 |
| 504-111 | TUBE FITTING TH4 M10x1,0 | 4 | M10x1 | M8x1 | M8x1 | 31 | 38 | 6,5 | 14 | 504-056 | 504-051 | 37 | 0.08 |
| 504-106 | TUBE FITTING TH4/6 M10x1,0 | 4/6 | M10x1 | M8x1 | M10x1 | 33 | 38 | 6,5 | 14 | 506-006 | 504-051 | 37 | 0.08 |
| 506-442 | TUBE FITTING TH6 M12x1,0 | 6 | M12x1 | M10x1 | M10x1 | 38 | 48 | 7,5 | 17 | 558-612 | 506-032 | 70 | 0.15 |
| 506-014 | TUBE FITTING TH6 M14x1,5 | 6 | M14x1,5 | M10x1 | M10x1 | 40 | 48 | 7,5 | 17 | 508-303 | 506-007 | 73 | 0.16 |
| 586-442 | TUBE FITTING TH6/8 M12x1,0 | 6/8 | M12x1 | M10x1 | M14x1,5 | 44 | 48 | 7,5 | 17 | 558-812 | 506-032 | 72 | 0.16 |
| 506-026 | TUBE FITTING TH6/8 M14x1,5 | 6/8 | M14x1,5 | M10x1 | M14x1,5 | 43 | 48 | 7,5 | 17 | 508-008 | 506-007 | 70 | 0.15 |
| 508-442 | TUBE FITTING TH8 M12x1,0 | 8 | M12x1 | M14x1,5 | M14x1,5 | 44 | 54 | 7,5 | 17 | 558-812 | 508-032 | 68 | 0.15 |
| 508-014 | TUBE FITTING TH8 M14x1,5 | 8 | M14x1,5 | M14x1,5 | M14x1,5 | 43 | 54 | 7,5 | 17 | 508-008 | 508-005 | 79 | 0.17 |
| 568-442 | TUBE FITTING TH8/6 M12x1,0 | 8/6 | M12x1 | M14x1,5 | M10x1 | 38 | 54 | 7,5 | 17 | 558-612 | 508-032 | 80 | 0.18 |
| 508-305 | TUBE FITTING TH8/6 M14x1,5 | 8/6 | M14x1,5 | M14x1,5 | M10x1 | 40 | 54 | 7,5 | 17 | 508-303 | 508-005 | 90 | 0.20 |
| 510-442 | TUBE FITTING TH10 M12x1,0 | 10 | M12x1 | M16x1,5 | M16x1,5 | 48,5 | 60 | 7,5 | 19 | 558-912 | 510-042 | 99 | 0.22 |

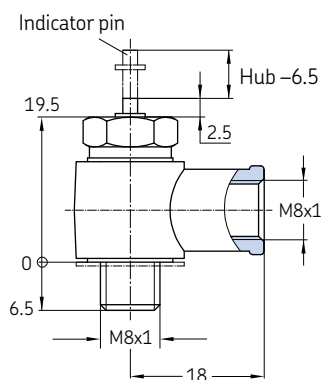
Solderless pipe union with tapered sleeve

Banjo fittings, rotatable



| Order number | Designation | Tube ØD | Thread T ₁ | Thread ₂ | Speed max. | Oil pressure max. | | Air pressure max. | | Material | Weight | |
|--------------|------------------------------------|------------|-----------------------|---------------------|---------------|----------------------|-----|----------------------|-----|----------|--------|------|
| | | | | | | bar | psi | bar | psi | | g | lb |
| 405-549-049 | BANJO FITTING MOVABLE M 8x1A x M8I | 4 | M8x1 tap. | M8x1 | 1 | 45 | 650 | - | - | Brass | 41 | 0.09 |
| 405-551-049 | BANJO FITTING MOVABLE M10x1A x M8I | 4 | M10x1tap. | M8x1 | 1 | 45 | 650 | - | - | Brass | 40 | 0.09 |

Banjo fitting with indicator pin for lubricant distributor

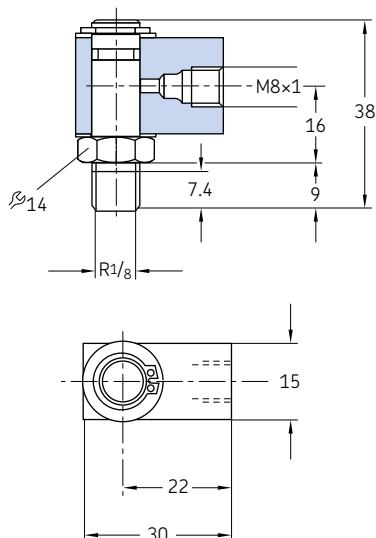


| Order number | Designation | Tube Ø | Material | Weight | |
|--------------|-------------------------------|--------|-------------------|--------|------|
| | | | | g | lb |
| 169-200-008 | TUBE FITTING SWVE 4 M 8x1,0+K | 4 | Steel, galvanized | 24 | 0.05 |

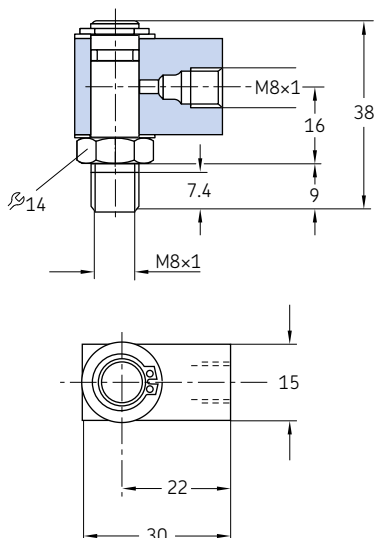
Solderless pipe union with tapered sleeve

Rotating joints

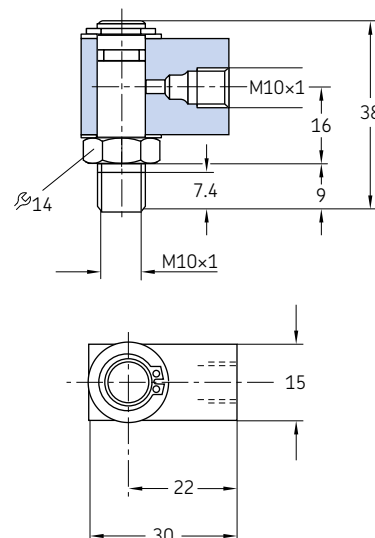
401-504-192



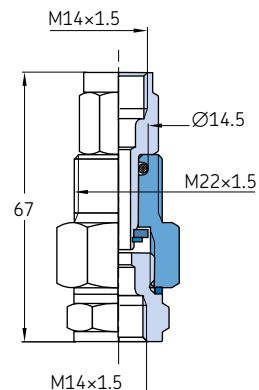
401-504-292



401-506-313



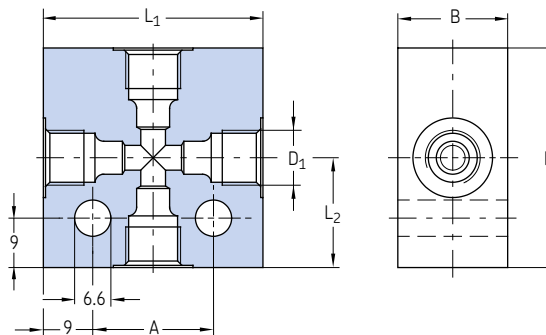
| Order number | Designation | Tube ØD mm | Thread ₁ mm | Thread ₂ mm | Speed max. min ⁻¹ | Oil pressure max. | | Air pressure max. | | Material | Weight | |
|--------------|---------------------------|---------------|---------------------------|---------------------------|------------------------------------|----------------------|-----|----------------------|-----|----------|--------|------|
| | | | | | | bar | psi | bar | psi | | g | lb |
| 401-504-192 | ROTATING JOINT MS 4 G1/8 | 4 | G1/8 | M8x1 | 100 | 30 | 435 | 8 | 116 | Brass | 81 | 0.18 |
| 401-504-292 | ROTATING JOINT MS 4 M 8x1 | 4 | M8x1 | M8x1 | 100 | 30 | 435 | 8 | 116 | Brass | 80 | 0.18 |
| 401-506-313 | ROTATING JOINT MS 6 M10x1 | 6 | M10x1 | M10x1 | 100 | 30 | 435 | 8 | 116 | Brass | 77 | 0.17 |



| Order number | Designation | Tube ØD mm | Thread ₁ mm | Thread ₂ mm | Speed max. min ⁻¹ | Oil pressure max. | | Air pressure max. | | Material | Weight | |
|--------------|-----------------------------|---------------|---------------------------|---------------------------|------------------------------------|----------------------|-----|----------------------|-----|----------|--------|------|
| | | | | | | bar | psi | bar | psi | | g | lb |
| 408-120 | ROTATING JOINT ST 8 M14x1,5 | 8 | M14x1,5 | M14x1,5 | 20 | 10 | 145 | - | - | Steel | 200 | 0.44 |

Solderless pipe union with tapered sleeve

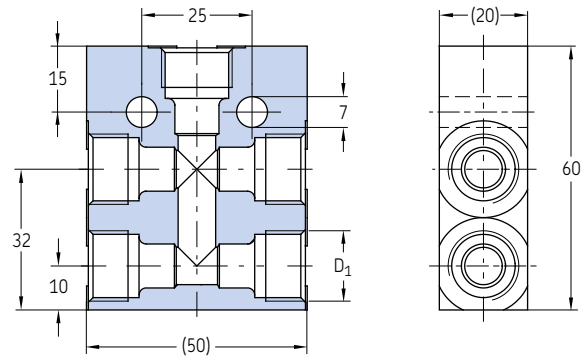
Cross joints



| Order number | Designation | Tube Ø | D ₁ | A | B | H | L ₁ | L ₂ | Material | Weight | |
|------------------|----------------------------------|-----------|----------------|----|----|----|----------------|----------------|----------|--------|------|
| | | mm | mm | mm | mm | mm | mm | mm | | g | lb |
| DAK504-S1 | CROSS PIECE,AL 1x M10x1/3x M 8x1 | 4/6 | M10x1/ M8x1 | 22 | 20 | 40 | 40 | 20 | Aluminum | 78 | 0.17 |
| DAK506 | CROSS PIECE,AL 4x M10x1 | 6 | M10x1 | 22 | 20 | 40 | 40 | 20 | Aluminum | 75 | 0.17 |
| DAK508 | CROSS PIECE,AL 4x M14x1,5 | 8 | M14x1,5 | 32 | 20 | 50 | 50 | 25 | Aluminum | 110 | 0.24 |
| DAK510 | CROSS PIECE,AL 4x M16x1,5 | 10 | M16x1,5 | 25 | 20 | 56 | 50 | 28 | Aluminum | 115 | 0.25 |
| DAK512 | CROSS PIECE,AL 4x M18x1,5 | 12 | M18x1,5 | 42 | 25 | 60 | 60 | 30 | Aluminum | 194 | 0.43 |

Solderless pipe union with tapered sleeve

Cross joints



Tapered sleeve unions

| Order number | Designation | Tube Ø | D ₁ | Material | Weight | |
|--------------|----------------------|--------|----------------|-------------------|--------|------|
| | | | | | g | lb |
| DAK510-S1 | TEE,ST 5x M16x1,5 ZN | 10 | M16x1,5 | Steel, galvanized | 322 | 0.71 |

High-pressure cutting sleeve unions acc. to ISO 8334-1

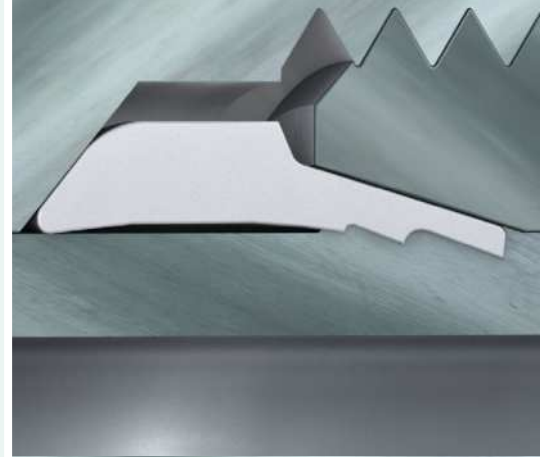
DECS union



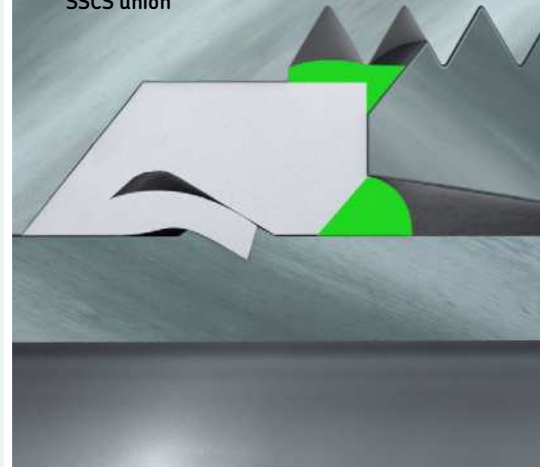
SSCS union



DECS union



SSCS union



Description

Solderless pipe fittings with cutting sleeves are designed for high-pressure oil, fluid grease and grease lubrication systems with pressures up to 400 bar and more with an operating temperature range from -25 to 80 °C. Depending on the operating pressure, the fittings are available in 3 pressure series: LL (very light), L (light) and S (heavy). The pipe connections, threads and pressure series are defined in DIN EN ISO 8434-1 (formerly DIN 2353).

In consideration of the application, the fittings are available in various materials (galvanized steel, stainless steel and brass).

Cutting sleeve fittings, also called bite-type fittings, are very popular due to simple assembly that requires only two wrenches. It is recognised for its high-pressure performance from a compact body. During assembly, the cutting ring forms, cutting edges into the tube that will remain after reassembly. The cutting ring can also be preassembled by a manual device or with the help of a tool.

Series

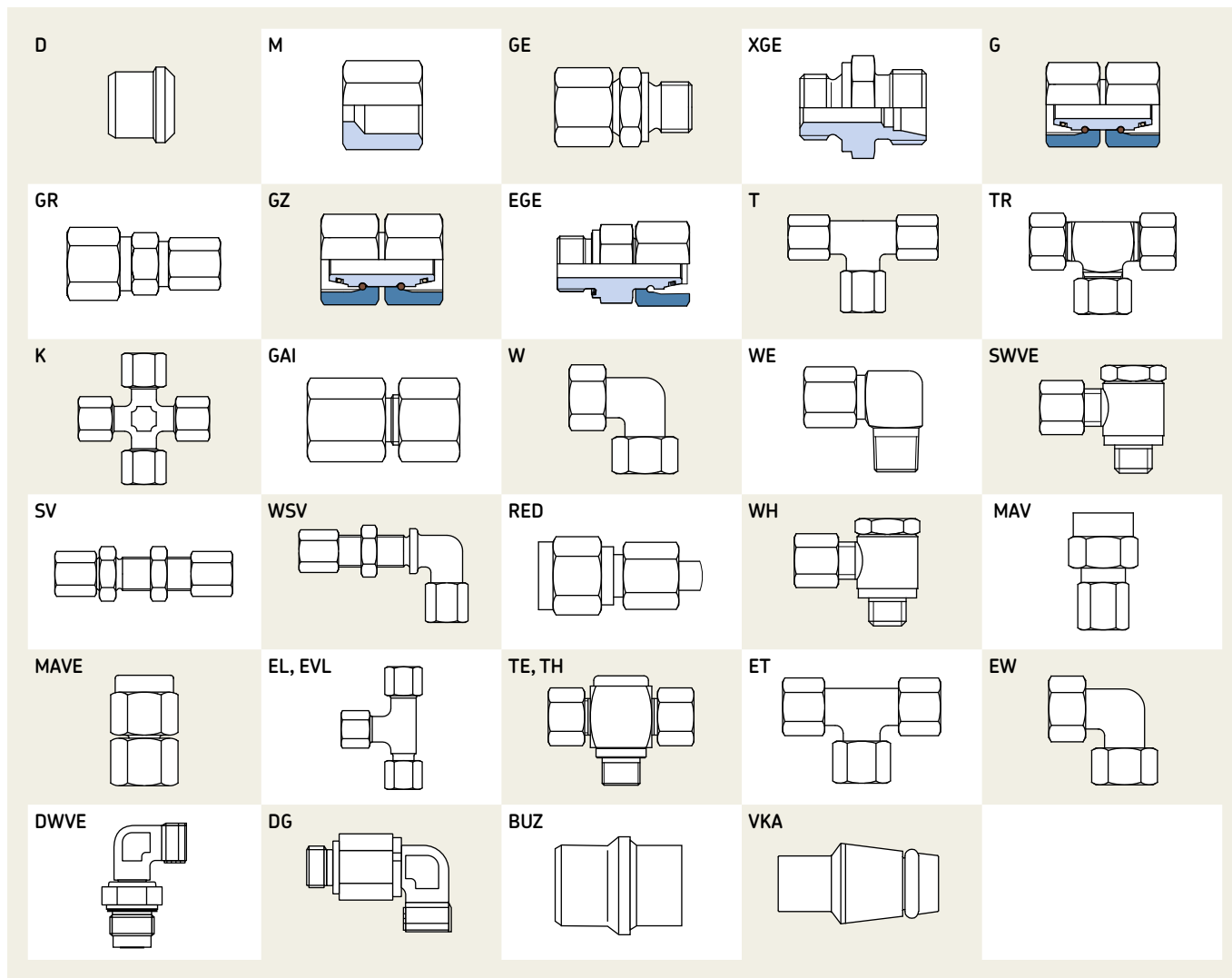
| | LL | L | S |
|-------------------------|-------------------------------------|----------------------|---|
| Design | very light | light | rigid |
| Tube diameter (mm) | 4, 6, 8, 10, 12 | 6, 8, 10, 12, 15 | 22, 26, 6, 8, 10, 12, 16, 20, 30 |
| Nominal pressure | 100 bar 1 450 psi | 315 bar 4 568 psi | 160 bar 2 320 psi 630 bar 9 137 psi 400 bar 5 800 psi |
| Operation pressure max. | 200 bar 2 900 psi | 500 bar 7 250 psi | 250 bar 3 625 psi 900 bar 13 053 psi 420 bar 6 090 psi |
| Space requirement | very small | small | large |
| Lubrication systems | medium-pressure lubrication systems | | high-pressure grease systems |
| Typical applications | vehicles, machine tools, wind mills | | presses, injection molding machines, heavy industry |

Types of cutting sleeve unions

- Double-edged cutting sleeve union (DECS)
- Soft-seal cutting sleeve union (SSCS)

High-pressure cutting sleeve unions

Fitting types



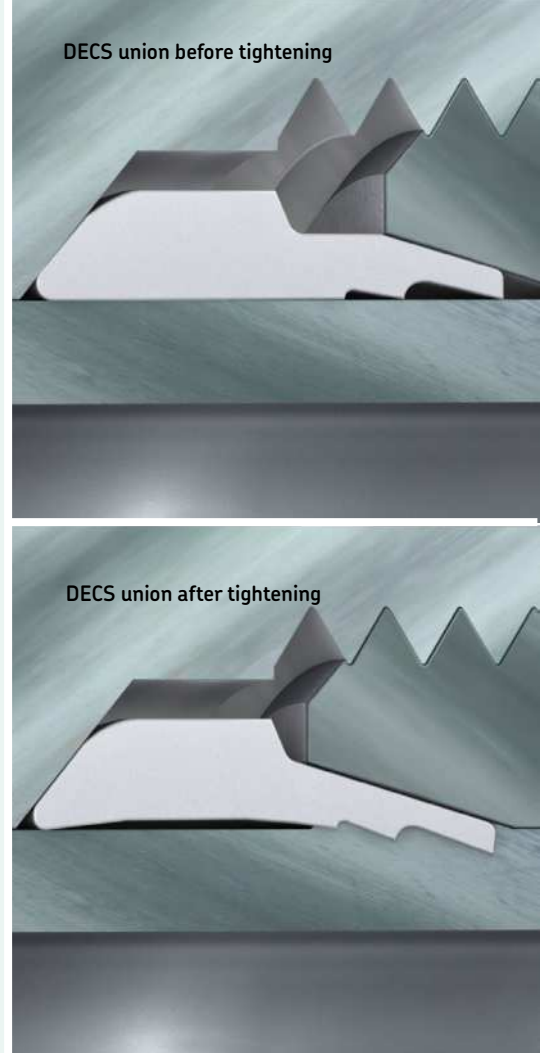
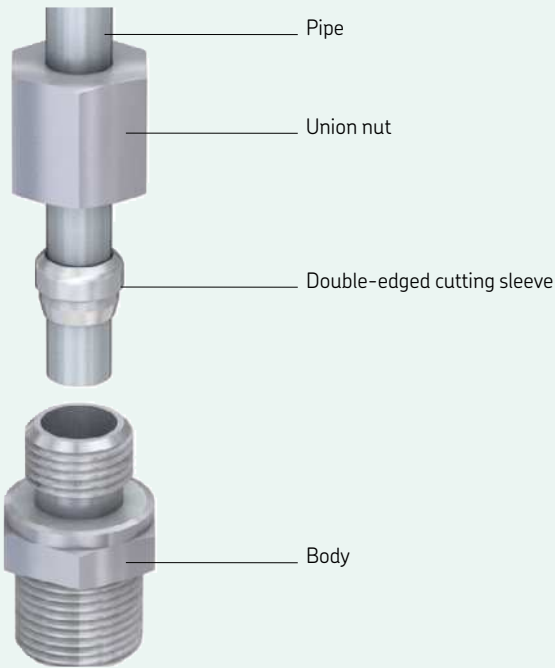
Nomenclature of fitting designations

| | D | M | ST | 4 | -LL | G1/8 | | | | | | |
|--------------------------|-----|----|----|---|-----|-------|----|----|--|--|--|--|
| | GE | VA | 8 | | -L | R1/8 | | | | | | |
| | ... | MS | 10 | Z | -S | M8x1K | ED | CF | | | | |
| Fitting type | | | | | | | | | | | | |
| Material | | | | | | | | | | | | |
| Tube diameter in mm | | | | | | | | | | | | |
| Soft seal (fitting seal) | | | | | | | | | | | | |
| Series | | | | | | | | | | | | |
| Thread type | | | | | | | | | | | | |
| Soft seal (tube seal) | | | | | | | | | | | | |
| Surface coating | | | | | | | | | | | | |

Legend of fitting type abbreviations

| | | | |
|-------------|--|-------------|--|
| D | Cutting sleeve | MAVE | Connectors for pressure gauge (adjustable) |
| M | Union nuts | EL | L-connectors adjustable |
| GE | Straight screw-in connector | EVL | Standpipe branch tee |
| XGE | Straight screw-in gland | TE | Screw-in T-connector |
| G | Straight tube-to-tube connector | TH | Screw-in T-connector (high-pressure) |
| GR | Straight tube-to-tube reducing connector | ET | Swivel nut branch tee |
| GZ | Union stud | EW | Swivel nut elbow |
| EGE | Straight tube stud | DWVE | Elbow male stud plain bearing rotary union |
| T | T-connector | DG | Elbow bulkhead ball bearing rotary union |
| TR | T reducing connector | BUZ | Blanking plug for cones |
| K | K-connector | VKA | Blanking plug for cones |
| GAI | Female connector straight | | |
| W | Elbow connector | | |
| WE | Elbow screw-in connector | | |
| SWVE | Banjo fitting | | |
| SV | Straight bulkhead connector | | |
| WSV | Elbow bulkhead connector | | |
| RED | Reducing connectors | | |
| WH | Banjo fitting (high-pressure) | | |
| MAV | Connectors for pressure gauge | | |

Double-edged cutting sleeve union (DECS)



Description

Double-edged cutting sleeve unions (DECS) consist of a union nut, a double-edged cutting sleeve and a body. To mount the union, the union nut and double-edged cutting sleeve must be placed on the pipe end. Both parts must be aligned as shown on the illustration above. Then the pipe can be pushed into the body before tightening the union nut. During this process, the double-edged cutting sleeve cuts into the pipe to seal the connection as shown in the illustration above.

The following must be considered when tightening the union:

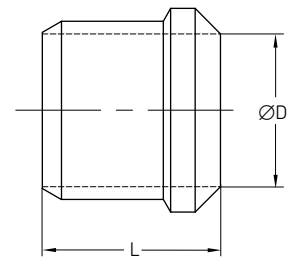
- Manual presetting – tighten the nut by 1 1/4 turns
- Final assembly – 1/4 turn after perceptible rise in force

Features and benefits

- Compact installation dimensions
- Virtually leakage-free, high-pressure union
- Recommended for high-pressure grease applications
- Suitable for thin and heavy pipes made from steel, stainless steel, copper and aluminum
- Common fitting system for high-pressure systems, especially for oil and grease lubrication
- Over-assembly protection through noticeable increase in force when tightening union nut
- Pipe vibration dampening resulting from pipe fixation during assembly (caused by DECS union)
- Wide operating temperature range from -25 to 80 °C

Double-edged cutting sleeve unions

Double-edged cutting sleeves D acc. to DIN 3861/ISO 8434-1

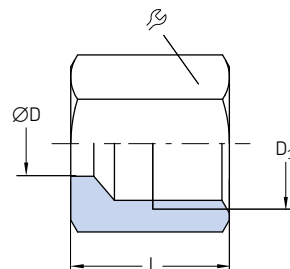


| Order number | Designation | Series | Tube ØD | L | Material | Operating pressure max. | | Weight | |
|-------------------|-----------------------|--------|------------|------|-------------------|----------------------------|-------|--------|------|
| | | | | | | bar | psi | g | lb |
| | | | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | |
| 223-14083-3 | FERRULE ST D 4-LL | LL | 4 | 6 | Steel, galvanized | 100 | 1 450 | 0,3 | 0.00 |
| 223-12295-2 | FERRULE ST D 6-LL | LL | 6 | 7 | Steel, galvanized | 100 | 1 450 | 0,8 | 0.00 |
| 223-12295-5 | FERRULE ST D 8-LL | LL | 8 | 7 | Steel, galvanized | 100 | 1 450 | 1 | 0.00 |
| 223-12295-9 | FERRULE ST D 10-LL | LL | 10 | 7 | Steel, galvanized | 100 | 1 450 | 1,3 | 0.00 |
| 223-12295-3 | FERRULE ST D 6-L/S | L/S | 6 | 9,5 | Steel, galvanized | 250 | 3 625 | 1 | 0.00 |
| 223-12295-6 | FERRULE ST D 8-L/S | L/S | 8 | 10 | Steel, galvanized | 250 | 3 625 | 1,7 | 0.00 |
| 223-12295-8 | FERRULE ST D 10-L/S | L/S | 10 | 10 | Steel, galvanized | 250 | 3 625 | 3,1 | 0.01 |
| 223-12296-1 | FERRULE ST D 12-L/S | L/S | 12 | 10,5 | Steel, galvanized | 250 | 3 625 | 3,5 | 0.01 |
| 223-12296-9 | FERRULE ST D 15-L | L | 15 | 10 | Steel, galvanized | 160 | 2 320 | 4,5 | 0.01 |
| 223-12583-1 | FERRULE ST D 18-L | L | 18 | 10,5 | Steel, galvanized | 160 | 2 320 | 5,5 | 0.01 |
| 223-12296-8 | FERRULE ST D 16-S | S | 16 | 10 | Steel, galvanized | 400 | 5 800 | 5,6 | 0.01 |
| 223-12296-3 | FERRULE ST D 20-S | S | 20 | 13 | Steel, galvanized | 400 | 5 800 | 11,4 | 0.03 |
| 223-12296-5 | FERRULE ST D 30-S | S | 30 | 13 | Steel, galvanized | 400 | 5 800 | 19,3 | 0.04 |
| Stainless steel | | | | | | | | | |
| 223-13639-5 | FERRULE VA D 4-LL | LL | 4 | 6 | Stainless steel | 100 | 1 450 | 0,3 | 0.00 |
| 223-13639-3 | FERRULE VA D 6-L/S | L/S | 6 | 9,5 | Stainless steel | 250 | 3 625 | 1 | 0.00 |
| 223-13639-2 | FERRULE VA D 6-LL | LL | 6 | 7 | Stainless steel | 100 | 1 450 | 0,8 | 0.00 |
| 223-13639-1 | FERRULE VA D 8-L/S | L/S | 8 | 9,5 | Stainless steel | 250 | 3 625 | 1,7 | 0.00 |
| 223-13639-4 | FERRULE VA D 10-L/S | L/S | 10 | 9,5 | Stainless steel | 250 | 3 625 | 3,1 | 0.01 |
| 223-13639-9 | FERRULE VA D 12-L/S | L/S | 12 | 10 | Stainless steel | 250 | 3 625 | 3,5 | 0.01 |
| 223-13639-7 | FERRULE VA D 16-S | S | 16 | 9,5 | Stainless steel | 400 | 5 800 | 5,6 | 0.01 |
| 223-13639-8 | FERRULE VA D 20-S | S | 20 | 12,5 | Stainless steel | 400 | 5 800 | 11,4 | 0.03 |
| 223-14092-5 | FERRULE VA D 30-S | S | 30 | 12,5 | Stainless steel | 400 | 5 800 | 19,3 | 0.04 |
| Zinc-nickel | | | | | | | | | |
| 406-351 | FERRULE ST D 6-LL Z3W | LL | 6 | 7 | Zinc-nickel | 100 | 1 450 | 1 | 0.00 |
| 408-351 | FERRULE ST D 8-LL Z3W | LL | 8 | 7 | Zinc-nickel | 100 | 1 450 | 1 | 0.00 |
| 406-361 | FERRULE ST D 6-L Z3W | L | 6 | 11,5 | Zinc-nickel | 250 | 3 625 | 2 | 0.00 |
| 408-361 | FERRULE ST D 8-L Z3W | L | 8 | 11,5 | zinc-nickel | 250 | 3 625 | 2 | 0.00 |

Double-edged cutting sleeve unions

Union nuts M

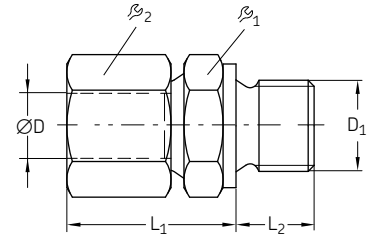
acc. to DIN 3861/ISO 8434-1



| Order number | Designation | Series | Tube ØD | D ₁ | L | ⌀ | Material | Operating pressure max. | | Weight | |
|-------------------|----------------------------|--------|------------|----------------|------|----|-------------------|-------------------------|------|--------|------|
| | | | | | | | | bar | psi | g | lb |
| Steel, galvanized | | | | | | | | | | | |
| 223-13032-1 | COUPLING NUT ST M 4-LL CF | LL | 4 | M8×1 | 11 | 10 | Steel, galvanized | 100 | 1450 | 4 | 0.01 |
| 223-12374-9 | COUPLING NUT ST M 6-LL CF | LL | 6 | M10×1 | 12 | 12 | Steel, galvanized | 100 | 1450 | 6 | 0.01 |
| 223-13032-3 | COUPLING NUT ST M 8-LL CF | LL | 8 | M12×1 | 12 | 14 | Steel, galvanized | 100 | 1450 | 7 | 0.02 |
| 223-12374-6 | COUPLING NUT ST M 10-LL CF | LL | 10 | M14×1 | 12,5 | 17 | Steel, galvanized | 100 | 1450 | 11 | 0.02 |
| 223-12373-9 | COUPLING NUT ST M 6-L CF | L | 6 | M12×1,5 | 14,5 | 14 | Steel, galvanized | 250 | 3625 | 10 | 0.02 |
| 223-13032-4 | COUPLING NUT ST M 8-L CF | L | 8 | M14×1,5 | 14,5 | 17 | Steel, galvanized | 250 | 3625 | 15 | 0.03 |
| 223-13032-6 | COUPLING NUT ST M 10-L CF | L | 10 | M16×1,5 | 16 | 19 | Steel, galvanized | 250 | 3625 | 18 | 0.04 |
| 223-12373-2 | COUPLING NUT ST M 12-L CF | L | 12 | M18×1,5 | 16 | 22 | Steel, galvanized | 250 | 3625 | 25 | 0.06 |
| 223-12374-8 | COUPLING NUT ST M 15-L CF | L | 15 | M22×1,5 | 18 | 27 | Steel, galvanized | 250 | 3625 | 42 | 0.09 |
| 223-12374-7 | COUPLING NUT ST M 18-L CF | L | 18 | M26×1,5 | 18 | 32 | Steel, galvanized | 250 | 3625 | 62 | 0.14 |
| 223-13032-9 | COUPLING NUT ST M 16-S CF | S | 16 | M24×1,5 | 20,5 | 30 | Steel, galvanized | 400 | 5800 | 66 | 0.15 |
| 223-12373-6 | COUPLING NUT ST M 20-S CF | S | 20 | M30×2 | 24 | 36 | Steel, galvanized | 400 | 5800 | 102 | 0.22 |
| 223-12374-2 | COUPLING NUT ST M 30-S CF | S | 30 | M42×2 | 29 | 50 | Steel, galvanized | 400 | 5800 | 219 | 0.48 |
| Zinc-nickel | | | | | | | | | | | |
| 406-352 | COUPLING NUT ST M 6-LL Z3W | LL | 6 | M10×1 | 11,5 | 12 | Zinc-nickel | 100 | 1450 | 5 | 0.01 |
| 408-352 | COUPLING NUT ST M 8-LL Z3W | LL | 8 | M12×1 | 12 | 14 | Zinc-nickel | 100 | 1450 | 5 | 0.01 |
| 406-362 | COUPLING NUT ST M 6-L Z3W | L | 6 | M12×1,5 | 14,5 | 14 | Zinc-nickel | 250 | 3625 | 30 | 0.07 |
| 408-362 | COUPLING NUT ST M 8-L Z3W | L | 8 | M14×1,5 | 14,5 | 17 | Zinc-nickel | 250 | 3625 | 35 | 0.08 |
| Stainless steel | | | | | | | | | | | |
| 223-13638-6 | COUPLING NUT VA M 4-LL | LL | 4 | M8×1 | 11 | 10 | Stainless steel | 100 | 1450 | 4 | 0.01 |
| 223-13638-2 | COUPLING NUT VA M 6-LL | LL | 6 | M10×1 | 12 | 12 | Stainless steel | 100 | 1450 | 6 | 0.01 |
| 223-14082-5 | COUPLING NUT VA M 6-L | L | 6 | M12×1,5 | 14,5 | 14 | Stainless steel | 250 | 3625 | 10 | 0.02 |
| 223-13638-1 | COUPLING NUT VA M 8-L | L | 8 | M14×1,5 | 14,5 | 17 | Stainless steel | 250 | 3625 | 15 | 0.03 |
| 223-13638-3 | COUPLING NUT VA M 10-L | L | 10 | M16×1,5 | 16 | 19 | Stainless steel | 250 | 3625 | 18 | 0.04 |
| 223-14082-3 | COUPLING NUT VA M 12-L | L | 12 | M18×1,5 | 16 | 22 | Stainless steel | 250 | 3625 | 25 | 0.06 |
| 223-13638-7 | COUPLING NUT VA M 16-S | S | 16 | M24×1,5 | 20,5 | 30 | Stainless steel | 400 | 5800 | 66 | 0.15 |
| 223-13638-9 | COUPLING NUT VA M 20-S | S | 20 | M30×2 | 24 | 36 | Stainless steel | 400 | 5800 | 102 | 0.22 |
| 223-14082-6 | COUPLING NUT VA M 30-S | S | 30 | M42×2 | 29 | 50 | Stainless steel | 400 | 5800 | 219 | 0.48 |

Double-edged cutting sleeve unions

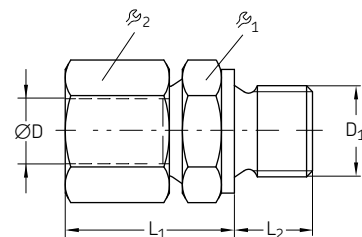
Straight screw-in connectors GE with metrical thread



| Order number | Designation | Series | Tube | D ₁ | L ₁ | L ₂ | ϕ ₁ | ϕ ₂ | Material | Operating pressure max. | | Weight | | | | |
|---------------------------|-------------|--------|------|----------------|----------------|----------------|----------------|----------------|----------|-------------------------|----|-------------------|-----|--------|-----|------|
| | | | | | | | | | | mm | mm | mm | mm | mm | mm | bar |
| Cylindrical thread | | | | | | | | | | | | | | | | |
| 223-12361-6 | TB.FITT.ST | GE | 8-L | M12x1,5 | L | 8 | M12x1,5 | 25 | 12 | 17 | 17 | Steel, galvanized | 315 | 4 570 | 40 | 0.09 |
| 223-10263-8 | TB.FITT.ST | GE | 10-L | M10x1,0 | L | 10 | M10x1 | 23 | 8 | 14 | 14 | Steel, galvanized | 315 | 4 570 | 40 | 0.09 |
| 223-14129-4 | TB.FITT.ST | GE | 10-L | M14x1,5 | L | 10 | M14x1,5 | 26 | 12 | 19 | 19 | Steel, galvanized | 315 | 4 570 | 50 | 0.11 |
| 223-10313-2 | TB.FITT.ST | GE | 10-L | M18x1,5 | L | 10 | M18x1,5 | 27 | 12 | 24 | 19 | Steel, galvanized | 315 | 4 570 | 71 | 0.16 |
| 412-423 | TB.FITT.ST | GE | 12-L | M14x1,5 | L | 12 | M14x1,5 | 26 | 12 | 19 | 22 | Steel, galvanized | 315 | 4 570 | 60 | 0.13 |
| 412-403 | TB.FITT.ST | GE | 12-L | M16x1,5 | L | 12 | M16x1,5 | 27 | 12 | 22 | 22 | Steel, galvanized | 315 | 4 570 | 70 | 0.15 |
| 412-433 | TB.FITT.ST | GE | 12-L | M18x1,5 | L | 12 | M18x1,5 | 27 | 12 | 24 | 22 | Steel, galvanized | 315 | 4 570 | 77 | 0.17 |
| 415-403 | TB.FITT.ST | GE | 15-L | M18x1,5 | L | 15 | M18x1,5 | 29 | 12 | 24 | 27 | Steel, galvanized | 250 | 3 626 | 97 | 0.21 |
| 415-413 | TB.FITT.ST | GE | 15-L | M22x1,5 | L | 15 | M22x1,5 | 30 | 14 | 27 | 27 | Steel, galvanized | 250 | 3 626 | 100 | 0.22 |
| 418-403 | TB.FITT.ST | GE | 18-L | M22x1,5 | L | 18 | M22x1,5 | 31 | 14 | 27 | 32 | Steel, galvanized | 250 | 3 626 | 143 | 0.32 |
| 223-11242-5 | TB.FITT.ST | GE | 18-L | M18x1,5 | L | 18 | M18x1,5 | 30 | 12 | 27 | 32 | Steel, galvanized | 250 | 3 626 | 150 | 0.33 |
| 223-11242-4 | TB.FITT.ST | GE | 22-L | M27x2,0 | L | 22 | M27x2 | 33 | 16 | 32 | 36 | Steel, galvanized | 160 | 2 320 | 160 | 0.35 |
| 223-14214-8 | TB.FITT.ST | GE | 28-L | M33x2,0 | L | 28 | M33x2 | 34 | 18 | 41 | 41 | Steel, galvanized | 160 | 2 320 | 280 | 0.62 |
| 96-0335-0058 | TB.FITT.ST | GE | 35-L | M42x2,0 | L | 35 | M42x2 | 39 | 20 | 50 | 50 | Steel, galvanized | 160 | 2 320 | 450 | 0.99 |
| 96-0342-0058 | TB.FITT.ST | GE | 42-L | M48x2,0 | L | 42 | M48x2 | 42 | 22 | 55 | 60 | Steel, galvanized | 160 | 2 320 | 600 | 1.32 |
| 96-1206-0058 | TB.FITT.ST | GE | 6-S | M12x1,5K | S | 6 | M12x1,5 | 28 | 12 | 17 | 17 | Steel, galvanized | 800 | 11 600 | 30 | 0.07 |
| 408-413 | TB.FITT.ST | GE | 8-S | M14x1,5 | S | 8 | M14x1,5 | 30 | 12 | 19 | 17 | Steel, galvanized | 800 | 11 600 | 66 | 0.15 |
| 410-413 | TB.FITT.ST | GE | 10-S | M16x1,5 | S | 10 | M16x1,5 | 31 | 12 | 22 | 22 | Steel, galvanized | 800 | 11 600 | 87 | 0.19 |
| 412-453 | TB.FITT.ST | GE | 12-S | M18x1,5 | S | 12 | M18x1,5 | 33 | 12 | 24 | 24 | Steel, galvanized | 630 | 9 140 | 111 | 0.24 |
| 96-1214-0058 | TB.FITT.ST | GE | 14-S | M20x1,5 | S | 14 | M20x1,5 | 37 | 14 | 27 | 17 | Steel, galvanized | 630 | 9 140 | 140 | 0.31 |
| Tapered thread | | | | | | | | | | | | | | | | |
| 223-12533-5 | TB.FITT.ST | GE | 4-LL | M6x1 K | LL | 4 | M6x1 tap. | 26 | 8 | 9 | 10 | Steel, galvanized | 100 | 1 450 | 12 | 0.03 |
| 223-12271-8 | TB.FITT.ST | GE | 4-LL | M8x1 K | LL | 4 | M8x1 tap. | 26 | 8 | 10 | 10 | Steel, galvanized | 100 | 1 450 | 15 | 0.03 |
| 223-13069-1 | TB.FITT.ST | GE | 4-LL | M10x1 K | LL | 4 | M10x1 tap. | 26 | 8 | 10 | 10 | Steel, galvanized | 100 | 1 450 | 16 | 0.04 |
| 223-12533-9 | TB.FITT.ST | GE | 6-LL | M6x1 K | LL | 6 | M6x1 tap. | 26 | 8 | 11 | 12 | Steel, galvanized | 100 | 1 450 | 19 | 0.04 |
| 223-13023-1 | TB.FITT.ST | GE | 6-LL | M8x1 K | LL | 6 | M8x1 tap. | 26 | 8 | 11 | 12 | Steel, galvanized | 100 | 1 450 | 20 | 0.04 |
| 223-12271-7 | TB.FITT.ST | GE | 6-LL | M10x1 K | LL | 6 | M10x1 tap. | 26 | 8 | 11 | 12 | Steel, galvanized | 100 | 1 450 | 21 | 0.05 |
| 223-13021-1 | TB.FITT.ST | GE | 8-LL | M10x1,0K | LL | 8 | M10x1 tap. | 28 | 8 | 12 | 14 | Steel, galvanized | 100 | 1 450 | 24 | 0.05 |
| 410-443 | TB.FITT.ST | GE | 10-L | M10x1,0K | L | 10 | M10x1 tap. | 25 | 9 | 19 | 17 | Steel, galvanized | 500 | 7 250 | 56 | 0.12 |
| 223-13658-7 | TB.FITT.VA | GE | 6-LL | M 6x1 K | LL | 6 | M6x1 tap. | 26 | 8 | 11 | 12 | Stainless steel | 100 | 1 450 | 26 | 0.06 |
| 223-13658-6 | TB.FITT.VA | GE | 6-LL | M 8x1 K | LL | 6 | M8x1 tap. | 26 | 8 | 11 | 12 | Stainless steel | 100 | 1 450 | 27 | 0.06 |
| 223-13658-5 | TB.FITT.VA | GE | 6-LL | M 10x1 K | LL | 6 | M10x1 tap. | 26 | 8 | 11 | 12 | Stainless steel | 100 | 1 450 | 31 | 0.07 |
| 223-13715-1 | TB.FITT.VA | GE | 8-LL | M 10x1 K | LL | 8 | M10x1 tap. | 28 | 8 | 12 | 14 | Stainless steel | 100 | 1 450 | 33 | 0.07 |
| 223-14184-5 | TB.FITT.VA | GE | 6-L | M 10x1 K | L | 6 | M10x1 tap. | 23 | 8 | 14 | 14 | Stainless steel | 100 | 1 450 | 31 | 0.07 |
| 410-403-S3 | TB.FITT.VA | GE | 10-L | M14x1,5 | L | 10 | M14x1,5 tap. | 26 | 12 | 19 | 19 | Stainless steel | 315 | 4 570 | 24 | 0.05 |

Double-edged cutting sleeve unions

Straight screw-in connectors GE with Whitworth pipe thread

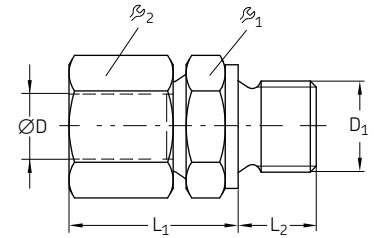


| Order number | Designation | Series | Tube ØD | D ₁ | | L ₁ | L ₂ | ϕ ₁ | ϕ ₂ | Material | Operating pressure max. | | Weight | |
|--------------------|-------------------------------|--------|------------|----------------|----|----------------|----------------|----------------|-------------------|-------------------|-------------------------|-----|--------|----|
| | | | | mm | in | | | | | | bar | psi | g | lb |
| Cylindrical thread | | | | | | | | | | | | | | |
| 223-13016-3 | FITTING ST GE 6-L G 1/8 A CF | L | 6 | G 1/8 A | 23 | 8 | 14 | 14 | Steel, galvanized | 315 | 4 570 | 18 | 0.04 | |
| 223-12477-8 | FITTING ST GE 6-L G 1/4 A CF | L | 6 | G 1/4 A | 25 | 12 | 19 | 14 | Steel, galvanized | 315 | 4 570 | 35 | 0.08 | |
| 223-13766-6 | FITTING ST GE 6-L G 3/8 A CF | L | 6 | G 3/8 A | 26 | 12 | 22 | 14 | Steel, galvanized | 315 | 4 570 | 51 | 0.11 | |
| 223-10814-2 | FITTING ST GE 8-L G 1/8 A CF | L | 8 | G 1/8 A | 23 | 8 | 14 | 17 | Steel, galvanized | 315 | 4 570 | 24 | 0.05 | |
| 223-12477-6 | FITTING ST GE 8-L G 1/4 A CF | L | 8 | G 1/4 A | 25 | 12 | 19 | 17 | Steel, galvanized | 315 | 4 570 | 35 | 0.08 | |
| 223-10080-3 | FITTING ST GE 8-L G 3/8 A CF | L | 8 | G 3/8 A | 26 | 12 | 22 | 17 | Steel, galvanized | 315 | 4 570 | 53 | 0.12 | |
| 408-453W | FITTING ST GE 8-L G 1/2 A CF | L | 8 | G 1/2 A | 27 | 14 | 27 | 17 | Steel, galvanized | 315 | 4 570 | 82 | 0.18 | |
| 223-12272-9 | FITTING ST GE 10-L G 1/4 A CF | L | 10 | G 1/4 A | 26 | 12 | 19 | 19 | Steel, galvanized | 315 | 4 570 | 41 | 0.09 | |
| 223-14214-4 | FITTING ST GE 10-L G 3/8 A CF | L | 10 | G 3/8 A | 27 | 12 | 22 | 19 | Steel, galvanized | 315 | 4 570 | 55 | 0.12 | |
| 223-10313-7 | FITTING ST GE 10-L G 1/2 A CF | L | 10 | G 1/2 A | 28 | 14 | 27 | 19 | Steel, galvanized | 315 | 4 570 | 83 | 0.18 | |
| 223-12477-9 | FITTING ST GE 12-L G 1/4 A CF | L | 12 | G 1/4 A | 27 | 12 | 19 | 22 | Steel, galvanized | 315 | 4 570 | 46 | 0.10 | |
| 223-12360-8 | FITTING ST GE 12-L G 3/8 A CF | L | 12 | G 3/8 A | 27 | 12 | 22 | 22 | Steel, galvanized | 315 | 4 570 | 56 | 0.12 | |
| 412-453W | FITTING ST GE 12-L G 1/2 A CF | L | 12 | G 1/2 A | 28 | 14 | 27 | 22 | Steel, galvanized | 250 | 3 625 | 79 | 0.17 | |
| 415-443W | FITTING ST GE 15-L G 3/4 A CF | L | 15 | G 3/4 A | 30 | 16 | 32 | 27 | Steel, galvanized | 250 | 3 625 | 163 | 0.36 | |
| 223-12361-9 | FITTING ST GE 15-L G 1/2 A CF | L | 15 | G 1/2 A | 29 | 14 | 27 | 27 | Steel, galvanized | 250 | 3 625 | 119 | 0.26 | |
| 223-13621-8 | FITTING ST GE 15-L G 3/8 A CF | L | 15 | G 3/8 A | 29 | 12 | 24 | 27 | Steel, galvanized | 250 | 3 625 | 101 | 0.22 | |
| 223-13766-1 | FITTING ST GE 18-L G 1/2 A CF | L | 18 | G 1/2 A | 31 | 14 | 27 | 32 | Steel, galvanized | 250 | 3 625 | 139 | 0.31 | |
| 418-413W | FITTING ST GE 18-L G 3/4 A CF | L | 18 | G 3/4 A | 30 | 16 | 32 | 32 | Steel, galvanized | 250 | 3 625 | 178 | 0.39 | |
| 223-13749-3 | FITTING ST GE 22-L G 1/2 A CF | L | 22 | G 1/2 A | 33 | 14 | 32 | 36 | Steel, galvanized | 160 | 2 320 | 180 | 0.40 | |
| 223-13016-2 | FITTING ST GE 22-L G 3/4 A CF | L | 22 | G 3/4 A | 33 | 16 | 32 | 36 | Steel, galvanized | 160 | 2 320 | 191 | 0.42 | |
| 223-14214-9 | FITTING ST GE 28-L G 3/4 A CF | L | 28 | G 3/4 A | 34 | 16 | 41 | 41 | Steel, galvanized | 160 | 2 320 | 257 | 0.57 | |
| 223-13610-9 | FITTING ST GE 28-L G 1 A CF | L | 28 | G 1 A | 34 | 18 | 41 | 41 | Steel, galvanized | 160 | 2 320 | 287 | 0.63 | |
| 223-12477-1 | FITTING ST GE 6-S G 1/4 A CF | S | 6 | G 1/4 A | 28 | 12 | 19 | 17 | Steel, galvanized | 400 | 5 800 | 54 | 0.12 | |
| 223-12477-2 | FITTING ST GE 8-S G 1/4 A CF | S | 8 | G 1/4 A | 30 | 12 | 19 | 19 | Steel, galvanized | 400 | 5 800 | 60 | 0.13 | |
| 223-13016-6 | FITTING ST GE 8-S G 3/8 A CF | S | 8 | G 3/8 A | 30 | 12 | 22 | 19 | Steel, galvanized | 400 | 5 800 | 78 | 0.17 | |
| 223-13016-9 | FITTING ST GE 10-S G 1/4 A CF | S | 10 | G 1/4 A | 31 | 12 | 19 | 22 | Steel, galvanized | 400 | 5 800 | 77 | 0.17 | |
| 223-13016-4 | FITTING ST GE 10-S G 3/8 A CF | S | 10 | G 3/8 A | 31 | 12 | 22 | 22 | Steel, galvanized | 400 | 5 800 | 90 | 0.20 | |
| 223-13016-7 | FITTING ST GE 12-S G 3/8 A CF | S | 12 | G 3/8 A | 33 | 12 | 22 | 24 | Steel, galvanized | 400 | 5 800 | 96 | 0.21 | |
| 223-14129-3 | FITTING ST GE 12-S G 1/2 A CF | S | 12 | G 1/2 A | 24 | 14 | 27 | 24 | Steel, galvanized | 400 | 5 800 | 91 | 0.20 | |
| 96-1114-0058 | FITTING ST GE 14-S G 1/2 A CF | S | 14 | G 1/2 A | 27 | 14 | 27 | 27 | Steel, galvanized | 400 | 5 800 | 153 | 0.34 | |
| 223-13749-5 | FITTING ST GE 16-S G 3/8 A CF | S | 16 | G 3/8 A | 36 | 12 | 27 | 30 | Steel, galvanized | 400 | 5 800 | 165 | 0.36 | |
| 223-13621-1 | FITTING ST GE 16-S G 1/2 A CF | S | 16 | G 1/2 A | 37 | 14 | 27 | 30 | Steel, galvanized | 400 | 5 800 | 164 | 0.36 | |
| 223-12360-6 | FITTING ST GE 20-S G 1/2 A CF | S | 20 | G 1/2 A | 42 | 14 | 32 | 36 | Steel, galvanized | 400 | 5 800 | 214 | 0.47 | |
| 223-12359-6 | FITTING ST GE 20-S G 3/4 A CF | S | 20 | G 3/4 A | 42 | 16 | 32 | 32 | Steel, galvanized | 400 | 5 800 | 224 | 0.49 | |
| Tapered thread | | | | | | | | | | | | | | |
| 223-12270-8 | FITTING ST GE 4-LL R 1/8K CF | LL | 4 | R 1/8 | 26 | 8 | 11 | 10 | Steel, galvanized | 100 ¹⁾ | 1 450 ¹⁾ | 12 | 0.03 | |
| 223-12270-7 | FITTING ST GE 6-LL R 1/8K CF | LL | 6 | R 1/8 | 26 | 8 | 11 | 12 | Steel, galvanized | 100 ¹⁾ | 1 450 ¹⁾ | 15 | 0.03 | |
| 223-12270-9 | FITTING ST GE 8-LL R 1/8K CF | LL | 8 | R 1/8 | 28 | 8 | 12 | 14 | Steel, galvanized | 100 ¹⁾ | 1 450 ¹⁾ | 18 | 0.04 | |
| 223-13621-6 | FITTING ST GE 8-LL R 1/4K CF | LL | 8 | R 1/4 | 32 | 12 | 14 | 14 | Steel, galvanized | 100 ¹⁾ | 1 450 ¹⁾ | 26 | 0.06 | |
| 96-5911-0058 | FITTING ST GE10-LL R 1/4K CF | LL | 10 | R 1/4 | 32 | 12 | 14 | 17 | Steel, galvanized | 100 ¹⁾ | 1 450 ¹⁾ | 36 | 0.08 | |
| 96-5912-0058 | FITTING ST GE12-LL R 1/8K CF | LL | 12 | R 1/8 | 32 | 12 | 17 | 19 | Steel, galvanized | 100 ¹⁾ | 1 450 ¹⁾ | 65 | 0.14 | |
| 96-5913-0058 | FITTING ST GE12-LL R 3/8K CF | LL | 12 | R 3/8 | 32 | 12 | 17 | 19 | Steel, galvanized | 100 ¹⁾ | 1 450 ¹⁾ | 55 | 0.12 | |
| 410-443W | FITTING ST GE10-L R 1/8K CF | L | 10 | R 1/8 | 34 | 8 | 14 | 17 | Steel, galvanized | 315 | 4 570 | 42 | 0.09 | |

¹⁾ In grease lubrication systems fittings are permitted for operating pressures up to 350 bar, 5080 psi

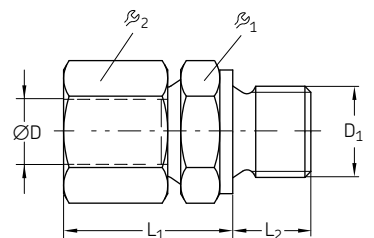
Double-edged cutting sleeve unions

Straight screw-in connectors GE with Whitworth pipe thread, made from stainless steel or brass



| Order number | Designation | Series | Tube | D ₁ | | L ₁ | L ₂ | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|-----------------|---------------------------|--------|------|----------------|--|----------------|----------------|----------------|----------------|-----------------|-------------------------|-------|--------|------|
| | | | | ØD | | | | | | | mm | mm | mm | mm |
| Stainless steel | | | | | | | | | | | | | | |
| 223-13614-9 | TB.FITT.VA GE 6-LL R 1/8K | LL | 6 | R 1/8 | | 26 | 8 | 11 | 10 | Stainless steel | 100 | 1 450 | 65 | 0.14 |
| 223-13658-2 | TB.FITT.VA GE 6-L G 1/8A | L | 6 | G 1/8A | | 23 | 8 | 14 | 14 | Stainless steel | 315 | 4 570 | 23 | 0.05 |
| 223-13658-9 | TB.FITT.VA GE 6-L G 1/4A | L | 6 | G 1/4A | | 25 | 12 | 19 | 14 | Stainless steel | 315 | 4 570 | 40 | 0.09 |
| 223-13658-1 | TB.FITT.VA GE 8-LL G 1/8A | LL | 8 | G 1/8A | | 24 | 8 | 14 | 17 | Stainless steel | 315 | 4 570 | 33 | 0.07 |
| 223-14420-7 | TB.FITT.VA GE10-L G 1/4A | L | 10 | G 1/4A | | 26 | 12 | 19 | 19 | Stainless steel | 315 | 4 570 | 50 | 0.11 |
| 223-13715-9 | TB.FITT.VA GE15-L G 1/2A | L | 15 | G 1/2A | | 29 | 14 | 27 | 27 | Stainless steel | 250 | 3 625 | 119 | 0.26 |
| 223-13715-6 | TB.FITT.VA GE15-L G 3/8A | L | 15 | G 3/8A | | 29 | 12 | 24 | 27 | Stainless steel | 250 | 3 625 | 88 | 0.19 |
| 223-14420-8 | TB.FITT.VA GE18-L G 1/2A | L | 18 | G 1/2A | | 31 | 14 | 27 | 32 | Stainless steel | 250 | 3 625 | 139 | 0.31 |
| 99-0222-0058 | TB.FITT.VA GE22-L G 3/4A | L | 22 | G 3/4A | | 33 | 16 | 32 | 36 | Stainless steel | 160 | 2 320 | 191 | 0.42 |
| 223-14184-2 | TB.FITT.VA GE28-L G 1A | L | 28 | G 1A | | 34 | 18 | 41 | 41 | Stainless steel | 160 | 2 320 | 278 | 0.61 |
| 223-13614-7 | TB.FITT.VA GE 6-S G 1/4A | S | 6 | G 1/4A | | 28 | 12 | 19 | 17 | Stainless steel | 400 | 5 800 | 54 | 0.12 |
| 223-13614-6 | TB.FITT.VA GE 8-S G 1/4A | S | 8 | G 1/4A | | 30 | 12 | 19 | 19 | Stainless steel | 400 | 5 800 | 64 | 0.14 |
| 223-12452-9 | TB.FITT.VA GE10-S G 1/4A | S | 10 | G 1/4A | | 31 | 12 | 19 | 22 | Stainless steel | 400 | 5 800 | 77 | 0.17 |
| 223-12452-7 | TB.FITT.VA GE16-S G 1/2A | S | 16 | G 1/2A | | 37 | 14 | 27 | 30 | Stainless steel | 400 | 5 800 | 164 | 0.36 |
| 223-13658-4 | TB.FITT.VA GE20-S G 1/2A | S | 20 | G 1/2A | | 42 | 14 | 32 | 36 | Stainless steel | 400 | 5 800 | 214 | 0.47 |
| 223-12452-5 | TB.FITT.VA GE20-S G 3/4A | S | 20 | G 3/4A | | 42 | 16 | 32 | 32 | Stainless steel | 400 | 5 800 | 224 | 0.49 |
| Brass | | | | | | | | | | | | | | |
| 223-12377-7 | TB.FITT.MS GE 8-L G 1/4A | L | 8 | G 1/4A | | 25 | 12 | 19 | 17 | Brass | 200 | 2 900 | 26 | 0.06 |
| 223-12377-8 | TB.FITT.MS GE15-L G 1/2A | L | 15 | G 1/2A | | 29 | 14 | 27 | 27 | Brass | 160 | 2 320 | 72 | 0.16 |

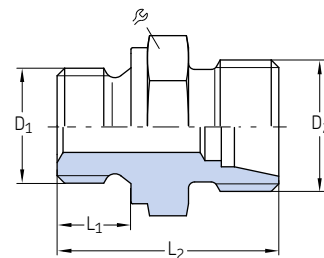
Straight screw-in connectors GE with NPT pipe thread



| Order number | Designation | Series | Tube | D ₁ | | L ₁ | L ₂ | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|--------------------|------------------------------|--------|------|----------------|--|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | ØD | | | | | | | mm | mm | mm | mm |
| Cylindrical thread | | | | | | | | | | | | | | |
| 223-14214-2 | FITTING ST GE 6-L 1/8NPT CF | L | 6 | 1/8 NPT | | 32 | 10 | 11 | 12 | Steel, galvanized | 100 | 1 450 | 24 | 0.05 |
| 223-12273-5 | FITTING ST GE 8-L 1/4NPT CF | L | 8 | 1/4 NPT | | 38 | 14.5 | 17 | 17 | Steel, galvanized | 315 | 4 570 | 42 | 0.09 |
| 223-13096-2 | FITTING ST GE 10-S 1/4NPT CF | S | 10 | 1/4 NPT | | 44 | 14.5 | 19 | 22 | Steel, galvanized | 630 | 9 140 | 77 | 0.17 |
| 223-14214-5 | FITTING ST GE 20-S 1/2NPT CF | S | 20 | 1/2 NPT | | 59 | 19.5 | 32 | 36 | Steel, galvanized | 400 | 5 800 | 235 | 0.52 |

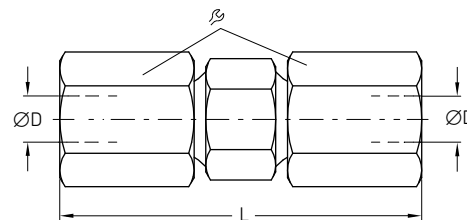
Double-edged cutting sleeve unions

Straight screw-in glands XGE



| Order number | Designation | Series | Tube \varnothing | D_1 | D_2 | L_1 | L_2 | \varnothing | Material | Operating pressure max. | | Weight | |
|--------------|----------------------------------|--------|--------------------|------------|---------|-------|-------|---------------|--------------|-------------------------|--------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| | | | | mm | mm | mm | mm | mm | | | | | |
| 223-13766-9 | TB.FITT.ST XGE 6-LL M 10x1,0K CF | LL | 6 | M10x1 tap. | M10x1 | 8 | 20 | 11 | Steel, galv. | 100 | 1 450 | 17 | 0.04 |
| 223-14129-1 | TB.FITT.ST XGE 6-LL M 8x1,0K CF | LL | 6 | M8x1 tap. | M10x1 | 8 | 20 | 11 | Steel, galv. | 100 | 1 450 | 17 | 0.04 |
| 223-14129-2 | TB.FITT.ST XGE 6-LL R 1/8K CF | LL | 6 | R 1/8 | M12x1,5 | 8 | 20 | 11 | Steel, galv. | 100 | 1 450 | 18 | 0.04 |
| 223-14234-7 | TB.FITT.ST XGE 6-L M 10x1,0 CF | L | 6 | M10x1 | M12x1,5 | 8 | 23,5 | 14 | Steel, galv. | 500 | 7 250 | 20 | 0.04 |
| 408-313 | TB.FITT.ST XGE 8-L M 14x1,5 CF | L | 8 | M14x1,5 | M14x1,5 | 9 | 36 | 17 | Steel, galv. | 500 | 7 250 | 31 | 0.07 |
| 410-313 | TB.FITT.ST XGE10-L M 16x1,5 CF | L | 10 | M16x1,5 | M16x1,5 | 9 | 31,5 | 22 | Steel, galv. | 500 | 7 250 | 40 | 0.09 |
| 223-14304-2 | TB.FITT.ST XGE 10-L M 14x1,5 CF | L | 10 | M14x1,5 | M16x1,5 | 9 | 30,0 | 19 | Steel, galv. | 500 | 7 250 | 40 | 0.09 |
| 223-14304-7 | TB.FITT.ST XGE 12-L M 14x1,5 CF | L | 12 | M14x1,5 | M18x1,5 | 12 | 30,0 | 19 | Steel, galv. | 400 | 5 800 | 55 | 0.12 |
| 223-13610-8 | TB.FITT.ST XGE 18-L M 22x1,5 CF | L | 18 | M22x1,5 | M26x1,5 | 14 | 36,0 | 27 | Steel, galv. | 315 | 4 570 | 148 | 0.33 |
| 223-11229-9 | TB.FITT.ST XGE 8-L G 1/4A CF | L | 8 | G 1/4A | M14x1,5 | 12 | 30 | 19 | Steel, galv. | 500 | 7 250 | 35 | 0.08 |
| 223-14234-4 | TB.FITT.ST XGE10-L G 1/8A CF | L | 10 | G 1/8A | M18x1,5 | 12 | 34 | 17 | Steel, galv. | 500 | 7 250 | 33 | 0.07 |
| 223-10055-9 | TB.FITT.ST XGE10-L G 3/8A CF | L | 10 | G 3/8A | M18x1,5 | 12 | 31,5 | 22 | Steel, galv. | 500 | 7 250 | 55 | 0.12 |
| 223-14418-7 | TB.FITT.ST XGE18-L G 1/2A CF | L | 18 | G 1/2A | M26x1,5 | 14 | 36 | 27 | Steel, galv. | 400 | 5 800 | 139 | 0.31 |
| 223-11089-3 | TB.FITT.ST XGE10-S G 1/4A CF | S | 10 | G 1/4A | M18x1,5 | 12 | 30 | 19 | Steel, galv. | 800 | 11 600 | 41 | 0.09 |
| 223-14304-5 | TB.FITT.ST XGE20-S G 1/2A CF | S | 20 | G 1/2A | M30x2 | 14 | 45 | 32 | Steel, galv. | 420 | 6 090 | 262 | 0.58 |

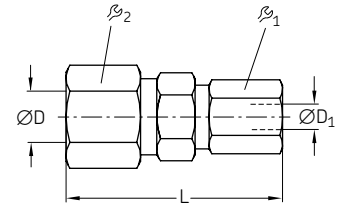
Straight tube-to-tube connectors G



| Order number | Designation | Series | Tube \varnothing D | L | \varnothing | Material | Operating pressure max. | | Weight | |
|-------------------|----------------------|--------|----------------------|----|---------------|-------------------|-------------------------|--------|--------|------|
| | | | | | | | bar | psi | g | lb |
| | | | | mm | mm | mm | | | | |
| Steel, galvanized | | | | | | | | | | |
| 223-12531-8 | TB.FITT.ST G 4-LL CF | LL | 4 | 31 | 10 | Steel, galvanized | 100 | 1 450 | 13 | 0.03 |
| 223-12482-9 | TB.FITT.ST G 6-LL CF | LL | 6 | 32 | 12 | Steel, galvanized | 100 | 1 450 | 21 | 0.05 |
| 223-12531-9 | TB.FITT.ST G 8-LL CF | LL | 8 | 35 | 14 | Steel, galvanized | 100 | 1 450 | 26 | 0.06 |
| 223-12531-2 | TB.FITT.ST G 10-L CF | L | 10 | 42 | 19 | Steel, galvanized | 500 | 7 250 | 65 | 0.14 |
| 223-13732-8 | TB.FITT.ST G 12-L CF | L | 12 | 43 | 22 | Steel, galvanized | 500 | 7 250 | 84 | 0.19 |
| 223-12531-6 | TB.FITT.ST G 15-L CF | L | 15 | 46 | 27 | Steel, galvanized | 400 | 5 800 | 145 | 0.32 |
| 223-13732-4 | TB.FITT.ST G 18-L CF | L | 18 | 48 | 32 | Steel, galvanized | 400 | 5 800 | 205 | 0.45 |
| 223-13049-3 | TB.FITT.ST G 10-S CF | S | 10 | 49 | 22 | Steel, galvanized | 800 | 11 600 | 112 | 0.25 |
| 223-12531-4 | TB.FITT.ST G 16-S CF | S | 16 | 57 | 30 | Steel, galvanized | 630 | 9 140 | 234 | 0.52 |
| 223-12363-2 | TB.FITT.ST G 20-S CF | S | 20 | 66 | 36 | Steel, galvanized | 420 | 6 090 | 369 | 0.81 |
| 223-12363-6 | TB.FITT.ST G 30-S CF | S | 30 | 80 | 50 | Steel, galvanized | 420 | 6 090 | 806 | 1.78 |
| Stainless steel | | | | | | | | | | |
| 223-13615-5 | TB.FITT.VA G 6-L | L | 6 | 39 | 14 | Stainless steel | 315 | 4 570 | 36 | 0.08 |
| 223-13615-3 | TB.FITT.VA G 8-L | L | 8 | 40 | 17 | Stainless steel | 315 | 4 570 | 50 | 0.11 |
| 223-13615-6 | TB.FITT.VA G 10-L | L | 10 | 42 | 19 | Stainless steel | 315 | 4 570 | 37 | 0.08 |
| 223-12454-8 | TB.FITT.VA G 15-L | L | 15 | 46 | 27 | Stainless steel | 315 | 4 570 | 145 | 0.32 |
| 223-12454-1 | TB.FITT.VA G 10-S | S | 10 | 49 | 22 | Stainless steel | 630 | 9 140 | 112 | 0.25 |
| 223-12454-6 | TB.FITT.VA G 16-S | S | 16 | 57 | 30 | Stainless steel | 400 | 5 800 | 234 | 0.52 |
| 223-12454-3 | TB.FITT.VA G 20-S | S | 20 | 66 | 36 | Stainless steel | 400 | 5 800 | 369 | 0.81 |
| 223-12454-5 | TB.FITT.VA G 30-S | S | 30 | 80 | 50 | Stainless steel | 400 | 5 800 | 806 | 1.78 |

Double-edged cutting sleeve unions

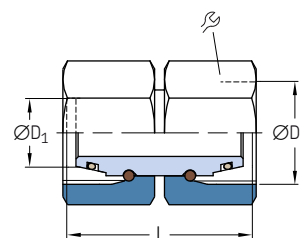
Straight tube-to-tube reducing connectors GR



| Order number | Designation | Series | Tube | Tube | L | β_1 | β_2 | Material | Operating pressure max. | | Weight | | |
|-------------------|-------------|----------------|-----------------|-------------------|----|-----------|-----------|----------|-------------------------|-----|--------|-----|------|
| | | | $\varnothing D$ | $\varnothing D_1$ | | mm | mm | | bar | psi | g | lb | |
| | | | mm | mm | mm | mm | mm | | | | | | |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-12542-2 | TB.FITT.ST | GR 6/ 4-LL CF | LL | 6 | 4 | 32 | 10 | 12 | Steel, galvanized | 100 | 1 450 | 7 | 0.02 |
| 504-412 | TB.FITT.ST | GR 8/ 4-LL CF | LL | 8 | 4 | 34 | 10 | 14 | Steel, galvanized | 100 | 1 450 | 9 | 0.02 |
| 223-13705-5 | TB.FITT.ST | GR 8/ 6-L CF | L | 8 | 6 | 40 | 14 | 17 | Steel, galvanized | 500 | 7 250 | 16 | 0.04 |
| 223-13622-3 | TB.FITT.ST | GR 10/ 6-L CF | L | 10 | 6 | 41 | 14 | 19 | Steel, galvanized | 500 | 7 250 | 21 | 0.05 |
| 223-13024-4 | TB.FITT.ST | GR 10/ 8-L CF | L | 10 | 8 | 41 | 17 | 19 | Steel, galvanized | 500 | 7 250 | 21 | 0.05 |
| 223-10986-1 | TB.FITT.ST | GR 12/ 6-L CF | L | 12 | 6 | 42 | 14 | 22 | Steel, galvanized | 400 | 5 800 | 26 | 0.06 |
| 223-13622-7 | TB.FITT.ST | GR 12/ 8-L CF | L | 12 | 8 | 42 | 17 | 22 | Steel, galvanized | 400 | 5 800 | 26 | 0.06 |
| 510-410 | TB.FITT.ST | GR 12/ 10-L CF | L | 12 | 10 | 43 | 19 | 22 | Steel, galvanized | 400 | 5 800 | 29 | 0.06 |
| 223-13024-8 | TB.FITT.ST | GR 15/ 8-L CF | L | 15 | 8 | 45 | 17 | 27 | Steel, galvanized | 400 | 5 800 | 42 | 0.09 |
| 223-12542-7 | TB.FITT.ST | GR 15/ 10-L CF | L | 15 | 10 | 45 | 19 | 27 | Steel, galvanized | 400 | 5 800 | 46 | 0.10 |
| 223-12542-8 | TB.FITT.ST | GR 15/ 12-L CF | L | 15 | 12 | 45 | 22 | 27 | Steel, galvanized | 400 | 5 800 | 45 | 0.10 |
| 510-413 | TB.FITT.ST | GR 18/ 10-L CF | L | 18 | 10 | 46 | 19 | 32 | Steel, galvanized | 400 | 5 800 | 65 | 0.14 |
| 512-412 | TB.FITT.ST | GR 18/ 12-L CF | L | 18 | 12 | 46 | 22 | 32 | Steel, galvanized | 400 | 5 800 | 64 | 0.14 |
| 515-410 | TB.FITT.ST | GR 18/ 15-L CF | L | 18 | 15 | 48 | 27 | 32 | Steel, galvanized | 400 | 5 800 | 65 | 0.14 |
| 223-13622-1 | TB.FITT.ST | GR 16/ 10-S CF | S | 16 | 10 | 54 | 22 | 30 | Steel, galvanized | 630 | 9 140 | 80 | 0.18 |
| 223-12364-4 | TB.FITT.ST | GR 20/ 10-S CF | S | 20 | 10 | 60 | 22 | 36 | Steel, galvanized | 420 | 6 090 | 129 | 0.28 |
| 223-13024-1 | TB.FITT.ST | GR 30/ 20-S CF | S | 30 | 20 | 74 | 36 | 50 | Steel, galvanized | 420 | 6 090 | 299 | 0.66 |
| Stainless steel | | | | | | | | | | | | | |
| 223-13619-9 | TB.FITT.VA | GR 16/ 10 S | S | 16 | 10 | 54 | 22 | 30 | Stainless steel | 400 | 5 800 | 80 | 0.18 |
| 223-13619-2 | TB.FITT.VA | GR 20/ 10 S | S | 20 | 10 | 60 | 22 | 36 | Stainless steel | 400 | 5 800 | 129 | 0.28 |
| 223-13791-5 | TB.FITT.VA | GR 30/ 20 S | S | 30 | 20 | 74 | 36 | 50 | Stainless steel | 400 | 5 800 | 299 | 0.66 |

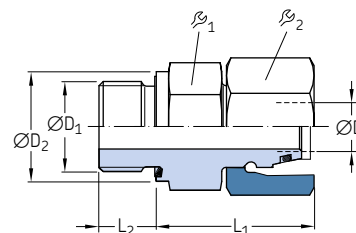
Double-edged cutting sleeve unions

Union studs GZ



| Order number | Designation | Series | Tube ØD ₁ | | L | β | Material | Operating pressure max. | | Weight | |
|-------------------|----------------------|--------|----------------------|---------|----|----|-------------------|-------------------------|--------|--------|------|
| | | | mm | mm | | | | bar | psi | g | lb |
| Steel, galvanized | | | | | | | | | | | |
| 223-10550-2 | TB.STUD ST GZ 6-L CF | L | 6 | M14×1,5 | 33 | 14 | Steel, galvanized | 500 | 7 250 | 28 | 0.06 |
| 223-10550-8 | TB.STUD ST GZ 8-L CF | L | 8 | M14×1,5 | 33 | 17 | Steel, galvanized | 500 | 7 250 | 41 | 0.09 |
| 223-14253-2 | TB.STUD ST GZ10-L CF | L | 10 | M16×1,5 | 34 | 19 | Steel, galvanized | 500 | 7 250 | 53 | 0.12 |
| 223-10550-6 | TB.STUD ST GZ12-L CF | L | 12 | M18×1,5 | 34 | 22 | Steel, galvanized | 400 | 5 800 | 71 | 0.16 |
| 223-14253-5 | TB.STUD ST GZ15-L CF | L | 15 | M22×1,5 | 39 | 27 | Steel, galvanized | 400 | 5 800 | 129 | 0.28 |
| 223-10550-1 | TB.STUD ST GZ 6-S CF | S | 6 | M14×1,5 | 33 | 17 | Steel, galvanized | 800 | 11 600 | 41 | 0.09 |
| 223-14253-4 | TB.STUD ST GZ10-S CF | S | 10 | M18×1,5 | 35 | 22 | Steel, galvanized | 800 | 11 600 | 74 | 0.16 |
| 223-14253-1 | TB.STUD ST GZ16-S CF | S | 16 | M24×1,5 | 42 | 30 | Steel, galvanized | 630 | 9 140 | 172 | 0.38 |
| 223-14497-8 | TB.STUD ST GZ20-S CF | S | 20 | M30×2 | 48 | 36 | Steel, galvanized | 420 | 6 090 | 261 | 0.58 |
| 223-14253-3 | TB.STUD ST GZ30-S CF | S | 30 | M42×2 | 62 | 50 | Steel, galvanized | 420 | 6 090 | 605 | 1.33 |
| Stainless steel | | | | | | | | | | | |
| 223-14497-1 | TB.STUD VA GZ10-L | L | 10 | M16×1,5 | 34 | 19 | Stainless steel | 315 | 4 570 | 53 | 0.12 |
| 223-14497-4 | TB.STUD VA GZ20-S | S | 20 | M30×2 | 48 | 36 | Stainless steel | 400 | 5 800 | 261 | 0.58 |

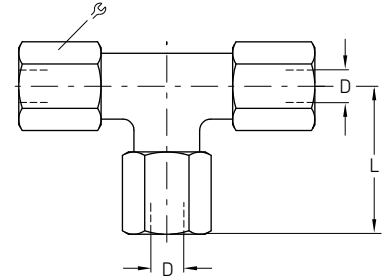
Straight tube studs EGE



| Order number | Designation | Series | Tube ØD ₁ | | ØD ₂ | L ₁ | L ₂ | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|--------------|----------------------------------|--------|----------------------|---------|-----------------|----------------|----------------|----------------|----------------|--------------|-------------------------|--------|--------|------|
| | | | mm | mm | | | | | | | mm | mm | mm | mm |
| 223-14130-7 | TB.STUD ST EGE 6-L G 1/8A-ED CF | L | 6 | G 1/8A | 14 | 24,5 | 8 | 14 | 14 | Steel, galv. | 500 | 7 250 | 27 | 0.06 |
| 223-13686-1 | TB.STUD ST EGE10-L G 1/4A-ED CF | L | 10 | G 1/4A | 19 | 27,5 | 12 | 19 | 19 | Steel, galv. | 500 | 7 250 | 54 | 0.12 |
| 223-14130-9 | TB.STUD ST EGE10-L G 3/8A-ED CF | L | 10 | G 3/8A | 22 | 29 | 12 | 22 | 19 | Steel, galv. | 400 | 5 800 | 70 | 0.15 |
| 223-14187-4 | TB.STUD ST EGE10-L M14×1,5-ED CF | L | 10 | M14×1,5 | 19 | 27,5 | 12 | 19 | 19 | Steel, galv. | 500 | 7 250 | 49 | 0.11 |
| 223-10563-8 | TB.STUD ST EGE12-L M16×1,5-ED CF | L | 12 | M16×1,5 | 22 | 30,5 | 12 | 22 | 22 | Steel, galv. | 400 | 5 800 | 67 | 0.15 |
| 223-14187-4 | TB.STUD ST EGE10-L 1/4 NPT-ED CF | L | 10 | 1/4 NPT | 19 | 27,5 | 12 | 19 | 19 | Steel, galv. | 315 | 4 570 | 44 | 0.10 |
| 223-10563-5 | TB.STUD ST EGE12-L G 1/4A-ED CF | L | 12 | G 1/4A | 19 | 27,5 | 12 | 19 | 22 | Steel, galv. | 400 | 5 800 | 61 | 0.13 |
| 223-14130-2 | TB.STUD ST EGE15-L G 1/2A-ED CF | L | 15 | G 1/2A | 27 | 32 | 14 | 27 | 27 | Steel, galv. | 400 | 5 800 | 114 | 0.25 |
| 223-10563-7 | TB.STUD ST EGE 6-S G 1/4A-ED CF | S | 6 | G 1/4A | 19 | 27 | 12 | 19 | 17 | Steel, galv. | 800 | 11 600 | 53 | 0.12 |
| 223-10563-6 | TB.STUD ST EGE12-S G 3/8A-ED CF | S | 12 | G 3/8A | 22 | 34 | 12 | 22 | 24 | Steel, galv. | 630 | 9 140 | 95 | 0.21 |
| 223-14130-2 | TB.STUD ST EGE30-S 3/4 NPT-ED CF | S | 20 | 3/4 NPT | 32 | 43 | 16 | 32 | 36 | Steel, galv. | 400 | 5 800 | 254 | 0.56 |

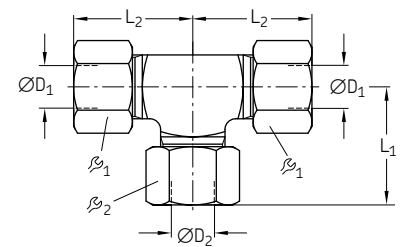
Double-edged cutting sleeve unions

T-connectors T



| Order number | Designation | Series | Tube | ØD | L | R | Material | Operating pressure max. | | Weight | |
|-------------------|----------------------|--------|------|----|----|---|-------------------|-------------------------|--------|--------|------|
| | | | | | | | | bar | psi | g | lb |
| | | | mm | mm | mm | | | | | | |
| Steel, galvanized | | | | | | | | | | | |
| 223-12563-5 | TB.FITT.ST T 4-LL CF | LL | 4 | 21 | 10 | | Steel, galvanized | 100 | 1 450 | 31 | 0.07 |
| 223-12484-2 | TB.FITT.ST T 6-L CF | L | 6 | 27 | 14 | | Steel, galvanized | 500 | 7 250 | 58 | 0.13 |
| 223-12484-6 | TB.FITT.ST T 8-L CF | L | 8 | 29 | 17 | | Steel, galvanized | 500 | 7 250 | 104 | 0.23 |
| 223-13057-5 | TB.FITT.ST T10-L CF | L | 10 | 30 | 19 | | Steel, galvanized | 500 | 7 250 | 111 | 0.24 |
| 412-407 | TB.FITT.ST T12-L CF | L | 12 | 32 | 22 | | Steel, galvanized | 400 | 5 800 | 149 | 0.33 |
| 223-12563-2 | TB.FITT.ST T15-L CF | L | 15 | 36 | 27 | | Steel, galvanized | 400 | 5 800 | 247 | 0.54 |
| 418-407 | TB.FITT.ST T18-L CF | L | 18 | 40 | 32 | | Steel, galvanized | 400 | 5 800 | 383 | 0.84 |
| 223-13057-4 | TB.FITT.ST T22-L CF | L | 22 | 44 | 36 | | Steel, galvanized | 250 | 3 625 | 492 | 1.08 |
| 223-12563-9 | TB.FITT.ST T10-S CF | S | 10 | 34 | 22 | | Steel, galvanized | 800 | 11 600 | 193 | 0.43 |
| 223-13057-2 | TB.FITT.ST T16-S CF | S | 16 | 43 | 30 | | Steel, galvanized | 630 | 9 140 | 418 | 0.92 |
| 223-12366-2 | TB.FITT.ST T20-S CF | S | 20 | 48 | 36 | | Steel, galvanized | 420 | 6 090 | 867 | 1.91 |
| 223-12366-6 | TB.FITT.ST T30-S CF | S | 30 | 62 | 50 | | Steel, galvanized | 420 | 6 090 | 2 274 | 5.01 |
| Stainless steel | | | | | | | | | | | |
| 223-13616-3 | TB.FITT.VA T10-L | L | 10 | 30 | 19 | | Stainless steel | 315 | 4 570 | 111 | 0.24 |
| 223-12455-1 | TB.FITT.VA T10-S | S | 10 | 34 | 22 | | Stainless steel | 630 | 9 140 | 193 | 0.43 |
| 223-12455-5 | TB.FITT.VA T16-S | S | 16 | 43 | 30 | | Stainless steel | 400 | 5 800 | 418 | 0.92 |
| 223-12455-2 | TB.FITT.VA T20-S | S | 20 | 48 | 36 | | Stainless steel | 400 | 5 800 | 867 | 1.91 |

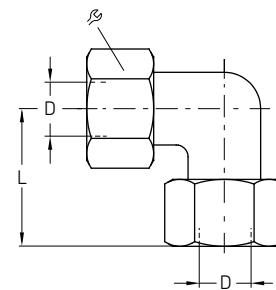
Reducing T-connectors TR



| Order number | Designation | Series | Tube | Tube | L ₁ | L ₂ | R ₁ | R ₂ | Material | Operating pressure max. | | Weight | |
|-------------------|----------------------------|--------|-----------------|-----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| | | | ØD ₁ | ØD ₂ | mm | mm | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-12573-6 | TB.FITT.ST TR10/ 6/10-L CF | L | 10 | 6 | 30 | 30 | 19 | 14 | Steel, galvanized | 500 | 7 250 | 94 | 0.21 |
| 223-12541-5 | TB.FITT.ST TR15/10/15-L CF | L | 15 | 10 | 36 | 36 | 27 | 19 | Steel, galvanized | 400 | 5 800 | 213 | 0.47 |
| 223-13025-6 | TB.FITT.ST TR12/10/12-S CF | S | 12 | 10 | 38 | 38 | 24 | 22 | Steel, galvanized | 630 | 9 140 | 217 | 0.48 |
| 223-12367-2 | TB.FITT.ST TR20/10/20-S CF | S | 20 | 10 | 46 | 48 | 36 | 22 | Steel, galvanized | 420 | 6 090 | 503 | 1.11 |
| 223-12367-4 | TB.FITT.ST TR20/12/20-S CF | S | 20 | 12 | 46 | 48 | 36 | 24 | Steel, galvanized | 420 | 6 090 | 522 | 1.15 |
| Stainless steel | | | | | | | | | | | | | |
| 223-13672-8 | TB.FITT.VA TR18/10/18-L | L | 18 | 10 | 39 | 40 | 32 | 19 | Stainless steel | 315 | 4 570 | 305 | 0.67 |
| 223-13672-3 | TB.FITT.VA TR20/10/20-S | S | 20 | 10 | 46 | 48 | 36 | 22 | Stainless steel | 400 | 5 800 | 529 | 1.17 |

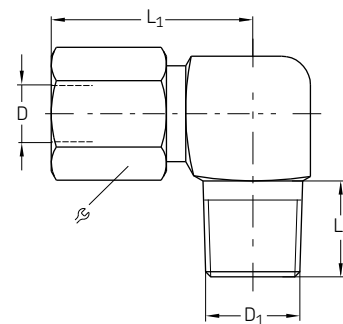
Double-edged cutting sleeve unions

Elbow connectors W



| Order number | Designation | Series | Tube | ØD | L | ⊘ | Material | Operating pressure max. | | Weight | |
|-------------------|---------------------|--------|------|----|----|---|-------------------|-------------------------|--------|--------|------|
| | | | | | | | | mm | mm | mm | bar |
| Steel, galvanized | | | | | | | | | | | |
| 223-12483-2 | TB.FITT.ST W6-L CF | L | 6 | 27 | 14 | | Steel, galvanized | 500 | 7 250 | 41 | 0.09 |
| 223-12483-5 | TB.FITT.ST W8-L CF | L | 8 | 29 | 17 | | Steel, galvanized | 500 | 7 250 | 60 | 0.13 |
| 223-12483-8 | TB.FITT.ST W10-L CF | L | 10 | 30 | 19 | | Steel, galvanized | 500 | 7 250 | 75 | 0.17 |
| 223-12562-2 | TB.FITT.ST W15-L CF | L | 15 | 36 | 27 | | Steel, galvanized | 400 | 5 800 | 128 | 0.28 |
| 443-218-001 | TB.FITT.ST W18-L CF | L | 18 | 40 | 32 | | Steel, galvanized | 400 | 5 800 | 208 | 0.46 |
| 443-290-001 | TB.FITT.ST W22-L CF | L | 22 | 44 | 36 | | Steel, galvanized | 250 | 3 625 | 267 | 0.59 |
| 223-12562-7 | TB.FITT.ST W10-S CF | S | 10 | 34 | 22 | | Steel, galvanized | 800 | 11 600 | 133 | 0.29 |
| 223-12280-9 | TB.FITT.ST W12-S CF | S | 12 | 38 | 24 | | Steel, galvanized | 630 | 9 140 | 175 | 0.39 |
| 223-12562-8 | TB.FITT.ST W16-S CF | S | 16 | 43 | 30 | | Steel, galvanized | 630 | 9 140 | 232 | 0.51 |
| 223-12365-2 | TB.FITT.ST W20-S CF | S | 20 | 48 | 36 | | Steel, galvanized | 420 | 6 090 | 333 | 0.73 |
| Stainless steel | | | | | | | | | | | |
| 223-14424-5 | TB.FITT.VA W 8-L | L | 8 | 29 | 17 | | Stainless steel | 315 | 4 570 | 60 | 0.13 |
| 223-13675-6 | TB.FITT.VA W 10-S | S | 10 | 34 | 22 | | Stainless steel | 630 | 9 140 | 133 | 0.29 |
| 223-13675-2 | TB.FITT.VA W 20-S | S | 20 | 48 | 36 | | Stainless steel | 400 | 5 800 | 333 | 0.73 |

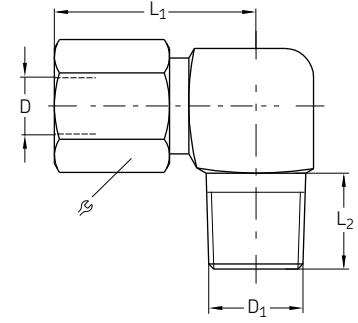
Elbow screw-in connectors WE with metrical thread



| Order number | Designation | Series | Tube | ØD | ØD ₁ | L ₁ | L ₂ | ⊘ | Material | Operating pressure max. | | Weight | |
|-------------------|-------------------------------|--------|------|--------------|-----------------|----------------|----------------|---|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | mm | mm | mm | mm |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-13023-3 | TB.FITT.ST WE 6-LL M8x1K CF | LL | 6 | M8x1 tap. | 21 | 8 | 12 | | Steel, galvanized | 100 | 1 450 | 24 | 0.05 |
| 223-13021-3 | TB.FITT.ST WE 6-LL M10x1K CF | LL | 6 | M10x1 tap. | 15 | 8 | 12 | | Steel, galvanized | 100 | 1 450 | 24 | 0.05 |
| 223-12362-4 | TB.FITT.ST WE 8-LL M10x1K CF | LL | 8 | M10x1 tap. | 17 | 8 | 14 | | Steel, galvanized | 100 | 1 450 | 33 | 0.07 |
| 223-12485-8 | TB.FITT.ST WE 6-L M10x1K CF | L | 6 | M10x1 tap. | 19 | 8 | 14 | | Steel, galvanized | 315 | 4 570 | 41 | 0.09 |
| 223-12362-8 | TB.FITT.ST WE 8-L M12x1,5K CF | L | 8 | M12x1,5 tap. | 21 | 12 | 17 | | Steel, galvanized | 315 | 4 570 | 63 | 0.14 |
| 410-405 | TB.FITT.ST WE10-L M14x1,5K CF | L | 10 | M14x1,5 tap. | 30 | 12 | 19 | | Steel, galvanized | 315 | 4 570 | 125 | 0.28 |
| 412-405 | TB.FITT.ST WE12-L M16x1,5K CF | L | 12 | M16x1,5 tap. | 24 | 12 | 22 | | Steel, galvanized | 315 | 4 570 | 117 | 0.26 |
| 415-405 | TB.FITT.ST WE15-L M18x1,5K CF | L | 15 | M18x1,5 tap. | 28 | 12 | 27 | | Steel, galvanized | 315 | 4 570 | 125 | 0.28 |
| 223-12485-2 | TB.FITT.ST WE10-S M16x1,5K CF | S | 10 | M16x1,5 tap. | 25 | 12 | 22 | | Steel, galvanized | 400 | 5 800 | 123 | 0.27 |
| Stainless steel | | | | | | | | | | | | | |
| 404-405-S3 | TB.FITT.VA WE 4-LL M 8x1,0K | LL | 4 | M8x1 tap. | 15 | 8 | 10 | | Stainless steel | 100 | 1 450 | 18 | 0.04 |
| 223-13677-2 | TB.FITT.VA WE 6-LL M 8x1,0K | LL | 6 | M8x1 tap. | 21 | 8 | 12 | | Stainless steel | 100 | 1 450 | 24 | 0.05 |

Double-edged cutting sleeve unions

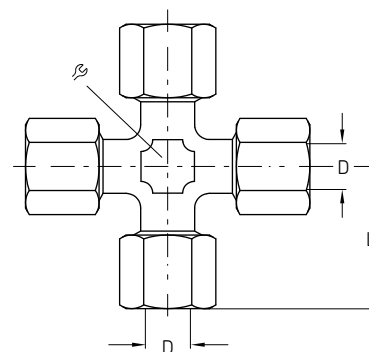
Elbow screw-in connectors WE with Whitworth pipe thread



| Order number | Designation | Series | Tube ØD | ØD ₁ | L ₁ | L ₂ | R | Material | Operating pressure max. | | Weight | |
|-------------------|------------------------------|--------|------------|-----------------|----------------|----------------|----|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| | | | | mm | in | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | | | | |
| 223-13021-4 | TB.FITT.ST WE 4-LL R 1/8K CF | LL | 4 | R 1/8 | 15 | 8 | 10 | Steel, galvanized | 100 | 1 450 | 21 | 0.05 |
| 223-13021-6 | TB.FITT.ST WE 8-LL R 1/8K CF | LL | 8 | R 1/8 | 17 | 8 | 14 | Steel, galvanized | 100 | 1 450 | 32 | 0.07 |
| 96-6112-0058 | TB.FITT.ST WE12-LL R 1/4K CF | LL | 12 | R 1/4 | 19 | 12 | 19 | Steel, galvanized | 100 | 1 450 | 61 | 0.13 |
| 223-13048-1 | TB.FITT.ST WE 6-L R 1/8K CF | L | 6 | R 1/8 | 19 | 8 | 14 | Steel, galvanized | 315 | 4 570 | 42 | 0.09 |
| 223-12380-6 | TB.FITT.ST WE 6-L R 1/4K CF | L | 6 | R 1/4 | 21 | 12 | 14 | Steel, galvanized | 315 | 4 570 | 59 | 0.13 |
| 408-425W | TB.FITT.ST WE 8-L R 1/8K CF | L | 8 | R 1/8 | 21 | 8 | 17 | Steel, galvanized | 315 | 4 570 | 66 | 0.15 |
| 223-14240-5 | TB.FITT.ST WE 8-L R 1/4K CF | L | 8 | R 1/4 | 21 | 12 | 17 | Steel, galvanized | 315 | 4 570 | 63 | 0.14 |
| 223-13048-5 | TB.FITT.ST WE10-L R 1/4K CF | L | 10 | R 1/4 | 22 | 12 | 19 | Steel, galvanized | 315 | 4 570 | 82 | 0.18 |
| 412-405W | TB.FITT.ST WE12-L R 3/8K CF | L | 12 | R 3/8 | 24 | 12 | 22 | Steel, galvanized | 315 | 4 570 | 116 | 0.26 |
| 223-13021-7 | TB.FITT.ST WE15-L R 1/2K CF | L | 15 | R 1/2 | 28 | 14 | 27 | Steel, galvanized | 315 | 4 570 | 141 | 0.31 |
| 418-405W | TB.FITT.ST WE18-L R 1/2K CF | L | 18 | R 1/2 | 31 | 14 | 32 | Steel, galvanized | 315 | 4 570 | 230 | 0.51 |
| 223-13048-6 | TB.FITT.ST WE10-S R 3/8K CF | S | 10 | R 3/8 | 25 | 12 | 22 | Steel, galvanized | 400 | 5 800 | 138 | 0.30 |
| 96-1412-0058 | TB.FITT.ST WE12-S R 3/8K CF | S | 12 | R 3/8 | 29 | 12 | 24 | Steel, galvanized | 400 | 5 800 | 164 | 0.36 |
| 223-13048-8 | TB.FITT.ST WE16-S R 1/2K CF | S | 16 | R 1/2 | 33 | 14 | 30 | Steel, galvanized | 400 | 5 800 | 232 | 0.51 |
| Stainless steel | | | | | | | | | | | | |
| 223-13620-8 | TB.FITT.VA WE 6-L R 1/8K | L | 6 | R 1/8 | 19 | 8 | 14 | Stainless steel | 315 | 4 570 | 42 | 0.09 |
| 223-13677-5 | TB.FITT.VA WE 8-L R 1/4K | L | 8 | R 1/4 | 21 | 12 | 17 | Stainless steel | 315 | 4 570 | 63 | 0.14 |
| 223-12453-1 | TB.FITT.VA WE 10-L R 1/4K | L | 10 | R 1/4 | 22 | 12 | 19 | Stainless steel | 315 | 4 570 | 82 | 0.18 |

Double-edged cutting sleeve unions

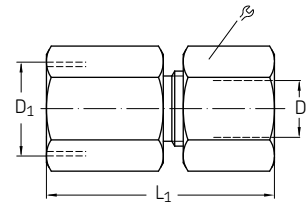
K-connectors K



| Order number | Designation | Series | Tube ØD | L | r | Material | Operating pressure max. | | Weight | |
|--------------|----------------------|--------|---------|----|----|-------------------|-------------------------|-------|--------|------|
| | | | | | | | bar | psi | g | lb |
| 96-2106-0058 | TB.FITT.ST K 6-LL CF | LL | 6 | 21 | 12 | Steel, galvanized | 100 | 1 450 | 27 | 0.06 |
| 446-308-001 | TB.FITT.ST K 8-LL CF | LL | 8 | 23 | 14 | Steel, galvanized | 100 | 1 450 | 52 | 0.11 |
| 446-310-001 | TB.FITT.ST K10-LL CF | LL | 10 | 30 | 19 | Steel, galvanized | 100 | 1 450 | 110 | 0.24 |
| 446-312-001 | TB.FITT.ST K12-LL CF | LL | 12 | 32 | 22 | Steel, galvanized | 100 | 1 450 | 129 | 0.28 |
| 446-315-001 | TB.FITT.ST K15-LL CF | LL | 15 | 36 | 27 | Steel, galvanized | 100 | 1 450 | 306 | 0.67 |
| 96-2118-0058 | TB.FITT.ST K18-L CF | L | 18 | 40 | 32 | Steel, galvanized | 160 | 2 320 | 420 | 0.93 |
| 96-2122-0058 | TB.FITT.ST K22-LL CF | L | 22 | 44 | 36 | Steel, galvanized | 160 | 2 320 | 550 | 1.21 |
| 223-12423-7 | TB.FITT.ST K10-L CF | L | 10 | 30 | 19 | Steel, galvanized | 315 | 4 570 | 136 | 0.30 |
| 223-12432-2 | TB.FITT.ST K10-S CF | S | 10 | 34 | 22 | Steel, galvanized | 630 | 9 140 | 233 | 0.51 |
| 223-12432-8 | TB.FITT.ST K20-S CF | S | 20 | 48 | 36 | Steel, galvanized | 315 | 4 570 | 791 | 1.74 |

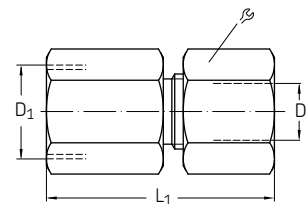
Double-edged cutting sleeve unions

Female connector straight GAI with metric thread



| Order number | Designation | Series | Tube ØD | ØD ₁ | L ₁ | L ₂ | R | Material | Operating pressure max. | | Weight | |
|--------------|-------------------------------|--------|------------|-----------------|----------------|----------------|----|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| 223-10307-2 | TB.FITT.ST GAI 6-L M10x1,0 CF | L | 6 | M10x1 | 26,5 | 19,5 | 14 | Steel, galvanized | 315 | 4 570 | 30 | 0.07 |
| 96-0508-0060 | TB.FITT.ST GAI 8-L M12x1,5 CF | L | 8 | M12x1,5 | 31 | 24 | 17 | Steel, galvanized | 315 | 4 570 | 49 | 0.11 |
| 223-13033-2 | TB.FITT.ST GAI10-L M14x1,5 CF | L | 10 | M14x1,5 | 32 | 25 | 19 | Steel, galvanized | 315 | 4 570 | 60 | 0.13 |
| 96-0512-0060 | TB.FITT.ST GAI12-L M16x1,5 CF | L | 12 | M16x1,5 | 33 | 26 | 22 | Steel, galvanized | 315 | 4 570 | 80 | 0.18 |
| 223-13693-9 | TB.FITT.ST GAI18-L M22x1,5 CF | L | 18 | M22x1,5 | 37 | 29,5 | 32 | Steel, galvanized | 315 | 4 570 | 179 | 0.39 |
| 96-0606-0060 | TB.FITT.ST GAI 6-S M12x1,5 CF | S | 6 | M12x1 | 33 | 26 | 17 | Steel, galvanized | 400 | 5 800 | 54 | 0.12 |
| 96-0608-0060 | TB.FITT.ST GAI 8-S M14x1,5 CF | S | 8 | M14x1,5 | 33 | 26 | 19 | Steel, galvanized | 400 | 5 800 | 73 | 0.16 |

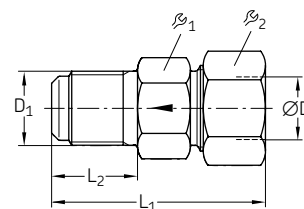
Female connector straight GAI with Whitworth pipe thread



| Order number | Designation | Series | Tube ØD | ØD ₁ | L ₁ | L ₂ | R | Material | Operating pressure max. | | Weight | |
|-------------------|----------------------------|--------|------------|-----------------|----------------|----------------|----|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| Steel, galvanized | | | | | | | | | | | | |
| 223-13693-4 | TB.FITT.ST GAI 6-L G1/8 CF | L | 6 | G 1/8 | 26 | 19 | 14 | Steel, galvanized | 315 | 4 570 | 30 | 0.07 |
| 223-13693-6 | TB.FITT.ST GAI 8-L G1/4 CF | L | 8 | G 1/4 | 31 | 24 | 19 | Steel, galvanized | 315 | 4 570 | 56 | 0.12 |
| 223-13693-2 | TB.FITT.ST GAI10-L G1/4 CF | L | 10 | G 1/4 | 32 | 25 | 19 | Steel, galvanized | 315 | 4 570 | 61 | 0.13 |
| 96-0712-0060 | TB.FITT.ST GAI12-L G3/8 CF | L | 12 | G 3/8 | 33 | 26 | 24 | Steel, galvanized | 315 | 4 570 | 92 | 0.20 |
| 96-0715-0060 | TB.FITT.ST GAI15-L G1/2 CF | L | 15 | G 1/2 | 38 | 31 | 27 | Steel, galvanized | 315 | 4 570 | 134 | 0.30 |
| 96-0718-0060 | TB.FITT.ST GAI18-L G1/2 CF | L | 18 | G 1/2 | 38 | 30,5 | 27 | Steel, galvanized | 315 | 4 570 | 157 | 0.35 |
| 223-12273-2 | TB.FITT.ST GAI22-L G3/4 CF | L | 22 | G 3/4 | 43 | 35,5 | 36 | Steel, galvanized | 160 | 2 320 | 262 | 0.58 |
| 223-13693-1 | TB.FITT.ST GAI10-S G3/8 CF | S | 10 | G 3/8 | 33 | 26 | 24 | Steel, galvanized | 315 | 4 570 | 84 | 0.19 |
| Stainless steel | | | | | | | | | | | | |
| 223-14116-2 | TB.FITT.VA GAI10-S G3/8 | S | 10 | G 3/8 | 34 | 26,5 | 24 | Stainless steel | 400 | 5 800 | 102 | 0.22 |
| 223-14116-9 | TB.FITT.VA GAI20-S G3/4 | S | 20 | G 3/4 | 45 | 34,5 | 36 | Stainless steel | 315 | 4 570 | 309 | 0.68 |

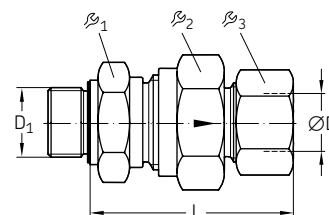
Double-edged cutting sleeve unions

Check valves GERV



| Order number | Designation | Series | Tube ØD | ØD ₁ | L ₁ | L ₂ | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|-------------------|--------------------------------------|--------|------------|-----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| | | | | mm | mm | mm | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-12290-2 | CHECK VALVE ST GERV 4-LL G 1/8A L CF | LL | 4 | G 1/8 | 30 | 11 | 10 | 11 | Steel, galvanized | 100 | 1 450 | 12 | 0.03 |
| 223-12290-7 | CHECK VALVE ST GERV 6-LL G 1/8A L CF | LL | 6 | G 1/8 | 30 | 11 | 12 | 11 | Steel, galvanized | 100 | 1 450 | 16 | 0.04 |
| 223-13052-8 | CHECK VALVE ST GERV 6-LL M10×1 L CF | LL | 6 | M0×1 | 30 | 11 | 12 | 11 | Steel, galvanized | 100 | 1 450 | 15 | 0.03 |
| 223-13051-1 | CHECK VALVE ST GERV 8-L G 1/4A L CF | L | 8 | G 1/4 | 42 | 14 | 17 | 17 | Steel, galvanized | 400 | 5 800 | 45 | 0.10 |
| 223-13051-2 | CHECK VALVE ST GERV10 -L G 1/4A L CF | L | 10 | G 1/4 | 41 | 14 | 19 | 19 | Steel, galvanized | 400 | 5 800 | 60 | 0.13 |
| 223-12372-9 | CHECK VALVE ST GERV 6-S G 1/4A L CF | S | 6 | G 1/4 | 44 | 14 | 17 | 17 | Steel, galvanized | 420 | 6 090 | 60 | 0.13 |
| Stainless steel | | | | | | | | | | | | | |
| 223-12535-9 | CHECK VALVE VA GERV 6-LL G 1/8A L | LL | 6 | G 1/8 | 30 | 11 | 12 | 11 | Stainless steel | 100 | 1 450 | 16 | 0.04 |
| 223-11185-1 | CHECK VALVE VA GERV 6-S G 1/4A L | S | 6 | G 1/4 | 44 | 14 | 17 | 17 | Stainless steel | 400 | 5 800 | 60 | 0.13 |
| 223-12535-5 | CHECK VALVE VA GERV 8-S G 1/4A L | S | 8 | G 1/4 | 42 | 14 | 19 | 19 | Stainless steel | 400 | 5 800 | 45 | 0.10 |

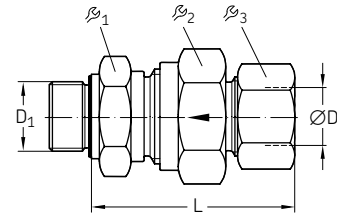
Check valves RHV



| Order number | Designation | Series | Tube ØD | ØD ₁ | L | β ₁ | β ₂ | β ₃ | Material | Operating pressure max. | | Weight | |
|-------------------|-----------------------------------|--------|------------|-----------------|------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| | | | | mm | in | mm | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-14464-9 | CHECK VALVE ST RHV 6-L G 1/8AV CF | L | 6 | G 1/8 | 42,5 | 17 | 17 | 14 | Steel, galvanized | 400 | 5 800 | 59 | 0.13 |
| 223-13079-1 | CHECK VALVE ST RHV 8-L G 1/4AV CF | L | 8 | G 1/4 | 44,5 | 19 | 19 | 17 | Steel, galvanized | 400 | 5 800 | 89 | 0.20 |
| 223-12291-4 | CHECK VALVE ST RHV10-L G 1/4AV CF | L | 10 | G 1/4 | 53 | 22 | 24 | 19 | Steel, galvanized | 400 | 5 800 | 126 | 0.28 |
| 223-12429-1 | CHECK VALVE ST RHV 6-S G 1/4AV CF | S | 6 | G 1/4 | 46 | 19 | 19 | 17 | Steel, galvanized | 420 | 6 090 | 82 | 0.18 |
| 223-12291-2 | CHECK VALVE ST RHV 8-S G 1/4AV CF | S | 8 | G 1/4 | 46 | 19 | 19 | 19 | Steel, galvanized | 420 | 6 090 | 102 | 0.22 |
| 223-12291-6 | CHECK VALVE ST RHV10-S G 3/8AV CF | S | 10 | G 3/8 | 54 | 22 | 24 | 22 | Steel, galvanized | 420 | 6 090 | 166 | 0.37 |
| Stainless steel | | | | | | | | | | | | | |
| 210-13681-1 | RS-VENT VA RHV 8-L G 1/4AV | L | 8 | G 1/4 | 44,5 | 19 | 19 | 17 | Stainless steel | 250 | 3 625 | 89 | 0.20 |

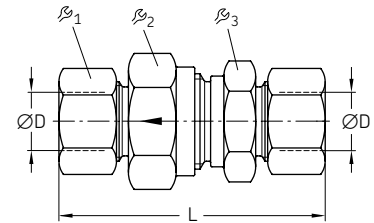
Double-edged cutting sleeve unions

Check valves RHZ



| Order number | Designation | Series | Tube ØD ₁ | L | R ₁ | R ₂ | R ₃ | Material | Operating pressure max. | | Weight | | |
|-------------------|---------------------------------------|--------|-------------------------|-------|----------------|----------------|----------------|----------|-------------------------|-----|--------|-----|------|
| | | | | | | | | | bar | psi | g | lb | |
| | | | mm | mm | mm | mm | mm | | | | | | |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-12292-2 | CHECK VALVE ST RHZ 6-L G 1/8A-ED L CF | L | 6 | G 1/8 | 41 | 17 | 17 | 14 | Steel, galvanized | 400 | 5 800 | 51 | 0.11 |
| 223-12292-5 | CHECK VALVE ST RHZ10-L G 1/4A L CF | L | 10 | G 1/4 | 53 | 22 | 24 | 19 | Steel, galvanized | 400 | 5 800 | 148 | 0.33 |
| 223-13706-3 | CHECK VALVE ST RHZ 6-L M10×1.0 L CF | L | 6 | M10×1 | 41 | 17 | 17 | 14 | Steel, galvanized | 400 | 5 800 | 51 | 0.11 |
| 223-12292-9 | CHECK VALVE ST RHZ 6-S G 1/4A L CF | S | 6 | G 1/4 | 46 | 19 | 19 | 17 | Steel, galvanized | 420 | 6 090 | 80 | 0.18 |
| Stainless steel | | | | | | | | | | | | | |
| 223-13692-3 | CHECK VALVE VA RHZ 6-L G 1/8A L | L | 6 | G 1/8 | 41 | 17 | 17 | 14 | Stainless steel | 250 | 3 625 | 51 | 0.11 |

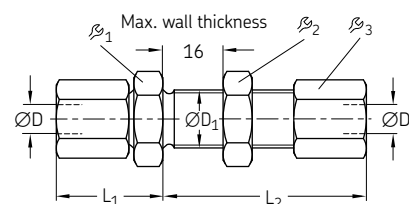
Check valves RHD



| Order number | Designation | Series | Tube ØD | L | R ₁ | R ₂ | R ₃ | Material | Operating pressure max. | | Weight | |
|-------------------|---------------------------|--------|------------|------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| | | | mm | mm | mm | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | | | | |
| 223-13643-8 | CHECK VALVE ST RHD 6-L CF | L | 6 | 58 | 17 | 17 | 14 | Steel, galvanized | 400 | 5 800 | 70 | 0.15 |
| 223-13643-3 | CHECK VALVE ST RHD 8-L CF | L | 8 | 59 | 19 | 19 | 17 | Steel, galvanized | 400 | 5 800 | 95 | 0.21 |
| 223-13643-2 | CHECK VALVE ST RHD10-L CF | L | 10 | 69,5 | 22 | 24 | 19 | Steel, galvanized | 400 | 5 800 | 146 | 0.32 |
| 223-14464-8 | CHECK VALVE ST RHD18-L CF | L | 18 | 83,5 | 36 | 36 | 32 | Steel, galvanized | 400 | 5 800 | 428 | 0.94 |
| 223-13643-1 | CHECK VALVE ST RHD10-S CF | S | 10 | 72,5 | 22 | 24 | 22 | Steel, galvanized | 420 | 6 090 | 189 | 0.42 |
| 223-13643-4 | CHECK VALVE ST RHD16-S CF | S | 16 | 86,5 | 32 | 36 | 30 | Steel, galvanized | 420 | 6 090 | 430 | 0.95 |
| 223-13643-6 | CHECK VALVE ST RHD20-S CF | S | 20 | 97,5 | 41 | 46 | 36 | Steel, galvanized | 420 | 6 090 | 732 | 1.61 |
| Stainless steel | | | | | | | | | | | | |
| 223-13770-6 | CHECK VALVE VA RHD 6-L | L | 6 | 58 | 17 | 17 | 14 | Stainless steel | 250 | 3 625 | 70 | 0.15 |
| 223-13770-8 | CHECK VALVE VA RHD 8-L | L | 8 | 59 | 19 | 19 | 17 | Stainless steel | 250 | 3 625 | 95 | 0.21 |
| 223-13770-2 | CHECK VALVE VA RHD10-S | S | 10 | 72,5 | 22 | 24 | 22 | Stainless steel | 400 | 5 800 | 189 | 0.42 |
| 223-13770-5 | CHECK VALVE VA RHD20-S | S | 20 | 97,5 | 41 | 46 | 36 | Stainless steel | 250 | 3 625 | 732 | 1.61 |

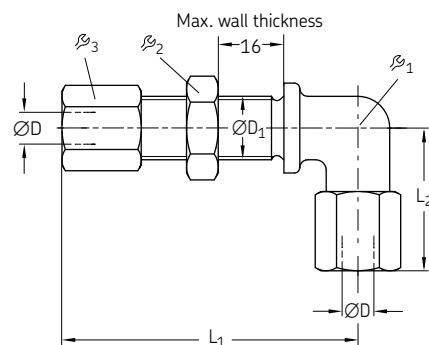
Double-edged cutting sleeve unions

Straight bulkhead connectors SV



| Order number | Designation | Series | Tube ØD | ØD ₁ | L ₁ | L ₂ | ϕ ₁ | ϕ ₂ | ϕ ₃ | Material | Operating pressure max. | | Weight | |
|-------------------|-----------------------|--------|------------|-----------------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|--------|--------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| Steel, galvanized | | | | | | | | | | | | | | |
| 223-12368-4 | TB.FITT.ST SV 6-L CF | L | 6 | 12,5 | 22 | 42 | 17 | 17 | 14 | Steel, galvanized | 500 | 7 250 | 63 | 0.14 |
| 223-12368-6 | TB.FITT.ST SV 8-L CF | L | 8 | 14,5 | 23 | 42 | 19 | 19 | 17 | Steel, galvanized | 500 | 7 250 | 84 | 0.19 |
| 223-12368-8 | TB.FITT.ST SV 10-L CF | L | 10 | 16,5 | 25 | 43 | 22 | 22 | 19 | Steel, galvanized | 500 | 7 250 | 109 | 0.24 |
| 223-13698-4 | TB.FITT.ST SV 12-L CF | L | 12 | 18,5 | 25 | 44 | 24 | 24 | 22 | Steel, galvanized | 400 | 5 800 | 134 | 0.30 |
| 223-12564-2 | TB.FITT.ST SV 15-L CF | L | 15 | 22,5 | 27 | 46 | 27 | 30 | 27 | Steel, galvanized | 400 | 5 800 | 222 | 0.49 |
| 223-12564-8 | TB.FITT.ST SV 18-L CF | L | 18 | 26,5 | 30 | 49 | 32 | 36 | 32 | Steel, galvanized | 400 | 5 800 | 334 | 0.74 |
| 422-416 | TB.FITT.ST SV 22-L CF | L | 22 | 30,5 | 33 | 51 | 36 | 41 | 36 | Steel, galvanized | 250 | 3 625 | 432 | 0.95 |
| 223-12564-6 | TB.FITT.ST SV 10-S CF | S | 10 | 18,5 | 31 | 46 | 24 | 24 | 22 | Steel, galvanized | 800 | 11 600 | 180 | 0.40 |
| 223-12368-2 | TB.FITT.ST SV 20-S CF | S | 20 | 30,5 | 39 | 55 | 41 | 41 | 36 | Steel, galvanized | 420 | 6 090 | 688 | 1.52 |
| Stainless steel | | | | | | | | | | | | | | |
| 223-13671-9 | TB.FITT.VA SV 8-S | S | 8 | 16,5 | 28 | 44 | 22 | 22 | 19 | Stainless steel | 630 | 9 140 | 133 | 0.29 |
| 223-12564-3 | TB.FITT.VA SV 10-S | S | 10 | 18,5 | 31 | 46 | 24 | 24 | 22 | Stainless steel | 630 | 9 140 | 180 | 0.40 |
| 223-13671-2 | TB.FITT.VA SV 20-S | S | 20 | 30,5 | 39 | 55 | 41 | 41 | 36 | Stainless steel | 400 | 5 800 | 688 | 1.52 |

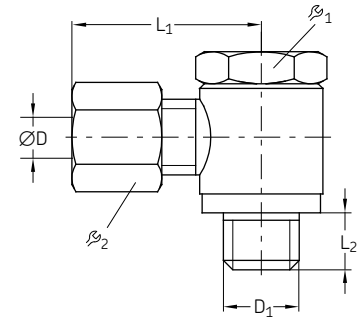
Elbow bulkhead connectors WSV



| Order number | Designation | Series | Tube ØD | ØD ₁ | L ₁ | L ₂ | ϕ ₁ | ϕ ₂ | ϕ ₃ | Material | Operating pressure max. | | Weight | |
|-------------------|------------------------|--------|------------|-----------------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| Steel, galvanized | | | | | | | | | | | | | | |
| 223-13050-4 | TB.FITT.ST WSV 6-L CF | L | 6 | 12,5 | 48 | 27 | 12 | 17 | 14 | Steel, galvanized | 315 | 4 570 | 75 | 0.17 |
| 223-12409-6 | TB.FITT.ST WSV 8-L CF | L | 8 | 14,5 | 51 | 29 | 12 | 19 | 17 | Steel, galvanized | 315 | 4 570 | 95 | 0.21 |
| 223-12409-9 | TB.FITT.ST WSV 10-L CF | L | 10 | 16,5 | 53 | 30 | 14 | 22 | 19 | Steel, galvanized | 315 | 4 570 | 120 | 0.26 |
| 412-409 | TB.FITT.ST WSV 12-L CF | L | 12 | 18,5 | 56 | 32 | 17 | 24 | 22 | Steel, galvanized | 315 | 4 570 | 141 | 0.31 |
| 223-12409-8 | TB.FITT.ST WSV 15-L CF | L | 15 | 22,5 | 61 | 36 | 19 | 30 | 27 | Steel, galvanized | 315 | 4 570 | 184 | 0.41 |
| 418-409 | TB.FITT.ST WSV 18-L CF | L | 18 | 26,5 | 64 | 40 | 24 | 36 | 32 | Steel, galvanized | 315 | 4 570 | 374 | 0.82 |
| 223-13050-3 | TB.FITT.ST WSV 22-L CF | L | 22 | 30,5 | 72 | 44 | 27 | 41 | 36 | Steel, galvanized | 160 | 2 320 | 505 | 1.11 |
| 223-13050-2 | TB.FITT.ST WSV 10-S CF | S | 10 | 18,5 | 57 | 34 | 17 | 24 | 22 | Steel, galvanized | 630 | 9 140 | 196 | 0.43 |
| 223-12409-2 | TB.FITT.ST WSV 20-S CF | S | 20 | 30,5 | 74 | 48 | 27 | 41 | 36 | Steel, galvanized | 400 | 5 800 | 616 | 1.36 |
| Stainless steel | | | | | | | | | | | | | | |
| 223-10364-6 | TB.FITT.VA WSV 8-S | S | 8 | 16,5 | 54 | 32 | 14 | 22 | 19 | Stainless steel | 630 | 9 140 | 155 | 0.34 |
| 223-10364-3 | TB.FITT.VA WSV 10-S | S | 10 | 18,5 | 57 | 34 | 17 | 24 | 22 | Stainless steel | 630 | 9 140 | 196 | 0.43 |
| 223-13758-4 | TB.FITT.VA WSV 20-S | S | 20 | 30,5 | 74 | 48 | 27 | 41 | 36 | Stainless steel | 400 | 5 800 | 616 | 1.36 |

Double-edged cutting sleeve unions

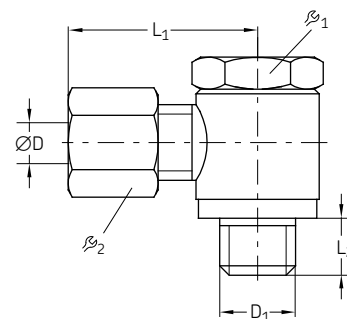
Banjo fittings SWVE with metrical thread



| Order number | Designation | Series | Tube | D ₁ | L ₁ | L ₂ | ϕ ₁ | ϕ ₂ | Material | Operating pressure max. | | Weight | |
|-------------------|--------------------------------|--------|------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | mm | mm | mm | mm |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-12480-2 | TB.FITT.ST SWVE 4-LL M 8x1 CF | LL | 4 | M8x1 | 20 | 6 | 12 | 10 | Steel, galvanized | 63 | 915 | 22 | 0.05 |
| 223-12480-7 | TB.FITT.ST SWVE 6-LL M10x1 CF | LL | 6 | M10x1 | 22 | 6 | 14 | 12 | Steel, galvanized | 63 | 915 | 36 | 0.08 |
| 96-7108-0058 | TB.FITT.ST SWVE 8-LL M10x1 CF | LL | 8 | M10x1 | 23 | 6 | 14 | 14 | Steel, galvanized | 63 | 915 | 39 | 0.09 |
| 223-12369-7 | TB.FITT.ST SWVE 6-L M10x1 CF | L | 6 | M10x1 | 25 | 6 | 14 | 14 | Steel, galvanized | 160 | 2 320 | 43 | 0.09 |
| 96-7808-0058 | TB.FITT.ST SWVE 8-L M12x1,5 CF | L | 8 | M12x1,5 | 27 | 9 | 17 | 17 | Steel, galvanized | 160 | 2 320 | 68 | 0.15 |
| 445-535-101 | TB.FITT.ST SWVE10-L M14x1,5 CF | L | 10 | M14x1,5 | 29 | 9 | 19 | 19 | Steel, galvanized | 160 | 2 320 | 89 | 0.20 |
| 96-7812-0058 | TB.FITT.ST SWVE12-L M16x1,5 CF | L | 12 | M16x1,5 | 30 | 9 | 21 | 22 | Steel, galvanized | 100 | 1 450 | 128 | 0.28 |
| 96-7815-0058 | TB.FITT.ST SWVE15-L M18x1,5 CF | L | 15 | M18x1,5 | 33 | 9 | 24 | 27 | Steel, galvanized | 100 | 1 450 | 185 | 0.41 |
| 96-7818-0058 | TB.FITT.ST SWVE18-L M22x1,5 CF | L | 18 | M22x1,5 | 37 | 11 | 27 | 32 | Steel, galvanized | 100 | 1 450 | 309 | 0.68 |
| 96-7822-0058 | TB.FITT.ST SWVE22-L M26x1,5 Z3 | L | 22 | M26x1,5 | 42 | 13 | 32 | 36 | Steel, galvanized | 100 | 1 450 | 440 | 0.97 |
| 96-8006-0058 | TB.FITT.ST SWVE 6-S M12x1,5 CF | S | 6 | M12x1,5 | 29 | 9 | 17 | 17 | Steel, galvanized | 160 | 2 320 | 74 | 0.16 |
| 96-8008-0058 | TB.FITT.ST SWVE 8-S M14x1,5 CF | S | 8 | M14x1,5 | 30 | 9 | 19 | 19 | Steel, galvanized | 160 | 2 320 | 98 | 0.22 |
| 223-13669-4 | TB.FITT.ST SWVE10-S M16x1,5 CF | S | 10 | M16x1,5 | 32 | 9 | 22 | 22 | Steel, galvanized | 100 | 1 450 | 140 | 0.31 |
| 96-8012-0058 | TB.FITT.ST SWVE12-S M18x1,5 CF | S | 12 | M18x1,5 | 33 | 9 | 24 | 24 | Steel, galvanized | 100 | 1 450 | 172 | 0.38 |
| 96-8014-0058 | TB.FITT.ST SWVE14-S M20x1,5 Z3 | S | 14 | M20x1,5 | 38 | 11 | 27 | 27 | Steel, galvanized | 100 | 1 450 | 236 | 0.52 |
| 96-8016-0058 | TB.FITT.ST SWVE16-S M22x1,5 Z3 | S | 16 | M22x1,5 | 40 | 11 | 27 | 30 | Steel, galvanized | 100 | 1 450 | 324 | 0.71 |
| Stainless steel | | | | | | | | | | | | | |
| 223-12456-6 | TB.FITT.VA SWVE 6-LL M10x1 | LL | 6 | M10x1 | 22 | 6 | 14 | 12 | Stainless steel | 63 | 915 | 36 | 0.08 |
| 223-10389-3 | TB.FITT.VA SWVE 8-LL M10x1 | LL | 8 | M10x1 | 23 | 6 | 14 | 14 | Stainless steel | 63 | 915 | 39 | 0.09 |
| 223-14089-9 | TB.FITT.VA SWVE 6-L M10x1 | L | 6 | M10x1 | 25 | 6 | 14 | 14 | Stainless steel | 160 | 2 320 | 43 | 0.09 |

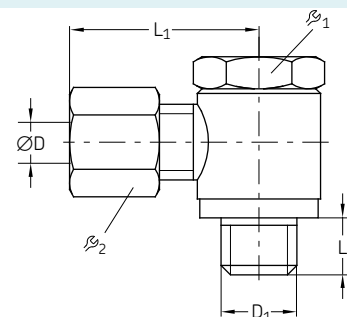
Double-edged cutting sleeve unions

Banjo fittings SWVE with Whitworth pipe thread



| Order number | Designation | Series | Tube | D ₁ | L ₁ | L ₂ | r ₁ | r ₂ | Material | Operating pressure max. | | Weight | |
|-------------------|--------------------------------|--------|------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | ØD | mm | mm | mm |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-13629-1 | TB.FITT.ST SWVE 4-LL G 1/8A CF | LL | 4 | G 1/8A | 21 | 6 | 14 | 10 | Steel, galvanized | 63 | 915 | 32 | 0.07 |
| 223-12479-9 | TB.FITT.ST SWVE 6-LL G 1/8A CF | LL | 6 | G 1/8A | 22 | 6 | 14 | 12 | Steel, galvanized | 63 | 915 | 35 | 0.08 |
| 223-12479-8 | TB.FITT.ST SWVE 8-LL G 1/8A CF | LL | 8 | G 1/8A | 23 | 6 | 14 | 14 | Steel, galvanized | 63 | 915 | 38 | 0.08 |
| 223-12479-5 | TB.FITT.ST SWVE 6-L G 1/8A CF | L | 6 | G 1/8A | 25 | 6 | 14 | 14 | Steel, galvanized | 160 | 2 320 | 43 | 0.09 |
| 223-12284-7 | TB.FITT.ST SWVE 8-L G 1/4A CF | L | 8 | G 1/4A | 28 | 9 | 19 | 17 | Steel, galvanized | 160 | 2 320 | 82 | 0.18 |
| 223-12369-9 | TB.FITT.ST SWVE10-L G 1/4A CF | L | 10 | G 1/4A | 29 | 9 | 19 | 22 | Steel, galvanized | 160 | 2 320 | 87 | 0.19 |
| 223-13669-3 | TB.FITT.ST SWVE12-L G 3/8A CF | L | 12 | G 3/8A | 30 | 9 | 19 | 22 | Steel, galvanized | 100 | 1 450 | 130 | 0.29 |
| 445-513-181 | TB.FITT.ST SWVE18-L G 1/2AA CF | L | 18 | G 1/2A | 37 | 11 | 27 | 32 | Steel, galvanized | 100 | 1 450 | 317 | 0.70 |
| 445-517-222 | TB.FITT.ST SWVE22-L G 3/4A CF | L | 22 | G 3/4A | 42 | 13 | 32 | 36 | Steel, galvanized | 100 | 1 450 | 438 | 0.97 |
| 223-12285-8 | TB.FITT.ST SWVE 6-S G 1/4A CF | S | 6 | G 1/4A | 30 | 9 | 19 | 17 | Steel, galvanized | 160 | 2 320 | 88 | 0.19 |
| 223-12285-9 | TB.FITT.ST SWVE 8-S G 1/4A CF | S | 8 | G 1/4A | 30 | 9 | 19 | 19 | Steel, galvanized | 160 | 2 320 | 96 | 0.21 |
| 223-12285-5 | TB.FITT.ST SWVE10-S G 3/8A CF | S | 10 | G 3/8A | 32 | 9 | 22 | 22 | Steel, galvanized | 100 | 1 450 | 142 | 0.31 |
| 223-12285-6 | TB.FITT.ST SWVE12-S G 3/8A CF | S | 12 | G 3/8A | 33 | 9 | 24 | 24 | Steel, galvanized | 100 | 1 450 | 185 | 0.41 |
| 96-7914-0058 | TB.FITT.ST SWVE14-S G 1/2A Z3 | S | 14 | G 1/2A | 38 | 11 | 27 | 27 | Steel, galvanized | 100 | 1 450 | 234 | 0.52 |
| 96-7916-0058 | TB.FITT.ST SWVE16-S G 1/2A CF | S | 16 | G 1/2A | 40 | 11 | 27 | 30 | Steel, galvanized | 100 | 1 450 | 321 | 0.71 |
| 223-12285-7 | TB.FITT.ST SWVE20-S G 3/4A CF | S | 20 | G 3/4A | 46 | 13 | 32 | 36 | Steel, galvanized | 100 | 1 450 | 472 | 1.04 |
| Stainless steel | | | | | | | | | | | | | |
| 223-12456-7 | TB.FITT.VA SWVE 6-LL G 1/8A | LL | 6 | G 1/8A | 22 | 6 | 14 | 12 | Stainless steel | 63 | 915 | 35 | 0.08 |
| 223-12456-9 | TB.FITT.VA SWVE 8-L G 1/4A | L | 8 | G 1/4A | 28 | 9 | 19 | 17 | Stainless steel | 160 | 2 320 | 82 | 0.18 |
| 223-12456-1 | TB.FITT.VA SWVE 10-L G 1/4A | L | 10 | G 1/4A | 29 | 9 | 19 | 22 | Stainless steel | 160 | 2 320 | 87 | 0.19 |
| 223-14089-5 | TB.FITT.VA SWVE 12-L G 3/8A | L | 12 | G 3/8A | 30 | 9 | 19 | 22 | Stainless steel | 100 | 1 450 | 130 | 0.29 |
| 223-10389-4 | TB.FITT.VA SWVE 6-S G 1/4A | S | 6 | G 1/4A | 22 | 9 | 19 | 17 | Stainless steel | 160 | 2 320 | 45 | 0.10 |
| 223-14089-6 | TB.FITT.VA SWVE 16-S G 1/2A | S | 16 | G 1/2A | 40 | 11 | 27 | 30 | Stainless steel | 100 | 1 450 | 321 | 0.71 |

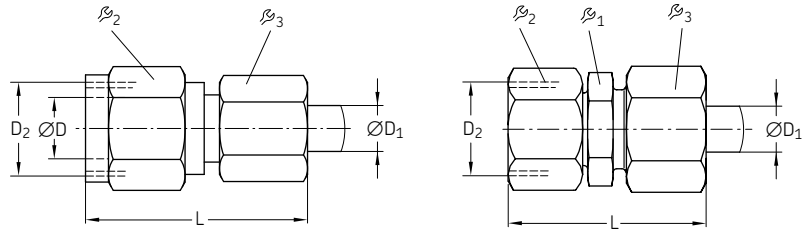
Banjo fittings WH (high-pressure)



| Order number | Designation | Series | Tube | D ₁ | L ₁ | L ₂ | r ₁ | r ₂ | Material | Operating pressure max. | | Weight | |
|-------------------|---------------------------------|--------|------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | ØD | mm | mm | mm |
| Steel, galvanized | | | | | | | | | | | | | |
| 223-13679-8 | TB.FITT.ST WH10-L G1/4A-KD CF | L | 10 | G 1/4A | 30 | 12 | 19 | 19 | Steel, galvanized | 315 | 4 570 | 123 | 0.27 |
| 223-13679-9 | TB.FITT.ST WH10-S G3/8A-KD CF | S | 10 | G 3/8A | 35 | 12 | 24 | 22 | Steel, galvanized | 400 | 5 800 | 212 | 0.47 |
| 223-13679-3 | TB.FITT.ST WH10-S M16x1,5-KD CF | S | 10 | M16x1,5 | 35 | 12 | 24 | 22 | Steel, galvanized | 315 | 4 570 | 220 | 0.49 |
| Stainless steel | | | | | | | | | | | | | |
| 223-14238-4 | TB.FITT.VA WH10-L G1/4A | L | 10 | G 1/4A | 30 | 12 | 19 | 19 | Stainless steel | 315 | 4 570 | 123 | 0.27 |

Double-edged cutting sleeve unions

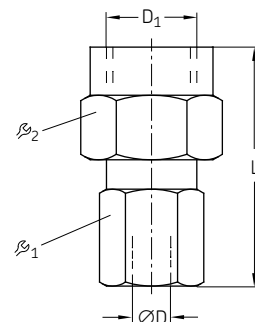
Reducing connectors RED with cylindrical thread



| Order number | Designation | Series | Tube ØD | Tube ØD ₁ | D ₂ mm | L mm | Ø ₁ mm | Ø ₂ mm | Ø ₃ mm | Material | Operating pressure max. | | Weight | |
|--------------|--------------------------|--------|------------|-------------------------|----------------------|---------|----------------------|----------------------|----------------------|-------------------|-------------------------|--------|--------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| 96-1406-0060 | TB.FITT.ST RED 6/4-LL CF | LL | 6 | 4 | M10×1 | 29 | - | 12 | 10 | Steel, galvanized | 100 | 1 450 | 21 | 0.05 |
| 96-1408-0060 | TB.FITT.ST RED 8/4-LL CF | LL | 8 | 4 | M12×1 | 29 | - | 14 | 10 | Steel, galvanized | 100 | 1 450 | 28 | 0.06 |
| 96-1410-0060 | TB.FITT.ST RED 8/6-LL CF | LL | 8 | 6 | M12×1 | 29 | - | 14 | 12 | Steel, galvanized | 100 | 1 450 | 32 | 0.07 |
| 223-10670-3 | TB.FITT.ST RED 8/6-L CF | L | 8 | 6 | M14×1,5 | 38,0 | 12 | 17 | 14 | Steel, galvanized | 500 | 7 250 | 36 | 0.08 |
| 223-12582-5 | TB.FITT.ST RED10/6-L CF | L | 10 | 6 | M16×1,5 | 40,0 | 14 | 19 | 14 | Steel, galvanized | 500 | 7 250 | 48 | 0.11 |
| 473-808-371 | TB.FITT.ST RED10/8-L CF | L | 10 | 8 | M16×1,5 | 40 | 17 | 22 | 17 | Steel, galvanized | 500 | 7 250 | 58 | 0.13 |
| 223-13699-7 | TB.FITT.ST RED12/6-L CF | L | 12 | 6 | M20×1,5 | 40 | 17 | 22 | 14 | Steel, galvanized | 400 | 5 800 | 60 | 0.13 |
| 473-808-392 | TB.FITT.ST RED12/8-L CF | L | 12 | 8 | M18×1,5 | 40 | 17 | 22 | 17 | Steel, galvanized | 400 | 5 800 | 69 | 0.15 |
| 223-14293-2 | TB.FITT.ST RED12/10-L CF | L | 12 | 10 | M18×1,5 | 41,0 | 17 | 22 | 19 | Steel, galvanized | 400 | 5 800 | 63 | 0.14 |
| 223-14152-2 | TB.FITT.ST RED15/8-L CF | L | 15 | 8 | M22×1,5 | 43,0 | 19 | 27 | 17 | Steel, galvanized | 400 | 5 800 | 102 | 0.22 |
| 223-14293-4 | TB.FITT.ST RED15/10-L CF | L | 15 | 10 | M22×1,5 | 44,0 | 19 | 27 | 19 | Steel, galvanized | 400 | 5 800 | 104 | 0.23 |
| 96-1541-0060 | TB.FITT.ST RED18/6-L CF | L | 18 | 6 | M26×1,5 | 43,0 | 24 | 32 | 14 | Steel, galvanized | 400 | 5 800 | 121 | 0.27 |
| 96-1542-0060 | TB.FITT.ST RED18/8-L CF | L | 18 | 8 | M26×1,5 | 43,0 | 24 | 32 | 17 | Steel, galvanized | 400 | 5 800 | 128 | 0.28 |
| 96-1543-0060 | TB.FITT.ST RED18/10-L CF | L | 18 | 10 | M26×1,5 | 44,0 | 24 | 32 | 19 | Steel, galvanized | 400 | 5 800 | 131 | 0.29 |
| 223-14293-8 | TB.FITT.ST RED18/15-L CF | L | 18 | 15 | M26×1,5 | 45,0 | 24 | 32 | 27 | Steel, galvanized | 400 | 5 800 | 162 | 0.36 |
| 96-1551-0060 | TB.FITT.ST RED22/6-L CF | L | 22 | 6 | M30×2 | 47,0 | 27 | 36 | 14 | Steel, galvanized | 250 | 3 625 | 170 | 0.37 |
| 223-12581-9 | TB.FITT.ST RED22/15-L CF | L | 22 | 15 | M30×2 | 49,0 | 27 | 36 | 27 | Steel, galvanized | 250 | 3 625 | 211 | 0.47 |
| 96-1556-0060 | TB.FITT.ST RED22/18-L CF | L | 22 | 18 | M30×2 | 50,0 | 27 | 36 | 32 | Steel, galvanized | 250 | 3 625 | 235 | 0.52 |
| 223-10688-1 | TB.FITT.ST RED 8/6-S CF | S | 8 | 6 | M16×1,5 | 42 | 14 | 19 | 17 | Steel, galvanized | 800 | 11 600 | 61 | 0.13 |
| 223-10187-1 | TB.FITT.ST RED10/6-S CF | S | 10 | 6 | M18×1,5 | 42 | 17 | 22 | 17 | Steel, galvanized | 800 | 11 600 | 74 | 0.16 |
| 223-13054-4 | TB.FITT.ST RED10/8-S CF | S | 10 | 8 | M18×1,5 | 42 | 17 | 22 | 19 | Steel, galvanized | 800 | 11 600 | 81 | 0.18 |
| 223-12287-8 | TB.FITT.ST RED12/8-S CF | S | 12 | 8 | M20×1,5 | 44 | 17 | 24 | 19 | Steel, galvanized | 630 | 9 140 | 91 | 0.20 |
| 223-12288-2 | TB.FITT.ST RED12/10-S CF | S | 12 | 10 | M20×1,5 | 46 | 19 | 24 | 22 | Steel, galvanized | 630 | 9 140 | 109 | 0.24 |
| 96-1633-0060 | TB.FITT.ST RED14/10-S CF | S | 14 | 10 | M22×1,5 | 47 | 19 | 27 | 22 | Steel, galvanized | 630 | 9 140 | 125 | 0.28 |
| 96-1642-0060 | TB.FITT.ST RED16/8-S CF | S | 16 | 8 | M24×1,5 | 47 | 22 | 30 | 19 | Steel, galvanized | 630 | 9 140 | 137 | 0.30 |
| 223-14293-1 | TB.FITT.ST RED16/10-S CF | S | 16 | 10 | M24×1,5 | 48 | 22 | 30 | 22 | Steel, galvanized | 630 | 9 140 | 149 | 0.33 |
| 96-1644-0060 | TB.FITT.ST RED16/12-S CF | S | 16 | 12 | M24×1,5 | 48 | 22 | 30 | 24 | Steel, galvanized | 630 | 9 140 | 156 | 0.34 |
| 223-12577-8 | TB.FITT.ST RED20/6-S CF | S | 20 | 6 | M30×2 | 51 | 27 | 36 | 17 | Steel, galvanized | 420 | 6 090 | 191 | 0.42 |
| 96-1652-0060 | TB.FITT.ST RED20/8-S CF | S | 20 | 8 | M30×2 | 51 | 27 | 36 | 19 | Steel, galvanized | 420 | 6 090 | 197 | 0.43 |
| 223-12577-2 | TB.FITT.ST RED20/10-S CF | S | 20 | 10 | M30×2 | 52 | 27 | 36 | 22 | Steel, galvanized | 420 | 6 090 | 208 | 0.46 |
| 223-12580-2 | TB.FITT.ST RED20/12-S CF | S | 20 | 12 | M30×2 | 52 | 27 | 36 | 24 | Steel, galvanized | 420 | 6 090 | 215 | 0.47 |
| 223-13759-7 | TB.FITT.ST RED20/16-S CF | S | 20 | 16 | M30×2 | 55 | 27 | 36 | 30 | Steel, galvanized | 420 | 6 090 | 254 | 0.56 |

Double-edged cutting sleeve unions

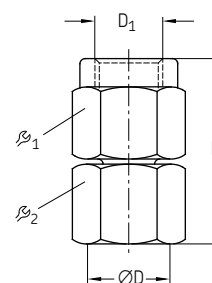
Connectors for pressure gauges MAV



| Order number | Designation | Series | Tube ØD | D ₁ | L | 1 | 2 | Material | Operating pressure max. | | Weight | |
|-------------------|-----------------------------|--------|------------|----------------|----|----|----|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| | | | mm | in | mm | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | | | | |
| 223-12481-4 | TB.FITT.ST MAV 6-L G 1/4 CF | L | 6 | G 1/4 | 37 | 19 | 14 | Steel, galvanized | 315 | 4 570 | 49 | 0.11 |
| 223-12481-6 | TB.FITT.ST MAV 8-L G 1/4 CF | L | 8 | G 1/4 | 37 | 19 | 17 | Steel, galvanized | 315 | 4 570 | 55 | 0.12 |
| 223-13028-2 | TB.FITT.ST MAV10-L G 1/4 CF | L | 10 | G 1/4 | 38 | 19 | 19 | Steel, galvanized | 315 | 4 570 | 62 | 0.14 |
| 223-12481-8 | TB.FITT.ST MAV12-L G 1/4 CF | L | 12 | G 1/4 | 38 | 19 | 22 | Steel, galvanized | 315 | 4 570 | 71 | 0.16 |
| 441-108-132 | TB.FITT.ST MAV 8-S G 1/2 CF | S | 8 | G 1/2 | 46 | 27 | 19 | Steel, galvanized | 630 | 9 140 | 105 | 0.23 |
| 223-13028-4 | TB.FITT.ST MAV10-S G 1/2 CF | S | 10 | G 1/2 | 47 | 27 | 22 | Steel, galvanized | 630 | 9 140 | 111 | 0.24 |
| 223-12286-8 | TB.FITT.ST MAV12-S G 1/2 CF | S | 12 | G 1/2 | 47 | 27 | 24 | Steel, galvanized | 630 | 9 140 | 131 | 0.29 |
| Stainless steel | | | | | | | | | | | | |
| 223-13685-3 | TB.FITT.VA MAV 6-L G 1/4 | L | 6 | G 1/4 | 37 | 19 | 14 | Stainless steel | 315 | 4 570 | 49 | 0.11 |
| 223-13685-1 | TB.FITT.VA MAV10-S G 1/2 | S | 10 | G 1/2 | 47 | 27 | 22 | Stainless steel | 630 | 9 140 | 111 | 0.24 |

Connectors for pressure gauges MAVE

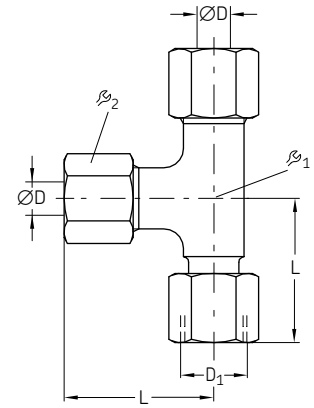
(Swivel with O-ring)



| Order number | Designation | Series | Tube ØD | D ₁ | L | 1 | 2 | Material | Operating pressure max. | | Weight | |
|-------------------|------------------------------|--------|------------|----------------|------|----|----|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| | | | mm | in | mm | mm | mm | | | | | |
| Steel, galvanized | | | | | | | | | | | | |
| 96-8804-0058 | TB.FITT.ST MAVE 4-L G 1/4 CF | L | 4 | G 1/4 | 33 | 19 | 10 | Steel, galvanized | 315 | 4 570 | 42 | 0.09 |
| 223-13655-1 | TB.FITT.ST MAVE 6-L G 1/4 CF | L | 6 | G 1/4 | 35,5 | 19 | 14 | Steel, galvanized | 315 | 4 570 | 46 | 0.10 |
| 223-10889-2 | TB.FITT.ST MAVE 8-L G 1/4 CF | L | 8 | G 1/4 | 35,5 | 19 | 17 | Steel, galvanized | 315 | 4 570 | 52 | 0.11 |
| 223-13655-7 | TB.FITT.ST MAVE10-L G 1/4 CF | L | 10 | G 1/4 | 36,0 | 19 | 19 | Steel, galvanized | 315 | 4 570 | 59 | 0.13 |
| 223-14268-4 | TB.FITT.ST MAVE12-L G 1/4 CF | L | 12 | G 1/4 | 36,0 | 19 | 22 | Steel, galvanized | 315 | 4 570 | 70 | 0.15 |
| 96-8906-0058 | TB.FITT.ST MAVE 6-S G 1/2 CF | S | 6 | G 1/2 | 42,5 | 27 | 17 | Steel, galvanized | 630 | 9 140 | 95 | 0.21 |
| 223-13655-2 | TB.FITT.ST MAVE10-S G 1/2 CF | S | 10 | G 1/2 | 43,5 | 27 | 22 | Steel, galvanized | 630 | 9 140 | 109 | 0.24 |
| 223-13655-4 | TB.FITT.ST MAVE12-S G 1/2 CF | S | 12 | G 1/2 | 45,0 | 27 | 24 | Steel, galvanized | 630 | 9 140 | 125 | 0.28 |
| Stainless steel | | | | | | | | | | | | |
| 223-14268-7 | TB.FITT.VA MAVE 6-L G 1/4 | L | 6 | G 1/4 | 35,5 | 19 | 14 | Stainless steel | 315 | 4 570 | 46 | 0.10 |
| 223-13655-5 | TB.FITT.VA MAVE10-S G 1/2 | S | 10 | G 1/2 | 43,5 | 27 | 22 | Stainless steel | 630 | 9 140 | 109 | 0.24 |

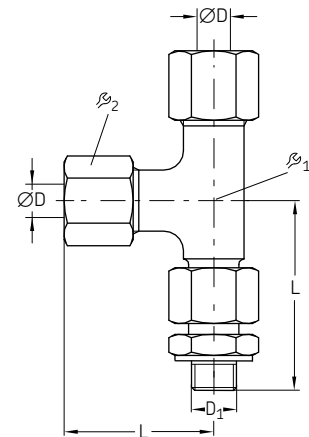
Double-edged cutting sleeve unions

L-connectors EL directionally adjustable



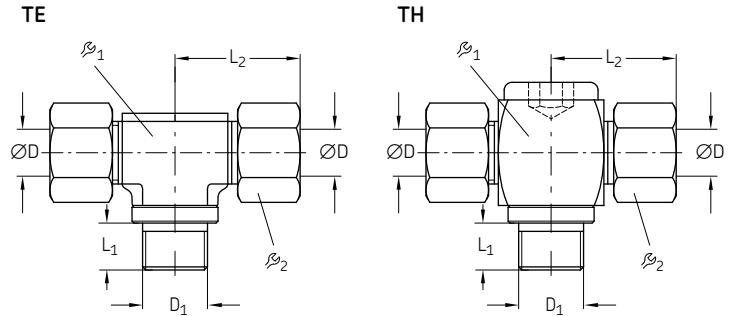
| Order number | Designation | Series | Tube ØD | ØD ₁ | L | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|-------------------|-----------------------|--------|------------|-----------------|----|----------------|----------------|-------------------|-------------------------|--------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| | | | | mm | mm | mm | mm | mm | | | | |
| Steel, galvanized | | | | | | | | | | | | |
| 223-14190-6 | TB.STUD ST EL 6-L CF | L | 6 | M12×1,5 | 27 | 12 | 14 | Steel, galvanized | 500 | 7 250 | 68 | 0.15 |
| 223-14190-7 | TB.STUD ST EL 8-L CF | L | 8 | M14×1,5 | 29 | 12 | 17 | Steel, galvanized | 500 | 7 250 | 87 | 0.19 |
| 223-13040-9 | TB.STUD ST EL 10-L CF | L | 10 | M16×1,5 | 30 | 14 | 19 | Steel, galvanized | 500 | 7 250 | 110 | 0.24 |
| 223-13761-5 | TB.STUD ST EL 12-L CF | L | 12 | M18×1,5 | 32 | 17 | 22 | Steel, galvanized | 400 | 5 800 | 151 | 0.33 |
| 223-14190-5 | TB.STUD ST EL 15-L CF | L | 15 | M22×1,5 | 36 | 19 | 27 | Steel, galvanized | 400 | 5 800 | 245 | 0.54 |
| 443-418-181 | TB.STUD ST EL 18-L CF | L | 18 | M26×1,5 | 40 | 24 | 32 | Steel, galvanized | 400 | 5 800 | 369 | 0.81 |
| 223-13040-3 | TB.STUD ST EL 6-S CF | S | 6 | M14×1,5 | 31 | 12 | 17 | Steel, galvanized | 800 | 11 600 | 103 | 0.23 |
| 223-13040-7 | TB.STUD ST EL 8-S CF | S | 8 | M16×1,5 | 32 | 14 | 19 | Steel, galvanized | 800 | 11 600 | 130 | 0.29 |
| 223-14190-2 | TB.STUD ST EL 10-S CF | S | 10 | M18×1,5 | 34 | 17 | 22 | Steel, galvanized | 800 | 11 600 | 136 | 0.30 |
| 223-14190-4 | TB.STUD ST EL 12-S CF | S | 12 | M20×1,5 | 38 | 17 | 24 | Steel, galvanized | 630 | 9 140 | 212 | 0.47 |
| 223-14190-1 | TB.STUD ST EL 16-S CF | S | 16 | M24×1,5 | 43 | 24 | 30 | Steel, galvanized | 630 | 9 140 | 404 | 0.89 |
| 223-13761-7 | TB.STUD ST EL 20-S CF | S | 20 | M30×2 | 48 | 27 | 36 | Steel, galvanized | 420 | 6 090 | 601 | 1.33 |
| Stainless steel | | | | | | | | | | | | |
| 223-14244-8 | TB.STUD VA EL 10-L | L | 10 | M16×1,5 | 30 | 14 | 19 | Stainless steel | 315 | 4 570 | 110 | 0.24 |
| 223-14244-6 | TB.STUD VA EL 20-S | S | 20 | M30×2 | 48 | 27 | 36 | Stainless steel | 400 | 5 800 | 601 | 1.33 |

L-connectors EVL directionally adjustable

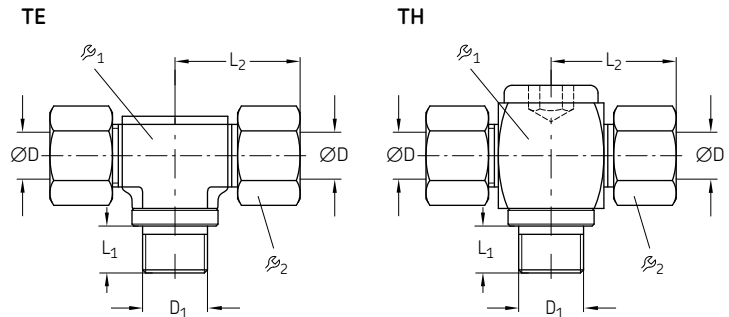


| Order number | Designation | Series | Tube ØD | ØD ₁ | L | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|-------------------|------------------------------|--------|------------|-----------------|----|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| | | | | mm | in | mm | mm | mm | | | | |
| Steel, galvanized | | | | | | | | | | | | |
| 443-410-211 | TB.FITT.ST EVL 10-S G3/8A CF | S | 10 | G 3/8 | 34 | 17 | 22 | Steel, galvanized | 630 | 9 140 | 226 | 0.50 |
| 443-410-161 | TB.FITT.ST EVL 10-L G1/4A CF | L | 10 | G 1/4 | 30 | 14 | 19 | Steel, galvanized | 250 | 3 625 | 132 | 0.29 |

Double-edged cutting sleeve unions

Screw-in T-connectors
TE, TH with metrical
pipe thread

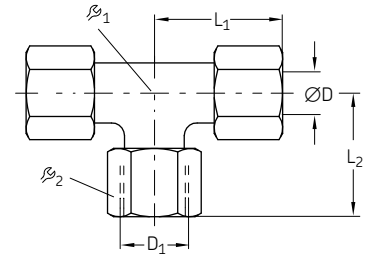
| Order number | Designation | Series | Tube ØD | D ₁ | L ₁ | L ₂ | r ₁ | r ₂ | Material | Operating pressure max. | | Weight | |
|--------------|--------------------------------|--------|------------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | mm | mm | bar | psi |
| 96-6404-0058 | TB.FITT.ST TE 4-LL M 8x1,0K CF | LL | 4 | M8x1 tap. | 8 | 21 | 9 | 10 | Steel, galvanized | 100 | 1 450 | 19 | 0.04 |
| 96-6406-0058 | TB.FITT.ST TE 6-LL M10x1,0K CF | LL | 6 | M10x1 tap. | 8 | 21 | 11 | 12 | Steel, galvanized | 100 | 1 450 | 40 | 0.09 |
| 96-6408-0058 | TB.FITT.ST TE 8-LL M10x1,0K CF | LL | 8 | M10x1 tap. | 8 | 23 | 12 | 14 | Steel, galvanized | 100 | 1 450 | 30 | 0.07 |
| 96-0906-0058 | TB.FITT.ST TE 6-L M10x1,0xK CF | L | 6 | M10x1 tap. | 8 | 27 | 12 | 14 | Steel, galvanized | 250 | 3 625 | 50 | 0.11 |
| 445-910-551 | TB.FITT.ST TE10-L M14x1,5K CF | L | 10 | M14x1,5 tap. | 12 | 30 | 14 | 19 | Steel, galvanized | 250 | 3 625 | 100 | 0.22 |
| 96-1806-0058 | TB.FITT.ST TE 6-S M12x1,5K CF | S | 6 | M12x1,5 tap. | 12 | 31 | 14 | 17 | Steel, galvanized | 400 | 5 800 | 67 | 0.15 |
| 96-1808-0058 | TB.FITT.ST TE 8-S M14x1,5K CF | S | 8 | M14x1,5 tap. | 12 | 32 | 14 | 19 | Steel, galvanized | 400 | 5 800 | 100 | 0.22 |
| 445-735-101 | TB.FITT.ST TH10-L M14x1,5K CF | L | 10 | M14x1,5 | 12 | 30 | 19 | 19 | Steel, galvanized | 315 | 3 625 | 154 | 0.34 |
| 445-739-151 | TB.FITT.ST TH15-L M18x1,5K CF | L | 15 | M18x1,5 | 14 | 37 | 30 | 32 | Steel, galvanized | 250 | 3 625 | 352 | 0.78 |

Screw-in T-connectors
TE, TH with Whitworth
pipe thread

| Order number | Designation | Series | Tube ØD | D ₁ | L ₁ | L ₂ | r ₁ | r ₂ | Material | Operating pressure max. | | Weight | |
|--------------|------------------------------|--------|------------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | mm | in | mm | mm |
| 96-6304-0058 | TB.FITT.ST TE 4-LL R 1/8K CF | LL | 4 | R1/8 | 8 | 21 | 10 | 11 | Steel, galvanized | 100 | 1 450 | 14 | 0.03 |
| 96-6306-0058 | TB.FITT.ST TE 6-LL R 1/8K CF | LL | 6 | R1/8 | 8 | 21 | 11 | 12 | Steel, galvanized | 100 | 1 450 | 26 | 0.06 |
| 96-6308-0058 | TB.FITT.ST TE 8-LL R 1/8K CF | LL | 8 | R1/8 | 8 | 23 | 12 | 14 | Steel, galvanized | 100 | 1 450 | 32 | 0.07 |
| 96-0806-0058 | TB.FITT.ST TE 6-L R 1/8K CF | L | 6 | R1/8 | 8 | 27 | 12 | 14 | Steel, galvanized | 250 | 3 625 | 38 | 0.08 |
| 96-0808-0058 | TB.FITT.ST TE 8-L R 1/4K CF | L | 8 | R1/4 | 12 | 29 | 14 | 17 | Steel, galvanized | 250 | 3 625 | 75 | 0.17 |
| 96-0810-0058 | TB.FITT.ST TE 10-L R 1/4K CF | L | 10 | R1/4 | 12 | 30 | 14 | 19 | Steel, galvanized | 250 | 3 625 | 100 | 0.22 |
| 96-0818-0058 | TB.FITT.ST TE 18-L R 1/2K CF | L | 18 | R1/2 | 14 | 40 | 24 | 32 | Steel, galvanized | 250 | 3 625 | 149 | 0.33 |
| 96-1706-0058 | TB.FITT.ST TE 6-S R 1/4K CF | S | 6 | R1/4 | 12 | 31 | 12 | 17 | Steel, galvanized | 400 | 5 800 | 100 | 0.22 |
| 445-721-121 | TB.FITT.ST TH12-L G 3/8A CF | L | 12 | G 3/8A | 12 | 33 | 24 | 22 | Steel, galvanized | 315 | 4 570 | 249 | 0.55 |
| 445-713-151 | TB.FITT.ST TH 15-L G 1/2A CF | L | 15 | G 1/2A | 14 | 37 | 30 | 27 | Steel, galvanized | 315 | 4 570 | 415 | 0.92 |
| 445-717-221 | TB.FITT.ST TH 22-L G 3/4A CF | L | 22 | G 3/4A | 16 | 44 | 36 | 36 | Steel, galvanized | 160 | 2 320 | 763 | 1.68 |

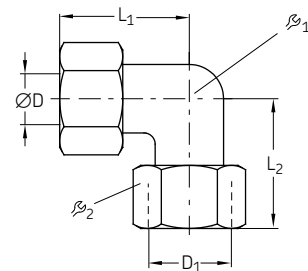
Double-edged cutting sleeve unions

Swivel nut branch ET



| Order number | Designation | Series | Tube ØD | D ₁ | L ₁ | L ₂ | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|--------------|----------------------|--------|---------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|--------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| | | | | mm | mm | mm | mm | mm | mm | | | | |
| 223-14189-6 | TB.STUD ST ET 6-L CF | L | 6 | M12×1,5 | 27 | 26 | 12 | 14 | Steel, galvanized | 500 | 7 250 | 68 | 0.15 |
| 223-13040-1 | TB.STUD ST ET 8-L CF | L | 8 | M14×1,5 | 29 | 26,5 | 12 | 17 | Steel, galvanized | 500 | 7 250 | 87 | 0.19 |
| 223-14189-1 | TB.STUD ST ET10-L CF | L | 10 | M16×1,5 | 30 | 29 | 14 | 19 | Steel, galvanized | 500 | 7 250 | 113 | 0.25 |
| 223-13785-8 | TB.STUD ST ET12-L CF | L | 12 | M18×1,5 | 32 | 29,5 | 17 | 22 | Steel, galvanized | 400 | 5 800 | 153 | 0.34 |
| 223-14189-7 | TB.STUD ST ET15-L CF | L | 15 | M22×1,5 | 36 | 32,5 | 19 | 27 | Steel, galvanized | 400 | 5 800 | 253 | 0.56 |
| 96-3118-0060 | TB.STUD ST ET18-L CF | L | 18 | M26×1,5 | 40 | 35,5 | 24 | 32 | Steel, galvanized | 400 | 5 800 | 375 | 0.83 |
| 96-3122-0060 | TB.STUD ST ET22-L CF | L | 22 | M30×1,5 | 44 | 38,5 | 27 | 36 | Steel, galvanized | 250 | 3 625 | 486 | 1.07 |
| 445-806-351 | TB.STUD ST ET 6-S CF | S | 6 | M14×1,5 | 31 | 27 | 12 | 17 | Steel, galvanized | 800 | 11 600 | 101 | 0.22 |
| 223-10374-3 | TB.STUD ST ET 8-S CF | S | 8 | M16×1,5 | 32 | 27,5 | 14 | 19 | Steel, galvanized | 800 | 11 600 | 135 | 0.30 |
| 223-14189-5 | TB.STUD ST ET10-S CF | S | 10 | M18×1,5 | 34 | 30 | 17 | 22 | Steel, galvanized | 800 | 11 600 | 181 | 0.40 |
| 223-14189-9 | TB.STUD ST ET12-S CF | S | 12 | M20×1,5 | 38 | 31 | 17 | 24 | Steel, galvanized | 630 | 9 140 | 212 | 0.47 |
| 223-14189-2 | TB.STUD ST ET16-S CF | S | 16 | M24×1,5 | 43 | 36,5 | 24 | 30 | Steel, galvanized | 630 | 9 140 | 383 | 0.84 |
| 223-14189-3 | TB.STUD ST ET20-S CF | S | 20 | M30×1,5 | 48 | 44,5 | 27 | 36 | Steel, galvanized | 420 | 6 090 | 614 | 1.35 |

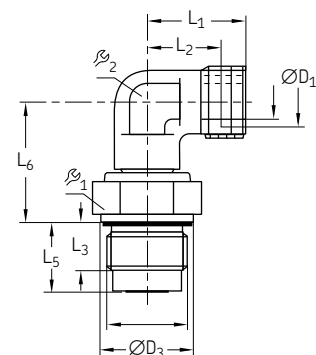
Swivel nut elbow EW



| Order number | Designation | Series | Tube ØD | D ₁ | L ₁ | L ₂ | β ₁ | β ₂ | Material | Operating pressure max. | | Weight | |
|--------------|----------------------|--------|---------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------------|--------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| | | | | mm | mm | mm | mm | mm | mm | | | | |
| 223-14171-1 | TB.STUD ST EW 6-L CF | L | 6 | M12×1,5 | 27 | 26 | 12 | 14 | Steel, galvanized | 500 | 7 250 | 46 | 0.10 |
| 223-14102-3 | TB.STUD ST EW 8-L CF | L | 8 | M14×1,5 | 29 | 27,5 | 12 | 17 | Steel, galvanized | 500 | 7 250 | 59 | 0.13 |
| 443-306-343 | TB.STUD ST EW 6-S CF | S | 6 | M14×1,5 | 31 | 27 | 12 | 17 | Steel, galvanized | 800 | 11 600 | 67 | 0.15 |
| 223-14171-8 | TB.STUD ST EW10-S CF | S | 10 | M18×1,5 | 34 | 30 | 17 | 22 | Steel, galvanized | 800 | 11 600 | 126 | 0.28 |
| 223-14171-4 | TB.STUD ST EW16-S CF | S | 16 | M24×1,5 | 43 | 36,5 | 24 | 30 | Steel, galvanized | 630 | 9 140 | 284 | 0.63 |
| 223-14171-5 | TB.STUD ST EW20-S CF | S | 20 | M30×1,5 | 48 | 44,5 | 27 | 36 | Steel, galvanized | 420 | 6 090 | 422 | 0.93 |

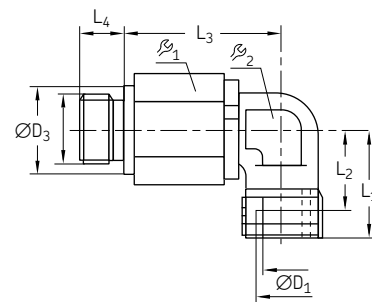
Double-edged cutting sleeve unions

Swivels DVWE



| Order number | Designation | Tube Ø | Ø D ₁ | | Series | Speed max. | Operation pressure max. | | Material | Weight | |
|------------------|----------------------------------|--------|------------------|----|--------|------------|-------------------------|------------------|----------|--------|----|
| | | | mm | in | | | bar | psi | | g | lb |
| Steel galvanized | | | | | | | | | | | |
| 223-13694-6 | TB.FITT.ST DVWE10-L G 3/8A CF 10 | 10 | G 3/8A | L | 21 | 40 | 580 | Steel galvanized | 83 | 0.18 | |
| 223-13694-1 | TB.FITT.ST DVWE10-S G 3/8A CF 10 | 10 | G 3/8A | S | 9 | 100 | 1 450 | Steel galvanized | 103 | 0.23 | |
| Stainless steel | | | | | | | | | | | |
| 223-13694-7 | TB.FITT.VA DVWE10-L G 3/8A | 10 | G 3/8A | L | 21 | 40 | 580 | Stainless steel | 83 | 0.18 | |
| 223-13694-3 | TB.FITT.VA DVWE10-S G 3/8A | 10 | G 3/8A | S | 9 | 100 | 1 450 | Stainless steel | 103 | 0.23 | |

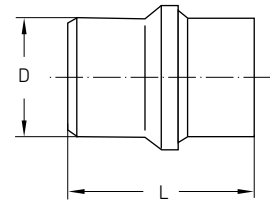
Swivels DG



| Order number | Designation | Tube Ø | Ø D ₁ | | Series | Speed max. | Operation pressure max. | | Material | Weight | |
|--------------|---------------------------------|--------|------------------|----|--------|------------|-------------------------|------------------|----------|--------|----|
| | | | mm | in | | | bar | psi | | g | lb |
| 223-13665-7 | TB.FITT.ST DG104/ 6-S G 1/4A CF | 6 | G 1/4A | S | 400 | 100 | 1 450 | Steel galvanized | 131 | 0.29 | |
| 223-13665-8 | TB.FITT.ST DG104/ 8-S G 1/4A CF | 8 | G 1/4A | S | 400 | 100 | 1 450 | Steel galvanized | 135 | 0.30 | |
| 223-13665-9 | TB.FITT.ST DG104/12-S G 3/8A CF | 12 | G 3/8A | S | 200 | 100 | 1 450 | Steel galvanized | 284 | 0.62 | |

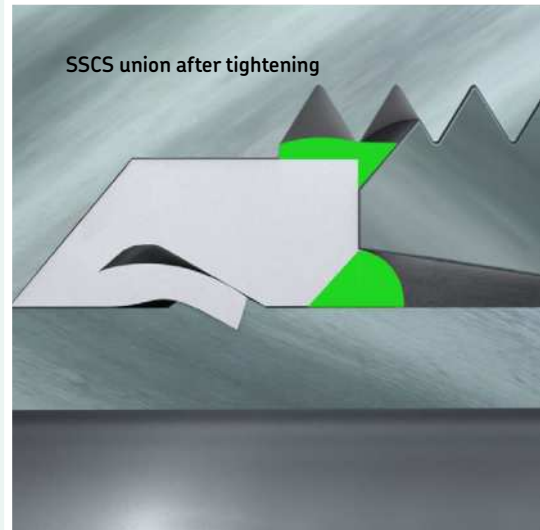
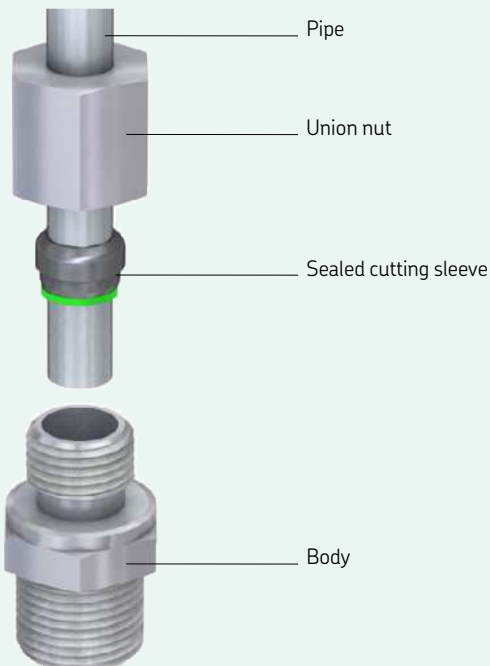
Double-edged cutting sleeve unions

Blanking plug for cones BUZ



| Order number | Designation | Series | D | L | Material | Operating pressure max. | | Weight | | |
|--------------------|-----------------------|--------|----|------|-------------------|-------------------------|-------|--------|------|--|
| | | | mm | mm | | bar | psi | g | lb | |
| Steel galvanized | | | | | | | | | | |
| 223-13640-1 | PLUG ST BUZ 6-L/S CF | L/S | 6 | 19,5 | Steel, galvanized | 315 | 4 570 | 5 | 0.01 | |
| 223-13640-5 | PLUG ST BUZ 8-L/S CF | L/S | 8 | 19,5 | Steel, galvanized | 315 | 4 570 | 8 | 0.02 | |
| 223-13640-3 | PLUG ST BUZ10 -L/S CF | L/S | 10 | 21,0 | Steel, galvanized | 315 | 4 570 | 13 | 0.03 | |
| 223-13640-4 | PLUG ST BUZ12 -L/S CF | L/S | 12 | 21,8 | Steel, galvanized | 315 | 4 570 | 20 | 0.04 | |
| 223-13640-9 | PLUG ST BUZ18 -L CF | L/S | 18 | 24,0 | Steel, galvanized | 315 | 4 570 | 45 | 0.10 | |
| 223-13640-8 | PLUG ST BUZ16 -S CF | S | 16 | 25,5 | Steel, galvanized | 400 | 5 800 | 39 | 0.09 | |
| 223-13640-2 | PLUG ST BUZ20 -S CF | S | 20 | 30,5 | Steel, galvanized | 400 | 5 800 | 73 | 0.16 | |
| Stainless steel | | | | | | | | | | |
| 223-14215-5 | PLUG VA BUZ 6-L/S | L/S | 6 | 19,5 | Stainless steel | 315 | 4 570 | 5 | 0.01 | |
| 223-14215-3 | PLUG VA BUZ10 -L/S | L/S | 10 | 21,0 | Stainless steel | 315 | 4 570 | 13 | 0.03 | |
| 223-14215-2 | PLUG VA BUZ12 -L/S | L/S | 12 | 21,8 | Stainless steel | 315 | 4 570 | 20 | 0.04 | |
| 223-10638-3 | PLUG VA BUZ16 -S | S | 16 | 25,5 | Stainless steel | 400 | 5 800 | 39 | 0.09 | |
| 223-14215-4 | PLUG VA BUZ20 -S | S | 20 | 30,5 | Stainless steel | 400 | 5 800 | 73 | 0.16 | |

Soft-seal cutting sleeve union (SSCS)



Description

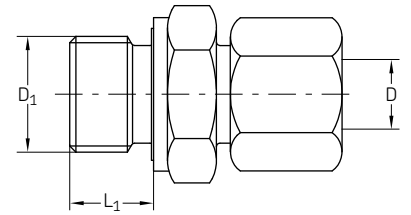
Soft-seal cutting sleeve unions (SSCS) consist of a union nut, a cutting sleeve, a support ring with soft seal, and a body with another soft seal. To mount the union, the union nut and the sealed cutting sleeve have to be put on the pipe end. All parts must be aligned as shown on the illustration above. Then the pipe end can be pushed into the body before tightening the union nut. During that process, the sealed cutting sleeve cuts into the pipe to seal the connection as shown in the illustration above. In addition, the union also is sealed by the soft seal.

Features and benefits

- Compact installation dimensions
- Virtually leakage-free, high-pressure union
- Recommended for high-pressure oil and grease applications
- Common fitting system for high-pressure systems
- Higher nominal pressures than DECS unions (series "L" can often be used instead of "S")
- High sealing capacity, especially with low-viscosity media (e.g. no sweating with low-viscosity oils)
- Easy assembly by tightening the union nut to the stop (no risk of under- or over-assembly)
- Pipe vibration dampening resulting from pipe fixation during assembly (caused by SSCS union)
- Wide operating temperature range from -25 to 80 °C
- Tightening forces 25% lower than TECS unions

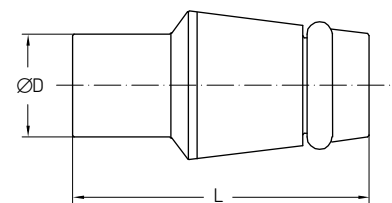
Soft-seal cutting sleeve union

Straight screw-in connectors GEZ



| Order number | Designation | Series | Tube ØD | ØD ₁ | L | L ₁ | R ₁ | R ₂ | Material | Operating pressure max. | | Weight | |
|--------------|------------------------------------|--------|------------|-----------------|----|----------------|----------------|----------------|-------------|-------------------------|-------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| | | | | mm | mm | mm | mm | mm | | | | | |
| 471-004-191 | TB.FITT.ST GE 4Z-LL G 1/8A-ED CF | LL | 4 | G 1/8A | 19 | 6,5 | 14 | 10 | Steel galv. | 100 | 1 450 | 15 | 0.03 |
| 471-004-311 | TB.FITT.ST GE 4Z-LL M 10x1,0-ED CF | LL | 4 | M10x1 | 26 | 8 | 10 | 10 | Steel galv. | 100 | 1 450 | 15 | 0.03 |
| 471-006-192 | TB.FITT.ST GE 6Z-L G 1/8A-ED CF | L | 6 | G 1/8A | 23 | 8 | 14 | 14 | Steel galv. | 500 | 7 250 | 25 | 0.06 |
| 471-006-161 | TB.FITT.ST GE 6Z-L G 1/4A-ED CF | L | 6 | G 1/4A | 25 | 12 | 19 | 14 | Steel galv. | 500 | 7 250 | 40 | 0.09 |
| 471-006-311 | TB.FITT.ST GE 6Z-L M 10x1,0-ED CF | L | 6 | M10x1 | 23 | 8 | 14 | 14 | Steel galv. | 500 | 7 250 | 25 | 0.06 |
| 471-006-351 | TB.FITT.ST GE 6Z-L M 14x1,5-ED CF | L | 6 | M14x1,5 | 27 | 12 | 14 | 14 | Steel galv. | 400 | 5 800 | 44 | 0.10 |
| 471-008-130 | TB.FITT.ST GE 8Z-L G 1/8A-ED CF | L | 8 | G 1/8A | 24 | 8 | 14 | 17 | Steel galv. | 500 | 7 250 | 33 | 0.07 |
| 471-008-161 | TB.FITT.ST GE 8Z-L G 1/4A-ED CF | L | 8 | G 1/4A | 25 | 12 | 19 | 17 | Steel galv. | 500 | 7 250 | 44 | 0.10 |
| 471-008-131 | TB.FITT.ST GE 8Z-L G 1/2A-ED CF | L | 8 | G 1/2A | 27 | 14 | 27 | 17 | Steel galv. | 400 | 5 800 | 90 | 0.20 |
| 471-008-211 | TB.FITT.ST GE 8Z-L G 3/8A-ED CF | L | 8 | G 3/8A | 26 | 12 | 22 | 17 | Steel galv. | 400 | 5 800 | 60 | 0.13 |
| 471-008-314 | TB.FITT.ST GE 8Z-L M 10x1,0-ED CF | L | 8 | M10x1 | 34 | 7 | 17 | 14 | Steel galv. | 45 | 650 | 40 | 0.09 |
| 471-008-345 | TB.FITT.ST GE 8Z-L M 12x1,5-ED CF | L | 8 | M12x1,5 | 25 | 12 | 17 | 17 | Steel galv. | 500 | 7 250 | 37 | 0.08 |
| 471-008-391 | TB.FITT.ST GE 8Z-L M 18x1,5-ED CF | L | 8 | M18x1,5 | 38 | 11 | 24 | 17 | Steel galv. | 400 | 5 800 | 70 | 0.15 |
| 471-010-161 | TB.FITT.ST GE 10Z-L G 1/4A-ED CF | L | 10 | G 1/4A | 26 | 12 | 19 | 19 | Steel galv. | 500 | 7 250 | 50 | 0.11 |
| 471-010-211 | TB.FITT.ST GE 10Z-L G 3/8A-ED CF | L | 10 | G 3/8A | 27 | 12 | 22 | 22 | Steel galv. | 400 | 5 800 | 60 | 0.13 |
| 471-010-312 | TB.FITT.ST GE 10Z-L M 10x1,0-ED CF | L | 10 | M10x1 | 32 | 8 | 19 | 17 | Steel galv. | 500 | 7 250 | 43 | 0.09 |
| 471-010-351 | TB.FITT.ST GE 10Z-L M 14x1,5-ED CF | L | 10 | M14x1,5 | 26 | 12 | 19 | 19 | Steel galv. | 500 | 7 250 | 50 | 0.11 |
| 471-010-391 | TB.FITT.ST GE 10Z-L M 18x1,5-ED CF | L | 10 | M18x1,5 | 27 | 12 | 24 | 19 | Steel galv. | 400 | 5 800 | 75 | 0.17 |
| 471-012-161 | TB.FITT.ST GE 12Z-L G 1/4A-ED CF | L | 12 | G 1/4A | 27 | 12 | 19 | 22 | Steel galv. | 400 | 5 800 | 58 | 0.13 |
| 471-012-211 | TB.FITT.ST GE 12Z-L G 3/8A-ED CF | L | 12 | G 3/8A | 27 | 12 | 22 | 22 | Steel galv. | 400 | 5 800 | 73 | 0.16 |
| 471-012-391 | TB.FITT.ST GE 12Z-L M 18x1,5-ED CF | L | 12 | M18x1,5 | 27 | 12 | 24 | 22 | Steel galv. | 400 | 5 800 | 120 | 0.26 |
| 471-008-351 | TB.FITT.ST GE 8Z-S M 14x1,5-ED CF | S | 8 | M14x1,5 | 30 | 12 | 19 | 19 | Steel galv. | 400 | 5 800 | 50 | 0.11 |

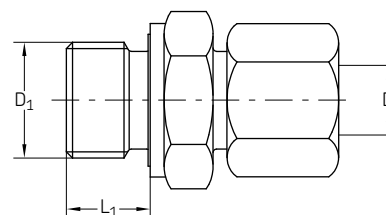
Cone plugs VKA



| Order number | Designation | Series | Tube ØD | L | Material | Operating pressure max. | | Weight | | |
|------------------|-------------------------------|--------|------------|------|------------------|-------------------------|--------|--------|------|--|
| | | | | | | bar | psi | g | lb | |
| | | | | mm | mm | | | | | |
| Steel galvanized | | | | | | | | | | |
| 223-10297-5 | BLANKING PLUG ST VKA 6-L/S CF | L/S | 6 | 18,5 | Steel galvanized | 800 | 11 600 | 6 | 0.01 | |
| 460-708-001 | BLANKING PLUG ST VKA 8-L CF | L | 8 | 18,5 | Steel galvanized | 500 | 7 250 | 9 | 0.02 | |
| 223-10297-6 | BLANKING PLUG ST VKA10-L/S CF | L/S | 10 | 15 | Steel galvanized | 800 | 11 600 | 15 | 0.03 | |
| 223-10297-9 | BLANKING PLUG ST VKA12-L/S CF | L/S | 12 | 21 | Steel galvanized | 630 | 9 140 | 21 | 0.05 | |
| 223-10297-7 | BLANKING PLUG ST VKA20-S CF | S | 20 | 28,5 | Steel galvanized | 420 | 6 090 | 78 | 0.17 | |
| 223-14241-2 | BLANKING PLUG ST VKA30-S CF | S | 30 | 30,5 | Steel galvanized | 420 | 6 090 | 180 | 0.40 | |
| Stainless steel | | | | | | | | | | |
| 223-14241-9 | BLANKING PLUG VA VKA10-L/S | L/S | 10 | 15 | Stainless steel | 630 | 9 140 | 15 | 0.03 | |
| 223-10297-1 | BLANKING PLUG VA VKA20-S | S | 20 | 28,5 | Stainless steel | 400 | 5 800 | 78 | 0.17 | |
| 223-14241-5 | BLANKING PLUG VA VKA30-S | S | 30 | 30,5 | Stainless steel | 400 | 5 800 | 180 | 0.40 | |

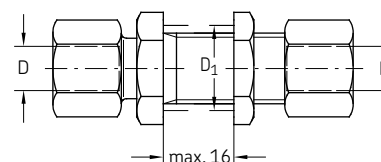
Soft-seal cutting sleeve union

Straight screw-in connectors with shortened thread and function nut GEZ (short)



| Order number | Designation | Series | Tube ØD | ØD ₁ | L ₁ | R ₁ | R ₂ | Material | Operating pressure max. | | Weight | |
|--------------|---|--------|------------|-----------------|----------------|----------------|----------------|-------------|-------------------------|-------|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| 471-006-320 | TB.FITT.ST GE 6Z-LL M10x1,0-ED CF SHORT | LL | 6 | M10x1 | 31 | 14 | 14 | Steel galv. | 100 | 1 450 | 27 | 0.06 |
| 471-006-319 | TB.FITT.ST GE 6Z-LL M12x1,0-ED CF SHORT | LL | 6 | M12x1 | 31 | 14 | 19 | Steel galv. | 100 | 1 450 | 40 | 0.09 |
| 471-008-132 | TB.FITT.ST GE 8Z-LL M10x1,0-ED CF SHORT | LL | 8 | M10x1 | 34 | 17 | 14 | Steel galv. | 100 | 1 450 | 35 | 0.08 |
| 471-008-318 | TB.FITT.ST GE 8Z-LL M12x1,0-ED CF SHORT | LL | 8 | M12x1 | 32 | 17 | 19 | Steel galv. | 100 | 1 450 | 70 | 0.15 |
| 471-010-312 | TB.FITT.ST GE10Z-LL M10x1,0-ED CF SHORT | LL | 10 | M10x1 | 32 | 19 | 17 | Steel galv. | 100 | 1 450 | 43 | 0.09 |
| 471-010-318 | TB.FITT.ST GE10Z-LL M12x1,0-ED CF SHORT | LL | 10 | M12x1 | 34 | 19 | 19 | Steel galv. | 100 | 1 450 | 45 | 0.10 |
| 471-012-312 | TB.FITT.ST GE12Z-LL M10x1,0-ED CF SHORT | LL | 12 | M10x1 | 36 | 22 | 22 | Steel galv. | 100 | 1 450 | 57 | 0.13 |
| 471-012-313 | TB.FITT.ST GE12Z-LL M12x1,0-ED CF SHORT | LL | 12 | M12x1 | 34 | 22 | 22 | Steel galv. | 100 | 1 450 | 51 | 0.11 |

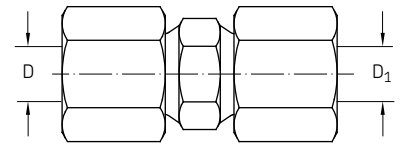
Straight bulkhead connectors with function nut SVZ



| Order number | Designation | Series | Tube ØD | D ₁ | L ₁ | L ₂ | R ₁ | R ₂ | R ₃ | Material | Operating pressure max. | | Weight | |
|--------------|-----------------------|--------|------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------|-------------------------|-------|--------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| 474-606-331 | TB.FITT.ST SV 6Z-L CF | L | 6 | 12,5 | 22 | 42 | 17 | 17 | 14 | Steel galv. | 500 | 7 250 | 61 | 0.13 |
| 474-608-351 | TB.FITT.ST SV 8Z-L CF | L | 8 | 14,5 | 23 | 42 | 19 | 19 | 17 | Steel galv. | 500 | 7 250 | 83 | 0.18 |
| 474-610-351 | TB.FITT.ST SV10Z-L CF | L | 10 | 16,5 | 25 | 43 | 22 | 22 | 19 | Steel galv. | 500 | 7 250 | 100 | 0.22 |
| 474-612-391 | TB.FITT.ST SV12Z-L CF | L | 12 | 18,5 | 25 | 44 | 24 | 24 | 22 | Steel galv. | 400 | 5 800 | 134 | 0.30 |
| 474-615-431 | TB.FITT.ST SV15Z-L CF | L | 15 | 22,5 | 27 | 46 | 27 | 30 | 27 | Steel galv. | 400 | 5 800 | 224 | 0.49 |
| 474-618-441 | TB.FITT.ST SV18Z-L CF | L | 18 | 26,5 | 30 | 49 | 32 | 36 | 32 | Steel galv. | 400 | 5 800 | 344 | 0.76 |

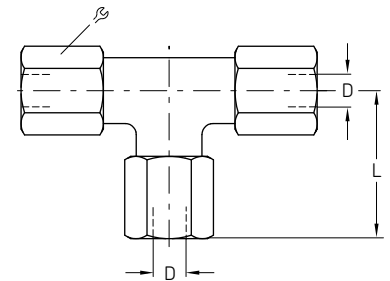
Soft-seal cutting sleeve union

Straight connectors (tube to tube) with function nut GZ



| Order number | Designation | Series | Tube ØD | L | ⌀ | Material | Operating pressure max. | | Weight | |
|--------------------|----------------------|--------|------------|----|----|------------------|----------------------------|-------|--------|------|
| | | | | | | | bar | psi | g | lb |
| 474-506-061 | TB.FITT.ST G 6Z-L CF | L | 6 | 39 | 14 | Steel galvanized | 500 | 7 250 | 35 | 0.08 |
| 474-508-081 | TB.FITT.ST G 8Z-L CF | L | 8 | 40 | 17 | Steel galvanized | 500 | 7 250 | 50 | 0.11 |
| 474-510-101 | TB.FITT.ST G10Z-L CF | L | 10 | 42 | 19 | Steel galvanized | 500 | 7 250 | 64 | 0.14 |
| 474-512-121 | TB.FITT.ST G12Z-L CF | L | 12 | 43 | 22 | Steel galvanized | 400 | 5 800 | 87 | 0.19 |
| 474-515-151 | TB.FITT.ST G15Z-L CF | L | 15 | 46 | 27 | Steel galvanized | 400 | 5 800 | 144 | 0.32 |
| 474-518-181 | TB.FITT.ST G18Z-L CF | L | 18 | 48 | 32 | Steel galvanized | 400 | 5 800 | 200 | 0.44 |

T-connectors with function nut TZ



| Order number | Designation | Series | Tube ØD | L | ⌀ | Material | Operating pressure max. | | Weight | |
|--------------------|----------------------|--------|------------|----|----|------------------|----------------------------|-------|--------|------|
| | | | | | | | bar | psi | g | lb |
| 476-006-001 | TB.FITT.ST T 6Z-L CF | L | 6 | 27 | 14 | Steel galvanized | 500 | 7 250 | 70 | 0.15 |
| 476-008-001 | TB.FITT.ST T 8Z-L CF | L | 8 | 29 | 17 | Steel galvanized | 500 | 7 250 | 90 | 0.20 |
| 476-010-001 | TB.FITT.ST T10Z-L CF | L | 10 | 30 | 19 | Steel galvanized | 500 | 7 250 | 114 | 0.25 |
| 476-012-001 | TB.FITT.ST T12Z-L CF | L | 12 | 32 | 22 | Steel galvanized | 400 | 5 800 | 153 | 0.34 |
| 476-015-001 | TB.FITT.ST T15Z-L CF | L | 15 | 36 | 27 | Steel galvanized | 400 | 5 800 | 241 | 0.53 |

Adapters, plugs and washers



Description

Adapter fittings are used where no standard fittings are available or may require too much space. In fact, adapter fittings are not an ideal solution due to the risk of an additional leakage point in the system. Therefore, the adapter fitting sealing, material, design and operation pressure must be considered during the selection process. SKF offers adapters for various applications with suitable operating pressures, fittings, seals and designs.

Adapter fittings, plugs and washers are available in various designs to serve different application requirements for system pressure:

- 45 bar designs
- 350 bar designs
- LL (very light, max. 100 bar)
- L (light, max. 500 bar)
- S (heavy, max. 800 bar)

Features and benefits

- Fast and virtually leakage-free connection
- Designs for almost every application
- Space-saving small design

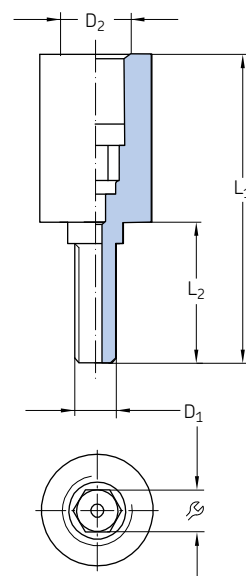


Applications

- Food and beverage industry
- Renewable energy industry
- Construction machinery
- Material handling
- On-road vehicles
- Machine tools
- Etc.

Adapter fittings

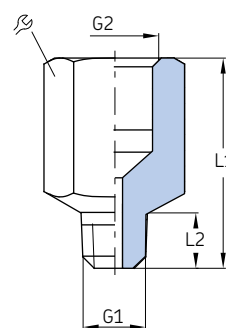
Reducing connectors with cylindrical thread
for operating pressures up to 45 bar
(sealed by flat washer acc. to DIN 7603)



| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | ♀ | Material | Weight | |
|--------------|--------------------------|----------------|----------------|----------------|----------------|-----------------|---------------------------|--------|------|
| | | | | | | | | mm | mm |
| 843-130-021 | ADAPTER ST M 3Ax M 5I CF | M3 | M5 | 22 | 10 | 3 ¹⁾ | Steel, galvanized surface | 4 | 0.01 |
| 843-130-022 | ADAPTER ST M 4Ax M 5I CF | M4 | M5 | 22 | 10 | 3 ¹⁾ | Steel, galvanized surface | 5 | 0.01 |
| 843-130-023 | ADAPTER ST M 5Ax M 5I CF | M5 | M5 | 22 | 10 | 3 ¹⁾ | Steel, galvanized surface | 11 | 0.02 |

¹⁾ Female thread

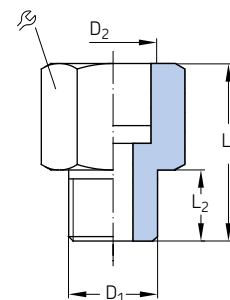
Reducing connectors with tapered thread
for operating pressures up to 45 bar



| Order number | Designation | G ₁ | G ₂ | L ₁ | L ₂ | ♀ | Material | Weight | |
|--------------|------------------------------|----------------|----------------|----------------|----------------|----|---------------------------|--------|------|
| | | | | | | | | mm | in |
| 406-044-S1 | ADAPTER ST M10x1AKx R1/4I CF | M10x1 tap. | R 1/4 | 22,5 | 8 | 17 | Steel, galvanized surface | 20 | 0.04 |

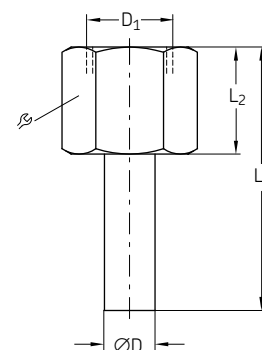
Adapter fittings

Reducing connectors with cylindrical thread for operating pressures up to 45 bar (sealed by flat washer acc. to DIN 7603)



| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | ⌀ | Material | Weight | |
|---------------------------|------------------------------|----------------|----------------|----------------|----------------|----|-------------------|--------|------|
| | | | | | | | | g | lb |
| | | | in | mm | mm | mm | | | |
| Steel, galvanized surface | | | | | | | | | |
| 401-013-161 | ADAPTER ST G1/4Ax G1/2 CF | G 1/4 A | G 1/2 | 40 | 12 | 27 | Steel, galvanized | 114 | 0.25 |
| 401-011-132 | ADAPTER ST G1/2Ax G1 CF | G 1/2 A | G 1 | 49 | 14 | 41 | Steel, galvanized | 222 | 0.49 |
| 401-013-171 | ADAPTER ST G1/4Ax G1/2 CF | G 3/4 A | G 1/2 | 41 | 16 | 32 | Steel, galvanized | 140 | 0.31 |
| P-78.01 | ADAPTER ST M12x1Ax G1/4 CF | M12x1 | G 1/4 | 27 | 8,5 | 19 | Steel, galvanized | 31 | 0.07 |
| 401-016-371 | ADAPTER ST M16x1,5Ax G1/4 CF | M16x1,5 | G 1/4 | 30 | 12 | 19 | Steel, galvanized | 39 | 0.09 |
| 243-001.10 | ADAPTER ST M16x1,5Ax G1/2 CF | M16x1,5 | G 1/2 | 31 | 9 | 27 | Steel, galvanized | 60 | 0.13 |
| 267-001.36 | ADAPTER ST M18x1,5Ax G3/8 CF | M18x1,5 | G 3/8 | 32 | 10 | 22 | Steel, galvanized | 50 | 0.11 |
| 243-001.20 | ADAPTER ST M18x1,5Ax G1/2 CF | M18x1,5 | G 1/2 | 32 | 10 | 27 | Steel, galvanized | 59 | 0.13 |
| 44-1755-2029 | ADAPTER ST M20x1,5Ax G1/4 CF | M20x1,5 | G 1/4 | 28 | 12 | 24 | Steel, galvanized | 59 | 0.13 |
| Brass | | | | | | | | | |
| 267-001.47 | ADAPTER MS G3/8Ax G3/4 | G 3/8 A | G 1/4 | 31 | 10 | 22 | Brass | 60 | 0.13 |
| 267-001.60 | ADAPTER MS G3/8Ax G1/2 | G 3/8 A | G 1/2 | 34 | 10 | 27 | Brass | 78 | 0.17 |
| 401-019-132 | ADAPTER MS G1/2Ax G1/8 | G 1/2 A | G 1/8 | 24 | 12 | 27 | Brass | 22 | 0.05 |
| DZ333 | ADAPTER MS G1/2Ax G1/4 | G 1/2 A | G 1/4 | 24 | 12 | 27 | Brass | 64 | 0.14 |
| 401-013-131 | ADAPTER MS G1/2Ax G1/2 | G 1/2 A | G 1/2 | 40,5 | 12 | 27 | Brass | 107 | 0.24 |
| DZ334 | ADAPTER MS G1/2Ax G3/8 | G 1/2 A | G 3/8 | 31 | 12 | 27 | Brass | 83 | 0.18 |
| 267-001.03 | ADAPTER MS G1/2Ax G3/4 | G 1/2 A | G 3/4 | 40 | 12 | 36 | Brass | 166 | 0.37 |
| 406-024 | ADAPTER MS M10x1Ax G1/8 | M10x1 | G 1/8 | 20 | 8 | 14 | Brass | 15 | 0.03 |
| 401-016-312 | ADAPTER MS M10x1Ax G1/4 | M10x1 | G 1/4 | 26,5 | 7,5 | 17 | Brass | 25 | 0.06 |
| 401-019-352 | ADAPTER MS M14x1,5Ax G1/8 | M14x1,5 | G 1/8 | 20 | 9 | 17 | Brass | 24 | 0.05 |

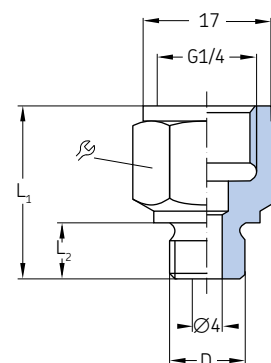
Adapter for pressure gauges for operating pressures up to 45 bar (sealed by flat washer acc. to DIN 7603)



| Order number | Designation | Series | Tube ØD | D ₁ | L ₁ | L ₂ | ⌀ | Material | Operating pressure max. | | Weight | |
|--------------|-----------------------|--------|------------|----------------|----------------|----------------|----|----------|-------------------------|-----|--------|------|
| | | | | | | | | | bar | psi | g | lb |
| | | | mm | in | mm | mm | mm | | | | | |
| 248-610.01 | ADAPTER MS D 6AxG 1/4 | L | 6 | G 1/4 | 46 | 22 | 17 | Brass | 45 | 650 | 30 | 0.07 |

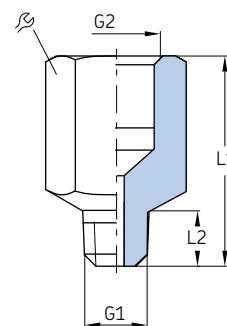
Adapter fittings

Adapter for pressure gauges with cylindrical thread for operating pressures up to 45 bar



| Order number | Designation | D | L ₁ | L ₂ | ⌀ | Material | Weight | |
|--------------|----------------------------------|---------|----------------|----------------|----|-------------------|--------|-------|
| | | | | | | | mm | mm |
| 301-134 | CONNECTING PIECE ST - M10×1 ZN | M10×1 | 23 | 7,5 | 17 | Steel, galvanized | 20 | 0.044 |
| 301-034 | CONNECTING PIECE ST - M14×1,5 ZN | M14×1,5 | 22 | 9 | 17 | Steel, galvanized | 20 | 0.044 |

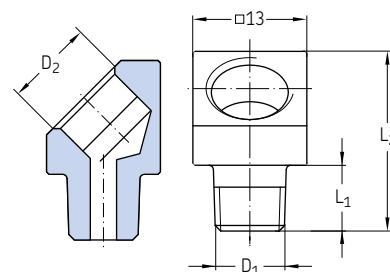
Reducing connectors with tapered thread for operating pressures up to 350 bar



| Order number | Designation | G ₁ | G ₂ | L ₁ | L ₂ | ⌀ | Material | Weight | |
|--------------|---------------------------------|----------------|----------------|----------------|----------------|----|-------------------|--------|------|
| | | | | | | | | mm | mm |
| 304-19230-1 | ADAPTER R1/8 AxM10x1,0 CF | R1/8 | M10×1 | 18 | 6 | 13 | Steel, galvanized | 20 | 0.04 |
| 304-19787-1 | ADAPTER M 8X1,0 IXM 6X1,0KA CF | M 6×1K | M 8×1 | 20 | 6 | 10 | Steel, galvanized | 6 | 0.01 |
| 304-19437-1 | ADAPTER M 8x1,0KAxM 8x1,0 CF | M 8×1K | M 8×1 | 16 | 5 | 10 | Steel, galvanized | 5 | 0.01 |
| 304-19548-1 | ADAPTER M 8x1,25KAxM 8x1,0 CF | M 8×1,25K | M 8×1 | 20 | 8 | 12 | Steel, galvanized | 10 | 0.02 |
| 304-19167-1 | ADAPTER M 8x1,0AxR1/8 CF | M 8×1 | R1/8 | 17 | 5 | 13 | Steel, galvanized | 10 | 0.02 |
| 304-19509-1 | ADAPTER M10x1,0KAxM10x1,0 CF | M10×1K | M10×1 | 18 | 6,5 | 13 | Steel, galvanized | 9 | 0.02 |
| 304-16337-1 | ADAPTER M10x1 xM12x1KA CF | M12×1K | M10×1 | 18 | 8 | 17 | Steel, galvanized | 15 | 0.03 |

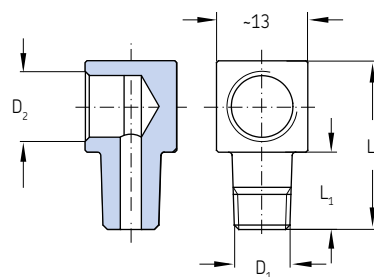
Adapter fittings

Elbow reducing connectors 45° with tapered thread for operating pressures up to 350 bar



| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | Material | Weight | |
|--------------|--|----------------|----------------|----------------|----------------|-------------------|--------|------|
| | | | | mm | mm | | g | lb |
| 432-70673-1 | ELBOW FITT.ST 45DEGREE R1/8A xG1/8 CF | R 1/8 | G 1/8 | 6 | 20 | Steel, galvanized | 10 | 0.02 |
| 406-155K | ELBOW FITT.ST 45DEGREE R1/8AxM10x1I CF | R 1/8 | M10x1 | 7,5 | 20,5 | Steel, galvanized | 13 | 0.03 |
| 406-165K | ELBOW FITT.ST 45DEGREE R1/8AxG1/8 CF | R 1/8 | G 1/8 | 7,5 | 20,5 | Steel, galvanized | 13 | 0.03 |
| 432-24050-1 | ELBOW FITT.ST 45DEGREE M8x1AKxM8x1I CF | M8x1 tap. | M8x1 | 5 | 20 | Steel, galvanized | 11 | 0.02 |
| 432-71483-1 | ELBOW FITT.ST 45DEGREE M8x1AKxM10x1I CF | M8x1 tap. | M10x1 | 5 | 20 | Steel, galvanized | 11 | 0.02 |
| 406-145K | ELBOW FITT.ST 45DEGREE M8x1AKxM10x1I CF | M8x1 tap. | M10x1 | 7,5 | 21 | Steel, galvanized | 11 | 0.02 |
| 406-045K | ELBOW FITT.ST 45DEGREE M10x1AKxM10x1I CF | M10x1 tap. | M10x1 | 7,5 | 21 | Steel, galvanized | 12 | 0.03 |
| 432-24051-1 | ELBOW FITT.ST 45DEGREE M10x1AKxM8x1I CF | M10x1 tap. | M8x1 | 5 | 20 | Steel, galvanized | 12 | 0.03 |

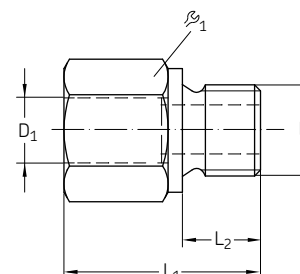
Elbow reducing connectors 90° with tapered thread for operating pressures up to 350 bar



| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | Material | Weight | |
|--------------|--|----------------|----------------|----------------|----------------|-------------------|--------|------|
| | | | | mm | mm | | g | lb |
| 432-70674-1 | ELBOW FITT.ST 90DEGREE G1/8xR1/8A CF | R 1/8 | G 1/8 | 9 | 22.5 | Steel, galvanized | 16 | 0.04 |
| 406-091K | ELBOW FITT.ST 90DEGREE R1/8AxG1/8 CF | R 1/8 | G 1/8 | 11 | 24 | Steel, galvanized | 20 | 0.04 |
| 406-093K | ELBOW FITT.ST 90DEGREE R1/8AxM10x1I CF | R 1/8 | M10x1 | 11 | 24 | Steel, galvanized | 16 | 0.04 |
| 406-094K | ELBOW FITT.ST 90DE.M8x1,25AKxM8x1,25I CF | M8x1.25 tap. | M8x1.25 | 11 | 24 | Steel, galvanized | 11 | 0.02 |
| 406-089K | ELBOW FITT.ST 90DEGREE M8x1AKxM10x1I CF | M8x1 tap. | M10x1 | 11 | 24 | Steel, galvanized | 15 | 0.03 |
| 406-090K | ELBOW FITT.ST 90DEGREE M10x1AKxM10x1I CF | M10x1 tap. | M10x1 | 11 | 24 | Steel, galvanized | 16 | 0.04 |
| 406-092K | ELBOW FITT.ST 90DEGREE M10x1AKxM10x1I CF | M10x1 tap. | M10x1 | 17 | 30 | Steel, galvanized | 20 | 0.04 |
| 432-24043-1 | ELBOW FITT.ST 90DEGREE M8x1AKxM8x1I CF | M8x1 tap. | M8x1 | 5 | 20 | Steel, galvanized | 12 | 0.03 |
| 432-24052-1 | ELBOW FITT.ST 90DEGREE M10x1AKxM8x1I CF | M10x1 tap. | M8x1 | 5 | 20 | Steel, galvanized | 14 | 0.03 |

Adapter fittings

Reducing connectors RI with cylindrical thread for operating pressures up to 400 bar

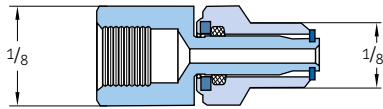


| Order number | Designation | Tube ØD | ØD ₁ | L ₁ | L ₂ | β | Material | Operating pressure max. | | Weight | |
|------------------|-----------------------------------|------------|-----------------|----------------|----------------|----|------------------|-------------------------|-------|--------|------|
| | | | | | | | | bar | psi | g | lb |
| | | in | in | mm | mm | mm | | | | | |
| Steel galvanized | | | | | | | | | | | |
| 222-12578-5 | BUSHING ST RI G 1/8AxG 1/4 CF | G 1/8A | G 1/4 | 31 | 8 | 19 | Steel galvanized | 400 | 5 800 | 42 | 0.09 |
| 222-12521-5 | BUSHING ST RI G 1/4AxG 1/8 CF | G 1/4A | G 1/8 | 28 | 12 | 19 | Steel galvanized | 400 | 5 800 | 38 | 0.08 |
| 222-12521-6 | BUSHING ST RI G 1/4AxG 3/8 CF | G 1/4A | G 3/8 | 36 | 12 | 24 | Steel galvanized | 400 | 5 800 | 69 | 0.15 |
| 222-12521-4 | BUSHING ST RI G 1/4AxG 1/2 CF | G 1/4A | G 1/2 | 40 | 12 | 30 | Steel galvanized | 400 | 5 800 | 116 | 0.26 |
| 222-13678-2 | BUSHING ST RI G 3/8AxG 1/8 CF | G 3/8A | G 1/8 | 22.5 | 12 | 22 | Steel galvanized | 400 | 5 800 | 39 | 0.09 |
| 222-12578-4 | BUSHING ST RI G 3/8AxG 1/4 CF | G 3/8A | G 1/4 | 36 | 12 | 22 | Steel galvanized | 400 | 5 800 | 68 | 0.15 |
| 222-12578-8 | BUSHING ST RI G 3/8AxG 1/2 CF | G 3/8A | G 1/2 | 41 | 12 | 30 | Steel galvanized | 400 | 5 800 | 125 | 0.28 |
| 222-12578-3 | BUSHING ST RI G 3/8AxG 3/4 CF | G 3/8A | G 3/4 | 44 | 12 | 36 | Steel galvanized | 315 | 4 570 | 183 | 0.40 |
| 222-12521-2 | BUSHING ST RI G 1/2AxG 1/4 CF | G 1/2A | G 1/4 | 24 | 14 | 27 | Steel galvanized | 315 | 4 570 | 56 | 0.12 |
| 96-3102-0058 | BUSHING ST RI G 1/2AxG 1/8 CF | G 1/2A | G 1/8 | 24 | 14 | 27 | Steel galvanized | 400 | 5 800 | 66 | 0.15 |
| 222-12599-2 | BUSHING ST RI G 1/2AxG 3/8 CF | G 1/2A | G 3/8 | 36 | 14 | 27 | Steel galvanized | 315 | 4 570 | 94 | 0.21 |
| 222-12047-2 | BUSHING ST RI G 1/2AxG 3/4 CF | G 1/2A | G 3/4 | 46 | 14 | 36 | Steel galvanized | 315 | 4 570 | 182 | 0.40 |
| 222-12599-3 | BUSHING ST RI G 1/2AxG 1 CF | G 1/2A | G 1 | 49 | 14 | 41 | Steel galvanized | 315 | 4 570 | 221 | 0.49 |
| 222-12578-2 | BUSHING ST RI G 1/2AxG 1-1/4 CF | G 1/2A | G 1 1/4 | 53 | 14 | 55 | Steel galvanized | 160 | 2 320 | 482 | 1.06 |
| 222-13678-1 | BUSHING ST RI G 3/4AxG 1/4 CF | G 3/4A | G 1/4 | 26 | 16 | 32 | Steel galvanized | 315 | 4 570 | 103 | 0.23 |
| 222-12578-9 | BUSHING ST RI G 3/4AxG 3/8 CF | G 3/4A | G 3/8 | 26 | 16 | 32 | Steel galvanized | 315 | 4 570 | 87 | 0.19 |
| 222-12047-8 | BUSHING ST RI G 3/4AxG 1/2 CF | G 3/4A | G 1/2 | 41 | 16 | 32 | Steel galvanized | 315 | 4 570 | 143 | 0.32 |
| 222-12047-4 | BUSHING ST RI G 3/4AxG 1 CF | G 3/4A | G 1 | 51 | 16 | 41 | Steel galvanized | 315 | 4 570 | 235 | 0.52 |
| 96-3129-0058 | BUSHING ST RI G 3/4AxG 1-1/4 CF | G 3/4A | G 1 1/4 | 55 | 16 | 55 | Steel galvanized | 160 | 2 320 | 481 | 1.06 |
| 222-12599-9 | BUSHING ST RI G 1AxG 1/2 CF | G 1A | G 1/2 | 29 | 18 | 41 | Steel galvanized | 315 | 4 570 | 157 | 0.35 |
| 222-13678-4 | BUSHING ST RI G 1AxG 3/8 CF | G 1A | G 3/8 | 29 | 18 | 41 | Steel galvanized | 315 | 4 570 | 179 | 0.39 |
| 96-3106-0058 | BUSHING ST RI G 1AxG 1/4 CF | G 1A | G 1/4 | 29 | 18 | 41 | Steel galvanized | 315 | 4 570 | 195 | 0.43 |
| 222-12599-5 | BUSHING ST RI G 1AxG 3/4 CF | G 1A | G 3/4 | 47 | 18 | 41 | Steel galvanized | 315 | 4 570 | 278 | 0.61 |
| 222-13670-1 | BUSHING ST RI G 1AxG 1-1/4 CF | G 1A | G 1 1/4 | 57 | 18 | 55 | Steel galvanized | 160 | 2 320 | 530 | 1.17 |
| 96-3133-0058 | BUSHING ST RI G 1AxG 1-1/2 CF | G 1A | G 1 1/2 | 59 | 18 | 60 | Steel galvanized | 160 | 2 320 | 585 | 1.29 |
| 222-13678-8 | BUSHING ST RI G 1-1/4AxG 1/2 CF | G 1 1/4A | G 1/2 | 32 | 20 | 50 | Steel galvanized | 160 | 2 320 | 308 | 0.68 |
| 222-12521-8 | BUSHING ST RI G 1-1/4AxG 3/4 CF | G 1 1/4A | G 3/4 | 32 | 20 | 50 | Steel galvanized | 160 | 2 320 | 267 | 0.59 |
| 222-12599-6 | BUSHING ST RI G 1-1/4AxG 1 CF | G 1 1/4A | G 1 | 32 | 20 | 50 | Steel galvanized | 160 | 2 320 | 458 | 1.01 |
| 96-3112-0058 | BUSHING ST RI G 1-1/2AxG 3/4 CF | G 1 1/2A | G 3/4 | 36 | 22 | 55 | Steel galvanized | 160 | 2 320 | 402 | 0.89 |
| 222-13678-3 | BUSHING ST RI G 1-1/2AxG 1 CF | G 1 1/2A | G 1 | 36 | 22 | 55 | Steel galvanized | 160 | 2 320 | 337 | 0.74 |
| 96-3136-0058 | BUSHING ST RI G 1-1/2AxG 1-1/4 CF | G 1 1/2A | G 1 1/4 | 58 | 22 | 55 | Steel galvanized | 160 | 2 320 | 542 | 1.20 |
| 96-3137-0058 | BUSHING ST RI G 2AxG 1-1/2 CF | G 2A | G 1 1/2 | 62 | 24 | 70 | Steel galvanized | 160 | 2 320 | 990 | 2.18 |
| Stainless steel | | | | | | | | | | | |
| 222-13618-1 | BUSHING VA RI G 1/8AxG 1/4 | G 1/8A | G 1/4 | 31 | 8 | 19 | Stainless steel | 400 | 5 800 | 42 | 0.09 |
| 222-10365-3 | BUSHING VA RI G 1/4AxG 1/8 | G 1/4A | G 1/8 | 28 | 12 | 19 | Stainless steel | 400 | 5 800 | 38 | 0.08 |
| 222-13618-5 | BUSHING VA RI G 1/4AxG 1/2 | G 1/4A | G 1/2 | 40 | 12 | 30 | Stainless steel | 400 | 5 800 | 116 | 0.26 |
| 222-14180-7 | BUSHING VA RI G 3/8AxG 1/4 | G 3/8A | G 1/4 | 36 | 12 | 22 | Stainless steel | 400 | 5 800 | 68 | 0.15 |
| 222-13618-2 | BUSHING VA RI G 3/8AxG 1/2 | G 3/8A | G 1/2 | 41 | 12 | 30 | Stainless steel | 400 | 5 800 | 125 | 0.28 |
| 222-14180-3 | BUSHING VA RI G 1/2AxG 1/4 | G 1/2A | G 1/4 | 24 | 14 | 27 | Stainless steel | 315 | 4 570 | 56 | 0.12 |
| 222-14180-6 | BUSHING VA RI G 1/2AxG 3/8 | G 1/2A | G 3/8 | 36 | 14 | 27 | Stainless steel | 315 | 4 570 | 94 | 0.21 |
| 222-14180-9 | BUSHING VA RI G 3/4AxG 3/8 | G 3/4A | G 3/8 | 26 | 16 | 32 | Stainless steel | 315 | 4 570 | 87 | 0.19 |
| 222-13618-3 | BUSHING VA RI G 3/4AxG 1/2 | G 3/4A | G 1/2 | 41 | 16 | 32 | Stainless steel | 315 | 4 570 | 143 | 0.32 |
| 222-14180-5 | BUSHING VA RI G 1AxG 3/4 | G 1A | G 3/4 | 47 | 18 | 41 | Stainless steel | 315 | 4 570 | 278 | 0.61 |

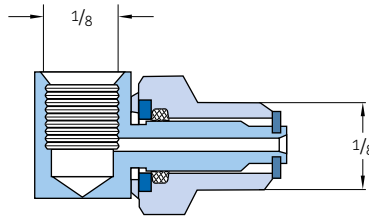
Adapter fittings

Banjo fittings, rotatable

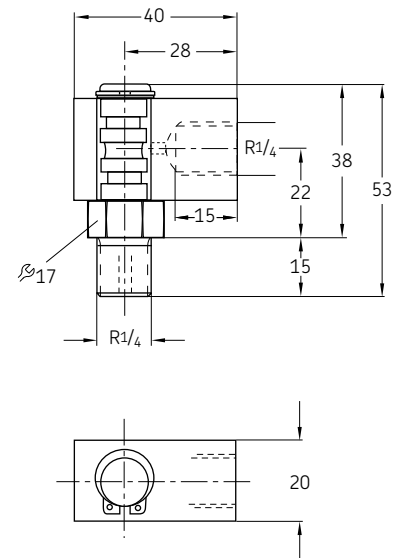
91308



223-12567-1

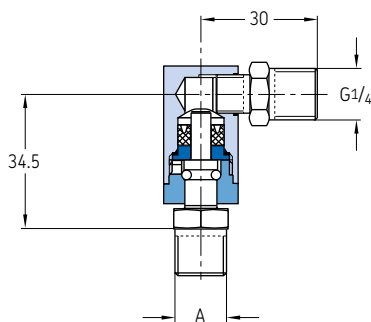


626-25702-1

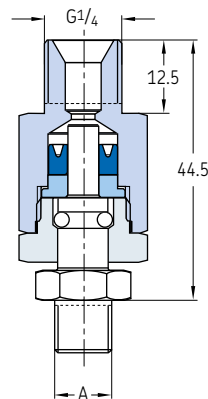


| Order number | Designation | Tube Ø | | Speed max. | Operation pressure max. | | Material | Weight | |
|--------------|-------------------------|------------------|------------------|------------|-------------------------|-------|------------------|--------|------|
| | | Ø D ₁ | Ø D ₂ | | min ⁻¹ | bar | | psi | g |
| 091308 | Straight swivel 1/8 NPT | – | 1/8 NPT | 1 | 50 | 725 | Steel galvanized | 20 | 0.04 |
| 223-12567-1 | Swivel 90° 1/8 NPT | – | 1/8 NPT | 1 | 50 | 725 | Steel galvanized | 40 | 0.08 |
| 626-25702-1 | Swivel R1/4XR1/4 MS | – | R1/4 male | 1 | 200 | 2 900 | Brass | 102 | 0.22 |

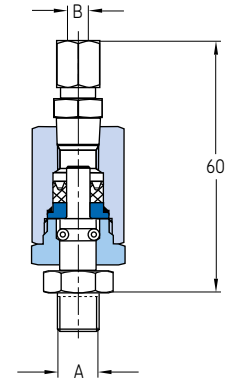
626-2...



626-25720-2



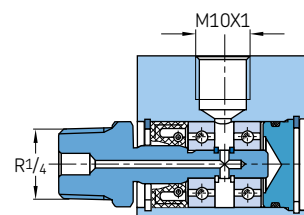
626-26696-2



| Order number | Designation | Tube Ø | | Speed max. | Operation pressure max. | | Material | Weight | |
|--------------|------------------------------|------------------|------------------|------------|-------------------------|-------|------------------|--------|------|
| | | Ø D ₁ | Ø D ₂ | | min ⁻¹ | bar | | psi | g |
| 626-25716-2 | Swivel 90° G1/4AxG1/4A F | – | G1/4 male | 80 | 100 | 1 450 | Steel galvanized | 105 | 0.23 |
| 626-25540-2 | Swivel 90° G1/4AxG1/8A F | – | G1/4 male | 80 | 100 | 1 450 | Steel galvanized | 105 | 0.23 |
| 626-26700-2 | Swivel 90° G1/8AxD 4 F | 4 | – | 80 | 100 | 1 450 | Steel galvanized | 95 | 0.21 |
| 626-25438-2 | Swivel 90° G1/8AxD 6 F | 6 | – | 80 | 100 | 1 450 | Steel galvanized | 100 | 0.22 |
| 626-26701-2 | Swivel 90° G1/4AxD 4 F | 4 | – | 80 | 100 | 1 450 | Steel galvanized | 105 | 0.23 |
| 626-25717-2 | Swivel 90° G1/4AxD 6 F | 6 | – | 80 | 100 | 1 450 | Steel galvanized | 102 | 0.22 |
| 626-26696-2 | Swivel straight G1/8AXD 4 CF | 4 | – | 80 | 100 | 1 450 | Steel galvanized | 105 | 0.23 |

Adapter fittings

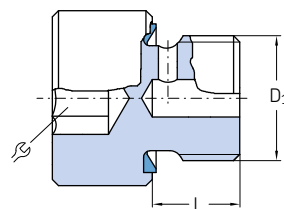
Banjo fittings, rotatable



| Order number | Designation | Tube ØD | Thread ₁ | Thread ₂ | Speed max. | Oil pressure max. | | Air pressure max. | | Material | Weight | |
|-----------------|---------------------------|---------|---------------------|---------------------|-------------------|-------------------|-----|-------------------|-----|----------|--------|------|
| | | mm | in | mm | min ⁻¹ | bar | psi | bar | psi | | g | lb |
| Brass | | | | | | | | | | | | |
| DLY930-2 | ROTATING JOINT MS 8 G1/4A | 8 | G 1/4 A | M14x1,5 | 1400 | 20 | 290 | 8 | 116 | Brass | 246 | 0.54 |
| DLY931 | ROTATING JOINT MS 8 R1/8K | 8 | R 1/8 | M14x1,5 | 1400 | 20 | 290 | 8 | 116 | Brass | 244 | 0.54 |
| Aluminum | | | | | | | | | | | | |
| DLY932 | ROTATING JOINT AL 8 R1/4K | 6 | R 1/4 | M10x1 | 1400 | 5 | 72 | – | – | Aluminum | 65 | 0.14 |

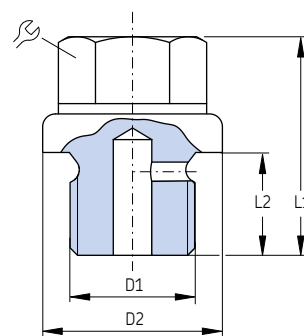
Plugs

Vent plugs with profile seal acc. to ISO 9974-2



| Order number | Designation | D ₁ | L | ϕ | Material | Weight | |
|--------------|------------------------------------|----------------|----|----|-------------------|--------|------|
| | | | mm | | | mm | g |
| 466-431-006 | VENTILATING SCREW,HEX. ST M10x1 | M10x1 | 7 | 10 | Steel, galvanized | 10 | 0.02 |
| 466-431-005 | VENTILATING SCREW,6-SOCK ST M10x1 | M10x1 | 7 | 5 | Steel, galvanized | 10 | 0.02 |
| 466-431-009 | VENTILATING SCREW,6-SOCK ST G 1/8A | G 1/8A | 7 | 5 | Steel, galvanized | 11 | 0.02 |

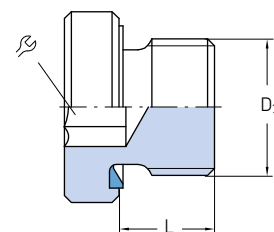
Vent plugs sealed by flat washer acc. to DIN 7603



| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | ϕ | Material | Operating pressure max. | | Weight | |
|--------------|-----------------------------|----------------|----------------|----------------|----------------|----|-------------------|-------------------------|-----|--------|-------|
| | | | | | | | | bar | psi | g | lb |
| 833-020-022 | VENTILATING SCREW ST M 8x1 | M8x1 | 12 | 13,5 | 7,5 | 11 | Steel, galvanized | 45 | 650 | 7 | 0.015 |
| 833-330-016 | VENTILATING SCREW ST M10x1 | M10x1 | 14 | 17 | 8 | 11 | Steel, galvanized | 45 | 650 | 11 | 0.024 |
| 44-1855-6021 | VENTILATING SCREW ST M12x1 | M12x1 | 17 | 13,5 | 7,5 | 17 | Steel, galvanized | 45 | 650 | 12 | 0.026 |
| 833-330-021 | VENTILATING SCREW ST G 1/8A | G 1/8 A | 14 | 17 | 8 | 11 | Steel, galvanized | 45 | 650 | 10 | 0.022 |
| 833-340-034 | VENTILATING SCREW ST G 1/4A | G 1/4 A | 18 | 17 | 8 | 11 | Steel, galvanized | 45 | 650 | 22 | 0.049 |

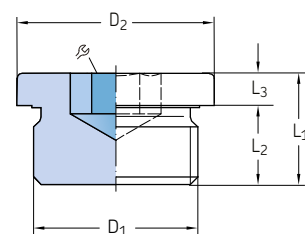
Plugs

Screw plugs VSTI



| Order number | Designation | Tube ØD | D ₁ | L | ⌀ | Material | Operating pressure max. | | Weight | |
|------------------|-------------------------------------|------------|----------------|----|----|-------------------|-------------------------|-------|--------|------|
| | | | | | | | bar | psi | g | lb |
| | | | mm | mm | mm | | | | | |
| Steel galvanized | | | | | | | | | | |
| 466-419-001 | PLUG,CLOS.6-SOCK VSTI G 1/8A-ED CF | G 1/8A | 14 | 8 | 5 | Steel, galvanized | 400 | 5 800 | 8 | 0.02 |
| 223-13702-1 | PLUG 6-SOCK ST VSTI G 1/4A-ED CF | G 1/4A | 19 | 12 | 6 | Steel, galvanized | 400 | 5 800 | 20 | 0.04 |
| 223-13702-7 | PLUG 6-SOCK ST VSTI G 1/2A-ED CF | G 1/2A | 27 | 14 | 10 | Steel, galvanized | 400 | 5 800 | 51 | 0.11 |
| 223-13702-6 | PLUG 6-SOCK ST VSTI G 3/4A -ED CF | G 3/4A | 32 | 16 | 12 | Steel, galvanized | 400 | 5 800 | 79 | 0.17 |
| 223-10530-4 | PLUG 6-SOCK ST VSTI G1A -ED CF | G1A | 39,9 | 16 | 17 | Steel, galvanized | 400 | 5 800 | 130 | 0.29 |
| 466-429-001 | PLUG,CLOS.6-SOCK VSTI M 8x1-ED CF | M8x1 mm | 12 | 8 | 4 | Steel, galvanized | 400 | 5 800 | 7 | 0.02 |
| 466-431-001 | PLUG,CLOS.6-SOCK VSTI M10x1-ED CF | M10x1 mm | 14 | 8 | 5 | Steel, galvanized | 400 | 5 800 | 8 | 0.02 |
| 466-439-001 | PLUG,CLOS.6-SOCK VSTI M18x1,5-ED CF | M18x1,5 mm | 23,9 | 14 | 8 | Steel, galvanized | 400 | 5 800 | 32 | 0.07 |
| Stainless steel | | | | | | | | | | |
| 223-13702-5 | PLUG 6-SOCK VA VSTI G1/4A -ED | G 1/4A | 19 | 12 | 6 | Stainless steel | 400 | 5 800 | 20 | 0.04 |
| 223-13702-9 | PLUG 6-SOCK VA VSTI G1/2A -ED | G 1/2A | 27 | 14 | 10 | Stainless steel | 400 | 5 800 | 51 | 0.11 |

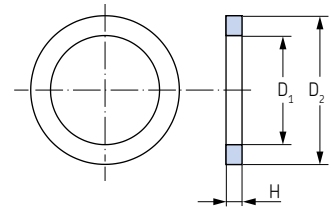
Screw plugs sealed by flat washer acc. to DIN 7603



| Order number | Designation | D ₁ | D ₂ | L ₁ | L ₂ | L ₃ | ⌀ | Material | Weight | |
|--------------------|-------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------------|-------------------|--------|------|
| | | | | | | | | | g | lb |
| | | | | mm | mm | mm | mm | | | |
| DIN910-R1-8-5.8 | PLUG,CLOSURE-HEX. 5.8 G 1/8AZN | G 1/8 A | 14 | 17 | 8 | 3 | 11 | Steel, galvanized | 11 | 0.02 |
| DIN910-R1-4x8-5.8 | PLUG,CLOSURE-HEX. 5.8 G 1/4AZN | G 1/4 A | 18 | 17 | 8 | 3 | 14 | Steel, galvanized | 19 | 0.04 |
| DIN910-R3-8-5.8 | PLUG,CLOSURE-HEX. 5.8 G 3/8AZN | G 3/8 A | 22 | 21 | 12 | 3 | 17 | Steel, galvanized | 38 | 0.08 |
| DIN910-R1-2-5.8 | PLUG,CLOSURE-HEX. 5.8 G 1/2AZN | G 1/2 A | 26 | 26 | 14 | 4 | 19 | Steel, galvanized | 68 | 0.15 |
| DIN910-R3-4-5.8 | PLUG,CLOSURE-HEX. 5.8 G 3/4AZN | G 3/4 A | 32 | 30 | 16 | 4 | 24 | Steel, galvanized | 125 | 0.28 |
| DIN910-R1-5.8 | PLUG,CLOSURE-HEX. 5.8 G1 AZN | G1 A | 39 | 32 | 16 | 5 | 27 | Steel, galvanized | 199 | 0.44 |
| 402-011 | PLUG,CLOSURE-HEX. ST M 6x0,75A SW10 | M6x0.75 | - | 9 | 5 | - | 10 | Steel, galvanized | 4 | 0.01 |
| 404-011 | PLUG,CLOSURE-HEX. ST M 8x1,0A SW11 | M8x1 | - | 9,5 | 5,5 | - | 11 | Steel, galvanized | 5 | 0.01 |
| 406-011 | PLUG,CLOSURE-HEX. ST M10x1,0A SW12 | M10x1 | - | 12 | 7 | - | 12 | Steel, galvanized | 8 | 0.02 |
| 408-211 | PLUG,CLOSURE-HEX. ST M12x1,0A SW17 | M12x1 | - | 12 | 7 | - | 17 | Steel, galvanized | 14 | 0.03 |
| 408-011 | PLUG,CLOSURE-HEX. ST M14x1,5A SW17 | M14x1.5 | - | 12 | 7 | - | 17 | Steel, galvanized | 17 | 0.04 |
| 410-011 | PLUG,CLOSURE-HEX. ST M16x1,5A SW19 | M16x1.5 | - | 14 | 8 | - | 19 | Steel, galvanized | 25 | 0.06 |
| 412-011 | PLUG,CLOSURE-HEX. ST M18x1,5A SW22 | M18x1.5 | - | 15 | 10 | - | 22 | Steel, galvanized | 33 | 0.07 |
| DIN908-M10x1-5.8 | PLUG,CLOS6-SOCK 5.8 M10x1,5 ZN | M10x1 | 14 | 11 | 8 | 3 | 5 ¹⁾ | Steel, galvanized | 7 | 0.02 |
| DIN908-M12x1.5-5.8 | PLUG,CLOS6-SOCK 5.8 M12x1,0 ZN | M12x1.5 | 17 | 15 | 12 | 3 | 6 ¹⁾ | Steel, galvanized | 12 | 0.03 |
| DIN908-M14x1.5-5.8 | PLUG,CLOS6-SOCK 5.8 M14x1,5 ZN | M14x1.5 | 19 | 15 | 12 | 3 | 6 ¹⁾ | Steel, galvanized | 16 | 0.04 |
| DIN908-G1-8A-5.8 | PLUG,CLOS6-SOCK 5.8 G 1/8AZN | G 1/8 A | 14 | 11 | 8 | 3 | 5 ¹⁾ | Steel, galvanized | 5 | 0.01 |
| DIN908-G3-8A-5.8 | PLUG,CLOS6-SOCK 5.8 G 3/8AZN | G 3/8 A | 22 | 15 | 12 | 3 | 8 ¹⁾ | Steel, galvanized | 10 | 0.02 |

Washers

Flat washers



| Order number | Designation | | D ₁ | D ₂ | H | For thread | | Material | Weight (100 pcs) | |
|---------------------------|-----------------|-----------------|----------------|----------------|-----|------------|-------|----------|------------------|------|
| | | | mm | mm | mm | mm | in | | g | lb |
| Aluminum | | | | | | | | | | |
| 504-019-AL | SEALING RING AL | 10,2x13,9x1,1 | 10,2 | 13,9 | 1,1 | M10 | G 1/8 | Aluminum | 100 | 0.22 |
| Copper | | | | | | | | | | |
| DIN7603-A6x10-CU | SEALING RING CU | 6,2x 9,9x1,0 | 6,2 | 9,9 | 1 | M6 | – | Copper | 100 | 0.22 |
| DIN7603-A8x11.5-CU | SEALING RING CU | 8,2x 11,4x1,0 | 8,2 | 11,4 | 1 | M8 | – | Copper | 100 | 0.22 |
| 504-019 | SEALING RING CU | 10,2x 13,9x1,1 | 10,2 | 13,9 | 1,1 | M10 | G 1/8 | Copper | 100 | 0.22 |
| 508-215-CU | SEALING RING CU | 12,2x 15,9x1,4 | 12,2 | 15,9 | 1,4 | M12 | – | Copper | 100 | 0.22 |
| 508-320-CU | SEALING RING CU | 12,2x 15,9x 2,0 | 12,2 | 15,9 | 2 | M12 | – | Copper | 100 | 0.22 |
| DIN7603-A12x18-CU | SEALING RING CU | 12,2x 14,9x 1,0 | 12,2 | 14,9 | 1 | M12 | – | Copper | 100 | 0.22 |
| 508-108 | SEALING RING CU | 13,3x 17,9x 1,5 | 13,3 | 17,9 | 1,5 | – | G 1/4 | Copper | 100 | 0.22 |
| DIN7603-A14x18-CU | SEALING RING CU | 14,2x 17,9x 1,5 | 14,2 | 17,9 | 1,5 | M14 | – | Copper | 200 | 0.44 |
| DIN7603-A16x20-CU | SEALING RING CU | 16,2x 19,9x 1,5 | 16,2 | 19,9 | 1,5 | M16 | – | Copper | 200 | 0.44 |
| DIN7603-A17x21-CU | SEALING RING CU | 17,2x 20,9x 1,5 | 17,2 | 20,9 | 1,5 | – | G 3/8 | Copper | 200 | 0.44 |
| DIN7603-A18x22-CU | SEALING RING CU | 18,2x 21,9x 1,5 | 18,2 | 21,9 | 1,5 | M18 | – | Copper | 200 | 0.44 |
| DIN7603-A20x24-CU | SEALING RING CU | 20,2x 23,9x 1,5 | 20,2 | 23,9 | 1,5 | M20 | – | Copper | 200 | 0.44 |
| DIN7603-A21x26-CU | SEALING RING CU | 21,2x 25,9x 1,5 | 21,2 | 25,9 | 1,5 | – | G 1/2 | Copper | 200 | 0.44 |
| DIN7603-A22x27-CU | SEALING RING CU | 22,2x 26,9x 1,5 | 22,2 | 26,9 | 1,5 | M22 | – | Copper | 300 | 0.66 |
| DIN7603-A27x32-CU | SEALING RING CU | 27,3x 31,9x 2,0 | 27,3 | 31,9 | 2 | M27 | – | Copper | 400 | 0.88 |
| DIN7603-A30x36-CU | SEALING RING CU | 30,3x 35,9x 2,0 | 30,3 | 35,9 | 2 | M30 | – | Copper | 500 | 1.10 |
| DIN7603-A33x39-CU | SEALING RING CU | 33,3x 38,9x 2,0 | 33,3 | 38,9 | 2 | M33 | – | Copper | 500 | 1.10 |

Quick connectors



Description

SKF quick connectors are the faster alternative when it comes to connecting pipes. Push-in type connectors are available for fast establishment of secure connections. Simply plug the end of the line into the pre-installed connector – all done! No wrench is required. Connections can be made more easily and quickly, especially in difficult-to-access areas. Push-in type fittings can be used to connect the entire system of lines from the pump to the metering devices, pressure switches, etc. – all the way to the lubrication points. The fittings feature internal claws to hold the tubing tight, even at 350 bar (5076 psi). They are equally suitable for plastic and steel tubing. Two versions of quick connectors are offered by SKF:

- Single-seal quick connectors (350 bar, 5076 psi) suitable for grease lubrication systems
- Triple-seal quick connectors (300 bar, 4350 psi) suitable for oil and grease lubrication systems

Features and benefits

- Fast and virtually leakage-free connection
- No wrench tightening required
- Time savings due to easy and quick system assembly
- Connections in systems (without system pressure) can be easily opened and reclosed again
- Protection against penetrating dirt

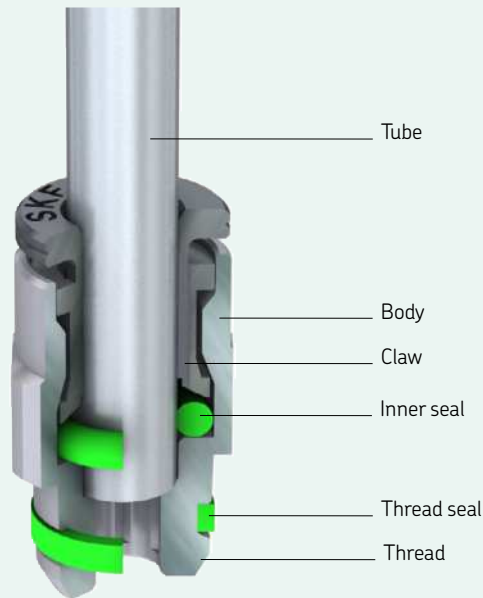


Applications

- Food and beverage industry
- Renewable energy industry
- Construction machinery
- Asphalt mixing plants
- Agricultural machines
- Material handling
- On-road vehicles
- Etc.

Quick connectors

Single-seal quick connectors (350 bar)



Description

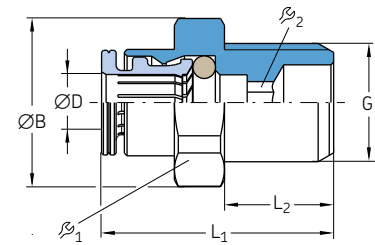
SKF single-seal quick connectors have one O-ring. They are suitable for grease lubrication systems with system pressures up to 350 bar.

Features and benefits

- Suitable for grease
- Smaller
- Protection caps needed under harsh conditions
- Max. operating pressure 350 bar
- For tube $\varnothing 6$ mm
- Marking of the collet: with groove
- Surface: nickel-plated C5M (sea water proof)
- Pipe sealing, expansion ring for collet chuck
- Plastic pipes can be used without claw groove
- Thread sealing via spring ring

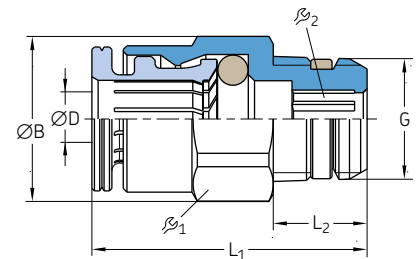
Single-seal quick connectors

Straight screw-in connectors



| Order number | Designation | Tube ØD | G | ØB | L ₁ | L ₂ | r ₁ | r ₂ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|-------------------------|------------|--------|------|----------------|----------------|----------------|----------------|------|----------------------|-------------------------|-------|------------------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| 226-14139-1 | PUSH-IN FITT.GEZM 6-1/4 | 6 | G 1/4B | 18,5 | 12 | 25,5 | 17 | 4 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 000 | 4.41 |

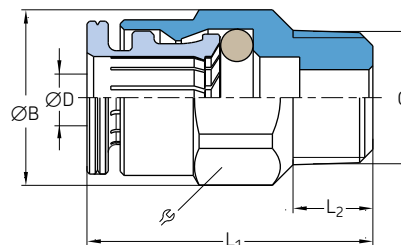
Straight screw-in connectors with FKM threaded seal



| Order number | Designation | Tube ØD | G | ØB | L ₁ | L ₂ | r ₁ | r ₂ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|---------------------------|------------|--------|------|----------------|----------------|----------------|----------------|------|----------------------|-------------------------|-------|------------------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| 226-14111-1 | PUSH-IN FITT.GEKM S 6-1/8 | 6 | R 1/8 | 13,2 | 7.5 | 22 | 12 | 4 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 000 | 2.21 |
| 226-10205-5 | PUSH-IN FITT.GEZM S 6-1/4 | 6 | G 1/4B | 15,2 | 7 | 21,5 | 14 | 4 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 400 | 3.09 |

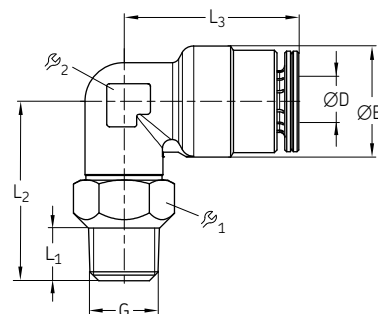
Single-seal quick connectors

Adapters with tapered thread



| Order number | Designation | Tube ØD G | ØB | L ₁ | L ₂ | R | Seal | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|----------------------------|--------------|------|----------------|----------------|----|------|----------------------|-------------------------|-------|------------------|------|
| | | | | | | | | | bar | psi | g | lb |
| 226-14111-4 | PUSH-IN FITT. GEKM 6-M6×1 | 6 M6×1 tap. | 13,2 | 24 | 6 | 12 | NBR | Brass, nickel-plated | 350 | 5 080 | 900 | 1,98 |
| 226-14111-2 | PUSH-IN FITT. GEKM 6-M8×1 | 6 M8×1 tap. | 13,2 | 23 | 6 | 12 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 000 | 2,21 |
| 226-14111-3 | PUSH-IN FITT. GEKM 6-M10×1 | 6 M10×1 tap. | 13,2 | 21,5 | 6 | 12 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 000 | 2,21 |
| 226-10622-8 | PUSH-IN FITT. GEKM 6-1/8 | 6 R 1/8 | 13,2 | 22 | 7,5 | 12 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 000 | 2,21 |

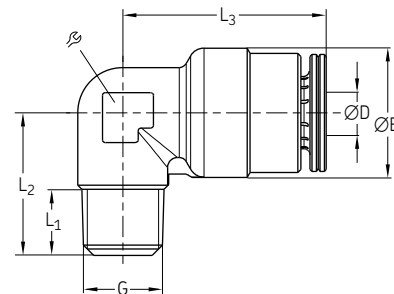
Banjo fittings with tapered thread



| Order number | Designation | Tube ØD G | ØB | L ₁ | L ₂ | L ₃ | R ₁ | R ₂ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|-----------------------------|--------------|------|----------------|----------------|----------------|----------------|----------------|------|----------------------|-------------------------|-------|------------------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| 226-14157-3 | PUSH-IN FITT. WEDKM 6-M 6×1 | 6 M6×1 tap. | 12,7 | 6 | 20,5 | 20 | 10 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 600 | 3,53 |
| 226-14157-1 | PUSH-IN FITT. WEDKM 6-M 8×1 | 6 M8×1 tap. | 12,7 | 6 | 20,5 | 20 | 10 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 600 | 3,53 |
| 226-14157-2 | PUSH-IN FITT. WEDKM 6-M10×1 | 6 M10×1 tap. | 12,7 | 6 | 20,5 | 20 | 12 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 000 | 4,41 |
| 226-13756-9 | PUSH-IN FITT. WEDKM 6-1/8 | 6 R 1/8 | 12,7 | 7,5 | 21 | 20 | 12 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 900 | 4,19 |

Single-seal quick connectors

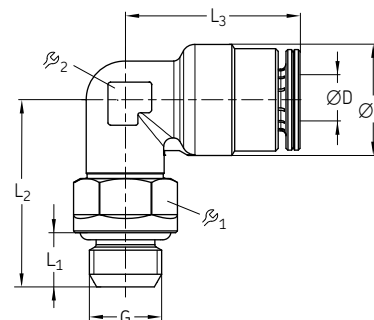
Elbows with tapered thread



| Order number | Designation | Tube G ØD | ØB | L ₁ | L ₂ | L ₃ | R ₁ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | | |
|--------------|-------------------------------|--------------|------------|----------------|----------------|----------------|----------------|------|----------|-------------------------|-----|------------------|-------|------|
| | | | | | | | | | | bar | psi | g | lb | |
| 226-14123-4 | PUSH-IN FITT. WEKM 6-M 6×1 | 6 | M6×1 tap. | 12,7 | 6 | 15 | 20 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 400 | 3.09 |
| 226-14123-2 | PUSH-IN FITT. WEKM 6-M 8×1 | 6 | M8×1 tap. | 12,7 | 6,5 | 14 | 20 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 300 | 2.87 |
| 226-14123-3 | PUSH-IN FITT. WEKM 6-M10×1 | 6 | M10×1 tap. | 12,7 | 6 | 14 | 20 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 500 | 3.31 |
| 226-14123-5 | PUSH-IN FITT. WEKM 6-1/8 | 6 | R 1/8 | 12,7 | 7,5 | 15,5 | 20 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 400 | 3.09 |
| 226-13753-9 | 1) PUSH-IN FITT. WEKM S 6-1/8 | 6 | R 1/8 | 12,7 | 7,5 | 15,5 | 20 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 400 | 3.09 |

1) with threaded seal

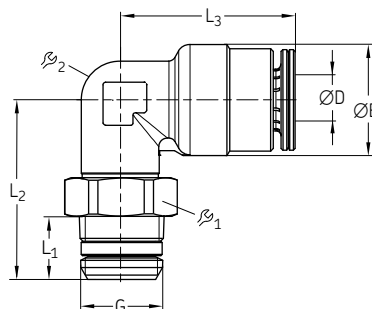
Banjo fittings with O-ring threaded seal



| Order number | Designation | Tube G ØD | ØB | L ₁ | L ₂ | L ₃ | R ₁ | R ₂ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | | |
|--------------|-----------------------------|--------------|--------|----------------|----------------|----------------|----------------|----------------|------|----------|-------------------------|-----|------------------|-------|------|
| | | | | | | | | | | | bar | psi | g | lb | |
| 226-11313-8 | PUSH-IN FITT. WEDZM 6-1/4B | 6 | G 1/4B | 12,7 | 7 | 23 | 20 | 15 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 500 | 5.51 |
| 226-11313-9 | PUSH-IN FITT. WEDZM 6-1/8B | 6 | G 1/8B | 12,7 | 6 | 21 | 20 | 12 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 300 | 5.07 |
| 226-11315-1 | PUSH-IN FITT. WEDZM 6-M 6 | 6 | M6×1 | 12,7 | 7 | 21 | 20 | 10 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 300 | 5.07 |
| 226-11315-2 | PUSH-IN FITT. WEDZM 6-M 8×1 | 6 | M8×1 | 12,7 | 7 | 22 | 20 | 10 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 400 | 5.29 |

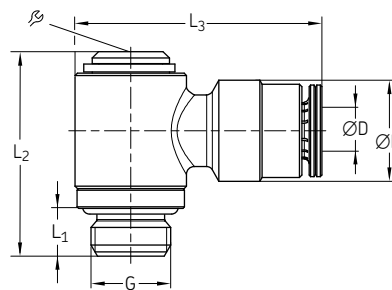
Single-seal quick connectors

Banjo fittings with FKM threaded seal



| Order number | Designation | Tube | | ØB | L ₁ | L ₂ | L ₃ | ϕ ₁ | ϕ ₂ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|-----------------------------|------|------|------|----------------|----------------|----------------|----------------|----------------|------|----------------------|-------------------------|-------|------------------|------|
| | | ØD | G | | | | | | | | | mm | psi | g | lb |
| | | mm | in | mm | mm | mm | mm | mm | mm | | | bar | psi | g | lb |
| 226-14157-4 | PUSH-IN FITT. WEDKM S 6-1/4 | 6 | R1/4 | 12,7 | 11 | 24,5 | 20,1 | 14 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 000 | 4.41 |
| 226-14157-5 | PUSH-IN FITT. WEDKM S 6-1/8 | 6 | R1/8 | 12,7 | 7,5 | 21 | 20 | 12 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 1 900 | 4.19 |

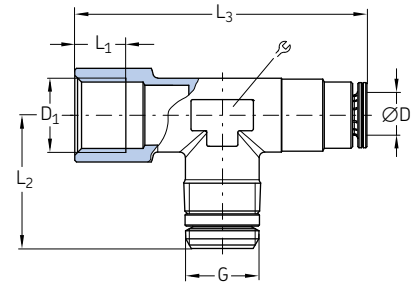
Banjo fittings with hexagon socket and O-ring threaded seal



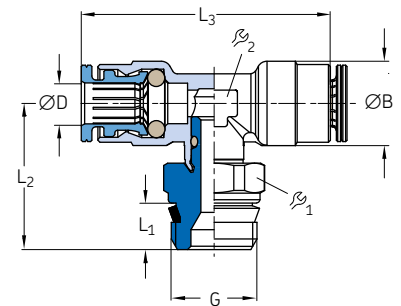
| Order number | Designation | Tube | | ØB | L ₁ | L ₂ | L ₃ | ϕ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|-----------------------------|------|-------|------|----------------|----------------|----------------|----|------|----------------------|-------------------------|-------|------------------|------|
| | | ØD | G | | | | | | | | mm | psi | g | lb |
| | | mm | | mm | mm | mm | mm | mm | | | bar | psi | g | lb |
| 226-10223-2 | PUSH-IN FITT. WEDZM 6-1/8 | 6 | G1/8B | 12,7 | 6 | 25,7 | 24,1 | 5 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 700 | 5.95 |
| 226-10223-4 | PUSH-IN FITT. WEDZM 6-M 8x1 | 6 | M 8x1 | 12,7 | 6 | 26 | 24 | 5 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 500 | 5.51 |
| 226-10223-6 | PUSH-IN FITT. WEDZM 6-M10x1 | 6 | M10x1 | 12,7 | 6 | 25,7 | 24,1 | 5 | NBR | Brass, nickel-plated | 350 | 5 080 | 2 600 | 5.73 |

Single-seal quick connectors

Screw-in T-connectors



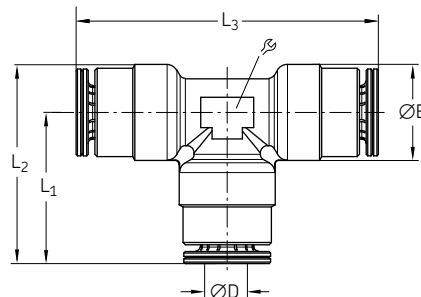
| Order number | Designation | Tube | | D ₁ | L ₁ | L ₂ | L ₃ | ⌀ | Seal | Material | Operating pressure max. | | Weight | |
|--------------|---------------------------|------|-------|----------------|----------------|----------------|----------------|----|------|----------------------|-------------------------|-------|--------|------|
| | | ØD | G | | | | | | | | bar | psi | g | lb |
| | | mm | | mm | mm | mm | mm | mm | | | | | | |
| 226-14097-5 | PUSH-IN FITT. TSM S 6-1/4 | 6 | G 1/4 | G 1/4 | 9 | 23,5 | 51,5 | 14 | NBR | Brass, nickel-plated | 350 | 5 080 | 50 | 0.11 |



| Order number | Designation | Tube | | ØB | L ₁ | L ₂ | L ₃ | ⌀ ₁ | ⌀ ₂ | Seal | Material | Operating pressure max. | | Weight | |
|--------------|-----------------------------|------|--------|------|----------------|----------------|----------------|----------------|----------------|------|----------------------|-------------------------|-------|--------|------|
| | | ØD | G | | | | | | | | | bar | psi | g | lb |
| | | mm | | mm | mm | mm | mm | mm | mm | | | | | | |
| 226-10159-1 | PUSH-IN FITT. TEDZM S 6-1/8 | 6 | G 1/8B | 12,7 | 5,5 | 20,3 | 40,2 | 9 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 27 | 0.06 |
| 226-10159-9 | PUSH-IN FITT. TEDZM S 6-1/4 | 6 | G 1/4B | 12,7 | 7 | 22 | 40 | 14 | 9 | NBR | Brass, nickel-plated | 350 | 5 080 | 35 | 0.08 |

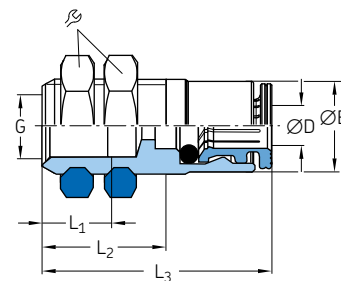
Single-seal quick connectors

T-connectors



| Order number | Designation | Tube ØD | ØB | L ₁ | L ₂ | L ₃ | ⌀ | Seal | Material | Operating pressure max. | | Weight | |
|--------------|---------------------|------------|------|----------------|----------------|----------------|---|------|----------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | bar | psi | g | lb |
| 226-14097-4 | PUSH-IN FITT. TSM 6 | 6 | 12,7 | 20 | 26 | 40 | 6 | NBR | Brass, nickel-plated | 350 | 5 080 | 20 | 0.04 |

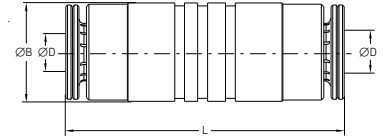
Straight bulkhead connectors



| Order number | Designation | Tube ØD | G | ØB | L ₁ | L ₂ | L ₃ | ⌀ | Seal | Material | Operating pressure max. | | Weight | |
|--------------|---------------------------|------------|-------|------|----------------|----------------|----------------|----|------|----------------------|-------------------------|-------|--------|------|
| | | | | | | | | | | | bar | psi | g | lb |
| 226-10214-4 | PUSH-IN FITT. SVM 6-G 1/8 | 6 | G 1/8 | 12,5 | 9 | 17 | 31,6 | 17 | NBR | Brass, nickel-plated | 350 | 5 080 | 26 | 0.06 |
| 226-10214-7 | PUSH-IN FITT. SVM 6-M 8x1 | 6 | M 8x1 | 12,5 | 9 | 17 | 31,5 | 17 | NBR | Brass, nickel-plated | 350 | 5 080 | 27 | 0.06 |

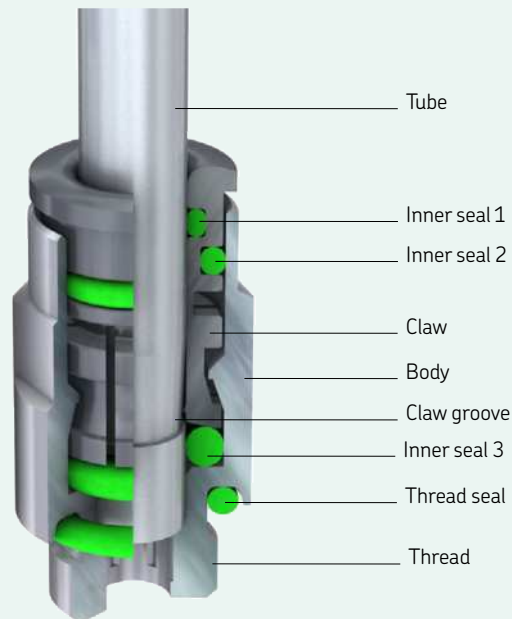
Single-seal quick connectors

Tube-to-tube connector

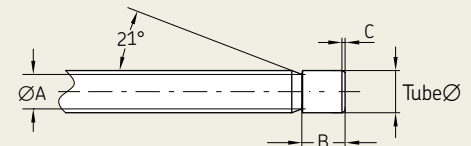


| Order number | Designation | Tube | ØB | L | Seal | Material | Operating pressure max. | | Weight | |
|--------------|-----------------|------|----|----|------|----------------------|-------------------------|-------|--------|------|
| | | ØD | mm | mm | | | bar | psi | g | lb |
| 226-13773-4 | CONNECTOR GSM 6 | 6 | 12 | 34 | NBR | Brass, nickel-plated | 350 | 5 080 | 18 | 0.04 |

Triple-seal quick connectors



Claw grooves



Description

SKF triple-seal quick connectors have three O-rings. They are suitable for oil lubrication systems with system pressures up to 300 bar. For a good union, steel pipes or fittings used as hose end fittings must be prepared with a claw groove. Plastic pipes can be connected directly without an additional claw groove.

For metal pipes, a claw groove is required at the end of the pipe

| Tube Ø | A +0,3 | B ±0,2 | C |
|--------|--------|--------|-------------|
| 4 | 3,1 | 5 | 0,3 ... 0,7 |
| 6 | 4,9 | 6,2 | 0,4 ... 0,9 |
| 8 | 6,9 | 6,2 | 0,5 ... 0,9 |

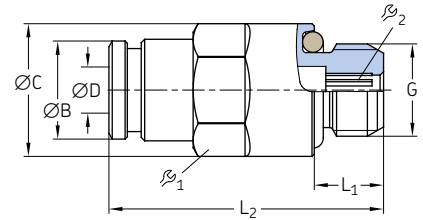
Tool for the production of pipe ends (cutting and groove-forming) available in the chapter on tools.

Features and benefits

- Suitable for oil and fluid grease
- Better sealing by three O-rings (leakage-free)
- Max. operating pressure 300 bar
- For tube Ø4, 6 and 8 mm
- Marking of the collet: plain
- Surface: collet nickel-plated C4
- Insertion depth for plastic and steel tubing
 - Ø4 mm: 19 mm
 - Ø6 mm: 22 mm
 - Ø8 mm: 24 mm
- Reduction of bending forces
- Sealing for the pipe, expansion ring for collet chuck
- Sealing thread O-ring

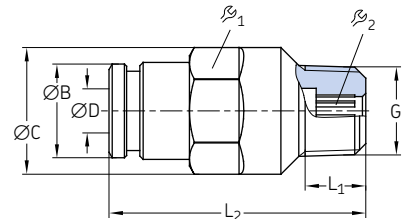
Triple-seal quick connectors

Straight screw-in connectors with cylindrical thread



| Order number | Designation | Tube G ØD | ØB | ØC | L ₁ | L ₂ | r ₁ | r ₂ | Seal | Material | Operating pressure max. | Weight (100 pcs) |
|----------------|--------------------------------|--------------|---------|------|----------------|----------------|----------------|----------------|------|----------|-------------------------|----------------------|
| | | mm | mm | mm | mm | mm | mm | mm | | | bar psi | g lb |
| 451-004-260-VS | PUSH-IN FITT.GEZ 4-M6 NBR | 4 | M6 | 8,8 | 11,5 | 4,5 | 25 | 10 | 2,5 | NBR | Brass | 300 4 350 1 000 2.21 |
| 404-073-VS | PUSH-IN FITT.GEZ 4-M6x0,75 NBR | 4 | M6x0,75 | 8,8 | 11,5 | 4,5 | 25,3 | 10 | 2,5 | NBR | Brass | 300 4 350 1 000 2.21 |
| 404-063-VS | PUSH-IN FITT.GEZ 4-M8 NBR | 4 | M8 | 8,8 | 11,5 | 6 | 23,8 | 10 | 2,5 | NBR | Brass | 300 4 350 900 1.98 |
| 404-003-VS | PUSH-IN FITT.GEZ 4-M8x1 NBR | 4 | M8x1 | 8,8 | 11,5 | 6 | 23,8 | 10 | 2,5 | NBR | Brass | 300 4 350 900 1.98 |
| 404-003-S8-VS | PUSH-IN FITT.GEZ 4-M8x1 FPM | 4 | M8x1 | 8,8 | 11,5 | 6 | 23,8 | 10 | 2,5 | FPM | Brass | 300 4 350 1 000 2.21 |
| 404-006-VS | PUSH-IN FITT.GEZ 4-M10x1 NBR | 4 | M10x1 | 8,8 | 13,5 | 6 | 23,8 | 12 | 2,5 | NBR | Brass | 300 4 350 1 400 3.09 |
| 404-006-S8-VS | PUSH-IN FITT.GEZ 4-M10x1 FPM | 4 | M10x1 | 8,8 | 13,5 | 6 | 23,8 | 12 | 2,5 | FPM | Brass | 300 4 350 1 400 3.09 |
| 404-040-VS | PUSH-IN FITT.GEZ 4-G1/8 NBR | 4 | G 1/8 | 8,8 | 13,5 | 6 | 23,8 | 12 | 2,5 | NBR | Brass | 300 4 350 1 400 3.09 |
| 406-158-VS | PUSH-IN FITT. GEZ 6-M8x1 NBR | 6 | M8x1 | 11,7 | 13,2 | 6 | 30,5 | 12 | 3 | NBR | Brass | 300 4 350 1 500 3.31 |
| 406-004-VS | PUSH-IN FITT. GEZ 6-M10x1 NBR | 6 | M10x1 | 11,7 | 13,5 | 6 | 27 | 12 | 4 | NBR | Brass | 300 4 350 1 500 3.31 |
| 406-004-S8-VS | PUSH-IN FITT. GEZ 6-M10x1 FPM | 6 | M10x1 | 11,7 | 13,5 | 6 | 27 | 12 | 4 | FPM | Brass | 300 4 350 1 400 3.09 |
| 456-004-VS | PUSH-IN FITT. GEZ 6-G1/8 NBR | 6 | G 1/8 | 11,7 | 13,5 | 6 | 27 | 12 | 4 | NBR | Brass | 300 4 350 1 400 3.09 |
| 456-004-S8-VS | PUSH-IN FITT. GEZ 6-G1/8 FPM | 6 | G 1/8 | 11,7 | 13,5 | 6 | 27 | 12 | 4 | FPM | Brass | 300 4 350 1 400 3.09 |
| 406-054-VS | PUSH-IN FITT. GEZ 6-G1/4 NBR | 6 | G 1/4 | 11,7 | 16,4 | 7 | 28 | 12 | 4 | NBR | Brass | 300 4 350 1 900 4.19 |
| 406-162-VS | PUSH-IN FITT. GEZ 6-M12x1 NBR | 6 | M12x1 | 11,7 | 15,4 | 7 | 28 | 14 | 4 | NBR | Brass | 300 4 350 2 200 4.85 |
| 406-162-S8-VS | PUSH-IN FITT. GEZ 6-M12x1 FPM | 6 | M12x1 | 11,7 | 15,4 | 7 | 28 | 14 | 4 | FPM | Brass | 300 4 350 2 400 5.29 |
| 408-004-VS | PUSH-IN FITT. GEZ 8-M10x1 NBR | 8 | M10x1 | 13,9 | 15,2 | 6 | 32,3 | 14 | 5 | NBR | Brass | 300 4 350 2 000 4.41 |
| 408-004-S8-VS | PUSH-IN FITT. GEZ 8-M10x1 FPM | 8 | M10x1 | 13,9 | 15,2 | 6 | 32,3 | 14 | 5 | FPM | Brass | 300 4 350 2 000 4.41 |
| 408-162-VS | PUSH-IN FITT. GEZ 8-M12x1 NBR | 8 | M12x1 | 13,9 | 15,2 | 7 | 32,8 | 14 | 6 | NBR | Brass | 300 4 350 2 300 5.07 |
| 408-162-S8-VS | PUSH-IN FITT. GEZ 8-M12x1 FPM | 8 | M12x1 | 13,9 | 15,2 | 7 | 32,8 | 14 | 6 | FPM | Brass | 300 4 350 2 000 4.41 |
| 408-054-VS | PUSH-IN FITT. GEZ 8-G1/4 NBR | 8 | G 1/4 | 13,9 | 16,4 | 7 | 30,8 | 15 | 6 | NBR | Brass | 300 4 350 3 000 6.62 |

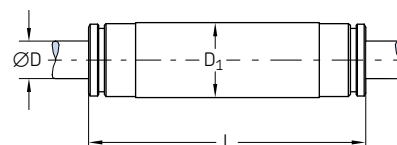
Straight screw-in connectors with tapered thread



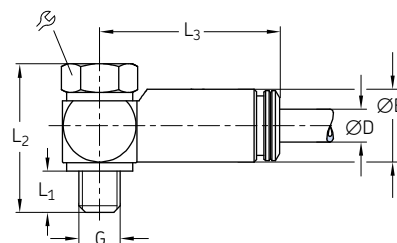
| Order number | Designation | Tube G ØD | ØB | ØC | L ₁ | L ₂ | r ₁ | r ₂ | Seal | Material | Operating pressure max. | Weight (100 pcs) |
|----------------|---------------------------------------|--------------|---------------|------|----------------|----------------|----------------|----------------|------|----------|-------------------------|----------------------|
| | | mm | mm | mm | mm | mm | mm | mm | | | bar psi | g lb |
| 451-004-462-VS | PUSH-IN FITT. GEK 4-M6K NBR | 4 | M6 tap. | 8,8 | 11,5 | 5,5 | 25,8 | 10 | 2,5 | NBR | Brass | 300 4 350 900 1.98 |
| 451-004-471-VS | PUSH-IN FITT. GEK 4-M6x0,75K NBR | 4 | M6x0,75 tap. | 8,8 | 11,5 | 5,5 | 25,8 | 10 | 2,5 | NBR | Brass | 300 4 350 900 1.98 |
| 451-004-498-VS | PUSH-IN FITT. GEK 4-M8x1K NBR | 4 | M8x1 tap. | 8,8 | 11,5 | 5,5 | 23,3 | 10 | 2,5 | NBR | Brass | 300 4 350 900 1.98 |
| 451-004-518-VS | PUSH-IN FITT. GEK 4-M10x1K NBR | 4 | M10x1 tap. | 8,8 | 11,5 | 5,5 | 22,8 | 10 | 2,5 | NBR | Brass | 300 4 350 1 100 2.43 |
| 404-673K-V1-VS | PUSH-IN FITT. GEK 4-1/4-28 SAE LT NBR | 4 | 1/4-28 SAE LT | 8,8 | 11,5 | 5,1 | 26,3 | 10 | 2,5 | NBR | Brass | 300 4 350 1 000 2.21 |
| 404-040K-V1-VS | PUSH-IN FITT. GEK 4-1/8 NPTF NBR | 4 | 1/8 NPTF | 8,8 | 11,5 | 8 | 24,8 | 10 | 2,5 | NBR | Brass | 300 4 350 1 200 2.65 |
| 451-006-468-VS | PUSH-IN FITT. GEK 6-M6K NBR | 6 | M6 tap. | 11,7 | 13,5 | 5,5 | 30 | 12 | 2,5 | NBR | Brass | 300 4 350 1 400 3.09 |
| 451-006-498-VS | PUSH-IN FITT. GEK 6-M8x1K NBR | 6 | M8x1 tap. | 11,7 | 13,5 | 5,5 | 29,5 | 12 | 4 | NBR | Brass | 300 4 350 1 400 3.09 |
| 451-006-518-VS | PUSH-IN FITT. GEK 6-M10x1K NBR | 6 | M10x1 tap. | 11,7 | 13,5 | 5,5 | 27 | 12 | 4 | NBR | Brass | 300 4 350 1 500 3.31 |
| 406-423W-VS | PUSH-IN FITT. GEK 6-R1/8K NBR | 6 | R 1/8 | 11,7 | 13,5 | 6,5 | 28,5 | 12 | 4 | NBR | Brass | 300 4 350 1 500 3.31 |
| 406-423N-VS | PUSH-IN FITT. GEK 6-1/8 NPT NBR | 6 | 1/8 NPT | 11,7 | 13,5 | 7,5 | 28,5 | 12 | 4 | NBR | Brass | 300 4 350 1 600 3.53 |

Triple-seal quick connectors

Tube-to-tube connectors



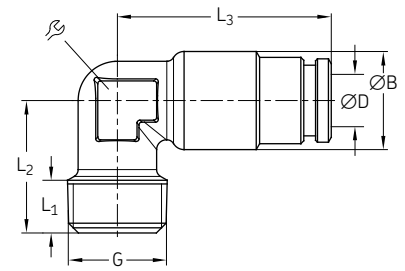
| Order number | Designation | Tube ØD | D ₁ | L | Material | Operating pressure max. | | Weight (100 pcs) | |
|----------------|--------------------|------------|----------------|------|----------|----------------------------|-------|---------------------|------|
| | | | | | | bar | psi | g | lb |
| 454-504-041-VS | CONNECTOR GS 4 NBR | 4 | 10 | 38,5 | Brass | 300 | 4 350 | 1 500 | 3.31 |
| 406-426-VS | CONNECTOR GS 6 NBR | 6 | 12 | 44,5 | Brass | 300 | 4 350 | 2 000 | 4.41 |

Banjo fittings with banjo bolt
and cylindrical thread

| Order number | Designation | Tube ØD | G | ØB | L ₁ | L ₂ | L ₃ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | | |
|----------------|--------------------------------|------------|--------|-----|----------------|----------------|----------------|------|----------|----------------------------|-----|---------------------|-------|------|
| | | | | | | | | | | bar | psi | g | lb | |
| 504-161-VS | BANJO FITTING SWVZ-4-M6 NBR | 4 | M6 | 8,8 | 5 | 19,5 | 22,3 | 9 | NBR | Brass | 300 | 4 350 | 1300 | 2.87 |
| 504-401-S1-VS | BANJO FITTING SWVZ-4-M5 NBR | 4 | M5 | 8,8 | 5 | 18 | 21,8 | 8 | NBR | Brass | 300 | 4 350 | 1100 | 2.43 |
| 504-411-VS | BANJO FITTING SWVZ-4-M8 NBR | 4 | M8 | 8,8 | 7 | 20 | 23,8 | 12 | NBR | Brass | 300 | 4 350 | 1700 | 3.75 |
| 504-401-VS | BANJO FITTING SWVZ-4-M8x1 NBR | 4 | M8x1 | 8,8 | 7 | 20 | 23,8 | 12 | NBR | Brass | 300 | 4 350 | 1800 | 3.97 |
| 504-103-VS | BANJO FITTING SWVZ-4-M10x1 NBR | 4 | M10x1 | 8,8 | 7 | 22,5 | 24,8 | 14 | NBR | Brass | 300 | 4 350 | 2 400 | 5.29 |
| 445-519-041-VS | BANJO FITTING SWVZ-4-G1/8A NBR | 4 | G 1/8A | 8,8 | 7 | 22,5 | 24,8 | 14 | NBR | Brass | 300 | 4 350 | 2 400 | 5.29 |

Triple-seal quick connectors

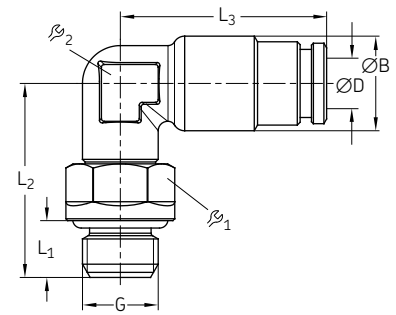
Elbows with tapered thread



| Order number | Designation | Tube ØD | G | D ₁ | L ₁ | L ₂ | L ₃ | ⌀ | Seal | Material | Operating pressure max. | Weight (100 pcs) max. | |
|-------------------|--------------------------------------|------------|--------------|----------------|----------------|----------------|----------------|----|------|----------|-------------------------------|-----------------------------|------|
| | | mm | | mm | mm | mm | mm | mm | | | bar psi | g lb | |
| 453-004-471-VS | PUSH-IN FITT. WEK 4-M6K NBR | 4 | M6 tap. | 10 | 6 | 14 | 21,89 | | NBR | Brass | 300 4 350 | 1 100 | 2.43 |
| 453-004-471-S8-VS | PUSH-IN FITT. WEK 4-M6K FPM | 4 | M6 tap. | 10 | 6 | 14 | 21,89 | | FPM | Brass | 300 4 350 | 1 200 | 2.65 |
| 504-201-VS | PUSH-IN FITT. WEK 4-M8x1K NBR | 4 | M8x1 tap. | 10 | 6 | 13,5 | 21,89 | | NBR | Brass | 300 4 350 | 1 100 | 2.43 |
| 504-201-S8-VS | PUSH-IN FITT. WEK 4-M8x1K FPM | 4 | M8x1 tap. | 10 | 6 | 13,5 | 21,89 | | FPM | Brass | 300 4 350 | 1 200 | 2.65 |
| 504-202-VS | PUSH-IN FITT. WEK 4-M10x1K NBR | 4 | M10x1 tap. | 10 | 6 | 13,5 | 21,89 | | NBR | Brass | 300 4 350 | 1 100 | 2.43 |
| 504-202-S8-VS | PUSH-IN FITT. WEK 4-M10x1K FPM | 4 | M10x1 tap. | 10 | 6 | 13,5 | 21,89 | | FPM | Brass | 300 4 350 | 1 300 | 2.87 |
| 514-018-VS | PUSH-IN FITT. WEK 4-R1/8K NBR | 4 | R 1/8 | 10 | 7,5 | 15 | 21,89 | | NBR | Brass | 300 4 350 | 1 200 | 2.65 |
| 514-018-S8-VS | PUSH-IN FITT. WEK 4-R1/8K FPM | 4 | R 1/8 | 10 | 7,5 | 15 | 21,89 | | FPM | Brass | 300 4 350 | 1 300 | 2.87 |
| 504-200K-V1-VS | PUSH-IN FITT. WEK 4-1/4-28SAE LT NBR | 4 | 1/4-28SAE LT | 10 | 5,1 | 15,5 | 21,89 | | NBR | Brass | 300 4 350 | 1 200 | 2.65 |
| 514-018K-V1-VS | PUSH-IN FITT. WEK 4-1/8NPT NBR | 4 | 1/8 NPT | 10 | 7 | 15 | 21,89 | | NBR | Brass | 300 4 350 | 1 300 | 2.87 |
| 453-006-468-VS | PUSH-IN FITT. WEK 6-M6K NBR | 6 | M6 tap. | 12,5 | 6 | 15 | 26 | 10 | NBR | Brass | 300 4 350 | 2 000 | 4.41 |
| 453-006-468-S8-VS | PUSH-IN FITT. WEK 6-M6K FPM | 6 | M6 tap. | 12,5 | 6 | 15 | 26 | 10 | FPM | Brass | 300 4 350 | 1 800 | 3.97 |
| 506-508-VS | PUSH-IN FITT. WEK 6-M8x1K NBR | 6 | M8x1 tap. | 12,5 | 6,5 | 14 | 26 | 10 | NBR | Brass | 300 4 350 | 1 600 | 3.53 |
| 506-508-S8-VS | PUSH-IN FITT. WEK 6-M8x1K FPM | 6 | M8x1 tap. | 12,5 | 6,5 | 14 | 26 | 10 | FPM | Brass | 300 4 350 | 1 800 | 3.97 |
| 506-510-VS | PUSH-IN FITT. WEK 6-M10x1K NBR | 6 | M10x1 tap. | 12,5 | 6 | 14 | 26 | 10 | NBR | Brass | 300 4 350 | 1 600 | 3.53 |
| 506-510-S8-VS | PUSH-IN FITT. WEK 6-M10x1K FPM | 6 | M10x1 tap. | 12,5 | 6 | 14 | 26 | 10 | FPM | Brass | 300 4 350 | 1 700 | 3.75 |
| 506-512-VS | PUSH-IN FITT. WEK 6-M12x1K NBR | 6 | M12x1 tap. | 12,5 | 7 | 15 | 26 | 10 | NBR | Brass | 300 4 350 | 1 800 | 3.97 |
| 506-511-VS | PUSH-IN FITT. WEK 6-R1/8K NBR | 6 | R 1/8 | 12,5 | 8,5 | 16,5 | 26 | 10 | NBR | Brass | 300 4 350 | 1 700 | 3.75 |
| 506-511-S8-VS | PUSH-IN FITT. WEK 6-R1/8K FPM | 6 | R 1/8 | 12,5 | 8,5 | 16,5 | 26 | 10 | FPM | Brass | 300 4 350 | 1 800 | 3.97 |
| 506-511K-V1-VS | PUSH-IN FITT. WEK 6-1/8NPT NBR | 6 | 1/8 NPT | 12,5 | 8,5 | 16,5 | 26 | 10 | NBR | Brass | 300 4 350 | 1 900 | 4.19 |
| 455-565-068-VS | PUSH-IN FITT. WEK 6-R1/4K NBR | 6 | R 1/4 | 12,5 | 11,5 | 19,5 | 26 | 10 | NBR | Brass | 300 4 350 | 1 900 | 4.19 |

Triple-seal quick connectors

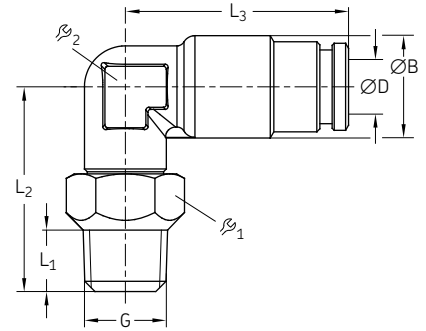
Banjo fittings with cylindrical thread



| Order number | Designation | Tube G ØD | ØB | L ₁ | L ₂ | L ₃ | ϕ ₁ | ϕ ₂ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | | |
|---------------|--------------------------------|--------------|--------|----------------|----------------|----------------|----------------|----------------|------|----------|-------------------------|-----|------------------|-------|------|
| | | | | | | | | | | | bar | psi | g | lb | |
| 504-100-VS | PUSH-IN FITT. WEDZ 4-M6x1 NBR | 4 | M6x1 | 10 | 4,5 | 17,5 | 21,8 | 9 | 9 | NBR | Brass | 300 | 4 350 | 1 200 | 2.65 |
| 504-101-VS | PUSH-IN FITT. WEDZ 4-M8x1 NBR | 4 | M8x1 | 10 | 6 | 20,5 | 21,8 | 10 | 9 | NBR | Brass | 300 | 4 350 | 1 500 | 3.31 |
| 504-101-S8-VS | PUSH-IN FITT. WEDZ 4-M8x1 FPM | 4 | M8x1 | 10 | 6 | 20,5 | 21,8 | 10 | 9 | FPM | Brass | 300 | 4 350 | 1 500 | 3.31 |
| 504-102-VS | PUSH-IN FITT. WEDZ 4-M10x1 NBR | 4 | M10x1 | 10 | 6 | 20,5 | 21,8 | 12 | 9 | NBR | Brass | 300 | 4 350 | 2 000 | 4.41 |
| 504-102-S8-VS | PUSH-IN FITT. WEDZ 4-M10x1 FPM | 4 | M10x1 | 10 | 6 | 20,5 | 21,8 | 12 | 9 | FPM | Brass | 300 | 4 350 | 2 000 | 4.41 |
| 504-108-VS | PUSH-IN FITT. WEDZ 4-G1/8A NBR | 4 | G 1/8A | 10 | 6 | 20,5 | 21,8 | 12 | 9 | NBR | Brass | 300 | 4 350 | 1 800 | 3.97 |
| 504-108-S8-VS | PUSH-IN FITT. WEDZ 4-G1/8A FPM | 4 | G 1/8A | 10 | 6 | 20,5 | 21,8 | 12 | 9 | FPM | Brass | 300 | 4 350 | 1 900 | 4.19 |
| 506-139-VS | PUSH-IN FITT. WEDZ 6-M8x1 NBR | 6 | M8x1 | 12,5 | 6 | 21 | 26 | 10 | 10 | NBR | Brass | 300 | 4 350 | 1 900 | 4.19 |
| 506-139-S8-VS | PUSH-IN FITT. WEDZ 6-M8x1 FPM | 6 | M8x1 | 12,5 | 6 | 21 | 26 | 10 | 10 | FPM | Brass | 300 | 4 350 | 2 000 | 4.41 |
| 506-140-VS | PUSH-IN FITT. WEDZ 6-M10x1 NBR | 6 | M10x1 | 12,5 | 6 | 21 | 26 | 12 | 10 | NBR | Brass | 300 | 4 350 | 2 200 | 4.85 |
| 506-140-S8-VS | PUSH-IN FITT. WEDZ 6-M10x1 FPM | 6 | M10x1 | 12,5 | 6 | 21 | 26 | 12 | 10 | FPM | Brass | 300 | 4 350 | 2 200 | 4.85 |
| 506-108-VS | PUSH-IN FITT. WEDZ 6-G1/8A NBR | 6 | G 1/8A | 12,5 | 6 | 21 | 26 | 12 | 10 | NBR | Brass | 300 | 4 350 | 2 200 | 4.85 |
| 506-108-S8-VS | PUSH-IN FITT. WEDZ 6-G1/8A FPM | 6 | G 1/8A | 12,5 | 6 | 21 | 26 | 12 | 10 | FPM | Brass | 300 | 4 350 | 2 300 | 5.07 |
| 506-142-VS | PUSH-IN FITT. WEDZ 6-M12x1 NBR | 6 | M12x1 | 12,5 | 7 | 23 | 26 | 14 | 10 | NBR | Brass | 300 | 4 350 | 2 700 | 5.95 |
| 506-142-S8-VS | PUSH-IN FITT. WEDZ 6-M12x1 FPM | 6 | M12x1 | 12,5 | 7 | 23 | 26 | 14 | 10 | FPM | Brass | 300 | 4 350 | 2 700 | 5.95 |
| 506-143-VS | PUSH-IN FITT. WEDZ 6-G1/4A NBR | 6 | G 1/4A | 12,5 | 7 | 23 | 26 | 15 | 10 | NBR | Brass | 300 | 4 350 | 2 900 | 6.39 |
| 508-142-VS | PUSH-IN FITT. WEDZ 8-M12x1 NBR | 8 | M12x1 | 14,5 | 7 | 23 | 28,8 | 14 | 12 | NBR | Brass | 300 | 4 350 | 3 200 | 7.06 |
| 508-142-S8-VS | PUSH-IN FITT. WEDZ 8-M12x1 FPM | 8 | M12x1 | 14,5 | 7 | 23 | 28,8 | 14 | 12 | FPM | Brass | 300 | 4 350 | 3 200 | 7.06 |

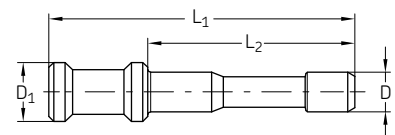
Triple-seal quick connectors

Banjo fittings with tapered thread



| Order number | Designation | Tube ØD | G | ØB | L ₁ | L ₂ | L ₃ | R ₁ | R ₂ | Seal | Material | Operating pressure max. | | Weight (100 pcs) | |
|-------------------|---------------------------------|------------|------------|------|----------------|----------------|----------------|----------------|----------------|------|----------|-------------------------|-------|------------------|------|
| | | | | | | | | | | | | bar | psi | g | lb |
| 455-546-048-VS | PUSH-IN FITT. WEDK 4-M6K NBR | 4 | M6 tap. | 10 | 6 | 20 | 21,8 | 10 | 9 | NBR | Brass | 300 | 4 350 | 1 400 | 3.09 |
| 455-546-048-S8-VS | PUSH-IN FITT. WEDK 4-M6K FPM | 4 | M6 tap. | 10 | 6 | 20 | 21,8 | 10 | 9 | FPM | Brass | 300 | 4 350 | 1 500 | 3.31 |
| 455-529-048-VS | PUSH-IN FITT. WEDK 4-M8x1K NBR | 4 | M8x1 tap. | 10 | 6 | 20 | 21,8 | 10 | 9 | NBR | Brass | 300 | 4 350 | 1 600 | 3.53 |
| 455-529-048-S8-VS | PUSH-IN FITT. WEDK 4-M8x1K FPM | 4 | M8x1 tap. | 10 | 6 | 20 | 21,8 | 10 | 9 | FPM | Brass | 300 | 4 350 | 1 600 | 3.53 |
| 455-531-048-VS | PUSH-IN FITT. WEDK 4-M10x1K NBR | 4 | M10x1 tap. | 10 | 6 | 20 | 21,8 | 12 | 9 | NBR | Brass | 300 | 4 350 | 1 800 | 3.97 |
| 455-531-048-S8-VS | PUSH-IN FITT. WEDK 4-M10x1K FPM | 4 | M10x1 tap. | 10 | 6 | 20 | 21,8 | 12 | 9 | FPM | Brass | 300 | 4 350 | 1 800 | 3.97 |
| 455-569-048-VS | PUSH-IN FITT. WEDK 4-R1/8K NBR | 4 | R 1/8 | 10 | 7,5 | 20,5 | 21,8 | 12 | 9 | NBR | Brass | 300 | 4 350 | 2 000 | 4.41 |
| 455-529-068-VS | PUSH-IN FITT. WEDK 6-M8x1K NBR | 6 | M8x1 tap. | 12,5 | 6 | 20,5 | 26 | 10 | 10 | NBR | Brass | 300 | 4 350 | 2 000 | 4.41 |
| 455-529-068-S8-VS | PUSH-IN FITT. WEDK 6-M8x1K FPM | 6 | M8x1 tap. | 12,5 | 6 | 20,5 | 26 | 10 | 10 | FPM | Brass | 300 | 4 350 | 2 000 | 4.41 |
| 455-531-068-VS | PUSH-IN FITT. WEDK 6-M10x1K NBR | 6 | M10x1 tap. | 12,5 | 6 | 20,5 | 26 | 12 | 10 | NBR | Brass | 300 | 4 350 | 2 300 | 5.07 |
| 455-531-068-S8-VS | PUSH-IN FITT. WEDK 6-M10x1K FPM | 6 | M10x1 tap. | 12,5 | 6 | 20,5 | 26 | 12 | 10 | FPM | Brass | 300 | 4 350 | 2 300 | 5.07 |
| 455-546-068-VS | PUSH-IN FITT. WEDK 6-M6x1K NBR | 6 | M6x1 tap. | 12,5 | 6 | 20,5 | 26 | 10 | 10 | NBR | Brass | 300 | 4 350 | 2 000 | 4.41 |
| 455-565-068-VS | PUSH-IN FITT. WEDK 6-R1/4K FPM | 6 | R 1/4 | 12,5 | 11 | 24,5 | 26 | 14 | 10 | NBR | Brass | 300 | 4 350 | 2 900 | 6.39 |

Locking pin



| Order number | Designation | Tube Ø | D ₁ | L ₁ | L ₂ | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|--------------------------------------|-----------|----------------|----------------|----------------|----------|-------------------------|-------|------------------|------|
| | | | | | | | bar | psi | g | lb |
| 450-204-002 | CLOSURE PLUG D4 MS FOR PUSH-IN FITT. | 4 | 6 | 31 | 21 | Brass | 300 | 4 350 | 300 | 0.66 |
| 450-206-002 | CLOSURE PLUG D6 MS FOR PUSH-IN FITT. | 6 | 8 | 37 | 25 | Brass | 300 | 4 350 | 800 | 1.76 |

Manifolds



Description

Manifolds are designed for the installation of one or several metering devices, restrictors or lubrication point lines and enable direct main line connection. They are often used with the 341, 351 and 361 series single-line metering devices or VD screw-in flow restrictors. Manifolds are available for various main-line connections, such as M8×1, M10×1 and M14×1.5 threads. The number of outlet ports varies from 1 to 10 (on request up to 20) with threads of M8×1 and M10×1. The seal is made via an O-ring or sealing washer (copper).

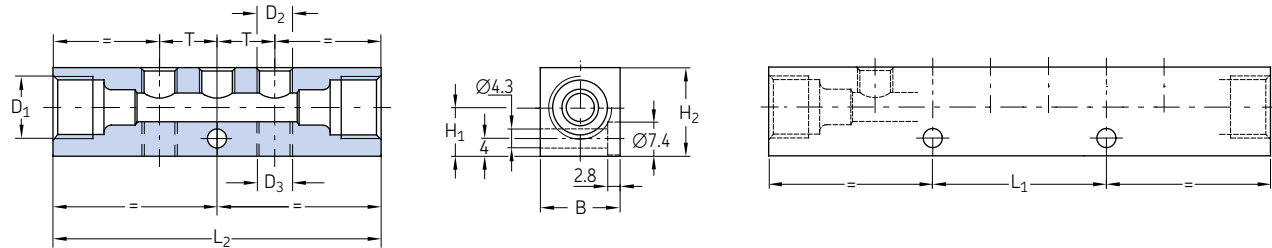
Features and benefits

- Wide selection of connection options and variants
- Available in aluminum; galvanized steel available on request
- Easy and quick system extension/reduction

Applications

- Automotive Industry
- General industry
- Machine tools
- Etc.

Metering device manifolds



| Order number | Designation | Main D ₁ | | D ₂ above | D ₃ below | L ₁ | L ₂ | H ₁ | H ₂ | B | T | Material | Weight | | |
|--------------|----------------------------------|---------------------|---------|-------------------------|-------------------------|----------------|----------------|----------------|----------------|----|----|----------------|----------------|------|------|
| | | mm | mm | | | | | | | | | | mm | mm | mm |
| VL-01EAM3 | MET.DEV.BAR,AL M10x1 1x M10x1 | 6 | M10x1 | 1x | M10x1 | - | 41 | 11 | 20 | 18 | - | Aluminum alloy | 40 | 0.09 | |
| VL-02EAM3 | MET.DEV.BAR,AL M10x1 2x M10x1 | 6 | M10x1 | 2x | M10x1 | - | 58 | 11 | 20 | 18 | 17 | Aluminum alloy | 50 | 0.11 | |
| VL-03EAM3 | MET.DEV.BAR,AL M10x1 3x M10x1 | 6 | M10x1 | 3x | M10x1 | - | 75 | 11 | 20 | 18 | 17 | Aluminum alloy | 60 | 0.13 | |
| VL-04EAM3 | MET.DEV.BAR,AL M10x1, 4x M10x1 | 6 | M10x1 | 4x | M10x1 | - | 92 | 11 | 20 | 18 | 17 | Aluminum alloy | 78 | 0.17 | |
| VL-05EAM3 | MET.DEV.BAR,AL M10x1 5x M10x1 | 6 | M10x1 | 5x | M10x1 | - | 109 | 11 | 20 | 18 | 17 | Aluminum alloy | 90 | 0.20 | |
| VL-06EAM3 | MET.DEV.BAR,AL M10x1 6x M10x1 | 6 | M10x1 | 6x | M10x1 | - | 126 | 11 | 20 | 18 | 17 | Aluminum alloy | 100 | 0.22 | |
| VL-08EAM3 | MET.DEV.BAR,AL M10x1 8x M10x1 | 6 | M10x1 | 8x | M10x1 | - | 160 | 11 | 20 | 18 | 17 | Aluminum alloy | 135 | 0.30 | |
| VL-10EAM3 | MET.DEV.BAR,AL M10x1 10x M10x1 | 6 | M10x1 | 10x | M10x1 | - | 194 | 11 | 20 | 18 | 17 | Aluminum alloy | 162 | 0.36 | |
| 322-861 | MET.DEV.BAR,AL M10x1 2x1x M10x1 | 6 | M10x1 | 1x | M10x1 | 1x | 41 | 11 | 20 | 18 | - | Aluminum alloy | 30 | 0.07 | |
| 324-861 | MET.DEV.BAR,AL M10x1 2x2x M10x1 | 6 | M10x1 | 2x | M10x1 | 2x | 58 | 11 | 20 | 18 | 18 | Aluminum alloy | 50 | 0.11 | |
| 326-663 | MET.DEV.BAR,AL M10x1 2x3x M10x1 | 6 | M10x1 | 3x | M10x1 | 3x | 77 | 11 | 17 | 18 | 18 | Aluminum alloy | 60 | 0.13 | |
| 328-861 | MET.DEV.BAR,AL M10x1 2x4x M10x1 | 6 | M10x1 | 4x | M10x1 | 4x | 92 | 11 | 20 | 18 | 18 | Aluminum alloy | 70 | 0.15 | |
| 330-861 | MET.DEV.BAR,AL M10x1 2x5x M10x1 | 6 | M10x1 | 5x | M10x1 | 5x | 109 | 11 | 20 | 18 | 18 | Aluminum alloy | 80 | 0.18 | |
| 332-861 | MET.DEV.BAR,AL M10x1 2x6x M10x1 | 6 | M10x1 | 6x | M10x1 | 6x | 126 | 11 | 20 | 18 | 18 | Aluminum alloy | 96 | 0.21 | |
| 334-861 | MET.DEV.BAR,AL M10x1 2x7x M10x1 | 6 | M10x1 | 7x | M10x1 | 7x | 143 | 11 | 20 | 18 | 18 | Aluminum alloy | 108 | 0.24 | |
| 336-861 | MET.DEV.BAR,AL M10x1 2x8x M10x1 | 6 | M10x1 | 8x | M10x1 | 8x | 160 | 11 | 20 | 18 | 18 | Aluminum alloy | 128 | 0.28 | |
| 338-861 | MET.DEV.BAR,AL M10x1 2x9x M10x1 | 6 | M10x1 | 9x | M10x1 | 9x | 177 | 11 | 20 | 18 | 18 | Aluminum alloy | 137 | 0.30 | |
| 340-861 | MET.DEV.BAR,AL M10x1 2x10x M10x1 | 6 | M10x1 | 10x | M10x1 | 10x | 194 | 11 | 20 | 18 | 18 | Aluminum alloy | 140 | 0.31 | |
| VL-01DAM3 | MET.DEV.BAR,AL M10x1 1x M8x1 | 6 | M10x1 | 1x | M8x1 | - | 39 | 10,5 | 17 | 13 | - | Aluminum alloy | 20 | 0.04 | |
| VL-02DAM3 | MET.DEV.BAR,AL M10x1 2x M8x1 | 6 | M10x1 | 2x | M8x1 | - | 52 | 10,5 | 17 | 13 | 13 | Aluminum alloy | 30 | 0.07 | |
| VL-03DAM3 | MET.DEV.BAR,AL M10x1 1x M8x1 | 6 | M10x1 | 3x | M8x1 | - | 65 | 10,5 | 17 | 13 | 13 | Aluminum alloy | 30 | 0.07 | |
| VL-04DAM3 | MET.DEV.BAR,AL M10x1 3x M8x1 | 6 | M10x1 | 4x | M8x1 | - | 78 | 10,5 | 17 | 13 | 13 | Aluminum alloy | 38 | 0.08 | |
| VL-05DAM3 | MET.DEV.BAR,AL M10x1 4x M8x1 | 6 | M10x1 | 5x | M8x1 | - | 91 | 10,5 | 17 | 13 | 13 | Aluminum alloy | 40 | 0.09 | |
| VL-06DAM3 | MET.DEV.BAR,AL M10x1 6x M8x1 | 6 | M10x1 | 6x | M8x1 | - | 104 | 11 | 20 | 18 | 13 | Aluminum alloy | 50 | 0.11 | |
| VL-08DAM3 | MET.DEV.BAR,AL M10x1 8x M8x1 | 6 | M10x1 | 8x | M8x1 | - | 130 | 10,5 | 17 | 13 | 13 | Aluminum alloy | 65 | 0.14 | |
| VL-10DAM3 | MET.DEV.BAR,AL M10x1 10x M8x1 | 6 | M10x1 | 10x | M8x1 | - | 156 | 10,5 | 17 | 13 | 13 | Aluminum alloy | 80 | 0.18 | |
| 321-581 | MET.DEV.BAR,AL M14x1,5 1x M8x1 | 8 | M14x1,5 | 1x | M8x1 | - | 48 | - | 20 | 18 | - | Aluminum alloy | 40 | 0.09 | |
| 322-581 | MET.DEV.BAR,AL M14x1,5 2x M8x1 | 8 | M14x1,5 | 2x | M8x1 | - | 61 | 11 | 20 | 18 | 13 | Aluminum alloy | 47 | 0.10 | |
| 323-581 | MET.DEV.BAR,AL M14x1,5 3x M8x1 | 8 | M14x1,5 | 3x | M8x1 | - | 74 | 11 | 20 | 18 | 13 | Aluminum alloy | 50 | 0.11 | |
| 324-581 | MET.DEV.BAR,AL M14x1,5 4x M8x1 | 8 | M14x1,5 | 4x | M8x1 | - | 87 | 11 | 20 | 18 | 13 | Aluminum alloy | 55 | 0.12 | |
| 325-581 | MET.DEV.BAR,AL M14x1,5 5x M8x1 | 8 | M14x1,5 | 5x | M8x1 | - | 100 | 11 | 20 | 18 | 13 | Aluminum alloy | 60 | 0.13 | |
| 326-581 | MET.DEV.BAR,AL M14x1,5 6x M8x1 | 8 | M14x1,5 | 6x | M8x1 | - | 113 | 11 | 20 | 18 | 13 | Aluminum alloy | 70 | 0.15 | |
| 328-581 | MET.DEV.BAR,AL M14x1,5 8x M8x1 | 8 | M14x1,5 | 8x | M8x1 | - | 139 | 11 | 20 | 18 | 13 | Aluminum alloy | 90 | 0.20 | |
| 330-581 | MET.DEV.BAR,AL M14x1,5 10x M8x1 | 8 | M14x1,5 | 10x | M8x1 | - | 165 | 11 | 20 | 18 | 13 | Aluminum alloy | 110 | 0.24 | |
| | | | | | | | 91 | 165 | 11 | 20 | 18 | 13 | Aluminum alloy | 135 | 0.30 |

Tubes and hoses



Description

Pipe and hose lines are an important connecting element in all lubrication systems. The lubricant is transported by them from the pump via the metering device to the lubrication points.

The following chapter lists the suitable pipe and hose material for all SKF lubrication systems.

This criteria must be considered when selecting:

- Pipe dimension (inside diameter and wall thickness): Selection according to the occurring pressures and pressure drops
- Material or surface protection of the steel pipes

Material for steel pipes: precision hydraulic pipe seamless to EN 10305-4 in galvanized Cr-6-free or stainless steel material 1.4571 for aggressive conditions (sea water, cleaning agents, paper machines).

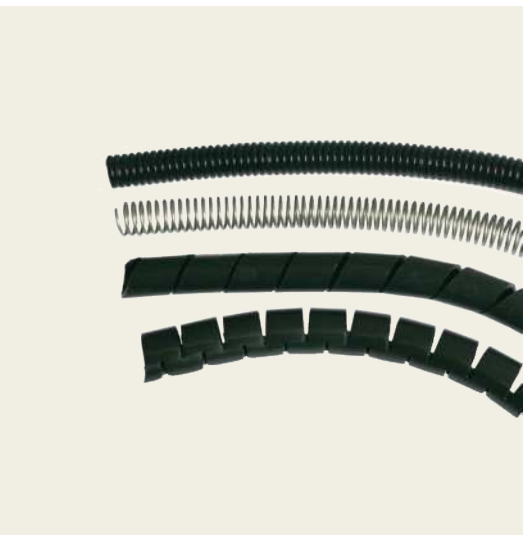
Material for plastic pipes Polyamide: PA12H (natural, semi-rigid), PA12HL (black, semi-rigid), PA12PH (natural, flexible), PA12PHL (black, flexible).

Features and benefits

- Reliable and long-term lubricant transfer solutions for low-, medium- and high-pressure lubrication systems
- Quick installation as pipes/hoses are pre-filled with lubricant
- Wide range of available versions

Applications

- Paper and packaging industry
- Food and beverage industry
- Construction machines
- Agriculture machines
- Oil and gas industry
- Renewable energy
- Material handling
- On-road trucks
- Etc.



Fixing material

SKF offers a wide range of tube-fixing material, such as fixing clips, pipe brackets, cable straps, mounting bases and fixing bolts, which are suitable for tubes typically used in lubrication systems. For more details, please see the chapter on fixing material.

Tools

SKF has a variety of tools that help assemble tubes and hoses in all kinds of systems, such as:

- Tube bending device (for the bending of metal tubes)
- Pipe cutter (for cutting metal tubes and producing a claw groove for quick connection fittings)

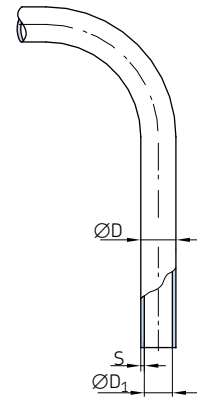
For more information, please see the chapter on tools.

Tube protections

SKF offers a range of solutions for tube protection including coils, protective helixes or corrugated hoses. For more details, please see page 103.

Tubes and hoses

Plastic tubing



| Order number | Designation | Tube outside ØD | Wall thickness S | Min. bending radius ¹⁾ R | Burst pressure ²⁾ | | Material | Weight (100 m) | |
|--|-----------------------------|-----------------|------------------|-------------------------------------|------------------------------|--------|----------|----------------|------|
| | | | | | bar | psi | | kg | lb |
| Plastic tubing semirigid (without plasticizer) | | | | | | | | | |
| WVN715-R02.5X0.5 | TUBE,PA12H 2,5x0,5 NATUR | 2,5 | 0,5 | 25 | 840 | 12 183 | PA12H | 0,33 | 0.73 |
| WVN715-R04X0.85 | TUBE,PA12H 4,0x0,85 NATUR | 4 | 0,85 | 38 | 216 | 3 132 | PA12H | 0,88 | 1.94 |
| WVN715R04X0.85+A89 | TUBE,PA12HL 4,0x0,85 BLACK | 4 | 0,85 | 38 | 216 | 3 132 | PA12HL | 0,88 | 1.94 |
| 112-35127-7 | TUBE, PA12HL 4,0x1,0 BLACK | 4 | 1 | 30 | 267 | 3 872 | PA12HL | 0,9 | 1.98 |
| 112-35127-5 | TUBE,PA12HL 4,0x1,0 NATUR | 4 | 1 | 30 | 267 | 3 872 | PA12HL | 0,9 | 1.98 |
| WVN715-R06X1 | TUBE,PA12H 6,0x1,0 NATUR | 6 | 1 | 63 | 159 | 2 306 | PA12H | 1,61 | 3.55 |
| WVN715-R06X1.25 | TUBE,PA12H 6,0x1,25 NATUR | 6 | 1,25 | 63 | 210 | 3 045 | PA12H | 1,92 | 4.23 |
| WVN715R06X1.25+A89 | TUBE,PA12HL 6,0x1,25 BLACK | 6 | 1,25 | 63 | 210 | 3 045 | PA12HL | 2,16 | 4.76 |
| 112-35127-2 | TUBE,PA12HL 6,0x1,5 BLACK | 6 | 1,5 | 40 | 267 | 3 872 | PA12HL | 2,29 | 5.05 |
| WVN715-R08x1.25 | TUBE,PA12H 8,0x1,25 NATUR | 8 | 1,25 | 76 | 147 | 2 132 | PA12H | 2,73 | 6.02 |
| Plastic tubing flexible (containing plasticizer) | | | | | | | | | |
| WVN716-R04X0.85 | TUBE,PA12PH 4,0x0,85 NATUR | 4 | 0,85 | 38 | 108 | 1 566 | PA12PH | 0,53 | 1.17 |
| WVN716R04X0.85+A89 | TUBE,PA12PHL 4,0x0,85 BLACK | 4 | 0,85 | 38 | 108 | 1 566 | PA12PHL | 0,53 | 1.17 |
| 112-35225-4 | TUBE,PA12PHL 4,0x1,0 BLACK | 4 | 1 | 27 | 132 | 1 914 | PA12PHL | 0,63 | 1.39 |
| WVN716-R06X1.25 | TUBE,PA12PH 6,0x1,25 NATUR | 6 | 1,25 | 63 | 105 | 1 522 | PA12PH | 2 | 4.41 |
| WVN716R06X1.25+A89 | TUBE,PA12PHL 6,0x1,25 BLACK | 6 | 1,25 | 63 | 105 | 1 522 | PA12PHL | 2 | 4.41 |
| WVN716-R08X1.25 | TUBE,PA12PH 8,0x1,25 NATUR | 8 | 1,25 | 80 | 75 | 1 087 | PA12PH | 2,8 | 6.17 |

¹⁾ without bending device
²⁾ the permissible burst pressure is lower at higher temperatures (→ pressure utilization factor table).

Pressure utilization factor

| Temperature up to °C | Pressure efficiency % |
|----------------------|-----------------------|
| 23 | 100 |
| 30 | 83 |
| 40 | 72 |
| 50 | 64 |
| 60 | 57 |
| 70 | 52 |
| 80 | 47 |

The pressure utilization factor indicates the percentage utilization of effective stress available in the specified temperature ranges, based on 23 °C.

Technical Data

| | | |
|--------------------------|--|--|
| Material | PA 12 H polyamide 12, semirigid, unplasticized as per DIN 73378, stabilized against heat and aging. | PA 12 HL (black tubing) polyamide 12, semirigid, unplasticized as per DIN 73378, stabilized against light, heat and aging. |
| | PA 12 PH polyamide 12, flexible, containing plasticizer as per DIN 73378, stabilized against heat and aging. | PA 12 PHL (black tubing) polyamide 12, flexible, containing plasticizer as per DIN 73378, stabilized against light, heat, and aging. |
| Temperature range | -60 to +80 °C | -60 to +80 °C |

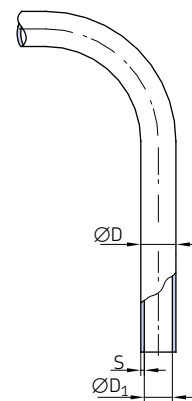
Tube and hose protections



| Order number | Designation | Ø | Material | Weight | | |
|---------------------|--------------------------------|-------|----------|----------------------------|-----|------|
| | | | | g | lb | |
| per linear meter | | | | | | |
| Corrugated tube | | | | | | |
| 982-760-120 | TUBE,CORRUGATED PA6 NW8 | BLACK | 8,4 | Polyamide 6, black colour | 20 | 0.04 |
| 982-760-130 | TUBE,CORRUGATED PA6 NW10 | BLACK | 10 | Polyamide 6, black colour | 26 | 0.06 |
| 982-760-160 | TUBE,CORRUGATED PA6 NW12 | BLACK | 12,3 | Polyamide 6, black colour | 34 | 0.07 |
| Spring coil | | | | | | |
| 982-760-122 | SPRING COIL DI6,1xD1,2 1.4310 | | 6,1 | Stainless steel | 64 | 0.14 |
| 982-760-132 | SPRING COIL DI10,6xD1,2 1.4310 | | 10,6 | Stainless steel | 64 | 0.14 |
| 982-760-142 | SPRING COIL DI13,5xD1,5 1.4310 | | 12,5 | Stainless steel | 64 | 0.14 |
| 111-35306-5 | SPRING COIL DI17xD1,8 1.4310 | | 17 | Stainless steel | 290 | 0.64 |
| Plastic helix | | | | | | |
| 113-35075-2 | PLASTIC HELIX GR. 6 BLACK | | 5-20 | Polyethylene, black colour | 13 | 0.03 |
| 113-35075-3 | PLASTIC HELIX GR.12 BLACK | | 9-30 | Polyethylene, black colour | 48 | 0.11 |
| Spiral hose slotted | | | | | | |
| 982-760-102 | SPIRAL HOSE PP NW8 SLOTTED | | 6-9 | Polypropylene | 25 | 0.06 |
| 982-760-172 | SPIRAL HOSE PP NW15 SLOTTED | | 10-16 | Polypropylene | 100 | 0.22 |

Tubes and hoses

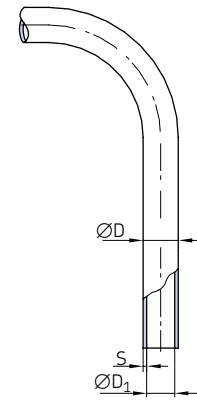
Steel tubing



| Order number | Designation | ØD | D ₁ | Material | Operating pressure max. | | Weight | |
|--------------------|-----------------------------|----|----------------|--|-------------------------|-------|--------|------|
| | | | | | bar | psi | kg/m | lb/m |
| | | mm | mm | | | | | |
| 982-120-041 | TUBE, E235+N D 4,0x 0,7 CF | 4 | 2,6 | Steel tubing, galvanized surface (Cr-6 free) | 368 | 5 340 | 0,063 | 0.14 |
| 982-120-040 | TUBE, E235+N D 4,0x 1,0 CF | 4 | 2 | Steel tubing, galvanized surface (Cr-6 free) | 500 | 7 250 | 0,074 | 0.16 |
| 982-120-061 | TUBE, E235+N D 6,0x 0,7 CF | 6 | 4,6 | Steel tubing, galvanized surface (Cr-6 free) | 333 | 4 830 | 0,12 | 0.26 |
| 105-35251-1 | TUBE, E235+N D 6,0x 1,0 CF | 6 | 4 | Steel tubing, galvanized surface (Cr-6 free) | 372 | 5 390 | 0,123 | 0.27 |
| 105-35251-3 | TUBE, E235+N D 8,0x 1,0 CF | 8 | 6 | Steel tubing, galvanized surface (Cr-6 free) | 333 | 4 830 | 0,173 | 0.38 |
| 982-120-100 | TUBE, E235+N D 10,0x 1,0 CF | 10 | 8 | Steel tubing, galvanized surface (Cr-6 free) | 282 | 4 090 | 0,222 | 0.49 |
| 105-35025-5 | TUBE, E235+N D 10,0x 1,5 CF | 10 | 7 | Steel tubing, galvanized surface (Cr-6 free) | 373 | 5 410 | 0,314 | 0.69 |
| 105-35134-3 | TUBE, E235+N D 12,0x 1,5 CF | 12 | 9 | Steel tubing, galvanized surface (Cr-6 free) | 353 | 5 120 | 0,388 | 0.86 |
| 105-35134-9 | TUBE, E235+N D 15,0x 1,5 CF | 15 | 12 | Steel tubing, galvanized surface (Cr-6 free) | 282 | 4 090 | 0,499 | 1.1 |
| 105-35183-3 | TUBE, E235+N D 16,0x 2,0 CF | 16 | 12 | Steel tubing, galvanized surface (Cr-6 free) | 353 | 5 120 | 0,691 | 1.52 |
| 982-120-180 | TUBE, E235+N D 18,0x 1,0 CF | 18 | 15 | Steel tubing, galvanized surface (Cr-6 free) | 157 | 2 280 | 0,61 | 1.35 |
| 105-35134-1 | TUBE, E235+N D 20,0x 2,0 CF | 20 | 16 | Steel tubing, galvanized surface (Cr-6 free) | 282 | 4 090 | 0,888 | 1.96 |
| 105-35308-1 | TUBE, E235+N D 28,0x 2,0 CF | 28 | 24 | Steel tubing, galvanized surface (Cr-6 free) | 201 | 2 910 | 1,282 | 2.83 |
| 105-35134-4 | TUBE, E235+N D 30,0x 3,0 CF | 30 | 24 | Steel tubing, galvanized surface (Cr-6 free) | 282 | 4 090 | 1,998 | 4.41 |

Tubes and hoses

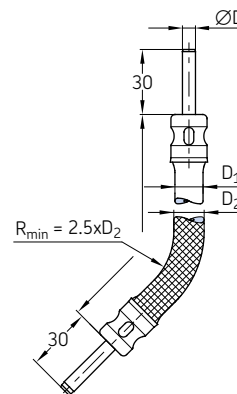
Stainless steel tubing



| Order number | Designation | ØD | D ₁ | Material | Operating pressure max. | | Weight | | |
|---------------------------|------------------------------|-----|----------------|--|-------------------------|-------|--------|------|--|
| | | | | | bar | psi | kg/m | lb/m | |
| | | mm | mm | | | | | | |
| D1127R02.5x0.5+A46 | TUBE, NIRO 1.4301 D 2,5x0,5 | 2,5 | 1,5 | Stainless steel (material 1.4301/1.4306) | 386 | 5 600 | 0,042 | 0,09 | |
| DIN2462-R04x1+A46 | TUBE, NIRO 1.4301 D 4,0x1,0 | 4 | 2 | Stainless steel (material 1.4301/1.4306) | 466 | 6 760 | 0,075 | 0,17 | |
| 106-35203-4 | TUBE, NIRO 1.4571 D 6,0x1,0 | 6 | 4 | Stainless steel 1.4571 | 426 | 6 180 | 0,125 | 0,28 | |
| 106-35203-3 | TUBE, NIRO 1.4571 D 8,0x1,0 | 8 | 6 | Stainless steel 1.4571 | 368 | 5 340 | 0,169 | 0,37 | |
| DIN2462-R010x1+A46 | TUBE, NIRO 1.4301 D 10,0x1,0 | 10 | 8 | Stainless steel (material 1.4301/1.4306) | 231 | 3 350 | 0,225 | 0,5 | |
| 106-35203-2 | TUBE, NIRO 1.4571 D 10,0x1,5 | 10 | 7 | Stainless steel 1.4571 | 389 | 5 640 | 0,319 | 0,7 | |
| 106-35203-1 | TUBE, NIRO 1.4571 D 20,0x2,0 | 20 | 16 | Stainless steel 1.4571 | 294 | 4 260 | 0,901 | 1,99 | |
| 106-35292-2 | TUBE, NIRO 1.4571 D 22,0x2,0 | 22 | 18 | Stainless steel 1.4571 | 267 | 3 870 | 1,002 | 2,21 | |
| 106-35292-1 | TUBE, NIRO 1.4571 D 28,0x2,0 | 28 | 24 | Stainless steel 1.4571 | 210 | 3 050 | 1,302 | 2,87 | |
| 106-35203-7 | TUBE, NIRO 1.4571 D 30,0x3,0 | 30 | 24 | Stainless steel 1.4571 | 294 | 4 260 | 2,028 | 4,47 | |
| 106-35231-1 | TUBE, NIRO 1.4301 D 6,0x1,0 | 6 | 4 | Stainless steel 1.4301 | 400 | 5 800 | 0,123 | 0,27 | |
| 106-35231-2 | TUBE, NIRO 1.4301 D 8,0x1,0 | 8 | 6 | Stainless steel 1.4301 | 310 | 4 500 | 0,17 | 0,37 | |
| 106-35231-3 | TUBE, NIRO 1.4301 D 10,0x1,5 | 10 | 7 | Stainless steel 1.4301 | 365 | 5 290 | 0,315 | 0,69 | |
| 106-35231-6 | TUBE, NIRO 1.4301 D 20,0x2,0 | 20 | 16 | Stainless steel 1.4301 | 253 | 3 670 | 0,888 | 1,96 | |
| 106-35267-4 | TUBE, NIRO 1.4301 D 22,0x2,0 | 22 | 18 | Stainless steel 1.4301 | 232 | 3 360 | 0,986 | 2,17 | |

Tubes and hoses

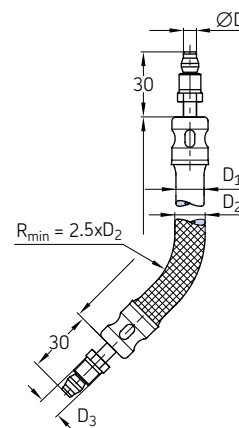
Low-pressure hoses for main lines max. 45 bar with pipe stud on both ends



| Order number | Designation ¹⁾ | Tube ØD | Length | Rubber ØD ₁ | Metal braided D ₂ | Max. increase in volume at 80 bar | Weight | |
|---|---|------------|--------|---------------------------|------------------------------------|---|--------|------|
| | | mm | mm | mm | mm | cm ³ /m | g | lb |
| Low-pressure hoses with pipe stud Ø4 mm | | | | | | | | |
| 714-180 | HOSE,CR 45 DN 3x 180,STU 4 | 4 | 180 | 11 | – | 2,5 | 39 | 0.09 |
| 714-220 | HOSE,CR 45 DN 3x 220,STU 4 | 4 | 220 | 11 | – | 2,5 | 43 | 0.09 |
| 714-260 | HOSE,CR 45 DN 3x 260,STU 4 | 4 | 260 | 11 | – | 2,5 | 48 | 0.11 |
| 714-300 | HOSE,CR 45 DN 3x 300,STU 4 | 4 | 300 | 11 | – | 2,5 | 57 | 0.13 |
| 714-380 | HOSE,CR 45 DN 3x 380,STU 4 | 4 | 380 | 11 | – | 2,5 | 61 | 0.13 |
| 714-420 | HOSE,CR 45 DN 3x 420,STU 4 | 4 | 420 | 11 | – | 2,5 | 70 | 0.15 |
| 714-450 | HOSE,CR 45 DN 3x 450,STU 4 | 4 | 450 | 11 | – | 2,5 | 74 | 0.16 |
| 714-500 | HOSE,CR 45 DN 3x 500,STU 4 | 4 | 500 | 11 | – | 2,5 | 84 | 0.19 |
| 714-580 | HOSE,CR 45 DN 3x 580,STU 4 | 4 | 580 | 11 | – | 2,5 | 92 | 0.20 |
| Low-pressure hoses with pipe stud Ø4 mm and metal braid | | | | | | | | |
| 714-180-M | HOSE,CR 45 DN 3x 180,STU 4 MET.BRAID. | 4 | 180 | 11 | 12 | 2,5 | 56 | 0.12 |
| 714-260-M | HOSE,CR 45 DN 3x 260,STU 4 MET.BRAID. | 4 | 260 | 11 | 12 | 2,5 | 69 | 0.15 |
| 714-300-M | HOSE,CR 45 DN 3x 300,STU 4 MET.BRAID. | 4 | 300 | 11 | 12 | 2,5 | 75 | 0.17 |
| 714-400-M | HOSE,CR 45 DN 3x 400,STU 4 MET.BRAID. | 4 | 400 | 11 | 12 | 2,5 | 97 | 0.21 |
| 714-500-M | HOSE,CR 45 DN 3x 500,STU 4 MET.BRAID. | 4 | 500 | 11 | 12 | 2,5 | 119 | 0.26 |
| 714-580-M | HOSE,CR 45 DN 3x 580,STU 4 MET.BRAID. | 4 | 580 | 11 | 12 | 2,5 | 167 | 0.37 |
| Low-pressure hoses with pipe stud Ø6 mm | | | | | | | | |
| 716-220 | HOSE,CR 45 DN 4,5x 220,STU 6 | 6 | 220 | 13 | – | 3,6 | 64 | 0.14 |
| 716-300 | HOSE,CR 45 DN 4,5x 300,STU 6 | 6 | 300 | 13 | – | 3,6 | 72 | 0.16 |
| 716-340 | HOSE,CR 45 DN 4,5x 340,STU 6 | 6 | 340 | 13 | – | 3,6 | 79 | 0.17 |
| 716-380 | HOSE,CR 45 DN 4,5x 380,STU 6 | 6 | 380 | 13 | – | 3,6 | 86 | 0.19 |
| 716-420 | HOSE,CR 45 DN 4,5x 420,STU 6 | 6 | 420 | 13 | – | 3,6 | 90 | 0.20 |
| 716-500 | HOSE,CR 45 DN 4,5x 500,STU 6 | 6 | 500 | 13 | – | 3,6 | 101 | 0.22 |
| 716-580 | HOSE,CR 45 DN 4,5x 580,STU 6 | 6 | 580 | 13 | – | 3,6 | 128 | 0.28 |
| Low-pressure hoses with pipe stud Ø6 mm and metal braid | | | | | | | | |
| 716-300-M | HOSE,CR 45 DN 4,5x 300,STU6 MET.BRAID. | 6 | 300 | 13 | 14 | 3,6 | 108 | 0.24 |
| 716-400-M | HOSE,CR 45 DN 4,5x 400,STU6 MET.BRAID. | 6 | 400 | 13 | 14 | 3,6 | 140 | 0.31 |
| 716-500-M | HOSE,CR 45 DN 4,5x 500,STU6 MET.BRAID. | 6 | 500 | 13 | 14 | 3,6 | 165 | 0.36 |
| Low-pressure hoses with pipe stud Ø8 mm | | | | | | | | |
| 718-340 | HOSE,CR 45 DN 6,5x 340,STU 8 | 8 | 340 | 15 | – | 4,4 | 117 | 0.26 |
| 718-450 | HOSE,CR 45 DN 6,5x 450,STU 8 | 8 | 450 | 15 | – | 4,4 | 133 | 0.29 |
| 718-580 | HOSE,CR 45 DN 6,5x 580,STU 8 | 8 | 580 | 15 | – | 4,4 | 141 | 0.31 |
| Low-pressure hoses with pipe stud Ø8 mm and metal braid | | | | | | | | |
| 718-400-M | HOSE,CR 45 DN 6,5x 400,STU 8 MET.BRAID. | 8 | 400 | 15 | 16 | 4,4 | 136 | 0.30 |
| 718-500-M | HOSE,CR 45 DN 6,5x 500,STU 8 MET.BRAID. | 8 | 500 | 15 | 16 | 4,4 | 174 | 0.38 |

¹⁾ Material hose: mineral oil resistant CR rubber inside; 2 layers of braided rayon, outside rubber conditionally oil resistant, resistant to light cracks and ozone.
Material metal braid: galvanized steel wire; tube ends: galvanized steel pipe.

Low-pressure hoses for main lines max. 45 bar with tapered sleeve and socket union on both ends

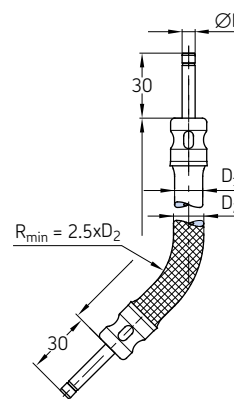


| Order number | Designation ¹⁾ | Tube ØD | Length | Rubber ØD ₁ | Metal braided D ₂ | Thread D ₃ | Max. increase in volume at 80 bar | Weight | |
|---|--|------------|--------|---------------------------|------------------------------------|--------------------------|---|--------|------|
| | | mm | mm | mm | mm | mm | cm ³ /m | g | lb |
| Low-pressure hoses with tapered sleeve socket union | | | | | | | | | |
| 714-180-K | HOSE,CR 45 DN 3x 180,M8x1 | 4 | 180 | 11 | – | M8x1 | 2,5 | 45 | 0.10 |
| 714-220-K | HOSE,CR 45 DN 3x 220,M8x1 | 4 | 220 | 11 | – | M8x1 | 2,5 | 49 | 0.11 |
| 714-260-K | HOSE,CR 45 DN 3x 260,M8x1 | 4 | 260 | 11 | – | M8x1 | 2,5 | 53 | 0.12 |
| 714-300-K | HOSE,CR 45 DN 3x 300,M8x1 | 4 | 300 | 11 | – | M8x1 | 2,5 | 59 | 0.13 |
| 714-380-K | HOSE,CR 45 DN 3x 380,M8x1 | 4 | 380 | 11 | – | M8x1 | 2,5 | 68 | 0.15 |
| 714-420-K | HOSE,CR 45 DN 3x 420,M8x1 | 4 | 420 | 11 | – | M8x1 | 2,5 | 76 | 0.17 |
| 714-450-K | HOSE,CR 45 DN 3x 450,M8x1 | 4 | 450 | 11 | – | M8x1 | 2,5 | 84 | 0.19 |
| 714-500-K | HOSE,CR 45 DN 3x 500,M8x1 | 4 | 500 | 11 | – | M8x1 | 2,5 | 90 | 0.20 |
| 714-580-K | HOSE,CR 45 DN 3x 580,M8x1 | 4 | 580 | 11 | – | M8x1 | 2,5 | 100 | 0.22 |
| Low-pressure hoses with tapered sleeve socket union and metal braid | | | | | | | | | |
| 714-180-MK | HOSE,CR 45 DN 3x 180,M8x1 MET.BRAID. | 4 | 180 | 11 | 12 | M8x1 | 2,5 | 63 | 0.14 |
| 714-260-MK | HOSE,CR 45 DN 3x 260,M8x1 MET.BRAID. | 4 | 260 | 11 | 12 | M8x1 | 2,5 | 80 | 0.18 |
| 714-300-MK | HOSE,CR 45 DN 3x 300,M8x1 MET.BRAID. | 4 | 300 | 11 | 12 | M8x1 | 2,5 | 85 | 0.19 |
| 714-400-MK | HOSE,CR 45 DN 3x 400,M8x1 MET.BRAID. | 4 | 400 | 11 | 12 | M8x1 | 2,5 | 110 | 0.24 |
| 714-500-MK | HOSE,CR 45 DN 3x 500,M8x1 MET.BRAID. | 4 | 500 | 11 | 12 | M8x1 | 2,5 | 120 | 0.26 |
| 714-580-MK | HOSE,CR 45 DN 3x 580,M8x1 MET.BRAID. | 4 | 580 | 11 | 12 | M8x1 | 2,5 | 140 | 0.31 |
| Low-pressure hoses with tapered sleeve socket union | | | | | | | | | |
| 716-220-K | HOSE,CR 45 DN 4,5x 220,M10x1 | 6 | 220 | 13 | – | M10x1 | 3,6 | 68 | 0.15 |
| 716-300-K | HOSE,CR 45 DN 4,5x 300,M10x1 | 6 | 300 | 13 | – | M10x1 | 3,6 | 80 | 0.18 |
| 716-340-K | HOSE,CR 45 DN 4,5x 340,M10x1 | 6 | 340 | 13 | – | M10x1 | 3,6 | 85 | 0.19 |
| 716-380-K | HOSE,CR 45 DN 4,5x 380,M10x1 | 6 | 380 | 13 | – | M10x1 | 3,6 | 92 | 0.20 |
| 716-420-K | HOSE,CR 45 DN 4,5x 420,M10x1 | 6 | 420 | 13 | – | M10x1 | 3,6 | 98 | 0.22 |
| 716-500-K | HOSE,CR 45 DN 4,5x 500,M10x1 | 6 | 500 | 13 | – | M10x1 | 3,6 | 113 | 0.25 |
| 716-580-K | HOSE,CR 45 DN 4,5x 580,M10x1 | 6 | 580 | 13 | – | M10x1 | 3,6 | 127 | 0.28 |
| Low-pressure hoses with tapered sleeve socket union and metal braid | | | | | | | | | |
| 716-300-MK | HOSE,CR 45 DN 4,5x 300,M10x1 MET.BRAID. | 6 | 300 | 13 | 14 | M10x1 | 3,6 | 110 | 0.24 |
| 716-400-MK | HOSE,CR 45 DN 4,5x 400,M10x1 MET.BRAID. | 6 | 400 | 13 | 14 | M10x1 | 3,6 | 140 | 0.31 |
| 716-450-MK | HOSE,CR 45 DN 4,5x 450,M10x1 MET.BRAID. | 6 | 450 | 13 | 14 | M10x1 | 3,6 | 160 | 0.35 |
| 716-500-MK | HOSE,CR 45 DN 4,5x 500,M10x1 MET.BRAID. | 6 | 500 | 13 | 14 | M10x1 | 3,6 | 180 | 0.40 |
| Low-pressure hoses with tapered sleeve socket union | | | | | | | | | |
| 718-400-K | HOSE,CR 45 DN 6,5x 400,M14x1,5 | 8 | 340 | 15 | – | M14x1,5 | 4,4 | 116 | 0.26 |
| 718-450-K | HOSE,CR 45 DN 6,5x 450,M14x1,5 | 8 | 450 | 15 | – | M14x1,5 | 4,4 | 147 | 0.32 |
| 718-500-K | HOSE,CR 45 DN 6,5x 500,M14x1,5 | 8 | 580 | 15 | – | M14x1,5 | 4,4 | 164 | 0.36 |
| Low-pressure hoses with tapered sleeve socket union and metal braid | | | | | | | | | |
| 718-400-MK | HOSE,CR 45 DN6,5x 400,M14x1,5 MET.BRAID. | 8 | 400 | 15 | 16 | M14x1,5 | 4,4 | 160 | 0.35 |
| 718-450-MK | HOSE,CR 45 DN6,5x 450,M14x1,5 MET.BRAID. | 8 | 450 | 15 | 16 | M14x1,5 | 4,4 | 195 | 0.43 |
| 718-500-MK | HOSE,CR 45 DN6,5x 500,M14x1,5 MET.BRAID. | 8 | 500 | 15 | 16 | M14x1,5 | 4,4 | 221 | 0.49 |

¹⁾ Material hose: mineral oil resistant CR rubber inside; 2 layers of braided rayon, outside rubber conditionally oil resistant, resistant to light cracks and ozone.
Material metal braid: galvanized steel wire; tube ends: galvanized steel tubing.

Tubes and hoses

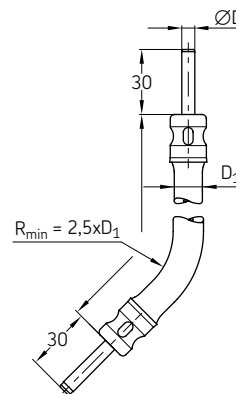
Low-pressure hoses for main lines max. 45 bar with pipe stud on both ends and with claw groove for quick connectors



| Order number | Designation ¹⁾ | Tube ØD | Length | Rubber ØD ₁ | Metal braided D ₂ | Max. increase in volume at 80 bar | Weight | |
|---|--------------------------------------|------------|--------|---------------------------|------------------------------------|---|--------|------|
| | | mm | mm | mm | mm | cm ³ /m | g | lb |
| Low-pressure hoses with pipe stud Ø4 mm with claw groove for quick connectors | | | | | | | | |
| 714-180-VS | HOSE,CR 45 DN 3x 180,VS | 4 | 180 | 11 | – | 2,5 | 39 | 0.09 |
| 714-220-VS | HOSE,CR 45 DN 3x 220,VS | 4 | 220 | 11 | – | 2,5 | 43 | 0.09 |
| 714-260-VS | HOSE,CR 45 DN 3x 260,VS | 4 | 260 | 11 | – | 2,5 | 48 | 0.11 |
| 714-300-VS | HOSE,CR 45 DN 3x 300,VS | 4 | 300 | 11 | – | 2,5 | 57 | 0.13 |
| 714-380-VS | HOSE,CR 45 DN 3x 380,VS | 4 | 380 | 11 | – | 2,5 | 61 | 0.13 |
| 714-420-VS | HOSE,CR 45 DN 3x 420,VS | 4 | 420 | 11 | – | 2,5 | 70 | 0.15 |
| 714-450-VS | HOSE,CR 45 DN3x 450,VS | 4 | 450 | 11 | – | 2,5 | 74 | 0.16 |
| 714-500-VS | HOSE,CR 45 DN 3x 500,VS | 4 | 500 | 11 | – | 2,5 | 84 | 0.19 |
| 714-580-VS | HOSE,CR 45 DN 3x 580,VS | 4 | 580 | 11 | – | 2,5 | 92 | 0.20 |
| Low-pressure hoses with pipe stud Ø4 mm with claw groove for quick connectors and metal braid | | | | | | | | |
| 714-180-M-VS | HOSE,CR 45 DN 3x 180,VS MET.BRAID. | 4 | 180 | 11 | 12 | 2,5 | 56 | 0.12 |
| 714-260-M-VS | HOSE,CR 45 DN 3x 260,VS MET.BRAID. | 4 | 260 | 11 | 12 | 2,5 | 69 | 0.15 |
| 714-300-M-VS | HOSE,CR 45 DN 3x 300,VS MET.BRAID. | 4 | 300 | 11 | 12 | 2,5 | 75 | 0.17 |
| 714-400-M-VS | HOSE,CR 45 DN 3x 400,VS MET.BRAID. | 4 | 400 | 11 | 12 | 2,5 | 97 | 0.21 |
| 714-500-M-VS | HOSE,CR 45 DN 3x 500,VS MET.BRAID. | 4 | 500 | 11 | 12 | 2,5 | 119 | 0.26 |
| 714-580-M-VS | HOSE,CR 45 DN 3x 580,VS MET.BRAID. | 4 | 580 | 11 | 12 | 2,5 | 167 | 0.37 |
| Low-pressure hoses with pipe stud Ø6 mm with claw groove for quick connectors | | | | | | | | |
| 716-220-VS | HOSE,CR 45 DN 4,5x 220,VS | 6 | 220 | 13 | – | 3,6 | 64 | 0.14 |
| 716-300-VS | HOSE,CR 45 DN 4,5x 300,VS | 6 | 300 | 13 | – | 3,6 | 72 | 0.16 |
| 716-340-VS | HOSE,CR 45 DN 4,5x 340,VS | 6 | 340 | 13 | – | 3,6 | 79 | 0.17 |
| 716-380-VS | HOSE,CR 45 DN 4,5x 380,VS | 6 | 380 | 13 | – | 3,6 | 86 | 0.19 |
| 716-420-VS | HOSE,CR 45 DN 4,5x 420,VS | 6 | 420 | 13 | – | 3,6 | 90 | 0.20 |
| 716-500-VS | HOSE,CR 45 DN 4,5x 500,VS | 6 | 500 | 13 | – | 3,6 | 101 | 0.22 |
| 716-580-VS | HOSE,CR 45 DN 4,5x 580,VS | 6 | 580 | 13 | – | 3,6 | 128 | 0.28 |
| Low-pressure hoses with pipe stud Ø6 mm with claw groove for quick connectors and metal braid | | | | | | | | |
| 716-300-M-VS | HOSE,CR 45 DN 4,5x 300,VS MET.BRAID. | 6 | 300 | 13 | 14 | 3,6 | 108 | 0.24 |
| 716-400-M-VS | HOSE,CR 45 DN 4,5x 400,VS MET.BRAID. | 6 | 400 | 13 | 14 | 3,6 | 140 | 0.31 |
| 716-450-M-VS | HOSE,CR 45 DN 4,5x 450,VS MET.BRAID. | 6 | 450 | 13 | 14 | 3,6 | 155 | 0.34 |
| 716-500-M-VS | HOSE,CR 45 DN 4,5x 500,VS MET.BRAID. | 6 | 500 | 13 | 14 | 3,6 | 165 | 0.36 |
| Low-pressure hoses with pipe stud Ø8 mm with claw groove for quick connectors | | | | | | | | |
| 718-340-VS | HOSE,CR 45 DN 6,5x 340,VS | 8 | 340 | 15 | – | 4,4 | 117 | 0.26 |
| 718-450-VS | HOSE,CR 45 DN 6,5x 450,VS | 8 | 450 | 15 | – | 4,4 | 133 | 0.29 |
| 718-580-VS | HOSE,CR 45 DN 6,5x 580,VS | 8 | 580 | 15 | – | 4,4 | 141 | 0.31 |
| Low-pressure hoses with pipe stud Ø8 mm with claw groove for quick connectors and metal braid | | | | | | | | |
| 718-400-M-VS | HOSE,CR 45 DN 6,5x 400,VS MET.BRAID. | 8 | 400 | 15 | 16 | 4,4 | 136 | 0.30 |
| 718-450-M-VS | HOSE,CR 45 DN 6,5x 450,VS MET.BRAID. | 8 | 450 | 15 | 16 | 4,4 | 157 | 0.35 |
| 718-500-M-VS | HOSE,CR 45 DN 6,5x 500,VS MET.BRAID. | 8 | 500 | 15 | 16 | 4,4 | 174 | 0.38 |

¹⁾ Material hose: mineral oil resistant CR rubber inside; 2 layers of braided rayon, outside rubber conditionally oil resistant, resistant to light cracks and ozone.
Material metal braid: galvanized steel wire; tube ends: galvanized steel pipe.

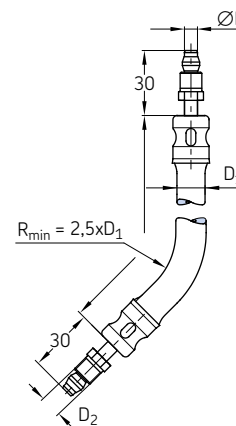
Low-pressure hoses for secondary lines max. 15 bar with pipe stud on both ends



| Order number | Designation ¹⁾ | Tube | Length | Rubber | Weight | |
|--------------|----------------------------|------|--------|-----------------|--------|------|
| | | ØD | mm | ØD ₁ | g | lb |
| 734-180 | HOSE,CR 15 DN 3x 180,STU 4 | 4 | 180 | 8,8 | 30 | 0,07 |
| 734-220 | HOSE,CR 15 DN 3x 220,STU 4 | 4 | 220 | 8,8 | 33 | 0,07 |
| 734-260 | HOSE,CR 15 DN 3x 260,STU 4 | 4 | 260 | 8,8 | 37 | 0,08 |
| 734-300 | HOSE,CR 15 DN 3x 300,STU 4 | 4 | 300 | 8,8 | 40 | 0,09 |
| 734-380 | HOSE,CR 15 DN 3x 380,STU 4 | 4 | 380 | 8,8 | 45 | 0,10 |
| 734-420 | HOSE,CR 15 DN 3x 420,STU 4 | 4 | 420 | 8,8 | 47 | 0,10 |
| 734-450 | HOSE,CR 15 DN 3x 450,STU 4 | 4 | 450 | 8,8 | 48 | 0,11 |
| 734-500 | HOSE,CR 15 DN 3x 500,STU 4 | 4 | 500 | 8,8 | 58 | 0,13 |
| 734-580 | HOSE,CR 15 DN 3x 580,STU 4 | 4 | 580 | 8,8 | 61 | 0,13 |

¹⁾ Material hose: mineral oil resistant CR rubber inside; 2 layers of braided rayon, outside rubber conditionally oil resistant, resistant to light cracks and ozone.
Material metal braid: galvanized steel wire; tube ends: galvanized steel pipe.

Low-pressure hoses for secondary lines max. 15 bar with tapered sleeve and socket union on both ends

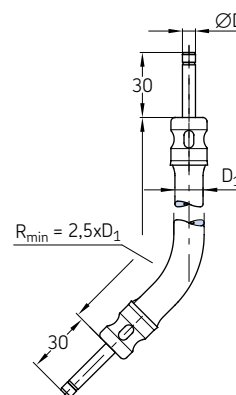


| Order number | Designation ¹⁾ | Tube | Length | Rubber | Thread | Weight | |
|--------------|---------------------------|------|--------|-----------------|-----------------|--------|------|
| | | ØD | mm | ØD ₁ | ØD ₂ | g | lb |
| 734-180-K | HOSE,CR 15 DN 3x 180,M8x1 | 4 | 180 | 8,8 | M8x1 | 36 | 0,08 |
| 734-220-K | HOSE,CR 15 DN 3x 220,M8x1 | 4 | 220 | 8,8 | M8x1 | 41 | 0,09 |
| 734-260-K | HOSE,CR 15 DN 3x 260,M8x1 | 4 | 260 | 8,8 | M8x1 | 44 | 0,10 |
| 734-300-K | HOSE,CR 15 DN 3x 300,M8x1 | 4 | 300 | 8,8 | M8x1 | 46 | 0,10 |
| 734-380-K | HOSE,CR 15 DN 3x 380,M8x1 | 4 | 380 | 8,8 | M8x1 | 51 | 0,11 |
| 734-420-K | HOSE,CR 15 DN 3x 420,M8x1 | 4 | 420 | 8,8 | M8x1 | 53 | 0,12 |
| 734-450-K | HOSE,CR 15 DN 3x 450,M8x1 | 4 | 450 | 8,8 | M8x1 | 56 | 0,12 |
| 734-500-K | HOSE,CR 15 DN 3x 500,M8x1 | 4 | 500 | 8,8 | M8x1 | 60 | 0,13 |
| 734-580-K | HOSE,CR 15 DN 3x 580,M8x1 | 4 | 580 | 8,8 | M8x1 | 68 | 0,15 |

¹⁾ Material hose: mineral oil resistant CR rubber inside; 2 layers of braided rayon, outside rubber conditionally oil resistant, resistant to light cracks and ozone.
Material metal braid: galvanized steel wire; tube ends: galvanized steel pipe.

Tubes and hoses

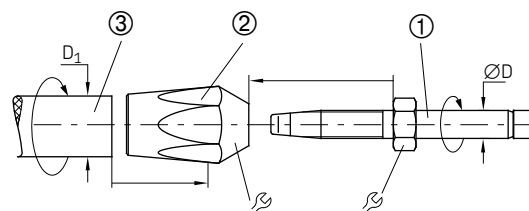
Low-pressure hoses for secondary lines max. 15 bar with pipe stud on both ends and claw groove for quick connectors



| Order number | Designation ¹⁾ | Tube | Length | Rubber | Weight | |
|--------------|---------------------------|------|--------|-----------------|--------|------|
| | | ØD | mm | ØD ₁ | g | lb |
| 734-180-VS | HOSE,CR 15 DN 3x 180,VS | 4 | 180 | 8,8 | 30 | 0.07 |
| 734-220-VS | HOSE,CR 15 DN 3x 220,VS | 4 | 220 | 8,8 | 33 | 0.07 |
| 734-260-VS | HOSE,CR 15 DN 3x 260,VS | 4 | 260 | 8,8 | 37 | 0.08 |
| 734-300-VS | HOSE,CR 15 DN 3x 300,VS | 4 | 300 | 8,8 | 40 | 0.09 |
| 734-380-VS | HOSE,CR 15 DN 3x 380,VS | 4 | 380 | 8,8 | 45 | 0.10 |
| 734-420-VS | HOSE,CR 15 DN 3x 420,VS | 4 | 420 | 8,8 | 47 | 0.10 |
| 734-450-VS | HOSE,CR 15 DN 3x 450,VS | 4 | 450 | 8,8 | 48 | 0.11 |
| 734-500-VS | HOSE,CR 15 DN 3x 500,VS | 4 | 500 | 8,8 | 58 | 0.13 |
| 734-580-VS | HOSE,CR 15 DN 3x 580,VS | 4 | 580 | 8,8 | 61 | 0.13 |

¹⁾ Material hose: mineral oil resistant CR rubber inside; 2 layers of braided rayon, outside rubber conditionally oil resistant, resistant to light cracks and ozone.
Material metal braid: galvanized steel wire; tube ends: galvanized steel pipe.

Low-pressure hoses suitable for self-installation max. 45 bar



| Order number | Designation | Tube ØD | D ₁ | ⌀ | Material | Max. increase in volume ~ 40 bar | Weight | |
|---|--|------------|----------------|----|-------------------------|-------------------------------------|--------|------|
| | | mm | mm | mm | | cm ³ /m | g | lb |
| ① Hose coupling | | | | | | | | |
| 406-704-001 | HOSE COUPLING STRAIGHT D4 BEL | - | - | 8 | Steel, galvanized | 1 | 7 | 0.01 |
| 406-706-001 | HOSE COUPLING STRAIGHT D6 BEL | - | - | 10 | Steel, galvanized | 1,4 | 11 | 0.02 |
| 406-708-001 | HOSE COUPLING STRAIGHT D8 BEL | - | - | 13 | Steel, galvanized | 1,4 | 21 | 0.04 |
| 406-704-001-VS | ¹⁾ HOSE COUPLING STRAIGHT D4 VS | - | - | 8 | Steel, galvanized | 1 | 7 | 0.01 |
| 406-706-001-VS | ¹⁾ HOSE COUPLING STRAIGHT D6 VS | - | - | 10 | Steel, galvanized | 1,4 | 11 | 0.02 |
| 406-708-001-VS | ¹⁾ HOSE COUPLING STRAIGHT D8 VS | - | - | 13 | Steel, galvanized | 1,4 | 21 | 0.04 |
| ② Threaded sleeve | | | | | | | | |
| 406-804-001 | THREADED SLEEVE F.HOSE STUD D4 | - | - | 14 | Brass | 1 | 20 | 0.04 |
| 406-806-001 | THREADED SLEEVE F.HOSE STUD D6 | - | - | 17 | Brass | 1,4 | 31 | 0.07 |
| 406-808-001 | THREADED SLEEVE F.HOSE STUD D8 | - | - | 19 | Brass | 1,4 | 36 | 0.08 |
| ③ Hose | | | | | | | | |
| WVN701-4 | ²⁾ HOSE, CR 45 DN 3 | 4 | 11 | - | Perbunan, braided rayon | 1 | 117 | 0.26 |
| WVN701-6 | ²⁾ HOSE, CR 45 DN 4,5 | 6 | 13 | - | Perbunan, braided rayon | 1,4 | 153 | 0.34 |
| WVN701-8 | ²⁾ HOSE, CR 45 DN 6,5 | 8 | 15 | - | Perbunan, braided rayon | 1,4 | 190 | 0.42 |
| ¹⁾ VS = version with claw groove on tube ends for quick connectors ²⁾ Please quote length when ordering. Max. length available 20 m ³⁾ Perbunan, resistant to mineral oils, with two layers of braided rayon | | | | | | | | |
| Permissible operating pressure: -40 to +100 °C / -40 to +212 °F | | | | | | | | |

Low-pressure hose assignment guide
(products in one and the same line below are combinable)

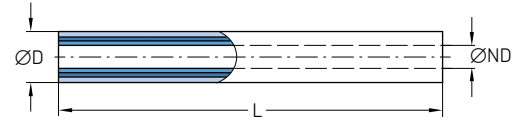
| Hose coupling | Coupling type | ØD | Threaded sleeve | High-pressure hose | Operating pressure | |
|-----------------------|---------------|----|--------------------|--------------------|--------------------|-----|
| | | mm | | | bar | psi |
| 406-704-001 | straight | 4 | 406-804-001 | WVN701-4 | 45 | 653 |
| 406-704-001-VS | straight | 4 | 406-804-001 | WVN701-4 | 45 | 653 |
| 406-706-001 | straight | 6 | 406-806-001 | WVN701-6 | 45 | 653 |
| 406-706-001-VS | straight | 6 | 406-806-001 | WVN701-6 | 45 | 653 |
| 406-708-001 | straight | 8 | 406-808-001 | WVN701-8 | 45 | 653 |
| 406-708-001-VS | straight | 8 | 406-808-001 | WVN701-8 | 45 | 653 |

! Important note
To avoid damage, screw all parts only up to the stop. Do not tighten!

- Installation notes**
- 1 Apply thin film of oil to inner hose end, inner threaded sleeve and outer hose coupling end.
 - 2 Screw threaded sleeve onto hose end up to the stop.
 - 3 Clamp threaded sleeve in vise and screw in hose coupling turning it to the left up to the stop.

Tubes and hoses

High-pressure hoses for self-installation

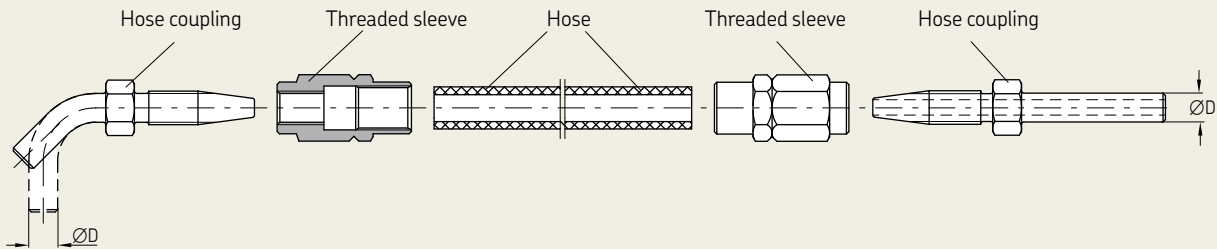


| Order number ¹⁾ | Designation | Tube | Nominal | Length | Material hose | Burst pressure | | Weight | |
|----------------------------|-------------------------------------|------|-------------|--------|---------------------------------------|----------------|--------|--------|-------|
| | | ØD | diameter ND | | | bar | psi | g | lb |
| | | mm | mm | m | | | | | |
| 111-35114-1 | HOSE PL300 NW4,0 HIGHFLEXIBLE | 8,6 | 4 | 1 | Polyamide, polyurethane ²⁾ | 840 | 12 183 | 48 | 0.106 |
| 1110-00000002 | HP HOSE 8,6/4,1-PA6/PUR-BK COIL50M | 8,6 | 4 | 50 | Polyamide, polyurethane ²⁾ | 840 | 12 183 | 2 400 | 5.291 |
| 982-750-111 | HOSE, PL400 NW6,0 HIGHFLEXIBLE | 11,2 | 6 | 1 | Polyamide, polyurethane ²⁾ | 840 | 12 183 | 70 | 0.154 |
| 1110-00000001 | HP HOSE 11,3/6,4-PA6/PUR-BK COIL50M | 11,2 | 6 | 50 | Polyamide, polyurethane ²⁾ | 840 | 12 183 | 3 500 | 7.716 |
| WVN711-10 | HOSE, 3TE,NW8,0 HIGHFLEXIBLE | 16,5 | 8 | 1 | Polyamide, polyurethane ²⁾ | 520 | 7 542 | 198 | 0.432 |

¹⁾ Hoses can be delivered prefilled with lubricant on request.

²⁾ Inner hose = polyamide, soft; pressure reinforcement = polyamide high strength; sheathing = polyurethane

Scheme - High-pressure hose self-mounting components



High-pressure hoses and threaded joints assignment guide (products in one and the same line below are combinable)

| Hose coupling ¹⁾ | Coupling type | ØD | Threaded sleeve | High-pressure hose | Burst pressure | |
|-----------------------------|---------------|----|--------------------|--------------------|----------------|--------|
| | | mm | | | bar | psi |
| 853-380-006-VS | straight | 4 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-370-002(-VS) | straight | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-380-002(-VS) | straight | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-390-002(-VS) | straight | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-380-003(-VS) | 90° | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-390-003(-VS) | 90° | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-380-004(-VS) | 45° | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-380-005(-VS) | straight | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-390-005 | straight | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 853-380-007-VS | 45° | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 456-706-001 | straight | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 855-380-002 | straight | 6 | 853-540-010 | 111-35114-1 | 840 | 12 183 |
| 406-708-005(-VS) | straight | 8 | 406-808-005 | 982-750-111 | 840 | 12 183 |
| 406-710-002 | straight | 10 | 406-810-002 | WVN711-10 | 520 | 7 542 |

¹⁾ 000-000-000(-VS) means both versions 000-000-000 and 000-000-000-VS. To identify hose coupling design details, please see table on page 113.

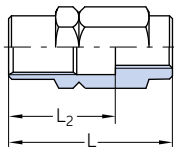
! Important note
To avoid damage, screw all parts only up to the stop. Do not tighten!

Installation notes

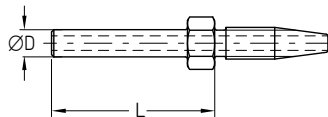
- 1 Apply thin film of oil to inner hose end, inner threaded sleeve and outer hose coupling end.
- 2 Screw threaded sleeve onto hose end up to the stop.
- 3 Clamp threaded sleeve in vise and screw in hose coupling turning it to the left up to the stop.

Threaded joints for high-pressure hoses

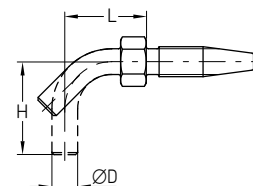
Threaded sleeve



Hose coupling straight



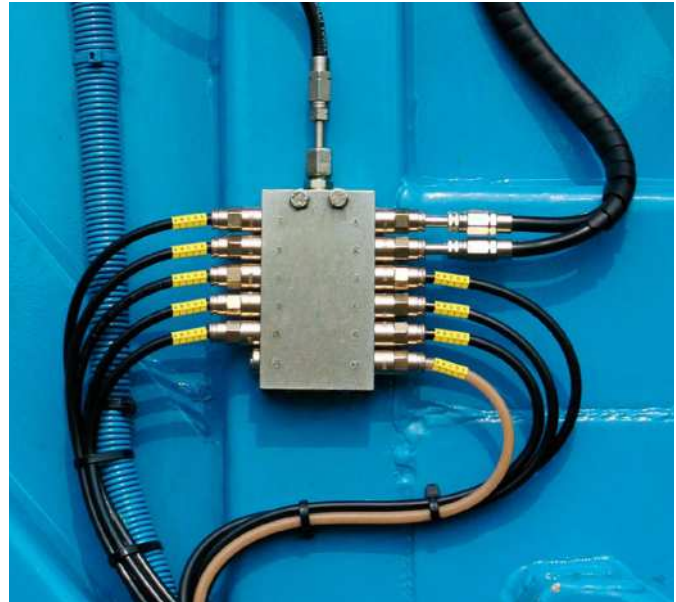
Hose coupling bent



| Order number | Designation | ØD | L | L ₂ | H | Material | Weight | |
|--|------------------------------------|----|----|----------------|----|------------------------|--------|------|
| | | | | | | | mm | mm |
| Threaded sleeves | | | | | | | | |
| 853-540-010 | THREADED SLEEVE F.HOSE STUD D 6 | 6 | 28 | 17 | 17 | Zinc-nickel, Cr-6-free | 12 | 0.26 |
| 406-808-005 | THREADED SLEEVE F.HOSE STUD D 8 | 8 | 35 | 23 | 23 | Zinc-nickel, Cr-6-free | 34 | 0.07 |
| 406-810-002 | THREADED SLEEVE F.HOSE STUD D10 | 10 | 41 | 32 | 32 | Zinc-nickel, Cr-6-free | 47 | 0.10 |
| 432-23676-1 | THREADED SLEEVE F.HOSE STUD 6 VA | 6 | 28 | 17 | 17 | Stainless steel | 12 | 0.26 |
| 406-808-005-S3 | THREADED SLEEVE F.HOSE STUD D 8 VA | 8 | 35 | 23 | 23 | Stainless steel | 34 | 0.07 |
| Hose studs with claw grooves for quick connectors | | | | | | | | |
| 853-380-006-VS | HOSE STUD STRAIGHT D4/NW2 VS | 4 | 39 | – | – | Zinc-nickel, Cr-6-free | 12 | 0.26 |
| 853-370-002-VS | HOSE STUD STRAIGHT D6/NW4 VS | 6 | 32 | – | – | Zinc-nickel, Cr-6-free | 12 | 0.26 |
| 853-380-002-VS | HOSE STUD STRAIGHT D6/NW4 VS | 6 | 39 | – | – | Zinc-nickel, Cr-6-free | 12 | 0.26 |
| 853-390-002-VS | HOSE STUD 45DEGREE D6/NW4 VS | 6 | 75 | – | – | Zinc-nickel, Cr-6-free | 18 | 0.03 |
| 853-390-006-VS | HOSE STUD 10DEGREE D6/NW4 VS | 6 | 70 | – | 10 | Zinc-nickel, Cr-6-free | 18 | 0.03 |
| 853-390-005-VS | HOSE STUD 30DEGREE D6/NW4 VS | 6 | 70 | – | 17 | Zinc-nickel, Cr-6-free | 19 | 0.04 |
| 853-380-004-VS | HOSE STUD 45DEGREE D6/NW4 VS | 6 | 40 | – | 23 | Zinc-nickel, Cr-6-free | 14 | 0.03 |
| 853-380-007-VS | HOSE STUD STRAIGHT D6/NW4 VS | 6 | 65 | – | 18 | Zinc-nickel, Cr-6-free | 19 | 0.04 |
| 853-390-004-VS | HOSE STUD 45DEGREE D6/NW4 VS | 6 | 65 | – | 24 | Zinc-nickel, Cr-6-free | 19 | 0.04 |
| 853-380-003-VS | HOSE STUD 90DEGREE D6/NW4 VS | 6 | 19 | – | 35 | Zinc-nickel, Cr-6-free | 14 | 0.03 |
| 853-390-003-VS | HOSE STUD 90DEGREE D6/NW4 VS | 6 | 30 | – | 50 | Zinc-nickel, Cr-6-free | 19 | 0.04 |
| 406-708-005-VS | HOSE STUD STRAIGHT D8/NW6 VS | 8 | 39 | – | – | Zinc-nickel, Cr-6-free | 21 | 0.05 |
| 855-380-002-VS | HOSE STUD VA STRAIGHT D6/NW4 VS | 6 | 39 | – | – | Stainless steel | 12 | 0.26 |
| 855-380-003-VS | HOSE STUD VA 90DEGREE D6/NW4 VS | 6 | 19 | – | 35 | Stainless steel | 13 | 0.03 |
| Hose studs | | | | | | | | |
| 853-370-002 | HOSE STUD STRAIGHT D6/NW4 BEL | 6 | 26 | – | – | Zinc-nickel, Cr-6-free | 10 | 0.02 |
| 853-380-002 | HOSE STUD STRAIGHT D6/NW4 BEL | 6 | 36 | – | – | Zinc-nickel, Cr-6-free | 12 | 0.02 |
| 853-390-002 | HOSE STUD STRAIGHT D6/NW4 BEL | 6 | 75 | – | – | Zinc-nickel, Cr-6-free | 20 | 0.04 |
| 853-380-004 | HOSE STUD 45DEGREE D6/NW4 BEL | 6 | 23 | – | 11 | Zinc-nickel, Cr-6-free | 20 | 0.04 |
| 853-380-003 | HOSE STUD 90DEGREE D6/NW4 BEL | 6 | 19 | – | 21 | Zinc-nickel, Cr-6-free | 10 | 0.02 |
| 853-390-003 | HOSE STUD 90DEGREE D6/NW4 BEL | 6 | 30 | – | 50 | Zinc-nickel, Cr-6-free | 20 | 0.04 |
| 853-390-004 | HOSE STUD 90DEGREE D6/NW4 BEL | 6 | 24 | – | 36 | Zinc-nickel, Cr-6-free | 16 | 0.03 |
| 406-708-005 | HOSE STUD STRAIGHT D8/NW6 BEL | 8 | 26 | – | – | Zinc-nickel, Cr-6-free | 19 | 0.04 |
| 406-708-006 | HOSE STUD STRAIGHT D8/NW6 BEL | 8 | 32 | – | – | Zinc-nickel, Cr-6-free | 20 | 0.04 |
| 406-708-007 | HOSE STUD STRAIGHT D8/NW6 BEL | 8 | 53 | – | – | Zinc-nickel, Cr-6-free | 24 | 0.05 |
| 406-708-009 | HOSE STUD 45DEGREE D6/NW4 BEL | 8 | 43 | – | 26 | Zinc-nickel, Cr-6-free | 20 | 0.04 |
| 406-708-008 | HOSE STUD 90DEGREE D8/NW6 BEL | 8 | 25 | – | 34 | Zinc-nickel, Cr-6-free | 20 | 0.04 |
| 406-710-002 | HOSE STUD STRAIGHT D10/NW8 BEL | 10 | 35 | – | – | Zinc-nickel, Cr-6-free | 32 | 0.07 |
| 855-380-002 | HOSE STUD VA STRAIGHT D6/NW4 BEL | 6 | 36 | – | – | Stainless steel | 12 | 0.02 |
| 855-380-003 | HOSE STUD VA 90DEGREE D6/NW4 BEL | 6 | 19 | – | 21 | Stainless steel | 13 | 0.02 |
| 406-708-005-S3 | HOSE STUD STRAIGHT D8/NW6 BEL | 8 | 22 | – | – | Stainless steel | 20 | 0.04 |

Tubes and hoses

Plastic tube T



Description

Tailored SKF plastic tubes are configurable tubes in custom lengths optionally available prefilled with standard greases for quick and easy mounting. They come in nominal diameters from 2 to 10 mm and optionally also with hose protection and customer-specific markings as hose label, printing or with clips. Configuration takes place via SKF online tube configurator or via SKF parts library app.

Features and benefits

- Custom tube lengths for quick and easy installation
- Easy online configuration with automatically created order numbers and CAD data download
- Prefilled with SKF or special grease
- Customized tube end markings
- Optionally with tube protection
- Imprints for easy identification

Applications

- Metal and plastic forming machinery
- Construction machinery
- Agriculture machinery
- Renewable energy
- Machine tools
- Printing
- Marine

Technical data

| | |
|-----------------------|--|
| Function | plastic tubes |
| Operating temperature | -60 to +80 °C; -76 to 175 °F |
| Nominal diameters | 2, 4, 6, 8, 10 mm |
| Lengths | 100–50 000 mm; 3.9–1 968 in |
| Lubricants | oil, fluid grease and grease up to NLGI 3 |
| Optional markings | label, printing or clips |
| Materials | Polyamide PA 6.12 or Polyamide PA 12 acc. to DIN 73378 |
| Material options | L = black, stabilized against light PH = flexible, containing plasticizer, stabilized against heat and aging H = semirigid, unplasticized, stabilized against heat and aging |

Online tube configurator

3D CAD data, technical drawings and data sheets of plastic tubes are now available in native format in the online parts library. In addition to enjoying easy CAD downloads, you can configure tubes with custom lengths and integrate them into your design process.



<https://skf-lubrication.partcommunity.com>

High-pressure hose H



Description

Tailored high-pressure hoses are configurable hoses in custom lengths and fittings for quick and easy mounting. They are available prefilled with standard greases and come with nominal diameters of 6, 8 and 10 mm. In case of demanding operating environments of the lubrication system consider using hose protections. To simplify installation of more complex systems with many lubrication lines SKF offers customer-specific markings, for example with a hose label, printing or with clips. Configuration of tailored hoses takes place via SKF online configurator or via SKF parts library app.

Features and benefits

- Individual hose lengths and customized fittings for quick and easy installation
- Easy online configuration with automatically created order numbers and CAD data download
- Prefilled with standard or individual grease
- Customized hose end markings
- Imprints for easy identification
- Optional hose protection

Applications

- Construction machinery
- Agriculture machinery
- Renewable energy
- Railways
- Marine

Technical data

| | |
|-----------------------|---|
| Function | high-pressure hoses |
| Operating temperature | ND6, ND8 = -40 to +70 °C, -40 to 158 °F ND10 = -40 to +100 °C, -40 to 212 °F |
| Material | polyamide (soft), polyester (high strength), polyurethane, synthetic rubber |
| Nominal diameter | 6, 8 or 10 mm |
| Lengths | 50–50 000 mm; 1.9–1 968 in |
| Lubricants | oil, fluid grease and grease up to NLGI 3 |
| Optional markings | label, printing or clips |
| Operating pressure | max. 130–840 bar; 1 885–12 183 psi depending on model/size/length |

Online hose configurator

3D CAD data, technical drawings and data sheets of high-pressure hoses are now available in native format in the online parts library. In addition to enjoying easy CAD downloads, you can combine and configure hoses with the fittings of your choice and integrate them into your design process.



<https://skf-lubrication.partcommunity.com>

Fixing material



Description

The following chapter includes the screws and bolts for fixing the individual components of lubrication systems, as well as cable straps, mounting bases and a large selection of pipe clamps for fixing the pipes.

Clamps for pipes with a diameter of 8 mm and 10 mm are available in two versions: One according to DIN 72573 and another reinforced design version with a thicker and wider metal sheet than DIN 72573.

For use in corrosive areas, various mounting parts are also available in stainless steel (material 1.4571).

Features and benefits

- Wide product range with many different dimensions
- Recommended and reliable fixing material for lubrication system components such as pipes and tubes
- Suitable for all types of automatic lubrication systems

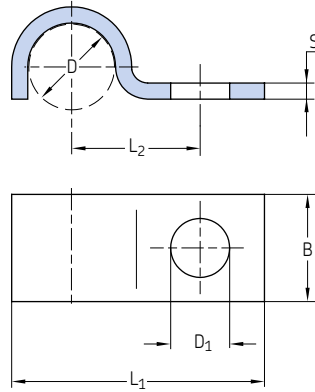
Applications

- Metal forming machines
- On- and off-road vehicles
- Construction and mining
- Agriculture machinery
- Packaging machines
- General industry
- Etc.

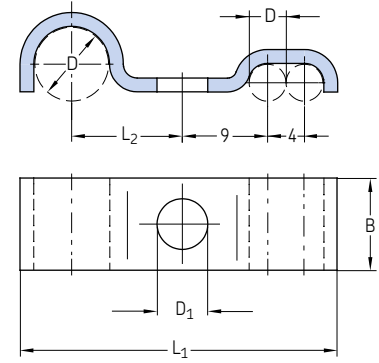
Fixing material

Fixing clips

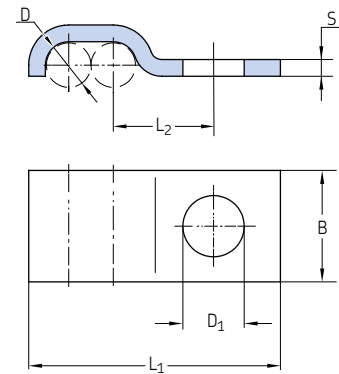
602-001 – 612-001, 226-xxxx-1



608-003



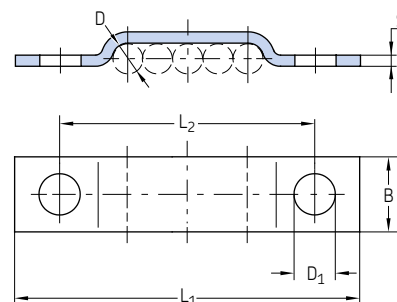
| Order number | Designation | Tube ØD | B | D ₁ | L ₁ | L ₂ | S | Material | Weight (100 pcs) | |
|-------------------------------|-------------------------------|--------------|----|----------------|----------------|----------------|-----|-------------------|------------------|------|
| | | | | | | | | | g | lb |
| Zinc-plated steel | | | | | | | | | | |
| 602-001 | TUBE CLAMP ST-Z D 2,5(1x) | 2,5 mm | 10 | 3,5 | 11,25 | 5 | 1,5 | Zinc-plated steel | 200 | 0.44 |
| 604-001 | TUBE CLAMP ST-Z D 4(1x) | 4 mm | 10 | 5,5 | 18,5 | 9 | 1,5 | Zinc-plated steel | 200 | 0.44 |
| 606-010 | TUBE CLAMP ST-Z D 6(1x) | 6 mm | 10 | 5,5 | 20,5 | 10 | 1,5 | Zinc-plated steel | 300 | 0.66 |
| 608-001 | TUBE CLAMP ST-Z D 8(1x) | 8 mm | 10 | 5,5 | 23,5 | 12 | 1,5 | Zinc-plated steel | 300 | 0.66 |
| 608-003 | TUBE CLAMP ST-Z D 8(1x)D4(2x) | 8 mm / 4 mm | 10 | 5,5 | 34 | 12 | 1,5 | Zinc-plated steel | 300 | 0.66 |
| 610-001 | TUBE CLAMP ST-Z D10(1x) | 10 mm or 1/8 | 10 | 5,5 | 25,5 | 13 | 1,5 | Zinc-plated steel | 400 | 0.88 |
| 612-001 | TUBE CLAMP ST-Z D12(1x) | 12 mm | 20 | 6,8 | 35 | 18 | 2 | Zinc-plated steel | 500 | 1.1 |
| Zinc-plated steel (continued) | | | | | | | | | | |
| 226-12335-7 | TUBE CLAMP ST-Z D 6(1X)ZG | 6 mm | 10 | 4,8 | 20,5 | 10 | 1 | Zinc-plated steel | 200 | 0.44 |
| 226-12337-1 | TUBE CLAMP ST-Z D 8(1X)ZG | 8 mm | 15 | 7 | 28 | 15,5 | 2 | Zinc-plated steel | 700 | 1.54 |
| 226-12338-1 | TUBE CLAMP ST-Z D10(1X)ZG | 10 mm | 15 | 7 | 30 | 15 | 2 | Zinc-plated steel | 800 | 1.76 |
| Stainless steel | | | | | | | | | | |
| 226-13716-1 | TUBE CLAMP 1.4571 D 6(1X) | 6 mm | 10 | 4,8 | 20 | 10 | 1 | Stainless steel | 200 | 0.44 |
| 226-13717-1 | TUBE CLAMP 1.4571 D 8(1X) | 8 mm | 15 | 7 | 28 | 15,5 | 2 | Stainless steel | 700 | 1.54 |
| 226-13673-1 | TUBE CLAMP 1.4571 D10(1X) | 10 mm | 15 | 7 | 30 | 15 | 2 | Stainless steel | 800 | 1.76 |



| Order number | Designation | Tube ØD | Number of tubes | B | D ₁ | L ₁ | L ₂ | S | Material | Weight (100 pcs) | |
|--------------|---------------------------|---------|-----------------|----|----------------|----------------|----------------|-----|-------------------|------------------|------|
| | | | | | | | | | | g | lb |
| 602-002 | TUBE CLAMP ST-Z D 2,5(2x) | 2,5 | 2 | 10 | 3,5 | 13,8 | 5 | 1,5 | Zinc-plated steel | 200 | 0.44 |
| 604-002 | TUBE CLAMP ST-Z D 4(2x) | 4 | 2 | 10 | 5,5 | 22,6 | 9 | 1,5 | Zinc-plated steel | 200 | 0.44 |
| 604-003 | TUBE CLAMP ST-Z D 4(3x) | 4 | 3 | 10 | 5,5 | 26,6 | 9 | 1,5 | Zinc-plated steel | 300 | 0.66 |

Fixing material

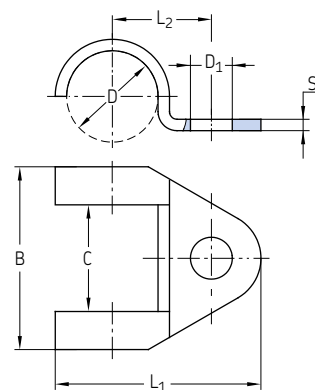
Fixing clips



| Order number | Designation | Tube ØD | Number of tubes | B | D ₁ | L ₁ | L ₂ | S | Material | Weight (100 pcs) | |
|-------------------|---------------------------|------------|--------------------|----|----------------|----------------|----------------|-----|-------------------|---------------------|------|
| | | mm | mm | mm | mm | mm | mm | mm | | g | lb |
| Zinc-plated steel | | | | | | | | | | | |
| 604-014 | TUBE CLAMP ST-Z D 4(4x) | 4 | 4 | 10 | 5,5 | 42 | 30 | 1,5 | Zinc-plated steel | 400 | 0.88 |
| 604-015 | TUBE CLAMP ST-Z D 4(5x) | 4 | 5 | 10 | 5,5 | 46 | 34 | 1,5 | Zinc-plated steel | 400 | 0.88 |
| 604-016 | TUBE CLAMP ST-Z D 4(6x) | 4 | 6 | 10 | 5,5 | 50 | 38 | 1,5 | Zinc-plated steel | 500 | 1.1 |
| 604-018 | TUBE CLAMP ST-Z D 4(8x) | 4 | 8 | 10 | 5,5 | 58 | 46 | 1,5 | Zinc-plated steel | 600 | 1.32 |
| DIN72573-2x6-ST | TUBE CLAMP ST-Z D 6(2x) | 6 | 2 | 10 | 4,8 | 39 | 27 | 1 | Zinc-plated steel | 300 | 0.66 |
| DIN72573-3x6-ST | TUBE CLAMP ST-Z D 6(3x) | 6 | 3 | 10 | 4,8 | 45 | 33 | 1 | Zinc-plated steel | 400 | 0.88 |
| DIN72573-4x6-ST | TUBE CLAMP ST-Z D 6(4x) | 6 | 4 | 10 | 4,8 | 51 | 39 | 1 | Zinc-plated steel | 400 | 0.88 |
| DIN72573-5x6-ST | TUBE CLAMP ST-Z D 6(5x) | 6 | 5 | 10 | 4,8 | 57 | 45 | 1 | Zinc-plated steel | 400 | 0.88 |
| DIN72573-6x6-ST | TUBE CLAMP ST-Z D 6(6x) | 6 | 6 | 10 | 4,8 | 64 | 52 | 1 | Zinc-plated steel | 600 | 1.32 |
| DIN72573-2x8-ST | TUBE CLAMP ST-Z D 8(2x) | 8 | 2 | 10 | 4,8 | 43 | 31 | 1 | Zinc-plated steel | 400 | 0.88 |
| DIN72573-3x8-ST | TUBE CLAMP ST-Z D 8(3x) | 8 | 3 | 10 | 4,8 | 51 | 39 | 1 | Zinc-plated steel | 400 | 0.88 |
| DIN72573-4x8-ST | TUBE CLAMP ST-Z D 8(4x) | 8 | 4 | 10 | 4,8 | 59 | 47 | 1 | Zinc-plated steel | 500 | 1.1 |
| DIN72573-5x8-ST | TUBE CLAMP ST-Z D 8(5x) | 8 | 5 | 10 | 4,8 | 68 | 56 | 1 | Zinc-plated steel | 600 | 1.32 |
| DIN579-6x8-ST | TUBE CLAMP ST-Z D 8(6x) | 8 | 6 | 10 | 4,8 | 76 | 64 | 1 | Zinc-plated steel | 700 | 1.54 |
| DIN72573-2x10-ST | TUBE CLAMP ST-Z D10(2x) | 10 | 2 | 10 | 4,8 | 45 | 33 | 1 | Zinc-plated steel | 400 | 0.88 |
| DIN72573-3x10-ST | TUBE CLAMP ST-Z D10(3x) | 10 | 3 | 10 | 4,8 | 55 | 43 | 1 | Zinc-plated steel | 500 | 1.1 |
| DIN72573-4x10-ST | TUBE CLAMP ST-Z D10(4x) | 10 | 4 | 10 | 4,8 | 67 | 55 | 1 | Zinc-plated steel | 600 | 1.32 |
| DIN72573-5x10-ST | TUBE CLAMP ST-Z D10(5x) | 10 | 5 | 10 | 4,8 | 77 | 65 | 1 | Zinc-plated steel | 800 | 1.76 |
| | | | | | | | | | | | |
| 226-12337-2 | TUBE CLAMP ST-Z D 8(2X) | 8 | 2 | 15 | 7 | 61,2 | 39 | 2 | Zinc-plated steel | 1 300 | 2.87 |
| 226-12337-3 | TUBE CLAMP ST-Z D 8(3X) | 8 | 3 | 15 | 7 | 69,2 | 47 | 2 | Zinc-plated steel | 1 500 | 3.31 |
| 226-12337-4 | TUBE CLAMP ST-Z D 8(4X) | 8 | 4 | 15 | 7 | 77,2 | 55 | 2 | Zinc-plated steel | 1 700 | 3.75 |
| 226-12337-5 | TUBE CLAMP ST-Z D 8(5X) | 8 | 5 | 15 | 7 | 85,2 | 63 | 2 | Zinc-plated steel | 1 800 | 3.97 |
| 226-12337-6 | TUBE CLAMP ST-Z D 8(6X) | 8 | 6 | 15 | 7 | 93,2 | 71 | 2 | Zinc-plated steel | 2 000 | 4.41 |
| 226-12338-2 | TUBE CLAMP ST-Z D10(2X) | 10 | 2 | 15 | 7 | 65,3 | 40 | 2 | Zinc-plated steel | 1 300 | 2.87 |
| 226-12338-3 | TUBE CLAMP ST-Z D10(3X) | 10 | 3 | 15 | 7 | 75,3 | 50 | 2 | Zinc-plated steel | 1 600 | 3.53 |
| 226-12338-4 | TUBE CLAMP ST-Z D10(4X) | 10 | 4 | 15 | 7 | 85,3 | 60 | 2 | Zinc-plated steel | 1 800 | 3.97 |
| 226-12338-5 | TUBE CLAMP ST-Z D10(5X) | 10 | 5 | 15 | 7 | 95,3 | 70 | 2 | Zinc-plated steel | 2 000 | 4.41 |
| 226-12338-6 | TUBE CLAMP ST-Z D10(6X) | 10 | 6 | 15 | 7 | 105,3 | 80 | 2 | Zinc-plated steel | 2 200 | 4.85 |
| | | | | | | | | | | | |
| Stainless steel | | | | | | | | | | | |
| 226-13716-2 | TUBE CLAMP 1.4571 D 6(2x) | 6 | 2 | 10 | 4,8 | 38 | 26 | 1 | Stainless steel | 340 | 0.75 |
| 226-13716-3 | TUBE CLAMP 1.4571 D 6(3x) | 6 | 3 | 10 | 4,8 | 45 | 33 | 1 | Stainless steel | 410 | 0.90 |
| 226-13716-4 | TUBE CLAMP 1.4571 D 6(4x) | 6 | 4 | 10 | 4,8 | 51 | 39 | 1 | Stainless steel | 450 | 0.99 |
| 226-13716-5 | TUBE CLAMP 1.4571 D 6(5x) | 6 | 5 | 10 | 4,8 | 57 | 45 | 1 | Stainless steel | 470 | 1.04 |
| 226-13716-6 | TUBE CLAMP 1.4571 D 6(6x) | 6 | 6 | 10 | 4,8 | 64 | 52 | 1 | Stainless steel | 500 | 1.10 |
| | | | | | | | | | | | |
| 226-13717-2 | TUBE CLAMP 1.4571 D 8(2x) | 8 | 2 | 15 | 7 | 61,2 | 39 | 2 | Stainless steel | 1 200 | 2.65 |
| 226-13717-3 | TUBE CLAMP 1.4571 D 8(3X) | 8 | 3 | 15 | 7 | 69,2 | 47 | 2 | Stainless steel | 1 400 | 3.09 |
| 226-13717-4 | TUBE CLAMP 1.4571 D 8(4X) | 8 | 4 | 15 | 7 | 77,2 | 55 | 2 | Stainless steel | 1 600 | 3.53 |
| 226-13718-1 | TUBE CLAMP 1.4571 D10(2X) | 10 | 2 | 15 | 7 | 65,3 | 40 | 2 | Stainless steel | 1 300 | 2.87 |
| 226-13673-4 | TUBE CLAMP 1.4571 D10(3X) | 10 | 3 | 15 | 7 | 75,3 | 50 | 2 | Stainless steel | 1 600 | 3.53 |
| 226-13673-5 | TUBE CLAMP 1.4571 D10(4X) | 10 | 4 | 15 | 7 | 85,3 | 60 | 2 | Stainless steel | 1 700 | 3.75 |
| 226-13718-2 | TUBE CLAMP 1.4571 D10(5X) | 10 | 5 | 15 | 7 | 95 | 70 | 2 | Stainless steel | 2 100 | 4.63 |
| 226-13718-3 | TUBE CLAMP 1.4571 D10(6X) | 10 | 6 | 15 | 7 | 105 | 80 | 2 | Stainless steel | 2 300 | 5.07 |

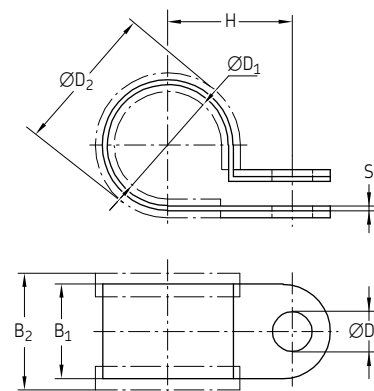
Fixing material

Fixing clips



Fixing material

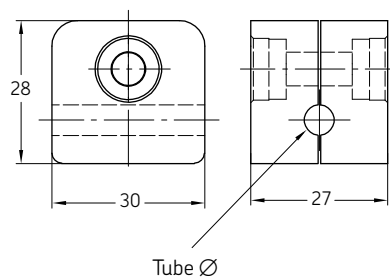
| Order number | Designation | Tube $\varnothing D$ | | B | C | D_1 | L_1 | L_2 | S | Material | Weight (100 pcs) | |
|--------------|-------------------------|----------------------|-----|----|----|-------|-------|-------|-----|-------------------|------------------|------|
| | | mm | in | | | | | | | | g | lb |
| 604-004 | TUBE CLAMP ST-Z D12(1x) | 12 | - | 24 | 14 | 5,5 | 27 | 13 | 1,5 | Zinc-plated steel | 500 | 1.1 |
| 606-014 | TUBE CLAMP ST-Z D14(1x) | 14 | 1/4 | 30 | 15 | 6,3 | 34 | 16 | 2 | Zinc-plated steel | 1 200 | 2.65 |
| 608-004 | TUBE CLAMP ST-Z D18(1x) | 18 | 3/8 | 36 | 20 | 7 | 40 | 21 | 1,5 | Zinc-plated steel | 1 200 | 2.65 |
| 610-004 | TUBE CLAMP ST-Z D20(1x) | 20 | 1/2 | 36 | 20 | 7 | 40 | 21 | 1,5 | Zinc-plated steel | 1 200 | 2.65 |



| Order number | Designation | $\varnothing D_1$ | $\varnothing D_2$ | $\varnothing D_3$ | B_1 | B_2 | H | S | Material | Weight (100 pcs) | |
|--------------|--|-------------------|-------------------|-------------------|-------|-------|------|-----|-------------------|------------------|------|
| | | | | | | | | | | mm | mm |
| 941-206-104 | TUBE CLAMP ST-RUB. D 6 F.FAST.SCREW M5 | 6 | 11,8 | 5,2 | 12 | 15 | 11 | 0,5 | Steel, galvanized | 400 | 0.88 |
| 941-206-108 | TUBE CLAMP ST-RUB. D 6 F.FAST.SCREW M6 | 6 | 11,8 | 6,4 | 15 | 18,5 | 4,2 | 0,6 | Steel, galvanized | 700 | 1.54 |
| 941-208-104 | TUBE CLAMP ST-RUB. D 8 F.FAST.SCREW M6 | 8 | 15,4 | 6,4 | 15 | 18,5 | 15,2 | 0,6 | Steel, galvanized | 800 | 1.76 |
| 941-209-104 | TUBE CLAMP ST-RUB. D 9 F.FAST.SCREW M5 | 9 | 5 | 5,2 | 12 | 5 | 12,5 | 0,5 | Steel, galvanized | 500 | 1.1 |
| 941-209-105 | TUBE CLAMP ST-RUB. D 9 F.FAST.SCREW M6 | 9 | 15 | 6,4 | 15 | 18,5 | 15,7 | 0,6 | Steel, galvanized | 900 | 1.98 |
| 941-210-104 | TUBE CLAMP ST-RUB. D10 F.FAST.SCREW M6 | 10 | 17,4 | 6,4 | 15 | 18,5 | 16,2 | 0,6 | Steel, galvanized | 900 | 1.98 |
| 941-212-104 | TUBE CLAMP ST-RUB. D12 F.FAST.SCREW M6 | 12 | 19,4 | 6,4 | 15 | 18,5 | 17,2 | 0,6 | Steel, galvanized | 1 000 | 2.21 |
| 941-213-104 | TUBE CLAMP ST-RUB. D13 F.FAST.SCREW M6 | 13 | 20,4 | 6,4 | 15 | 18,5 | 7,7 | 0,6 | Steel, galvanized | 1 100 | 2.43 |
| 941-215-104 | TUBE CLAMP ST-RUB. D15 F.FAST.SCREW M6 | 15 | 22,4 | 6,4 | 5 | 18,5 | 18,7 | 0,8 | Steel, galvanized | 2 000 | 4.41 |
| 941-217-104 | TUBE CLAMP ST-RUB. D17 F.FAST.SCREW M5 | 17 | 23 | 5,2 | 12 | 15 | 16,5 | 0,5 | Steel, galvanized | 800 | 1.76 |
| 941-217-105 | TUBE CLAMP ST-RUB. D17 F.FAST.SCREW M6 | 17 | 23 | 6,4 | 15 | 8,5 | 19,7 | 0,8 | Steel, galvanized | 1 500 | 3.31 |
| 941-218-101 | TUBE CLAMP ST-RUB. D18 F.FAST.SCREW M6 | 18 | 24 | 6,4 | 15 | 8,5 | 20,2 | 0,6 | Steel, galvanized | 1 400 | 3.09 |
| 941-220-104 | TUBE CLAMP ST-RUB. D20 F.FAST.SCREW M6 | 20 | 27,6 | 6,4 | 15 | 8,5 | 21,2 | 0,8 | Steel, galvanized | 1 500 | 3.31 |
| 941-222-100 | TUBE CLAMP ST-RUB. D22 F.FAST.SCREW M6 | 22 | 28 | 6,4 | 15 | 18,5 | 22,2 | 0,8 | Steel, galvanized | 1 700 | 3.75 |
| 941-225-104 | TUBE CLAMP ST-RUB. D25 F.FAST.SCREW M6 | 25 | 31 | 6,4 | 15 | 18,5 | 23,7 | 0,8 | Steel, galvanized | 2 000 | 4.41 |

Fixing material

Pipe brackets acc. to DIN 3015

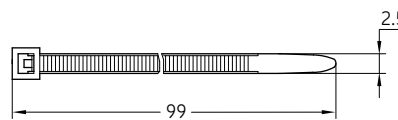
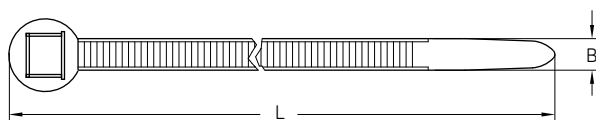


| Order number | Designation | Tube Ø | Material | Weight | |
|---|----------------------------------|--------|---------------|--------|------|
| | | | | g | lb |
| | | mm | | | |
| 941-606-000 | TUBE CLAMP 106 PP | 6 | Polypropylene | 10 | 0.02 |
| 941-608-000 | TUBE CLAMP 108 PP | 8 | Polypropylene | 10 | 0.02 |
| 941-610-000 | TUBE CLAMP 110 PP | 10 | Polypropylene | 5 | 0.01 |
| Tube clamp PP with weld plate, standard series | | | | | |
| 226-12343-5 | TUBE CLAMP SP 110 PP -LI | 10 | Polypropylene | 40 | 0.09 |
| 226-12343-1 | TUBE CLAMP SP 320 PP -LI | 20 | Polypropylene | 77 | 0.17 |
| 226-13097-3 | TUBE CLAMP SP 320 /20 PP -GD -AS | 2x20 | Polypropylene | 173 | 0.38 |
| 226-12343-2 | TUBE CLAMP SP 430 PP -LI | 30 | Polypropylene | 80 | 0.18 |
| Tube clamp PP with weld plate and cover plate, heavy series | | | | | |
| 226-13058-3 | TUBE CLAMP SPAL4020 PP -DPAL-AS | 20 | Polypropylene | 394 | 0.87 |
| 226-13058-5 | TUBE CLAMP SPAL5030 PP -DPAL-AS | 30 | Polypropylene | 480 | 1.06 |

Cable straps

898-610-000, 898-710-000, 898-710-001

898-510-000

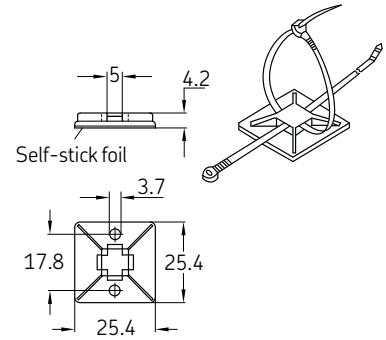


| Order number | Designation | L | B | Material | Weight (100 pcs) | |
|-----------------------|--------------------------|-----|-----|-----------|------------------|------|
| | | | | | g | lb |
| | | mm | mm | | | |
| 898-610-000 | CABLE STRAP SW 204LGx4,7 | 197 | 4,9 | Polyamide | 100 | 0.22 |
| 898-710-000 | CABLE STRAP SW 302LGx4,8 | 302 | 4,9 | Polyamide | 200 | 0.44 |
| 898-710-001 | CABLE STRAP SW 360LGx7,5 | 360 | 7,5 | Polyamide | 500 | 1.10 |
| For automatic pincers | | | | | | |
| 898-510-000 | CABLE STRAP SW 100LGx2,5 | 99 | 2,5 | Polyamide | 100 | 0.22 |

Fixing material

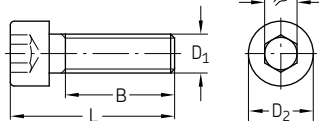
Mounting base

| Order number | Designation | Material | Weight (100 pcs) | |
|--------------|--------------------------|----------|------------------|------|
| | | | g | lb |
| 179-990-186 | MOUNTING PLATE 25,4x25,4 | ABS | 100 | 0.22 |

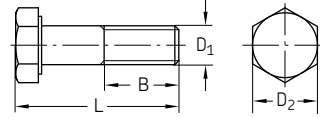


Fixing bolts

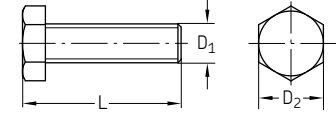
DIN EN ISO 4762



IN EN ISO 4014 / DIN EN ISO 4017



DIN7513



| Order number | Designation | D ₁ | L | D ₂ | B | ⌀ | Material | Weight | |
|-------------------|-----------------------------------|----------------|----|----------------|----|----|-------------------|--------|-------|
| | | | | | | | | g | lb |
| Steel, galvanized | | | | | | | | | |
| 201-12015-5 | SCREW,SOCK,HEX. 8.8 M4x 20CF | M4 | 20 | 7 | 14 | 3 | Steel, galvanized | 3 | 0.007 |
| 201-12019-9 | SCREW,SOCK,HEX. 8.8 M6x 16CF | M6 | 16 | 10 | 18 | 5 | Steel, galvanized | 6 | 0.013 |
| 201-12018-7 | SCREW,SOCK,HEX. 8.8 M6x 25CF | M6 | 25 | 10 | 18 | 5 | Steel, galvanized | 7 | 0.015 |
| 201-12019-6 | SCREW,SOCK,HEX. 8.8 M6x 60CF | M6 | 60 | 10 | 18 | 5 | Steel, galvanized | 14 | 0.031 |
| 201-12021-3 | SCREW,SOCK,HEX. 8.8 M8x 16CF | M8 | 16 | 13 | 12 | 6 | Steel, galvanized | 20 | 0.044 |
| DIN931-M6x30-8.8 | SCREW,HEX. 8.8 M 6x 30 CF | M6 | 30 | 10 | 18 | 10 | Steel, galvanized | 8 | 0.018 |
| DIN933-M4x10-8.8 | SCREW,HEX. 8.8 M 4x 10 CF | M4 | 10 | 7 | 5 | - | Steel, galvanized | 2 | 0.004 |
| 200-13092-1 | SCREW,HEX. 8.8 M 5x 12CF | M5 | 12 | 8 | 6 | - | Steel, galvanized | 3 | 0.007 |
| 200-13017-9 | SCREW,HEX. 8.8 M 5x 16CF | M5 | 16 | 8 | 11 | - | Steel, galvanized | 3 | 0.007 |
| 200-13017-5 | SCREW,HEX. 8.8 M 5x 45CF | M5 | 45 | 8 | 40 | - | Steel, galvanized | 7 | 0.015 |
| 200-13022-4 | SCREW,HEX. 8.8 M 6x 16CF | M6 | 16 | 10 | 9 | - | Steel, galvanized | 5 | 0.011 |
| 200-13022-7 | SCREW,HEX. 8.8 M 6x 20CF | M6 | 20 | 10 | 13 | - | Steel, galvanized | 6 | 0.013 |
| 200-13022-1 | SCREW,HEX. 8.8 M 6x 25CF | M6 | 25 | 10 | 19 | - | Steel, galvanized | 7 | 0.015 |
| 200-13037-3 | SCREW,HEX. 8.8 M 6x 60CF | M6 | 60 | 10 | 53 | - | Steel, galvanized | 14 | 0.031 |
| 200-12553-4 | SCREW,HEX. 8.8 M 8x 20CF | M8 | 20 | 13 | 11 | - | Steel, galvanized | 12 | 0.026 |
| 200-10406-7 | SCREW,HEX. 8.8 M 8x 25CF | M8 | 25 | 13 | 16 | - | Steel, galvanized | 13 | 0.029 |
| 200-12007-6 | SCREW,HEX. 8.8 M 8x 30CF | M8 | 30 | 13 | 21 | - | Steel, galvanized | 15 | 0.033 |
| 200-12553-8 | SCREW,HEX. 8.8 M 8x 40CF | M8 | 40 | 13 | 31 | - | Steel, galvanized | 18 | 0.04 |
| 200-12399-2 | SCREW,HEX. 8.8 M 8x 80CF | M8 | 80 | 13 | 71 | - | Steel, galvanized | 34 | 0.075 |
| 200-12523-3 | SCREW,HEX. 8.8 M10x 40CF | M10 | 40 | 16 | 39 | - | Steel, galvanized | 30 | 0.066 |
| 200-12009-7 | SCREW,HEX. 8.8 M12x 40CF | M12 | 40 | 18 | 28 | - | Steel, galvanized | 34 | 0.075 |
| DIN7513-BM4x20 | SCREW,SELF-TAPP C15 BM 4,0x 20 CF | M4 | 20 | 7 | - | - | Steel, galvanized | 2 | 0.004 |
| DIN7513-BM4x25 | SCREW,SELF-TAPP C15 BM 4,0x 25 CF | M4 | 25 | 7 | - | - | Steel, galvanized | 2 | 0.004 |
| 206-12124-3 | SCREW,SELF-TAPP C15 BM 5,0x 10 | M5 | 10 | 8,5 | - | - | Steel | 2 | 0.004 |
| 206-12125-4 | SCREW,SELF-TAPP C15 BM 6,0x 16 CF | M6 | 16 | 10 | - | - | Steel, galvanized | 5 | 0.011 |
| DIN7513-BM6x25 | SCREW,SELF-TAPP C15 BM 6,0x 25 CF | M6 | 25 | 10 | - | - | Steel, galvanized | 6 | 0.013 |
| Stainless steel | | | | | | | | | |
| DIN912-M3x8-A4 | SCREW,SOCK,HEX. A4 M 3x 8 | M3 | 8 | 5,5 | - | - | Stainless steel | 1 | 0.002 |
| 201-13741-1 | SCREW,SOCK,HEX. A4 M 4x12 | M4 | 12 | 7 | - | - | Stainless steel | 2 | 0.004 |
| 201-13608-6 | SCREW,SOCK,HEX. A4 M 5x10 | M5 | 10 | 7 | - | - | Stainless steel | 2 | 0.004 |

Couplings



Description

Couplings for hydraulic or lubrication systems are required whenever a virtually leakage-free flow of media is to be separated or distributed. Typically, this happens e.g. when a pump is used to fill several lubricant reservoirs and must be connected and disconnected again and again.

For each coupling design/model, a corresponding hose is required. Conveniently, the coupling side is on the hose of the filling pump and the counterpart, the coupling nipple, is attached to the reservoir. Another coupling application in the field of lubrication systems is the coupling and uncoupling of groups of machines that need not be continuously supplied by one lubrication pump, e.g. for vehicle lubrication and trailer lubrication.

When selecting a coupling, the maximum possible pump/system pressure must be considered. In addition, there are couplings suitable mainly for either indoor or outdoor applications. If the application is not accurately defined before ordering, stainless steel or surface-treated couplings are the best choice. Couplings protect hydraulic fluids or lubricants for contamination and allow quick and high-pressure media flows.

Features and benefits

- Wide product range with different pressure rates and sizes
- Available for filling as well as for operation of automatic lubrication systems
- Quick couplings (ESK) for under-pressure coupling available
- Virtually leakage-free filling

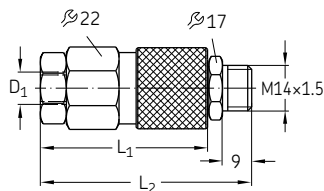
Applications

- All kinds of lubrication systems
- Printing and packaging machines
- Construction and mining
- Metal forming machines
- Vehicles, trucks, loaders
- Agriculture machinery
- General industry
- Machine tools
- Etc.

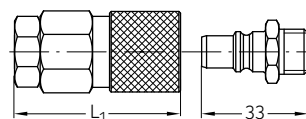
Couplings

Low-pressure quick-disconnect couplings

Coupling, complete



Outer coupling member



Inner coupling member

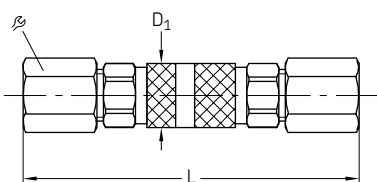
| Order number | Designation | Tube \varnothing D ₁ ¹⁾ | | L ₁ | L ₂ | Material | Operating pressure max. | | Weight | |
|--------------------|-----------------------|---|---------|----------------|----------------|-------------------|-------------------------|-----|--------|------|
| | | mm | mm | | | | bar | psi | g | lb |
| 207-168-2 | COUPLING, COMPLETE | 6 | M10x1 | – | 65 | Steel, galvanized | 45 | 653 | 150 | 0.33 |
| 207-188-2 | COUPLING, COMPLETE | 8 | M14x1,5 | – | 71,5 | Steel, galvanized | 45 | 653 | 152 | 0.34 |
| 207-168.U7 | OUTER COUPLING MEMBER | 6 | – | 51,5 | – | Steel, galvanized | 45 | 653 | 120 | 0.26 |
| 207-188.U11 | OUTER COUPLING MEMBER | 8 | – | 58 | – | Steel, galvanized | 45 | 653 | 130 | 0.29 |
| 207-168.U2 | INNER COUPLING MEMBER | – | – | – | – | Steel, galvanized | 45 | 653 | 22 | 0.05 |

Both coupling members are shut off when disconnected!

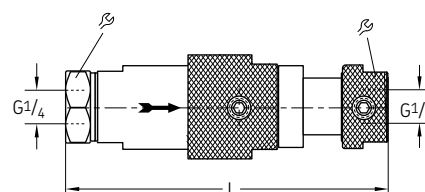
¹⁾ Ports tapped for solderless tube connection

Medium- and high-pressure quick-disconnect couplings

995-001-525, 995-001-526



626-26246-1

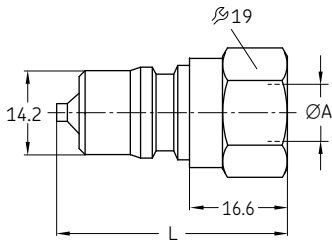


| Order number | Designation | Tube \varnothing D ₁ | | L | β | Material | Operating pressure max. | | Weight | |
|--------------------|----------------------------------|-----------------------------------|----|-----|---------|-------------------|-------------------------|-------|--------|------|
| | | mm | mm | | | | mm | mm | bar | psi |
| 995-001-525 | PLUG AND SOCKET COUPLING, TUBE 4 | 4 | 10 | 68 | 10 | Steel, galvanized | 100 | 1 450 | 30 | 0.07 |
| 995-001-526 | PLUG AND SOCKET COUPLING, TUBE 6 | 6 | 15 | 80 | 12 | Steel, galvanized | 100 | 1 450 | 35 | 0.08 |
| 626-26246-1 | COUPLING ESK G1/4 D | – | – | 124 | 27 | Steel, galvanized | 300 | 4 351 | 760 | 1.68 |

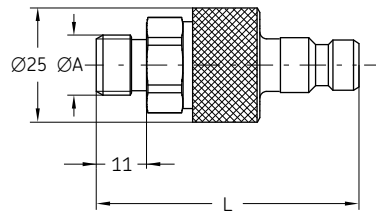
Couplings

Coupling plugs

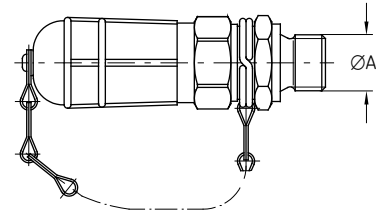
995-001-096



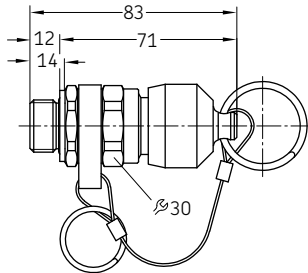
995-001-501



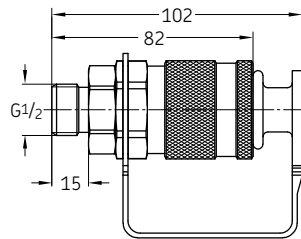
995-000-705



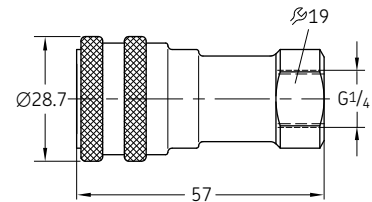
995-001-260



995-001-950



995-001-500



| Order number | Designation | Material | ØA | L | Respective dust cover Order number | Respective coupling socket Order number | Operating pressure max. | | Weight | |
|--------------|---------------------------|-------------------|-------|------|------------------------------------|---|-------------------------|-------|---------------------|--------------------|
| | | | | | | | bar | psi | g | lb |
| 995-001-096 | COUPLING PLUG G1/4 350BAR | Steel, galvanized | G 1/4 | 39 | 995-001-235 | – | 350 | 5 080 | 60 ¹⁾ | 0.13 ¹⁾ |
| 995-001-501 | COUPLING PLUG G1/4 200BAR | Steel, galvanized | G 1/4 | 57.5 | 995-001-503 | 995-002-073 | 200 | 2 900 | 305 ²⁾ | 0.67 ²⁾ |
| 995-001-502 | COUPLING PLUG G1/2 250BAR | Steel, galvanized | G 1/2 | 82 | 995-001-504 | 995-001-950 | 250 | 3 600 | 1 050 ²⁾ | 2.32 ²⁾ |
| 995-000-705 | COUPLING PLUG G1/4 70BAR | Steel, galvanized | G 1/4 | – | – | 995-001-500 | 70 | 1 000 | 233 ³⁾ | 0.51 ³⁾ |
| 995-001-260 | COUPLING PLUG G1/2 | Steel, galvanized | G 1/2 | 83 | – | – | – | – | 229 | 0.50 |

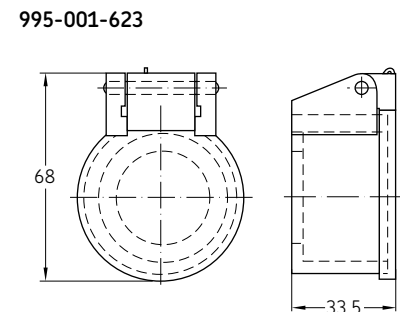
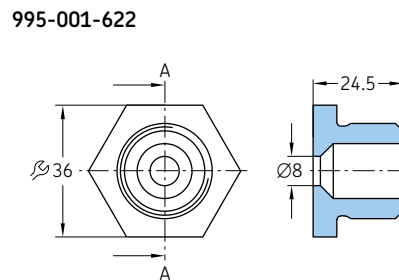
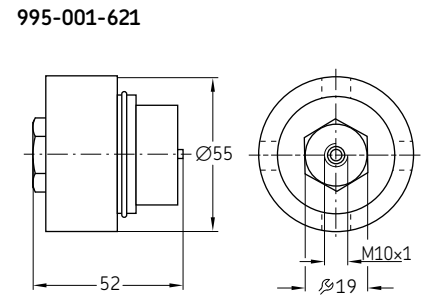
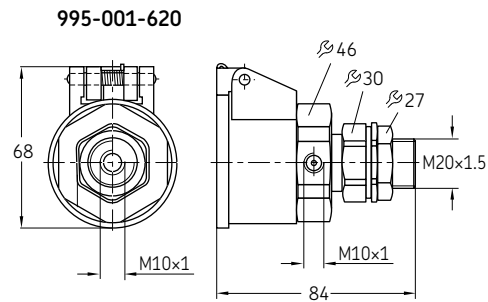
¹⁾ weight for plug + dust cover

²⁾ weight for complete coupling

³⁾ weight for plug + coupling socket

Couplings

Coupling sockets with return flow port



| Order number | Designation | Material | Operating pressure max. | | Weight | |
|--------------|-----------------|-------------------|-------------------------|------|--------|------|
| | | | bar | psi | g | lb |
| 995-001-620 | COUPLING SOCKET | Steel, galvanized | 100 | 1450 | 480 | 1.06 |
| 995-001-621 | COUPLING PLUG | Steel, galvanized | 100 | 1450 | 380 | 0.84 |
| 995-001-622 | STUB | Steel, galvanized | 100 | 1450 | 100 | 0.22 |
| 995-001-623 | DUST COVER | Steel, galvanized | 100 | 1450 | 55 | 0.12 |

Valves



Description

Several kind of valves are usually needed to operate automatic lubrication systems accurately. Intermittent or subsectioned systems only work if the right valves are installed. Valves specifically used in just one SKF system, such as in single-line lubrication systems, can be selected out of the respective SKF automatic lubrication system catalogues.

This catalogue chapter contains valves for use in multiple systems:

- Shut-off valves
- Safety valves
- Check valves
- Relief valves

In several applications, necessary valves may also come directly integrated in the pump unit, mounted in a valve block or as part of a reservoir unit.

Features and benefits

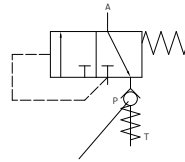
- System component protection against excessive pressure and destruction
- Cost-efficient operation due to lubrication system subsectioning
- Shut-off valves allow manual activation or deactivation of independently operating machine zones

Applications

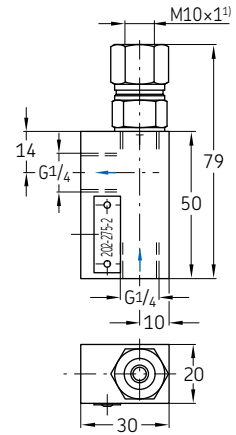
- Small-to-medium machine tools
- Mobile on-road (fleet vehicles, on-road vehicles)
- Assembly/Automation, food packaging, part assembly lines
- Pulp and paper industry
- Injection molding
- General industry
- Heavy industry
- Etc.

Relief valve

Connection diagram



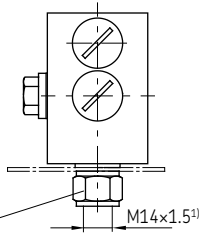
Check valve = residual pressure valve 0.5 bar



| Order number | Designation | Residual pressure | | Weight | |
|--------------|---------------------------------|-------------------|------|--------|------|
| | | bar | psi | g | lb |
| 202-275-2 | PRESS. RELIEF VALVE 0,5BAR G1/4 | 0,5 | 7.25 | 240 | 0.53 |

Relief valves with bleed valve and safety valve

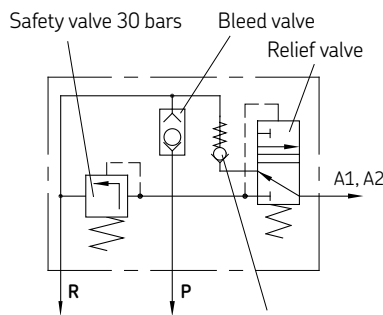
Fitted to reservoir



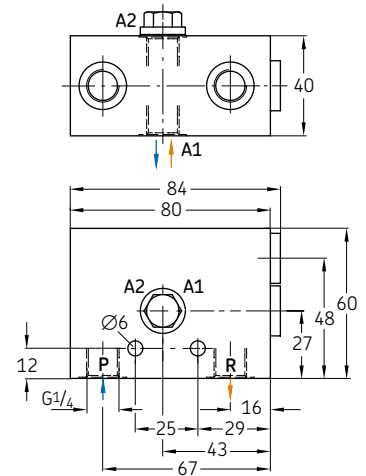
For P and R
2 adapters each 408-160
washers 508-108

¹⁾ Ports tapped for solderless tube connection

Relief valve circuit diagram



Check valve = residual pressure valve 0.5 bars



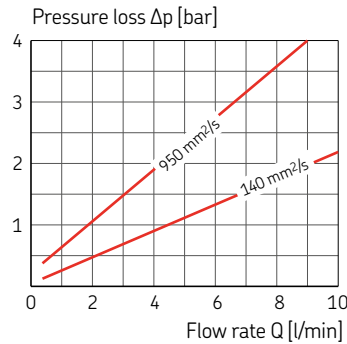
| Order number | Designation | Tube Ø | Material | Residual pressure | | Weight | |
|------------------------|----------------------------------|--------|-------------------|-------------------|-----|--------|------|
| | | | | bar | psi | g | lb |
| 202-175-30 | PRESS. RELIEF VALVE 30BAR R1/4 | - | Aluminum | 30 | 435 | 570 | 1.26 |
| Adapters ¹⁾ | | | | | | | |
| 406-054 | CONNECTING PIECE ST 6 G1/4AZN | 6 | Steel, galvanized | - | - | 20 | 0.04 |
| 301-020 | CONNECTING PIECE ST 8 G1/4AZN | 8 | Steel, galvanized | - | - | 16 | 0.04 |
| 410-163 | CONNECTING PIECE ST 10 - G1/4AZN | 10 | Steel, galvanized | - | - | 30 | 0.07 |

¹⁾ Ports tapped for solderless tube connection

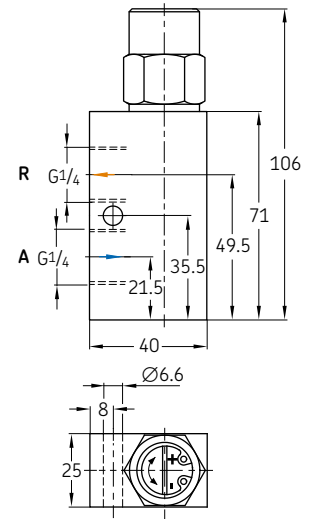
A = Outlet; P = Inlet; T (R) = Return

Valves

Pressure regulating valves, adjustable (poppet valve)



With increasing flow rate, the pressure upstream from the valve will also rise in accordance with the curves.

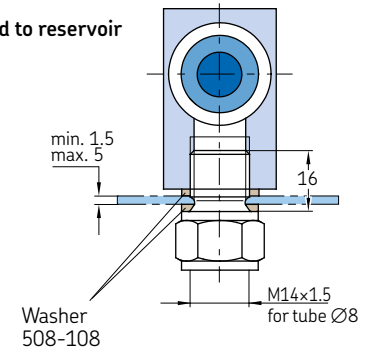


| Order number | Designation | Adjustable pres. range | | Operating pres. max. | | Oil temperature | | Viscosity range | Seal | Weight | |
|------------------------|-------------------------------|------------------------|-------------|----------------------|-------|-----------------|-----|-----------------|------|--------|------|
| | | bar | psi | bar | psi | °C | °F | | | g | lb |
| Steel, galvanized | | | | | | | | | | | |
| WVN200-10E6 | PRES.REGUL.VALVE 1-6BAR NBR | 1 to 6 | 14,5 to 87 | 40 | 580 | 80 | 176 | 20 to 1000 | NBR | 500 | 1.10 |
| WVN200-10E12 | PRES.REGUL.VALVE 3-12BAR NBR | 3 to 12 | 43,5 to 174 | 40 | 580 | 80 | 176 | 20 to 1000 | NBR | 500 | 1.10 |
| WVN200-10E12-S8 | PRES.REGUL.VALVE 3-12BAR FPM | 3 to 12 | 43,5 to 174 | 40 | 580 | 80 | 176 | 20 to 1000 | FPM | 500 | 1.10 |
| WVN200-10E25 | PRES.REGUL.VALVE 4-25BAR NBR | 4 to 25 | 58 to 363 | 40 | 580 | 80 | 176 | 20 to 1000 | NBR | 500 | 1.10 |
| WVN200-10E25-S8 | PRES.REGUL.VALVE 4-25BAR FPM | 4 to 25 | 58 to 363 | 40 | 580 | 80 | 176 | 20 to 1000 | FPM | 500 | 1.10 |
| WVN200-10E35 | PRES.REGUL.VALVE 4-35BAR NBR | 4 to 35 | 58 to 510 | 40 | 580 | 80 | 176 | 20 to 1000 | NBR | 510 | 1.12 |
| WVN200-10E60 | PRES.REGUL.VALVE 12-60BAR NBR | 12 to 60 | 174 to 870 | 70 | 1 015 | 80 | 176 | 20 to 1000 | NBR | 510 | 1.12 |
| WVN200-10E60-S8 | PRES.REGUL.VALVE 12-60BAR FPM | 12 to 60 | 174 to 870 | 70 | 1 015 | 80 | 176 | 20 to 1000 | FPM | 510 | 1.12 |

General characteristics Design: poppet valve with hydraulic cushioning directly controlled
Lubricant: oil
Connecting thread: G 1/4
Mounting position: optional

Adapters for valves

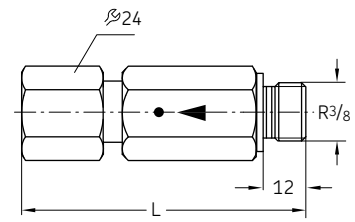
Fitted to reservoir



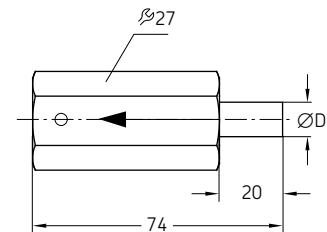
| Order number | Designation | Description | Tube ØD | Material | Weight | |
|--------------------|-----------------------------------|---------------------------------|---------|-------------------|--------|------|
| | | | mm | | g | lb |
| 301-020 | CONNECTING PIECE ST 8 - G1/4A ZN | for valves WVN200-10E6 ...10E35 | 8 | Steel, galvanized | 16 | 0.04 |
| 410-163 | CONNECTING PIECE ST 10 - G1/4A ZN | for valves WVN200-10E6 ...10E35 | 10 | Steel, galvanized | 30 | 0.07 |
| 412-163 | CONNECTING PIECE ST 12 - G1/4A ZN | for valves WVN200-10E6 ...10E35 | 12 | Steel, galvanized | 51 | 0.11 |
| 508-108 | SEALING RING CU 13,3x17,9x1,5 | for valves WVN200-10E6 ...10E35 | - | Copper | 1 | 0.00 |
| 223-12477-6 | TB.FITT.ST GE 8-L G 1/4A CF | for valve WVN200-10E60 | 8 | Steel, galvanized | 35 | 0.08 |
| 223-12272-9 | TB.FITT.ST GE10-L G 1/4A CF | for valve WVN200-10E60 | 10 | Steel, galvanized | 41 | 0.09 |
| 508-108 | SEALING RING CU 13,3x17,9x1,5 | for valve WVN200-10E60 | - | Copper | 1 | 0.00 |
| 408-160 | CONNECTING PIECE ST 8 - G1/4A ZN | adapters with long tube ends | - | Steel, galvanized | 22 | 0.05 |

Valves

Pressure regulating valves, fixed pressure



| Order number | Designation | L | Material | Operating pressure max. | | Weight | |
|--------------|-----------------------|----|-------------------|-------------------------|-------|--------|------|
| | | | | bar | psi | g | lb |
| | | mm | | | | | |
| 624-25465-1 | VALVE SV -120-G3/8A Z | 88 | Steel, galvanized | 120 | 1 740 | 241 | 0.53 |
| 624-25294-1 | VALVE SV -350-G3/8A Z | 84 | Steel, galvanized | 350 | 5 075 | 241 | 0.53 |
| 624-27092-1 | VALVE SV -410-G3/8A Z | 82 | Steel, galvanized | 410 | 5 950 | 241 | 0.53 |

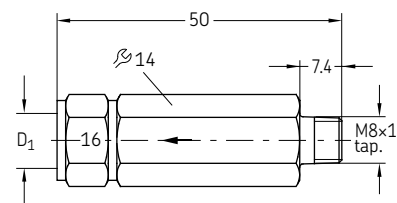


| Order number | Designation | Pipe stud ØD | Material | Operating pressure max. | | Weight | |
|--------------|---------------------|-----------------|-------------------|-------------------------|-------|--------|------|
| | | | | bar | psi | g | lb |
| | | mm | | | | | |
| 624-25478-1 | VALVE SVP -200-S 6 | 6 | Steel, galvanized | 200 | 2 900 | 237 | 0.52 |
| 624-25479-1 | VALVE SVP -350-S 6 | 6 | Steel, galvanized | 350 | 5 075 | 236 | 0.52 |
| 624-25480-1 | VALVE SVP -200-S 8 | 8 | Steel, galvanized | 200 | 2 900 | 240 | 0.53 |
| 624-25481-1 | VALVE SVP -350-S 8 | 8 | Steel, galvanized | 350 | 5 075 | 240 | 0.53 |
| 624-25482-1 | VALVE SVP -200-S 10 | 10 | Steel, galvanized | 200 | 2 900 | 240 | 0.53 |
| 624-25483-1 | VALVE SVP -350-S 10 | 10 | Steel, galvanized | 350 | 5 075 | 260 | 0.57 |

Valves

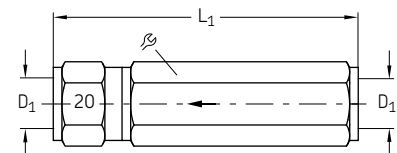
Pressure regulating valves

For flow rates from 0.5–2 l/min



| Order number | Designation | Tube Ø | | Opening pressure | | Marking | Material | Weight | |
|-----------------|----------------------------|------------------------------|-------|------------------|------|---------|-------------------|--------|------|
| | | D ₁ ¹⁾ | | bar | psi | | | g | lb |
| | | mm | mm | bar | psi | | | g | lb |
| WVN200-4A0.4 | PRES.REGUL.VALVE 0,4BAR D4 | 4 | M8×1 | 0,4 | 5,8 | 0,4 | Steel, galvanized | 45 | 0.10 |
| WVN200-4A5 | PRES.REGUL.VALVE 5BAR D4 | 4 | M8×1 | 5 | 72,5 | 5 | Steel, galvanized | 47 | 0.10 |
| WVN200-4A8 | PRES.REGUL.VALVE 8BAR D4 | 4 | M8×1 | 8 | 116 | 8 | Steel, galvanized | 46 | 0.10 |
| WVN200-4A12 | PRES.REGUL.VALVE 12BAR D4 | 4 | M8×1 | 12 | 174 | 12 | Steel, galvanized | 45 | 0.10 |
| WVN200-4A16 | PRES.REGUL.VALVE 16BAR D4 | 4 | M8×1 | 16 | 232 | 16 | Steel, galvanized | 46 | 0.10 |
| WVN200-4A25 | PRES.REGUL.VALVE 25BAR D4 | 4 | M8×1 | 25 | 360 | 25 | Steel, galvanized | 46 | 0.10 |
| WVN200-4A0.4-S1 | PRES.REGUL.VALVE 0,4BAR D6 | 6 | M10×1 | 0,4 | 5,8 | 0,4 | Steel, galvanized | 48 | 0.11 |

1) Ports tapped for solderless tube connection



| Order number | Designation | Tube Ø | | L ₁ | Ø | Opening pressure | | Marking | Weight | |
|---------------------------|------------------------------|------------------------------|---------|----------------|----|------------------|------|---------|--------|------|
| | | D ₁ ¹⁾ | | | | bar | psi | | g | lb |
| | | mm | mm | mm | mm | bar | psi | | g | lb |
| Steel, galvanized | | | | | | | | | | |
| WVN200-6B0.5 | PRES.REGUL.VALVE 0,5BAR D6 | 6 | M10×1 | 61 | 14 | 0,5 | 7,25 | 5 | 57 | 0.13 |
| WVN200-6B3 | PRES.REGUL.VALVE 3BAR D6 | 6 | M10×1 | 61 | 14 | 3 | 43,5 | 3 | 58 | 0.13 |
| WVN200-6B8 | PRES.REGUL.VALVE 8BAR D6 | 6 | M10×1 | 61 | 14 | 8 | 116 | 8 | 58 | 0.13 |
| WVN200-6B12 | PRES.REGUL.VALVE 12BAR D6 | 6 | M10×1 | 61 | 14 | 12 | 174 | 12 | 59 | 0.13 |
| WVN200-6B16 | PRES.REGUL.VALVE 16BAR D6 | 6 | M10×1 | 61 | 14 | 16 | 232 | 16 | 60 | 0.13 |
| WVN200-6B20 | PRES.REGUL.VALVE 20BAR D6 | 6 | M10×1 | 61 | 14 | 20 | 290 | 20 | 60 | 0.13 |
| WVN200-6B40 | PRES.REGUL.VALVE 40BAR D6 | 6 | M10×1 | 61 | 14 | 40 | 580 | 40 | 59 | 0.13 |
| WVN200-8B0 | PRES.REGUL.VALVE 0,04BAR D8 | 8 | M14×1,5 | 71 | 17 | 0,04 | 0,58 | 0 | 86 | 0.19 |
| WVN200-8B3 | PRES.REGUL.VALVE 3BAR D8 | 8 | M14×1,5 | 71 | 17 | 3 | 43,5 | 3 | 87 | 0.19 |
| WVN200-8B5 | PRES.REGUL.VALVE 5BAR D8 | 8 | M14×1,5 | 71 | 17 | 5 | 72,5 | 5 | 89 | 0.20 |
| WVN200-8B12 | PRES.REGUL.VALVE 12BAR D8 | 8 | M14×1,5 | 71 | 17 | 12 | 174 | 12 | 89 | 0.20 |
| WVN200-8B16 | PRES.REGUL.VALVE 16BAR D8 | 8 | M14×1,5 | 71 | 17 | 16 | 232 | 16 | 84 | 0.19 |
| WVN200-8B20 | PRES.REGUL.VALVE 20BAR D8 | 8 | M14×1,5 | 71 | 17 | 20 | 290 | 20 | 90 | 0.20 |
| WVN200-8B32 | PRES.REGUL.VALVE 32BAR D8 | 8 | M14×1,5 | 71 | 17 | 32 | 464 | 32 | 93 | 0.21 |
| 161-212-054 ²⁾ | PRES.REGUL.VALVE 20BAR D8 | 8 | M14×1,5 | 84,5 | 17 | 20 | 290 | 20 | 107 | 0.24 |
| WVN200-10B0 | PRES.REGUL.VALVE 0,04BAR D10 | 10 | M16×1,5 | 80 | 19 | 0,04 | 0,58 | 0 | 100 | 0.22 |
| WVN200-10B0.5 | PRES.REGUL.VALVE 0,5BAR D10 | 10 | M16×1,5 | 80 | 19 | 0,5 | 7,25 | 5 | 126 | 0.28 |
| WVN200-10B1 | PRES.REGUL.VALVE 12BAR D10 | 10 | M16×1,5 | 80 | 19 | 1,2 | 17,4 | 12 | 128 | 0.28 |
| WVN200-10B32 | PRES.REGUL.VALVE 32BAR D10 | 10 | M16×1,5 | 80 | 19 | 32 | 464 | 32 | 130 | 0.29 |

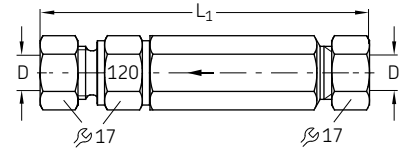
¹⁾ Ports tapped for solderless tube connection

²⁾ This valve is designed as a plunger valve. Because of this design it can also be used for regulating tasks, whereas the ball valves should be used as safety valves.

Valves

Pressure regulating valves

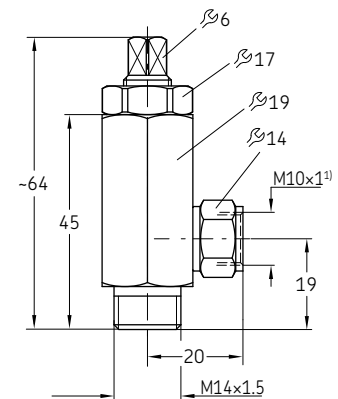
For flow rates from 0.5–2 l/min



| Order number | Designation | Tube Ø | | Opening pressure | | Marking | Material | Weight | |
|------------------|-----------------------------|--------|----|------------------|-------|---------|-------------------|--------|------|
| | | mm | mm | bar | psi | | | g | lb |
| WVN200-8D50 | PRES.REGUL.VALVE 50BAR D8 | 8 | 84 | 50 | 725 | 50 | Steel, galvanized | 130 | 0.29 |
| WVN200-8D75 | PRES.REGUL.VALVE 75BAR D8 | 8 | 84 | 75 | 1 090 | 75 | Steel, galvanized | 135 | 0.30 |
| WVN200-8D120 | PRES.REGUL.VALVE 120BAR D8 | 8 | 84 | 120 | 1 740 | 120 | Steel, galvanized | 130 | 0.29 |
| WVN200-8D220 | PRES.REGUL.VALVE 220BAR D8 | 8 | 84 | 220 | 3 190 | 220 | Steel, galvanized | 130 | 0.29 |
| WVN200-10D120-S1 | PRES.REGUL.VALVE 120BAR D10 | 10 | 87 | 120 | 1 740 | 120 | Steel, galvanized | 140 | 0.31 |
| WVN200-10D220-S1 | PRES.REGUL.VALVE 220BAR D10 | 10 | 87 | 220 | 3 190 | 220 | Steel, galvanized | 135 | 0.30 |

Cutting sleeve screw unions according to DIN 2353

Shut-off valves

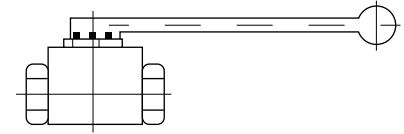


| Order number | Designation | p max. | | Max. temperature | | Material | Weight | |
|--------------|------------------------------|--------|-----|------------------|-----|-------------------|--------|------|
| | | bar | psi | °C | °F | | g | lb |
| 202-085-S | SHUT-OFF VALVE 60BAR M14x1,5 | 60 | 810 | 80 | 176 | Steel, galvanized | 110 | 0.24 |

Direction of flow optional

Valves

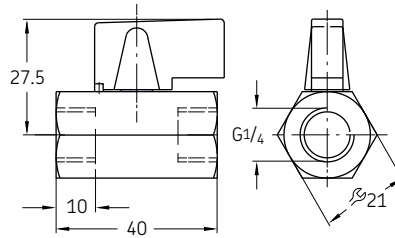
Shut-off valves



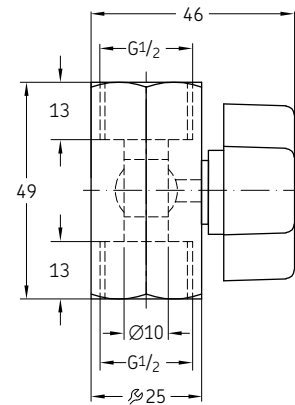
| Order number | Designation | p max. | | Connection | Nominal Ø DN | Material | Weight | |
|--------------------|----------------------------------|--------|-------|--------------|--------------|-------------------|--------|------|
| | | bar | psi | | | | g | lb |
| 235-13108-4 | BALL VALVE ST G 1/2 DN13 500 BAR | 500 | 7 250 | G 1/2 female | 13 | Steel, galvanized | 640 | 1.41 |
| 235-13114-1 | BALL VALVE ST D20 DN16 400 BAR | 400 | 5 800 | Tube Ø 20 | 16 | Steel, galvanized | 960 | 2.12 |

Direction of flow optional

161-600-036



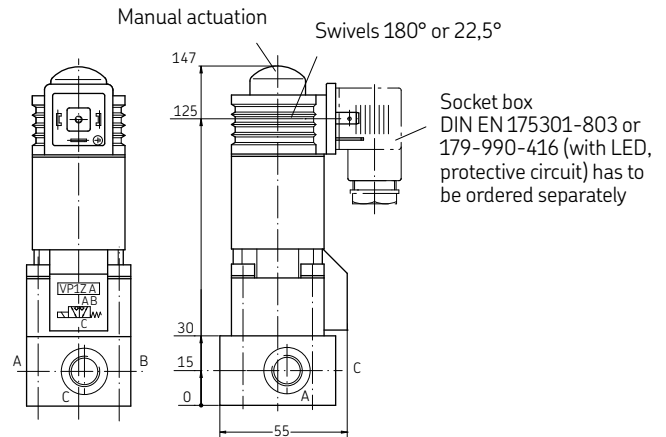
UFZ.0097



| Order number | Designation | p max. | | Max. temperature | | Material | Weight | |
|--------------------|--------------------------|--------|-----|------------------|-----|----------|--------|------|
| | | bar | psi | °C | °F | | g | lb |
| 161-600-036 | BALL VALVE PN 16 G1/4 MS | 16 | 232 | 90 | 194 | Brass | 80 | 0.18 |
| UFZ.0097 | BALL VALVE PN 10 G1/2 MS | 10 | 145 | 90 | 194 | Brass | 150 | 0.33 |

Direction of flow optional

Solenoid valves



| Order number | Designation | Type | Off Position | Operating voltage | Con- nection | p max. | | Weight | |
|-----------------|------------------------------|---------------|-----------------|-------------------|-----------------|--------|-------|--------|------|
| | | | | | | bar | psi | kg | lb |
| 525-32080-1 | WAY VALVE WV-M-W2G-1/2- 24DC | 2/2 way valve | normally closed | 24 VDC | G 1/2 | 400 | 5 800 | 1,74 | 3.84 |
| 525-32082-1 | WAY VALVE WV-M-W2G-1/2-230AC | 2/2 way valve | normally closed | 230 VAC | G 1/2 | 400 | 5 800 | 1,7 | 3.75 |
| 525-32081-1 | WAY VALVE WV-M-W2G-1/2-110AC | 2/2 way valve | normally closed | 110 VAC | G 1/2 | 400 | 5 800 | 1,76 | 3.88 |
| 525-32083-1 | WAY VALVE WV-M-W20-1/2- 24DC | 2/2 way valve | normally open | 24 VDC | G 1/2 | 400 | 5 800 | 1,76 | 3.88 |
| 525-32084-1 | WAY VALVE WV-M-W20-1/2-230AC | 2/2 way valve | normally open | 230 VAC | G 1/2 | 400 | 5 800 | 1,69 | 3.73 |
| 525-32098-1 | WAY VALVE WV-M-W20-1/2-110AC | 2/2 way valve | normally open | 110 VAC | G 1/2 | 400 | 5 800 | 1,81 | 3.99 |
| 525-32085-1 | WAY VALVE WV-M-W3 -3/8- 24DC | 3/2 way valve | - | 24 VDC | G 3/8 | 400 | 5 800 | 1,37 | 3.02 |
| 525-32087-1 | WAY VALVE WV-M-W3 -3/8-230AC | 3/2 way valve | - | 230 VAC | G 3/8 | 400 | 5 800 | 1,3 | 2.87 |
| 525-32086-1 | WAY VALVE WV-M-W3 -3/8-110AC | 3/2 way valve | - | 110 VAC | G 3/8 | 400 | 5 800 | 1,38 | 3.04 |
| 161-110-031+924 | WAY VALVE WV-M-W2G-1/4- 24DC | 2/2 way valve | normally closed | 24 VDC | G 1/4 | 500 | 7 250 | 1,28 | 2.82 |
| 161-120-064+924 | WAY VALVE WV-M-W3 -1/4- 24DC | 3/2 way valve | - | 24 VDC | G 1/4 | 500 | 7 250 | 1,25 | 2.76 |

Pressure gauges



Description

Pressure gauges are mechanically operated instruments that visually display the pressure of the connected medium. In lubrication systems, they are used to show the pressure rate of air, oil or grease of either the pump or the pipe system. They are available in various pressure ranges for low-, medium- or high-pressure applications in all kinds of lubrication systems.

The following points must be considered in order to select the correct model:

- Pressure of the medium – the maximum pressure that could occur in the system shall not be higher than 2/3 of the indication range of the pressure range
- Pulsation of the pressure – use of liquid-filled gauges is highly recommended for measuring points with high dynamic pressure loads and areas with vibration
- Corrosive atmosphere – use of stainless steel pressure gauges is highly recommended
- If an electrical signal is desired – use of pressure gauges, including digital pressure indication, is highly recommended

Features and benefits

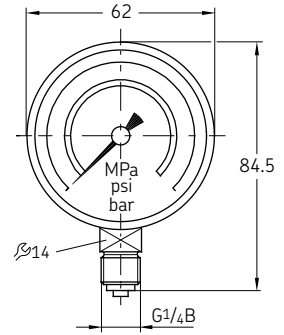
- Visual and digital pump and system pressure monitoring
- Economical, reliable and virtually maintenance-free operation
- Wide range of pressure rates and sizes
- Liquid-filled gauges for dynamic operations available
- Stainless for operation in aggressive atmosphere available

Applications

- All kinds of lubrication systems: low, middle mechanic and plant engineering
- Oil and grease lubrication systems
- Installation at the pump or at the end of the line

Pressure gauges

Standard pressure gauges

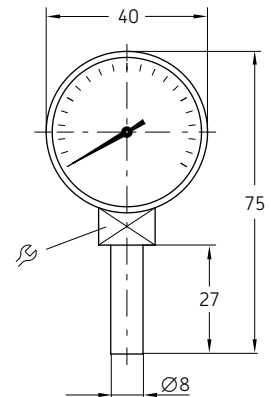


| Order number | Designation | Indication range | | Material | Weight | |
|--------------|-------------------------------------|------------------|--------|-------------|--------|------|
| | | bar | psi | | g | lb |
| 169-101-004 | PR.GAUGE D63 0-10 BAR G1/4A ABS | 0-10 | 0-145 | ABS housing | 96 | 0.21 |
| 169-102-020 | 2) PR.GAUGE D63 0-25 BAR G1/4B ABS | 0-25 | 0-360 | ABS housing | 90 | 0.20 |
| 169-104-020 | 2) PR.GAUGE D63 0-40 BAR G1/4B ABS | 0-40 | 0-580 | ABS housing | 100 | 0.22 |
| 169-106-020 | 2) PR.GAUGE D63 0-60 BAR G1/4B ABS | 0-60 | 0-870 | ABS housing | 83 | 0.18 |
| 169-110-020 | 2) PR.GAUGE D63 0-100 BAR G1/4B ABS | 0-100 | 0-1450 | ABS housing | 90 | 0.20 |
| 169-116-000 | PR.GAUGE D63 0-160 BAR G1/4A ABS | 0-160 | 0-2320 | ABS housing | 94 | 0.21 |
| 169-125-020 | 2) PR.GAUGE D63 0-250 BAR G1/4B ABS | 0-250 | 0-3625 | ABS housing | 84 | 0.19 |

Washer, **order No. 248-610.02**, must be ordered separately for use in solderless tube connections acc. to DIN 3862.

2) Associated connecting pieces → page 60

Damped pressure gauges with restrictor



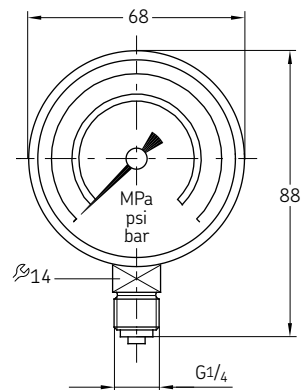
| Order number | Designation | ϕ | Restrictor | Lubricant | Indication range | | Material | Weight | |
|--------------|----------------------------------|--------|------------|-----------|------------------|-------|----------------------|--------|------|
| | | | | | bar | psi | | g | lb |
| 248-602.25 | PR.GAUGE D40 0-10 BAR TUBE 8 | 4kt 12 | - | - | 0-10 | 0-145 | Steel housing, black | 66 | 0.15 |
| 169-102-506 | 1) PR.GAUGE D40 0-25 BAR TUBE 8 | 12 | 0,4 | - | 0-25 | 0-360 | Steel housing, black | 62 | 0.14 |
| 248-602.20 | PR.GAUGE D40 0-40 BAR TUBE 8 | 12 | - | Grease | 0-40 | 0-580 | Steel housing, black | 59 | 0.13 |
| 169-104-008 | 1) PR.GAUGE D40 0-40 BAR TUBE 8 | 4kt 14 | 0,4 | Oil | 0-40 | 0-580 | Steel housing, black | 61 | 0.13 |
| 169-106-004 | PR.GAUGE D40 0-60 BAR TUBE 8 ABS | 4kt 14 | - | - | 0-60 | 0-870 | ABS housing | 60 | 0.13 |

Fixed by means of a double-tapered sleeve and socket union (solderless tube connection) in counterbore acc. to DIN 3854/DIN 3862.

1) damped design

Pressure gauges

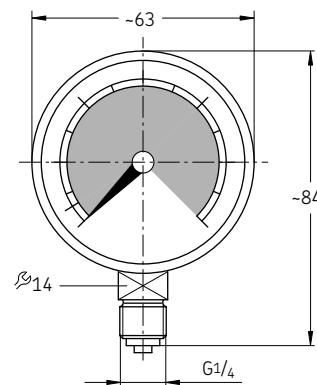
Damped pressure gauges with glycerin filling



| Order number | Designation | Mounting position | Indication range | | Material | Weight | |
|--------------|--|-------------------|------------------|---------|-------------------------|--------|------|
| | | | bar | psi | | g | lb |
| 169-102-015 | PR.GAUGE D68 0- 25 BAR GLYCER G1/4B VA | vertically | 0-25 | 0-360 | Stainless steel housing | 210 | 0.46 |
| 169-104-015 | PR.GAUGE D68 0- 40 BAR GLYCER G1/4B VA | vertically | 0-40 | 0-580 | Stainless steel housing | 200 | 0.44 |
| 169-106-015 | PR.GAUGE D68 0- 60 BAR GLYCER G1/4B VA | vertically | 0-60 | 0-870 | Stainless steel housing | 200 | 0.44 |
| 169-110-015 | PR.GAUGE D68 0-100 BAR GLYCER G1/4B VA | vertically | 0-100 | 0-1 450 | Stainless steel housing | 200 | 0.44 |
| 169-125-015 | PR.GAUGE D68 0-250 BAR GLYCER G1/4B VA | vertically | 0-250 | 0-3 625 | Stainless steel housing | 200 | 0.44 |
| 169-140-001 | PR.GAUGE D62 0-400 BAR GLYCER G1/4B VA | vertically | 0-400 | 0-5 800 | Stainless steel housing | 220 | 0.49 |

Washer, **order No. 248-610.02**, must be ordered separately for use in solderless tube connections acc. to DIN 3862.

Damped pressure gauges with glycerin filling and visualization in red/green

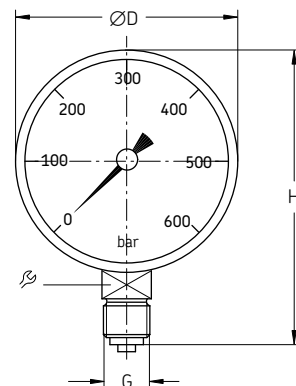


| Order number | Designation | Mounting position | Indication range | | Material | Weight | |
|--------------|---------------------------------------|-------------------|------------------|---------|-------------------------|--------|------|
| | | | bar | psi | | g | lb |
| 169-101-607 | PR.GAUGE D63 0-16 BAR GLYZ. G1/4B VA | vertically | 0-16 | 0-230 | Stainless steel housing | 166 | 0,37 |
| 169-106-011 | PR.GAUGE D63 0-60 BAR GLYZ. G1/4B VA | vertically | 0-60 | 0-870 | Stainless steel housing | 220 | 0,49 |
| 169-110-010 | PR.GAUGE D63 0-100 BAR GLYZ. G1/4B VA | vertically | 0-100 | 0-1 450 | Stainless steel housing | 174 | 0,38 |

Washer, **order No. 248-610.02**, must be ordered separately for use in solderless tube connections acc. to DIN 3862.

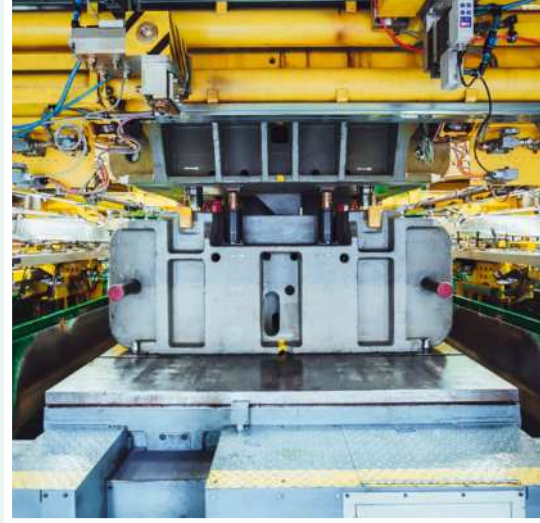
Pressure gauges

High-pressure gauges



| Order number | Designation | ØD | G | H | Mounting position | Indication range | | Weight | |
|-------------------------|--|-----|--------------|------|-------------------|------------------|--------|--------|------|
| | | | | | | bar | psi | g | lb |
| Steel housing, black | | | | | | | | | |
| 234-13132-7 | PR.GAUGE D 63 0- 400 BAR GLYZ.G1/4B BOT | 63 | G 1/4 bottom | 84,5 | vertically | 0-400 | 0-5800 | 200 | 0,44 |
| 234-13132-8 | PR.GAUGE D 63 0- 400 BAR G1/4B | 63 | G 1/4 bottom | 84,5 | vertically | 0-400 | 0-5800 | 100 | 0,22 |
| 234-13156-6 | PR.GAUGE D 63 0- 600 BAR | 63 | G 1/4 bottom | 84,5 | vertically | 0-600 | 0-8700 | 210 | 0,46 |
| 234-13182-7 | PR.GAUGE D 63 0- 600 BAR GLYZ.G1/4B BOT | 63 | G 1/4 bottom | 84,5 | vertically | 0-600 | 0-8700 | 200 | 0,44 |
| 234-10396-2 | PR.GAUGE D100 0- 400 BAR | 100 | G 1/2 bottom | 133 | vertically | 0-400 | 0-5800 | 601 | 1,33 |
| 234-13101-2 | PR.GAUGE D100 0- 600 BAR G1/2A | 100 | G 1/2 bottom | 133 | vertically | 0-600 | 0-8700 | 560 | 1,23 |
| 234-13101-4 | PR.GAUGE D100 0- 600 BAR G1/2B GLYZER | 100 | G 1/2 bottom | 133 | vertically | 0-600 | 0-8700 | 860 | 1,90 |
| Stainless steel housing | | | | | | | | | |
| 234-10396-9 | PR.GAUGE D 63 0- 400 BAR G1/4(BAR/PSI)VA | 63 | G 1/4 bottom | 84,5 | vertically | 0-400 | 0-5800 | 200 | 0,44 |
| 234-13182-8 | PR.GAUGE D 63 0- 400BAR G1/4B BACK VA | 63 | G 1/4 back | 63 | vertically | 0-400 | 0-5800 | 220 | 0,49 |
| 234-10898-4 | PR.GAUGE D100 0- 400 BAR+PSI GLYZ.1.4404 | 100 | G 1/2 bottom | 133 | vertically | 0-400 | 0-5800 | 993 | 2,19 |
| 234-13136-2 | PR.GAUGE D100 0- 600 BAR HOUSING VA | 100 | G 1/2 bottom | 133 | vertically | 0-600 | 0-8700 | 600 | 1,32 |

Reservoirs



Description

For technical reasons, all reservoirs shown in this catalogue can only be used for oil. Grease reservoirs require additional technical features that make a combination of reservoir and pump necessary. The reservoirs shown are available in either plastic or metal designs. The advantage of the plastic containers is that the oil filling level is clearly visible through the transparent reservoir. Metal reservoirs from 6 liters (1.5 gal) and larger can be equipped with external oil level indicators. It is also possible to monitor the minimum or maximum oil level electrically via float switches. Depending on the oil used, the sealing material (NBR or FPM) should be selected.

Features and benefits

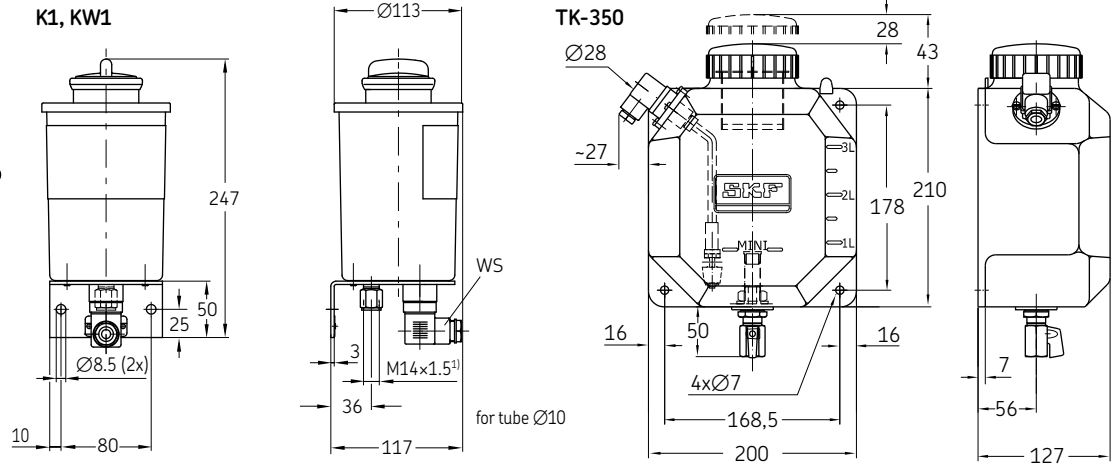
- Available in sizes ranging from 3 litres to 100 litres on request
- All reservoirs are equipped with a screen at the filler socket (exception: 1 litre tank screen at the outlet), which reliably prevents foreign particles from entering
- Simple and proven design for use in all kinds of automatic oil lubrication systems
- Virtually leakage-free storage of oil
- Easy manual or digital fill-level monitoring

Applications

- All automatic oil lubrication systems
- Pulp and paper industry
- Automobile presses
- Food and beverage
- Automation
- Printing
- Metals
- Etc.

Reservoirs

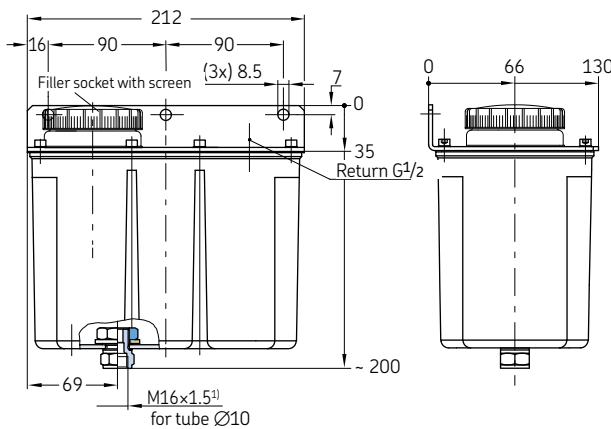
Plastic reservoirs



1) Ports tapped for solderless tube connection

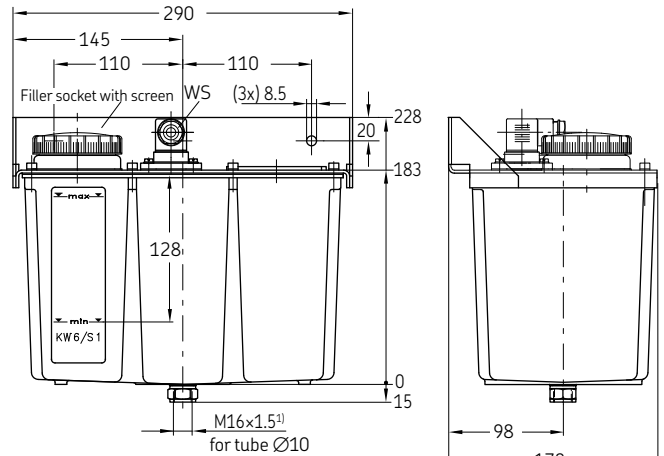
| Order number | Designation | Reservoir Capacity | | Level indicator | Type of contact | Electrical connector | Seal material | Weight | |
|-------------------|----------------------------------|--------------------|------|--------------------|-----------------|-------------------------------|---------------|--------|------|
| | | l | gal. | | | | | kg | lb |
| K1 | OIL RESERVOIR ASSY. PL 1YN | 1 | 0.26 | – | – | – | NBR | 0,70 | 1.54 |
| KW1 | OIL RESERVOIR ASSY. PL 1YL (NO) | 1 | 0.26 | Min. filling level | NO | Rectangular connector | NBR | 0,76 | 1.68 |
| KW1-S2 | OIL RESERVOIR ASSY. PL 1YL (NC) | 1 | 0.26 | Min. filling level | NC | Rectangular connector | NBR | 0,80 | 1.76 |
| TK-350-V | OIL RESERVOIR ASSY. PL 3,7L | 3,7 | 0.97 | – | – | – | NBR | 0,93 | 2.05 |
| TK-350-VM | OIL RESERVOIR ASSY. PL 3,3L (NO) | 3,3 | 0.87 | Min. filling level | NO | Wire with appr. 0,95 m length | NBR | 1,06 | 2.33 |
| TK-350-VMC | OIL RESERVOIR ASSY. PL 3,3L (NO) | 3,3 | 0.87 | Min. filling level | NO | Rectangular connector | NBR | 1,13 | 2.49 |

Plastic reservoir, 3 liter



1) Ports tapped for solderless tube connection

Plastic reservoir, 6 liter

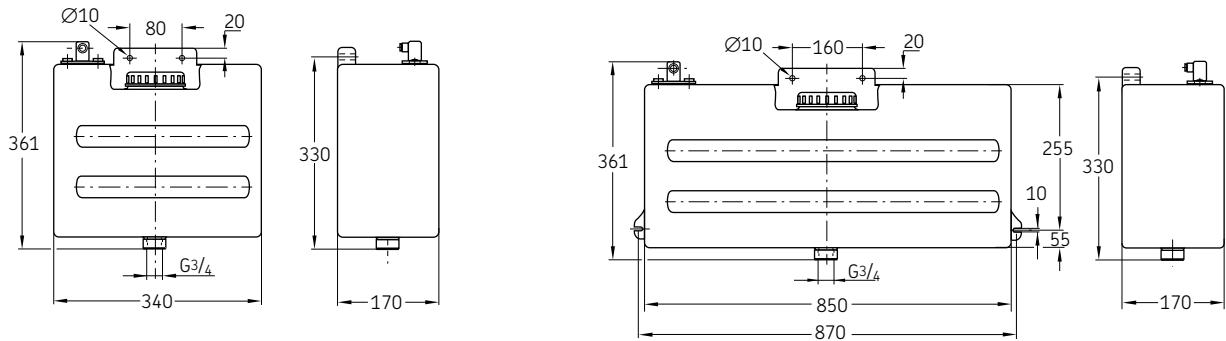


1) Ports tapped for solderless tube connection

| Order number | Designation | Reservoir Capacity | | Level indicator WS | Type of contact | Seal material | Weight | |
|---------------|-----------------------------------|--------------------|------|-----------------------------------|-----------------|---------------|--------|------|
| | | l | gal. | | | | kg | lb |
| K3-S2 | OIL RESERVOIR ASSY. PL 3YN | 3 | 0.79 | – | – | NBR | 1,34 | 2.95 |
| KW3-S1 | OIL RESERVOIR ASSY. PL 3YL (SPDT) | 3 | 0.79 | Min. filling level | Changeover | NBR | 1,63 | 3.59 |
| K6-S5 | OIL RESERVOIR ASSY. PL 6YN | 6 | 1.58 | – | – | NBR | 2,28 | 5.04 |
| K6-S6 | OIL RESERVOIR ASSY. PL 6YL (SPDT) | 6 | 1.58 | – | – | NBR | 2,28 | 5.04 |
| KW6-S1 | OIL RESERVOIR ASSY. PL 6YL (SPDT) | 6 | 1.58 | Min. filling level | Changeover | NBR | 2,58 | 5.70 |
| KW6-S2 | OIL RESERVOIR ASSY. PL 6YLP (NC) | 6 | 1.58 | Min. filling with advance warning | 2NCs | NBR | 2,50 | 5.51 |

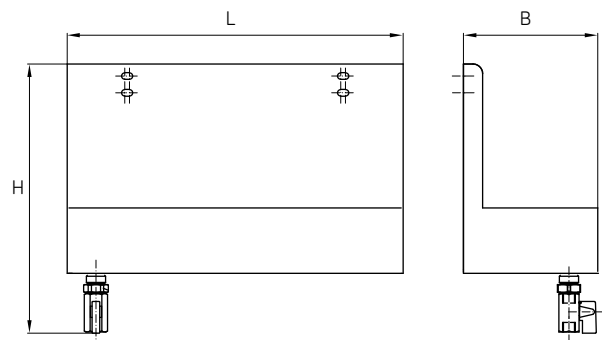
Reservoirs

Plastic reservoirs



| Order number | Designation | Reservoir capacity | | Level indicator WS | Type of contact | Weight | |
|--------------|-----------------------------|--------------------|------|-----------------------|-----------------|--------|------|
| | | l | gal. | | | kg | lb |
| 651-28691-1 | OIL RESERVOIR PL 13YL F.PMA | 13 | 2.86 | Minimum filling level | Changeover | 2,2 | 4.85 |
| 651-29124-1 | OIL RESERVOIR PL 13YN F.PMA | 13 | 2.86 | – | – | 2 | 4.40 |
| 651-28685-1 | OIL RESERVOIR PL 36YL F.PMA | 36 | 7.9 | Minimum filling level | Changeover | 4,251 | 9.37 |

Oil trough with shut-off valve

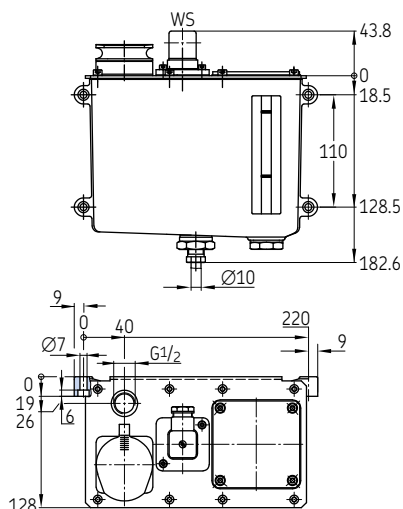


| Order number | Designation | Reservoir capacity | | L | B | H |
|--------------|---------------|--------------------|-------|-----|-----|-----|
| | | l | gal. | | | |
| B3.U21 | OIL TROUGH 3L | 3 | 0,792 | 350 | 280 | 140 |
| B7.U271 | OIL TROUGH 6L | 6 | 1,585 | 400 | 380 | 190 |

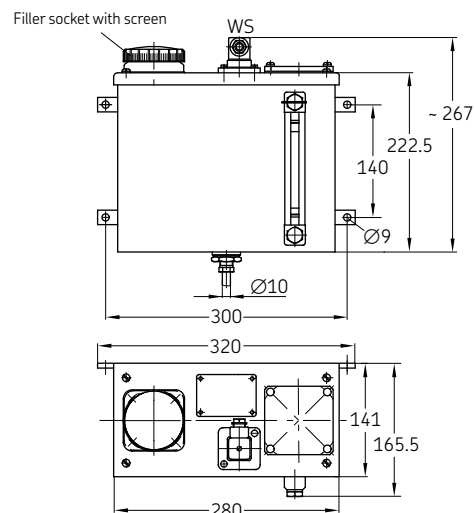
Reservoirs

Metal reservoirs

Metal reservoir, 3 liter



Metal reservoir, 6 liter

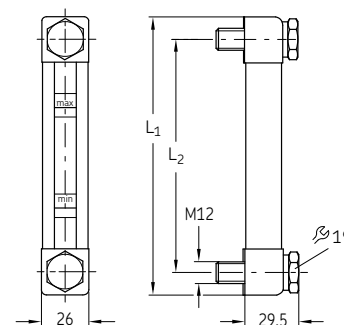


| Order number | Designation | Reservoir capacity | | Level indicator WS | Type of contact | Seal material | Weight | |
|--------------------|-------------------------------------|--------------------|------|---|-----------------|---------------|--------|-------|
| | | l | gal. | | | | kg | lb |
| BW3-2-S1 | OIL RESERVOIR ASSY. ST 3YL | 3 | 0.79 | Min. filling level | Changeover | NBR | 2,24 | 4.94 |
| B7 | OIL RESERVOIR ASSY. ST 6YN | 6 | 1.58 | – | – | NBR | 4,9 | 10.80 |
| BW7-S6 | OIL RESERVOIR ASSY. ST 6YBN | 6 | 1.58 | Min. and max. filling level | 2 NCs | NBR | 5,12 | 11.29 |
| BW7-S7 | OIL RESERVOIR ASSY. ST 6YLP (2xNC) | 6 | 1.58 | Min. filling level with advance warning | 2 NCs | NBR | 5,2 | 11.47 |
| BW7-S8 | OIL RESERVOIR ASSY. ST 6YL (SPDT) | 6 | 1.58 | Min. filling level | Changeover | FPM | 5,11 | 11.27 |
| BW7-S11 | OIL RESERVOIR ASSY. ST 6YP (2xSPDT) | 6 | 1.58 | Min. filling level with advance warning | 1 NO, 1 NC | NBR | 4,97 | 10.96 |
| BW7-S14 | OIL RESERVOIR ASSY. ST 6YP (NC/NO)) | 6 | 1.58 | Min. filling level with advance warning | 1 NO, 1 NC | NBR | 5,2 | 11,47 |
| 162-310-005 | OIL RESERVOIR ASSY. ST 6YL (SPDT) | 6 | 1.58 | Min. filling level | Changeover | NBR | 4,96 | 10,94 |

Oil level gauges for metal reservoirs

| Order number | Designation | L ₁ | L ₂ | Reservoir Capacity | | Weight | |
|--------------------|-------------------------|----------------|----------------|--------------------|---------------|--------|------|
| | | mm | mm | Liters | gal. | g | lb |
| 995-003-044 | OIL LEVEL GAUGE L=127MM | 152 | 127 | 6 | 1.58 | 146 | 0.32 |
| 995-003-040 | OIL LEVEL GAUGE L=165MM | 190 | 165 | 6 | 1.58 | 158 | 0.35 |
| 995-003-041 | OIL LEVEL GAUGE L=190MM | 215 | 190 | 15 and 30 | 3.96 and 7.92 | 170 | 0.37 |
| 995-003-042 | OIL LEVEL GAUGE L=254MM | 279 | 254 | 50 | 13.21 | 190 | 0.42 |
| 995-003-043 | OIL LEVEL GAUGE L=280MM | 305 | 280 | 100 | 26.42 | 199 | 0.44 |

Type: NBR, FKM (FPM) on request



Lubricating nipples



Description

Grease nipples provide a standardized connection to the grease gun and are therefore an important part for servicing and maintaining bearings. They also protect the lubrication point from external influences such as dirt and water.

Features and benefits

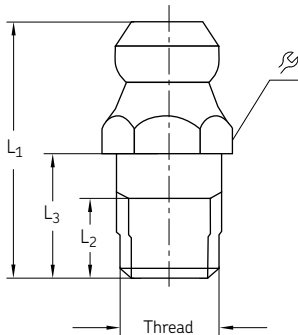
- Our standard program includes the most common hydraulic and flat grease nipples according to DIN 74412 and DIN 3404
- Available in galvanized steel or stainless steel

Applications

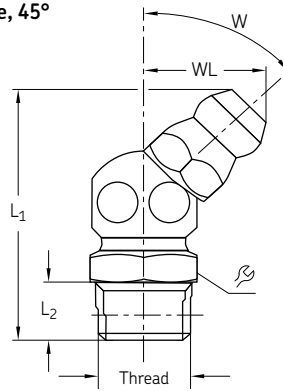
- Linear guides
- Bearings, bearing blocks
- Drive shafts, cardan shafts
- Axles

Hydraulic grease nipples according to DIN 71412

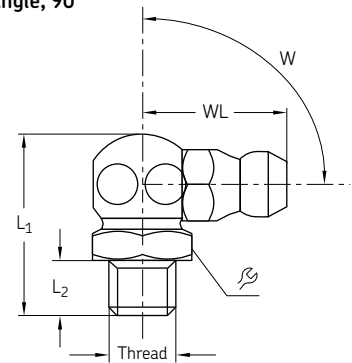
Straight



Angle, 45°

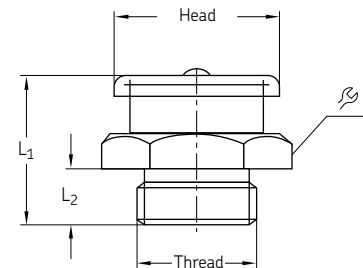


Angle, 90°



| Order number | Designation | Form | Thread | mm | Material | Operating pressure max. | | Weight (100 pcs) | |
|-------------------|-------------------------------------|------------|--------|----|-------------------|-------------------------|-------|------------------|------|
| | | | | | | bar | psi | g | lb |
| Steel, galvanized | | | | | | | | | |
| 251-14040-1 | HYDRAULIC LUBR.FITT. ST AR 1/8 Z | Straight | R 1/8 | 11 | Steel, galvanized | 350 | 5 080 | 600 | 1.32 |
| 996-001-890 | HYDRAULIC LUBR.FITT. ST AM 10X1,0 Z | Straight | M10×1 | 11 | Steel, galvanized | 350 | 5 080 | 500 | 1.10 |
| 251-14109-3 | HYDRAULIC LUBR.FITT. ST BR 1/4 Z | Angle, 45° | R 1/4 | 14 | Steel, galvanized | 350 | 5 080 | 1 800 | 3.97 |
| 251-14045-1 | HYDRAULIC LUBR.FITT. ST BR 1/8 Z | Angle, 45° | R 1/8 | 11 | Steel, galvanized | 350 | 5 080 | 1 200 | 2.65 |
| 251-14040-2 | HYDRAULIC LUBR.FITT. ST CR 1/8 Z | Angle, 90° | R 1/8 | 11 | Steel, galvanized | 350 | 5 080 | 1 200 | 2.65 |
| 251-14044-8 | HYDRAULIC LUBR.FITT. ST CR 1/4 Z | Angle, 90° | R 1/4 | 14 | Steel, galvanized | 350 | 5 080 | 1 200 | 2.65 |
| Stainless steel | | | | | | | | | |
| 251-14073-9 | HYDR.LUBR.FITT.+CHECK VALVE A2 1/8 | Straight | R 1/8 | 11 | Stainless steel | 400 | 5 800 | 800 | 1.76 |
| 251-14109-2 | HYDRAULIC LUBR.FITT. A2 AR 1/8 Z | Straight | R 1/8 | 11 | Stainless steel | 350 | 5 080 | 600 | 1.32 |
| 251-10309-1 | HYDRAULIC LUBR.FITT. A2 AR 1/4 Z | Straight | R 1/4 | 14 | Stainless steel | 350 | 5 080 | 1 200 | 2.65 |
| 251-10780-2 | HYDRAULIC LUBR.FITT. A2 AM 10X1,0 Z | Straight | M10×1 | 11 | Stainless steel | 350 | 5 080 | 500 | 1.10 |
| 251-14063-4 | HYDRAULIC LUBR.FITT. A2 BR 1/8 Z | Angle, 45° | R 1/8 | 11 | Stainless steel | 350 | 5 080 | 1 200 | 2.65 |
| 251-14063-9 | HYDRAULIC LUBR.FITT. A2 CR 1/8 Z | Angle, 90° | R 1/8 | 11 | Stainless steel | 350 | 5 080 | 1 200 | 2.65 |

Button-head grease nipples according DIN 3404

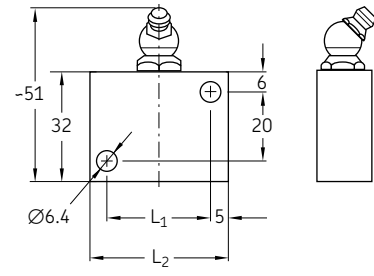


| Order number | Designation | Head Ø | Thread | mm | Material | Operating pressure max. | | Weight (100 pcs) | |
|--------------|---------------------------------------|--------|--------|----|-------------------|-------------------------|-------|------------------|------|
| | | | | | | bar | psi | g | lb |
| 251-14040-5 | BUTTON HEAD LUBR.FITT.ST AG 1/8-16Z | 16 | G 1/8 | 17 | Steel, galvanized | 350 | 5 800 | 1 700 | 3.75 |
| 251-14040-4 | BUTTON HEAD LUBR.FITT.ST AG 1/4-16Z | 16 | G 1/4 | 17 | Steel, galvanized | 350 | 5 800 | 1 900 | 4.19 |
| 251-10309-2 | BUTTON HEAD LUBR.FITT.ST AG 3/8-16Z | 16 | G 3/8 | 17 | Steel, galvanized | 350 | 5 800 | 2 000 | 4.41 |
| 251-14063-1 | BUTTON HEAD LUBR.FITT.ST AG 1/4-22Z | 22 | G 1/4 | 22 | Steel, galvanized | 350 | 5 800 | 4 000 | 8.82 |
| 251-14040-3 | BUTTON HEAD LUBR.FITT.ST AG 3/8-22Z | 22 | G 3/8 | 22 | Steel, galvanized | 350 | 5 800 | 4 000 | 8.82 |
| 251-14045-8 | BUTTON HEAD LUBR.FITT.ST AM10X1,0-16Z | 16 | M10×1 | 22 | Steel, galvanized | 350 | 5 800 | 1 700 | 3.75 |

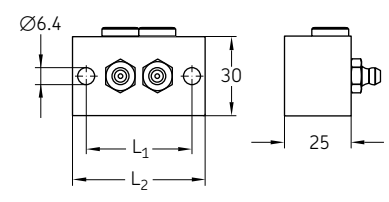
Lubricating nipples

Lubrication fitting block

532-32248-1



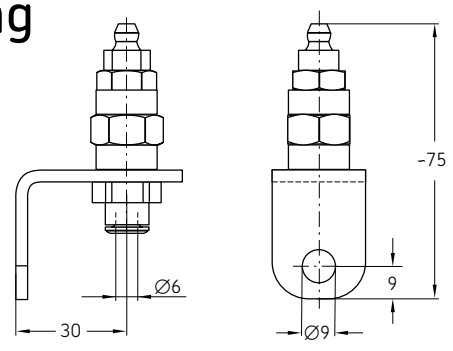
532-32454-1



| Order number | Designation | Ports for lubricating nipples | L ₁ | L ₂ | Material | Operating pressure max. | | Weight | |
|--------------|---|-------------------------------|----------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | mm | mm | | bar | psi | g | lb |
| 532-32248-1 | LUBR.FITT.BLOCK W.1 FITT. R1/8 45 DEGREE | 1 | 30 | 40 | Steel, galvanized | 400 | 5 800 | 160 | 0.35 |
| 504-37184-2 | LUBR.FITT.BLOCK W.1 FITT. R1/4" 90 DEGREE | 1 | 30 | 40 | Steel, galvanized | 400 | 5 800 | 217 | 0.48 |
| 504-37210-1 | LUBR.FITT.BLOCK 2 FITT. R1/8 | 2 | 40 | 50 | Steel, galvanized | 400 | 5 800 | 132 | 0.29 |
| 504-37211-1 | LUBR.FITT.BLOCK 3 FITT. R1/8 | 3 | 60 | 70 | Steel, galvanized | 400 | 5 800 | 177 | 0.39 |
| 532-32454-1 | LUBR.FITT.BLOCK W. 2 FITT. R1/8 | 2 | 40 | 50 | Steel, galvanized | 400 | 5 800 | 331 | 0.73 |
| 432-70024-1 | LUBR.FITT.BLOCK 2 CONN.R1/8 HORIZ./VERTIC | 2 ¹⁾ | 40 | 50 | Steel, galvanized | 400 | 5 800 | 236 | 0.52 |

¹⁾ Two lubricating nipple connections; corresponding tapered grease nipple order no. 251-14045-1

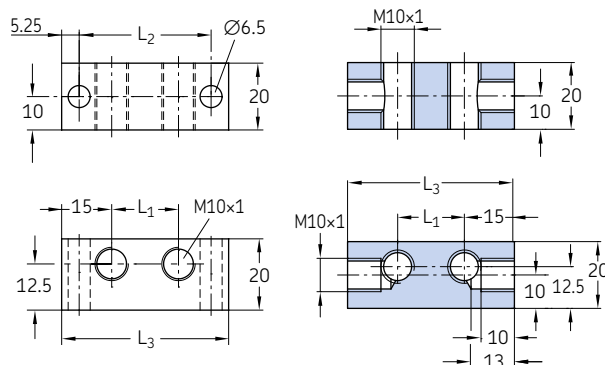
Holder with lubricating nipple and fitting



| Order number | Designation | Ports for lubricating nipples | L ₁ | Material | Operating pressure max. | | Weight | |
|--------------|-------------------------------|-------------------------------|----------------|-------------------|-------------------------|-------|--------|------|
| | | | mm | | bar | psi | g | lb |
| 532-32131-1 | HOLDER W. HYDR. LUBR. FITTING | 1 | 40 | Steel, galvanized | 400 | 5 800 | 93 | 0.21 |

Lubricating nipples

Lubrication nipple manifolds



| Order number | Designation | L ₁ | L ₂ | L ₃ | Number of threaded holes | Material | Operating pressure max. | | Weight | |
|---------------------------|-----------------------------|----------------|----------------|----------------|--------------------------|------------------------|-------------------------|-------|--------|------|
| | | | | | | | bar | psi | g | lb |
| 871-340-006 | LUBRICATION BAR 1x M10x1 | – | 19,5 | 30 | 1 | Steel, galvanized | 400 | 5 800 | 72 | 0.16 |
| 871-340-008 ¹⁾ | LUBRICATION BAR 2x M10x1 | – | 19,5 | 30 | 1 | Steel, galvanized | 400 | 5 800 | 70 | 0.15 |
| 871-360-006 | LUBRICATION BAR 2x M10x1 | 20 | 39,5 | 50 | 2 | Steel, galvanized | 400 | 5 800 | 120 | 0.26 |
| 871-360-008 ¹⁾ | LUBRICATION BAR 4x M10x1 | 20 | 39,5 | 50 | 2 | Steel, galvanized | 400 | 5 800 | 120 | 0.26 |
| 871-380-006 | LUBRICATION BAR 3x M10x1 | 20 | 40 | 70 | 3 | Steel, galvanized | 400 | 5 800 | 180 | 0.40 |
| 871-380-008 | LUBRICATION BAR VA 3x M10x1 | 20 | 40 | 70 | 3 | Stainless steel 1.4301 | 400 | 5 800 | 180 | 0.40 |
| 871-390-020 | LUBRICATION BAR 10x M10x1 | 20 | 199,5 | 210 | 10 | Steel, galvanized | 400 | 5 800 | 530 | 1.17 |
| 871-390-023 | LUBRICATION BAR 13x M10x1 | 20 | 200 | 270 | 13 | Steel, galvanized | 400 | 5 800 | 685 | 1.51 |

¹⁾ Nipple connection; corresponding tapered grease nipple with valve, order no. 996-001-890

Lubricating nipple box



| Thread | Type | Quantity |
|--------|----------|----------|
| M6x1 | straight | 30 |
| M8x1 | straight | 20 |
| M10x1 | straight | 10 |
| G 1/8 | straight | 10 |
| M6x1 | 45° | 5 |
| M8x1 | 45° | 10 |
| M10x1 | 45° | 5 |
| G 1/8 | 45° | 5 |
| M6x1 | 90° | 5 |
| M8x1 | 90° | 10 |
| M10x1 | 90° | 5 |
| G 1/8 | 90° | 5 |

| Order number | Designation | Material | Operating pressure max. | |
|--------------|---------------------------------|---|-------------------------|-------|
| | | | bar | psi |
| LAGN 120 | LUBRICATION NIPPLE BOX LAGN 120 | Steel, zinc plated, hardened and blue chromed | 400 | 5 800 |



Description

These easy-to-service lubricant filters consist of a housing and an integrated screen. Grease filters have pressure ratings up to 400 bar (5800 psi) and allow flow rates up to 24 dm³/hour (6.3 US gal/hour), oil and fluid grease filters allow 2 l/min.

Galvanized and chromate-treated lubricant filter units are available with hydraulic lubrication fittings for lubrication pump reservoir filling. They are also suitable for upstream installation in lubrication systems with divider valves and for outlet connection with outside diameters of 6 mm.

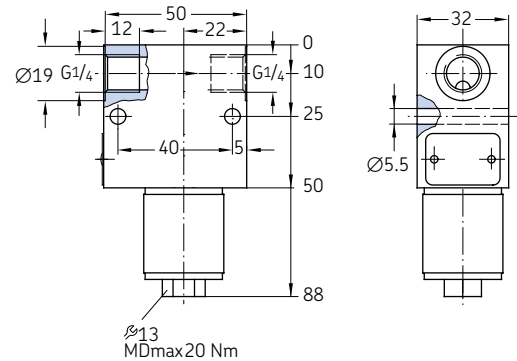
Features and benefits

- Prevents system or component failures and extends system life to significant reduction of solids
- Economical, reliable and maintenance-friendly operation
- Compact and modular design mountable directly into pipes
- Wide range of volumetric flow levels and grades of filtration
- Optimized service handling by replacing of filter elements only
- Dirt monitoring of filter elements as an option
- Oil, fluid grease and grease filters

Applications

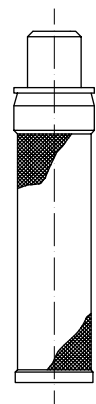
- General mechanic and plant engineering
- Ship building and offshore industry
- Pulp and paper industry
- Heavy industry

Screen filters for oil and fluid grease



| Order number | Designation | Lubricant | Filter rating | Connection thread | Material | Operating pressure max. | | Weight | |
|--------------|-------------|---------------------------------|---------------|-------------------|----------|-------------------------|-----|--------|------|
| | | | | | | bar | psi | kg | lb |
| | | | µm | | | | | | |
| 213-870 | FILTER | FLUID GREASE NLGI CLASS 000, 00 | 63 | G 1/4 | Aluminum | 60 | 870 | 0,31 | 0,68 |
| 213-870F | FILTER | FLUID GREASE NLGI CLASS 000, 00 | 160 | G 1/4 | Aluminum | 60 | 870 | 0,31 | 0,68 |
| 213-880 | FILTER | OIL | 25 | G 1/4 | Aluminum | 60 | 870 | 0,31 | 0,68 |
| 213-930F | FILTER | FLUID GREASE NLGI CLASS 000, 00 | 160 | G 1/4 | Aluminum | 60 | 870 | 1,27 | 2,80 |

Filter elements for oil and fluid grease filters

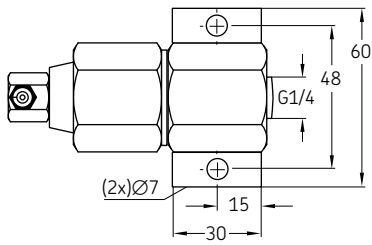


| Order number | Designation | Lubricant | Filter rating | Operating pressure max. | |
|--------------|-----------------------------|---------------------------------|---------------|-------------------------|-----|
| | | | | bar | psi |
| | | | µm | | |
| 213-870.U1 | FILTER ELEMENT FOR 213-870 | Fluid grease NLGI class 000, 00 | 63 | 60 | 870 |
| 213-870.U2 | FILTER ELEMENT FOR 213-870F | Fluid grease NLGI class 000, 00 | 160 | 60 | 870 |
| 213-880.U1 | FILTER ELEMENT FOR 213-880 | Oil | 25 | 60 | 870 |
| 213-870.U2 | FILTER ELEMENT FOR 213-930F | Fluid grease NLGI class 000, 00 | 160 | 60 | 870 |

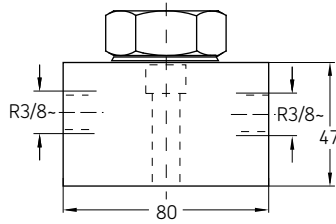
Filters

Screen filters for grease

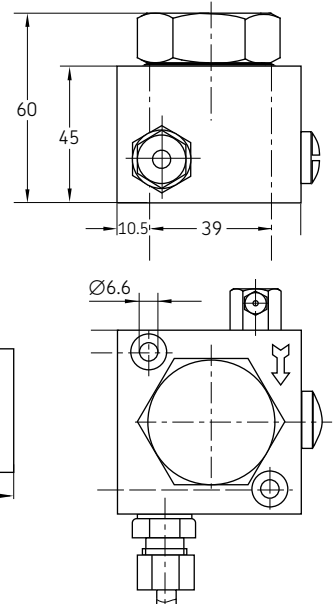
628-36062-3



628-25531-2

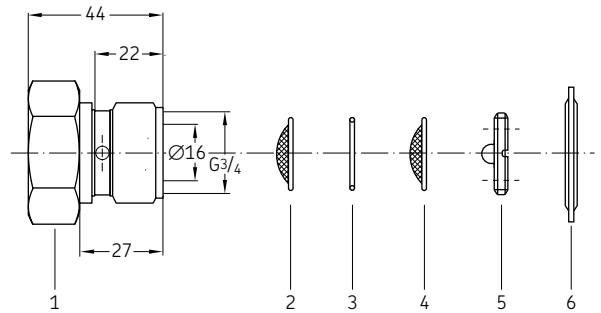


528-36045-6



| Order number | Designation | Tube ØD | Thread | Material | Operating pressure max. | | Weight | |
|--------------|---|---------|--------|-------------------|-------------------------|-------|--------|-------|
| | | | | | bar | psi | g | lb |
| 628-36062-3 | Type SF 1-G 1/4 + 90° Nipple | – | G 1/4 | Steel, galvanized | 350 | 5 080 | 540 | 1.19 |
| 628-26452-2 | Type SF 1-G 1/4 | – | G 1/4 | Steel, galvanized | 350 | 5 080 | 440 | 0.97 |
| 428-21544-1 | Coarse strainer (replacement part) | – | – | Steel, galvanized | 350 | 5 080 | 2 | 0.005 |
| 528-36045-6 | Filter unit with nipple and tube connection | 6 | – | Steel, galvanized | 350 | 5 080 | 1 400 | 3.09 |
| 528-31341-3 | Filter unit G 1/4 female | – | G 1/4 | Steel, galvanized | 350 | 5 080 | 1 280 | 2.82 |
| 628-25531-2 | Filter unit G 3/8 female | – | G 3/8 | Steel, galvanized | 350 | 5 080 | 2 470 | 5.45 |

Filter elements for grease filter units



| Order number | Designation | Item number | Material | Operating pressure max. | | Weight | |
|--------------|--|-------------|-------------------|-------------------------|-------|--------|-------|
| | | | | bar | psi | g | lb |
| 428-21543-2 | Hollow screw | 1 | Steel, galvanized | 350 | 5 080 | 284 | 0.63 |
| 428-21544-1 | Coarse strainer, fineness of filtration 410 µm | 2 | Brass | 350 | 5 080 | 2 | 0.005 |
| 428-21546-2 | Spacing ring | 3 | Spring steel | 350 | 5 080 | 2 | 0.005 |
| 428-21545-1 | Fine strainer, fineness of filtration 270 µm | 4 | Brass | 350 | 5 080 | 2 | 0.005 |
| 303-17546-1 | Threaded ring | 5 | Steel | 350 | 5 080 | 12 | 0.03 |
| 220-12238-3 | Uisit sealing ring | 6 | NBR | 350 | 5 080 | 7 | 0.02 |

Brushes



Description

Brushes are used as lubricant applicators in lubrication systems. Regardless of the type of lubrication system, the applicators are always located at the end of the line and directly at the lubrication point. They are a simple and inexpensive solution for many applications, such as in chain lubrication. When using a brush, the entire chain is evenly coated with a protective film of lubricant. This keeps the chain supple and protects it from corrosion.

Features and benefits

- Simple and inexpensive solution for many lubrication applications
- Accurate dosage, regardless of oil viscosity and flow resistance
- Lubricates the entire conveyor chain, not just the connecting points of the chain links

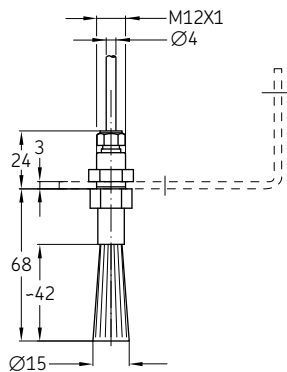
Applications

- Conveyors for sorting, cleaning, cooking and pasteurizing fruits and vegetables
- Dryers, smokers and conveyors for meat processing
- Conveyors for material transport
- Ovens, boilers, dryers
- Freezers

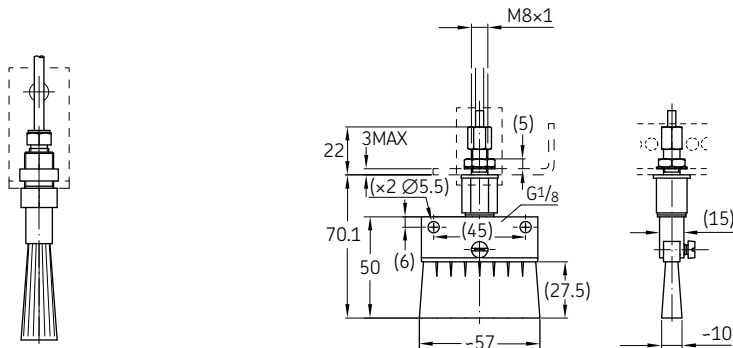
Brushes

UC, 233, 068874

UC-1066-10

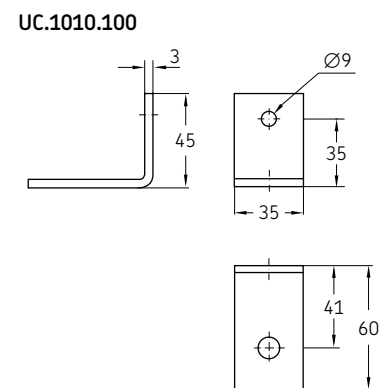
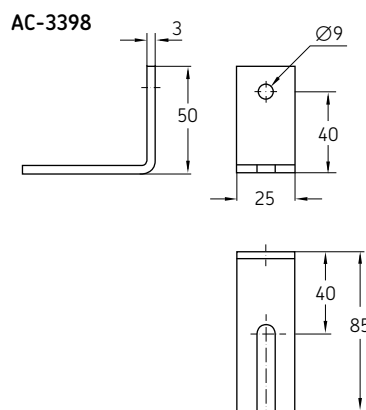
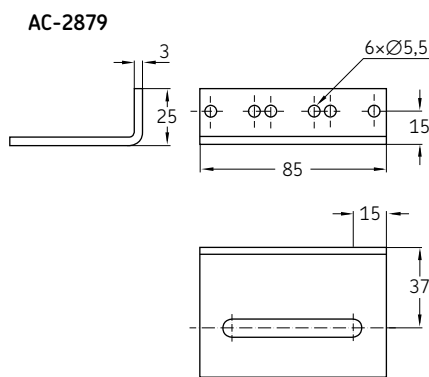


UC-1066-14



| Order number | Designation | Shape | Tube ØD | Shape size | Temperature | | Material | Fixation | | Weight | |
|--------------|---------------------------------------|-----------|------------|---------------|-------------|-----------|-----------------|----------|-----|--------|--|
| | | | | | °C | °F | | mm | g | lb | |
| UC-1066-01 | OIL BRUSH BRISTLE, 55x16 | Rectangle | 4 mm | 55x16 | 10 to 60 | 50 to 140 | Bristle | Ø8,5 | 110 | 0.24 | |
| UC-1066-02 | OIL BRUSH MS, 55x16 | Rectangle | 4 mm | 55x16 | 10 to 200 | 50 to 392 | Brass | Ø8,5 | 160 | 0.35 | |
| UC-1066-03 | OIL BRUSH BRISTLE, D30 | Circle | 4 mm | Ø30 | 10 to 60 | 50 to 140 | Bristle | Ø19 | 85 | 0.19 | |
| UC-1066-04 | OIL BRUSH BRISTLE, D15 | Circle | 4 mm | Ø15 | 10 to 60 | 50 to 140 | Bristle | Ø12,5 | 45 | 0.10 | |
| UC-1066-05 | OIL BRUSH PA6, D15 | Circle | 4 mm | Ø15 | 10 to 80 | 50 to 176 | Polyamide 6.6 | Ø12,5 | 45 | 0.10 | |
| UC-1066-06 | OIL BRUSH PA6, 55x16 | Rectangle | 4 mm | 55x16 | 10 to 80 | 50 to 176 | Polyamide 6.6 | Ø12,5 | 45 | 0.10 | |
| UC-1066-10 | OIL BRUSH MS, D15 | Circle | 4 mm | Ø15 | 10 to 200 | 50 to 392 | Brass | - | 59 | 0.13 | |
| UC-1066-14 | OIL BRUSH MS, 55x16 | Rectangle | 4 mm | 55x16 | 10 to 300 | 50 to 572 | Brass | - | - | - | |
| 233-14419-1 | OIL BRUSH BZ MODEL SPF 57 G 1/8 | Rectangle | G 1/8 | 55x16 | 10 to 200 | 50 to 392 | Brass | 2xØ5,5 | 62 | 0.14 | |
| 233-13651-1 | OIL BRUSH MS L=CA 47MM R1/8 | Circle | R 1/8 | Ø30 | 10 to 200 | 50 to 392 | Brass | Ø20 | 20 | 0.04 | |
| 233-13651-6 | OIL BRUSH V2A MODEL SPR16/30/53 G 1/8 | Circle | G 1/8 | Ø30 | 10 to 200 | 50 to 392 | Stainless steel | Ø20 | 35 | 0.08 | |
| 068874 | BRUSH | Circle | 1/8 NPT | Ø15 | 10 to 80 | 50 to 176 | Nylon | Ø20 | 20 | 0.04 | |

Support for brushes



| Order number | Designation | Suitable for brush | Temperature | | Material |
|--------------|------------------|---------------------------|-------------|-----------|----------|
| | | | °C | °F | |
| AC-2879 | SUPPRT FOR BRUSH | UC-1066-01, -02, -06, -14 | 10 to 80 | 50 to 176 | Steel |
| AC-3398 | SUPPRT FOR BRUSH | UC-1066-04, -05, -10 | 10 to 80 | 50 to 176 | Steel |
| UC.1010.100 | SUPPRT FOR BRUSH | UC-1066-03 | 10 to 80 | 50 to 176 | Steel |



Description

The tools shown in the following chapter considerably improve and professionalize assembly, maintenance and testing work on lubrication systems.

- Hand-operated bending tools are available for bending steel pipes in the outer diameters of 4, 6, 8, 10 mm; machine-operated bending devices should be used for larger diameters or quantities
- Claw groove tool can be used to cut the metal pipe to length in one step and to produce the exact geometric shape of the claw groove; a claw groove is necessary for the three O-ring connection fittings
- The hand lever grease gun can be optimally used for functional testing and pressure testing of small central lubrication systems (preferably progressive systems) and progressive metering devices; it is equipped with:
 - High-pressure hose 1 m long
 - Glycerin damped manometer 0–400 bar, 63 mm diameter
 - Union nut and cutting ring for connection to cutting ring fittings for pipe \varnothing 6 mm

Features and benefits

- Simple and proven design for use with all lubrication systems
- Manual tools, no additional energy source required
- Professional tools to achieve the right quality result

Applications

- Lubrication system installation
- Lubrication system startup
- Lubrication system maintenance

Pipe cutter



Description

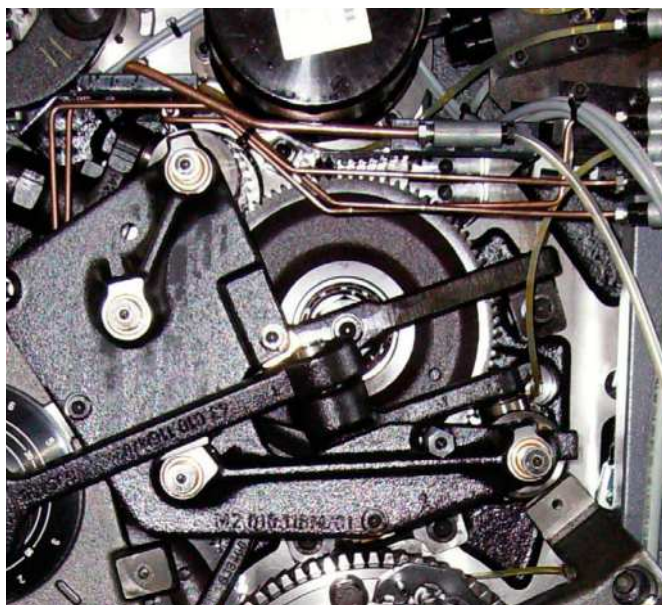
This manual pipe cutter is particularly suitable for pipes made of copper, brass, light metal and hard plastic, as well as for steel and stainless steel pipes with outside diameters from 3 to 35 mm and a maximum cutting depth of 2.5 mm.

Features and benefits

- Optimal hold of the tube when cutting with two guide rollers
- Combines accuracy with ease of use
- Optimal size, light weight

Applications

- Metal and plastic forming machinery
- Construction machinery
- Agriculture, automation
- Printing



Technical data

| | |
|------------|---|
| Function | manual tube cutter |
| Material | steel, metal, plastic |
| Dimensions | 145 x 58 x 45 mm 5.70 x 2.28 x 1.77 in |

Order information

| Order number | Designation | Tube | | |
|--------------|-------------------|--------|-----|------|
| | | Weight | | |
| | | Ø mm | g | lb |
| 223-10540-1 | STEEL PIPE CUTTER | 3 - 35 | 356 | 0.78 |
| 223-10540-2 | CUTTING COG SR153 | 3 - 35 | 6 | 0.01 |

Tools

Claw groove tool



Description

The manual claw groove tool is suitable for hardened copper, brass, steel and stainless steel tubes with diameters of 4, 6, 8 and 10 mm. It allows the creation of claw grooves on metal pipes that are needed for use with SKF quick connectors.

Features and benefits

- One compact tool for both cutting and grooving
- Combines accuracy with ease of use
- Optimal size, light weight

Applications

- Metal and plastic forming machinery
- Construction machinery
- Agriculture, automation
- Printing

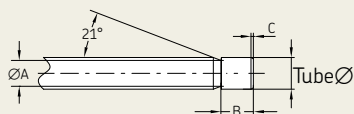
Technical data

| | |
|------------|---|
| Function | manual claw groove tool |
| Material | steel, metal, plastic |
| Dimensions | 154 x 50 x 50 mm 6.06 x 1.96 x 1.96 in |

Order information

| Order number | Designation | Tube | Weight | |
|--------------------|-------------------|------|--------|-------|
| | | Ø mm | g | lb |
| 169-000-336 | Pipe cutter 4 mm | 4 | 345 | 0.76 |
| 169-000-337 | Pipe cutter 6 mm | 6 | 344 | 0.76 |
| 169-000-338 | Pipe cutter 8 mm | 8 | 349 | 0.77 |
| 844-330-006 | Cutting ring 4 mm | 4 | 20 | 0.044 |
| 844-330-007 | Cutting ring 6 mm | 6 | 21 | 0.046 |
| 844-330-007 | Cutting ring 8 mm | 8 | 21 | 0.046 |

Claw grooves



For the use of SKF quick connector fittings, a claw groove is required at the end of the pipe.

Claw groove information

| Tube | A | B | C |
|------|-----|-----|-------------|
| Ø mm | mm | mm | mm |
| 4 | 3,1 | 5 | 0,3 ... 0,7 |
| 6 | 4,9 | 6,2 | 0,4 ... 0,9 |
| 8 | 6,9 | 6,2 | 0,5 ... 0,9 |

Tube bender



Description

The easy-to-use manual tube bender is designed for pipe diameters of 6, 8 and 10 mm and has a bending radius range from 1-180° with a visible, marked scale featuring 15° steps. The bender is suitable for use with hardened copper, steel and stainless steel tubes.

Features and benefits

- Designed for bending hardened copper, steel and stainless steel
- Provides measurements in inches and millimeters
- Combines accuracy with ease of use
- Optimal size, light weight
- Includes oil-absorbing shoe

Applications

- Metal and plastic forming machinery
- Construction machinery
- Textile machinery
- Agriculture
- Automation
- Printing

Technical data

| | |
|----------------|------------------------------|
| Function | manual tube bender |
| Material | steel, metal, plastic |
| Bending radius | 1-180° |
| Scale | 15° steps |
| Length | 260-370 mm 10.23-14.56 in |

Order information

| Order number | Designation | Tube | | | Weight |
|--------------|----------------------|------|------|------|--------|
| | | Ø mm | kg | lb | |
| 223-13700-8 | HAND-BENDING MACHINE | 6 | 0,7 | 1.54 | |
| 223-13700-9 | HAND-BENDING MACHINE | 8 | 1,3 | 2.86 | |
| 223-13700-7 | HAND-BENDING MACHINE | 10 | 1,18 | 2.60 | |

Tube bending fix



Description

Designed for installation on a workbench, the manual tube bending fix is suitable for hardened copper, steel and stainless steel tubes with diameters of 4, 6, 8 and 10 mm. Its bending radius range is 1-180°.

Features and benefits

- One compact tool for workbench assembly with exchangeable bending disks
- Combines accuracy with ease of use
- Optimal size, light weight

Applications

- Metal and plastic forming machinery
- Construction machinery
- Textile machinery
- Agriculture
- Automation
- Printing

Technical data

| | |
|----------------|-------------------------|
| Function | manual tube bending fix |
| Material | steel, metal, plastic |
| Bending radius | 1-270° |

Order information

| Order number | Designation | Tube | Weight | |
|-------------------|------------------|---|--------|------|
| | | | kg | lb |
| | | Ø mm | | |
| 248-803.20 | Tube bending fix | 4, 6, 8, 10 | 1,53 | 3.37 |
| 248-803.17 | Bending disk | 12 (special grooved disk) ¹⁾ | 0,378 | 0.83 |
| 248-803.16 | Bending disk | 4 (retro fitting set) ²⁾ | 0,093 | 0.21 |

¹⁾ To bend pipes with 12 mm diameter, the special grooved disk 248-803.17 must be ordered in addition to pipe bending device 248-803.20.

²⁾ Retro fitting set with grooved disk for older pipe bending devices 248-803.20.

Tube cutter



Description

This manual tube cutter is particularly suitable for tubes and hoses made of plastic and rubber, including tubes with thin metal layers. It cuts tubes with outside diameters up to 12,5 mm.

Features and benefits

- Combines accuracy with ease of use
- Highly resistant against stress and flexural vibrations
- Small size, light weight

Applications

- Metal and plastic forming machinery
- Construction machinery
- General industry
- Agriculture
- Printing

Technical data

| | |
|------------|--|
| Function | manual hose cutter |
| Material | steel, metal |
| Dimensions | 175 × 115 × 10 mm 6.88 × 4.52 × 0.39 in |

Order information

| Order number | Designation | Tube |
|--------------|--------------------------------|--------|
| | | Ø mm |
| 226-12508-5 | TUBE CUTTER | 1-12,5 |
| 226-13095-7 | TUBE CUTTER REPLACEMENT BLADES | 1-12,5 |

Tools

Grease pump set for pressure and function check



Description

This manual grease pump set for pressure and function check is a perfect tool for lubrication system installation, maintenance or troubleshooting existing systems. Its integrated pressure gauge, hose and fitting enable accurate system function check and help to identify system leaks as well as system blockages. The set includes two different connection options: a hydraulic coupler for grease nipple, and a fitting for connection of tube $\varnothing 6$ mm.

Features and benefits

- Combines accuracy with ease of use
- Set contains a wide range of fittings
- Robust and reliable tool
- Small size, light weight

Applications

- Metal and plastic forming machinery
- Construction machinery
- General industry
- Agriculture
- Printing

Technical data

| | |
|-------------|---|
| Function | grease pump set for pressure and function check |
| Connections | hydraulic coupler for grease nipple, or fitting for connection of tube $\varnothing 6$ mm |
| Material | steel, metal |

Order information

| | |
|--------------|-------------|
| Order number | Designation |
|--------------|-------------|

| | |
|--------------------|--|
| 604-36879-1 | PRESSURE AND FUNCTION TESTING SET |
|--------------------|--|

Drum plug wrench



Description

The drum plug wrench was developed to simplify the opening and closing of caps and plugs on fluid drums. The model 5841 wrench eliminates the need for cumbersome makeshift tools, such as screwdrivers and hammers. Constructed of safe, non-sparking cast aluminum, the drum plug wrench features a comfortable, textured grip. This cost-effective wrench is suitable for agriculture, construction, industrial, fleet maintenance and vehicle service applications – anywhere that fluid drums are used. It is compatible with standard metal and plastic caps or plugs on 60 l (16 gal) and 200 l (55 gal) drums.

Features and benefits

- Suitable for common cap types – both plastic and metal
- Non-sparking, non-corrosive aluminum construction
- Saves time and effort when loosening and tightening plugs and caps
- Fits large and small caps
- Cost-effective solution
- Simple to use

Applications

- Caps or plugs on 60 l (16 gal) and 200 l (55 gal) drums

Technical data

| | |
|-------------|--|
| Function | drum plug wrench |
| Application | 60 l (16 gal) and 200 l (55 gal) drums |
| Material | aluminum |
| Wrench | 3/4 |

Order information

| | |
|--------------|-------------|
| Order number | Designation |
|--------------|-------------|

| | |
|---------------|------------------|
| 005841 | DRUM PLUG WRENCH |
|---------------|------------------|

Socket wrench insert for elbows



Description

This socket wrench insert for elbow fitting mounting allows quick and clean system installation work, especially in machines or in facilities where lubrication lines have to run around many corners and barriers.

Features and benefits

- Combines accuracy with ease of use
- Highly resistant against stress and flexural vibrations
- Small size, light weight

Applications

- Metal and plastic forming machinery
- Construction machinery
- General industry
- Agriculture
- Printing

Technical data

| | |
|-------------|---------------------------------|
| Function | socket wrench insert |
| Application | elbows with max. width of 11 mm |
| Material | tool steel |
| Wrench | 1/4 |
| Dimensions | Ø24 mm, height 20 mm |

Order information

| | |
|--------------|-------------|
| Order number | Designation |
|--------------|-------------|

| | |
|----------------|--|
| 917-877 | SOCKET WRENCH INSERT FOR ELBOWS |
|----------------|--|

Mounting stud for hose couplings



Description

The mounting stud is an important tool for the self-assembly of threaded joints of high-pressure hoses. With the aid of the stud, it is possible to mount the threaded sleeve in the correct position in the high-pressure hose. This is important because incorrectly mounted sleeves can cause the hose to burst or couplings not to seal.

Features and benefits

- Simple mounting without complex measuring with caliper
- Avoids malfunctions in the central lubrication system due to blocked or burst hose lines
- Avoids errors during hose assembly

Applications

- Hose mounting for nominal diameter 6 mm

Technical data

| | |
|-----------------|----------------------|
| Function | mounting stud |
| Hose type | ND 6 mm |
| Immersion depth | 11 mm |
| Material | galvanized steel |
| Weight | 20 g; 0.05 lbs |
| Dimensions | Ø10 mm, Ø6 mm, 40 mm |

Order information

Order number Designation

432-23077-1 MOUNTING STUD

Manual grease guns



Description

The right lubricant has to be supplied in the right quantity at the right time in the right quality to the right lubrication point. Particularly contamination during the transfer process, applying too much or too little lubricant and using the wrong lubricant for a lubrication point are common problems and can easily be prevented. The SKF manual lubrication tools are specifically designed and selected to support these processes.

Features and benefits

- Avoid mistakes during manual lubrication with tools that are designed to support the “right” lubrication
- Select the best products for your needs from a wide product portfolio for storage, handling, dosing, labelling, analyzing and applying lubricants

Applications

- Agriculture and forestry industry
- Construction machinery
- Pulp and paper industry
- Renewables industry
- Oil and gas industry
- On-road vehicles
- Heavy industry
- Etc.

Manual grease guns

Manual grease filler guns



Description

The manual cartridge grease gun is ideal for agricultural, industrial and construction industries and for private use. It can be utilized to lubricate directly or as filler pump for automatic lubrication systems. The tool is designed for rough treatment on the job with a cast iron pump head, precision fit plunger and extra heavy follower spring.

Features and benefits

- For use with cartridges and bulk grease
- Knurled body for firm and safe grip
- High-output setting delivers twice the grease per stroke
- High or low pressure for light- or heavy-duty greasing action
- Extension swivels 360° for hard-to-reach fittings
- Plated barrel, head and handle

Applications

- General mechanic and plant engineering
- Agriculture, construction, automotive, trucking
- Heavy equipment
- Wind energy
- General industry

Technical data

| | |
|-----------------------|--|
| Function | manually operated cartridge grease gun |
| Delivery rate | max. 284 g/min; 10 oz/min |
| Cartridge capacity | 420 ml; 14.2 fl oz |
| Operating temperature | -18 to 50 °C; 0 to 122 °F |
| Lubricant | grease up to NLGI 2 |
| Material | steel, metal, plastic |

Order information

| Order number | Designation | Operation pressure max. | | Weight | |
|--------------|-------------|-------------------------|-------|--------|------|
| | | bar | psi | kg | lb |
| 001013 | LEVER GUN | 275 | 4 000 | 2,09 | 4.61 |
| 001142 | LEVER GUN | 400 | 5 800 | 1,85 | 4.08 |
| 001133 | PISTOL GUN | 414 | 6 000 | 1,62 | 3.57 |

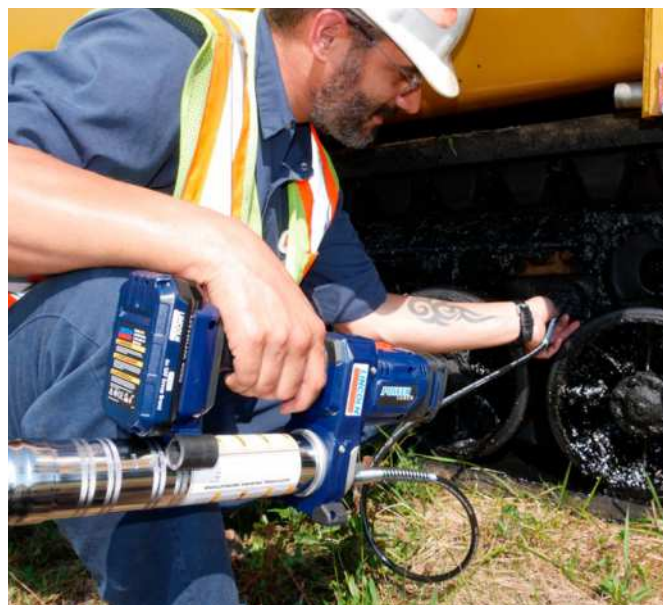
Manual grease guns

PowerLuber

Model 1260

Model 1880

Model 1890



Description

PowerLuber Li-ion grease gun family is designed to make quick work of lubrication tasks. It contains the rugged simplicity of the 12V, single-speed model, the speed and versatility of the durable 20V, high ratio, two speed design and the advanced technology of the 20V with LCD.

Features and benefits

- Flex hose that comes with anti-kink spring guards on each end and is the ideal size for most lubrication tasks
- Integrated vent valve purges trapped air to help assure easy prime
- The filler nipple facilitates a quick, clean refill for those who prefer to bulk fill their barrel
- Lithium-ion technology is powerful and efficient, delivering an even flow of energy
- LCD display version shows battery charge and grease output in both grams and ounces

Applications

- General mechanic and plant engineering
- Agriculture, construction, automotive, trucking
- Heavy equipment
- Wind energy
- General industry

Technical data

| | |
|-----------------------|-----------------------------|
| Function | battery-operated grease gun |
| Operating power | 12V or 20V |
| Operating pressure | max. 690 bar; 10 000 psi |
| Delivery rate | max. 284 g/min; 10 oz/min |
| Reservoir capacity | 411 g; 14.5 oz |
| Operating temperature | -18 to 50 °C; 0 to 122 °F |
| Rated current | 5.0 A |
| Lubricant | grease up to NLGI 2 |
| Material | steel, metal, plastic |
| Weight | 3,4 kg; 7.5 lb |

Order information

| Order number | Description | Approval |
|---------------|--|----------|
| 1890 | 20V Li-ion high-ratio dual output grease gun with single battery | UL |
| 1886 | 20V Li-ion high-ratio dual output grease gun with single battery, charger and carrying case | UL |
| 1886-E | 20V Li-ion high-ratio dual output grease gun with single battery, charger and carrying case | CE |
| 1880 | 20V Li-ion 2-speed grease gun with multi-funcion LED and single battery | UL |
| 1882 | 20V Li-ion 2-speed grease gun with multi-funcion LED and single battery, charger and carrying case | UL |
| 1882-E | 20V Li-ion 2-speed grease gun with multi-funcion LED and single battery, charger and carrying case | CE |
| 1871 | 20V Li-ion battery, 2,5 Ah | UL, CE |
| 1872 | 20V Li-ion battery, 4,0 Ah | UL, CE |
| 1260 | 12V Li-ion single-speed grease gun with single battery | UL |
| 1262 | 12V Li-ion single-speed grease gun with single battery, charger and carrying case | UL |
| 1262-E | 12V Li-ion single-speed grease gun with single battery, charger and carrying case | CE |

Manual grease guns

PowerLuber

20V Li-ion PowerLuber
High-ratio, dual-output design for low- or high-volume lubrication points



Model 1890

20V Li-ion PowerLuber
Two-speed grease gun with multi-function LCD identifying output quantity, battery charge and motor speed



Model 1880

12V Li-ion PowerLuber
Single-speed grease gun



Model 1260



Model 1886 / 1886-E



Model 1882 / 1882-E



Model 1262



Model 1888



Model 1884



Model 1264



Full range of high-pressure hoses for all Lincoln PowerLuber models

- Model 1218 18 in. 46 cm
- Model 1224 24 in. 61 cm
- Model 1230 ²⁾ 30 in. 76 cm
- Model 1236 ³⁾ 36 in. 91 cm
- Model 1248HP ⁴⁾ 48 in. 122 cm (new)

Included with the PowerLuber

¹ Standard on all PowerLuber models
² Standard on the 12V models
³ Standard on the 20V models 1882 and 1884
⁴ Standard on the 20V models 1886 and 1888 (new)



Grease coupler ¹⁾
Model 5852



Heavy-duty grease coupler
Model 5845



360 Degree coupler with quick-connect
Model 5849



Carrying strap
Model 1414



Lever-action coupler
Model 5900

Refill pumps



Description

Filling pumps make it easier to top up lubricants in reservoirs of automatic lubrication pumps. By using original barrels, hoses and couplings, it is ensured that no dirt gets into the reservoir during the filling process. Contaminated lubricants that enter the reservoir during manual filling via the open reservoir lid are the greatest risk of malfunctions in a centralized lubrication system.

Depending on the desired degree of automation, the filling pumps can be supplied with manual, compressed air or electric drive.

For longer transport distances, the use of a filling pump on a trolley is recommended.

Features and benefits

- Improved maintenance of all lubrication systems
- Easy-to-use, application-optimized product design
- Quick and professional refilling with contamination prevention, compared to manual grease refilling
- Optimized consumption of refilling barrel lubricants due to use of perfectly suited barrel follower plates
- Wide range of filling pumps for all common reservoir sizes

Applications

- General mechanic and plant engineering
- Agriculture and forestry industry
- Construction machinery
- Pulp and paper industry
- Renewables industry
- Oil and gas industry
- On-road vehicles
- Heavy industry
- Etc.

Refill pumps

Filler cylinder



Description

Lubricant outlets of automatic lubrication system pumps can, as an option, be equipped with one suitable filler socket in order to fill the unit using a filling cylinder (cartridge). A filler cylinder is only recommended for systems with low lubricant consumption and reservoir sizes up to 2 kg.

Features and benefits

- Robust and sustainable manual filler pump
- Knurled body for firm and safe grip
- Easy to use

Applications

- General mechanic and plant engineering
- Agriculture, construction, automotive, trucking
- General industry
- Heavy equipment
- Wind energy

Technical data

| | |
|-----------------------|--|
| Function | manually operated cartridge filler cylinder |
| Reservoir capacity | 420 ml; 14.2 fl oz |
| Operating temperature | -18 to 50 °C; 0 to 122 °F |
| Lubricant | grease up to NLGI 2 |
| Material | steel, metal, plastic |

Order information

| Order number | Designation | Thread |
|----------------------|-----------------|---------|
| | | mm |
| 169-000-171 | FILLER CYLINDER | – |
| 169-000-174 | FILL CONNECTION | M20x1,5 |
| 5590-00000002 | FILL CONNECTION | M22x1,5 |

Refill pumps

Manual and pneumatic filling pumps



Description

The 169 series of filling pumps is available in manual or pneumatic models that are suitable for barrel sizes of 15, 20, 25 and 50 kg. The pumps are offered in stationary or mobile versions.

Features and benefits

- Easy and cost-efficient filling of pump reservoirs
- No contamination of the lubricant during the filling process
- Steel pump with guided grease follower piston
- Centering cover that positions the pump centrally in the barrel and ensures optimum residual emptying

Applications

- Construction and agriculture vehicles
- Production plants

Technical data

| | |
|-----------------------|---|
| Function | filling pump |
| Design | manually operated filling pump |
| Delivery rate | max. 100 g/stroke; 10 oz/stroke |
| Design | pneumatically operated filling pump |
| Delivery rate | max. 1 800 g/min; 3.97 lbs/min |
| Ratio | 1 : 3 |
| Operating pressure | max. 24 bar; max. 348 psi |
| Air pressure | max. 8 bar; max. max. 116 psi |
| Barrel capacities | 15, 20, 25 and 50 kg |
| Operating temperature | -10 to +40 °C; 14 to 104 °F |
| Lubricant | fluid grease and grease up to NLGI 2 |
| Coupling | acc. to ISO 241 B DN6 R 1/4 |
| Hose length | 2 m; 6.5 ft |
| Material | steel, metal, plastic |
| Dimensions | max. 550 x 550 x 950 max. 21.65 x 21.65 x 37.4 |

Order information

| Order number | Designation | Drum | Inner diameter | | Lubricant | Delivery rate per Weight stroke | | | |
|--------------|------------------------------------|-------|-------------------|--------------------|-----------|---------------------------------|-----------------|-----------------|-------|
| | | | kg | mm | | in | cm ³ | in ³ | kg |
| 169-000-004 | MANUAL FILLING PUMP 15L,STATIONARY | 15 | 267 | 10.5 | NLGI 1/2 | 4 | 0.25 | 4,383 | 9.66 |
| 169-000-012 | MANUAL FILLING PUMP 10L,STATIONARY | 10 | 236 | 9.3 | NLGI 1/2 | 25 | 1.53 | 4,68 | 10.32 |
| 169-000-016 | MANUAL FILLING PUMP 20L,STATIONARY | 20 | 290 | 11.4 | NLGI 1/2 | 25 | 1.53 | 5,12 | 11.30 |
| 169-000-082 | MANUAL FILLING PUMP 25/50L,MOBILE | 25/50 | 350 ¹⁾ | 13.8 ¹⁾ | 00/000 | 100 | 6.1 | 7 | 15.43 |
| 169-000-084 | MANUAL FILLING PUMP 25L,MOBILE | 25 | 350 ¹⁾ | 13.8 ¹⁾ | 00/000 | 250 | 15.3 | 4 | 8.82 |
| 169-000-042 | MANUAL FILLING PUMP 25L,MOBILE | 25 | 300-335 | 11.2-13.2 | NLGI 1/2 | 45 | 2.7 | 16,8 | 37.04 |
| 169-000-054 | MANUAL FILLING PUMP 50L,MOBILE | 50 | 355-387 | 14-15.2 | NLGI 1/2 | 45 | 2.7 | 10 | 22.05 |
| 169-000-342 | MANUAL FILLING PUMP 25L,STATIONARY | 25 | 300-335 | 11.2-13.2 | NLGI 1/2 | 45 | 2.7 | 6,38 | 14.06 |
| 169-000-018 | FILLING PUMP, PNEUM. 25L, MOBILE | 25 | 300-335 | 11.2-13.2 | NLGI 1/2 | 45 | 2.7 | 16,8 | 37.04 |

¹⁾ max. outer diameter

Compact grease transfer pump GTP-C



Description

To use the GTP-C, simply turn on the main switch located on the terminal box. The function status is shown by two LEDs, with green indicating power supply and yellow indicating the pump's operational readiness. The GTP-C will deliver grease continuously while the button on the wired remote control is pressed. The grease in the drum or pail is drawn below the follower plate and fed by the pump. When the follower plate reaches the bottom of the drum, it activates an empty signal switch that automatically shuts off the pump. Replacing the empty grease drum is simplified by opening the vent.

Features and benefits

- Purely electric drive
- Filling hose with quick-release coupling or connection with M30x2 thread
- High delivery volume up to 1 100 cm³/min (0.29 gal/min)
- Powerful performance with no air connection required
- Fast filling even at low temperatures
- Time- and effort-saving alternative to manual filling
- Easy-to-use in mobile applications

Applications

- Wind energy
- Service and maintenance trucks
- Mining and construction vehicles
- General mechanical and plant engineering

Technical data

| | |
|-------------------------|--|
| Function | electrically operated gerotor pump |
| Delivery rate | max. 1 100 cm ³ /min; 67 in ³ /min |
| Barrel capacities | 5 gal. (only 799-000-3161) 25 kg / 30 l 50 kg / 60 l 180 kg / 216 l |
| Operating temperature | -10 to +50 °C; 14 to 122 °F |
| Lubricant | grease up to NLGI 2 |
| Outlet fitting | quick-release coupling or connection with M30x2 thread |
| Rated delivery pressure | max. 100 bar; 1450 psi |
| Material | steel, metal, plastic |
| System voltage | 230 V AC/50 or 120V AC/60 Hz |
| Motor power | 0,37 kW |
| Protection class | IP54 |
| Insulation class | F |
| Electrical connection | grounded plug, 3 m (9.8 ft) cable - motor protection via circuit breaker |
| Activation | wired remote control (5/10/15 m) |
| Dimensions (pump only) | 250 x 597 mm; 9.13 x 26.38 in |

Order information

| Order number | Description | Approval |
|--------------|---|----------|
| 799-000-3161 | Filling pump mounted on frame with follower plate in transport pail, 120 V AC/60 Hz | UL |
| 799-000-3109 | Filling pump mounted on frame with follower plate in transport pail, 230 V AC/50 Hz, 25 kg reservoir | CE |
| 799-000-3119 | Filling pump mounted on frame with follower plate in transport pail, 230 V AC/50 Hz, 50 kg reservoir | CE |
| 799-000-3118 | Filling pump mounted on frame with follower plate in transport pail, 230 V AC/50 Hz, 180 kg reservoir | CE |

Refill pumps

Grease transfer pump GTP



Description

Pump frames for grease drum sizes of 50 to 200 kg are available on request. The pump is ready for operation after switching on the main switch on the terminal box. The function status is shown by 2 LEDs. Green indicates the power supply and yellow the pump's operational readiness. The pump delivers grease.

Features and benefits

- Powerful even where only power connection (no air connection) is available
- Time- and effort-saving alternative to manual filling
- Filling hose with quick-release coupling or connection with M30x2 thread
- High delivery volume up to 2 500 cm³/min (152 in³/min)
- Fast filling even at low temperatures
- Easy-to-use in mobile applications
- For pressure up to 100 bar

Applications

- General mechanical and plant engineering
- Construction and agriculture
- Wind energy
- Vehicles
- Railway



Technical data

| | |
|-------------------------|---|
| Function | electrically operated gerotor pump |
| Delivery rate | max. 2 500 cm ³ /min; 152 in ³ /min |
| Barrel capacities | 25 kg/30 l (further on request) |
| Operating temperature | -10 to +50 °C; 14 to 122 °F |
| Lubricant | grease up to NLGI 2 |
| Outlet fitting | quick-release coupling or connection with M30x2 thread |
| Rated delivery pressure | max. 100 bar; 1 450 psi |
| Material | steel, metal, plastic |
| System voltage | 230 V AC / 50 Hz |
| Motor power | 0,75 kW |
| Protection class | IP54 |
| Insulation class | F |
| Electrical connection | grounded plug, 3 m cable - motor protection via circuit breaker |
| Activation | wired remote control (5/10/15 m) |
| Dimensions (pump only) | 250 x 993 mm; 6.8 x 39 in |

Order information

| Order number | Description | Approval |
|---------------------|--|----------|
| 24-1560-3576 | Filling pump with transport bracket and plug and socket coupling | CE |
| 24-1560-3595 | Filling pump without transport bracket and plug and socket coupling | CE |
| 24-1722-2557 | Pump frame with follower plate for grease drums 25 kg/30 l with empty signal | CE |
| 24-1722-2559 | Pump frame with follower plate for grease drums 25 kg/30 l, without empty signal | CE |

Refill pumps

Electric filling pump EFP



Description

The EFP electric grease filling pump is a piston pump for grease drum sizes from 16 to 25 kg. The delivery stroke is generated at the lower end of the intake tube by a delivery piston that is controlled by an electrically driven eccentric shaft. The pump is activated using an ON/OFF switch attached to the terminal box.

Features and benefits

- Suitable for pressures up to 250 bar
- Suitable for oil, fluid grease and grease
- Integrated automatic shut-off function for use with grease guns

Applications

- Wind energy
- Stationary and mobile vehicles

Technical data

| | |
|----------------------------------|---|
| Function | electrically operated piston pump |
| Delivery rate | max. 400 cm ³ /min; 24 in ³ /min |
| Barrel capacities | 16 and 25 kg |
| Operating temperature | -10 to +60 °C; 14 to 140 °F |
| Lubricant | oil, fluid grease and grease up to NLGI 2 |
| Outlet fitting | G 1/4 |
| Automatic shut-off, fixed | 250 bar |
| Pressure regulating valve, fixed | 300 bar |
| Restart after pressure relief | < 150 bar |
| Material | steel, metal, plastic |
| System voltage | 230 V AC/50 to 60 Hz |
| Motor power | 370 W |
| Protection class | IP54 |
| Insulation class | F |
| Intake current | 2,73 A |
| Electrical connection | grounded plug, 3 m cable - motor protection via circuit breaker |
| Dimensions (pump only) | 550 x 900 mm; 21.7 x 35.4 in |

Order information

| Order number | Designation | Weight | |
|--------------|---------------------------------------|--------|-------|
| | | kg | lb |
| 24-1560-3577 | EL. BARREL PUMP EFP | 34,5 | 76.07 |
| 24-1560-3578 | EL. BARREL PUMP EFP WITH SIGNAL INPUT | 34,9 | 76.95 |
| 24-1868-4334 | HIGH-PRESSURE HOSE, MAX. 275 BAR, 5 M | - | - |
| 412-423W | SCREW UNION G1/4A 412-423W | - | - |
| 995-001-500 | COUPLING BELL G1/4 | - | - |
| 995-000-705 | COUPLING PLUG G1/4 | - | - |
| 169-000-031 | GREASE GUN | - | - |

Accessories for EFP

| Order number | Designation | Drums Weight | | |
|--------------|---------------------------------------|--------------|------|-------|
| | | kg | kg | lb |
| 24-1722-2545 | CARRYING FRAME | 16/25 | 13,2 | 29.11 |
| 24-1722-2551 | CARRYING FRAME WITH HANDLE AND WHEELS | 16/25 | 16,6 | 36.60 |
| 24-1722-2552 | CARRYING FRAME WITH WHEELS | 16/25 | 15 | 33.08 |
| 24-1952-2034 | FOLLOWER PLATE Ø 265-285 | 16/25 | 0,7 | 1.54 |
| 24-1952-2035 | FOLLOWER PLATE Ø 285-305 | 16/25 | 1 | 2.21 |
| 24-1952-2036 | FOLLOWER PLATE Ø 305-350 | 16/25 | 1,5 | 3.31 |

Cross reference list

| Historical order number | SKF Lincoln order number | Historical order number | SKF Lincoln order number |
|-------------------------|--------------------------|-------------------------|--------------------------|
| 226-12490-3 | 898-610-000 | 410-323 | 223-14304-2 |
| 226-12557-1 | 941-206-104 | 410-403 | 223-14129-4 |
| 226-12557-2 | 941-209-104 | 410-403W | 223-12272-9 |
| 226-12557-7 | 941-210-104 | 410-403W-S3 | 223-14420-7 |
| 226-13095-1 | 898-710-001 | 410-404 | 223-12483-8 |
| 226-13095-6 | 179-990-186 | 410-405W | 223-13048-5 |
| 401-013-111 | 222-12599-9 | 410-407 | 223-13057-5 |
| 401-016-132 | 222-12521-2 | 410-409 | 223-12409-9 |
| 401-016-191 | 222-12578-5 | 410-410 | 223-12531-2 |
| 401-021-111 | 222-13678-4 | 410-410-S3 | 223-13615-6 |
| 404-301 | 223-14083-3 | 410-411 | 223-13028-2 |
| 404-302 | 223-13032-1 | 410-413W | 223-14214-4 |
| 404-403 | 223-13069-1 | 410-416 | 223-12368-8 |
| 404-403W | 223-12270-8 | 410-425 | 223-12485-2 |
| 404-404 | 223-12531-8 | 410-433W | 223-10313-7 |
| 404-405W | 223-13021-4 | 410-443-S3 | 223-14420-4 |
| 404-413 | 223-12271-8 | 410-463 | 223-10313-2 |
| 404-425 | 223-13069-2 | 412-301 | 223-12296-1 |
| 406-301 | 223-12295-3 | 412-302 | 223-12373-2 |
| 406-302 | 223-12373-9 | 412-403W | 223-12360-8 |
| 406-302-S3 | 223-14082-5 | 412-404 | 223-12280-9 |
| 406-303 | 223-14234-7 | 412-411 | 223-12481-8 |
| 406-323 | 223-13766-9 | 412-412 | 223-13732-8 |
| 406-331 | 223-12295-2 | 412-416 | 223-13698-4 |
| 406-332 | 223-12374-9 | 412-423W | 223-12477-9 |
| 406-332-S3 | 223-13638-2 | 415-301 | 223-12296-9 |
| 406-333 | 223-14129-1 | 415-302 | 223-12374-8 |
| 406-403 | 223-10263-8 | 415-403W | 223-12361-9 |
| 406-403-S3 | 223-14184-5 | 415-405W | 223-13021-7 |
| 406-403W | 223-13016-3 | 415-407 | 223-12563-2 |
| 406-403W-S3 | 223-13658-2 | 415-409 | 223-12409-8 |
| 406-404 | 223-12483-2 | 415-415 | 223-12531-6 |
| 406-405 | 223-12485-8 | 415-415-S3 | 223-12454-8 |
| 406-405W | 223-13048-1 | 415-416 | 223-12564-2 |
| 406-406 | 223-12482-9 | 415-433W | 223-13621-8 |
| 406-407 | 223-12484-2 | 418-301 | 223-12583-1 |
| 406-409 | 223-13050-4 | 418-302 | 223-12374-7 |
| 406-411 | 223-12481-4 | 418-403W | 223-13766-1 |
| 406-413W | 223-12477-1 | 418-403W-S3 | 223-14420-8 |
| 406-413W-S3 | 223-13614-7 | 418-416 | 223-12564-8 |
| 406-415W | 223-12380-6 | 418-418 | 223-13732-4 |
| 406-416 | 223-12368-4 | 422-407 | 223-13057-4 |
| 406-423 | 223-12271-7 | 428-403W | 223-13610-9 |
| 406-423-S3 | 223-13658-5 | 428-413W | 223-14214-9 |
| 406-423W | 223-12270-7 | 441-008-511 | 223-13021-1 |
| 406-423W-S3 | 223-13614-9 | 441-008-511-S3 | 223-13715-1 |
| 406-425 | 223-13021-3 | 471-110-163 | 223-13028-4 |
| 406-433 | 223-13023-1 | 471-112-162 | 223-12286-8 |
| 406-433-S3 | 223-13658-6 | 443-190-901 | 223-13050-3 |
| 406-435 | 223-13023-3 | 443-215-001 | 223-12562-2 |
| 406-435-S3 | 223-13677-2 | 443-306-341 | 223-14171-1 |
| 406-443 | 223-12533-9 | 443-308-351 | 223-14102-3 |
| 406-443-S3 | 223-13658-7 | 443-406-061 | 223-14190-6 |
| 406-445 | 223-13023-2 | 443-408-081 | 223-14190-7 |
| 406-445-S3 | 223-13677-4 | 443-410-101 | 223-13040-9 |
| 406-446 | 223-14181-3 | 443-412-121 | 223-13761-5 |
| 406-463W | 223-13766-6 | 443-415-151 | 223-14190-5 |
| 408-301 | 223-12295-6 | 445-516-081 | 223-12284-7 |
| 408-302 | 223-13032-4 | 445-519-041 | 223-13629-1 |
| 408-403 | 223-12361-6 | 445-519-061 | 223-12479-5 |
| 408-403W | 223-12477-6 | 445-529-041 | 223-12480-2 |
| 408-405 | 223-12362-8 | 445-531-061 | 223-12369-7 |
| 408-405W | 223-14240-5 | 445-531-062 | 223-12480-7 |
| 408-407 | 223-12484-6 | 445-808-351 | 223-13040-1 |
| 408-408 | 223-12531-9 | 445-810-371 | 223-14189-1 |
| 408-408-S3 | 223-13615-3 | 460-706-001 | 223-10297-5 |
| 408-409 | 223-12409-6 | 460-710-001 | 223-10297-6 |
| 408-411 | 223-12481-6 | 460-712-001 | 223-10297-9 |
| 408-413W | 223-10080-3 | 466-411-001 | 223-10530-4 |
| 408-416 | 223-12368-6 | 466-413-001 | 223-13702-7 |
| 408-423W | 223-12270-9 | 466-416-001 | 223-13702-1 |
| 408-423W-S3 | 223-13614-9 | 466-418-001 | 223-13702-6 |
| 408-425 | 223-12362-4 | 471-106-163 | 223-13655-1 |
| 410-301 | 223-12295-8 | 471-110-163 | 223-13655-7 |
| 410-302 | 223-13032-6 | 471-112-163 | 223-14268-4 |

Cross reference list

| Historical order number | SKF Lincoln order number | Historical order number | SKF Lincoln order number |
|-------------------------|--------------------------|-------------------------|--------------------------|
| 504-410 | 223-12542-2 | 96-5708-0058 | 223-12295-5 |
| 506-410 | 223-13705-5 | 96-5710-0058 | 223-12295-9 |
| 506-412 | 223-13622-3 | 96-5909-0058 | 223-13621-6 |
| 506-413 | 223-10986-1 | 96-6002-0058 | 223-12533-5 |
| 508-410 | 223-13024-4 | 96-6202-0058 | 223-12533-6 |
| 508-412 | 223-13622-7 | 96-6904-0058 | 223-12563-5 |
| 508-413 | 223-13024-8 | 96-7004-0058 | 223-13629-1 |
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Important information on product usage

SKF and Lincoln lubrication systems or their components are not approved for use with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1 013 mbar) by more than 0,5 bar at their maximum permissible temperature.



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PUB LS/P1 15859 EN · April 2021

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