

# Fittings and accessories for lubrication systems

Product catalogue 2021

NEW EDITION  
WITH FULLY  
REVISED AND  
IMPROVED  
ASSORTMENT!



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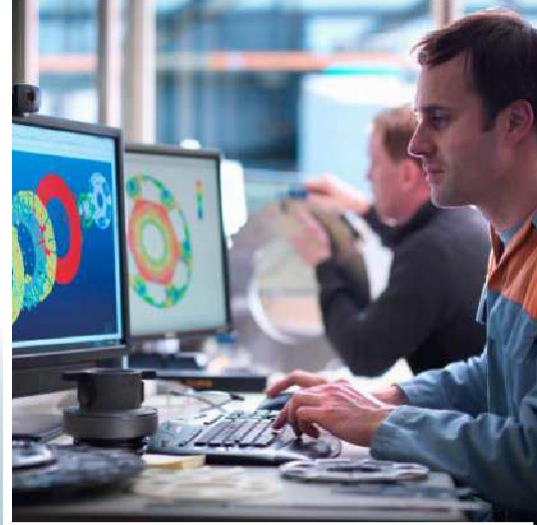
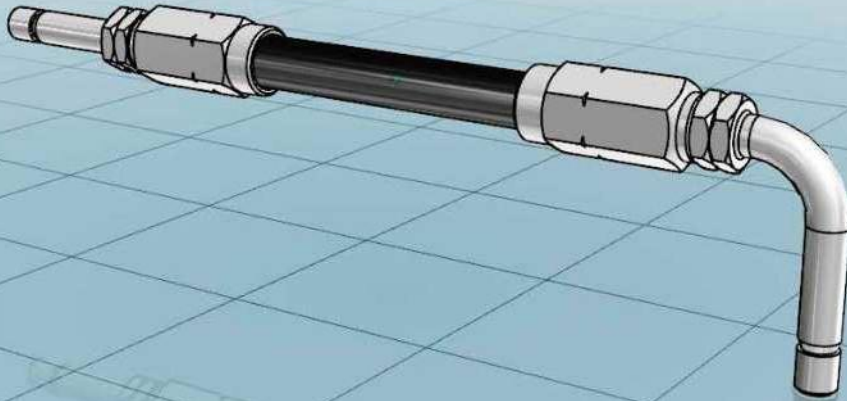
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## Electronic part library

# 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.



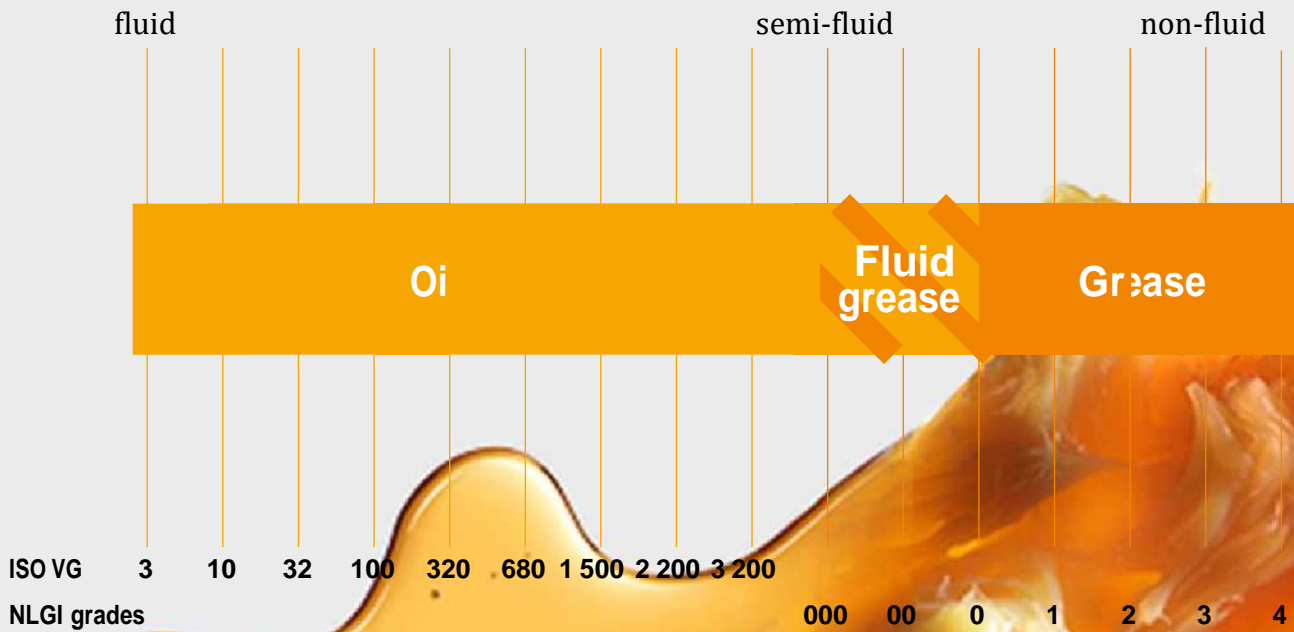
Apple App Store



Google Play



## Lubricants suitable for lubrication systems



### Oil and fluid grease

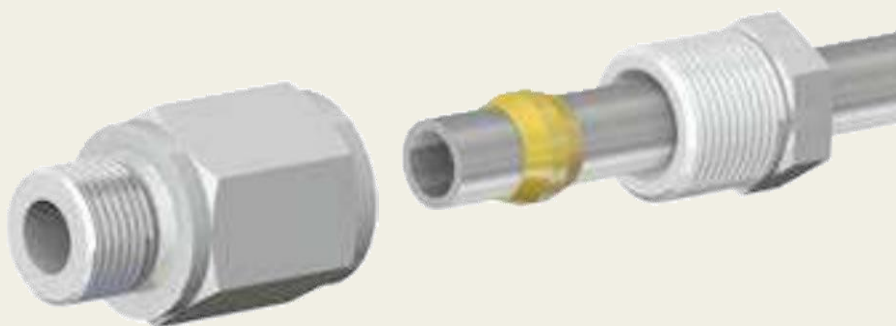
The viscosity is an expression of a fluid's internal friction. Oils are classified in ISO VG viscosity classes from 2 to 3 200. NLGI grade 000, 00 and 0 greases are called fluid greases. Different types of oils are available, including mineral oils, organic oils and synthetic oils. A compatibility check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



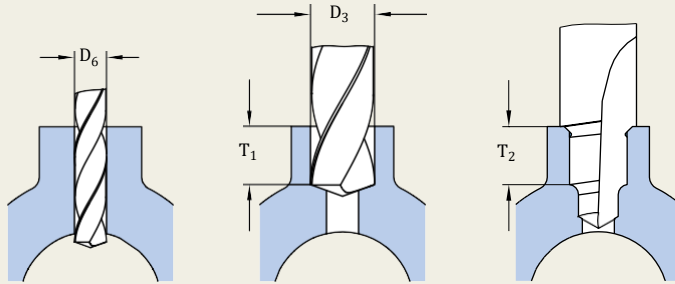
Tapered sleeve unions

## 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

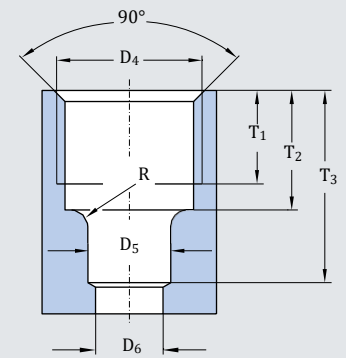
# Provision of counterbore



- 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 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 $\varnothing$	$\varnothing D_5^{B11}$	$\varnothing D_4$	$\varnothing D_5$	$T_1$	$T_2$	$T_3$	R
	mm	mm	mm	mm	mm	mm	mm	mm
<b>1102</b> <sup>1)</sup>	2.5	2.5	1.5	M6×0.75	4.5	5.5	8.5	1.3
<b>1404</b>	4	4	3	M8×1	6.5	8.5	12.5	1.6
<b>1406</b>	6	6	4.5	M10×1	7	9	14	1.6
<b>1408</b>	8	8	6.5	M14×1.5	9	11.5	18.5	1.6
<b>1410</b>	10	10	8.5	M16×1.5	9	11.5	19.5	1.6
<b>1412</b>	12	12	10.5	M18×1.5	9.5	12	22	1.6

<sup>1)</sup> not shown in DIN standard

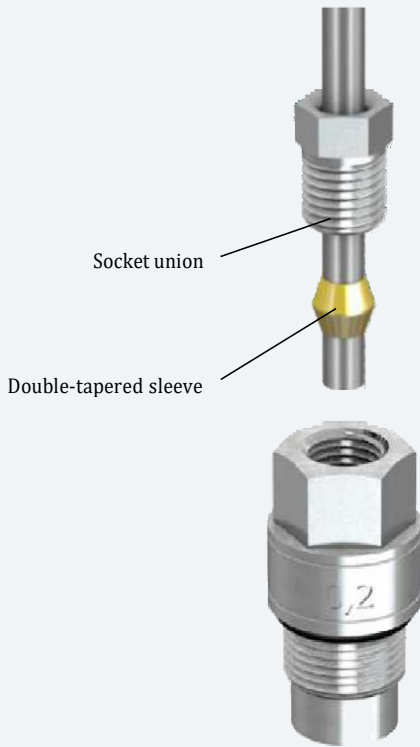


#### Important note for provision of counterbore:

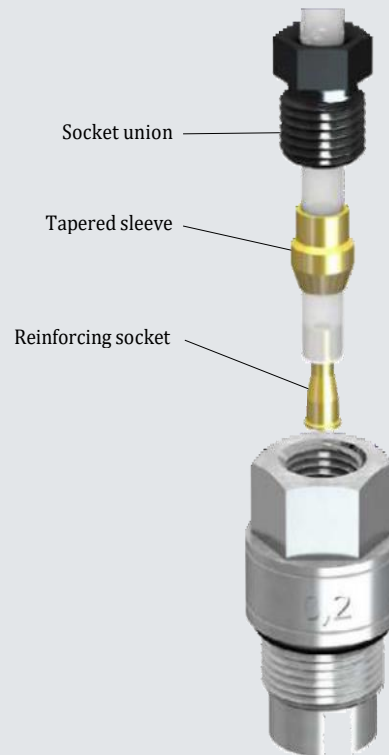
When using a hand drill, take care not to tilt the counterbore out of the drill axis. To avoid damage, drill steadily without interruption. Increase pressure slightly at the stop.

## 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

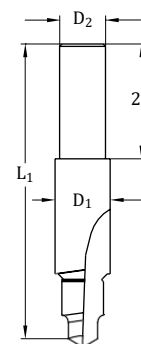
Cut the plastic pipe straight to length using a suitable tool, e.g., a hose cutter. Insert the reinforcing socket into the end of the plastic pipe to stabilize the end of the pipe being assembled. This prevents the plastic pipe from being constricted during assembly. Push the socket union and the tapered 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

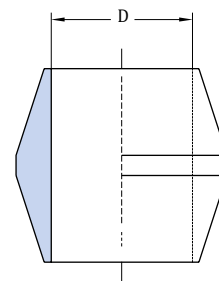
Each time after the screw union is loosened, the socket union must be firmly retightened (with the same force) as in the initial assembly.

## Solderless pipe union with tapered sleeve

## Form counterbores



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

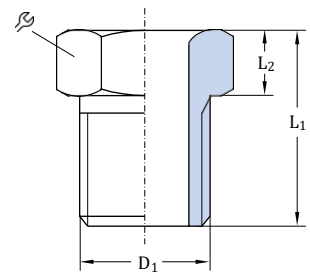
Double-tapered sleeves  
for metal pipes

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

<sup>1)</sup> not shown in DIN standard

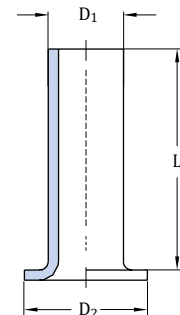
## Solderless pipe union with tapered sleeve

# Socket unions for metal pipes acc. to DIN 3871



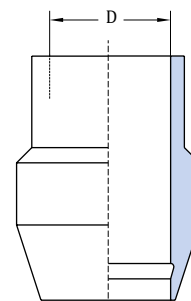
Order number	Designation	TubeØ	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	Material	Weight (100 pcs)		
							g	lb	
Steel, galvanized									
<b>402-002</b>	COMP NUT ST D 2,5 M 6x0,75 ZN	2,5	M6×0,75	9	3	7	Steel, galvanized	166	0.37
<b>404-002</b>	COMP NUT ST D 4,0 M 8x1,0 ZN	4	M8×1	12	4	8	Steel, galvanized	300	0.66
<b>406-002</b>	COMP NUT ST D 6,0 M 10x1,0 ZN	6	M10×1	13	4	10	Steel, galvanized	400	0.88
<b>408-202</b>	COMP NUT ST D 8,0 M 14x1,5 ZN	8	M14×1,5	16	4,5	14	Steel, galvanized	1 000	2.21
<b>410-002</b>	COMP NUT ST D 10,0 M 16x1,5 ZN	10	M16×1,5	17	5,5	17	Steel, galvanized	1 400	3.09
<b>412-002</b>	COMP NUT ST D 12,0 M 18x1,5 ZN	12	M18×1,5	18	6	19	Steel, galvanized	1 800	3.97
Stainless steel									
<b>404-002-S3</b>	COMP NUT VA D 4,0 M 8x1,0	4	M8×1	12	4	8	Stainless steel	300	0.66
<b>406-002-S3</b>	COMP NUT VA D 6,0 M 10x1,0	6	M10×1	13	4	10	Stainless steel	400	0.88
<b>408-202-S3</b>	COMP NUT VA D 8,0 M 14x1,5	8	M14×1,5	16	4,5	14	Stainless steel	1 000	2.21

## Reinforcing sockets for plastic tubes

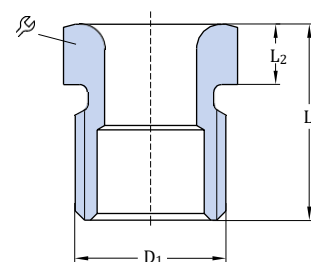


Order number	Designation	TubeØ	D <sub>1</sub>	D <sub>2</sub>	L	Material	Weight	
							g	lb
<b>402-603</b>	INLET BUSHING MS F TUBE D 2,5x0,5	2,5×0,5	1,4	2,3	8	Brass	5	0.01
<b>404-603</b>	INLET BUSHING MS F TUBE D 4,0x0,85	4×0,85	2,2	3,8	10	Brass	8	0.02
<b>406-603</b>	INLET BUSHING MS F TUBE D 6x1,0	6×1	3,9	5,8	12	Brass	12	0.03
<b>406-613</b>	INLET BUSHING MS F TUBE D 6x1,25	6×1,25	3,4	5,8	12	Brass	15	0.03
<b>408-603</b>	INLET BUSHING MS F TUBE D 8x1,25	8×1,25	5,4	7,8	15	Brass	20	0.04
<b>410-603</b>	INLET BUSHING MS F TUBE D 10x1,5	10×1,5	6,9	9,8	18	Brass	24	0.05
<b>412-603</b>	INLET BUSHING MS F TUBE D 12x1,5	12×1,5	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	TubeØ D	Material	Weight (100 pcs)	
				g	lb
		mm			
<b>402-611</b>	TAPER CUTT RING MS D 2,5	2,5	Brass	100	0.22
<b>404-611</b>	TAPER CUTT RING MS D 4,0	4	Brass	120	0.26
<b>406-611</b>	TAPER CUTT RING MS D 6,0	6	Brass	160	0.35
<b>408-611</b>	TAPER CUTT RING MS D 8,0	8	Brass	200	0.44
<b>410-611</b>	TAPER CUTT RING MS D10,0	10	Brass	250	0.55
<b>412-611</b>	TAPER CUTT RING MS D12,0	12	Brass	300	0.66

Socket unions for plastic tubes  
acc. to DIN 3871

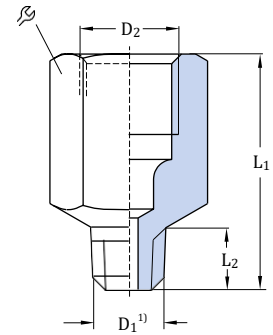
Order number	Designation	TubeØ D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	Material	Weight (100 pcs)		
		mm	mm				g	lb	
Steel, galvanized									
<b>402-612</b>	COMP NUT ST D 2,5 M 6x0,75 ZN	2,5	M6×0,75	9	3	7	Steel, galvanized	100	0.22
<b>404-612</b>	COMP NUT ST D 4,0 M 8x1,0 ZN	4	M8×1	12	4	8	Steel, galvanized	200	0.44
<b>406-612</b>	COMP NUT ST D 6,0 M10x1,0 ZN	6	M10×1	13	4	10	Steel, galvanized	300	0.66
<b>408-612</b>	COMP NUT ST D 8,0 M14x1,5 ZN	8	M14×1,5	16	4,5	14	Steel, galvanized	900	1.98
<b>410-612</b>	COMP NUT ST D10,0 M16x1,5 ZN	10	M16×1,5	17	5,5	17	Steel, galvanized	1 300	2.87
<b>412-612</b>	COMP NUT ST D12,0 M18x1,5 ZN	12	M18×1,5	18	6	19	Steel, galvanized	1 700	3.75
Brass									
<b>404-612-MS</b>	COMP NUT MSD 4,0 M 8x1,0	4	M8×1	12	4	8	Brass	200	0.44
<b>406-612-MS</b>	COMP NUT MSD 6,0 M10x1,0	6	M10×1	13	4	10	Brass	300	0.66
<b>408-612-MS</b>	COMP NUT MSD 8,0 M14x1,5	8	M14×1,5	16	4,5	14	Brass	900	1.98
<b>410-612-MS</b>	COMP NUT MSD10,0 M16x1,5	10	M16×1,5	17	5,5	17	Brass	1 300	2.87



## Solderless pipe union with tapered sleeve

# Connectors with tapered thread

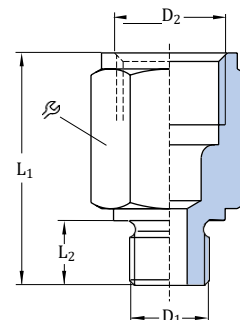
Tapered threads are used without washers; sealed by tapered outer thread and sealant according to DIN 3852-1



Order number	Designation	TubeØ D <sub>1</sub> <sup>1)</sup>		D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	Symbol	Material	Weight	
		mm	mm						mm	mm
<b>402-003K</b>	CONNECTING PIECE ST D 2,5 M 6x0,75K ZN	2,5	M6×0,75 tap	M6×0,75	11,5	4,5	8	Steel, galvanized	2	0.004
<b>402-006K</b>	CONNECTING PIECE ST D 2,5 M 8x1,0K ZN	2,5	M8×1 tap	M6×0,75	15	8	9	Steel, galvanized	5	0.011
<b>402-008K</b>	CONNECTING PIECE ST D 2,5 M10x1,0K ZN	2,5	M10×1 tap	M6×0,75	16	7,5	12	Steel, galvanized	11	0.024
<b>404-662K</b>	CONNECTING PIECE ST D 4,0 M 6K ZN	4	M6 tap	M8×1	19	5	11	Steel, galvanized	8	0.018
<b>404-663K</b>	CONNECTING PIECE ST D 4,0 M 6K ZN	4	M6 tap	M8×1	20	6	11	Steel, galvanized	8	0.018
<b>404-673K</b>	CONNECTING PIECE ST D 4,0 M 6x0,75K ZN	4	M6×0,75 tap	M8×1	20	6	11	Steel, galvanized	8	0.018
<b>404-047K</b>	CONNECTING PIECE ST D 4,0 M 7K ZN	4	M7 tap	M8×1	20	6	11	Steel, galvanized	9	0.02
<b>404-003K</b>	CONNECTING PIECE ST D 4,0 M 8x1,0K ZN	4	M8×1 tap	M8×1	17	7,4	11	Steel, galvanized	6	0.013
<b>404-045</b>	CONNECTING PIECE ST D 4,0 M 8x1,0K ZN	4	M8×1 tap	M8×1	62,5	7,4	11	Steel, galvanized	40	0.088
<b>404-006K</b>	CONNECTING PIECE ST D 4,0 M10x1,0K ZN	4	M10×1 tap	M8×1	16	7,4	11	Steel, galvanized	7	0.015
<b>401-004-512</b>	CONNECTING PIECE ST D 4,0 M10x1,0K ZN	4	M10×1 tap	M8×1	25	7,4	11	Steel, galvanized	14	0.031
<b>404-040K</b>	CONNECTING PIECE ST D 4,0 R1/8K ZN	4	R 1/8	M8×1	16	6	11	Steel, galvanized	7	0.015
<b>404-040K-US</b>	CONNECTING PIECE ST D 4,0 1/8NPTF ZN	4	1/8 NPTF	M8×1	20	6,7	11	Steel, galvanized	10	0.022
<b>404-054K</b>	CONNECTING PIECE ST D 4,0 R1/4K ZN	4	R 1/4	M8×1	14	9	14	Steel, galvanized	11	0.024
<b>404-072</b>	CONNECTING PIECE ST D 4,0 1/4 28UNF ZN	4	1/4-28 UNF	M8×1	20	5,6	11	Steel, galvanized	9	0.02
<b>401-004-903</b>	CONNECTING PIECE ST D 4,0 1/4BSF ZN	4	1/4 BSF	M8×1	20	5	11	Steel, galvanized	9	0.02
<b>401-004-904</b>	CONNECTING PIECE ST D 4,0 3/16BSF ZN	4	1/16 BSF	M8×1	18	5	11	Steel, galvanized	7	0.015
<b>406-004K</b>	CONNECTING PIECE ST D 6,0 M10x1,0K ZN	6	M10×1 tap	M10×1	23	7,4	14	Steel, galvanized	20	0.044
<b>456-004K</b>	CONNECTING PIECE ST D 6,0 R1/8K ZN	6	R 1/8	M10×1	21	6	14	Steel, galvanized	15	0.033
<b>406-054K</b>	CONNECTING PIECE ST D 6,0 R1/4K ZN	6	R 1/4	M10×1	20	9	17	Steel, galvanized	22	0.049

<sup>1)</sup> Tapered thread according to DIN 158 short, resp according to DIN 2999

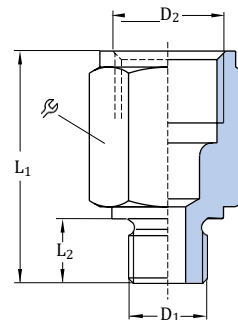
## Solderless pipe union with tapered sleeve

Connectors with cylindrical thread  
acc. to DIN 71428

Order number	Designation	Tube	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	Material	Weight		
		Ø	mm	mm	mm	mm		mm	g	lb
Steel, galvanized										
<b>402-004</b>	CONNECTING PIECE ST D 2,5 M 6 ZN	2,5	M6	M6×0,75	13	5,5	9	Steel, galvanized	3	0.007
<b>402-003</b>	CONNECTING PIECE ST D 2,5 M 6x0,75 ZN	2,5	M6×0,75	M6×0,75	13	5,5	9	Steel, galvanized	3	0.007
<b>402-006</b>	CONNECTING PIECE ST D 2,5 M 8x1,0 ZN	2,5	M8×1	M6×0,75	15	7,5	11	Steel, galvanized	7	0.015
<b>404-004</b>	CONNECTING PIECE ST D 4,0 M 8x1,0 ZN	4	M8×1	M8×1	24	14	11	Steel, galvanized	9	0.02
<b>404-005</b>	CONNECTING PIECE ST D 4,0 M 8x1,0 ZN	4	M8×1	M8×1	32	22	11	Steel, galvanized	14	0.031
<b>404-061</b>	CONNECTING PIECE ST D 4,0 M 5 ZN	4	M5	M8×1	20	5,5	11	Steel, galvanized	9	0.02
<b>404-063</b>	CONNECTING PIECE ST D 4,0 M 8 ZN	4	M8	M8×1	22	8	11	Steel, galvanized	10	0.022
<b>404-003</b>	CONNECTING PIECE ST D 4,0 M 8x1,0 ZN	4	M8×1	M8×1	18	7,5	11	Steel, galvanized	6	0.013
<b>404-006</b>	CONNECTING PIECE ST D 4,0 M10x1,0 ZN	4	M10×1	M8×1	18	7,5	14	Steel, galvanized	13	0.029
<b>404-040</b>	CONNECTING PIECE ST D 4,0 G1/8A ZN	4	G 1/8A	M8×1	18	8	14	Steel, galvanized	13	0.029
<b>404-162</b>	CONNECTING PIECE ST D 4,0 M12x1,0 ZN	4	M12×1	M8×1	18	9	17	Steel, galvanized	19	0.042
<b>404-164</b>	CONNECTING PIECE ST D 4,0 M14x1,5 ZN	4	M14×1,5	M8×1	18	9	17	Steel, galvanized	21	0.046
<b>406-158</b>	CONNECTING PIECE ST D 6,0 M 8x1,0 ZN	6	M8×1	M10×1	23	7,5	14	Steel, galvanized	38	0.084
<b>406-004</b>	CONNECTING PIECE ST D 6,0 M10x1 ZN	6	M10×1	M10×1	18	7,5	14	Steel, galvanized	10	0.022
<b>406-162</b>	CONNECTING PIECE ST D 6,0 M12x1,0 ZN	6	M12×1	M10×1	19	9	17	Steel, galvanized	18	0.04
<b>406-054</b>	CONNECTING PIECE ST D 6,0 G1/4A ZN	6	G 1/4A	M10×1	20	10	17	Steel, galvanized	20	0.044
<b>301-005</b>	CONNECTING PIECE ST D 6,0 M14x1,5 ZN	6	M14×1,5	M10×1	18	9	17	Steel, galvanized	18	0.04
<b>406-166</b>	CONNECTING PIECE ST D 6,0 M16x1,5 ZN	6	M16×1,5	M10×1	19	9	19	Steel, galvanized	28	0.062
<b>406-055</b>	CONNECTING PIECE ST D 6,0 G3/8A ZN	6	G 3/8A	M10×1	21	10	22	Steel, galvanized	41	0.09
<b>408-004</b>	CONNECTING PIECE ST D 8,0 M10×1 ZN	8	M10×1	M14×1,5	28	7,5	17	Steel, galvanized	25	0.055
<b>408-154</b>	CONNECTING PIECE ST D 8,0 G1/8A ZN	8	G 1/8A	M14×1,5	29	8	17	Steel, galvanized	26	0.057
<b>408-160</b>	CONNECTING PIECE ST D 8,0 G1/4A ZN	8	G 1/4A	M14×1,5	30	16	17	Steel, galvanized	22	0.049
<b>408-162</b>	CONNECTING PIECE ST D 8,0 M12×1 ZN	8	M12×1	M14×1,5	29	9	17	Steel, galvanized	26	0.057
<b>301-020</b>	CONNECTING PIECE ST D 8,0 G1/4A ZN	8	G 1/4A	M14×1,5	23	10	17	Steel, galvanized	16	0.035
<b>301-001</b>	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
<b>408-005</b>	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
<b>408-006</b>	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
<b>408-022</b>	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										
<b>267-001 17</b>	CONNECTING PIECE MS D 6,0 G1/4A	6	G 1/8A	M10×1	24	8	14	Brass	18	0.04
<b>406-163</b>	CONNECTING PIECE MS D 6,0 M12x1	6	M12×1	M10×1	19	9	17	Brass	20	0.044
<b>D301-005-MS</b>	CONNECTING PIECE MS D 6,0 M14x1,5	6	M14×1,5	M10×1	20	9	17	Brass	24	0.053
<b>406-167</b>	CONNECTING PIECE MS D 6,0 M16x1,5	6	M16×1,5	M10×1	19	9	19	Brass	31	0.068
<b>267-001 19</b>	CONNECTING PIECE MS D 6,0 M18x1,5	6	M18×1,5	M10×1	21	10	22	Brass	71	0.157
<b>D408-004-MS</b>	CONNECTING PIECE MS D 8,0 M10x1	8	M10×1	M14×1,5	29	7,5	17	Brass	29	0.064
<b>D301-001-MS</b>	CONNECTING PIECE MS D 8,0 M14×1,5	8	M14×1,5	M14×1,5	28	9	17	Brass	29	0.064
<b>D301-020-MS</b>	CONNECTING PIECE MS D 8,0 G1/4A	8	G 1/4A	M14×1,5	30	10	17	Brass	30	0.066
<b>267-001 13</b>	CONNECTING PIECE MS D 8,0 G1/8A	8	G 1/8A	M14×1,5	24	12	27	Brass	71	0.157
Stainless steel										
<b>301-005-S3</b>	CONNECTING PIECE VA D 6,0 M14x1,5	6	M14×1,5	M10×1	18	9	17	Stainless steel	19	0.042
<b>406-004-S3</b>	CONNECTING PIECE VA D 6,0 M10x1,0	6	M10×1	M10×1	18	7,5	14	Stainless steel	10	0.022
<b>406-158-S3</b>	CONNECTING PIECE VA D 6,0 M 8x1,0	6	M8×1	M10×1	23	7,5	14	Stainless steel	15	0.033
<b>301-020-S3</b>	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



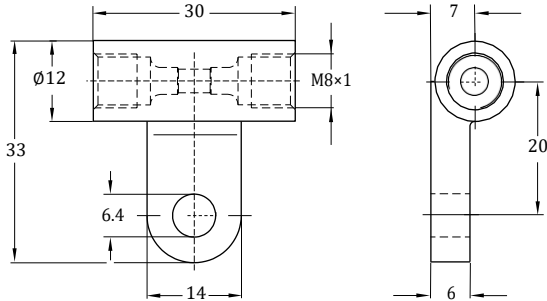
Tapered sleeve unions

Order number	Designation	Tube						Material	Weight	
		Ø	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	ℓ		g	lb
		mm	mm	mm	mm	mm	mm			
<b>410-160</b>	CONNECTING PIECE ST D10,0 M10x1,0 ZN	10	M10×1	M16×1,5	30	7,5	19	Steel, galvanized	32	0.071
<b>410-162</b>	CONNECTING PIECE ST D10,0 M12x1,0 ZN	10	M12×1	M16×1,5	31	9	19	Steel, galvanized	30	0.066
<b>410-163</b>	CONNECTING PIECE ST D10,0 G1/4A ZN	10	G 1/4 A	M16×1,5	30	10	19	Steel, galvanized	30	0.066
<b>410-164</b>	CONNECTING PIECE ST D10,0 M14x1,5 ZN	10	M14×1,5	M16×1,5	29	9	19	Steel, galvanized	30	0.066
<b>410-169</b>	CONNECTING PIECE ST D10,0 G1/4A ZN	10	G 1/4 A	M16×1,5	52	16	19	Steel, galvanized	32	0.071
<b>410-004</b>	CONNECTING PIECE ST D10,0 M16x1,5 ZN	10	M16×1,5	M16×1,5	23	9	19	Steel, galvanized	21	0.046
<b>410-018</b>	CONNECTING PIECE ST D10,0 M18x1,5 ZN	10	M18×1,5	M16×1,5	24	10	22	Steel, galvanized	37	0.082
<b>410-171</b>	CONNECTING PIECE ST D10,0 G1/2A ZN	10	G 1/2 A	M16×1,5	24	12	27	Steel, galvanized	58	0.128
<b>410-022</b>	CONNECTING PIECE ST D10,0 M22x1,5 ZN	10	M22×1,5	M16×1,5	24	12	27	Steel, galvanized	64	0.141
<b>412-162</b>	CONNECTING PIECE ST D12,0 M12x1,0 ZN	12	M12×1	M18×1,5	35	9	22	Steel, galvanized	52	0.115
<b>412-163</b>	CONNECTING PIECE ST D12,0 G1/4A ZN	12	G 1/4 A	M18×1,5	35	10	22	Steel, galvanized	51	0.112
<b>412-164</b>	CONNECTING PIECE ST D12,0 M14x1,5 ZN	12	M14×1,5	M18×1,5	33	9	22	Steel, galvanized	46	0.101
<b>412-169</b>	CONNECTING PIECE ST D12,0 G1/4A ZN	12	G 1/4 A	M18×1,5	41	16	22	Steel, galvanized	49	0.108
<b>412-004</b>	CONNECTING PIECE ST D12,0 M18x1,5 ZN	12	M18×1,5	M18×1,5	24	10	22	Steel, galvanized	28	0.062
<b>412-014</b>	CONNECTING PIECE ST D12,0 M22x1,5 ZN	12	M22×1,5	M18×1,5	26	12	27	Steel, galvanized	63	0.139

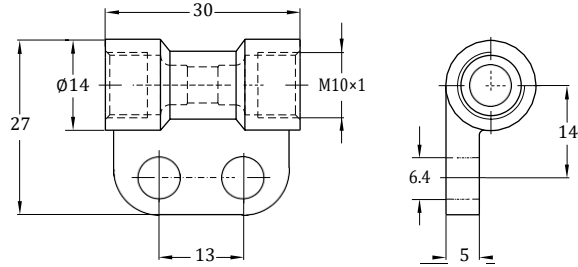
## Solderless pipe union with tapered sleeve

# Bracketed connectors

504-004

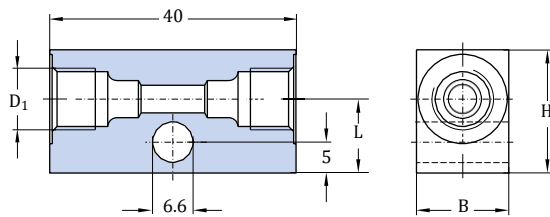


506-010

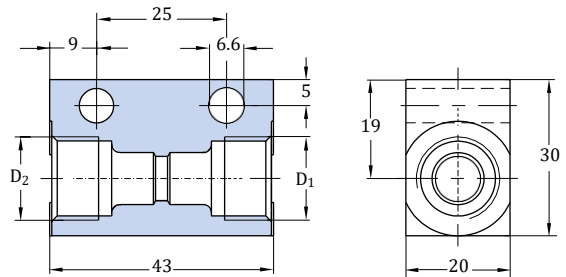


Order number	Designation	TubeØ	Material	Weight	
				g	lb
		mm			
Die-cast zinc <b>504-004</b>	TUBE FITTING ZN G4+BRACKET	4	Die-cast zinc	26	0.06
Brass <b>506-010</b>	TUBE FITTING MS G6+BRACKET	6	Brass	30	0.07

DAR506, DAR508



DAR510, DAR510-S1

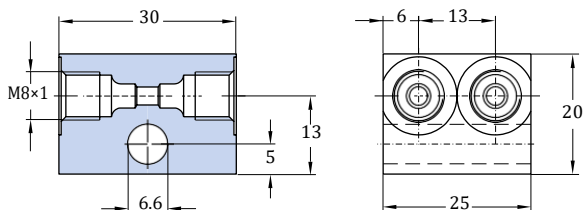


Order number	Designation	TubeØ	D <sub>1</sub>	D <sub>2</sub>	B	H	L <sub>1</sub>	Material	Weight	
									g	lb
		mm	mm	mm	mm	mm	mm			
Aluminum										
<b>DAR506</b>	TUBE CONNECTOR,AL 2x M10x1	6	M10×1	-	15	20	12	Aluminum	26	0.06
<b>DAR508</b>	TUBE CONNECTOR,AL 2x M14x1	8	M14×1,5	-	20	25	15	Aluminum	41	0.09
Steel, galvanized										
<b>DAR510</b>	TUBE CONNECTOR,ST 2x M16x1 ZN	10	M16×1,5	M16×1,5	-	-	-	Steel, galvanized	140	0.31
<b>DAR510-S1</b>	TUBE CONNECT,ST 1x M14x1,5/1x M16x1,5ZN	8/10	M14×1,5	M16×1,5	-	-	-	Steel, galvanized	150	0.33

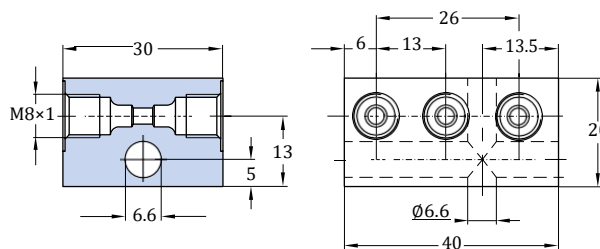
## Solderless pipe union with tapered sleeve

### Bracketed connectors

DAR524

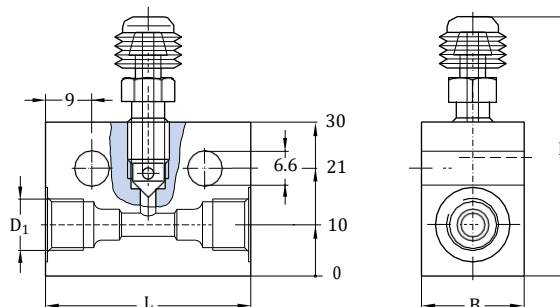


DAR534



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

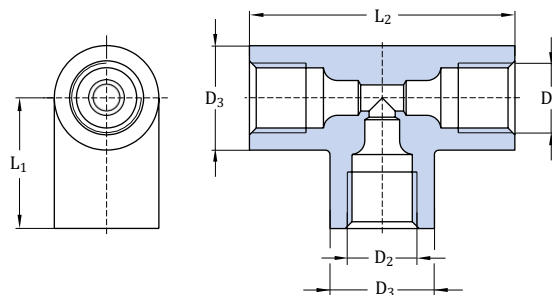
### Tube-to-tube connector with air vent acc. to DIN 3862



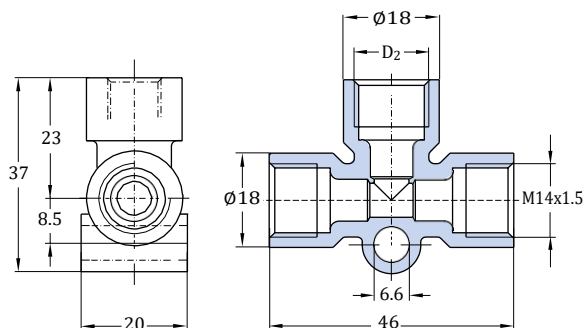
Order number	Designation	TubeØ	D <sub>1</sub>	B	H	L <sub>1</sub>	Material	Weight	
								g	lb
995-001-104	TUBE FITTING AL G4 M 8x1,0 VENT DEVICE	4	M8×1	20	50	40	Aluminum	68	0.15
995-001-106	TUBE FITTING AL G6 M10x1,0 VENT DEVICE	6	M10×1	20	50	40	Aluminum	49	0.11

## Solderless pipe union with tapered sleeve

# T-connectors acc. to DIN 71433



Order number	Designation	TubeØ	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>	Form	Material	Weight	
										g	lb
<b>504-008</b>	TUBE FITTING ZN T4 M 8x1,0	4	M8×1	M8×1	12	15	30,5	A	Die-cast zinc	20	0.04
<b>506-008</b>	TUBE FITTING ZN T6 M10x1,0	6	M10×1	M10×1	14	18	36	A	Die-cast zinc	31	0.07
<b>510-102</b>	TUBE FITTING ZN T10 M16x1,5	10	M16×1,5	M16×1,5	20	25	50	A	Die-cast zinc	62	0.14
<b>506-408</b>	TUBE FITTING ZN TR6/4 M10x1,0	6/4	M10×1	M8×1	14	18	36	B	Die-cast zinc	33	0.07

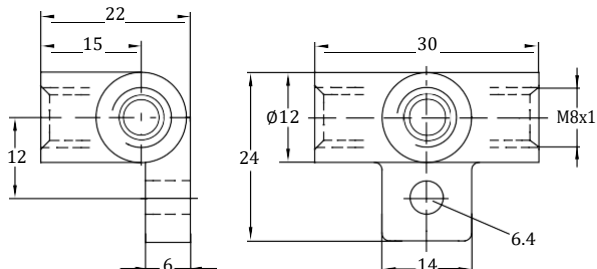


Order number	Designation	TubeØ	D <sub>2</sub>	Form	Material	Weight	
						g	lb
<b>508-602-2</b>	TUBE FITTING ZN TR8/6	8/6	M10×1	B	Die-cast zinc	58	0.13
<b>508-002-2</b>	TUBE FITTING ZN TR8	8	M14×1,5	A	Die-cast zinc	50	0.11

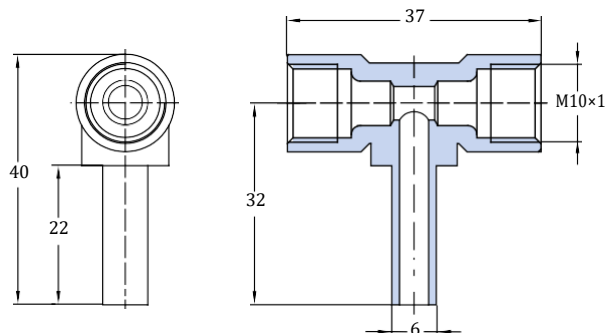
# Solderless pipe union with tapered sleeve

## T-connectors acc. to DIN 71433

504-045

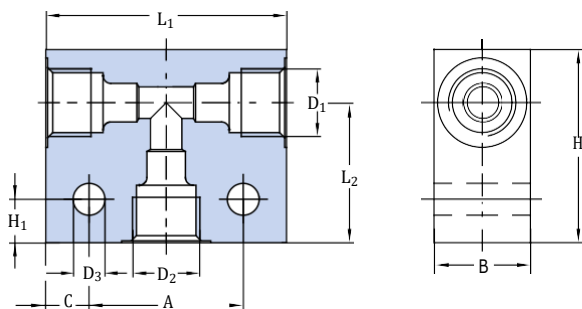


DY964

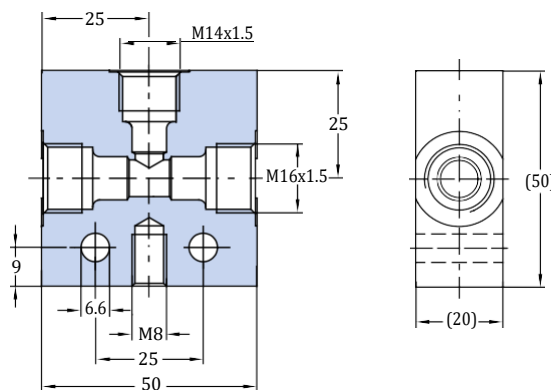


Order number	Designation	TubeØ	Material	Weight	
				g	lb
504-045	TUBE FITTING ZN T4	4	Die-cast zinc	26	0.06
DY964	TUBE FITTING MS T6	6	Brass	38	0.08

DAT506 – DAT510



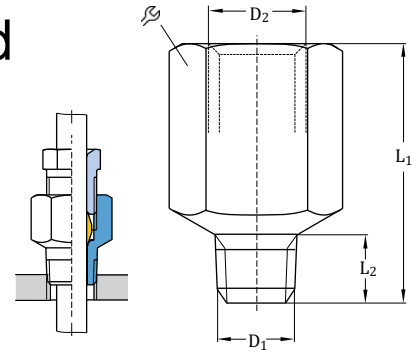
DAT510-S1



Order number	Designation	Tube Ø	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	A	B	C	H	H <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	Form	Material	Weight	
															g	lb
Aluminum																
DAT506	TEE,AL 3x M10x1	6	M10×1	M10×1	6,6	22	20	9	30	9	40	20	A	Aluminum	55	0.12
DAT508	TEE,AL 3x M14x1,5	8	M14×1,5	M14×1,5	6,6	32	20	9	40	9	50	29	A	Aluminum	90	0.2
DAT512	TEE,AL 3x M18x1,5	12	M18×1,5	M18×1,5	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	M16×1,5	M10×1	7	25	25	13,5	40	15	52	29	B	Aluminum	120	0.26
Steel, galvanized																
DAT510	TEE,ST 3x M16x1,5 ZN	10	M16×1,5	M16×1,5	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 (1×), 10 (2×)	6	M16×1,5	M14×1,5	6,6	25	20	12,5	50	9	50	25	B	Steel, galv	306	0.67

## Solderless pipe union with tapered sleeve

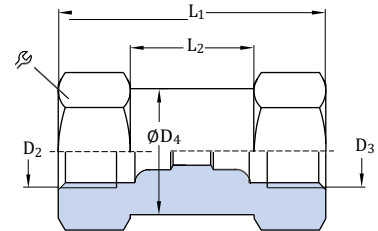
## Bulkhead connectors with tapered thread



Order number	Designation	TubeØ		D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	⌀	Material	Weight	
		mm	mm						mm	mm
<b>404-003DK</b>	ADAPTER ST 4 M 8x1,0 ZN	4	M8×1 tap	M8×1	17	7,4	11	Steel, galvanized	6	0.013
<b>404-006DK</b>	ADAPTER ST 4 M10x1,0 ZN	4	M10×1 tap	M8×1	16	7,4	11	Steel, galvanized	7	0.015
<b>406-004DK</b>	ADAPTER ST 6 M10x1,0 ZN	6	M10×1 tap	M10×1	18	7,4	14	Steel, galvanized	10	0.022
<b>301-001DK</b>	ADAPTER ST 8 M14x1,5 ZN	8	M14×1,5 tap	M14×1,5	24	11	17	Steel, galvanized	19	0.042
<b>410-004DK</b>	ADAPTER ST10 M16x1,5 ZN	10	M16×1,5 tap	M16×1,5	24	11	19	Steel, galvanized	22	0.049

<sup>1)</sup> Tapered thread according to DIN 158 tap short

## Tube-to-tube connectors

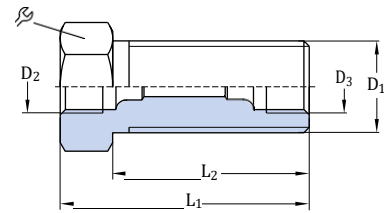


Order number	Designation	TubeØ D <sub>2</sub>		D <sub>3</sub>	ØD <sub>4</sub>	L <sub>1</sub>	L <sub>2</sub>	⌀	Material	Weight	
		mm	mm							mm	mm
<b>404-010</b>	TUBE FITTING ST G 4 ZN	4	M8×1	M8×1	10,8	27	13	11	Steel, galvanized	14	0.03
<b>406-010</b>	TUBE FITTING ST G 6 ZN	6	M10×1	M10×1	13,8	30	10	14	Steel, galvanized	25	0.06
<b>406-805</b>	TUBE FITTING ST GR 6/8 ZN 6/8	6	M14×1,5	M10×1	16,8	35	11	17	Steel, galvanized	43	0.09
<b>408-010</b>	TUBE FITTING ST G 8 ZN	8	M14×1,5	M14×1,5	16,8	40	14	17	Steel, galvanized	40	0.09
<b>410-010</b>	TUBE FITTING ST G 10 ZN	10	M16×1,5	M16×1,5	18,8	42	13	19	Steel, galvanized	54	0.12
<b>412-010</b>	TUBE FITTING ST G 12 ZN	12	M18×1,5	M18×1,5	21,8	48	18	22	Steel, galvanized	85	0.19



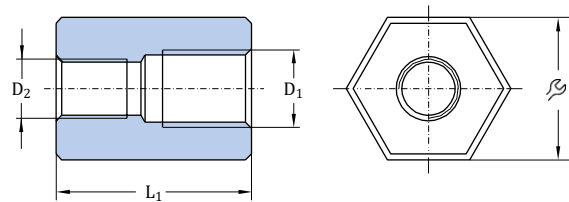
## Solderless pipe union with tapered sleeve

# Straight bulkhead fittings acc. to DIN 71429



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

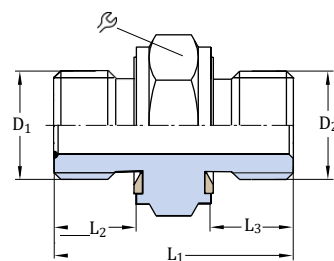
## Reducing piece



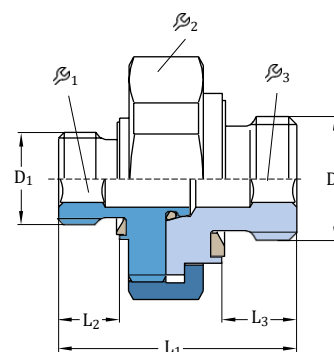
Order number	Designation	TubeØ		D <sub>2</sub>	L <sub>1</sub>	⌀	Material	Weight	
		D <sub>1</sub>	D <sub>2</sub>					g	lb
		mm	in	mm	mm	mm			
<b>44-1755-2019</b>	TB STUD RED ST 4 G1/4I xM10x11 SW24 ZN	4	G 1/4	M10x1	33	24	Steel, galvanized	100	0.22

## Solderless pipe union with tapered sleeve

### Threaded sockets



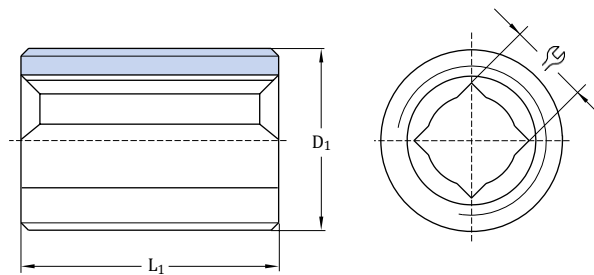
Order number	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	ϕ	Seals	Material	Weight	
		in	in	mm	mm	mm				mm	g
<b>402-116-161</b>	THREADED PIECE ST L29 G1/4A ZN	G 1/4 A	G 1/4 A	29	10	10	19	NBR	Steel, galvanized	30	0.07
<b>402-116-165</b>	THREADED PIECE ST L37 G1/2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



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

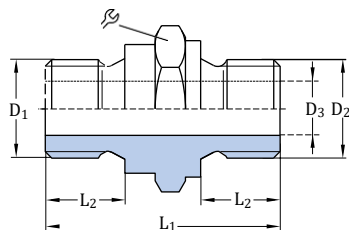
### Threaded sockets



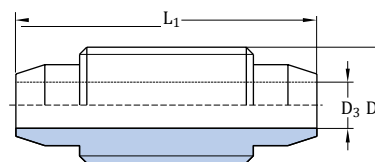
Order number	Designation	D <sub>1</sub>	L <sub>1</sub>	β	Material	Weight	
						mm	mm
Steel							
<b>404-203</b>	THREADED PIECE ST L13 M 8x1,0	M8×1	13	3,5	Steel	3	0.007
<b>406-203</b>	THREADED PIECE ST L15 M10x1,0	M10×1	15	3,5	Steel	6	0.013
<b>406-243-B</b> <sup>1)</sup>	THREADED PIECE ST L18 M10x1,0	M10×1	18	3,5	Steel	7	0.015
<b>408-243-B</b> <sup>1)</sup>	THREADED PIECE ST L19 M12x1,0	M12×1	19	5,5	Steel	9	0.02
<b>458-012</b>	THREADED PIECE ST L17 M12x1,0	M12×1	17	5,5	Steel	8	0.018
<b>458-012-B</b> <sup>1)</sup>	THREADED PIECE ST L17 M12x1,0	M12×1	17	5,5	Steel	8	0.018
<b>408-023</b>	THREADED PIECE ST L18 M14x1,5	M14×1,5	18	5,5	Steel	13	0.029
<b>410-003</b>	THREADED PIECE ST L19 M16x1,5	M16×1,5	19	7	Steel	16	0.035
<b>410-003-B</b> <sup>1)</sup>	THREADED PIECE ST L19 M16x1,5	M16×1,5	19	7	Steel	17	0.037
Stainless steel							
<b>408-033-S3</b>	THREADED PIECE VA L15 G1/4A	G 1/4 A	15	5,5	Stainless steel	9	0.02

<sup>1)</sup> Coated with microencapsulated adhesive

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



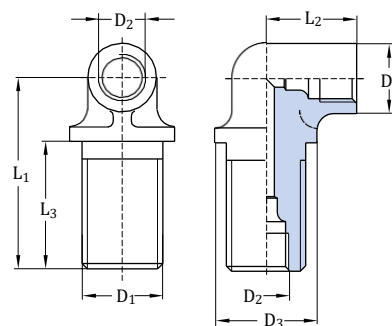
#### 406-233



Order number	Designation	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>	β	Material	Weight	
									mm	mm
Steel, galvanized										
<b>406-103</b>	THREADED PIECE ST L20 M10x1,0xM12x1,0 ZN	M10×1	M12×1	5	20	6	14	Steel, galvanized	14	0.03
<b>408-103</b>	THREADED PIECE ST L21 M12x1,0xM14x1,5 ZN	M12×1	M14×1,5	6	21	7	17	Steel, galvanized	21	0.05
<b>853-750-024</b>	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										
<b>406-233</b>	THREADED PIECE MS L26 M10x1,0	M10×1	-	4	26	-	-	Brass	8	0.02

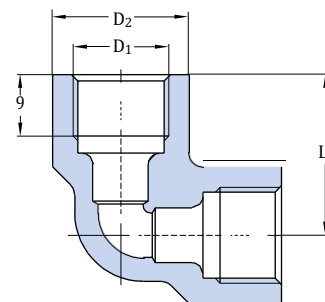
## Solderless pipe union with tapered sleeve

### Elbow bulkhead fittings acc. to DIN 71429



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

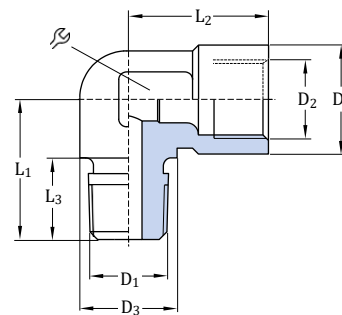
### Elbows with cylindrical thread acc. to DIN 71433



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

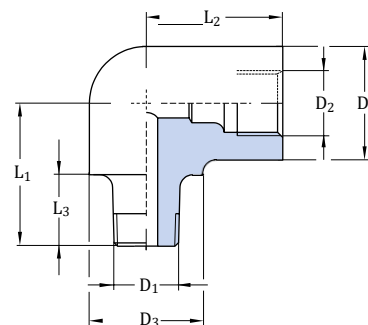
## Solderless pipe union with tapered sleeve

# Elbows with tapered thread acc. to DIN 71429



Order number	Designation	TubeØ	D <sub>1</sub> <sup>1)</sup>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Material	Weight		
		mm	mm	mm	mm	mm	mm	mm	mm	mm	g	lb	
<b>504-510K</b>	ELBOW PIPE ZN 4 M10x1,0K	4	M10×1 tap	M8×1	13	13	21	16	10	14	Die-cast zinc	24	0.05
<b>514-018K</b>	ELBOW PIPE ZN 4 R1/8K	4	R 1/8	M8×1	13	13	21	16	10	14	Die-cast zinc	23	0.05
<b>506-508K</b>	ELBOW PIPE ZN 6 M 8x1,0K	6	M8×1 tap	M10×1	12,5	14	18	18	10,5	14	Die-cast zinc	18	0.04
<b>506-510K</b>	ELBOW PIPE ZN 6 M10x1,0K	6	M10×1 tap	M10×1	12,5	14	18	18	10,5	14	Die-cast zinc	20	0.04
<b>506-512K</b>	ELBOW PIPE ZN 6 M12x1,0K	6	M12×1 tap	M10×1	12,5	14	18	18	10,5	14	Die-cast zinc	21	0.05
<b>508-512K</b>	ELBOW PIPE ZN 8 M12x1,0K	8	M12×1 tap	M14×1,5	14	19,5	19,5	24	10	14	Die-cast zinc	34	0.07

<sup>1)</sup> Tapered thread according to DIN 158 tap short, resp according to DIN 2999

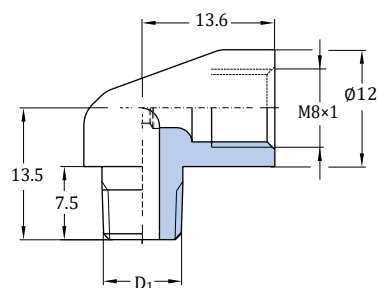


Order number	Designation	TubeØ	D <sub>1</sub> <sup>1)</sup>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Material	Weight	
		mm	mm	mm	mm	mm	mm	mm	mm	mm	g	lb
<b>Steel</b>												
<b>502-206K</b>	ELBOW PIPE ST 2,5 M 6K	2,5	M6 tap	M6×0,75	-	8	10	9,5	6	Steel	6	0.01
<b>403-006-651</b>	ELBOW PIPE ST 6 R1/4K	6	R 1/4	M10×1	14	14	17	17,5	8,5	Steel	32	0.07
<b>Brass</b>												
<b>506-202K</b>	ELBOW PIPE MS 6 M10x1,0K	6	M10×1 tap	M10×1	17	17	22	21	11	Brass	60	0.13

<sup>1)</sup> Tapered thread according to DIN 158 tap short, resp according to DIN 2999

### Solderless pipe union with tapered sleeve

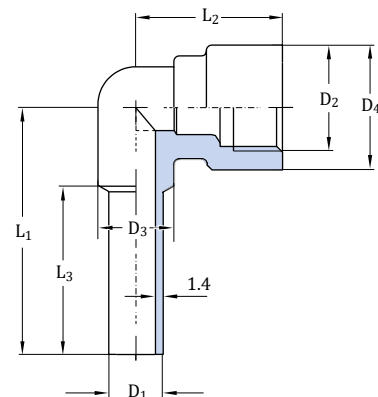
## Elbows with tapered thread acc. to DIN 71429



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

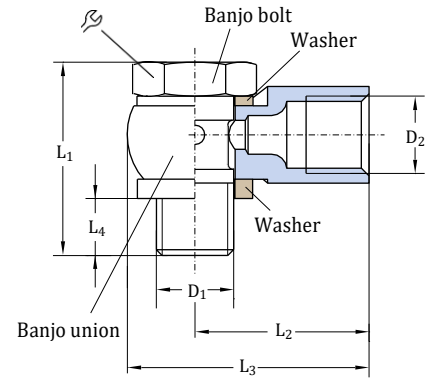
## Elbows with tube end for pipe union for installation in counterbores acc. to DIN 3854/DIN 3862



Order number	Designation	TubeØ				L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Material	Weight		
		D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>					g	lb	
		mm	mm	mm	mm	mm	mm	mm				
<b>DY958</b>	ELBOW PIPE MS D6	6	6	M10x1	8	14	30,8	21	22	Brass	23	0.05
<b>DY960</b>	ELBOW PIPE MS D8	8	8	M14x1,5	11	18	37	24,5	27	Brass	37	0.08
<b>DY961</b>	ELBOW PIPE MS D10	10	10	M16x1,5	15	23	42,5	26,5	29	Brass	73	0.16
<b>DY962</b>	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

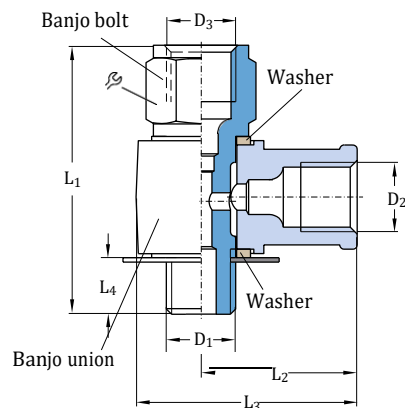


Order number	Designation	TubeØ D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	☞	Banjo bolt	Banjo union	Weight (total)	
		mm	mm	mm	mm	mm	mm	mm			g lb	
Steel, galvanized												
<b>502-161</b> <sup>1)</sup>	TUBE FITTING SWVE 2,5 M 6	2,5	M6	M6×0,75	20	13	19	4,5	9	<b>502-056</b>	<b>502-051</b>	11 0.02
<b>502-101</b> <sup>1)</sup>	TUBE FITTING SWVE 2,5 M 6x0,75	2,5	M6×0,75	M6×0,75	18	13	19	5	9	<b>502-053</b>	<b>502-051</b>	10 0.02
<b>502-102</b> <sup>1)</sup>	TUBE FITTING SWVE 2,5 M 8x1,0	2,5	M8×1	M6×0,75	20	14	21	6,5	11	<b>502-054</b>	<b>502-052</b>	15 0.03
<b>504-161</b> <sup>1)</sup>	TUBE FITTING SWVE 4 M 6	4	M6	M8×1	20	17	24	4,1	9	<b>502-056</b>	<b>504-651</b>	15 0.03
<b>504-162</b> <sup>1)</sup>	TUBE FITTING SWVE 4 M 6x0,75	4	M6×0,75	M8×1	18	17	24	4,5	9	<b>502-053</b>	<b>504-651</b>	14 0.03
<b>504-411</b> <sup>1)</sup>	TUBE FITTING SWVE 4 M 8	4	M8	M8×1	23	18	25	7,5	11	<b>502-154</b>	<b>504-851</b>	20 0.04
<b>504-401</b> <sup>1)</sup>	TUBE FITTING SWVE 4 M 8x1,0	4	M8×1	M8×1	20	18	25	7	11	<b>502-054</b>	<b>504-851</b>	17 0.04
Steel, galvanized bolt and die-cast zinc union												
<b>504-101</b>	TUBE FITTING SWVE 4 M 8x1,0	4	M8×1	M8×1	26	18	25	6,5	11	<b>504-073</b>	<b>504-072</b>	23 0.05
<b>504-102</b>	TUBE FITTING SWVE 4 M10x1,0	4	M10×1	M8×1	26	19	27,5	6,5	14	<b>504-054</b>	<b>504-052</b>	30 0.07
<b>504-108</b>	TUBE FITTING SWVE 4 G1/8A	4	G 1/8 A	M8×1	27	19	27,5	6,8	14	<b>504-027</b>	<b>504-052</b>	32 0.07
<b>506-140</b>	TUBE FITTING SWVE 6 M10x1,0	6	M10×1	M10×1	26	21	28,5	6,5	14	<b>504-054</b>	<b>506-033</b>	33 0.07
<b>506-142</b>	TUBE FITTING SWVE 6 M12x1,0	6	M12×1	M10×1	34	25	35,2	7,5	17	<b>558-012</b>	<b>506-030</b>	60 0.13
<b>506-012</b>	TUBE FITTING SWVE 6 M14x1,5	6	M14×1,5	M10×1	34	25	35,2	7,5	17	<b>508-006</b>	<b>506-005</b>	60 0.13
<b>506-145</b>	TUBE FITTING SWVE 6 M16x1,5	6	M16×1,5	M10×1	35	30	41	8,7	19	<b>510-017</b>	<b>506-034</b>	90 0.20
<b>506-108</b>	TUBE FITTING SWVE 6 G1/8A	6	G 1/8 A	M10×1	27	21	28,5	7	14	<b>504-027</b>	<b>506-033</b>	33 0.07
<b>506-214</b>	TUBE FITTING SWVE 6 G1/4A	6	G 1/4 A	M10×1	35	25	35,2	8,5	17	<b>508-023</b>	<b>506-005</b>	60 0.13
<b>508-142</b>	TUBE FITTING SWVE 8 M12x1,0	8	M12×1	M14×1,5	34	27	37	7,5	17	<b>558-012</b>	<b>508-030</b>	63 0.14
<b>508-144</b>	TUBE FITTING SWVE 8 M14x1,5	8	M14×1,5	M14×1,5	34	27	37	7,5	17	<b>508-006</b>	<b>508-007</b>	61 0.13
<b>508-145</b>	TUBE FITTING SWVE 8 M16x1,5	8	M16×1,5	M14×1,5	35	30	41	8,7	19	<b>510-017</b>	<b>508-054</b>	80 0.18
<b>508-024</b>	TUBE FITTING SWVE 8 G1/4A	8	G 1/4 A	M14×1,5	35	27	37	8,5	17	<b>508-023</b>	<b>508-007</b>	59 0.13
<b>510-142</b>	TUBE FITTING SWVE 10 M12x1,0	10	M12×1	M16×1,5	34	30	40	7,5	17	<b>558-012</b>	<b>510-041</b>	70 0.15
<b>510-145</b>	TUBE FITTING SWVE 10 M16x1,5	10	M16×1,5	M16×1,5	35	30	41	10,7	19	<b>510-017</b>	<b>510-044</b>	80 0.18
<b>510-024</b>	TUBE FITTING SWVE 10 G1/4A	10	G 1/4 A	M16×1,5	35	30	40	7,5	17	<b>508-023</b>	<b>510-023</b>	65 0.14

<sup>1)</sup> Miniature design, banjo union steel

## Solderless pipe union with tapered sleeve

# Banjo fittings acc. to DIN 71430 Form B

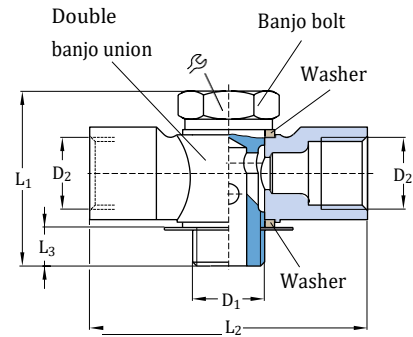


Order number	Designation	Tube Ø	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	☉	Banjo bolt	Banjo union	Weight (total)		
													g	lb	
Steel, galvanized bolt and die-cast zinc union															
<b>504-114</b>	TUBE FITTING LE 4 M 8x1,0	4	M8×1	M8×1	M8×1	31	18	25,5	6,5	11	<b>504-075</b>	<b>504-072</b>	24	0.05	
<b>504-115</b>	TUBE FITTING LE 4 M10x1,0	4	M10×1	M8×1	M8×1	31	19	27,5	6,5	14	<b>504-056</b>	<b>504-052</b>	34	0.07	
<b>504-105</b>	TUBE FITTING LE 4/6 M10x1,0	4/6	M10×1	M8×1	M10×1	33	19	27,5	6,5	14	<b>506-006</b>	<b>504-052</b>	34	0.07	
<b>405-619-061</b>	TUBE FITTING LE 4/6 G1/8A	4/6	G 1/8 A	M8×1	M10×1	33	19	27,5	6,3	14	<b>402-606-191</b>	<b>504-052</b>	33	0.07	
<b>506-114</b>	TUBE FITTING LE 6 M10x1,0	6	M10×1	M10×1	M10×1	33	21	28,5	6,3	14	<b>506-006</b>	<b>506-033</b>	35	0.08	
<b>506-342</b>	TUBE FITTING LE 6 M12x1,0	6	M12×1	M10×1	M10×1	38	25	35,2	7,5	17	<b>558-612</b>	<b>506-030</b>	62	0.14	
<b>506-101</b>	TUBE FITTING LE 6 M14x1,5	6	M14×1,5	M10×1	M10×1	40	25	35,2	7,5	17	<b>508-303</b>	<b>506-005</b>	70	0.15	
<b>586-342</b>	TUBE FITTING LE 6/8 M12x1,0	6/8	M12×1	M10×1	M14×1,5	44	25	35,2	7,5	17	<b>558-812</b>	<b>506-030</b>	64	0.14	
<b>506-013</b>	TUBE FITTING LE 6/8 M14x1,5	6/8	M14×1,5	M10×1	M14×1,5	43	25	35,2	7,5	17	<b>508-008</b>	<b>506-005</b>	61	0.13	
<b>506-345</b>	TUBE FITTING LE 6/10 M12x1,0	6/10	M12×1	M10×1	M16×1,5	48,5	25	35	7,7	19	<b>558-912</b>	<b>506-030</b>	77	0.17	
<b>506-346</b>	TUBE FITTING LE 6/10 M16x1,5	6/10	M16×1,5	M10×1	M16×1,5	50	30	41	8,7	19	<b>510-010</b>	<b>506-034</b>	100	0.22	
<b>508-342</b>	TUBE FITTING LE 8 M12x1,0	8	M12×1	M14×1,5	M14×1,5	44	27	37	7,5	17	<b>558-812</b>	<b>508-030</b>	67	0.15	
<b>508-012</b>	TUBE FITTING LE 8 M14x1,5	8	M14×1,5	M14×1,5	M14×1,5	43	27	37	7,5	17	<b>508-008</b>	<b>508-007</b>	63	0.14	
<b>508-034</b>	TUBE FITTING LE 8 G1/4A	8	G 1/4 A	M14×1,5	M14×1,5	44	27	37	7,5	17	<b>508-033</b>	<b>508-007</b>	65	0.14	
<b>568-342</b>	TUBE FITTING LE 8/6 M12x1,0	8/6	M12×1	M14×1,5	M10×1	38	27	37	7,5	17	<b>558-612</b>	<b>508-030</b>	65	0.14	
<b>508-304</b>	TUBE FITTING LE 8/6 M14x1,5	8/6	M14×1,5	M14×1,5	M10×1	40	27	37	7,5	17	<b>508-303</b>	<b>508-007</b>	66	0.15	
<b>508-345</b>	TUBE FITTING LE 8/10 M12x1,0	8/10	M12×1	M14×1,5	M16×1,5	48,5	27	37	7,7	19	<b>558-912</b>	<b>508-030</b>	80	0.18	
<b>508-346</b>	TUBE FITTING LE 8/10 M16x1,5	8/10	M16×1,5	M14×1,5	M16×1,5	50	30	41	8,7	19	<b>510-010</b>	<b>508-054</b>	93	0.21	
<b>510-342</b>	TUBE FITTING LE 10 M12x1,0	10	M12×1	M16×1,5	M16×1,5	48,5	30	40	7,5	19	<b>558-912</b>	<b>510-041</b>	81	0.18	
<b>510-344</b>	TUBE FITTING LE 10 M16x1,5	10	M16×1,5	M16×1,5	M16×1,5	50	30	41	8,7	19	<b>510-010</b>	<b>510-044</b>	89	0.20	
<b>510-343</b>	TUBE FITTING LE 10 G1/4A	10	G 1/4 A	M16×1,5	M16×1,5	48,5	30	40	7,5	19	<b>558-913</b>	<b>510-023</b>	78	0.17	
<b>510-346</b>	TUBE FITTING LE 10/6 M16x1,5	10/6	M16×1,5	M16×1,5	M10×1	50	30	41	8,7	19	<b>506-018</b>	<b>510-044</b>	96	0.21	
<b>510-341</b>	TUBE FITTING LE 10/8 M12x1,0	10/8	M12×1	M16×1,5	M14×1,5	44	30	40	7,5	17	<b>558-812</b>	<b>510-041</b>	69	0.15	



## Solderless pipe union with tapered sleeve

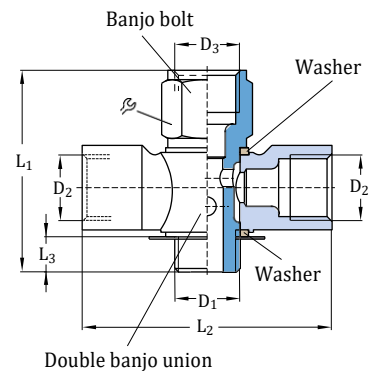
# Banjo fittings acc. to DIN 71430 Form C



Tapered sleeve unions

Order number	Designation	Tube		D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Banjo bolt	Material	Double banjo union	Material	Weight (total)	
		Ø											mm	mm
<b>504-109</b>	TUBE FITTING TH4 M 8x1,0	4	M8×1	M8×1	26	38	6,5	11	<b>504-073</b>	Steel, galv	<b>504-071</b>	Die-cast zinc	31	0.07
<b>504-112</b>	TUBE FITTING TH4 M10x1,0	4	M10×1	M8×1	26	38	6,5	14	<b>504-054</b>	Steel, galv	<b>504-051</b>	Die-cast zinc	35	0.08
<b>506-242</b>	TUBE FITTING TH6 M12x1,0	6	M12×1	M10×1	34	48	7,5	17	<b>558-012</b>	Steel, galv	<b>506-032</b>	Die-cast zinc	71	0.16
<b>506-025</b>	TUBE FITTING TH6 M14x1,5	6	M14×1,5	M10×1	34	48	7,5	17	<b>508-006</b>	Steel, galv	<b>506-007</b>	Die-cast zinc	70	0.15
<b>508-242</b>	TUBE FITTING TH8 M12x1,0	8	M12×1	M14×1,5	34	54	7,5	17	<b>558-012</b>	Steel, galv	<b>508-032</b>	Die-cast zinc	77	0.17
<b>508-013</b>	TUBE FITTING TH8 M14x1,5	8	M14×1,5	M14×1,5	34	54	7,5	17	<b>508-006</b>	Steel, galv	<b>508-005</b>	Die-cast zinc	77	0.17
<b>508-025</b>	TUBE FITTING TH8 G1/4A	8	G 1/4A	M14×1,5	35	54	7,5	17	<b>508-023</b>	Steel, galv	<b>508-005</b>	Die-cast zinc	77	0.17
<b>510-242</b>	TUBE FITTING TH10 M12x1,0	10	M12×1	M16×1,5	34	60	7,5	17	<b>558-012</b>	Steel, galv	<b>510-042</b>	Die-cast zinc	83	0.18

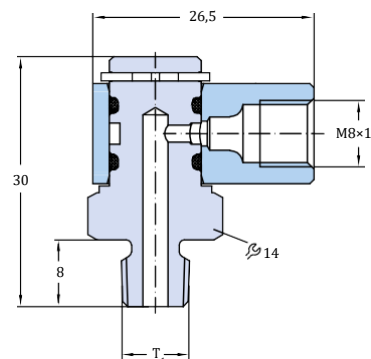
# Banjo fittings acc. to DIN 71430 Form D



Order number	Designation	Tube			L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Banjo bolt	Material	Double banjo union	Weight (total)		
		Ø	D <sub>1</sub>	D <sub>2</sub>							D <sub>3</sub>	mm	mm
Steel, galvanized bolt and die-cast zinc union													
<b>504-110</b>	TUBE FITTING TH4 M 8x1,0	4	M8×1	M8×1	M8×1	31	38	6,5	11	<b>504-071</b>	<b>504-071</b>	32	0.07
<b>504-111</b>	TUBE FITTING TH4 M10x1,0	4	M10×1	M8×1	M8×1	31	38	6,5	14	<b>504-056</b>	<b>504-051</b>	37	0.08
<b>504-106</b>	TUBE FITTING TH4/6 M10x1,0	4/6	M10×1	M8×1	M10×1	33	38	6,5	14	<b>506-006</b>	<b>504-051</b>	37	0.08
<b>506-442</b>	TUBE FITTING TH6 M12x1,0	6	M12×1	M10×1	M10×1	38	48	7,5	17	<b>558-612</b>	<b>506-032</b>	70	0.15
<b>506-014</b>	TUBE FITTING TH6 M14x1,5	6	M14×1,5	M10×1	M10×1	40	48	7,5	17	<b>508-303</b>	<b>506-007</b>	73	0.16
<b>586-442</b>	TUBE FITTING TH6/8 M12x1,0	6/8	M12×1	M10×1	M14×1,5	44	48	7,5	17	<b>558-812</b>	<b>506-032</b>	72	0.16
<b>506-026</b>	TUBE FITTING TH6/8 M14x1,5	6/8	M14×1,5	M10×1	M14×1,5	43	48	7,5	17	<b>508-008</b>	<b>506-007</b>	70	0.15
<b>508-442</b>	TUBE FITTING TH8 M12x1,0	8	M12×1	M14×1,5	M14×1,5	44	54	7,5	17	<b>558-812</b>	<b>508-032</b>	68	0.15
<b>508-014</b>	TUBE FITTING TH8 M14x1,5	8	M14×1,5	M14×1,5	M14×1,5	43	54	7,5	17	<b>508-008</b>	<b>508-005</b>	79	0.17
<b>568-442</b>	TUBE FITTING TH8/6 M12x1,0	8/6	M12×1	M14×1,5	M10×1	38	54	7,5	17	<b>558-612</b>	<b>508-032</b>	80	0.18
<b>508-305</b>	TUBE FITTING TH8/6 M14x1,5	8/6	M14×1,5	M14×1,5	M10×1	40	54	7,5	17	<b>508-303</b>	<b>508-005</b>	90	0.20
<b>510-442</b>	TUBE FITTING TH10 M12x1,0	10	M12×1	M16×1,5	M16×1,5	48,5	60	7,5	19	<b>558-912</b>	<b>510-042</b>	99	0.22

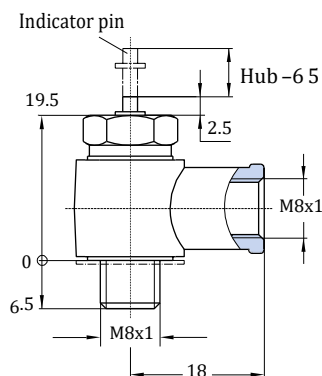
## Solderless pipe union with tapered sleeve

### Banjo fittings, rotatable



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

### Banjo fitting with indicator pin for lubricant distributor

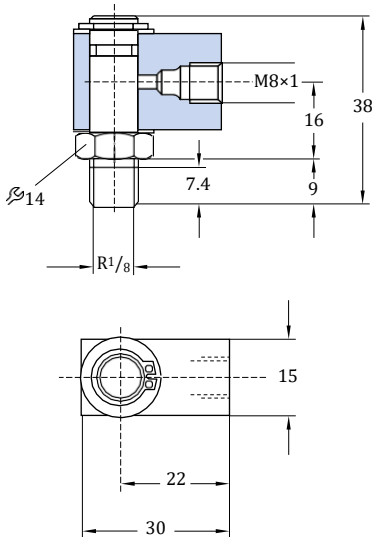


Order number	Designation	Tube Ø	Material	Weight	
				g	lb
<b>169-200-008</b>	TUBE FITTING SWVE 4 M 8x1,0+K	4	Steel, galvanized	24	0.05

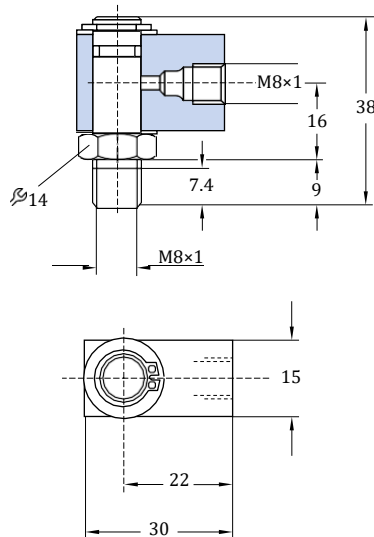
# Solderless pipe union with tapered sleeve

## Rotating joints

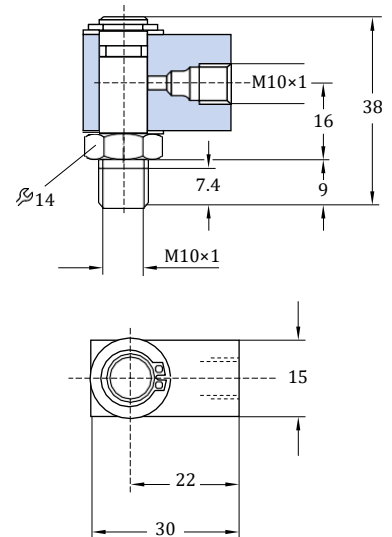
401-504-192



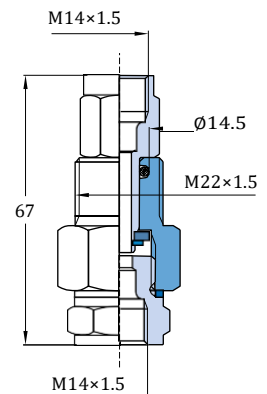
401-504-292



401-506-313



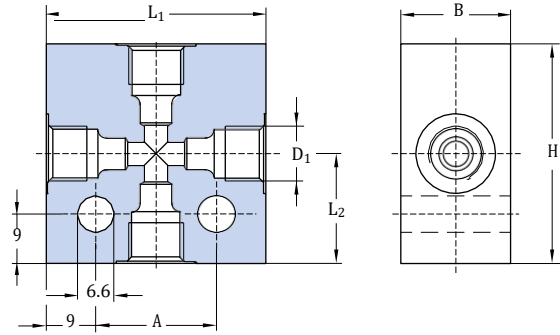
Order number	Designation	Tube ØD	Thread <sub>1</sub>	Thread <sub>2</sub>	Speed max	Oil pressure max		Air pressure max		Material	Weight	
						bar	psi	bar	psi		g	lb
401-504-192	ROTATING JOINT MS 4 G1/8	4	G1/8	M8×1	100	30	435	8	116	Brass	81	0.18
401-504-292	ROTATING JOINT MS 4 M 8x1	4	M8×1	M8×1	100	30	435	8	116	Brass	80	0.18
401-506-313	ROTATING JOINT MS 6 M10x1	6	M10×1	M10×1	100	30	435	8	116	Brass	77	0.17



Order number	Designation	Tube ØD	Thread <sub>1</sub>	Thread <sub>2</sub>	Speed max	Oil pressure max		Air pressure max		Material	Weight	
						bar	psi	bar	psi		g	lb
408-120	ROTATING JOINT ST 8 M14x1,5 8	14	M14x1,5	M14x1,5	20	10	145	-	-	Steel	200	0.44

## Solderless pipe union with tapered sleeve

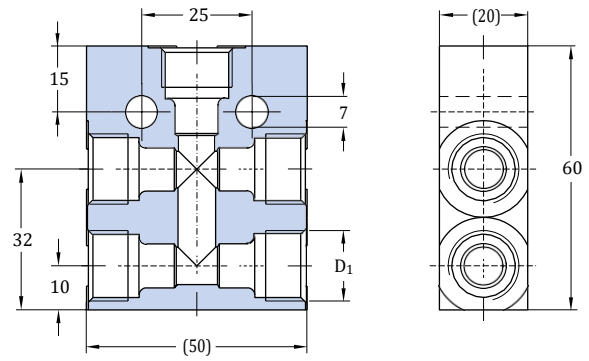
## Cross joints



Order number	Designation	Tube Ø	D <sub>1</sub>	A	B	H	L <sub>1</sub>	L <sub>2</sub>	Material	Weight	
										g	lb
<b>DAK504-S1</b>	CROSS PIECE,AL 1x M10x1/3x M 8x1	4/6	M10×1/ M8×1	22	20	40	40	20	Aluminum	78	0.17
<b>DAK506</b>	CROSS PIECE,AL 4x M10x1	6	M10×1	22	20	40	40	20	Aluminum	75	0.17
<b>DAK508</b>	CROSS PIECE,AL 4x M14x1,5	8	M14×1,5	32	20	50	50	25	Aluminum	110	0.24
<b>DAK510</b>	CROSS PIECE,AL 4x M16x1,5	10	M16×1,5	25	20	56	50	28	Aluminum	115	0.25
<b>DAK512</b>	CROSS PIECE,AL 4x M18x1,5	12	M18×1,5	42	25	60	60	30	Aluminum	194	0.43

## Solderless pipe union with tapered sleeve

### Cross joints



Tapered sleeve unions

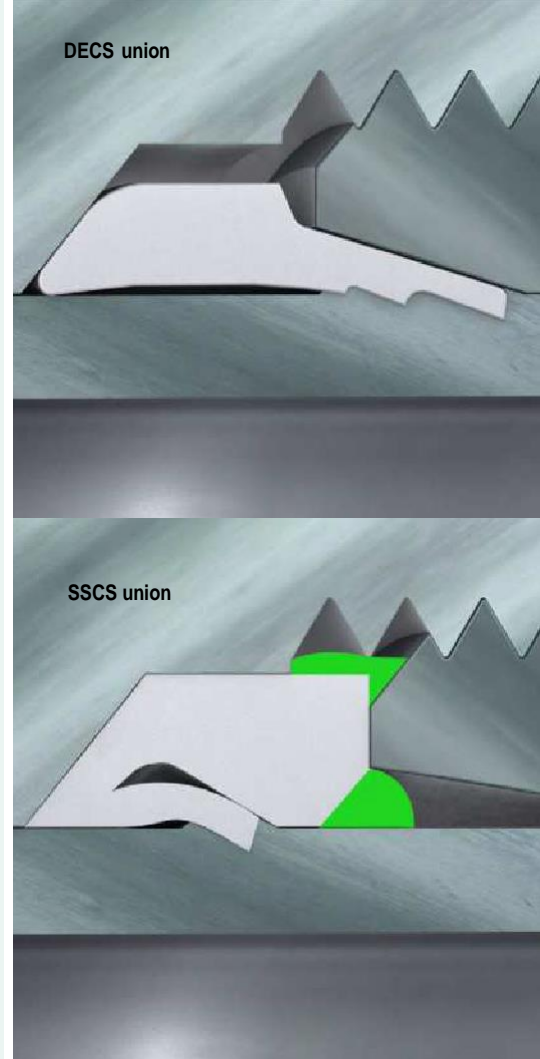
Order number	Designation	Tube $\varnothing$	$D_1$	Material	Weight	
					g	lb
<b>DAK510-S1</b>	TEE,ST 5x M16x1,5 ZN	10	M16x1,5	Steel, galvanized	322	0.71

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

DECS union



SSCS union



### 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

### Types of cutting sleeve unions

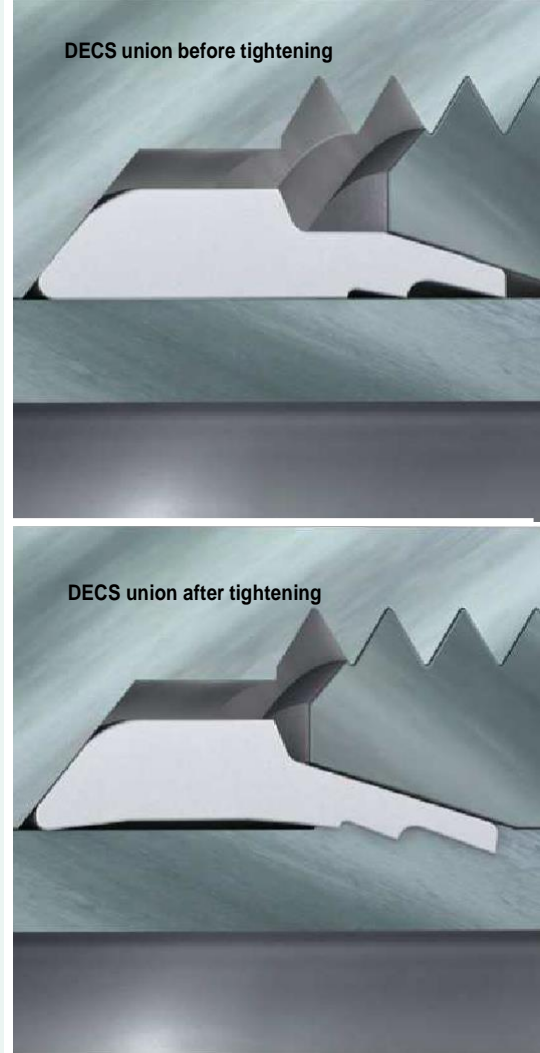
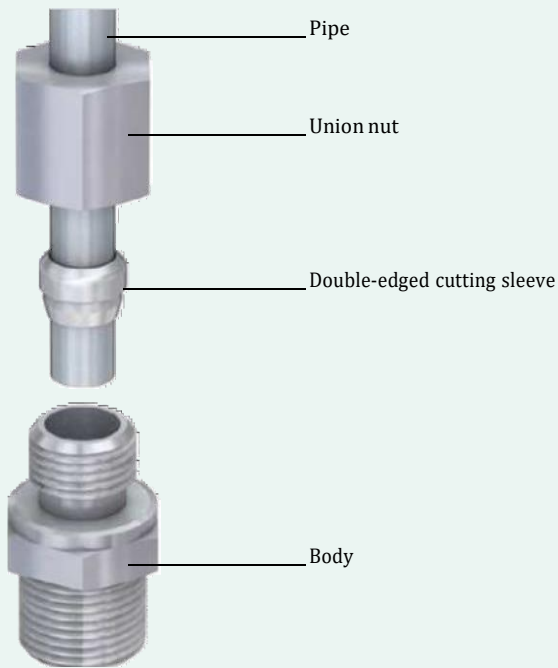
- Double-edged cutting sleeve union (DECS)
- Soft-seal cutting sleeve union (SSCS)

### 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, 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		



## 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

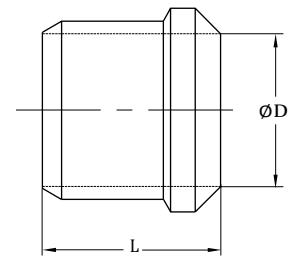
### Features and benefits

- 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



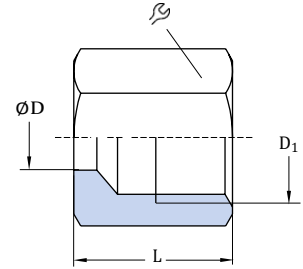
## Double-edged cutting sleeve unions

# 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									
<b>223-14083-3</b>	FERRULE ST D 4-LL	LL	4	6	Steel, galvanized	100	1 450	0,3	0.00
<b>223-12295-2</b>	FERRULE ST D 6-LL	LL	6	7	Steel, galvanized	100	1 450	0,8	0.00
<b>223-12295-5</b>	FERRULE ST D 8-LL	LL	8	7	Steel, galvanized	100	1 450	1	0.00
<b>223-12295-9</b>	FERRULE ST D 10-LL	LL	10	7	Steel, galvanized	100	1 450	1,3	0.00
<b>223-12295-3</b>	FERRULE ST D 6-L/S	L/S	6	9,5	Steel, galvanized	250	3 625	1	0.00
<b>223-12295-6</b>	FERRULE ST D 8-L/S	L/S	8	10	Steel, galvanized	250	3 625	1,7	0.00
<b>223-12295-8</b>	FERRULE ST D 10-L/S	L/S	10	10	Steel, galvanized	250	3 625	3,1	0.01
<b>223-12296-1</b>	FERRULE ST D 12-L/S	L/S	12	10,5	Steel, galvanized	250	3 625	3,5	0.01
<b>223-12296-9</b>	FERRULE ST D 15-L	L	15	10	Steel, galvanized	160	2 320	4,5	0.01
<b>223-12583-1</b>	FERRULE ST D 18-L	L	18	10,5	Steel, galvanized	160	2 320	5,5	0.01
<b>223-12296-8</b>	FERRULE ST D 16-S	S	16	10	Steel, galvanized	400	5 800	5,6	0.01
<b>223-12296-3</b>	FERRULE ST D 20-S	S	20	13	Steel, galvanized	400	5 800	11,4	0.03
<b>223-12296-5</b>	FERRULE ST D 30-S	S	30	13	Steel, galvanized	400	5 800	19,3	0.04
Stainless steel									
<b>223-13639-5</b>	FERRULE VA D 4-LL	LL	4	6	Stainless steel	100	1 450	0,3	0.00
<b>223-13639-3</b>	FERRULE VA D 6-L/S	L/S	6	9,5	Stainless steel	250	3 625	1	0.00
<b>223-13639-2</b>	FERRULE VA D 6-LL	LL	6	7	Stainless steel	100	1 450	0,8	0.00
<b>223-13639-1</b>	FERRULE VA D 8-L/S	L/S	8	9,5	Stainless steel	250	3 625	1,7	0.00
<b>223-13639-4</b>	FERRULE VA D 10-L/S	L/S	10	9,5	Stainless steel	250	3 625	3,1	0.01
<b>223-13639-9</b>	FERRULE VA D 12-L/S	L/S	12	10	Stainless steel	250	3 625	3,5	0.01
<b>223-13639-7</b>	FERRULE VA D 16-S	S	16	9,5	Stainless steel	400	5 800	5,6	0.01
<b>223-13639-8</b>	FERRULE VA D 20-S	S	20	12,5	Stainless steel	400	5 800	11,4	0.03
<b>223-14092-5</b>	FERRULE VA D 30-S	S	30	12,5	Stainless steel	400	5 800	19,3	0.04
Zinc-nickel									
<b>406-351</b>	FERRULE ST D 6-LL Z3W	LL	6	7	Zinc-nickel	100	1 450	1	0.00
<b>408-351</b>	FERRULE ST D 8-LL Z3W	LL	8	7	Zinc-nickel	100	1 450	1	0.00
<b>406-361</b>	FERRULE ST D 6-L Z3W	L	6	11,5	Zinc-nickel	250	3 625	2	0.00
<b>408-361</b>	FERRULE ST D 8-L Z3W	L	8	11,5	zinc-nickel	250	3 625	2	0.00

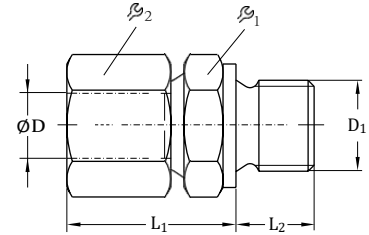
## Double-edged cutting sleeve unions

Union nuts M  
acc. to DIN 3861/ISO 8434-1

Order number	Designation	Series	Tube ØD	D <sub>1</sub>	L	⌀	Material	Operating pressure max		Weight	
								bar	psi	g	lb
Steel, galvanized											
<b>223-13032-1</b>	COUPLING NUT ST M 4-LL CF	LL	4	M8×1	11	10	Steel, galvanized	100	1 450	4	0.01
<b>223-12374-9</b>	COUPLING NUT ST M 6-LL CF	LL	6	M10×1	12	12	Steel, galvanized	100	1 450	6	0.01
<b>223-13032-3</b>	COUPLING NUT ST M 8-LL CF	LL	8	M12×1	12	14	Steel, galvanized	100	1 450	7	0.02
<b>223-12374-6</b>	COUPLING NUT ST M 10-LL CF	LL	10	M14×1	12,5	17	Steel, galvanized	100	1 450	11	0.02
<b>223-12373-9</b>	COUPLING NUT ST M 6-L CF	L	6	M12×1,5	14,5	14	Steel, galvanized	250	3 625	10	0.02
<b>223-13032-4</b>	COUPLING NUT ST M 8-L CF	L	8	M14×1,5	14,5	17	Steel, galvanized	250	3 625	15	0.03
<b>223-13032-6</b>	COUPLING NUT ST M 10-L CF	L	10	M16×1,5	16	19	Steel, galvanized	250	3 625	18	0.04
<b>223-12373-2</b>	COUPLING NUT ST M 12-L CF	L	12	M18×1,5	16	22	Steel, galvanized	250	3 625	25	0.06
<b>223-12374-8</b>	COUPLING NUT ST M 15-L CF	L	15	M22×1,5	18	27	Steel, galvanized	250	3 625	42	0.09
<b>223-12374-7</b>	COUPLING NUT ST M 18-L CF	L	18	M26×1,5	18	32	Steel, galvanized	250	3 625	62	0.14
<b>223-13032-9</b>	COUPLING NUT ST M 16-S CF	S	16	M24×1,5	20,5	30	Steel, galvanized	400	5 800	66	0.15
<b>223-12373-6</b>	COUPLING NUT ST M 20-S CF	S	20	M30×2	24	36	Steel, galvanized	400	5 800	102	0.22
<b>223-12374-2</b>	COUPLING NUT ST M 30-S CF	S	30	M42×2	29	50	Steel, galvanized	400	5 800	219	0.48
Zinc-nickel											
<b>406-352</b>	COUPLING NUT ST M 6-LL Z3W	LL	6	M10×1	11,5	12	Zinc-nickel	100	1 450	5	0.01
<b>408-352</b>	COUPLING NUT ST M 8-LL Z3W	LL	8	M12×1	12	14	Zinc-nickel	100	1 450	5	0.01
<b>406-362</b>	COUPLING NUT ST M 6-L Z3W	L	6	M12×1,5	14,5	14	Zinc-nickel	250	3 625	30	0.07
<b>408-362</b>	COUPLING NUT ST M 8-L Z3W	L	8	M14×1,5	14,5	17	Zinc-nickel	250	3 625	35	0.08
Stainless steel											
<b>223-13638-6</b>	COUPLING NUT VA M 4-LL	LL	4	M8×1	11	10	Stainless steel	100	1 450	4	0.01
<b>223-13638-2</b>	COUPLING NUT VA M 6-LL	LL	6	M10×1	12	12	Stainless steel	100	1 450	6	0.01
<b>223-14082-5</b>	COUPLING NUT VA M 6-L	L	6	M12×1,5	14,5	14	Stainless steel	250	3 625	10	0.02
<b>223-13638-1</b>	COUPLING NUT VA M 8-L	L	8	M14×1,5	14,5	17	Stainless steel	250	3 625	15	0.03
<b>223-13638-3</b>	COUPLING NUT VA M 10-L	L	10	M16×1,5	16	19	Stainless steel	250	3 625	18	0.04
<b>223-14082-3</b>	COUPLING NUT VA M 12-L	L	12	M18×1,5	16	22	Stainless steel	250	3 625	25	0.06
<b>223-13638-7</b>	COUPLING NUT VA M 16-S	S	16	M24×1,5	20,5	30	Stainless steel	400	5 800	66	0.15
<b>223-13638-9</b>	COUPLING NUT VA M 20-S	S	20	M30×2	24	36	Stainless steel	400	5 800	102	0.22
<b>223-14082-6</b>	COUPLING NUT VA M 30-S	S	30	M42×2	29	50	Stainless steel	400	5 800	219	0.48

## Double-edged cutting sleeve unions

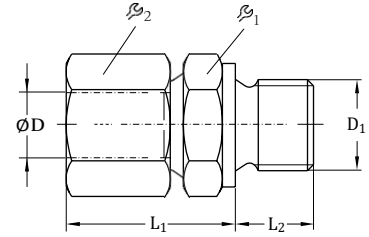
# Straight screw-in connectors GE with metrical thread



Order number	Designation	Series	Tube	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max	Weight		
				ØD	mm	mm	mm	mm		bar	psi	g	lb
<b>Cylindrical thread</b>													
223-12361-6	TB FITT ST GE 8-L M12x1,5 CF	L	8	M12x1,5	25	12	17	17	Steel, galvanized	315	4 570	40	0.09
223-10263-8	TB FITT ST GE10-L M10x1,0 CF	L	10	M10x1	23	8	14	14	Steel, galvanized	315	4 570	40	0.09
223-14129-4	TB FITT ST GE10-L M14x1,5 CF	L	10	M14x1,5	26	12	19	19	Steel, galvanized	315	4 570	50	0.11
223-10313-2	TB FITT ST GE10-L M18x1,5 CF	L	10	M18x1,5	27	12	24	19	Steel, galvanized	315	4 570	71	0.16
412-423	TB FITT ST GE12-L M14x1,5 CF	L	12	M14x1,5	26	12	19	22	Steel, galvanized	315	4 570	60	0.13
412-403	TB FITT ST GE12-L M16x1,5 CF	L	12	M16x1,5	27	12	22	22	Steel, galvanized	315	4 570	70	0.15
412-433	TB FITT ST GE12-L M18x1,5 CF	L	12	M18x1,5	27	12	24	22	Steel, galvanized	315	4 570	77	0.17
415-403	TB FITT ST GE15-L M18x1,5 CF	L	15	M18x1,5	29	12	24	27	Steel, galvanized	250	3 626	97	0.21
415-413	TB FITT ST GE15-L M22x1,5 CF	L	15	M22x1,5	30	14	27	27	Steel, galvanized	250	3 626	100	0.22
418-403	TB FITT ST GE18-L M22x1,5 CF	L	18	M22x1,5	31	14	27	32	Steel, galvanized	250	3 626	143	0.32
223-11242-5	TB FITT ST GE18-L M18x1,5 CF	L	18	M18x1,5	30	12	27	32	Steel, galvanized	250	3 626	150	0.33
223-11242-4	TB FITT ST GE22-L M27x2,0 CF	L	22	M27x2	33	16	32	36	Steel, galvanized	160	2 320	160	0.35
223-14214-8	TB FITT ST GE28-L M33x2,0 CF	L	28	M33x2	34	18	41	41	Steel, galvanized	160	2 320	280	0.62
96-0335-0058	TB FITT ST GE35-L M42x2,0 CF	L	35	M42x2	39	20	50	50	Steel, galvanized	160	2 320	450	0.99
96-0342-0058	TB FITT ST GE42-L M48x2,0 CF	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 CF	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 CF	S	8	M14x1,5	30	12	19	17	Steel, galvanized	800	11 600	66	0.15
410-413	TB FITT ST GE10-S M16x1,5 CF	S	10	M16x1,5	31	12	22	22	Steel, galvanized	800	11 600	87	0.19
412-453	TB FITT ST GE12-S M18x1,5 CF	S	12	M18x1,5	33	12	24	24	Steel, galvanized	630	9 140	111	0.24
96-1214-0058	TB FITT ST GE14-S M20x1,5K CF	S	14	M20x1,5	37	14	27	17	Steel, galvanized	630	9 140	140	0.31
<b>Tapered thread</b>													
223-12533-5	TB FITT ST GE 4-LL M6x1 K CF	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 CF	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 CF	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 CF	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 CF	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 CF	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 CF	LL	8	M10x1 tap	28	8	12	14	Steel, galvanized	100	1 450	24	0.05
410-443	TB FITT ST GE10-L M10x1,0K CF	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 GE10-L M14x1,5K	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

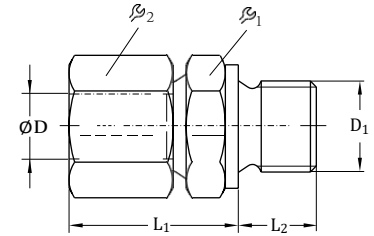


Order number	Designation	Series	Tube D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	S <sub>1</sub>	S <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	in						bar	psi	g	lb
<b>Cylindrical thread</b>													
223-13016-3	FITTING ST GE 6-L G 1/8 A CF	L	6	G 1/8 A	23	8	14	14	Steel, galvanized	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	24	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
223-13621-6	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
<b>Tapered thread</b>													
223-12270-8	FITTING ST GE 4-LL R 1/8K CF	LL	4	R 1/8	26	8	11	10	Steel, galvanized	100 <sup>1)</sup>	1 450 <sup>1)</sup>	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 <sup>1)</sup>	1 450 <sup>1)</sup>	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 <sup>1)</sup>	1 450 <sup>1)</sup>	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 <sup>1)</sup>	1 450 <sup>1)</sup>	26	0.06
96-5911-0058	FITTING ST GE 10-LL R 1/4K CF	LL	10	R 1/4	32	12	14	17	Steel, galvanized	100 <sup>1)</sup>	1 450 <sup>1)</sup>	36	0.08
96-5912-0058	FITTING ST GE 12-LL R 1/8K CF	LL	12	R 1/8	32	12	17	19	Steel, galvanized	100 <sup>1)</sup>	1 450 <sup>1)</sup>	65	0.14
96-5913-0058	FITTING ST GE 12-LL R 3/8K CF	LL	12	R 3/8	32	12	17	19	Steel, galvanized	100 <sup>1)</sup>	1 450 <sup>1)</sup>	55	0.12
410-443W	FITTING ST GE 10-L R 1/8K CF	L	10	R 1/8	34	8	14	17	Steel, galvanized	315	4 570	42	0.09

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

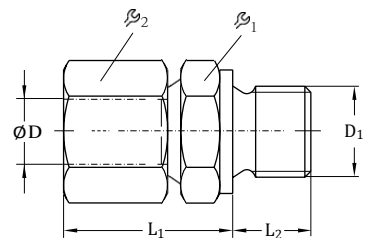
## Double-edged cutting sleeve unions

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



Order number	Designation	Series Tube D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
		mm	in						bar	psi	g	lb
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

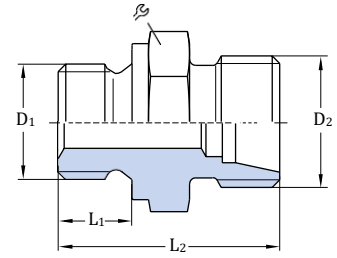
### Straight screw-in connectors GE with NPT pipe thread



Order number	Designation	Series Tube D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight		
		mm	in						bar	psi	g	lb	
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

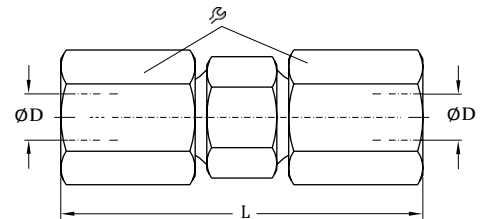
## Double-edged cutting sleeve unions

## Straight screw-in glands XGE



Order number	Designation	Series	Tube $\varnothing$	$D_1$	$D_2$	$L_1$	$L_2$	$R$	Material	Operating pressure max		Weight	
			mm	mm	mm	mm	mm	mm		bar	psi	g	lb
223-13766-9	TB FITT ST XGE 6-LL M 10x1,0K CF	LL	6	M10×1 tap	M10×1	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	M8×1 tap	M10×1	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	M12×1,5	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	M10×1	M12×1,5	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	M14×1,5	M14×1,5	9	36	17	Steel, galv	500	7 250	31	0.07
410-313	TB FITT ST XGE 10-L M 16x1,5 CF	L	10	M16×1,5	M16×1,5	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	M14×1,5	M16×1,5	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	M14×1,5	M18×1,5	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	M22×1,5	M26×1,5	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	M14×1,5	12	30	19	Steel, galv	500	7 250	35	0.08
223-14234-4	TB FITT ST XGE 10-L G 1/8A CF	L	10	G 1/8A	M18×1,5	12	34	17	Steel, galv	500	7 250	33	0.07
223-10055-9	TB FITT ST XGE 10-L G 3/8A CF	L	10	G 3/8A	M18×1,5	12	31,5	22	Steel, galv	500	7 250	55	0.12
223-14418-7	TB FITT ST XGE 18-L G 1/2A CF	L	18	G 1/2A	M26×1,5	14	36	27	Steel, galv	400	5 800	139	0.31
223-11089-3	TB FITT ST XGE 10-S G 1/4A CF	S	10	G 1/4A	M18×1,5	12	30	19	Steel, galv	800	11 600	41	0.09
223-14304-5	TB FITT ST XGE 20-S G 1/2A CF	S	20	G 1/2A	M30×2	14	45	32	Steel, galv	420	6 090	262	0.58

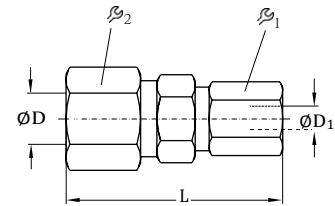
## Straight tube-to-tube connectors G



Order number	Designation	Series	Tube $\varnothing D$	L	$R$	Material	Operating pressure max		Weight	
			mm	mm	mm		bar	psi	g	lb
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

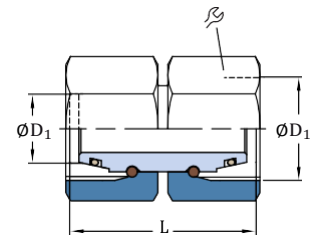
# Straight tube-to-tube reducing connectors GR



Order number	Designation	Series	Tube	Tube	L	$\varnothing_1$	$\varnothing_2$	Material	Operating pressure max		Weight		
			$\varnothing D$	$\varnothing D_1$		mm	mm		bar	psi	g	lb	
			mm	mm	mm	mm	mm						
Steel, galvanized													
<b>223-12542-2</b>	TB FITT ST GR 6/4-LL CF	LL	6	4	32	10	12	Steel, galvanized	100	1450	7	0.02	
<b>504-412</b>	TB FITT ST GR 8/4-LL CF	LL	8	4	34	10	14	Steel, galvanized	100	1450	9	0.02	
<b>223-13705-5</b>	TB FITT ST GR 8/6-L CF	L	8	6	40	14	17	Steel, galvanized	500	7250	16	0.04	
<b>223-13622-3</b>	TB FITT ST GR 10/6-L CF	L	10	6	41	14	19	Steel, galvanized	500	7250	21	0.05	
<b>223-13024-4</b>	TB FITT ST GR 10/8-L CF	L	10	8	41	17	19	Steel, galvanized	500	7250	21	0.05	
<b>223-10986-1</b>	TB FITT ST GR 12/6-L CF	L	12	6	42	14	22	Steel, galvanized	400	5800	26	0.06	
<b>223-13622-7</b>	TB FITT ST GR 12/8-L CF	L	12	8	42	17	22	Steel, galvanized	400	5800	26	0.06	
<b>510-410</b>	TB FITT ST GR 12/10-L CF	L	12	10	43	19	22	Steel, galvanized	400	5800	29	0.06	
<b>223-13024-8</b>	TB FITT ST GR 15/8-L CF	L	15	8	45	17	27	Steel, galvanized	400	5800	42	0.09	
<b>223-12542-7</b>	TB FITT ST GR 15/10-L CF	L	15	10	45	19	27	Steel, galvanized	400	5800	46	0.10	
<b>223-12542-8</b>	TB FITT ST GR 15/12-L CF	L	15	12	45	22	27	Steel, galvanized	400	5800	45	0.10	
<b>510-413</b>	TB FITT ST GR 18/10-L CF	L	18	10	46	19	32	Steel, galvanized	400	5800	65	0.14	
<b>512-412</b>	TB FITT ST GR 18/12-L CF	L	18	12	46	22	32	Steel, galvanized	400	5800	64	0.14	
<b>515-410</b>	TB FITT ST GR 18/15-L CF	L	18	15	48	27	32	Steel, galvanized	400	5800	65	0.14	
<b>223-13622-1</b>	TB FITT ST GR 16/10-S CF	S	16	10	54	22	30	Steel, galvanized	630	9140	80	0.18	
<b>223-12364-4</b>	TB FITT ST GR 20/10-S CF	S	20	10	60	22	36	Steel, galvanized	420	6090	129	0.28	
<b>223-13024-1</b>	TB FITT ST GR 30/20-S CF	S	30	20	74	36	50	Steel, galvanized	420	6090	299	0.66	
Stainless steel													
<b>223-13619-9</b>	TB FITT VA GR 16/10 S	S	16	10	54	22	30	Stainless steel	400	5800	80	0.18	
<b>223-13619-2</b>	TB FITT VA GR 20/10 S	S	20	10	60	22	36	Stainless steel	400	5800	129	0.28	
<b>223-13791-5</b>	TB FITT VA GR 30/20 S	S	30	20	74	36	50	Stainless steel	400	5800	299	0.66	

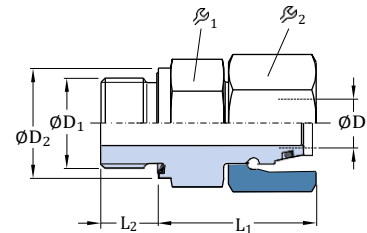
## Double-edged cutting sleeve unions

## Union studs GZ



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

## Straight tube studs EGE

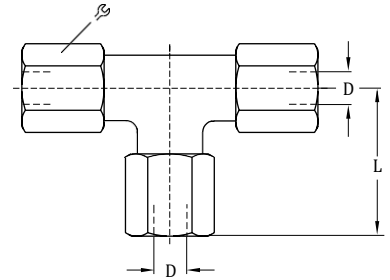


Order number	Designation	Series	Tube ØD <sub>1</sub>		ØD <sub>2</sub>		L <sub>1</sub>	L <sub>2</sub>	R <sub>1</sub>	R <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	mm	mm	mm						mm	mm	mm	mm
<b>223-14130-7</b>	TB STUD ST EGE 6-L G 1/8A-ED CF	L	6	G 1/8A	14	24,5	8	14	14	Steel, galv	500	7 250	27	0.06	
<b>223-13686-1</b>	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	
<b>223-14130-9</b>	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	
<b>223-14187-4</b>	TB STUD ST EGE10-L M14x1,5-ED CF	L	10	M14×1,5	19	27,5	12	19	19	Steel, galv	500	7 250	49	0.11	
<b>223-10563-8</b>	TB STUD ST EGE12-L M16x1,5-ED CF	L	12	M16×1,5	22	30,5	12	22	22	Steel, galv	400	5 800	67	0.15	
<b>223-14187-4</b>	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	
<b>223-10563-5</b>	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	
<b>223-14130-2</b>	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	
<b>223-10563-7</b>	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	
<b>223-10563-6</b>	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	
<b>223-14130-2</b>	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	



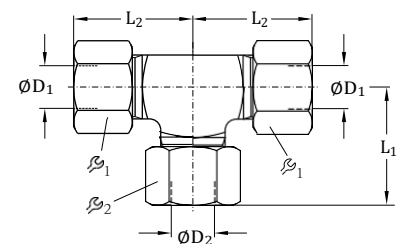
## Double-edged cutting sleeve unions

### T-connectors T



Order number	Designation	Series	Tube	ØD	L	⊘	Material	Operating pressure		Weight	
								max	max	g	lb
			mm	mm	mm	mm		bar	psi		
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 T 10-L CF	L	10	30	19		Steel, galvanized	500	7 250	111	0.24
412-407	TB FITT ST T 12-L CF	L	12	32	22		Steel, galvanized	400	5 800	149	0.33
223-12563-2	TB FITT ST T 15-L CF	L	15	36	27		Steel, galvanized	400	5 800	247	0.54
418-407	TB FITT ST T 18-L CF	L	18	40	32		Steel, galvanized	400	5 800	383	0.84
223-13057-4	TB FITT ST T 22-L CF	L	22	44	36		Steel, galvanized	250	3 625	492	1.08
223-12563-9	TB FITT ST T 10-S CF	S	10	34	22		Steel, galvanized	800	11 600	193	0.43
223-13057-2	TB FITT ST T 16-S CF	S	16	43	30		Steel, galvanized	630	9 140	418	0.92
223-12366-2	TB FITT ST T 20-S CF	S	20	48	36		Steel, galvanized	420	6 090	867	1.91
223-12366-6	TB FITT ST T 30-S CF	S	30	62	50		Steel, galvanized	420	6 090	2 274	5.01
Stainless steel											
223-13616-3	TB FITT VA T 10-L	L	10	30	19		Stainless steel	315	4 570	111	0.24
223-12455-1	TB FITT VA T 10-S	S	10	34	22		Stainless steel	630	9 140	193	0.43
223-12455-5	TB FITT VA T 16-S	S	16	43	30		Stainless steel	400	5 800	418	0.92
223-12455-2	TB FITT VA T 20-S	S	20	48	36		Stainless steel	400	5 800	867	1.91

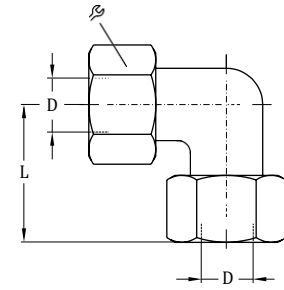
### Reducing T-connectors TR



Order number	Designation	Series	Tube	Tube	L <sub>1</sub>	L <sub>2</sub>	⊘ <sub>1</sub>	⊘ <sub>2</sub>	Material	Operating pressure		Weight	
										max	max	g	lb
			mm	mm	mm	mm	mm	mm		bar	psi		
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

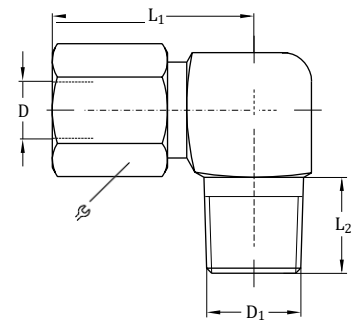
## Double-edged cutting sleeve unions

## 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

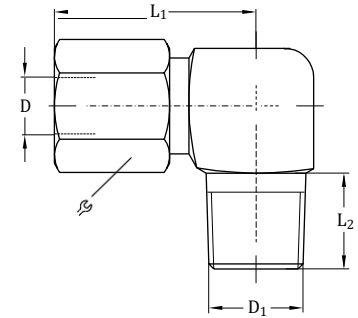
## Elbow screw-in connectors WE with metrical thread



Order number	Designation	Series	Tube	ØD	ØD <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	Material	Operating pressure max		Weight	
									mm	mm	mm	mm
Steel, galvanized												
223-13023-3	TB FITT ST WE 6-LL M8x1K CF	LL	6	M8×1	21	8	12	Steel, galvanized	100	1 450	24	0.05
223-13021-3	TB FITT ST WE 6-LL M10x1K CF	LL	6	M10×1	15	8	12	Steel, galvanized	100	1 450	24	0.05
223-12362-4	TB FITT ST WE 8-LL M10x1K CF	LL	8	M10×1	17	8	14	Steel, galvanized	100	1 450	33	0.07
223-12485-8	TB FITT ST WE 6-L M10x1K CF	L	6	M10×1	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	M12×1,5	21	12	17	Steel, galvanized	315	4 570	63	0.14
406-405	TB FITT ST WE10-L M14x1,5K CF	L	10	M14×1,5	22	12	19	Steel, galvanized	315	4 570	83	0.18
412-405	TB FITT ST WE12-L M16x1,5K CF	L	12	M16×1,5	24	12	22	Steel, galvanized	315	4 570	117	0.26
415-405	TB FITT ST WE15-L M18x1,5K CF	L	15	M18×1,5	28	12	27	Steel, galvanized	315	4 570	125	0.28
223-12485-2	TB FITT ST WE10-S M16x1,5K CF	S	10	M16×1,5	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	M8×1	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	M8×1	21	8	12	Stainless steel	100	1 450	24	0.05

## Double-edged cutting sleeve unions

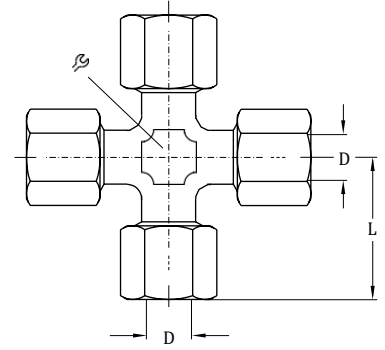
# Elbow screw-in connectors WE with Whitworth pipe thread



Order number	Designation	Series Tube $\varnothing D_1$		$L_1$	$L_2$	$\varnothing$	Material	Operating pressure max		Weight		
		mm	in					bar	psi	g	lb	
Steel, galvanized												
<b>223-13021-4</b>	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
<b>223-13021-6</b>	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
<b>96-6112-0058</b>	TB FITT ST WE 12-LL R 1/4K CF	LL	12	R 1/4	19	12	19	Steel, galvanized	100	1 450	61	0.13
<b>223-13048-1</b>	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
<b>223-12380-6</b>	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
<b>408-425W</b>	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
<b>223-14240-5</b>	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
<b>223-13048-5</b>	TB FITT ST WE 10-L R 1/4K CF	L	10	R 1/4	22	12	19	Steel, galvanized	315	4 570	82	0.18
<b>412-405W</b>	TB FITT ST WE 12-L R 3/8K CF	L	12	R 3/8	24	12	22	Steel, galvanized	315	4 570	116	0.26
<b>223-13021-7</b>	TB FITT ST WE 15-L R 1/2K CF	L	15	R 1/2	28	14	27	Steel, galvanized	315	4 570	141	0.31
<b>418-405W</b>	TB FITT ST WE 18-L R 1/2K CF	L	18	R 1/2	31	14	32	Steel, galvanized	315	4 570	230	0.51
<b>223-13048-6</b>	TB FITT ST WE 10-S R 3/8K CF	S	10	R 3/8	25	12	22	Steel, galvanized	400	5 800	138	0.30
<b>96-1412-0058</b>	TB FITT ST WE 12-S R 3/8K CF	S	12	R 3/8	29	12	24	Steel, galvanized	400	5 800	164	0.36
<b>223-13048-8</b>	TB FITT ST WE 16-S R 1/2K CF	S	16	R 1/2	33	14	30	Steel, galvanized	400	5 800	232	0.51
Stainless steel												
<b>223-13620-8</b>	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
<b>223-13677-5</b>	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
<b>223-12453-1</b>	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

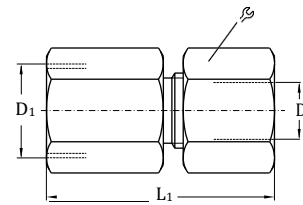
## K-connectors K



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

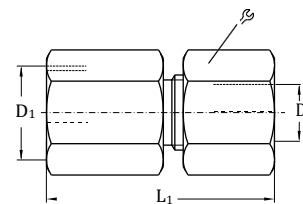
## Double-edged cutting sleeve unions

### Female connector straight GAI with metric thread



Order number	Designation	Series	Tube $\varnothing D_1$		$L_1$	$L_2$	$\varnothing$	Material	Operating pressure max		Weight	
			mm	mm					bar	psi	g	lb
<b>223-10307-2</b>	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
<b>96-0508-0060</b>	TB FITT ST GAI 8-L M12x1,5 CF	L	8	M12x1,5	31	24	17	Steel, galvanized	315	4 570	49	0.11
<b>223-13033-2</b>	TB FITT ST GAI10-L M14x1,5 CF	L	10	M14x1,5	32	25	19	Steel, galvanized	315	4 570	60	0.13
<b>96-0512-0060</b>	TB FITT ST GAI12-L M16x1,5 CF	L	12	M16x1,5	33	26	22	Steel, galvanized	315	4 570	80	0.18
<b>223-13693-9</b>	TB FITT ST GAI18-L M22x1,5 CF	L	18	M22x1,5	37	29,5	32	Steel, galvanized	315	4 570	179	0.39
<b>96-0606-0060</b>	TB FITT ST GAI 6-S M12x1,5 CF	S	6	M12x1	33	26	17	Steel, galvanized	400	5 800	54	0.12
<b>96-0608-0060</b>	TB FITT ST GAI 8-S M14x1,5 CF	S	8	M14x1,5	33	26	19	Steel, galvanized	400	5 800	73	0.16

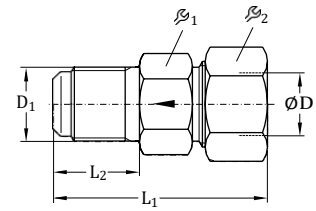
### Female connector straight GAI with Whitworth pipe thread



Order number	Designation	Series	Tube $\varnothing D_1$		$L_1$	$L_2$	$\varnothing$	Material	Operating pressure max		Weight	
			mm	in					bar	psi	g	lb
Steel, galvanized												
<b>223-13693-4</b>	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
<b>223-13693-6</b>	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
<b>223-13693-2</b>	TB FITT ST GAI10-L G1/4 CF	L	10	G 1/4	32	25	19	Steel, galvanized	315	4 570	61	0.13
<b>96-0712-0060</b>	TB FITT ST GAI12-L G3/8 CF	L	12	G 3/8	33	26	24	Steel, galvanized	315	4 570	92	0.20
<b>96-0715-0060</b>	TB FITT ST GAI15-L G1/2 CF	L	15	G 1/2	38	31	27	Steel, galvanized	315	4 570	134	0.30
<b>96-0718-0060</b>	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
<b>223-12273-2</b>	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
<b>223-13693-1</b>	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												
<b>223-14116-2</b>	TB FITT VA GAI10-S G3/8	S	10	G 3/8	34	26,5	24	Stainless steel	400	5 800	102	0.22
<b>223-14116-9</b>	TB FITT VA GAI20-S G3/4	S	20	G 3/4	45	34,5	36	Stainless steel	315	4 570	309	0.68

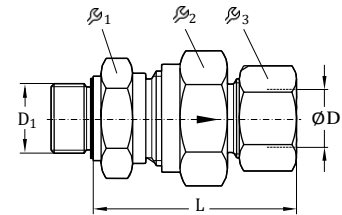
## Double-edged cutting sleeve unions

## Check valves GERV



Order number	Designation	Series	Tube ØD <sub>1</sub> ØD	L <sub>1</sub>	L <sub>2</sub>	Ø <sub>1</sub>	Ø <sub>2</sub>	Material	Operating pressure max		Weight	
									bar	psi	g	lb
Steel, galvanized												
<b>223-12290-2</b>	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
<b>223-12290-7</b>	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
<b>223-13052-8</b>	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
<b>223-13051-1</b>	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
<b>223-13051-2</b>	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
<b>223-12372-9</b>	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												
<b>223-12535-9</b>	CHECK VALVE VA GERV 6-LL G 1/8A L	LL	G 1/8	30	11	12	11	Stainless steel	100	1 450	16	0.04
<b>223-11185-1</b>	CHECK VALVE VA GERV 6-S G 1/4A L	S	G 1/4	44	14	17	17	Stainless steel	400	5 800	60	0.13
<b>223-12535-5</b>	CHECK VALVE VA GERV 8-S G 1/4A L	S	G 1/4	42	14	19	19	Stainless steel	400	5 800	45	0.10

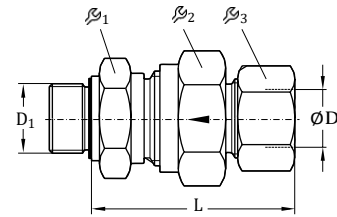
## Check valves RHV



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

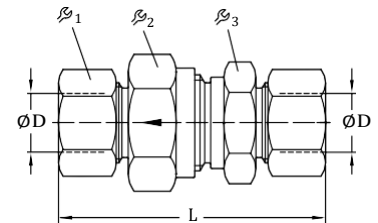
## Double-edged cutting sleeve unions

### Check valves RHZ



Order number	Designation	Series	Tube		L	ϕ <sub>1</sub>	ϕ <sub>2</sub>	ϕ <sub>3</sub>	Material	Operating pressure max		Weight	
			ØD <sub>1</sub>	ØD						bar	psi	g	lb
			mm	mm	mm	mm	mm	mm					
Steel, galvanized													
<b>223-12292-2</b>	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
<b>223-12292-5</b>	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
<b>223-13706-3</b>	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
<b>223-12292-9</b>	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													
<b>223-13692-3</b>	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

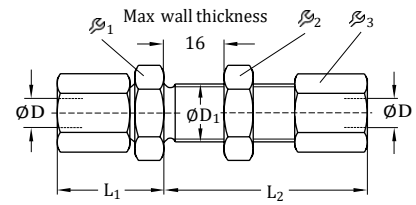
### Check valves RHD



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

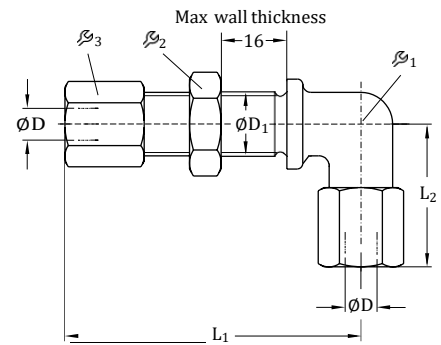
## Double-edged cutting sleeve unions

## Straight bulkhead connectors SV



Order number	Designation	Series	Tube		L <sub>1</sub>	L <sub>2</sub>	Ø <sub>1</sub>	Ø <sub>2</sub>	Ø <sub>3</sub>	Material	Operating pressure max		Weight	
			ØD <sub>1</sub>	ØD							bar	psi	g	lb
			mm	mm	mm	mm	mm	mm	mm					
Steel, galvanized														
<b>223-12368-4</b>	TB FITT ST SV 6-L CF	L	6	12,5	22	42	17	17	14	Steel, galvanized	500	7 250	63	0.14
<b>223-12368-6</b>	TB FITT ST SV 8-L CF	L	8	14,5	23	42	19	19	17	Steel, galvanized	500	7 250	84	0.19
<b>223-12368-8</b>	TB FITT ST SV 10-L CF	L	10	16,5	25	43	22	22	19	Steel, galvanized	500	7 250	109	0.24
<b>223-13698-4</b>	TB FITT ST SV 12-L CF	L	12	18,5	25	44	24	24	22	Steel, galvanized	400	5 800	134	0.30
<b>223-12564-2</b>	TB FITT ST SV 15-L CF	L	15	22,5	27	46	27	30	27	Steel, galvanized	400	5 800	222	0.49
<b>223-12564-8</b>	TB FITT ST SV 18-L CF	L	18	26,5	30	49	32	36	32	Steel, galvanized	400	5 800	334	0.74
<b>422-416</b>	TB FITT ST SV22-L CF	L	22	30,5	33	51	36	41	36	Steel, galvanized	250	3 625	432	0.95
<b>223-12564-6</b>	TB FITT ST SV 10-S CF	S	10	18,5	31	46	24	24	22	Steel, galvanized	800	11 600	180	0.40
<b>223-12368-2</b>	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														
<b>223-13671-9</b>	TB FITT VA SV 8-S	S	8	16,5	28	44	22	22	19	Stainless steel	630	9 140	133	0.29
<b>223-12564-3</b>	TB FITT VA SV 10-S	S	10	18,5	31	46	24	24	22	Stainless steel	630	9 140	180	0.40
<b>223-13671-2</b>	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

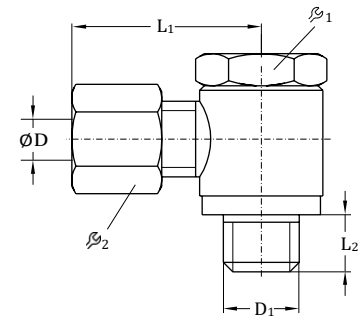


Order number	Designation	Series	Tube		L <sub>1</sub>	L <sub>2</sub>	Ø <sub>1</sub>	Ø <sub>2</sub>	Ø <sub>3</sub>	Material	Operating pressure max		Weight	
			ØD <sub>1</sub>	ØD							bar	psi	g	lb
			mm	mm	mm	mm	mm	mm	mm					
Steel, galvanized														
<b>223-13050-4</b>	TB FITT ST WSV 6-L CF	L	6	12,5	48	27	12	17	14	Steel, galvanized	315	4 570	75	0.17
<b>223-12409-6</b>	TB FITT ST WSV 8-L CF	L	8	14,5	51	29	12	19	17	Steel, galvanized	315	4 570	95	0.21
<b>223-12409-9</b>	TB FITT ST WSV10-L CF	L	10	16,5	53	30	14	22	19	Steel, galvanized	315	4 570	120	0.26
<b>412-409</b>	TB FITT ST WSV12-L CF	L	12	18,5	56	32	17	24	22	Steel, galvanized	315	4 570	141	0.31
<b>223-12409-8</b>	TB FITT ST WSV15-L CF	L	15	22,5	61	36	19	30	27	Steel, galvanized	315	4 570	184	0.41
<b>418-409</b>	TB FITT ST WSV18-L CF	L	18	26,5	64	40	24	36	32	Steel, galvanized	315	4 570	374	0.82
<b>223-13050-3</b>	TB FITT ST WSV22-L CF	L	22	30,5	72	44	27	41	36	Steel, galvanized	160	2 320	505	1.11
<b>223-13050-2</b>	TB FITT ST WSV10-S CF	S	10	18,5	57	34	17	24	22	Steel, galvanized	630	9 140	196	0.43
<b>223-12409-2</b>	TB FITT ST WSV20-S CF	S	20	30,5	74	48	27	41	36	Steel, galvanized	400	5 800	616	1.36
Stainless steel														
<b>223-10364-6</b>	TB FITT VA WSV 8-S	S	8	16,5	54	32	14	22	19	Stainless steel	630	9 140	155	0.34
<b>223-10364-3</b>	TB FITT VA WSV10-S	S	10	18,5	57	34	17	24	22	Stainless steel	630	9 140	196	0.43
<b>223-13758-4</b>	TB FITT VA WSV20-S	S	20	30,5	74	48	27	41	36	Stainless steel	400	5 800	616	1.36



## Double-edged cutting sleeve unions

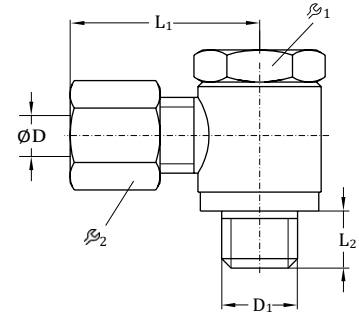
# Banjo fittings SWVE with metrical thread



Order number	Designation	Series	Tube D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	mm						bar	psi	g	lb
Steel, galvanized													
<b>223-12480-2</b>	TB FITT ST SWVE 4-LL M 8x1 CF	LL	4	M8×1	20	6	12	10	Steel, galvanized	63	915	22	0.05
<b>223-12480-7</b>	TB FITT ST SWVE 6-LL M10x1 CF	LL	6	M10×1	22	6	14	12	Steel, galvanized	63	915	36	0.08
<b>96-7108-0058</b>	TB FITT ST SWVE 8-LL M10x1 CF	LL	8	M10×1	23	6	14	14	Steel, galvanized	63	915	39	0.09
<b>223-12369-7</b>	TB FITT ST SWVE 6-L M10x1 CF	L	6	M10×1	25	6	14	14	Steel, galvanized	160	2 320	43	0.09
<b>96-7808-0058</b>	TB FITT ST SWVE 8-L M12x1,5 CF	L	8	M12×1,5	27	9	17	17	Steel, galvanized	160	2 320	68	0.15
<b>445-535-101</b>	TB FITT ST SWVE10-L M14x1,5 CF	L	10	M14×1,5	29	9	19	19	Steel, galvanized	160	2 320	89	0.20
<b>96-7812-0058</b>	TB FITT ST SWVE12-L M16x1,5 CF	L	12	M16×1,5	30	9	21	22	Steel, galvanized	100	1 450	128	0.28
<b>96-7815-0058</b>	TB FITT ST SWVE15-L M18x1,5 CF	L	15	M18×1,5	33	9	24	27	Steel, galvanized	100	1 450	185	0.41
<b>96-7818-0058</b>	TB FITT ST SWVE18-L M22x1,5 CF	L	18	M22×1,5	37	11	27	32	Steel, galvanized	100	1 450	309	0.68
<b>96-7822-0058</b>	TB FITT ST SWVE22-L M26x1,5 Z3	L	22	M26×1,5	42	13	32	36	Steel, galvanized	100	1 450	440	0.97
<b>96-8006-0058</b>	TB FITT ST SWVE 6-S M12x1,5 CF	S	6	M12×1,5	29	9	17	17	Steel, galvanized	160	2 320	74	0.16
<b>96-8008-0058</b>	TB FITT ST SWVE 8-S M14x1,5 CF	S	8	M14×1,5	30	9	19	19	Steel, galvanized	160	2 320	98	0.22
<b>223-13669-4</b>	TB FITT ST SWVE10-S M16x1,5 CF	S	10	M16×1,5	32	9	22	22	Steel, galvanized	100	1 450	140	0.31
<b>96-8012-0058</b>	TB FITT ST SWVE12-S M18x1,5 CF	S	12	M18×1,5	33	9	24	24	Steel, galvanized	100	1 450	172	0.38
<b>96-8014-0058</b>	TB FITT ST SWVE14-S M20x1,5 Z3	S	14	M20×1,5	38	11	27	27	Steel, galvanized	100	1 450	236	0.52
<b>96-8016-0058</b>	TB FITT ST SWVE16-S M22x1,5 Z3	S	16	M22×1,5	40	11	27	30	Steel, galvanized	100	1 450	324	0.71
Stainless steel													
<b>223-12456-6</b>	TB FITT VA SWVE 6-LL M10x1	LL	6	M10×1	22	6	14	12	Stainless steel	63	915	36	0.08
<b>223-10389-3</b>	TB FITT VA SWVE 8-LL M10x1	LL	8	M10×1	23	6	14	14	Stainless steel	63	915	39	0.09
<b>223-14089-9</b>	TB FITT VA SWVE 6-L M10x1	L	6	M10×1	25	6	14	14	Stainless steel	160	2 320	43	0.09

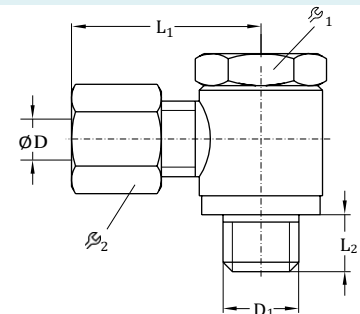
## Double-edged cutting sleeve unions

## Banjo fittings SWVE with Whitworth pipe thread



Order number	Designation	Series Tube	D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	in						bar	psi	g	lb
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 CFL	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	

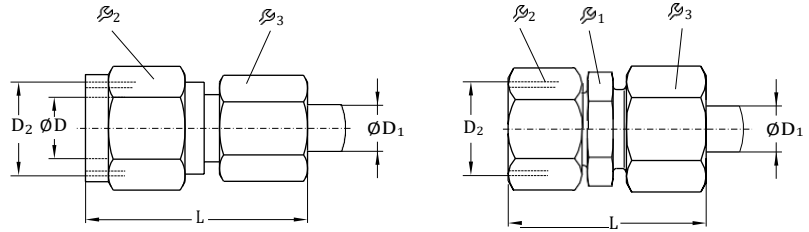
## Banjo fittings WH (high-pressure)



Order number	Designation	Series Tube	D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	mm						bar	psi	g	lb
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	
223-13679-3	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	
223-13679-9	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

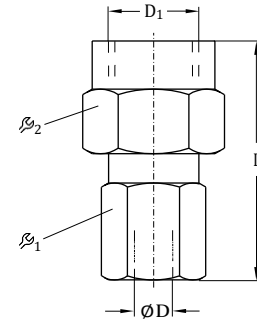
# Reducing connectors RED with cylindrical thread



Order number	Designation	Series	Tube ØD	Tube D <sub>2</sub> ØD <sub>1</sub>	L	Ø <sub>1</sub>	Ø <sub>2</sub>	Ø <sub>3</sub>	Material	Operating pressure max		Weight		
										bar	psi	g	lb	
			mm	mm	mm	mm	mm	mm						
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	M16x1,5	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	M20x1,5	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	M18x1,5	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	M18x1,5	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

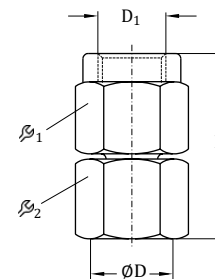
## Connectors for pressure gauges MAV



Order number	Designation	Series	Tube ØD	D <sub>1</sub>	L	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
									bar	psi	g	lb
			mm	in	mm	mm	mm					
Steel, galvanized												
<b>223-12481-4</b>	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
<b>223-12481-6</b>	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
<b>223-13028-2</b>	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
<b>223-12481-8</b>	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
<b>441-108-132</b>	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
<b>223-13028-4</b>	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
<b>223-12286-8</b>	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												
<b>223-13685-3</b>	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
<b>223-13685-1</b>	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

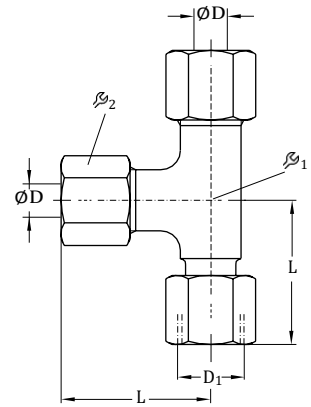
(Swivel with O-ring)



Order number	Designation	Series	Tube ØD	D <sub>1</sub>	L	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
									bar	psi	g	lb
			mm	in	mm	mm	mm					
Steel, galvanized												
<b>96-8804-0058</b>	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
<b>223-13655-1</b>	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
<b>223-10889-2</b>	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
<b>223-13655-7</b>	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
<b>223-14268-4</b>	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
<b>96-8906-0058</b>	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
<b>223-13655-2</b>	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
<b>223-13655-4</b>	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												
<b>223-14268-7</b>	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
<b>223-13655-5</b>	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

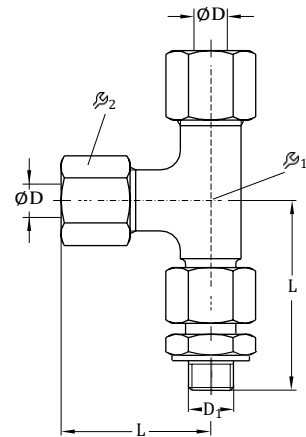
## Double-edged cutting sleeve unions

### L-connectors EL directionally adjustable



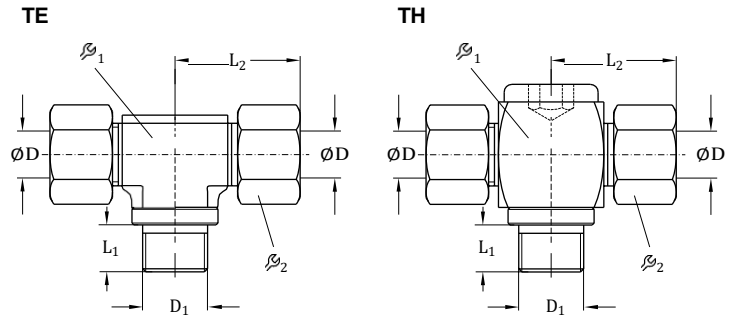
Order number	Designation	Series	Tube ØD <sub>1</sub>		L	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	mm					bar	psi	g	lb
Steel, galvanized												
<b>223-14190-6</b>	TB STUD ST EL 6-L CF	L	6	M12×1,5	27	12	14	Steel, galvanized	500	7 250	68	0.15
<b>223-14190-7</b>	TB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

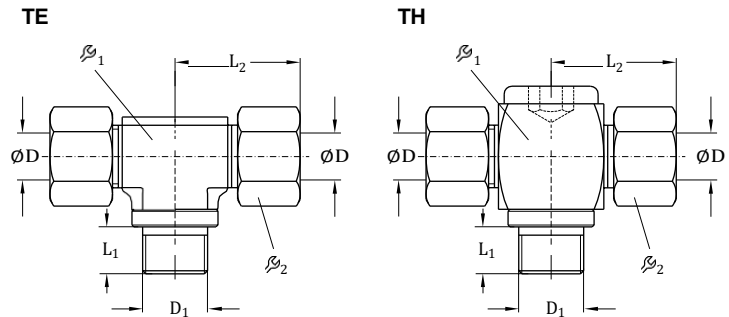


Order number	Designation	Series	Tube ØD <sub>1</sub>		L	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	in					bar	psi	g	lb
Steel, galvanized												
<b>443-410-211</b>	TB FITT ST EVL 10-S G3/8A CF	S	10	G 3/8	34	17	22	Steel, galvanized	630	9 140	226	0.50
<b>443-410-161</b>	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

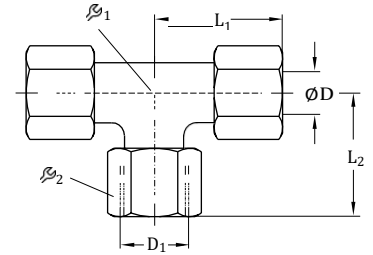
Order number	Designation	Series	Tube	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
										mm	mm	mm	mm
96-6404-0058	TB FITT ST TE 4-LL M 8x1,0K CF	LL	4	M8×1 tap	8	21	9	10	Steel, galvanized	100	1 450	19	0.04
96-6406-0058	TB FITT ST TE 6-LL M10x1,0K CF	LL	6	M10×1 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	M10×1 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	M10×1 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	M14×1,5 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	M12×1,5 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	M14×1,5 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	M14×1,5	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	M18×1,5	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	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
										mm	in	mm	mm
96-6304-0058	TB FITT ST TE 4-LL R 1/8K CF	LL	4	R 1/8	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	R 1/8	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	R 1/8	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	R 1/8	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	R 1/4	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	R 1/4	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	R 1/2	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	R 1/4	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

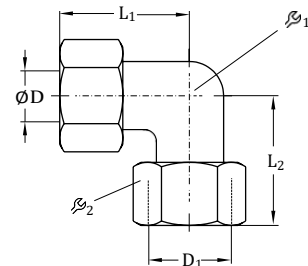
## Double-edged cutting sleeve unions

### Swivel nut branch ET



Order number	Designation	Series	Tube ØD D <sub>1</sub>		L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	mm						bar	psi	g	lb
<b>223-14189-6</b>	TB STUD ST ET 6-L CF	L	6	M12×1,5	27	26	12	14	Steel, galvanized	500	7250	68	0.15
<b>223-13040-1</b>	TB STUD ST ET 8-L CF	L	8	M14×1,5	29	26,5	12	17	Steel, galvanized	500	7250	87	0.19
<b>223-14189-1</b>	TB STUD ST ET10-L CF	L	10	M16×1,5	30	29	14	19	Steel, galvanized	500	7250	113	0.25
<b>223-13785-8</b>	TB STUD ST ET12-L CF	L	12	M18×1,5	32	29,5	17	22	Steel, galvanized	400	5800	153	0.34
<b>223-14189-7</b>	TB STUD ST ET15-L CF	L	15	M22×1,5	36	32,5	19	27	Steel, galvanized	400	5800	253	0.56
<b>96-3118-0060</b>	TB STUD ST ET18-L CF	L	18	M26×1,5	40	35,5	24	32	Steel, galvanized	400	5800	375	0.83
<b>96-3122-0060</b>	TB STUD ST ET22-L CF	L	22	M30×1,5	44	38,5	27	36	Steel, galvanized	250	3625	486	1.07
<b>445-806-351</b>	TB STUD ST ET 6-S CF	S	6	M14×1,5	31	27	12	17	Steel, galvanized	800	11 600	101	0.22
<b>223-10374-3</b>	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
<b>223-14189-5</b>	TB STUD ST ET10-S CF	S	10	M18×1,5	34	30	17	22	Steel, galvanized	800	11 600	181	0.40
<b>223-14189-9</b>	TB STUD ST ET12-S CF	S	12	M20×1,5	38	31	17	24	Steel, galvanized	630	9 140	212	0.47
<b>223-14189-2</b>	TB STUD ST ET16-S CF	S	16	M24×1,5	43	36,5	24	30	Steel, galvanized	630	9 140	383	0.84
<b>223-14189-3</b>	TB STUD ST ET20-S CF	S	20	M30×1,5	48	44,5	27	36	Steel, galvanized	420	6 090	614	1.35

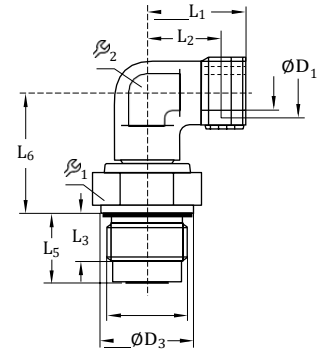
### Swivel nut elbow EW



Order number	Designation	Series	Tube D <sub>1</sub> ØD		L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Material	Operating pressure max		Weight	
			mm	mm						bar	psi	g	lb
<b>223-14171-1</b>	TB STUD ST EW 6-L CF	L	6	M12×1,5	27	26	12	14	Steel, galvanized	500	7250	46	0.10
<b>223-14102-3</b>	TB STUD ST EW 8-L CF	L	8	M14×1,5	29	27,5	12	17	Steel, galvanized	500	7250	59	0.13
<b>443-306-343</b>	TB STUD ST EW 6-S CF	S	6	M14×1,5	31	27	12	17	Steel, galvanized	800	11 600	67	0.15
<b>223-14171-8</b>	TB STUD ST EW10-S CF	S	10	M18×1,5	34	30	17	22	Steel, galvanized	800	11 600	126	0.28
<b>223-14171-4</b>	TB STUD ST EW16-S CF	S	16	M24×1,5	43	36,5	24	30	Steel, galvanized	630	9 140	284	0.63
<b>223-14171-5</b>	TB STUD ST EW20-S CF	S	20	M30×1,5	48	44,5	27	36	Steel, galvanized	420	6 090	422	0.93

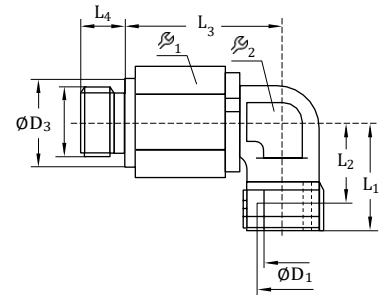
## Double-edged cutting sleeve unions

## Swivels DVWE



Order number	Designation	Tube $\varnothing$	$\varnothing D_1$		Series	Speed max	Operation pressure			Weight	
			mm	in			bar	psi	g	lb	
Steel galvanized											
<b>223-13694-6</b>	TB FITT ST DVWE10-L G 3/8A CF 10	10		G 3/8A	L	21	40	580	Steel galvanized	83	0.18
<b>223-13694-1</b>	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											
<b>223-13694-7</b>	TB FITT VA DVWE10-L G 3/8A	10		G 3/8A	L	21	40	580	Stainless steel	83	0.18
<b>223-13694-3</b>	TB FITT VA DVWE10-S G 3/8A	10		G 3/8A	S	9	100	1 450	Stainless steel	103	0.23

## Swivels DG

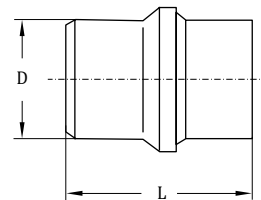


Order number	Designation	Tube $\varnothing$	$\varnothing D_1$		Series	Speed max	Operation pressure			Weight	
			mm	in			bar	psi	g	lb	
<b>223-13665-7</b>	TB FITT ST DG104/ 6-S G 1/4A CF	6		G 1/4A	S	400	100	1 450	Steel galvanized	131	0.29
<b>223-13665-8</b>	TB FITT ST DG104/ 8-S G 1/4A CF	8		G 1/4A	S	400	100	1 450	Steel galvanized	135	0.30
<b>223-13665-9</b>	TB FITT ST DG104/12-S G 3/8A CF	12		G 3/8A	S	200	100	1 450	Steel galvanized	284	0.62



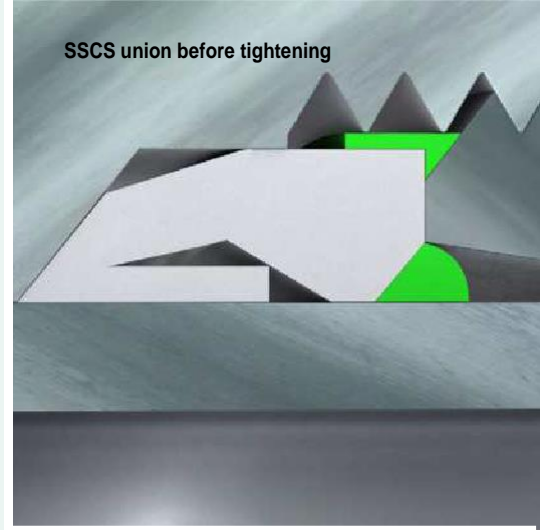
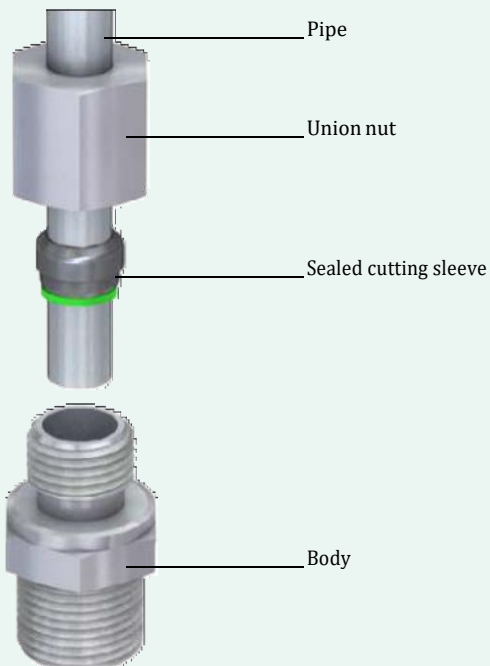
## Double-edged cutting sleeve unions

### Blanking plug for cones BUZ



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

## Soft-seal cutting sleeve union (SSCS)



SSCS union before tightening



SSCS union after tightening

### Description

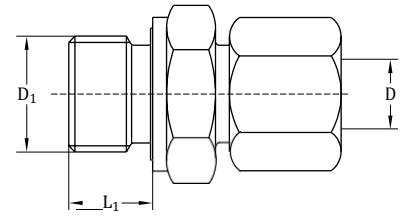
Soft-seal cutting sleeve unions (SSCS) consist of a union nut, a cutting sleeve, a support ring with soft seal, and a body with another soft seal. To mount the union, the union nut and the sealed cutting sleeve have to be put on the pipe end. All parts must be aligned as shown on the illustration above. 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

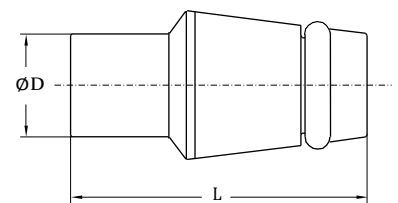
## Soft-seal cutting sleeve union

# Straight screw-in connectors GEZ



Order number	Designation	Series	Tube ØD	ØD <sub>1</sub>	L	L <sub>1</sub>	R <sub>1</sub>	R <sub>2</sub>	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	M 10x1	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-SM 14x1,5-ED CF	S	8	M14x1,5	30	12	19	19	Steel galv	400	5 800	50	0.11

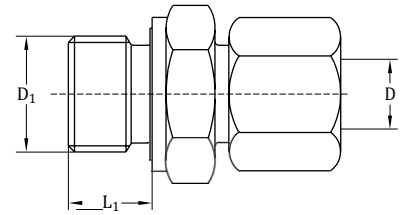
## Cone plugs VKA



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	

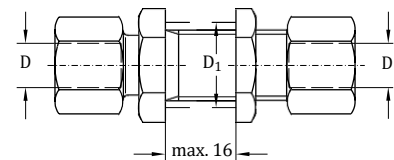
## Soft-seal cutting sleeve union

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



Order number	Designation	Series Tube ØD	ØD <sub>1</sub>	L <sub>1</sub>	1	2	Material	Operating pressure max		Weight	
								bar	psi	g	lb
		mm	mm	mm	mm	mm					
<b>471-006-320</b>	TB FITT ST GE 6Z-LL M10x1,0-ED CF SHORT	LL 6	M10x1	31	14	14	Steel galv	100	1450	27	0.06
<b>471-006-319</b>	TB FITT ST GE 6Z-LL M12x1,0-ED CF SHORT	LL 6	M12x1	31	14	19	Steel galv	100	1450	40	0.09
<b>471-008-132</b>	TB FITT ST GE 8Z-LL M10x1,0-ED CF SHORT	LL 8	M10x1	34	17	14	Steel galv	100	1450	35	0.08
<b>471-008-318</b>	TB FITT ST GE 8Z-LL M12x1,0-ED CF SHORT	LL 8	M12x1	32	17	19	Steel galv	100	1450	70	0.15
<b>471-010-312</b>	TB FITT ST GE10Z-LL M10x1,0-ED CF SHORT	LL 10	M10x1	32	19	17	Steel galv	100	1450	43	0.09
<b>471-010-318</b>	TB FITT ST GE10Z-LL M12x1,0-ED CF SHORT	LL 10	M12x1	34	19	19	Steel galv	100	1450	45	0.10
<b>471-012-312</b>	TB FITT ST GE12Z-LL M10x1,0-ED CF SHORT	LL 12	M10x1	36	22	22	Steel galv	100	1450	57	0.13
<b>471-012-313</b>	TB FITT ST GE12Z-LL M12x1,0-ED CF SHORT	LL 12	M12x1	34	22	22	Steel galv	100	1450	51	0.11

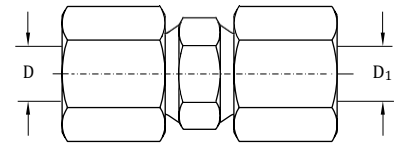
## Straight bulkhead connectors with function nut SVZ



Order number	Designation	Series Tube ØD	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	Material	Operating pressure max		Weight	
										bar	psi	g	lb
		mm	mm	mm	mm	mm	mm	mm					
<b>474-606-331</b>	TB FITT ST SV 6Z-L CF	L 6	12,5	22	42	17	17	14	Steel galv	500	7250	61	0.13
<b>474-608-351</b>	TB FITT ST SV 8Z-L CF	L 8	14,5	23	42	19	19	17	Steel galv	500	7250	83	0.18
<b>474-610-351</b>	TB FITT ST SV10Z-L CF	L 10	16,5	25	43	22	22	19	Steel galv	500	7250	100	0.22
<b>474-612-391</b>	TB FITT ST SV12Z-L CF	L 12	18,5	25	44	24	24	22	Steel galv	400	5800	134	0.30
<b>474-615-431</b>	TB FITT ST SV15Z-L CF	L 15	22,5	27	46	27	30	27	Steel galv	400	5800	224	0.49
<b>474-618-441</b>	TB FITT ST SV18Z-L CF	L 18	26,5	30	49	32	36	32	Steel galv	400	5800	344	0.76

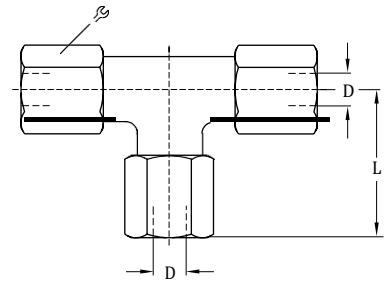
## Soft-seal cutting sleeve union

### Straight connectors (tube to tube) with function nut GZ



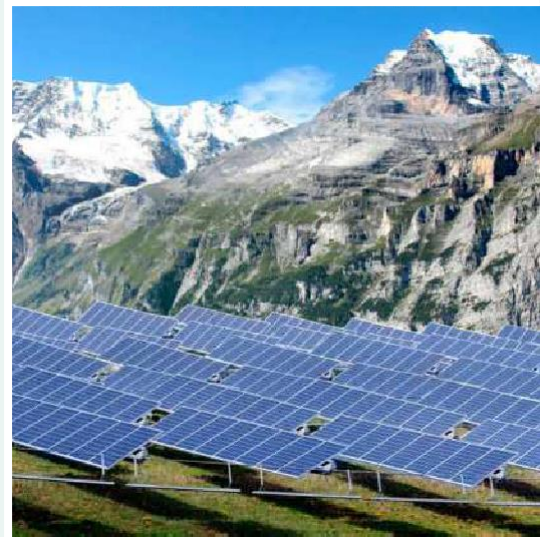
Order number	Designation	Series	Tube	L	⌀	Material	Operating pressure max		Weight	
			∅D				mm	mm	mm	bar
<b>474-506-061</b>	TB FITT ST G 6Z-L CF	L	6	39	14	Steel galvanized	500	7 250	35	0.08
<b>474-508-081</b>	TB FITT ST G 8Z-L CF	L	8	40	17	Steel galvanized	500	7 250	50	0.11
<b>474-510-101</b>	TB FITT ST G10Z-L CF	L	10	42	19	Steel galvanized	500	7 250	64	0.14
<b>474-512-121</b>	TB FITT ST G12Z-L CF	L	12	43	22	Steel galvanized	400	5 800	87	0.19
<b>474-515-151</b>	TB FITT ST G15Z-L CF	L	15	46	27	Steel galvanized	400	5 800	144	0.32
<b>474-518-181</b>	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	L	⌀	Material	Operating pressure max		Weight	
			∅D				mm	mm	mm	bar
<b>476-006-001</b>	TB FITT ST T 6Z-L CF	L	6	27	14	Steel galvanized	500	7 250	70	0.15
<b>476-008-001</b>	TB FITT ST T 8Z-L CF	L	8	29	17	Steel galvanized	500	7 250	90	0.20
<b>476-010-001</b>	TB FITT ST T10Z-L CF	L	10	30	19	Steel galvanized	500	7 250	114	0.25
<b>476-012-001</b>	TB FITT ST T12Z-L CF	L	12	32	22	Steel galvanized	400	5 800	153	0.34
<b>476-015-001</b>	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



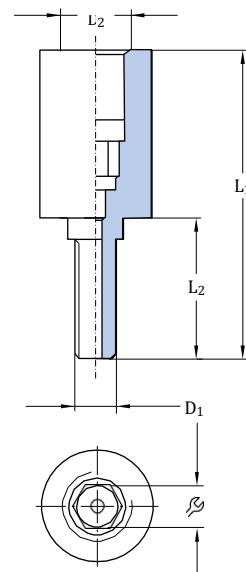
Adapters, plugs and washers

## Applications

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

## Adapter fittings

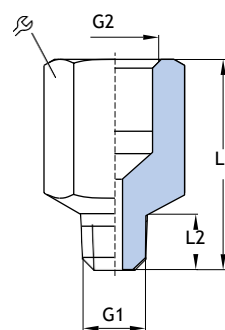
Reducing connectors with cylindrical thread  
for operating pressures up to 45 bar  
(sealed by flat washer acc. to DIN 7603)



Order number	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	♀	Material	Weight	
								g	lb
		mm	mm	mm	mm	mm			
<b>843-130-021</b>	ADAPTER ST M 3Ax M 5I CF	M3	M5	22	10	3 1)	Steel, galvanized surface	4	0.01
<b>843-130-022</b>	ADAPTER ST M 4Ax M 5I CF	M4	M5	22	10	3 1)	Steel, galvanized surface	5	0.01
<b>843-130-023</b>	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

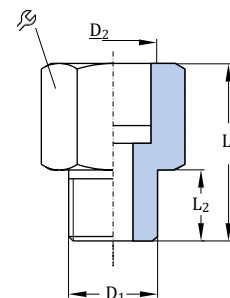


Order number	Designation	G <sub>1</sub>	G <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	♀	Material	Weight	
								mm	in
<b>406-044-S1</b>	ADAPTER ST M10x1AKx R1/4I CF	M10×1 tap	R 1/4	22,5	8	17	Steel, galvanized surface	20	0.04



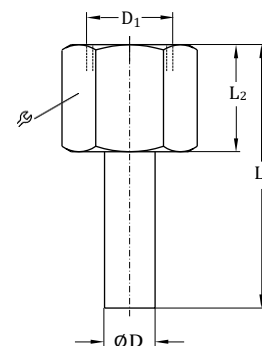
## Adapter fittings

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



Order number	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	ϕ	Material	Weight	
								in	mm
Steel, galvanized surface									
<b>401-013-161</b>	ADAPTER ST G1/4Ax G1/2 CF	G 1/4 A	G 1/2	40	12	27	Steel, galvanized	114	0.25
<b>401-011-132</b>	ADAPTER ST G1/2Ax G1 CF	G 1/2 A	G 1	49	14	41	Steel, galvanized	222	0.49
<b>401-013-171</b>	ADAPTER ST G1/4Ax G1/2 CF	G 3/4 A	G 1/2	41	16	32	Steel, galvanized	140	0.31
<b>P-78 01</b>	ADAPTER ST M12x1Ax G1/4 CF	M12x1	G 1/4	27	8,5	19	Steel, galvanized	31	0.07
<b>401-016-371</b>	ADAPTER ST M16x1,5Ax G1/4 CF	M16x1.5	G 1/4	30	12	19	Steel, galvanized	39	0.09
<b>243-001 10</b>	ADAPTER ST M16x1,5Ax G1/2 CF	M16x1.5	G 1/2	31	9	27	Steel, galvanized	60	0.13
<b>267-001 36</b>	ADAPTER ST M18x1,5Ax G3/8 CF	M18x1.5	G 3/8	32	10	22	Steel, galvanized	50	0.11
<b>243-001 20</b>	ADAPTER ST M18x1,5Ax G1/2 CF	M18x1.5	G 1/2	32	10	27	Steel, galvanized	59	0.13
<b>44-1755-2029</b>	ADAPTER ST M20x1,5Ax G1/4 CF	M20x1.5	G 1/4	28	12	24	Steel, galvanized	59	0.13
Brass									
<b>267-001 47</b>	ADAPTER MS G3/8Ax G3/4	G 3/8 A	G 1/4	31	10	22	Brass	60	0.13
<b>267-001 60</b>	ADAPTER MS G3/8Ax G1/2	G 3/8 A	G 1/2	34	10	27	Brass	78	0.17
<b>401-019-132</b>	ADAPTER MS G1/2Ax G1/8	G 1/2 A	G 1/8	24	12	27	Brass	22	0.05
<b>DZ333</b>	ADAPTER MS G1/2Ax G1/4	G 1/2 A	G 1/4	24	12	27	Brass	64	0.14
<b>401-013-131</b>	ADAPTER MS G1/2Ax G1/2	G 1/2 A	G 1/2	40,5	12	27	Brass	107	0.24
<b>DZ334</b>	ADAPTER MS G1/2Ax G3/8	G 1/2 A	G 3/8	31	12	27	Brass	83	0.18
<b>267-001 03</b>	ADAPTER MS G1/2Ax G3/4	G 1/2 A	G 3/4	40	12	36	Brass	166	0.37
<b>406-024</b>	ADAPTER MS M10x1Ax G1/8	M10x1	G 1/8	20	8	14	Brass	15	0.03
<b>401-016-312</b>	ADAPTER MS M10x1Ax G1/4	M10x1	G 1/4	26,5	7,5	17	Brass	25	0.06
<b>401-019-352</b>	ADAPTER MS M14x1,5Ax G1/8	M14x1.5	G 1/8	20	9	17	Brass	24	0.05

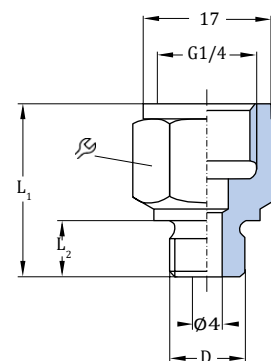
Adapter for pressure gauges for operating pressures up to 45 bar (sealed by flat washer acc. to DIN 7603)



Order number	Designation	Series	Tube ØD	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	ϕ	Material	Operating pressure max		Weight	
									bar	psi	g	lb
<b>248-610 01</b>	ADAPTER MS D 6AxG 1/4	L	6	G 1/4	46	22	17	Brass	45	650	30	0.07

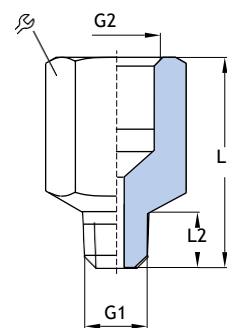
## Adapter fittings

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



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

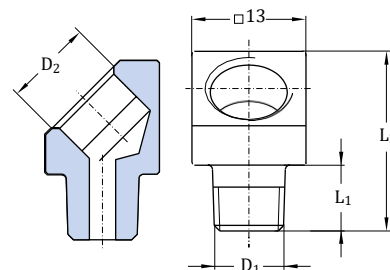
## Reducing connectors with tapered thread for operating pressures up to 350 bar



Order number	Designation	G <sub>1</sub>	G <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	☞	Material	Weight	
								mm	mm
<b>304-19230-1</b>	ADAPTER R1/8 AxM10x1,0 I CF	R1/8	M10×1	18	6	13	Steel, galvanized	20	0.04
<b>304-19787-1</b>	ADAPTER M 8X1,0 IXM 6X1,0KA CF	M 6×1K	M 8×1	20	6	10	Steel, galvanized	6	0.01
<b>304-19437-1</b>	ADAPTER M 8x1,0KAxM 8x1,0 I CF	M 8×1K	M 8×1	16	5	10	Steel, galvanized	5	0.01
<b>304-19548-1</b>	ADAPTER M 8x1,25KAxM 8x1,0 I CF	M 8×1,25K	M 8×1	20	8	12	Steel, galvanized	10	0.02
<b>304-19167-1</b>	ADAPTER M 8x1,0 AxR1/8 I CF	M 8×1	R1/8	17	5	13	Steel, galvanized	10	0.02
<b>304-19509-1</b>	ADAPTER M10x1,0KAxM10x1,0 I CF	M10×1K	M10×1	18	6,5	13	Steel, galvanized	9	0.02
<b>304-16337-1</b>	ADAPTER M10x1 IxM12x1KA CF	M12×1K	M10×1	18	8	17	Steel, galvanized	15	0.03

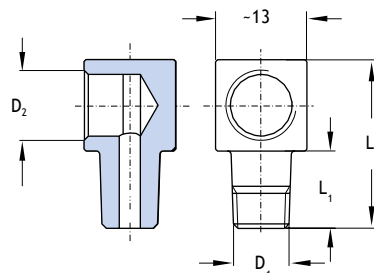
## Adapter fittings

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



Order number	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	Material	Weight	
				mm	mm		g	lb
<b>432-70673-1</b>	ELBOW FITT ST 45DEGREE R1/8A xG1/8 CF	R 1/8	G 1/8	6	20	Steel, galvanized	10	0.02
<b>406-155K</b>	ELBOW FITT ST 45DEGREE R1/8AxM10x11 CF	R 1/8	M10×1	7,5	20,5	Steel, galvanized	13	0.03
<b>406-165K</b>	ELBOW FITT ST 45DEGREE R1/8AxG1/8 CF	R 1/8	G 1/8	7,5	20,5	Steel, galvanized	13	0.03
<b>432-24050-1</b>	ELBOW FITT ST 45DEGREE M8x1AKxM8x11 CF	M8x1 tap	M8x1	5	20	Steel, galvanized	11	0.02
<b>432-71483-1</b>	ELBOW FITT ST 45DEGREE M8x1AKxM10x11 CF	M8x1 tap	M10x1	5	20	Steel, galvanized	11	0.02
<b>406-145K</b>	ELBOW FITT ST 45DEGREE M8x1AKxM10x11 CF	M8×1 tap	M10×1	7,5	21	Steel, galvanized	11	0.02
<b>406-045K</b>	ELBOW FITT ST 45DEGREE M10x1AKxM10x11 CF	M10×1 tap	M10×1	7,5	21	Steel, galvanized	12	0.03
<b>432-24051-1</b>	ELBOW FITT ST 45DEGREE M10x1AKxM8x11 CF	M10x1 tap	M8x1	5	20	Steel, galvanized	12	0.03

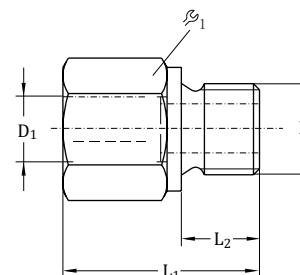
### Elbow reducing connectors 90° with tapered thread for operating pressures up to 350 bar



Order number	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	Material	Weight	
				mm	mm		g	lb
<b>432-70674-1</b>	ELBOW FITT ST 90DEGREE G1/8xR1/8A CF	R 1/8	G 1/8	9	22 5	Steel, galvanized	16	0.04
<b>406-091K</b>	ELBOW FITT ST 90DEGREE R1/8AxG1/8 CF	R 1/8	G 1/8	11	24	Steel, galvanized	20	0.04
<b>406-093K</b>	ELBOW FITT ST 90DEGREE R1/8AxM10x11 CF	R 1/8	M10×1	11	24	Steel, galvanized	16	0.04
<b>406-094K</b>	ELBOW FITT ST 90DE M8x1,25AKxM8x1,25I CF	M8×1 25 tap	M8×1 25	11	24	Steel, galvanized	11	0.02
<b>406-089K</b>	ELBOW FITT ST 90DEGREE M8x1AKxM10x11 CF	M8×1 tap	M10×1	11	24	Steel, galvanized	15	0.03
<b>406-090K</b>	ELBOW FITT ST 90DEGREE M10x1AKxM10x11 CF	M10×1 tap	M10×1	11	24	Steel, galvanized	16	0.04
<b>406-092K</b>	ELBOW FITT ST 90DEGREE M10x1AKxM10x11 CF	M10×1 tap	M10×1	17	30	Steel, galvanized	20	0.04
<b>432-24043-1</b>	ELBOW FITT ST 90DEGREE M8x1AKxM8x11 CF	M8x1 tap	M8x1	5	20	Steel, galvanized	12	0.03
<b>432-24052-1</b>	ELBOW FITT ST 90DEGREE M10x1AKxM8x11 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

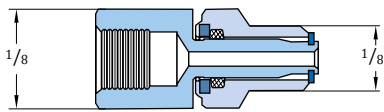


Order number	Designation	Tube ØD	ØD <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	⌀	Material	Operating pressure max		Weight	
								bar	psi	g	lb
Steel galvanized											
222-12578-5	BUSHING ST RI G 1/8AxG 1/4 CF	G 1/8A	G 1/4	31	8	19	Steel galvanized	400	5 800	42	0.09
222-12521-5	BUSHING ST RI G 1/4AxG 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

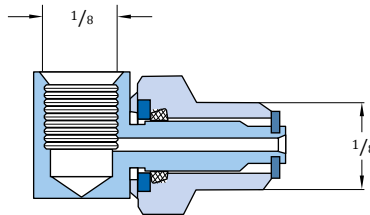
## Adapter fittings

# Banjo fittings, rotatable

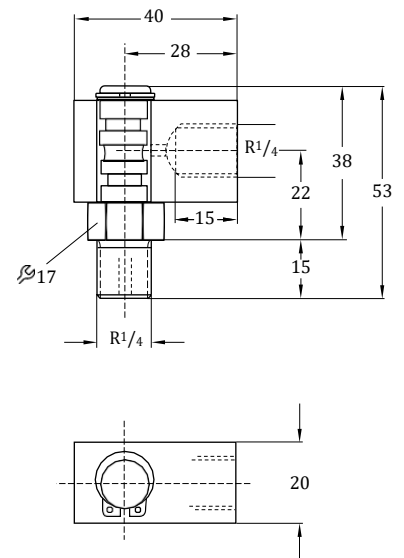
91308



223-12567-1

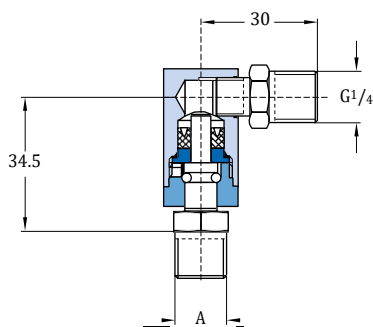


626-25702-1

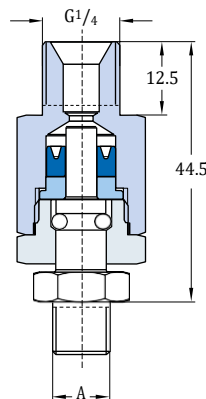


Order number	Designation	Tube $\varnothing$		Speed max	Operation pressure max		Material	Weight	
		$\varnothing D_1$	$\varnothing D_2$		bar	psi		g	lb
091308	Straight swivel 1/8 NPT	-	1/8 NPT	1	50	725	Steel galvanized	20	0.04
223-12567-1	Swivel 90° 1/8 NPT	-	1/8 NPT	1	50	725	Steel galvanized	40	0.08
626-25702-1	Swivel R1/4XR1/4 MS	-	R1/4 male	1	200	2 900	Brass	102	0.22

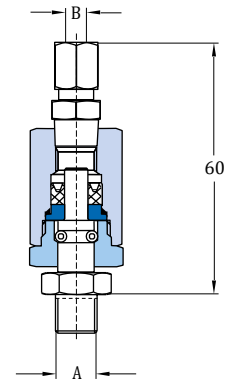
626-2



626-25720-2



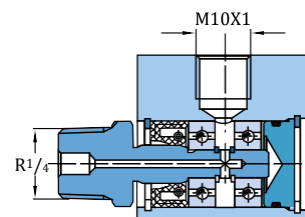
626-26696-2



Order number	Designation	Tube $\varnothing$		Speed max	Operation pressure max		Material	Weight	
		$\varnothing D_1$	$\varnothing D_2$		bar	psi		g	lb
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

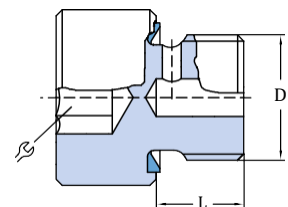
# Banjo fittings, rotatable



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

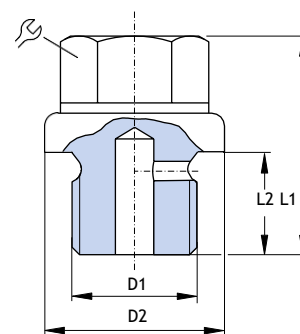
## Plugs

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



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

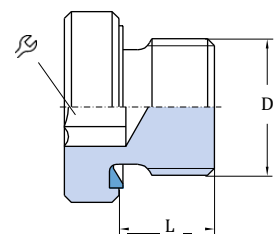
### Vent plugs sealed by flat washer acc. to DIN 7603



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

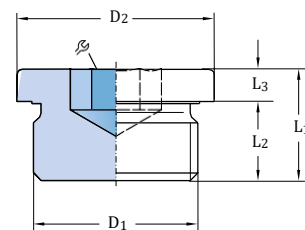
## Plugs

## Screw plugs VSTI



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

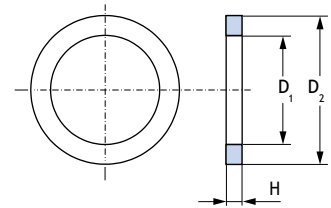


Order number	Designation	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Material	Weight		
								g	lb	
<b>DIN910-R1-8-5 8</b>	PLUG,CLOSURE-HEX 5 8 G 1/8A ZN	G 1/8 A	14	17	8	3	11	Steel, galvanized	11	0.02
<b>DIN910-R1-4x8-5 8</b>	PLUG,CLOSURE-HEX 5 8 G 1/4A ZN	G 1/4 A	18	17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



## Washers

### Flat washers



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

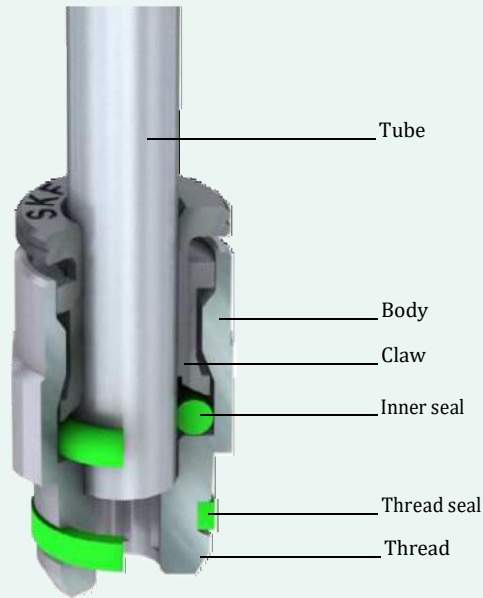


## Applications

- 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

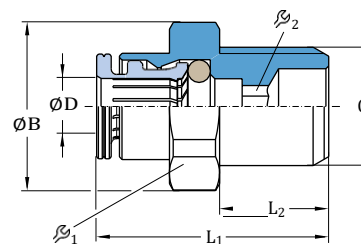
SKF single-seal quick connectors have one O-ring. They are suitable for grease lubrication systems with system pressures up to 350 bar.

## 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

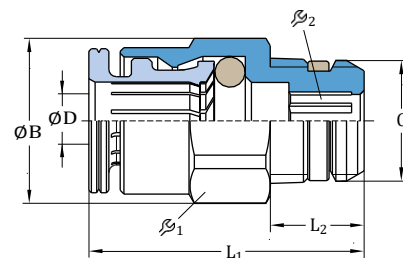
## Single-seal quick connectors

### Straight screw-in connectors



Order number	Designation	Tube		ØB	L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Seal	Material	Operating pressure max		Weight (100 pcs)	
		ØD	G								bar	psi	g	lb
<b>226-14139-1</b>	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

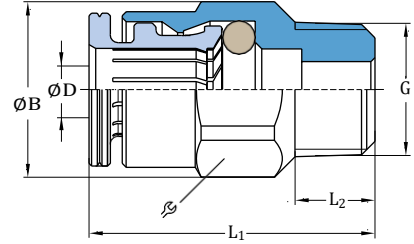
### Straight screw-in connectors with FKM threaded seal



Order number	Designation	Tube		ØB	L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Seal	Material	Operating pressure max		Weight (100 pcs)	
		ØD	G								bar	psi	g	lb
<b>226-14111-1</b>	PUSH-IN FITT GEKMS 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
<b>226-10205-5</b>	PUSH-IN FITT GEZMS 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

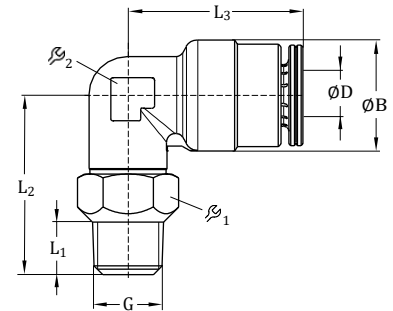
## Single-seal quick connectors

## Adapters with tapered thread



Order number	Designation	Tube ØD	G	ØB	L <sub>1</sub>	L <sub>2</sub>	⌀	Seal	Material	Operating pressure max		Weight (100 pcs)	
										bar	psi	g	lb
<b>226-14111-4</b>	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
<b>226-14111-2</b>	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
<b>226-14111-3</b>	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
<b>226-10622-8</b>	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

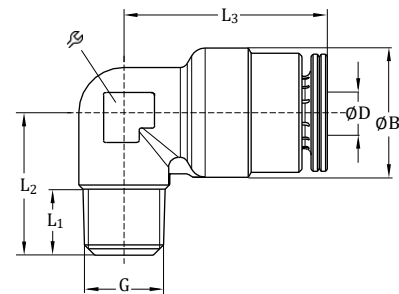
## Banjo fittings with tapered thread



Order number	Designation	Tube ØD	G	ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	⌀ <sub>1</sub>	⌀ <sub>2</sub>	Seal	Material	Operating pressure max		Weight (100 pcs)	
												bar	psi	g	lb
<b>226-14157-3</b>	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
<b>226-14157-1</b>	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
<b>226-14157-2</b>	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
<b>226-13756-9</b>	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

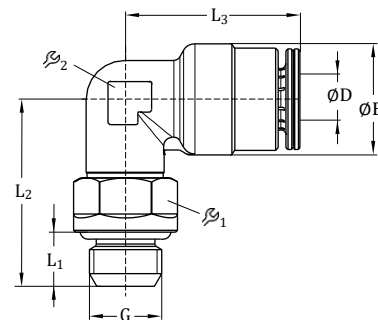
### Elbows with tapered thread



Order number	Designation	Tube G ØD	ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	⌀	Seal Material	Operating pressure max		Weight (100 pcs) max		
									bar	psi	g	lb	
<b>226-14123-4</b>	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
<b>226-14123-2</b>	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
<b>226-14123-3</b>	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
<b>226-14123-5</b>	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
<b>226-13753-9</b>	<sup>1)</sup> 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

<sup>1)</sup> with threaded seal

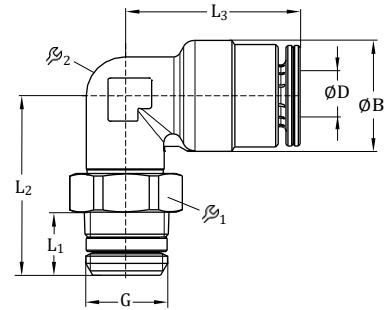
### Banjo fittings with O-ring threaded seal



Order number	Designation	Tube G ØD	ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	⌀ <sub>1</sub>	⌀ <sub>2</sub>	Seal Material	Operating pressure max		Weight (100 pcs)		
										bar	psi	g	lb	
<b>226-11313-8</b>	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
<b>226-11313-9</b>	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
<b>226-11315-1</b>	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
<b>226-11315-2</b>	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

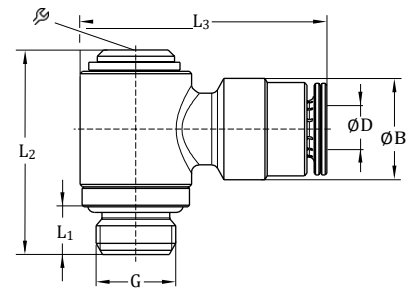
Single-seal quick connectors

Banjo fittings with FKM threaded seal



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

Banjo fittings with hexagon socket and O-ring threaded seal

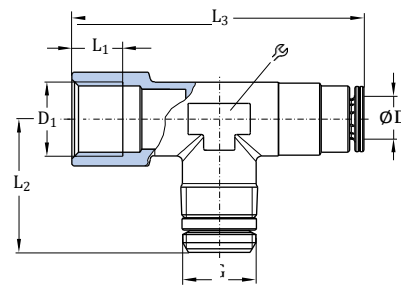


Order number	Designation	Tube		ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	ϕ	Seal	Material	Operating pressure		Weight (100 pcs) max	
		ØD	G								bar	psi	g	lb
		mm	mm	mm	mm	mm	mm	mm			bar	psi	g	lb
<b>226-10223-2</b>	PUSH-IN FITT WEDZM 6-1/8	6	G 1/8B	12,7	6	25,7	24,1	5	NBR	Brass, nickel-plated	350	5 080	2 700	5.95
<b>226-10223-4</b>	PUSH-IN FITT WEDZM 6-M 8×1	6	M 8×1	12,7	6	26	24	5	NBR	Brass, nickel-plated	350	5 080	2 500	5.51
<b>226-10223-6</b>	PUSH-IN FITT WEDZM 6-M10×1	6	M10×1	12,7	6	25,7	24,1	5	NBR	Brass, nickel-plated	350	5 080	2 600	5.73

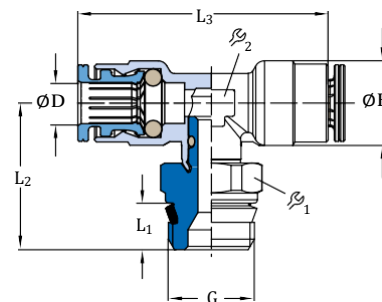


## Single-seal quick connectors

### Screw-in T-connectors



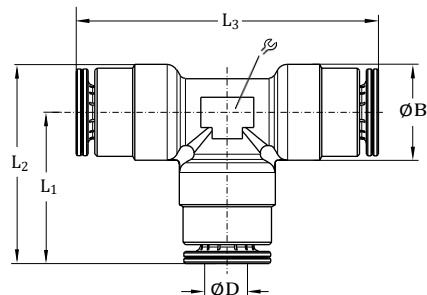
Order number	Designation	Tube		D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	⌀	Seal	Material	Operating pressure max		Weight	
		ØD	G								bar	psi	g	lb
<b>226-14097-5</b>	PUSH-IN FITT TSM S 6-1/4 6	6	G 1/4	G 1/4	9	23,5	51,5	14	NBR	Brass, nickel-plated	350	5 080	50	0.11



Order number	Designation	Tube		ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	⌀ <sub>1</sub>	⌀ <sub>2</sub>	Seal Material	Operating pressure max		Weight		
		ØD	G								bar	psi	g	lb	
<b>226-10159-1</b>	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
<b>226-10159-9</b>	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

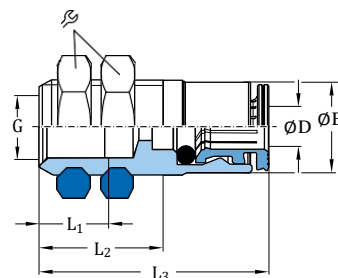
## Single-seal quick connectors

### T-connectors



Order number	Designation	Tube $\varnothing D$	$\varnothing B$	$L_1$	$L_2$	$L_3$		Seal	Material	Operating pressure max		Weight	
										bar	psi	g	lb
<b>226-14097-4</b>	PUSH-IN FITT TSM 6	6	12,7	20	26	40	6	NBR	Brass, nickel-plated	350	5 080	20	0.04

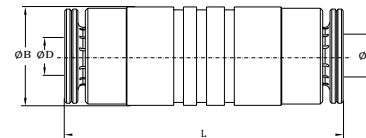
### Straight bulkhead connectors



Order number	Designation	Tube $\varnothing D$	G	$\varnothing B$	$L_1$	$L_2$	$L_3$		Seal	Material	Operating pressure max		Weight	
											bar	psi	g	lb
<b>226-10214-4</b>	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
<b>226-10214-7</b>	PUSH-IN FITT SVM 6-M 8×1	6	M 8×1	12,5	9	17	31,5	17	NBR	Brass, nickel-plated	350	5 080	27	0.06

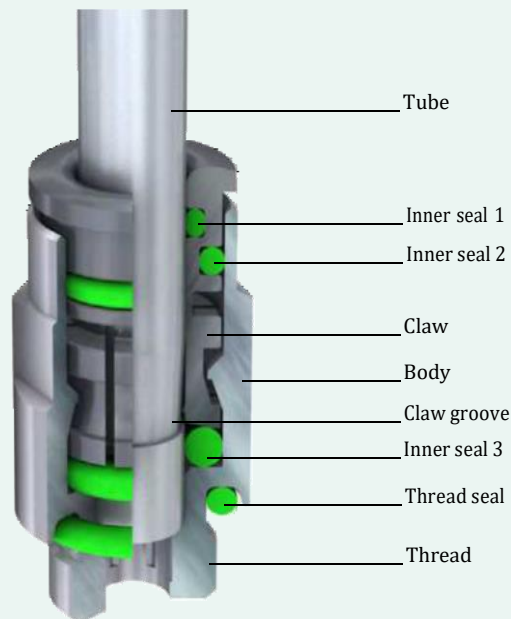
## Single-seal quick connectors

### Tube-to-tube connector

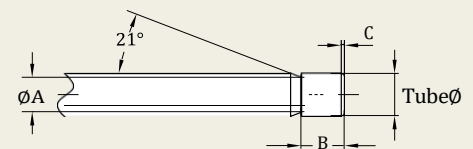


Order number	Designation	Tube $\varnothing D$	$\varnothing B$	L	Seal	Material	Operating pressure max		Weight	
							bar	psi	g	lb
<b>226-13773-4</b>	CONNECTOR GSM 6	6	12	34	NBR	Brass, nickel-plated	350	5 080	18	0.04

## 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 $\phi$	A +0,3	B $\pm 0,2$	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

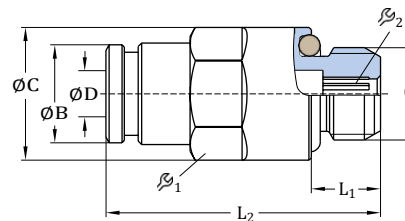
Tool for the production of pipe ends (cutting and groove-forming) available in the chapter on tools

### Features and benefits

- Suitable for oil and fluid grease
- Better sealing by three O-rings (leakage-free)
- Max. operating pressure 300 bar
- For tube  $\phi 4, 6$  and  $8$  mm
- Marking of the collet: plain
- Surface: collet nickel-plated C4
- Insertion depth for plastic and steel tubing
  - $\phi 4$  mm: 19 mm
  - $\phi 6$  mm: 22 mm
  - $\phi 8$  mm: 24 mm
- Reduction of bending forces
- Sealing for the pipe, expansion ring for collet chuck
- Sealing thread O-ring

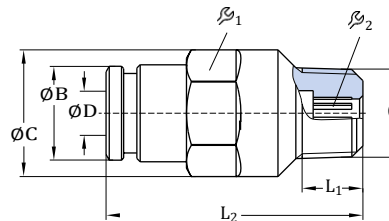
## Triple-seal quick connectors

# Straight screw-in connectors with cylindrical thread



Order number	Designation	Tube G ØD	ØB	ØC	L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	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

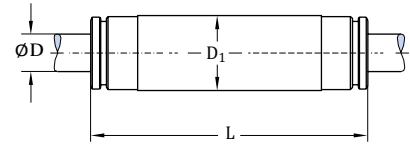
# Straight screw-in connectors with tapered thread



Order number	Designation	Tube G ØD	ØB	ØC	L <sub>1</sub>	L <sub>2</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	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

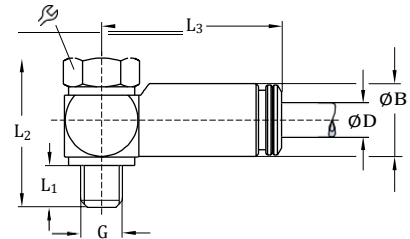
## Triple-seal quick connectors

## Tube-to-tube connectors



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

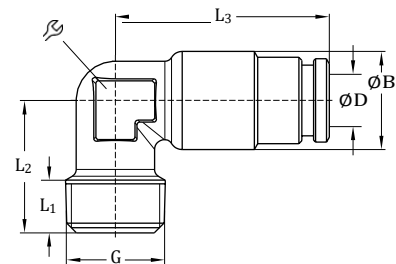
## Banjo fittings with banjo bolt and cylindrical thread



Order number	Designation	Tube G ØD	ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Seal	Material	Operating pressure max		Weight (100 pcs)			
									bar	psi	g	lb		
<b>504-161-VS</b>	BANJO FITTING SWVZ-4-M6 NBR	4	M6	8,8	5	19,5	22,3	9	NBR	Brass	300	4 350	1 300	2.87
<b>504-401-S1-VS</b>	BANJO FITTING SWVZ-4-M5 NBR	4	M5	8,8	5	18	21,8	8	NBR	Brass	300	4 350	1 100	2.43
<b>504-411-VS</b>	BANJO FITTING SWVZ-4-M8 NBR	4	M8	8,8	7	20	23,8	12	NBR	Brass	300	4 350	1 700	3.75
<b>504-401-VS</b>	BANJO FITTING SWVZ-4-M8x1 NBR	4	M8x1	8,8	7	20	23,8	12	NBR	Brass	300	4 350	1 800	3.97
<b>504-103-VS</b>	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
<b>445-519-041-VS</b>	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

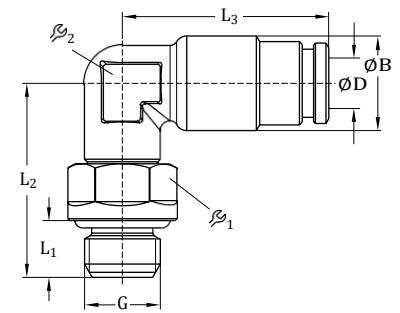
### Elbows with tapered thread



Order number	Designation	Tube G ØD	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	⌀	Seal	Material	Operating pressure max		Weight (100 pcs)	
										bar	psi	g	lb
<b>453-004-471-VS</b>	PUSH-IN FITT WEK 4-M6K NBR	4	M6 tap	10	6	14	21,89	NBR	Brass	300	4350	1 100	2.43
<b>453-004-471-S8-VS</b>	PUSH-IN FITT WEK 4-M6K FPM	4	M6 tap	10	6	14	21,89	FPM	Brass	300	4350	1 200	2.65
<b>504-201-VS</b>	PUSH-IN FITT WEK 4-M8x1K NBR	4	M8×1 tap	10	6	13,5	21,89	NBR	Brass	300	4350	1 100	2.43
<b>504-201-S8-VS</b>	PUSH-IN FITT WEK 4-M8x1K FPM	4	M8×1 tap	10	6	13,5	21,89	FPM	Brass	300	4350	1 200	2.65
<b>504-202-VS</b>	PUSH-IN FITT WEK 4-M10x1K NBR	4	M10×1 tap	10	6	13,5	21,89	NBR	Brass	300	4350	1 100	2.43
<b>504-202-S8-VS</b>	PUSH-IN FITT WEK 4-M10x1K FPM	4	M10×1 tap	10	6	13,5	21,89	FPM	Brass	300	4350	1 300	2.87
<b>514-018-VS</b>	PUSH-IN FITT WEK 4-R1/8K NBR	4	R 1/8	10	7,5	15	21,89	NBR	Brass	300	4350	1 200	2.65
<b>514-018-S8-VS</b>	PUSH-IN FITT WEK 4-R1/8K FPM	4	R 1/8	10	7,5	15	21,89	FPM	Brass	300	4350	1 300	2.87
<b>504-200K-V1-VS</b>	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	4350	1 200	2.65
<b>514-018K-V1-VS</b>	PUSH-IN FITT WEK 4-1/8NPT NBR	4	1/8NPT	10	7	15	21,89	NBR	Brass	300	4350	1 300	2.87
<b>453-006-468-VS</b>	PUSH-IN FITT WEK 6-M6K NBR	6	M6 tap	12,5	6	15	26 10	NBR	Brass	300	4350	2 000	4.41
<b>453-006-468-S8-VS</b>	PUSH-IN FITT WEK 6-M6K FPM	6	M6 tap	12,5	6	15	26 10	FPM	Brass	300	4350	1 800	3.97
<b>506-508-VS</b>	PUSH-IN FITT WEK 6-M8x1K NBR	6	M8×1 tap	12,5	6,5	14	26 10	NBR	Brass	300	4350	1 600	3.53
<b>506-508-S8-VS</b>	PUSH-IN FITT WEK 6-M8x1K FPM	6	M8×1 tap	12,5	6,5	14	26 10	FPM	Brass	300	4350	1 800	3.97
<b>506-510-VS</b>	PUSH-IN FITT WEK 6-M10x1K NBR	6	M10×1 tap	12,5	6	14	26 10	NBR	Brass	300	4350	1 600	3.53
<b>506-510-S8-VS</b>	PUSH-IN FITT WEK 6-M10x1K FPM	6	M10×1 tap	12,5	6	14	26 10	FPM	Brass	300	4350	1 700	3.75
<b>506-512-VS</b>	PUSH-IN FITT WEK 6-M12x1K NBR	6	M12×1 tap	12,5	7	15	26 10	NBR	Brass	300	4350	1 800	3.97
<b>506-511-VS</b>	PUSH-IN FITT WEK 6-R1/8K NBR	6	R 1/8	12,5	8,5	16,5	26 10	NBR	Brass	300	4350	1 700	3.75
<b>506-511-S8-VS</b>	PUSH-IN FITT WEK 6-R1/8K FPM	6	R 1/8	12,5	8,5	16,5	26 10	FPM	Brass	300	4350	1 800	3.97
<b>506-511K-V1-VS</b>	PUSH-IN FITT WEK 6-1/8NPT NBR	6	1/8NPT	12,5	8,5	16,5	26 10	NBR	Brass	300	4350	1 900	4.19
<b>455-565-068-VS</b>	PUSH-IN FITT WEK 6-R1/4K NBR	6	R 1/4	12,5	11,5	19,5	26 10	NBR	Brass	300	4350	1 900	4.19

## Triple-seal quick connectors

## Banjo fittings with cylindrical thread

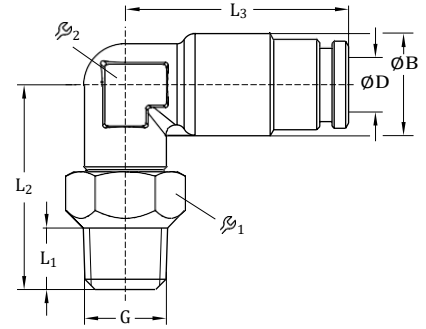


Order number	Designation	Tube G ØD	ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	ϕ <sub>1</sub>	ϕ <sub>2</sub>	Seal	Material	Operating pressure max		Weight (100 pcs) max		
											bar	psi	g	lb	
<b>504-100-VS</b>	PUSH-IN FITT WEDZ 4-M6x1 NBR	4	M6×1	10	4,5	17,5	21,8	9	9	NBR	Brass	300	4 350	1 200	2.65
<b>504-101-VS</b>	PUSH-IN FITT WEDZ 4-M8x1 NBR	4	M8×1	10	6	20,5	21,8	10	9	NBR	Brass	300	4 350	1 500	3.31
<b>504-101-S8-VS</b>	PUSH-IN FITT WEDZ 4-M8x1 FPM	4	M8×1	10	6	20,5	21,8	10	9	FPM	Brass	300	4 350	1 500	3.31
<b>504-102-VS</b>	PUSH-IN FITT WEDZ 4-M10x1 NBR	4	M10×1	10	6	20,5	21,8	12	9	NBR	Brass	300	4 350	2 000	4.41
<b>504-102-S8-VS</b>	PUSH-IN FITT WEDZ 4-M10x1 FPM	4	M10×1	10	6	20,5	21,8	12	9	FPM	Brass	300	4 350	2 000	4.41
<b>504-108-VS</b>	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
<b>504-108-S8-VS</b>	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
<b>506-139-VS</b>	PUSH-IN FITT WEDZ 6-M8x1 NBR	6	M8×1	12,5	6	21	26	10	10	NBR	Brass	300	4 350	1 900	4.19
<b>506-139-S8-VS</b>	PUSH-IN FITT WEDZ 6-M8x1 FPM	6	M8×1	12,5	6	21	26	10	10	FPM	Brass	300	4 350	2 000	4.41
<b>506-140-VS</b>	PUSH-IN FITT WEDZ 6-M10x1 NBR	6	M10×1	12,5	6	21	26	12	10	NBR	Brass	300	4 350	2 200	4.85
<b>506-140-S8-VS</b>	PUSH-IN FITT WEDZ 6-M10x1 FPM	6	M10×1	12,5	6	21	26	12	10	FPM	Brass	300	4 350	2 200	4.85
<b>506-108-VS</b>	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
<b>506-108-S8-VS</b>	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
<b>506-142-VS</b>	PUSH-IN FITT WEDZ 6-M12x1 NBR	6	M12×1	12,5	7	23	26	14	10	NBR	Brass	300	4 350	2 700	5.95
<b>506-142-S8-VS</b>	PUSH-IN FITT WEDZ 6-M12x1 FPM	6	M12×1	12,5	7	23	26	14	10	FPM	Brass	300	4 350	2 700	5.95
<b>506-143-VS</b>	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
<b>508-142-VS</b>	PUSH-IN FITT WEDZ 8-M12x1 NBR	8	M12×1	14,5	7	23	28,8	14	12	NBR	Brass	300	4 350	3 200	7.06
<b>508-142-S8-VS</b>	PUSH-IN FITT WEDZ 8-M12x1 FPM	8	M12×1	14,5	7	23	28,8	14	12	FPM	Brass	300	4 350	3 200	7.06



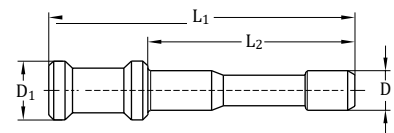
## Triple-seal quick connectors

### Banjo fittings with tapered thread



Order number	Designation	Tube ØD	G	ØB	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Ø <sub>1</sub>	Ø <sub>2</sub>	Seal	Mate- rial	Operating pressure max		Weight (100 pcs)	
												bar	psi	g	lb
<b>455-546-048-VS</b>	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
<b>455-546-048-S8-VS</b>	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
<b>455-529-048-VS</b>	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
<b>455-529-048-S8-VS</b>	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
<b>455-531-048-VS</b>	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
<b>455-531-048-S8-VS</b>	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
<b>455-569-048-VS</b>	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
<b>455-529-068-VS</b>	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
<b>455-529-068-S8-VS</b>	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
<b>455-531-068-VS</b>	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
<b>455-531-068-S8-VS</b>	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
<b>455-546-068-VS</b>	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
<b>455-565-068-VS</b>	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 <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	Material	Operating pressure max		Weight (100 pcs)	
							bar	psi	g	lb
<b>450-204-002</b>	CLOSURE PLUG D4 MS FOR PUSH-IN FITT	4	6	31	21	Brass	300	4 350	300	0.66
<b>450-206-002</b>	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

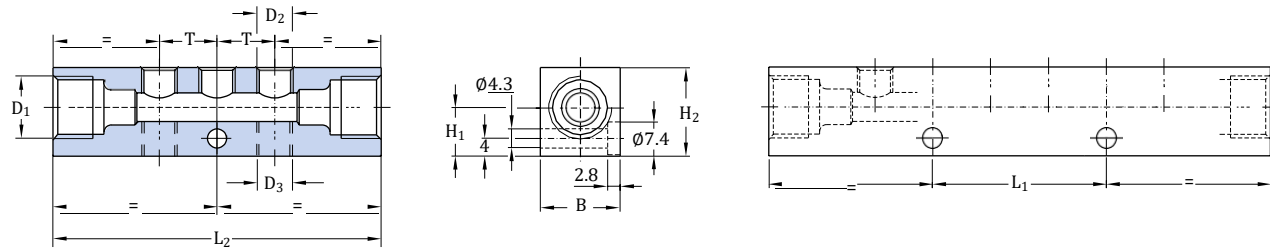
- Wide selection of connection options and variants
- Available in aluminum; galvanized steel available on request
- Easy and quick system extension/reduction

### Applications

- Automotive Industry
- General industry
- Machine tools
- Etc

# Manifolds

## Metering device manifolds



Order number	Designation	Main D <sub>1</sub> tube Ø		D <sub>2</sub> above	D <sub>3</sub> below	L <sub>1</sub>	L <sub>2</sub>	H <sub>1</sub>	H <sub>2</sub>	B	T	Material	Weight		
		mm	mm										mm	mm	mm
<b>VL-01EAM3</b>	MET DEV BAR,AL M10x1 1x M10x1	6	M10×1	1x	M10×1	-	-	41	11	20	18	-	Aluminum alloy	40	0.09
<b>VL-02EAM3</b>	MET DEV BAR,AL M10x1 2x M10x1	6	M10×1	2x	M10×1	-	-	58	11	20	18	17	Aluminum alloy	50	0.11
<b>VL-03EAM3</b>	MET DEV BAR,AL M10x1 3x M10x1	6	M10×1	3x	M10×1	-	-	75	11	20	18	17	Aluminum alloy	60	0.13
<b>VL-04EAM3</b>	MET DEV BAR,AL M10x1 4x M10x1	6	M10×1	4x	M10×1	-	34	92	11	20	18	17	Aluminum alloy	78	0.17
<b>VL-05EAM3</b>	MET DEV BAR,AL M10x1 5x M10x1	6	M10×1	5x	M10×1	-	51	109	11	20	18	17	Aluminum alloy	90	0.20
<b>VL-06EAM3</b>	MET DEV BAR,AL M10x1 6x M10x1	6	M10×1	6x	M10×1	-	68	126	11	20	18	17	Aluminum alloy	100	0.22
<b>VL-08EAM3</b>	MET DEV BAR,AL M10x1 8x M10x1	6	M10×1	8x	M10×1	-	52	160	11	20	18	17	Aluminum alloy	135	0.30
<b>VL-10EAM3</b>	MET DEV BAR,AL M10x1 10x M10x1	6	M10×1	10x	M10×1	-	136	194	11	20	18	17	Aluminum alloy	162	0.36
<b>322-861</b>	MET DEV BAR,AL M10x1 2x1x M10x1	6	M10×1	1x	M10×1	1x	M10×1	41	11	20	18	-	Aluminum alloy	30	0.07
<b>324-861</b>	MET DEV BAR,AL M10x1 2x2x M10x1	6	M10×1	2x	M10×1	2x	M10×1	58	11	20	18	18	Aluminum alloy	50	0.11
<b>326-663</b>	MET DEV BAR,AL M10x1 2x3x M10x1	6	M10×1	3x	M10×1	3x	M10×1	77	11	17	18	18	Aluminum alloy	60	0.13
<b>328-861</b>	MET DEV BAR,AL M10x1 2x4x M10x1	6	M10×1	4x	M10×1	4x	M10×1	92	11	20	18	18	Aluminum alloy	70	0.15
<b>330-861</b>	MET DEV BAR,AL M10x1 2x5x M10x1	6	M10×1	5x	M10×1	5x	M10×1	109	11	20	18	18	Aluminum alloy	80	0.18
<b>332-861</b>	MET DEV BAR,AL M10x1 2x6x M10x1	6	M10×1	6x	M10×1	6x	M10×1	126	11	20	18	18	Aluminum alloy	96	0.21
<b>334-861</b>	MET DEV BAR,AL M10x1 2x7x M10x1	6	M10×1	7x	M10×1	7x	M10×1	143	11	20	18	18	Aluminum alloy	108	0.24
<b>336-861</b>	MET DEV BAR,AL M10x1 2x8x M10x1	6	M10×1	8x	M10×1	8x	M10×1	160	11	20	18	18	Aluminum alloy	128	0.28
<b>338-861</b>	MET DEV BAR,AL M10x1 2x9x M10x1	6	M10×1	9x	M10×1	9x	M10×1	177	11	20	18	18	Aluminum alloy	137	0.30
<b>340-861</b>	MET DEV BAR,AL M10x1 2x10x M10x1	6	M10×1	10x	M10×1	10x	M10×1	194	11	20	18	18	Aluminum alloy	140	0.31
<b>VL-01DAM3</b>	MET DEV BAR,AL M10x1 1x M8x1	6	M10×1	1x	M8×1	-	-	39	10,5	17	13	-	Aluminum alloy	20	0.04
<b>VL-02DAM3</b>	MET DEV BAR,AL M10x1 2x M8x1	6	M10×1	2x	M8×1	-	-	52	10,5	17	13	13	Aluminum alloy	30	0.07
<b>VL-03DAM3</b>	MET DEV BAR,AL M10x1 1x M8x1	6	M10×1	3x	M8×1	-	-	65	10,5	17	13	13	Aluminum alloy	30	0.07
<b>VL-04DAM3</b>	MET DEV BAR,AL M10x1 3x M8x1	6	M10×1	4x	M8×1	-	-	78	10,5	17	13	13	Aluminum alloy	38	0.08
<b>VL-05DAM3</b>	MET DEV BAR,AL M10x1 4x M8x1	6	M10×1	5x	M8×1	-	-	91	10,5	17	13	13	Aluminum alloy	40	0.09
<b>VL-06DAM3</b>	MET DEV BAR,AL M10x1 6x M8x1	6	M10×1	6x	M8×1	-	52	104	11	20	18	13	Aluminum alloy	50	0.11
<b>VL-08DAM3</b>	MET DEV BAR,AL M10x1 8x M8x1	6	M10×1	8x	M8×1	-	52	130	10,5	17	13	13	Aluminum alloy	65	0.14
<b>VL-10DAM3</b>	MET DEV BAR,AL M10x1 10x M8x1	6	M10×1	10x	M8×1	-	78	156	10,5	17	13	13	Aluminum alloy	80	0.18
<b>321-581</b>	MET DEV BAR,AL M14x1,5 1x M8x1	8	M14×1,5	1x	M8×1	-	-	48	-	20	18	-	Aluminum alloy	40	0.09
<b>322-581</b>	MET DEV BAR,AL M14x1,5 2x M8x1	8	M14×1,5	2x	M8×1	-	-	61	11	20	18	13	Aluminum alloy	47	0.10
<b>323-581</b>	MET DEV BAR,AL M14x1,5 3x M8x1	8	M14×1,5	3x	M8×1	-	-	74	11	20	18	13	Aluminum alloy	50	0.11
<b>324-581</b>	MET DEV BAR,AL M14x1,5 4x M8x1	8	M14×1,5	4x	M8×1	-	-	87	11	20	18	13	Aluminum alloy	55	0.12
<b>325-581</b>	MET DEV BAR,AL M14x1,5 5x M8x1	8	M14×1,5	5x	M8×1	-	-	74	11	20	18	13	Aluminum alloy	70	0.15
<b>326-581</b>	MET DEV BAR,AL M14x1,5 6x M8x1	8	M14×1,5	6x	M8×1	-	39	113	11	20	18	13	Aluminum alloy	90	0.20
<b>328-581</b>	MET DEV BAR,AL M14x1,5 8x M8x1	8	M14×1,5	8x	M8×1	-	65	139	11	20	18	13	Aluminum alloy	110	0.24
<b>330-581</b>	MET DEV BAR,AL M14x1,5 10x M8x1	8	M14×1,5	10x	M8×1	-	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)

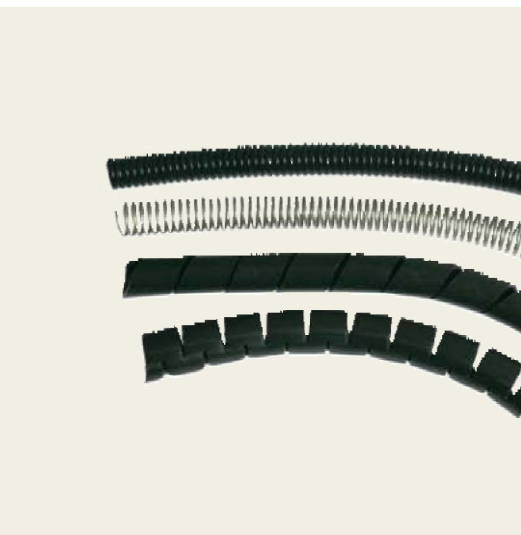
Material for plastic pipes Polyamide: PA12H (natural, semi-rigid), PA12HL (black, semi-rigid), PA12PH (natural, flexible), PA12PHL (black, flexible)

### Features and benefits

- Reliable and long-term lubricant transfer solutions for low-, medium- and high-pressure lubrication systems
- Quick installation as pipes/hoses are prefilled 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)

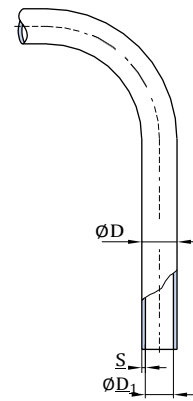
For more information, please see the chapter on tools.

### Tube protections

SKF offers a range of solutions for tube protection including coils, protective helices 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 <sup>1)</sup> R	Burst pressure		Material	Weig t (100m)	
					bar	psi		kg	lb
Plastic tubing semirigid (without plasticizer)									
<b>WVN715-RO2 5X0 5</b>	TUBE,PA12H 2,5x 0,5 NATUR	2,5	0,5	25	840	12 183	PA12H	0,33	0.73
<b>WVN715-RO4X0 85</b>	TUBE,PA12H 4,0x 0,85 NATUR	4	0,85	38	216	3 132	PA12H	0,88	1.94
<b>WVN715RO4X0 85+A89</b>	TUBE,PA12HL 4,0x 0,85 BLACK	4	0,85	38	216	3 132	PA12HL	0,88	1.94
<b>112-35127-7</b>	TUBE,PA12HL 4,0x 1,0 BLACK	4	1	30	267	3 872	PA12HL	0,9	1.98
<b>112-35127-5</b>	TUBE,PA12HL 4,0x 1,0 NATUR	4	1	30	267	3 872	PA12HL	0,9	1.98
<b>WVN715-RO6X1</b>	TUBE,PA12H 6,0x 1,0 NATUR	6	1	63	159	2 306	PA12H	1,61	3.55
<b>WVN715-RO6X1 25</b>	TUBE,PA12H 6,0x 1,25 NATUR	6	1,25	63	210	3 045	PA12H	1,92	4.23
<b>WVN715RO6X1 25+A89</b>	TUBE,PA12HL 6,0x 1,25 BLACK	6	1,25	63	210	3 045	PA12HL	2,16	4.76
<b>112-35127-2</b>	TUBE,PA12HL 6,0x 1,5 BLACK	6	1,5	40	267	3 872	PA12HL	2,29	5.05
<b>WVN715-RO8x1 25</b>	TUBE,PA12H 8,0x 1,25 NATUR	8	1,25	76	147	2 132	PA12H	2,73	6.02
Plastic tubing flexible (containing plasticizer)									
<b>WVN716-RO4X0 85</b>	TUBE,PA12PH 4,0x 0,85 NATUR	4	0,85	38	108	1 566	PA12PH	0,53	1.17
<b>WVN716RO4X0 85+A89</b>	TUBE,PA12PHL 4,0x 0,85 BLACK	4	0,85	38	108	1 566	PA12PHL	0,53	1.17
<b>112-35225-4</b>	TUBE,PA12PHL 4,0x 1,0 BLACK	4	1	27	132	1 914	PA12PHL	0,63	1.39
<b>WVN716-RO6X1 25</b>	TUBE,PA12PH 6,0x 1,25 NATUR	6	1,25	63	105	1 522	PA12PH	2	4.41
<b>WVN716RO6X1 25+A89</b>	TUBE,PA12PHL 6,0x 1,25 BLACK	6	1,25	63	105	1 522	PA12PHL	2	4.41
<b>WVN716-RO8X1 25</b>	TUBE,PA12PH 8,0x 1,25 NATUR	8	1,25	80	75	1 087	PA12PH	2,8	6.17

<sup>1)</sup> without bending device  
<sup>2)</sup> 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

## Tubes and hoses

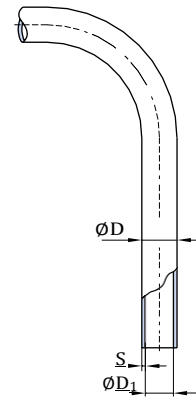
# Tube and hose protections



Order number	Designation	Ø	Material	Weight		
				g	lb	
per linear meter				mm		
<b>Corrugated tube</b>						
<b>982-760-120</b>	TUBE,CORRUGATED PA6 NW8	BLACK	8,4	Polyamide 6, black colour	20	0.04
<b>982-760-130</b>	TUBE,CORRUGATED PA6 NW10	BLACK	10	Polyamide 6, black colour	26	0.06
<b>982-760-160</b>	TUBE,CORRUGATED PA6 NW12	BLACK	12,3	Polyamide 6, black colour	34	0.07
<b>Spring coil</b>						
<b>982-760-122</b>	SPRING COIL DI6,1xD1,2 1 4310		6,1	Stainless steel	64	0.14
<b>982-760-132</b>	SPRING COIL DI10,6xD1,2 1 4310		10,6	Stainless steel	64	0.14
<b>982-760-142</b>	SPRING COIL DI13,5xD1,5 1 4310		12,5	Stainless steel	64	0.14
<b>111-35306-5</b>	SPRING COIL DI17XD1 8 1 4310		17	Stainless steel	290	0.64
<b>Plastic helix</b>						
<b>113-35075-2</b>	PLASTIC HELIX GR 6 BLACK		5-20	Polyethylene, black colour	13	0.03
<b>113-35075-3</b>	PLASTIC HELIX GR 12 BLACK		9-30	Polyethylene, black colour	48	0.11
<b>Spiral hose slotted</b>						
<b>982-760-102</b>	SPIRAL HOSE PP NW8 SLOTTED		6-9	Polypropylene	25	0.06
<b>982-760-172</b>	SPIRAL HOSE PP NW15 SLOTTED		10-16	Polypropylene	100	0.22

Tubes and hoses

Steel tubing

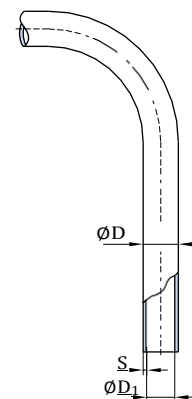


Order number	Designation	ØD	D <sub>1</sub>	Material	Operating pressure max		Weight		
					bar	psi	kg/m	lb/m	
		mm	mm						
<b>982-120-041</b>	TUBE, E235+N D 4,0x 0,7 CF	4	2,6	Steel tubing, galvanized surface (Cr-6 free)	368	5 340	0,063	0.14	
<b>982-120-040</b>	TUBE, E235+N D 4,0x 1,0 CF	4	2	Steel tubing, galvanized surface (Cr-6 free)	500	7 250	0,074	0.16	
<b>982-120-061</b>	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	
<b>105-35251-1</b>	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	
<b>105-35251-3</b>	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	
<b>982-120-100</b>	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	
<b>105-35025-5</b>	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	
<b>105-35134-3</b>	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	
<b>105-35134-9</b>	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	
<b>105-35183-3</b>	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	
<b>982-120-180</b>	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	
<b>105-35134-1</b>	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	
<b>105-35308-1</b>	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	
<b>105-35134-4</b>	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

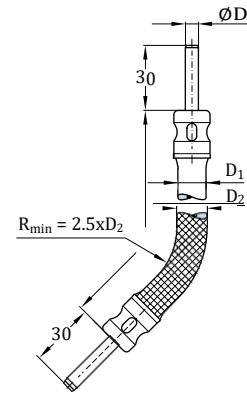
### Stainless steel tubing



Order number	Designation	ØD	D <sub>1</sub>	Material	Operating pressure max		Weight	
					bar	psi	kg/m	lb/m
		mm	mm					
<b>D1127RO2 5x0 5+A46</b>	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
<b>DIN2462-RO4x1+A46</b>	TUBE,NIRO 1 4301 D 4,0x1,0	4	2	Stainless steel (material 1 4301/1 4306)	466	6 760	0,075	0,17
<b>106-35203-4</b>	TUBE,NIRO 1 4571 D 6,0x1,0	6	4	Stainless steel 1 4571	426	6 180	0,125	0,28
<b>106-35203-3</b>	TUBE,NIRO 1 4571 D 8,0x1,0	8	6	Stainless steel 1 4571	368	5 340	0,169	0,37
<b>DIN2462-RO10x1+A46</b>	TUBE,NIRO 1 4301 D 10,0x1,0	10	8	Stainless steel (material 1 4301/1 4306)	231	3 350	0,225	0,5
<b>106-35203-2</b>	TUBE,NIRO 1 4571 D 10,0x1,5	10	7	Stainless steel 1 4571	389	5 640	0,319	0,7
<b>106-35203-1</b>	TUBE,NIRO 1 4571 D 20,0x2,0	20	16	Stainless steel 1 4571	294	4 260	0,901	1,99
<b>106-35292-2</b>	TUBE,NIRO 1 4571 D 22,0x2,0	22	18	Stainless steel 1 4571	267	3 870	1,002	2,21
<b>106-35292-1</b>	TUBE,NIRO 1 4571 D 28,0x2,0	28	24	Stainless steel 1 4571	210	3 050	1,302	2,87
<b>106-35203-7</b>	TUBE,NIRO 1 4571 D 30,0x3,0	30	24	Stainless steel 1 4571	294	4 260	2,028	4,47
<b>106-35231-1</b>	TUBE,NIRO 1 4301 D 6,0x1,0	6	4	Stainless steel 1 4301	400	5 800	0,123	0,27
<b>106-35231-2</b>	TUBE,NIRO 1 4301 D 8,0x1,0	8	6	Stainless steel 1 4301	310	4 500	0,17	0,37
<b>106-35231-3</b>	TUBE,NIRO 1 4301 D 10,0x1,5	10	7	Stainless steel 1 4301	365	5 290	0,315	0,69
<b>106-35231-6</b>	TUBE,NIRO 1 4301 D 20,0x2,0	20	16	Stainless steel 1 4301	253	3 670	0,888	1,96
<b>106-35267-4</b>	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

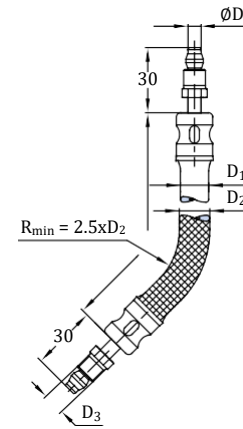


Order number	Designation <sup>1)</sup>	Tube ØD	Length	Rubber ØD <sub>1</sub>	Metal braided D <sub>2</sub>	Max increase in volume at 80 bar	Weight
		mm	mm	mm	mm	cm <sup>3</sup> /m	g <i>lb</i>
Low-pressure hoses with pipe stud Ø4 mm							
<b>714-180</b>	HOSE,CR 45 DN 3x 180,STU 4	4	180	11	–	2,5	39 <i>0.09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

<sup>1)</sup> 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 main lines max. 45 bar with tapered sleeve and socket union on both ends

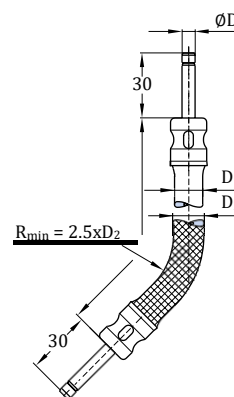


Order number	Designation <sup>1)</sup>	Tube ØD	Length	Rubber ØD <sub>1</sub>	Metal braided D <sub>2</sub>	Thread D <sub>3</sub>	Max increase in volume at 80 bar	Weight	
		mm	mm	mm	mm	mm	cm <sup>3</sup> /m	g	lb
Low-pressure hoses with tapered sleeve socket union									
<b>714-180-K</b>	HOSE,CR 45 DN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

<sup>1)</sup> 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

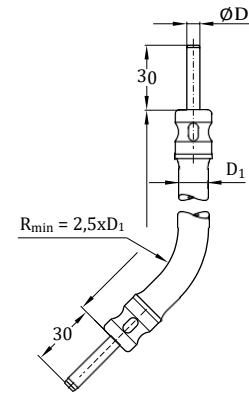


Order number	Designation <sup>1)</sup>	Tube ØD	Length	Rubber ØD <sub>1</sub>	Metal braided D <sub>2</sub>	Max increase in volume at 80 bar	Weight	
		mm	mm	mm	mm	cm <sup>3</sup> /m	g	lb
Low-pressure hoses with pipe stud Ø4 mm with claw groove for quick connectors								
<b>714-180-VS</b>	HOSE,CR 45 DN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

<sup>1)</sup> 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

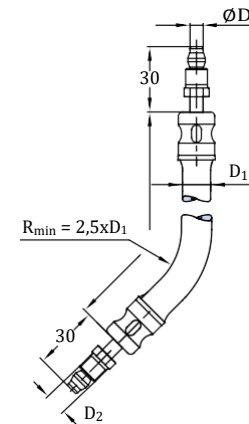
### Low-pressure hoses for secondary lines max. 15 bar with pipe stud on both ends



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

<sup>1)</sup> 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

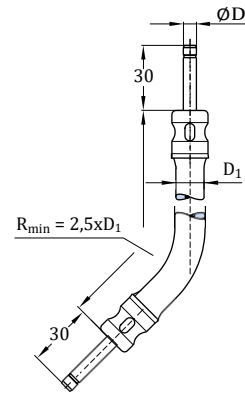


Order number	Designation <sup>1)</sup>	Tube ØD	Length	Rubber ØD <sub>1</sub>	Thread ØD <sub>2</sub>	Weight
		mm	mm	mm	mm	g      lb
<b>734-180-K</b>	HOSE,CR 15 DN 3x 180,M8x1	4	180	8,8	M8x1	36      0,08
<b>734-220-K</b>	HOSE,CR 15 DN 3x 220,M8x1	4	220	8,8	M8x1	41      0,09
<b>734-260-K</b>	HOSE,CR 15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

<sup>1)</sup> 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

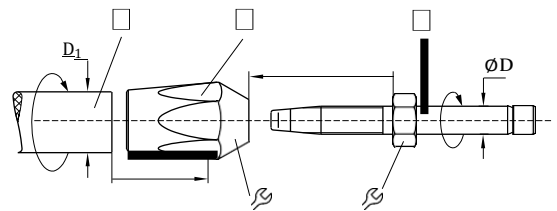
Low-pressure hoses for secondary lines max. 15 bar with pipe stud on both ends and claw groove for quick connectors



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

<sup>1)</sup> 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 $D_1$		Material	Max increase in volume ~ 40 bar	Weight		
		$\text{ØD}$				cm <sup>3</sup> /m	g	lb
		mm	mm	mm				
☐ Hose coupling								
<b>406-704-001</b>	HOSE COUPLING STRAIGHT D4 BEL	-	-	8	Steel, galvanized	1	7	0.01
<b>406-706-001</b>	HOSE COUPLING STRAIGHT D6 BEL	-	-	10	Steel, galvanized	1,4	11	0.02
<b>406-708-001</b>	HOSE COUPLING STRAIGHT D8 BEL	-	-	13	Steel, galvanized	1,4	21	0.04
<b>406-704-001-VS</b>	1) HOSE COUPLING STRAIGHT D4 VS	-	-	8	Steel, galvanized	1	7	0.01
<b>406-706-001-VS</b>	1) HOSE COUPLING STRAIGHT D6 VS	-	-	10	Steel, galvanized	1,4	11	0.02
<b>406-708-001-VS</b>	1) HOSE COUPLING STRAIGHT D8 VS	-	-	13	Steel, galvanized	1,4	21	0.04
☐ Threaded sleeve								
<b>406-804-001</b>	THREADED SLEEVE F HOSE STUD D4	-	-	14	Brass	1	20	0.04
<b>406-806-001</b>	THREADED SLEEVE F HOSE STUD D6	-	-	17	Brass	1,4	31	0.07
<b>406-808-001</b>	THREADED SLEEVE F HOSE STUD D8	-	-	19	Brass	1,4	36	0.08
☐ Hose								
<b>WVN701-4</b>	2) HOSE,CR 45 DN 3	4	11	-	Perbunan, braided rayon	1	117	0.26
<b>WVN701-6</b>	2) HOSE,CR 45 DN 4,5	6	13	-	Perbunan, braided rayon	1,4	153	0.34
<b>WVN701-8</b>	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)

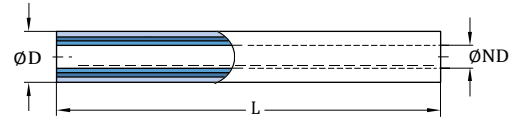
Hose coupling	Coupling type	$\text{ØD}$	Threaded sleeve	High-pressure hose	Operating pressure	
					bar	psi
					mm	
<b>406-704-001</b>	straight	4	<b>406-804-001</b>	<b>WVN701-4</b>	45	653
<b>406-704-001-VS</b>	straight	4	<b>406-804-001</b>	<b>WVN701-4</b>	45	653
<b>406-706-001</b>	straight	6	<b>406-806-001</b>	<b>WVN701-6</b>	45	653
<b>406-706-001-VS</b>	straight	6	<b>406-806-001</b>	<b>WVN701-6</b>	45	653
<b>406-708-001</b>	straight	8	<b>406-808-001</b>	<b>WVN701-8</b>	45	653
<b>406-708-001-VS</b>	straight	8	<b>406-808-001</b>	<b>WVN701-8</b>	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

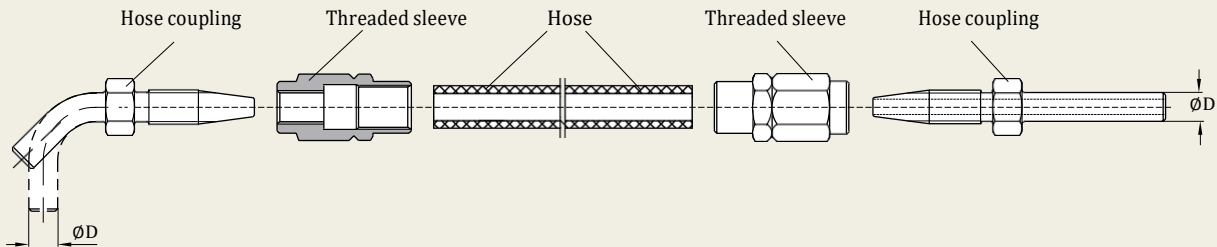
# High-pressure hoses for self-installation



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

<sup>1)</sup> Hoses can be delivered prefilled with lubricant on request  
<sup>2)</sup> 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 <sup>1)</sup>	Coupling type	ØD mm	Threaded sleeve	High-pressure hose	Burst pressure	
					bar	psi
<b>853-380-006-VS</b>	straight	4	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-370-002(-VS)</b>	straight	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-380-002(-VS)</b>	straight	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-390-002(-VS)</b>	straight	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-380-003(-VS)</b>	90°	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-390-003(-VS)</b>	90°	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-380-004(-VS)</b>	45°	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-380-005(-VS)</b>	straight	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-390-005</b>	straight	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>853-380-007-VS</b>	45°	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>456-706-001</b>	straight	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>855-380-002</b>	straight	6	<b>853-540-010</b>	<b>111-35114-1</b>	840	12 183
<b>406-708-005(-VS)</b>	straight	8	<b>406-808-005</b>	<b>982-750-111</b>	840	12 183
<b>406-710-002</b>	straight	10	<b>406-810-002</b>	<b>WVN711-10</b>	520	7 542

<sup>1)</sup> 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!

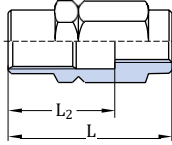
#### Installation notes

- 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

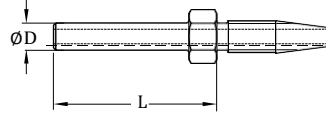


# Threaded joints for high-pressure hoses

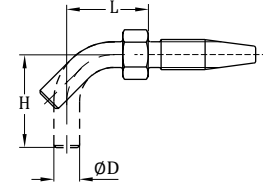
Threaded sleeve



Hose coupling straight



Hose coupling bent



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

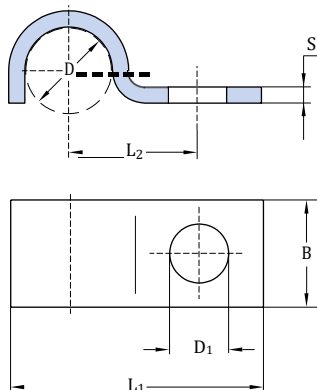
### Applications

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

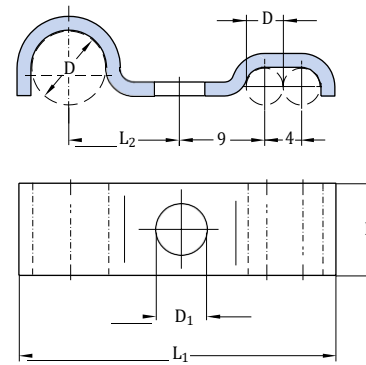
## Fixing material

### Fixing clips

602-001 - 612-001, 226-xxxx-1

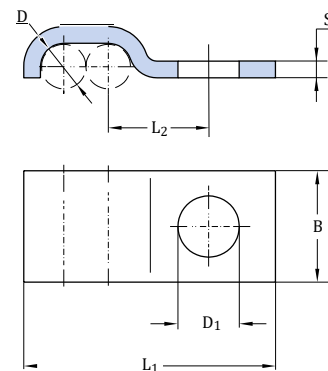


608-003



Fixing material

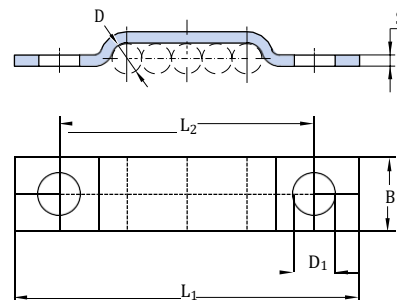
Order number	Designation	Tube ØD	B	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	S	Material	Weight (100 pcs)	
									g	lb
Steel										
<b>602-001</b>	TUBE CLAMP ST-Z D 2,5(1x)	2,5 mm	10	3,5	11,25	5	1,5	Steel	200	0.44
<b>604-001</b>	TUBE CLAMP ST-Z D 4(1x)	4 mm	10	5,5	18,5	9	1,5	Steel	200	0.44
<b>606-010</b>	TUBE CLAMP ST-Z D 6(1x)	6 mm	10	5,5	20,5	10	1,5	Steel	300	0.66
<b>608-001</b>	TUBE CLAMP ST-Z D 8(1x)	8 mm	10	5,5	23,5	12	1,5	Steel	300	0.66
<b>610-001</b>	TUBE CLAMP ST-Z D10(1x)	10 mm or 1/8	10	5,5	25,5	13	1,5	Steel	400	0.88
<b>612-001</b>	TUBE CLAMP ST-Z D12(1x)	12 mm	20	6,8	35	18	2	Steel	500	1.1
<b>608-003</b>	TUBE CLAMP ST-Z D 8(1x)D4(2x)	8/4	10	5,5	34	12	1,5	Steel	100	0.22
Zinc-plated steel										
<b>226-12337-1</b>	TUBE CLAMP ST-Z D 8(1X)ZG	8 mm	15	7	28	15,5	2	Zinc-plated steel	700	1.54
<b>226-12338-1</b>	TUBE CLAMP ST-Z D10(1X)ZG	10 mm	15	7	30	15	2	Zinc-plated steel	800	1.76
Stainless steel										
<b>226-12335-7</b>	TUBE CLAMP 1 4571 D 6 (1X)	6 mm	10	4,8	20,5	10	1	Stainless steel	200	0.44
<b>226-13717-1</b>	TUBE CLAMP 1 4571 D 8(1X)ZG	8 mm	15	7	28	15,5	2	Stainless steel	700	1.54
<b>226-13673-1</b>	TUBE CLAMP 1 4571 D10(1X)ZG	10 mm	15	7	30	15	2	Stainless steel	800	1.76



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

## Fixing material

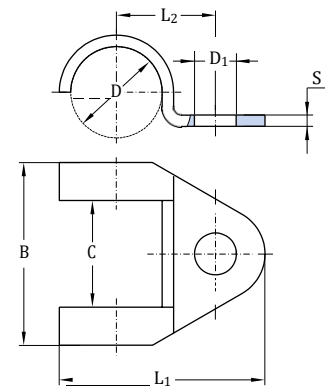
# Fixing clips



Order number	Designation	Tube Number ØD of tubes	B	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	S	Material	Weight (100 pcs)	
									mm	mm
Mild steel										
<b>604-014</b>	TUBE CLAMP ST-Z D 4(4x)	4 4	10	5,5	42	30	1,5	Mild steel	400	0.88
<b>604-015</b>	TUBE CLAMP ST-Z D 4(5x)	4 5	10	5,5	46	34	1,5	Mild steel	400	0.88
<b>604-016</b>	TUBE CLAMP ST-Z D 4(6x)	4 6	10	5,5	50	38	1,5	Mild steel	500	1.1
<b>604-018</b>	TUBE CLAMP ST-Z D 4(8x)	4 8	10	5,5	58	46	1,5	Mild steel	600	1.32
<b>DIN72573-2x6-ST</b>	TUBE CLAMP ST-Z D 6(2x)	6 2	10	4,8	39	27	1	Mild steel	300	0.66
<b>DIN72573-3x6-ST</b>	TUBE CLAMP ST-Z D 6(3x)	6 3	10	4,8	45	33	1	Mild steel	400	0.88
<b>DIN72573-4x6-ST</b>	TUBE CLAMP ST-Z D 6(4x)	6 4	10	4,8	51	39	1	Mild steel	400	0.88
<b>DIN72573-5x6-ST</b>	TUBE CLAMP ST-Z D 6(5x)	6 5	10	4,8	57	45	1	Mild steel	400	0.88
<b>DIN72573-6x6-ST</b>	TUBE CLAMP ST-Z D 6(6x)	6 6	10	4,8	64	52	1	Mild steel	600	1.32
<b>DIN72573-2x8-ST</b>	TUBE CLAMP ST-Z D 8(2x)	8 2	10	4,8	43	31	1	Mild steel	400	0.88
<b>DIN72573-3x8-ST</b>	TUBE CLAMP ST-Z D 8(3x)	8 3	10	4,8	51	39	1	Mild steel	400	0.88
<b>DIN72573-4x8-ST</b>	TUBE CLAMP ST-Z D 8(4x)	8 4	10	4,8	59	47	1	Mild steel	500	1.1
<b>DIN72573-5x8-ST</b>	TUBE CLAMP ST-Z D 8(5x)	8 5	10	4,8	68	56	1	Mild steel	600	1.32
<b>D72573-6X8ST+ZZ1</b>	TUBE CLAMP ST-Z D 8(6x)	8 6	10	4,8	76	64	1	Mild steel	700	1.54
<b>DIN72573-2x10-ST</b>	TUBE CLAMP ST-Z D10(2x)	10 2	10	4,8	45	33	1	Mild steel	400	0.88
<b>DIN72573-3x10-ST</b>	TUBE CLAMP ST-Z D10(3x)	10 3	10	4,8	55	43	1	Mild steel	500	1.1
<b>DIN72573-4x10-ST</b>	TUBE CLAMP ST-Z D10(4x)	10 4	10	4,8	67	55	1	Mild steel	600	1.32
<b>DIN72573-5x10-ST</b>	TUBE CLAMP ST-Z D10(5x)	10 5	10	4,8	77	65	1	Mild steel	800	1.76
Zinc-plated steel										
<b>226-12337-2</b>	TUBE CLAMP ST-Z D 8(2X)	8 2	15	7	61,2	39	2	Zinc-plated steel	1 300	2.87
<b>226-12337-3</b>	TUBE CLAMP ST-Z D 8(3X)	8 3	15	7	69,2	47	2	Zinc-plated steel	1 500	3.31
<b>226-12337-4</b>	TUBE CLAMP ST-Z D 8(4X)	8 4	15	7	77,2	55	2	Zinc-plated steel	1 700	3.75
<b>226-12337-5</b>	TUBE CLAMP ST-Z D 8(5X)	8 5	15	7	85,2	63	2	Zinc-plated steel	1 800	3.97
<b>226-12337-6</b>	TUBE CLAMP ST-Z D 8(6X)	8 6	15	7	93,2	71	2	Zinc-plated steel	2 000	4.41
<b>226-12338-2</b>	TUBE CLAMP ST-Z D10(2X)	10 2	15	7	65,3	40	2	Zinc-plated steel	1 300	2.87
<b>226-12338-3</b>	TUBE CLAMP ST-Z D10(3X)	10 3	15	7	75,3	50	2	Zinc-plated steel	1 600	3.53
<b>226-12338-4</b>	TUBE CLAMP ST-Z D10(4X)	10 4	15	7	85,3	60	2	Zinc-plated steel	1 800	3.97
<b>226-12338-5</b>	TUBE CLAMP ST-Z D10(5X)	10 5	15	7	95,3	70	2	Zinc-plated steel	2 000	4.41
<b>226-12338-6</b>	TUBE CLAMP ST-Z D10(6X)	10 6	15	7	105,3	80	2	Zinc-plated steel	2 200	4.85
Stainless steel										
<b>DIN72573-1x6-NIRO</b>	TUBE CLAMP 1 4571 D 6(1x)	6 1	10	4,8	32	20	1	Stainless steel	300	0.66
<b>DIN72573-2x6-NIRO</b>	TUBE CLAMP 1 4571 D 6(2x)	6 2	10	4,8	38	26	1	Stainless steel	300	0.66
<b>DIN72573-3x6-NIRO</b>	TUBE CLAMP 1 4571 D 6(3x)	6 3	10	4,8	45	33	1	Stainless steel	300	0.66
<b>DIN72573-4x6-NIRO</b>	TUBE CLAMP 1 4571 D 6(4x)	6 4	10	4,8	51	39	1	Stainless steel	400	0.88
<b>DIN72573-5x6-NIRO</b>	TUBE CLAMP 1 4571 D 6(5x)	6 5	10	4,8	57	45	1	Stainless steel	400	0.88
<b>DIN72573-6x6-NIRO</b>	TUBE CLAMP 1 4571 D 6(6x)	6 6	10	4,8	64	52	1	Stainless steel	500	1.1
<b>226-13717-2</b>	TUBE CLAMP 1 4571 D 8(2x)	8 2	15	7	61,2	39	2	Stainless steel	1 200	2.65
<b>226-13717-3</b>	TUBE CLAMP 1 4571 D 8(3X)	8 3	15	7	69,2	47	2	Stainless steel	1 400	3.09
<b>226-13717-4</b>	TUBE CLAMP 1 4571 D 8(4X)	8 4	15	7	77,2	55	2	Stainless steel	1 600	3.53
<b>226-13718-1</b>	TUBE CLAMP 1 4571 D10(2X)	10 2	15	7	65,3	40	2	Stainless steel	1 300	2.87
<b>226-13673-4</b>	TUBE CLAMP 1 4571 D10(3X)	10 3	15	7	75,3	50	2	Stainless steel	1 600	3.53
<b>226-13673-5</b>	TUBE CLAMP 1 4571 D10(4X)	10 4	15	7	85,3	60	2	Stainless steel	1 700	3.75

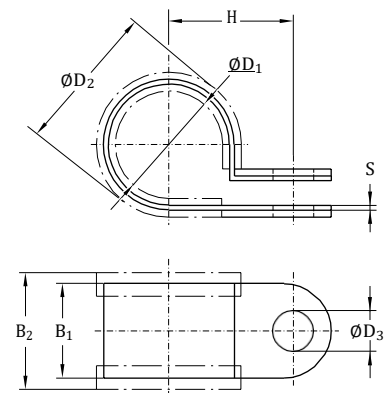
## Fixing material

### Fixing clips



Fixing material

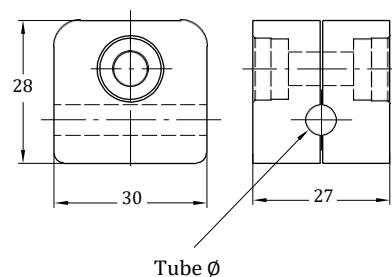
Order number	Designation	Tube ØD		B	C	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	S	Material	Weight (100 pcs)	
		mm	in								g	lb
<b>604-004</b>	TUBE CLAMP ST-Z D12(1x)	12	-	24	14	5,5	27	13	1,5	Steel	500	1.1
<b>606-014</b>	TUBE CLAMP ST-Z D14(1x)	14	1/4	30	15	6,3	32,5	16	2	Steel	1 200	2.65
<b>608-004</b>	TUBE CLAMP ST-Z D18(1x)	18	3/8	36	20	7	40	21	2	Steel	1 200	2.65
<b>610-004</b>	TUBE CLAMP ST-Z D20(1x)	20	1/2	36	20	7	40	21	2	Steel	1 200	2.65



Order number	Designation	ØD <sub>1</sub>	ØD <sub>2</sub>	ØD <sub>3</sub>	B <sub>1</sub>	B <sub>2</sub>	H	S	Material	Weight (100 pcs)	
										mm	mm
<b>941-206-104</b>	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
<b>941-206-108</b>	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
<b>941-208-104</b>	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
<b>941-209-104</b>	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
<b>941-209-105</b>	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
<b>941-210-104</b>	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
<b>941-212-104</b>	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
<b>941-213-104</b>	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
<b>941-215-104</b>	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
<b>941-217-104</b>	TUBE CLAMP ST-RUB D17 F FAST SCREW M5	17	23	5,2	12	15	16,5	0,5	Steel, galvanized	800	1.76
<b>941-217-105</b>	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
<b>941-218-101</b>	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
<b>941-220-104</b>	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
<b>941-222-100</b>	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
<b>941-225-104</b>	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

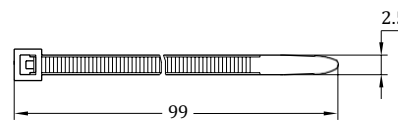
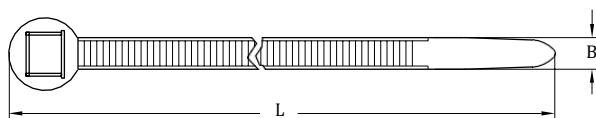


Order number	Designation	Tube Ø	Material	Weight	
				g	lb
		mm			
<b>941-606-000</b>	TUBE CLAMP 106 PP	6	Polypropylene	10	0.02
<b>941-608-000</b>	TUBE CLAMP 108 PP	8	Polypropylene	10	0.02
<b>941-610-000</b>	TUBE CLAMP 110 PP	10	Polypropylene	5	0.01
Tube clamp PP with weld plate, standard series					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



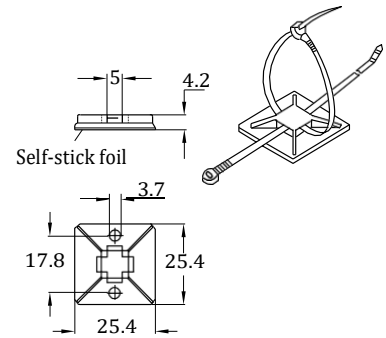
Order number	Designation	L	B	Material	Weight (100 pcs)	
					g	lb
		mm	mm			
<b>898-610-000</b>	CABLE STRAP SW 204LGx4,7	197	4,9	Polyamide	100	0.22
<b>898-710-000</b>	CABLE STRAP SW 302LGx4,8	302	4,9	Polyamide	200	0.44
<b>898-710-001</b>	CABLE STRAP SW 360LGx7,5	360	7,5	Polyamide	500	1.10
For automatic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



## Fixing material

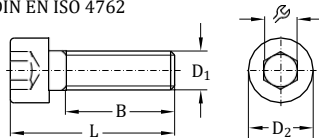
### Mounting base

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

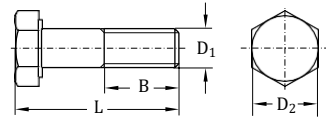


### Fixing bolts

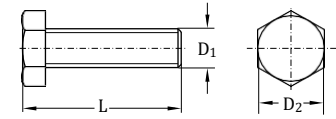
DIN EN ISO 4762



IN EN ISO 4014 / DIN EN ISO 4017

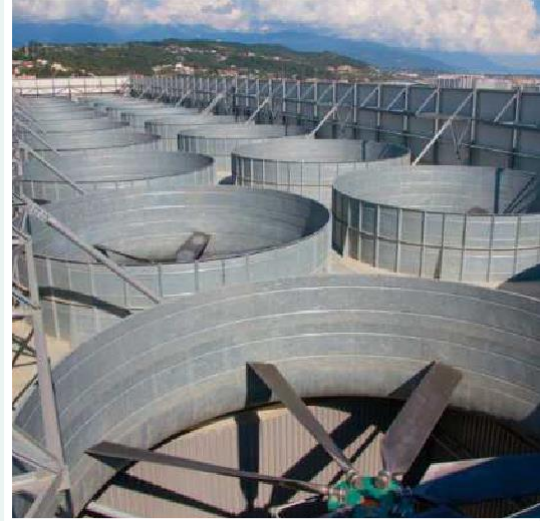


DIN7513



Order number	Designation	D <sub>1</sub>	L	D <sub>2</sub>	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

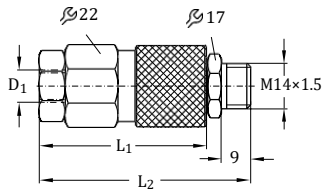
### Applications

- 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

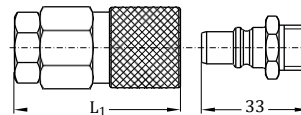
## Couplings

### Low-pressure quick-disconnect couplings

Coupling, complete



Outer coupling member



Inner coupling member

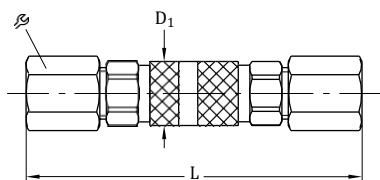
Order number	Designation	Tube $\varnothing$ D <sub>1</sub> <sup>1)</sup>		L <sub>1</sub>	L <sub>2</sub>	Material	Operating pressure max		Weight	
		mm	mm				bar	psi	g	lb
<b>207-168-2</b>	COUPLING, COMPLETE	6	M10x1	-	65	Steel, galvanized	45	653	150	0.33
<b>207-188-2</b>	COUPLING, COMPLETE	8	M14x1,5	-	71,5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

Both coupling members are shut off when disconnected!

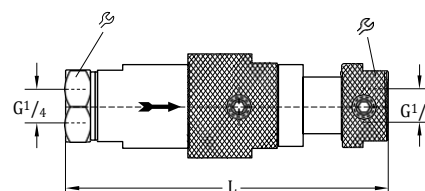
<sup>1)</sup> Ports tapped for solderless tube connection

### Medium- and high-pressure quick-disconnect couplings

995-001-525, 995-001-526



626-26246-1

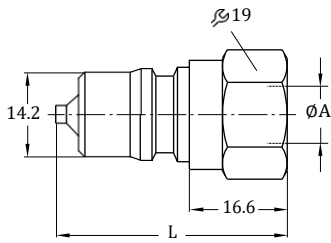


Order number	Designation	Tube $\varnothing$ D <sub>1</sub>		L	$\varnothing$	Material	Operating pressure max		Weight	
		mm	mm				mm	mm	bar	psi
<b>995-001-525</b>	PLUG AND SOCKET COUPLING, TUBE 4	4	10	68	10	Steel, galvanized	100	1 450	30	0.07
<b>995-001-526</b>	PLUG AND SOCKET COUPLING, TUBE 6	6	15	80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

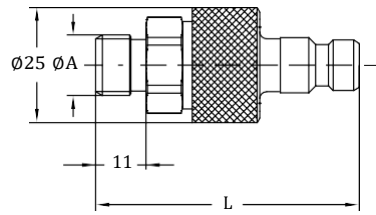
## Couplings

## Coupling plugs

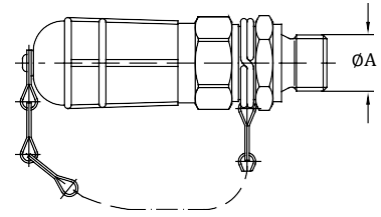
995-001-096



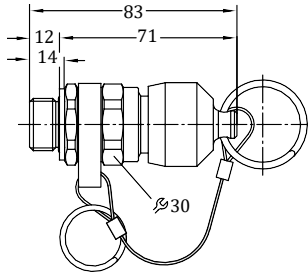
995-001-501



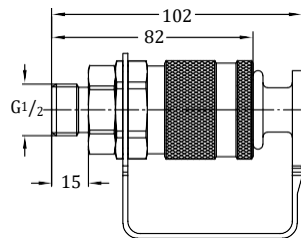
995-000-705



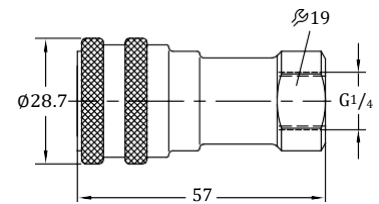
995-001-260



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 <sup>1)</sup>	0.13 <sup>1)</sup>
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 <sup>2)</sup>	0.67 <sup>2)</sup>
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 <sup>2)</sup>	2.32 <sup>2)</sup>
995-000-705	COUPLING PLUG G1/4 70BAR	Steel, galvanized	G 1/4	-	-	995-001-500	70	1 000	233 <sup>3)</sup>	0.51 <sup>3)</sup>
995-001-260	COUPLING PLUG G1/2	Steel, galvanized	G 1/2	83	-	-	-	-	229	0.50

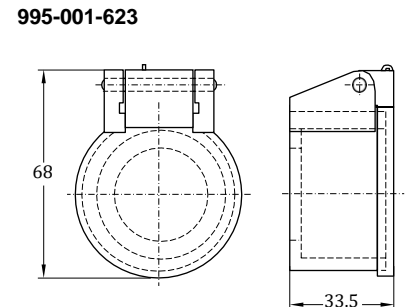
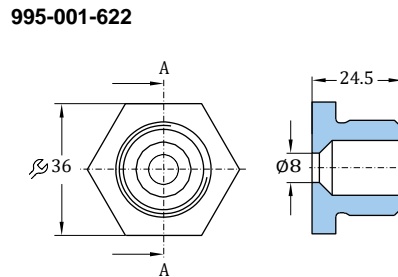
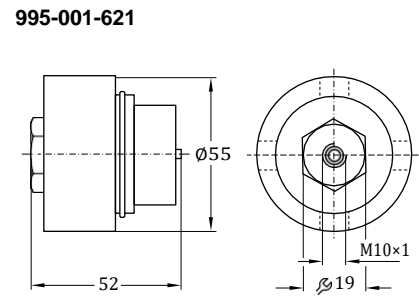
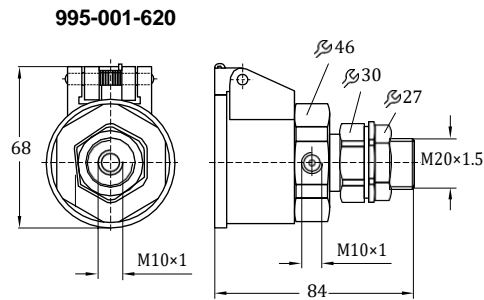
<sup>1)</sup> weight for plug + dust cover

<sup>2)</sup> weight for complete coupling

<sup>3)</sup> weight for plug + coupling socket

## Couplings

# Coupling sockets with return flow port



Order number	Designation	Material	Operating pressure max		Weight	
			bar	psi	g	lb
<b>995-001-620</b>	COUPLING SOCKET	Steel, galvanized	100	1 450	480	1.06
<b>995-001-621</b>	COUPLING PLUG	Steel, galvanized	100	1 450	380	0.84
<b>995-001-622</b>	STUB	Steel, galvanized	100	1 450	100	0.22
<b>995-001-623</b>	DUST COVER	Steel, galvanized	100	1 450	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

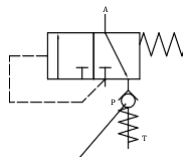
### Applications

- 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

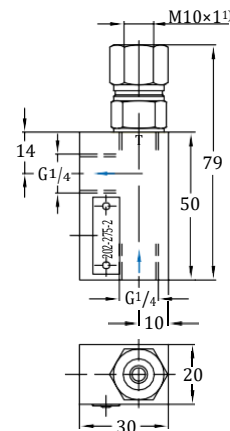
# Valves

## Relief valve

Connection diagram



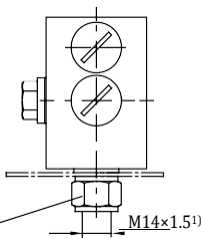
Check valve = residual pressure valve 0.5 bar



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

## Relief valves with bleed valve and safety valve

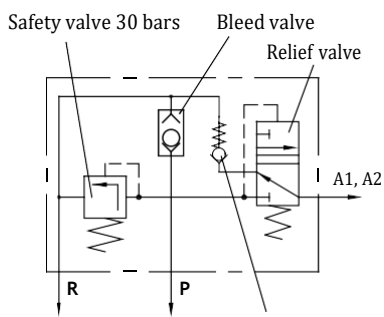
Fitted to reservoir



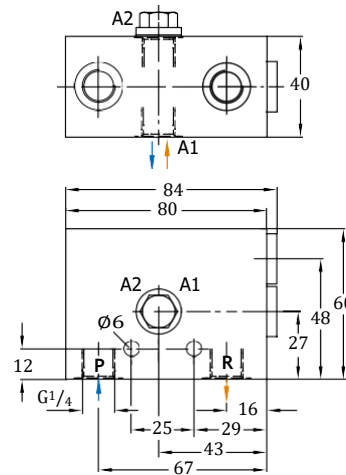
For P and R  
2 adapters each 408-160  
washers 508-108

<sup>1)</sup> Ports tapped for solderless tube connection

Relief valve circuit diagram



Check valve = residual pressure valve 0.5 bars

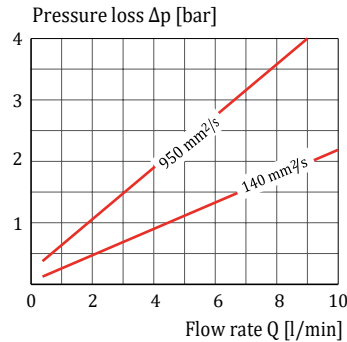


Order number	Designation	Tube Ø	Material	Residual pressure		Weight	
				bar	psi	g	lb
<b>202-175-30</b>	PRESS RELIEF VALVE 30BAR R1/4	-	Aluminum	30	435	570	1.26
Adapters <sup>1)</sup>							
<b>406-054</b>	CONNECTING PIECE ST 6 G1/4A ZN	6	Steel, galvanized	-	-	20	0.04
<b>301-020</b>	CONNECTING PIECE ST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

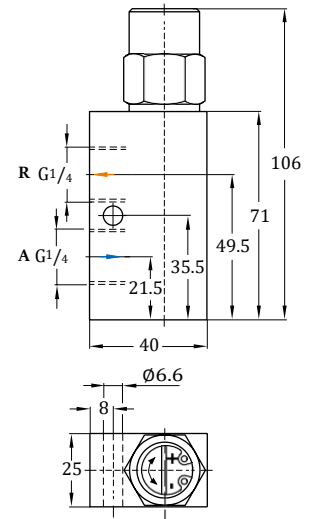
<sup>1)</sup> Ports tapped for solderless tube connection

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

## Valves

Pressure regulating valves, adjustable  
(poppet valve)

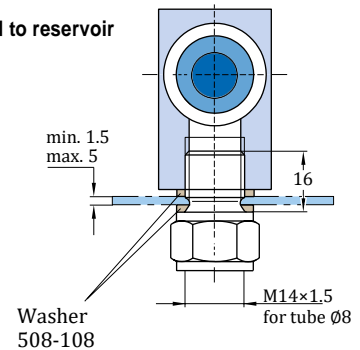
With increasing flow rate, the pressure upstream from the valve will also rise in accordance with the curves



Order number	Designation	Adjustable pres range		Operating pres max		Oil temperature		Viscosity range	Seal	Weight	
		bar	psi	bar	psi	°C	°F			mm <sup>2</sup> /s	g
Steel, galvanized											
<b>WVN200-10E6</b>	PRES REGUL VALVE 1-6BAR NBR	1 to 6	14,5 to 87	40	580	80	176	20 to 1000	NBR	500	1.10
<b>WVN200-10E12</b>	PRES REGUL VALVE 3-12BAR NBR	3 to 12	43,5 to 174	40	580	80	176	20 to 1000	NBR	500	1.10
<b>WVN200-10E12-S8</b>	PRES REGUL VALVE 3-12BAR FPM	3 to 12	43,5 to 174	40	580	80	176	20 to 1000	FPM	500	1.10
<b>WVN200-10E25</b>	PRES REGUL VALVE 4-25BAR NBR	4 to 25	58 to 363	40	580	80	176	20 to 1000	NBR	500	1.10
<b>WVN200-10E25-S8</b>	PRES REGUL VALVE 4-25BAR FPM	4 to 25	58 to 363	40	580	80	176	20 to 1000	FPM	500	1.10
<b>WVN200-10E35</b>	PRES REGUL VALVE 4-35BAR NBR	4 to 35	58 to 510	40	580	80	176	20 to 1000	NBR	510	1.12
<b>WVN200-10E60</b>	PRES REGUL VALVE 12-60BAR NBR	12 to 60	174 to 870	70	1 015	80	176	20 to 1000	NBR	510	1.12
<b>WVN200-10E60-S8</b>	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

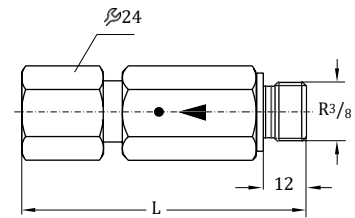


Order number	Designation	Description	Tube ØD	Material	Weight	
			mm		g	lb
<b>301-020</b>	CONNECTING PIECE ST 8 - G1/4A ZN	for valves WVN200-10E6 10E35	8	Steel, galvanized	16	0.04
<b>410-163</b>	CONNECTING PIECE ST 10 - G1/4A ZN	for valves WVN200-10E6 10E35	10	Steel, galvanized	30	0.07
<b>412-163</b>	CONNECTING PIECE ST 12 - G1/4A ZN	for valves WVN200-10E6 10E35	12	Steel, galvanized	51	0.11
<b>508-108</b>	SEALING RING CU 13,3x 17,9x 1,5	for valves WVN200-10E6 10E35	-	Copper	1	0.00
<b>223-12477-6</b>	TB FITT ST GE 8-L G 1/4A CF	for valve WVN200-10E60	8	Steel, galvanized	35	0.08
<b>223-12272-9</b>	TB FITT ST GE10-L G 1/4A CF	for valve WVN200-10E60	10	Steel, galvanized	41	0.09
<b>508-108</b>	SEALING RING CU 13,3x 17,9x 1,5	for valve WVN200-10E60	-	Copper	1	0.00
<b>408-160</b>	CONNECTING PIECE ST 8 - G1/4A ZN	adapters with long tube ends	-	Steel, galvanized	22	0.05

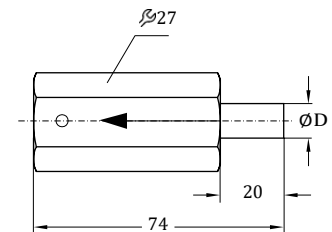


## Valves

# 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

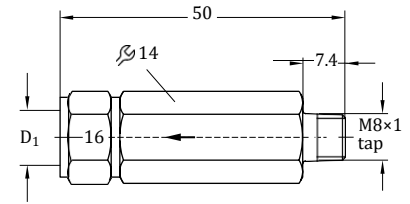


Order number	Designation	Pipe stud ØD	Material	Operating pressure max		Weight	
				bar	psi	g	lb
		mm					
624-25478-1	VALVE SVP -200-S 6	6	Steel, galvanized	200	2 900	237	0.52
624-25479-1	VALVE SVP -350-S 6	6	Steel, galvanized	350	5 075	236	0.52
624-25480-1	VALVE SVP -200-S 8	8	Steel, galvanized	200	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

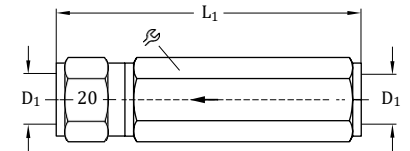
# Pressure regulating valves (ball valves)

For flow rates from 0.5–2 l/min



Order number	Designation	Tube Ø	D <sub>1</sub> 1)	Opening pressure		Marking	Material	Weight	
				bar	psi			g	lb
<b>WVN200-4A0 4</b>	PRES REGUL VALVE 0,4BAR D4	4	M8×1	0,4	5,8	0,4	Steel, galvanized	45	0.10
<b>WVN200-4A5</b>	PRES REGUL VALVE 5BAR D4	4	M8×1	5	72,5	5	Steel, galvanized	47	0.10
<b>WVN200-4A8</b>	PRES REGUL VALVE 8BAR D4	4	M8×1	8	116	8	Steel, galvanized	46	0.10
<b>WVN200-4A12</b>	PRES REGUL VALVE 12BAR D4	4	M8×1	12	174	12	Steel, galvanized	45	0.10
<b>WVN200-4A16</b>	PRES REGUL VALVE 16BAR D4	4	M8×1	16	232	16	Steel, galvanized	46	0.10
<b>WVN200-4A25</b>	PRES REGUL VALVE 25BAR D4	4	M8×1	25	360	25	Steel, galvanized	46	0.10
<b>WVN200-4A0 4-S1</b>	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	D <sub>1</sub> 1)	L <sub>1</sub>	Ø	Opening pressure		Marking	Weight	
						bar	psi		g	lb
Steel, galvanized										
<b>WVN200-6B0 5</b>	PRES REGUL VALVE 0,5BAR D6	6	M10×1	61	14	0,5	7,25	5	57	0.13
<b>WVN200-6B3</b>	PRES REGUL VALVE 3BAR D6	6	M10×1	61	14	3	43,5	3	58	0.13
<b>WVN200-6B8</b>	PRES REGUL VALVE 8BAR D6	6	M10×1	61	14	8	116	8	58	0.13
<b>WVN200-6B12</b>	PRES REGUL VALVE 12BAR D6	6	M10×1	61	14	12	174	12	59	0.13
<b>WVN200-6B16</b>	PRES REGUL VALVE 16BAR D6	6	M10×1	61	14	16	232	16	60	0.13
<b>WVN200-6B20</b>	PRES REGUL VALVE 20BAR D6	6	M10×1	61	14	20	290	20	60	0.13
<b>WVN200-6B40</b>	PRES REGUL VALVE 40BAR D6	6	M10×1	61	14	40	580	40	59	0.13
<b>WVN200-8B0</b>	PRES REGUL VALVE 0,04BAR D8	8	M14×1,5	71	17	0,04	0,58	0	86	0.19
<b>WVN200-8B3</b>	PRES REGUL VALVE 3BAR D8	8	M14×1,5	71	17	3	43,5	3	87	0.19
<b>WVN200-8B5</b>	PRES REGUL VALVE 5BAR D8	8	M14×1,5	71	17	5	72,5	5	89	0.20
<b>WVN200-8B12</b>	PRES REGUL VALVE 12BAR D8	8	M14×1,5	71	17	12	174	12	89	0.20
<b>WVN200-8B16</b>	PRES REGUL VALVE 16BAR D8	8	M14×1,5	71	17	16	232	16	84	0.19
<b>WVN200-8B20</b>	PRES REGUL VALVE 20BAR D8	8	M14×1,5	71	17	20	290	20	90	0.20
<b>WVN200-8B32</b>	PRES REGUL VALVE 32BAR D8	8	M14×1,5	71	17	32	464	32	93	0.21
<b>161-212-054 2)</b>	PRES REGUL VALVE 20BAR D8	8	M14×1,5	84,5	17	20	290	20	107	0.24
<b>WVN200-10B0</b>	PRES REGUL VALVE 0,04BAR D10	10	M16×1,5	80	19	0,04	0,58	0	100	0.22
<b>WVN200-10B0 5</b>	PRES REGUL VALVE 0,5BAR D10	10	M16×1,5	80	19	0,5	7,25	5	126	0.28
<b>WVN200-10B1</b>	PRES REGUL VALVE 12BAR D10	10	M16×1,5	80	19	1,2	17,4	12	128	0.28
<b>WVN200-10B32</b>	PRES REGUL VALVE 32BAR D10	10	M16×1,5	80	19	32	464	32	130	0.29

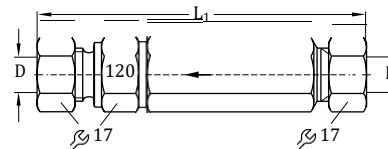
1) Ports tapped for solderless tube connection

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 (ball valves)

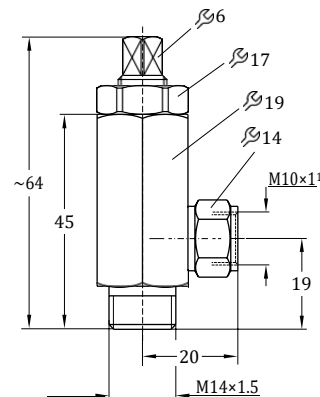
For flow rates from 0.5–2 l/min



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

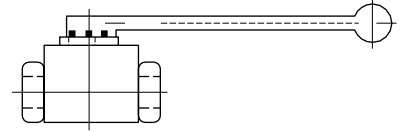


Order number	Designation	p max		Max temperature		Material	Weight	
		bar	psi	°C	°F		g	lb
<b>202-085-S</b>	SHUT-OFF VALVE 60BAR M14x1,5	60	810	80	176	Steel, galvanized	110	0.24

Direction of flow optional

## Valves

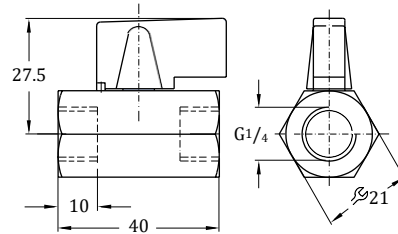
## Shut-off valves



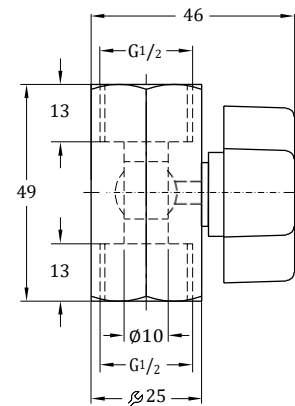
Order number	Designation	p max		Connection	Nominal Ø DN	Material	Weight	
		bar	psi				g	lb
<b>235-13108-4</b>	BALL VALVE ST G 1/2 DN13 500 BAR	500	7 250	G 1/2 female	13	Steel, galvanized	640	1.41
<b>235-13114-1</b>	BALL VALVE ST D20 DN16 400 BAR	400	5 800	Tube Ø 20	16	Steel, galvanized	960	2.12

Direction of flow optional

161-600-036



UFZ 0097

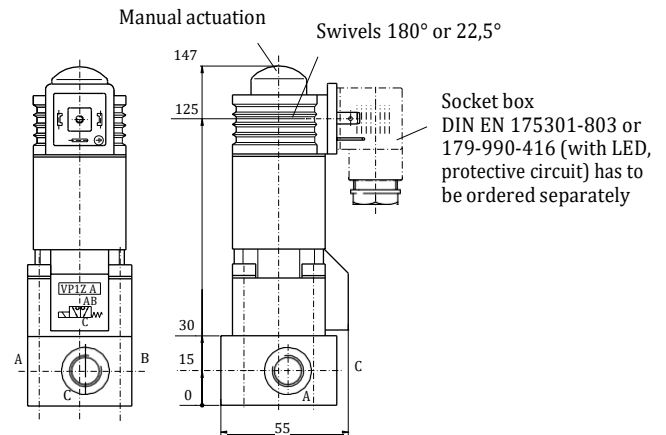


Order number	Designation	p max		Max temperature		Material	Weight	
		bar	psi	°C	°F		g	lb
<b>161-600-036</b>	BALL VALVE PN 16 G1/4 MS	16	232	90	194	Brass	80	0.18
<b>UFZ 0097</b>	BALL VALVE PN 10 G1/2 MS	10	145	90	194	Brass	150	0.33

Direction of flow optional

## Valves

# Solenoid valves



Order number	Designation	Type	Off Position	Operating voltage	Con- nection	p max		Weight	
						bar	psi	kg	lb
<b>525-32080-1</b>	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
<b>525-32082-1</b>	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
<b>525-32081-1</b>	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
<b>525-32083-1</b>	WAY VALVE WV-M-W2O-1/2- 24DC	2/2 way valve	normally open	24 VDC	G 1/2	400	5 800	1,76	3.88
<b>525-32084-1</b>	WAY VALVE WV-M-W2O-1/2-230AC	2/2 way valve	normally open	230 VAC	G 1/2	400	5 800	1,69	3.73
<b>525-32098-1</b>	WAY VALVE WV-M-W2O-1/2-110AC	2/2 way valve	normally open	110 VAC	G 1/2	400	5 800	1,81	3.99
<b>525-32085-1</b>	WAY VALVE WV-M-W3 -3/8- 24DC	3/2 way valve	-	24 VDC	G 3/8	400	5 800	1,37	3.02
<b>525-32087-1</b>	WAY VALVE WV-M-W3 -3/8-230AC	3/2 way valve	-	230 VAC	G 3/8	400	5 800	1,3	2.87
<b>525-32086-1</b>	WAY VALVE WV-M-W3 -3/8-110AC	3/2 way valve	-	110 VAC	G 3/8	400	5 800	1,38	3.04
<b>161-110-031+924</b>	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
<b>161-120-064+924</b>	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

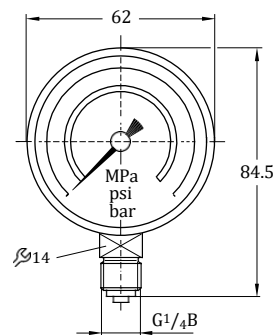
- Visual and digital pump and system pressure monitoring
- Economical, reliable and virtually maintenance-free operation
- Wide range of pressure rates and sizes
- Liquid-filled gauges for dynamic operations available
- Stainless for operation in aggressive atmosphere available

### 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

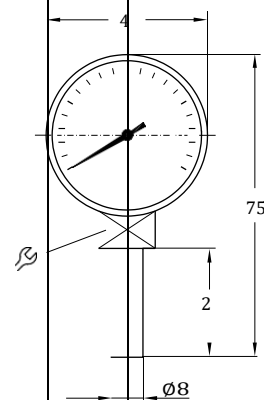


Order number	Designation	Indication range		Material	Weight	
		bar	psi		g	lb
<b>169-101-004</b>	PR GAUGE D63 0-10 BAR G1/4A ABS	0-10	0-145	ABS housing	96	0.21
<b>169-102-020</b> 2)	PR GAUGE D63 0-25 BAR G1/4B ABS	0-25	0-360	ABS housing	90	0.20
<b>169-104-020</b> 2)	PR GAUGE D63 0-40 BAR G1/4B ABS	0-40	0-580	ABS housing	100	0.22
<b>169-106-020</b> 2)	PR GAUGE D63 0-60 BAR G1/4B ABS	0-60	0-870	ABS housing	83	0.18
<b>169-110-020</b> 2)	PR GAUGE D63 0-100 BAR G1/4B ABS	0-100	0-1 450	ABS housing	90	0.20
<b>169-116-000</b>	PR GAUGE D63 0-160 BAR G1/4A ABS	0-160	0-2 320	ABS housing	94	0.21
<b>169-125-020</b> 2)	PR GAUGE D63 0-250 BAR G1/4B ABS	0-250	0-3 625	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



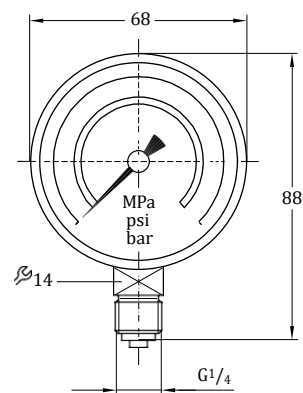
Order number	Designation	Restrictor	Lubricant	Indication range		Material	Weight	
				mm	bar		psi	g
<b>248-602 25</b>	PR GAUGE D40 0-10 BAR TUBE 8	4kt 12	-	0-10	0-145	Steel housing, black	66	0.15
<b>169-102-506</b> 1)	PR GAUGE D40 0-25 BAR TUBE 8	12	0,4	0-25	0-360	Steel housing, black	62	0.14
<b>248-602 20</b>	PR GAUGE D40 0-40 BAR TUBE 8	12	-	0-40	0-580	Steel housing, black	59	0.13
<b>169-104-008</b> 1)	PR GAUGE D40 0-40 BAR TUBE 8	4kt 14	0,4	0-40	0-580	Steel housing, black	61	0.13
<b>169-106-004</b>	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 /DIN3 86

1) damped design

## Pressure gauges

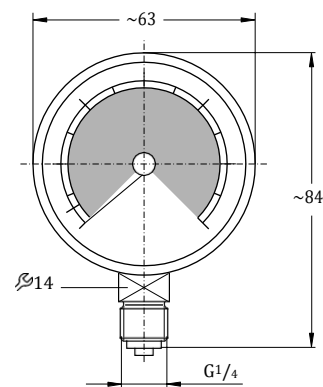
### Damped pressure gauges with glycerin filling



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	0-1450	Stainless steel housing	200	0.44
169-125-015	PR GAUGE D68 0-250 BAR GLYCER G1/4B VA	vertically	0-250	0-3625	Stainless steel housing	200	0.44
169-140-001	PR GAUGE D62 0-400 BAR GLYCER G1/4B VA	vertically	0-400	0-5800	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



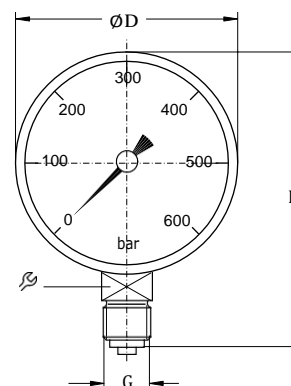
Order number	Designation	Mounting position	Indication range		Material	Weight	
			bar	psi		g	lb
169-101-607	PR GAUGE D63 0-16 BAR GLYZ G1/4B VA	vertically	0-16	0-230	Stainless steel housing	166	0,37
169-106-011	PR GAUGE D63 0-60 BAR GLYZ G1/4B VA	vertically	0-60	0-870	Stainless steel housing	220	0,49
169-110-010	PR GAUGE D63 0-100 BAR GLYZ G1/4B VA	vertically	0-100	0-1450	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	
		mm	in			bar	psi	g	lb
Steel housing, black									
<b>234-13132-7</b>	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
<b>234-13132-8</b>	PR GAUGE D 63 0- 400 BAR G1/4B	63	G 1/4 bottom	84,5	vertically	0-400	0-5800	100	0,22
<b>234-13156-6</b>	PR GAUGE D 63 0- 600 BAR	63	G 1/4 bottom	84,5	vertically	0-600	0-8700	210	0,46
<b>234-13182-7</b>	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
<b>234-10396-2</b>	PR GAUGE D100 0- 400 BAR	100	G 1/2 bottom	133	vertically	0-400	0-5800	601	1,33
<b>234-13101-2</b>	PR GAUGE D100 0- 600 BAR G1/2A	100	G 1/2 bottom	133	vertically	0-600	0-8700	560	1,23
<b>234-13101-4</b>	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									
<b>234-10396-9</b>	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
<b>234-13182-8</b>	PR GAUGE D 63 0- 400BAR G1/4B BACK VA	63	G 1/4 back	63	vertically	0-400	0-5800	220	0,49
<b>234-10898-4</b>	PR GAUGE D100 0- 400 BAR+PSI GLYZ 1 4404	100	G 1/2 bottom	133	vertically	0-400	0-5800	993	2,19
<b>234-13136-2</b>	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

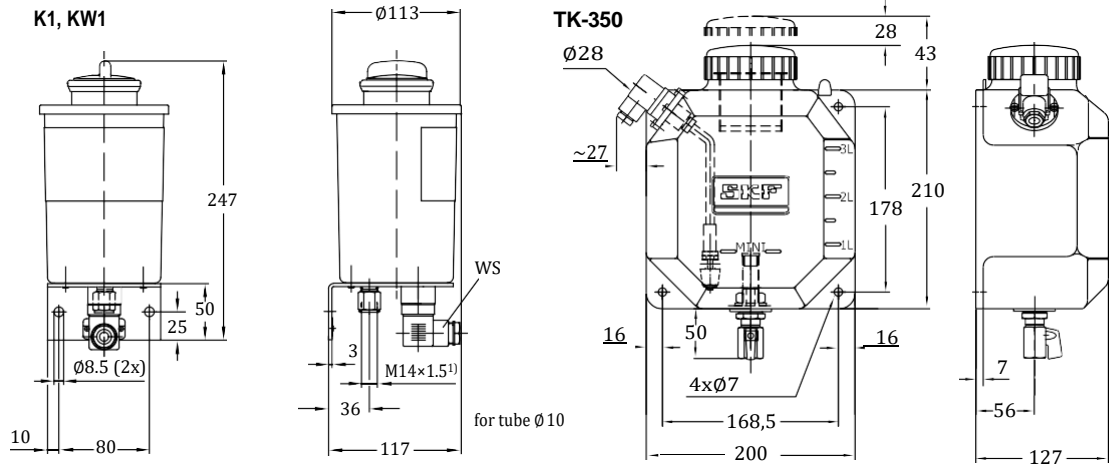
- Available in sizes ranging from 3 litres to 100 litres on request
- All reservoirs are equipped with a screen at the filler socket (exception: 1 litre tank screen at the outlet), which reliably prevents foreign particles from entering
- Simple and proven design for use in all kinds of automatic oil 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

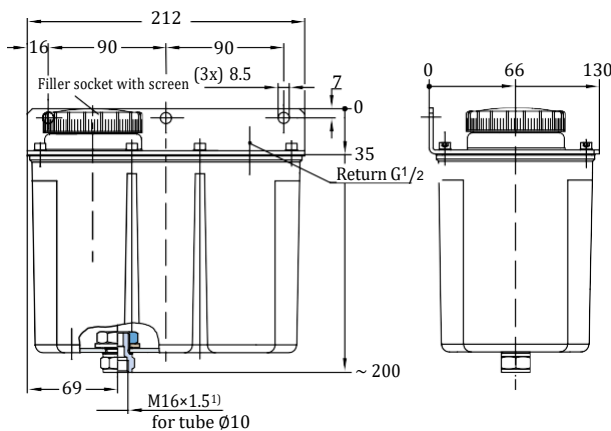
### Plastic reservoirs



1) Ports tapped for solderless tube connection

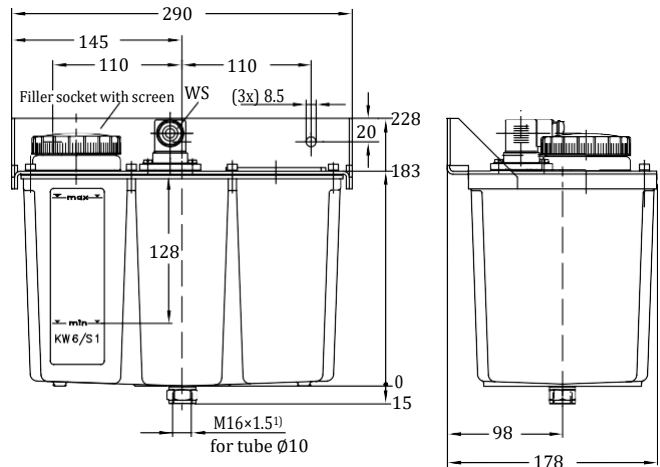
Order number	Designation	Reservoir Capacity	Level indicator		Type of contact	Electrical connector	Seal material	Weight	
			l	gal.				kg	lb
<b>K1</b>	OIL RESERVOIR ASSY PL 1YN	1	0.26	-	-	-	NBR	0,70	1.54
<b>KW1</b>	OIL RESERVOIR ASSY PL 1YL (NO)	1	0.26	Min filling level	NO	Rectangular connector	NBR	0,76	1.68
<b>KW1-S2</b>	OIL RESERVOIR ASSY PL 1YL (NC)	1	0.26	Min filling level	NC	Rectangular connector	NBR	0,80	1.76
<b>TK-350-V</b>	OIL RESERVOIR ASSY PL 3,7L	3,7	0.97	-	-	-	NBR	0,93	2.05
<b>TK-350-VM</b>	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
<b>TK-350-VMC</b>	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

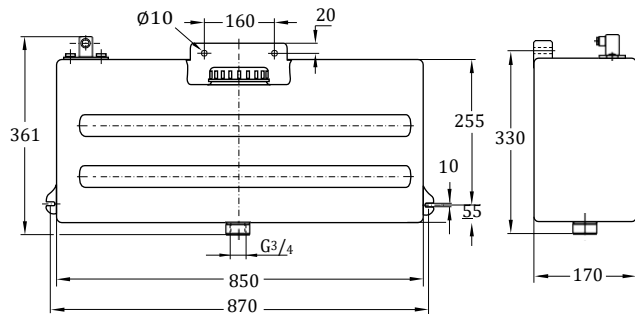
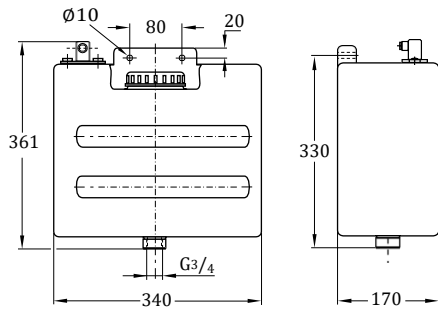


1) Ports tapped for solderless tube connection

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

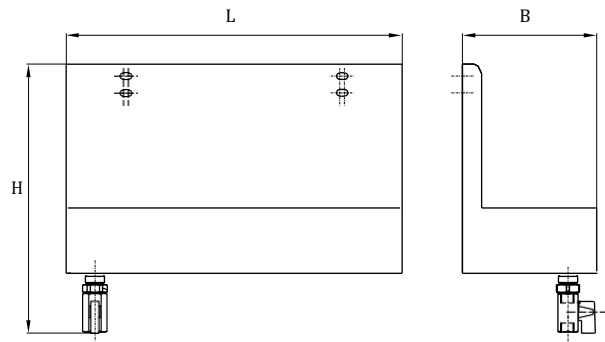
## Reservoirs

## Plastic reservoirs



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

## Oil trough with shut-off valve

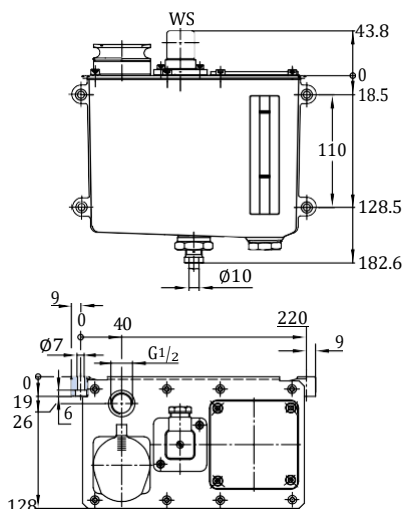


Order number	Designation	Reservoir capacity		L	B	H
		l	gal.			
<b>B3 U21</b>	OIL TROUGH 3L	3	0,792	350	280	140
<b>B7 U271</b>	OIL TROUGH 6L	6	1,585	400	380	190

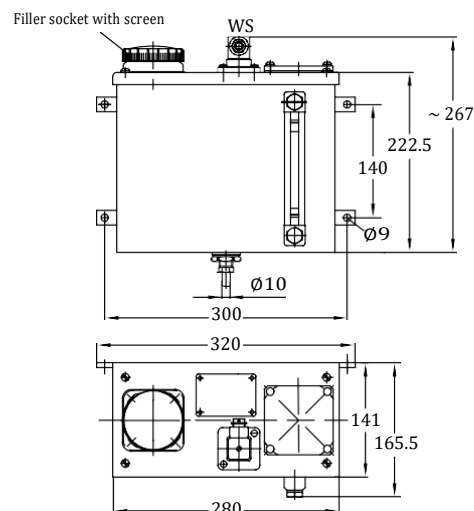
## Reservoirs

### Metal reservoirs

Metal reservoir, 3 liter



Metal reservoir, 6 liter

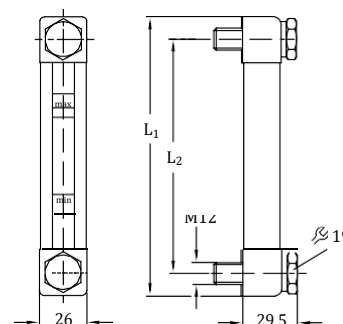


Order number	Designation	Reservoir capacity		Level indicator WS	Type of contact	Seal material	Weight	
		l	gal.				kg	lb
<b>BW3-2-S1</b>	OIL RESERVOIR ASSY ST 3YL	3	0.79	Min filling level	Changeover	NBR	2,24	4.94
<b>B7</b>	OIL RESERVOIR ASSY ST 6YN	6	1.58	-	-	NBR	4,9	10.80
<b>BW7-S6</b>	OIL RESERVOIR ASSY ST 6YBN	6	1.58	Min and max filling level	2 NCs	NBR	5,12	11.29
<b>BW7-S7</b>	OIL RESERVOIR ASSY ST 6YLP (2xNC)	6	1.58	Min filling level with advance warning	2 NCs	NBR	5,2	11.47
<b>BW7-S8</b>	OIL RESERVOIR ASSY ST 6YL (SPDT)	6	1.58	Min filling level	Changeover	FPM	5,11	11.27
<b>BW7-S11</b>	OIL RESERVOIR ASSY ST 6YP (2xSPDT)	6	1.58	Min filling level with advance warning	1 NO, 1 NC	NBR	4,97	10.96
<b>BW7-S14</b>	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
<b>162-310-005</b>	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 <sub>1</sub>	L <sub>2</sub>	Reservoir Capacity		Weight	
		mm	mm	Liters	gal.	g	lb
<b>995-003-044</b>	OIL LEVEL GAUGE L=127MM	152	127	6	1.58	146	0.32
<b>995-003-040</b>	OIL LEVEL GAUGE L=146MM	190	146	6	1.58	150	0.35
<b>995-003-041</b>	OIL LEVEL GAUGE L=190MM	215	190	15 and 30	3.96 and 7.92	170	0.37
<b>995-003-042</b>	OIL LEVEL GAUGE L=254MM	279	254	50	13.21	190	0.42
<b>995-003-043</b>	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

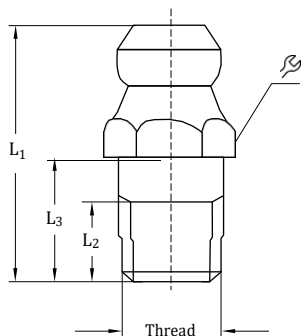
- Our standard program includes the most common hydraulic and flat grease nipples according to DIN 74412 and DIN 3404
- Available in galvanized steel or stainless steel

### Applications

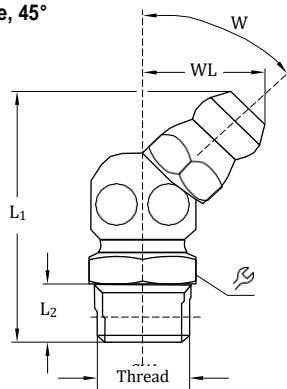
- Linear guides
- Bearings, bearing blocks
- Drive shafts, cardan shafts
- Axles

# Hydraulic grease nipples according to DIN 71412

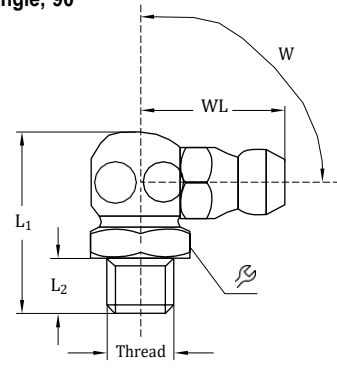
Straight



Angle, 45°

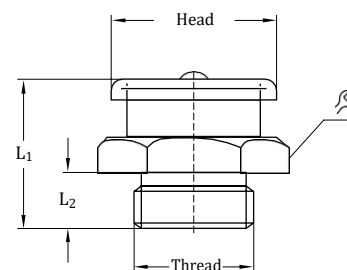


Angle, 90°



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
251-10309-2	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

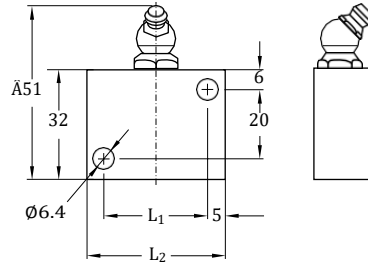


Order number	Designation	Head Ø	Thread	mm	Material	Operating pressure max		Weight (100 pcs)	
						bar	psi	g	lb
251-14040-5	BUTTON HEAD LUBR FITT ST AG 1/8-16Z	16	G 1/8	17	Steel, galvanized	350	5 800	1 700	3.75
251-14040-4	BUTTON HEAD LUBR FITT ST AG 1/4-16Z	16	G 1/4	17	Steel, galvanized	350	5 800	1 900	4.19
	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

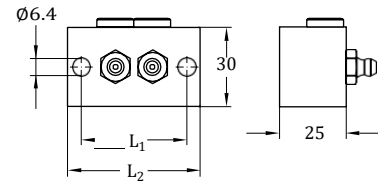
## Lubricating nipples

# Lubrication fitting block

532-32248-1



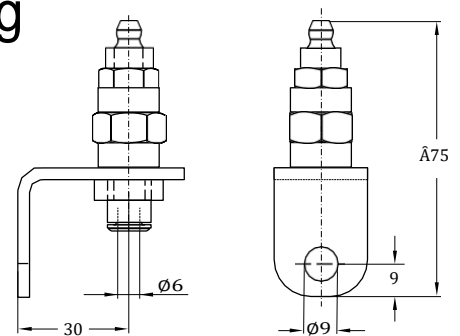
532-32454-1



Order number	Designation	Ports for lubricating nipples	L <sub>1</sub>	L <sub>2</sub>	Material	Operating pressure max		Weight (100 pcs) max	
			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 <sup>1)</sup>	40	50	Steel, galvanized	400	5 800	236	0.52

<sup>1)</sup> Two lubricating nipple connections; corresponding tapered grease nipple order no 251-14045-1

## Holder with lubricating nipple and fitting

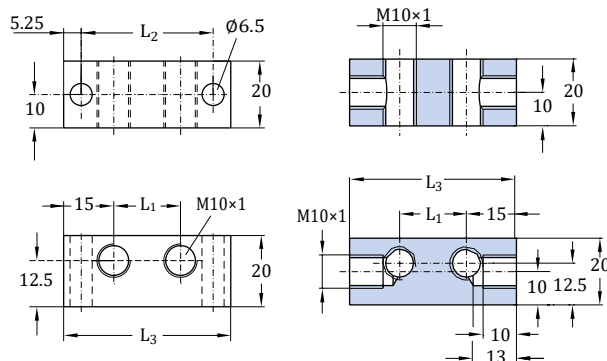


Order number	Designation	Ports for lubricating nipples	L <sub>1</sub>	Material	Operating pressure max		Weight (100 pcs)	
			mm		bar	psi	g	lb
532-32131-1	HOLDER W HYDR LUBR FITTING	1	40	Steel, galvanized	400	5 800	93	0.21



## Lubricating nipples

# Lubrication nipple manifolds



Order number	Designation	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Number of threaded holes	Material	Operating pressure max		Weight (100 pcs)	
							bar	psi	g	lb
		mm	mm	mm						
<b>871-340-006</b>	LUBRICATION BAR 1x M10x1	-	19,5	30	1	Steel, galvanized	400	5 800	72	0.16
<b>871-340-008</b> <sup>1)</sup>	LUBRICATION BAR 2x M10x1	-	19,5	30	1	Steel, galvanized	400	5 800	70	0.15
<b>871-360-006</b>	LUBRICATION BAR 2x M10x1	20	39,5	50	2	Steel, galvanized	400	5 800	120	0.26
<b>871-360-008</b> <sup>1)</sup>	LUBRICATION BAR 4x M10x1	20	39,5	50	2	Steel, galvanized	400	5 800	120	0.26
<b>871-380-006</b>	LUBRICATION BAR VA 3x M10x1	40	59,5	70	3	Stainless steel	400	5 800	180	0.40
<b>871-390-020</b>	LUBRICATION BAR 10x M10x1	20	199,5	210	10	Steel, galvanized	400	5 800	530	1.17
<b>871-390-023</b>	LUBRICATION BAR 13x M10x1	20	200	270	13	Steel, galvanized	400	5 800	685	1.51

<sup>1)</sup> 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
<b>LAGN 120</b>	LUBRICATION NIPPLE BOX LAGN 120	Steel, zinc plated, hardened and blue chromed	400	5 800

## Filters



### 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 dm<sup>3</sup>/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

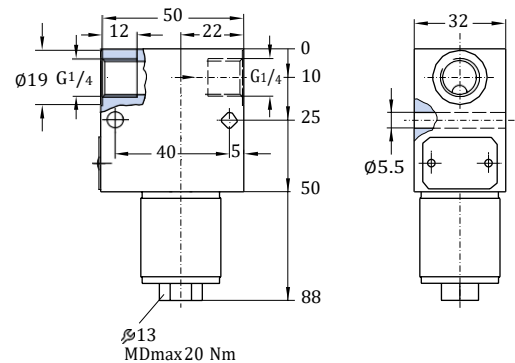
- Prevents system or component failures and extends system life to significant reduction of solids
- Economical, reliable and maintenance-friendly operation
- Compact and modular design mountable directly into pipes
- Wide range of volumetric flow levels and grades of filtration
- Optimized service handling 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

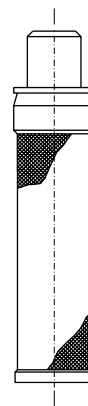
## Filters

### 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						
<b>213-870</b>	FILTER	FLUID GREASE NLGI CLASS 000, 00	63	G 1/4	Aluminum	60	870	0,31	0.68
<b>213-870F</b>	FILTER	FLUID GREASE NLGI CLASS 000, 00	160	G 1/4	Aluminum	60	870	0,31	0.68
<b>213-880</b>	FILTER	OIL	25	G 1/4	Aluminum	60	870	0,31	0.68
<b>213-930F</b>	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

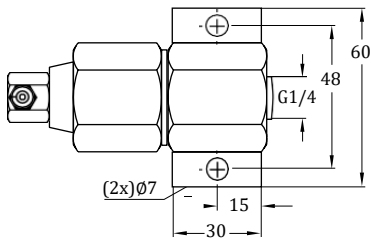


Order number	Designation	Lubricant	Filter rating	Operating pressure max	
				bar	psi
			µm		
<b>213-870 U1</b>	FILTER ELEMENT FOR 213-870	Fluid grease NLGI class 000, 00	63	60	870
<b>213-870 U2</b>	FILTER ELEMENT FOR 213-870F	Fluid grease NLGI class 000, 00	160	60	870
<b>213-880 U1</b>	FILTER ELEMENT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

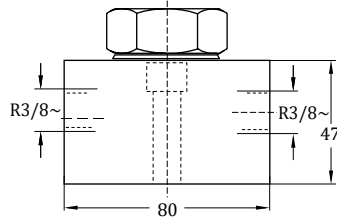
## Filters

# Screen filters for grease

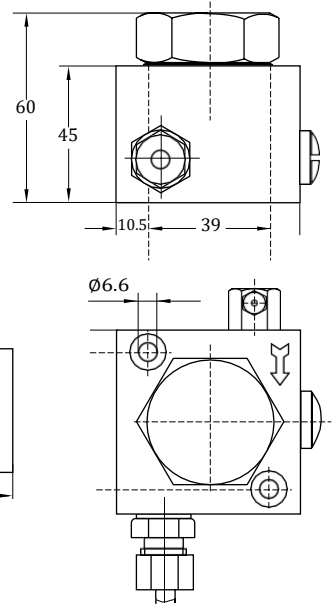
628-36062-3



628-25531-2

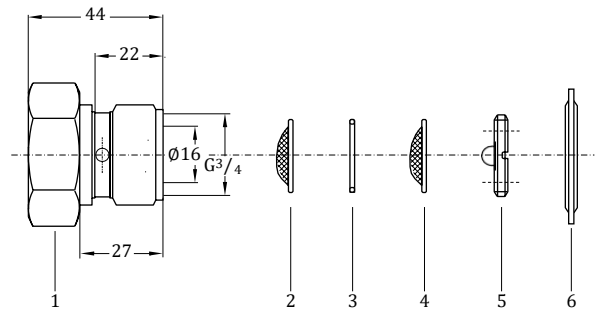


528-36045-6



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
<b>428-21543-2</b>	Hollow screw	1	Steel, galvanized	350	5 080	284	0.63
<b>428-21544-1</b>	Coarse strainer, fineness of filtration 410 µm	2	Brass	350	5 080	2	0.005
<b>428-21546-2</b>	Spacing ring	3	Spring steel	350	5 080	2	0.005
<b>428-21545-1</b>	Fine strainer, fineness of filtration 270 µm	4	Brass	350	5 080	2	0.005
<b>303-17546-1</b>	Threaded ring	5	Steel	350	5 080	12	0.03
<b>220-12238-3</b>	Usit 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

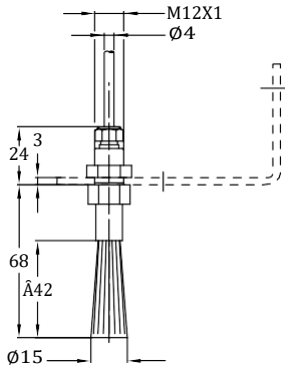
### Applications

- 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

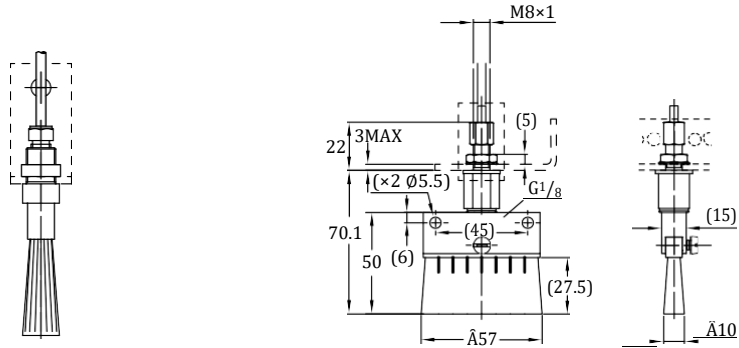
# Brushes

## UC, 233, 068874

UC-1066-10

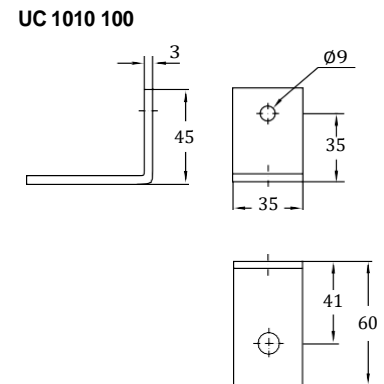
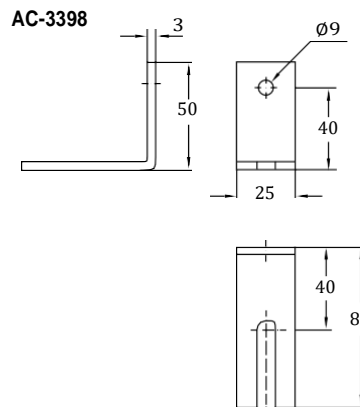
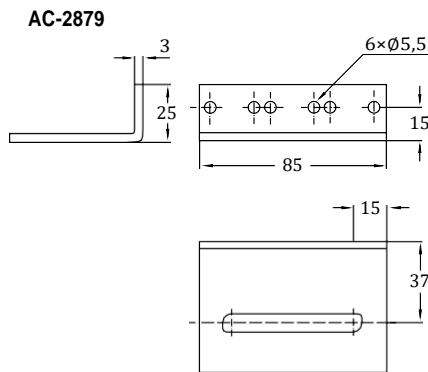


UC-1066-14



Order number	Designation	Shape	Tube ØD	Shape Temperature		Material	Fixation Weight			
				mm	°C		°F	mm	g	lb
UC-1066-01	OIL BRUSH BRISTLE, 55x16	Rectangle	4 mm	55×16	10 to 60	50 to 140	Bristle	Ø8,5	110	0.24
UC-1066-02	OIL BRUSH MS, 55x16	Rectangle	4 mm	55×16	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	55×16	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	55×16	10 to 300	50 to 572	Brass	-	-	-
233-14419-1	OIL BRUSH BZ MODEL SPF 57 G 1/8	Rectangle	G 1/8	55×16	10 to 200	50 to 392	Brass	2×Ø5,5	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 Ø 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



## Tools

# Pipe cutter



### Description

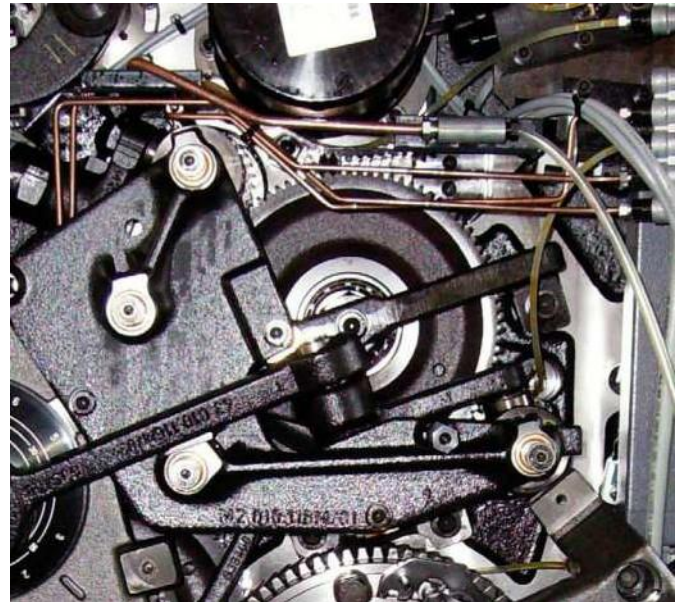
This manual pipe cutter is particularly suitable for pipes made of copper, brass, light metal and hard plastic, as well as for steel and stainless steel pipes with outside diameters from 3 to 35 mm and a maximum cutting depth of 2.5 mm

### 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 × 58 × 45 mm 5.70 × 2.28 × 1.77 in

### Order information

Order number	Designation	Tube			Weight	
		Ø mm	g	lb		
<b>223-10540-1</b>	STEEL PIPE CUTTER	3 - 35	356	0.78		
<b>223-10540-2</b>	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

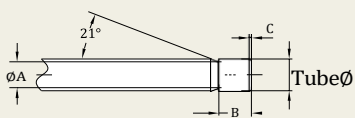
### Technical data

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

### Order information

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

## Tools

# 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		
		∅ mm	kg	lb
<b>223-13700-8</b>	HAND-BENDING MACHINE	6	0,7	1.54
<b>223-13700-9</b>	HAND-BENDING MACHINE	8	1,3	2.86
<b>223-13700-7</b>	HAND-BENDING MACHINE	10	1,18	2.60

## Tools

# 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 1-
Bending radius	270°

### Order information

Order number	Designation	Tube Ø mm	Weight	
			kg	lb
<b>248-803 20</b>	Tube bending fix	4, 6, 8, 10	1,53	3.37
<b>248-803 17</b>	Bending disk	12 (special grooved disk) <sup>1)</sup>	0,378	0.83
<b>248-803 16</b>	Bending disk	4 (retro fitting set) <sup>2)</sup>	0,093	0.21

<sup>1)</sup> 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

<sup>2)</sup> Retro fitting set with grooved disk for older pipe bending devices 248-803.20

## Tools

# 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 Ø6 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 Ø6 mm
Material	steel, metal

#### Order information

Order number	Designation
<hr/>	
<hr/>	

**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

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**005841** DRUM PLUG WRENCH

## Tools

# 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

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**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
<b>001013</b>	LEVER GUN	275	4 000	2,09	4.61
<b>001142</b>	LEVER GUN	400	5 800	1,85	4.08
<b>001133</b>	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 20 V
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
<b>1890</b>	20V Li-ion high-ratio dual output grease gun with single battery	UL
<b>1886</b>	20V Li-ion high-ratio dual output grease gun with single battery, charger and carrying case	UL
<b>1886-E</b>	20V Li-ion high-ratio dual output grease gun with single battery, charger and carrying case	CE
<b>1880</b>	20V Li-ion 2-speed grease gun with multi-function LED and single battery	UL
<b>1882</b>	20V Li-ion 2-speed grease gun with multi-function LED and single battery, charger and carrying case	UL
<b>1882-E</b>	20V Li-ion 2-speed grease gun with multi-function LED and single battery, charger and carrying case	CE
<b>1871</b>	20V Li-ion battery, 2,5 Ah	UL, CE
<b>1872</b>	20V Li-ion battery, 4,0 Ah	UL, CE
<b>1260</b>	12V Li-ion single-speed grease gun with single battery	UL
<b>1262</b>	12V Li-ion single-speed grease gun with single battery, charger and carrying case	UL
<b>1262-E</b>	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 <sup>2)</sup>	30 in	76 cm
Model 1236 <sup>3)</sup>	36 in	91 cm
Model 1248HP <sup>4)</sup>	48 in	122 cm (new)

**Included with the PowerLuber**

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



**Grease coupler <sup>1)</sup>**  
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
<b>169-000-171</b>	FILLER CYLINDER	-
<b>169-000-174</b>	FILL CONNECTION	M20x1,5
<b>5590-0000002</b>	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. 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 <sup>3</sup>	in <sup>3</sup>	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 <sup>1)</sup>	13.8 <sup>1)</sup>	00/000	100	6.1	7	15.43
169-000-084	MANUAL FILLING PUMP 25L,MOBILE	25	350 <sup>1)</sup>	13.8 <sup>1)</sup>	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

<sup>1)</sup> 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 cm<sup>3</sup>/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 <sup>3</sup> /min; 67 in <sup>3</sup> /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 cm<sup>3</sup>/min (152 in<sup>3</sup>/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 <sup>3</sup> /min; 152 in <sup>3</sup> /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
<b>24-1560-3576</b>	Filling pump with transport bracket and plug and socket coupling	CE
<b>24-1560-3595</b>	Filling pump <b>without</b> transport bracket and plug and socket coupling	CE
<b>24-1722-2557</b>	Pump frame with follower plate for grease drums 25 kg/30 l with empty signal	CE
<b>24-1722-2559</b>	Pump frame with follower plate for grease drums 25 kg/30 l, without empty signal	CE

# 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 <sup>3</sup> /min; 24 in <sup>3</sup> /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
<b>24-1560-3577</b>	EL BARREL PUMP EFP	34,5	76.07
<b>24-1560-3578</b>	EL BARREL PUMP EFP WITH SIGNAL INPUT	34,9	76.95
<b>24-1868-4334</b>	HIGH-PRESSURE HOSE, MAX 275 BAR, 5 M	-	-
<b>412-423W</b>	SCREW UNION G1/4A 412-423W	-	-
<b>995-001-500</b>	COUPLING BELL G1/4	-	-
<b>995-000-705</b>	COUPLING PLUG G1/4	-	-
<b>169-000-031</b>	GREASE GUN	-	-

## Accessories for EFP

Order number	Designation	Drums Weight		
		kg	kg	lb
<b>24-1722-2545</b>	CARRYING FRAME	16 / 25	13,2	29.11
<b>24-1722-2551</b>	CARRYING FRAME WITH HANDLE AND WHEELS	16 / 25	16,6	36.60
<b>24-1722-2552</b>	CARRYING FRAME WITH WHEELS	16 / 25	15	33.08
<b>24-1952-2034</b>	FOLLOWER PLATE Ø 265-285	16 / 25	0,7	1.54
<b>24-1952-2035</b>	FOLLOWER PLATE Ø 285-305	16 / 25	1	2.21
<b>24-1952-2036</b>	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
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408-403	223-12361-6	445-519-061	223-12479-5
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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
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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
510-412	223-12542-7	96-7006-0058	223-12479-9
96-0203-0058	223-10814-2	96-7008-0058	223-12479-8
96-0204-0058	223-12477-8	96-7104-0158	223-12480-8
96-0222-0058	223-13016-2	96-7920-0058	223-12285-7
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96-0328-0058	223-14214-8	99-0228-0058	223-14184-2
96-0408-0058	223-12483-5	99-2712-0058	223-13639-9
96-0506-0060	223-10307-2	99-5604-0058	223-13638-6
96-0510-0060	223-13033-2	99-5612-0058	223-14082-3
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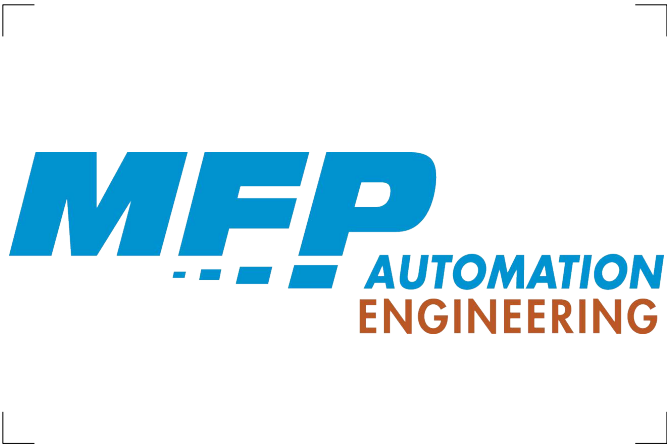
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#### **Important information on product usage**

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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