

# Hydraulic & Offshore SUPPLIES

## Parker High Pressure Hydraulic Flanges

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### Introduction

The 4 bolt flange connections conforming to SAE J518 and ISO 6162-1 and -2 are proven, leak-free connections, especially suited for larger sizes, high pressures and assembly in tight quarters. Threaded port connections such as SAE straight thread O-ring and ISO 6149 are reasonably easy to assemble and provide 6000 psi and higher pressure capability up to size 12 (M27). Beyond this size the pressure rating starts to decrease and assembly torques increase rapidly.

The 4 bolt flange port connections provide ability to connect larger sizes and achieve higher-pressure capability at reasonable assembly torques. Because of the lower assembly torques compared to an equivalent size threaded port, these connections are well suited for tight quarters where wrench clearances are limited.

### Design and construction

Parker 4 bolt flange products are designed to provide different methods of connecting a tube, hose, pipe or another fitting to the SAE standard 4-bolt flange port.

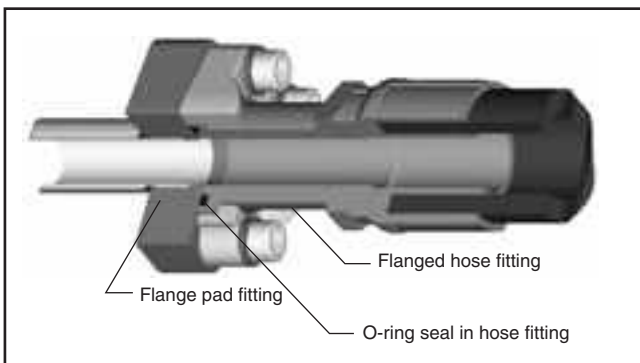
**Flange fittings** – All Parker flange fittings, except for those with square mounting hole pattern, are designed to conform to O-ring groove, bolt holes and bolt pattern dimensions of either Code 61 or Code 62 of SAE J518 and ISO 6162-1 or ISO 6162-2.

The flange adapters and 4 bolt flange block fittings have O-ring grooves conforming to dimensions in ISO 6162-1 and -2 (SAE J518). The 4 bolt flange block fittings have through holes for the mounting bolts, again conforming to ISO 6162-1 and -2 (SAE J518).

The counter fittings have a flat face (no O-ring groove) and the mounting holes are tapped. Where these fittings are used, the seal is in the mating part (flange adapter, flange hose fitting, flange block fitting, etc.) as shown in Fig. 1.

Dimensions other than the O-ring groove, bolt holes, bolt pattern, and the flange foot print are not governed by any industry standard. However, Parker product design follows common industry practice and sound engineering.

Fig. 1 – Flange pad fitting



**Flange clamps** – Clamps are used for providing the holding power to the 4 bolt flange connection. They are offered in split and captive (one-piece) versions. The captive ones are also offered with either drilled or tapped bolt holes. The captive flange clamp with tapped holes is used while connecting a tube to another tube or a hose.

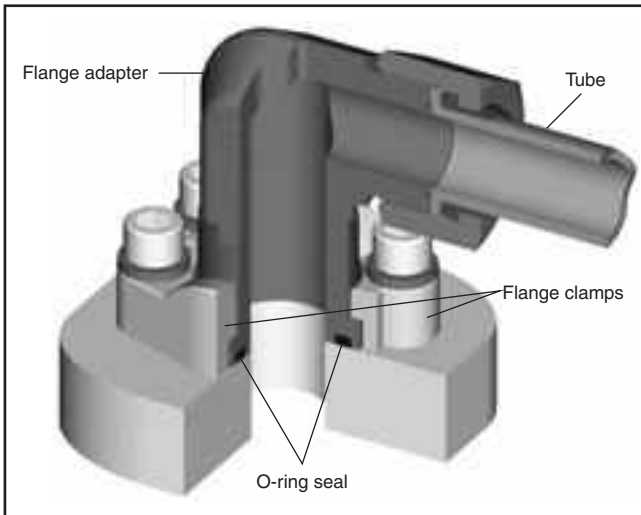
Parker flange clamps are forged for higher strength and durability. They meet all requirements of ISO 6162-1 and -2 (SAE J518). The split clamps make it easy to assemble the connection in close quarters. They also make removal of the flange head component, such as a hose assembly, easy by loosening all four bolts and removing one clamp half.

**Connector plate** – Connector plate is used as a middle plate to connect two flange heads with O-ring grooves, such as two hose assemblies with flange connection ends. The flat surface of the plate provides sealing surface on each side for the O-ring housed in the hose ends.

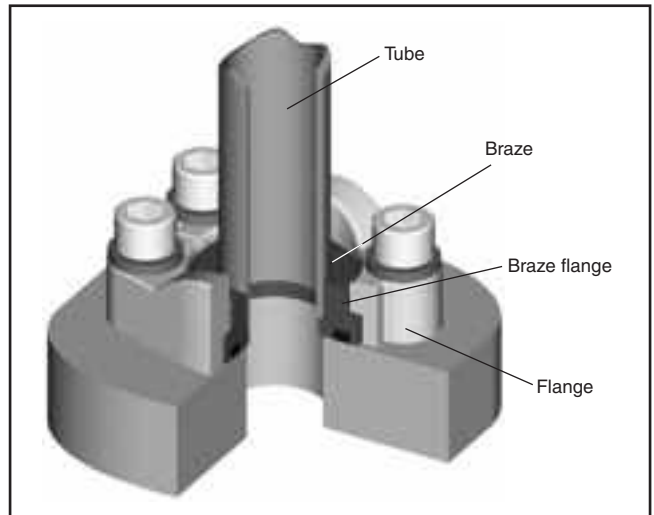
**Spacer plate** – Spacer plate provides access to the system fluid via the gage port on the side. The plate is sandwiched in the flange connection to provide this access.

**Plugs** – Plugs provide a means to block off the 4 bolt flange port with and without clamps, and to plug the end of a pipe (via welding).

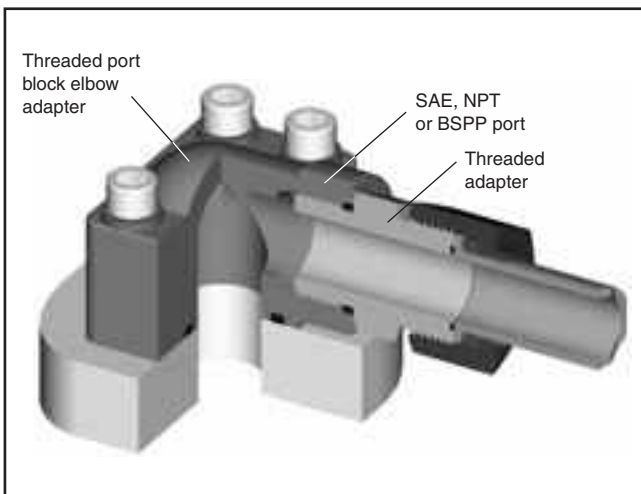
Methods of connection – Parker 4 bolt flange products



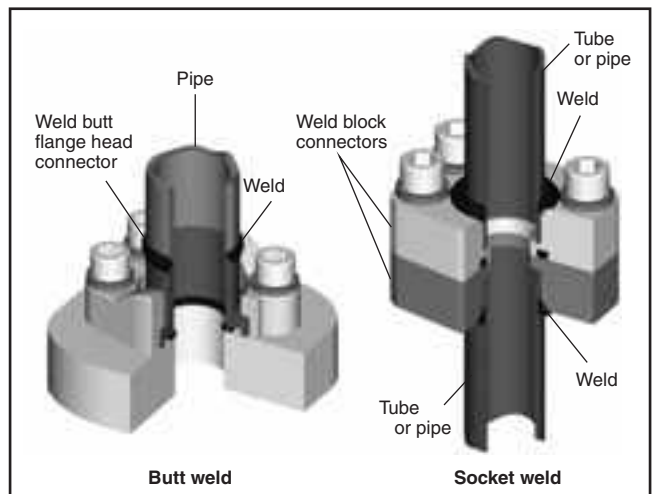
**Connecting tube and hose via a threaded tube/hose end connection:** The flange adapters provide means of connecting tubes or hoses to a 4 bolt flange port via threaded connection such as Seal-Lok (ORFS), Triple-Lok® (37° flare), etc.



**Connecting tubes via brazing.** The braze flange head fittings for Code 61 and Code 62 connections provide the means of connecting tubes directly to 4 bolt flange ports.



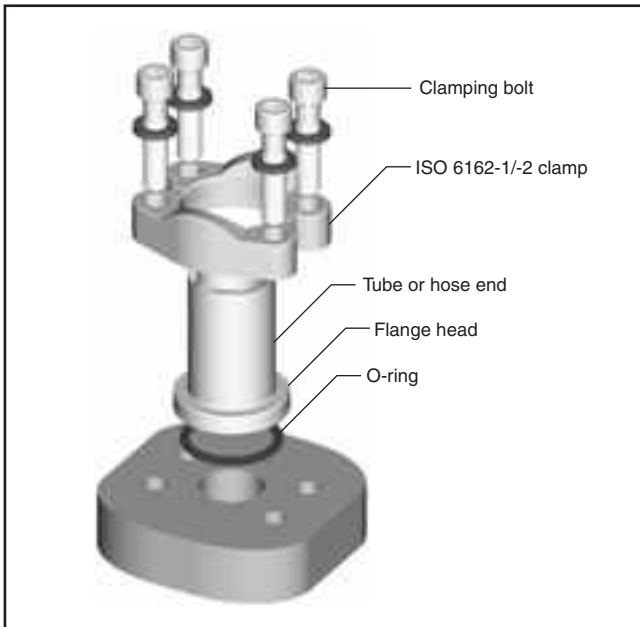
**Connecting tube, hose and pipe via threaded port connection.** The flange head and flange block conversion adapters provide the means of converting a 4 bolt flange port to either SAE, NPT or BSPP port. A user can then use appropriate threaded adapters to connect tube and hose, or connect threaded pipe directly into NPT and BSPP ports.



**Connecting tube and pipe via welding.** The flange head and flange block weld fittings provide the means of connecting tubes and pipes to 4 bolt flange port via socket welding for tubes and socket and butt welding for pipes.



### How flange connections work



**4 bolt flange connection ISO 6162-1 and -2 (SAE J518)** is a proven leak-free connection, especially suited for larger sizes. As a result, it has achieved worldwide acceptance.

The connection's success is in its simplicity. It is a static face seal using a high durometer O-ring for the seal and clamps and bolts for holding power as shown here.

The (O-ring) seal is compressed between the bottom of the groove in the flange head and the flat surface of the port or flange pad, providing a reliable soft seal. The alternate seal plate has a high durometer bonded rubber seal on the inside edge, which compresses between the two flat surfaces, providing a soft seal with the same reliability. A metal-to-metal contact at the outer face of the flange with the port face keeps the seal from extruding under pressure. This metal-to-metal contact is maintained by the clamping force provided by tightening of the bolts via the clamps.

This simple design provides several advantages over threaded port connections, such as NPT, SAE, BSPP, ISO 6149, etc., in larger sizes:

- Ability to connect up to 5 inch O.D. tube (ISO 6162-1 only)
- Much lower tightening torque required from the four bolts compared to that required for equivalent size threaded port.
- Less tightening torque means smaller wrenches and wrench swing clearances – providing ease of assembly in tight quarters.
- Up to 6000 psi capability through 2" size (ISO 6162-2 only)
- Single seal point between tube/pipe/hose assembly and the port
- Ease of disassembly through use of split clamps

The connection has one disadvantage – it requires a larger area (foot print) on the component than an equivalent threaded port.

## Flanges



### Assembly of flanges

- SAE flange adapters
- SAE 4 bolt flanges
- Gear pump flanges
- CETOP square flanges

1



- Make sure sealing surfaces are free of burrs, nicks, scratches or any contamination
- Lubricate the O-ring with system fluid or compatible lubricant

2



- Position flange and clamp halves
- Place lock washers on bolts and bolt through clamp halves

3



- Hand tighten bolts
- Torque bolts in diagonal sequence in small increments to the appropriate torque level listed in chart

4



- Tighten bolts according to chart

#### 3000 PSI Series (Code 61) Flange recommend screw torque

Dash size	Flange size	Inch screws (J518)	Torque Nm <sup>1</sup>	Metric screws (ISO 6162)	Torque Nm <sup>1</sup>
8	1/2"	5/16-18	17 ± 2	M8	25
12	3/4"	3/8-16	25 ± 4.5	M10	49
16	1"	3/8-16	31 ± 4.5	M10	49
20	1.1/4"	7/16-14	41 ± 5	M10	85
24	1.1/2"	1/2-13	52 ± 6	M12	85
32	2"	1/2-13	60 ± 6	M12	92
40	2.1/2"	1/2-13	85 ± 9	M12	95
48	3"	5/8-11	144 ± 15	M16	220
56	3.1/2"	5/8-11	125 ± 8	M16	220
64	4"	5/8-11	125 ± 8	M16	220
80	5"	5/8-11	125 ± 8	M16	220

#### 6000 PSI Series (Code 62) Flange recommend screw torque

Dash size	Flange size	Inch screws (J518)	Torque Nm <sup>1</sup>	Metric screws (ISO 6162)	Torque Nm <sup>1</sup>
8	1/2"	5/16-18	17 ± 2	M8	25
12	3/4"	3/8-16	30 ± 4.5	M10	49
16	1"	7/16-14	46 ± 4.5	M12	85
20	1.1/4"	1/2-13	69 ± 6	M12	135
24	1.1/2"	5/8-11	125 ± 8	M16	210
32	2"	3/4-10	208 ± 20	M20	425

#### Hydraulic Flange recommend screw torque

Socket screw bolt circle (LK)	Socket head cap screws	Tightening torques Nm <sup>1</sup>
LK30	M6	10
LK35	M6	10
LK40	M6	10
LK51	M10	49
LK55	M8	25
LK56	M10	49
LK62	M10	49
LK72.5	M12	85

1) Tolerances: max. 10 %  
min. 0 %



## Technical data

### Flange screws

#### SAE Flanges according to ISO 6162-1 and -2 (SAE J518)

- metric screws according to  
DIN 912-8.8 (ISO 4762-8.8) or  
DIN 912-10.9 (ISO 4762-10.9)<sup>1</sup>
- UNC screws according to ASA B 18.3

#### Square flanges according to ISO 6164 (1994) and Cetop

- metric screws according to  
DIN 912-8.8 (ISO 4762-8.8) or  
DIN 912-10.9 (ISO 4762-10.9)<sup>1</sup>

#### Gear pump flanges

- metric screws according to  
DIN 912-8.8 (ISO 4762-8.8)

<sup>1</sup> Screws with grade 10.9/12.9 are to be used, when the material for the flanges is high tempered!

### Used Sealing

#### Materials

Flanges according **SAE J518 (ISO 6162-1 and -2)**, **ISO 6164**, **Cetop** and all **gear pump flanges** in this catalogue are sealed with an O-ring. The seals of our flanges are out of the following materials:

- NBR (e.g. perbunan) 90 durometer is our standard seal material for hydraulic **steel** flange applications.
- FKM (e.g. FKM) 85 or 90 durometer is our standard seal material for hydraulic **stainless steel** flange applications.

Perbunan = registered trademark of Bayer

#### Dimensions

O-ring dimensions of ISO 6164 flanges, Cetop flanges and gear pump flanges are shown direct on the product catalogue page. For all flanges according to **SAE J518 (ISO 6162-1 and -2)** the O-ring dimension are according to the following table:

Nominal flange size	Nominal-inch tube size (in inches)	ISO 3601-1 O-ring	SAE J515 O-ring	SAE J515 O-ring size number
13	1/2	19×3.55	18.64×3.53	210
19	3/4	25×3.55	24.99×3.53	214
25	1	32.5×3.55	32.92×3.53	219
32	1 1/4	37.5×3.55	37.69×3.53	222
38	1 1/2	47.5×3.55	47.22×3.53	225
51	2	56×3.55	56.74×3.53	228
64	2 1/2	69×3.55	69.44×3.53	232
76	3	85×3.55	85.32×3.53	237
89	3 1/2	97.5×3.55	98.02×3.53	241
102	4	112×3.55	110.72×3.53	245
127	5	136×3.55	136.12×3.53	253

### Pressure ratings

The maximum recommended working pressure is indicated for each article.

Before using a part, please take notice of the pressure ratings.

All pressure indications are based on a working temperature from –20° celsius up to +100° celsius (resp. ambient temperature from –40° celsius up to +120° celsius). Outside of this temperature range the physical properties of the material is affected and the maximum recommended working pressure is reduced.

The indicated working pressures refer only to the flange itself.

For the tubes, fittings and connections the pressure ratings of the specific manufacturer must also be taken into account.

### Materials

#### SAE flanges according to ISO 6162-1 and -2 (SAE 518)

Flange clamps, flange adapter and forged 4 bolt flanges are made of the material ST 52.3 or compatible for **steel** construction. For **stainless steel** constructions we are using for flange clamps, flange adapters and 4 bolt forged flanges the material 1.4401 (316) or compatible. For special applications it is also possible to get the flange adapters made from the material 1.4571 (316Ti).

#### Square flanges according to ISO 6164 (1994) and Cetop

Steel construction: ST52.3, C40 or compatible

Stainless steel construction: 1.4571 (316Ti) or compatible

#### Gear pump flanges

Steel forged construction: GTW40 or compatible

Steel construction: ST52.3, 11SMnPb30 or compatible

If different materials are used for manufacturing, this will be shown on the catalogue product page.

### Surface protection

All surface order possibilities are described on each catalogue page!

Surface possibilities are:

1. Oil dipped
2. silver surface protection type A3K according to DIN EN ISO 4042
3. Cr(VI)-free surface protection type CF with better corrosion resistance than A3C surface protection

## Order codes screws and O-rings

### Screws for flanges

according ISO 6162-1 and -2 (SAE J518)

Nominal flange size			Screws for flange halves		Screws for full flanges	
Series	ISO	SAE	metr. Order code	UNC Order code	metr. Order code	UNC Order code
3000 PSI	13	1/2	ZYLS8X25VZX	UNC5/16-18X11/4	ZYLS8X30VZX	UNC5/16-18X11/4
3000 PSI	19	3/4	ZYLS10X30VZX	UNC3/8-16X11/4	ZYLS10X35VZX	UNC3/8-16X11/2
3000 PSI	25	1	ZYLS10X30VZX	UNC3/8-16X11/4	ZYLS10X35VZX	UNC3/8-16X11/2
3000 PSI	32	1 1/4	ZYLS10X30VZX	UNC7/16-14X11/2	ZYLS10X40VZX	UNC7/16-14X11/2
3000 PSI	32	1 1/4	ZYLS10X35VZX *	—	—	—
3000 PSI	32	1 1/4	ZYLS12X35VZX *	—	—	—
3000 PSI	38	1 1/2	ZYLS12X35VZX	UNC1/2-13X11/2	ZYLS12X45VZX	UNC1/2-13X13/4
3000 PSI	38	1 1/2	ZYLS14X35VZX *	—	—	—
3000 PSI	51	2	ZYLS12X35VZX	UNC1/2-13X11/2	ZYLS12X45VZX	UNC1/2-13X13/4
3000 PSI	51	2	ZYLS14X35VZX *	—	—	—
3000 PSI	64	2 1/2	ZYLS12X40VZX	UNC1/2-13X11/2 *	ZYLS12X45VZX	UNC1/2-13X13/4
3000 PSI	64	2 1/2	ZYLS14X35VZX *	UNC1/2-13X13/4	—	—
3000 PSI	76	3	ZYLS16X50VZX	UNC5/8-11X2 *	ZYLS16X55VZX	UNC5/8-11X21X4
3000 PSI	76	3	ZYLS16X45VZX *	UNC5/8-11X13/4	—	—
3000 PSI	89	3 1/2	ZYLS16X50VZX	UNC5/8-11X2 *	ZYLS16X55VZX	UNC5/8-11X21X4
3000 PSI	89	3 1/2	ZYLS16X45VZX *	—	—	—
3000 PSI	102	4	ZYLS16X50VZX	UNC5/8-11X2	ZYLS16X55VZX	UNC5/8-11X21X4
3000 PSI	102	4	ZYLS16X45VZX *	—	—	—
3000 PSI	127	5	ZYLS16X50VZX *	UNC5/8-11X21/4	ZYLS16X55VZX	UNC5/8-11X21X4
3000 PSI	127	5	ZYLS16X55VZX	UNC5/8-11X2 *	—	—
Serie	ISO	SAE	metr.	UNC	metr.	UNC
6000 PSI	13	1/2	ZYLS8X30VZX	UNC5/16-18X11/4	ZYLS8X30VZX	UNC5/16-18X11/4
6000 PSI	19	3/4	ZYLS10X35VZX	UNC3/8-16X11/2	ZYLS10X35VZX	UNC3/8-16X11/2
6000 PSI	25	1	ZYLS12X45VZX	UNC7/16-14X11/2 *	ZYLS12X45VZX	UNC7/16-14X11/2
6000 PSI	25	1	—	UNC7/16-14X13/4	—	—
6000 PSI	32	1 1/4	ZYLS14X50VZX *	UNC1/2-13X13/4	ZYLS14X50VZX	UNC1/2-13X13/4
6000 PSI	32	1 1/4	ZYLS12X45VZX	—	—	—
6000 PSI	38	1 1/2	ZYLS16X55VZX	UNC5/8-11X21/4	ZYLS16X55VZX	UNC5/8-11X21X4
6000 PSI	38	1 1/2	—	UNC5/8-11X2 *	—	—
6000 PSI	51	2	ZYLS20X65VZX	UNC3/4-10X23/4	ZYLS20X70VZX	UNC3/4-10X23X4
6000 PSI	51	2	ZYLS20X70VZ	UNC3/4-10X21/2 *	—	—
6000 PSI	64	2 1/2	ZYLS24X75VZX	—	ZYLS24X90VZX	—
6000 PSI	76	3	ZYLS30X90VZX	—	ZYLS30X110VZX	—

\* = are not implemented in the ISO 6162 -1 and ISO 6162-2.

### Screws for hydraulic flanges

(BFG, BFW)

Typ	Screws Order code	Description
BFG (10L-28L)	ZYLS6X22VZX	4 pieces
BFG (20S)	ZYLS8X25VZX	4 pieces

Type	LK	Screws		Description	
		Order code	Order code		
BFW	10L	35	ZYLS6X22VZX	ZYLS6X35VZX	2 Pieces of each screws
BFW	12L	35	ZYLS6X22VZX	ZYLS6X35VZX	2 Pieces of each screws
BFW	15L	35	ZYLS6X22VZX	ZYLS6X35VZX	2 Pieces of each screws
BFW	16S	35	ZYLS6X22VZX	ZYLS6X40VZX	2 Pieces of each screws
BFW	20S	35	ZYLS6X22VZX	ZYLS6X45VZX	2 Pieces of each screws
BFW	15L	40	ZYLS6X22VZX	—	4 Pieces
BFW	18L	40	ZYLS6X22VZX	—	4 Pieces
BFW	22L	40	ZYLS6X22VZX	—	4 Pieces
BFW	28L	40	ZYLS6X20VZX	ZYLS6X50VZX	2 Pieces of each screws
BFW	35L	40	ZYLS6X22VZX	ZYLS6X60VZX	2 Pieces of each screws
BFW	20S	40	ZYLS6X22VZX	ZYLS6X45VZX	2 Pieces of each screws
BFW	35L	55	ZYLS8X25VZX	ZYLS8X60VZX	2 Pieces of each screws
BFW	42L	55	ZYLS8X25VZX	ZYLS8X70VZX	2 Pieces of each screws
BFW	20S	55	ZYLS8X25VZX	ZYLS8X50VZX	2 Pieces of each screws
BFW	25S	55	ZYLS8X25VZX	ZYLS8X55VZX	2 Pieces of each screws
BFW	30S	55	ZYLS8X25VZX	ZYLS8X50VZX	2 Pieces of each screws

### O-rings for flanges

SAE J518

ISO (DN)	SAE (Zoll)	O-ring	
		NBR Order code	FKM Order code
13	1/2	OR18.64X3.53X	OR18.64X3.53VITX
19	3/4	OR25X3.53X	OR25X3.53VITX
25	1	OR32.92X3.53X	OR32.92X3.53VITX
32	1 1/4	OR37.69X3.53X	OR37.69X3.53VITX
38	1 1/2	OR47.22X3.53X	OR47.22X3.53VITX
51	2	OR56.75X3.53X	OR56.75X3.53VITX
64	2 1/2	OR69.44X3.53X	OR69.44X3.53VITX
76	3	OR85.32X3.53X	OR85.32X3.53VITX
89	3 1/2	OR98.02X3.53X	OR98.02X3.53VITX
102	4	OR110.72X3.53X	OR110.72X3.53VITX
127	5	OR136.12X3.53X	OR136.12X3.53VITX

### O-rings for hydraulic flanges

(BFG, BFW)

LK	O-ring size	Order code
35	20x2.5	OR20X2.5X
40	26x2.5	OR26X2.5X
55	32x2.5	OR32X2.5X





### Features, advantages and benefits

- 1. Manufacture** – Code 61/62 fittings conform to SAE J518 and ISO 6162. This specification controls dimensions and tolerances of Code 61/62 port connections.
- 2. Available configurations** – Over 60 different configurations are standard in a range of sizes. The breadth of product provides flexibility in plumbing to insure the best solution possible.
- 3. Materials** – All configurations are available as standard in steel, with commonly used styles available in stainless steel.
- 4. Available sizes** – Most configurations are available as standard in 1/2" through 2" with sizes as large as 5" available in some styles.
- 5. Construction** – Parker offers a completely forged steel product line to insure our products hold up in the most rigorous applications.
- 6. Envelope size** – Forged construction provides a compact design compared to flanges machined from block steel.
- 7. Pressure ratings** – Code 61/62 fittings and flanges have pressure ratings up to 6000 psi. The recommended working pressure can be found directly on each catalogue page. This is a quick and easy way to verify the part in question meets the application pressure requirements.
- 8. Flange kits** – To reduce ordering and assembly errors, kits that include mounting hardware (bolts, O-ring, and if needed flange halves) are available.
- 9. Mounting hardware** – Bolts used in mounting kits are designated at least grade 8.8 to provide long dependable use.

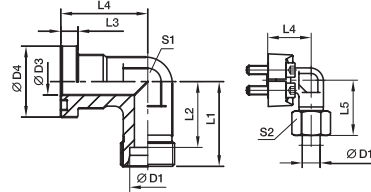
How to order

SAE Flange adapters



WFS SAE 90° Elbow flange adapter

SAE Flange / EO 24° cone end  
(ISO 6162-1/-2)



3000 PSI Series

Nom. flange size		D1 <sup>2)</sup>	Dimensions										Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)		D3	D4	L1	L2	L3	L4	L5	S1	S2	(metr.)	(unc.)	CF			71	
1/2	13	12S	12	30.2	50	42.5	6.7	44	58.5	22	24	M 8x25	5/16x1 1/4	0.38	<b>WFS32/12S</b>	210	210	
1/2	13	15L	12	30.2	36	29.0	6.7	36	44.0	24	27	M 8x25	5/16x1 1/4	0.40	<b>WFS32/15L</b>	315	315	
1/2	13	16S	12	30.2	38	29.5	6.7	36	48.0	24	30	M 8x25	5/16x1 1/4	0.43	<b>WFS32/16S</b>	350	350	
1/2	13	18L	12	30.2	50	42.5	6.7	44	59.0	22	32	M 8x25	5/16x1 1/4	0.44	<b>WFS32/18L</b>	315	315	
3/4	19	16S	19	38.1	64	55.5	6.7	53	73.5	27	30	M10x30	3/8x1 1/4	0.60	<b>WFS33/16S</b>	350	350	
3/4	19	18L	19	38.1	39	31.5	6.7	42	48.0	30	32	M10x30	3/8x1 1/4	0.66	<b>WFS33/18L</b>	315	315	
3/4	19	22L	19	38.1	41	33.5	6.7	42	50.0	30	36	M10x30	3/8x1 1/4	0.66	<b>WFS33/22L</b>	160	160	
3/4	19	20S	17	38.1	43	32.5	6.7	42	54.0	30	36	M10x30	3/8x1 1/4	0.76	<b>WFS33/20S</b>	350	350	
3/4	19	25S	17	38.1	45	33.0	6.7	42	57.0	30	46	M10x30	3/8x1 1/4	0.89	<b>WFS33/25S</b>	350	350	
3/4	1	25	20S	20	44.5	65	54.5	8.0	60	77.0	34	36	M10x30	3/8x1 1/4	0.7	<b>WFS33/25</b>	350	350
1	1	25	22L	18	44.5	65	57.5	8.0	60	74.0	34	36	M10x30	3/8x1 1/4	0.7	<b>WFS34/22L</b>	160	160
1	1	25	28L	25	44.5	44	36.5	8.0	45	53.0	36	41	M10x30	3/8x1 1/4	0.7	<b>WFS34/28L</b>	160	160
1	1	25	25S	20	44.5	48	36.5	8.0	45	57.0	36	46	M10x30	3/8x1 1/4	0.7	<b>WFS34/25S</b>	160	160
1	1	25	30S	24	44.5	50	36.5	8.0	45	63.0	36	50	M10x30	3/8x1 1/4	0.89	<b>WFS34/30S</b>	160	160
1 1/4	32	35L	32	50.8	57	46.5	8.0	50	68.0	41	50	M10x35	3/8x1 1/4	1.13	<b>WFS35/35L/10<sup>3)</sup></b>	200	200	
1 1/4	32	25S	27	50.8	55	43.0	8.0	50	67.0	41	46	M10x35	3/8x1 1/4	1.13	<b>WFS35/25S/10</b>	200	200	
1 1/4	32	30S	28	50.8	57	43.5	8.0	50	70.0	41	50	M10x35	3/8x1 1/4	1.13	<b>WFS35/30S/10</b>	200	200	
1 1/4	32	38S	28	50.8	59	43.0	8.0	50	74.0	46	60	M10x35	3/8x1 1/4	1.13	<b>WFS35/38S</b>	200	200	
1 1/4	32	35L	32	50.8	57	46.5	8.0	50	68.0	41	50	M12x40	7/16x1 1/2	1.35	<b>WFS35/35L</b>	160	160	
1 1/4	32	25S	27	50.8	55	43.0	8.0	50	67.0	41	46	M12x40	7/16x1 1/2	1.35	<b>WFS35/25S</b>	200	200	
1 1/4	32	30S	28	50.8	57	43.5	8.0	50	70.0	41	50	M12x40	7/16x1 1/2	1.40	<b>WFS35/30S</b>	200	200	
1 1/4	32	38S	28	50.8	59	43.0	8.0	50	74.0	41	60	M12x40	7/16x1 1/2	1.53	<b>WFS35/38S</b>	200	200	
1 1/2	38	35L	30	60.3	78	67.5	8.0	66	83.0	50	50	M12x35	1/2x1 1/2	1.55	<b>WFS36/35L</b>	160	160	
1 1/2	38	42L	36	60.3	58	47.0	8.0	55	70.0	50	60	M12x35	1/2x1 1/2	1.60	<b>WFS36/42L</b>	160	160	
1 1/2	38	38S	36	60.3	64	48.0	8.0	55	79.0	50	60	M12x35	1/2x1 1/2	1.95	<b>WFS36/38S</b>	200	200	

<sup>1)</sup> Pressure shown = Item deliverable  
<sup>2)</sup> L = light series; S = heavy series

PN (bar) = PN (MPa)  
10

Delivery without nut and ring.  
Information on ordering complete fittings or alternative sealing materials see page M11.

<sup>3)</sup> Order code for the elbow flange adapter assembled with FH35/10CFX and M10X35 screws.

\*Please add the suffixes below to the material/surface required

Material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	WFS32/16SCFX	WFS32/16S71X	MDCFU NBR
Stainless steel	WFS32/16SOMDCF	WFS32/16SOMD71	MD71U VIT



Catalogue 4100-8/UK

The right way to order made easy!

Step 1 Selecting order code

1. All flange sizes available in our program of supply are clearly listed in the index at the front of this catalogue.
2. Open the catalogue at the corresponding page containing detailed information of the product of your choice.
3. Select the required flange size!  
The basic order code is printed in bold type on the right-hand side of the table of dimensions.

Example: **WFS34/30S**

Step 2 Selecting material and surface ...

Now simply add the corresponding ID code for the surface and material variant of the product you require to the basic order code.  
This ID code is contained in the table printed at the bottom of every page.

Example: WFS34/30S + CFX = **WFS34/30SCFX**

4. **Ordering single parts**  
Example: single part, Cr(VI)-free galvanized  
WFS34/30S + CFX = **WFS34/30SCFX**
5. **Ordering complete types**  
Example: order incl. splitflanges, metric-screw pack and O-ring  
WFS34/30S + OMDCF = **WFS34/30SOMDCF**
6. **Order containing nut and cutting ring**  
Example: flange incl. splitflanges, metric-screw pack, O-ring, nut and cutting ring  
WFS34/30S + CF = **WFS34/30SCF**
7. **Order with functional nut**  
Example: flange incl. splitflanges, metric-screw pack, O-ring, nut and functional nut  
WFS34/30 (+Z) S + CF = **WFS34/30ZSCF**
8. **Other sealing materials**  
Example: flange made of steel incl. splitflanges, metric-screw pack and O-ring made of **FKM** (for example, FKM).  
WFS34/30S + VITOMDCF = **WFS34/30SVITOMDCF**  
  
Example: flange made of stainless steel incl. splitflanges, metric-screw pack and O-ring made of **NBR** (for example, Perbunan).  
WFS34/30S + NBRMD71 = **WFS34/30SNBROMD71**

Perbunan = registered trademark of Bayer

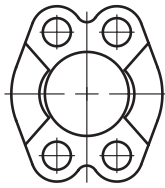
The corresponding order variant is contained in the table printed at the bottom of every page in the catalogue.

# Visual index

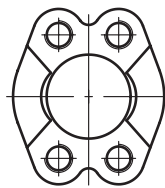
## SAE Flange clamps



FHS – p. M15



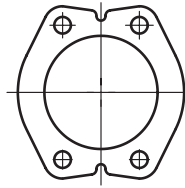
FUS – p. M16



FUSM – p. M17



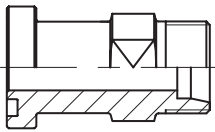
FHSF – p. M18



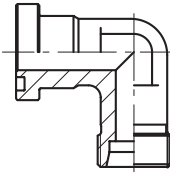
FUSF – p. M19

## SAE Flange adapters

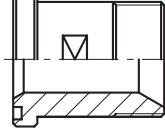
EO 24° cone end



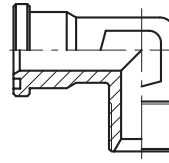
GFS – p. M20



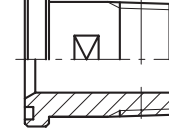
WFS – p. M22



GFS-G – p. M24



WFS-G – p. M25



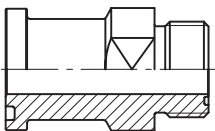
GFS-N – p. M26

BSPP 60° cone end

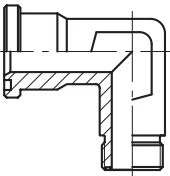
Male NPT thread

O-Lok® ORFS end

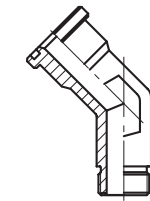
Triple-Lok® 37° flare end



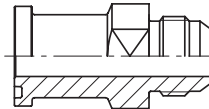
L(O)HQ – p. M27



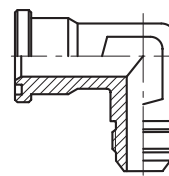
L(O)EMQ – p. M28



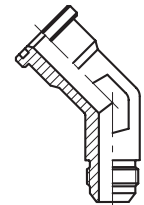
L(O)VQ – p. M29



XHQ – p. M30



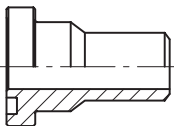
XEMQ – p. M31



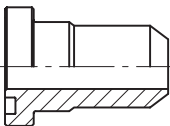
XVQ – p. M32

Butt weld end

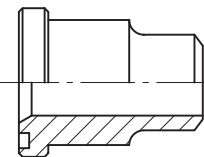
Socket weld end



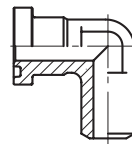
ASR – p. M33



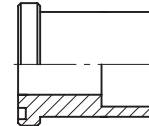
AS – p. M34



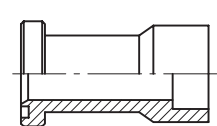
ASL – p. M36



WAS – p. M37



ES – p. M38

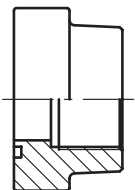


ESL – p. M40

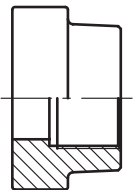
## SAE 4 bolt flanges

BSPP Female thread

Female NPT thread



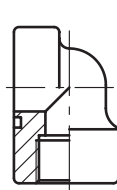
PFF-G – p. M41



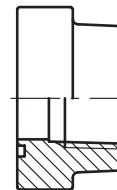
PCFF-G – p. M42



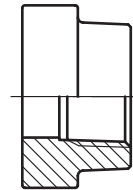
PAFSF-G – p. M43



PEFF-G – p. M44



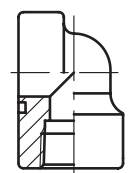
PFF-N – p. M45



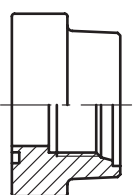
PCFF-N – p. M46

Female metric and UN/UNF thread

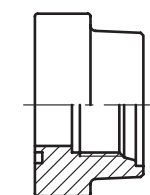
EO 24° cone end



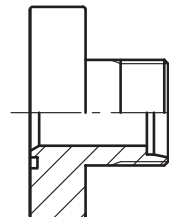
PEFF-N – p. M47



PAFS-M – p. M48



PAFS-U – p. M49



PFF-..S/L – p. M50



PAFG-90M – p. M51

<p>BSPP 60° cone end</p> <p><b>PAFG-G</b> – p. M52      <b>PAFG-90G</b> – p. M53</p>		<p>Triple-Lok® 37° flare end</p> <p><b>PAFG-X</b> – p. M54      <b>PAFG-90X</b> – p. M55</p>		<p>O-Lok® ORFS end</p> <p><b>PAFG-L</b> – p. M56      <b>PAFG-90L</b> – p. M57</p>	
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<p>Butt weld end</p> <p><b>PAFS-B</b> – p. M58      <b>PGFS-B</b> – p. M59      <b>PAFS-90B</b> – p. M60</p>			<p>Socket weld end</p> <p><b>PAFS-S</b> – p. M61      <b>PGFS-S</b> – p. M62      <b>PAFSF-S</b> – p. M63      <b>PAFS-90S</b> – p. M64</p>			
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Complete flange connections

**PDFS-G** – p. M65      **PDFS-B** – p. M66      **PDFS-S** – p. M67

SAE Flange accessories

**PCFF** – p. M68      **PCCFF** – p. M69      **CPM** – p. M70      **AP** – p. M71      **PMQ flat** – p. M72      **PMQ** – p. M73

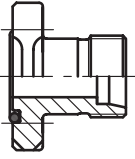
**PAGL-(G/M)** – p. M74      **PRF** – p. M75



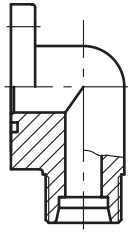
## Visual index

### Gear pump flanges

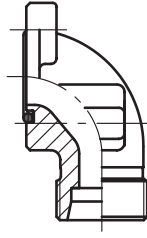
EO 24° cone end



**BFG** – p. M76

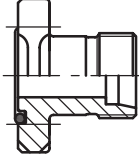


**BFW** – p. M77



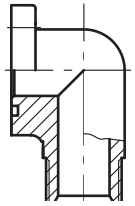
**BFW3** – p. M78

O-Lok® ORFS end

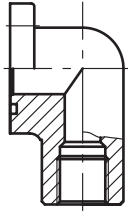


**BFG-L** – p. M79

Male/Female BSPP thread

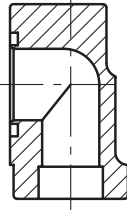


**BFW-G** – p. M80



**BFW-GI** – p. M81

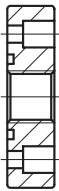
Socket weld end



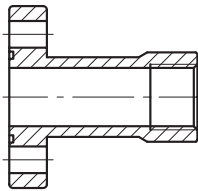
**BFW-S** – p. M82

### Gear pump flanges

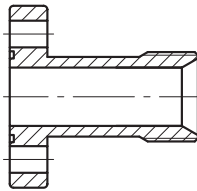
Special pump size flanges



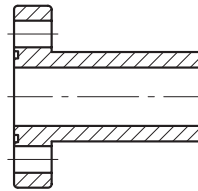
**PF** – p. M83



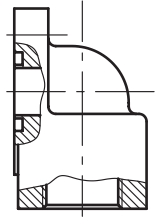
**PFL** – p. M83



**PFE** – p. M84

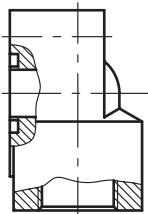


**PFB** – p. M84

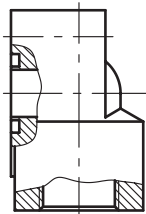


**BFW3-G** – p. M85

Aluminium flanges



**PWDS-G** – p. M86

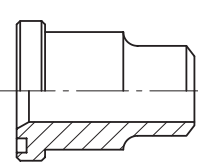


**PWDA** – p. M87

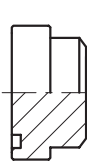
### ISO 6164 Square flanges



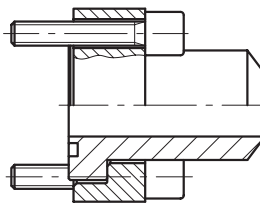
**PSFC** – p. M88



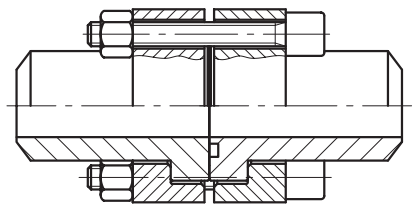
**PSFA-B** – p. M89



**PSFP** – p. M90

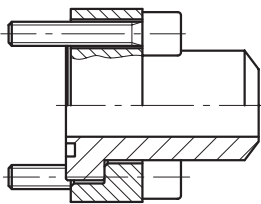


**PSF-B** – p. M91

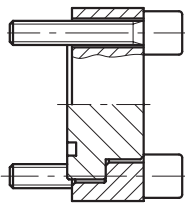


**PDSF-B** – p. M92

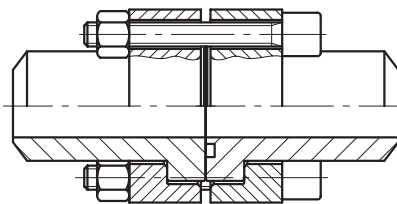
### Cetop square flanges



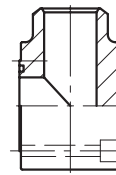
**PCF-B** – p. M93



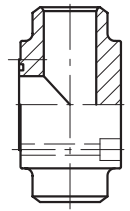
**PPCF** – p. M94



**PDCF-B** – p. M95



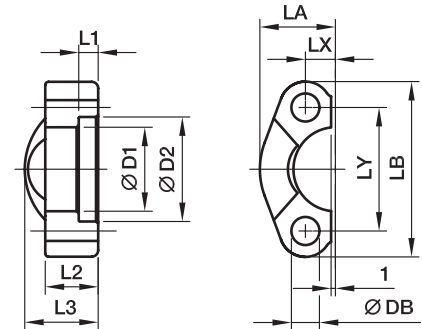
**PLCF-B** – p. M96



**PTCF-B** – p. M97

**FHS SAE Split flange halves**

ISO 6162-1/-2



**3000 PSI Series**

Nom. flange size		D1	D2	L1	L2	L3	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			CF	SS
1/2	13	24.3	31.0	6.2	13	19	23.0	54.0	8.7	38.1	9.0	M 8×25	5/16×1 1/4	0.07	<b>FHS32</b>	345	345
3/4	19	32.2	38.9	6.2	14	22	25.9	65.0	11.1	47.6	11.0	M10×30	3/8×1 1/4	0.09	<b>FHS33</b>	345	345
1	25	38.5	45.2	7.5	16	24	29.2	69.9	13.1	52.4	11.0	M10×30	3/8×1 1/4	0.11	<b>FHS34</b>	345	345
1 1/4	32	43.7	51.6	7.5	16	22	36.3	79.4	15.1	58.7	11.0	M10×35	–	0.15	<b>FHS35/10</b>	276	276
1 1/4	32	43.7	51.6	7.5	16	22	36.3	79.4	15.1	58.7	12.0	–	7/16×1 1/2	0.15	<b>FHS35/12</b>	276	276
1 1/4	32	43.7	51.6	7.5	16	22	36.3	79.4	15.1	58.7	12.5	M12×35	–	0.15	<b>FHS35</b>	276	276
1 1/2	38	50.8	61.1	7.5	16	25	41.1	93.8	17.9	69.9	13.0	M12×35	1/2×1 1/2	0.23	<b>FHS36</b>	207	207
1 1/2	38	50.8	61.1	7.5	16	25	41.1	93.8	17.9	69.9	14.5	M14×35	–	0.23	<b>FHS36/14</b>	207	207
2	51	62.8	72.3	9.0	16	26	48.2	101.6	21.4	77.8	13.0	M12×35	1/2×1 1/2	0.25	<b>FHS38/12</b>	207	207
2	51	62.8	72.3	9.0	16	26	48.2	101.6	21.4	77.8	14.5	M14×35	–	0.25	<b>FHS38</b>	207	207
2 1/2	64	74.9	84.9	9.0	19	38	54.1	114.3	25.4	88.9	13.0	M12×40	1/2×1 3/4	0.37	<b>FHS310</b>	172	172
2 1/2	64	74.9	84.9	9.0	19	38	54.1	114.3	25.4	88.9	14.5	M14×40	–	0.37	<b>FHS310/14</b>	172	172
3	76	90.9	102.4	9.0	22	41	65.3	135.0	31.0	106.4	17.0	M16×45	5/8×1 3/4	0.65	<b>FHS312</b>	138	138
3 1/2	89	102.4	115.0	10.7	22	28	68.6	152.4	34.9	120.7	17.0	M16×45	5/8×2	0.75	<b>FHS314</b>	34	34
4	102	115.1	127.8	10.7	25	35	74.9	162.0	38.9	130.2	17.0	M16×50	5/8×2	0.84	<b>FHS316</b>	34	34
5	127	140.5	153.2	10.7	28	41	89.4	184.2	46.0	152.4	17.0	M16×50	5/8×2 1/4	1.25	<b>FHS320</b>	34	34

**6000 PSI Series**

1/2	13	24.6	32.5	7.2	16	22	24.0	56.4	9.1	40.5	9.0	M 8×30	5/16×1 1/4	0.08	<b>FHS62</b>	420	420
3/4	19	32.5	42.0	8.3	19	28	30.0	72.0	11.9	50.8	11.0	M10×35	3/8×1 1/2	0.18	<b>FHS63</b>	420	420
1	25	38.8	48.4	9.0	24	33	34.8	81.0	13.9	57.2	13.0	M12×45	–	0.27	<b>FHS64</b>	420	420
1	25	38.9	48.4	9.0	24	33	34.8	81.0	13.9	57.2	12.0	–	7/16×1 3/4	0.27	<b>FHS64/12</b>	420	420
1 1/4	32	44.5	54.8	9.8	27	38	38.6	95.3	15.9	66.6	15.0	M14×50	–	0.27	<b>FHS65</b>	420	420
1 1/4	32	44.5	54.8	9.8	27	38	38.6	95.3	15.9	66.6	13.0	M12×45	1/2×1 3/4	0.27	<b>FHS65/12</b>	420	420
1 1/2	38	51.6	64.3	12.1	30	43	47.5	112.8	18.3	79.3	17.0	M16×55	5/8×2 1/4	0.40	<b>FHS66</b>	420	420
2	51	67.6	80.2	12.1	37	52	56.9	133.4	22.2	96.8	22.0	M20×65	3/4×2 3/4	0.40	<b>FHS68</b>	420	420
2 1/2	64	90.0	108.0	20.0	45	45	75.1	180.0	29.4	123.8	25.0	M24×75	–	0.68	<b>FHS610</b>	420	420
3	76	115.0	132.5	25.0	55	55	99.1	215.0	35.7	152.4	31.5	M30×90	–	1.05	<b>FHS612</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

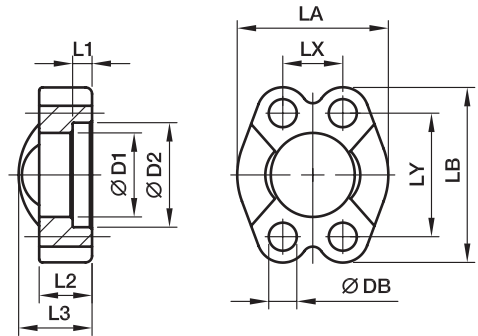
Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	FHS32CFX	only flange half
Stainless steel	SS	FHS32SSX	only flange half



## SAE Flange adapters

### FUS SAE Flange clamps

ISO 6162-1/-2



#### 3000 PSI Series

Nom. flange size		D1	D2	L1	L2	L3	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			CF	SS
1/2	13	24.3	31.0	6.2	13	19	46	54.0	17.5	38.1	8.8	M 8×25	5/16×1 1/4	0.15	<b>FUS32</b>	345	345
3/4	19	32.2	38.9	6.2	14	22	52	65.0	22.3	47.6	10.5	M10×30	3/8×1 1/4	0.17	<b>FUS33</b>	345	345
1	25	38.5	45.2	7.5	16	24	59	69.9	26.2	52.4	10.5	M10×30	3/8×1 1/4	0.22	<b>FUS34</b>	345	345
1 1/4	32	43.7	51.6	7.5	16	22	73	79.4	30.2	58.7	10.5	M10×35	–	0.30	<b>FUS35/10</b>	276	276
1 1/4	32	43.7	51.6	7.5	16	22	73	79.4	30.2	58.7	12.0	–	7/16×1 1/2	0.29	<b>FUS35/12</b>	276	276
1 1/4	32	43.7	51.6	7.5	16	22	73	79.4	30.2	58.7	12.5	M12×35	–	0.29	<b>FUS35</b>	276	276
1 1/2	38	50.8	61.1	7.5	16	25	83	93.8	35.8	69.9	13.5	M12×35	1/2×1 1/2	0.45	<b>FUS36</b>	207	207
1 1/2	38	50.8	61.1	7.5	16	25	83	93.8	35.8	69.9	14.5	M14×35	–	0.44	<b>FUS36/14</b>	207	207
2	51	62.8	72.3	9.0	16	26	97	101.6	42.8	77.8	13.5	M12×35	1/2×1 1/2	0.50	<b>FUS38/12</b>	207	207
2	51	62.8	72.3	9.0	16	26	97	101.6	42.8	77.8	14.5	M14×35	–	0.49	<b>FUS38</b>	207	207
2 1/2	64	74.9	84.9	9.0	19	38	109	114.3	50.8	88.9	13.5	M12×40	1/2×1 3/4	0.74	<b>FUS310</b>	172	172
2 1/2	64	74.9	84.9	9.0	19	38	109	114.3	50.8	88.9	14.5	M14×40	–	0.73	<b>FUS310/14</b>	172	172
3	76	90.9	102.4	9.0	22	41	131	135.0	61.9	106.4	17.0	M16×45	5/8×1 3/4	1.30	<b>FUS312</b>	138	138
3 1/2	89	102.4	115.0	10.7	22	28	140	152.4	69.9	120.7	17.0	M16×45	5/8×2	1.50	<b>FUS314</b>	34	34
4	102	115.1	127.8	10.7	25	35	150	162.0	77.8	130.2	17.0	M16×50	5/8×2	1.65	<b>FUS316</b>	34	34
5	127	140.5	153.2	10.7	28	41	180	184.2	92.1	152.4	17.0	M16×50	5/8×2 1/4	2.50	<b>FUS320</b>	34	34

#### 6000 PSI Series

1/2	13	24.6	32.5	7.2	16	22	48	56.4	18.2	40.5	8.8	M 8×30	5/16×1 1/4	0.16	<b>FUS62</b>	420	420
3/4	19	32.5	42.0	8.3	19	28	60	71.4	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.35	<b>FUS63</b>	420	420
1	25	38.8	48.4	9.0	24	33	70	81.0	27.8	57.2	13.0	M12×45	–	0.53	<b>FUS64</b>	420	420
1	25	38.9	48.4	9.0	24	33	70	81.0	27.8	57.2	12.0	–	7/16×1 3/4	0.53	<b>FUS64/12</b>	420	420
1 1/4	32	44.5	54.8	9.8	27	38	78	95.3	31.8	66.6	15.0	M14×50	–	0.80	<b>FUS65</b>	420	420
1 1/4	32	44.5	54.8	9.8	27	38	78	95.3	31.8	66.6	13.5	M12×45	1/2×1 3/4	0.80	<b>FUS65/12</b>	420	420
1 1/2	38	51.6	64.3	12.1	30	43	96	112.8	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.35	<b>FUS66</b>	420	420
2	51	67.6	80.2	12.1	37	52	114	133.4	44.5	96.8	21.0	M20×65	3/4×2 3/4	2.10	<b>FUS68</b>	420	420
2 1/2	64	90.0	108.9	20.5	45	45	150	180	58.7	123.8	25.0	M24×75	–	4.10	<b>FUS610</b>	420	420
3	76	115.0	132.5	25.5	55	55	178	215	71.4	152.4	32.0	M30×90	–	8.60	<b>FUS612</b>	420	420

<sup>1</sup>) Pressure shown = Item deliverable

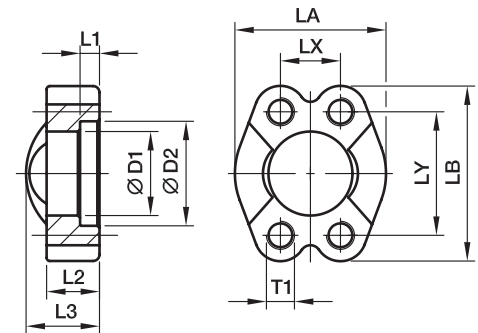
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	FUS32CFX	only flange clamp
Stainless steel	SS	FUS32SSX	only flange clamp

**FUSM SAE Flange clamps with metric tapped holes**

ISO 6162-1/-2



**3000 PSI Series**

Nom. flange size		D1	D2	L1	L2	L3	LA	LB	LX	LY	T1	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)													CF	SS
1/2	13	24.3	31.0	6.2	13	20	46	54.0	17.5	38.1	M 8	0.15	FUSM32	345	345
3/4	19	32.1	38.9	6.2	14	22	52	65.0	22.3	47.6	M10	0.17	FUSM33	345	345
1	25	38.5	45.2	7.5	16	24	59	69.9	26.2	52.4	M10	0.22	FUSM34	345	345
1 1/4	32	43.7	51.6	7.5	16	22	73	79.4	30.2	58.7	M10	0.30	FUSM35/10	276	276
1 1/4	32	43.7	51.6	7.5	16	22	73	79.4	30.2	58.7	M12	0.29	FUSM35/12	276	276
1 1/2	38	50.8	61.1	7.5	16	25	83	93.8	35.7	69.9	M12	0.45	FUSM36	207	207
1 1/2	38	50.8	61.1	7.5	16	25	83	93.8	35.7	69.9	M14	0.44	FUSM36/14	207	207
2	51	62.8	72.3	9.0	16	26	97	101.6	42.9	77.8	M12	0.50	FUSM38/12	207	207
2	51	62.8	72.3	9.0	16	26	97	101.6	42.9	77.8	M14	0.49	FUSM38	207	207
2 1/2	64	74.9	84.9	9.0	19	38	109	114.3	50.8	88.9	M12	0.74	FUSM310	172	172
2 1/2	64	74.9	84.9	9.0	19	38	109	114.3	50.8	88.9	M14	0.73	FUSM310/14	172	172
3	76	90.9	102.4	9.0	22	41	131	135.0	61.9	106.4	M16	1.30	FUSM312	138	138
3 1/2	89	102.4	115.0	10.7	23	28	140	152.4	69.9	120.7	M16	1.50	FUSM314	34	34
4	102	115.1	127.8	10.7	25	35	150	162.0	77.8	130.2	M16	1.65	FUSM316	34	34
5	127	140.5	153.2	10.7	28	41	180	184.2	92.1	152.4	M16	2.50	FUSM320	34	34

**6000 PSI Series**

1/2	13	24.6	32.5	7.2	16	22	48	56.4	18.2	40.5	M 8	0.16	FUSM62	420	420
3/4	19	32.5	42.0	8.2	19	28	60	71.4	23.8	50.8	M10	0.35	FUSM63	420	420
1	25	38.9	48.4	9.0	24	33	70	81.0	27.8	57.2	M12	0.53	FUSM64	420	420
1 1/4	32	44.5	54.8	9.8	27	38	78	95.3	31.8	66.6	M14	0.80	FUSM65	420	420
1 1/2	38	51.6	64.3	12.1	30	43	96	112.8	36.5	79.3	M16	1.35	FUSM66	420	420
2	51	67.6	80.2	12.1	37	52	114	133.4	44.5	96.8	M20	2.10	FUSM68	420	420
2 1/2	64	90.0	108.9	20.5	45	45	150	180.0	58.7	123.8	M24	4.10	FUSM610	420	420
3	76	115.0	132.5	25.5	55	55	178	215.0	71.4	152.4	M30	8.60	FUSM612	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN(\text{bar})}{10} = PN(\text{MPa})$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example only flange clamp with metr. threads	Description
Steel, zinc plated, Cr(VI)-free	CF	FUSM32CFM	only flange clamp
Stainless steel	SS	FUSM32SSM	only flange clamp

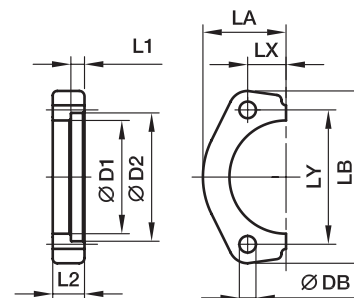




## SAE Flange adapters

### FHSF SAE Flange halves flat

ISO 6162-1/-2



#### 3000 PSI Series

Nom. flange size												Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	D1	D2	L1	L2	LA	LB	LX	LY	DB	(metr.)	(unc.)	CF			SS	
1/2	13	24.3	31.0	6.2	13	22.8	56	8.7	38.1	9.0	M 8×25	5/16×1 1/4	0.06	<b>FHSF32</b>	345	345	
3/4	19	32.1	38.9	6.2	14	25.9	65	11.1	47.6	11.0	M10×30	3/8×1 1/4	0.07	<b>FHSF33</b>	345	345	
1	25	38.5	45.3	7.5	16	29.2	70	13.1	52.4	11.0	M10×30	3/8×1 1/4	0.10	<b>FHSF34</b>	345	345	
1 1/4	32	43.7	51.6	7.5	16	36.6	79	15.1	58.7	11.0	M10×35	–	0.15	<b>FHSF35/10</b>	276	276	
1 1/4	32	43.7	51.6	7.5	16	36.6	79	15.1	58.7	12.5	M12×35	7/16×1 1/2	0.14	<b>FHSF35/12</b>	276	276	
1 1/2	38	50.8	61.1	7.5	16	41.1	94	17.9	69.9	13.0	M12×35	1/2×1 1/2	0.18	<b>FHSF36</b>	207	207	
1 1/2	38	50.8	61.1	7.5	16	41.1	94	17.9	69.9	14.5	M14×35	–	0.17	<b>FHSF36/14</b>	207	207	
2	51	62.8	72.3	9.0	16	48.2	104	21.4	77.8	13.0	M12×35	1/2×1 1/2	0.22	<b>FHSF38</b>	207	207	
2	51	62.8	72.3	9.0	16	48.2	104	21.4	77.8	14.5	M14×35	–	0.21	<b>FHSF38/14</b>	207	207	
2 1/2	64	74.9	84.9	9.0	19	53.0	114	25.4	88.9	13.5	M12×40	1/2×1 3/4	0.58	<b>FHSF310</b>	172	172	
2 1/2	64	74.9	84.9	9.0	19	53.0	114	25.4	88.9	14.5	M14×40	–	0.57	<b>FHSF310/14</b>	172	172	
3	76	90.9	102.4	9.0	22	64.3	135	31.0	106.4	17.0	M16×45	5/8×1 3/4	0.98	<b>FHSF312</b>	138	138	

#### 6000 PSI Series

1/2	13	24.6	32.5	7.2	16	23.6	56	9.1	40.5	9.0	M 8×30	5/16×1 1/4	0.08	<b>FHSF62</b>	420	420
3/4	19	32.5	42.0	8.3	20	30.0	71	11.9	50.8	11.0	M10×35	3/8×1 1/2	0.16	<b>FHSF63</b>	420	420
1	25	38.8	48.4	9.0	25	34.8	81	13.9	57.2	13.0	M12×45	–	0.25	<b>FHSF64</b>	420	420
1 1/4	32	44.5	54.8	9.8	27	38.6	95	15.9	66.6	15.0	M14×50	1/2×1 3/4	0.34	<b>FHSF65</b>	420	420
1 1/2	38	51.6	64.3	12.1	30	47.5	113	18.3	79.3	17.0	M16×55	5/8×2 1/4	0.55	<b>FHSF66</b>	420	420
2	51	67.6	80.2	12.1	37	56.9	133	22.2	96.8	21.0	M20×65	3/4×2 3/4	1.02	<b>FHSF68</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$

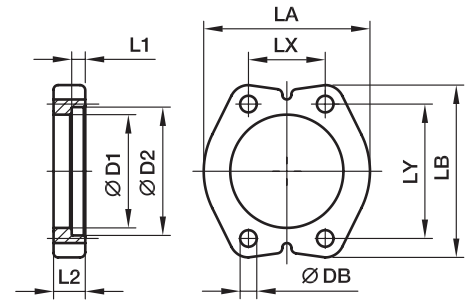
Material for steel: C60

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	FHSF32CF	only flange half
Stainless steel	SS	FHSF32SS	only flange half

**FUSF SAE Flange clamps flat**

ISO 6162-1/-2



**3000 PSI Series**

Nom. flange size												Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	D1	D2	L1	L2	LA	LB	LX	LY	DB	(metr.)	(unc.)	CF			SS	
1/2	13	24.3	31.0	6.2	13	46	56	17.4	38.1	9.0	M 8×25	5/16×1 1/4	0.13	<b>FUSF32</b>	345	345	
3/4	19	32.1	38.9	6.2	14	52	65	22.2	47.6	11.0	M10×30	3/8×1 1/4	0.15	<b>FUSF33</b>	345	345	
1	25	38.5	45.3	7.5	16	59	70	26.2	52.4	11.0	M10×30	3/8×1 1/4	0.21	<b>FUSF34</b>	345	345	
1 1/4	32	43.7	51.6	7.5	16	73	79	30.2	58.7	11.0	M10×35	7/16×1 1/2	0.31	<b>FUSF35/10</b>	276	276	
1 1/4	32	43.7	51.6	7.5	16	73	79	30.2	58.7	12.5	M12×35	–	0.28	<b>FUSF35/12</b>	276	276	
1 1/2	38	50.8	61.1	7.5	16	83	94	35.8	69.9	13.0	M12×35	1/2×1 1/2	0.35	<b>FUSF36</b>	207	207	
1 1/2	38	50.8	61.1	7.5	16	83	94	35.8	69.9	14.5	M14×35	–	0.33	<b>FUSF36/14</b>	207	207	
2	51	62.8	72.3	9.0	16	97	104	42.8	77.8	13.5	M12×35	1/2×1 1/2	0.43	<b>FUSF38/12</b>	207	207	
2	51	62.8	72.3	9.0	16	97	104	42.8	77.8	14.5	M14×35	–	0.41	<b>FUSF38</b>	207	207	
2 1/2	64	74.9	84.9	9.0	19	109	114	50.8	88.9	13.5	M12×40	1/2×1 3/4	1.15	<b>FUSF310</b>	172	172	
2 1/2	64	74.9	84.9	9.0	19	109	114	50.8	88.9	14.5	M14×40	–	1.43	<b>FUSF310/14</b>	172	172	
3	76	90.9	102.4	9.0	22	131	135	61.9	106.4	17.0	M16×45	5/8×1 3/4	1.95	<b>FUSF312</b>	138	138	

**6000 PSI Series**

1/2	13	24.6	32.5	7.2	16	48	56	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.15	<b>FUSF62</b>	420	420
3/4	19	32.5	42.0	8.3	20	60	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.31	<b>FUSF63</b>	420	420
1	25	38.8	48.4	9.0	25	70	81	27.8	57.2	13.0	M12×45	–	0.49	<b>FUSF64</b>	420	420
1 1/4	32	44.5	54.8	9.8	27	78	95	31.8	66.6	15.0	M14×50	1/2×1 3/4	0.67	<b>FUSF65</b>	420	420
1 1/2	38	51.6	64.3	12.1	30	95	113	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.08	<b>FUSF66</b>	420	420
2	51	67.6	80.2	12.1	37	114	133	44.5	96.8	21.0	M20×65	3/4×2 3/4	2.03	<b>FUSF68</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN (bar)}{10} = PN (MPa)$

Material for steel: C60

\*Please add the **suffixes** below according to the material/surface required.

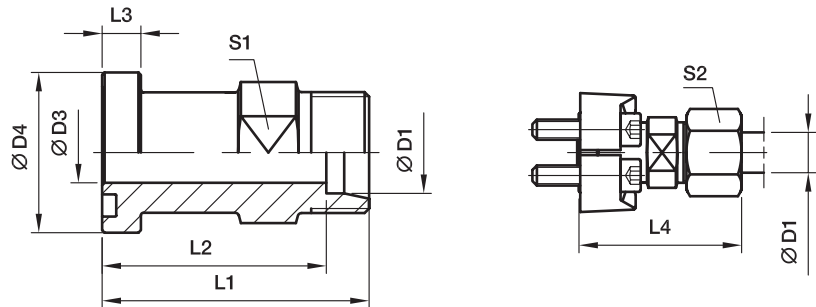
Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	FUSF32CF	only flange clamp
Stainless steel	SS	FUSF32SS	only flange clamp



## SAE Flange adapters

### GFS SAE Straight flange adapter

SAE Flange / EO 24° cone end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		D1 <sup>2)</sup>									Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)		D3	D4	L1	L2	L3	L4	S1	S2	(metr.)	(unc.)			CF	71
1/2	13	15L	12.0	30.2	48.0	41.0	6.7	56.0	24	27	M 8x25	5/16x1 1/4	0.36	GFS32/15L	315	315
1/2	13	16S	12.0	30.2	50.0	41.5	6.7	60.0	24	30	M 8x25	5/16x1 1/4	0.40	GFS32/16S	350	350
1/2	13	18L	14.0	30.2	50.0	42.5	6.7	61.0	19	32	M 8x25	5/16x1 1/4	0.42	GFS32/18L	315	315
3/4	19	16S	12.0	38.1	55.0	46.5	6.7	64.5	27	30	M10x30	3/8x1 1/4	0.52	GFS33/16S	350	350
3/4	19	18L	17.0	38.1	53.0	45.5	6.7	62.0	30	32	M10x30	3/8x1 1/4	0.59	GFS33/18L	315	315
3/4	19	22L	19.0	38.1	53.0	45.5	6.7	62.0	30	36	M10x30	3/8x1 1/4	0.59	GFS33/22L	160	160
3/4	19	28L	19.0	38.1	55.0	41.0	6.7	64.0	32	41	M10x30	3/8x1 1/4	0.60	GFS33/28L	160	160
3/4	19	20S	17.0	38.1	57.0	46.5	6.7	68.0	30	36	M10x30	3/8x1 1/4	0.65	GFS33/20S	350	350
3/4	19	25S	17.0	38.1	57.0	45.0	6.7	69.0	30	46	M10x30	3/8x1 1/4	0.78	GFS33/25S	350	350
1	25	20S	25.0	44.5	60.0	48.5	8.0	71.0	32	36	M10x30	3/8x1 1/4	0.70	GFS34/20S	350	350
1	25	28L	24.0	44.5	54.0	46.5	8.0	63.0	36	41	M10x30	3/8x1 1/4	0.73	GFS34/28L	160	160
1	25	25S	20.0	44.5	58.0	46.5	8.0	60.0	36	46	M10x30	3/8x1 1/4	0.84	GFS34/25S	350	350
1	25	30S	24.0	44.5	63.0	49.5	8.0	76.0	36	50	M10x30	3/8x1 1/4	0.94	GFS34/30S	250	250
1	25	42L	24.0	44.5	76.0	65.0	8.0	87.5	41	60	M10x30	3/8x1 1/4	0.95	GFS34/42L	160	160
1 1/4	32	35L	32.0	50.8	58.0	47.5	8.0	69.0	41	50	M10x35	-	0.96	GFS35/35L/10 <sup>3)</sup>	160	160
1 1/4	32	25S	27.0	50.8	60.0	48.0	8.0	72.0	41	46	M10x35	-	1.11	GFS35/25S/10	200	200
1 1/4	32	30S	28.5	50.8	62.0	48.5	8.0	75.0	41	50	M10x35	-	1.13	GFS35/30S/10	200	200
1 1/4	32	38S	28.0	50.8	66.0	50.0	8.0	81.0	46	60	M10x35	-	1.36	GFS35/38S/10	200	200
1 1/4	32	28L	23.0	50.8	60.0	52.5	8.0	67.0	36	41	M12x40	7/16x1 1/2	1.12	GFS35/28L	160	160
1 1/4	32	35L	32.0	50.8	58.0	47.5	8.0	69.0	41	50	M12x40	7/16x1 1/2	1.02	GFS35/35L	160	160
1 1/4	32	25S	27.0	50.8	60.0	48.0	8.0	72.0	41	46	M12x40	7/16x1 1/2	1.17	GFS35/25S	200	200
1 1/4	32	30S	28.5	50.8	62.0	48.5	8.0	75.0	41	50	M12x40	7/16x1 1/2	1.20	GFS35/30S	200	200
1 1/4	32	38S	28.0	50.8	66.0	50.0	8.0	81.0	46	60	M12x40	7/16x1 1/2	1.41	GFS35/38S	200	200
1 1/2	38	35L	30.0	60.3	65.0	54.5	8.0	76.0	46	50	M12x35	1/2x1 1/2	1.20	GFS36/35L	160	160
1 1/2	38	42L	36.0	60.3	64.0	53.0	8.0	76.0	46	60	M12x35	1/2x1 1/2	1.36	GFS36/42L	160	160
1 1/2	38	38S	32.0	60.3	70.0	54.0	8.0	85.0	46	60	M12x35	1/2x1 1/2	1.63	GFS36/38S	200	200

1) Pressure shown = Item deliverable

2) L = light series; S = heavy series

$\frac{PN(\text{bar})}{10} = PN(\text{MPa})$

Delivery without nut and ring.

Information on ordering complete fittings or alternative sealing materials see page M11.

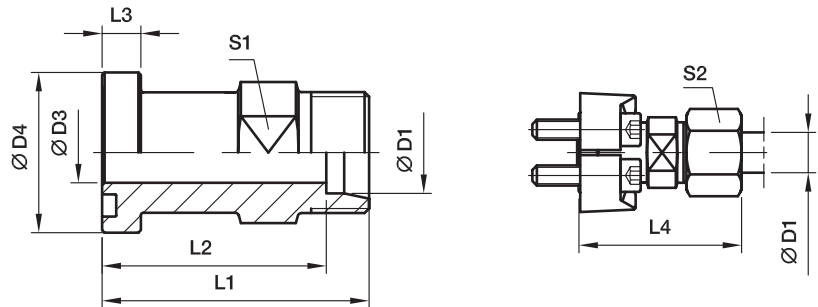
3) Order code for the flange adapter assembled with FHS35/10CFX and M10X35 screws.

\*Please add the suffixes below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	GFS32/16SCFX	GFS32/16SOMDCF	GFS32/16SOMDCFU	NBR
Stainless steel	71	GFS32/16S71X	GFS32/16SOMD71	GFS32/16SOMD71U	VIT

**GFS SAE Straight flange adapter**

SAE Flange / EO 24° cone end  
(ISO 6162-1/-2)



**6000 PSI Series**

Nom. flange size		D1 <sup>2)</sup>									Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)		D3	D4	L1	L2	L3	L4	S1	S2	(metr.)	(unc.)			CF	71
1/2	13	12S	8	31.8	50.0	42.5	7.7	57.5	19	24	M 8x30	5/16x1 1/4	0.35	<b>GFS62/12S</b>	420	420
1/2	13	14S	10	31.8	50.0	42.0	7.7	59.5	19	27	M 8x30	5/16x1 1/4	0.39	<b>GFS62/14S</b>	420	420
1/2	13	16S	12	31.8	53.0	44.5	7.7	62.5	24	30	M 8x30	5/16x1 1/4	0.47	<b>GFS62/16S</b>	420	420
3/4	19	16S	17	41.3	59.0	50.5	8.7	68.5	30	30	M10x35	3/8x1 1/2	0.79	<b>GFS63/16S</b>	420	420
3/4	19	20S	17	41.3	61.0	50.5	8.7	72.0	30	36	M10x35	3/8x1 1/2	0.86	<b>GFS63/20S</b>	420	400
3/4	19	25S	17	41.3	63.0	51.0	8.7	75.0	30	46	M10x35	3/8x1 1/2	0.97	<b>GFS63/25S</b>	420	400
3/4	19	30S	18	41.3	76.0	62.0	8.7	89.0	30	50	M10x35	3/8x1 1/2	1.15	<b>GFS63/30S</b>	420	400
3/4	19	38S	18	41.3	85.0	69.0	8.7	99.5	41	60	M10x35	3/8x1 1/2	1.15	<b>GFS63/38S</b>	315	315
1	25	20S	16	47.6	75.0	64.5	9.5	88.0	36	36	M12x45	7/16x1 3/4	0.97	<b>GFS64/20S</b>	420	400
1	25	25S	20	47.6	72.0	60.0	9.5	84.0	36	46	M12x45	7/16x1 3/4	1.42	<b>GFS64/25S</b>	420	400
1	25	30S	24	47.6	74.0	62.0	9.5	87.0	36	50	M12x45	7/16x1 3/4	1.40	<b>GFS64/30S</b>	420	400
1	25	38S	24	47.6	84.5	68.0	9.5	99.0	46	60	M12x45	7/16x1 3/4	1.40	<b>GFS64/38S</b>	315	315
1 1/4	32	25S	20	54.0	80.0	68.0	10.2	92.0	41	46	M14x50	1/2x1 3/4	1.85	<b>GFS65/25S</b>	420	400
1 1/4	32	30S	30	54.0	79.0	65.5	10.2	92.0	41	50	M12x45	-	1.95	<b>GFS65/30S/12<sup>3)</sup></b>	420	400
1 1/4	32	38S	30	54.0	83.0	67.0	10.2	97.5	46	60	M12x45	-	2.16	<b>GFS65/38S/12</b>	315	315
1 1/4	32	30S	30	54.0	79.0	65.5	10.2	92.0	41	50	M14x50	1/2x1 3/4	1.90	<b>GFS65/30S</b>	420	400
1 1/4	32	38S	30	54.0	83.0	67.0	10.2	97.5	46	60	M14x50	1/2x1 3/4	2.10	<b>GFS65/38S</b>	315	315
1 1/2	38	30S	30	63.5	90.0	74.0	12.5	103.0	46	50	M16x55	5/8x2 1/4	2.10	<b>GFS66/30S</b>	420	400
1 1/2	38	38S	30	63.5	89.0	73.0	12.5	103.5	46	60	M16x55	5/8x2 1/4	3.06	<b>GFS66/38S</b>	315	315

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

Delivery without nut and ring.

Information on ordering complete fittings or alternative sealing materials see page M11.

<sup>3)</sup> Order code for the flange adapter assembled with FHS65/12CFX and M12X45 screws.

\*Please add the **suffixes** below according to the material/surface required.

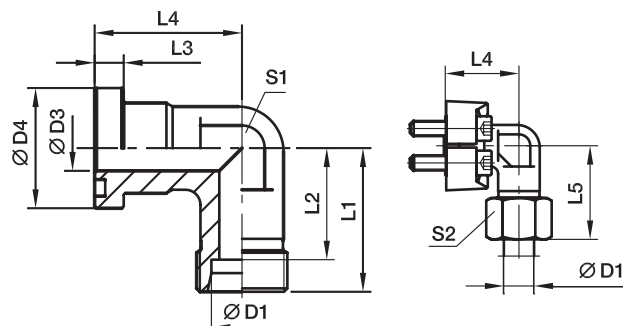
Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	GFS62/16SCFX	GFS62/16SOMDCF	GFS62/16SOMDCFU	NBR
Stainless steel	71	GFS62/16S71X	GFS62/16SOMD71	GFS62/16SOMD71U	VIT



## SAE Flange adapters

### WFS SAE 90° Elbow flange adapter

SAE Flange / EO 24° cone end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		D1 <sup>2)</sup>											Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)		D3	D4	L1	L2	L3	L4	L5	S1	S2	(metr.)	(unc.)	CF			71	
1/2	13	12S	12	30.2	50	42.5	6.7	44	58.5	22	24	M 8x25	5/16x1 1/4	0.38	WFS32/12S	210	210	
1/2	13	15L	12	30.2	36	29.0	6.7	36	44.0	24	27	M 8x25	5/16x1 1/4	0.40	WFS32/15L	315	315	
1/2	13	16S	12	30.2	38	29.5	6.7	36	48.0	24	30	M 8x25	5/16x1 1/4	0.43	WFS32/16S	350	350	
1/2	13	18L	12	30.2	50	42.5	6.7	44	59.0	22	32	M 8x25	5/16x1 1/4	0.44	WFS32/18L	315	315	
3/4	19	16S	19	38.1	64	55.5	6.7	53	73.5	27	30	M10x30	3/8x1 1/4	0.60	WFS33/16S	350	350	
3/4	19	18L	19	38.1	39	31.5	6.7	42	48.0	30	32	M10x30	3/8x1 1/4	0.66	WFS33/18L	315	315	
3/4	19	22L	19	38.1	41	33.5	6.7	42	50.0	30	36	M10x30	3/8x1 1/4	0.66	WFS33/22L	160	160	
3/4	19	20S	17	38.1	43	32.5	6.7	42	54.0	30	36	M10x30	3/8x1 1/4	0.76	WFS33/20S	350	350	
3/4	19	25S	17	38.1	45	33.0	6.7	42	57.0	30	46	M10x30	3/8x1 1/4	0.89	WFS33/25S	350	350	
1	25	20S	20	44.5	65	54.5	8.0	60	77.0	34	36	M10x30	3/8x1 1/4	0.78	WFS34/20S	350	350	
1	25	22L	18	44.5	65	57.5	8.0	60	74.0	34	36	M10x30	3/8x1 1/4	0.81	WFS34/22L	160	160	
1	25	28L	25	44.5	44	36.5	8.0	45	53.0	36	41	M10x30	3/8x1 1/4	0.85	WFS34/28L	160	160	
1	25	25S	20	44.5	48	36.5	8.0	45	57.0	36	46	M10x30	3/8x1 1/4	0.95	WFS34/25S	350	350	
1	25	30S	24	44.5	50	36.5	8.0	45	63.0	36	50	M10x30	3/8x1 1/4	1.06	WFS34/30S	250	250	
1 1/4	32	35L	32	50.8	57	46.5	8.0	50	68.0	41	50	M10x35	3/8x1 1/4	1.15	WFS35/35L/10 <sup>3)</sup>	160	160	
1 1/4	32	25S	27	50.8	55	43.0	8.0	60	67.0	41	46	M10x35	3/8x1 1/4	1.35	WFS35/25S/10	200	200	
1 1/4	32	30S	28	50.8	57	43.5	8.0	50	70.0	41	50	M10x35	3/8x1 1/4	1.40	WFS35/30S/10	200	200	
1 1/4	32	38S	28	50.8	59	43.0	8.0	50	74.0	46	60	M10x35	3/8x1 1/4	1.53	WFS35/38S/10	200	200	
1 1/4	32	35L	32	50.8	57	46.5	8.0	50	68.0	41	50	M12x40	7/16x1 1/2	1.15	WFS35/35L	160	160	
1 1/4	32	25S	27	50.8	55	43.0	8.0	50	67.0	41	46	M12x40	7/16x1 1/2	1.35	WFS35/25S	200	200	
1 1/4	32	30S	28	50.8	57	43.5	8.0	50	70.0	41	50	M12x40	7/16x1 1/2	1.40	WFS35/30S	200	200	
1 1/4	32	38S	28	50.8	59	43.0	8.0	50	74.0	41	60	M12x40	7/16x1 1/2	1.53	WFS35/38S	200	200	
1 1/2	38	35L	30	60.3	78	67.5	8.0	66	83.0	50	50	M12x35	1/2x1 1/2	1.55	WFS36/35L	160	160	
1 1/2	38	42L	36	60.3	58	47.0	8.0	55	70.0	50	60	M12x35	1/2x1 1/2	1.60	WFS36/42L	160	160	
1 1/2	38	38S	36	60.3	64	48.0	8.0	55	79.0	50	60	M12x35	1/2x1 1/2	1.95	WFS36/38S	200	200	

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$

Delivery without nut and ring.

Information on ordering complete fittings  
or alternative sealing materials see page M11.

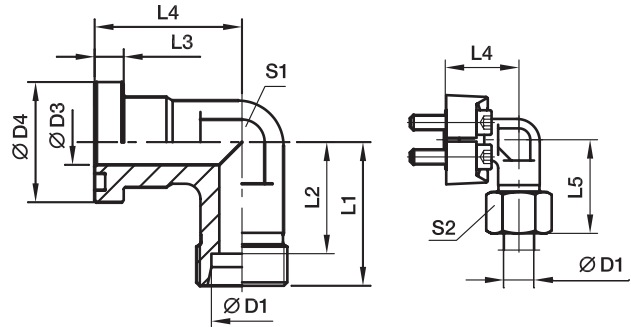
<sup>3)</sup> Order code for the elbow flange adapter assembled with FHS35/10CFX and M10X35 screws.

\*Please add the **suffixes** below according  
to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	WFS32/16SCFX	WFS32/16SOMDCF	WFS32/16SOMDCFU	NBR
Stainless steel	71	WFS32/16S71X	WFS32/16SOMD71	WFS32/16SOMD71U	VIT

**WFS SAE 90° Elbow flange adapter**

SAE Flange / EO 24° cone end  
(ISO 6162-1/-2)



**6000 PSI Series**

Nom. flange size		D1 <sup>2)</sup>											Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)		D3	D4	L1	L2	L3	L4	L5	S1	S2	(metr.)	(unc.)	CF			71	
1/2	13	12S	12	31.8	50	42.5	7.7	44	58.5	22	24	M 8x30	5/16x1 1/4	0.37	<b>WFS62/12S</b>	420	420	
1/2	13	14S	12	31.8	50	42.0	7.7	44	59.5	22	27	M 8x30	5/16x1 1/4	0.39	<b>WFS62/14S</b>	420	420	
1/2	13	16S	12	31.8	38	29.5	7.7	39	48.0	24	30	M 8x30	5/16x1 1/4	0.49	<b>WFS62/16S</b>	420	420	
3/4	19	16S	17	41.3	45	36.5	8.7	48	55.0	32	30	M10x35	3/8x1 1/2	0.92	<b>WFS63/16S</b>	420	420	
3/4	19	20S	17	41.3	46	35.5	8.7	48	57.0	32	36	M10x35	3/8x1 1/2	0.97	<b>WFS63/20S</b>	420	400	
3/4	19	25S	17	41.3	48	36.0	8.7	48	60.0	32	46	M10x35	3/8x1 1/2	1.19	<b>WFS63/25S</b>	420	400	
1	25	20S	16	47.6	65	54.5	9.5	62	75.0	34	36	M12x45	7/16x1 3/4	1.69	<b>WFS64/20S</b>	420	400	
1	25	25S	20	47.6	53	44.0	9.5	60	65.0	41	46	M12x45	7/16x1 3/4	1.67	<b>WFS64/25S</b>	420	400	
1	25	30S	25	47.6	55	41.5	9.5	60	68.0	41	50	M12x45	7/16x1 3/4	1.63	<b>WFS64/30S</b>	420	400	
1 1/4	32	25S	25	54.0	64	52.0	10.2	55	76.0	42	46	M12x45	7/16x1 1/2	2.23	<b>WFS65/25S/12<sup>3)</sup></b>	420	400	
1 1/4	32	30S	30	54.0	58	44.5	10.2	68	71.0	46	50	M12x45	7/16x1 1/2	2.20	<b>WFS65/30S/12</b>	420	400	
1 1/4	32	38S	30	54.0	61	45.0	10.2	68	76.0	46	60	M12x45	7/16x1 1/2	2.39	<b>WFS65/38S/12</b>	315	315	
1 1/4	32	25S	25	54.0	64	52.0	10.2	55	76.0	42	46	M14x50	1/2x1 3/4	2.23	<b>WFS65/25S</b>	420	400	
1 1/4	32	30S	30	54.0	58	44.5	10.2	68	71.0	46	50	M14x50	1/2x1 3/4	2.20	<b>WFS65/30S</b>	420	400	
1 1/4	32	38S	30	54.0	61	45.0	10.2	68	76.0	46	60	M14x50	1/2x1 3/4	2.39	<b>WFS65/38S</b>	315	315	
1 1/2	38	30S	25	63.5	76	63.5	12.5	77	90.0	50	50	M16x55	5/8x2 1/4	2.38	<b>WFS66/30S</b>	420	400	
1 1/2	38	38S	32	63.5	72	56.0	12.5	76	87.0	50	60	M16x55	5/8x2 1/4	2.58	<b>WFS66/38S</b>	315	315	

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> S = heavy series

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

Delivery without nut and ring.  
Information on ordering complete fittings  
or alternative sealing materials see page M11.

<sup>3)</sup> Order code for the elbow flange adapter assembled with FHS65/12CFX and M12X45 screws.

\*Please add the **suffixes** below according to the material/surface required.

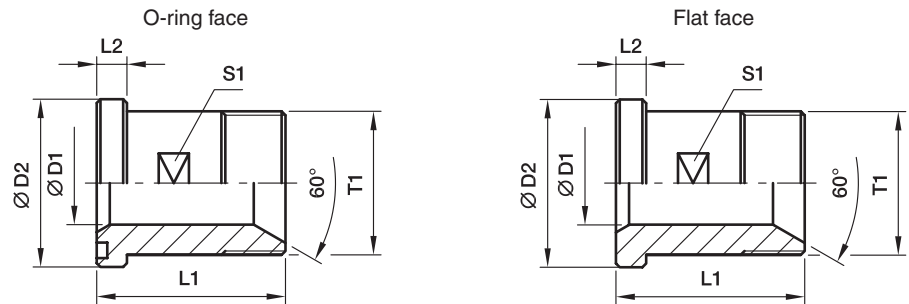
Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	WFS62/16SCFX	WFS62/16SOMDCF	WFS62/16SOMDCFU	NBR
Stainless steel	71	WFS62/16S71X	WFS62/16SOMD71	WFS62/16SOMD71U	VIT



## SAE Flange adapters

### GFS-G SAE Straight flange adapter

SAE Flange / BSP 60° cone end  
(ISO 6162-1/-2) (ISO 8434-6)



#### 3000 PSI Series

Nom. flange size		T1	D1	D2	L1	L2	S1	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										CF	SS
1/2	13	G1/2	12	30.2	50	6.7	19	0.08	GFS32/12G	GFSG32/12G	345	345
1/2	13	G3/8	10	30.2	50	6.7	19	0.08	GFS32/38G	GFSG32/38G	345	345
3/4	19	G3/4	17	38.1	55	6.7	27	0.16	GFS33/34G	GFSG33/34G	345	345
3/4	19	G1/2	12	38.1	55	6.7	27	0.16	GFS33/12G	GFSG33/12G	345	345
1	25	G1	22	44.4	60	8.0	32	0.23	GFS34/1G	GFSG34/1G	345	345
1	25	G3/4	17	44.4	60	8.0	32	0.23	GFS34/34G	GFSG34/34G	345	345
1 1/4	32	G1 1/4	27	50.8	65	8.0	41	0.30	GFS35/114G	GFSG35/114G	276	276
1 1/4	32	G1	22	50.8	65	8.0	41	0.30	GFS35/1G	GFSG35/1G	276	276
1 1/2	38	G1 1/2	32	60.3	70	8.0	46	0.40	GFS36/112G	GFSG36/112G	207	207
1 1/2	38	G1 1/4	27	60.3	70	8.0	46	0.40	GFS36/114G	GFSG36/114G	207	207
2	51	G2	40	71.4	75	9.5	55	0.50	GFS38/2G	GFSG38/2G	207	207
2	51	G1 1/2	32	71.4	75	9.5	55	0.50	GFS38/112G	GFSG38/112G	207	207

#### 6000 PSI Series

1/2	13	G1/2	12	31.8	50	7.7	19	0.09	GFS62/12G	GFSG62/12G	420	420
1/2	13	G3/8	10	31.8	50	7.7	19	0.09	GFS62/38G	GFSG62/38G	420	420
3/4	19	G3/4	17	41.3	60	8.7	26	0.15	GFS63/34G	GFSG63/34G	420	420
3/4	19	G1/2	12	41.3	60	8.7	26	0.15	GFS63/12G	GFSG63/12G	420	420
1	25	G1	22	47.6	70	9.5	32	0.23	GFS64/1G	GFSG64/1G	420	420
1	25	G3/4	17	47.6	70	9.5	32	0.23	GFS64/34G	GFSG64/34G	420	420
1 1/4	32	G1 1/4	27	54.0	75	10.3	36	0.30	GFS65/114G	GFSG65/114G	420	420
1 1/4	32	G1	22	54.0	75	10.3	36	0.30	GFS65/1G	GFSG65/1G	420	420
1 1/2	38	G1 1/2	32	63.5	80	12.5	46	0.50	GFS66/112G	GFSG66/112G	420	420
1 1/2	38	G1 1/4	27	63.5	80	12.5	46	0.50	GFS66/114G	GFSG66/114G	420	420
2	51	G2	40	79.4	90	12.5	55	0.80	GFS68/2G	GFSG68/2G	420	420
2	51	G1 1/2	32	79.4	90	12.5	55	0.80	GFS68/112G	GFSG68/112G	420	420

<sup>1)</sup> Pressure shown = Item deliverable

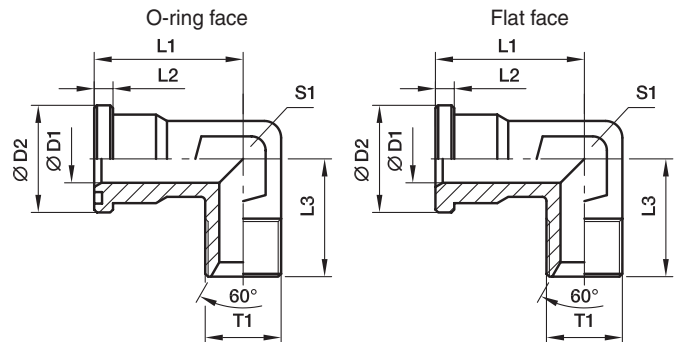
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	GFS32/12GCF	GFS32/12GCFM	GFS32/12GCFU	NBR
Stainless steel	SS	GFS32/12GSS	GFS32/12GSSM	GFS32/12GSSU	VIT

**WFS-G SAE 90° Elbow flange adapter**

SAE Flange / BSPP 60° cone end  
(ISO 6162-1/-2) (ISO 8434-6)



**3000 PSI Series**

Nom. flange size		T1	D1	D2	L1	L2	L3	S1	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											CF	SS
1/2	13	G1/2	12	30.2	44	6.7	50	22	0.40	WFS32/12G	WFSG32/12G	345	345
1/2	13	G3/8	10	30.2	44	6.7	50	22	0.34	WFS32/38G	WFSG32/38G	345	345
3/4	19	G1/2	12	38.1	53	6.7	64	27	0.60	WFS33/12G	WFSG33/12G	345	345
3/4	19	G3/4	17	38.1	53	6.7	64	27	0.63	WFS33/34G	WFSG33/34G	345	345
3/4	19	G1	19	38.1	53	6.7	64	27	0.66	WFS33/1G	WFSG33/1G	345	345
1	25	G3/4	17	44.4	60	8.0	65	34	0.80	WFS34/34G	WFSG34/34G	345	345
1	25	G1	22	44.4	60	8.0	65	34	0.85	WFS34/1G	WFSG34/1G	345	345
1	25	G1 1/4	25	44.4	60	8.0	65	34	0.89	WFS34/114G	WFSG34/114G	345	345
1 1/4	32	G1	22	50.8	55	8.0	64	42	1.16	WFS35/1G	WFSG35/1G	276	276
1 1/4	32	G1 1/4	28	50.8	55	8.0	64	42	1.27	WFS35/114G	WFSG35/114G	276	276
1 1/2	38	G1 1/4	28	60.3	66	8.0	78	50	1.90	WFS36/114G	WFSG36/114G	207	207
1 1/2	38	G1 1/2	34	60.3	66	8.0	78	50	2.05	WFS36/112G	WFSG36/112G	207	207

**6000 PSI Series**

1/2	13	G1/2	12	31.8	44	7.7	50	22	0.45	WFS62/12G	WFSG62/12G	420	420
1/2	13	G3/8	10	31.8	44	7.7	50	22	0.37	WFS62/34G	WFSG62/34G	420	420
3/4	19	G1/2	14	41.3	53	8.7	64	27	0.88	WFS63/12G	WFSG63/12G	420	420
3/4	19	G3/4	17	41.3	53	8.7	64	27	0.97	WFS63/34G	WFSG63/34G	420	420
3/4	19	G1	19	41.3	53	8.7	64	27	1.02	WFS63/1G	WFSG63/1G	420	420
1	25	G3/4	17	47.6	60	9.5	62	34	1.46	WFS64/34G	WFSG64/34G	420	420
1	25	G1	22	47.6	60	9.5	62	34	1.57	WFS64/1G	WFSG64/1G	420	420
1	25	G1 1/4	25	47.6	60	9.5	62	34	1.70	WFS64/114G	WFSG64/114G	420	420
1 1/4	32	G1	22	54.0	70	10.3	72	42	2.20	WFS65/1G	WFSG65/1G	420	420
1 1/4	32	G1 1/4	27	54.0	70	10.3	72	42	2.30	WFS65/114G	WFSG65/114G	420	420
1 1/2	38	G1 1/4	27	63.5	80	12.5	84	50	3.08	WFS66/114G	WFSG66/114G	420	420
1 1/2	38	G1 1/2	32	63.5	80	12.5	84	50	3.45	WFS66/112G	WFSG66/112G	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	WFS32/12GCF	WFS32/12GCFM	WFS32/12GCFU	NBR
Stainless steel	SS	WFS32/12GSS	WFS32/12GSSM	WFS32/12GSSU	VIT

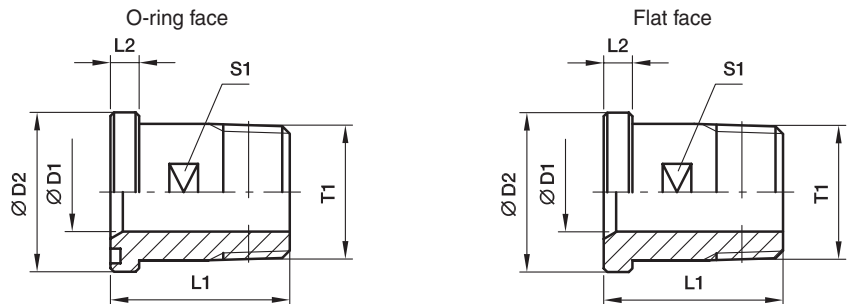




## SAE Flange adapters

### GFS-N SAE Flange adapters straight

SAE Flange / Male NPT thread  
(ISO 6162-1/-2) (SAE J476)



#### 3000 PSI Series

Nom. flange size		T1	D1	D2	L1	L2	S1	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										CF	SS
1/2	13	1/2NPT	12	30.2	50	6.7	19	0.08	GFS32/12N	GFSG32/12N	345	345
1/2	13	3/8NPT	10	30.2	50	6.7	19	0.08	GFS32/38N	GFSG32/38N	345	345
3/4	19	3/4NPT	17	38.1	55	6.7	27	0.16	GFS33/34N	GFSG33/34N	345	345
3/4	19	1/2NPT	12	38.1	55	6.7	27	0.16	GFS33/12N	GFSG33/12N	345	345
1	25	1NPT	22	44.4	60	8.0	32	0.23	GFS34/1N	GFSG34/1N	345	345
1	25	3/4NPT	17	44.4	60	8.0	32	0.23	GFS34/34N	GFSG34/34N	345	345
1 1/4	32	1 1/4NPT	27	50.8	65	8.0	41	0.30	GFS35/114N	GFSG35/114N	276	276
1 1/4	32	1NPT	22	50.8	65	8.0	41	0.30	GFS35/1N	GFSG35/1N	276	276
1 1/2	38	1 1/2NPT	32	60.3	70	8.0	46	0.40	GFS36/112N	GFSG36/112N	207	207
1 1/2	38	1 1/4NPT	27	60.3	70	8.0	46	0.40	GFS36/114N	GFSG36/114N	207	207
2	51	2NPT	40	71.4	75	9.5	55	0.50	GFS38/2N	GFSG38/2N	207	207
2	51	1 1/2NPT	32	71.4	75	9.5	55	0.50	GFS38/112N	GFSG38/112N	207	207

#### 6000 PSI Series

1/2	13	1/2NPT	12	31.8	50	7.7	19	0.09	GFS62/12N	GFSG62/12N	420	420
1/2	13	3/8NPT	10	31.8	50	7.7	19	0.09	GFS62/38N	GFSG62/38N	420	420
3/4	19	3/4NPT	17	41.3	60	8.7	26	0.15	GFS63/34N	GFSG63/34N	420	420
3/4	19	1/2NPT	12	41.3	60	8.7	26	0.15	GFS63/12N	GFSG63/12N	420	420
1	25	1NPT	22	47.6	70	9.5	32	0.23	GFS64/1N	GFSG64/1N	420	420
1	25	3/4NPT	17	47.6	70	9.5	32	0.23	GFS64/34N	GFSG64/34N	420	420
1 1/4	32	1 1/4NPT	27	54.0	75	10.3	36	0.30	GFS65/114N	GFSG65/114N	420	420
1 1/4	32	1NPT	22	54.0	75	10.3	36	0.30	GFS65/1N	GFSG65/1N	420	420
1 1/2	38	1 1/2NPT	32	63.5	80	12.5	46	0.50	GFS66/112N	GFSG66/112N	420	420
1 1/2	38	1 1/4NPT	27	63.5	80	12.5	46	0.50	GFS66/114N	GFSG66/114N	420	420
2	51	2NPT	40	79.4	90	12.5	55	0.80	GFS68/2N	GFSG68/2N	420	420
2	51	1 1/2NPT	32	79.4	90	12.5	55	0.80	GFS68/112N	GFSG68/112N	420	420

<sup>1)</sup> Pressure shown = Item deliverable

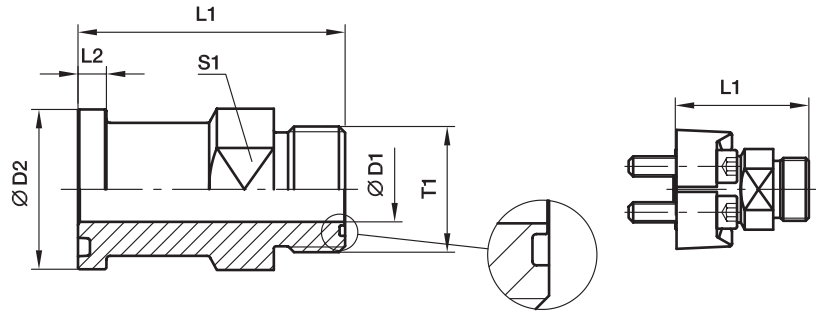
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	GFS32/12NCF	GFS32/12NCFM	GFS32/12NCFU	NBR
Stainless steel	SS	GFS32/12NSS	GFS32/12NSSM	GFS32/12NSSU	VIT

**L(O)HQ SAE Straight flange adapter**

SAE Flange / O-Lok® ORFS end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		Tube		T1	D1	D2	L1	L2	Weight (steel) kg/piece	O-ring face without ORFS	O-ring face include ORFS	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	(metr.)	(in)							O-ring Order code*	O-ring Order code*	S	SS
3/4	19	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15.5	38.1	69.6	6.7	0.21	<b>12LHQ1</b>	<b>12LOHQ1</b>	350	350
1	25	22, 25	7/8, 1	<b>1 7/16-12UN-2A</b>	20.6	44.5	71.4	8.0	0.30	<b>16LHQ1</b>	<b>16LOHQ1</b>	350	350
1 1/4	32	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26.0	50.8	81.5	8.0	0.31	<b>20LHQ1</b>	<b>20LOHQ1</b>	280	280
1 1/2	38	35, 38	1 1/2	<b>2-12UN-2A</b>	32.0	60.3	83.6	8.0	0.56	<b>24LHQ1</b>	<b>24LOHQ1</b>	210	210

**6000 PSI Series**

3/4	19	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15.5	41.3	76.7	8.8	0.21	<b>12LHQ2</b>	<b>12LOHQ2</b>	420	420
1	25	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15.5	47.6	84.8	9.5	0.26	<b>12-16LHQ2</b>	<b>12-16LOHQ2</b>	420	420
1	25	22, 27	3/4, 7/8	<b>1 7/16-12UN-2A</b>	20.6	47.6	85.3	9.5	0.30	<b>16LHQ2</b>	<b>16LOHQ2</b>	420	420
1 1/4	32	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26.0	54.0	88.4	10.3	0.31	<b>20LHQ2</b>	<b>20LOHQ2</b>	345	345
1 1/2	38	35, 38	1 1/2	<b>2-12UN-2A</b>	32.0	63.5	105.2	12.6	0.56	<b>24LHQ2</b>	<b>24LOHQ2</b>	310	310

<sup>1)</sup>Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$



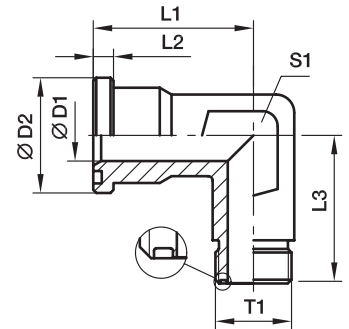
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example only flange adapter without ORFS O-ring	Example only flange adapter incl. ORFS O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	12LHQ1-S	12LOHQ1-S	NBR
Stainless steel	SS	12LHQ1-SS	12LOHQ1-SS	VIT

## SAE Flange adapters

### L(O)EMQ SAE 90° Elbow flange adapter

SAE Flange / O-Lok® ORFS end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		Tube		T1	D1	D2	L1	L2	L3	S1	Weight (steel) kg/piece	O-ring face without ORFS	O-ring face include ORFS	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	(metr.)	(in)									O-ring Order code*	O-ring Order code*	CF	SS
1/2	13	8, 10	3/8	<b>11/16-16UN-2A</b>	6	30.2	44	6.7	50	22	0.40	<b>6-8LEMQ1</b>	<b>6-8LOEMQ1</b>	350	350
1/2	13	12	1/2	<b>13/16-16UN-2A</b>	9	30.2	44	6.7	50	22	0.36	<b>8LEMQ1</b>	<b>8LOEMQ1</b>	350	350
1/2	13	14, 15, 16	5/8	<b>1-14UN-2A</b>	12	30.2	44	6.7	50	22	0.32	<b>10-8LEMQ1</b>	<b>10-8LOEMQ1</b>	350	350
3/4	19	14, 15, 16	5/8	<b>1-14UN-2A</b>	12	38.1	53	6.7	64	27	0.47	<b>10-12LEMQ1</b>	<b>10-12LOEMQ1</b>	350	350
3/4	19	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15	38.1	53	6.7	64	27	0.44	<b>12LEMQ1</b>	<b>12LOEMQ1</b>	350	350
1	25	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15	44.4	60	8.0	65	34	0.52	<b>12-16LEMQ1</b>	<b>12-16LOEMQ1</b>	350	350
1	25	22, 25	7/8, 1	<b>1 7/16-12UN-2A</b>	20	44.4	60	8.0	65	34	0.50	<b>16LEMQ1</b>	<b>16LOEMQ1</b>	350	350
1 1/4	32	22, 25	7/8, 1	<b>1 7/16-12UN-2A</b>	20	50.8	55	8.0	64	42	0.48	<b>16-20LEMQ1</b>	<b>16-20LOEMQ1</b>	278	278
1 1/4	32	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26	50.8	55	8.0	64	42	0.56	<b>20LEMQ1</b>	<b>20LOEMQ1</b>	278	278
1 1/2	38	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26	60.3	66	8.0	78	50	0.73	<b>20-24LEMQ1</b>	<b>20-24LOEMQ1</b>	207	207
1 1/2	38	35, 38	1 1/2	<b>2-12UN-2A</b>	32	60.3	66	8.0	78	50	0.69	<b>24LEMQ1</b>	<b>24LOEMQ1</b>	207	207

#### 6000 PSI Series

1/2	13	8, 10	3/8	<b>11/16-16UN-2A</b>	6	31.8	44	7.7	50	22	0.40	<b>6-8LEMQ2</b>	<b>6-8LOEMQ2</b>	420	420
1/2	13	12	1/2	<b>13/16-16UN-2A</b>	9	31.8	44	7.7	50	22	0.36	<b>8LEMQ2</b>	<b>8LOEMQ2</b>	420	420
1/2	13	14, 15, 16	5/8	<b>1-14UN-2A</b>	12	31.8	44	7.7	50	22	0.32	<b>10-8LEMQ2</b>	<b>10-8LOEMQ2</b>	420	420
3/4	19	14, 15, 16	5/8	<b>1-14UN-2A</b>	12	41.3	53	8.7	64	27	0.47	<b>10-12LEMQ2</b>	<b>10-12LOEMQ2</b>	420	420
3/4	19	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15	41.3	53	8.7	64	27	0.44	<b>12LEMQ2</b>	<b>12LOEMQ2</b>	420	420
1	25	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15	47.6	60	9.5	62	34	0.52	<b>12-16LEMQ2</b>	<b>12-16LOEMQ2</b>	420	420
1	25	22, 25	7/8, 1	<b>1 7/16-12UN-2A</b>	20	47.6	60	9.5	62	34	0.50	<b>16LEMQ2</b>	<b>16LOEMQ2</b>	420	420
1 1/4	32	22, 25	7/8, 1	<b>1 7/16-12UN-2A</b>	20	54.0	70	10.3	72	42	0.48	<b>16-20LEMQ2</b>	<b>16-20LOEMQ2</b>	420	420
1 1/4	32	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26	54.0	70	10.3	72	42	0.56	<b>20LEMQ2</b>	<b>20LOEMQ2</b>	345	345
1 1/2	38	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26	63.5	80	12.5	84	50	0.73	<b>20-24LEMQ2</b>	<b>20-24LOEMQ2</b>	345	345
1 1/2	38	35, 38	1 1/2	<b>2-12UN-2A</b>	32	63.5	80	12.5	84	50	0.69	<b>24LEMQ2</b>	<b>24LOEMQ2</b>	310	310

<sup>1)</sup> Pressure shown = Item deliverable

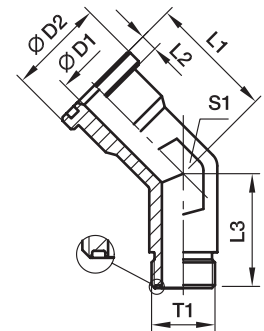
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example only flange adapter without ORFS O-ring	Example only flange adapter incl. ORFS O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	12LEMQ1CF	12LOEMQ1CF	NBR
Stainless steel	SS	12LEMQ1SS	12LOEMQ1SS	VIT

**L(O)VQ SAE 45° Elbow flange adapter**

SAE Flange / O-Lok® ORFS end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		Tube		T1	D1	D2	L1	L2	L3	S1	Weight (steel) kg/piece	O-ring face without ORFS	O-ring face include ORFS	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	(metr.)	(in)									O-ring Order code*	O-ring Order code*	S	SS
3/4	19	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15.5	38.1	40	6.7	26	30	0.29	<b>12LVQ1</b>	<b>12LOVQ1</b>	350	350
1	25	22, 25	7/8, 1	<b>1 7/16-12UN-2A</b>	20.5	44.5	47	8.0	30	36	0.39	<b>16LVQ1</b>	<b>16LOVQ1</b>	350	350
1 1/4	32	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26.0	50.8	52	8.0	32	41	0.45	<b>20LVQ1</b>	<b>20LOVQ1</b>	280	280
1 1/2	38	35, 38	1 1/2	<b>2-12UN-2A</b>	32.0	60.3	60	8.0	37	48	0.57	<b>24LVQ1</b>	<b>24LOVQ1</b>	210	210

**6000 PSI Series**

3/4	19	18, 20	3/4	<b>1 3/16-12UN-2A</b>	15.5	41.3	40	8.8	26	30	0.29	<b>12LVQ2</b>	<b>12LOVQ2</b>	420	420
1	25	22, 25	7/8, 1	<b>1 7/16-12UN-2A</b>	20.5	47.6	47	9.5	30	36	0.39	<b>16LVQ2</b>	<b>16LOVQ2</b>	420	420
1 1/4	32	28, 30, 32	1 1/4	<b>1 11/16-12UN-2A</b>	26.0	54.0	52	10.3	32	41	0.45	<b>20LVQ2</b>	<b>20LOVQ2</b>	345	345
1 1/2	38	35, 38	1 1/2	<b>2-12UN-2A</b>	32.0	63.5	60	12.6	37	48	0.57	<b>24LVQ2</b>	<b>24LOVQ2</b>	310	310

<sup>1)</sup>Pressure shown = Item deliverable

PN (bar) = PN (MPa)  
10



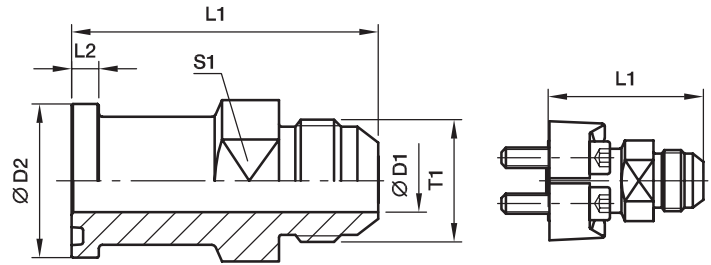
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example only flange adapter without ORFS O-ring	Example only flange adapter incl. ORFS O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	12LVQ1-S	12LOVQ1-S	NBR
Stainless steel	SS	12LVQ1-SS	12LOVQ1-SS	VIT

## SAE Flange adapters

### XHQ SAE Straight flange adapter

SAE Flange / Triple-Lok® 37° flare end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		Tube		T1	D1	D2	L1	L2	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	(metr.)	(in)								S	SS
3/4	19	18, 20	3/4	<b>1 1/16-12UN-2A</b>	15.5	38.1	70.4	6.7	0.21	<b>12XHQ1</b>	350	350
1	25	22, 25	7/8, 1	<b>1 5/16-12UN-2A</b>	21.5	44.5	73.9	8.0	0.30	<b>16XHQ1</b>	350	350
1 1/4	32	28, 30, 32	1 1/4	<b>1 5/8-12UN-2A</b>	27.5	50.8	85.3	8.0	0.31	<b>20XHQ1</b>	275	275
1 1/2	38	35, 38	1 1/2	<b>1 7/8-12UN-2A</b>	33.5	60.3	90.7	8.0	0.56	<b>24XHQ1</b>	210	210
2	51	50	2	<b>2 1/2-12UN-2A</b>	45.0	71.4	102.6	9.5	1.10	<b>32XHQ1</b>	210	210

#### 6000 PSI Series

3/4	19	18, 20	3/4	<b>1 1/16-12UN-2A</b>	15.5	41.3	78.2	8.8	0.21	<b>12XHQ2</b>	350	350
1	25	22, 25	7/8, 1	<b>1 5/16-12UN-2A</b>	21.5	47.6	87.1	9.5	0.30	<b>16XHQ2</b>	350	350
1 1/4	32	28, 30, 32	1 1/4	<b>1 5/8-12UN-2A</b>	27.5	54.0	91.4	10.3	0.31	<b>20XHQ2</b>	275	275
1 1/2	38	35, 38	1 1/2	<b>1 7/8-12UN-2A</b>	33.5	63.5	110.2	12.6	0.56	<b>24XHQ2</b>	210	210

<sup>1)</sup> Pressure shown = Item deliverable

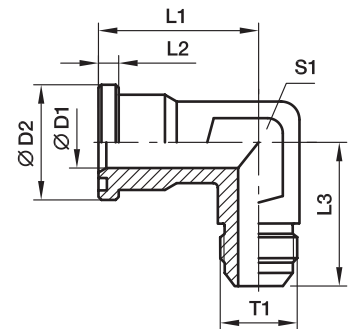
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example only flange adapter	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	12XHQ1-S	NBR
Stainless steel	SS	12XHQ1-SS	VIT

**XEMQ SAE 90° Elbow flange adapter**

SAE Flange / Triple-Lok® 37° flare end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		Tube		T1	D1	D2	L1	L2	L3	S1	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	(metr.)	(in)										S	SS
1/2	13	12	1/2	3/4-16UNF-2A	10	30.2	44	6.7	50	22	0.20	8XEMQ1	350	350
1/2	13	14, 15, 16	5/8	7/8-14UNF-2A	12	30.2	44	6.7	50	22	0.20	10-8XEMQ1	350	350
3/4	19	14, 15, 16	5/8	7/8-14UNF-2A	19	38.1	53	6.7	64	27	0.29	10-12XEMQ1	350	350
3/4	19	18, 20	3/4	1 1/16-12UN-2A	19	38.1	53	6.7	64	27	0.29	12XEMQ1	350	350
3/4	19	25	1	1 5/16-12UN-2A	19	38.1	53	6.7	64	27	0.29	16-12XEMQ1	350	350
1	25	18, 20	3/4	1 1/16-12UN-2A	22	44.4	60	8.0	65	34	0.39	12-16XEMQ1	350	350
1	25	25	1	1 5/16-12UN-2A	22	44.4	60	8.0	65	34	0.39	16XEMQ1	350	350
1	25	30, 32	1 1/4	1 5/8-12UN-2A	22	44.4	60	8.0	65	34	0.39	20-16XEMQ1	275	275
1 1/4	32	25	1	1 5/16-12UN-2A	28	50.8	55	8.0	64	42	0.45	16-20XEMQ1	275	275
1 1/4	32	30, 32	1 1/4	1 5/8-12UN-2A	28	50.8	55	8.0	64	42	0.45	20XEMQ1	275	275
1 1/2	38	30, 32	1 1/4	1 5/8-12UN-2A	35	60.3	66	8.0	78	50	0.57	20-24XEMQ1	210	210
1 1/2	38	38	1 1/2	1 7/8-12UN-2A	35	60.3	66	8.0	78	50	0.57	24XEMQ1	210	210

**6000 PSI Series**

1/2	13	12	1/2	3/4-16UNF-2A	12	31.8	44	7.7	50	22	0.20	8XEMQ2	350	350
1/2	13	14, 15, 16	5/8	7/8-14UNF-2A	12	31.8	44	7.7	50	22	0.20	10-8XEMQ2	350	350
3/4	19	14, 15, 16	5/8	7/8-14UNF-2A	18	41.3	53	8.7	64	27	0.29	10-12XEMQ2	350	350
3/4	19	18, 20	3/4	1 1/16-12UN-2A	18	41.3	53	8.7	64	27	0.29	12XEMQ2	350	350
3/4	19	25	1	1 5/16-12UN-2A	18	41.3	53	8.7	64	27	0.29	16-12XEMQ2	350	350
1	25	18, 20	3/4	1 1/16-12UN-2A	22	47.6	60	9.5	62	34	0.39	12-16XEMQ2	350	350
1	25	25	1	1 5/16-12UN-2A	22	47.6	60	9.5	62	34	0.39	16XEMQ2	350	350
1	25	30, 32	1 1/4	1 5/8-12UN-2A	22	47.6	60	9.5	62	34	0.39	20-16XEMQ2	275	275
1 1/4	32	25	1	1 5/16-12UN-2A	27	54.0	70	10.3	70	42	0.45	16-20XEMQ2	350	350
1 1/4	32	30, 32	1 1/4	1 5/8-12UN-2A	27	54.0	70	10.3	72	42	0.45	20XEMQ2	275	275
1 1/2	38	30, 32	1 1/4	1 5/8-12UN-2A	32	63.5	80	12.5	87	50	0.57	20-24XEMQ2	275	275
1 1/2	38	38	1 1/2	1 7/8-12UN-2A	32	63.5	80	12.5	87	50	0.57	24XEMQ2	210	210

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

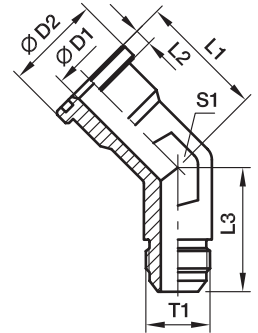
Order code suffixes			
Material	Suffix surface and material	Example only flange adapter	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	8XEMQ1CF	NBR
Stainless steel	SS	8XEMQ1SS	VIT



## SAE Flange adapters

### XVQ SAE 45° Elbow flange adapter

SAE Flange / Triple-Lok® 37° flare end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		Tube		T1	D1	D2	L1	L2	L3	S1	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)	(metr.)	(in)										S	SS
3/4	19	18, 20	3/4	<b>1 1/16-12UN-2A</b>	15.5	38.1	40.1	6.7	32.5	1 1/16	0.29	<b>12XVQ1</b>	350	350
1	25	22, 25	7/8, 1	<b>1 5/16-12UN-2A</b>	21.4	44.5	47.0	8.0	37.3	1 5/16	0.39	<b>16XVQ1</b>	350	350
1 1/4	32	28, 30, 32	1 1/4	<b>1 5/8-12UN-2A</b>	27.4	50.8	51.8	8.0	40.4	1 5/8	0.45	<b>20XVQ1</b>	275	275
1 1/2	38	35, 38	1 1/2	<b>1 7/8-12UN-2A</b>	33.3	60.3	60.5	8.0	45.2	1 7/8	0.57	<b>24XVQ1</b>	210	210
2	51	50	2	<b>2 1/2-12UN-2A</b>	45.2	71.4	76.2	9.5	56.4	2 1/2	1.15	<b>32XVQ1</b>	210	210

#### 6000 PSI Series

3/4	19	18, 20	3/4	<b>1 1/16-12UN-2A</b>	15.5	41.3	40.1	8.8	32.5	1 1/16	0.42	<b>12XVQ2</b>	350	350
1	25	22, 25	7/8, 1	<b>1 5/16-12UN-2A</b>	21.4	47.6	47.0	9.5	37.3	1 5/16	0.52	<b>16XVQ2</b>	350	350
1 1/4	32	28, 30, 32	1 1/4	<b>1 5/8-12UN-2A</b>	27.4	54.0	51.8	10.3	40.4	1 5/8	0.56	<b>20XVQ2</b>	275	275
1 1/2	38	35, 38	1 1/2	<b>1 7/8-12UN-2A</b>	33.3	63.5	60.5	12.6	45.2	1 7/8	0.69	<b>24XVQ2</b>	210	210

<sup>1)</sup> Pressure shown = Item deliverable

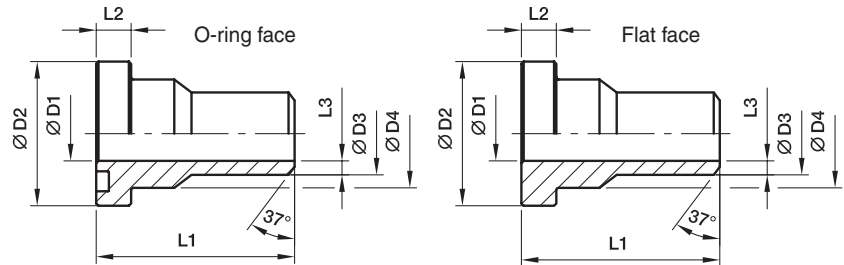
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example only flange adapter	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	12XVQ1-S	NBR
Stainless steel	SS	12XVQ1-SS	VIT

## ASR SAE Straight flange adapter

SAE Flange / Butt weld reducer tube end  
(ISO 6162-1/-2)



### 3000 PSI Series

Nom. flange size		Tube	D1	D2	D3	D4	L1	L2	L3	Weight (steel) kg/piece	O-ring face	Flat face	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										Order code*	Order code*	S	SS
1/2	13	18×4.5	10	30.2	18.0	24.0	45	6.7	4.0	0.30	<b>ASR32/18X4.5</b>	<b>ASRG32/18X4.5</b>	345	345
3/4	19	22×4.5	13	38.1	22.0	31.5	50	6.7	4.5	0.40	<b>ASR33/22X4.5</b>	<b>ASRG33/22X4.5</b>	345	345
1	25	28×4.5	19	44.4	28.0	38.0	55	8.0	4.5	0.49	<b>ASR34/28X4.5</b>	<b>ASRG34/28X4.5</b>	345	345
1 1/4	32	35×5	25	50.8	35.0	43.0	60	8.0	5.0	0.75	<b>ASR35/35X5</b>	<b>ASRG35/35X5</b>	276	276
1 1/2	38	43×6	31	60.3	43.0	50.0	65	8.0	6.0	1.01	<b>ASR36/43X6</b>	<b>ASRG36/43X6</b>	207	207
2	51	50×6	38	71.4	50.0	62.0	70	9.5	6.0	1.15	<b>ASR38/50X6</b>	<b>ASRG38/50X6</b>	207	207
2 1/2	64	62×7.5	47	84.1	62.0	74.0	75	9.5	7.5	1.40	<b>ASR310/62X7.5</b>	<b>ASRG310/62X7.5</b>	172	172
3	76	76×9	58	101.6	76.0	90.0	85	9.5	9.0	1.76	<b>ASR312/76X9</b>	<b>ASRG312/76X9</b>	138	138
3 1/2	89	90×10	70	114.3	90.0	102.0	90	11.2	10.0	2.15	<b>ASR314/90X10</b>	<b>ASRG314/90X10</b>	34	34
4	102	102×7	88	127.0	102.0	114.0	100	11.2	7.0	2.35	<b>ASR316/102X7</b>	<b>ASRG316/102X7</b>	34	34

### 6000 PSI Series

1/2	13	18×4	10	31.8	18.0	24.0	45	7.7	4.0	0.40	<b>ASR62/18X4</b>	<b>ASRG62/18X4</b>	420	420
3/4	19	22×4.5	13	41.3	22.0	32.0	50	8.7	4.5	0.50	<b>ASR63/22X4.5</b>	<b>ASRG63/22X4.5</b>	420	420
1	25	28×5	18	47.6	28.0	38.0	55	9.5	5.0	0.90	<b>ASR64/28X5</b>	<b>ASRG64/28X5</b>	420	420
1 1/4	32	35×6.5	22	54.0	35.0	44.0	60	10.3	6.5	1.35	<b>ASR65/35X6.5</b>	<b>ASRG65/35X6.5</b>	420	420
1 1/2	38	44×7.5	29	63.5	44.0	51.0	65	12.5	7.5	2.65	<b>ASR66/44X7.5</b>	<b>ASRG66/44X7.5</b>	420	420
2	51	51×8	35	79.4	51.0	67.0	70	12.5	8.0	3.90	<b>ASR68/51X8</b>	<b>ASRG68/51X8</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	ASR32/18X4.5S	ASR32/18X4.5SM	ASR32/18X4.5SU	NBR
Stainless steel	SS	ASR32/18X4.5SS	ASR32/18X4.5SSM	ASR32/18X4.5SSU	VIT

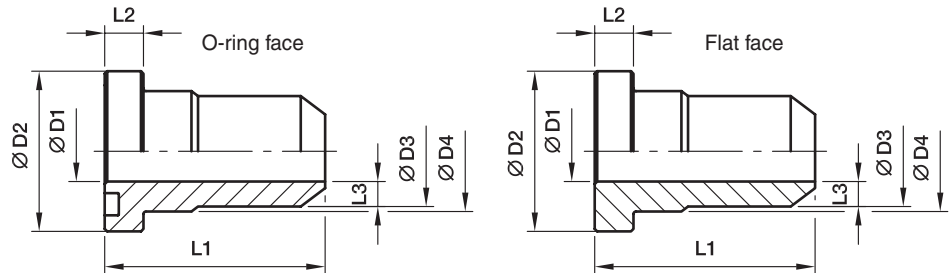




## SAE Flange adapters

### AS SAE Straight flange adapter

SAE Flange / Butt weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		Tube	D1	D2	D3	D4	L1	L2	L3	Weight (steel) kg/piece	O-ring face	Flat face	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										Order code*	Order code*	S	SS
1/2	13	15x2	11	30.2	15	23.9	45.0	6.8	2.0	0.26	AS32/15X2	ASG32/15X2	345	345
1/2	13	16x3	10	30.2	16	23.9	45.0	6.8	3.0	0.27	AS32/16X3	ASG32/16X3	345	345
1/2	13	21.3x2.6	13	30.2	22	23.9	45.0	6.8	4.5	0.29	AS32/21.3X2.6	ASG32/21.3X2.6	345	345
3/4	19	18x1.5	15	38.1	18	31.5	49.9	6.8	1.5	0.51	AS33/18X1.5	ASG33/18X1.5	345	345
3/4	19	22x2	18	38.1	22	31.5	49.9	6.8	2.0	0.49	AS33/22X2	ASG33/22X2	345	345
3/4	19	20x3	14	38.1	20	31.5	49.9	6.8	3.0	0.52	AS33/20X3	ASG33/20X3	345	345
3/4	19	25x4	17	38.1	25	31.5	49.9	6.8	4.0	0.49	AS33/25X4	ASG33/25X4	345	345
3/4	19	26.9x2.6	19	38.1	28	31.5	50.0	6.7	4.5	0.51	AS33/26.9X2.6	ASG33/26.9X2.6	345	345
1	25	20x2.5	15	44.5	20	38.0	55.0	8.0	2.5	0.59	AS34/20X2.5	ASG34/20X2.5	345	345
1	25	28x2	24	44.5	28	38.0	55.0	8.0	2.0	0.59	AS34/28X2	ASG34/28X2	345	345
1	25	30x4.5	21	44.5	30	38.0	55.0	8.0	4.5	0.62	AS34/30X4.5	ASG34/30X4.5	345	345
1	25	33.7x4	25	44.4	35	38.0	55.0	8.0	5.0	0.70	AS34/33.7X4	ASG34/33.7X4	345	345
1 1/4	32	35x2	31	50.8	35	43.0	60.0	8.0	2.0	0.75	AS35/35X2	ASG35/35X2	276	276
1 1/4	32	25x3	19	50.8	25	43.0	60.0	8.0	3.0	0.89	AS35/25X3	ASG35/25X3	276	276
1 1/4	32	30x4	22	50.8	30	43.0	60.0	8.0	4.0	0.88	AS35/30X4	ASG35/30X4	276	276
1 1/4	32	38x5	28	50.8	38	43.0	60.0	8.0	5.0	0.81	AS35/38X5	ASG35/38X5	276	276
1 1/4	32	42.4x6.0	31	50.8	43	43.0	60.0	8.0	6.0	0.92	AS35/42.4X5	ASG35/42.4X5	276	276
1 1/2	38	42x3	36	60.3	42	50.0	64.9	8.0	3.0	1.03	AS36/42X3	ASG36/42X3	207	207
1 1/2	38	38x4	30	60.3	38	50.0	64.9	8.0	4.0	1.17	AS36/38X4	ASG36/38X4	207	207
1 1/2	38	48.3x6.0	38	60.3	50	50.0	65.0	8.0	6.0	1.21	AS36/48.3X5	ASG36/48.3X5	207	207
2	51	50x6	38	71.4	50	62.0	70.0	9.6	6.0	1.49	AS38/50X6	ASG38/50X6	207	207
2	51	65x8	49	71.4	65	62.0	70.0	9.6	8.0	1.38	AS38/65X8	ASG38/65X8	207	207
2	51	60.3x7.5	47	71.4	62	62.0	70.0	9.5	7.5	1.25	AS38/62X7.5	ASG38/62X7.5	207	207
2 1/2	64	76.1x5.5	63	84.1	74	74.0	75.0	9.5	5.5	1.50	AS310/74X5.5	ASG310/74X5.5	172	172
3	76	88.9x10	70	101.6	90	90.0	85.0	9.5	10.0	2.11	AS312/90X10	ASG312/90X10	138	138
3 1/2	89	101.6x7.0	88	114.3	102	102.0	90.0	11.2	7.0	2.51	AS314/102X7	ASG314/102X7	34	34
4	102	114x8.0	98	127.0	114	114.0	100.0	11.2	8.0	2.75	AS316/115X8.5	ASG316/115X8.5	34	34
5	127	139.7x10	120	152.4	140	140.0	100.0	11.2	10.0	3.41	AS320/140X10	ASG320/140X10	34	34

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

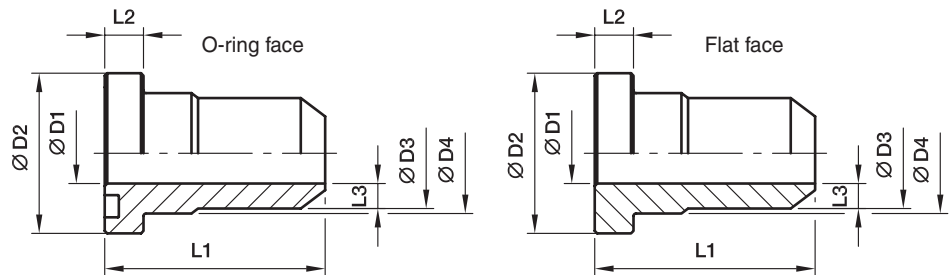
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	AS32/15X2S	AS32/15X2SM	AS32/15X2SU	NBR
Stainless steel	SS	AS32/15X2SS	AS32/15X2SSM	AS32/15X2SSU	VIT

## AS SAE Straight flange adapter

SAE Flange / Butt weld tube end  
(ISO 6162-1/-2)



### 6000 PSI Series

Nom. flange size		Tube	D1	D2	D3	D4	L1	L2	L3	Weight (steel) kg/piece	O-ring face	Flat face	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										Order code*	Order code*	S	SS
1/2	13	16×3	10	31.8	16	24.0	45	7.8	3.0	0.12	<b>AS62/16X3</b>	<b>ASG62/16X3</b>	420	420
1/2	13	21.3×3.2	13	31.8	22	24.0	45	7.8	4.5	0.12	<b>AS62/21.3X3.2</b>	<b>ASG62/21.3X3.2</b>	420	420
3/4	19	16×3	10	41.3	16	31.8	50	8.8	3.0	0.20	<b>AS63/16X3</b>	<b>ASG63/16X3</b>	420	420
3/4	19	20×4	12	41.3	20	31.8	50	8.8	4.0	0.22	<b>AS63/20X4</b>	<b>ASG63/20X4</b>	420	420
3/4	19	26.9×4	18	41.3	28	32.0	50	8.8	5.0	0.21	<b>AS63/26.9X4</b>	<b>ASG63/26.9X4</b>	420	420
3/4	19	25×5	15	41.3	25	31.8	50	8.8	5.0	0.21	<b>AS63/25X5</b>	<b>ASG63/25X5</b>	420	420
1	25	25×5	15	47.6	25	38.0	55	9.5	5.0	0.34	<b>AS64/25X5</b>	<b>ASG64/25X5</b>	420	420
1	25	30×4	22	47.6	30	38.0	55	9.5	4.0	0.30	<b>AS64/30X4</b>	<b>ASG64/30X4</b>	420	420
1	25	30×6	18	47.3	30	38.0	67	9.5	6.0	0.33	<b>AS64/30X6</b>	<b>ASG64/30X6</b>	420	420
1	25	33.7×6.3	22	47.6	35	38.0	55	9.5	6.5	0.33	<b>AS64/33.7X6.3</b>	<b>ASG64/33.7X6.3</b>	420	420
1 1/4	32	30×4	22	54.0	30	44.0	60	10.3	4.0	0.53	<b>AS65/30X4</b>	<b>ASG65/30X4</b>	420	420
1 1/4	32	30×6	18	54.0	30	44.0	60	10.3	6.0	0.63	<b>AS65/30X6</b>	<b>ASG65/30X6</b>	420	420
1 1/4	32	38×5	28	54.0	38	44.0	60	10.3	5.0	0.45	<b>AS65/38X5</b>	<b>ASG65/38X5</b>	420	420
1 1/4	32	38×8	22	54.0	38	44.0	60	10.3	8.0	0.55	<b>AS65/38X8</b>	<b>ASG65/38X8</b>	420	420
1 1/4	32	42.4×6.3	29	54.0	44	44.0	60	10.3	7.5	0.47	<b>AS65/42.4X6.3</b>	<b>ASG65/42.4X6.3</b>	420	420
1 1/2	38	38×5	28	63.5	38	50.8	65	12.6	5.0	0.71	<b>AS66/38X5</b>	<b>ASG66/38X5</b>	420	420
1 1/2	38	38×8	22	63.5	38	50.8	65	12.6	8.0	0.85	<b>AS66/38X8</b>	<b>ASG66/38X8</b>	420	420
1 1/2	38	48.3×8	35	63.5	51	51.0	65	12.6	8.0	0.66	<b>AS66/48.3X8</b>	<b>ASG66/48.3X8</b>	420	420
2	51	50×9	32	79.4	50	66.6	70	12.6	9.0	1.24	<b>AS68/50X9</b>	<b>ASG68/50X9</b>	420	420
2	51	65×8	49	79.4	65	66.6	70	12.6	8.0	0.98	<b>AS68/65X8</b>	<b>ASG68/65X8</b>	420	420
2	51	60.3×10	43	79.4	61	67.0	70	12.6	9.0	1.12	<b>AS68/60.3X10</b>	<b>ASG68/60.3X10</b>	420	420
2 1/2	64	73×14	45	107.8	74	88.9	90	20.6	14.5	6.41	<b>AS610/73X14</b>	<b>ASG610/73X14</b>	420	420
3	76	88.6×16	58	131.7	90	113.8	110	25.6	16.0	9.31	<b>AS612/88.6X16</b>	<b>ASG612/88.6X16</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

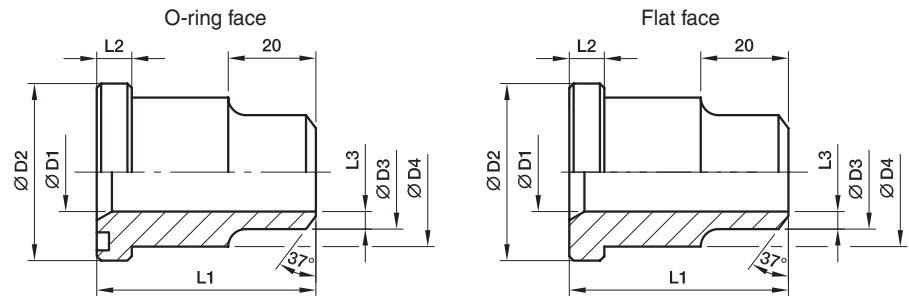
Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	AS62/16X3S	AS62/16X3SM	AS62/16X3SU	NBR
Stainless steel	SS	AS62/16X3SS	AS62/16X3SSM	AS62/16X3SSU	VIT



## SAE Flange adapters

### ASL SAE Straight flange adapter

SAE Flange / Butt weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		Tube	D1	D2	D3	D4	L1	L2	L3	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												S	SS
1/2	13	16x2	12	30.2	17	23.9	41	6.7	2.5	0.26	ASL32/16X2	ASLG32/16X2	210	210
3/4	19	25x3	19	38.1	25	31.7	50	6.7	3.0	0.45	ASL33/25X3	ASLG33/25X3	210	210
1	25	30x4	22	44.4	30	38.0	50	8.0	4.0	0.59	ASL34/30X4	ASLG34/30X4	210	210
1 1/4	32	38x5	28	50.8	38	43.0	55	8.0	5.0	0.82	ASL35/38X5	ASLG35/38X5	210	210
1 1/2	38	45x5	35	60.3	45	50.0	57	8.0	5.0	1.10	ASL36/45X5	ASLG36/45X5	210	210
2	51	60x7	45	71.4	60	62.0	57	9.5	7.5	1.35	ASL38/60X7	ASLG38/60X7	210	210
2 1/2	64	70x7.5	55	84.1	70	74.0	58	9.5	7.5	1.52	ASL310/70X7.5	ASLG310/70X7.5	175	175
3	76	80x6	68	101.6	80	90.0	60	9.5	6.0	2.13	ASL312/80X6	ASLG312/80X6	138	138
3 1/2	89	100x6	88	114.3	100	102.0	60	11.2	6.0	2.41	ASL314/100X6	ASLG314/100X6	35	35
4	102	110x6	98	127.0	110	114.0	60	11.2	6.0	2.52	ASL316/110X6	ASLG316/110X6	35	35
5	127	133x6.5	120	152.4	133	140.0	60	11.2	6.5	3.12	ASL320/133X6.5	ASLG320/133X6.5	35	35

#### 6000 PSI Series

1/2	13	16x2	12	31.8	16	24.0	34	7.7	2.0	0.32	ASL62/16X2	ASLG62/16X2	420	420
3/4	19	25x3.5	18	41.3	25	32.0	38	8.7	3.5	0.70	ASL63/25X3.5	ASLG63/25X3.5	420	420
1	25	30x4	22	47.6	30	38.5	40	9.5	4.0	1.10	ASL64/30X4	ASLG64/30X4	420	420
1 1/4	32	38x5.5	27	54.0	38	44.0	45	10.3	5.5	1.70	ASL65/38X5.5	ASLG65/38X5.5	420	420
1 1/2	38	45x6.5	32	63.5	45	51.0	50	12.5	6.5	2.85	ASL66/45X6.5	ASLG66/45X6.5	420	420
2	51	60x7.5	45	79.4	60	67.0	58	12.5	7.5	4.60	ASL68/60X7.5	ASLG68/60X7.5	420	420
2 1/2	64	74x14.5	45	107.8	74	88.9	90	20.6	14.5	6.50	ASL610/74X14.5	ASLG610/74X14.5	420	420
3	76	90x16	58	131.7	90	113.8	110	25.6	16.0	9.62	ASL612/90X16	ASLG612/90X16	420	420

<sup>4)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

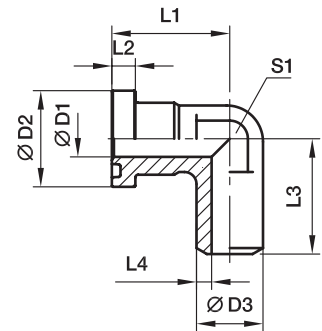
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	ASL32/16X2S	ASL32/16X2SM	ASL32/16X2SU	NBR
Stainless steel	SS	ASL32/16X2SS	ASL32/16X2SSM	ASL32/16X2SSU	VIT

**WAS SAE 90° Elbow flange adapter**

SAE Flange / Butt weld tube end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		⌀ max.	D1	D2	D3	L1	L2	L3	L4	S1	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												S	SS
1/2	13	21.3	13	30.2	21.6	44	6.7	50	4.3	22	0.38	<b>WAS32/21.6</b>	345	345
3/4	19	26.9	19	38.1	27.2	53	6.7	64	4.1	27	0.64	<b>WAS33/27.2</b>	345	345
1	25	33.7	25	44.4	34.5	60	8.0	65	4.7	34	1.13	<b>WAS34/34.5</b>	345	345
1 1/4	32	42.4	30	50.8	42.8	55	8.0	64	6.4	42	1.27	<b>WAS35/42.8</b>	276	276
1 1/2	38	48.3	38	60.3	48.6	66	8.0	78	5.3	50	2.04	<b>WAS36/48.6</b>	207	207

**6000 PSI Series**

1/2	13	21.3	13	31.8	21.6	44	7.7	50	4.3	22	0.48	<b>WAS62/21.6</b>	420	420
3/4	19	26.9	18	41.3	27.2	53	8.7	64	4.6	27	0.96	<b>WAS63/27.2</b>	420	420
1	25	33.7	22	47.6	34.5	60	9.5	62	6.3	34	1.42	<b>WAS64/34.5</b>	420	420
1 1/4	32	42.4	28	54.0	42.8	70	10.3	72	7.4	42	2.45	<b>WAS65/42.8</b>	420	420
1 1/2	38	48.3	32	63.5	48.6	80	12.5	84	8.3	50	3.25	<b>WAS66/48.6</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.



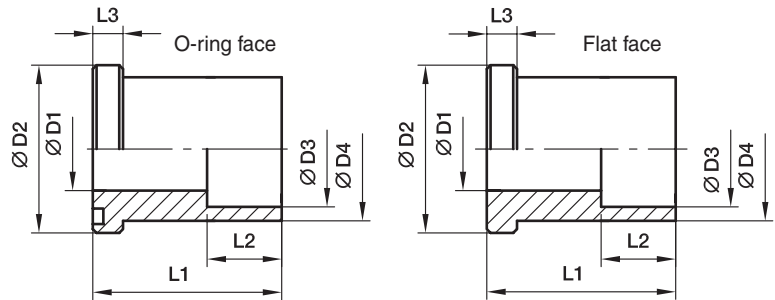
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	WAS32/21.6S	WAS32/21.6SM	WAS32/21.6SU	NBR
Stainless steel	SS	WAS32/21.6SS	WAS32/21.6SSM	WAS32/21.6SSU	VIT

## SAE Flange adapters

### ES SAE Straight flange adapter

SAE Flange / Socket weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		⌀ max.	D1	D2	D3	D4	L1	L2	L3	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												S	SS
1/2	13	16.0	12.5	30.2	16.5	24.0	35	12	6.7	0.25	ES32/16.5	ESG32/16.5	345	345
1/2	13	17.3	12.5	30.2	17.6	24.0	35	12	6.7	0.23	ES32/17.6	ESG32/17.6	345	345
3/4	19	20.0	15.0	38.1	20.5	31.5	40	13	6.7	0.35	ES33/20.5	ESG33/20.5	345	345
3/4	19	21.3	15.0	38.1	21.7	31.5	40	13	6.7	0.32	ES33/21.7	ESG33/21.7	345	345
1	25	25.0	20.0	44.4	25.5	38.0	45	14	8.0	0.45	ES34/25.5	ESG34/25.5	345	345
1	25	26.9	20.0	44.4	27.3	38.0	45	14	8.0	0.41	ES34/27.3	ESG34/27.3	345	345
1 1/4	32	30.0	25.0	50.8	30.5	43.0	50	16	8.0	0.65	ES35/30.5	ESG35/30.5	276	276
1 1/4	32	32.0	25.0	50.8	32.5	43.0	50	16	8.0	0.63	ES35/32.5	ESG35/32.5	276	276
1 1/4	32	33.7	25.0	50.8	34.2	43.0	50	16	8.0	0.61	ES35/34.2	ESG35/34.2	276	276
1 1/2	38	38.0	32.0	60.3	38.5	50.0	55	18	8.0	0.89	ES36/38.5	ESG36/38.5	207	207
1 1/2	38	40.0	32.0	60.3	40.7	50.0	55	18	8.0	0.86	ES36/40.7	ESG36/40.7	207	207
1 1/2	38	42.4	32.0	60.3	43.0	50.0	55	18	8.0	0.95	ES36/43	ESG36/43	207	207
2	51	48.3	32.0	71.4	49.0	62.0	65	20	9.5	1.21	ES38/49	ESG38/49	207	207
2	51	50.0	38.0	71.4	50.7	62.0	65	20	9.5	1.17	ES38/50.7	ESG38/50.7	207	207
2 1/2	64	60.3	38.0	84.1	61.0	74.0	75	22	9.5	1.45	ES310/61	ESG310/61	172	172
2 1/2	64	63.5	47.0	84.1	64.0	74.0	75	22	9.5	1.41	ES310/64	ESG310/64	172	172
3	76	73.5	47.0	101.6	74.0	90.0	85	24	9.5	2.50	ES312/74	ESG312/74	138	138
3	76	76.1	58.0	101.6	77.0	90.0	85	24	9.5	2.45	ES312/77	ESG312/77	138	138
3	76	80.0	58.0	101.6	81.0	90.0	85	24	9.5	2.30	ES312/81	ESG312/81	138	138

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

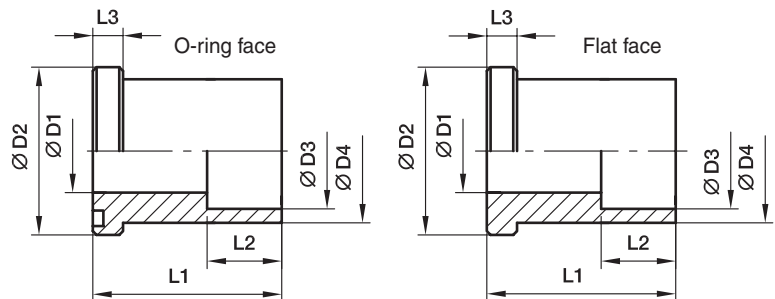
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	ES32/16.5S	ES32/16.5SM	ES32/16.5SU	NBR
Stainless steel	SS	ES32/16.5SS	ES32/16.5SSM	ES32/16.5SSU	VIT

## ES SAE Straight flange adapter

SAE Flange / Socket weld tube end  
(ISO 6162-1/-2)



### 6000 PSI Series

Nom. flange size		⌀ max.	D1	D2	D3	D4	L1	L2	L3	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												S	SS
1/2	13	16.0	11.0	31.8	16.5	24.0	35	13	7.7	0.26	<b>ES62/16.5</b>	<b>ESG62/16.5</b>	420	420
1/2	13	17.3	11.0	31.8	17.6	24.0	35	13	7.7	0.24	<b>ES62/17.6</b>	<b>ESG62/17.6</b>	420	420
3/4	13	20.0	15.0	41.3	20.5	31.8	40	13	8.7	0.37	<b>ES63/20.5</b>	<b>ESG63/20.5</b>	420	420
3/4	19	21.3	15.0	41.3	21.7	31.8	40	13	8.7	0.33	<b>ES63/21.7</b>	<b>ESG63/21.7</b>	420	420
1	25	25.0	20.0	47.6	25.5	38.0	45	13	9.5	0.48	<b>ES64/25.5</b>	<b>ESG64/25.5</b>	420	420
1	25	26.9	20.0	47.6	27.3	38.0	45	13	9.5	0.43	<b>ES64/27.3</b>	<b>ESG64/27.3</b>	420	420
1 1/4	32	30.0	24.0	54.0	30.5	44.0	50	16	10.3	0.68	<b>ES65/30.5</b>	<b>ESG65/30.5</b>	420	420
1 1/4	32	32.0	24.0	54.0	32.5	44.0	50	16	10.3	0.65	<b>ES65/32.5</b>	<b>ESG65/32.5</b>	420	420
1 1/4	32	33.7	24.0	54.0	34.2	44.0	50	16	10.3	0.64	<b>ES65/34.2</b>	<b>ESG65/34.2</b>	420	420
1 1/2	38	38.0	31.0	63.5	38.5	51.0	55	18	12.5	0.92	<b>ES66/38.5</b>	<b>ESG66/38.5</b>	420	420
1 1/2	38	40.0	31.0	63.5	40.7	51.0	55	18	12.5	0.88	<b>ES66/40.7</b>	<b>ESG66/40.7</b>	420	420
1 1/2	38	42.4	31.0	63.5	42.8	51.0	55	18	12.5	0.85	<b>ES66/42.8</b>	<b>ESG66/42.8</b>	420	420
2	51	48.3	38.0	79.4	49.0	67.0	65	20	12.5	1.25	<b>ES68/49</b>	<b>ESG68/49</b>	420	420
2	51	50.0	38.0	79.4	50.7	67.0	65	20	12.5	1.21	<b>ES68/50.7</b>	<b>ESG68/50.7</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

PN (bar) = PN (MPa)  
10

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.



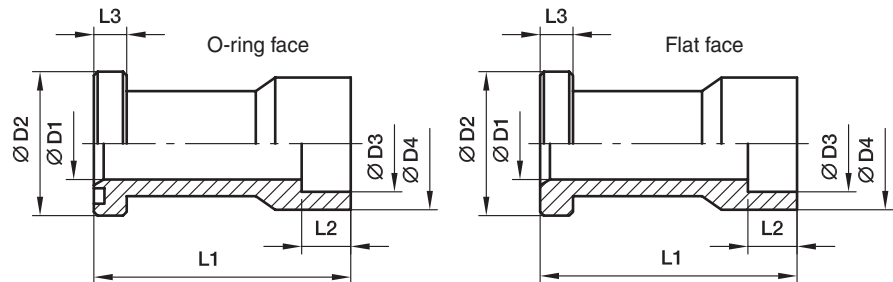
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	ES62/16.5S	ES62/16.5SM	ES62/16.5SU	NBR
Stainless steel	SS	ES62/16.5SS	ES62/16.5SSM	ES62/16.5SSU	VIT

## SAE Flange adapters

### ESL SAE Straight flange adapter

SAE Flange / Socket weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		⌀ max.	D1	D2	D3	D4	L1	L2	L3	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												S	SS
1/2	13	20.0	15	30.2	20.5	30	60	13	6.7	0.45	ESL32/20.5	ESLG32/20.5	345	345
1/2	13	21.3	15	30.2	21.7	30	60	13	6.7	0.44	ESL32/21.7	ESLG32/21.7	345	345
3/4	19	25.0	19	38.1	25.5	35	68	13	6.7	0.60	ESL33/25.5	ESLG33/25.5	345	345
3/4	19	26.9	19	38.1	27.3	35	68	13	6.7	0.58	ESL33/27.3	ESLG33/27.3	345	345
1	25	30.0	23	44.4	30.5	44	75	16	8.0	0.75	ESL34/30.5	ESLG34/30.5	345	345
1	25	32.0	24	44.4	32.5	44	75	16	8.0	0.72	ESL34/32.5	ESLG34/32.5	345	345
1	25	33.7	25	44.4	34.0	44	75	16	8.0	0.70	ESL34/34	ESLG34/34	345	345
1	25	35.0	25	44.4	35.5	44	75	16	8.0	0.68	ESL34/35.5	ESLG34/35.5	345	345
1 1/4	32	38.0	32	50.8	38.5	55	95	18	8.0	0.87	ESL35/38.5	ESLG35/38.5	276	276
1 1/4	32	40.0	32	50.8	40.5	55	95	18	8.0	0.95	ESL35/40.5	ESLG35/40.5	276	276
1 1/4	32	42.4	32	50.8	43.0	55	95	18	8.0	0.93	ESL35/43	ESLG35/43	276	276
1 1/2	38	48.3	38	60.3	49.0	68	100	20	8.0	1.54	ESL36/49	ESLG36/49	207	207
1 1/2	38	50.0	38	60.3	50.4	68	100	20	8.0	1.50	ESL36/50.4	ESLG36/50.4	207	207
2	51	60.3	50	71.4	61.0	79	107	22	9.5	1.89	ESL38/61	ESLG38/61	207	207
2	51	65.0	50	71.4	65.8	79	107	22	9.5	1.80	ESL38/65.8	ESLG38/65.8	207	207
2 1/2	64	73.0	58	84.1	74.0	98	130	24	9.5	2.30	ESL310/74	ESLG310/74	172	172
2 1/2	64	76.1	58	84.1	77.0	98	130	24	9.5	2.25	ESL310/77	ESLG310/77	172	172
2 1/2	64	80.0	58	84.1	81.0	98	130	24	9.5	2.15	ESL310/81	ESLG310/81	172	172
3	76	88.9	70	101.6	90.5	116	150	28	9.5	3.00	ESL312/90.5	ESLG312/90.5	138	138

#### 6000 PSI Series

1/2	13	20.0	15	31.8	20.5	32	60	13	7.7	0.45	ESL62/20.5	ESLG62/20.5	420	420
1/2	13	21.3	15	31.8	21.7	32	60	13	7.7	0.44	ESL62/21.7	ESLG62/21.7	420	420
1/2	13	22.0	15	31.8	22.5	32	60	13	7.7	0.65	ESL62/22.5	ESLG62/22.5	420	420
3/4	19	25.0	19	41.3	25.7	40	68	13	8.7	0.63	ESL63/25.7	ESLG63/25.7	420	420
3/4	19	26.9	19	41.3	27.3	40	68	13	8.7	0.61	ESL63/27.3	ESLG63/27.3	420	420
3/4	19	28.0	19	41.3	28.7	40	68	13	8.7	0.60	ESL63/28.7	ESLG63/28.7	420	420
1	25	33.7	25	47.6	34.0	48	75	16	9.5	0.75	ESL64/34	ESLG64/34	420	420
1	25	35.0	25	47.6	35.5	48	75	16	9.5	0.73	ESL64/35.5	ESLG64/35.5	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

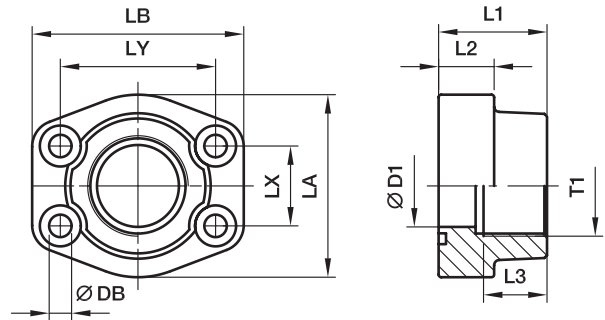
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only flange adapter	Example incl. splitflanges, metr. screws and O-ring	Example incl. splitflanges, UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	ESL32/20.5S	ESL32/20.5SM	ESL32/20.5SU	NBR
Stainless steel	SS	ESL32/20.5SS	ESL32/20.5SSM	ESL32/20.5SSU	VIT

**PFF-G SAE Straight 4 bolt flange with BSPP thread**

SAE Flange / Female BSPP thread  
(ISO 6162-1/-2) (ISO 1179-1)



**3000 PSI Series**

Nom. flange size		T1	D1	L1	L2	L3	LA	LB	LX	LY	DB	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)													S	SS
1/2	13	G3/8	13	36	16	19	46	57	17.5	38.1	9.0	0.27	PFF32G38	345	345
1/2	13	G1/2	13	36	16	19	46	57	17.5	38.1	9.0	0.25	PFF32G	345	345
3/4	19	G3/4	19	36	18	19	50	65	22.3	47.6	11.0	0.37	PFF33G	345	345
3/4	13	G1/2	13	36	18	19	50	65	22.3	47.6	11.0	0.40	PFF33G12	345	345
1	25	G1	25	38	18	22	55	70	26.2	52.4	11.0	0.45	PFF34G	345	345
1	19	G3/4	19	35	21	19	55	70	26.2	52.4	11.0	0.45	PFF34G34	345	345
1 1/4	32	G1 1/4	32	40	21	22	68	79	30.2	58.7	11.5	0.66	PFF35G	276	276
1 1/4	25	G1	25	42	25	22	65	80	30.2	58.7	11.5	0.80	PFF35G1	276	276
1 1/2	38	G1 1/2	38	45	25	24	78	93	35.7	69.9	13.5	1.05	PFF36G	207	207
1 1/2	32	G1 1/4	32	45	27	24	78	95	35.7	69.9	13.5	1.17	PFF36G114	207	207
2	51	G2	51	45	25	30	89	103	42.9	77.8	13.5	1.17	PFF38G	207	207
2	38	G1 1/2	38	45	25	26	89	103	42.9	77.8	13.5	1.52	PFF38G112	207	207
2 1/2	63	G2 1/2	63	50	25	30	101	115	50.8	88.9	13.5	1.59	PFF310G	172	172
2 1/2	51	G2	51	50	25	30	101	115	50.8	88.9	13.5	2.13	PFF310G2	172	172
3	73	G3	73	50	27	34	124	135	61.9	106.4	17.5	2.28	PFF312G	138	138
3	63	G2 1/2	63	50	27	30	124	135	61.9	106.4	17.5	2.56	PFF312G212	138	138
3 1/2	89	G3 1/2	89	48	27	34	136	152	61.9	120.7	17.5	2.42	PFF314G	34	34
3 1/2	73	G3	73	48	27	34	136	152	61.9	120.7	17.5	3.28	PFF314G3	34	34
4	99	G4	99	48	27	34	146	162	77.8	130.2	17.5	2.78	PFF316G	34	34
4	89	G3 1/2	89	48	27	34	146	162	77.8	130.2	17.5	3.30	PFF316G312	34	34
5	129	G5	120	50	28	30	180	184	92.1	152.4	17.5	5.80	PFF320G	34	34

**6000 PSI Series**

1/2	13	G3/8	13	36	16	19	46	57	18.2	40.5	9.0	0.26	PFF62G38	420	420
1/2	13	G1/2	13	36	16	19	46	57	18.2	40.5	9.0	0.29	PFF62G	420	420
3/4	19	G3/4	19	35	21	22	55	71	23.8	50.8	11.0	0.50	PFF63G	420	420
3/4	13	G1/2	13	35	21	22	55	71	23.8	50.8	11.0	0.50	PFF63G12	420	420
1	25	G1	25	42	25	24	65	81	27.8	57.2	13.0	0.76	PFF64G	420	420
1	19	G3/4	19	42	25	24	65	81	27.8	57.2	13.0	0.76	PFF64G34	420	420
1 1/4	32	G1 1/4	32	45	27	25	78	95	31.8	66.6	15.0**	1.20	PFF65G	420	420
1 1/4	25	G1	25	45	27	25	78	95	31.8	66.6	15.0**	1.20	PFF65G1	420	420
1 1/2	38	G1 1/2	38	50	30	28	94	112	36.5	79.3	17.0	1.65	PFF66G	420	420
1 1/2	32	G1 1/4	32	50	30	28	94	112	36.5	79.3	17.0	1.65	PFF66G114	420	420
2	51	G2	51	65	37	30	114	134	44.5	96.8	21.0	2.45	PFF68G	420	420
2	38	G1 1/2	38	65	37	30	114	134	44.5	96.8	21.0	2.45	PFF68G112	420	420
2 1/2	63	G2 1/2	63	80	45	32	152	180	58.7	123.8	25.0	3.05	PFF610G	420	420
3	73	G3	73	90	55	40	178	208	71.4	152.4	32.0	3.45	PFF612G	420	420

\*\*DB = 13.5 for UNC Screws

1) Pressure shown = Item deliverable

\*Please add the suffixes below according to the material/surface required.

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PFF32G38S	PFF32G38SM	PFF32G38SU	
Stainless steel	SS	PFF32G38SS	PFF32G38SSM	PFF32G38SSU	VIT
Steel, zinc plated, Cr(VI)-free	CF	PFF32G38CF	PFF32G38CFM	PFF32G38CFU	NBR

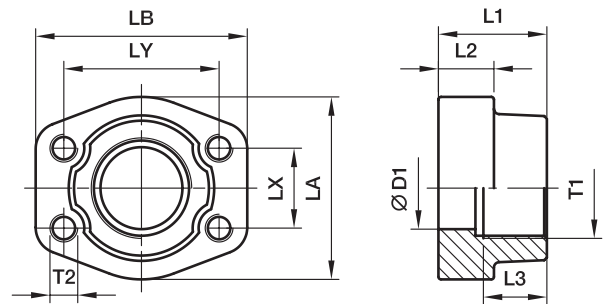




## SAE 4 Bolt flanges

### PCFF-G SAE Straight 4 bolt flange with BSPP thread

SAE Counter flange / Female BSPP thread  
(ISO 6162-1/-2) (ISO 1179-1)



#### 3000 PSI Series

Nom. flange size		T1	D1	L1	L2	L3	LA	LB	LX	LY	T2		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										(metr.)	(unc.)			S	SS
1/2	13	G3/8	13	36	16	19	46	57	17.5	38.1	M 8	5/16	0.26	PCFF32G38	345	345
1/2	13	G1/2	13	36	16	19	46	57	17.5	38.1	M 8	5/16	0.28	PCFF32G	345	345
3/4	19	G3/4	19	36	18	19	50	65	22.3	47.6	M10	3/8	0.41	PCFF33G	345	345
3/4	13	G1/2	13	36	18	19	50	65	22.3	47.6	M10	3/8	0.44	PCFF33G12	345	345
1	25	G1	25	38	18	22	55	70	26.2	52.4	M10	3/8	0.49	PCFF34G	345	345
1	19	G3/4	19	35	21	19	55	70	26.2	52.4	M10	3/8	0.55	PCFF34G34	345	345
1 1/4	32	G1 1/4	32	40	21	22	68	79	30.2	58.7	M10	7/16	0.71	PCFF35G	276	276
1 1/4	25	G1	25	42	25	22	65	80	30.2	58.7	M10	7/16	0.85	PCFF35G1	276	276
1 1/2	38	G1 1/2	38	45	25	24	78	93	35.7	69.9	M12	1/2	1.12	PCFF36G	207	207
1 1/2	32	G1 1/4	32	45	27	24	78	95	35.7	69.9	M12	1/2	1.24	PCFF36G114	207	207
2	51	G2	51	45	25	30	89	103	42.9	77.8	M12	1/2	1.24	PCFF38G	207	207
2	38	G1 1/2	38	45	25	26	89	103	42.9	77.8	M12	1/2	1.59	PCFF38G112	207	207
2 1/2	64	G2 1/2	63	50	25	30	101	115	50.8	88.9	M12	1/2	1.66	PCFF310G	172	172
2 1/2	51	G2	51	50	25	30	101	115	50.8	88.9	M12	1/2	2.20	PCFF310G2	172	172
3	76	G3	73	50	27	30	124	135	61.9	106.4	M16	5/8	2.37	PCFF312G	138	138
3	63	G2 1/2	63	50	27	30	124	135	61.9	106.4	M16	5/8	2.65	PCFF312G212	138	138
3 1/2	89	G3 1/2	89	50	27	30	136	152	69.9	120.7	M16	5/8	2.51	PCFF314G	34	34
3 1/2	73	G3	73	48	27	34	136	152	61.9	120.7	M16	5/8	3.37	PCFF314G3	34	34
4	102	G4	99	50	27	30	146	162	77.8	130.2	M16	5/8	2.87	PCFF316G	34	34
4	89	G3 1/2	89	48	27	34	146	162	77.8	130.2	M16	5/8	3.39	PCFF316G312	34	34
5	127	G5	120	50	28	30	180	184	92.1	152.4	M16	5/8	5.80	PCFF320G	34	34

#### 6000 PSI Series

1/2	13	G3/8	13	36	16	19	46	57	18.2	40.5	M 8	5/16	0.26	PCFF62G38	420	420
1/2	13	G1/2	13	36	16	19	46	57	18.2	40.5	M 8	5/16	0.29	PCFF62G	420	420
3/4	19	G3/4	19	35	21	22	55	71	23.8	50.8	M10	3/8	0.55	PCFF63G	420	420
3/4	13	G1/2	13	35	21	22	55	71	23.8	50.8	M10	3/8	0.60	PCFF63G12	420	420
1	25	G1	25	42	25	24	65	81	27.8	57.2	M12	7/16	0.87	PCFF64G	420	420
1	19	G3/4	19	42	25	24	65	81	27.8	57.2	M12	7/16	0.90	PCFF64G34	420	420
1 1/4	32	G1 1/4	32	45	27	25	78	95	31.8	66.6	M14	1/2	1.21	PCFF65G	420	420
1 1/4	25	G1	25	45	27	25	78	95	31.8	66.6	M14	1/2	1.34	PCFF65G1	420	420
1 1/2	38	G1 1/2	38	50	30	28	94	112	36.5	79.3	M16	5/8	1.90	PCFF66G	420	420
1 1/2	32	G1 1/4	32	50	30	28	94	112	36.5	79.3	M16	5/8	2.03	PCFF66G2	420	420
2	51	G2	51	65	37	30	114	134	44.5	96.8	M20	3/4	3.43	PCFF68G	420	420
2	38	G1 1/2	38	65	37	30	114	134	44.5	96.8	M20	3/4	3.92	PCFF68G12	420	420
2 1/2	64	G2 1/2	63	80	45	32	152	180	58.7	123.8	M24	-	6.98	PCFF610G	420	420
3	76	G3	73	90	55	40	178	208	71.4	152.4	M30	-	13.00	PCFF612G	420	420

<sup>1)</sup> Pressure shown = Item deliverable

\*Please add the **suffixes** below according to the material/surface required.

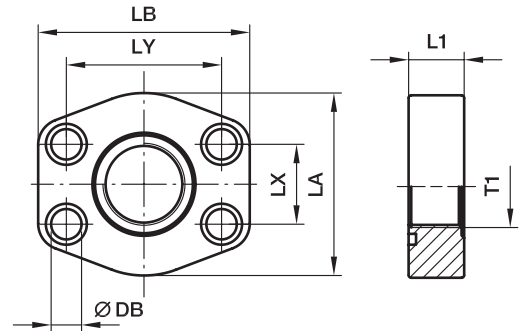
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

Order code suffixes				
Material	Suffix surface and material	Example 4 bolt flange with metr. threads	Example 4 bolt flange with UNC threads	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PCFF32G38SM	PCFF32G38SU	NBR
Stainless steel	SS	PCFF32G38SSM	PCFF32G38SSU	VIT
Steel, zinc plated, Cr(VI)-free	CF	PCFF32G38CFM	PCFF32G38CFU	NBR

**PAFSF-G SAE Straight 4 bolt flange flat with BSPP thread**

SAE Flange / Female BSPP thread  
(ISO 6162-1/-2) (ISO 1179-1)

only for low pressure applications



**3000 PSI Series**

Nom. flange size		T1	L1	LA	LB	LX	LY	DB	Screws		O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)								(metr.)	(unc.)				S	SS
1/2	13	G3/8	16	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	Standard	0.20	PAFSF080G38	40	40
1/2	13	G1/2	16	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	OR25.07X2.62X	0.27	PAFSF080G	40	40
3/4	19	G1/2	18	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	Standard	0.29	PAFSF100G12	40	40
3/4	19	G3/4	18	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	OR31.34X3.53X	0.27	PAFSF100G	40	40
1	25	G3/4	19	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	Standard	0.32	PAFSF102G34	40	40
1	25	G1	19	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	OR37.7X3.53X	0.31	PAFSF102G	40	40
1 1/4	32	G1	21	69	80	30.2	58.7	10.5	M10×35	7/16×1 1/2	Standard	0.44	PAFSF104G1	40	40
1 1/4	32	G1 1/4	21	69	80	30.2	58.7	10.5	M10×35	7/16×1 1/2	OR44.45X3.53X	0.56	PAFSF104G	40	40
1 1/2	38	G1 1/4	24	77	95	35.7	69.9	13.5	M12×45	1/2×1 3/4	Standard	0.83	PAFSF106G114	40	40
1 1/2	38	G1 1/2	24	77	95	35.7	69.9	13.5	M12×45	1/2×1 3/4	OR52.39X3.53X	0.76	PAFSF106G	40	40
2	51	G1 1/2	24	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	Standard	1.00	PAFSF108G112	40	40
2	51	G2	24	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	OR65.09X3.53X	0.90	PAFSF108G	40	40
2 1/2	64	G2	25	101	116	50.8	88.9	13.5	M12×45	1/2×1 3/4	Standard	1.30	PAFSF110G2	40	40
2 1/2	64	G2 1/2	25	101	116	50.8	88.9	13.5	M12×45	1/2×1 3/4	OR78.97X3.53X	1.25	PAFSF110G	40	40
3	76	G2 1/2	25	124	136	61.9	106.4	17.0	M16×55	5/8×2 1/4	Standard	1.86	PAFSF112G212	30	30
3	76	G3	25	124	136	61.9	106.4	17.0	M16×55	5/8×2 1/4	OR94.84X3.53X	1.49	PAFSF112G	30	30
3 1/2	89	G3	25	136	152	69.9	120.7	17.0	M16×55	5/8×2 1/4	Standard	1.68	PAFSF114G3	30	30
3 1/2	89	G3 1/2	25	136	152	69.9	120.7	17.0	M16×55	5/8×2 1/4	OR107.5X3.53X	1.59	PAFSF114G	30	30
4	102	G3 1/2	25	146	162	77.8	130.2	17.0	M16×55	5/8×2 1/4	Standard	2.35	PAFSF116G312	30	30
4	102	G4	25	146	162	77.8	130.2	17.0	M16×55	5/8×2 1/4	OR117.1X3.53X	2.25	PAFSF116G	30	30
5	127	G4	25	180	184	92.1	152.4	17.0	M16×55	5/8×2 1/4	Standard	3.45	PAFSF118G4	30	30
5	127	G5	25	180	184	92.1	152.4	17.0	M16×55	5/8×2 1/4	OR145.6X3.53X	3.15	PAFSF118G	30	30

**6000 PSI Series**

1/2	13	G3/8	16	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	Standard	0.25	PAFSF401G38	40	40
1/2	13	G1/2	16	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	OR25.07X2.62X	0.20	PAFSF401G	40	40
3/4	19	G1/2	19	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	Standard	0.37	PAFSF402G12	40	40
3/4	19	G3/4	19	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	OR32.92X3.53X	0.36	PAFSF402G	40	40
1	25	G3/4	24	66	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	Standard	0.64	PAFSF403G34	40	40
1	25	G1	24	66	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	OR37.7X3.53X	0.60	PAFSF403G	40	40
1 1/4	32	G1	27	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	Standard	0.88	PAFSF404G1	40	40
1 1/4	32	G1 1/4	27	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	OR44.45X3.53X	0.87	PAFSF404G	40	40
1 1/2	38	G1 1/4	30	89	103	36.5	79.3	17.0	M16×55	5/8×2 1/4	Standard	1.14	PAFSF405G114	40	40
1 1/2	38	G1 1/2	30	89	103	36.5	79.3	17.0	M16×55	5/8×2 1/4	OR52.39X3.53X	1.01	PAFSF405G	40	40
2	51	G1 1/2	35	123	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	Standard	2.94	PAFSF406G112	40	40
2	51	G2	35	123	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	OR65.09X3.53X	2.84	PAFSF406G	40	40

<sup>1)</sup> Pressure shown = Item deliverable

\*Please add the suffixes below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PAFSF080GS	PAFSF080GSM	PAFSF080GSU	NBR
Stainless steel	SS	PAFSF080GSS	PAFSF080GSSM	PAFSF080GSSU	VIT

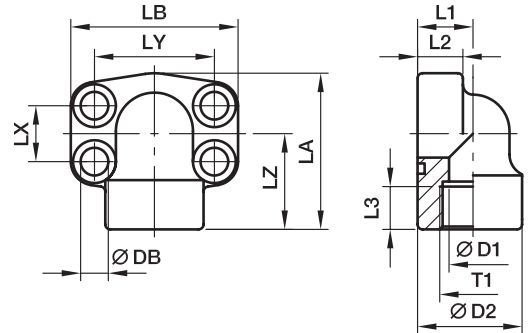
$$\frac{PN(\text{bar})}{10} = PN(\text{MPa})$$



## SAE 4 Bolt flanges

### PEFF-G SAE 90° 4 bolt flange with BSPP thread

SAE 90° Flange / Female BSPP thread  
(ISO 6162-1/-2) (ISO 1179-1)



#### 3000 PSI Series

Nom. flange size		T1	D1	D2	L1	L2	L3	LA	LB	LX	LY	LZ	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)													(metr.)	(unc.)			S	SS
1/2	13	<b>G1/2</b>	13	34.0	18	16	16	59	57	17.5	38.1	36	9.0	M 8×30	5/16×1 1/4	0.35	<b>PEFF32G</b>	348	348
3/4	19	<b>G3/4</b>	19	38.5	22	18	19	63	68	22.3	47.6	38	10.5	M10×35	3/8×1 1/2	0.55	<b>PEFF33G</b>	348	348
1	25	<b>G1</b>	25	44.5	28	19	19	68	74	26.2	52.4	41	10.5	M10×35	3/8×1 1/2	0.80	<b>PEFF34G</b>	348	348
1 1/4	32	<b>G1 1/4</b>	31	53.5	30	22	22	84	81	30.2	58.7	50	10.5	M10×35	7/16×1 1/2	1.30	<b>PEFF35G</b>	278	278
1 1/2	38	<b>G1 1/2</b>	38	62.5	36	25	24	97	95	35.7	69.9	58	13.5	M12×45	1/2×1 3/4	1.60	<b>PEFF36G</b>	210	210
2	51	<b>G2</b>	50	77.0	41	25	26	109	105	42.9	77.8	65	13.5	M12×45	1/2×1 3/4	2.00	<b>PEFF38G</b>	210	210
2 1/2	64	<b>G2 1/2</b>	60	89.0	50	25	30	127	115	50.8	88.9	77	13.5	M12×45	1/2×1 3/4	2.40	<b>PEFF310G</b>	175	175

#### 6000 PSI Series

1/2	13	<b>G1/2</b>	13	34.0	18	16	16	59	57	18.2	40.5	36	8.8	M 8×30	5/16×1 1/4	0.35	<b>PEFF62G</b>	420	420
3/4	19	<b>G3/4</b>	19	44.5	28	20	22	68	72	23.8	50.8	41	10.5	M10×35	3/8×1 1/2	0.80	<b>PEFF63G</b>	420	420
1	25	<b>G1</b>	25	53.5	30	24	24	84	82	27.8	57.2	50	13.5	M12×45	7/16×1 1/2	1.30	<b>PEFF64G</b>	420	420
1 1/4	32	<b>G1 1/4</b>	31	62.5	36	25	25	97	95	31.8	66.6	58	15.0**	M14×50	1/2×1 3/4	1.60	<b>PEFF65G</b>	420	420
1 1/2	38	<b>G1 1/2</b>	38	77.0	51	26	28	109	110	36.5	79.3	65	17.0	M16×55	5/8×2 1/4	2.00	<b>PEFF66G</b>	420	420
2	51	<b>G2</b>	50	87.0	45	35	34	133	134	44.5	96.8	75	21.0	M20×70	3/4×2 3/4	2.50	<b>PEFF68G</b>	420	420

\*\*DB = 13.5 for UNC Screws

<sup>1)</sup> Pressure shown = Item deliverable

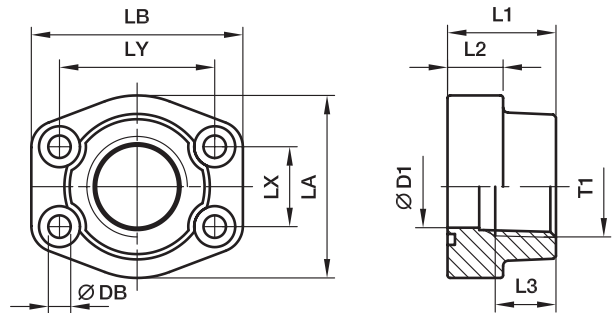
PN (bar) = PN (MPa)  
10

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PEFF32GS	PEFF32GSM	PEFF32GSU	NBR
Stainless steel	SS	PEFF32GSS	PEFF32GSSM	PEFF32GSSU	VIT

**PFF-N SAE Straight 4 bolt flange with NPT thread**

SAE Flange / Female NPT thread  
(ISO 6162-1/-2) (SAE 476)



**3000 PSI Series**

Nom. flange size		T1	D1	L1	L2	L3	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			S	SS
1/2	13	3/8NPT	13	36	16	15	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.25	<b>PFF32N38</b>	345	345
1/2	13	1/2NPT	13	36	16	15	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.28	<b>PFF32N</b>	345	345
3/4	19	3/4NPT	19	36	18	19	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.39	<b>PFF33N</b>	345	345
1	25	1NPT	25	38	18	19	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.46	<b>PFF34N</b>	345	345
1 1/4	32	1 1/4NPT	31	41	21	22	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.66	<b>PFF35N</b>	276	276
1 1/2	38	1 1/2NPT	38	44	25	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.05	<b>PFF36N</b>	207	207
2	51	2NPT	50	45	25	26	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.19	<b>PFF38N</b>	207	207
2 1/2	64	2 1/2NPT	63	50	25	30	101	115	50.8	88.9	13.5	M12×45	1/2×1 3/4	1.40	<b>PFF310N</b>	172	172
3	76	3NPT	73	50	27	34	124	135	61.9	106.4	17.0	M16×55	5/8×2 1/4	2.15	<b>PFF312N</b>	138	138
3 1/2	89	3 1/2NPT	89	50	27	36	136	152	69.9	120.7	17.0	M16×55	5/8×2 1/4	2.40	<b>PFF314N</b>	34	34
4	102	4NPT	99	50	27	36	146	162	77.8	130.2	17.0	M16×55	5/8×2 1/4	2.85	<b>PFF316N</b>	34	34
5	127	5NPT	120	50	28	36	180	184	92.1	152.4	17.0	M16×55	5/8×2 1/4	3.25	<b>PFF320N</b>	34	34

**6000 PSI Series**

1/2	13	3/8NPT	13	36	16	15	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.26	<b>PFF62N38</b>	420	420
1/2	13	1/2NPT	13	36	16	15	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.29	<b>PFF62N</b>	420	420
3/4	19	3/4NPT	19	36	19	22	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.50	<b>PFF63N</b>	420	420
1	25	1NPT	25	44	24	24	69	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.76	<b>PFF64N</b>	420	420
1 1/4	32	1 1/4NPT	31	44	27	25	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.20	<b>PFF65N</b>	420	420
1 1/2	38	1 1/2NPT	38	51	30	28	89	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.65	<b>PFF66N</b>	420	420
2	51	2NPT	50	70	37	33	116	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	2.45	<b>PFF68N</b>	420	420
2 1/2	64	2 1/2NPT	63	75	45	35	150	166	58.7	123.8	25.0	M24×90	–	3.05	<b>PFF610N</b>	420	420
3	76	3NPT	73	90	55	40	178	208	71.4	152.4	32.0	M30×110	–	3.45	<b>PFF612N</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$

\*Please add the **suffixes** below according to the material/surface required.

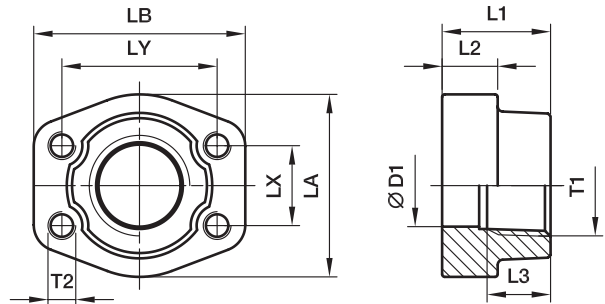
Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PFF32N38S	PFF32N38SM	PFF32N38SU	NBR
Stainless steel	SS	PFF32N38SS	PFF32N38SSM	PFF32N38SSU	VIT



## SAE 4 Bolt flanges

### PCFF-N SAE Straight 4 bolt flange with NPT thread

SAE Counter flange / Female NPT thread  
(ISO 6162-1/-2) (SAE 476)



#### 3000 PSI Series

Nom. flange size		T1	D1	L1	L2	L3	LA	LB	LX	LY	T2		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										(metr.)	(unc.)			S	SS
1/2	13	3/8NPT	13	36	16	19	47	57	17.5	38.1	M 8	5/16	0.25	PCFF32N38	345	345
1/2	13	1/2NPT	13	36	16	19	47	57	17.5	38.1	M 8	5/16	0.28	PCFF32N	345	345
3/4	19	3/4NPT	19	36	18	19	49	66	22.3	47.6	M10	3/8	0.39	PCFF33N	345	345
1	25	1NPT	25	38	18	19	53	71	26.2	52.4	M10	3/8	0.46	PCFF34N	345	345
1 1/4	32	1 1/4NPT	31	41	21	22	69	80	30.2	58.7	M10	7/16	0.66	PCFF35N	276	276
1 1/2	51	1 1/2NPT	38	44	25	24	77	94	35.7	69.9	M12	1/2	1.05	PCFF36N	207	207
2		2NPT	50	45	25	26	89	103	42.9	77.8	M12	1/2	1.19	PCFF38N	207	207
2 1/2	64	2 1/2NPT	63	50	25	30	101	115	50.8	88.9	M12	1/2	1.40	PCFF310N	172	172
3	76	3NPT	73	50	27	30	124	135	61.9	106.4	M16	5/8	2.15	PCFF312N	138	138
3 1/2	89	3 1/2NPT	89	50	27	30	136	152	69.9	120.7	M16	5/8	2.40	PCFF314N	34	34
4	102	4NPT	99	50	27	30	146	162	77.8	130.2	M16	5/8	2.85	PCFF316N	34	34
5	127	5NPT	120	50	28	30	180	184	92.1	152.4	M16	5/8	3.25	PCFF320N	34	34

#### 6000 PSI Series

1/2	13	3/8NPT	13	36	16	19	47	57	18.2	40.5	M 8	5/16	0.26	PCFF62N38	420	420
1/2	13	1/2NPT	13	36	16	19	47	57	18.2	40.5	M 8	5/16	0.29	PCFF62N	420	420
3/4	19	3/4NPT	19	36	19	22	53	71	23.8	50.8	M10	3/8	0.50	PCFF63N	420	420
1	25	1NPT	25	44	24	24	69	80	27.8	57.2	M12	7/16	0.76	PCFF64N	420	420
1 1/4	32	1 1/4NPT	31	44	27	25	77	94	31.8	66.6	M14	1/2	1.20	PCFF65N	420	420
1 1/2	32	1 1/2NPT	38	51	30	28	89	106	36.5	79.3	M16	5/8	1.65	PCFF66N	420	420
2	51	2NPT	50	70	37	33	116	135	44.5	96.8	M20	3/4	2.45	PCFF68N	420	420
2 1/2	64	2 1/2NPT	63	75	45	35	150	166	58.7	123.8	M24	–	3.05	PCFF610N	420	420
3	76	3NPT	73	90	55	40	178	208	71.4	152.4	M30	–	3.45	PCFF612N	420	420

<sup>1)</sup> Pressure shown = Item deliverable

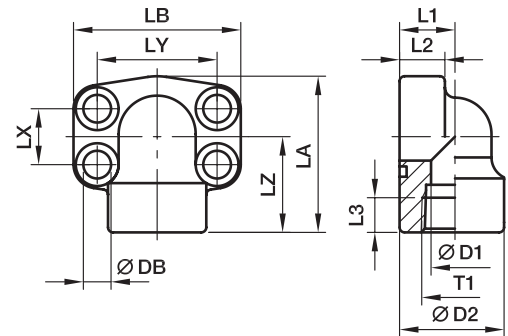
$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example 4 bolt flange with metr. threads	Example 4 bolt flange with UNC threads	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PCFF32N38SM	PCFF32N38SU	NBR
Stainless steel	SS	PCFF32N38SSM	PCFF32N38SSU	VIT

**PEFF-N SAE 90° 4 bolt flange with NPT thread**

SAE 90° Flange / Female NPT thread  
(ISO 6162-1/-2) (SAE 476)



**3000 PSI Series**

Nom. flange size		T1	D1	D2	L1	L2	L3	LA	LB	LX	LY	LZ	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)													(metr.)	(unc.)			S	SS
1/2	13	<b>1/2NPT</b>	13	34.0	18	16	16	59	56	17.5	38.1	36	9.0	M 8×30	5/16×1 1/4	0.35	<b>PEFF32N</b>	348	348
3/4	19	<b>3/4NPT</b>	19	38.5	22	18	19	63	68	22.3	47.6	38	10.5	M10×35	3/8×1 1/2	0.55	<b>PEFF33N</b>	348	348
1	25	<b>1NPT</b>	25	44.5	28	19	19	68	74	26.2	52.4	41	10.5	M10×35	3/8×1 1/2	0.80	<b>PEFF34N</b>	348	348
1 1/4	32	<b>1 1/4NPT</b>	31	53.5	30	22	22	84	81	30.2	58.7	50	10.5	M10×35	7/16×1 1/2	1.30	<b>PEFF35N</b>	278	278
1 1/2	38	<b>1 1/2NPT</b>	38	62.5	36	25	24	97	95	35.7	69.9	58	13.5	M12×45	1/2×1 3/4	1.60	<b>PEFF36N</b>	210	210
2	51	<b>2NPT</b>	50	77.0	41	25	26	109	105	42.9	77.8	65	13.5	M12×45	1/2×1 3/4	2.00	<b>PEFF38N</b>	210	210
2 1/2	64	<b>2 1/2NPT</b>	60	89.0	50	25	30	127	115	50.8	88.9	77	13.5	M12×45	1/2×1 3/4	2.40	<b>PEFF310N</b>	175	175

**6000 PSI Series**

1/2	13	<b>1/2NPT</b>	13	34.0	18	16	16	59	56	18.2	40.5	36	9.0	M 8×30	5/16×1 1/4	0.35	<b>PEFF62N</b>	420	420
3/4	19	<b>3/4NPT</b>	19	44.5	28	20	22	68	72	23.8	50.8	41	10.5	M10×35	3/8×1 1/2	0.80	<b>PEFF63N</b>	420	420
1	25	<b>1NPT</b>	25	53.5	30	24	24	84	82	27.8	57.2	50	13.5	M12×45	7/16×1 1/2	1.30	<b>PEFF64N</b>	420	420
1 1/4	32	<b>1 1/4NPT</b>	31	62.5	36	25	25	97	95	31.8	66.6	58	15.0**	M14×50	1/2×1 3/4	1.60	<b>PEFF65N</b>	420	420
1 1/2	38	<b>1 1/2NPT</b>	38	77.0	51	26	28	109	110	36.5	79.3	65	17.0	M16×55	5/8×2 1/4	2.00	<b>PEFF66N</b>	420	420
2	51	<b>2NPT</b>	50	87.0	45	35	34	133	134	44.5	96.8	75	21.0	M20×70	3/4×2 3/4	2.50	<b>PEFF68N</b>	420	420

\*\*DB = 13.5 for UNC Screws

<sup>1)</sup>Pressure shown = Item deliverable

PN (bar) / 10 = PN (MPa)



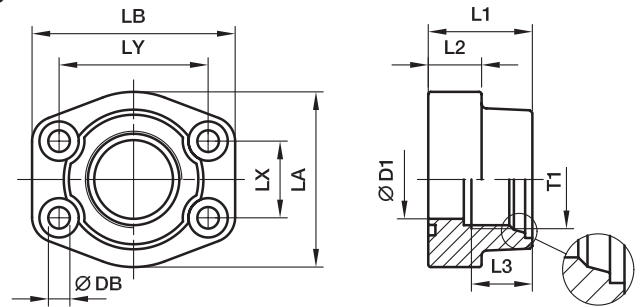
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PEFF32NS	PEFF32NSM	PEFF32NSU	NBR
Stainless steel	SS	PEFF32NSS	PEFF32NSSM	PEFF32NSSU	VIT

## SAE 4 Bolt flanges

### PAFS-M SAE Straight 4 bolt flange with metric thread

SAE Flange / Female metric thread for O-ring  
(ISO 6162-1/-2) (ISO 6149-1)



#### 3000 PSI Series

Nom. flange size		T1	D1	L1	L2	L3	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			S	SS
1/2	13	<b>M18×1.5</b>	13	36	16	15	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.33	<b>PAFS080MA</b>	345	345
1/2	13	<b>M20×1.5</b>	13	36	16	15	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.30	<b>PAFS080MB</b>	345	345
3/4	19	<b>M22×1.5</b>	19	36	18	16	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.45	<b>PAFS100MA</b>	345	345
3/4	19	<b>M27×2.0</b>	19	36	18	19	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.42	<b>PAFS100MB</b>	345	345
1	25	<b>M27×2.0</b>	25	38	18	19	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.48	<b>PAFS102MA</b>	345	345
1	25	<b>M33×2.0</b>	25	38	18	19	53	71	26.2	52.4	13.5	M10×35	3/8×1 1/2	0.45	<b>PAFS102MB</b>	345	345
1 1/4	32	<b>M33×2.0</b>	31	41	21	19	69	80	30.2	58.7	13.5	M10×40	7/16×1 1/2	0.84	<b>PAFS104MA</b>	276	276
1 1/4	32	<b>M42×2.0</b>	31	41	21	20	69	80	30.2	58.7	13.5	M10×40	7/16×1 1/2	0.71	<b>PAFS104MB</b>	276	276
1 1/2	38	<b>M42×2.0</b>	38	44	25	20	77	94	35.7	69.9	17.0	M12×45	1/2×1 3/4	1.25	<b>PAFS106MA</b>	207	207
1 1/2	38	<b>M48×2.0</b>	38	44	25	22	77	94	35.7	69.9	17.0	M12×45	1/2×1 3/4	1.14	<b>PAFS106MB</b>	207	207

#### 6000 PSI Series

1/2	13	<b>M18×1.5</b>	13	36	16	15	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.33	<b>PAFS401MA</b>	420	420
1/2	13	<b>M20×1.5</b>	13	36	16	15	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.30	<b>PAFS401MB</b>	420	420
3/4	19	<b>M22×1.5</b>	19	36	19	16	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.53	<b>PAFS402MA</b>	420	420
3/4	19	<b>M27×2.0</b>	19	36	19	19	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.50	<b>PAFS402MB</b>	420	420
1	25	<b>M27×2.0</b>	25	44	24	19	69	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.86	<b>PAFS403MA</b>	420	420
1	25	<b>M33×2.0</b>	25	44	24	19	69	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.84	<b>PAFS403MB</b>	420	420
1 1/4	32	<b>M33×2.0</b>	31	44	27	19	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.30	<b>PAFS404MA</b>	420	420
1 1/4	32	<b>M42×2.0</b>	31	44	27	20	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.25	<b>PAFS404MB</b>	420	420
1 1/2	38	<b>M42×2.0</b>	38	51	30	20	89	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.78	<b>PAFS405MA</b>	420	420
1 1/2	38	<b>M48×2.0</b>	38	51	30	22	89	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.70	<b>PAFS405MB</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

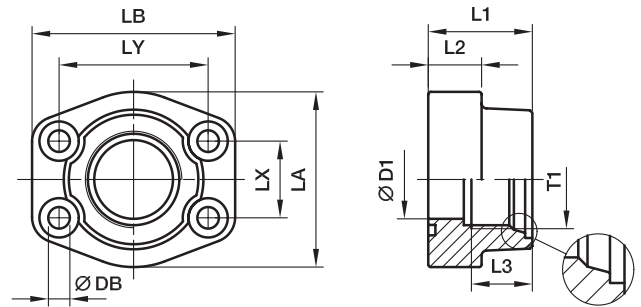
PN (bar) = PN (MPa)  
10

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PAFS080MAS	PAFS080MASM	PAFS080MASU	NBR
Stainless steel	SS	PAFS080MASS	PAFS080MASSM	PAFS080MASSU	VIT

**PAFS-U SAE Straight 4 bolt flange with UN/UNF thread**

SAE Flange / Female UN/UNF thread for O-ring  
(ISO 6162-1/-2) (ISO 11926-1)



**3000 PSI Series**

Nom. flange size		T1	D1	L1	L2	L3	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (Zoll)	ISO (DN)											(metr.)	(unc.)			S	SS
1/2	13	<b>3/4-16UNF-2A</b>	13	36	16	17	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.30	<b>PAFS080UA</b>	345	345
3/4	19	<b>7/8-14UNF-2A</b>	19	36	18	17	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.45	<b>PAFS100UA</b>	345	345
3/4	19	<b>1 1/16-12UN-2A</b>	19	36	18	23	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.42	<b>PAFS100UB</b>	345	345
1	25	<b>1 1/16-12UN-2A</b>	25	38	18	23	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.48	<b>PAFS102UA</b>	345	345
1	25	<b>1 5/16-12UN-2A</b>	25	38	18	23	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.45	<b>PAFS102UB</b>	345	345
1 1/4	32	<b>1 5/16-12UN-2A</b>	31	41	21	23	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.84	<b>PAFS104UA</b>	276	276
1 1/4	32	<b>1 5/8-12UN-2A</b>	31	41	21	23	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.71	<b>PAFS104UB</b>	276	276
1 1/2	38	<b>1 5/8-12UN-2A</b>	38	44	25	23	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.25	<b>PAFS106UA</b>	207	207
1 1/2	38	<b>1 7/8-12UN-2A</b>	38	44	25	23	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.14	<b>PAFS106UB</b>	207	207

**6000 PSI Series**

1/2	13	<b>3/4-16UNF-2A</b>	13	36	16	17	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.30	<b>PAFS401UA</b>	420	420
3/4	19	<b>7/8-14UNF-2A</b>	19	36	19	17	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.53	<b>PAFS402UA</b>	420	420
3/4	19	<b>1 1/16-12UN-2A</b>	19	36	19	23	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.50	<b>PAFS402UB</b>	420	420
1	25	<b>1 1/16-12UN-2A</b>	25	44	24	23	69	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.86	<b>PAFS403UA</b>	420	420
1	25	<b>1 5/16-12UN-2A</b>	25	44	24	23	69	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.84	<b>PAFS403UB</b>	420	420
1 1/4	32	<b>1 5/16-12UN-2A</b>	31	44	27	23	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.30	<b>PAFS404UA</b>	420	420
1 1/4	32	<b>1 5/8-12UN-2A</b>	31	44	27	23	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.25	<b>PAFS404UB</b>	420	420
1 1/2	38	<b>1 5/8-12UN-2A</b>	38	51	30	23	89	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.78	<b>PAFS405UA</b>	420	420
1 1/2	38	<b>1 7/8-12UN-2A</b>	38	51	30	23	89	106	36.5	79.3	18.0	M16×55	5/8×2 1/4	1.70	<b>PAFS405UB</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, oil dipped	S	PAFS080UAS	PAFS080UASM	PAFS080UASU	NBR
Stainless steel	SS	PAFS080UASS	PAFS080UASSM	PAFS080UASSU	VIT

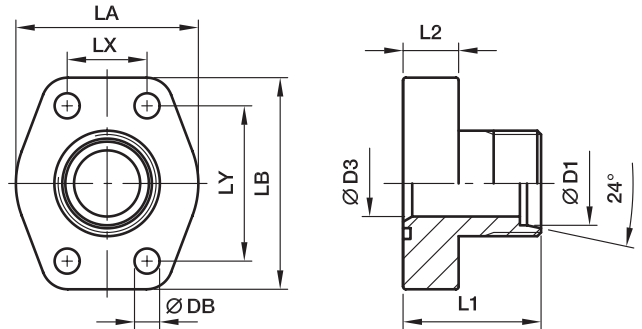




## SAE 4 Bolt flanges

### PFF-..S/L SAE Straight 4 bolt flange with EO 24° cone end

SAE Flange / EO 24° cone end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size	D1 <sup>2)</sup>	D3	L1	L2	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>		
										(metr.)	(unc.)			CF	SS	
1/2	13	12S	8	47	16	42	57	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.25	PFF32/12S	348	348
1/2	13	15L	11	47	16	42	57	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.29	PFF32/15L	348	315
1/2	13	16S	12	47	16	42	57	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.32	PFF32/16S	348	348
3/4	19	16S	12	52	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.35	PFF33/16S	348	348
3/4	19	20S	16	52	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.36	PFF33/20S	348	348
3/4	19	22L	18	52	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.37	PFF33/22L	250	160
1	25	20S	16	55	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.44	PFF34/20S	348	348
1	25	25S	20	55	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.46	PFF34/25S	348	348
1	25	28L	23	55	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.50	PFF34/28L	250	160
1 1/4	32	25S	20	60	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.65	PFF35/25S	278	278
1 1/4	32	30S	25	60	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.70	PFF35/30S	278	278
1 1/4	32	35L	30	60	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.72	PFF35/35L	278	278
1 1/2	38	35L	30	70	25	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.00	PFF36/35L	210	210
1 1/2	38	38S	32	70	25	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.00	PFF36/38S	210	210
1 1/2	38	42L	36	70	25	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.02	PFF36/42L	210	210
2	51	38S	32	74	25	90	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.40	PFF38/38S	210	210
2	51	42L	36	74	25	90	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.35	PFF38/42L	210	210

#### 6000 PSI Series

1/2	13	12S	8	47	16	47	57	18.3	40.5	9.0	M 8×30	5/16×1 1/4	0.30	PFF62/12S	420	420
1/2	13	14S	10	47	16	47	57	18.3	40.5	9.0	M 8×30	5/16×1 1/4	0.32	PFF62/14S	420	420
1/2	13	16S	12	47	16	47	57	18.3	40.5	9.0	M 8×30	5/16×1 1/4	0.35	PFF62/16S	420	420
3/4	19	16S	12	52	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.68	PFF63/16S	420	420
3/4	19	20S	16	52	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.73	PFF63/20S	420	400
3/4	19	22L	18	52	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.82	PFF63/22L	250	160
1	25	20S	16	60	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.00	PFF64/20S	420	400
1	25	25S	20	60	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.15	PFF64/25S	420	400
1	25	28L	23	60	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.20	PFF64/28L	250	160
1 1/4	32	25S	20	68	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.60	PFF65/25S	420	400
1 1/4	32	30S	25	68	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.80	PFF65/30S	420	400
1 1/4	32	35L	30	68	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.85	PFF65/35L	250	160
1 1/2	38	35L	25	72	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	2.20	PFF66/35L	250	160
1 1/2	38	38S	32	72	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	2.25	PFF66/38S	315	315
1 1/2	38	42L	36	72	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	2.35	PFF66/42L	250	160

<sup>2)</sup> L = light series; S = heavy series

Delivery without nut and ring.

<sup>1)</sup> Pressure shown = Item deliverable

Information on ordering complete fittings  
or alternative sealing materials see page M11.

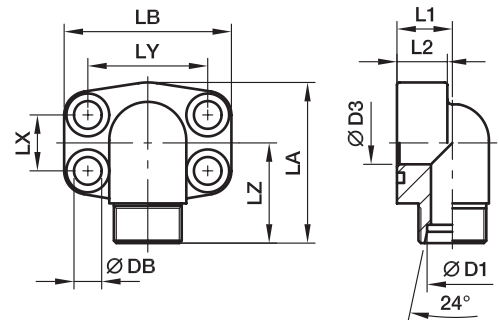
$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

\*Please add the suffixes below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PFF32/12SCF	PFF32/12SOMDCFM	PFF32/12SOMDCFU	NBR
Stainless steel	SS	PFF32/12S-SS	PFF32/12SOMDSSM	PFF32/12SOMDSSU	VIT

**PAFG-90M SAE 90° 4 bolt flange with EO 24° cone end**

SAE 90° Flange / EO 24° cone end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		D1 <sup>2)</sup>	D3	L1	L2	LA	LB	LX	LY	LZ	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			CF	SS
1/2	13	12S	8	18	16	60	57	17.5	38.1	36	9.0	M 8×30	5/16×1 1/4	0.28	PAFG080/90M12S	348	348
1/2	13	15L	11	18	16	60	57	17.5	38.1	36	9.0	M 8×30	5/16×1 1/4	0.33	PAFG080/90M15L	348	315
1/2	13	16S	12	18	16	60	57	17.5	38.1	36	9.0	M 8×30	5/16×1 1/4	0.30	PAFG080/90M16S	348	348
3/4	19	16S	12	22	18	63	66	22.3	47.6	38	11.0	M10×35	3/8×1 1/2	0.43	PAFG100/90M16S	348	348
3/4	19	20S	16	22	18	63	66	22.3	47.6	38	11.0	M10×35	3/8×1 1/2	0.43	PAFG100/90M20S	348	348
3/4	19	22L	18	22	18	63	66	22.3	47.6	38	11.0	M10×35	3/8×1 1/2	0.43	PAFG100/90M22L	250	160
1	25	20S	16	28	19	80	71	26.2	52.4	42	11.0	M10×35	3/8×1 1/2	0.68	PAFG102/90M20S	348	348
1	25	25S	20	28	19	80	71	26.2	52.4	42	11.0	M10×35	3/8×1 1/2	0.64	PAFG102/90M25S	348	348
1	25	28L	23	28	19	80	71	26.2	52.4	42	11.0	M10×35	3/8×1 1/2	0.62	PAFG102/90M28L	250	160
1 1/4	32	25S	20	30	22	84	80	30.2	58.7	50	11.5	M10×40	7/16×1 1/2	1.15	PAFG104/90M25S	278	278
1 1/4	32	30S	25	30	22	84	80	30.2	58.7	50	11.5	M10×40	7/16×1 1/2	1.02	PAFG104/90M30S	278	278
1 1/4	32	35L	30	30	22	84	80	30.2	58.7	50	11.5	M10×40	7/16×1 1/2	0.94	PAFG104/90M35L	278	278
1 1/2	38	35L	30	36	25	88	94	35.7	69.9	58	13.5	M12×45	1/2×1 3/4	1.50	PAFG106/90M35L	210	210
1 1/2	38	38S	32	36	25	88	94	35.7	69.9	58	13.5	M12×45	1/2×1 3/4	1.50	PAFG106/90M38S	210	210
1 1/2	38	42L	36	36	25	88	94	35.7	69.9	58	13.5	M12×45	1/2×1 3/4	1.50	PAFG106/90M42L	210	210

**6000 PSI Series**

1/2	13	12S	8	20	16	60	57	18.2	40.5	36	9.0	M 8×30	5/16×1 1/4	0.30	PAFG401/90M12S	420	420
1/2	13	14S	10	20	16	60	57	18.2	40.5	36	9.0	M 8×30	5/16×1 1/4	0.32	PAFG401/90M14S	420	420
1/2	13	16S	12	20	16	60	57	18.2	40.5	36	9.0	M 8×30	5/16×1 1/4	0.35	PAFG401/90M16S	420	420
3/4	19	16S	12	26	19	68	71	23.8	50.8	41	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90M16S	420	420
3/4	19	20S	20	26	19	68	71	23.8	50.8	41	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90M20S	420	400
3/4	19	22L	23	26	19	68	71	23.8	50.8	41	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90M22L	250	160
1	25	20S	16	30	24	83	80	27.8	57.2	50	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90M20S	420	400
1	25	25S	20	30	24	83	80	27.8	57.2	50	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90M25S	420	400
1	25	28L	23	30	24	83	80	27.8	57.2	50	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90M28L	250	160
1 1/4	32	25S	20	36	25	97	94	31.8	66.6	58	15.0	M14×50	1/2×1 3/4	1.35	PAFG404/90M25S	420	400
1 1/4	32	30S	25	36	25	97	94	31.8	66.6	58	15.0	M14×50	1/2×1 3/4	1.40	PAFG404/90M30S	420	400
1 1/4	32	35L	30	36	25	97	94	31.8	66.6	58	15.0	M14×50	1/2×1 3/4	1.45	PAFG404/90M35L	250	160
1 1/2	38	35L	25	41	26	110	106	36.5	79.3	65	17.0	M16×55	5/8×2 1/4	1.80	PAFG405/90M35L	250	160
1 1/2	38	38S	32	41	26	110	106	36.5	79.3	65	17.0	M16×55	5/8×2 1/4	1.85	PAFG405/90M38S	315	315
1 1/2	38	42L	36	41	26	110	106	36.5	79.3	65	17.0	M16×55	5/8×2 1/4	1.90	PAFG405/90M42L	250	160

<sup>2)</sup> L = light series; S = heavy series

Delivery without nut and ring.  
Information on ordering complete fittings  
or alternative sealing materials see page M11.

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the suffixes below according to the material/surface required.

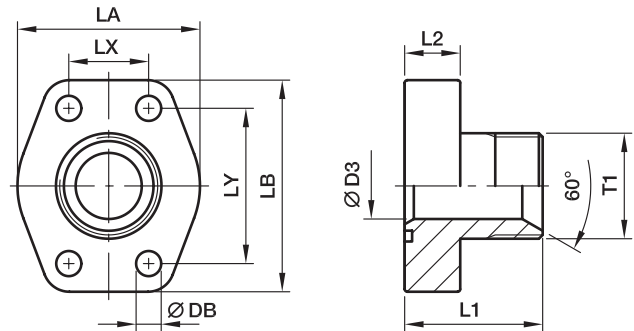
Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PAFG080/90M12SCF	PAFG080/90M12SOMDCFM	PAFG080/90M12SOMDCFU	NBR
Stainless steel	SS	PAFG080/90M12S-SS	PAFG080/90M12SOMDSSM	PAFG080/90M12SOMDSSU	VIT



## SAE 4 Bolt flanges

### PAFG-G SAE Straight 4 bolt flange with BSPP 60° cone end

SAE Flange / BSPP 60° cone end  
(ISO 6162-1/-2) (ISO 8434-6)



#### 3000 PSI Series

Nom. flange size		T1	D3	L1	L2	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										(metr.)	(unc.)			CF	SS
1/2	13	G3/8	10	37	16	47	56	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.25	PAFG080G38	348	348
1/2	13	G1/2	12	39	16	47	56	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.29	PAFG080G	348	348
1/2	13	G3/4	13	42	16	47	56	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.32	PAFG080G34	348	348
3/4	19	G1/2	12	42	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.35	PAFG100G12	348	348
3/4	19	G3/4	17	45	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.34	PAFG100G	348	348
3/4	19	G1	19	47	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.37	PAFG100G1	348	348
1	25	G3/4	17	47	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.44	PAFG102G34	348	348
1	25	G1	22	49	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.46	PAFG102G	348	348
1	25	G1 1/4	25	49	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.50	PAFG102G114	348	348
1 1/4	32	G1	22	53	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.65	PAFG104G1	278	278
1 1/4	32	G1 1/4	27	53	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.70	PAFG104G	278	278
1 1/4	32	G1 1/2	31	55	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.72	PAFG104G112	278	278
1 1/2	38	G1 1/4	27	59	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.00	PAFG106G114	210	210
1 1/2	38	G1 1/2	34	61	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.00	PAFG106G	210	210
1 1/2	38	G2	38	63	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.02	PAFG106G2	210	210
2	51	G1 1/2	34	69	25	90	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.40	PAFG108G112	210	210
2	51	G2	42	69	25	90	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.35	PAFG108G	210	210

#### 6000 PSI Series

1/2	13	G3/8	10	38	16	47	56	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.30	PAFG401G38	420	420
1/2	13	G1/2	12	40	16	47	56	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.32	PAFG401G	420	420
1/2	13	G3/4	13	43	16	47	56	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.35	PAFG401G34	420	420
3/4	19	G1/2	12	44	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.68	PAFG402G12	420	420
3/4	19	G3/4	17	47	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.73	PAFG402G	420	420
3/4	19	G1	19	49	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.82	PAFG402G1	420	420
1	25	G3/4	17	54	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.00	PAFG403G34	420	420
1	25	G1	22	56	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.15	PAFG403G	420	420
1	25	G1 1/4	25	56	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.20	PAFG403G114	420	420
1 1/4	32	G1	22	61	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.60	PAFG404G1	420	420
1 1/4	32	G1 1/4	27	61	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.80	PAFG404G	420	420
1 1/4	32	G1 1/2	31	63	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.85	PAFG404G112	420	420
1 1/2	38	G1 1/4	27	65	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	2.20	PAFG405G114	420	420
1 1/2	38	G1 1/2	32	67	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	2.25	PAFG405G	420	420

<sup>1)</sup> Pressure shown = Item deliverable

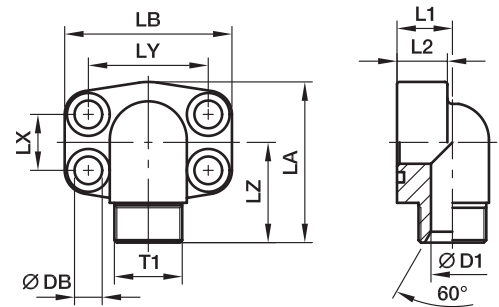
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PAFG080GCF	PAFG080GCFM	PAFG080GCFU	NBR
Stainless steel	SS	PAFG080GSS	PAFG080GSSM	PAFG080GSSU	VIT

**PAFG-90G SAE 90° 4 bolt flange with BSPP 60° cone end**

SAE 90° Flange/ BSPP 60° cone end  
(ISO 6162-1/-2) (ISO 8434-6)



**3000 PSI Series**

Nom. flange size		T1	D3	L1	L2	LA	LB	LX	LY	LZ	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			CF	SS
1/2	13	G3/8	10	17	16	60	57	17.5	38.1	37	9.0	M 8×30	5/16×1 1/4	0.27	PAFG080/90G38	348	348
1/2	13	G1/2	12	17	16	60	57	17.5	38.1	39	9.0	M 8×30	5/16×1 1/4	0.31	PAFG080/90G	348	348
1/2	13	G3/4	13	20	16	60	57	17.5	38.1	40	9.0	M 8×30	5/16×1 1/4	0.31	PAFG080/90G34	348	348
3/4	19	G1/2	12	20	18	63	66	22.3	47.6	41	11.0	M10×35	3/8×1 1/2	0.47	PAFG100/90G12	348	348
3/4	19	G3/4	17	20	18	63	66	22.3	47.6	44	11.0	M10×35	3/8×1 1/2	0.42	PAFG100/90G	348	348
3/4	19	G1	19	25	18	63	66	22.3	47.6	45	11.0	M10×35	3/8×1 1/2	0.60	PAFG100/90G1	348	348
1	25	G3/4	17	20	19	80	71	26.2	52.4	47	11.0	M10×35	3/8×1 1/2	0.66	PAFG102/90G34	348	348
1	25	G1	22	25	19	80	71	26.2	52.4	48	11.0	M10×35	3/8×1 1/2	0.62	PAFG102/90G	348	348
1	25	G1 1/4	25	31	19	80	71	26.2	52.4	49	11.0	M10×40	3/8×1 1/2	0.65	PAFG102/90G114	348	348
1 1/4	32	G1	22	25	22	84	80	30.2	58.7	54	11.5	M10×40	7/16×1 1/2	1.06	PAFG104/90G1	278	278
1 1/4	32	G1 1/4	27	31	22	84	80	30.2	58.7	55	11.5	M10×35	7/16×1 1/2	0.93	PAFG104/90G	278	278
1 1/4	32	G1 1/2	31	37	22	84	80	30.2	58.7	56	11.5	M10×40	7/16×1 1/2	0.96	PAFG104/90G112	278	278
1 1/2	38	G1 1/4	27	31	25	88	94	35.7	69.9	59	13.5	M12×45	1/2×1 3/4	1.44	PAFG106/90G114	210	210
1 1/2	38	G1 1/2	34	37	25	88	94	35.7	69.9	61	13.5	M12×45	1/2×1 3/4	1.35	PAFG106/90G	210	210

**6000 PSI Series**

1/2	13	G3/8	10	17	16	60	57	18.2	40.5	37	9.0	M 8×30	5/16×1 1/4	0.30	PAFG401/90G38	420	420
1/2	13	G1/2	12	17	16	60	57	18.2	40.5	39	9.0	M 8×30	5/16×1 1/4	0.32	PAFG401/90G	420	420
1/2	13	G3/4	13	20	16	60	57	18.2	40.5	40	9.0	M 8×30	5/16×1 1/4	0.35	PAFG401/90G34	420	420
3/4	19	G1/2	12	20	19	68	71	23.8	50.8	45	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90G12	420	420
3/4	19	G3/4	17	20	19	68	71	23.8	50.8	48	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90G	420	420
3/4	19	G1	19	25	19	68	71	23.8	50.8	50	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90G1	420	420
1	25	G3/4	17	25	24	83	80	27.8	57.2	52	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90G34	420	420
1	25	G1	22	25	24	83	80	27.8	57.2	54	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90G	420	420
1	25	G1 1/4	25	31	24	83	80	27.8	57.2	55	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90G114	420	420
1 1/4	32	G1	22	31	25	97	94	31.8	66.6	59	15.0	M14×50	1/2×1 3/4	1.35	PAFG404/90G1	420	420
1 1/4	32	G1 1/4	27	31	25	97	94	31.8	66.6	59	15.0	M14×50	1/2×1 3/4	1.40	PAFG404/90G	420	420
1 1/4	32	G1 1/2	31	37	25	97	94	31.8	66.6	61	15.0	M14×50	1/2×1 3/4	1.45	PAFG404/90G112	420	420
1 1/2	38	G1 1/4	27	37	26	110	106	36.5	79.3	64	17.0	M16×55	5/8×2 1/4	1.80	PAFG405/90G114	420	420
1 1/2	38	G1 1/2	32	37	26	110	106	36.5	79.3	66	17.0	M16×55	5/8×2 1/4	1.85	PAFG405/90G	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

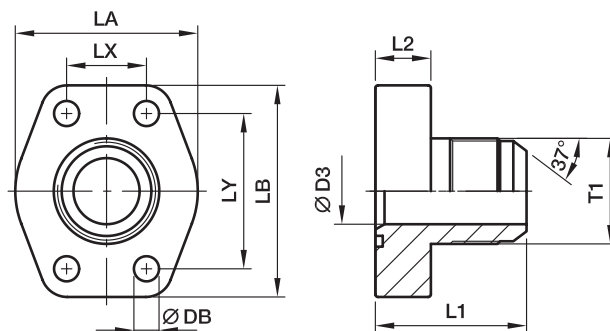
Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PAFG080/90GCF	PAFG080/90GCFM	PAFG080/90GCFU	NBR
Stainless steel	SS	PAFG080/90GSS	PAFG080/90GSSM	PAFG080/90GSSU	VIT



## SAE 4 Bolt flanges

### PAFG-X SAE Straight 4 bolt flange with Triple-Lok® 37° flare end

SAE Flange / Triple-Lok® 37° flare end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		T1	D3	L1	L2	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										(metr.)	(unc.)			CF	SS
1/2	13	<b>3/4-16UNF-2A</b>	9.9	41	16	47	57	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.25	<b>PAFG080X-A</b>	348	348
1/2	13	<b>7/8-14UNF-2A</b>	12.3	41	16	47	57	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.29	<b>PAFG080X-B</b>	348	348
1/2	13	<b>1 1/16-12UN-2A</b>	12.3	46	16	47	57	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.32	<b>PAFG080X-C</b>	348	348
3/4	19	<b>7/8-14UN-2A</b>	12.3	47	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.35	<b>PAFG100X-A</b>	348	348
3/4	19	<b>1 1/16-12UN-2A</b>	15.5	49	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.34	<b>PAFG100X-B</b>	348	348
3/4	19	<b>1 5/16-12UN-2A</b>	21.5	50	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.37	<b>PAFG100X-C</b>	348	348
1	25	<b>1 1/16-12UN-2A</b>	15.5	51	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.44	<b>PAFG102X-A</b>	348	348
1	25	<b>1 5/16-12UN-2A</b>	21.5	52	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.46	<b>PAFG102X-B</b>	348	348
1	25	<b>1 5/8-12UN-2A</b>	27.5	54	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.50	<b>PAFG102X-C</b>	348	348
1 1/4	32	<b>1 5/16-12UN-2A</b>	21.5	56	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.65	<b>PAFG104X-A</b>	278	278
1 1/4	32	<b>1 5/8-12UN-2A</b>	27.5	58	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.70	<b>PAFG104X-B</b>	278	278
1 1/4	32	<b>1 7/8-12UN-2A</b>	33.0	61	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.72	<b>PAFG104X-C</b>	278	278
1 1/2	38	<b>1 5/8-12UN-2A</b>	27.5	64	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.00	<b>PAFG106X-A</b>	210	210
1 1/2	38	<b>1 7/8-12UN-2A</b>	33.0	67	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.00	<b>PAFG106X-B</b>	210	210

#### 6000 PSI Series

1/2	13	<b>3/4-16UNF-2A</b>	9.9	42	16	47	57	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.30	<b>PAFG401X-A</b>	350	350
1/2	13	<b>7/8-14UNF-2A</b>	12.3	45	16	47	57	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.32	<b>PAFG401X-B</b>	350	350
1/2	13	<b>1 1/16-12UN-2A</b>	12.3	47	16	47	57	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.35	<b>PAFG401X-C</b>	350	350
3/4	19	<b>7/8-14UN-2A</b>	12.3	49	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.68	<b>PAFG402X-A</b>	350	350
3/4	19	<b>1 1/16-12UN-2A</b>	15.5	51	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.73	<b>PAFG402X-B</b>	350	350
3/4	19	<b>1 5/16-12UN-2A</b>	21.5	52	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.82	<b>PAFG402X-C</b>	350	350
1	25	<b>1 1/16-12UN-2A</b>	15.5	58	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.00	<b>PAFG403X-A</b>	350	350
1	25	<b>1 5/16-12UN-2A</b>	21.5	59	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.15	<b>PAFG403X-B</b>	350	350
1	25	<b>1 5/8-12UN-2A</b>	27.5	61	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	1.20	<b>PAFG403X-C</b>	275	275
1 1/4	32	<b>1 5/16-12UN-2A</b>	21.5	64	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.60	<b>PAFG404X-A</b>	350	350
1 1/4	32	<b>1 5/8-12UN-2A</b>	27.5	66	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.80	<b>PAFG404X-B</b>	275	275
1 1/4	32	<b>1 7/8-12UN-2A</b>	33.0	69	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.85	<b>PAFG404X-C</b>	210	210
1 1/2	38	<b>1 5/8-12UN-2A</b>	27.5	70	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	2.20	<b>PAFG405X-A</b>	275	275
1 1/2	38	<b>1 7/8-12UN-2A</b>	33.0	73	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	2.25	<b>PAFG405X-B</b>	210	210

<sup>1)</sup> Pressure shown = Item deliverable

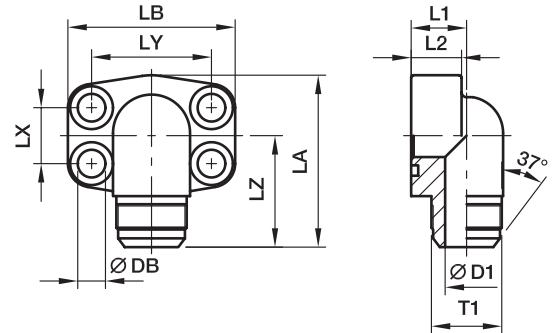
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PAFG080X-ACF	PAFG080X-ACFM	PAFG080X-ACFU	NBR
Stainless steel	SS	PAFG080X-ASS	PAFG080X-ASSM	PAFG080X-ASSU	VIT

**PAFG-90X SAE 90° 4 bolt flange with Triple-Lok® 37° flare end**

SAE 90° Flange / Triple-Lok® 37° flare end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		T1	D1	L1	L2	LA	LB	LX	LY	LZ	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			CF	SS
1/2	13	3/4-16	9.9	17	16	60	56	17.5	38.1	40	9.0	M 8×30	5/16×1 1/4	0.27	PAFG080/90X-A	348	348
1/2	13	7/8-14	12.3	17	16	60	56	17.5	38.1	42	9.0	M 8×30	5/16×1 1/4	0.31	PAFG080/90X-B	348	348
1/2	13	1 1/16-12	12.3	20	16	60	57	17.5	38.1	43	9.0	M 8×30	5/16×1 1/4	0.31	PAFG080/90X-C	348	348
3/4	19	7/8-14	12.3	20	18	63	66	22.3	47.6	45	11.0	M10×35	3/8×1 1/2	0.47	PAFG100/90X-A	348	348
3/4	19	1 1/16-12	15.5	20	18	63	66	22.3	47.6	47	11.0	M10×35	3/8×1 1/2	0.42	PAFG100/90X-B	348	348
3/4	19	1 5/16-12	21.5	25	18	63	66	22.3	47.6	48	11.0	M10×35	3/8×1 1/2	0.60	PAFG100/90X-C	348	348
1	25	1 1/16-12	15.5	20	19	80	71	26.2	52.4	50	11.0	M10×35	3/8×1 1/2	0.66	PAFG102/90X-A	348	348
1	25	1 5/16-12	21.5	25	19	80	71	26.2	52.4	51	11.0	M10×35	3/8×1 1/2	0.62	PAFG102/90X-B	348	348
1 1/4	32	1 5/16-12	21.5	25	22	84	80	30.2	58.7	56	11.5	M10×40	7/16×1 1/2	1.06	PAFG104/90X-A	278	278
1 1/4	32	1 5/8-12	27.5	31	22	84	80	30.2	58.7	58	11.5	M10×40	7/16×1 1/2	0.93	PAFG104/90X-B	278	278
1 1/4	32	1 7/8-12	33.0	37	22	84	80	30.2	58.7	61	11.5	M10×40	7/16×1 1/2	0.96	PAFG104/90X-C	278	278
1 1/2	38	1 5/8-12	27.5	31	25	88	94	35.7	69.9	63	13.5	M10×40	1/2×1 3/4	1.44	PAFG106/90X-A	210	210
1 1/2	38	1 7/8-12	33.0	37	25	88	94	35.7	69.9	66	13.5	M12×45	1/2×1 3/4	1.35	PAFG106/90X-B	210	210

**6000 PSI Series**

1/2	13	3/4-16	9.9	17	16	60	57	18.2	40.5	40	9.0	M 8×30	5/16×1 1/4	0.30	PAFG401/90X-A	350	350
1/2	13	7/8-14	12.3	17	16	60	57	18.2	40.5	42	9.0	M 8×30	5/16×1 1/4	0.32	PAFG401/90X-B	350	350
1/2	13	1 1/16-12	12.3	20	16	60	57	18.2	40.5	43	9.0	M 8×30	5/16×1 1/4	0.35	PAFG401/90X-C	350	350
3/4	19	7/8-14	12.3	20	19	68	71	23.8	50.8	49	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90X-A	350	350
3/4	19	1 1/16-12	15.5	20	19	68	71	23.8	50.8	51	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90X-B	350	350
3/4	19	1 5/16-12	21.5	25	19	68	71	23.8	50.8	52	11.0	M10×35	3/8×1 1/2	0.53	PAFG402/90X-C	350	350
1	25	1 1/16-12	15.5	25	24	83	80	27.8	57.2	55	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90X-A	350	350
1	25	1 5/16-12	21.5	25	24	83	80	27.8	57.2	56	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90X-B	350	350
1	25	1 5/8-12	27.5	31	24	83	80	27.8	57.2	58	13.0	M12×45	7/16×1 1/2	0.90	PAFG403/90X-C	275	275
1 1/4	32	1 5/16-12	21.5	31	25	97	94	31.8	66.6	56	15.0	M14×50	1/2×1 3/4	1.35	PAFG404/90X-A	350	350
1 1/4	32	1 5/8-12	27.5	31	25	97	94	31.8	66.6	63	15.0	M14×50	1/2×1 3/4	1.40	PAFG404/90X-B	275	275
1 1/4	32	1 7/8-12	33.0	37	25	97	94	31.8	66.6	63	15.0	M14×50	1/2×1 3/4	1.45	PAFG404/90X-C	210	210
1 1/2	38	1 5/8-12	27.5	37	26	110	106	36.5	79.3	67	17.0	M16×55	5/8×2 1/4	1.80	PAFG405/90X-A	275	275
1 1/2	38	1 7/8-12	33.0	37	26	110	106	36.5	79.3	70	17.0	M16×55	5/8×2 1/4	1.85	PAFG405/90X-B	210	210

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

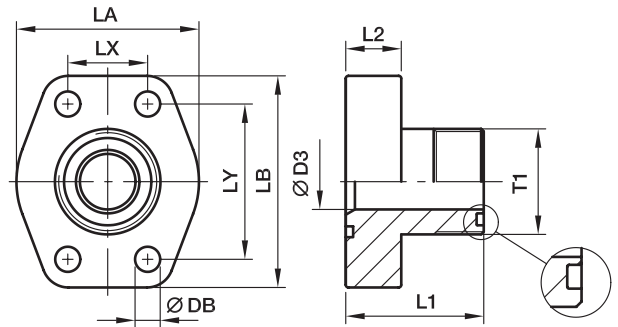
Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PAFG080/90X-ACF	PAFG080/90X-ACFM	PAFG080/90X-ACFU	NBR
Stainless steel	SS	PAFG080/90X-ASS	PAFG080/90X-ASSM	PAFG080/90X-ASSU	VIT



## SAE 4 Bolt flanges

### PAFG-L SAE Straight 4 bolt flange with O-Lok® ORFS end

SAE Flange / O-Lok® ORFS end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		T1	D3	L1	L2	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										(metr.)	(unc.)			CF	SS
1/2	13	<b>11/16-16UN-2A</b>	6	37	16	47	56	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.24	<b>PAFG080L-A</b>	348	348
1/2	13	<b>13/16-16UN-2A</b>	9	39	16	47	56	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.25	<b>PAFG080L-B</b>	348	348
1/2	13	<b>1-14UN-2A</b>	12	42	16	47	56	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.27	<b>PAFG080L-C</b>	348	348
3/4	19	<b>1-14UN-2A</b>	12	45	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.44	<b>PAFG100L-A</b>	348	348
3/4	19	<b>1 3/16-12UN-2A</b>	15	47	18	50	66	22.3	47.6	11.0	M10×35	3/8×1 1/2	0.46	<b>PAFG100L-B</b>	348	348
1	25	<b>1 3/16-12UN-2A</b>	15	49	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.53	<b>PAFG102L-A</b>	348	348
1	25	<b>1 7/16-12UN-2A</b>	20	49	18	53	71	26.2	52.4	11.0	M10×35	3/8×1 1/2	0.52	<b>PAFG102L-B</b>	348	348
1 1/4	32	<b>1 7/16-12UN-2A</b>	20	53	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.75	<b>PAFG104L-A</b>	278	278
1 1/4	32	<b>1 11/16-12UN-2A</b>	26	53	21	69	80	30.2	58.7	11.5	M10×40	7/16×1 1/2	0.78	<b>PAFG104L-B</b>	278	278
1 1/2	38	<b>1 11/16-12UN-2A</b>	26	61	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.20	<b>PAFG106L-A</b>	210	210
1 1/2	38	<b>2-12UN-2A</b>	32	61	24	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.25	<b>PAFG106L-B</b>	210	210

#### 6000 PSI Series

1/2	13	<b>11/16-16UN-2A</b>	6	38	16	47	57	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.25	<b>PAFG401L-A</b>	420	420
1/2	13	<b>13/16-16UN-2A</b>	9	40	16	47	57	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.27	<b>PAFG401L-B</b>	420	420
1/2	13	<b>1-14UN-2A</b>	12	43	16	47	57	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.31	<b>PAFG401L-C</b>	420	420
3/4	19	<b>1-14UN-2A</b>	12	47	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.56	<b>PAFG402L-A</b>	420	420
3/4	19	<b>1 3/16-12UN-2A</b>	15	49	18	53	71	23.8	50.8	11.0	M10×35	3/8×1 1/2	0.65	<b>PAFG402L-B</b>	420	420
1	25	<b>1 3/16-12UN-2A</b>	15	56	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	0.62	<b>PAFG403L-A</b>	420	420
1	25	<b>1 7/16-12UN-2A</b>	20	56	21	66	80	27.8	57.2	13.0	M12×45	7/16×1 1/2	0.66	<b>PAFG403L-B</b>	420	420
1 1/4	32	<b>1 7/16-12UN-2A</b>	20	61	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	0.95	<b>PAFG404L-A</b>	345	345
1 1/4	32	<b>1 11/16-12UN-2A</b>	26	61	24	78	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.08	<b>PAFG404L-B</b>	345	345
1 1/2	38	<b>1 11/16-12UN-2A</b>	26	65	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.66	<b>PAFG405L-A</b>	310	310
1 1/2	38	<b>2-12UN-2A</b>	32	67	27	90	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.75	<b>PAFG405L-B</b>	310	310

<sup>1)</sup> Pressure shown = Item deliverable

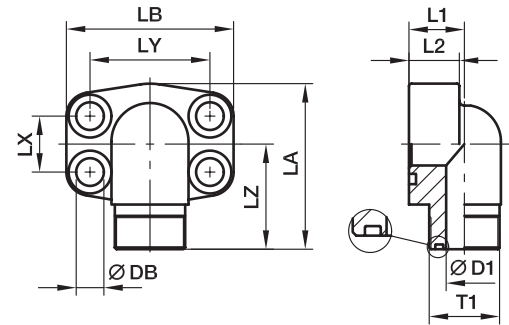
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PAFG080L-ACF	PAFG080L-ACFM	PAFG080L-ACFU	NBR
Stainless steel	SS	PAFG080L-ASS	PAFG080L-ASSM	PAFG080L-ASSU	VIT

**PAFG-90L SAE 90° 4 bolt flange with O-Lok® ORFS end**

SAE 90° Flange / O-Lok® ORFS end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		T1	D1	L1	L2	LA	LB	LX	LY	LZ	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			CF	SS
1/2	13	<b>11/16-16UN-2A</b>	6	17	16	60	56	17.5	38.1	37	9.0	M 8×30	5/16×1 1/4	0.26	<b>PAFG080/90L-A</b>	348	348
1/2	13	<b>13/16-16UN-2A</b>	9	17	16	60	56	17.5	38.1	39	9.0	M 8×30	5/16×1 1/4	0.29	<b>PAFG080/90L-B</b>	348	348
1/2	13	<b>1-14UN-2A</b>	12	20	16	60	56	17.5	38.1	40	9.0	M 8×30	5/16×1 1/4	0.31	<b>PAFG080/90L-C</b>	348	348
3/4	19	<b>1-14UN-2A</b>	12	20	18	63	66	22.3	47.6	44	11.0	M10×35	3/8×1 1/2	0.63	<b>PAFG100/90L-A</b>	348	348
3/4	19	<b>1 3/16-12UN-2A</b>	15	25	18	63	66	22.3	47.6	45	11.0	M10×35	3/8×1 1/2	0.64	<b>PAFG100/90L-B</b>	348	348
1	25	<b>1 3/16-12UN-2A</b>	15	25	19	80	71	26.2	52.4	48	11.0	M10×35	3/8×1 1/2	0.63	<b>PAFG102/90L-A</b>	348	348
1	25	<b>1 7/16-12UN-2A</b>	20	31	19	80	71	26.2	52.4	49	11.0	M10×35	3/8×1 1/2	0.66	<b>PAFG102/90L-B</b>	348	348
1 1/4	32	<b>1 7/16-12UN-2A</b>	20	31	22	84	80	30.2	58.7	55	11.5	M10×40	7/16×1 1/2	1.02	<b>PAFG104/90L-A</b>	278	278
1 1/4	32	<b>1 11/16-12UN-2A</b>	26	31	22	84	80	30.2	58.7	55	11.5	M10×40	7/16×1 1/2	1.08	<b>PAFG104/90L-B</b>	278	278
1 1/2	38	<b>1 11/16-12UN-2A</b>	26	31	25	88	94	35.7	69.9	59	13.5	M12×45	1/2×1 3/4	1.66	<b>PAFG106/90L-A</b>	210	210
1 1/2	38	<b>2-12UN-2A</b>	32	37	25	88	94	35.7	69.9	61	13.5	M12×45	1/2×1 3/4	1.68	<b>PAFG106/90L-B</b>	210	210

**6000 PSI Series**

1/2	13	<b>11/16-16UN-2A</b>	16	17	16	60	57	18.2	40.5	37	9.0	M 8×30	5/16×1 1/4	0.27	<b>PAFG401/90L-A</b>	420	420
1/2	13	<b>13/16-16UN-2A</b>	16	17	16	60	57	18.2	40.5	39	9.0	M 8×30	5/16×1 1/4	0.30	<b>PAFG401/90L-B</b>	420	420
1/2	13	<b>1-14UN-2A</b>	16	20	16	60	57	18.2	40.5	40	9.0	M 8×30	5/16×1 1/4	0.32	<b>PAFG401/90L-C</b>	420	420
3/4	19	<b>1-14UN-2A</b>	19	20	19	68	71	23.8	50.8	48	11.0	M10×35	3/8×1 1/2	0.64	<b>PAFG402/90L-A</b>	420	420
3/4	19	<b>1 3/16-12UN-2A</b>	19	25	19	68	71	23.8	50.8	50	11.0	M10×35	3/8×1 1/2	0.65	<b>PAFG402/90L-B</b>	420	420
1	25	<b>1 3/16-12UN-2A</b>	24	25	24	83	80	27.8	57.2	54	13.0	M12×45	7/16×1 1/2	0.64	<b>PAFG403/90L-A</b>	420	420
1	25	<b>1 7/16-12UN-2A</b>	24	31	24	83	80	27.8	57.2	55	13.0	M12×45	7/16×1 1/2	0.67	<b>PAFG403/90L-B</b>	420	420
1 1/4	32	<b>1 7/16-12UN-2A</b>	25	31	25	97	94	31.8	66.6	59	15.0	M14×50	1/2×1 3/4	1.04	<b>PAFG404/90L-A</b>	420	420
1 1/4	32	<b>1 11/16-12UN-2A</b>	25	31	25	97	94	31.8	66.6	59	15.0	M14×50	1/2×1 3/4	1.10	<b>PAFG404/90L-B</b>	345	345
1 1/2	38	<b>1 11/16-12UN-2A</b>	26	37	26	110	106	36.5	79.3	64	17.0	M16×55	5/8×2 1/4	1.69	<b>PAFG405/90L-A</b>	345	345
1 1/2	38	<b>2-12UN-2A</b>	26	37	26	110	106	36.5	79.3	66	17.0	M16×55	5/8×2 1/4	1.71	<b>PAFG405/90L-B</b>	310	310

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	PAFG080/90L-ACF	PAFG080/90L-ACFM	PAFG080/90L-ACFU	NBR
Stainless steel	SS	PAFG080/90L-ASS	PAFG080/90L-ASSM	PAFG080/90L-ASSU	VIT

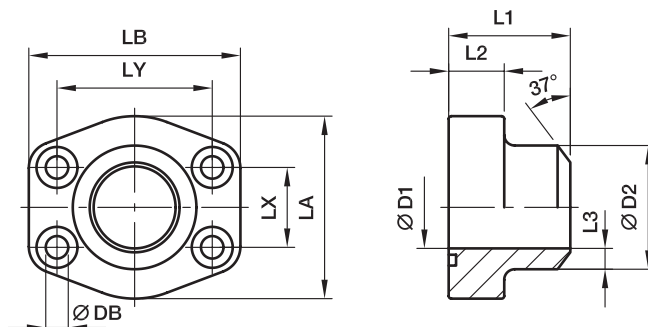




## SAE 4 Bolt flanges

### PAFS-B SAE Straight 4 bolt flange (butt weld)

SAE Flange / Butt weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		⊕ max.	D1	D2	L1	L2	L3	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												(metr.)	(unc.)			S	SS
1/2	13	21.3	13	21.6	36	16	4.3	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.28	<b>PAFS080B</b>	345	345
3/4	19	26.9	19	27.2	36	18	4.1	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.39	<b>PAFS100B</b>	345	345
1	25	33.7	25	34.5	38	18	4.7	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.46	<b>PAFS102B</b>	345	345
1 1/4	32	42.4	31	42.8	41	21	3.0	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.66	<b>PAFS104B</b>	276	276
1 1/2	38	48.3	38	48.6	44	25	5.3	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.05	<b>PAFS106B</b>	207	207
2	51	60.3	50	61.0	45	25	5.5	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.19	<b>PAFS108B</b>	207	207
2 1/2	64	76.1	63	76.6	50	25	6.8	101	115	50.8	88.9	13.5	M12×45	1/2×1 3/4	1.40	<b>PAFS110B</b>	172	172
3	76	88.9	73	89.0	50	27	8.0	124	135	61.9	106.4	17.0	M16×55	5/8×2 1/4	2.15	<b>PAFS112B</b>	138	138
3 1/2	89	101.6	89	103.0	50	27	7.0	134	153	69.9	120.7	17.0	M16×55	5/8×2 1/4	2.40	<b>PAFS114B</b>	34	34
4	102	114.3	99	115.0	50	27	8.0	147	163	77.8	130.2	17.0	M16×55	5/8×2 1/4	2.85	<b>PAFS116B</b>	34	34
5	127	140.0	120	141.0	50	28	10.5	180	184	92.1	152.4	17.0	M16×55	5/8×2 1/4	4.85	<b>PAFS118B</b>	34	34

#### 6000 PSI Series

1/2	13	17.2	10	17.5	36	18	3.7	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.26	<b>PAFS401B38</b>	420	420
1/2	13	21.3	13	21.6	36	18	4.3	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.29	<b>PAFS401B</b>	420	420
3/4	19	26.9	18	27.2	36	18	4.6	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.50	<b>PAFS402B</b>	420	420
1	25	33.7	22	34.5	44	24	6.3	66	80	27.8	57.2	10.5	M12×45	7/16×1 1/2	0.76	<b>PAFS403B</b>	420	420
1 1/4	32	42.4	28	42.8	44	25	7.4	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.35	<b>PAFS404B</b>	420	420
1 1/2	38	48.3	32	48.6	51	29	8.3	89	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.80	<b>PAFS405B</b>	420	420
2	51	60.3	41	61.0	70	35	10.0	116	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	2.45	<b>PAFS406B</b>	420	420
2 1/2	64	76.1	50	76.6	75	45	13.0	150	166	58.7	123.8	25.0	M24×90	–	6.25	<b>PAFS407B</b>	420	420
3	76	88.9	58	90.0	90	55	16.0	178	208	71.4	152.4	32.0	M30×110	–	8.10	<b>PAFS408B</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

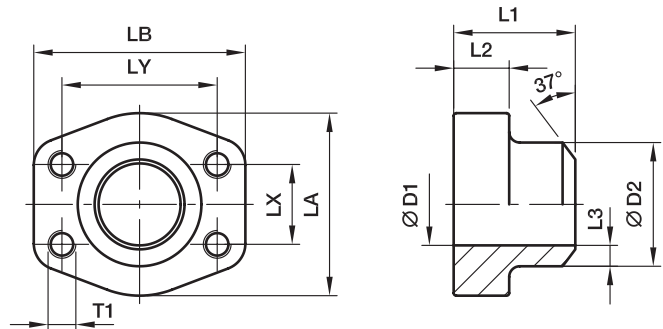
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PAFS080BS	PAFS080BSM	PAFS080BSU	NBR
Stainless steel	SS	PAFS080BSS	PAFS080BSSM	PAFS080BSSU	VIT

**PGFS-B SAE Straight 4 bolt counter flange (butt weld)**

SAE Counter flange / Butt weld tube end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		⊕ max.	D1	D2	L1	L2	L3	LA	LB	LX	LY	T1		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			S	SS
1/2	13	21.3	13	21.6	36	16	4.3	47	57	17.5	38.1	M 8	5/16	0.25	<b>PGFS080B</b>	345	345
3/4	19	26.9	19	27.2	36	18	4.1	49	66	22.3	47.6	M10	3/8	0.35	<b>PGFS100B</b>	345	345
1	25	33.7	25	34.5	38	18	4.7	53	71	26.2	52.4	M10	3/8	0.46	<b>PGFS102B</b>	345	345
1 1/4	32	42.4	31	42.8	41	21	6.0	69	80	30.2	58.7	M10	7/16	0.66	<b>PGFS104B</b>	276	276
1 1/2	38	48.3	38	48.6	44	25	5.3	77	94	35.7	69.9	M12	1/2	1.05	<b>PGFS106B</b>	207	207
2	51	60.3	50	61.0	45	25	5.5	89	103	42.9	77.8	M12	1/2	1.19	<b>PGFS108B</b>	207	207
2 1/2	64	76.1	63	76.6	50	25	6.8	101	115	50.8	88.9	M12	1/2	1.40	<b>PGFS110B</b>	172	172
3	76	88.9	73	89.0	50	27	8.0	124	135	61.9	106.4	M16	5/8	2.15	<b>PGFS112B</b>	138	138
3 1/2	89	101.6	89	103.0	50	27	7.0	134	153	69.9	120.7	M16	5/8	2.40	<b>PGFS114B</b>	34	34
4	102	114.3	99	115.0	50	27	8.0	147	163	77.8	130.2	M16	5/8	2.85	<b>PGFS116B</b>	34	34
5	127	140.0	120	141.0	50	28	10.5	180	184	92.1	152.4	M16	5/8	4.90	<b>PGFS118B</b>	34	34

**6000 PSI Series**

1/2	13	17.2	10	17.5	36	16	3.7	47	57	18.2	40.5	M 8	5/16	0.29	<b>PGFS401B38</b>	420	420
1/2	13	21.3	13	21.6	36	16	4.3	47	57	18.2	40.5	M 8	5/16	0.26	<b>PGFS401B</b>	420	420
3/4	19	26.9	18	27.2	36	19	4.6	53	71	23.8	50.8	M10	3/8	0.50	<b>PGFS402B</b>	420	420
1	25	33.7	22	34.5	44	24	6.3	66	80	27.8	57.2	M12	7/16	0.76	<b>PGFS403B</b>	420	420
1 1/4	32	42.4	28	42.8	44	27	7.4	77	94	31.8	66.6	M14	1/2	1.20	<b>PGFS404B</b>	420	420
1 1/2	38	48.3	32	48.6	51	30	8.3	89	106	36.5	79.3	M16	5/8	1.65	<b>PGFS405B</b>	420	420
2	51	60.3	41	61.0	70	37	10.0	116	135	44.5	96.8	M20	3/4	2.75	<b>PGFS406B</b>	420	420
2 1/2	64	76.1	50	76.6	75	45	13.0	150	166	58.7	123.8	M24	–	6.40	<b>PGFS407B</b>	420	420
3	76	88.9	58	90.0	90	55	16.0	178	208	71.4	152.4	M30	–	8.25	<b>PGFS408B</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

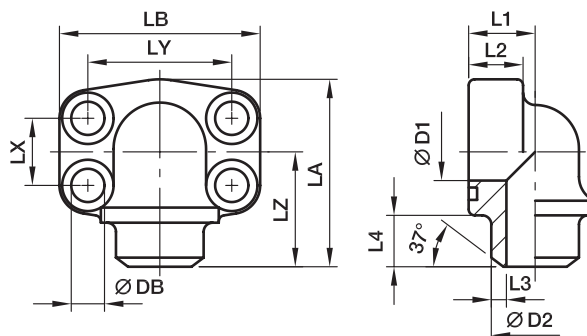
Order code suffixes				
Material	Suffix surface and material	Example 4 bolt flange with metr. threads	Example 4 bolt flange with UNC threads	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PGFS080BSM	PGFS080BSU	NBR
Stainless steel	SS	PGFS080BSSM	PGFS080BSSU	VIT



## SAE 4 Bolt flanges

### PAFS-90B SAE 90° 4 bolt flange (butt weld)

SAE 90° Flange / Butt weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		max.														Screws		Weight (steel) kg/piece	PN (bar) <sup>1)</sup>		
SAE (in)	ISO (DN)		D1	D2	L1	L2	L3	L4	LA	LB	LX	LY	LZ	DB	(metr.)	(unc.)	Order code*		S	SS	
1/2	13	21.3	13	21.6	18	16	4.3	12	63	56	17.5	38.1	40	9.0	M 8×30	5/16×1 1/4	0.45	<b>PAFS080/90B</b>	345	345	
3/4	19	26.9	19	27.2	22	18	4.1	12	74	68	22.3	47.6	41	10.5	M10×35	3/8×1 1/2	0.65	<b>PAFS100/90B</b>	345	345	
1	25	33.7	25	34.5	28	19	4.7	13	77	74	26.2	52.4	50	10.5	M10×35	3/8×1 1/2	0.85	<b>PAFS102/90B</b>	345	345	
1 1/4	32	42.4	31	42.8	30	22	6.0	13	91	81	30.2	58.7	57	10.5	M10×40	7/16×1 1/2	1.15	<b>PAFS104/90B</b>	276	276	
1 1/2	38	48.3	38	48.6	36	25	5.3	14	105	95	35.7	69.9	66	13.5	M12×45	1/2×1 3/4	1.70	<b>PAFS106/90B</b>	207	207	
2	51	60.3	50	61.0	41	25	5.5	15	110	105	42.9	77.8	66	13.5	M12×45	1/2×1 3/4	2.15	<b>PAFS108/90B</b>	207	207	
2 1/2	64	76.1	60	76.6	50	25	8.0	25	127	115	50.8	88.9	77	13.5	M12×45	1/2×1 3/4	2.95	<b>PAFS110/90B</b>	172	172	

#### 6000 PSI Series

1/2	13	21.3	13	21.6	18	16	4.3	12	63	56	18.2	40.5	40	9.0	M 8×30	5/16×1 1/4	0.50	<b>PAFS401/90B</b>	420	420
3/4	19	26.9	18	27.2	28	20	4.6	12	77	72	23.8	50.8	50	10.5	M10×35	3/8×1 1/2	0.55	<b>PAFS402/90B</b>	420	420
1	25	33.7	22	34.5	26	24	6.3	13	91	82	27.8	57.2	57	13.5	M12×45	7/16×1 1/2	0.80	<b>PAFS403/90B</b>	420	420
1 1/4	32	42.4	28	42.8	36	25	7.4	13	105	95	31.8	66.6	66	15.0	M14×55	1/2×1 3/4	1.15	<b>PAFS404/90B</b>	420	420
1 1/2	38	48.3	32	48.6	41	26	8.3	15	109	110	36.5	79.3	65	17.0	M16×50	5/8×2 1/4	2.00	<b>PAFS405/90B</b>	420	420
2	51	60.3	41	61.0	45	35	10.0	15	133	134	44.5	96.8	75	21.0	M20×70	3/4×2 3/4	3.00	<b>PAFS406/90B</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

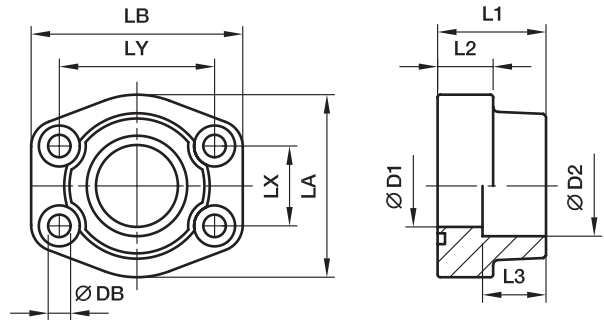
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PAFS080/90BS	PAFS080/90BSM	PAFS080/90BSU	NBR
Stainless steel	SS	PAFS080/90BSS	PAFS080/90BSSM	PAFS080/90BSSU	VIT

**PAFS-S SAE Straight 4 bolt flange (socket weld)**

SAE Flange / Socket weld tube end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		⊕ max.	D1	D2	L1	L2	L3	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												(metr.)	(unc.)			S	SS
1/2	13	17.2	13	17.5	36	16	18	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.25	<b>PAFS080S17.5</b>	345	345
1/2	13	21.3	13	21.6	36	16	18	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.28	<b>PAFS080S21.6</b>	345	345
3/4	19	26.9	19	27.2	36	18	18	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.39	<b>PAFS100S27.2</b>	345	345
1	25	33.7	25	34.1	38	18	18	53	70	26.2	52.4	10.3	M10×35	3/8×1 1/2	0.46	<b>PAFS102S34.1</b>	345	345
1 1/4	32	42.4	31	42.8	41	21	20	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.66	<b>PAFS104S42.8</b>	276	276
1 1/2	38	48.3	38	48.6	44	25	22	77	94	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.05	<b>PAFS106S48.6</b>	207	207
2	51	60.3	50	61.0	45	25	24	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.19	<b>PAFS108S61</b>	207	207
2 1/2	64	76.1	63	76.6	50	25	28	101	115	50.8	88.9	13.5	M12×45	1/2×1 3/4	1.40	<b>PAFS110S76.6</b>	172	172
3	76	88.9	73	90.5	50	27	28	124	135	61.9	106.4	17.0	M16×55	5/8×2 1/4	2.15	<b>PAFS112S90.5</b>	138	138
3 1/2	89	101.6	89	103.0	50	27	28	137	153	69.9	120.7	17.0	M16×55	5/8×2 1/4	2.40	<b>PAFS114S103</b>	34	34
4	102	114.3	99	115.5	50	27	28	147	163	77.8	130.2	17.0	M16×55	5/8×2 1/4	2.85	<b>PAFS116S115.5</b>	34	34
5	127	140.0	120	142.0	50	28	28	180	184	92.1	152.4	17.0	M16×55	5/8×2 1/4	3.25	<b>PAFS118S142</b>	34	34

**6000 PSI Series**

1/2	13	17.2	13	17.5	36	16	18	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.26	<b>PAFS401S17.5</b>	420	420
1/2	13	21.3	13	21.6	36	16	18	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.29	<b>PAFS401S21.6</b>	420	420
3/4	19	26.9	19	27.2	36	19	20	53	71	23.8	50.8	10.3	M10×35	3/8×1 1/2	0.50	<b>PAFS402S27.2</b>	420	420
1	25	33.7	25	34.1	44	24	22	66	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.76	<b>PAFS403S34.1</b>	420	420
1 1/4	32	42.4	31	42.8	44	27	22	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	1.20	<b>PAFS404S42.8</b>	420	420
1 1/2	38	48.3	38	48.6	51	30	24	89	106	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.65	<b>PAFS405S48.6</b>	420	420
2	51	60.3	50	61.0	70	37	25	116	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	2.45	<b>PAFS406S61</b>	420	420
2 1/2	64	76.1	63	76.6	75	45	28	150	166	58.7	123.8	25.0	M24×90	–	3.05	<b>PAFS407S76.6</b>	420	420
3	76	88.9	73	90.5	90	55	30	178	208	71.4	152.4	32.0	M30×110	–	3.45	<b>PAFS408S90.5</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN (bar)}{10} = PN (MPa)$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

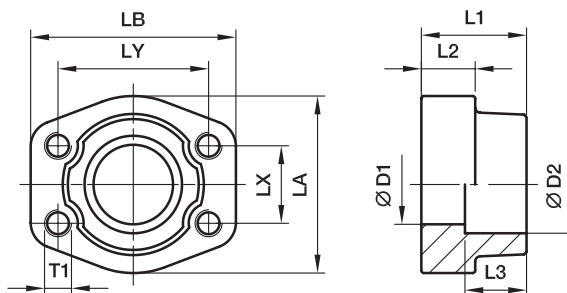
Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PAFS080S17.5S	PAFS080S17.5SM	PAFS080S17.5SU	NBR
Stainless steel	SS	PAFS080S17.5SS	PAFS080S17.5SSM	PAFS080S17.5SSU	VIT



## SAE 4 Bolt flanges

### PGFS-S SAE Straight counter 4 bolt flange (socket weld)

SAE Counter flange / Socket weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		max.	D1	D2	L1	L2	L3	LA	LB	LX	LY	DB	T1		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)												(metr.)	(unc.)			S	SS
1/2	13	17.2	13	17.5	36	18	16	46	58	17.5	38.1	9.0	M 8	5/16	0.25	<b>PGFS080S17.5</b>	345	345
1/2	13	21.3	13	21.6	36	18	16	46	58	17.5	38.1	9.0	M 8	5/16	0.28	<b>PGFS080S21.6</b>	345	345
3/4	19	26.9	19	27.2	36	18	18	49	66	22.3	47.6	10.5	M10	3/8	0.39	<b>PGFS100S27.2</b>	345	345
1	25	33.7	25	34.1	38	18	18	53	70	26.2	52.4	10.5	M10	3/8	0.46	<b>PGFS102S34.1</b>	345	345
1 1/4	32	42.4	31	42.8	41	20	21	69	80	30.2	58.7	10.5	M10	7/16	0.66	<b>PGFS104S42.8</b>	276	276
1 1/2	38	48.3	38	48.6	44	22	25	77	94	35.7	69.9	13.5	M12	1/2	1.05	<b>PGFS106S48.6</b>	207	207
2	51	60.3	50	61.0	45	24	25	89	103	42.9	77.8	13.5	M12	1/2	1.19	<b>PGFS108S61</b>	207	207
2 1/2	64	76.1	63	76.6	50	28	25	101	115	50.8	88.9	13.5	M12	1/2	1.40	<b>PGFS110S76.6</b>	172	172
3	76	88.9	73	90.5	50	28	27	124	135	61.9	106.4	17.0	M16	5/8	2.15	<b>PGFS112S90.5</b>	138	138
3 1/2	89	101.6	89	103.0	50	28	27	137	153	69.9	120.7	17.0	M16	5/8	2.40	<b>PGFS114S103</b>	34	34
4	102	114.3	99	115.5	50	28	27	147	163	77.8	130.2	17.0	M16	5/8	2.85	<b>PGFS116S115.5</b>	34	34
5	127	140.0	120	142.0	50	28	28	180	184	92.1	152.4	17.0	M16	5/8	3.25	<b>PGFS118S142</b>	34	34

#### 6000 PSI Series

1/2	13	17.2	13	17.5	36	18	16	46	58	18.2	40.5	9.0	M 8	5/16	0.26	<b>PGFS401S17.5</b>	420	420
1/2	13	21.3	13	21.6	36	18	16	46	58	18.2	40.5	9.0	M 8	5/16	0.29	<b>PGFS401S21.6</b>	420	420
3/4	19	26.9	19	27.2	36	20	19	53	71	23.8	50.8	10.5	M10	3/8	0.50	<b>PGFS402S27.2</b>	420	420
1	25	33.7	25	34.1	44	22	24	66	80	27.8	57.2	13.5	M12	7/16	0.76	<b>PGFS403S34.1</b>	420	420
1 1/4	32	42.4	31	42.8	44	22	27	77	94	31.8	66.6	15.0	M14	1/2	1.20	<b>PGFS404S42.8</b>	420	420
1 1/2	38	48.3	38	48.6	51	24	30	89	106	36.5	79.3	17.0	M16	5/8	1.65	<b>PGFS405S48.6</b>	420	420
2	51	60.3	50	61.0	70	25	37	116	135	44.5	96.8	21.0	M20	3/4	2.45	<b>PGFS406S61</b>	420	420
2 1/2	64	76.1	63	76.6	75	28	45	150	166	58.7	123.8	25.0	M24	–	3.05	<b>PGFS407S76.6</b>	420	420
3	76	88.9	73	90.5	90	30	55	178	208	71.4	152.4	32.0	M30	–	3.45	<b>PGFS408S90.5</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

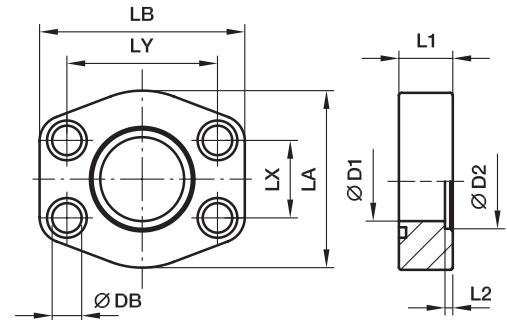
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example 4 bolt flange with metr. threads	Example 4 bolt flange with UNC threads	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PGFS080S17.5SM	PGFS080S17.5SU	NBR
Stainless steel	SS	PGFS080S17.5SSM	PGFS080S17.5SSU	VIT

**PAFSF-S SAE Straight 4 bolt flange flat (socket weld)**

SAE Flange / Socket weld tube end  
(ISO 6162-1/-2)

only for low pressure applications



**3000 PSI Series**

Nom. flange size		S	D1	D2	L1	L2	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			S	SS
1/2	13	17.2	13	17.5	16	3	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.12	PAFSF080S17.5	40	40
1/2	13	21.3	13	21.6	16	3	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.12	PAFSF080S21.6	40	40
3/4	19	21.3	13	21.6	18	4	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.20	PAFSF100S21.6	40	40
3/4	19	26.9	19	27.2	18	4	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.20	PAFSF100S27.2	40	40
1	25	26.9	19	27.2	19	4	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.25	PAFSF102S27.2	40	40
1	25	33.7	25	34.5	19	4	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.25	PAFSF102S34.5	40	40
1 1/4	32	33.7	25	34.5	21	4	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.31	PAFSF104S34.5	40	40
1 1/4	32	42.4	31	42.8	21	4	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.31	PAFSF104S42.8	40	40
1 1/2	38	42.4	31	42.8	24	4	77	95	35.7	69.9	13.5	M12×45	1/2×1 3/4	0.50	PAFSF106S42.8	40	40
1 1/2	38	48.3	38	48.6	24	4	77	95	35.7	69.9	13.5	M12×45	1/2×1 3/4	0.50	PAFSF106S48.6	40	40
2	51	48.3	38	48.6	24	4	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	0.59	PAFSF108S48.6	40	40
2	51	60.3	50	61.0	24	4	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	0.59	PAFSF108S61.0	40	40
2 1/2	64	60.3	50	61.0	25	5	101	116	50.8	88.9	13.5	M12×45	1/2×1 3/4	0.72	PAFSF110S61.0	40	40
2 1/2	64	76.1	63	76.6	25	5	101	116	50.8	88.9	13.5	M12×45	1/2×1 3/4	0.72	PAFSF110S76.6	40	40
3	76	76.1	63	76.6	25	5	124	136	61.9	106.4	17.0	M16×55	5/8×2 1/4	1.25	PAFSF112S76.6	30	30
3	76	88.9	73	90.5	25	5	124	136	61.9	106.4	17.0	M16×55	5/8×2 1/4	1.25	PAFSF112S90.5	30	30
3 1/2	89	88.9	73	90.5	25	5	136	152	69.9	120.7	17.0	M16×55	5/8×2 1/4	1.50	PAFSF114S90.5	30	30
3 1/2	89	101.6	89	103.0	25	5	136	152	69.9	120.7	17.0	M16×55	5/8×2 1/4	1.50	PAFSF114S103	30	30
4	102	101.6	89	103.0	25	6	146	162	77.8	130.2	17.0	M16×55	5/8×2 1/4	2.15	PAFSF116S103	30	30
4	102	114.3	99	115.5	25	6	146	162	77.8	130.2	17.0	M16×55	5/8×2 1/4	2.15	PAFSF116S115.5	30	30
5	127	114.3	99	115.5	25	6	180	184	92.1	152.4	17.0	M16×55	5/8×2 1/4	3.00	PAFSF118S115.5	30	30
5	127	140.0	120	142.5	25	6	180	184	92.1	135.0	17.0	M16×55	5/8×2 1/4	3.00	PAFSF118S142.5	30	30

**6000 PSI Series**

1/2	13	17.2	13	17.5	16	4	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.12	PAFSF401S17.5	40	40
1/2	13	21.3	13	21.6	16	4	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.12	PAFSF401S21.6	40	40
3/4	19	21.3	13	21.6	19	4	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.20	PAFSF402S21.6	40	40
3/4	19	26.9	19	27.2	19	4	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.20	PAFSF402S27.2	40	40
1	25	26.9	19	27.2	24	4	66	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.25	PAFSF403S27.2	40	40
1	25	33.7	25	34.5	24	4	66	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.25	PAFSF403S34.5	40	40
1 1/4	32	33.7	25	34.5	27	4	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	0.31	PAFSF404S34.5	40	40
1 1/4	32	42.4	31	42.8	27	4	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	0.31	PAFSF404S42.8	40	40
1 1/2	38	42.4	31	42.8	30	4	89	103	36.5	79.3	17.0	M16×55	5/8×2 1/4	0.50	PAFSF405S42.8	40	40
1 1/2	38	48.3	38	48.6	30	4	89	103	36.5	79.3	17.0	M16×55	5/8×2 1/4	0.50	PAFSF405S48.6	40	40
2	51	48.3	38	48.6	35	4	123	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	0.59	PAFSF406S48.6	40	40
2	51	60.3	50	61.0	35	4	123	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	0.59	PAFSF406S61.0	40	40

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

<sup>1)</sup> Pressure shown = Item deliverable

\*Please add the **suffixes** below according to the material/surface required.

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

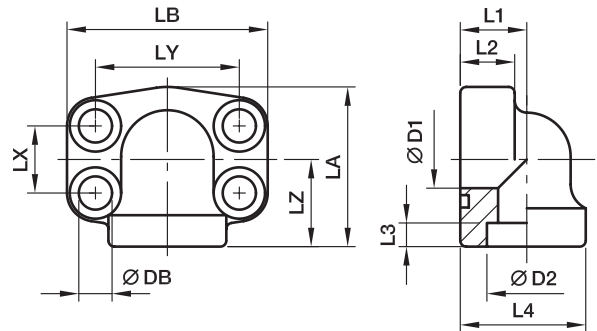
Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PAFSF080S17.5S	PAFSF080S17.5SM	PAFSF080S17.5SU	NBR
Stainless steel	SS	PAFSF080S17.5SS	PAFSF080S17.5SSM	PAFSF080S17.5SSU	VIT



## SAE 4 Bolt flanges

### PAFS-90S SAE 90° 4 bolt flange (socket weld)

SAE 90° Flange / Socket weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		⊕ max.														Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)		D1	D2	L1	L2	L3	L4	LA	LB	LX	LY	LZ	DB	(metr.)	(unc.)	S			SS	
1/2	13	21.3	13	21.6	18	17	5	34.0	51	57	17.5	38.1	28	9.0	M 8×30	5/16×1 1/4	0.35	<b>PAFS080/90S21.6</b>	345	345	
3/4	19	26.9	19	27.2	22	18	5	38.5	50	68	22.2	47.6	25	10.5	M10×35	3/8×1 1/2	0.55	<b>PAFS100/90S27.2</b>	345	345	
1	25	33.7	25	34.1	28	19	6	44.5	55	72	26.2	52.4	28	10.5	M10×35	3/8×1 1/2	0.80	<b>PAFS102/90S34.1</b>	345	345	
1 1/4	32	42.4	31	42.8	30	22	7	53.5	68	82	30.2	58.7	34	10.5	M10×40	7/16×1 1/2	1.30	<b>PAFS104/90S42.8</b>	276	276	
1 1/2	38	48.3	38	48.6	36	25	8	62.5	82	95	35.7	69.9	43	13.5	M12×45	1/2×1 3/4	1.60	<b>PAFS106/90S48.6</b>	207	207	
2	51	60.3	50	61.0	41	25	10	77.0	94	105	42.9	77.8	50	13.5	M12×45	1/2×1 3/4	2.00	<b>PAFS108/90S61</b>	207	207	
2 1/2	64	76.1	60	76.6	50	25	28	85.0	127	115	50.8	88.9	77	13.5	M12×45	1/2×1 3/4	2.60	<b>PAFS110/90S76.6</b>	172	172	

#### 6000 PSI Series

1/2	13	21.3	13	21.6	18	17	5	34.0	51	57	18.2	40.5	28	9.0	M 8×30	5/16×1 1/4	0.35	<b>PAFS401/90S21.6</b>	420	420
3/4	19	26.9	19	27.2	28	19	6	44.5	55	72	23.8	50.8	28	10.5	M10×35	3/8×1 1/2	0.80	<b>PAFS402/90S27.2</b>	420	420
1	25	33.7	25	34.1	30	24	7	53.5	68	82	27.8	57.2	34	13.5	M12×50	7/16×1 1/2	1.30	<b>PAFS403/90S34.1</b>	420	420
1 1/4	32	42.4	31	42.8	36	25	8	62.5	82	95	31.8	66.6	43	15.0	M14×45	1/2×1 3/4	1.60	<b>PAFS404/90S42.8</b>	420	420
1 1/2	38	48.3	38	48.6	41	26	10	77.0	94	110	36.5	79.3	50	17.0	M16×55	5/8×2 1/4	2.00	<b>PAFS405/90S48.6</b>	420	420
2	51	60.3	50	61.0	45	35	12	89.0	123	134	44.5	96.8	65	21.0	M20×70	3/4×2 3/4	2.50	<b>PAFS406/90S61</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

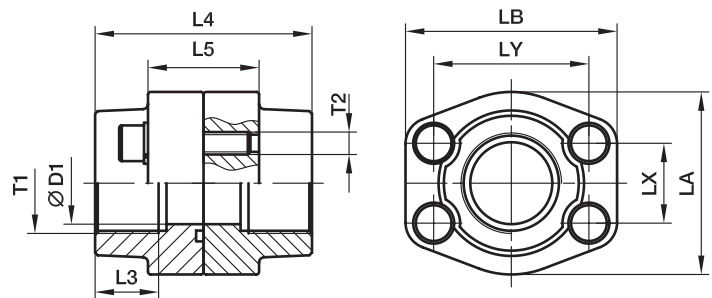
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only 4 bolt flange	Example 4 bolt flange incl. metr. screws and O-ring	Example 4 bolt flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PAFS080/90S21.6S	PAFS080/90S21.6SM	PAFS080/90S21.6SU	NBR
Stainless steel	SS	PAFS080/90S21.6SS	PAFS080/90S21.6SSM	PAFS080/90S21.6SSU	VIT

**PDFS-G SAE Straight 4 bolt flange connection**

SAE Flange / Female BSP thread  
(ISO 6162-1/-2) (ISO 1179-1)



**3000 PSI Series**

Nom. flange size		T1	D1	L3	L4	L5	LA	LB	LX	LY	T2		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										(metr.)	(unc.)			S	SS
1/2	13	<b>G3/8</b>	13	19	72	32	47	57	17.5	38.1	M 8	5/16	0.50	<b>PDFS080G38</b>	345	345
1/2	13	<b>G1/2</b>	13	19	72	32	47	57	17.5	38.1	M 8	5/16	0.56	<b>PDFS080G</b>	345	345
3/4	19	<b>G3/4</b>	19	19	72	36	49	66	22.3	47.6	M10	3/8	0.78	<b>PDFS100G</b>	345	345
1	25	<b>G1</b>	25	19	76	36	53	71	26.2	52.4	M10	3/8	0.92	<b>PDFS102G</b>	345	345
1 1/4	32	<b>G1 1/4</b>	31	22	82	42	69	80	30.2	58.7	M10	7/16	1.32	<b>PDFS104G</b>	276	276
1 1/2	38	<b>G1 1/2</b>	38	24	88	48	77	94	35.7	69.9	M12	1/2	2.10	<b>PDFS106G</b>	207	207
2	51	<b>G2</b>	50	26	90	48	89	103	42.9	77.8	M12	1/2	2.38	<b>PDFS108G</b>	207	207
2 1/2	64	<b>G2 1/2</b>	63	30	100	48	101	115	50.8	88.9	M12	1/2	2.80	<b>PDFS110G</b>	172	172
3	76	<b>G3</b>	73	34	100	53	124	135	61.9	106.4	M16	5/8	4.30	<b>PDFS112G</b>	138	138
3 1/2	89	<b>G3 1/2</b>	89	27	100	54	136	152	69.9	120.7	M16	5/8	4.80	<b>PDFS114G</b>	34	34
4	102	<b>G4</b>	99	30	100	54	146	162	77.8	130.2	M16	5/8	5.70	<b>PDFS116G</b>	34	34
5	127	<b>G5</b>	120	30	100	54	180	184	92.1	152.4	M16	5/8	6.60	<b>PDFS118G</b>	34	34

**6000 PSI Series**

1/2	13	<b>G3/8</b>	13	19	72	32	47	57	18.2	40.5	M 8	5/16	0.52	<b>PDFS401G38</b>	420	420
1/2	13	<b>G1/2</b>	13	19	72	32	47	57	18.2	40.5	M 8	5/16	0.58	<b>PDFS401G</b>	420	420
3/4	19	<b>G3/4</b>	19	22	72	38	53	71	23.8	50.8	M10	3/8	1.00	<b>PDFS402G</b>	420	420
1	25	<b>G1</b>	25	24	88	48	69	80	27.8	57.2	M12	7/16	1.52	<b>PDFS403G</b>	420	420
1 1/4	32	<b>G1 1/4</b>	31	25	88	54	77	94	31.8	66.6	M14	1/2	2.40	<b>PDFS404G</b>	420	420
1 1/2	38	<b>G1 1/2</b>	38	28	102	60	89	106	36.5	79.3	M16	5/8	3.30	<b>PDFS405G</b>	420	420
2	51	<b>G2</b>	50	33	140	74	116	135	44.5	96.8	M20	3/4	4.90	<b>PDFS406G</b>	420	420
2 1/2	64	<b>G2 1/2</b>	63	35	150	90	150	166	58.7	123.8	M24	-	6.50	<b>PDFS407G</b>	420	420
3	76	<b>G3</b>	73	40	180	110	178	208	71.4	152.4	M30	-	8.00	<b>PDFS408G</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example 4 bolt flange coupling incl. metr. screws and O-ring	Example 4 bolt flange coupling incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PDFS080GS	PDFS080GSU	NBR
Stainless steel	SS	PDFS080GSS	PDFS080GSSU	VIT

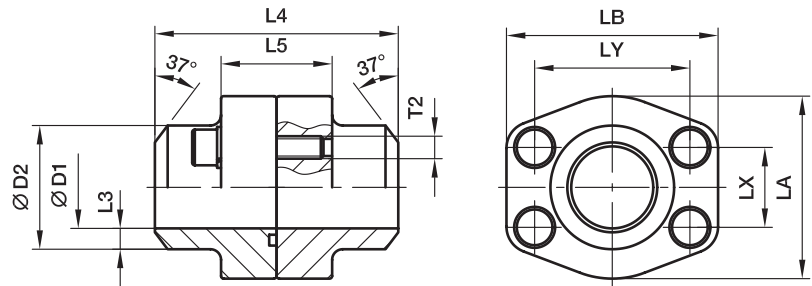




## SAE 4 Bolt flanges

### PDFS-B SAE Straight 4 bolt flange connection (butt weld)

SAE Flange / Butt weld tube end  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		max.	D1	D2	L3	L4	L5	LA	LB	LX	LY	T2		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			S	SS
1/2	13	21.3	13	21.6	4.3	72	32	47	57	17.5	38.1	M 8	5/16	0.50	<b>PDFS080B</b>	345	345
3/4	19	26.9	19	27.2	4.1	72	36	49	66	22.3	47.6	M10	3/8	0.56	<b>PDFS100B</b>	345	345
1	25	33.7	25	34.5	4.7	76	36	53	71	26.2	52.4	M10	3/8	0.78	<b>PDFS102B</b>	345	345
1 1/4	32	42.4	31	42.8	6.0	82	42	69	80	30.2	58.7	M10	7/16	0.92	<b>PDFS104B</b>	345	345
1 1/2	38	48.3	38	48.6	5.3	88	48	77	94	35.7	69.9	M12	1/2	1.32	<b>PDFS106B</b>	276	276
2	51	60.3	50	61.0	5.5	90	48	89	103	42.9	77.8	M12	1/2	2.10	<b>PDFS108B</b>	207	207
2 1/2	64	76.1	63	76.6	6.8	100	48	101	115	50.8	88.9	M12	1/2	2.38	<b>PDFS110B</b>	207	207
3	76	88.9	73	89.0	8.0	100	53	124	135	61.9	106.4	M16	5/8	2.80	<b>PDFS112B</b>	172	172
3 1/2	89	101.6	89	103.0	7.0	100	54	137	153	69.9	120.7	M16	5/8	4.30	<b>PDFS114B</b>	138	138
4	102	114.3	99	115.0	8.0	100	54	147	163	77.8	130.2	M16	5/8	4.80	<b>PDFS116B</b>	34	34
5	127	140.0	120	141.0	10.5	100	54	180	184	92.1	152.4	M16	5/8	5.70	<b>PDFS118B</b>	34	34

#### 6000 PSI Series

1/2	13	17.2	10	17.5	3.7	72	32	47	57	18.2	40.5	M 8	5/16	0.52	<b>PDFS401B38</b>	420	420
1/2	13	21.3	13	21.6	4.3	72	32	47	57	18.2	40.5	M 8	5/16	0.58	<b>PDFS401B</b>	420	420
3/4	19	26.9	18	27.2	4.6	72	38	53	71	23.8	50.8	M10	3/8	1.00	<b>PDFS402B</b>	420	420
1	25	33.7	22	34.5	6.3	88	48	66	80	27.8	57.2	M12	7/16	1.52	<b>PDFS403B</b>	420	420
1 1/4	32	42.4	28	42.8	7.4	88	54	77	94	31.8	66.5	M14	1/2	2.40	<b>PDFS404B</b>	420	420
1 1/2	38	48.3	32	48.6	8.3	102	60	89	106	36.5	79.3	M16	5/8	3.30	<b>PDFS405B</b>	420	420
2	51	60.3	41	61.0	10.0	140	74	116	135	44.5	96.8	M20	3/4	4.90	<b>PDFS406B</b>	420	420
2 1/2	64	76.1	50	76.6	13.0	150	90	150	166	58.7	123.8	M24	–	6.50	<b>PDFS407B</b>	420	420
3	76	88.9	58	90.0	16.0	180	110	178	208	71.4	152.4	M30	–	8.00	<b>PDFS408B</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

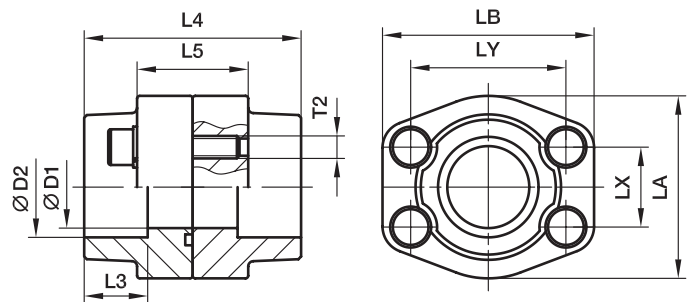
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example 4 bolt flange coupling incl. metr. screws and O-ring	Example 4 bolt flange coupling incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PDFS080BS	PDFS080BSU	NBR
Stainless steel	SS	PDFS080BSS	PDFS080BSSU	VIT

**PDFS-S SAE Straight 4 bolt flange connection (socket weld)**

SAE Flange / Socket weld tube end  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		max.	D1	D2	L3	L4	L5	LA	LB	LX	LY	T2		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											(metr.)	(unc.)			S	SS
1/2	13	17.2	13	17.5	18	72	36	47	57	17.5	38.1	M 8	5/16	0.50	PDFS080S17.5	345	345
1/2	13	21.3	13	21.6	18	72	36	47	57	17.5	38.1	M 8	5/16	0.50	PDFS080S21.6	345	345
3/4	19	26.9	19	27.2	18	72	36	49	66	22.3	47.6	M10	3/8	0.56	PDFS100S27.2	345	345
1	25	33.7	25	34.1	18	76	36	53	71	26.2	52.4	M10	3/8	0.78	PDFS102S34.1	345	345
1 1/4	32	42.4	31	42.8	20	82	42	69	80	30.2	58.7	M10	7/16	0.92	PDFS104S42.8	345	345
1 1/2	38	48.3	38	48.6	22	88	48	77	94	35.7	69.9	M12	1/2	1.32	PDFS106S48.6	276	276
2	51	60.3	50	61.0	24	90	48	89	103	42.9	77.8	M12	1/2	2.10	PDFS108S61	207	207
2 1/2	64	76.1	63	76.6	28	100	48	101	116	50.8	88.9	M12	1/2	2.38	PDFS110S76.6	207	207
3	76	88.9	73	90.5	28	100	53	124	135	61.9	106.4	M16	5/8	2.80	PDFS112S90.5	172	172
3 1/2	89	101.6	89	103.0	28	100	54	137	153	69.9	120.7	M16	5/8	4.30	PDFS114S103	138	138
4	102	114.3	99	115.5	28	100	54	147	163	77.8	130.2	M16	5/8	4.80	PDFS116S115.5	34	34
5	127	140.0	120	142.0	28	100	54	180	184	92.1	152.4	M16	5/8	5.70	PDFS118S142	34	34

**6000 PSI Series**

1/2	13	17.2	13	17.5	18	72	32	47	57	18.2	40.5	M 8	5/16	0.52	PDFS401S17.5	420	420
1/2	13	21.3	13	21.6	18	72	32	47	57	18.2	40.5	M 8	5/16	0.58	PDFS401S21.6	420	420
3/4	19	26.9	19	27.2	20	72	38	53	71	23.8	50.8	M10	3/8	1.00	PDFS402S27.2	420	420
1	25	33.7	25	34.1	22	88	48	66	80	27.8	57.2	M12	7/16	1.52	PDFS403S34.1	420	420
1 1/4	32	42.4	31	42.8	22	88	54	77	94	31.8	66.6	M14	1/2	2.40	PDFS404S42.8	420	420
1 1/2	38	48.3	38	48.6	24	102	60	89	106	36.5	79.3	M16	5/8	3.30	PDFS405S48.6	420	420
2	51	60.3	50	61.0	25	140	74	116	135	44.5	96.8	M20	3/4	4.90	PDFS406S61	420	420
2 1/2	64	76.1	63	76.6	28	150	90	150	166	58.7	123.8	M24	-	6.50	PDFS407S76.6	420	420
3	76	88.9	73	90.5	30	180	110	178	208	71.4	152.4	M30	-	8.00	PDFS408S90.5	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

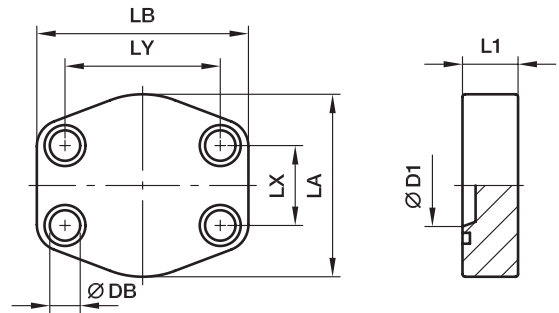
Order code suffixes				
Material	Suffix surface and material	Example 4 bolt flange coupling incl. metr. screws and O-ring	Example 4 bolt flange coupling incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PDFS080S17.5S	PDFS080S17.5SU	NBR
Stainless steel	SS	PDFS080S17.5SS	PDFS080S17.5SSU	VIT



## SAE 4 Flange accessories

### PCFF SAE Closed flange

SAE Closed flange  
(ISO 6162-1/-2)



#### 3000 PSI Series

Nom. flange size		D1	L1	LA	LB	LX	LY	DB	Screws		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)								(metr.)	(unc.)			S	SS
1/2	13	13	16	46	58	17.5	38.1	9.0	M 8×30	5/16×1 1/4	0.30	<b>PCFF32</b>	345	345
3/4	19	15	18	49	66	22.3	47.6	10.5	M10×35	3/8×1 1/2	0.37	<b>PCFF33</b>	345	345
1	25	18	19	53	71	26.2	52.4	10.5	M10×35	3/8×1 1/2	0.54	<b>PCFF34</b>	345	345
1 1/4	32	23	21	69	80	30.2	58.7	10.5	M10×40	7/16×1 1/2	0.90	<b>PCFF35</b>	276	276
1 1/2	38	28	24	77	95	35.7	69.9	13.5	M12×45	1/2×1 3/4	1.03	<b>PCFF36</b>	207	207
2	51	45	24	89	103	42.9	77.8	13.5	M12×45	1/2×1 3/4	1.30	<b>PCFF38</b>	207	207
2 1/2	64	58	25	101	116	50.8	88.9	13.5	M12×45	1/2×1 3/4	1.45	<b>PCFF310</b>	172	172
3	76	70	25	124	136	61.9	106.4	17.0	M16×55	5/8×2 1/4	2.72	<b>PCFF312</b>	138	138
3 1/2	89	85	25	136	152	69.9	120.7	17.0	M16×55	5/8×2 1/4	2.90	<b>PCFF314</b>	34	34
4	102	95	25	146	162	77.8	130.2	17.0	M16×55	5/8×2 1/4	3.85	<b>PCFF316</b>	34	34
5	127	110	25	180	184	92.1	152.4	17.0	M16×55	5/8×2 1/4	4.20	<b>PCFF320</b>	34	34

#### 6000 PSI Series

1/2	13	13	16	46	58	18.2	40.5	9.0	M 8×30	5/16×1 1/4	0.30	<b>PCFF62</b>	420	420
3/4	19	15	19	53	71	23.8	50.8	10.5	M10×35	3/8×1 1/2	0.44	<b>PCFF63</b>	420	420
1	25	22	24	66	80	27.8	57.2	13.5	M12×45	7/16×1 1/2	0.73	<b>PCFF64</b>	420	420
1 1/4	32	30	27	77	94	31.8	66.6	15.0	M14×50	1/2×1 3/4	0.85	<b>PCFF65</b>	420	420
1 1/2	38	35	30	89	103	36.5	79.3	17.0	M16×55	5/8×2 1/4	1.61	<b>PCFF66</b>	420	420
2	51	48	35	123	135	44.5	96.8	21.0	M20×70	3/4×2 3/4	3.31	<b>PCFF68</b>	420	420
2 1/2	64	55	45	150	166	58.7	123.8	25.0	M24×90	–	4.50	<b>PCFF610</b>	420	420
3	76	65	55	178	208	71.4	152.4	32.0	M30×110	–	5.30	<b>PCFF612</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

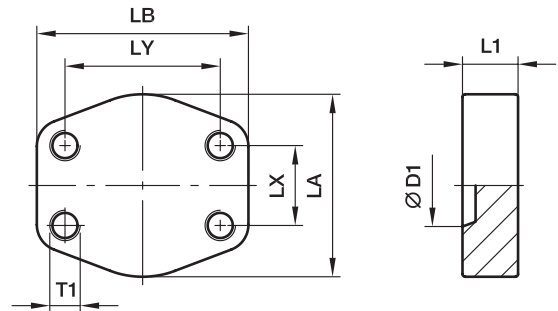
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes					
Material	Suffix surface and material	Example only closed flange	Example closed flange incl. metr. screws and O-ring	Example closed flange incl. UNC screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PCFF32S	PCFF32SM	PCFF32SU	NBR
Stainless steel	SS	PCFF32SS	PCFF32SSM	PCFF32SSU	VIT

**PCCFF SAE Closed counter flange**

SAE Closed counter flange  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		D1	L1	LA	LB	LX	LY	T1		Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)							(metr.)	(unc.)			S	SS
1/2	13	13	16	46	58	17.5	38.1	M 8	5/16	0.30	<b>PCCFF32</b>	345	345
3/4	19	15	18	49	66	22.3	47.6	M10	3/8	0.37	<b>PCCFF33</b>	345	345
1	25	18	19	53	71	26.2	52.4	M10	3/8	0.54	<b>PCCFF34</b>	345	345
1 1/4	32	23	21	69	80	30.2	58.7	M10	7/16	0.90	<b>PCCFF35</b>	276	276
1 1/2	38	28	24	77	95	35.7	69.9	M12	1/2	1.03	<b>PCCFF36</b>	207	207
2	51	45	24	89	103	42.9	77.8	M12	1/2	1.20	<b>PCCFF38</b>	207	207
2 1/2	64	58	25	101	116	50.8	88.9	M12	1/2	1.45	<b>PCCFF310</b>	172	172
3	76	70	25	124	136	61.9	106.4	M16	5/8	2.72	<b>PCCFF312</b>	138	138
3 1/2	89	85	25	136	152	69.9	120.7	M16	5/8	2.90	<b>PCCFF314</b>	34	34
4	102	95	25	146	162	77.8	130.2	M16	5/8	3.85	<b>PCCFF316</b>	34	34
5	127	110	25	180	184	92.1	152.4	M16	5/8	4.20	<b>PCCFF320</b>	34	34

**6000 PSI Series**

1/2	13	13	16	46	58	18.2	40.5	M 8	5/16	0.30	<b>PCCFF62</b>	420	420
3/4	19	15	19	53	71	23.8	50.8	M10	3/8	0.44	<b>PCCFF63</b>	420	420
1	25	22	24	66	80	27.8	57.2	M12	7/16	0.73	<b>PCCFF64</b>	420	420
1 1/4	32	30	27	77	94	31.8	66.6	M14	1/2	0.85	<b>PCCFF65</b>	420	420
1 1/2	38	35	30	89	103	36.5	79.3	M16	5/8	1.61	<b>PCCFF66</b>	420	420
2	51	48	35	123	135	44.5	96.8	M20	3/4	3.31	<b>PCCFF68</b>	420	420
2 1/2	64	55	45	150	166	58.7	123.8	M24	–	4.50	<b>PCCFF610</b>	420	420
3	76	65	55	178	208	71.4	152.4	M30	–	5.30	<b>PCCFF612</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN(\text{bar})}{10} = PN(\text{MPa})$$

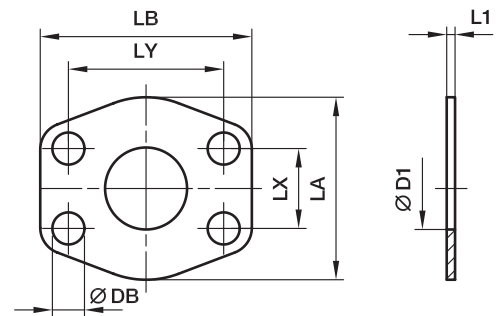
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes				
Material	Suffix surface and material	Example closed flange with metr. threads	Example closed flange with UNC threads	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PCCFF32SM	PCCFF32SU	NBR
Stainless steel	SS	PCCFF32SSM	PCCFF32SSU	VIT



**CPM SAE Flange connector plate**

ISO 6162-1/-2



**3000 PSI Series**

Nom. flange size		D1	L1	LA	LB	LX	LY	DB	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)										CF	SS
1/2	13	13	3	47	57	17.5	38.1	9.0	0.01	<b>8CPM1</b>	345	345
3/4	19	19	3	49	66	22.3	47.6	11.0	0.01	<b>12CPM1</b>	345	345
1	25	25	3	53	71	26.2	52.4	11.0	0.01	<b>16CPM1</b>	345	345
1 1/4	32	32	3	69	80	30.2	58.7	11.5	0.02	<b>20CPM1</b>	276	276
1 1/2	38	38	3	77	95	35.7	69.9	13.5	0.02	<b>24CPM1</b>	207	207
2	51	51	3	89	103	42.9	77.8	13.5	0.03	<b>32CPM1</b>	207	207
2 1/2	64	63	3	101	116	50.8	88.9	13.5	0.03	<b>40CPM1</b>	172	172
3	76	73	4	124	136	61.9	106.4	17.0	0.04	<b>48CPM1</b>	138	138
3 1/2	89	89	4	136	152	69.9	120.7	17.0	0.06	<b>56CPM1</b>	34	34
4	102	99	4	146	162	77.8	130.2	17.0	0.08	<b>64CPM1</b>	34	34
5	127	120	4	180	184	92.1	152.4	17.0	0.09	<b>80CPM1</b>	34	34

**6000 PSI Series**

1/2	13	13	4	47	57	18.2	40.5	9.0	0.01	<b>8CPM2</b>	420	420
3/4	19	17	4	53	71	23.8	50.8	11.0	0.01	<b>12CPM2</b>	420	420
1	25	24	4	66	80	27.8	57.2	13.0	0.02	<b>16CPM2</b>	420	420
1 1/4	32	31	4	77	94	31.8	66.6	15.0	0.03	<b>20CPM2</b>	420	420
1 1/2	38	38	4	89	103	36.5	79.3	17.0	0.04	<b>24CPM2</b>	420	420
2	51	51	4	123	135	44.5	96.8	21.0	0.05	<b>32CPM2</b>	420	420
2 1/2	64	63	4	150	166	58.7	123.8	25.0	0.07	<b>40CPM2</b>	420	420
3	76	73	4	178	208	71.4	152.4	32.0	0.08	<b>48CPM2</b>	420	420

<sup>1)</sup> Pressure shown = Item deliverable

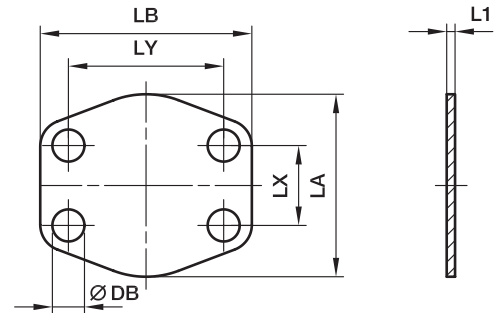
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	8CPM1CF	only connector plate
Stainless steel	SS	8CPM1SS	only connector plate

**AP SAE Flange locking plate**

ISO 6162-1/-2



**3000 PSI Series**

Nom. flange size		L1	LA	LB	LX	LY	DB	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)									CF	SS
1/2	13	3	47	57	17.5	38.1	9.0	0.02	<b>8AP1</b>	-	-
3/4	19	3	49	66	22.3	47.6	11.0	0.02	<b>12AP1</b>	-	-
1	25	3	53	71	26.2	52.4	11.0	0.02	<b>16AP1</b>	-	-
1 1/4	32	3	69	80	30.2	58.7	11.5	0.03	<b>20AP1</b>	-	-
1 1/2	38	3	77	95	35.7	69.9	13.5	0.03	<b>24AP1</b>	-	-
2	51	3	89	103	42.9	77.8	13.5	0.04	<b>32AP1</b>	-	-
2 1/2	64	3	101	116	50.8	89.9	13.5	0.04	<b>40AP1</b>	-	-
3	76	4	124	136	61.9	106.4	17.0	0.07	<b>48AP1</b>	-	-
3 1/2	89	4	136	152	69.9	102.7	17.0	0.07	<b>56AP1</b>	-	-
4	102	4	146	162	77.8	130.2	17.0	0.09	<b>64AP1</b>	-	-
5	127	4	180	184	92.1	152.4	17.0	0.10	<b>80AP1</b>	-	-

**6000 PSI Series**

1/2	13	4	47	57	18.2	40.5	9.0	0.02	<b>8AP2</b>	-	-
3/4	19	4	53	71	23.8	50.8	11.0	0.02	<b>12AP2</b>	-	-
1	25	4	66	80	27.8	57.1	13.0	0.03	<b>16AP2</b>	-	-
1 1/4	32	4	77	94	31.8	66.7	15.0	0.04	<b>20AP2</b>	-	-
1 1/2	38	4	89	103	36.5	79.4	17.0	0.05	<b>24AP2</b>	-	-
2	51	4	123	135	44.5	96.8	21.0	0.06	<b>32AP2</b>	-	-
2 1/2	64	4	150	166	58.7	123.8	25.0	0.08	<b>40AP2</b>	-	-
3	76	4	178	208	71.4	152.4	32.0	0.10	<b>48AP2</b>	-	-

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN(\text{bar})}{10} = PN(\text{MPa})$$

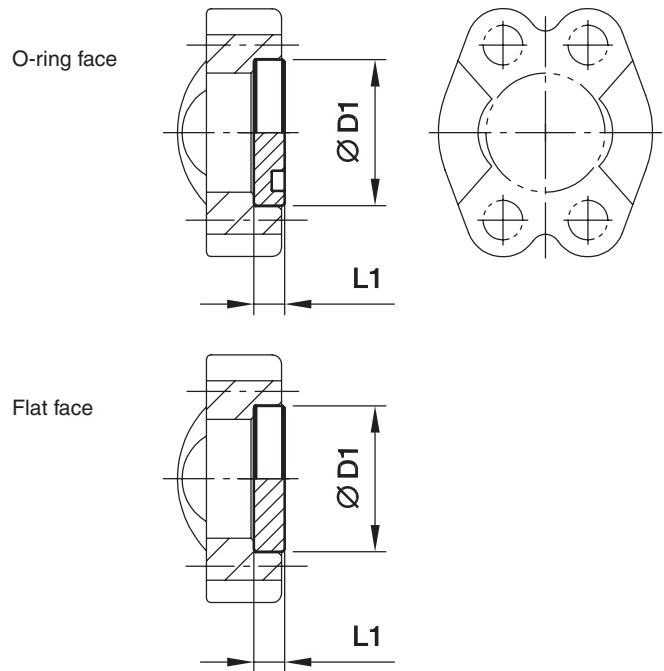
This flange locking plate is not used under pressure.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	8AP1CF	only locking plate
Stainless steel	SS	8AP1SS	only locking plate

**PMQ Flange head plug flat**

(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size SAE (in)	D1 	L1	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup> CF
1/2	30.2	6.8	0.03	<b>8PFMQ1</b>	<b>8PFCMQ1</b>	210
3/4	38.1	6.8	0.05	<b>12PFMQ1</b>	<b>12PFCMQ1</b>	210
1	44.5	8.0	0.09	<b>16PFMQ1</b>	<b>16PFCMQ1</b>	210
1 1/4	50.8	8.0	0.12	<b>20PFMQ1</b>	<b>20PFCMQ1</b>	210
1 1/2	60.3	8.0	0.17	<b>24PFMQ1</b>	<b>24PFCMQ1</b>	160
2	71.4	9.6	0.29	<b>32PFMQ1</b>	<b>32PFCMQ1</b>	200
2 1/2	84.1	9.6	0.39	<b>40PFMQ1</b>	<b>40PFCMQ1</b>	–
3	101.6	9.6	0.58	<b>48PFMQ1</b>	<b>48PFCMQ1</b>	–
3 1/2	114.3	11.3	0.86	<b>56PFMQ1</b>	<b>56PFCMQ1</b>	–
4	127.0	11.3	1.02	<b>64PFMQ1</b>	<b>64PFCMQ1</b>	–
5	152.4	11.3	1.96	<b>80PFMQ1</b>	<b>80PFCMQ1</b>	–

**6000 PSI Series**

1/2	31.8	7.8	0.04	<b>8PFMQ2</b>	<b>8PFCMQ2</b>	250
3/4	41.3	8.8	0.09	<b>12PFMQ2</b>	<b>12PFCMQ2</b>	250
1	47.6	9.5	0.13	<b>16PFMQ2</b>	<b>16PFCMQ2</b>	250
1 1/4	54.0	10.3	0.18	<b>20PFMQ2</b>	<b>20PFCMQ2</b>	250
1 1/2	63.5	12.6	0.30	<b>24PFMQ2</b>	<b>24PFCMQ2</b>	250
2	79.4	12.6	0.48	<b>32PFMQ2</b>	<b>32PFCMQ2</b>	250
2 1/2	108.0	21.2	1.26	<b>40PFMQ2</b>	<b>40PFCMQ2</b>	–
3	132.0	26.5	2.31	<b>48PFMQ2</b>	<b>48PFCMQ2</b>	–

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

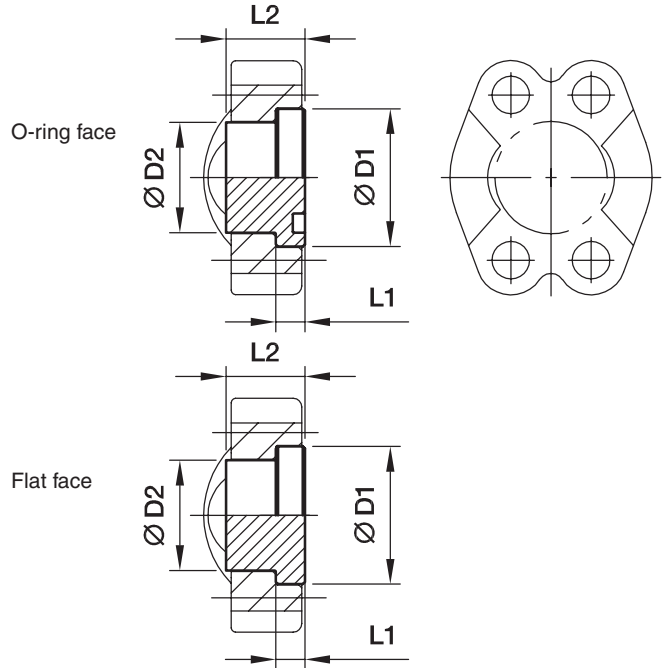
Flange head plug in stainless steel on request.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	8PFMQ1CF	only flange head plug

**PMQ Flange head plug**

(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size SAE (in)	D1	D2	L1	L2	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup> CF
1/2	24.0	30.2	6.8	16	0.03	<b>8PMQ1</b>	<b>8PCMQ1</b>	350
3/4	31.8	38.1	6.8	17	0.05	<b>12PMQ1</b>	<b>12PCMQ1</b>	350
1	38.0	44.5	8.0	17	0.09	<b>16PMQ1</b>	<b>16PCMQ1</b>	315
1 1/4	43.0	50.8	8.0	17	0.12	<b>20PMQ1</b>	<b>20PCMQ1</b>	250
1 1/2	50.0	60.3	8.0	19	0.17	<b>24PMQ1</b>	<b>24PCMQ1</b>	200
2	62.0	71.4	9.6	19	0.29	<b>32PMQ1</b>	<b>32PCMQ1</b>	200
2 1/2	74.0	84.1	9.6	40	0.39	<b>40PMQ1</b>	<b>40PCMQ1</b>	160
3	90.0	101.6	9.6	45	0.58	<b>48PMQ1</b>	<b>48PCMQ1</b>	138
3 1/2	102.0	114.3	11.3	30	0.86	<b>56PMQ1</b>	<b>56PCMQ1</b>	35
4	114.5	127.0	11.3	36	1.02	<b>64PMQ1</b>	<b>64PCMQ1</b>	35
5	140.0	152.4	11.3	45	1.96	<b>80PMQ1</b>	<b>80PCMQ1</b>	35

**6000 PSI Series**

1/2	24.0	31.8	7.8	14	0.04	<b>8PMQ2</b>	<b>8PCMQ2</b>	400
3/4	31.8	41.3	8.8	15	0.09	<b>12PMQ2</b>	<b>12PCMQ2</b>	400
1	38.0	47.6	9.5	16	0.13	<b>16PMQ2</b>	<b>16PCMQ2</b>	400
1 1/4	44.0	54.0	10.3	16	0.18	<b>20PMQ2</b>	<b>20PCMQ2</b>	400
1 1/2	50.8	63.5	12.6	19	0.30	<b>24PMQ2</b>	<b>24PCMQ2</b>	400
2	67.0	79.4	12.6	30	0.48	<b>32PMQ2</b>	<b>32PCMQ2</b>	400
2 1/2	89.0	108.0	21.2	45	1.26	<b>40PMQ2</b>	<b>40PCMQ2</b>	400
3	114.3	132.0	26.5	55	2.31	<b>48PMQ2</b>	<b>48PCMQ2</b>	400

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

Flange head plug in stainless steel on request.

\*Please add the **suffixes** below according to the material/surface required.

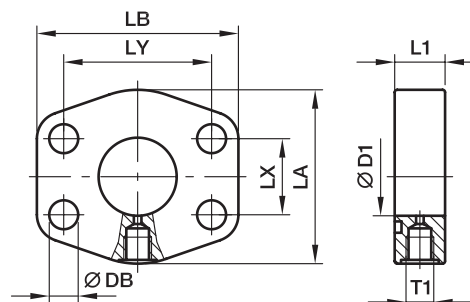
Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, zinc plated, Cr(VI)-free	CF	8PMQ1CF	only flange head plug





**PAGL-(G/M) SAE 4 bolt flange with test point port**

SAE Flange with test point port  
(ISO 6162-1/-2)



**3000 PSI Series**

Nom. flange size		T1	D1	L1	LA	LB	LX	LY	DB	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>	
SAE (in)	ISO (DN)											S	SS
1	25	G1/4	25	22	53	71	26.2	52.4	11.0	0.65	PAGL102G14	348	348
1	25	M10×1	25	19	53	71	26.2	52.4	11.0	0.65	PAGL102M10	348	348
1 1/4	32	G1/4	31	20	69	80	30.2	58.7	11.5	0.75	PAGL104G14	278	278
1 1/4	32	M10×1	31	20	69	80	30.2	58.7	11.5	0.75	PAGL104M10	278	278
1 1/2	38	G1/4	38	25	77	94	35.7	69.9	13.5	0.80	PAGL106G14	210	210
1 1/2	38	M10×1	38	25	77	94	35.7	69.9	13.5	0.80	PAGL106M10	210	210
2	51	G1/4	50	25	89	103	42.9	77.8	13.5	1.25	PAGL108G14	210	210
2	51	M10×1	50	25	89	103	42.9	77.8	13.5	1.25	PAGL108M10	210	210
2 1/2	64	G1/4	63	25	101	115	50.8	88.9	13.5	1.75	PAGL110G14	175	175
2 1/2	64	M10×1	63	25	101	115	50.8	88.9	13.5	1.75	PAGL110M10	175	175
3	76	G1/4	73	27	124	135	61.9	106.4	17.0	2.25	PAGL112G14	138	138
3	76	M10×1	73	27	124	135	61.9	106.4	17.0	2.25	PAGL112M10	138	138
3 1/2	89	G1/4	89	27	136	152	61.9	120.7	17.0	3.00	PAGL114G14	35	35
3 1/2	89	M10×1	89	27	136	152	61.9	120.7	17.0	3.00	PAGL114M10	35	35
4	102	G1/4	99	26	146	162	77.8	130.2	17.0	4.25	PAGL116G14	35	35
4	102	M10×1	99	26	146	162	77.8	130.2	17.0	4.25	PAGL116M10	35	35
5	127	G1/4	120	23	180	184	92.1	152.4	17.0	5.75	PAGL118G14	35	35
5	127	M10×1	120	23	180	184	92.1	152.4	17.0	5.75	PAGL118M10	35	35

**6000 PSI Series**

1	25	G1/4	25	22	69	80	27.8	57.2	13.0	0.65	PAGL403G14	420	420
1	25	M10×1	25	22	69	80	27.8	57.2	13.0	0.65	PAGL403M10	420	420
1 1/4	32	G1/4	31	26	77	94	31.8	66.6	15.0	0.75	PAGL404G14	420	420
1 1/4	32	M10×1	31	26	77	94	31.8	66.6	15.0	0.75	PAGL404M10	420	420
1 1/2	38	G1/4	38	30	89	106	36.5	79.3	17.0	0.95	PAGL405G14	420	420
1 1/2	38	M10×1	38	30	89	106	36.5	79.3	17.0	0.85	PAGL405M10	420	420
2	51	G1/4	50	36	116	135	44.5	96.8	21.0	1.25	PAGL406G14	420	420
2	51	M10×1	50	36	116	135	44.5	96.8	21.0	1.25	PAGL406M10	420	420
2 1/2	64	G1/4	63	45	150	166	58.7	123.8	25.0	1.75	PAGL408G14	420	420
2 1/2	64	M10×1	63	45	150	166	58.7	123.8	25.0	1.75	PAGL408M10	420	420
3	76	G1/4	73	55	178	208	71.4	152.4	32.0	2.25	PAGL410G14	420	420
3	76	M10×1	73	55	178	208	71.4	152.4	32.0	2.25	PAGL410M10	420	420

<sup>1)</sup>Pressure shown = Item deliverable

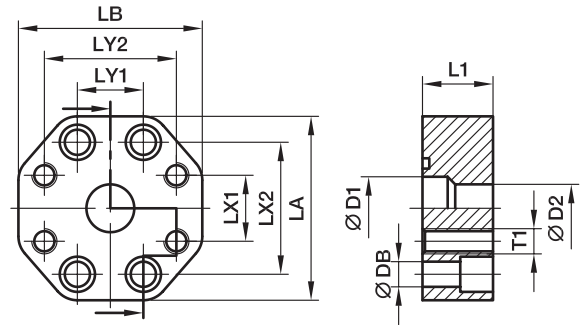
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the suffixes below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, blanc oil dipped	S	PAGL102G14S	only flange
Stainless steel	SS	PAGL102G14SS	only flange

**PRF SAE Straight reducing flange adapter**

ISO 6162-1/-2



**3000 PSI Series**

Nom. flange size		D1	D2	L1	LA	LB	LX1	LX2	LY1	LY2	DB	Screws (metr.)	T1	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
SAE (in)	ISO (DN)															
1x1	25/25	25	25	28	73	73	26.2	52.4	26.2	52.4	11	M10x35	M10	1.10	PRF102/102	210
1x3/4	25/19	25	19	28	73	73	22.3	52.4	26.2	47.6	11	M10x35	M10	1.15	PRF102/100	210
1 1/4x1 1/4	32/32	30	30	28	80	80	30.2	58.7	30.2	58.7	11	M10x35	M10	1.55	PRF104/104	210
1 1/4x1	32/25	30	25	28	80	71	26.2	58.7	30.2	52.4	11	M10x35	M10	1.55	PRF104/102	210
1 1/2x1 1/2	38/38	38	38	32	94	94	35.7	69.9	35.7	69.9	13	M12x45	M12	2.25	PRF106/106	210
1 1/2x1 1/4	38/32	38	30	32	94	80	30.2	69.9	35.7	58.7	13	M10x35	M10	2.40	PRF106/104	210
2x2	51/51	50	50	33	103	103	42.9	77.8	42.9	77.8	13	M12x45	M12	3.00	PRF108/108	210
2x1 1/2	51/38	50	38	33	103	94	35.7	77.8	42.9	70.0	13	M12x45	M12	3.15	PRF108/106	210
2 1/2x2 1/2	64/64	63	63	33	115	115	50.8	88.9	50.8	88.9	13	M12x45	M12	3.85	PRF110/110	175
2 1/2x2	64/51	63	50	33	115	103	42.9	88.9	50.8	77.8	13	M12x45	M12	3.95	PRF110/108	175
3x3	76/76	73	73	36	135	135	61.9	106.4	61.9	106.4	17	M16x50	M16	4.25	PRF112/112	138
3x2 1/2	76/64	73	63	36	135	115	50.8	106.4	61.9	89.0	17	M12x45	M12	4.45	PRF112/110	138

**6000 PSI Series**

3/4x3/4	19/19	19	19	28	71	71	23.8	50.8	23.8	50.8	11	M10x35	M10	0.80	PRF402/402	420
1x1	25/25	25	25	33	80	80	27.8	57.2	27.8	57.2	13	M12x45	M12	1.10	PRF403/403	420
1x3/4	25/19	25	19	33	80	71	23.8	57.2	27.8	50.8	13	M10x35	M10	1.10	PRF403/402	420
1 1/4x1 1/4	32/32	30	30	33	94	94	31.8	66.6	31.8	66.6	15	M14x45	M14	1.40	PRF404/404	420
1 1/4x1	32/25	30	25	33	94	80	27.8	66.6	31.8	57.2	15	M12x45	M12	1.60	PRF404/403	420
1 1/2x1 1/2	38/38	38	38	48	106	106	36.5	79.3	36.5	79.3	17	M16x50	M16	3.30	PRF405/405	420
1 1/2x1 1/4	38/32	38	30	48	106	94	31.8	79.3	36.5	66.6	17	M14x45	M14	3.60	PRF405/404	420
2x2	51/51	50	50	48	135	135	44.5	96.8	44.5	96.8	21	M20x65	M20	5.00	PRF406/406	420
2x1 1/2	51/38	50	38	48	135	106	36.5	96.8	44.5	79.3	21	M16x50	M16	5.25	PRF406/405	420
2 1/2x2	64/64	63	63	53	166	166	50.8	123.8	50.8	123.8	25	M20x65	M20	6.50	PRF408/408	420
3x2	76/51	73	50	58	208	178	44.5	152.4	71.4	96.8	31	M20x65	M20	7.50	PRF410/406	420

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

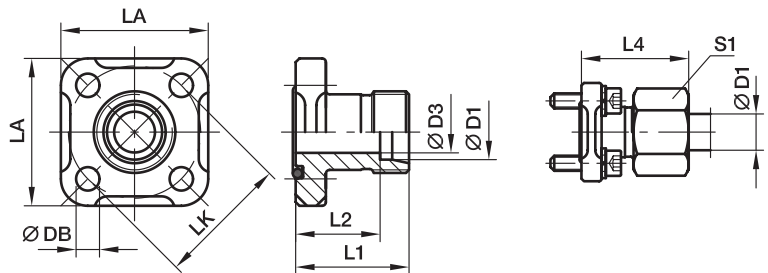
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, blanc oil dipped	S	PRF102/102S	only flange
Stainless steel	SS	PRF102/102SS	only flange



**BFG Gear pump flange straight**

Hydraulic flange / EO 24° cone end



**BFG Straight flange connection EO 24° cone end**

LK	D1 <sup>2)</sup>	D3	L1	L2	L4	LA	S1	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> CF
35	10L	8	30	23.0	39.0	39	19	6.4	M6×22	20×2.5	0.15	<b>BFG10L/LK35</b>	315
35	12L	10	30	23.0	39.0	39	22	6.4	M6×22	20×2.5	0.16	<b>BFG12L/LK35</b>	315
35	15L	12	30	23.0	38.0	39	27	6.4	M6×22	20×2.5	0.19	<b>BFG15L/LK35</b>	250
35	16S	12	30	21.5	39.5	39	30	6.4	M6×22	20×2.5	0.21	<b>BFG16S/LK35</b>	315
40	15L	12	35	28.0	43.0	42	27	6.4	M6×22	26×2.5	0.17	<b>BFG15L/LK40</b>	100
40	18L	15	35	27.5	44.0	42	32	6.4	M6×22	26×2.5	0.22	<b>BFG18L/LK40</b>	100
40	22L	19	35	27.5	44.5	42	36	6.4	M6×22	26×2.5	0.24	<b>BFG22L/LK40</b>	100
40	28L	24	35	27.5	44.5	42	41	6.4	M6×22	26×2.5	0.28	<b>BFG28L/LK40</b>	100
55	20S	16	50	39.5	61.0	57	36	8.4	M8×25	32×2.5	0.35	<b>BFG20S/LK55</b>	250

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

Delivery without nut and ring.

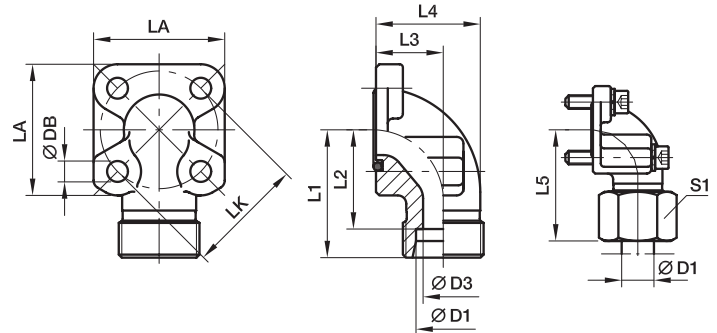
Information on ordering complete fittings or alternative sealing materials see page M11.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	BFG16S/LK35OMDCF	NBR

## BFW Gear pump flange 90° elbow

Hydraulic flange / EO 24° cone end



BFW 90° Flange connection EO 24° cone end

LK	D1 <sup>2)</sup>	D3	L1	L2	L3	L4	L5	LA	S1	DB	Screws		O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>
											2 pieces (metr.)	2 pieces (metr.)				
35	10L	8	38	31.0	16.5	26.5	47.0	40	19	6.4	M6×22	M6×35	20×2.5	0.23	<b>BFW10L/LK35</b>	315
35	12L	10	38	31.0	16.5	26.5	47.0	40	22	6.4	M6×22	M6×35	20×2.5	0.26	<b>BFW12L/LK35</b>	315
35	15L	12	38	31.0	16.5	26.5	46.0	40	27	6.4	M6×22	M6×35	20×2.5	0.38	<b>BFW15L/LK35</b>	315
35	16S	12	38	29.5	20.0	31.0	48.0	40	30	6.4	M6×22	M6×40	20×2.5	0.55	<b>BFW16S/LK35</b>	315
35	20S	16	45	34.5	25.0	38.0	56.0	40	36	6.4	M6×22	M6×45	20×2.5	0.65	<b>BFW20S/LK35</b>	315
40	15L	12	38	31.0	22.5	36.5	46.0	42	27	6.4	M6×22	M6×22	26×2.5	0.29	<b>BFW15L/LK40</b>	100
40	18L	15	38	30.5	22.5	36.5	47.0	42	32	6.4	M6×22	M6×22	26×2.5	0.70	<b>BFW18L/LK40</b>	100
40	22L	19	38	30.5	22.5	36.5	47.5	42	36	6.4	M6×22	M6×22	26×2.5	0.36	<b>BFW22L/LK40</b>	100
40	28L	22	40	32.5	28.0	43.0	49.0	42	41	6.4	M6×20	M6×50	26×2.5	0.82	<b>BFW28L/LK40</b>	100
40	35L	31	41	30.5	32.0	55.0	52.0	42	50	6.4	M6×22	M6×60	26×2.5	0.22	<b>BFW35L/LK40</b>	100
40	20S	16	40	29.5	22.5	35.5	50.0	42	36	6.4	M6×22	M6×45	26×2.5	0.23	<b>BFW20S/LK40</b>	250
55	35L	31	49	38.5	32.0	51.5	62.0	58	50	8.4	M8×25	M8×60	32×2.5	0.27	<b>BFW35L/LK55</b>	250
55	42L	38	49	38.0	40.0	64.5	61.0	58	60	8.4	M8×25	M8×70	32×2.5	0.41	<b>BFW42L/LK55</b>	250
55	20S	17	45	34.5	24.0	38.0	56.0	58	36	8.4	M8×25	M8×50	32×2.5	0.94	<b>BFW20S/LK55</b>	250
55	25S	20	49	37.0	30.0	46.0	61.0	58	46	8.4	M8×25	M8×55	32×2.5	0.80	<b>BFW25S/LK55</b>	250
55	30S	26	49	35.5	32.0	50.0	62.0	58	50	8.4	M8×25	M8×50	32×2.5	0.20	<b>BFW30S/LK55</b>	250

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{PN(\text{bar})}{10} = PN(\text{MPa})$$

Delivery without nut and ring.  
Information on ordering complete fittings  
or alternative sealing materials see page M11.

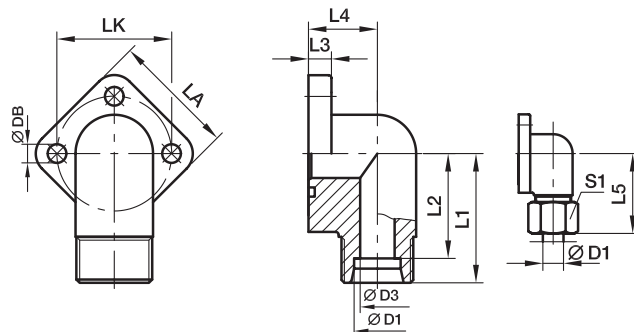


\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	BFW16S/LK35OMDCF	NBR

**BFW3 Gear pump flange 90° elbow 3 holes**

Hydraulic flange / EO 24° cone end



**BFW-3 90° Flange connection EO 24° cone end**

LK	D1 <sup>2)</sup>	D3	L1	L2	L3	L4	L5	LA	S1	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> CF
30	12L	10	37	30.0	10	37.5	46	38	22	6.4	M6×22	16×2.5	0.13	<b>BFW3-12L/LK30</b>	250
30	15L	12	37	30.0	10	37.5	47	38	27	6.4	M6×22	16×2.5	0.14	<b>BFW3-15L/LK30</b>	250
30	18L	15	37	30.0	10	37.5	47	38	32	6.4	M6×22	16×2.5	0.17	<b>BFW3-18L/LK30</b>	160
40	22L	19	43	35.5	14	41.0	53	48	36	8.4	M8×30	24×2.5	0.29	<b>BFW3-22L/LK40</b>	160
40	28L	24	43	35.5	14	41.0	53	48	41	8.4	M8×30	24×2.5	0.40	<b>BFW3-28L/LK40</b>	160

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

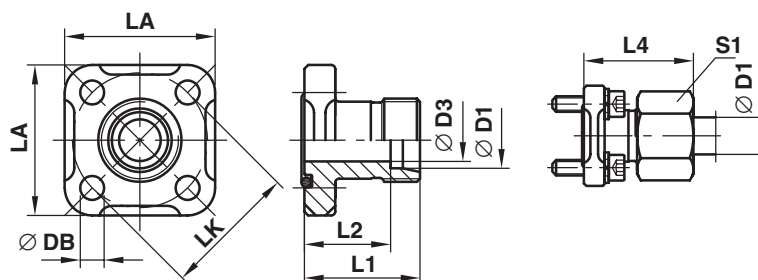
Delivery without nut and ring.  
Information on ordering complete fittings  
or alternative sealing materials see page M11.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	BFW3-12L/LK30OMDCF	NBR

## BFGL Gear pump flange straight

Hydraulic flange / O-Lok®-connection straight



### BFGL Straight flange connection O-Lok® end

LK	D1	Thread UN/UNF-2A T1	L1	LA	DB	Screws (metr.)	O-ring 1	O-ring 2	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> CF
35	6.5	11/16-16	30	40	6.5	M6×22	20×2.5	9.25×1.78	0.09	<b>6BFGL/LK35</b>	315
35	9.5	13/16-16	30	40	6.5	M6×22	20×2.5	12.42×1.78	0.10	<b>8BFGL/LK35</b>	250
35	12.5	1-14	30	40	6.5	M6×22	20×2.5	15.60×1.78	0.10	<b>10BFGL/LK35</b>	250
40	12.5	1-14	35	42	6.5	M6×22	26×2.5	15.60×1.78	0.12	<b>10BFGL/LK40</b>	100
40	15.5	1 3/16-12	35	42	6.5	M6×22	26×2.5	18.77×1.78	0.13	<b>12BFGL/LK40</b>	100
40	20.5	1 7/16-12	42	42	6.5	M6×22	26×2.5	23.52×1.78	0.15	<b>16BFGL/LK40</b>	100

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

Delivery without nut and ring.

Information on ordering complete fittings  
or alternative sealing materials see page M11.

M

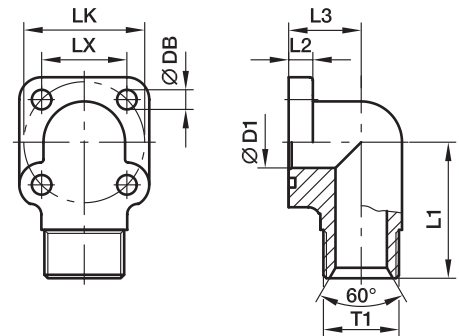
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-rings	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	6BFGL/LK35OMDCF	NBR

## SAE Gear pump flanges

### BFW-G Gear pump flange 90° elbow

Hydraulic flange / BSPP 60° cone end  
(ISO 8434-6)



#### BFW-G 90° BSPP 60° cone end

LK	T1	D1	L1	L2	L3	LX	DB	Screws		O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>
								2 pieces (metr.)	2 pieces (metr.)				CF
35	<b>G3/8</b>	10	40	8	20.0	24.8	6.5	M6×20	M6×35	18.72×2.62	0.22	<b>BFW-G38/LK35</b>	315
35	<b>G1/2</b>	12	40	8	20.0	24.8	6.5	M6×20	M6×35	18.72×2.62	0.24	<b>BFW-G12/LK35</b>	315
35	<b>G3/4</b>	15	40	8	20.0	24.8	6.5	M6×20	M6×40	18.72×2.62	0.26	<b>BFW-G34/LK35</b>	315
40	<b>G3/8</b>	10	40	8	22.5	28.2	6.5	M6×20	M6×40	25.07×2.62	0.30	<b>BFW-G38/LK40</b>	250
40	<b>G1/2</b>	12	40	8	22.5	28.2	6.5	M6×20	M6×40	25.07×2.62	0.32	<b>BFW-G12/LK40</b>	250
40	<b>G3/4</b>	17	40	8	22.5	28.2	6.5	M6×20	M6×40	25.07×2.62	0.34	<b>BFW-G34/LK40</b>	250
40	<b>G1</b>	19	40	8	28.0	28.2	6.5	M6×20	M6×50	25.07×2.62	0.36	<b>BFW-G1/LK40</b>	250
55	<b>G1/2</b>	12	49	12	24.0	38.8	8.5	M8×25	M8×45	31.42×2.62	0.35	<b>BFW-G12/LK55</b>	250
55	<b>G3/4</b>	17	46	12	24.0	38.8	8.5	M8×25	M8×60	31.42×2.62	0.40	<b>BFW-G34/LK55</b>	250
55	<b>G1</b>	22	49	12	31.0	38.8	8.5	M8×25	M8×70	31.42×2.62	0.45	<b>BFW-G1/LK55</b>	250

<sup>1)</sup> Pressure shown = Item deliverable

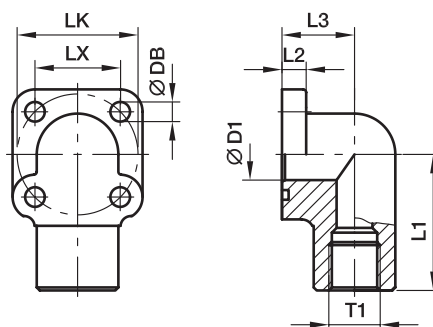
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	BFW-G38/LK35CFM	NBR

## BFW-GI Gear pump flange 90° elbow

Hydraulic flange / Female BSPP thread  
(ISO 1179-1)



### BFW-GI 90° Female BSPP thread

LK	T1	D1	L1	L2	L3	LX	DB	Screws		O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>
								2 pieces (metr.)	2 pieces (metr.)				CF
35	<b>G3/8</b>	10	40	8	20.0	24.8	6.5	M6×20	M6×35	18.72×2.62	0.22	<b>BFW-GI38/LK35</b>	315
35	<b>G1/2</b>	12	40	8	20.0	24.8	6.5	M6×20	M6×35	18.72×2.62	0.24	<b>BFW-GI12/LK35</b>	315
40	<b>G3/8</b>	10	40	8	22.5	28.2	6.5	M6×20	M6×40	25.07×2.62	0.30	<b>BFW-GI38/LK40</b>	250
40	<b>G1/2</b>	12	40	8	22.5	28.2	6.5	M6×20	M6×40	25.07×2.62	0.32	<b>BFW-GI12/LK40</b>	250
40	<b>G3/4</b>	17	40	8	22.5	28.2	6.5	M6×20	M6×40	25.07×2.62	0.34	<b>BFW-GI34/LK40</b>	250
55	<b>G1/2</b>	12	49	12	24.0	38.8	8.5	M8×25	M8×45	31.42×2.62	0.35	<b>BFW-GI12/LK55</b>	250
55	<b>G3/4</b>	17	46	12	24.0	38.8	8.5	M8×25	M8×60	31.42×2.62	0.40	<b>BFW-GI34/LK55</b>	250
55	<b>G1</b>	22	49	12	31.0	38.8	8.5	M8×25	M8×70	31.42×2.62	0.45	<b>BFW-GI1/LK55</b>	250

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

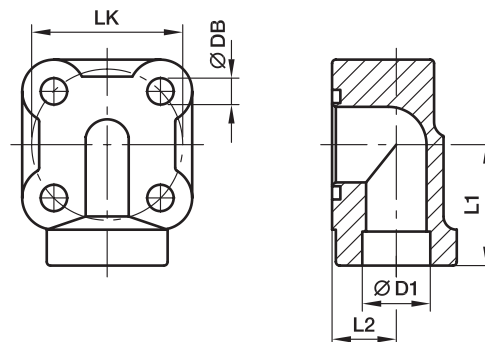
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	BFW-GI38/LK35CFM	NBR



## BFW-S Gear pump flange 90° elbow

Hydraulic flange / Socket weld end



### BFW-S 90° Socket weld end

LK	D1	L1	L2	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
30	12	30	14	7.0	M 6×30	15.88×2.62	0.15	<b>BFW-S12/LK30/M6</b>	200
30	12	27	13	8.5	M 8×35	15.88×2.62	0.15	<b>BFW-S12/LK30/M8</b>	250
30	14	27	13	6.5	M 6×30	15.88×2.62	0.14	<b>BFW-S14/LK30/M6</b>	200
30	14	27	13	8.5	M 8×35	15.88×2.62	0.14	<b>BFW-S14/LK30/M8</b>	250
30	16	27	13	6.5	M 6×30	15.88×2.62	0.12	<b>BFW-S16/LK30/M6</b>	200
30	16	27	13	8.5	M 8×35	15.88×2.62	0.12	<b>BFW-S16/LK30/M8</b>	250
30	18	27	13	6.5	M 6×30	15.88×2.62	0.10	<b>BFW-S18/LK30/M6</b>	200
35	14	30	12	6.5	M 6×35	18.72×2.62	0.20	<b>BFW-S14/LK35/M6</b>	200
35	14	30	14	8.5	M 8×40	18.72×2.62	0.20	<b>BFW-S14/LK35/M8</b>	250
35	16	30	12	6.5	M 6×35	18.72×2.62	0.18	<b>BFW-S16/LK35/M6</b>	200
35	16	30	14	8.5	M 8×40	18.72×2.62	0.18	<b>BFW-S16/LK35/M8</b>	250
35	18	30	14	6.5	M 6×35	18.72×2.62	0.18	<b>BFW-S18/LK35/M6</b>	200
35	18	30	14	8.5	M 8×40	18.72×2.62	0.18	<b>BFW-S18/LK35/M8</b>	250
35	20	30	14	6.5	M 6×35	18.72×2.62	0.17	<b>BFW-S20/LK35/M6</b>	200
40	18	32	17	6.5	M 6×40	23.81×2.62	0.25	<b>BFW-S18/LK40/M6</b>	200
40	18	32	17	8.5	M 8×40	23.81×2.62	0.25	<b>BFW-S18/LK40/M8</b>	250
40	20	32	17	6.5	M 6×40	23.81×2.62	0.24	<b>BFW-S20/LK40/M6</b>	200
40	20	32	17	8.5	M 8×40	23.81×2.62	0.24	<b>BFW-S20/LK40/M8</b>	250
40	22	32	17	6.5	M 6×40	23.81×2.62	0.23	<b>BFW-S22/LK40/M6</b>	200
40	22	32	17	8.5	M 8×40	23.81×2.62	0.23	<b>BFW-S22/LK40/M8</b>	250
40	25	32	17	6.5	M 6×40	23.81×2.62	0.22	<b>BFW-S25/LK40/M6</b>	200
40	25	32	17	8.5	M 8×40	23.81×2.62	0.22	<b>BFW-S25/LK40/M8</b>	250

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

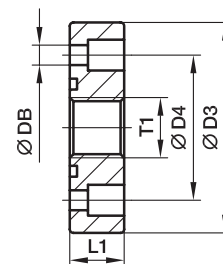
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	BFW-S16/LK30/M6SM	NBR

## PF Gear pump flange straight

Hydraulic flange / Female BSPB thread  
(ISO 1179-1)

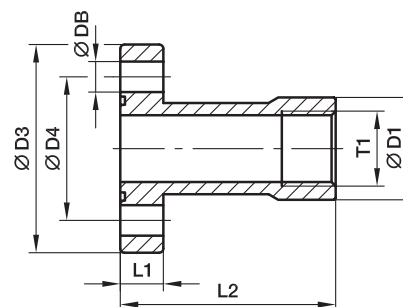


PF

Pump size	LK	T1	D3	D4	L1	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> CF
1.0	30.0	<b>G3/8</b>	45	30.0	13	6.5	M 6×16	18.77×1.78	0.10	<b>PF1</b>	250
2.0	40.0	<b>G1/2</b>	58	40.0	15	8.5	M 8×20	25.12×1.78	0.21	<b>PF2</b>	250
3.0	51.0	<b>G3/4</b>	75	51.0	18	10.5	M10×25	31.42×2.62	0.48	<b>PF3</b>	250
3B	56.0	<b>G3/4</b>	76	56.0	18	10.5	M10×25	31.42×2.62	0.48	<b>PF3B</b>	250
3.5	62.0	<b>G1</b>	88	62.0	20	10.5	M10×25	39.69×3.53	0.53	<b>PF3.5</b>	180
3.5B	62.0	<b>G1</b>	88	62.0	20	12.5	M12×25	39.69×3.53	0.59	<b>PF3.5B</b>	180
4.0	72.5	<b>G1 1/4</b>	98	72.5	22	12.5	M12×30	47.22×3.53	0.64	<b>PF4</b>	180

## PFL Gear pump flange straight

Hydraulic flange / Female BSPB thread – long version  
(ISO 1179-1)



PFL

Pump size	LK	T1	D1	D3	D4	L1	L2	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> CF
1.0	30.0	<b>G3/8</b>	23.0	45	30.0	10	55	6.5	M 6×20	18.77×1.78	0.15	<b>PFL1</b>	250
2.0	40.0	<b>G1/2</b>	26.5	58	40.0	12	60	8.5	M 8×25	25.12×1.78	0.27	<b>PFL2</b>	250
3.0	51.0	<b>G3/4</b>	33.5	76	51.0	16	72	10.5	M10×35	31.42×2.62	0.59	<b>PFL3</b>	250
3B	56.0	<b>G3/4</b>	33.5	76	56.0	19	72	10.5	M10×35	31.42×2.62	0.69	<b>PFL3.5</b>	250

<sup>1)</sup> Pressure shown = Item deliverable

PN (bar) = PN (MPa)  
10

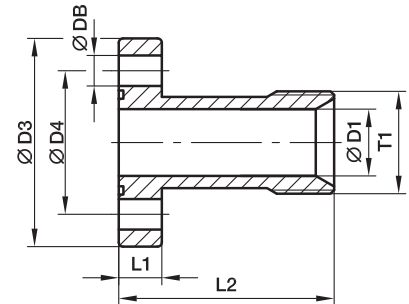
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free <b>PF</b>	CF	PF1CFM	NBR
Steel, zinc plated, Cr(VI)-free <b>PFL</b>	CF	PFL1CFM	NBR

## SAE Gear pump flanges

### PFE Gear pump flange straight

Hydraulic flange / BSPP 60° cone end  
(ISO 8434-6)

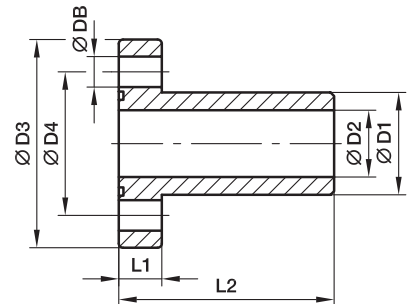


#### PFE

Pump size	LK	T1	D1	D3	D4	L1	L2	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> CF
1.0	30.0	G1/2	14.0	45	30.0	10	55	6.5	M 6×20	18.77×1.78	0.15	PFE1	250
2.0	40.0	G3/4	19.0	58	40.0	12	60	8.5	M 8×25	25.12×1.78	0.27	PFE2	250
3.0	51.0	G1	24.0	76	51.0	16	72	10.5	M10×35	31.42×2.62	0.59	PFE3	250
3B	56.0	G1	24.0	76	56.0	16	72	10.5	M10×35	31.42×2.62	0.69	PFE3.5	250

### PFB Gear pump flange straight

Hydraulic flange / Butt weld tube end



#### PFB

Pump size	LK	D1	D2	D3	D4	L1	L2	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
1.0	30.0	19.5	14.0	45	30.0	10	55	6.5	M 6×20	18.77×1.78	0.15	PFB1	250
2.0	40.0	25.4	19.0	58	40.0	12	60	8.5	M 8×25	25.12×1.78	0.27	PFB2	250
3.0	51.0	32.0	24.5	76	51.0	16	72	10.5	M10×35	31.42×2.62	0.59	PFB3	250
3B	56.0	32.0	24.5	76	56.0	16	72	10.5	M10×35	31.42×2.62	0.69	PFB3.5	250

<sup>1)</sup> Pressure shown = Item deliverable

$\frac{PN(\text{bar})}{10} = PN(\text{MPa})$

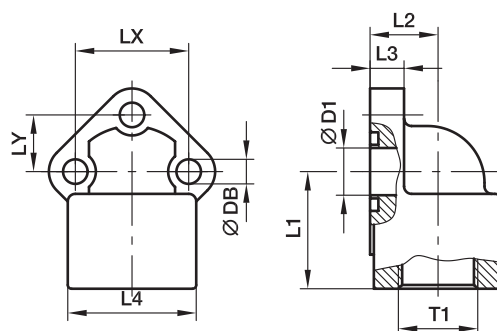
The pressures (PFB) given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	PFE CF	PFE1CFM	NBR
Steel, blanc oil dipped	PFB S	PFB1SM	NBR

**BFW3-G Gear pump flange 90° elbow 3 holes**

Hydraulic flange / Female BSSP thread  
(ISO 1179-1)



**PWDS Female BSSP thread**

Pump size	LK	T1	D1	L1	L2	L3	L4	LX	LY	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> CF
0.5	26.0	3/8	11	28	17	9.0	30	26.0	13.0	5.5	M 5×18	15.60×1.78	0.16	<b>BFW3-G38/LK26</b>	315
0.5	26.0	1/2	11	28	17	9.0	30	26.0	13.0	5.5	M 5×18	15.60×1.78	0.15	<b>BFW3-G12/LK26</b>	315
1.0	30.0	3/8	12	30	17	9.0	30	30.0	15.0	6.5	M 6×20	15.88×2.62	0.16	<b>BFW3-G38/LK30</b>	315
1.0	30.0	1/2	12	30	17	9.0	30	30.0	15.0	6.5	M 6×20	15.88×2.62	0.15	<b>BFW3-G12/LK30</b>	315
2.0	40.0	1/2	18	36	23	11.5	36	40.0	20.0	8.5	M 8×25	23.81×2.62	0.33	<b>BFW3-G12/LK40</b>	315
2.0	40.0	3/4	18	36	23	11.5	36	40.0	20.0	8.5	M 8×25	23.81×2.62	0.31	<b>BFW3-G34/LK40</b>	315
3.0	51.0	3/4	24	46	26	13.0	45	51.0	25.5	10.5	M10×30	29.75×3.53	0.57	<b>BFW3-G34/LK51</b>	315
3.0	51.0	1	24	46	26	13.0	45	51.0	25.5	10.5	M10×30	29.75×3.53	0.52	<b>BFW3-G1/LK51</b>	315
3B	56.0	3/4	24	46	26	13.0	45	56.0	28.0	10.5	M10×30	29.75×3.53	0.57	<b>BFW3-G34/LK56</b>	315
3B	56.0	1	24	46	26	13.0	45	56.0	28.0	10.5	M10×30	29.75×3.53	0.52	<b>BFW3-G1/LK56</b>	315
3.5	62.0	1 1/4	31	55	35	14.0	55	62.0	31.0	11.0	M10×30	37.69×3.53	0.74	<b>BFW3-G114/LK62</b>	315
3.5	62.0	1	25	55	35	14.0	55	62.0	31.0	11.0	M10×30	37.69×3.53	0.73	<b>BFW3-G1/LK62</b>	315
3.5	62.0	1 1/4	31	55	35	14.0	55	62.0	31.0	13.0	M12×35	37.69×3.53	0.74	<b>BFW3-G114/LK62/12</b>	315
3.5	62.0	1	25	55	35	14.0	55	62.0	31.0	13.0	M12×35	37.69×3.53	0.73	<b>BFW3-G1/LK62/12</b>	315
4.0	72.5	1 1/2	38	58	38	15.0	62	72.5	36.2	13.0	M12×35	47.22×3.53	0.95	<b>BFW3-G112/LK72.5</b>	315
4.0	72.5	1 1/4	31	58	38	15.0	62	72.5	36.2	13.0	M12×35	47.22×3.53	0.93	<b>BFW3-G114/LK72.5</b>	315

<sup>1)</sup> Pressure shown = Item deliverable

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$



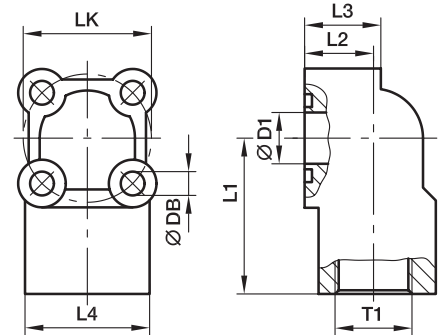
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, zinc plated, Cr(VI)-free	CF	BFW3-G38/LK26CFM	NBR

## SAE Gear pump flanges

### PWDS-G Gear pump flange 90° elbow 4 holes – aluminium

Hydraulic flange / Female BSSP thread  
(ISO 1179-1)



#### PWDS-G 90° Female BSSP thread

LK	T1	D1	L1	L2	L3	L4	DB	Screws		O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> A
								2 pieces (metr.)	2 pieces (metr.)				
30	<b>G3/8</b>	11.5	39.0	18	20	33	6.5	M6×30	M6×40	15.88×2.62	0.09	<b>PWDS-G38/LK30</b>	180
30	<b>G1/2</b>	11.5	39.0	18	20	33	6.5	M6×30	M6×40	15.88×2.62	0.09	<b>PWDS-G12/LK30</b>	180
35	<b>G3/8</b>	14.0	42.5	18	20	34	6.5	M6×30	M6×40	18.72×2.62	0.11	<b>PWDS-G38/LK35</b>	180
35	<b>G1/2</b>	14.0	42.5	18	20	34	6.5	M6×30	M6×40	18.72×2.62	0.11	<b>PWDS-G12/LK35</b>	180
40	<b>G1/2</b>	18.0	47.5	24	28	41	6.5	M6×40	M6×50	22.22×2.62	0.18	<b>PWDS-G12/LK40</b>	180
40	<b>G3/4</b>	18.0	47.5	24	28	41	6.5	M6×40	M6×50	22.22×2.62	0.18	<b>PWDS-G34/LK40</b>	180
55	<b>G3/4</b>	24.5	54.0	29	31	49	8.5	M8×45	M8×60	29.75×3.53	0.31	<b>PWDS-G34/LK55</b>	180
55	<b>G1</b>	24.5	54.0	29	31	49	8.5	M8×45	M8×60	29.75×3.53	0.30	<b>PWDS-G1/LK55</b>	180

<sup>1)</sup> Pressure shown = Item deliverable

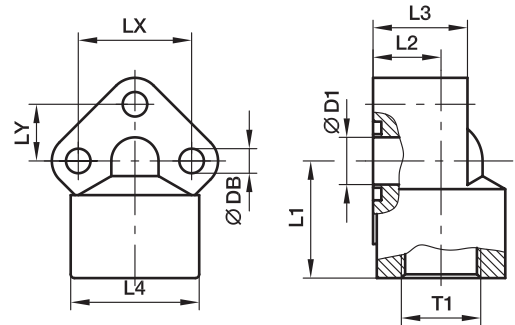
$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Aluminium	A	PWDS-G38/LK30AM	NBR

**PWDA Gear pump flange 90° elbow 3 holes – aluminium**

Hydraulic flange / Female BSPP thread  
(ISO 1179-1)



**PWDA 90° Female BSPP thread**

Pump size	LK	T1	D1	L1	L2	L3	L4	LX	LY	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> A
0.5	26	<b>G3/8</b>	10.0	31	18.0	25	31	26	13.0	5.5	M 5×35	14×1.78	0.06	<b>PWDA-05/38</b>	180
0.5	26	<b>G1/2</b>	10.0	31	18.0	25	31	26	13.0	5.5	M 5×35	14×1.78	0.06	<b>PWDA-05/12</b>	180
1.0	30	<b>G3/8</b>	12.5	31	18.0	26	34	30	15.0	6.5	M 6×35	15.88×2.62	0.08	<b>PWDA-1/38</b>	180
1.0	30	<b>G1/2</b>	12.5	31	18.0	26	34	30	15.0	6.5	M 6×35	15.88×2.62	0.08	<b>PWDA-1/12</b>	180
2.0	40	<b>G1/2</b>	18.0	40	21.5	31	42	40	20.0	8.5	M 8×45	22.22×2.62	0.15	<b>PWDA-2/12</b>	180
2.0	40	<b>G3/4</b>	18.0	40	21.5	31	42	40	20.0	8.5	M 8×45	22.22×2.62	0.15	<b>PWDA-2/34</b>	180
3.0*	51	<b>G3/4</b>	24.5	46	26.0	42	49	56	25.5 -28	11.0	M10×60	29.75×3.53	0.32	<b>PWDA-3/34</b>	180
3.0*	51	<b>G1</b>	24.5	46	26.0	42	49	56	25.5 -28	11.0	M10×60	29.75×3.53	0.32	<b>PWDA-3/100</b>	180

<sup>1)</sup> Pressure shown = Item deliverable

\*Oval drill hole

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$



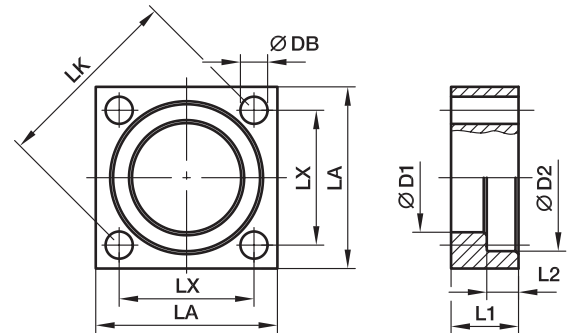
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Aluminium	A	PWDA-05/38AM	NBR

# ISO 6164 Square flanges

## PSFC Square flange clamp

ISO 6164



### 250 bar Series

Series <sup>2)</sup>	Nom. flange size		LK	D1	D2	L1	L2	LA	LX	DB	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup>
	SAE (in)	ISO (DN)											S
L	3/8	10	35	18.5	25.0	18	6.2	40	24.7	6.6	0.07	PSFC/L/10	250
L	1/2	13	42	24.3	31.0	20	6.2	45	29.7	9.0	0.08	PSFC/L/13	250
L	3/4	19	50	32.2	38.9	22	6.2	50	35.4	9.0	0.12	PSFC/L/19	250
L	1	25	62	38.5	45.3	25	7.5	65	43.8	11.0	0.24	PSFC/L/25	250
L	1 1/4	32	73	43.7	51.6	30	7.5	75	51.6	13.5	0.35	PSFC/L/32	250
L	1 1/2	38	85	50.8	61.1	36	7.5	90	60.1	17.5	0.51	PSFC/L/38	250
L	2	51	98	62.8	72.3	40	9.0	100	69.3	17.5	0.88	PSFC/L/51	250
L	2 1/2	56	118	76.6	88.0	45	9.0	120	83.4	22.0	1.53	PSFC/L/56	250
L	3	63	145	90.8	102.3	52	9.0	140	102.5	22.0	2.31	PSFC/L/63	250
L	4	80	160	114.5	132.0	60	21.0	160	113.5	25.0	4.19	PSFC/L/80	250

### 400 bar Series

S	3/8	10	35	18.5	26.4	18	7.2	40	24.7	6.6	0.08	PSFC/S/10	400
S	1/2	13	42	24.7	32.6	20	7.2	45	29.7	9.0	0.12	PSFC/S/13	400
S	3/4	19	50	32.5	42.1	22	8.2	50	35.4	9.0	0.17	PSFC/S/19	400
S	1	25	62	38.9	48.4	25	9.0	65	43.8	1.0	0.32	PSFC/S/25	400
S	1 1/4	32	73	44.6	54.8	30	9.8	75	51.6	13.5	0.46	PSFC/S/32	400
S	1 1/2	38	85	51.6	64.3	36	12.0	90	60.1	17.5	0.69	PSFC/S/38	400
S	2	51	98	67.6	80.2	40	12.0	100	69.3	17.5	1.18	PSFC/S/51	400
S	2 1/2	56	118	80.5	95.0	50	16.1	120	83.4	22.0	1.97	PSFC/S/56	400
S	3	63	145	90.5	111.0	52	16.1	150	102.5	26.0	2.81	PSFC/S/63	400
S	3 1/2	70	160	102.5	120.0	60	17.5	160	113.1	26.0	3.09	PSFC/S/70	400
S	4	80	175	114.5	136.0	70	21.0	180	123.7	33.0	4.88	PSFC/S/80	350

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

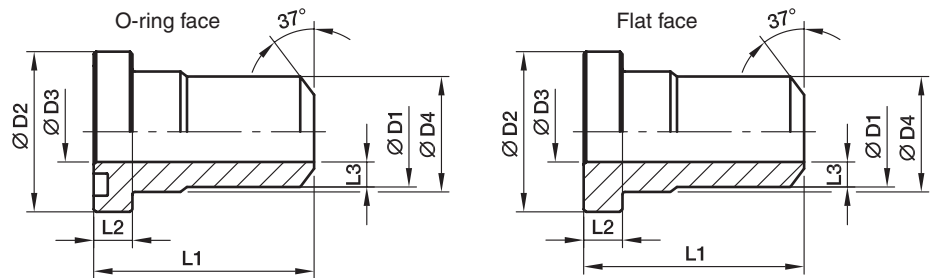
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, blanc oil dipped	S	PSFC/L/10S	only flange clamp

**PSFA-B Square flange adapter (butt weld)**

Square flange / Butt weld end  
(ISO 6164)



**250 bar Series**

Series <sup>2)</sup>	Nom. flange size		D1	D2	D3	D4	L1	L2	L3	O-ring	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup> S
	SAE (in)	ISO (DN)												
L	3/8	10	17.5	24.5	10	18.0	40	6.8	3.75	17.13x2.62	0.09	PSFA10/L/17.5B	PSCFA10/L/17.5B	250
L	1/2	13	21.6	30.2	13	24.0	50	6.8	4.30	18.64x3.53	0.12	PSFA13/L/21.6B	PSCFA13/L/21.6B	250
L	3/4	19	27.2	38.1	19	31.5	60	6.8	4.10	24.99x3.53	0.18	PSFA19/L/27.2B	PSCFA19/L/27.2B	250
L	1	25	34.5	44.5	25	38.0	70	8.0	4.75	32.93x3.53	0.35	PSFA25/L/34.5B	PSCFA25/L/34.5B	250
L	1 1/4	32	43.0	50.8	31	43.0	80	8.0	6.00	37.89x3.53	0.50	PSFA32/L/43B	PSCFA32/L/43B	250
L	1 1/2	38	48.6	60.4	38	50.0	90	8.0	5.30	47.22x3.53	0.74	PSFA38/L/48.6B	PSCFA38/L/48.6B	250
L	2	51	61.0	71.4	50	62.0	100	9.6	5.50	56.74x3.53	1.27	PSFA51/L/61B	PSCFA51/L/61B	250
L	2 1/2	56	76.6	87.2	63	76.0	110	12.0	6.80	69.44x3.53	2.20	PSFA56/L/76.6B	PSCFA56/L/76.6B	250
L	3	63	89.0	101.6	70	90.0	120	15.0	9.50	85.32x3.53	3.32	PSFA63/L/89B	PSCFA63/L/89B	250
L	4	80	114.0	131.0	90	114.0	140	23.5	12.00	97.79x5.34	6.03	PSFA80/L/114B	PSCFA80/L/114B	250

**400 bar Series**

S	3/8	10	17.5	26.0	10	18.0	40	7.8	3.75	17.13x2.62	0.11	PSFA10/S/17.5B	PSCFA10/S/17.5B	400
S	1/2	13	21.6	31.8	13	24.0	50	7.8	4.30	18.64x3.53	0.17	PSFA13/S/21.6B	PSCFA13/S/21.6B	400
S	3/4	19	27.2	41.3	18	32.0	60	8.8	4.60	24.99x3.53	0.25	PSFA19/S/27.2B	PSCFA19/S/27.2B	400
S	1	25	34.5	47.6	22	38.0	70	9.5	6.25	32.93x3.53	0.46	PSFA25/S/34.5B	PSCFA25/S/34.5B	400
S	1 1/4	32	43.0	54.0	28	44.0	90	10.3	7.50	37.89x3.53	0.65	PSFA32/S/43B	PSCFA32/S/43B	400
S	1 1/2	38	48.6	63.5	32	51.0	90	12.6	8.30	47.22x3.53	0.99	PSFA38/S/48.6B	PSCFA38/S/48.6B	400
S	2	51	61.0	79.4	41	67.0	100	12.6	10.00	56.52x5.34	1.69	PSFA51/S/61B	PSCFA51/S/61B	400
S	2 1/2	56	76.6	94.2	50	90.0	110	16.5	13.30	69.22x5.34	2.83	PSFA56/S/76.6B	PSCFA56/S/76.6B	400
S	3	63	89.0	104.0	58	90.0	120	18.0	15.50	75.57x5.34	4.04	PSFA63/S/89B	PSCFA63/S/89B	400
S	3 1/2	70	102.0	119.0	63	102.0	130	20.0	19.50	85.09x5.34	4.45	PSFA70/S/102B	PSCFA70/S/102B	400
S	4	80	114.0	131.0	74	114.0	140	23.5	20.00	88.27x5.34	7.01	PSFA80/S/114B	PSCFA80/S/114B	350

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, blanc oil dipped	S	PSFA10/L/17.5BS	only flange adapter

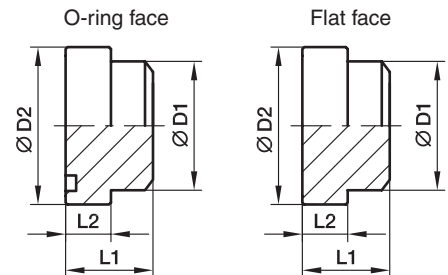




# ISO 6164 Square flanges

## PSFP Square flange plug

ISO 6164



### 250 bar Series

Series <sup>2)</sup>	Nom. flange size		D1	D2	L1	L2	O-ring	Weight (steel) kg/piece	O-ring face Order code*	Flat face Order code*	PN (bar) <sup>1)</sup> S
	SAE (in)	ISO (DN)									
L	3/8	10	18.0	24.5	6.8	18.0	17.13×2.62	0.07	PSFP10/L/18B	PSCFP10/L/18B	250
L	1/2	13	24.0	30.2	6.8	20.0	18.64×3.53	0.08	PSFP13/L/24B	PSCFP13/L/24B	250
L	3/4	19	31.5	38.1	6.8	22.0	24.99×3.53	0.12	PSFP19/L/31.5B	PSCFP19/L/31.5B	250
L	1	25	38.0	44.5	8.0	25.0	32.93×3.53	0.24	PSFP25/L/38B	PSCFP25/L/38B	250
L	1 1/4	32	43.0	50.8	8.0	30.0	37.89×3.53	0.35	PSFP32/L/43B	PSCFP32/L/43B	250
L	1 1/2	38	50.0	60.4	8.0	36.0	47.22×3.53	0.51	PSFP38/L/50B	PSCFP38/L/50B	250
L	2	51	62.0	71.4	9.6	40.0	56.74×3.53	0.88	PSFP51/L/62B	PSCFP51/L/62B	250
L	2 1/2	56	76.0	87.2	12.0	45.0	69.44×3.53	1.53	PSFP56/L/76B	PSCFP56/L/76B	250
L	3	63	90.0	101.6	15.0	52.0	85.32×3.53	2.31	PSFP63/L/90B	PSCFP63/L/90B	250
L	4	80	114.0	131.0	23.5	61.5	97.79×5.34	4.19	PSFP80/L/114B	PSCFP80/L/114B	250

### 400 bar Series

S	3/8	10	18.0	26.0	7.8	18.0	17.13×2.62	0.08	PSFP10/S/18B	PSCFP10/S/18B	400
S	1/2	13	24.0	31.8	7.8	20.0	18.64×3.53	0.12	PSFP13/S/24B	PSCFP13/S/24B	400
S	3/4	19	32.0	41.3	8.8	22.0	24.99×3.53	0.17	PSFP19/S/32B	PSCFP19/S/32B	400
S	1	25	38.0	47.6	9.5	25.0	32.93×3.53	0.32	PSFP25/S/38B	PSCFP25/S/38B	400
S	1 1/4	32	44.0	54.0	10.3	30.0	37.89×3.53	0.46	PSFP32/S/44B	PSCFP32/S/44B	400
S	1 1/2	38	51.0	63.5	12.6	36.0	47.22×3.53	0.69	PSFP38/S/51B	PSCFP38/S/51B	400
S	2	51	67.0	79.4	12.6	40.0	56.52×5.34	1.18	PSFP51/S/67B	PSCFP51/S/67B	400
S	2 1/2	56	80.0	94.2	16.5	45.0	69.22×5.34	1.97	PSFP56/S/80B	PSCFP56/S/80B	400
S	3	63	90.0	104.0	18.0	52.0	75.57×5.34	2.81	PSFP63/S/90B	PSCFP63/S/90B	400
S	3 1/2	70	102.0	119.0	20.0	60.0	85.09×5.34	3.09	PSFP70/S/102B	PSCFP70/S/102B	400
S	4	80	114.0	131.0	23.5	70.0	88.27×5.34	4.88	PSFP80/S/114B	PSCFP80/S/114B	350

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

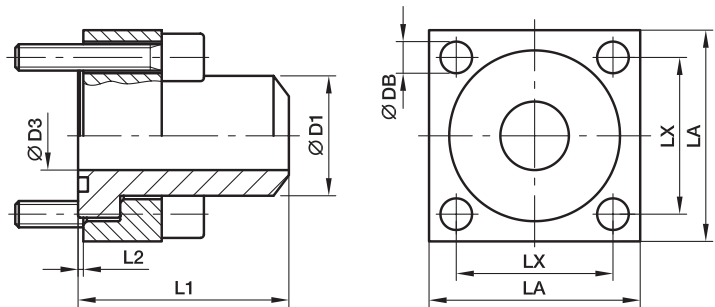
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Description
Steel, blanc oil dipped	S	PSFP10/L/18BS	only flange plug

**PSF-B Square flange (butt weld adapter coupling)**

Square flange / Butt weld end  
(ISO 6164)



**250 bar Series**

Series <sup>2)</sup>	Nom. flange size		D1	D3	L1	L2	LA	LX	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
	SAE (in)	ISO (DN)												
L	3/8	10	17.5	10	40	0.4	40	24.7	6.6	M 6×30	17.13×2.62	0.17	<b>PSF10/L/17.5B</b>	250
L	1/2	13	21.6	13	50	0.4	45	29.7	9.0	M 8×35	18.64×3.53	0.22	<b>PSF13/L/21.6B</b>	250
L	3/4	19	27.2	19	60	0.4	50	35.4	9.0	M 8×35	24.99×3.53	0.32	<b>PSF19/L/27.2B</b>	250
L	1	25	34.5	25	70	0.5	65	43.8	11.0	M10×40	32.93×3.53	0.63	<b>PSF25/L/34.5B</b>	250
L	1 1/4	32	43.0	31	80	0.5	75	51.6	13.5	M12×50	37.89×3.53	0.92	<b>PSF32/L/43B</b>	250
L	1 1/2	38	48.6	38	90	0.5	90	60.1	17.5	M16×60	47.22×3.53	1.34	<b>PSF38/L/48.6B</b>	250
L	2	51	61.0	50	100	0.6	100	69.3	17.5	M16×70	56.74×3.53	2.30	<b>PSF51/L/61B</b>	250
L	2 1/2	56	76.6	63	110	3.0	120	83.4	22.0	M20×80	69.44×3.53	4.00	<b>PSF56/L/76.6B</b>	250
L	3	63	89.0	70	120	6.0	140	102.5	22.0	M20×90	85.32×3.53	6.03	<b>PSF63/L/89B</b>	250
L	4	80	114.0	90	140	2.5	160	113.5	25.0	M24×100	97.79×5.34	10.96	<b>PSF80/L/114B</b>	250

**400 bar Series**

S	3/8	10	17.5	10	40	0.6	40	24.7	6.6	M 6×30	17.13×2.62	0.20	<b>PSF10/S/17.5B</b>	400
S	1/2	13	21.6	13	50	0.6	45	29.7	9.0	M 8×35	18.64×3.53	0.31	<b>PSF13/S/21.6B</b>	400
S	3/4	19	27.2	18	60	0.6	50	35.4	9.0	M 8×35	24.99×3.53	0.45	<b>PSF19/S/27.2B</b>	400
S	1	25	34.5	22	70	0.5	65	43.8	11.0	M10×40	32.93×3.53	0.83	<b>PSF25/S/34.5B</b>	400
S	1 1/4	32	43.0	28	90	0.5	75	51.6	13.5	M12×50	37.89×3.53	1.19	<b>PSF32/S/43B</b>	400
S	1 1/2	38	48.6	32	90	0.6	90	60.1	17.5	M16×60	47.22×3.53	1.80	<b>PSF38/S/48.6B</b>	400
S	2	51	61.0	41	100	0.6	100	69.3	17.5	M16×70	56.52×5.34	3.08	<b>PSF51/S/61B</b>	400
S	2 1/2	56	76.6	50	110	0.4	120	83.4	22.0	M20×80	69.22×5.34	5.14	<b>PSF56/S/76.6B</b>	400
S	3	63	89.0	58	120	1.9	150	102.5	26.0	M24×90	75.57×5.34	7.34	<b>PSF63/S/89B</b>	400
S	3 1/2	70	102.0	63	130	2.5	160	113.1	26.0	M24×100	85.09×5.34	8.09	<b>PSF70/S/102B</b>	400
S	4	80	114.0	74	140	2.5	180	123.7	33.0	M30×120	88.27×5.34	12.75	<b>PSF80/S/114B</b>	350

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

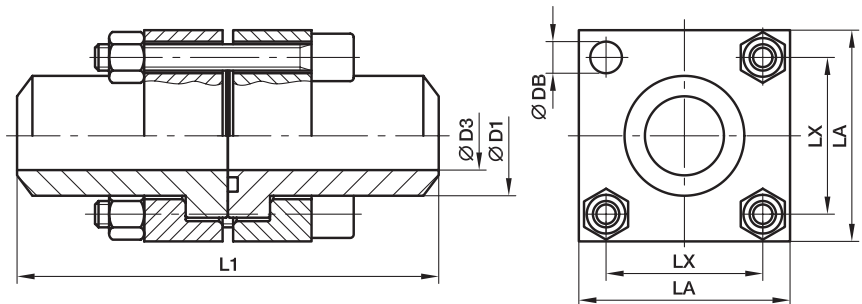
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. flange clamp, metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PSF10/L/17.5BS	NBR



**PDSF-B Square flange (butt weld connection)**

Square flange / Butt weld tube end  
(ISO 6164)



**250 bar Series**

Series <sup>2)</sup>	Nom. flange size		D1	D3	L1	LA	LX	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
	SAE (in)	ISO (DN)											
L	3/8	10	17.5	10	80	40	24.7	6.6	M 6x45	17.13x2.62	0.34	<b>PDSF10/L/17.5B</b>	250
L	1/2	13	21.6	13	100	45	29.7	9.0	M 8x50	18.64x3.53	0.44	<b>PDSF13/L/21.6B</b>	250
L	3/4	19	27.2	19	120	50	35.4	9.0	M 8x55	24.99x3.53	0.64	<b>PDSF19/L/27.2B</b>	250
L	1	25	34.5	25	140	65	43.8	11.0	M10x65	32.93x3.53	1.26	<b>PDSF25/L/34.5B</b>	250
L	1 1/4	32	43.0	31	160	75	51.6	13.5	M12x75	37.89x3.53	1.84	<b>PDSF32/L/43B</b>	250
L	1 1/2	38	48.6	38	180	90	60.1	17.5	M16x90	47.22x3.53	2.68	<b>PDSF38/L/48.6B</b>	250
L	2	51	61.0	50	200	100	69.3	17.5	M16x100	56.74x3.53	4.60	<b>PDSF51/L/61B</b>	250
L	2 1/2	56	76.6	63	220	120	83.4	22.0	M20x120	69.44x3.53	8.00	<b>PDSF56/L/76.6B</b>	250
L	3	63	89.0	70	240	140	102.5	22.0	M20x140	85.32x3.53	12.06	<b>PDSF63/L/89B</b>	250
L	4	80	114.0	90	280	160	113.5	22.0	M24x150	97.79x5.34	21.92	<b>PDSF80/L/114B</b>	250

**400 bar Series**

S	3/8	10	17.5	10	80	40	24.7	6.6	M 6x45	17.13x2.62	0.40	<b>PDSF10/S/17.5B</b>	400
S	1/2	13	21.6	13	100	45	29.7	9.0	M 8x50	18.64x3.53	0.62	<b>PDSF13/S/21.6B</b>	400
S	3/4	19	27.2	18	120	50	35.4	9.0	M 8x55	24.99x3.53	0.90	<b>PDSF19/S/27.2B</b>	400
S	1	25	34.5	22	140	65	43.8	11.0	M10x65	32.93x3.53	1.66	<b>PDSF25/S/34.5B</b>	400
S	1 1/4	32	43.0	28	160	75	51.6	13.5	M12x75	37.89x3.53	2.38	<b>PDSF32/S/43B</b>	400
S	1 1/2	38	48.6	32	180	90	60.1	17.5	M16x90	47.22x3.53	3.60	<b>PDSF38/S/48.6B</b>	400
S	2	51	61.0	41	200	100	69.3	17.5	M16x100	56.52x5.34	6.16	<b>PDSF51/S/61B</b>	400
S	2 1/2	56	76.6	50	220	120	83.4	22.0	M20x130	69.22x5.34	10.28	<b>PDSF56/S/76.6B</b>	400
S	3	63	89.0	58	240	150	102.5	26.0	M24x140	75.57x5.34	14.68	<b>PDSF63/S/89B</b>	400
S	3 1/2	70	102.0	63	260	160	113.1	26.0	M24x150	85.09x5.34	16.18	<b>PDSF70/S/102B</b>	400
S	4	80	114.0	74	280	180	123.7	33.0	M30x180	88.27x5.34	25.50	<b>PDSF80/S/114B</b>	350

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

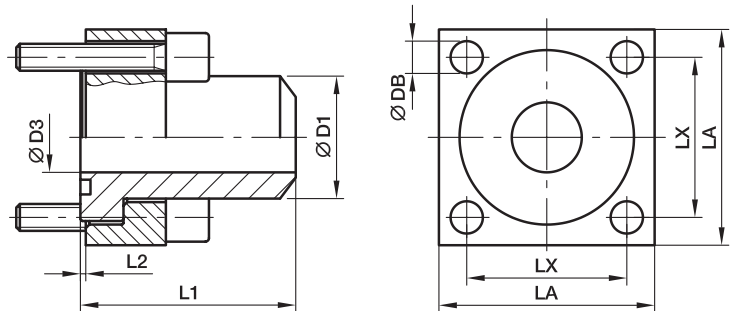
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example Flange coupling incl. flange clamps, metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PDSF10/L/17.5BS	NBR

**PCF-B Cetop square flange (weld connection)**

Cetop flange / Butt weld end



**250 bar Series**

Nom. flange size		D1	D3	L1	L2	LA	LX	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
Series <sup>2)</sup>	(in)												
L	3/8	18	12.5	40	1.0	40	24.7	6.5	M 6×25	17.3×2.62	0.17	PCF38/L/18B	250
L	1/2	22	14.0	45	1.0	45	29.7	8.5	M 8×30	18.64×3.53	0.22	PCF12/L/22B	250
L	3/4	28	20.0	50	1.0	50	35.3	8.5	M 8×30	24.99×3.53	0.32	PCF34/L/28B	250
L	1	35	25.0	55	1.0	65	43.8	10.5	M10×35	32.93×3.53	0.63	PCF1/L/35B	250
L	1 1/4	43	31.0	61	1.0	75	51.6	13.0	M12×40	37.89×3.53	0.92	PCF114/L/43B	250
L	1 1/2	50	38.0	65	1.0	85	60.0	15.0	M14×45	47.22×3.53	1.34	PCF112/L/50B	250
L	2	62	47.0	70	1.5	100	69.4	17.0	M16×55	56.74×3.53	2.30	PCF2/L/62B	250
L	2 1/2	76	58.0	75	1.5	120	83.4	21.0	M20×70	69.44×3.53	4.00	PCF212/L/76B	250
L	3	90	70.0	85	1.5	140	102.5	21.0	M20×80	85.32×3.53	6.03	PCF3/L/90B	250
L	3 1/2	102	80.0	90	1.5	140	102.5	21.0	M20×90	85.09×5.35	7.56	PCF312/L/102B	250
L	4	114	90.0	105	1.5	160	113.2	25.0	M24×100	97.79×5.34	10.96	PCF4/L/114B	250

**400 bar Series**

S	3/8	18	11.0	40	1.0	40	24.7	6.5	M 6×25	17.3×2.62	0.20	PCF38/S/18B	400
S	1/2	22	14.0	45	1.0	45	29.7	8.5	M 8×30	18.64×3.53	0.31	PCF12/S/22B	400
S	3/4	28	18.0	50	1.0	50	35.3	8.5	M 8×35	24.99×3.53	0.45	PCF34/S/28B	400
S	1	35	22.0	55	1.0	65	43.8	10.5	M10×40	32.93×3.53	0.83	PCF1/S/35B	400
S	1 1/4	44	29.0	61	1.0	75	51.6	13.0	M12×45	37.89×3.53	1.19	PCF114/S/44B	400
S	1 1/2	51	35.0	65	1.0	85	60.0	15.0	M14×55	47.22×3.53	1.80	PCF112/S/51B	400
S	2	61	43.0	70	1.5	100	69.4	17.0	M16×65	56.74×3.53	3.08	PCF2/S/61B	400
S	2 1/2	80	53.0	80	1.5	120	83.4	21.0	M20×70	69.22×5.34	5.14	PCF212/S/80B	400
S	3	90	58.0	90	1.5	140	102.5	21.0	M20×90	75.57×5.34	7.34	PCF3/S/90B	400
S	3 1/2	102	63.0	90	1.5	140	102.5	21.0	M20×90	85.09×5.34	8.09	PCF312/S/102B	400
S	4	114	74.0	105	1.5	160	113.2	25.0	M24×100	88.27×5.34	12.75	PCF4/S/114B	400

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

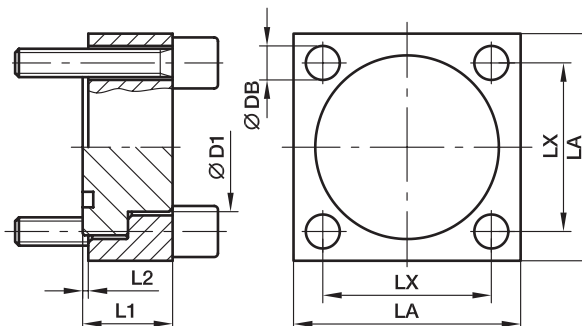
Order code suffixes			
Material	Suffix surface and material	Example incl. flange clamp, metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PCF38/L/18BS	NBR




## Cetop square flanges

### PPCF Cetop square flange plug

Cetop square flange / Plug



#### 250 bar Series

Nom. flange size		D1 	L1	L2	LA	LX	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
Series <sup>2)</sup>	(in)										
L	3/8	18.0	15	1.0	40	24.7	M 6×25	17.3×2.62	0.09	<b>PPCF38/L/18</b>	250
L	1/2	24.0	16	1.0	45	29.7	M 8×30	18.64×3.53	0.11	<b>PPCF12/L/24</b>	250
L	3/4	31.5	17	1.0	50	35.3	M 8×30	24.99×3.53	0.16	<b>PPCF34/L/31.5</b>	250
L	1	38.0	19	1.0	65	43.8	M10×35	32.93×3.53	0.32	<b>PPCF1/L/38</b>	250
L	1 1/4	43.0	23	1.0	75	51.6	M12×40	37.89×3.53	0.46	<b>PPCF114/L/43</b>	250
L	1 1/2	50.0	26	1.0	85	60.0	M14×45	47.22×3.53	0.67	<b>PPCF112/L/50</b>	250
L	2	62.0	31	1.5	100	69.4	M16×55	56.74×3.53	1.15	<b>PPCF2/L/62</b>	250
L	2 1/2	76.0	37	1.5	120	83.4	M20×70	69.44×3.53	2.00	<b>PPCF212/L/76</b>	250
L	3	90.0	42	1.5	140	102.5	M20×80	85.32×3.53	3.02	<b>PPCF3/L/90</b>	250
L	3 1/2	102.0	54	1.5	140	102.5	M20×90	85.09×5.35	3.78	<b>PPCF312/L/102</b>	250
L	4	114.0	62	1.5	160	113.2	M24×100	97.79×5.34	5.48	<b>PPCF4/L/114</b>	250
L	5	141.0	62	1.5	180	132.0	M27×100	120.7×5.34	6.48	<b>PPCF5/L/141</b>	250

#### 400 bar Series

S	3/8	18.0	17	1.0	40	24.7	M 6×25	17.3×2.62	0.10	<b>PPCF38/S/18</b>	400
S	1/2	24.0	19	1.0	45	29.7	M 8×30	18.64×3.53	0.16	<b>PPCF12/S/24</b>	400
S	3/4	32.0	21	1.0	50	35.3	M 8×35	24.99×3.53	0.23	<b>PPCF34/S/32</b>	400
S	1	38.0	25	1.0	65	43.8	M10×40	32.93×3.53	0.42	<b>PPCF1/S/38</b>	400
S	1 1/4	44.0	31	1.0	75	51.6	M12×50	37.89×3.53	0.60	<b>PPCF114/S/44</b>	400
S	1 1/2	51.0	33	1.0	85	60.0	M14×55	47.22×3.53	0.90	<b>PPCF112/S/51</b>	400
S	2	67.0	42	1.5	100	69.4	M16×65	56.74×3.53	1.54	<b>PPCF2/S/67</b>	400
S	2 1/2	80.0	48	1.5	120	83.4	M20×70	69.22×5.34	2.57	<b>PPCF212/S/80</b>	400
S	3	90.0	54	1.5	140	102.5	M20×90	75.57×5.34	3.67	<b>PPCF3/S/90</b>	400
S	3 1/2	102.0	54	1.5	140	102.5	M20×90	85.09×5.34	4.05	<b>PPCF312/S/102</b>	400
S	4	114.0	62	1.5	160	113.2	M24×100	88.27×5.34	6.38	<b>PPCF4/S/114</b>	400

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

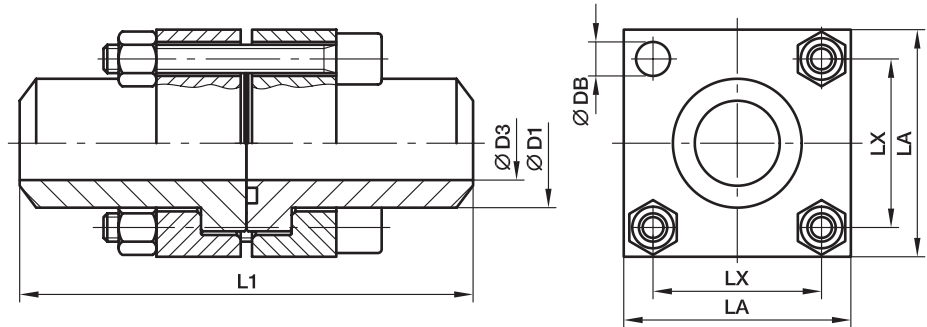
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example flange plug incl. flange clamp, metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PPCF38/L/18S	NBR

## PDCF-B Cetop square flange coupling

Cetop square flange / Butt weld end



### 250 bar Series

Nom. flange size		D1 	D3	L1	LA	LX	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
Series <sup>2)</sup>	(in)										
L	3/8	18	12.5	80	40	24.7	M 6×35	17.3×2.62	0.43	PDCF38/L/18B	250
L	1/2	22	14.0	90	45	29.7	M 8×40	18.64×3.53	0.55	PDCF12/L/22B	250
L	3/4	28	20.0	100	50	35.3	M 8×45	24.99×3.53	0.80	PDCF34/L/28B	250
L	1	35	25.0	110	65	43.8	M10×50	32.93×3.53	1.58	PDCF1/L/35B	250
L	1 1/4	43	31.0	120	75	51.6	M12×60	37.89×3.53	2.30	PDCF114/L/43B	250
L	1 1/2	50	38.0	130	85	60.0	M14×70	47.22×3.53	3.35	PDCF112/L/50B	250
L	2	62	47.0	140	100	69.4	M16×80	56.74×3.53	5.75	PDCF2/L/62B	250
L	2 1/2	76	58.0	150	120	83.4	M20×100	69.44×3.53	10.0	PDCF212/L/76B	250
L	3	90	70.0	170	140	102.5	M20×110	85.32×3.53	15.08	PDCF3/L/90B	250
L	3 1/2	102	80.0	180	140	102.5	M20×130	85.09×5.35	18.90	PDCF312/L/102B	250
L	4	114	90.0	210	160	113.2	M24×150	97.79×5.34	27.40	PDCF4/L/114B	250

### 400 bar Series

S	3/8	18	11.0	80	40	24.7	M 6×40	17.3×2.62	0.50	PDCF38/S/18B	400
S	1/2	22	14.0	90	45	29.7	M 8×45	18.64×3.53	0.78	PDCF12/S/22B	400
S	3/4	28	18.0	100	50	35.3	M 8×50	24.99×3.53	1.13	PDCF34/S/28B	400
S	1	35	22.0	110	65	43.8	M10×60	32.93×3.53	2.08	PDCF1/S/35B	400
S	1 1/4	44	29.0	120	75	51.6	M12×70	37.89×3.53	2.98	PDCF114/S/44B	400
S	1 1/2	51	35.0	130	85	60.0	M14×80	47.22×3.53	4.50	PDCF112/S/51B	400
S	2	61	43.0	140	100	69.4	M16×100	56.74×3.53	7.70	PDCF2/S/61B	400
S	2 1/2	80	53.0	160	120	83.4	M20×120	69.22×5.34	12.85	PDCF212/S/80B	400
S	3	90	58.0	180	140	102.5	M20×130	75.57×5.34	18.35	PDCF3/S/90B	400
S	3 1/2	102	63.0	180	140	102.5	M20×130	85.09×5.34	20.23	PDCF312/S/102B	400
S	4	114	74.0	210	160	113.2	M24×150	88.27×5.34	31.88	PDCF4/S/114B	400

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

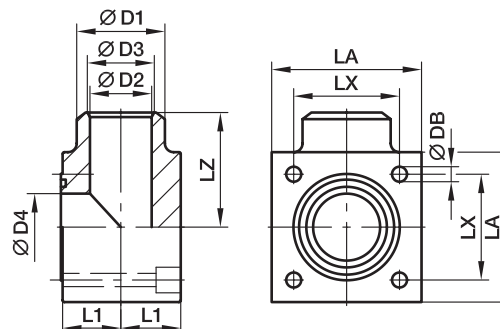
\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example Flange coupling incl. flange clamps, metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PDCF38/L/18BS	NBR

## Cetop square flanges

### PLCF-B Cetop square flange 90° elbow connection

Cetop square flange 90° elbow / Butt weld end



#### 250 bar Series

Nom. flange size		D1 	D2	D3	D4	L1	LA	LX	LZ	DB	Screws (metr.)	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
Series <sup>2)</sup>	(in)														
L	3/8	18	12	12	12.5	12	40	24.7	32	6.5	M 6×30	17.3×2.62	0.44	PLCF38/L/18B	250
L	1/2	22	14	14	15.0	17	45	29.7	40	8.5	M 8×40	18.64×3.53	0.57	PLCF12/L/22B	250
L	3/4	28	19	19	20.0	19	50	35.3	42	8.5	M 8×45	24.99×3.53	0.83	PLCF34/L/28B	250
L	1	35	23	23	25.0	24	65	43.8	50	10.5	M10×55	32.93×3.53	1.64	PLCF1/L/35B	250
L	1 1/4	44	30	30	32.0	30	75	51.6	56	13.0	M12×70	37.89×3.53	2.39	PLCF114/L/44B	250
L	1 1/2	50	35	38	38.0	34	85	60.0	65	15.0	M14×80	47.22×3.53	3.48	PLCF112/L/50B	250
L	2	63	43	47	47.0	42	100	69.4	75	17.0	M16×100	56.74×3.53	5.98	PLCF2/L/63B	250
L	2 1/2	86	53	58	58.0	53	120	83.4	85	21.0	M20×120	69.44×3.53	10.40	PLCF212/L/86B	250
L	3	90	65	70	70.0	59	140	102.5	100	21.0	M20×140	85.32×3.53	15.68	PLCF3/L/90B	250
L	4	114	80	90	90.0	65	160	113.2	110	25.0	M24×140	97.79×5.34	19.66	PLCF4/L/114B	250

#### 400 bar Series

S	3/8	18	12	12	12.5	12	40	24.7	32	6.5	M 6×30	17.3×2.62	0.52	PLCF38/S/18B	400
S	1/2	22	14	14	15.0	17	45	29.7	40	8.5	M 8×40	18.64×3.53	0.81	PLCF12/S/22B	400
S	3/4	28	19	19	20.0	19	50	35.3	42	8.5	M 8×45	24.99×3.53	1.17	PLCF34/S/28B	400
S	1	35	23	23	25.0	24	65	43.8	50	10.5	M10×55	32.93×3.53	2.16	PLCF1/S/35B	400
S	1 1/4	44	30	30	32.0	30	75	51.6	56	13.0	M12×70	37.89×3.53	3.09	PLCF114/S/44B	400
S	1 1/2	51	32	35	38.0	34	85	60.0	65	15.0	M14×80	47.22×3.53	4.68	PLCF112/S/51B	400
S	2	63	38	43	47.0	42	100	69.4	75	17.0	M16×100	56.74×3.53	8.01	PLCF2/S/63B	400
S	2 1/2	80	48	53	58.0	53	120	83.4	85	21.0	M20×120	69.22×5.34	13.36	PLCF212/S/80B	400
S	3	90	58	58	58.0	59	140	102.5	100	21.0	M20×140	75.57×5.34	19.08	PLCF3/S/90B	400

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

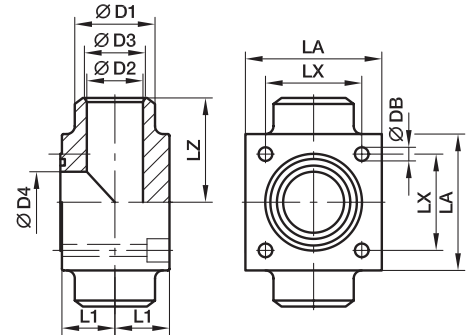
The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PLCF38/L/18BSM	NBR

**PTCF-B Cetop square flange 180° T-connection**

Cetop square flange 180° T-connection / Butt weld end



**250 bar Series**

Nom. flange size		D1	D2	D3	D4	L1	LA	LX	LZ	DB	Screws	O-ring	Weight (steel) kg/piece	Order code*	PN (bar) <sup>1)</sup> S
Series <sup>2)</sup>	(in)										(metr.)				
L	3/8	18	12	12	12.5	12	40	24.7	32	6.5	M 6×30	17.3×2.62	0.75	<b>PTCF38/L/18B</b>	250
L	1/2	22	14	14	15.0	17	45	29.7	40	8.5	M 8×40	18.64×3.53	0.97	<b>PTCF12/L/22B</b>	250
L	3/4	28	19	19	20.0	19	50	35.3	42	8.5	M 8×45	24.99×3.53	1.41	<b>PTCF34/L/28B</b>	250
L	1	35	23	23	25.0	24	65	43.8	50	10.5	M10×55	32.93×3.53	2.78	<b>PTCF1/L/35B</b>	250
L	1 1/4	44	30	30	32.0	30	75	51.6	56	13.0	M12×70	37.89×3.53	4.07	<b>PTCF114/L/44B</b>	250
L	1 1/2	50	35	38	38.0	34	85	60.0	65	15.0	M14×80	47.22×3.53	5.92	<b>PTCF112/L/50B</b>	250
L	2	63	43	47	47.0	42	100	69.4	75	17.0	M16×100	56.74×3.53	10.17	<b>PTCF2/L/63B</b>	250
L	2 1/2	76	53	58	58.0	53	120	83.4	85	21.0	M20×120	69.44×3.53	17.68	<b>PTCF212/L/76B</b>	250
L	3	90	65	70	70.0	59	140	102.5	100	21.0	M20×140	85.32×3.53	26.65	<b>PTCF3/L/90B</b>	250
L	4	114	80	90	90.0	65	160	113.2	110	25.0	M24×140	97.79×5.34	33.42	<b>PTCF4/L/114B</b>	250

**400 bar Series**

S	3/8	18	12	12	12.5	12	40	24.7	32	6.5	M 6×30	17.3×2.62	0.88	<b>PTCF38/S/18B</b>	400
S	1/2	22	14	14	15.0	17	45	29.7	40	8.5	M 8×40	18.64×3.53	1.37	<b>PTCF12/S/22B</b>	400
S	3/4	28	19	19	20.0	19	50	35.3	42	8.5	M 8×45	24.99×3.53	1.99	<b>PTCF34/S/28B</b>	400
S	1	35	23	23	25.0	24	65	43.8	50	10.5	M10×55	32.93×3.53	3.67	<b>PTCF1/S/35B</b>	400
S	1 1/4	44	30	30	32.0	30	75	51.6	56	13.0	M12×70	37.89×3.53	5.26	<b>PTCF114/S/44B</b>	400
S	1 1/2	51	32	35	38.0	34	85	60.0	65	15.0	M14×80	47.22×3.53	7.96	<b>PTCF112/S/51B</b>	400
S	2	63	38	43	47.0	42	100	69.4	75	17.0	M16×100	56.74×3.53	13.61	<b>PTCF2/S/63B</b>	400
S	2 1/2	80	48	53	58.0	53	120	83.4	85	21.0	M20×120	69.22×5.34	22.72	<b>PTCF212/S/80B</b>	400
S	3	90	58	58	58.0	59	140	102.5	100	21.0	M20×140	75.57×5.34	32.44	<b>PTCF3/S/90B</b>	400

<sup>1)</sup> Pressure shown = Item deliverable

<sup>2)</sup> L = light series; S = heavy series

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

The pressures given here are the maximum allowable for the flange fittings. If the pipe or tube used has a lower pressure rating, then the welded assembly rating will be the lower one, assuming the weld is adequately strong.

\*Please add the **suffixes** below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example incl. metr. screws and O-ring	Standard sealing material (no additional suffix needed)
Steel, blanc oil dipped	S	PTCF38/L/18BSM	NBR





# Hydraulic & Offshore SUPPLIES



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