

Face Seal Fittings

FO Series O-Ring Face Seal Fittings

Features

- ⊙ O-ring seal to provide perfect leak-tight service for working conditions from critical vacuum to high pressure
- ⊙ O-ring contained completely for maximum efficiency
- ⊙ Mechanically polished surface roughness finished to an average of Ra 20 $\mu\text{in.}$ (0.51 μm)
- ⊙ Test ports at nut for easy leak testing
- ⊙ Easy installation and maintenance
- ⊙ Silver-plated female threads
- ⊙ Sizes range from 1/8" to 1"
- ⊙ Every gland and body marked with size, material and heat number



Technical Data

- ⊙ Thread Specifications

Thread Type	Specification
NPT	ASME B1.20.1, SAE AS71051
Unified (SAE)	ASME B1.1, SAE J475

- ⊙ Materials

Material	Bar Stock	Forging	Designator
316 SS	ASTM A479	ASTM A182	SS
316L SS			6L

- ⊙ Weld End Tube O.D. and Wall Thickness

Fractional		Metric	
Tube O.D. in.	Wall Thickness in.	Tube O.D. mm	Wall Thickness mm
1/8	0.028	6	1.0
1/4	0.035	8	1.0
3/8	0.035	10	1.0
1/2	0.049	12	1.0
3/4	0.049	18	1.5
1	0.065		
1 1/2	0.065		
2	0.065		

For other sizes or wall thicknesses of welded ports, please contact FITOK Group or our authorized distributors.

⊙ Working Pressure

Working pressures shown in the Catalog are calculated according to ASME B31.3 and B31.1 at ambient temperature.

⊙ Working Temperature

Temperature ranges for FO fittings are restricted by the O-ring materials.

Material	Designator	Working Temperature
Fluorocarbon FKM (70 durometer)	VI7	-10°F to 400°F (-23°C to 204°C)
Fluorocarbon FKM (90 durometer)	VI9	-10°F to 400°F (-23°C to 204°C)
PTFE	T	-50°F to 450°F (-45°C to 232°C)
Buna N (70 durometer)	BN7	-10°F to 250°F (-23°C to 121°C)
Perfluoroelastomer	Z	-10°F to 550°F (-23°C to 287°C)
Ethylene Propylene	E	-50°F to 300°F (-45°C to 148°C)

Fluorocarbon FKM of 90 durometer is used for SAE/MS threads end.

Testing

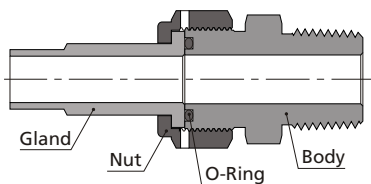
Every FO fitting is helium leak tested to a maximum allowable leak rate of 4×10^{-9} std cm³/s.

Ordering Information

- ⊙ Each component can be ordered separately.
 - ⊙ The FO body is supplied with O-rings of fluorocarbon FKM (70 durometer). For O-rings of other materials, add O-ring material designator between basic ordering number and cleaning grade designator, for example: 6L-CM-FO8-RS6-E-F2
 - ⊙ Add the material designator as a prefix, cleaning and packaging designator as a suffix to the basic ordering number to get the complete ordering number.
 - ⊙ Cleaning and Packaging
 - a. FC-01 Standard Cleaning and Packaging for general industrial procedures. No suffix is needed.
 - b. FC-02 Special Cleaning and Packaging, to ensure compliance with product cleanliness requirement as stated in ASTM G93 Level C. Add "-F2" as a suffix when needed.
- Example: For 316L SS standard 1/4" gland with FC-02 Special Cleaning and Packaging, the ordering number is 6L-G-FO4-TB4-F2.

Installation Instructions

1. Assemble the gland, nut, O-ring and body as below. Finger tight the nut.

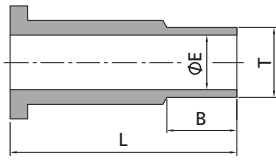


2. Tighten the nut 1/8 - 1/4 turn with a wrench while holding the fitting body steady, until there is a sharp rise in torque.

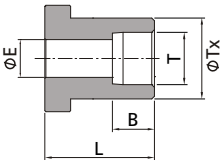
Cautions

- ⊙ Dimensions are for reference only and are subject to change.
- ⊙ Check the O-ring every time the fitting is disassembled and replace the O-ring if there is any damage.
- ⊙ Before welding the body, the O-ring should be removed to prevent possible damages.
- ⊙ Tungsten Inert Gas Welding (TIG) is recommended.
- ⊙ Do not loosen or tighten fittings when system is pressurized.

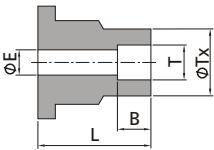
Glands



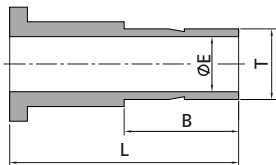
FO Gland to Tube Butt Weld							
FO Size (in.)	T-Tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)			Working Pressure psig (bar)	
			L	B	E		
1/4	1/8	-G-FO4-TB2	0.77 (19.6)	0.28 (7.1)	0.07 (1.8)	11200 (771)	
1/4	1/4	-G-FO4-TB4	1.12 (28.4)	0.41 (10.4)	0.12 (3.0)	11200 (771)	
1/2	1/4	-G-FO8-TB4	0.91 (23.1)	0.41 (10.4)	0.12 (3.0)	11200 (771)	
1/2	3/8	-G-FO8-TB6	0.84 (21.3)	0.41 (10.4)	0.23 (5.8)	8200 (564)	
1/2	1/2	-G-FO8-TB8	1.06 (26.9)	0.50 (12.7)	0.33 (8.4)	7500 (516)	



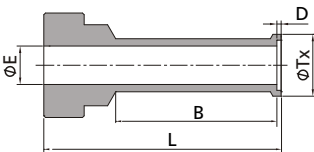
FO Gland to Tube Socket Weld							
FO Size (in.)	T-Tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)				Working Pressure psig (bar)
			L	B	E	Tx	
1/8	1/8	-G-FO2-TS2	0.77 (19.6)	0.10 (2.5)	0.09 (2.3)	0.38 (9.7)	15400 (1061)
1/4	1/4	-G-FO4-TS4	0.77 (19.6)	0.28 (7.1)	0.18 (4.6)	0.38 (9.7)	6800 (468)
3/8	3/8	-G-FO6-TS6	0.81 (20.6)	0.31 (7.9)	0.28 (7.1)	0.60 (15.2)	8100 (558)
1/2	1/2	-G-FO8-TS8	0.81 (20.6)	0.38 (9.7)	0.40 (10.2)	0.60 (15.2)	3000 (206)
3/4	3/4	-G-FO12-TS12	0.94 (23.9)	0.44 (11.2)	0.62 (15.7)	0.92 (23.4)	3700 (255)
1	1	-G-FO16-TS16	0.98 (24.9)	0.62 (15.7)	0.87 (22.1)	1.19 (30.2)	3000 (206)



FO Gland to Tube Socket Weld Reducing							
FO Size (in.)	T-Tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)				Working Pressure psig (bar)
			L	B	E	Tx	
1/4	1/8	-G-FO4-TS2	0.77 (19.6)	0.10 (2.5)	0.09 (2.3)	0.29 (7.4)	12600 (868)
1/2	1/4	-G-FO8-TS4	0.81 (20.6)	0.28 (7.1)	0.18 (4.6)	0.48 (12.2)	10700 (737)

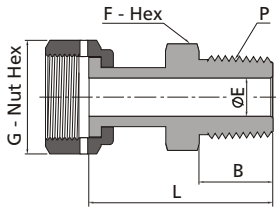


FO Gland to Tube Port							
FO Size (in.)	T-Tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)			Working Pressure psig (bar)	
			L	B	E		
1/4	1/4	-G-FO4-FT4	1.31 (33.3)	0.64 (16.3)	0.18 (4.6)	10200 (702)	
1/2	3/8	-G-FO8-FT6	1.38 (35.1)	0.70 (17.8)	0.27 (6.8)	6500 (447)	
1/2	1/2	-G-FO8-FT8	1.62 (41.1)	0.96 (24.4)	0.37 (9.3)	6700 (461)	
3/4	3/4	-G-FO12-FT12	1.80 (45.7)	1.02 (25.9)	0.58 (14.7)	5800 (399)	
1	1	-G-FO16-FT16	2.05 (52.1)	1.30 (33.0)	0.80 (20.3)	4700 (323)	



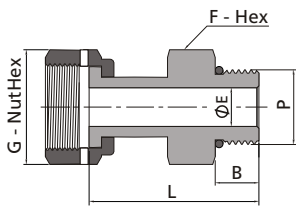
FO Gland to Automatic Tube Weld									
FO Size (in.)	Tube O.D. (in.)	Wall Thickness (in.)	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
				L	B	D	E	Tx	
1/4	1/4	0.035	-G-FO4-TB4A	1.12 (28.4)	0.78 (19.8)	0.02 (0.5)	0.18 (4.6)	0.29 (7.4)	5100 (351)
1/2	3/8	0.035	-G-FO8-TB6A	1.13 (28.7)	0.79 (20.0)	0.03 (0.8)	0.31 (7.9)	0.41 (10.4)	3300 (227)
1/2	1/2	0.049	-G-FO8-TB8A	1.14 (29.0)	0.80 (20.3)	0.04 (1.0)	0.40 (10.2)	0.55 (14.0)	3500 (241)
3/4	3/4	0.049	-G-FO12-TB12A	1.20 (30.5)	0.80 (20.3)	0.04 (1.0)	0.65 (16.5)	0.80 (20.3)	2200 (151)
1	1	0.065	-G-FO16-TB16A	1.41 (35.8)	1.00 (25.4)	0.04 (1.0)	0.87 (22.1)	1.06 (26.9)	2200 (151)

Welded Glands



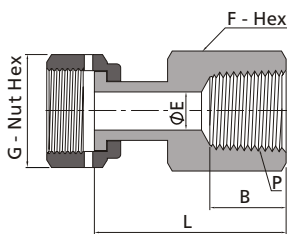
FO Welded Gland to Male NPT

FO Size (in.)	P-NPT Size	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
			L	B	E	G	F	
1/4	1/4	-WG-FO4-NS4	1.59 (40.4)	0.56 (14.2)	0.18 (4.6)	11/16 (17.5)	5/8 (15.9)	9800 (675)
1/2	3/8	-WG-FO8-NS6	1.67 (42.4)	0.56 (14.2)	0.40 (10.2)	1 (25.4)	15/16 (23.8)	5600 (385)
1/2	1/2	-WG-FO8-NS8	1.87 (47.5)	0.75 (19.1)	0.40 (10.2)	1 (25.4)	15/16 (23.8)	5600 (385)
3/4	3/4	-WG-FO12-NS12	2.03 (51.6)	0.75 (19.1)	0.62 (15.7)	1 1/2 (38.1)	1 1/16 (27.0)	3900 (268)
1	1	-WG-FO16-NS16	2.36 (59.9)	0.94 (23.9)	0.87 (22.1)	1 3/4 (44.5)	1 5/8 (41.3)	2900 (199)



FO Welded Gland to SAE/MS Thread

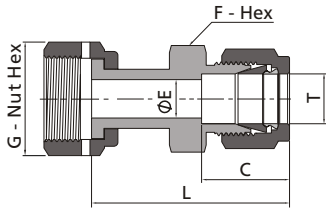
FO Size (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
			L	B	E	G	F	
1/4	7/16-20	-WG-FO4-ST7	1.54 (39.1)	0.36 (9.1)	0.18 (4.6)	11/16 (17.5)	9/16 (14.3)	4500 (310)
1/2	9/16-18	-WG-FO8-ST9	1.64 (41.7)	0.39 (9.9)	0.40 (10.2)	1 (25.4)	11/16 (17.5)	4500 (310)
1/2	3/4-16	-WG-FO8-ST12	1.71 (43.4)	0.45 (11.2)	0.40 (10.2)	1 (25.4)	7/8 (22.2)	4500 (310)
3/4	1 1/16-12	-WG-FO12-ST17	2.07 (52.6)	0.59 (15.0)	0.62 (15.7)	1 1/2 (38.1)	1 1/4 (31.8)	3600 (248)
1	1 5/16-12	-WG-FO16-ST21	2.17 (55.1)	0.59 (15.0)	0.87 (22.1)	1 3/4 (44.5)	1 1/2 (38.1)	2900 (199)



FO Welded Gland to Female NPT

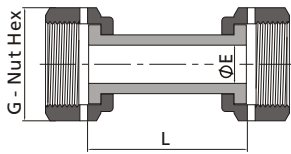
FO Size (in.)	P-NPT Size	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
			L	B	E	G	F	
1/4	1/4	-WG-FO4-FNS4	1.57 (39.9)	0.59 (15.0)	0.18 (4.6)	11/16 (17.5)	3/4 (19.1)	6600 (454)
1/2	3/8	-WG-FO8-FNS6	1.73 (43.9)	0.59 (15.0)	0.40 (10.2)	1 (25.4)	7/8 (22.2)	5300 (365)
1/2	1/2	-WG-FO8-FNS8	1.96 (49.8)	0.78 (19.8)	0.40 (10.2)	1 (25.4)	1 1/16 (27.0)	4900 (337)
3/4	3/4	-WG-FO12-FNS12	2.12 (53.8)	0.81 (20.6)	0.62 (15.7)	1 1/2 (38.1)	1 5/16 (33.3)	4000 (275)
1	1	-WG-FO16-FNS16	2.29 (58.2)	1.00 (25.4)	0.87 (22.1)	1 3/4 (44.5)	1 5/8 (41.3)	3000 (206)

F-43 Face Seal Fittings



FO Welded Gland to Tube Fitting

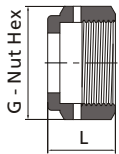
FO Size (in.)	T-Tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
			L	C	E	G	F	
1/4	1/4	-WG-FO4-FL4	1.74 (44.2)	0.60 (15.2)	0.18 (4.6)	11/16 (17.5)	1/2 (12.7)	10200 (702)
1/2	3/8	-WG-FO8-FL6	1.87 (47.5)	0.66 (16.8)	0.28 (7.1)	1 (25.4)	5/8 (15.9)	5800 (399)
1/2	1/2	-WG-FO8-FL8	2.01 (51.1)	0.90 (22.9)	0.40 (10.2)	1 (25.4)	13/16 (20.6)	5800 (399)
3/4	3/4	-WG-FO12-FL12	2.14 (54.4)	0.96 (24.4)	0.62 (15.7)	1 1/2 (38.1)	1 1/16 (27.0)	4000 (275)
1	1	-WG-FO16-FL16	2.45 (62.2)	1.23 (31.2)	0.87 (22.1)	1 3/4 (44.5)	1 3/8 (34.9)	3000 (206)



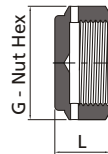
FO Welded Gland Union

FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)			Working Pressure psig (bar)
		L	E	G	
1/4	-WG-FO4	1.42 (36.1)	0.18 (4.6)	11/16 (17.5)	10200 (702)
1/2	-WG-FO8	1.61 (40.9)	0.40 (10.2)	1 (25.4)	5800 (399)

Nuts

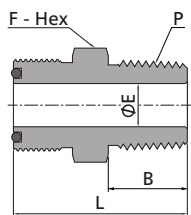


Female				
FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)		
		L	G	
1/8-1/4	-N-FO4	0.66 (16.8)	11/16 (17.5)	
3/8-1/2	-N-FO8	0.69 (17.5)	1 (25.4)	
3/4	-N-FO12	0.81 (20.6)	1 1/2 (38.1)	
1	-N-FO16	0.81 (20.6)	1 3/4 (44.5)	



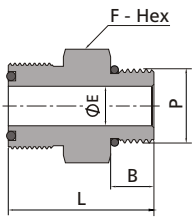
Blind				
FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)		
		L	G	
1/8-1/4	-N-FO4-B	0.44 (11.2)	11/16 (17.5)	
3/8-1/2	-N-FO8-B	0.56 (14.2)	1 (25.4)	
3/4	-N-FO12-B	0.75 (19.1)	1 1/2 (38.1)	
1	-N-FO16-B	0.81 (20.6)	1 3/4 (44.5)	

Bodies

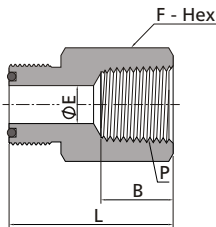


FO Body to Male NPT							
FO Size (in.)	P-NPT Size	Basic Ordering Number	Dimensions, in. (mm)				Working Pressure psig (bar)
			L	F	B	E	
1/4	1/8	-CM-FO4-NS2	1.16 (29.5)	5/8 (15.9)	0.38 (9.7)	0.18 (4.6)	10000 (689)
1/4	1/4	-CM-FO4-NS4	1.34 (34.0)	5/8 (15.9)	0.56 (14.2)	0.18 (4.6)	13400 (923)
1/2	3/8	-CM-FO8-NS6	1.46 (37.1)	15/16 (23.8)	0.56 (14.2)	0.38 (9.7)	7800 (537)
1/2	1/2	-CM-FO8-NS8	1.65 (41.9)	15/16 (23.8)	0.75 (19.1)	0.40 (10.2)	10000 (689)
3/4	3/4	-CM-FO12-NS12	1.75 (44.5)	1 5/16 (33.3)	0.75 (19.1)	0.62 (15.7)	7300 (502)
1	1	-CM-FO16-NS16	1.97 (50.0)	1 5/8 (41.3)	0.94 (23.9)	0.87 (22.1)	5300 (365)

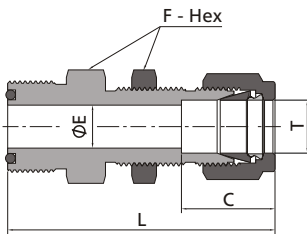
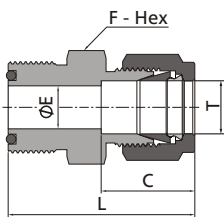
FO Body to SAE/MS Thread							
FO Size (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimensions, in. (mm)				Working Pressure psig (bar)
			L	F	B	E	
1/4	7/16-20	-CM-FO4-ST7	1.24 (31.5)	11/16 (17.5)	0.36 (9.1)	0.18 (4.6)	4500 (310)
1/4	9/16-18	-CM-FO4-ST9	1.17 (29.7)	11/16 (17.5)	0.39 (9.9)	0.18 (4.6)	4500 (310)
1/2	7/16-20	-CM-FO8-ST7	1.36 (34.5)	15/16 (23.8)	0.36 (9.1)	0.18 (4.6)	4500 (310)
1/2	9/16-18	-CM-FO8-ST9	1.39 (35.3)	15/16 (23.8)	0.39 (9.9)	0.30 (7.6)	4500 (310)
1/2	3/4-16	-CM-FO8-ST12	1.47 (37.3)	1 (25.4)	0.44 (11.2)	0.40 (10.2)	4500 (310)
3/4	1 1/16-12	-CM-FO12-ST17	1.73 (43.9)	1 3/8 (34.9)	0.59 (15.0)	0.62 (15.7)	3600 (248)
1	1 5/16-12	-CM-FO16-ST21	1.79 (45.5)	1 5/8 (41.3)	0.59 (15.0)	0.85 (21.6)	2900 (199)



FO Body to Female NPT							
FO Size (in.)	P-NPT Size	Basic Ordering Number	Dimensions, in. (mm)				Working Pressure psig (bar)
			L	F	B	E	
1/4	1/8	-CF-FO4-NS2	1.25 (31.8)	5/8 (15.9)	0.41 (10.4)	0.18 (4.6)	8400 (578)
1/4	1/4	-CF-FO4-NS4	1.39 (35.3)	3/4 (19.1)	0.59 (15.0)	0.18 (4.6)	6600 (454)
1/2	3/8	-CF-FO8-NS6	1.57 (39.9)	15/16 (23.8)	0.59 (15.0)	0.40 (10.2)	6600 (454)
1/2	1/2	-CF-FO8-NS8	1.77 (45.0)	1 1/16 (27.0)	0.78 (19.8)	0.40 (10.2)	4900 (337)
3/4	3/4	-CF-FO12-NS12	1.93 (49.0)	1 5/16 (33.3)	0.81 (20.6)	0.62 (15.7)	4600 (316)
1	1	-CF-FO16-NS16	2.02 (51.3)	1 5/8 (41.3)	1.00 (25.4)	0.87 (22.1)	4400 (303)

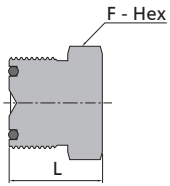


FO Body to Tube Fitting							
FO Size (in.)	T-tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)				Working Pressure psig (bar)
			L	F	C	E	
1/4	1/8	-U-FO4-FL2	1.38 (35.1)	5/8 (15.9)	0.51 (13.0)	0.09 (2.3)	10900 (751)
1/4	1/4	-U-FO4-FL4	1.47 (37.3)	5/8 (15.9)	0.60 (15.2)	0.18 (4.6)	10200 (702)
1/2	3/8	-U-FO8-FL6	1.65 (41.9)	15/16 (23.8)	0.66 (16.8)	0.28 (7.1)	6500 (447)
1/2	1/2	-U-FO8-FL8	1.78 (45.2)	15/16 (23.8)	0.90 (22.9)	0.40 (10.2)	6700 (461)
3/4	3/4	-U-FO12-FL12	1.86 (47.2)	1 5/16 (33.3)	0.96 (24.4)	0.62 (15.7)	5800 (399)
1	1	-U-FO16-FL16	2.06 (52.3)	1 5/8 (41.3)	1.23 (31.2)	0.87 (22.1)	4700 (323)

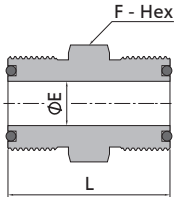


FO Body to Bulkhead Tube Fitting									
FO Size (in.)	T-tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)				Panel Hole Drill Size in. (mm)	Max. Panel Thickness in. (mm)	Working Pressure psig (bar)
			L	F	C	E			
1/4	1/4	-UB-FO4-FL4	2.10 (53.4)	5/8 (15.9)	0.60 (15.2)	0.18 (4.6)	0.45 (11.5)	0.40 (10.2)	10200 (702)
1/2	3/8	-UB-FO8-FL6	2.34 (59.4)	15/16 (23.8)	0.66 (16.8)	0.28 (7.1)	0.58 (14.7)	0.44 (11.2)	6500 (447)
1/2	1/2	-UB-FO8-FL8	2.55 (64.8)	15/16 (23.8)	0.90 (22.9)	0.40 (10.2)	0.76 (19.4)	0.50 (12.7)	6700 (461)
3/4	3/4	-UB-FO12-FL12	2.86 (72.6)	1 5/16 (33.3)	0.96 (24.4)	0.62 (15.7)	1.02 (25.8)	0.66 (16.8)	5800 (399)
1	1	-UB-FO16-FL16	3.29 (83.6)	1 5/8 (41.3)	1.23 (31.2)	0.87 (22.1)	1.33 (33.7)	0.75 (19.1)	4700 (323)

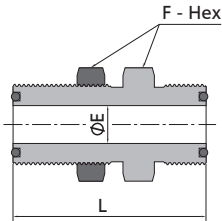
F-45 Face Seal Fittings



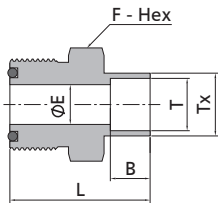
Blind Body			
FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)	
		L	F
1/4	-BY-FO4	0.77 (19.6)	5/8 (15.9)
1/2	-BY-FO8	0.89 (22.6)	15/16 (23.8)
3/4	-BY-FO12	0.99 (25.1)	1 5/16 (33.3)
1	-BY-FO16	1.02 (25.9)	1 5/8 (41.3)



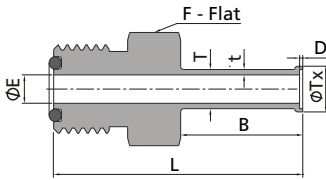
Union Body						
FO Size (in.)	FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)			Working Pressure psig (bar)
			L	F	E	
1/4	1/4	-U-FO4	1.25 (31.8)	5/8 (15.9)	0.18 (4.6)	14300 (985)
1/2	1/4	-U-FO8-FO4	1.43 (36.3)	15/16 (23.8)	0.18 (4.6)	11100 (764)
1/2	1/2	-U-FO8	1.50 (38.1)	15/16 (23.8)	0.40 (10.2)	11100 (764)



Bulkhead Union Body							
FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)			Panel Hole Drill Size in. (mm)	Max. Panel Thickness in. (mm)	Working Pressure psig (bar)
		L	F	E			
1/4	-BU-FO4	1.88 (47.8)	3/4 (19.1)	0.18 (4.6)	0.58 (14.7)	0.36 (9.1)	14300 (985)
1/2	-BU-FO8	2.09 (53.1)	1 1/16 (27.0)	0.40 (10.2)	0.89 (22.6)	0.40 (10.2)	11100 (764)

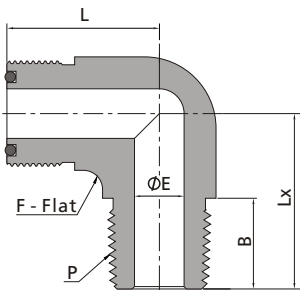


FO Body to Tube Socket Weld								
FO Size (in.)	T-Tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
			L	F	E	B	Tx	
1/8	1/8	-CW-FO2-TS2	0.88 (22.4)	5/8 (15.9)	0.09 (2.3)	0.10 (2.5)	0.29 (7.4)	12600 (868)
1/4	1/4	-CW-FO4-TS4	1.09 (27.7)	5/8 (15.9)	0.18 (4.6)	0.28 (7.1)	0.38 (9.7)	6800 (468)
3/8	3/8	-CW-FO6-TS6	1.28 (32.5)	15/16 (23.8)	0.28 (7.1)	0.31 (7.9)	0.60 (15.2)	8100 (558)
1/2	1/2	-CW-FO8-TS8	1.34 (34.0)	15/16 (23.8)	0.40 (10.2)	0.38 (9.7)	0.60 (15.2)	3000 (206)
3/4	3/4	-CW-FO12-TS12	1.50 (38.1)	1 5/16 (33.3)	0.62 (15.7)	0.44 (11.2)	0.92 (23.4)	3700 (254)
1	1	-CW-FO16-TS16	1.72 (43.7)	1 5/8 (41.3)	0.87 (22.1)	0.62 (15.7)	1.19 (30.2)	3000 (206)



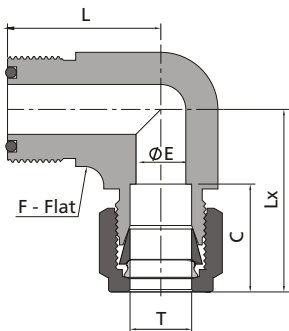
FO Body to Automatic Tube Weld

FO Size (in.)	T-tube O.D. (in.)	t-Wall Thickness (in.)	Basic Ordering Number	Dimensions, in. (mm)						Working Pressure psig (bar)
				L	B	D	E	Tx	F	
1/4	1/4	0.035	-CW-FO4-TB4A	1.59 (40.4)	0.78 (19.8)	0.02 (0.5)	0.18 (4.6)	0.29 (7.4)	5/8 (15.9)	5100 (351)
1/2	3/8	0.035	-CW-FO8-TB6A	1.74 (44.2)	0.79 (20.0)	0.03 (0.8)	0.31 (7.9)	0.41 (10.4)	15/16 (23.8)	3300 (227)
1/2	1/2	0.049	-CW-FO8-TB8A	1.75 (44.4)	0.80 (20.3)	0.04 (1.0)	0.40 (10.2)	0.55 (14.0)	15/16 (23.8)	3500 (241)
3/4	3/4	0.049	-CW-FO12-TB12A	1.78 (45.2)	0.80 (20.3)	0.04 (1.0)	0.65 (16.5)	0.80 (20.3)	1 5/16 (33.3)	2200 (151)
1	1	0.065	-CW-FO16-TB16A	2.03 (51.6)	1.00 (25.4)	0.04 (1.0)	0.87 (22.1)	1.06 (26.9)	1 5/8 (47.6)	2200 (151)



FO Body to Male NPT Elbow

FO Size (in.)	P-NPT Size	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
			L	F	B	E	Lx	
1/4	1/8	-LM-FO4-NS2	0.96 (24.4)	9/16 (14.3)	0.38 (9.7)	0.18 (4.6)	0.87 (22.1)	10000 (689)
1/4	1/4	-LM-FO4-NS4	0.96 (24.4)	9/16 (14.3)	0.56 (14.2)	0.18 (4.6)	1.05 (26.7)	8000 (551)
1/2	3/8	-LM-FO8-NS6	1.26 (32.0)	13/16 (20.6)	0.56 (14.2)	0.38 (9.7)	1.26 (32.0)	7800 (537)
1/2	1/2	-LM-FO8-NS8	1.26 (32.0)	13/16 (20.6)	0.75 (19.1)	0.40 (10.2)	1.45 (36.8)	7700 (530)
3/4	3/4	-LM-FO12-NS12	1.48 (37.6)	1 1/4 (31.8)	0.75 (19.1)	0.62 (15.7)	1.67 (42.4)	7300 (502)
1	1	-LM-FO16-NS16	1.56 (39.6)	1 11/16 (42.9)	0.94 (23.9)	0.87 (22.0)	1.94 (49.3)	5300 (365)



FO Body to Tube Fitting Elbow

FO Size (in.)	T-Tube O.D. (in.)	Basic Ordering Number	Dimensions, in. (mm)					Working Pressure psig (bar)
			L	F	C	E	Lx	
1/4	1/4	-LU-FO4-FL4	0.96 (24.4)	9/16 (14.3)	0.60 (15.2)	0.18 (4.6)	1.19 (30.2)	10200 (702)
1/2	3/8	-LU-FO8-FL6	1.26 (32.0)	13/16 (20.6)	0.66 (16.8)	0.28 (7.1)	1.39 (35.3)	6500 (447)
1/2	1/2	-LU-FO8-FL8	1.26 (32.0)	13/16 (20.6)	0.90 (22.9)	0.40 (10.2)	1.50 (38.1)	6700 (461)
3/4	3/4	-LU-FO12-FL12	1.48 (37.6)	1 1/4 (31.8)	0.96 (24.4)	0.62 (15.7)	1.80 (45.7)	5800 (399)
1	1	-LU-FO16-FL16	1.56 (39.6)	1 11/16 (42.9)	1.23 (31.2)	0.87 (22.1)	2.04 (51.8)	4700 (323)

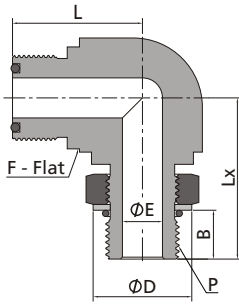
Fittings

Valves

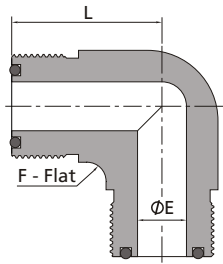
Pressure Gauges

Integrated Systems and Others

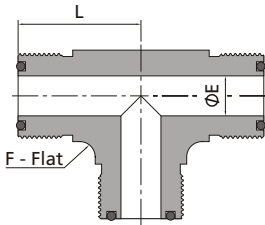
Process Specification



FO Body to Male SAE/MS Thread Positionable Elbow									
FO Size (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimensions, in. (mm)						Working Pressure psig (bar)
			L	F	B	E	D	Lx	
1/4	7/16-20	-LP-FO4-ST7	0.96 (24.4)	1/2 (12.7)	0.39 (9.9)	0.18 (4.6)	0.65 (16.5)	1.19 (30.2)	4500 (310)
1/2	9/16-18	-LP-FO8-ST9	1.33 (33.8)	13/16 (20.6)	0.44 (11.2)	0.30 (7.6)	0.79 (20.1)	1.54 (39.1)	3600 (248)
1/2	3/4-16	-LP-FO8-ST12	1.33 (33.8)	13/16 (20.6)	0.50 (12.7)	0.40 (10.2)	1.01 (25.7)	1.65 (41.9)	3600 (248)
3/4	1 1/16-12	-LP-FO12-ST17	1.53 (38.9)	1 1/4 (31.8)	0.66 (16.8)	0.62 (15.7)	1.44 (36.6)	2.13 (54.1)	2900 (199)
1	1 5/16-12	-LP-FO16-ST21	1.72 (43.7)	1 11/16 (42.9)	0.66 (16.8)	0.87 (22.1)	1.73 (43.9)	2.31 (58.7)	2300 (158)

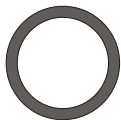


FO Body Union Elbow					
FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)			Working Pressure psig (bar)
		L	F	E	
1/4	-LU-FO4	0.96 (24.4)	9/16 (14.3)	0.18 (4.6)	14300 (985)
1/2	-LU-FO8	1.26 (32.0)	13/16 (20.6)	0.40 (10.2)	11100 (764)
3/4	-LU-FO12	1.48 (37.6)	1 1/4 (31.8)	0.62 (15.7)	10900 (751)
1	-LU-FO16	1.56 (39.6)	1 11/16 (42.9)	0.87 (22.1)	8800 (606)



FO Body Union Tee					
FO Size (in.)	Basic Ordering Number	Dimensions, in. (mm)			Working Pressure psig (bar)
		L	F	E	
1/4	-TTT-FO4	0.96 (24.4)	9/16 (14.3)	0.18 (4.6)	14300 (985)
1/2	-TTT-FO8	1.26 (32.0)	13/16 (20.6)	0.40 (10.2)	11100 (764)
3/4	-TTT-FO12	1.48 (37.6)	1 1/4 (31.8)	0.62 (15.7)	10900 (751)
1	-TTT-FO16	1.56 (39.6)	1 11/16 (42.9)	0.87 (22.1)	8800 (606)

O-Rings



FO Size (in.)	Basic Ordering Number
1/8-1/4	-010
3/8-1/2	-111
3/4	-116
1	-215

Add the designator of O-ring material in page F-42 as a prefix to the basic ordering number to get the complete ordering number.
 Example: V17-010