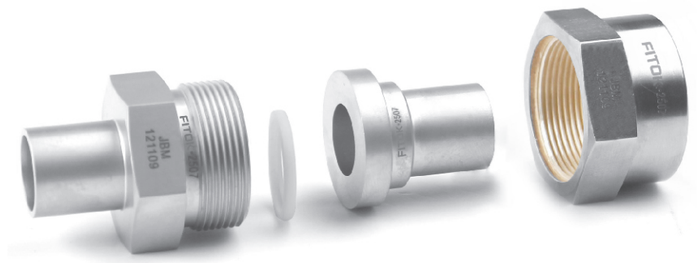
L-ring Face Seal Fittings

TFO Series



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FITOK
Valves and Fittings

L-ring Face Seal Fittings

TFO Series

Features

◎ Reduced internal entrapment
◎ Lubricant-free L-ring seal
◎ Tube butt end connections
◎ Controlled L-ring extrusion, no overtightening

Technical Data

◎ Sizes range from 1/4" to 1"
◎ Standard Materials of Constructions

Construction	Materials	Desighnator
Body/Gland	316L stanless steel	6L
Nut	316 stanless steel	SS
Seal	Ethylene propylene	E
	PTFE	T
	Silicone	SI
	Fluorocarbon FKM	VI

Materials traceable, certification available upon request

◎ Working Pressure at 100°F (37°C)

Tube OD.	Working Pressure psig (bar)
1/4 in.	2500 (172)
1/2 in.	2000 (137)
3/4 in.	1500 (103)
1 in.	
12 mm	2000 (137)

◎ Working Temperature
Temperature ranges for TFO fittings are governed by the L-ring materials.

Meterial	Working Temperature °F(°C)
Ethylene propylene	148(300)
PTFE	232(450)
Silicone	204(400)
Fluorocarbon FKM	

Testing

TFO fitting is tested with helium at a maximum leak rate of $4x10^{-9}$ std cm^3/s.

Ordering Information

◎ Dimensions are for reference only and are subject to change.
◎ Each component should be ordered separately.
◎ Add the material designator as a prefix, Wetted Surface Finish code or Cleaning and Packaging code as a suffix to the basic ordering number to get the complete ordering number.
◎ Wetted Surface Finish

Standard surface finish is a roughness average of 15 µin. (0.4 µm) Ra. To order fittings to a roughness average of 10 µin. (0.2 µm) Ra, add -E3 as a suffix to the ordering number. Put Wetted Surface Finish before code Cleaning and Packaging code. Example:**6L-G-TFO4-TB4-E3** .

◎ Standard Process Specification

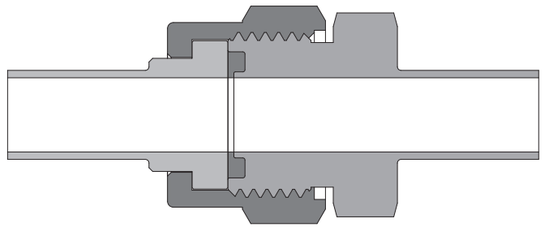
FC-01 standard cleaning and packaging, Is applied to all the fittings for general industrial procedure. No suffix is required. Example: **6L-G-TFO4-TB4**.

◎ High-Purity Process Specification

FC-02 special cleaning and packaging, following ASTM G93 level C, add -F2 as a suffix to the basic ordering number. Example: **6L-G-TFO4-TB4-F2**.

Installation Instructions

1. Assemble the gland, nut and gasket as below, finger tighten the nut.

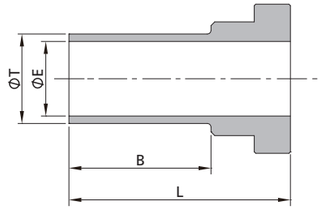


2. Tighten the nut 1/8 turn with a wrench while holding the body of the fitting steady.

Cautions

◎ For the best sealing result, the L-ring should be replaced each time the groove housing is dismantled.
◎ When welding is applied to the body, the L-ring should be removed to prevent possible damage.
◎ Tungsten Inert Gas Welding (TIG) is recommended.
◎ Do not loosen or tighten fittings when system is pressurized.

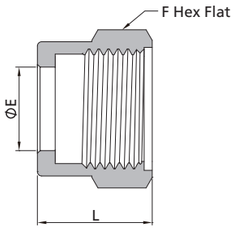
Gland



T-Tube OD. (in.)	Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)		
			L	B	E
1/4	0.035	6L-G-TFO4-TB4	0.67(17.0)	0.25(6.4)	0.18(4.6)
		6L-G-TFO4-TB4-12	1.17(29.7)	0.75(19.1)	
1/2	0.049	6L-G-TFO8-TB8			0.40(10.2)
	0.065	6L-G-TFO8-TB8×0.065			0.37(9.4)
3/4		6L-G-TFO12-TB12	1.24(31.5)		0.62(15.7)
1		6L-G-TFO16-TB16	1.45(36.8)	0.96(24.4)	0.87(22.1)
Metric					
12 mm	1 mm	6L-G-TFO8-MTB12	1.17(29.7)	0.75(19.1)	0.39(10)

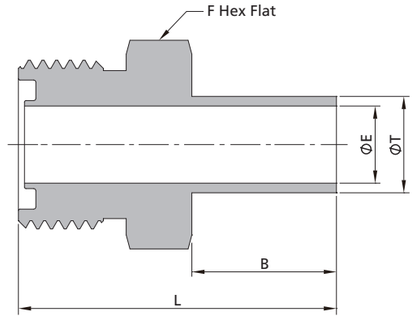
NOTE: -MTB12 gland and body use -TFO8 L-ring and nut.

Nut



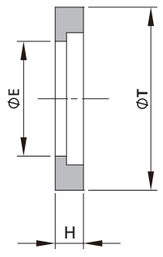
Ordering Number	Dimension, in. (mm)		
	L	E	F
SS-N-TFO4	0.75(19.1)	0.39(9.9)	11/16(17.46)
SS-N-TFO8	0.84(21.3)	0.61(15.5)	1(25.4)
SS-N-TFO12	0.90(22.9)	0.94(23.9)	1 1/2(38.1)
SS-N-TFO16		1.25(31.8)	1 3/4(44.45)

Tube Butt Weld Body



T-Tube OD. (in.)	Wall Thickness (in.)	Ordering Number	Dimension, in. (mm)			
			L	B	E	F
1/4	0.035	6L-CW-TFO4-TB4	1.03(26.2)	0.25(6.4)	0.18(4.6)	5/8(15.88)
		6L-CW-TFO4-TB4-12	1.53(38.9)	0.75(19.1)		
1/2	0.049	6L-CW-TFO8-TB8	1.65(41.9)		0.40(10.2)	15/16(23.8)
	0.065	6L-CW-TFO8-TB8×0.065			0.37(9.4)	
3/4		6L-CW-TFO12-TB12	1.75(44.4)		0.62(15.7)	
1		6L-CW-TFO16-TB16	1.99(50.5)	0.96(24.4)	0.87(22.1)	15/8(47.63)
Metric						
12 mm	1 mm	6L-CW-TFO8-MTB12	1.65(41.9)	0.75(19.1)	0.39(10)	15/16(23.8)

L-ring Seal



Basic Ordering Number	Dimension, in. (mm)		
	T	E	H
-GT-TFO4	0.38(9.6)	0.18(4.6)	0.07(1.8)
-GT-TFO8	0.64(16.2)	0.40(10.2)	0.10(2.5)
-GT-TFO12	0.92(23.4)	0.62(15.7)	
-GT-TFO16	1.30(33.0)	0.87(22.1)	0.14(3.6)