15 Series Tube Fittings and Tubing

15,000 psi (1034 bar)

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FITOK
Valves and Fittings

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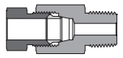
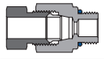
NPT Thread



Heavy-Duty SAE/MS



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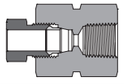
Female Connectors - CF



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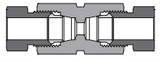
Unions - U



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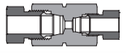
Reducing Unions - U



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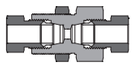
Bulkhead Unions - BU



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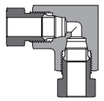
Union Elbows - LU



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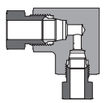
Union Reducing Elbows - LU



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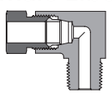
Male Elbows - LM



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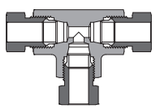
Union Tees - TTT



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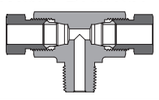
Male Branch Tees - TTM



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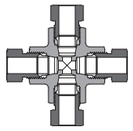
Union Crosses - C



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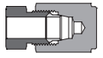

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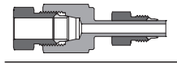

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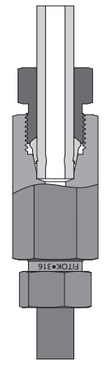
15 Series Tube Fittings and Tubing

Features



- Pressures up to 15000 psig (1034 bar).
- Fittings are easy to disconnect and retighten.
- Every fitting is stamped with size, material, and heat code.
- Radius junction design with elbows provides smooth flow path.
- Nut threads are lined with molybdenum disulfide-based lubricant to minimize the friction.
- Hardened threads and smoothed surface finishes extend fitting life and prevent sticking of the matching threads.

Materials of Construction

Component	Material	ASTM
Body, ferrule	*316 stainless steel*	*A276*
Nut	316 stainless steel	A276

Wetted component listed italics.

Working Pressure

Working pressure is dependent on the end connection with the lowest working pressures. Working pressures for the end connections used in this catalog are identified below.

15 Series Tube Ends

The maximum working pressure of the 15 Series tube ends at ambient temperature is determined by the maximum working pressure of the FITOK tubing that is used. Refer to FITOK 15 series tubing data.

Heavy-Duty SAE/MS Ends

Working pressure for Heavy-duty SAE/MS end connections listed in this catalog are rated to 9137 psig (630 bar), in according to SAE J1926-2.

NPT Pipe Thread Ends ①

NPT Size	Working Pressure, psig (bar)
1/16	15000 (1034)
1/8	
1/4	
3/8	
1/2	
3/4	10000 (690)
1	

① No allowance is made for corrosion, erosion, or elevated temperatures.

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Elevated Temperature Factors

To get the maximum working pressure at elevated temperature, use the maximum working pressure at ambient temperature to multiply the factors in the table below.

Material	Temperature		Factor
	°F	°C	
316	100	38	1
	200	93	1
	300	149	1
	400	204	0.97
	500	260	0.90
	600	316	0.85
	700	371	0.82
	800	427	0.80

Working Temperature

Connection	Temperature Rating
15 Series Tube Ends	-325°F(-198°C) to 800°F(427°C)
Heavy-Duty SAE/MS Ends	0°F(-17.8°C) to 400°F(204°C)
NPT Pipe Thread Ends	-325°F(-198°C) to 400°F(204°C)

Installation Instructions

15 Series Tube Fittings (For Tube O.D. 1/8", 1/4", 3/8" and 1/2")

◎ Join the ferrule end directly to the body, follow the steps below:

1. Put nut and ferrule on tubing in proper sequence and orientation (Fig. 1).
2. Install finger-tight into the body of the fitting or the valve, make sure that the tubing rests firmly on the shoulder of the port (Fig. 2).
3. Tighten the nut until the tubing cannot be turned by hand, then mark the nut and the body (Fig. 3).
4. Tighten the nut 1 turn for tube O.D. 1/8", and 1 1/4 turns for tube O.D. 1/4", 3/8" and 1/2" with a wrench while holding the body of the fitting or the valve steady (Fig. 4).

Fig.1

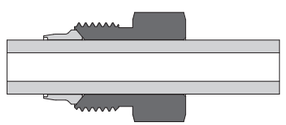


Fig.2

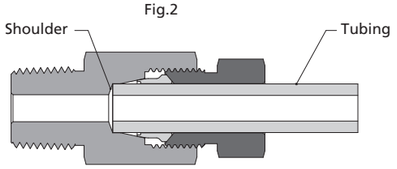


Fig.3

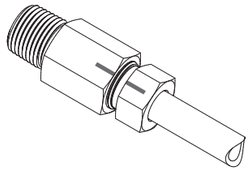
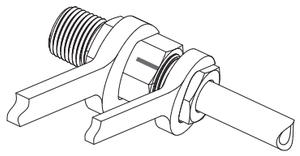


Fig.4



◎ First preassemble the ferrule end by using the manual presetter tool, then join the ferrule end to the body, follow the steps below:

1. Put nut and ferrule on tubing in proper sequence and orientation (Fig. 1).
2. Install finger-tight into the manual presetter tool, make sure that the tubing rests firmly on the shoulder of the port (Fig. 5).
3. Tighten the nut until the tubing cannot be turned by hand, then mark the nut and the manual presetter tool (Fig. 6).
4. Tighten the nut 1 turn for tube O.D. 1/8", and 1 1/4 turns for tube O.D. 1/4", 3/8" and 1/2" with a wrench while holding the manual presetter tool steady.
5. Loosen the nut and remove the tubing with preassembled ferrule from the manual presetter tool (Fig. 7).
   Note: If the tubing sticks in the manual presetter tool, remove the tube by gently rocking it back and forth. Do not turn the tubing.
6. Insert the ferrule end into the body of the fitting or the valve, rotate the nut finger-tight (Fig. 8).
7. Tighten the nut 1/4 turn with a wrench while holding the body steady.

Fig.5

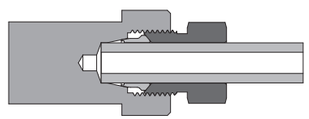


Fig.6

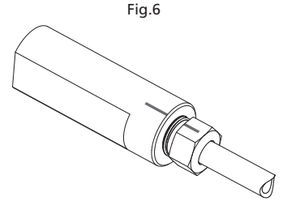


Fig.7

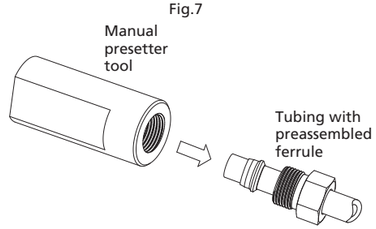
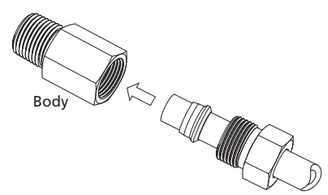


Fig.8



15 Series Tube Fittings (For Tube O.D. 9/16" and 3/4")

◎ First preassemble the ferrule end by using the hydraulic presetting tool, then join the ferrule end to the body, follow the steps below:

1. Preassemble the ferrule end by using the hydraulic presetting tool, supporting details please see the introduction of the hydraulic presetting tool.
2. Insert the ferrule end into the body of the fitting or the valve, rotate the nut finger-tight.
3. Tighten the nut 1/4 turn with a wrench.

Ferrule ends of the Reducers, Port Connectors and Adapters

1. The ferrule ends of the reducers, port connectors and adapters will be preassembled before shipping, the installation should follow the reinstallation instruction.

Plugs and Non-ferrule ends of Port Connectors

1. Insert the plug or non-ferrule end of the port connector into the body of the fitting or the valve, rotate the nut finger-tight.
2. Tighten the nut 1/4 turn with a wrench.

Reinstallation Instructions

◎ You may disassemble and reassemble the tube fitting multiple times.

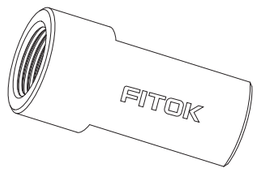
1. Insert the ferrule end into the body of the fitting or the valve, rotate the nut finger-tight.
2. Tighten the nut 1/4 turn with a wrench while holding the body of the fitting or the valve steady. After frequent reassemblies, it may take less than 1/4 turn to achieve a gas-tight seal and as little as 1/8 of a turn may be sufficient.

Tools and Accessories

Manual Presetter Tool

Tube O.D.	Ordering Number
1/8 in.	PST-2
1/4 in.	PST-4
3/8 in.	PST-6
1/2 in.	PST-8

Fig.9



Cautions

1. The ferrule end consists of the ferrule, nut and tubing.
2. Do not loosen or tighten fittings under pressure.
3. When assembling the tube fitting, hold the body with a wrench and turn the nut instead of holding the nut.
4. When installing a valve with tube fitting end, hold the valve body with a wrench and turn the nut.
5. When assembling the fitting to a valve with thread, hold the valve body with a wrench and turn the body of the fitting.

15 Series Tubing

Features

- Working pressures up to 15 000 psig (1034 bar).
- Material, size, pressure and heat code are indicated on the tubing surface.

Material Standards

FITOK 15 series tube fittings used with heavy-wall annealed stainless steel tubing.

Grade	UNS	Specification
316/316L	S31600/S31603	ASTM A213, 269
		ASME SA213

Working Pressure

- The allowable working pressures in the table below are based on ASME B31.3 at ambient temperature.
- To work out the allowable working pressure at elevated temperature, take allowable working pressure at ambient temperature to multiply the factors in the table of Elevated Temperature Factors on page 2.

Tube O.D. in.	Wall Thickness in.	Working Pressure① psig (bar)
1/8	0.037	15000 (1034)
1/4	0.083	15000 (1034)
1/4	0.065	10300 (710)
3/8	0.118	15000 (1034)
3/8	0.095	10000 (690)
1/2	0.156	15000 (1034)
1/2	0.134	11200 (772)
9/16	0.188	15000 (1034)
3/4	0.240	15000 (1034)
3/4	0.188	10000 (690)

① No allowance is made for corrosion, erosion, or elevated temperatures.

Ordering Information

Tube O.D. in.	Wall Thickness in.	Basic Ordering Number	Weight lb/ft (kg/m)
1/8	0.037	SS-15T2-037-	0.035 (0.053)
1/4	0.083	SS-15T4-083-	0.15 (0.22)
1/4	0.065	SS-15T4-065-	0.13 (0.19)
3/8	0.118	SS-15T6-118-	0.33 (0.49)
3/8	0.095	SS-15T6-095-	0.29 (0.43)
1/2	0.156	SS-15T8-156-	0.58 (0.87)
1/2	0.134	SS-15T8-134-	0.53 (0.79)
9/16	0.188	SS-15T9-188-	0.77 (1.14)
3/4	0.240	SS-15T12-240-	1.33 (1.98)
3/4	0.188	SS-15T12-188-	1.15 (1.71)

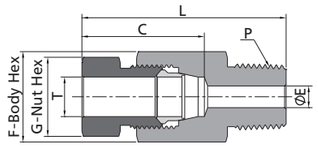
Add the actual foot (feet)/meter (meters) to the basic ordering number to get the complete ordering number.

For example:

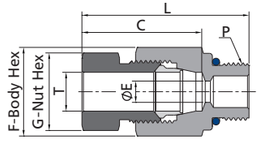
1. 10 feet length, outside diameter 1/2", wall thickness 0.156", 316 SS seamless tube, the complete ordering number is: SS-15T8-156-10.
2. 3 meters length, outside diameter 3/4", wall thickness 0.188", 316 SS seamless tube, the complete ordering number is: SS-15T12-188-3M.

15 Series Tube Fittings

Male Connectors

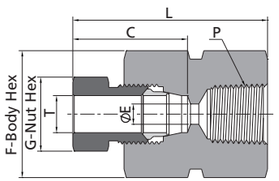


Tube							NPT Thread
T - Tube O.D. in.	P - NPT Size	Ordering Number	Dimensions, in. (mm)				
			L	C	E	F	G
1/8	1/8	SS-CM-FH2-NS2	1.44 (36.6)	0.91 (23.1)	0.09 (2.4)	0.50 (12.7)	0.37 (9.5)
1/8	1/4	SS-CM-FH2-NS4	1.57 (39.8)	0.91 (23.1)	0.09 (2.4)	0.56 (14.3)	0.37 (9.5)
1/8	3/8	SS-CM-FH2-NS6	1.57 (39.8)	0.91 (23.1)	0.09 (2.4)	0.69 (17.5)	0.37 (9.5)
1/4	1/8	SS-CM-FH4-NS2	1.78 (45.1)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
1/4	1/4	SS-CM-FH4-NS4	1.91 (48.4)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
1/4	3/8	SS-CM-FH4-NS6	1.91 (48.4)	1.21 (30.8)	0.19 (4.8)	0.69 (17.5)	0.69 (17.5)
1/4	1/2	SS-CM-FH4-NS8	2.15 (54.6)	1.21 (30.8)	0.19 (4.8)	0.87 (22.2)	0.87 (22.2)
3/8	1/4	SS-CM-FH6-NS4	2.04 (51.7)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
3/8	3/8	SS-CM-FH6-NS6	2.04 (51.7)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
3/8	1/2	SS-CM-FH6-NS8	2.16 (54.9)	1.29 (32.7)	0.25 (6.4)	0.87 (22.2)	0.75 (19.1)
1/2	1/4	SS-CM-FH8-NS4	2.35 (59.8)	1.38 (35.1)	0.25 (6.4)	1.00 (25.4)	0.94 (23.8)
1/2	3/8	SS-CM-FH8-NS6	2.35 (59.8)	1.38 (35.1)	0.31 (7.9)	1.00 (25.4)	0.94 (23.8)
1/2	1/2	SS-CM-FH8-NS8	2.48 (62.9)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)
1/2	3/4	SS-CM-FH8-NS12	2.35 (59.8)	1.38 (35.1)	0.37 (9.5)	1.06 (27.0)	0.94 (23.8)
9/16	1/4	SS-CM-FH9-NS4	2.80 (71.1)	1.70 (43.2)	0.25 (6.4)	1.13 (28.6)	1.06 (27.0)
9/16	1/2	SS-CM-FH9-NS8	2.88 (73.2)	1.70 (43.2)	0.41 (10.4)	1.13 (28.6)	1.06 (27.0)
3/4	1/2	SS-CM-FH12-NS8	3.45 (87.6)	2.20 (55.8)	0.41 (10.4)	1.50 (38.1)	1.38 (34.9)
3/4	3/4	SS-CM-FH12-NS12	3.45 (87.6)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)
3/4	1	SS-CM-FH12-NS16	3.54 (89.9)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)



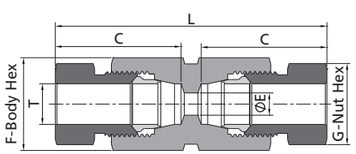
Tube							Heavy-Duty SAE/MS
T - Tube O.D. in.	P - SAE/MS Thread Size	Ordering Number	Dimensions, in. (mm)				
			L	C	E	F	G
1/8	7/16-20	SS-CM-FH2-SH7	1.44 (36.7)	0.91 (23.1)	0.09 (2.4)	0.56 (14.3)	0.37 (9.5)
1/8	9/16-18	SS-CM-FH2-SH9	1.50 (38.2)	0.91 (23.1)	0.09 (2.4)	0.69 (17.5)	0.37 (9.5)
1/4	7/16-20	SS-CM-FH4-SH7	1.86 (47.3)	1.21 (30.8)	0.18 (4.5)	0.63 (15.9)	0.63 (15.9)
1/4	9/16-18	SS-CM-FH4-SH9	1.90 (48.3)	1.21 (30.8)	0.19 (4.8)	0.69 (17.5)	0.63 (15.9)
3/8	7/16-20	SS-CM-FH6-SH7	1.95 (49.6)	1.29 (32.7)	0.18 (4.5)	0.75 (19.1)	0.75 (19.1)
3/8	9/16-18	SS-CM-FH6-SH9	2.00 (50.6)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
1/2	7/16-20	SS-CM-FH8-SH7	2.31 (58.8)	1.38 (35.1)	0.18 (4.5)	1.00 (25.4)	0.94 (23.8)
1/2	9/16-18	SS-CM-FH8-SH9	2.31 (58.8)	1.38 (35.1)	0.30 (7.5)	1.00 (25.4)	0.94 (23.8)

Female Connectors



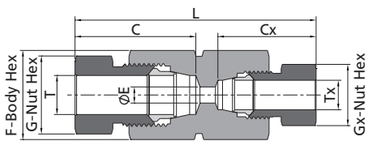
Tube							NPT Thread
T - Tube O.D. in.	P - NPT Size	Ordering Number	Dimensions, in. (mm)				
			L	C	E	F	G
1/8	1/8	SS-CF-FH2-NS2	1.81 (46.1)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/8	1/4	SS-CF-FH2-NS4	1.94 (49.3)	0.91 (23.1)	0.09 (2.4)	0.94 (23.8)	0.37 (9.5)
1/4	1/4	SS-CF-FH4-NS4	2.15 (54.7)	1.21 (30.8)	0.19 (4.8)	0.94 (23.8)	0.63 (15.9)
3/8	1/4	SS-CF-FH6-NS4	2.29 (58.1)	1.29 (32.7)	0.25 (6.4)	0.94 (23.8)	0.75 (19.1)
1/2	1/4	SS-CF-FH8-NS4	2.60 (66.1)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)
1/2	1/2	SS-CF-FH8-NS8	2.85 (72.5)	1.38 (35.1)	0.37 (9.5)	1.38 (34.9)	0.94 (23.8)
3/4	1/2	SS-CF-FH12-NS8	3.56 (90.3)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)

Unions



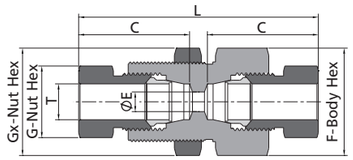
Tube						
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)				
		L	C	E	F	G
1/8	SS-U-FH2	2.13 (54.2)	0.91 (23.1)	0.09 (2.4)	0.50 (12.7)	0.37 (9.5)
1/4	SS-U-FH4	2.67 (67.8)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
3/8	SS-U-FH6	2.82 (71.7)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
1/2	SS-U-FH8	3.20 (81.4)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)
9/16	SS-U-FH9	3.65 (92.7)	1.70 (43.2)	0.41 (10.4)	1.13 (28.6)	1.06 (27.0)
3/4	SS-U-FH12	4.79 (121.7)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)

Reducing Unions



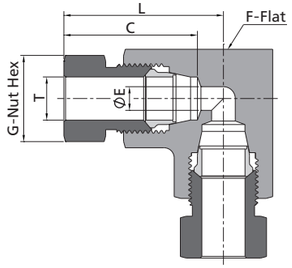
Tube								
T - Tube O.D. in.	Tx - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)					
			L	C	Cx	E	F	G	Gx
1/4	1/8	SS-U-FH4-FH2	2.40 (61.0)	1.21 (30.8)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.63 (15.9)	0.37 (9.5)
3/8	1/8	SS-U-FH6-FH2	2.48 (62.9)	1.29 (32.7)	0.91 (23.1)	0.09 (2.4)	0.75 (19.1)	0.75 (19.1)	0.37 (9.5)
3/8	1/4	SS-U-FH6-FH4	2.75 (69.8)	1.29 (32.7)	1.21 (30.8)	0.19 (4.8)	0.75 (19.1)	0.75 (19.1)	0.63 (15.9)
1/2	1/4	SS-U-FH8-FH4	3.00 (76.2)	1.38 (35.1)	1.21 (30.8)	0.19 (4.8)	1.00 (25.4)	0.94 (23.8)	0.63 (15.9)
1/2	3/8	SS-U-FH8-FH6	3.01 (76.5)	1.38 (35.1)	1.29 (32.7)	0.25 (6.4)	1.00 (25.4)	0.94 (23.8)	0.75 (19.1)
9/16	1/2	SS-U-FH9-FH8	3.63 (92.2)	1.70 (43.2)	1.38 (35.1)	0.37 (9.5)	1.13 (28.6)	1.06 (27.0)	0.94 (23.8)
3/4	1/2	SS-U-FH12-FH8	4.26 (108.2)	2.20 (55.8)	1.38 (35.1)	0.37 (9.5)	1.50 (38.1)	1.38 (34.9)	0.94 (23.8)

Bulkhead Unions



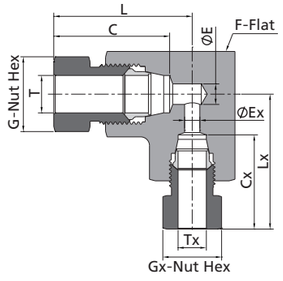
Tube									
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)							
		L	C	E	F	G	Gx	Panel Hole Size	Maximum Panel Thickness
1/8	SS-BU-FH2	2.64 (67.0)	0.91 (23.1)	0.09 (2.4)	0.75 (19.1)	0.37 (9.5)	0.81 (20.6)	0.69 (17.5)	0.38 (9.7)
1/4	SS-BU-FH4	2.93 (74.3)	1.21 (30.8)	0.19 (4.8)	1.00 (25.4)	0.63 (15.9)	1.00 (25.4)	0.94 (23.9)	0.38 (9.7)
3/8	SS-BU-FH6	2.95 (74.9)	1.29 (32.7)	0.25 (6.4)	1.00 (25.4)	0.75 (19.1)	1.06 (27.0)	0.94 (23.9)	0.38 (9.7)
1/2	SS-BU-FH8	3.58 (90.9)	1.38 (35.1)	0.37 (9.5)	1.38 (34.9)	0.94 (23.8)	1.38 (34.9)	1.13 (28.6)	0.38 (9.7)
9/16	SS-BU-FH9	4.18 (106.1)	1.70 (43.2)	0.41 (10.4)	1.63 (41.3)	1.06 (27.0)	1.63 (41.3)	1.33 (33.7)	0.38 (9.7)
3/4	SS-BU-FH12	5.23 (132.9)	2.20 (55.8)	0.56 (14.2)	1.87 (47.6)	1.38 (34.9)	1.87 (47.6)	1.64 (41.7)	0.38 (9.7)

Union Elbows



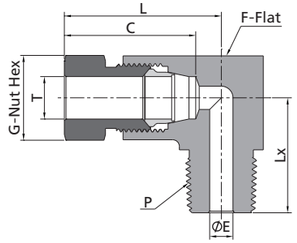
Tube						
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)				
		L	C	E	F	G
1/8	SS-LU-FH2	1.13 (28.7)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/4	SS-LU-FH4	1.52 (38.7)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
3/8	SS-LU-FH6	1.54 (39.0)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
1/2	SS-LU-FH8	1.85 (47.1)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)
9/16	SS-LU-FH9	2.20 (55.9)	1.70 (43.2)	0.41 (10.4)	1.38 (34.9)	1.06 (27.0)
3/4	SS-LU-FH12	2.82 (71.6)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)

Union Reducing Elbows



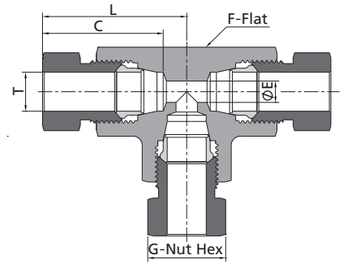
Tube									
T - Tube O.D. in.	Tx - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)						
			L	Lx	C	Cx	Ex	F	G	Gx
1/4	1/8	SS-LU-FH4-FH2	1.52 (38.7)	1.19 (30.3)	1.21 (30.8)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.63 (15.9)	0.37 (9.5)
3/8	1/8	SS-LU-FH6-FH2	1.54 (39.0)	1.19 (30.3)	1.29 (32.7)	0.91 (23.1)	0.09 (2.4)	0.75 (19.1)	0.75 (19.1)	0.37 (9.5)
3/8	1/4	SS-LU-FH6-FH4	1.54 (39.0)	1.52 (38.7)	1.29 (32.7)	1.21 (30.8)	0.19 (4.8)	0.75 (19.1)	0.75 (19.1)	0.63 (15.9)
1/2	1/4	SS-LU-FH8-FH4	1.85 (47.1)	1.77 (45.0)	1.38 (35.1)	1.21 (30.8)	0.19 (4.8)	0.94 (23.8)	0.94 (23.8)	0.63 (15.9)
1/2	3/8	SS-LU-FH8-FH6	1.85 (47.1)	1.78 (45.3)	1.38 (35.1)	1.29 (32.7)	0.25 (6.4)	0.94 (23.8)	0.94 (23.8)	0.75 (19.1)
9/16	1/2	SS-LU-FH9-FH8	2.20 (55.9)	2.14 (54.4)	1.70 (43.2)	1.38 (35.1)	0.37 (9.5)	1.38 (34.9)	1.06 (27.0)	0.94 (23.8)
3/4	1/2	SS-LU-FH12-FH8	2.82 (71.6)	2.51 (63.8)	2.20 (55.8)	1.38 (35.1)	0.37 (9.5)	1.50 (38.1)	1.38 (34.9)	0.94 (23.8)

Male Elbows



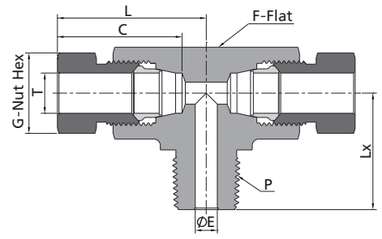
Tube								NPT Thread
T - Tube O.D. in.	P - NPT Size	Ordering Number	Dimensions, in. (mm)					
			L	Lx	C	E	F	G
1/8	1/8	SS-LM-FH2-NS2	1.13 (28.7)	0.79 (20.0)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/8	1/4	SS-LM-FH2-NS4	1.23 (31.3)	1.00 (25.4)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/8	3/8	SS-LM-FH2-NS6	1.31 (33.4)	1.00 (25.4)	0.91 (23.1)	0.09 (2.4)	0.75 (19.1)	0.37 (9.5)
1/4	1/4	SS-LM-FH4-NS4	1.52 (38.7)	0.94 (23.8)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
1/4	3/8	SS-LM-FH4-NS6	1.52 (38.7)	1.00 (25.4)	1.21 (30.8)	0.19 (4.8)	0.75 (19.1)	0.63 (15.9)
1/4	1/2	SS-LM-FH4-NS8	1.52 (38.7)	1.38 (34.9)	1.21 (30.8)	0.19 (4.8)	1.00 (25.4)	0.63 (15.9)
3/8	1/4	SS-LM-FH6-NS4	1.54 (39.0)	1.00 (25.4)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
3/8	3/8	SS-LM-FH6-NS6	1.54 (39.0)	1.06 (27.0)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
3/8	1/2	SS-LM-FH6-NS8	1.54 (39.0)	1.38 (34.9)	1.29 (32.7)	0.25 (6.4)	1.00 (25.4)	0.75 (19.1)
1/2	1/4	SS-LM-FH8-NS4	1.85 (47.1)	1.19 (30.2)	1.38 (35.1)	0.25 (6.4)	1.00 (25.4)	0.94 (23.8)
1/2	3/8	SS-LM-FH8-NS6	1.85 (47.1)	1.19 (30.2)	1.38 (35.1)	0.31 (7.9)	1.00 (25.4)	0.94 (23.8)
1/2	1/2	SS-LM-FH8-NS8	1.85 (47.1)	1.38 (34.9)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)
9/16	1/2	SS-LM-FH9-NS8	2.20 (55.9)	1.56 (39.5)	1.70 (43.2)	0.41 (10.4)	1.38 (34.9)	1.06 (27.0)
3/4	1/2	SS-LM-FH12-NS8	2.82 (71.6)	1.73 (44.0)	2.20 (55.8)	0.41 (10.4)	1.50 (38.1)	1.38 (34.9)
3/4	3/4	SS-LM-FH12-NS12	2.82 (71.6)	1.73 (44.0)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)

Union Tees



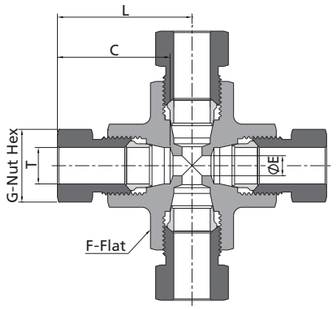
Tube						
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)				
		L	C	E	F	G
1/8	SS-TTT-FH2	1.19 (30.3)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/4	SS-TTT-FH4	1.52 (38.7)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
3/8	SS-TTT-FH6	1.54 (39.0)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
1/2	SS-TTT-FH8	1.85 (47.1)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)
9/16	SS-TTT-FH9	2.20 (55.9)	1.70 (43.2)	0.41 (10.4)	1.38 (34.9)	1.06 (27.0)
3/4	SS-TTT-FH12	2.82 (71.6)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)

Male Branch Tees



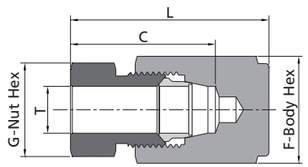
Tube								NPT Thread
T - Tube O.D. in.	P - NPT Size	Ordering Number	Dimensions, in. (mm)					
			L	Lx	C	E	F	G
1/8	1/8	SS-TTM-FH2-NS2	1.19 (30.3)	0.79 (20.0)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/8	1/4	SS-TTM-FH2-NS4	1.19 (30.3)	1.00 (25.4)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/4	1/8	SS-TTM-FH4-NS2	1.52 (38.7)	0.81 (20.6)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
1/4	1/4	SS-TTM-FH4-NS4	1.52 (38.7)	1.00 (25.4)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
3/8	1/4	SS-TTM-FH6-NS4	1.54 (39.0)	1.06 (27.0)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
1/2	1/4	SS-TTM-FH8-NS4	1.85 (47.1)	1.19 (30.2)	1.38 (35.1)	0.25 (6.4)	1.00 (25.4)	0.94 (23.8)
1/2	3/8	SS-TTM-FH8-NS6	1.85 (47.1)	1.19 (30.2)	1.38 (35.1)	0.31 (7.9)	1.00 (25.4)	0.94 (23.8)
3/4	3/4	SS-TTM-FH12-NS12	2.82 (71.6)	1.73 (44.0)	2.20 (55.8)	0.56 (14.2)	1.50 (38.1)	1.38 (34.9)

Union Crosses



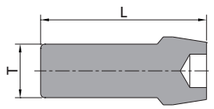
Tube						
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)				
		L	C	E	F	G
1/8	SS-C-FH2	1.19 (30.3)	0.91 (23.1)	0.09 (2.4)	0.63 (15.9)	0.37 (9.5)
1/4	SS-C-FH4	1.52 (38.7)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)
3/8	SS-C-FH6	1.54 (39.0)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)
1/2	SS-C-FH8	1.85 (47.1)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)

Caps



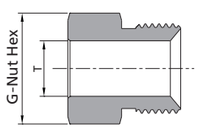
Tube					
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)			
		L	C	F	G
1/8	SS-TC-FH2	1.06 (27.1)	0.91 (23.1)	0.50 (12.7)	0.37 (9.5)
1/4	SS-TC-FH4	1.52 (38.7)	1.21 (30.8)	0.63 (15.9)	0.63 (15.9)
3/8	SS-TC-FH6	1.63 (41.4)	1.29 (32.7)	0.75 (19.1)	0.75 (19.1)
1/2	SS-TC-FH8	1.85 (47.1)	1.38 (35.1)	1.00 (25.4)	0.94 (23.8)
9/16	SS-TC-FH9	2.24 (56.9)	1.70 (43.2)	1.13 (28.6)	1.06 (27.0)
3/4	SS-TC-FH12	2.93 (74.4)	2.20 (55.8)	1.50 (38.1)	1.38 (34.9)

Plugs



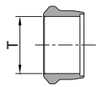
Tube		
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)
		L
1/8	SS-TP-FH2	0.80 (20.2)
1/4	SS-TP-FH4	1.02 (26.0)
3/8	SS-TP-FH6	1.06 (26.9)
1/2	SS-TP-FH8	1.19 (30.1)
9/16	SS-TP-FH9	1.56 (39.5)
3/4	SS-TP-FH12	2.08 (52.8)

Nuts



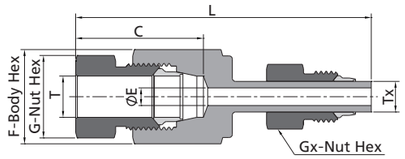
Tube		
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)
		G
1/8	SS-N-FH2	0.37 (9.5)
1/4	SS-N-FH4	0.63 (15.9)
3/8	SS-N-FH6	0.75 (19.1)
1/2	SS-N-FH8	0.94 (23.8)
9/16	SS-N-FH9	1.06 (27.0)
3/4	SS-N-FH12	1.38 (34.9)

Ferrules



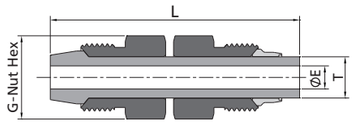
Tube	
T - Tube O.D. in.	Ordering Number
1/8	SS-FE-FH2
1/4	SS-FE-FH4
3/8	SS-FE-FH6
1/2	SS-FE-FH8
9/16	SS-FE-FH9
3/4	SS-FE-FH12

Reducers



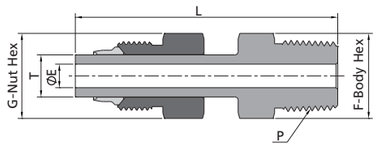
Tube							
T - Tube O.D. in.	Tx - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)				
			L	C	E	F	G	Gx
1/4	3/8	SS-R-FH4-FM6	2.89 (73.4)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)	0.75 (19.1)
1/4	1/2	SS-R-FH4-FM8	3.02 (76.6)	1.21 (30.8)	0.19 (4.8)	0.63 (15.9)	0.63 (15.9)	0.94 (23.8)
3/8	1/2	SS-R-FH6-FM8	3.12 (79.3)	1.29 (32.7)	0.25 (6.4)	0.75 (19.1)	0.75 (19.1)	0.94 (23.8)
1/2	3/8	SS-R-FH8-FM6	3.22 (81.9)	1.38 (35.1)	0.21 (5.3)	1.00 (25.4)	0.94 (23.8)	0.75 (19.1)
1/2	3/4	SS-R-FH8-FM12	4.66 (118.4)	1.38 (35.1)	0.37 (9.5)	1.00 (25.4)	0.94 (23.8)	1.38 (34.9)
9/16	3/4	SS-R-FH9-FM12	4.79 (121.7)	1.70 (43.2)	0.41 (10.4)	1.13 (28.6)	1.06 (27.0)	1.38 (34.9)
3/4	9/16	SS-R-FH12-FM9	4.93 (125.2)	2.20 (55.8)	0.31 (7.9)	1.50 (38.1)	1.38 (34.9)	1.06 (27.0)

Port Connectors



Tube				
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)		
		L	E	G
1/8	SS-P-FH2	1.74 (44.2)	0.06 (1.6)	0.37 (9.5)
1/4	SS-P-FH4	2.28 (57.8)	0.12 (3.0)	0.63 (15.9)
3/8	SS-P-FH6	2.39 (60.8)	0.21 (5.3)	0.75 (19.1)
1/2	SS-P-FH8	2.62 (66.5)	0.28 (7.1)	0.94 (23.8)
9/16	SS-P-FH9	3.31 (84.0)	0.31 (7.9)	1.06 (27.0)
3/4	SS-P-FH12	4.17 (105.8)	0.42 (10.7)	1.38 (34.9)

Adapters



Tube						NPT Thread
T - Tube O.D. in.	P - NPT Size	Ordering Number	Dimensions, in. (mm)			
			L	E	F	G
1/4	1/4	SS-AM-FM4-NS4	2.13 (54.1)	0.12 (3.0)	0.56 (14.3)	0.63 (15.9)
3/8	1/4	SS-AM-FM6-NS4	2.24 (57.0)	0.21 (5.3)	0.56 (14.3)	0.75 (19.1)
3/8	1/2	SS-AM-FM6-NS8	2.54 (64.5)	0.21 (5.3)	0.87 (22.2)	0.75 (19.1)
1/2	1/4	SS-AM-FM8-NS4	2.37 (60.3)	0.25 (6.4)	0.56 (14.3)	0.94 (23.8)
1/2	1/2	SS-AM-FM8-NS8	2.67 (67.7)	0.28 (7.1)	0.87 (22.2)	0.94 (23.8)
9/16	1/2	SS-AM-FM9-NS8	3.41 (86.5)	0.31 (7.9)	0.87 (22.2)	1.06 (27.0)
3/4	3/4	SS-AM-FM12-NS12	3.92 (99.6)	0.39 (10.0)	1.06 (27.0)	1.38 (34.9)

Note: Dimensions are for reference only, subject to change.