

# Medium Pressure Tube Fittings and Tubing

20,000 psig (1379 bar)



Medium & High Pressure  
Fittings and Tubing

Quick Couplings

Medium & High Pressure  
Valves

Line Filters

Sour Service Products

Subsea Valves

Tools and Installation  
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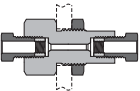
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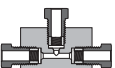
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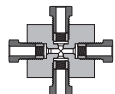
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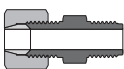
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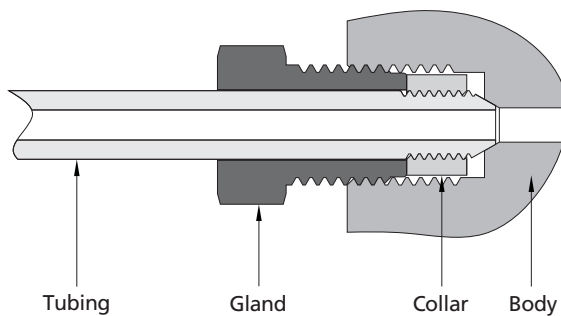
Technical Information

# Tube Fittings

## Features

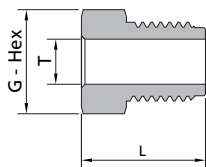
- ⦿ Maximum working pressure: 20,000 psig (1379 bar)
- ⦿ Working temperature range: -423°F to 1200°F (-252°C to 649°C)
- ⦿ Use with medium pressure tubing as standard
- ⦿ Coned-and-threaded connection
- ⦿ Tubing sizes available in 1/4", 3/8", 9/16", 3/4" and 1"
- ⦿ High tensile 316 Stainless Steel as raw material
- ⦿ Anti-vibration connection components available
- ⦿ Easy to disconnect and retighten
- ⦿ Metal-to-metal seal to provide perfect leak-tight service for working conditions from critical vacuum to medium pressure
- ⦿ Every fitting marked with size, material and heat number

## Construction



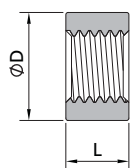
## Ordering Information and Dimensions

### Glands



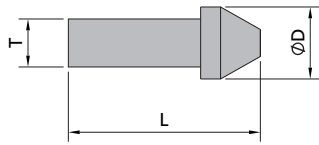
Tube			
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)	
		G	L
1/4	SS-G-2FH4	0.50 (12.7)	0.58 (14.7)
3/8	SS-G-2FH6	0.63 (15.9)	0.73 (18.5)
9/16	SS-G-2FH9	0.94 (23.8)	0.88 (22.4)
3/4	SS-G-2FH12	1.19 (30.2)	1.00 (25.4)
1	SS-G-2FH16	1.38 (34.9)	1.38 (35.1)

### Collars



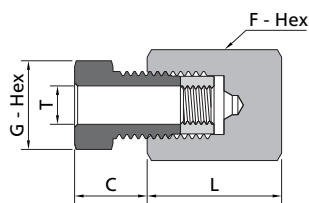
Tube			
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)	
		D	L
1/4	SS-CO-2FH4	0.38 (9.7)	0.22 (5.6)
3/8	SS-CO-2FH6	0.47 (11.9)	0.25 (6.4)
9/16	SS-CO-2FH9	0.72 (18.3)	0.31 (7.9)
3/4	SS-CO-2FH12	0.94 (23.8)	0.37 (9.4)
1	SS-CO-2FH16	1.25 (31.8)	0.50 (12.7)

### Plugs



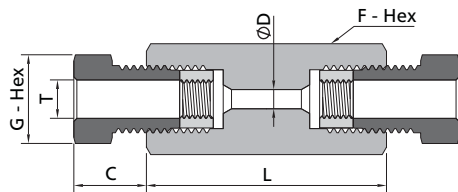
Tube			
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)	
		D	L
1/4	SS-TP-2FH4	0.38 (9.7)	0.94 (23.8)
3/8	SS-TP-2FH6	0.47 (11.9)	1.18 (30.0)
9/16	SS-TP-2FH9	0.72 (18.3)	1.40 (35.6)
3/4	SS-TP-2FH12	0.94 (23.8)	1.69 (42.9)
1	SS-TP-2FH16	1.25 (31.8)	2.20 (55.9)

### Caps



Tube					
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)			
		L	C	G	F
1/4	SS-TC-2FH4	0.81 (20.6)	0.38 (9.7)	0.50 (12.7)	0.63 (15.9)
3/8	SS-TC-2FH6	1.13 (28.6)	0.44 (11.2)	0.63 (15.9)	0.75 (19.1)
9/16	SS-TC-2FH9	1.38 (34.9)	0.55 (14.0)	0.94 (23.8)	1.00 (25.4)
3/4	SS-TC-2FH12	1.75 (44.5)	0.60 (15.2)	1.19 (30.2)	1.38 (34.9)
1	SS-TC-2FH16	2.25 (57.2)	0.74 (18.7)	1.38 (34.9)	1.75 (44.5)

### Unions



Tube						
T - Tube O.D. in.	Ordering Number	Dimensions, in. (mm)				
		L	C	D	G	F
1/4	SS-U-2FH4	1.62 (41.1)	0.38 (9.7)	0.11 (2.8)	0.50 (12.7)	0.63 (15.9)
3/8	SS-U-2FH6	1.75 (44.5)	0.44 (11.2)	0.20 (5.1)	0.63 (15.9)	0.75 (19.1)
9/16	SS-U-2FH9	2.14 (54.3)	0.55 (14.0)	0.31 (7.9)	0.94 (23.8)	1.00 (25.4)
3/4	SS-U-2FH12	2.50 (63.5)	0.60 (15.2)	0.44 (11.1)	1.19 (30.2)	1.38 (34.9)
1	SS-U-2FH16	3.50 (88.9)	0.74 (18.7)	0.56 (14.3)	1.38 (34.9)	1.75 (44.5)

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Line Filters

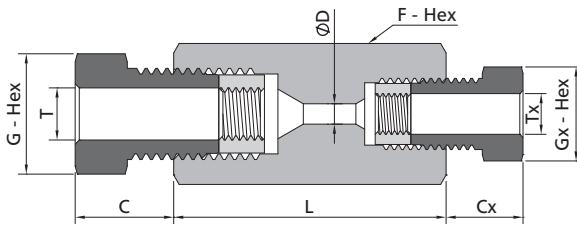
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Subsea Valves

Tools and Installation Instructions

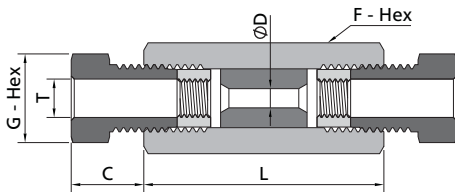
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## Reducing Unions



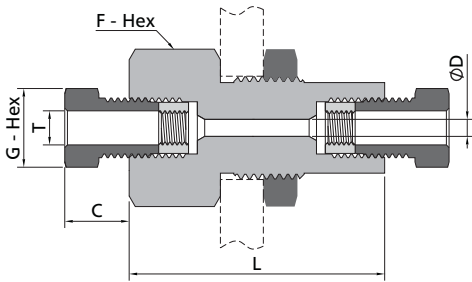
Tube			Dimensions, in. (mm)						
T - Tube O.D. in.	Tx - Tube O.D. in.	Ordering Number	L	C	Cx	D	G	Gx	F
3/8	1/4	SS-U-2FH6-2FH4	1.75 (44.5)	0.44 (11.2)	0.38 (9.7)	0.11 (2.8)	0.63 (15.9)	0.50 (12.7)	0.75 (19.1)
9/16	1/4	SS-U-2FH9-2FH4	2.00 (50.8)	0.55 (14.0)	0.38 (9.7)	0.11 (2.8)	0.94 (23.8)	0.50 (12.7)	1.00 (25.4)
9/16	3/8	SS-U-2FH9-2FH6	2.00 (50.8)	0.55 (14.0)	0.44 (11.2)	0.20 (5.1)	0.94 (23.8)	0.63 (15.9)	1.00 (25.4)
3/4	1/4	SS-U-2FH12-2FH4	2.25 (57.2)	0.60 (15.2)	0.38 (9.7)	0.11 (2.8)	1.19 (30.2)	0.50 (12.7)	1.38 (34.9)
3/4	3/8	SS-U-2FH12-2FH6	2.25 (57.2)	0.60 (15.2)	0.44 (11.2)	0.20 (5.1)	1.19 (30.2)	0.63 (15.9)	1.38 (34.9)
3/4	9/16	SS-U-2FH12-2FH9	2.50 (63.5)	0.60 (15.2)	0.55 (14.0)	0.31 (7.9)	1.19 (30.2)	0.94 (23.8)	1.38 (34.9)
1	1/4	SS-U-2FH16-2FH4	2.75 (69.9)	0.74 (18.7)	0.38 (9.7)	0.11 (2.8)	1.38 (34.9)	0.50 (12.7)	1.75 (44.5)
1	3/8	SS-U-2FH16-2FH6	2.88 (73.0)	0.74 (18.7)	0.44 (11.2)	0.20 (5.1)	1.38 (34.9)	0.63 (15.9)	1.75 (44.5)
1	9/16	SS-U-2FH16-2FH9	3.00 (76.2)	0.74 (18.7)	0.55 (14.0)	0.31 (7.9)	1.38 (34.9)	0.94 (23.8)	1.75 (44.5)
1	3/4	SS-U-2FH16-2FH12	3.00 (76.2)	0.74 (18.7)	0.60 (15.2)	0.44 (11.1)	1.38 (34.9)	1.19 (30.2)	1.75 (44.5)

## Unions (Slip Type)



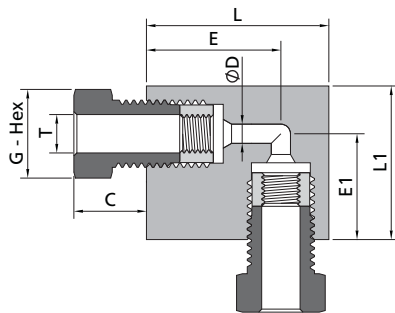
Tube		Dimensions, in. (mm)				
T - Tube O.D. in.	Ordering Number	L	C	D	G	F
1/4	SS-SU-2FH4	1.62 (41.1)	0.38 (9.7)	0.11 (2.8)	0.50 (12.7)	0.63 (15.9)
3/8	SS-SU-2FH6	1.75 (44.5)	0.44 (11.2)	0.20 (5.1)	0.63 (15.9)	0.75 (19.1)
9/16	SS-SU-2FH9	2.14 (54.3)	0.55 (14.0)	0.31 (7.9)	0.94 (23.8)	1.00 (25.4)
3/4	SS-SU-2FH12	2.50 (63.5)	0.60 (15.2)	0.44 (11.1)	1.19 (30.2)	1.38 (34.9)
1	SS-SU-2FH16	3.50 (88.9)	0.74 (18.7)	0.56 (14.3)	1.38 (34.9)	1.75 (44.5)

### Bulkhead Unions



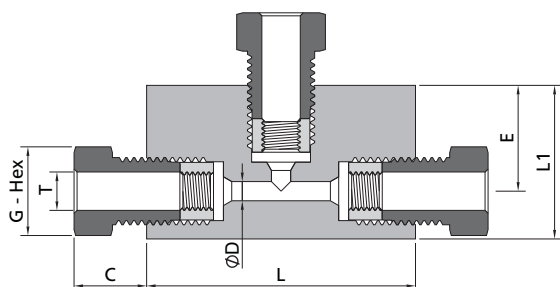
Tube		Dimensions, in. (mm)						
T - Tube O.D. in.	Ordering Number	L	C	D	G	F	Panel Hole Size	Max. Panel Thickness
1/4	SS-BU-2FH4	1.88 (47.8)	0.38 (9.7)	0.11 (2.8)	0.50 (12.7)	1.00 (25.4)	0.81 (20.6)	0.38 (9.7)
3/8	SS-BU-2FH6	2.00 (50.8)	0.44 (11.2)	0.20 (5.1)	0.63 (15.9)	1.06 (27.0)	0.94 (23.9)	0.38 (9.7)
9/16	SS-BU-2FH9	2.38 (60.5)	0.55 (14.0)	0.31 (7.9)	0.94 (23.8)	1.38 (34.9)	1.13 (28.6)	0.38 (9.7)
3/4	SS-BU-2FH12	2.62 (66.5)	0.60 (15.2)	0.44 (11.1)	1.19 (30.2)	1.88 (47.6)	1.69 (42.9)	0.38 (9.7)
1	SS-BU-2FH16	3.50 (88.9)	0.74 (18.7)	0.56 (14.3)	1.38 (34.9)	2.13 (54.0)	1.94 (49.3)	0.38 (9.7)

### Union Elbows



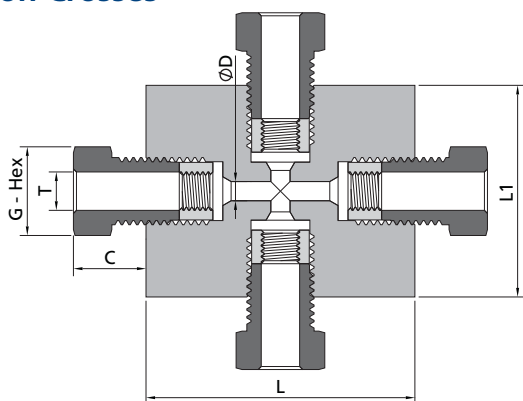
Tube		Dimensions, in. (mm)							
T - Tube O.D. in.	Ordering Number	C	D	G	L	E	L1	E1	Thickness
1/4	SS-LU-2FH4	0.38 (9.7)	0.11 (2.8)	0.50 (12.7)	1.12 (28.4)	0.75 (19.1)	1.12 (28.4)	0.75 (19.1)	0.63 (15.9)
3/8	SS-LU-2FH6	0.44 (11.2)	0.20 (5.1)	0.63 (15.9)	1.38 (34.9)	1.00 (25.4)	1.38 (34.9)	1.00 (25.4)	0.75 (19.1)
9/16	SS-LU-2FH9	0.55 (14.0)	0.31 (7.9)	0.94 (23.8)	1.75 (44.5)	1.25 (31.8)	1.75 (44.5)	1.25 (31.8)	1.00 (25.4)
3/4	SS-LU-2FH12	0.60 (15.2)	0.44 (11.1)	1.19 (30.2)	2.25 (57.2)	1.50 (38.1)	2.25 (57.2)	1.50 (38.1)	1.38 (34.9)
1	SS-LU-2FH16	0.74 (18.7)	0.56 (14.3)	1.38 (34.9)	3.00 (76.2)	2.06 (52.3)	3.00 (76.2)	2.06 (52.3)	1.75 (44.5)

## Union Tees



Tube		Dimensions, in. (mm)						
T - Tube O.D. in.	Ordering Number	C	D	G	L	L1	E	Thickness
1/4	SS-TTT-2FH4	0.38 (9.7)	0.11 (2.8)	0.50 (12.7)	1.50 (38.1)	1.12 (28.4)	0.75 (19.1)	0.63 (15.9)
3/8	SS-TTT-2FH6	0.44 (11.2)	0.20 (5.1)	0.63 (15.9)	2.00 (50.8)	1.38 (34.9)	1.00 (25.4)	0.75 (19.1)
9/16	SS-TTT-2FH9	0.55 (14.0)	0.31 (7.9)	0.94 (23.8)	2.50 (63.5)	1.75 (44.5)	1.25 (31.8)	1.00 (25.4)
3/4	SS-TTT-2FH12	0.60 (15.2)	0.44 (11.1)	1.19 (30.2)	3.00 (76.2)	2.25 (57.2)	1.50 (38.1)	1.38 (34.9)
1	SS-TTT-2FH16	0.74 (18.7)	0.56 (14.3)	1.38 (34.9)	4.12 (104.6)	3.00 (76.2)	2.06 (52.3)	1.75 (44.5)

## Union Crosses



Tube		Dimensions, in. (mm)					
T - Tube O.D. in.	Ordering Number	C	D	G	L	L1	Thickness
1/4	SS-C-2FH4	0.38 (9.7)	0.11 (2.8)	0.50 (12.7)	1.50 (38.1)	1.50 (38.1)	0.63 (15.9)
3/8	SS-C-2FH6	0.44 (11.2)	0.20 (5.1)	0.63 (15.9)	2.00 (50.8)	2.00 (50.8)	0.75 (19.1)
9/16	SS-C-2FH9	0.55 (14.0)	0.31 (7.9)	0.94 (23.8)	2.50 (63.5)	2.50 (63.5)	1.00 (25.4)
3/4	SS-C-2FH12	0.60 (15.2)	0.44 (11.1)	1.19 (30.2)	3.00 (76.2)	3.00 (76.2)	1.38 (34.9)
1	SS-C-2FH16	0.74 (18.7)	0.56 (14.3)	1.38 (34.9)	4.12 (104.6)	4.12 (104.6)	1.75 (44.5)

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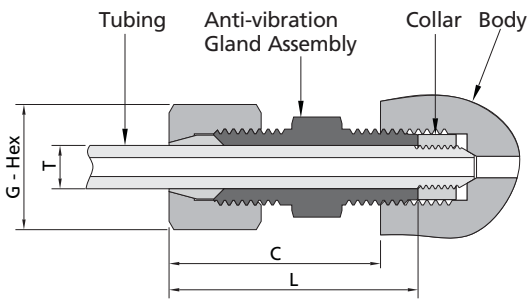
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## Anti-vibration Gland Assemblies

The extreme vibration or shock in tubing systems, such as mobile pressure systems or long tubing runs culminating at a compressor are subjected to, will be prevented by using FITOK Anti-vibration Gland Assemblies. These assemblies provide the same reliable connection as standard FITOK glands to essentially prolong vibrational fatigue life.

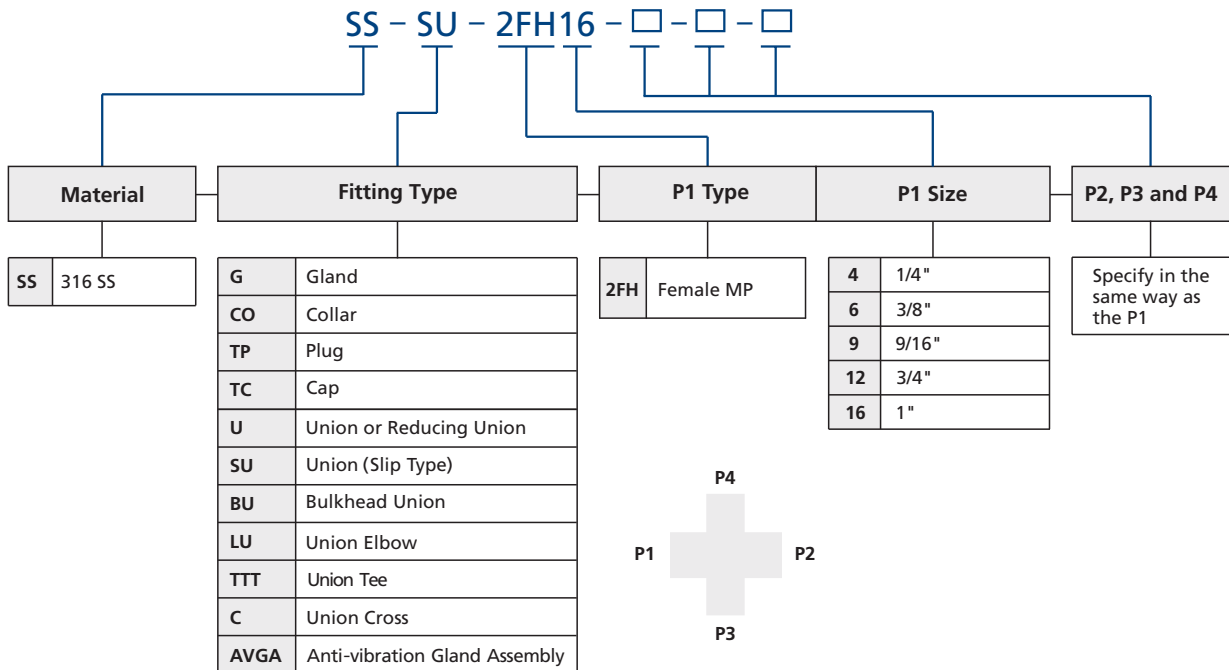
A coned and threaded tubing, when subjected to unusual or excessive vibration, may fail prematurely and break at the last thread. FITOK Anti-vibration Gland Assembly acts to move the fulcrum of vibration away from the threaded part of the tubing onto the strong, solid wall of the tubing. A wedge-like collet firmly holds the assembly in place, virtually eliminating premature tubing failure while reliably maintaining a leakage-free connection between the tubing and the connection seat.



Tube		Dimensions, in. (mm)		
T - Tube O.D. in.	Ordering Number	L	C	G
1/4	SS-AVGA-2FH4	1.24 (31.6)	1.05 (26.7)	0.63 (15.9)
3/8	SS-AVGA-2FH6	1.50 (38.1)	1.22 (30.9)	0.81 (20.6)
9/16	SS-AVGA-2FH9	1.78 (45.2)	1.42 (36.0)	0.94 (23.8)
3/4	SS-AVGA-2FH12	2.00 (50.8)	1.61 (40.8)	1.38 (34.9)
1	SS-AVGA-2FH16	2.38 (60.5)	1.74 (44.3)	1.50 (38.1)

NOTE: Dimensions are for reference only and are subject to change.

## Ordering Number Description



- P1, P2, P3 and P4 shall be described in the following orders:
- ⊙ Describe in descending order as per size if the end connection types are the same
  - ⊙ Describe the end of P1 if all end connections are the same

NOTE: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available.

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# Tubing

## Features

- ⦿ Cold drawn 316/316L Stainless Steel seamless tubing
- ⦿ Working temperature range: -423°F to 1200°F (-252°C to 649°C)
- ⦿ Every tubing marked with material, size and heat number
- ⦿ Use with medium pressure tube fittings

## Ordering Information and Dimensions

Tube O.D. in.	Tube I.D. in.	Material Grade	Basic Ordering Number	Max./Min. O.D. in. (mm)
1/4	0.109	316/316L	SS-MT-2FH4-	0.248/0.243 (6.30/6.17)
3/8	0.203	316/316L	SS-MT-2FH6-	0.370/0.365 (9.40/9.27)
9/16	0.312	316/316L	SS-MT-2FH9-	0.557/0.552 (14.15/14.02)
3/4	0.438	316/316L	SS-MT-2FH12-	0.745/0.740 (18.92/18.80)
1	0.562	316/316L	SS-MT-2FH16-	0.995/0.990 (25.27/25.14)



Add the length designator as a suffix to the basic ordering number to get the complete ordering number. The length designator "-10" means 10 feet. The length designator "-6M" means 6 meters.

Examples:

1. If 10 feet of 3/8" O.D. tubing is needed, the complete ordering number is SS-MT-2FH6-10.
2. If 6 meters of 3/4" O.D. tubing is needed, the complete ordering number is SS-MT-2FH12-6M.

The tubing is available in random lengths but no more than 20 feet (6 meters).

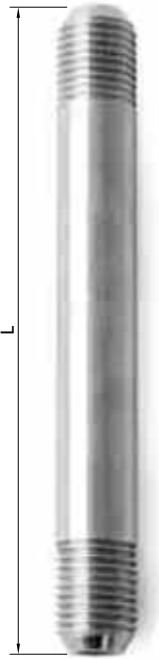
## Working Pressure

Tube O.D. in.	Working Pressure, psig (bar)				
	-423 to 100°F (-252 to 37.8°C)	200°F (93°C)	400°F (204°C)	600°F (316°C)	800°F (427°C)
1/4	20,000 (1379)	20,000 (1379)	19,250 (1327)	18,050 (1244)	16,800 (1158)
3/8	20,000 (1379)	20,000 (1379)	19,250 (1327)	18,050 (1244)	16,800 (1158)
9/16	20,000 (1379)	20,000 (1379)	19,250 (1327)	18,050 (1244)	16,800 (1158)
3/4	20,000 (1379)	20,000 (1379)	19,250 (1327)	18,050 (1244)	16,800 (1158)
1	20,000 (1379)	20,000 (1379)	19,250 (1327)	18,050 (1244)	16,800 (1158)

Data in this table are applied only to the working temperature below 800°F (427°C). For the working temperature above 800°F (427°C), please contact FITOK Group or our authorized distributors.

## Coned and Threaded Nipples

- ⦿ Machined from medium pressure tubing
- ⦿ For 1/4", 3/8" and 9/16" O.D. medium pressure tubing, manual coning and threading tools can be used to make nipples



Tube O.D. in.	Tube I.D. in.	Ordering Number	L in. (mm)
1/4	0.109	SS-CTN-2FH4-2.75	2.75 (69.9)
1/4	0.109	SS-CTN-2FH4-3	3 (76.2)
1/4	0.109	SS-CTN-2FH4-4	4 (101.6)
1/4	0.109	SS-CTN-2FH4-6	6 (152.4)
1/4	0.109	SS-CTN-2FH4-8	8 (203.2)
1/4	0.109	SS-CTN-2FH4-10	10 (254.0)
1/4	0.109	SS-CTN-2FH4-12	12 (304.8)
3/8	0.203	SS-CTN-2FH6-3	3 (76.2)
3/8	0.203	SS-CTN-2FH6-4	4 (101.6)
3/8	0.203	SS-CTN-2FH6-6	6 (152.4)
3/8	0.203	SS-CTN-2FH6-8	8 (203.2)
3/8	0.203	SS-CTN-2FH6-10	10 (254.0)
3/8	0.203	SS-CTN-2FH6-12	12 (304.8)
9/16	0.312	SS-CTN-2FH9-4	4 (101.6)
9/16	0.312	SS-CTN-2FH9-6	6 (152.4)
9/16	0.312	SS-CTN-2FH9-8	8 (203.2)
9/16	0.312	SS-CTN-2FH9-10	10 (254.0)
9/16	0.312	SS-CTN-2FH9-12	12 (304.8)
3/4	0.438	SS-CTN-2FH12-4	4 (101.6)
3/4	0.438	SS-CTN-2FH12-6	6 (152.4)
3/4	0.438	SS-CTN-2FH12-8	8 (203.2)
3/4	0.438	SS-CTN-2FH12-10	10 (254.0)
3/4	0.438	SS-CTN-2FH12-12	12 (304.8)
1	0.562	SS-CTN-2FH16-6	6 (152.4)
1	0.562	SS-CTN-2FH16-8	8 (203.2)
1	0.562	SS-CTN-2FH16-10	10 (254.0)
1	0.562	SS-CTN-2FH16-12	12 (304.8)

## Installation Instructions

Please see G-07.

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FK-IC-HF-02-EN-170613