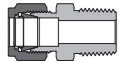
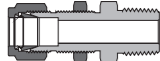
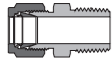
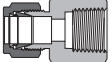
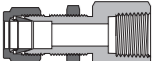
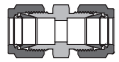

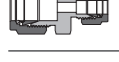
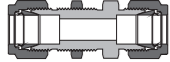
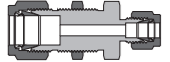
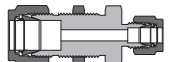



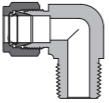
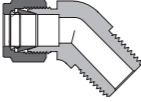
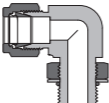
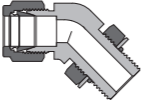
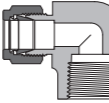
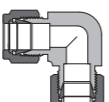
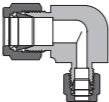
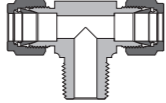
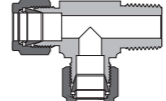
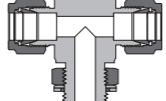
# Tube Fittings, Tubes and Pipes

F Series

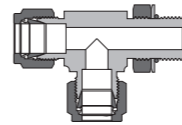
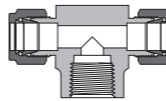
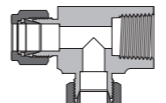
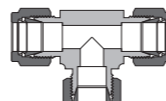
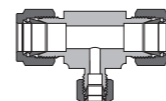
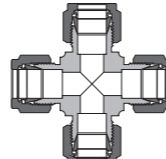



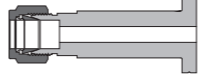











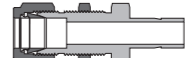
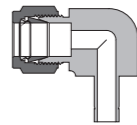

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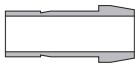
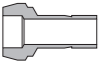
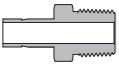
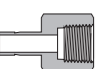

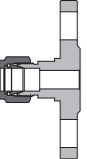

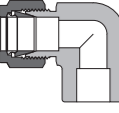
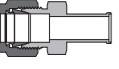

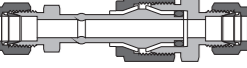

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## Features

- ☆ Sizes range from 1/16" to 1 1/2" and 2 mm to 38 mm.
- ☆ Live-loaded, two-ferrule design.
- ☆ Precision machined components ensure perfect deformation of the ferrules and tubing.
- ☆ Fittings are easy to disconnect and retighten.
- ☆ Hardened threads with smooth surface finish avoid galling and help to extend the fitting service life.
- ☆ Female nut threads are silver-plated to reduce the friction against the body threads.
- ☆ Radius junction design with elbows provides smooth flow path.
- ☆ Every fitting is stamped with size, material, and heat code.
- ☆ Diverse materials and configurations are available.

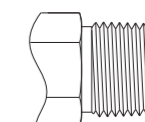
## Technical Data

### ☆ Thread Ends

#### NPT Threads (NPT)

- ☆ Comply with ASME B1.20.1, SAE As71051.
- ☆ Installation torque suggested by FINELOK.

Thread Data						
Thread Size	Thread/in.	Dia. at Reference Plane (mm)			Handtight Engagement (mm)	Required Torque N·m(lbf·in)
		Max. Dia.	Pitch Dia.	Min. Dia.		
1/16	27	7.894	7.142	6.389	4.064	—
1/8		10.242	9.489	8.737	4.102	9 (79.6)
1/4	18	13.616	12.487	11.358	5.785	15 (132.8)
3/8		17.055	15.926	14.797	6.096	25 (221.3)
1/2	14	21.224	19.772	18.321	8.128	35 (309.8)
3/4		26.569	25.117	23.666	8.618	50 (442.5)
1	11.5	33.228	31.461	29.694	10.160	55 (486.8)
1 1/4		41.985	40.218	38.451	10.668	60 (531)
1 1/2		48.054	46.287	44.520	10.668	70 (619.5)
2		60.092	58.325	56.558	11.065	75 (663.8)



- 60° thread angle
- Pitch measured in inch
- Truncation of root and crest are parallel
- Taper 1:16
- Type of sealing: thread sealant

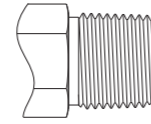
Working Pressures of NPT Thread Ends								
Thread Size	316 Stainless Steel and Carbon Steel				Brass			
	Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar
1/16	11000	757	6700	460	5500	378	3300	227
1/8	10000	689	6500	447	5000	344	3200	220
1/4	8000	551	6600	454	4000	275	3300	227
3/8	7800	537	5300	365	3900	268	2600	179
1/2	7700	530	4900	337	3800	261	2400	165
3/4	7300	502	4600	316	3600	248	2300	158
1	5300	365	4400	303	2600	179	2200	151
1 1/4	6000	410	5000	344	3000	200	2500	172
1 1/2	5000	344	4600	317	2500	172	2300	158
2	3900	268	3900	268	1900	130	1900	130

Working pressure is based on ANSI/ASME B31.3 at ambient temperature.

ISO Tapered Threads (R, R1, R2, Rc, RT, PT, BSPT, ZG)

- ☆ Comply with ISO 7-1, EN 10226-1, BS 21, DIN 2999, JIS B0203.
- ☆ The installation torque is the same as that of NPT thread ends.

Thread Data					
Thread Size	Thread/in.	Dia. at Reference Plane (mm)			Gauge Length
		Max. Dia.	Pitch Dia.	Min. Dia.	
1/16	28	7.723	7.142	6.561	4.0
1/8		9.728	9.147	8.566	4.0
1/4	19	13.157	12.301	11.445	6.0
3/8		16.662	15.806	14.950	6.4
1/2	14	20.955	19.793	18.631	8.2
3/4		26.441	25.279	24.117	9.5
1	11	33.249	31.770	30.291	10.4
1 1/4		41.910	40.431	38.952	12.7
1 1/2		47.803	46.324	44.845	12.7
2		59.614	58.135	56.656	15.9



- 55° thread angle
- Pitch measured in inch
- Truncation of root and crest are round
- Taper 1:16
- Type of sealing: thread sealant

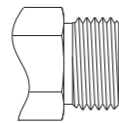
Working Pressures of ISO Tapered Thread Ends

The working pressures of ISO tapered thread ends are the same with that of the NPT thread ends.

ISO Parallel Threads (G, RP, PF, BSPP)

Comply with ISO 228-1, DIN ISO 228-1, JIS B0202, BS 2779.

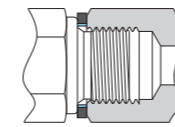
Thread Data				
Thread Size	Thread/in.	Basic Dia. (mm)		
		Max. Dia.	Pitch Dia.	Min. Dia.
1/16	28	7.723	7.142	6.561
1/8		9.728	9.147	8.566
1/4	19	13.157	12.301	11.445
3/8		16.662	15.806	14.950
1/2	14	20.955	19.793	18.631
5/8		22.911	21.749	20.587
3/4		26.441	25.279	24.117
7/8		30.201	29.039	27.877
1	11	33.249	31.770	30.291
1 1/8		37.897	36.418	34.939
1 1/4		41.910	40.431	38.952
1 1/2		47.803	46.324	44.845
1 3/4		53.746	52.267	50.788
2		59.614	58.135	56.656



- 60° thread angle
- Pitch measured in inch
- Truncation of root and crest are round

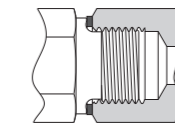
Types of Sealing for ISO parallel threads

1. RS Stud End, RS Gasket and RP Port



- RS stud end complies with DIN 3852-2 type A
- For RS gasket, see page 82
- RP port complies with DIN 3852-2 type X

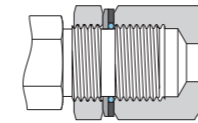
2. RP Stud End, RP Gasket and RP Port



- RP studs end complies with DIN 3852-2 type B
- For RP gasket, see page 83
- RP port complies with DIN 3852-2 type X

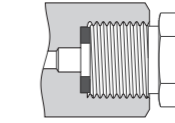
The RP gasket can be used with a RS fitting

3. PP Stud End and RP Port



- RP port complies with DIN 3852-2 type X

4. RG Port, RG Gasket and BP Stud End



- RG port complies with EN 837-1/3
- For RG gasket, see page 83

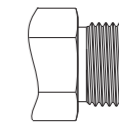
Working Pressures of Adjustable ISO Parallel Thread Ends(PP)

Thread Size	316 Stainless Steel and Carbon Steel	
	psig	bar
1/8	4568	315
1/4		
3/8		
1/2	2320	160
3/4		
1		

SAE/MS Straight Threads (UN, UNJ)

Comply with ASME B1.1, ISO R725.

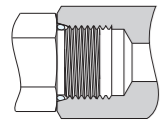
Thread Data				
Thread Size	Thread/in.	Basic Dia. (mm)		
		Max. Dia.	Pitch Dia.	Min. Dia.
5/16-24	24	7.938	7.249	6.792
3/8-24	24	9.525	8.837	8.380
7/16-20	20	11.113	10.287	9.738
1/2-20	20	12.700	11.875	11.326
9/16-18	18	14.288	13.325	12.761
3/4-16	16	19.050	18.019	17.330
7/8-14	14	22.225	21.046	20.262
1 1/16-12	12	26.988	25.613	24.719
1 3/16-12	12	30.163	28.788	27.871
1 5/16-12	12	33.338	31.963	31.046
1 5/8-12	12	41.275	39.901	38.984
1 7/8-12	12	47.625	46.251	45.324
2 1/2-12	12	63.500	62.126	61.209



- 60° thread angle
- Pitch measured in inch
- Truncation of root and crest are parallel

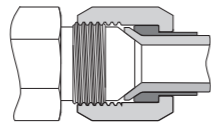
**Types of Sealing for SAE/MS threads**

1. ST Stud End and ISO 11926-1 Port



- ST stud end complies with ISO 11926-3
- For O-ring, see page 84

2. 37° Flare (AN) Stud and Flared Tubing



- The type of sealing complies with SAE J514

**Working Pressures of SAE/MS Thread Ends**

Thread Size	316 Stainless Steel and Carbon Steel					
	Non-adjustable		Adjustable			
	psig	bar	psig	bar		
5/16-24	4568	315	4568	315		
3/8-24						
7/16-20						
1/2-20			3626	250		
9/16-18						
3/4-16	3626	250	2900	200		
7/8-14						
1 1/16-12			2900	200	2320	160
1 3/16-12						
1 5/16-12						
1 5/8-12	2320	160	1813	125		
1 7/8-12						
2 1/2-12	1813	125	1450	100		

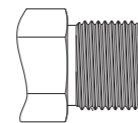
Working pressures are based on ISO 11926-3 at ambient temperature.

**Metric Threads (M)**

Comply with ISO 261.

**Thread Data**

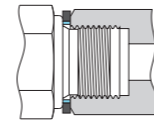
Thread Size	Pitch (mm)	Basic Dia. (mm)		
		Max. Dia.	Pitch Dia.	Min. Dia.
M6 x 1	1	6.000	5.350	4.917
M8 x 1		8.000	7.350	6.917
M10 x 1		10.000	9.350	8.917
M12 x 1.5	1.5	12.000	11.026	10.376
M14 x 1.5		14.000	13.026	12.376
M16 x 1.5		16.000	15.026	14.376
M18 x 1.5		18.000	17.026	16.376
M20 x 1.5		20.000	19.026	18.376
M22 x 1.5		22.000	21.026	20.376
M24 x 1.5		24.000	23.026	22.376
M27 x 2	2	27.000	25.701	24.835
M30 x 2		30.000	28.701	27.835
M33 x 2		33.000	31.701	30.835
M36 x 2		36.000	34.701	33.835
M39 x 2		39.000	37.701	36.835
M42 x 2		42.000	40.701	39.835
M45 x 2		45.000	43.701	42.835
M48 x 2		48.000	46.701	45.835



- 60° thread angle
- Pitch measured in mm
- Truncation of root and crest are parallel

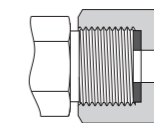
**Types of Sealing for Metric Threads**

1. MRS Stud End, RS-M gasket and MS Port



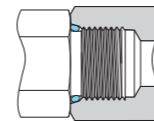
- MRS stud end complies with DIN 3852-1 type A
- For RS-M gasket, see page 82

2. MS Stud End, RG-M gasket and MS Port



- For RG-M gasket, see page 83

3. MST Stud End and ISO 6149-1 Port



- MST stud end complies with ISO 6149-3
- For O-ring, see page 84

**Working Pressures for MST Stud Ends**

Thread Size	Stainless Steel and Carbon Steel			
	Non-adjustable		Adjustable	
	psig	bar	psig	bar
M8 x 1	5800	400	4568	315
M10 x 1				
M12 x 1.5				
M14 x 1.5	4568	315	3626	250
M16 x 1.5				
M18 x 1.5				
M20 x 1.5				
M22 x 1.5				
M27 x 2	2900	200	2320	160
M30 x 2				
M33 x 2				
M42 x 2				
M48 x 2				
M60 x 2	2320	160	1450	100

Working pressures are based on ISO 6149-3 at ambient temperature.

☆ **Working Temperatures**

Tube Ends

Material	Minimum Temperature	Maximum Temperature
Stainless Steel	-325° F (-198° C)	800° F (426° C)
Brass	-325° F (-198° C)	400° F (204° C)
Alloy 400/R-405	-325° F (-198° C)	800° F (426° C)

Thread Ends

The working temperatures of the thread ends may be limited by the teflon tape or thread sealant or, when applicable, the gaskets or O-rings as follows:

Component	Material	Minimum Temperature	Maximum Temperature
RS gasket	Buna N	-22° F (-30° C)	230° F (110° C)
	Fluorocarbon FKM	-4° F (-20° C)	400° F (204° C)
RP/RG gasket	Copper	-452° F (-269° C)	500° F (260° C)
	Stainless Steel	-425° F (-254° C)	1000° F (538° C)
	PTFE	-65° F (-54° C)	450° F (232° C)
	Vulcanized Fibre	-76° F (-60° C)	221° F (105° C)
O-ring	Buna N	-22° F (-30° C)	230° F (110° C)
	Fluorocarbon FKM	-4° F (-20° C)	400° F (204° C)

## ☆ Working Pressures

- ☆ The maximum working pressures of the tube ends at ambient temperature are rated by the used FINELOK tubings. Refer to FINELOK tubing data.
- ☆ The maximum working pressures of the thread ends at ambient temperature are stated above.
- ☆ To get the maximum working pressure at elevated temperature, use the maximum working pressure at ambient temperature to multiply the factors in the form of Elevated Temperature Factors in page 9.
- ☆ The whole fitting is rated by the smallest value among its ends.

## Materials

Material	Bar Stock	Forging	Designator
316 stainless steel	ASTM A276, ASME SA479, EN 1.4401	ASTM A182, ASME SA182, EN 1.4401	SS
304 stainless steel	ASTM A276, ASME SA479, EN 1.4301	ASTM A182, ASME SA182, EN 1.4301	S4
321 stainless steel	ASTM A276, ASME SA479, EN 1.4541	ASTM A182, ASME SA182, EN 1.4541	S1
Alloy 20	ASTM B473	ASTM B462	A20
Alloy 400/R-405	ASTM B164, ASME SB164	ASTM B564, ASME SB564	M
Alloy 600	ASTM B166, ASME SB166	ASTM B564, ASME SB564	INC
Alloy 625	ASTM B446	ASTM B564, ASME SB564	A65
Alloy C-276	ASTM B574	ASTM B564	HC
Aluminum	ASTM B211	ASTM B247	AL
Brass	ASTM B16/B453	ASTM B283	B
Carbon steel	ASTM A108	/	CS
Nylon	ASTM D4066	/	PA
PTFE	ASTM D1710	ASTM D3294	T
Duplex 2205	ASTM A479	ASTM A182	D5
Duplex 2507	ASTM A479	ASTM A182	D7
Titanium (grade 4)	ASTM B348	ASTM B381	TI
904L stainless steel	ASTM B649	ASTM A182	904L

## Installation Instructions

- ☆ FINELOK tube fittings up to 1" or 25 mm
  1. Loosen the nut 1/4 turn from finger-tight position.
  2. Insert tubing into the tube fitting, make sure that the tubing rests firmly on the shoulder of the port.
  3. Finger-tighten the nut.
  4. Tighten the nut 1 1/4 turns with wrench while holding steady the body of the fitting or the valve (Fig.1).  
For small-sized fittings (1/16", 1/8" and 3/16", 2 mm, 3 mm and 4 mm), tighten the nut 3/4 turn with wrench (Fig.2).
- ☆ FINELOK tube fittings over 1" or 25 mm
  1. Use presetting tool to install the ferrules onto the tube, please refer to the instruction of Hydraulic Presetting Tool for details.
  2. Insert the preset tubing with ferrules and nut into the body of fitting, finger tight.
  3. Tighten the nut one-half turn with wrench.
- ☆ Reinstallation (all sizes)
  1. Mark the tube at the back of the nut, mark a line along the nut and fitting body flats.
  2. Insert tubing with presetted ferrules into the fitting body until the front ferrule seats.
  3. Then rotate the nut with a wrench to the previously pulled-up position as indicated by the marks on the tube and the flats.
  4. Tighten the nut slightly with wrench.
- ☆ Plugs and Port Connectors
  1. Tighten the plug or port connector 1/4 turn from the finger-tight position while holding steady the body of the fitting.  
For small-sized fittings (1/16", 1/8" and 3/16", 2 mm, 3 mm and 4 mm), tighten the nut 1/8 turn with wrench.
  2. Reinstallation: Tighten slightly with a wrench from the finger-tight position.

The Installation Instructions of the tube adapter end of Port Connectors are the same as the FINELOK Tube Fittings.

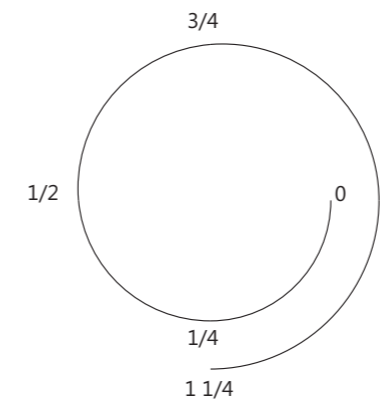


Fig.1

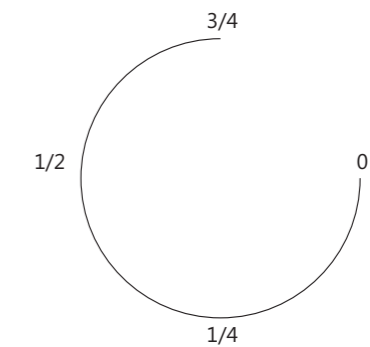


Fig.2

## Cautions:

- ☆ Do not loosen or tighten fittings when system is pressurized.
- ☆ Make sure that the tubing rests firmly on the shoulder of the port.
- ☆ Always leave enough straight length of the tubing for the fittings.
- ☆ Always use an insert for extremely soft plastic tubing.
- ☆ Material of the metal tubing should be softer than that of the fitting. For example, stainless steel tubing should not be used with brass fittings. When tubing and fittings are made of the same material, the tubing must be fully annealed.
- ☆ The allowable working pressure of the tube fitting is rated to the maximum working pressure of the corresponding tubing, which can be found in FINELOK tubing data sheet. For those which can not be found in FINELOK tubing data sheet, please contact the authorized representative or FINELOK for related information.
- ☆ Keep the tubing end and surface clean and smooth.
- ☆ Always use proper thread sealants on tapered pipe threads. Make sure that its working temperature does not exceed that of the sealants.
- ☆ When assemble the tube fitting, hold the body with a wrench and turn the nut instead of holding the nut.
- ☆ When install a valve with tube fitting end, hold the valve body with a wrench and turn the nut.
- ☆ When assemble the fitting to a valve with thread, hold the valve body with a wrench and turn the body of the fitting.

## FINELOK Stainless Steel Seamless Tubing

### Features

- ☆ Sizes range from 1/16" to 1 1/2" and 3 mm to 38 mm.
- ☆ Material, size, specification and heat code are indicated on the tubing surface.
- ☆ Pickling surface finish and mechanical polished surface finish tubes are available.

### Material Standards

Grade	UNS Designation	ASTM	ASME
316/316L	S31600/S31603	A269/A213	SA213
304/304L	S31400/S31403		
321	S32100		

### Allowable Working Pressure

- ☆ The allowable working pressures in the table below for fractional tubing and metric tubing are based on ASME B31.3 at ambient temperature.
- ☆ The data in the table are applied to 316 SS, 304 SS and 321 SS. For 316L SS and 304L SS, multiply the data in the table by 0.84 to get the allowable working pressure.
- ☆ 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 in page 9.

### Fractional Tubing

Tube O.D. (in.)	Nominal Wall Thickness, in.															
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.156	0.188
	Working Pressure, psig															
Note: For gas service, select a tube thickness outside of the shaded area																
1/16	5660	6870	8180	9490	12100											
1/8						8580	11000									
3/16						5450	7070	10300								
1/4						4040	5150	7570	10300							
5/16							4040	5860	8080							
3/8							3330	4850	5860							
1/2							2600	3530	4750	6260						
5/8								2930	4040	5250	6060					
3/4								2420	3330	4240	4950	5860				
7/8								2020	2830	3640	4240	4850				
1									2420	3130	3640	4240	4750			
1 1/4										2420	2830	3330	3640	4150	4950	
1 1/2											2320	2730	3030	3430	4040	4950

### Metric Tubing

Tube O.D. (mm)	Nominal Wall Thickness, mm												
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.5	4.0	4.5
	Working Pressure, bar												
Note: For gas service, select a tube thickness outside of the shaded area													
3	677												
6	313	424	545	717									
8		313	394	525									
10		242	303	404	515	586							
12		202	252	333	414	475							
14		162	202	273	343	384	434	494					
15		151	192	252	313	364	404	453					
16			172	232	293	333	374	404					
18			151	202	263	293	323	374					
20			141	182	232	263	293	333	384				
22			121	162	202	232	263	303	343				
25					182	202	232	263	293	323			
28						182	202	232	263	283	333		
30						172	182	212	242	263	313		
32						162	172	202	222	242	293	333	
38							141	162	192	202	242	273	313

### Elevated Temperature Factors

Temperature		Material				
°F	°C	316	316L	304	304L	321
100	38	1.0	1.0	1.0	1.0	1.0
200	93	1.0	1.0	1.0	1.0	1.0
300	149	1.0	1.0	1.0	1.0	1.0
400	204	0.97	0.93	0.94	0.94	1.0
500	260	0.90	0.86	0.88	0.88	0.97
600	316	0.85	0.81	0.82	0.84	0.92
650	343	0.84	0.79	0.81	0.82	0.90
700	371	0.82	0.77	0.80	0.81	0.88
750	399	0.80	0.75	0.78	0.80	0.86
800	427	0.80	0.74	0.76	0.78	0.85
850	454	0.79	0.72	0.75	0.77	0.84
900	486	0.78		0.73		0.83
950	510	0.77		0.72		0.82
1000	538	0.76		0.69		0.81

Example to calculate the allowable working pressure:

Type 316L SS 12 mm O.D.×1.5 mm wall at 800°F (427°C)

1. The allowable working pressure for 316 SS at ambient temperature is 333 bar (shown in the table above), multiply by 0.84 to get 316L SS data. So allowable working pressure for 316L SS at ambient temperature is 333 bar × 0.84 = 280 bar.
2. The elevated temperature factor for 800°F (427°C) is 0.74 (shown in the table above). So the allowable working pressure for 316L SS 12 mm O.D. × 1.5 mm wall at 800°F (427°C) is 280 bar × 0.74 = 207 bar.

Ordering Information

Fractional Tubing

Tube O.D. (in.)	Nominal Wall Thickness (in.)	Basic Ordering Number					Weight	
		316	316L	304	304L	321	lb/ft	Kg/m
1/8	0.028	SS-TU2-028-	6L-TU2-028-	S4-TU2-028-	4L-TU2-028-	S1-TU2-028-	0.030	0.044
1/4	0.035	SS-TU4-035-	6L-TU4-035-	S4-TU4-035-	4L-TU4-035-	S1-TU4-035-	0.082	0.122
	0.049	SS-TU4-049-	6L-TU4-049-	S4-TU4-049-	4L-TU4-049-	S1-TU4-049-	0.107	0.159
3/8	0.065	SS-TU4-065-	6L-TU4-065-	S4-TU4-065-	4L-TU4-065-	S1-TU4-065-	0.131	0.194
	0.035	SS-TU6-035-	6L-TU6-035-	S4-TU6-035-	4L-TU6-035-	S1-TU6-035-	0.129	0.192
1/2	0.049	SS-TU6-049-	6L-TU6-049-	S4-TU6-049-	4L-TU6-049-	S1-TU6-049-	0.173	0.258
	0.065	SS-TU6-065-	6L-TU6-065-	S4-TU6-065-	4L-TU6-065-	S1-TU6-065-	0.219	0.326
5/8	0.035	SS-TU8-035-	6L-TU8-035-	S4-TU8-035-	4L-TU8-035-	S1-TU8-035-	0.177	0.263
	0.049	SS-TU8-049-	6L-TU8-049-	S4-TU8-049-	4L-TU8-049-	S1-TU8-049-	0.240	0.357
3/4	0.065	SS-TU8-065-	6L-TU8-065-	S4-TU8-065-	4L-TU8-065-	S1-TU8-065-	0.307	0.457
	0.065	SS-TU10-065-	6L-TU10-065-	S4-TU10-065-	4L-TU10-065-	S1-TU10-065-	0.396	0.589
1	0.083	SS-TU12-065-	6L-TU12-065-	S4-TU12-065-	4L-TU12-065-	S1-TU12-065-	0.484	0.720
1 1/4	0.109	SS-TU16-083-	6L-TU16-083-	S4-TU16-083-	4L-TU16-083-	S1-TU16-083-	0.827	1.231
1 1/2	0.134	SS-TU20-109-	6L-TU20-109-	S4-TU20-109-	4L-TU20-109-	S1-TU20-109-	1.352	2.012
1 1/2	0.134	SS-TU24-134-	6L-TU24-134-	S4-TU24-134-	4L-TU24-134-	S1-TU24-134-	1.989	2.961

Metric Tubing

Tube O.D. (mm)	Nominal Wall Thickness (mm)	Basic Ordering Number					Weight	
		316	316L	304	304L	321	lb/ft	Kg/m
3	0.5	SS-TU3M-0.5-	6L-TU3M-0.5-	S4-TU3M-0.5-	4L-TU3M-0.5-	S1-TU3M-0.5-	0.031	0.031
	0.7	SS-TU3M-0.7-	6L-TU3M-0.7-	S4-TU3M-0.7-	4L-TU3M-0.7-	S1-TU3M-0.7-	0.040	0.040
6	1.0	SS-TU6M-1.0-	6L-TU6M-1.0-	S4-TU6M-1.0-	4L-TU6M-1.0-	S1-TU6M-1.0-	0.125	0.125
	1.5	SS-TU6M-1.5-	6L-TU6M-1.5-	S4-TU6M-1.5-	4L-TU6M-1.5-	S1-TU6M-1.5-	0.169	0.169
8	1.0	SS-TU8M-1.0-	6L-TU8M-1.0-	S4-TU8M-1.0-	4L-TU8M-1.0-	S1-TU8M-1.0-	0.175	0.175
	1.5	SS-TU8M-1.5-	6L-TU8M-1.5-	S4-TU8M-1.5-	4L-TU8M-1.5-	S1-TU8M-1.5-	0.244	0.244
10	1.0	SS-TU10M-1.0-	6L-TU10M-1.0-	S4-TU10M-1.0-	4L-TU10M-1.0-	S1-TU10M-1.0-	0.226	0.226
	1.5	SS-TU10M-1.5-	6L-TU10M-1.5-	S4-TU10M-1.5-	4L-TU10M-1.5-	S1-TU10M-1.5-	0.320	0.320
12	1.0	SS-TU12M-1.0-	6L-TU12M-1.0-	S4-TU12M-1.0-	4L-TU12M-1.0-	S1-TU12M-1.0-	0.276	0.276
	1.5	SS-TU12M-1.5-	6L-TU12M-1.5-	S4-TU12M-1.5-	4L-TU12M-1.5-	S1-TU12M-1.5-	0.395	0.395
14	2.0	SS-TU12M-2.0-	6L-TU12M-2.0-	S4-TU12M-2.0-	4L-TU12M-2.0-	S1-TU12M-2.0-	0.501	0.501
	1.0	SS-TU14M-1.0-	6L-TU14M-1.0-	S4-TU14M-1.0-	4L-TU14M-1.0-	S1-TU14M-1.0-	0.326	0.326
16	1.5	SS-TU14M-1.5-	6L-TU14M-1.5-	S4-TU14M-1.5-	4L-TU14M-1.5-	S1-TU14M-1.5-	0.470	0.470
	2.0	SS-TU14M-2.0-	6L-TU14M-2.0-	S4-TU14M-2.0-	4L-TU14M-2.0-	S1-TU14M-2.0-	0.602	0.602
18	1.0	SS-TU16M-1.0-	6L-TU16M-1.0-	S4-TU16M-1.0-	4L-TU16M-1.0-	S1-TU16M-1.0-	0.376	0.376
	1.5	SS-TU16M-1.5-	6L-TU16M-1.5-	S4-TU16M-1.5-	4L-TU16M-1.5-	S1-TU16M-1.5-	0.545	0.545
20	2.0	SS-TU16M-2.0-	6L-TU16M-2.0-	S4-TU16M-2.0-	4L-TU16M-2.0-	S1-TU16M-2.0-	0.702	0.702
	1.0	SS-TU18M-1.0-	6L-TU18M-1.0-	S4-TU18M-1.0-	4L-TU18M-1.0-	S1-TU18M-1.0-	0.426	0.426
22	1.5	SS-TU18M-1.5-	6L-TU18M-1.5-	S4-TU18M-1.5-	4L-TU18M-1.5-	S1-TU18M-1.5-	0.620	0.620
	2.0	SS-TU18M-2.0-	6L-TU18M-2.0-	S4-TU18M-2.0-	4L-TU18M-2.0-	S1-TU18M-2.0-	0.802	0.802
25	2.0	SS-TU20M-2.0-	6L-TU20M-2.0-	S4-TU20M-2.0-	4L-TU20M-2.0-	S1-TU20M-2.0-	0.903	0.903
	2.0	SS-TU22M-2.0-	6L-TU22M-2.0-	S4-TU22M-2.0-	4L-TU22M-2.0-	S1-TU22M-2.0-	1.003	1.003
28	2.0	SS-TU25M-2.0-	6L-TU25M-2.0-	S4-TU25M-2.0-	4L-TU25M-2.0-	S1-TU25M-2.0-	1.153	1.153
	2.5	SS-TU25M-2.5-	6L-TU25M-2.5-	S4-TU25M-2.5-	4L-TU25M-2.5-	S1-TU25M-2.5-	1.410	1.410
30	2.8	SS-TU28M-2.8-	6L-TU28M-2.8-	S4-TU28M-2.8-	4L-TU28M-2.8-	S1-TU28M-2.8-	1.769	1.769
	3.0	SS-TU30M-3.0-	6L-TU30M-3.0-	S4-TU30M-3.0-	4L-TU30M-3.0-	S1-TU30M-3.0-	2.031	2.031
32	3.5	SS-TU32M-3.5-	6L-TU32M-3.5-	S4-TU32M-3.5-	4L-TU32M-3.5-	S1-TU32M-3.5-	2.501	2.501
	4.0	SS-TU38M-4.0-	6L-TU38M-4.0-	S4-TU38M-4.0-	4L-TU38M-4.0-	S1-TU38M-4.0-	3.410	3.410

Add the actual length (foot or meter) and surface finish code as a suffix to the basic ordering number to get the complete ordering number. "AP" for pickling surface finish, "MP" for mechanical polished surface finish.

For example:

- 12 feet long, outside diameter 1/2", wall thickness 0.049", conform to ASTM A269, and pickling surface finish 316L SS seamless tube, the complete ordering number is 6L-TU8-049-12-AP-A269.
- 3 meters long, outside diameter 1/2", wall thickness 0.049", conform to ASTM A269, and mechanical polished surface finish 316L SS seamless tube, the complete ordering number is 6L-TU8-049-3M-MP-A269.
- 3 meters long, outside diameter 12 mm, wall thickness 1.0 mm, conform to ASTM A269, and pickling surface finish 304L SS seamless tube, the complete ordering number is 4L-TU12M-1.0-3M-AP-A269.



## FINELOK Stainless Steel Seamless Pipe

### Features

- ☆ Nominal pipe sizes from NPS 1/8 to NPS 2.
- ☆ Material, size, specification and heat code are indicated on the pipe surface.

### Allowable Working Pressure

- ☆ The allowable working pressures in the form are based on ASME B31.3 at ambient temperature.
- ☆ The datas in the form are applied to 316 SS, 304 SS and 321 SS. For 316L SS and 304L SS, multiply the data in the form by 0.84 to get the allowable working pressure.
- ☆ The elevated temperature factors are the same with those of FINELOK stainless steel seamless as tubing.

### Ordering Information

NPS	Schedule Number	Basic Ordering Number					Weight	
		316	316L	304	304L	321	lb/ft	Kg/m
1/8	40S	SS-NP2-40S-	6L-NP2-40S-	S4-NP2-40S-	4L-NP2-40S-	S1-NP2-40S-	0.250	0.372
	80S	SS-NP2-80S-	6L-NP2-80S-	S4-NP2-80S-	4L-NP2-80S-	S1-NP2-80S-	0.321	0.478
1/4	40S	SS-NP4-40S-	6L-NP4-40S-	S4-NP4-40S-	4L-NP4-40S-	S1-NP4-40S-	0.433	0.645
	80S	SS-NP4-80S-	6L-NP4-80S-	S4-NP4-80S-	4L-NP4-80S-	S1-NP4-80S-	0.546	0.812
3/8	40S	SS-NP6-40S-	6L-NP6-40S-	S4-NP6-40S-	4L-NP6-40S-	S1-NP6-40S-	0.579	0.862
	80S	SS-NP6-80S-	6L-NP6-80S-	S4-NP6-80S-	4L-NP6-80S-	S1-NP6-80S-	0.754	1.122
1/2	40S	SS-NP8-40S-	6L-NP8-40S-	S4-NP8-40S-	4L-NP8-40S-	S1-NP8-40S-	0.868	1.292
	80S	SS-NP8-80S-	6L-NP8-80S-	S4-NP8-80S-	4L-NP8-80S-	S1-NP8-80S-	1.110	1.652
3/4	40S	SS-NP12-40S-	6L-NP12-40S-	S4-NP12-40S-	4L-NP12-40S-	S1-NP12-40S-	1.154	1.717
	80S	SS-NP12-80S-	6L-NP12-80S-	S4-NP12-80S-	4L-NP12-80S-	S1-NP12-80S-	1.504	2.238
1	40S	SS-NP16-40S-	6L-NP16-40S-	S4-NP16-40S-	4L-NP16-40S-	S1-NP16-40S-	1.713	2.549
	80S	SS-NP16-80S-	6L-NP16-80S-	S4-NP16-80S-	4L-NP16-80S-	S1-NP16-80S-	2.216	3.297
1 1/4	40S	SS-NP20-40S-	6L-NP20-40S-	S4-NP20-40S-	4L-NP20-40S-	S1-NP20-40S-	2.319	3.450
	80S	SS-NP20-80S-	6L-NP20-80S-	S4-NP20-80S-	4L-NP20-80S-	S1-NP20-80S-	3.057	4.549
1 1/2	40S	SS-NP24-40S-	6L-NP24-40S-	S4-NP24-40S-	4L-NP24-40S-	S1-NP24-40S-	2.773	4.126
	80S	SS-NP24-80S-	6L-NP24-80S-	S4-NP24-80S-	4L-NP24-80S-	S1-NP24-80S-	3.705	5.513
2	40S	SS-NP32-40S-	6L-NP32-40S-	S4-NP32-40S-	4L-NP32-40S-	S1-NP32-40S-	3.727	5.546
	80S	SS-NP32-80S-	6L-NP32-80S-	S4-NP32-80S-	4L-NP32-80S-	S1-NP32-80S-	5.123	7.624

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

Example:

- 12 feet long, NPS 1/2, schedule number 40S, conform to ASTM A312, 316 SS seamless pipe, the complete ordering number is SS-NP8-40S-12-A312.
- 2 meters long, NPS 1/2, schedule number 40S, conform to ASTM A312, 316 SS seamless pipe, the complete ordering number is SS-NP8-40S-2M-A312.

### Material Standard

Grade	UNS Designation	ASTM	ASME
316/316L	S31600/S31603	A312	SA312
304/304L	S31400/S31403		
321	S32100		

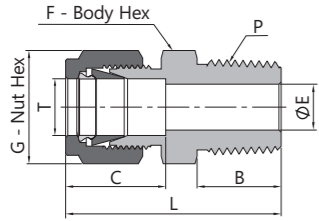
NPS	Schedule Number (ASME B36.19M)			
	5S	10S	40S	80S
	Working Pressure, psig (bar)			
1/8	/	3940 (272)	5750 (397)	8700 (600)
1/4	/	3960 (273)	5620 (387)	8130 (560)
3/8	/	3110 (215)	4540 (313)	6660 (459)
1/2	2470 (170)	3220 (222)	4370 (301)	6190 (427)
3/4	1960 (135)	2540 (175)	3550 (245)	5040 (348)
1	1550 (107)	2680 (185)	3330 (229)	4650 (320)
1 1/4	1230 (85)	2110 (146)	2760 (190)	3890 (268)
1 1/2	1070 (74)	1830 (126)	2460 (170)	3520 (243)
2	840 (58)	1430 (99)	2060 (142)	2990 (206)

### Pipe Dimension

NPS	Outside Diameter		Schedule Number																		
	In.	mm	5S	5	10S	10	20	30	40S	40	STD	60	80S	80	XS	100	120	140	160	XXS	
1/8	0.405	10.287																			
1/4	0.540	13.716																			
3/8	0.675	17.145																			
1/2	0.840	21.336																			4.775
3/4	1.050	26.670																			7.823
1	1.315	33.401																			9.093
1 1/4	1.660	42.164																			9.703
1 1/2	1.900	48.260																			10.160
2	2.375	60.325																			11.074
2 1/2	2.875	73.025																			14.021
3	3.500	88.900																			15.240
3 1/2	4.000	101.600																			17.120
4	4.500	114.300																			19.050
5	5.563	141.300																			21.946
6	6.625	168.275																			25.400
8	8.625	219.075																			35.712
10	10.750	273.050																			40.488
12	12.750	323.850																			45.237
14	14.000	355.600																			50.013
16	16.000	406.400																			53.975
18	18.000	457.200																			59.538
20	20.000	508.000																			
22	22.000	558.800																			
24	24.000	609.600																			
26	26.000	660.400																			
28	28.000	711.200																			
30	30.000	762.000																			
32	32.000	812.800																			
34	34.000	863.600																			
36	36.000	914.400																			

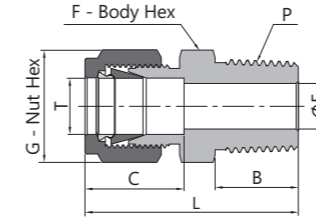
1. The schedule numbers of 5S, 10S, 40S, and 80S comply with ASME B36.19M.  
2. The others comply with ASME B36.10M.

Male Connectors

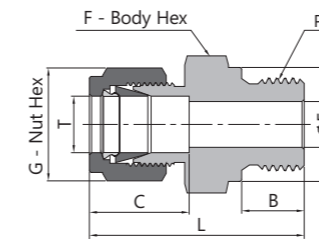


Fractional Tube			NPT Thread					
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
1/16	1/16	-MC-S1-NT1	23.9	9.7	8.6	1.3	7.9	7.9
1/16	1/8	-MC-S1-NT2	26.2	9.7	8.6	1.3	7.9	11.1
1/16	1/4	-MC-S1-NT4	31.0	14.2	8.6	1.3	7.9	14.3
1/8	1/16	-MC-S2-NT1	29.7	9.7	12.7	2.3	11.1	11.1
1/8	1/8	-MC-S2-NT2	30.5	9.7	12.7	2.3	11.1	11.1
1/8	1/4	-MC-S2-NT4	35.6	14.2	12.7	2.3	11.1	14.3
1/8	3/8	-MC-S2-NT6	35.8	14.2	12.7	2.3	11.1	17.5
1/8	1/2	-MC-S2-NT8	42.2	19.1	12.7	2.3	11.1	22.2
3/16	1/16	-MC-S3-NT1	31.2	9.7	13.7	2.3	12.7	11.1
3/16	1/8	-MC-S3-NT2	31.2	9.7	13.7	3.0	12.7	11.1
3/16	1/4	-MC-S3-NT4	36.3	14.2	13.7	3.0	12.7	14.3
1/4	1/16	-MC-S4-NT1	32.8	9.7	15.2	3.0	14.3	12.7
1/4	1/8	-MC-S4-NT2	32.8	9.7	15.2	4.8	14.3	12.7
1/4	1/4	-MC-S4-NT4	37.8	14.2	15.2	4.8	14.3	14.3
1/4	3/8	-MC-S4-NT6	38.4	14.2	15.2	4.8	14.3	17.5
1/4	1/2	-MC-S4-NT8	44.7	19.1	15.2	4.8	14.3	22.2
1/4	3/4	-MC-S4-NT12	46.2	19.1	15.2	4.8	14.3	27.0
5/16	1/8	-MC-S5-NT2	34.0	9.7	16.3	4.8	15.9	14.3
5/16	1/4	-MC-S5-NT4	38.6	9.7	16.3	6.4	15.9	14.3
5/16	3/8	-MC-S5-NT6	39.1	14.2	16.3	6.4	15.9	17.5
5/16	1/2	-MC-S5-NT8	45.5	19.1	16.3	6.4	15.9	22.2
3/8	1/8	-MC-S6-NT2	35.3	9.7	16.8	4.8	17.5	15.9
3/8	1/4	-MC-S6-NT4	39.9	14.2	16.8	7.1	17.5	15.9
3/8	3/8	-MC-S6-NT6	39.9	14.2	16.8	7.1	17.5	17.5
3/8	1/2	-MC-S6-NT8	46.2	19.1	16.8	7.1	17.5	22.2
3/8	3/4	-MC-S6-NT12	47.8	19.1	16.8	7.1	17.5	27.0
3/8	1	-MC-S6-NT16	47.0	23.9	16.8	7.1	17.5	34.9
1/2	1/8	-MC-S8-NT2	38.9	9.7	22.9	4.8	22.2	20.6
1/2	1/4	-MC-S8-NT4	43.4	14.2	22.9	7.1	22.2	20.6
1/2	3/8	-MC-S8-NT6	43.4	14.2	22.9	9.7	22.2	20.6
1/2	1/2	-MC-S8-NT8	49.0	19.1	22.9	10.4	22.2	22.2
1/2	3/4	-MC-S8-NT12	50.5	19.1	22.9	10.4	22.2	27.0
1/2	1	-MC-S8-NT16	57.2	23.9	22.9	10.4	22.2	34.9
5/8	1/4	-MC-S10-NT4	44.2	14.2	24.4	7.1	25.4	23.8
5/8	3/8	-MC-S10-NT6	44.2	14.2	24.4	9.7	25.4	23.8
5/8	1/2	-MC-S10-NT8	49.0	19.1	24.4	11.9	25.4	23.8
5/8	3/4	-MC-S10-NT12	50.5	19.1	24.4	12.7	25.4	27.0
3/4	3/8	-MC-S12-NT6	45.7	14.2	24.4	10.4	28.6	27.0
3/4	1/2	-MC-S12-NT8	50.5	19.1	24.4	11.9	28.6	27.0
3/4	3/4	-MC-S12-NT12	50.5	19.1	24.4	15.7	28.6	27.0
3/4	1	-MC-S12-NT16	57.2	23.9	24.4	15.7	28.6	34.9
7/8	1/2	-MC-S14-NT8	50.5	19.1	25.9	11.9	31.8	30.2
7/8	3/4	-MC-S14-NT12	50.5	19.1	25.9	15.7	31.8	30.2
7/8	1	-MC-S14-NT16	57.2	23.9	25.9	18.3	31.8	34.9
1	1/2	-MC-S16-NT8	57.4	19.1	31.2	11.9	38.1	34.9
1	3/4	-MC-S16-NT12	57.4	19.1	31.2	15.7	38.1	34.9
1	1	-MC-S16-NT16	62.2	23.9	31.2	22.4	38.1	34.9
1 1/8	1	-MC-S18-NT16	62.2	23.9	31.2	22.4	46.0	41.3
1 1/4	1	-MC-S20-NT16	77.2	23.9	41.1	22.4	47.6	44.5
1 1/4	1 1/4	-MC-S20-NT20	77.2	23.9	41.1	27.7	47.6	44.5
1 1/2	1 1/2	-MC-S24-NT24	88.9	26.2	50.0	34.0	57.2	54.0

Male Connectors



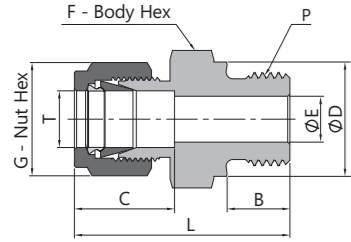
Fractional Tube			ISO Tapered Thread (RT)					
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
1/8	1/8	-MC-S2-RT2	30.5	9.7	12.7	2.3	11.1	11.1
1/8	1/4	-MC-S2-RT4	35.6	14.2	12.7	2.3	11.1	14.3
1/4	1/8	-MC-S4-RT2	32.8	9.7	15.2	4.8	14.3	12.7
1/4	1/4	-MC-S4-RT4	37.8	14.2	15.2	4.8	14.3	14.3
1/4	3/8	-MC-S4-RT6	38.4	14.2	15.2	4.8	14.3	17.5
1/4	1/2	-MC-S4-RT8	44.7	19.1	15.2	4.8	14.3	22.2
5/16	1/8	-MC-S5-RT2	34.0	9.7	16.3	4.8	15.9	14.3
5/16	1/4	-MC-S5-RT4	38.6	14.2	16.3	6.4	15.9	14.3
3/8	1/8	-MC-S6-RT2	35.3	9.7	16.8	4.8	17.5	15.9
3/8	1/4	-MC-S6-RT4	39.9	14.2	16.8	7.1	17.5	15.9
3/8	3/8	-MC-S6-RT6	39.9	14.2	16.8	7.1	17.5	17.5
3/8	1/2	-MC-S6-RT8	46.2	19.1	16.8	7.1	17.5	22.2
3/8	3/4	-MC-S6-RT12	47.8	19.1	16.8	7.1	17.5	27.0
1/2	1/4	-MC-S8-RT4	43.4	14.2	22.9	7.1	22.2	20.6
1/2	3/8	-MC-S8-RT6	43.4	14.2	22.9	9.7	22.2	20.6
1/2	1/2	-MC-S8-RT8	49.0	19.1	22.9	10.4	22.2	22.2
1/2	3/4	-MC-S8-RT12	50.5	19.1	22.9	10.4	22.2	27.0
5/8	1/2	-MC-S10-RT8	49.0	19.1	24.4	11.9	25.4	23.8
3/4	3/4	-MC-S12-RT12	50.5	19.1	24.4	15.7	28.6	27.0
3/4	1	-MC-S12-RT16	57.2	23.9	24.4	15.7	28.6	34.9
1	3/4	-MC-S16-RT12	57.4	19.1	31.2	15.7	38.1	34.9
1	1	-MC-S16-RT16	62.2	23.9	31.2	22.4	38.1	34.9



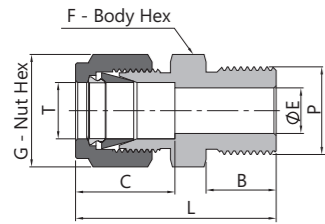
Fractional Tube			ISO Parallel Thread (RS)						
T-Tube O.D. (in.)	P-RS Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	D
1/8	1/8	-MC-S2-RS2	30.0	7.1	12.7	2.3	11.1	14.3	13.7
1/8	1/4	-MC-S2-RS4	35.3	11.2	12.7	2.3	11.1	19.1	18.0
1/8	3/8	-MC-S2-RS6	36.3	11.2	12.7	2.3	11.1	22.2	21.8
1/4	1/8	-MC-S4-RS2	32.3	7.1	15.2	4.0	14.3	14.3	13.7
1/4	1/4	-MC-S4-RS4	37.6	11.2	15.2	4.8	14.3	19.1	18.0
1/4	3/8	-MC-S4-RS6	38.9	11.2	15.2	4.8	14.3	22.2	21.8
1/4	1/2	-MC-S4-RS8	44.7	14.2	15.2	4.8	14.3	27.0	25.9
3/8	1/8	-MC-S6-RS2	37.8	7.1	16.8	4.0	17.5	15.9	13.7
3/8	1/4	-MC-S6-RS4	39.1	11.2	16.8	5.9	17.5	19.1	18.0
3/8	3/8	-MC-S6-RS6	40.4	11.2	16.8	7.1	17.5	22.2	21.8
3/8	1/2	-MC-S6-RS8	46.2	14.2	16.8	7.1	17.5	27.0	25.9
1/2	1/4	-MC-S8-RS4	42.7	11.2	22.9	5.9	22.2	20.6	18.0
1/2	3/8	-MC-S8-RS6	43.2	11.2	22.9	7.9	22.2	22.2	21.8
1/2	1/2	-MC-S8-RS8	49.0	14.2	22.9	10.4	22.2	27.0	25.9
3/4	1/2	-MC-S12-RS8	49.0	14.2	24.4	11.9	28.6	27.0	25.9
3/4	3/4	-MC-S12-RS12	52.9	15.7	24.4	15.7	28.6	33.3	32.0
1	1/2	-MC-S16-RS8	55.5	14.2	31.2	11.9	38.1	34.9	25.9
1	3/4	-MC-S16-RS12	57.7	15.7	31.2	16.0	38.1	34.9	32.0
1	1	-MC-S16-RS16	59.9	18.3	31.2	19.8	38.1	41.3	39.1

1. Dimensions are for reference only, subject to change.
2. Dimensions shown are in finger-tight position.

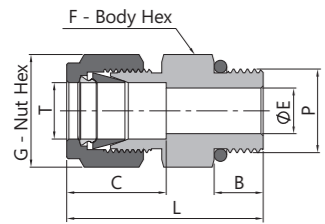
**Male Connectors**



Fractional Tube			ISO Parallel Thread (RP)							
T-Tube O.D. (in.)	P-RP Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	D	
1/8	1/8	-MC-S2-RP2	30.0	7.1	12.7	2.3	11.1	14.3	13.8	
1/8	1/4	-MC-S2-RP4	35.3	11.2	12.7	2.3	11.1	19.1	17.8	
1/4	1/8	-MC-S4-RP2	32.3	7.1	15.2	4.1	14.3	14.3	13.8	
1/4	1/4	-MC-S4-RP4	37.6	11.2	15.2	4.8	14.3	19.1	17.8	
1/2	3/8	-MC-S8-RP6	40.4	11.2	22.9	7.9	22.2	22.2	21.8	
1/2	1/2	-MC-S8-RP8	49.0	14.2	22.9	10.4	22.2	27.0	25.9	
3/4	1/2	-MC-S12-RP8	49.0	14.2	24.4	11.9	28.6	27.0	25.9	
3/4	3/4	-MC-S12-RP12	52.9	15.7	24.4	15.7	28.6	33.3	32.0	
1	1	-MC-S16-RP16	59.9	18.3	31.2	19.8	38.1	41.3	38.8	



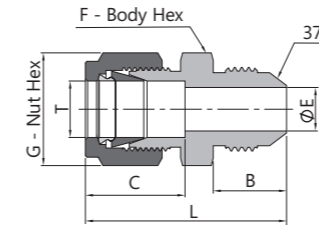
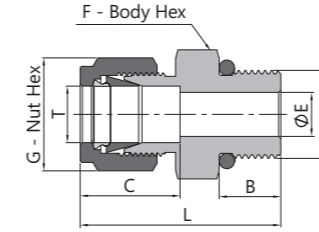
Fractional Tube			ISO Parallel Thread (BP)							
T-Tube O.D. (in.)	P-BP Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
1/4	3/8	-MC-S4-BP6	38.4	14.2	15.2	4.8	14.3	17.5		
3/8	3/8	-MC-S6-BP6	39.9	14.2	16.8	7.1	17.5	17.5		



Fractional Tube			SAE/MS Straight Thread							
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
1/16	5/16-24	-MC-S1-ST5	23.4	7.6	8.6	1.3	7.9	11.1		
1/8	5/16-24	-MC-S2-ST5	30.0	7.6	12.7	2.3	11.1	11.1		
1/8	7/16-20	-MC-S2-ST7	31.5	9.1	12.7	2.3	11.1	14.3		
1/8	9/16-18	-MC-S2-ST9	33.3	9.9	12.7	2.3	11.1	17.5		
3/16	3/8-24	-MC-S3-ST6	30.5	7.6	13.7	3.0	12.7	12.7		
1/4	5/16-24	-MC-S4-ST5	32.3	7.6	15.2	2.3	14.3	12.7		
1/4	7/16-20	-MC-S4-ST7	34.0	9.1	15.2	4.8	14.3	14.3		
1/4	9/16-18	-MC-S4-ST9	35.6	9.9	15.2	4.8	14.3	17.5		
1/4	3/4-16	-MC-S4-ST12	37.6	11.2	15.2	4.8	14.3	22.2		
1/4	7/8-14	-MC-S4-ST14	40.6	12.7	15.2	4.8	14.3	25.4		
5/16	1/2-20	-MC-S5-ST8	34.8	9.1	16.3	6.4	15.9	15.9		
3/8	7/16-20	-MC-S6-ST7	35.6	9.1	16.8	5.1	17.5	15.9		
3/8	9/16-18	-MC-S6-ST9	37.1	9.9	16.8	7.1	17.5	17.5		
3/8	3/4-16	-MC-S6-ST12	39.1	11.2	16.8	7.1	17.5	22.2		
3/8	7/8-14	-MC-S6-ST14	42.2	12.7	16.8	7.1	17.5	25.4		
1/2	9/16-18	-MC-S8-ST9	39.1	9.9	22.9	7.1	22.2	20.6		
1/2	3/4-16	-MC-S8-ST12	41.9	11.2	22.9	10.4	22.2	22.2		
1/2	7/8-14	-MC-S8-ST14	45.0	12.7	22.9	10.4	22.2	25.4		
1/2	1 1/16-12	-MC-S8-ST17	49.0	15.0	22.9	10.4	22.2	31.8		
5/8	3/4-16	-MC-S10-ST12	41.9	11.2	24.4	10.7	25.4	23.8		
5/8	7/8-14	-MC-S10-ST14	45.2	12.7	24.4	12.7	25.4	25.4		
3/4	3/4-16	-MC-S12-ST12	46.0	11.2	24.4	10.7	28.6	27.0		
3/4	1 1/16-12	-MC-S12-ST17	49.0	15.0	24.4	15.7	28.6	31.8		
3/4	1 5/16-12	-MC-S12-ST21	49.8	15.0	24.4	16.0	28.6	38.1		
7/8	1 3/16-12	-MC-S14-ST19	49.0	15.0	25.9	18.3	31.8	34.9		
1	1 1/16-12	-MC-S16-ST17	53.3	15.0	31.2	16.8	38.1	34.9		
1	1 5/16-12	-MC-S16-ST21	54.4	15.0	31.2	22.4	38.1	38.1		
1 1/4	1 5/8-12	-MC-S20-ST26	68.3	15.0	41.1	27.7	47.6	47.6		
1 1/2	1 7/8-12	-MC-S24-ST30	77.7	15.0	50.0	34.0	57.2	54.0		

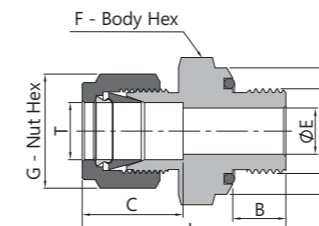
Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.

**Male Connectors**

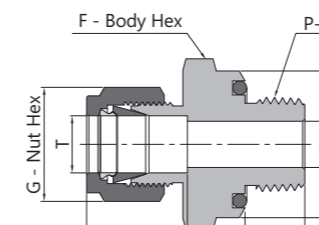


Fractional Tube			SAE/MS Straight Thread					
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
1/4	7/16-20	-CML-S4-ST7	57.4	9.1	15.2	4.8	14.3	14.3
1/2	3/4-16	-CML-S8-ST12	76.5	11.2	22.9	10.4	22.2	22.2

Fractional Tube			37° Flare (AN)					
T-Tube O.D. (in.)	AN Tube Flare Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
1/16	1/8	-MC-S1-AN2	27.2	11.4	8.6	1.3	7.9	11.1
1/8	1/8	-MC-S2-AN2	32.3	11.4	12.7	1.5	11.1	11.1
1/8	1/4	-MC-S2-AN4	35.1	14.0	12.7	2.3	11.1	12.7
3/16	3/16	-MC-S3-AN3	33.5	12.2	13.7	2.3	12.7	11.1
1/4	1/4	-MC-S4-AN4	37.6	14.0	15.2	4.3	14.3	12.7
5/16	5/16	-MC-S5-AN5	38.4	14.0	16.2	5.8	15.9	14.3
3/8	1/4	-MC-S6-AN4	39.6	14.0	16.8	4.3	17.5	15.9
3/8	3/8	-MC-S6-AN6	39.6	14.1	16.8	7.1	17.5	15.9
1/2	1/2	-MC-S8-AN8	46.0	16.7	22.8	9.9	22.2	20.6
5/8	5/8	-MC-S10-AN10	49.0	19.3	24.5	12.3	25.4	23.8
3/4	3/4	-MC-S12-AN12	53.3	21.9	24.4	15.5	28.6	28.6
1	1	-MC-S16-AN16	61.5	23.1	31.2	21.3	38.1	34.9

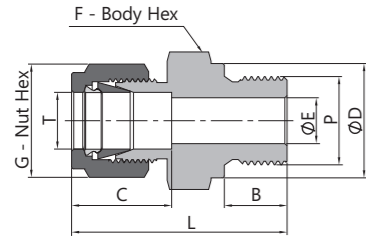


Fractional Tube			O-Seal with SAE/MS Straight Thread						
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	D
1/16	5/16-24	-MC-S1-OST5	26.7	8.6	8.6	1.3	7.9	14.3	14.0
1/8	5/16-24	-MC-S2-OST5	32.8	8.6	12.7	2.3	11.1	14.3	14.0
3/16	3/8-24	-MC-S3-OST6	34.3	9.7	13.7	3.0	12.7	15.9	15.7
1/4	7/16-20	-MC-S4-OST7	38.4	10.4	15.2	4.8	14.3	19.1	18.8
5/16	1/2-20	-MC-S5-OST8	40.6	11.2	16.3	6.4	15.9	22.2	21.8
3/8	9/16-18	-MC-S6-OST9	42.4	11.9	16.8	7.1	17.5	23.8	23.6
1/2	3/4-16	-MC-S8-OST12	46.0	11.9	22.9	10.4	22.2	28.6	28.4
3/4	1 1/16-12	-MC-S12-OST17	52.3	14.2	24.4	15.7	28.6	38.1	37.8
1	1 5/16-12	-MC-S16-OST21	58.2	14.2	31.2	22.4	38.1	44.5	44.2

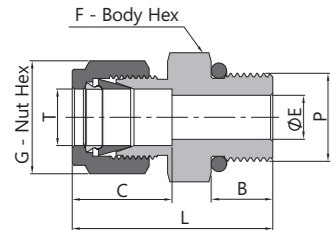


Fractional Tube			O-Seal with NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	D
1/8	1/8	-MC-S2-ONT2	32.8	7.1	8.6	2.3	11.1	19.1	18.8
1/4	1/8	-MC-S4-ONT2	35.1	7.1	15.2	4.8	14.3	19.1	18.8
1/4	1/4	-MC-S4-ONT4	38.4	9.7	15.2	4.8	14.3	23.8	23.6
3/8	1/4	-MC-S6-ONT4	39.9	9.7	16.8	7.1	17.5	23.8	23.6
3/8	3/8	-MC-S6-ONT6	41.4	10.4	16.8	7.1	17.5	28.6	28.4
3/8	1/2	-MC-S6-ONT8	47.0	13.5	16.8	7.1	17.5	33.3	33.0
1/2	1/2	-MC-S8-ONT8	49.8	13.5	22.9	10.4	22.2	33.3	33.0

Male Connectors

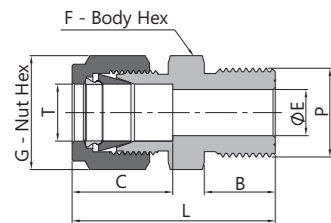


Fractional Tube			Metric Thread (MRS)						
T-Tube O.D. (in.)	P-Metric Thread Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	D
1/8	M14 x 1.5	-MC-S2-MRS14	36.7	12	12.7	2.3	11.1	19.1	19
1/8	M16 x 1.5	-MC-S2-MRS16	37.5	12	12.7	2.3	11.1	22.2	21
1/8	M18 x 1.5	-MC-S2-MRS18	38.5	12	12.7	2.3	11.1	23.8	23
1/8	M20 x 1.5	-MC-S2-MRS20	41.1	14	12.7	2.3	11.1	25.4	25
1/4	M14 x 1.5	-MC-S4-MRS14	38.0	12	15.2	4.8	14.3	19.1	19
1/4	M16 x 1.5	-MC-S4-MRS16	39.9	12	15.2	4.8	14.3	22.2	21
1/4	M18 x 1.5	-MC-S4-MRS18	40.8	12	15.2	4.8	14.3	23.8	23
1/4	M20 x 1.5	-MC-S4-MRS20	43.6	14	15.2	4.8	14.3	25.4	25
3/8	M14 x 1.5	-MC-S6-MRS14	41.3	12	16.8	7.1	17.5	19.1	19
3/8	M16 x 1.5	-MC-S6-MRS16	41.3	12	16.8	7.1	17.5	22.2	21
3/8	M18 x 1.5	-MC-S6-MRS18	41.8	12	16.8	7.1	17.5	23.8	23
3/8	M20 x 1.5	-MC-S6-MRS20	45.1	14	16.8	7.1	17.5	25.4	25
1/2	M16 x 1.5	-MC-S8-MRS16	44.0	12	22.9	9.0	22.2	22.2	21
1/2	M18 x 1.5	-MC-S8-MRS18	44.0	12	22.9	10.0	22.2	23.8	23
1/2	M20 x 1.5	-MC-S8-MRS20	47.9	14	22.9	10.4	22.2	25.4	25
1/2	M22 x 1.5	-MC-S8-MRS22	48.5	14	22.9	10.4	22.2	27.0	27



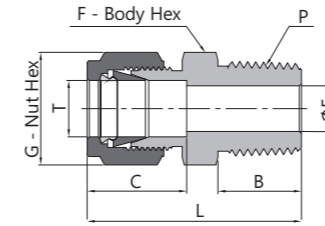
Adapt to straight thread boss of ISO 6149-1.

Fractional Tube			Metric Thread (MST)					
T-Tube O.D. (in.)	P-Metric Thread Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
1/4	M14X1.5	-MC-S4-MST14	35.2	11	15.2	4.8	14.3	19.1
3/8	M14X1.5	-MC-S6-MST14	36.7	11	16.8	7.1	17.5	19.1
3/8	M20X1.5	-MC-S6-MST20	41.2	14	16.8	7.1	17.5	27.0
1/2	M14X1.5	-MC-S8-MST14	40.2	11	22.9	7.5	22.2	20.6
1/2	M20X1.5	-MC-S8-MST20	44.0	14	22.9	10.4	22.2	27.0



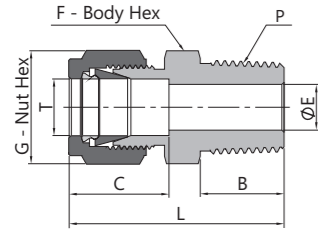
Fractional Tube			Metric Thread (MS)					
T-Tube O.D. (in.)	P-Metric Thread Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
1/16	M5 x 0.8	-MC-S1-MS5	21.8	8	8.6	1.3	7.9	7.9
1/8	M14 x 1.5	-MC-S2-MS14	34.8	13	12.7	2.3	11.1	15.9
1/8	M16 x 1.5	-MC-S2-MS16	35.8	14	12.7	2.3	11.1	17.5
1/8	M18 x 1.5	-MC-S2-MS18	37.2	15	12.7	2.3	11.1	19.1
1/8	M20 x 1.5	-MC-S2-MS20	38.2	16	12.7	2.3	11.1	22.2
1/4	M14 x 1.5	-MC-S4-MS14	36.9	13	15.2	4.8	14.3	15.9
1/4	M16 x 1.5	-MC-S4-MS16	38.1	14	15.2	4.8	14.3	17.5
1/4	M18 x 1.5	-MC-S4-MS18	39.5	15	15.2	4.8	14.3	19.1
1/4	M20 x 1.5	-MC-S4-MS20	40.7	16	15.2	4.8	14.3	22.2
3/8	M10 x 1.0	-MC-S6-MS10	36.4	11	16.8	4.8	17.5	15.9
3/8	M14 x 1.5	-MC-S6-MS14	39.3	13	16.8	7.1	17.5	15.9
3/8	M16 x 1.5	-MC-S6-MS16	39.7	14	16.8	7.1	17.5	17.5
3/8	M18 x 1.5	-MC-S6-MS18	41.5	15	16.8	7.1	17.5	19.1
3/8	M20 x 1.5	-MC-S6-MS20	42.3	16	16.8	7.1	17.5	22.2
1/2	M16 x 1.5	-MC-S8-MS16	43.2	14	22.9	8.4	22.2	20.6
1/2	M18 x 1.5	-MC-S8-MS18	43.7	15	22.9	9.6	22.2	20.6
1/2	M20 x 1.5	-MC-S8-MS20	44.9	16	22.9	10.4	22.2	22.2
1/2	M22 x 1.5	-MC-S8-MS22	47.0	17	22.9	10.4	22.2	23.8

Male Connectors



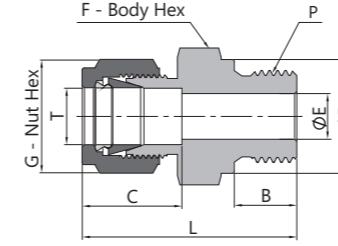
Metric Tube			NPT Thread					
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
2	1/8	-MC-SM2-NT2	30.5	9.7	12.9	1.7	12	12
3	1/8	-MC-SM3-NT2	30.5	9.7	12.9	2.4	12	12
3	1/4	-MC-SM3-NT4	35.6	14.2	12.9	2.4	12	14
4	1/8	-MC-SM4-NT2	31.2	9.7	13.7	2.4	12	12
4	1/4	-MC-SM4-NT4	36.3	14.2	13.7	2.4	12	14
6	1/8	-MC-SM6-NT2	32.8	9.7	15.3	4.8	14	14
6	1/4	-MC-SM6-NT4	37.9	14.2	15.3	4.8	14	14
6	3/8	-MC-SM6-NT6	38.4	14.2	15.3	4.8	14	18
6	1/2	-MC-SM6-NT8	44.7	19.1	15.3	4.8	14	22
8	1/8	-MC-SM8-NT2	34.2	9.7	16.2	4.8	16	15
8	1/4	-MC-SM8-NT4	38.7	14.2	16.2	6.4	16	15
8	3/8	-MC-SM8-NT6	39.3	14.2	16.2	6.4	16	18
8	1/2	-MC-SM8-NT8	45.6	19.1	16.2	6.4	16	22
10	1/8	-MC-SM10-NT2	36.3	9.7	17.2	4.8	19	18
10	1/4	-MC-SM10-NT4	40.9	14.2	17.2	7.1	19	18
10	3/8	-MC-SM10-NT6	40.9	14.2	17.2	7.9	19	18
10	1/2	-MC-SM10-NT8	46.5	19.1	17.2	7.9	19	22
10	3/4	-MC-SM10-NT12	48.0	19.1	17.2	7.9	19	27
10	1	-MC-SM10-NT16	54.6	23.9	17.2	7.9	19	35
12	1/8	-MC-SM12-NT2	38.8	9.7	22.8	4.8	22	22
12	1/4	-MC-SM12-NT4	43.4	14.2	22.8	7.1	22	22
12	3/8	-MC-SM12-NT6	43.4	14.2	22.8	9.5	22	22
12	1/2	-MC-SM12-NT8	49.0	19.1	22.8	9.5	22	22
12	3/4	-MC-SM12-NT12	50.5	19.1	22.8	9.5	22	27
14	1/8	-MC-SM14-NT2	38.8	9.7	24.4	4.8	25	24
14	1/4	-MC-SM14-NT4	44.1	14.2	24.4	7.1	25	24
14	3/8	-MC-SM14-NT6	44.1	14.2	24.4	9.5	25	24
14	1/2	-MC-SM14-NT8	49.0	19.1	24.4	11.1	25	24
14	3/4	-MC-SM14-NT12	50.5	19.1	24.4	11.1	25	27
15	1/2	-MC-SM15-NT8	49.0	19.1	24.4	11.9	25	24
15	3/4	-MC-SM15-NT12	50.5	19.1	24.4	11.9	25	27
15	1	-MC-SM15-NT16	57.1	23.9	24.4	11.9	25	35
16	1/4	-MC-SM16-NT4	44.1	14.2	24.4	7.1	25	24
16	3/8	-MC-SM16-NT6	44.1	14.2	24.4	9.5	25	24
16	1/2	-MC-SM16-NT8	49.0	19.1	24.4	11.9	25	24
16	3/4	-MC-SM16-NT12	50.5	19.1	24.4	12.7	25	27
18	3/8	-MC-SM18-NT6	45.6	14.2	24.4	9.5	30	27
18	1/2	-MC-SM18-NT8	50.5	19.1	24.4	11.9	30	27
18	3/4	-MC-SM18-NT12	50.5	19.1	24.4	15.1	30	27
20	1/2	-MC-SM20-NT8	52.3	19.1	26.0	11.9	32	30
20	3/4	-MC-SM20-NT12	52.3	19.1	26.0	15.9	32	30
20	1	-MC-SM20-NT16	57.1	23.9	26.0	15.9	32	35
22	1/2	-MC-SM22-NT8	52.3	19.1	26.0	11.9	32	30
22	3/4	-MC-SM22-NT12	52.3	19.1	26.0	15.9	32	30
22	1	-MC-SM22-NT16	57.1	23.9	26.0	18.3	32	35
25	1/2	-MC-SM25-NT8	57.5	19.1	31.3	11.9	38	35
25	3/4	-MC-SM25-NT12	57.5	19.1	31.3	15.9	38	35
25	1	-MC-SM25-NT16	62.3	23.9	31.3	21.8	38	35
28	1	-MC-SM28-NT16	72.4	23.9	36.6	21.8	46	41
28	1 1/4	-MC-SM28-NT20	73.1	23.9	36.6	21.8	46	46
30	1 1/4	-MC-SM30-NT20	77.2	23.9	39.6	26.2	50	46
32	1 1/4	-MC-SM32-NT20	79.6	23.9	42.0	28.6	50	46
38	1 1/2	-MC-SM38-NT24	91.6	26.2	49.4	33.7	60	55

Male Connectors



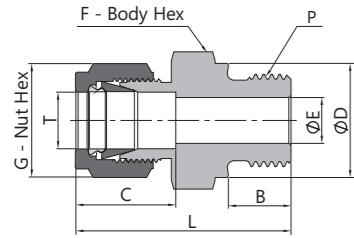
Metric Tube			ISO Tapered Thread (RT)						
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
2	1/8	-MC-SM2-RT2	30.5	9.7	12.9	1.7	12	12	
3	1/8	-MC-SM3-RT2	30.5	9.7	12.9	2.4	12	12	
3	1/4	-MC-SM3-RT4	35.6	14.2	12.9	2.4	12	14	
4	1/8	-MC-SM4-RT2	31.2	9.7	13.7	2.4	12	12	
4	1/4	-MC-SM4-RT4	36.3	14.2	13.7	2.4	12	14	
6	1/8	-MC-SM6-RT2	32.8	9.7	15.3	4.8	14	14	
6	1/4	-MC-SM6-RT4	37.9	14.2	15.3	4.8	14	14	
6	3/8	-MC-SM6-RT6	38.4	14.2	15.3	4.8	14	18	
6	1/2	-MC-SM6-RT8	44.7	19.1	15.3	4.8	14	22	
8	1/8	-MC-SM8-RT2	34.2	9.7	16.2	4.8	16	15	
8	1/4	-MC-SM8-RT4	38.7	14.2	16.2	6.4	16	15	
8	3/8	-MC-SM8-RT6	39.2	14.2	16.2	6.4	16	18	
8	1/2	-MC-SM8-RT8	45.6	19.1	16.2	6.4	16	22	
10	1/8	-MC-SM10-RT2	36.3	9.7	17.2	4.8	19	18	
10	1/4	-MC-SM10-RT4	40.9	14.2	17.2	7.1	19	18	
10	3/8	-MC-SM10-RT6	40.9	14.2	17.2	7.9	19	18	
10	1/2	-MC-SM10-RT8	46.5	19.1	17.2	7.9	19	22	
10	3/4	-MC-SM10-RT12	48.0	19.1	17.2	7.9	19	27	
12	1/8	-MC-SM12-RT2	38.3	9.7	22.8	4.8	22	22	
12	1/4	-MC-SM12-RT4	43.4	14.2	22.8	7.1	22	22	
12	3/8	-MC-SM12-RT6	43.4	14.2	22.8	9.5	22	22	
12	1/2	-MC-SM12-RT8	49.0	19.1	22.8	9.5	22	22	
12	3/4	-MC-SM12-RT12	50.5	19.1	22.8	9.5	22	27	
14	1/8	-MC-SM14-RT2	38.8	9.7	24.4	4.8	25	24	
14	1/4	-MC-SM14-RT4	44.1	14.2	24.4	7.1	25	24	
14	3/8	-MC-SM14-RT6	44.1	14.2	24.4	7.9	25	24	
14	1/2	-MC-SM14-RT8	49.0	19.1	24.4	11.1	25	24	
14	3/4	-MC-SM14-RT12	50.5	19.1	24.4	11.1	25	27	
15	1/2	-MC-SM15-RT8	49.0	19.1	24.4	11.9	25	24	
16	1/4	-MC-SM16-RT4	44.1	14.2	24.4	7.1	25	24	
16	3/8	-MC-SM16-RT6	44.1	14.2	24.4	9.5	25	24	
16	1/2	-MC-SM16-RT8	49.0	19.1	24.4	11.9	25	24	
16	3/4	-MC-SM16-RT12	50.5	19.1	24.4	12.7	25	27	
18	1/2	-MC-SM18-RT8	50.5	19.1	24.4	11.9	30	27	
18	3/4	-MC-SM18-RT12	50.5	19.1	24.4	15.1	30	27	
20	1/2	-MC-SM20-RT8	52.3	19.1	26.0	11.9	32	30	
20	3/4	-MC-SM20-RT12	52.3	19.1	26.0	15.9	32	30	
22	1	-MC-SM22-RT16	57.1	23.9	26.0	18.3	32	35	
25	1/2	-MC-SM25-RT8	57.5	19.1	31.3	11.9	38	35	
25	3/4	-MC-SM25-RT12	57.5	19.1	31.3	15.9	38	35	
25	1	-MC-SM25-RT16	62.3	23.9	31.3	21.8	38	35	
28	1	-MC-SM28-RT16	72.4	23.9	36.6	21.8	46	41	
28	1 1/4	-MC-SM28-RT20	73.1	23.9	36.6	21.8	46	46	
30	1 1/4	-MC-SM30-RT20	77.2	23.9	39.6	26.2	50	46	
32	1 1/4	-MC-SM32-RT20	79.6	23.9	42.0	28.6	50	46	
38	1 1/2	-MC-SM38-RT24	91.6	26.2	49.4	33.7	60	55	

Male Connectors

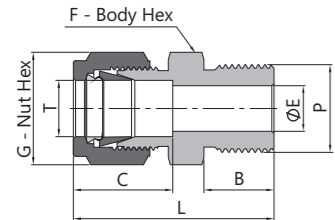


Metric Tube			ISO Parallel Thread (RS)						
T-Tube O.D. (mm)	P-RS Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	D
2	1/8	-MC-SM2-RS2	30.0	7.1	12.9	1.7	12	14	13.7
3	1/8	-MC-SM3-RS2	30.0	7.1	12.9	2.4	12	14	13.7
3	1/4	-MC-SM3-RS4	35.3	11.2	12.9	2.4	12	19	18.0
4	1/8	-MC-SM4-RS2	30.7	7.1	13.7	2.4	12	14	13.7
4	1/4	-MC-SM4-RS4	36.0	11.2	13.7	2.4	12	19	18.0
6	1/8	-MC-SM6-RS2	32.3	7.1	15.3	4.0	14	14	13.7
6	1/4	-MC-SM6-RS4	37.6	11.2	15.3	4.8	14	19	18.0
6	3/8	-MC-SM6-RS6	38.9	11.2	15.3	4.8	14	22	21.6
6	1/2	-MC-SM6-RS8	44.7	14.2	15.3	4.8	14	27	25.9
8	1/8	-MC-SM8-RS2	33.2	7.1	16.2	4.0	16	15	14.5
8	1/4	-MC-SM8-RS4	38.5	11.2	16.2	6.4	16	19	18.0
8	3/8	-MC-SM8-RS6	39.8	11.2	16.2	6.4	16	22	21.6
8	1/2	-MC-SM8-RS8	45.6	14.2	16.2	6.4	16	27	25.9
8	3/4	-MC-SM8-RS12	49.5	15.7	16.2	6.4	16	35	32.0
10	1/4	-MC-SM10-RS4	39.4	11.2	17.2	5.9	19	19	18.0
10	3/8	-MC-SM10-RS6	40.6	11.2	17.2	7.9	19	22	21.6
10	1/2	-MC-SM10-RS8	46.5	14.2	17.2	7.9	19	27	25.9
12	1/4	-MC-SM12-RS4	42.6	11.2	22.8	5.9	22	22	21.6
12	3/8	-MC-SM12-RS6	43.1	11.2	22.8	7.9	22	22	21.6
12	1/2	-MC-SM12-RS8	49.0	14.2	22.8	9.5	22	27	25.9
12	3/4	-MC-SM12-RS12	52.8	15.7	22.8	9.5	22	35	32.0
14	1/4	-MC-SM14-RS4	42.9	11.2	24.4	7.1	25	24	18.0
14	3/8	-MC-SM14-RS6	43.9	11.2	24.4	7.9	25	24	21.6
14	1/2	-MC-SM14-RS8	49.0	14.2	24.4	11.1	25	27	25.9
14	3/4	-MC-SM14-RS12	52.8	15.7	24.4	11.1	25	35	32.0
15	3/8	-MC-SM15-RS6	43.9	11.2	24.4	7.9	25	24	21.6
15	1/2	-MC-SM15-RS8	49.0	14.2	24.4	11.9	25	27	25.9
15	3/4	-MC-SM15-RS12	52.8	15.7	24.4	11.9	25	35	32.0
16	3/8	-MC-SM16-RS6	43.9	11.2	24.4	7.9	25	24	21.6
16	1/2	-MC-SM16-RS8	49.0	14.2	24.4	11.9	25	27	25.9
16	3/4	-MC-SM16-RS12	52.8	15.7	24.4	12.7	25	35	32.0
18	1/2	-MC-SM18-RS8	49.0	14.2	24.4	11.9	30	27	25.9
18	3/4	-MC-SM18-RS12	52.8	15.7	24.4	15.1	30	35	32.0
20	1/2	-MC-SM20-RS8	50.5	14.2	26.0	11.9	32	30	25.9
20	3/4	-MC-SM20-RS12	52.8	15.7	26.0	15.9	32	35	32.0
22	3/4	-MC-SM22-RS12	52.8	15.7	26.0	15.9	32	35	32.0
22	1	-MC-SM22-RS16	55.3	18.3	26.0	18.3	32	41	39.1
25	3/4	-MC-SM25-RS12	57.5	15.7	31.3	15.9	38	35	32.0
25	1	-MC-SM25-RS16	60.1	18.3	31.3	19.8	38	41	39.1
28	1	-MC-SM28-RS16	70.1	18.3	36.6	19.8	46	41	39.1
28	1 1/4	-MC-SM28-RS20	73.9	19.8	36.6	21.8	46	50	49.0
30	1 1/4	-MC-SM30-RS20	76.5	19.8	39.6	25.0	50	50	49.0
32	1 1/4	-MC-SM32-RS20	78.9	19.8	42.0	25.0	50	50	49.0
38	1 1/2	-MC-SM38-RS24	90.8	22.1	49.4	31.8	60	55	54.7

Male Connectors

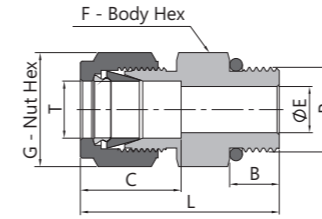


Metric Tube			ISO Parallel Thread (RP)						
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	D
3	1/8	-MC-SM3-RP2	30.0	7.1	12.9	2.4	12	14	13.8
3	1/4	-MC-SM3-RP4	35.3	11.2	12.9	2.4	12	19	18.0
4	1/8	-MC-SM4-RP2	30.7	7.1	13.7	2.4	12	14	13.8
6	1/8	-MC-SM6-RP2	32.3	7.1	15.3	4.0	14	14	13.8
6	1/4	-MC-SM6-RP4	37.6	11.2	15.3	4.8	14	19	18.0
6	3/8	-MC-SM6-RP6	38.9	11.2	15.3	4.8	14	22	21.8
6	1/2	-MC-SM6-RP8	44.7	14.2	15.3	4.8	14	27	26.0
8	1/8	-MC-SM8-RP2	33.3	7.1	16.2	4.0	16	15	13.8
8	1/4	-MC-SM8-RP4	38.5	11.2	16.2	5.9	16	19	18.0
8	3/8	-MC-SM8-RP6	39.8	11.2	16.2	6.4	16	22	21.8
8	1/2	-MC-SM8-RP8	45.6	14.2	16.2	6.4	16	27	26.0
10	1/4	-MC-SM10-RP4	39.4	11.2	17.2	5.9	19	19	18.0
10	3/8	-MC-SM10-RP6	40.6	11.2	17.2	7.9	19	22	21.8
10	1/2	-MC-SM10-RP8	46.5	14.2	17.2	7.9	19	27	26.0
12	1/4	-MC-SM12-RP4	42.6	11.2	22.8	5.9	22	22	18.0
12	3/8	-MC-SM12-RP6	43.1	11.2	22.8	7.9	22	22	21.8
12	1/2	-MC-SM12-RP8	49.0	14.2	22.8	9.5	22	27	26.0
12	3/4	-MC-SM12-RP12	52.8	15.7	22.8	9.5	22	35	32.0
15	1/2	-MC-SM15-RP8	49.0	14.2	24.4	11.9	25	27	26.0
16	3/8	-MC-SM16-RP6	43.9	11.2	24.4	7.9	25	24	21.8
16	1/2	-MC-SM16-RP8	49.0	14.2	24.4	11.9	25	27	26.0
18	1/2	-MC-SM18-RP8	49.0	14.2	24.4	11.9	30	27	26.0
18	3/4	-MC-SM18-RP12	52.8	15.7	24.4	15.1	30	35	32.0
20	1/2	-MC-SM20-RP8	50.5	14.2	26.0	11.9	32	30	26.0
20	3/4	-MC-SM20-RP12	52.8	15.7	26.0	15.9	32	35	32.0
22	3/4	-MC-SM22-RP12	52.8	15.7	26.0	15.9	32	35	32.0
22	1	-MC-SM22-RP16	55.3	18.3	26.0	18.3	32	41	39.0
25	3/4	-MC-SM25-RP12	57.5	15.7	31.3	15.9	38	35	32.0
25	1	-MC-SM25-RP16	60.1	18.3	31.3	19.8	38	41	39.0
28	1	-MC-SM28-RP16	70.1	18.3	36.6	19.8	46	41	39.0
28	1 1/4	-MC-SM28-RP20	73.9	19.8	36.6	21.8	46	50	49.0
30	1 1/4	-MC-SM30-RP20	76.5	19.8	39.6	26.2	50	50	49.0
32	1 1/4	-MC-SM32-RP20	78.9	19.8	42.0	28.6	50	50	49.0
38	1 1/2	-MC-SM38-RP24	89.3	20.6	49.4	31.8	60	55	54.7

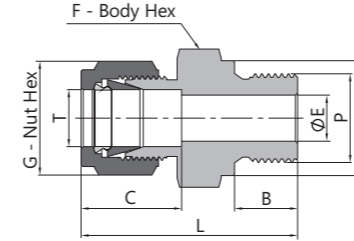


Metric Tube			ISO Parallel Thread (BP)					
T-Tube O.D. (mm)	P-BP Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
6	1/4	-MC-SM6-BP4	36.9	12.9	15.3	4.8	14	14
6	3/8	-MC-SM6-BP6	39.5	14.2	15.3	4.8	14	18
8	1/8	-MC-SM8-BP2	33.9	9.8	16.2	4.0	16	14
8	1/4	-MC-SM8-BP4	37.0	12.9	16.2	6.4	16	14
8	3/8	-MC-SM8-BP6	39.3	14.2	16.2	6.4	16	18
8	1/2	-MC-SM8-BP8	45.4	18.8	16.2	6.4	16	22
10	1/4	-MC-SM10-BP4	39.5	12.9	17.2	5.9	19	18
10	1/2	-MC-SM10-BP8	46.3	18.8	17.2	7.9	19	22
12	3/8	-MC-SM12-BP6	44.2	14.2	22.8	7.9	22	22
12	1/2	-MC-SM12-BP8	49.0	18.8	22.8	9.5	22	22
14	1/4	-MC-SM14-BP4	42.9	12.9	24.4	5.9	25	24
16	3/8	-MC-SM16-BP6	43.4	14.2	24.4	7.9	25	24
16	1/2	-MC-SM16-BP8	47.9	18.8	24.4	9.5	25	24
18	1/2	-MC-SM18-BP8	49.8	18.8	24.4	9.5	30	27

Male Connectors

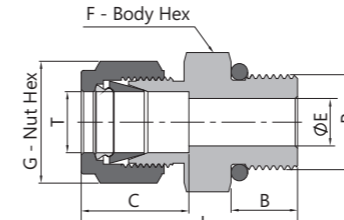


Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.



Metric Tube			SAE/MS Straight Thread					
T-Tube O.D. (mm)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
6	9/16-18	-MC-SM6-ST9	35.6	9.9	15.3	4.8	14	18
10	9/16-18	-MC-SM10-ST9	37.3	9.9	17.2	7.1	19	22
10	3/4-16	-MC-SM10-ST12	39.4	11.2	17.2	7.9	19	22
12	7/16-20	-MC-SM12-ST7	40.6	9.1	22.8	5.2	22	22
12	9/16-18	-MC-SM12-ST9	39.9	9.9	22.8	7.1	22	22

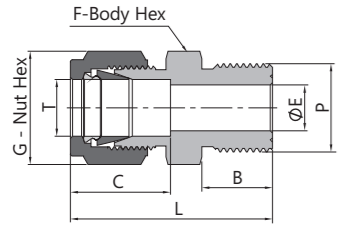
Metric Tube			Metric Thread (MRS)						
T-Tube O.D. (mm)	P-Metric Thread Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	D
6	M8 x 1	-MC-SM6-MRS8	33.3	8	15.3	3.0	14	14	12
6	M10 x 1	-MC-SM6-MRS10	33.3	8	15.3	4.0	14	14	14
6	M12 x 1.5	-MC-SM6-MRS12	38.2	12	15.3	4.8	14	18	17
6	M14 x 1.5	-MC-SM6-MRS14	39.7	12	15.3	4.8	14	19	19
8	M8 x 1	-MC-SM8-MRS8	34.1	8	16.2	3.0	16	14	12
8	M10 x 1	-MC-SM8-MRS10	34.1	8	16.2	5.0	16	15	14
8	M12 x 1.5	-MC-SM8-MRS12	40.4	12	16.2	6.0	16	18	17
8	M14 x 1.5	-MC-SM8-MRS14	40.4	12	16.2	6.4	16	19	19
10	M12 x 1.5	-MC-SM10-MRS12	40.7	12	17.2	6.0	19	18	17
10	M14 x 1.5	-MC-SM10-MRS14	41.5	12	17.2	7.9	19	19	19
12	M16 x 1.5	-MC-SM12-MRS16	45.5	12	22.8	9.0	22	22	21
12	M20 x 1.5	-MC-SM12-MRS20	48.0	14	22.8	9.5	22	25	25
12	M22 x 1.5	-MC-SM12-MRS22	49.5	14	22.8	9.5	22	27	27
14	M14 x 1.5	-MC-SM14-MRS14	44.9	12	24.4	8.0	25	24	19
14	M20 x 1.5	-MC-SM14-MRS20	48.0	14	24.4	11.1	25	25	25
16	M20 x 1.5	-MC-SM16-MRS20	48.0	14	24.4	12.0	25	25	25
18	M20 x 1.5	-MC-SM18-MRS20	48.5	14	24.4	12.0	30	27	25
20	M20 x 1.5	-MC-SM20-MRS20	50.0	14	26.0	12.0	32	30	25
22	M24 x 1.5	-MC-SM22-MRS24	50.5	14	26.0	15.0	32	30	29
25	M27 x 2	-MC-SM25-MRS27	57.5	16	31.3	16.8	38	35	32



Adapt to straight thread boss of ISO 6149-1.

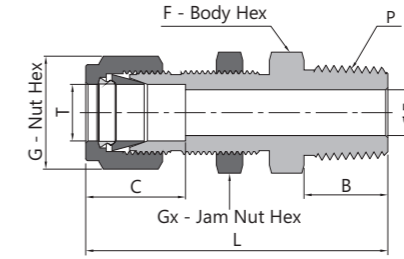
Metric Tube			Metric Thread (MST)					
T-Tube O.D. (mm)	P-Metric Thread Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
6	M14 x 1.5	-MC-SM6-MST14	35.2	11	15.3	4.8	14	19
10	M14 x 1.5	-MC-SM10-MST14	36.7	11	17.2	7.5	19	19
10	M20 x 1.5	-MC-SM10-MST20	41.2	14	17.2	7.9	19	27
12	M14 x 1.5	-MC-SM12-MST14	40.2	11	22.8	7.5	22	22
12	M20 x 1.5	-MC-SM12-MST20	44.0	14	22.8	10.4	22	27

Male Connectors



Metric Tube			Metric Thread (MS)						
T-Tube O.D. (mm)	P-Metric Thread Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
6	M6 x 1	-MC-SM6-MS6	32.4	8	15.3	2.0	14	14	
6	M8 x 1	-MC-SM6-MS8	32.4	9	15.3	3.0	14	14	
6	M10 x 1	-MC-SM6-MS10	35.2	11	15.3	4.7	14	14	
6	M12 x 1.5	-MC-SM6-MS12	36.4	12	15.3	4.8	14	14	
6	M14 x 1.5	-MC-SM6-MS14	37.4	13	15.3	4.8	14	16	
6	M16 x 1.5	-MC-SM6-MS16	38.4	14	15.3	4.8	14	18	
6	M18 x 1.5	-MC-SM6-MS18	40.0	15	15.3	4.8	14	19	
6	M20 x 1.5	-MC-SM6-MS20	41.7	16	15.3	4.8	14	22	
8	M8 x 1	-MC-SM8-MS8	34.5	9	16.2	3.0	16	14	
8	M10 x 1	-MC-SM8-MS10	35.6	11	16.2	4.7	16	14	
8	M12 x 1.5	-MC-SM8-MS12	36.6	12	16.2	6.0	16	14	
8	M14 x 1.5	-MC-SM8-MS14	37.7	13	16.2	6.4	16	16	
8	M20 x 1.5	-MC-SM8-MS20	42.5	16	16.2	6.4	16	22	
10	M12 x 1.5	-MC-SM10-MS12	38.7	12	17.2	6.0	19	18	
10	M14 x 1.5	-MC-SM10-MS14	39.7	13	17.2	7.2	19	18	
10	M20 x 1.5	-MC-SM10-MS20	43.5	16	17.2	7.9	19	22	
12	M12 x 1.5	-MC-SM12-MS12	41.2	12	22.8	6.0	22	22	
12	M16 x 1.5	-MC-SM12-MS16	43.2	14	22.8	9.5	22	22	
12	M18 x 1.5	-MC-SM12-MS18	44.2	15	22.8	9.5	22	22	
12	M20 x 1.5	-MC-SM12-MS20	45.2	16	22.8	9.5	22	22	
14	M14 x 1.5	-MC-SM14-MS14	42.5	13	24.4	7.2	25	24	
14	M16 x 1.5	-MC-SM14-MS16	43.9	14	24.4	8.4	25	24	
14	M20 x 1.5	-MC-SM14-MS20	45.1	16	24.4	10.8	25	24	
16	M20 x 1.5	-MC-SM16-MS20	46.1	16	24.4	10.8	25	24	
18	M20 x 1.5	-MC-SM18-MS20	47.5	16	24.4	10.8	30	27	
18	M22 x 1.5	-MC-SM18-MS22	48.5	17	24.4	12.0	30	27	
20	M20 x 1.5	-MC-SM20-MS20	49.5	16	26.0	10.8	32	30	
22	M24 x 1.5	-MC-SM22-MS24	50.5	17	26.0	14.4	32	30	
25	M27 x 2	-MC-SM25-MS27	57.0	18	31.3	16.1	38	35	

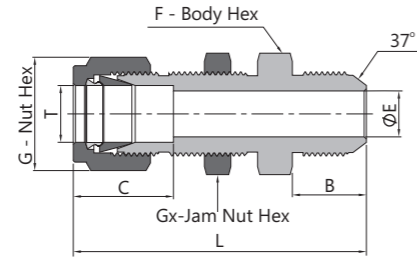
Bulkhead Male Connectors



Fractional Tube										NPT Thread	
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)
			L	B	C	E	G	F	Gx		
1/16	1/16	-BMC-S1-NT1	30.2	9.7	8.6	1.3	7.9	7.9	7.9	5.2	6.4
1/16	1/8	-BMC-S1-NT2	32.3	9.7	8.6	1.3	7.9	11.1	7.9	5.2	6.4
1/8	1/8	-BMC-S2-NT2	46.5	9.7	12.7	2.3	11.1	12.7	12.7	8.3	12.7
3/16	1/8	-BMC-S3-NT2	48.0	9.7	13.7	3.0	12.7	14.3	14.3	9.9	12.7
1/4	1/8	-BMC-S4-NT2	49.5	9.7	15.2	4.8	14.3	15.9	15.9	11.5	10.2
1/4	1/4	-BMC-S4-NT4	54.1	14.2	15.2	4.8	14.3	15.9	15.9	11.5	10.2
1/4	3/8	-BMC-S4-NT6	54.9	14.2	15.2	4.8	14.3	17.5	15.9	11.5	10.2
1/4	1/2	-BMC-S4-NT8	60.3	19.1	15.2	4.8	14.3	22.2	15.9	11.5	10.2
5/16	1/8	-BMC-S5-NT2	52.8	9.7	16.3	4.8	15.9	17.5	17.5	13.1	11.2
5/16	1/4	-BMC-S5-NT4	57.7	14.2	16.3	6.4	15.9	17.5	17.5	13.1	11.2
3/8	1/8	-BMC-S6-NT2	52.9	9.7	16.8	4.8	17.5	19.1	19.1	14.7	11.2
3/8	1/4	-BMC-S6-NT4	57.4	14.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2
3/8	3/8	-BMC-S6-NT6	57.4	14.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2
3/8	1/2	-BMC-S6-NT8	63.8	19.1	16.8	7.1	17.5	22.2	19.1	14.7	11.2
1/2	1/8	-BMC-S8-NT2	58.7	9.7	22.9	4.8	22.2	23.8	23.8	19.4	12.7
1/2	1/4	-BMC-S8-NT4	63.2	14.2	22.9	7.1	22.2	23.8	23.8	19.4	12.7
1/2	3/8	-BMC-S8-NT6	63.2	14.2	22.9	9.7	22.2	23.8	23.8	19.4	12.7
1/2	1/2	-BMC-S8-NT8	68.8	19.1	22.9	10.4	22.2	23.8	23.8	19.4	12.7
5/8	3/8	-BMC-S10-NT6	66.7	14.2	24.4	9.7	25.4	27.0	27.0	22.6	15.1
5/8	1/2	-BMC-S10-NT8	71.5	19.1	24.4	11.9	25.4	27.0	27.0	22.6	15.1
3/4	1/2	-BMC-S12-NT8	76.2	19.1	24.4	11.9	28.6	30.2	30.2	25.8	16.8
3/4	3/4	-BMC-S12-NT12	76.2	19.1	24.4	15.7	28.6	30.2	30.2	25.8	16.8
7/8	3/4	-BMC-S14-NT12	84.1	19.1	25.9	15.7	31.8	33.3	33.3	29.0	19.1
1	3/4	-BMC-S16-NT12	88.4	19.1	31.2	15.7	38.1	41.3	41.3	33.7	19.1
1	1	-BMC-S16-NT16	93.2	23.9	31.2	22.4	38.1	41.3	41.3	33.7	19.1

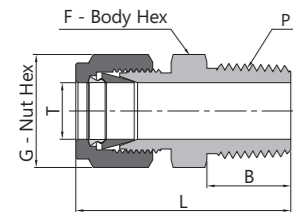
Metric Tube										NPT Thread	
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)
			L	B	C	E	G	F	Gx		
6	1/8	-BMC-SM6-NT2	49.6	9.7	15.3	4.8	14	16	16	11.5	10.2
6	1/4	-BMC-SM6-NT4	53.6	14.2	15.3	4.8	14	16	16	11.5	10.2
8	1/8	-BMC-SM8-NT2	52.3	9.7	16.2	4.8	16	18	18	13.1	11.2
8	1/4	-BMC-SM8-NT4	57.5	14.2	16.2	6.4	16	18	18	13.1	11.2
10	1/4	-BMC-SM10-NT4	58.4	14.2	17.2	7.9	19	22	22	16.3	11.2
10	3/8	-BMC-SM10-NT6	58.4	14.2	17.2	7.9	19	22	22	16.3	11.2
10	1/2	-BMC-SM10-NT8	63.1	19.1	17.2	7.9	19	22	22	16.3	11.2
12	1/4	-BMC-SM12-NT4	63.9	14.2	22.8	7.9	22	24	24	19.5	12.7
12	3/8	-BMC-SM12-NT6	63.9	14.2	22.8	9.5	22	24	24	19.5	12.7
12	1/2	-BMC-SM12-NT8	68.8	19.1	22.8	9.5	22	24	24	19.5	12.7

Bulkhead Male Connectors



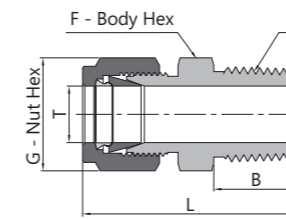
Fractional Tube			37° Flare (AN)									
T-Tube O.D. (in.)	AN Tube Flare Size	Basic Ordering Number	Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)	
			L	B	C	E	G	F	Gx			
1/8	1/8	-BMC-S2-AN2	48.5	11.4	12.7	1.5	11.1	12.7	12.7	8.3	12.7	
1/8	1/4	-BMC-S2-AN4	51.8	14.0	12.7	2.3	11.1	15.9	12.7	8.3	12.7	
3/16	3/16	-BMC-S3-AN3	50.3	12.2	13.7	2.3	12.7	14.3	14.3	9.9	12.7	
1/4	1/4	-BMC-S4-NT4	53.8	14.0	15.2	4.3	14.3	15.9	15.9	11.5	10.2	
5/16	5/16	-BMC-S5-AN5	56.1	14.0	16.2	5.8	15.9	17.5	17.5	13.1	14.3	
3/8	1/4	-BMC-S6-AN4	57.2	14.0	16.8	4.3	17.5	19.1	19.1	14.7	11.2	
3/8	3/8	-BMC-S6-AN6	57.2	14.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2	
1/2	1/2	-BMC-S8-AN8	65.8	16.8	22.8	9.9	22.2	23.8	23.8	19.4	12.7	
5/8	5/8	-BMC-S10-AN10	69.6	19.3	24.4	12.3	25.4	27.0	27.0	22.6	15.1	
3/4	3/4	-BMC-S12-AN12	79.0	21.8	24.4	15.5	28.6	30.2	30.2	25.8	16.8	
1	1	-BMC-S16-AN16	92.5	23.1	31.2	21.3	38.1	41.3	41.3	33.7	19.1	

Thermocouple Connectors



Fractional Tube			NPT Thread			
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm			
			L	B	G	F
1/16	1/16	-TMC-S1-NT1	23.9	9.7	7.9	7.9
1/16	1/8	-TMC-S1-NT2	26.2	9.7	7.9	11.1
1/16	1/4	-TMC-S1-NT4	31.0	14.2	7.9	14.3
1/8	1/16	-TMC-S2-NT1	29.7	9.7	11.1	11.1
1/8	1/8	-TMC-S2-NT2	30.5	9.7	11.1	11.1
1/8	1/4	-TMC-S2-NT4	35.6	14.2	11.1	14.3
3/16	1/8	-TMC-S3-NT2	31.2	9.7	12.7	11.1
3/16	1/4	-TMC-S3-NT4	36.3	14.2	12.7	14.3
1/4	1/8	-TMC-S4-NT2	32.8	9.7	14.3	12.7
1/4	1/4	-TMC-S4-NT4	37.8	14.2	14.3	14.3
1/4	3/8	-TMC-S4-NT6	38.4	14.2	14.3	17.5
1/4	1/2	-TMC-S4-NT8	44.7	19.1	14.3	22.2
5/16	1/4	-TMC-S5-NT4	38.6	14.2	15.9	14.3
3/8	1/4	-TMC-S6-NT4	39.9	14.2	17.5	15.9
3/8	3/8	-TMC-S6-NT6	39.9	14.2	17.5	17.5
3/8	1/2	-TMC-S6-NT8	46.2	19.1	17.5	22.2
3/8	3/4	-TMC-S6-NT12	47.8	19.1	17.5	27.0
1/2	1/2	-TMC-S8-NT8	49.0	19.1	22.2	22.2
1/2	3/4	-TMC-S8-NT12	50.5	19.1	22.2	27.0
5/8	3/4	-TMC-S10-NT12	50.5	19.1	25.4	27.0
3/4	3/4	-TMC-S12-NT12	50.5	19.1	28.6	27.0
1	1	-TMC-S16-NT16	62.2	23.9	38.1	34.9

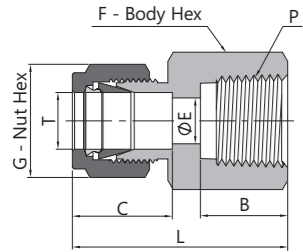
Thermocouple Connectors



Metric Tube			NPT Thread			
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm			
			L	B	G	F
2	1/8	-TMC-SM2-NT2	30.5	9.7	12	12
3	1/8	-TMC-SM3-NT2	30.5	9.7	12	12
3	1/4	-TMC-SM3-NT4	35.6	14.2	12	14
4	1/8	-TMC-SM4-NT2	31.2	9.7	12	12
4	1/4	-TMC-SM4-NT4	36.3	14.2	12	14
6	1/8	-TMC-SM6-NT2	32.8	9.7	14	14
6	1/4	-TMC-SM6-NT4	37.9	14.2	14	14
6	3/8	-TMC-SM6-NT6	38.4	14.2	14	18
6	1/2	-TMC-SM6-NT8	44.7	19.1	14	22
8	1/4	-TMC-SM8-NT4	38.7	14.2	16	15
8	3/8	-TMC-SM8-NT6	39.3	14.2	16	18
8	1/2	-TMC-SM8-NT8	45.6	19.1	16	22
10	3/8	-TMC-SM10-NT6	40.9	14.2	19	18
10	1/2	-TMC-SM10-NT8	46.5	19.1	19	22
10	3/4	-TMC-SM10-NT12	48.0	19.1	19	27
10	1	-TMC-SM10-NT16	54.6	23.9	19	35
12	3/8	-TMC-SM12-NT6	43.4	14.2	22	22
12	1/2	-TMC-SM12-NT8	49.0	19.1	22	22
12	3/4	-TMC-SM12-NT12	50.5	19.1	22	27
14	1/2	-TMC-SM14-NT8	49.0	19.1	25	24
14	3/4	-TMC-SM14-NT12	50.5	19.1	25	27
15	1/2	-TMC-SM15-NT8	49.0	19.1	25	24
15	3/4	-TMC-SM15-NT12	50.5	19.1	25	27
15	1	-TMC-SM15-NT16	57.1	23.9	25	35
16	3/4	-TMC-SM16-NT12	50.5	19.1	25	27
18	3/4	-TMC-SM18-NT12	50.5	19.1	30	27
20	1	-TMC-SM20-NT16	57.1	23.9	32	35
22	1	-TMC-SM22-NT16	57.1	23.9	32	35
25	1	-TMC-SM25-NT16	62.3	23.9	38	35



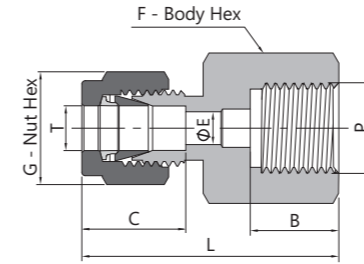
Female Connectors



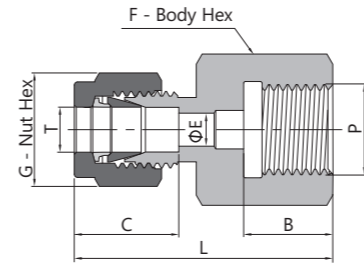
Fractional Tube			NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/16	1/16	-FC-S1-NT1	23.6	9.9	8.6	1.3	7.9	11.1	
1/16	1/8	-FC-S1-NT2	24.4	10.4	8.6	1.3	7.9	14.3	
1/8	1/8	-FC-S2-NT2	28.7	10.4	12.7	2.3	11.1	14.3	
1/8	1/4	-FC-S2-NT4	33.5	15.0	12.7	2.3	11.1	19.1	
3/16	1/8	-FC-S3-NT2	29.7	10.4	13.7	3.0	12.7	14.3	
1/4	1/8	-FC-S4-NT2	31.2	10.4	15.2	4.8	14.3	14.3	
1/4	1/4	-FC-S4-NT4	35.8	15.0	15.2	4.8	14.3	19.1	
1/4	3/8	-FC-S4-NT6	37.6	15.0	15.2	4.8	14.3	22.2	
1/4	1/2	-FC-S4-NT8	42.4	19.8	15.2	4.8	14.3	27.0	
5/16	1/8	-FC-S5-NT2	32.0	10.4	16.3	6.4	15.9	14.3	
5/16	1/4	-FC-S5-NT4	36.8	15.0	16.3	6.4	15.9	19.1	
3/8	1/8	-FC-S6-NT2	32.8	10.4	16.8	7.1	17.5	15.9	
3/8	1/4	-FC-S6-NT4	37.6	15.0	16.8	7.1	17.5	19.1	
3/8	3/8	-FC-S6-NT6	39.1	15.0	16.8	7.1	17.5	22.2	
3/8	1/2	-FC-S6-NT8	43.9	19.8	16.8	7.1	17.5	27.0	
3/8	3/4	-FC-S6-NT12	47.8	20.6	16.8	7.1	17.5	33.3	
1/2	1/4	-FC-S8-NT4	40.4	15.0	22.9	10.4	22.2	20.6	
1/2	3/8	-FC-S8-NT6	41.9	15.0	22.9	10.4	22.2	22.2	
1/2	1/2	-FC-S8-NT8	46.7	19.8	22.9	10.4	22.2	27.0	
1/2	3/4	-FC-S8-NT12	48.3	20.6	22.9	10.4	22.2	33.3	
5/8	3/8	-FC-S10-NT6	41.9	15.0	24.4	12.7	25.4	23.8	
5/8	1/2	-FC-S10-NT8	46.7	19.8	24.4	12.7	25.4	27.0	
3/4	1/2	-FC-S12-NT8	46.7	19.8	24.4	15.7	28.6	27.0	
3/4	3/4	-FC-S12-NT12	48.3	20.6	24.4	15.7	28.6	33.3	
7/8	3/4	-FC-S14-NT12	49.8	20.6	25.9	18.3	31.8	33.3	
1	3/4	-FC-S16-NT12	53.3	20.6	31.2	22.4	38.1	34.9	
1	1	-FC-S16-NT16	62.2	25.4	31.2	22.4	38.1	41.3	
1 1/4	1 1/4	-FC-S20-NT20	74.7	25.4	41.1	27.7	47.6	54.0	
1 1/2	1 1/2	-FC-S24-NT24	83.3	27.7	50.0	36.3	57.2	60.3	

Fractional Tube			ISO Tapered Thread (RT)						
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/4	1/8	-FC-S4-RT2	31.2	10.4	15.2	4.8	14.3	14.3	
1/4	1/4	-FC-S4-RT4	35.8	15.0	15.2	4.8	14.3	19.1	
1/4	3/8	-FC-S4-RT6	37.6	15.0	15.2	4.8	14.3	22.2	
1/4	1/2	-FC-S4-RT8	42.4	19.8	15.2	4.8	14.3	27.0	
3/8	1/4	-FC-S6-RT4	37.6	15.0	16.8	7.1	17.5	19.1	
3/8	3/8	-FC-S6-RT6	39.1	15.0	16.8	7.1	17.5	22.2	
3/8	1/2	-FC-S6-RT8	43.9	19.8	16.8	7.1	17.5	27.0	
1/2	1/4	-FC-S8-RT4	40.4	15.0	22.9	10.4	22.2	20.6	
1/2	3/8	-FC-S8-RT6	41.9	15.0	22.9	10.4	22.2	22.2	
1/2	1/2	-FC-S8-RT8	46.7	19.8	22.9	10.4	22.2	27.0	

Female Connectors

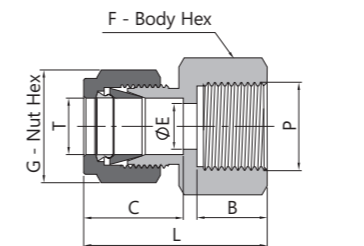


Fractional Tube			ISO Parallel Thread (RG)						
T-Tube O.D. (in.)	P-RG Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/8	1/4	-FC-S2-RG4	35.3	12.9	12.7	2.3	11.1	19.1	
1/8	3/8	-FC-S2-RG6	38.7	14.2	12.7	2.3	11.1	23.8	
1/4	1/4	-FC-S4-RG4	37.6	12.9	15.2	4.8	14.3	19.1	
1/4	3/8	-FC-S4-RG6	37.6	14.2	15.2	4.8	14.3	23.8	
1/4	1/2	-FC-S4-RG8	43.4	18.8	15.2	4.8	14.3	27.0	
5/16	1/4	-FC-S5-RG4	38.4	12.9	16.3	5.6	15.9	19.1	
5/16	3/8	-FC-S5-RG6	39.2	14.2	16.3	6.4	15.9	23.8	
5/16	1/2	-FC-S5-RG8	40.9	18.8	16.3	7.1	15.9	27.0	
3/8	1/4	-FC-S6-RG4	39.1	12.9	16.8	5.6	17.5	19.1	
3/8	3/8	-FC-S6-RG6	38.6	14.2	16.8	6.4	17.5	23.8	
3/8	1/2	-FC-S6-RG8	41.9	18.8	16.8	7.1	17.5	27.0	
1/2	1/4	-FC-S8-RG4	41.9	12.9	22.9	5.6	22.2	22.2	
1/2	3/8	-FC-S8-RG6	44.5	14.2	22.9	6.4	22.2	23.8	
1/2	1/2	-FC-S8-RG8	48.3	18.8	22.9	7.1	22.2	27.0	



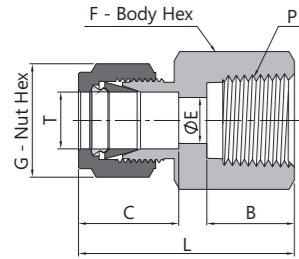
Adapt to Japanese gauge stud (JIS B7505)

Fractional Tube			ISO Parallel Thread (RJ)						
T-Tube O.D. (in.)	P-RJ Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/4	1/4	-FC-S4-RJ4	37.6	12.9	15.2	4.6	14.3	19.1	
1/4	3/8	-FC-S4-RJ6	37.6	15.8	15.2	4.8	14.3	23.8	
1/4	1/2	-FC-S4-RJ8	43.4	18.8	15.2	4.8	14.3	27.0	
5/16	1/4	-FC-S5-RJ4	38.4	12.9	16.3	5.6	15.9	19.1	
5/16	1/2	-FC-S5-RJ8	40.9	18.8	16.3	7.1	15.9	27.0	
3/8	1/4	-FC-S6-RJ4	39.1	12.9	16.8	5.6	17.5	19.1	
3/8	3/8	-FC-S6-RJ6	38.6	15.8	16.8	6.4	17.5	23.8	
3/8	1/2	-FC-S6-RJ8	41.9	18.8	16.8	7.1	17.5	27.0	
1/2	1/4	-FC-S8-RJ4	41.9	12.9	22.9	5.6	22.2	20.6	
1/2	3/8	-FC-S8-RJ6	44.5	15.8	22.9	6.4	22.2	23.8	
1/2	1/2	-FC-S8-RJ8	48.3	18.8	22.9	7.1	22.2	27.0	



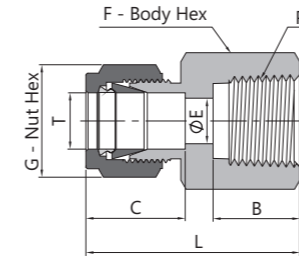
Fractional Tube			Metric Thread						
T-Tube O.D. (in.)	P-Metric Thread Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/8	M14 x 1.5	-FC-S2-MS14	32.3	13	12.7	2.3	11.1	19.1	
1/8	M16 x 1.5	-FC-S2-MS16	33.3	14	12.7	2.3	11.1	22.2	
1/8	M18 x 1.5	-FC-S2-MS18	34.3	15	12.7	2.3	11.1	25.4	
1/8	M20 x 1.5	-FC-S2-MS20	35.3	16	12.7	2.3	11.1	27.0	
1/4	M16 x 1.5	-FC-S4-MS16	35.8	14	15.2	4.8	14.3	22.2	
1/4	M18 x 1.5	-FC-S4-MS18	36.8	15	15.2	4.8	14.3	25.4	
1/4	M20 x 1.5	-FC-S4-MS20	37.8	16	15.2	4.8	14.3	27.0	
3/8	M14 x 1.5	-FC-S6-MS14	37.1	13	16.8	7.1	17.5	19.1	
3/8	M16 x 1.5	-FC-S6-MS16	37.5	14	16.8	7.1	17.5	22.2	
3/8	M18 x 1.5	-FC-S6-MS18	38.5	15	16.8	7.1	17.5	25.4	
3/8	M20 x 1.5	-FC-S6-MS20	39.5	16	16.8	7.1	17.5	27.0	
1/2	M16 x 1.5	-FC-S8-MS16	41.4	14	22.9	8.4	22.2	22.2	
1/2	M18 x 1.5	-FC-S8-MS18	42.4	15	22.9	9.6	22.2	25.4	
1/2	M20 x 1.5	-FC-S8-MS20	43.4	16	22.9	10.4	22.2	27.0	
1/2	M22 x 1.5	-FC-S8-MS22	44.4	17	22.9	10.4	22.2	27.0	

Female Connectors

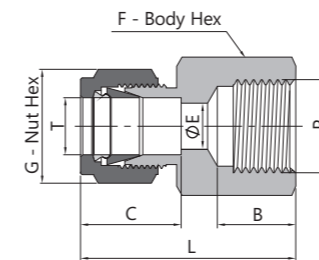


Metric Tube			NPT Thread					
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
3	1/8	-FC-SM3-NT2	28.7	10.4	12.9	2.4	12	14
3	1/4	-FC-SM3-NT4	33.5	15.0	12.9	2.4	12	19
4	1/8	-FC-SM4-NT2	29.7	10.4	13.7	2.4	12	14
6	1/8	-FC-SM6-NT2	31.3	10.4	15.3	4.8	14	14
6	1/4	-FC-SM6-NT4	35.8	15.0	15.3	4.8	14	19
6	3/8	-FC-SM6-NT6	37.7	15.0	15.3	4.8	14	22
6	1/2	-FC-SM6-NT8	42.5	19.8	15.3	4.8	14	27
8	1/8	-FC-SM8-NT2	32.1	10.4	16.2	4.8	16	15
8	1/4	-FC-SM8-NT4	37.0	15.0	16.2	6.4	16	19
8	3/8	-FC-SM8-NT6	38.5	15.0	16.2	6.4	16	22
8	1/2	-FC-SM8-NT8	43.3	19.8	16.2	6.4	16	27
10	1/8	-FC-SM10-NT2	33.0	10.4	17.2	4.8	19	15
10	1/4	-FC-SM10-NT4	37.8	15.0	17.2	7.9	19	19
10	3/8	-FC-SM10-NT6	39.4	15.0	17.2	7.9	19	22
10	1/2	-FC-SM10-NT8	44.2	19.8	17.2	7.9	19	27
12	1/4	-FC-SM12-NT4	40.3	15.0	22.8	7.9	22	22
12	3/8	-FC-SM12-NT6	41.9	15.0	22.8	9.5	22	22
12	1/2	-FC-SM12-NT8	46.7	19.8	22.8	9.5	22	27
12	3/4	-FC-SM12-NT12	49.7	20.6	22.8	9.5	22	35
14	3/4	-FC-SM14-NT12	49.7	20.6	24.4	11.1	25	35
15	1/2	-FC-SM15-NT8	46.7	19.8	24.4	11.9	25	27
16	3/8	-FC-SM16-NT6	41.9	15.0	24.4	9.5	25	27
16	1/2	-FC-SM16-NT8	46.9	19.8	24.4	11.9	25	27
20	1/2	-FC-SM20-NT8	47.9	19.8	26.0	11.9	32	30
20	3/4	-FC-SM20-NT12	49.7	20.6	26.0	15.9	32	35
22	3/4	-FC-SM22-NT12	49.7	20.6	26.0	15.9	32	35
22	1	-FC-SM22-NT16	57.9	25.4	26.0	18.3	32	41
25	3/4	-FC-SM25-NT12	53.4	20.6	31.3	15.9	38	35
25	1	-FC-SM25-NT16	62.3	25.4	31.3	21.8	38	41

Female Connectors

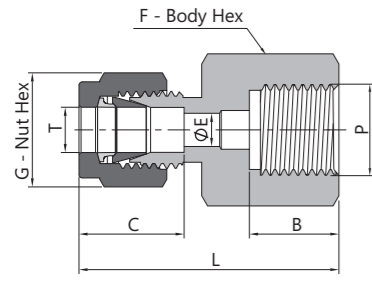


Metric Tube			ISO Tapered Thread (RT)					
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
3	1/8	-FC-SM3-RT2	28.7	10.4	12.9	2.4	12	14
6	1/8	-FC-SM6-RT2	31.3	10.4	15.3	4.8	14	14
6	1/4	-FC-SM6-RT4	35.8	15.0	15.3	4.8	14	19
6	3/8	-FC-SM6-RT6	36.9	15.0	15.3	4.8	14	22
6	1/2	-FC-SM6-RT8	42.5	19.8	15.3	4.8	14	27
8	1/8	-FC-SM8-RT2	32.1	10.4	16.2	6.4	16	15
8	1/4	-FC-SM8-RT4	37.0	15.0	16.2	6.4	16	19
8	3/8	-FC-SM8-RT6	38.5	15.0	16.2	6.4	16	22
8	1/2	-FC-SM8-RT8	43.3	19.8	16.2	6.4	16	27
10	1/8	-FC-SM10-RT2	33.0	10.4	17.2	7.9	19	18
10	1/4	-FC-SM10-RT4	37.8	15.0	17.2	7.9	19	19
10	3/8	-FC-SM10-RT6	39.4	15.0	17.2	7.9	19	22
10	1/2	-FC-SM10-RT8	44.2	19.8	17.2	7.9	19	27
12	1/8	-FC-SM12-RT2	35.5	10.4	22.8	8.3	22	22
12	1/4	-FC-SM12-RT4	40.3	15.0	22.8	9.5	22	22
12	3/8	-FC-SM12-RT6	41.9	15.0	22.8	9.5	22	22
12	1/2	-FC-SM12-RT8	46.7	19.8	22.8	9.5	22	27
12	3/4	-FC-SM12-RT12	49.0	20.6	22.8	9.5	22	35
15	1/2	-FC-SM15-RT8	46.7	19.8	24.4	11.9	25	27
16	1/2	-FC-SM16-RT8	48.4	19.8	24.4	11.9	25	27
16	3/4	-FC-SM16-RT12	49.7	20.6	24.4	12.7	25	35
20	1/2	-FC-SM20-RT8	47.9	19.8	26.0	11.9	32	30
20	3/4	-FC-SM20-RT12	49.7	20.6	26.0	15.9	32	35
22	3/4	-FC-SM22-RT12	49.7	20.6	26.0	15.9	32	35
22	1	-FC-SM22-RT16	57.9	25.4	26.0	18.3	32	41
25	3/4	-FC-SM25-RT12	53.4	20.6	31.3	15.9	38	35
25	1	-FC-SM25-RT16	62.3	25.4	31.3	21.8	38	41

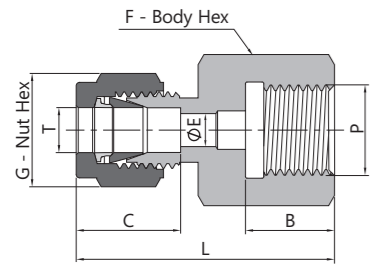


Metric Tube			ISO Parallel Thread (RP)					
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
6	1/8	-FC-SM6-RP2	33.5	13.0	15.3	4.8	14	14
6	1/4	-FC-SM6-RP4	39.4	18.5	15.3	4.8	14	19
22	3/4	-FC-SM22-RP12	53.3	25.9	26.0	18.3	32	35
25	1	-FC-SM25-RP16	63.9	28.2	31.3	21.8	38	40

Female Connectors

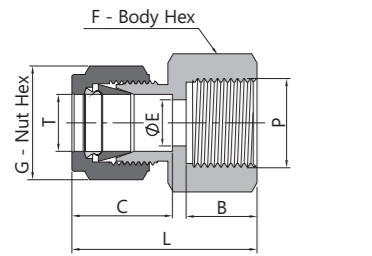


T-Tube O.D. (mm)	P-RG Size	Basic Ordering Number	ISO Parallel Thread (RG)							
			Dimension, mm							
			L	B	C	E	G	F		
3	1/4	-FC-SM3-RG4	35.3	12.9	12.9	2.4	12	19		
6	1/4	-FC-SM6-RG4	37.6	12.9	15.3	4.8	14	19		
6	3/8	-FC-SM6-RG6	37.6	14.2	15.3	4.8	14	24		
6	1/2	-FC-SM6-RG8	43.5	18.8	15.3	4.8	14	27		
8	1/4	-FC-SM8-RG4	38.5	12.9	16.2	6.4	16	19		
8	3/8	-FC-SM8-RG6	36.2	14.2	16.2	6.4	16	24		
8	1/2	-FC-SM8-RG8	41.0	18.8	16.2	6.4	16	27		
10	1/4	-FC-SM10-RG4	39.4	12.9	17.2	5.9	19	19		
10	3/8	-FC-SM10-RG6	38.8	14.2	17.2	7.9	19	24		
10	1/2	-FC-SM10-RG8	42.1	18.8	17.2	7.9	19	27		
12	1/4	-FC-SM12-RG4	41.9	12.9	22.8	5.9	22	22		
12	3/8	-FC-SM12-RG6	44.4	14.2	22.8	7.9	22	24		
12	1/2	-FC-SM12-RG8	48.2	18.8	22.8	9.5	22	27		
20	1/2	-FC-SM20-RG8	54.3	18.8	26.0	11.9	32	30		
22	1/2	-FC-SM22-RG8	54.3	18.8	26.0	11.9	32	30		



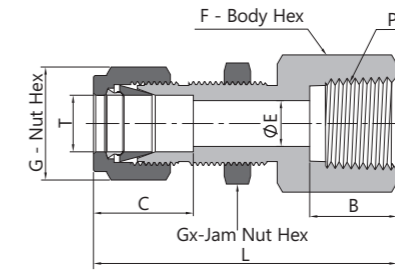
Adapt to Japanese Gauge stud (JIS B7505)

T-Tube O.D. (mm)	P-RJ Size	Basic Ordering Number	ISO Parallel Thread (RJ)							
			Dimension, mm							
			L	B	C	E	G	F		
6	1/4	-FC-SM6-RJ4	37.6	12.9	15.3	4.8	14	19		
6	3/8	-FC-SM6-RJ6	37.6	15.8	15.3	4.8	14	24		
6	1/2	-FC-SM6-RJ8	43.5	18.8	15.3	4.8	14	27		
8	1/4	-FC-SM8-RJ4	38.5	12.9	16.2	5.5	16	19		
8	3/8	-FC-SM8-RJ6	36.2	15.8	16.2	6.5	16	24		
8	1/2	-FC-SM8-RJ8	41.0	18.8	16.2	7.0	16	27		
10	1/4	-FC-SM10-RJ4	39.4	12.9	17.2	5.5	19	19		
10	3/8	-FC-SM10-RJ6	38.8	15.8	17.2	6.5	19	24		
10	1/2	-FC-SM10-RJ8	42.1	18.8	17.2	7.0	19	27		
12	1/4	-FC-SM12-RJ4	41.9	12.9	22.8	5.5	22	22		
12	3/8	-FC-SM12-RJ6	44.4	15.8	22.8	6.5	22	24		
12	1/2	-FC-SM12-RJ8	48.2	18.8	22.8	7.0	22	27		



T-Tube O.D. (mm)	P-Metric Thread Size	Basic Ordering Number	Metric Thread							
			Dimension, mm							
			L	B	C	E	G	F		
6	M10 x 1	-FC-SM6-MS10	32.7	11	15.3	4.0	14	16		
6	M14 x 1.5	-FC-SM6-MS14	34.7	13	15.3	4.8	14	19		
6	M20 x 1.5	-FC-SM6-MS20	37.7	16	15.3	4.8	14	27		
8	M8 x 1	-FC-SM8-MS8	31.6	9	16.2	3.2	16	14		
8	M10 x 1	-FC-SM8-MS10	33.6	11	16.2	4.0	16	16		
8	M14 x 1.5	-FC-SM8-MS14	35.6	13	16.2	6.0	16	19		
8	M20 x 1.5	-FC-SM8-MS20	38.6	16	16.2	6.4	16	27		
10	M16 x 1.5	-FC-SM10-MS16	38.1	14	17.2	7.9	19	22		
12	M20 x 1.5	-FC-SM12-MS20	44.9	16	22.8	9.5	22	27		
14	M10 x 1	-FC-SM14-MS10	42.5	11	24.4	4.0	25	24		
14	M20 x 1.5	-FC-SM14-MS20	44.9	16	24.4	10.8	25	27		
14	M22 x 1.5	-FC-SM14-MS22	45.9	17	24.4	11.1	25	27		
16	M20 x 1.5	-FC-SM16-MS20	44.9	16	24.4	10.8	26	27		
20	M20 x 1.5	-FC-SM20-MS20	46.5	16	26.0	10.8	32	30		
25	M27 x 2	-FC-SM25-MS27	54.4	18	31.3	16.1	38	35		

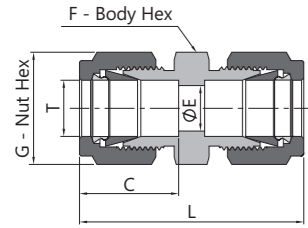
Bulkhead Female Connectors



T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Fractional Tube							NPT Thread		
			Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)	
			L	B	C	E	G	F	Gx			
1/16	1/16	-BFC-S1-NT1	26.2	9.9	8.6	1.3	7.9	11.1	7.9	5.2	3.2	
1/16	1/8	-BFC-S1-NT2	26.9	10.4	8.6	1.3	7.9	14.3	7.9	5.2	3.2	
1/8	1/8	-BFC-S2-NT2	44.7	10.4	12.7	2.3	11.1	14.3	12.7	8.3	12.7	
1/8	1/4	-BFC-S2-NT4	49.6	15.0	12.7	2.3	11.1	19.1	12.7	8.3	12.7	
3/16	1/8	-BFC-S3-NT2	45.5	10.4	13.7	3.0	12.7	14.3	14.3	9.9	12.7	
1/4	1/8	-BFC-S4-NT2	47.0	10.4	15.2	4.8	14.3	15.9	15.9	11.5	10.2	
1/4	1/4	-BFC-S4-NT4	51.8	15.0	15.2	4.8	14.3	19.1	15.9	11.5	10.2	
1/4	3/8	-BFC-S4-NT6	53.3	15.0	15.2	4.8	14.3	22.2	15.9	11.5	10.2	
1/4	1/2	-BFC-S4-NT8	58.2	19.8	15.2	4.8	14.3	27.0	15.9	11.5	10.2	
5/16	1/8	-BFC-S5-NT2	49.8	10.4	16.3	6.4	15.9	14.3	17.5	13.1	11.2	
5/16	1/4	-BFC-S5-NT4	60.5	15.0	16.3	6.4	15.9	19.1	17.5	13.1	11.2	
3/8	1/8	-BFC-S6-NT2	50.3	10.4	16.8	7.1	17.5	15.9	19.1	14.5	11.2	
3/8	1/4	-BFC-S6-NT4	55.1	15.0	16.8	7.1	17.5	19.1	19.1	14.5	11.2	
3/8	3/8	-BFC-S6-NT6	56.6	15.0	16.8	7.1	17.5	22.2	19.1	14.5	11.2	
3/8	1/2	-BFC-S6-NT8	61.5	19.8	16.8	7.1	17.5	27.0	19.1	14.5	11.2	
3/8	3/4	-BFC-S6-NT12	65.3	20.6	16.8	7.1	17.5	33.3	19.1	14.5	11.2	
1/2	1/4	-BFC-S8-NT4	60.2	15.0	22.9	10.4	22.2	23.8	23.8	19.4	12.7	
1/2	3/8	-BFC-S8-NT6	61.7	15.0	22.9	10.4	22.2	23.8	23.8	19.4	12.7	
1/2	1/2	-BFC-S8-NT8	66.5	19.8	22.9	10.4	22.2	27.0	23.8	19.4	12.7	
1/2	3/4	-BFC-S8-NT12	68.1	20.6	22.9	10.4	22.2	33.3	23.8	19.4	12.7	
5/8	3/8	-BFC-S10-NT6	62.5	15.0	24.4	12.7	25.4	23.8	27.0	22.6	15.1	
5/8	1/2	-BFC-S10-NT8	67.3	19.8	24.4	12.7	25.4	27.0	27.0	22.6	15.1	
3/4	1/2	-BFC-S12-NT8	72.2	19.8	24.4	15.7	28.6	27.0	30.2	25.8	19.8	
3/4	3/4	-BFC-S12-NT12	73.7	20.6	24.4	15.7	28.6	33.3	30.2	25.8	19.8	
7/8	3/4	-BFC-S14-NT12	80.8	20.6	25.9	18.3	31.8	33.3	33.3	29.0	23.8	
1	3/4	-BFC-S16-NT12	84.7	20.6	31.2	22.4	38.1	41.3	41.3	33.7	23.8	
1	1	-BFC-S16-NT16	93.5	25.4	31.2	22.4	38.1	41.3	41.3	33.7	23.8	

T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Metric Tube							NPT Thread	
			Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)
			L	B	C	E	G	F	Gx		
6	1/8	-BFC-SM6-NT2	47.2	10.4	15.3	4.8	14	16	16	11.5	10.2
6	1/4	-BFC-SM6-NT4	51.8	15.0	15.3	4.8	14	19	16	11.5	10.2
8	1/8	-BFC-SM8-NT2	49.6	10.4	16.2	4.8	16	18	18	13.1	11.2
10	1/4	-BFC-SM10-NT4	55.2	15.0	17.2	7.9	19	22	22	16.3	11.2
12	3/8	-BFC-SM12-NT6	60.9	15.0	22.8	9.5	22	24	24	19.5	12.7
12	1/2	-BFC-SM12-NT8	66.5	19.8	22.8	9.5	22	27	24	19.5	12.7

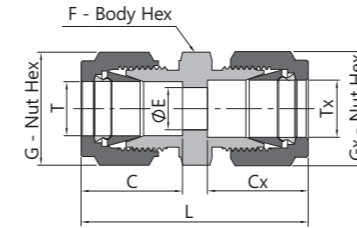
Unions



Fractional Tube						
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm				
		L	C	G	F	E
1/16	-U-S1	25.1	8.6	7.9	11.1	1.3
1/8	-U-S2	35.6	12.7	11.1	11.1	2.3
3/16	-U-S3	37.3	13.7	12.7	12.7	3.0
1/4	-U-S4	40.9	15.2	14.3	12.7	4.8
5/16	-U-S5	42.9	16.2	15.9	14.3	6.4
3/8	-U-S6	45.0	16.8	17.5	15.9	7.1
1/2	-U-S8	51.3	22.9	22.2	20.6	10.4
5/8	-U-S10	52.1	24.4	25.4	23.9	12.7
3/4	-U-S12	53.6	24.4	28.6	27.0	15.7
7/8	-U-S14	55.1	25.9	31.8	34.9	18.3
1	-U-S16	64.8	31.2	38.1	34.9	22.4
1 1/8	-U-S18	64.8	31.2	44.5	41.3	24.6
1 1/4	-U-S20	92.2	41.1	47.6	44.5	27.7
1 1/2	-U-S24	108.0	50.0	57.2	54.0	34.0

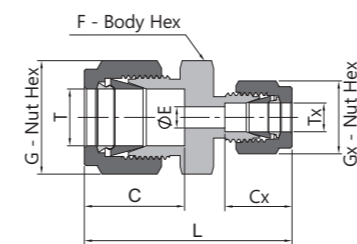
Metric Tube						
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm				
		L	C	G	F	E
2	-U-SM2	35.6	12.9	12	12	1.7
3	-U-SM3	35.3	12.9	12	12	2.4
4	-U-SM4	37.3	13.7	12	12	2.4
6	-U-SM6	41.0	15.3	14	14	4.8
8	-U-SM8	43.2	16.2	16	15	6.4
10	-U-SM10	46.2	17.2	19	18	7.9
12	-U-SM12	51.2	22.8	22	22	9.5
14	-U-SM14	52.0	24.4	25	24	11.1
15	-U-SM15	52.0	24.4	25	24	11.9
16	-U-SM16	52.0	24.4	25	24	12.7
18	-U-SM18	53.5	24.4	30	27	15.1
20	-U-SM20	55.0	26.0	32	30	15.9
22	-U-SM22	55.0	26.0	32	30	18.3
25	-U-SM25	65.0	31.3	38	35	21.8
28	-U-SM28	85.0	36.6	46	41	21.8
30	-U-SM30	92.7	39.6	50	46	26.2
32	-U-SM32	97.3	42.0	50	46	28.6
38	-U-SM38	113.6	49.4	60	55	33.7

Conversion Unions



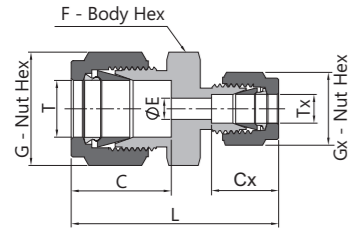
Metric Tube				Fractional Tube						
T-Tube O.D. (mm)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							
			L	C	G	F	E	Cx	Gx	
3	1/8	-U-SM3-S2	35.2	12.9	12	12	2.4	12.7	11.1	
4	1/8	-U-SM4-S2	36.5	13.7	12	12	2.4	12.7	11.1	
4	1/4	-U-SM4-S4	39.4	13.7	12	14	2.4	15.2	14.3	
6	1/8	-U-SM6-S2	38.5	15.3	14	14	2.4	12.7	11.1	
6	1/4	-U-SM6-S4	41.0	15.3	14	14	4.8	15.2	14.3	
6	5/16	-U-SM6-S5	42.3	15.3	14	14	4.8	16.2	15.9	
8	1/4	-U-SM8-S4	42.3	16.2	16	15	4.8	15.2	14.3	
8	3/8	-U-SM8-S6	44.3	16.2	16	16	6.4	16.8	17.5	
10	1/8	-U-SM10-S2	41.8	17.2	19	18	2.4	12.7	11.1	
10	1/4	-U-SM10-S4	44.5	17.2	19	18	4.8	15.2	14.3	
10	5/16	-U-SM10-S5	45.1	17.2	19	18	6.4	16.2	15.9	
10	3/8	-U-SM10-S6	45.9	17.2	19	18	7.1	16.8	17.5	
12	5/16	-U-SM12-S5	47.8	22.8	22	22	6.4	16.2	15.9	
12	3/8	-U-SM12-S6	48.4	22.8	22	22	7.1	16.8	17.5	
12	1/2	-U-SM12-S8	51.2	22.8	22	22	9.5	22.9	22.2	
15	1/2	-U-SM15-S8	52.0	24.4	25	24	10.4	22.9	22.2	
16	5/8	-U-SM16-S10	52.0	24.4	25	24	12.7	24.4	25.4	
18	3/4	-U-SM18-S12	53.5	24.4	30	27	15.1	24.4	28.6	
20	1/2	-U-SM20-S8	55.0	26.0	32	30	10.4	22.9	22.2	
20	1	-U-SM20-S16	62.8	26.0	32	35	15.9	31.2	38.1	
25	1	-U-SM25-S16	65.0	31.3	38	35	21.8	31.2	38.1	

Reducing Unions



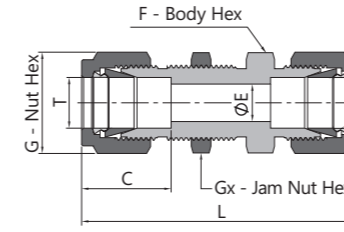
Fractional Tube										
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							
			L	C	G	F	E	Cx	Gx	
1/8	1/16	-U-S2-S1	31.0	12.7	11.1	11.1	1.3	8.6	7.9	
3/16	1/16	-U-S3-S1	32.3	13.7	12.7	11.1	1.3	8.6	7.9	
3/16	1/8	-U-S3-S2	36.6	13.7	12.7	11.1	2.3	12.7	11.1	
1/4	1/16	-U-S4-S1	34.3	15.2	14.3	12.7	1.3	8.6	7.9	
1/4	1/8	-U-S4-S2	38.6	15.2	14.3	12.7	2.3	12.7	11.1	
1/4	3/16	-U-S4-S3	39.4	15.2	14.3	12.7	3.0	13.7	12.7	
5/16	1/8	-U-S5-S2	39.6	16.2	15.9	14.3	2.3	12.7	11.1	
5/16	1/4	-U-S5-S4	42.2	16.2	15.9	14.3	4.8	15.2	14.3	
3/8	1/16	-U-S6-S1	36.6	16.8	17.5	15.9	1.3	8.6	7.9	
3/8	1/8	-U-S6-S2	40.9	16.8	17.5	15.9	2.3	12.7	11.1	
3/8	1/4	-U-S6-S4	43.2	16.8	17.5	15.9	4.8	15.2	14.3	
3/8	5/16	-U-S6-S5	44.2	16.8	17.5	15.9	6.4	16.2	15.9	
1/2	1/8	-U-S8-S2	45.2	22.8	22.2	20.6	2.3	12.7	11.1	
1/2	1/4	-U-S8-S4	47.0	22.8	22.2	20.6	4.8	15.2	14.3	
1/2	3/8	-U-S8-S6	48.5	22.8	22.2	20.6	7.1	16.8	17.5	
5/8	3/8	-U-S10-S6	49.3	24.4	25.4	23.9	7.1	16.8	17.5	
5/8	1/2	-U-S10-S8	52.1	24.4	25.4	23.9	10.4	22.8	22.2	
3/4	1/4	-U-S12-S4	49.3	24.4	28.6	27.0	4.8	15.2	14.3	
3/4	3/8	-U-S12-S6	50.8	24.4	28.6	27.0	7.1	16.8	17.5	
3/4	1/2	-U-S12-S8	53.6	24.4	28.6	27.0	10.4	22.8	22.2	
3/4	5/8	-U-S12-S10	53.6	24.4	28.6	27.0	12.7	24.4	25.4	
1	1/2	-U-S16-S8	60.5	31.2	38.1	34.9	10.4	22.8	22.2	
1	3/4	-U-S16-S12	60.5	31.2	38.1	34.9	15.7	24.4	28.6	

Reducing Unions



Metric Tube										
T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm							
			L	C	G	F	E	Cx	Gx	
3	2	-U-SM3-SM2	35.3	12.9	12	12	1.7	12.9	12	
6	2	-U-SM6-SM2	38.6	15.3	14	14	1.7	12.9	12	
6	3	-U-SM6-SM3	38.6	15.3	14	14	2.4	12.9	12	
6	4	-U-SM6-SM4	39.4	15.3	14	14	2.4	13.7	12	
8	6	-U-SM8-SM6	42.3	16.3	16	15	4.8	15.3	14	
10	6	-U-SM10-SM6	44.5	17.2	19	18	4.8	15.3	14	
10	8	-U-SM10-SM8	45.1	17.2	19	18	6.4	16.3	16	
12	6	-U-SM12-SM6	47.0	22.8	22	22	4.8	15.3	14	
12	8	-U-SM12-SM8	47.8	22.8	22	22	6.4	16.3	16	
12	10	-U-SM12-SM10	48.7	22.8	22	22	7.9	17.2	19	
16	10	-U-SM16-SM10	49.5	24.4	25	24	7.9	17.2	19	
16	12	-U-SM16-SM12	52.0	24.4	25	24	9.5	22.8	22	
18	12	-U-SM18-SM12	53.5	24.4	30	27	9.5	22.8	22	
25	18	-U-SM25-SM18	61.0	31.3	38	35	15.1	24.4	30	
25	20	-U-SM25-SM20	62.3	31.3	38	35	15.9	26.0	32	
30	18	-U-SM30-SM18	75.4	39.6	50	46	15.1	24.4	30	
30	20	-U-SM30-SM20	75.4	39.6	50	46	15.9	26.0	32	
30	25	-U-SM30-SM25	80.1	39.6	50	46	21.8	31.3	38	
32	18	-U-SM32-SM18	77.8	42.0	50	46	15.1	24.4	30	
32	20	-U-SM32-SM20	77.8	42.0	50	46	15.9	26.0	32	
32	25	-U-SM32-SM25	82.3	42.0	50	46	21.8	31.3	38	
38	20	-U-SM38-SM20	87.5	49.4	60	55	15.9	26.0	32	
38	25	-U-SM38-SM25	92.0	49.4	60	55	21.8	31.3	38	
38	30	-U-SM38-SM30	104.6	49.4	60	55	26.2	39.6	50	

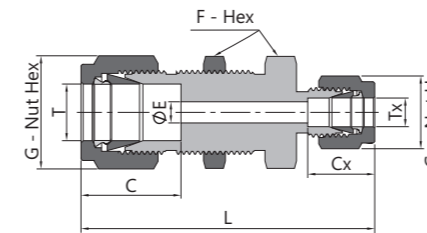
Bulkhead Unions



Fractional Tube										
Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm						Panel Hole Size (mm)	Max. Panel Thickness (mm)	
		L	C	E	G	F	Gx			
1/16	-BU-S1	31.5	8.6	1.3	7.9	7.9	7.9	5.2	3.0	
1/8	-BU-S2	51.3	12.7	2.3	11.1	12.7	12.7	8.3	12.7	
3/16	-BU-S3	53.6	13.7	3.0	12.7	14.3	14.3	9.9	12.7	
1/4	-BU-S4	57.7	15.2	4.8	14.3	15.9	15.9	11.5	10.2	
5/16	-BU-S5	60.7	16.3	6.4	15.9	17.5	17.5	13.1	11.2	
3/8	-BU-S6	62.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2	
1/2	-BU-S8	71.1	22.9	10.4	22.2	23.8	23.8	19.4	12.7	
5/8	-BU-S10	72.6	24.4	12.7	25.4	27.0	27.0	22.6	12.7	
3/4	-BU-S12	79.0	24.4	15.7	28.6	30.2	30.2	25.8	16.8	
7/8	-BU-S14	84.6	25.9	18.3	31.8	33.3	34.9	29.0	19.1	
1	-BU-S16	95.8	31.2	22.4	38.1	41.3	41.3	33.7	19.1	
1 1/4	-BU-S20	123.2	41.1	27.8	47.6	47.6	47.6	41.7	19.1	
1 1/2	-BU-S24	139.2	50.0	34.0	57.2	57.2	57.2	49.6	19.1	

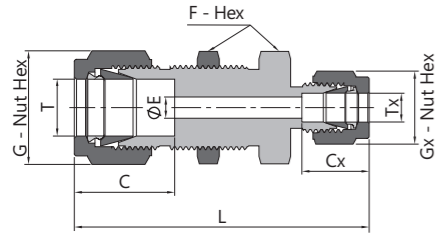
Metric Tube										
Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm						Panel Hole Size (mm)	Max. Panel Thickness (mm)	
		L	C	E	G	F	Gx			
3	-BU-SM3	51.3	12.9	2.4	12	14	14	8.3	12.7	
4	-BU-SM4	53.6	13.7	2.4	12	14	14	9.9	12.7	
6	-BU-SM6	57.7	15.3	4.8	14	16	16	11.5	10.2	
8	-BU-SM8	61.0	16.2	6.4	16	18	18	13.1	11.2	
10	-BU-SM10	63.7	17.2	7.9	19	22	22	16.3	11.2	
12	-BU-SM12	71.0	22.8	9.5	22	24	24	19.5	12.7	
14	-BU-SM14	72.5	24.4	11.1	25	27	27	22.5	12.7	
15	-BU-SM15	72.5	24.4	11.9	25	27	27	22.8	12.7	
16	-BU-SM16	72.5	24.4	12.7	25	27	27	22.8	12.7	
18	-BU-SM18	78.9	24.4	15.1	30	30	30	26.0	16.8	
20	-BU-SM20	84.5	26.0	15.9	32	35	35	29.0	19.0	
25	-BU-SM25	96.0	31.3	21.8	38	41	41	34.0	19.0	
30	-BU-SM30	124.0	39.6	26.2	50	50	50	40.5	19.0	
32	-BU-SM32	128.0	42.0	28.6	50	50	50	42.5	19.0	
38	-BU-SM38	145.0	49.4	33.7	60	60	60	50.5	19.0	

Bulkhead Reducing Unions



Fractional Tube											
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm						Panel Hole Size (mm)	Max. Panel Thickness (mm)	
			L	C	E	G	F	Cx			Gx
1/4	1/8	-BU-S4-S2	55.1	15.2	2.3	14.3	15.9	12.7	11.1	11.5	10.2
3/8	1/4	-BU-S6-S4	60.7	16.8	4.8	17.5	19.1	15.2	14.3	14.7	11.2
1/2	1/4	-BU-S8-S4	66.8	22.9	4.8	22.2	23.8	15.2	14.3	19.4	12.7

Bulkhead Reducing Unions



Metric Tube											
T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)
			L	C	E	G	F	Cx	Gx		
6	3	-BU-SM6-SM3	55.1	15.3	2.4	14	16	12.9	12	11.5	10.2
8	6	-BU-SM8-SM6	60.1	16.2	4.8	16	18	15.3	14	13.1	11.2
12	8	-BU-SM12-SM8	67.6	22.8	6.4	22	24	16.2	16	19.5	12.7

Bulkhead Conversion Unions

Fractional Tube											Metric Tube	
T-Tube O.D. (in.)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)	
			L	C	E	G	F	Cx	Gx			
1/4	6	-BU-S4-SM6	57.7	16.8	4.8	14.3	15.9	15.3	14	11.5	10.2	

Metric Tube											Fractional Tube	
T-Tube O.D. (mm)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							Panel Hole Size (mm)	Max. Panel Thickness (mm)	
			L	C	E	G	F	Cx	Gx			
6	1/8	-BU-SM6-S2	55.1	15.3	2.3	14	16	15.2	11.1	11.5	10.2	
6	1/4	-BU-SM6-S4	57.7	15.3	4.8	14	16	16.8	14.3	11.5	10.2	

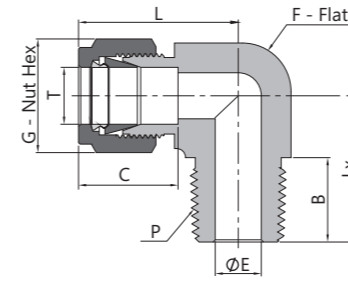
Bulkhead Locknuts



Fractional Tube	
T-Tube O.D. (in.)	Basic Ordering Number
1/16	-BN-S1
1/8	-BN-S2
3/16	-BN-S3
1/4	-BN-S4
5/16	-BN-S5
3/8	-BN-S6
1/2	-BN-S8
5/8	-BN-S10
3/4	-BN-S12
7/8	-BN-S14
1	-BN-S16
1 1/4	-BN-S20
1 1/2	-BN-S24

Metric Tube	
T-Tube O.D. (mm)	Basic Ordering Number
3	-BN-SM3
4	-BN-SM4
6	-BN-SM6
8	-BN-SM8
10	-BN-SM10
12	-BN-SM12
14	-BN-SM14
18	-BN-SM18
20	-BN-SM20
22	-BN-SM22
25	-BN-SM25
28	-BN-SM28
30	-BN-SM30
32	-BN-SM32
38	-BN-SM38

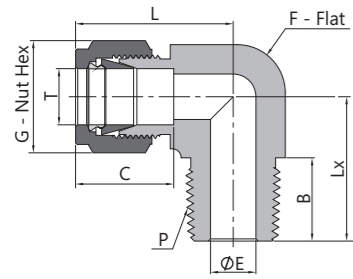
Male Elbows



Fractional Tube			NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
1/16	1/16	-LM-S1-NT1	19.1	8.6	7.9	11.1	1.3	9.7	17.8
1/16	1/8	-LM-S1-NT2	19.1	8.6	7.9	11.1	1.3	9.7	17.8
1/8	1/16	-LM-S2-NT1	23.6	12.7	11.1	11.1	2.4	9.7	17.8
1/8	1/8	-LM-S2-NT2	23.6	12.7	11.1	11.1	2.4	9.7	17.8
1/8	1/4	-LM-S2-NT4	24.6	12.7	11.1	12.7	2.4	14.2	23.4
3/16	1/8	-LM-S3-NT2	25.4	13.7	12.7	12.7	3.0	9.7	18.8
3/16	1/4	-LM-S3-NT4	25.4	13.7	12.7	12.7	3.0	14.2	23.4
1/4	1/16	-LM-S4-NT1	26.9	15.2	14.3	12.7	3.0	9.7	18.8
1/4	1/8	-LM-S4-NT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8
1/4	1/4	-LM-S4-NT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4
1/4	3/8	-LM-S4-NT6	29.7	15.2	14.3	17.5	4.8	14.2	26.2
1/4	1/2	-LM-S4-NT8	31.8	15.2	14.3	20.6	4.8	19.1	33.0
5/16	1/8	-LM-S5-NT2	28.7	16.3	15.9	14.3	4.8	9.7	19.8
5/16	1/4	-LM-S5-NT4	28.7	16.3	15.9	14.3	6.4	14.2	24.4
5/16	3/8	-LM-S5-NT6	30.5	16.3	15.9	17.5	6.4	14.2	26.2
3/8	1/8	-LM-S6-NT2	30.5	16.8	17.5	15.9	4.8	9.7	20.8
3/8	1/4	-LM-S6-NT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4
3/8	3/8	-LM-S6-NT6	31.2	16.8	17.5	17.5	7.1	14.2	26.2
3/8	1/2	-LM-S6-NT8	33.3	16.8	17.5	20.6	7.1	19.1	33.0
3/8	3/4	-LM-S6-NT12	37.1	16.8	17.5	27.0	7.1	19.1	36.8
1/2	1/4	-LM-S8-NT4	36.1	22.9	22.2	20.6	7.1	14.2	28.2
1/2	3/8	-LM-S8-NT6	36.1	22.9	22.2	20.6	9.7	14.2	28.2
1/2	1/2	-LM-S8-NT8	36.1	22.9	22.2	20.6	10.4	19.1	33.0
1/2	3/4	-LM-S8-NT12	39.9	22.9	22.2	27.0	10.4	19.1	36.8
5/8	3/8	-LM-S10-NT6	38.1	24.4	25.4	23.8	9.7	14.2	30.2
5/8	1/2	-LM-S10-NT8	38.1	24.4	25.4	23.8	11.9	19.1	35.1
5/8	3/4	-LM-S10-NT12	39.9	24.4	25.4	27.0	12.7	19.1	36.8
3/4	1/2	-LM-S12-NT8	39.9	24.4	28.6	27.0	11.9	19.1	36.8
3/4	3/4	-LM-S12-NT12	39.9	24.4	28.6	27.0	15.7	19.1	36.8
7/8	3/4	-LM-S14-NT12	44.7	25.9	31.8	34.9	15.7	19.1	41.7
1	3/4	-LM-S16-NT12	49.0	31.2	38.1	34.9	15.7	19.1	41.7
1	1	-LM-S16-NT16	49.0	31.2	38.1	34.9	22.4	23.9	46.5
1 1/4	1 1/4	-LM-S20-NT20	66.5	41.1	47.6	42.9	27.7	23.9	52.4
1 1/2	1 1/2	-LM-S24-NT24	78.0	50.0	57.2	50.8	34.0	26.2	60.5

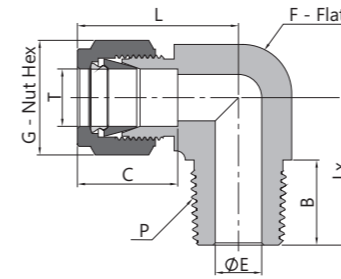
Fractional Tube			ISO Tapered Thread (RT)						
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
1/8	1/8	-LM-S2-RT2	23.6	12.7	11.1	11.1	2.4	9.7	17.8
1/8	1/4	-LM-S2-RT4	24.6	12.7	11.1	12.7	2.4	14.2	23.4
1/4	1/8	-LM-S4-RT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8
1/4	1/4	-LM-S4-RT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4
1/4	3/8	-LM-S4-RT6	29.7	15.2	14.3	17.5	4.8	14.2	26.2
1/4	1/2	-LM-S4-RT8	31.8	15.2	14.3	20.6	4.8	19.1	33.0
5/16	1/4	-LM-S5-RT4	28.7	16.3	15.9	14.3	6.4	14.2	24.4
3/8	1/8	-LM-S6-RT2	30.5	16.8	17.5	15.9	4.8	9.7	20.8
3/8	1/4	-LM-S6-RT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4
3/8	3/8	-LM-S6-RT6	31.2	16.8	17.5	17.5	7.1	14.2	26.2
1/2	3/8	-LM-S8-RT6	36.1	22.9	22.2	20.6	9.7	14.2	27.9
1/2	1/2	-LM-S8-RT8	36.1	22.9	22.2	20.6	10.4	19.1	33.0
3/4	1/2	-LM-S12-RT8	39.9	24.4	28.6	27.0	11.9	19.1	36.8
1	1	-LM-S16-RT16	49.0	31.2	38.1	34.9	22.4	23.9	46.5

Male Elbows



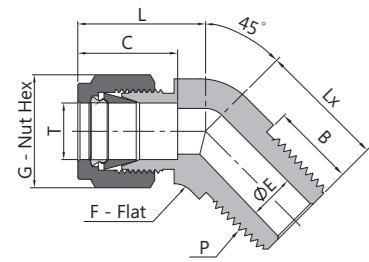
Metric Tube			NPT Thread						
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
3	1/8	-LM-SM3-NT2	23.6	12.9	12	11.1	2.4	9.7	17.8
3	1/4	-LM-SM3-NT4	24.6	12.9	12	12.7	2.4	14.2	23.4
4	1/8	-LM-SM4-NT2	25.4	13.7	12	12.7	2.4	9.7	18.8
4	1/4	-LM-SM4-NT4	25.4	13.7	12	12.7	2.4	14.2	23.4
6	1/8	-LM-SM6-NT2	27.0	15.3	14	12.7	4.8	9.7	18.8
6	1/4	-LM-SM6-NT4	27.0	15.3	14	12.7	4.8	14.2	23.4
6	3/8	-LM-SM6-NT6	29.8	15.3	14	17.5	4.8	14.2	26.2
6	1/2	-LM-SM6-NT8	31.8	15.3	14	20.6	4.8	19.1	33.0
8	1/8	-LM-SM8-NT2	28.8	16.2	16	14.3	4.8	9.7	19.8
8	1/4	-LM-SM8-NT4	28.8	16.2	16	14.3	6.4	14.2	24.4
8	3/8	-LM-SM8-NT6	30.6	16.2	16	17.5	6.4	14.2	26.2
8	1/2	-LM-SM8-NT8	32.6	16.2	16	20.6	6.4	19.1	33.0
10	1/8	-LM-SM10-NT2	31.5	17.2	19	17.5	4.8	9.7	21.6
10	1/4	-LM-SM10-NT4	31.5	17.2	19	17.5	7.1	14.2	26.2
10	3/8	-LM-SM10-NT6	31.5	17.2	19	17.5	7.9	14.2	26.2
10	1/2	-LM-SM10-NT8	33.5	17.2	19	20.6	7.9	19.1	33.0
12	1/8	-LM-SM12-NT2	36.0	22.8	22	20.6	4.8	9.7	23.6
12	1/4	-LM-SM12-NT4	36.0	22.8	22	20.6	7.1	14.2	28.2
12	3/8	-LM-SM12-NT6	36.0	22.8	22	20.6	9.5	14.2	28.2
12	1/2	-LM-SM12-NT8	36.0	22.8	22	20.6	9.5	19.1	33.0
12	3/4	-LM-SM12-NT12	39.8	22.8	22	27.0	9.5	19.1	36.8
15	1/2	-LM-SM15-NT8	38.0	24.4	25	23.8	11.9	19.1	35.1
16	1/4	-LM-SM16-NT4	38.0	24.4	25	23.8	7.1	14.2	30.2
16	3/8	-LM-SM16-NT6	38.0	24.4	25	23.8	9.5	14.2	30.2
16	1/2	-LM-SM16-NT8	38.0	24.4	25	23.8	11.9	19.1	35.1
16	3/4	-LM-SM16-NT12	39.8	24.4	25	27.0	12.7	19.1	36.8
18	1/2	-LM-SM18-NT8	39.8	24.4	30	27.0	11.9	19.1	36.8
18	3/4	-LM-SM18-NT12	39.8	24.4	30	27.0	15.1	19.1	36.8
20	1/2	-LM-SM20-NT8	44.6	26.0	32	34.9	11.9	19.1	41.7
20	3/4	-LM-SM20-NT12	44.6	26.0	32	34.9	15.9	19.1	41.7
22	3/4	-LM-SM22-NT12	44.6	26.0	32	34.9	15.9	19.1	41.7
22	1	-LM-SM22-NT16	44.6	26.0	32	34.9	18.3	23.9	46.5
25	3/4	-LM-SM25-NT12	49.1	31.3	38	34.9	15.9	19.1	41.7
25	1	-LM-SM25-NT16	49.1	31.3	38	34.9	21.8	23.9	46.5
30	1 1/4	-LM-SM30-NT20	69.9	39.6	50	42.9	26.2	23.9	53.1
32	1 1/4	-LM-SM32-NT20	72.3	42.0	50	42.9	27.8	23.9	53.1
38	1 1/2	-LM-SM38-NT24	84.0	49.4	60	50.8	33.7	26.2	60.4

Male Elbows



Metric Tube			ISO Tapered Thread (RT)						
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
3	1/8	-LM-SM3-RT2	23.6	12.9	12	11.1	2.4	9.7	17.8
3	1/4	-LM-SM3-RT4	24.6	12.9	12	12.7	2.4	14.2	23.4
4	1/8	-LM-SM4-RT2	25.4	13.7	12	12.7	2.4	9.7	18.8
4	1/4	-LM-SM4-RT4	25.4	13.7	12	12.7	2.4	14.2	23.4
6	1/8	-LM-SM6-RT2	27.0	15.3	14	12.7	4.8	9.7	18.8
6	1/4	-LM-SM6-RT4	27.0	15.3	14	12.7	4.8	14.2	23.4
6	3/8	-LM-SM6-RT6	29.8	15.3	14	17.5	4.8	14.2	26.2
6	1/2	-LM-SM6-RT8	31.8	15.3	14	20.6	4.8	19.1	33.0
8	1/8	-LM-SM8-RT2	28.8	16.2	16	14.3	4.8	9.7	19.8
8	1/4	-LM-SM8-RT4	28.8	16.2	16	14.3	6.4	14.2	24.4
8	3/8	-LM-SM8-RT6	30.6	16.2	16	17.5	6.4	14.2	26.2
8	1/2	-LM-SM8-RT8	32.6	16.2	16	20.6	6.4	19.1	33.0
10	1/8	-LM-SM10-RT2	31.5	17.2	19	17.5	4.8	9.7	21.6
10	1/4	-LM-SM10-RT4	31.5	17.2	19	17.5	7.1	14.2	26.2
10	3/8	-LM-SM10-RT6	31.5	17.2	19	17.5	7.9	14.2	26.2
10	1/2	-LM-SM10-RT8	33.5	17.2	19	20.6	7.9	19.1	33.0
12	1/8	-LM-SM12-RT2	36.0	22.8	22	20.6	4.8	9.7	23.6
12	1/4	-LM-SM12-RT4	36.0	22.8	22	20.6	7.1	14.2	28.2
12	3/8	-LM-SM12-RT6	36.0	22.8	22	20.6	9.5	14.2	28.2
12	1/2	-LM-SM12-RT8	36.0	22.8	22	20.6	9.5	19.1	33.0
12	3/4	-LM-SM12-RT12	39.8	22.8	22	27.0	9.5	19.1	36.8
14	1/2	-LM-SM14-RT8	38.1	24.4	25	23.8	11.1	19.1	35.1
15	1/2	-LM-SM15-RT8	38.1	24.4	25	23.8	11.9	19.1	35.1
16	1/4	-LM-SM16-RT4	38.0	24.4	25	23.8	7.1	14.2	30.2
16	3/8	-LM-SM16-RT6	38.0	24.4	25	23.8	9.5	14.2	30.2
16	1/2	-LM-SM16-RT8	38.0	24.4	25	23.8	11.9	19.1	35.1
16	3/4	-LM-SM16-RT12	39.8	24.4	25	27.0	12.7	19.1	36.8
18	1/2	-LM-SM18-RT8	39.8	24.4	30	27.0	11.9	19.1	36.8
18	3/4	-LM-SM18-RT12	39.8	24.4	30	27.0	15.1	19.1	36.8
20	1/2	-LM-SM20-RT8	44.6	26.0	32	34.9	11.9	19.1	41.7
20	3/4	-LM-SM20-RT12	44.6	26.0	32	34.9	15.9	19.1	41.7
22	3/4	-LM-SM22-RT12	44.6	26.0	32	34.9	15.9	19.1	41.7
22	1	-LM-SM22-RT16	44.6	26.0	32	34.9	18.3	23.9	46.5
25	3/4	-LM-SM25-RT12	49.1	31.3	38	34.9	15.9	19.1	41.7
25	1	-LM-SM25-RT16	49.1	31.3	38	34.9	21.8	23.9	46.5
28	1	-LM-SM28-RT16	64.0	36.6	46	42.9	21.8	23.9	53.1

45° Male Elbows



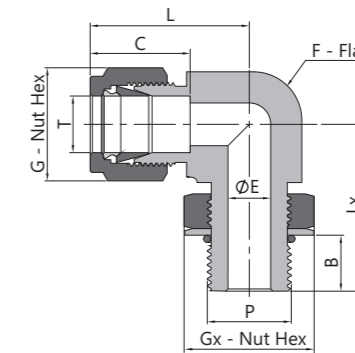
Fractional Tube			NPT Thread							
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							
			L	C	G	F	E	B	Lx	
1/16	1/16	-VM-S1-NT1	15.7	8.6	7.9	9.5	1.3	9.7	14.5	
1/8	1/8	-VM-S2-NT2	20.8	12.7	11.1	11.1	2.3	9.7	16.8	
3/16	1/8	-VM-S3-NT2	21.6	13.7	12.7	11.1	3.0	9.7	14.7	
1/4	1/8	-VM-S4-NT2	24.6	15.2	14.3	12.7	4.8	9.7	16.5	
1/4	1/4	-VM-S4-NT4	24.6	15.2	14.3	12.7	4.8	14.2	21.1	
5/16	1/8	-VM-S5-NT2	26.1	16.3	15.9	14.3	4.8	9.7	16.8	
3/8	1/8	-VM-S6-NT2	27.9	16.8	17.5	15.9	4.8	9.7	18.3	
3/8	1/4	-VM-S6-NT4	27.9	16.8	17.5	15.9	7.1	14.2	22.9	
3/8	3/8	-VM-S6-NT6	29.2	16.8	17.5	20.6	7.1	19.1	24.1	
1/2	3/8	-VM-S8-NT6	32.0	22.9	22.2	20.6	9.7	19.1	24.1	
5/8	1/2	-VM-S10-NT8	30.7	24.4	25.4	23.8	11.9	19.1	29.7	
3/4	3/4	-VM-S12-NT12	34.0	24.4	28.6	27.0	15.7	19.1	31.0	
7/8	3/4	-VM-S14-NT12	40.4	25.9	31.8	31.8	15.7	19.1	32.3	
1	1	-VM-S16-NT16	40.4	31.2	38.1	34.9	22.4	23.9	37.8	

Metric Tube			NPT Thread							
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							
			L	C	G	F	E	B	Lx	
6	1/8	-VM-SM6-NT2	23.4	15.3	14	12.7	4.8	9.7	16.8	
6	1/4	-VM-SM6-NT4	23.4	15.3	14	12.7	4.8	14.2	21.8	
8	1/8	-VM-SM8-NT2	24.3	16.2	16	15.9	4.8	9.7	16.8	
10	1/4	-VM-SM10-NT4	26.6	17.2	19	17.5	7.9	14.2	24.1	
12	3/8	-VM-SM12-NT6	29.1	22.8	22	20.6	9.5	19.1	24.1	
12	1/2	-VM-SM12-NT8	30.7	22.8	22	20.6	9.5	19.1	29.7	
16	1/2	-VM-SM16-NT8	30.7	24.4	25	23.8	11.9	19.1	29.7	

Adjustable Male Elbows

SAE/MS Straight Thread

Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.

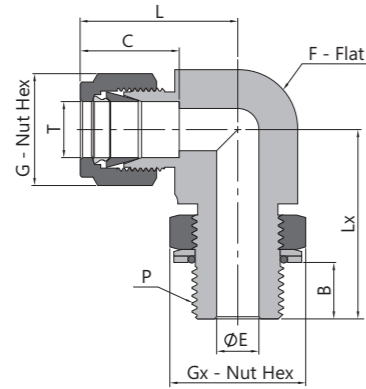


Fractional Tube			SAE/MS Straight Thread							
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	G	E	F	Lx	Gx
1/4	7/16-20	-LP-S4-ST7	28.4	9.9	15.2	14.3	4.8	12.7	28.4	14.3
1/4	9/16-18	-LP-S4-ST9	30.5	11.2	15.2	14.3	4.8	15.9	32.3	17.5
5/16	1/2-20	-LP-S5-ST8	30.2	9.9	16.3	15.9	5.8	14.3	29.5	15.9
3/8	7/16-20	-LP-S6-ST7	33.3	9.9	16.8	17.5	5.1	15.9	31.5	14.3
3/8	9/16-18	-LP-S6-ST9	32.0	11.2	16.8	17.5	7.1	15.9	32.3	17.5
3/8	3/4-16	-LP-S6-ST12	34.8	12.7	16.8	17.5	7.1	20.6	37.8	22.2
1/2	9/16-18	-LP-S8-ST9	37.6	11.2	22.9	22.2	7.1	20.6	37.5	17.5
1/2	3/4-16	-LP-S8-ST12	37.6	12.7	22.9	22.2	10.4	20.6	37.8	22.2
5/8	7/8-14	-LP-S10-ST14	39.6	14.2	24.4	25.4	12.7	23.8	43.4	25.4
3/4	1 1/16-12	-LP-S12-ST17	41.4	16.8	24.4	28.6	15.7	27.0	48.8	31.8
7/8	1 3/16-12	-LP-S14-ST19	43.2	16.8	25.9	31.8	18.3	30.2	50.5	34.9
1	1 5/16-12	-LP-S16-ST21	50.5	16.8	31.2	38.1	22.4	34.9	53.6	38.1
1 1/4	1 5/8-12	-LP-S20-ST26	67.8	16.8	41.1	47.6	27.7	42.9	58.2	47.6
1 1/2	1 7/8-12	-LP-S24-ST30	78.0	16.8	50.0	57.2	34.0	50.8	60.5	54.0



Adjustable Male Elbows

ISO Parallel Thread



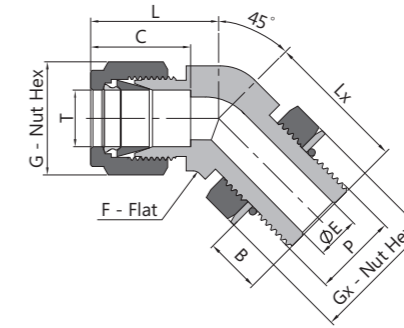
Fractional Tube			ISO Parallel Thread (PP)							
T-Tube O.D. (in.)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	G	E	F	Lx	Gx
1/4	1/8	-LP-S4-PP2	26.9	8.1	15.2	14.3	4.1	12.7	26.4	14.3
1/4	1/4	-LP-S4-PP4	29.0	9.1	15.2	14.3	4.8	15.9	32.3	19.1
3/8	1/4	-LP-S6-PP4	30.5	9.1	16.8	17.5	5.8	15.9	32.3	19.1
3/8	3/8	-LP-S6-PP6	33.3	9.4	16.8	17.5	7.1	20.6	37.1	22.2
1/2	1/4	-LP-S8-PP4	36.1	9.1	22.9	22.2	5.8	20.6	35.1	19.1
1/2	3/8	-LP-S8-PP6	36.1	9.4	22.9	22.2	7.9	20.6	37.1	22.2
1/2	1/2	-LP-S8-PP8	38.1	13.0	22.9	22.2	10.4	23.8	43.4	27.0
5/8	1/2	-LP-S10-PP8	38.1	13.0	24.4	25.4	11.9	23.8	43.4	27.0
3/4	1/2	-LP-S12-PP8	39.9	13.0	24.4	28.6	11.9	27.0	45.2	27.0
3/4	3/4	-LP-S12-PP12	39.9	13.0	24.4	28.6	15.7	27.0	48.8	34.9
1	3/4	-LP-S16-PP12	49.0	13.0	31.2	38.1	15.7	34.9	53.3	34.9
1	1	-LP-S16-PP16	49.0	14.0	31.2	38.1	19.8	34.9	53.6	41.3

Metric Tube			ISO Parallel Thread (PP)							
T-Tube O.D. (mm)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	G	E	F	Lx	Gx
6	1/8	-LP-SM6-PP2	27.0	8.1	15.3	14	4.0	12.7	26.4	14.3
6	1/4	-LP-SM6-PP4	29.0	9.1	15.3	14	4.8	15.9	32.3	19.1
8	1/8	-LP-SM8-PP2	28.8	8.1	16.2	16	4.0	14.3	27.4	14.3
8	1/4	-LP-SM8-PP4	29.9	9.1	16.2	16	5.9	15.9	32.2	19.1
10	1/4	-LP-SM10-PP4	33.5	9.1	17.2	19	5.9	20.6	35.0	19.1
10	3/8	-LP-SM10-PP6	33.5	9.4	17.2	19	7.9	20.6	37.1	22.2
12	1/4	-LP-SM12-PP4	36.0	9.1	22.8	22	5.9	20.6	35.0	19.1
12	3/8	-LP-SM12-PP6	36.0	9.4	22.8	22	7.9	20.6	37.1	22.2
12	1/2	-LP-SM12-PP8	38.0	13.0	22.8	22	9.5	23.8	43.4	27.0
12	3/4	-LP-SM12-PP12	39.8	13.0	22.8	22	9.5	27.0	48.8	34.9

45° Adjustable Male Elbows

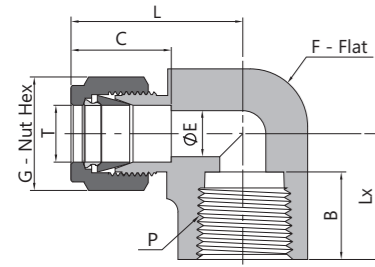
SAE/MS Straight Thread

Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.



Fractional Tube			SAE/MS Straight Thread							
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	G	E	F	Lx	Gx
1/4	7/16-20	-VP-S4-ST7	25.7	9.9	15.2	14.3	4.8	12.7	25.7	14.3
3/8	9/16-18	-VP-S6-ST9	27.9	11.2	16.8	17.5	7.1	15.9	28.2	17.5
1/2	3/4-16	-VP-S8-ST12	32.0	12.7	22.9	22.2	10.4	20.6	32.3	22.2
3/4	1 1/16-12	-VP-S12-ST17	39.9	16.8	24.4	28.6	15.7	27.0	47.2	31.8
1	1 5/16-12	-VP-S16-ST21	47.5	16.8	31.2	38.1	22.4	34.9	50.5	38.1

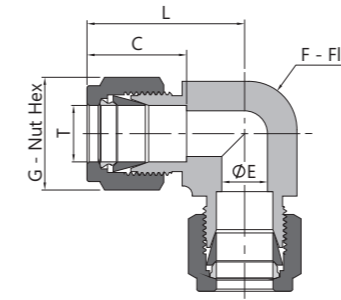
Female Elbows



Fractional Tube			NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	B	C	G	E	F	Lx
1/16	1/16	-LF-S1-NT1	18.0	9.9	8.6	7.9	1.3	11.1	14.2
1/16	1/8	-LF-S1-NT2	20.6	10.4	8.6	7.9	1.3	14.3	19.1
1/8	1/8	-LF-S2-NT2	24.6	10.4	12.7	11.1	2.3	14.3	19.1
1/8	1/4	-LF-S2-NT4	27.4	15.0	12.7	11.1	2.3	17.5	22.4
3/16	1/8	-LF-S3-NT2	25.4	10.4	13.7	12.7	3.0	12.7	19.1
1/4	1/8	-LF-S4-NT2	26.9	10.4	15.2	14.3	4.8	14.3	19.1
1/4	1/4	-LF-S4-NT4	29.7	15.0	15.2	14.3	4.8	17.5	22.4
1/4	3/8	-LF-S4-NT6	31.8	15.0	15.2	14.3	4.8	20.6	22.4
1/4	1/2	-LF-S4-NT8	34.5	19.8	15.2	14.3	4.8	25.4	28.4
5/16	1/8	-LF-S5-NT2	28.7	10.4	16.3	15.9	6.4	14.3	19.1
5/16	1/4	-LF-S5-NT4	30.5	15.0	16.3	15.9	6.4	17.5	22.4
3/8	1/8	-LF-S6-NT2	30.5	10.4	16.8	17.5	7.1	15.9	19.1
3/8	1/4	-LF-S6-NT4	31.2	15.0	16.8	17.5	7.1	17.5	22.4
3/8	3/8	-LF-S6-NT6	33.3	15.0	16.8	17.5	7.1	20.6	22.4
3/8	1/2	-LF-S6-NT8	36.1	19.8	16.8	17.5	7.1	25.4	28.4
1/2	1/4	-LF-S8-NT4	36.1	15.0	22.9	22.2	10.4	20.6	22.4
1/2	3/8	-LF-S8-NT6	36.1	15.0	22.9	22.2	10.4	20.6	22.4
1/2	1/2	-LF-S8-NT8	38.9	19.8	22.9	22.2	10.4	25.4	28.4
5/8	3/8	-LF-S10-NT6	38.1	15.0	24.4	25.4	12.7	23.8	22.4
5/8	1/2	-LF-S10-NT8	39.9	19.8	24.4	25.4	12.7	27.0	28.4
3/4	1/2	-LF-S12-NT8	39.9	19.8	24.4	28.6	15.7	27.0	28.4
3/4	3/4	-LF-S12-NT12	44.7	20.6	24.4	28.6	15.7	34.9	31.8
7/8	3/4	-LF-S14-NT12	44.7	20.6	25.9	31.8	18.3	34.9	31.8
1	3/4	-LF-S16-NT12	49.0	20.6	31.2	38.1	22.4	34.9	31.8
1	1	-LF-S16-NT16	53.6	25.4	31.2	38.1	22.4	42.9	38.1

Metric Tube			NPT Thread						
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	B	C	G	E	F	Lx
6	1/8	-LF-SM6-NT2	27.0	10.4	15.3	14	4.8	12.7	19.0
6	1/4	-LF-SM6-NT4	29.8	15.0	15.3	14	4.8	17.5	22.4
8	1/8	-LF-SM8-NT2	28.8	10.4	16.2	16	4.8	14.3	19.1
8	1/4	-LF-SM8-NT4	30.6	15.0	16.2	16	6.4	17.5	22.4
10	1/4	-LF-SM10-NT4	33.5	15.0	17.2	19	7.9	20.6	22.4
10	3/8	-LF-SM10-NT6	33.5	15.0	17.2	19	7.9	20.6	22.4
10	1/2	-LF-SM10-NT8	36.6	19.8	17.2	19	7.9	25.4	28.5
12	1/4	-LF-SM12-NT4	36.0	15.0	22.8	22	7.9	20.6	22.4
12	3/8	-LF-SM12-NT6	36.0	15.0	22.8	22	9.5	20.6	22.4
12	1/2	-LF-SM12-NT8	38.8	19.8	22.8	22	9.5	25.4	28.4
16	3/8	-LF-SM16-NT6	39.5	15.0	24.4	25	9.5	27.0	23.6
16	1/2	-LF-SM16-NT8	39.5	19.8	24.4	25	12.7	27.0	28.5

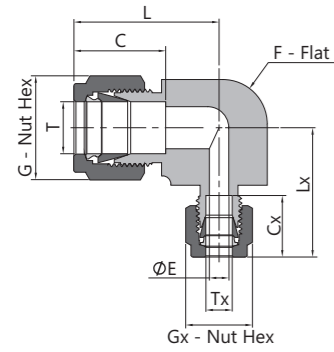
Union Elbows



Fractional Tube			Dimension, mm				
T-Tube O.D. (in.)	Basic Ordering Number		L	C	G	F	E
			1/16	-LU-S1		17.8	8.6
1/8	-LU-S2		22.4	12.7	11.1	9.5	2.3
3/16	-LU-S3		25.4	13.7	12.7	12.7	3.0
1/4	-LU-S4		26.9	15.2	14.3	12.7	4.8
5/16	-LU-S5		28.7	16.3	15.9	14.3	6.4
3/8	-LU-S6		30.5	16.8	17.5	15.9	7.1
1/2	-LU-S8		36.1	22.9	22.2	20.6	10.4
5/8	-LU-S10		38.1	24.4	25.4	23.8	12.7
3/4	-LU-S12		39.9	24.4	28.6	27.0	15.7
7/8	-LU-S14		44.7	25.9	31.8	34.9	18.3
1	-LU-S16		49.0	31.2	38.1	34.9	22.4
1 1/8	-LU-S18		55.1	31.2	41.3	42.9	24.6
1 1/4	-LU-S20		66.5	41.1	47.6	42.9	27.7
1 1/2	-LU-S24		78.0	50.0	57.2	50.8	34.0

Metric Tube			Dimension, mm				
T-Tube O.D. (mm)	Basic Ordering Number		L	C	G	F	E
			3	-LU-SM3		22.3	12.9
4	-LU-SM4		25.4	13.7	12	12.7	2.4
6	-LU-SM6		27.0	15.3	14	12.7	4.8
8	-LU-SM8		28.8	16.2	16	14.3	6.4
10	-LU-SM10		31.5	17.2	19	17.5	7.9
12	-LU-SM12		36.0	22.8	22	20.6	9.5
14	-LU-SM14		38.0	24.4	25	23.8	11.0
15	-LU-SM15		38.8	24.4	25	23.8	11.9
16	-LU-SM16		38.0	24.4	25	23.8	12.7
18	-LU-SM18		39.8	24.4	30	27.0	15.1
20	-LU-SM20		44.6	26.0	32	34.9	15.9
22	-LU-SM22		44.6	26.0	32	34.9	18.3
25	-LU-SM25		49.1	31.3	38	34.9	21.8
28	-LU-SM28		64.0	36.6	46	42.9	21.8
30	-LU-SM30		69.9	39.6	50	42.9	26.2
32	-LU-SM32		72.3	42.0	50	42.9	28.6
38	-LU-SM38		84.0	49.4	60	50.8	33.7

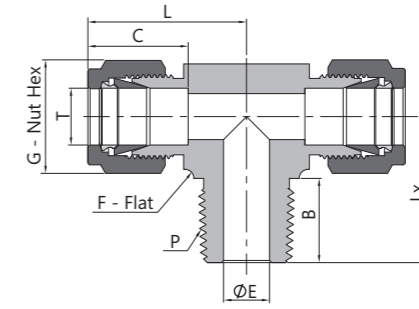
Union Reducing Elbows



Fractional Tube			Dimension, mm								
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	L	C	G	F	E	Cx	Gx	Lx	
3/16	1/8	-LU-S3-S2	25.4	13.7	12.7	12.7	2.3	12.7	11.1	24.7	
1/4	1/8	-LU-S4-S2	26.9	15.2	14.3	12.7	2.3	12.7	11.1	25.4	
5/16	1/8	-LU-S5-S2	29.7	16.3	15.9	14.3	2.3	12.7	11.1	26.4	
5/16	1/4	-LU-S5-S4	29.7	16.3	15.9	14.3	4.8	15.2	14.3	29.0	
3/8	1/8	-LU-S6-S2	30.5	16.8	17.5	15.9	2.3	12.7	11.1	26.4	
3/8	1/4	-LU-S6-S4	30.5	16.8	17.5	15.9	4.8	15.2	14.3	29.0	
3/8	5/16	-LU-S6-S5	30.5	16.8	17.5	15.9	6.4	16.3	15.9	29.7	
1/2	1/4	-LU-S8-S4	36.1	22.9	22.2	20.6	4.8	15.2	14.3	32.2	
1/2	5/16	-LU-S8-S5	36.1	22.9	22.2	20.6	6.4	16.3	15.9	32.5	
1/2	3/8	-LU-S8-S6	36.1	22.9	22.2	20.6	7.1	16.8	17.5	33.6	
5/8	3/8	-LU-S10-S6	38.1	24.4	25.4	23.8	7.1	16.8	17.5	35.6	
5/8	1/2	-LU-S10-S8	38.1	24.4	25.4	23.8	10.4	22.9	22.2	38.1	
3/4	1/4	-LU-S12-S4	39.9	24.4	28.6	27.0	4.8	15.2	14.3	35.9	
3/4	3/8	-LU-S12-S6	39.9	24.4	28.6	27.0	7.1	16.8	17.5	37.4	
3/4	1/2	-LU-S12-S8	39.9	24.4	28.6	27.0	10.4	22.9	22.2	39.9	
7/8	1/4	-LU-S14-S4	44.7	25.9	31.8	34.9	4.8	15.2	14.3	40.7	
1	1/2	-LU-S16-S8	49.0	31.2	38.1	34.9	10.4	22.9	22.2	44.4	
1	3/4	-LU-S16-S12	49.0	31.2	38.1	34.9	15.7	24.4	28.6	44.4	

Metric Tube			Dimension, mm								
T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	L	C	G	F	E	Cx	Gx	Lx	
8	6	-LU-SM8-SM6	28.8	16.2	16	14.3	4.8	15.3	14	27.9	
10	8	-LU-SM10-SM8	31.5	17.2	19	17.5	6.4	16.2	16	30.5	
12	8	-LU-SM12-SM8	36.0	22.8	22	20.6	6.4	16.2	16	32.6	
14	8	-LU-SM14-SM8	38.8	24.4	25	23.8	6.4	16.2	16	35.4	
14	10	-LU-SM14-SM10	38.8	24.4	25	23.8	7.9	17.2	19	36.4	

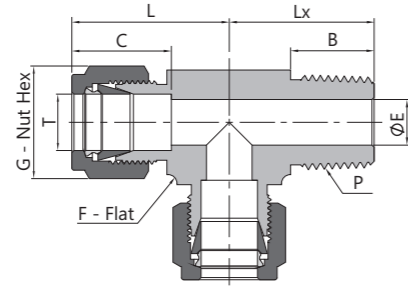
Male Branch Tees



Fractional Tube			NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
1/8	1/8	-TTM-S2-NT2	23.6	12.7	11.1	11.1	2.3	9.7	17.8
1/8	1/4	-TTM-S2-NT4	24.6	12.7	11.1	12.7	2.3	14.2	23.4
3/16	1/8	-TTM-S3-NT2	24.4	13.7	12.7	11.1	3.0	9.7	17.8
1/4	1/8	-TTM-S4-NT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8
1/4	1/4	-TTM-S4-NT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4
5/16	1/8	-TTM-S5-NT2	29.7	16.3	15.9	15.9	4.8	9.7	20.8
5/16	1/4	-TTM-S5-NT4	29.7	16.3	15.9	15.9	6.4	14.2	25.7
3/8	1/4	-TTM-S6-NT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4
3/8	3/8	-TTM-S6-NT6	33.3	16.8	17.5	20.6	7.1	14.2	28.2
1/2	3/8	-TTM-S8-NT6	36.1	22.9	22.2	20.6	9.7	14.2	28.2
1/2	1/2	-TTM-S8-NT8	36.1	22.9	22.2	20.6	10.4	19.1	33.0
5/8	1/2	-TTM-S10-NT8	38.9	24.4	25.4	25.4	11.9	19.1	35.8
3/4	3/4	-TTM-S12-NT12	39.9	24.4	28.6	27.0	15.7	19.1	36.8
7/8	3/4	-TTM-S14-NT12	44.7	25.9	31.8	33.3	15.7	19.1	38.1
1	3/4	-TTM-S16-NT12	49.3	31.2	38.1	33.3	15.7	19.1	42.2
1	1	-TTM-S16-NT16	49.3	31.2	38.1	34.9	22.4	23.9	46.7

Metric Tube			NPT Thread						
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
6	1/8	-TTM-SM6-NT2	27.0	15.3	14	12.7	4.8	9.7	18.8
6	1/4	-TTM-SM6-NT4	27.0	15.3	14	12.7	4.8	14.2	23.4
8	1/8	-TTM-SM8-NT2	29.9	16.2	16	15.9	4.8	9.7	20.8
8	1/4	-TTM-SM8-NT4	29.9	16.2	16	15.9	6.4	14.2	25.4
10	1/4	-TTM-SM10-NT4	33.5	17.2	19	20.6	7.9	14.2	28.2
10	3/8	-TTM-SM10-NT6	33.5	17.2	19	20.6	7.9	14.2	28.2
12	1/4	-TTM-SM12-NT4	36.0	22.8	22	20.6	7.9	14.2	28.2
12	3/8	-TTM-SM12-NT6	36.0	22.8	22	20.6	9.5	14.2	28.2
12	1/2	-TTM-SM12-NT8	36.0	22.8	22	20.6	9.5	19.1	33.0
16	1/2	-TTM-SM16-NT8	38.8	24.4	25	25.4	11.9	19.1	35.8

Male Run Tees



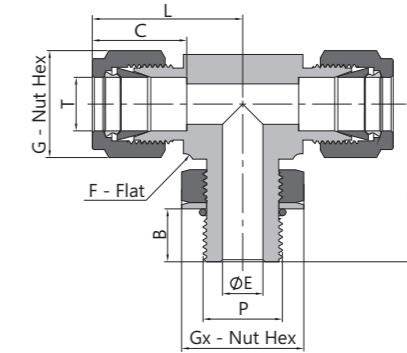
Fractional Tube			NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
1/8	1/8	-TMT-S2-NT2	23.6	12.7	11.1	11.1	2.3	9.7	17.8
1/8	1/4	-TMT-S2-NT4	24.6	12.7	11.1	12.7	2.3	14.2	23.4
3/16	1/8	-TMT-S3-NT2	24.4	13.7	12.7	11.1	3.0	9.7	17.8
1/4	1/8	-TMT-S4-NT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8
1/4	1/4	-TMT-S4-NT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4
5/16	1/8	-TMT-S5-NT2	29.7	16.3	15.9	15.9	4.8	9.7	20.8
5/16	1/4	-TMT-S5-NT4	29.7	16.3	15.9	15.9	6.4	14.2	25.7
3/8	1/4	-TMT-S6-NT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4
3/8	3/8	-TMT-S6-NT6	33.3	16.8	17.5	20.6	7.1	14.2	28.2
1/2	3/8	-TMT-S8-NT6	36.1	22.9	22.2	20.6	9.7	14.2	28.2
1/2	1/2	-TMT-S8-NT8	36.1	22.9	22.2	20.6	10.4	19.1	33.0
5/8	1/2	-TMT-S10-NT8	38.1	24.4	25.4	23.8	11.9	19.1	35.8
3/4	3/4	-TMT-S12-NT12	39.9	24.4	28.6	27.0	15.7	19.1	36.8
7/8	3/4	-TMT-S14-NT12	44.7	25.9	31.8	33.3	15.7	19.1	38.1
1	3/4	-TMT-S16-NT12	49.3	31.2	38.1	33.3	15.7	19.1	42.2
1	1	-TMT-S16-NT16	49.3	31.2	38.1	34.9	22.4	23.9	46.7

Metric Tube			NPT Thread						
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
6	1/8	-TMT-SM6-NT2	27.0	15.3	14	12.7	4.8	9.7	18.0
6	1/4	-TMT-SM6-NT4	27.0	15.3	14	12.7	4.8	14.2	23.4
8	1/8	-TMT-SM8-NT2	29.9	16.2	16	15.9	4.8	9.7	20.8
8	1/4	-TMT-SM8-NT4	29.9	16.2	16	15.9	6.4	14.2	25.4
10	1/4	-TMT-SM10-NT4	33.5	17.2	19	20.6	7.9	14.2	28.2
10	1/2	-TMT-SM10-NT8	33.5	17.2	19	20.6	7.9	14.2	28.2
12	1/4	-TMT-SM12-NT4	36.0	22.8	22	20.6	7.9	14.2	28.2
12	3/8	-TMT-SM12-NT6	36.0	22.8	22	20.6	9.5	14.2	28.2
12	1/2	-TMT-SM12-NT8	36.0	22.8	22	20.6	9.5	19.1	33.0
16	1/2	-TMT-SM16-NT8	38.0	24.4	25	23.8	11.9	19.1	35.0

Adjustable Male Branch Tees

SAE/MS Straight Thread

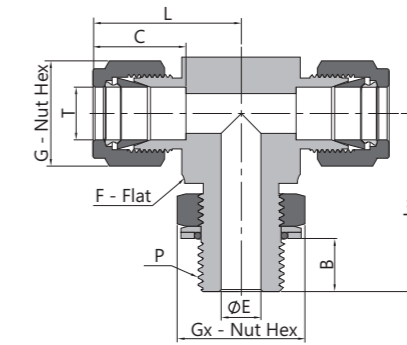
Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.



Fractional Tube			SAE/MS Straight Thread							
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	Lx	Gx
1/4	7/16-20	-TTP-S4-ST7	28.5	9.9	15.2	4.8	14.3	12.7	28.5	14.3
3/8	9/16-18	-TTP-S6-ST9	32.0	11.2	16.8	7.1	17.5	15.9	32.3	17.5
1/2	3/4-16	-TTP-S8-ST12	37.6	12.7	22.9	10.4	22.2	20.6	37.8	22.2
3/4	1 1/16-12	-TTP-S12-ST17	41.4	16.8	24.4	15.7	28.6	27.0	48.8	28.6
1	1 5/16-12	-TTP-S16-ST21	50.5	16.8	31.2	22.4	38.1	34.9	53.6	38.1
1 1/4	1 5/8-12	-TTP-S20-ST26	67.8	16.8	41.1	27.7	47.6	42.9	58.2	47.6
1 1/2	1 7/8-12	-TTP-S24-ST30	78.0	16.8	50.0	34.0	57.2	50.8	60.5	54.0

Adjustable Male Branch Tees

ISO Parallel Thread



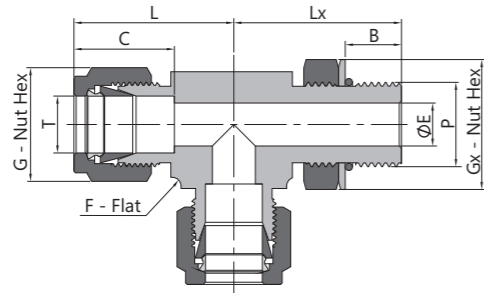
Fractional Tube			ISO Parallel Thread (PP)							
T-Tube O.D. (in.)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	Lx	Gx
1/4	1/8	-TTP-S4-PP2	26.9	8.1	15.2	4.1	14.3	12.7	26.4	14.3
1/4	1/4	-TTP-S4-PP4	29.0	9.1	15.2	4.8	14.3	15.9	32.3	19.1
3/8	1/4	-TTP-S6-PP4	30.5	9.1	16.8	5.8	17.5	15.9	32.3	19.1
1/2	3/8	-TTP-S8-PP6	36.1	9.4	22.9	7.9	22.2	20.6	37.1	22.2
1/2	1/2	-TTP-S8-PP8	38.1	13.0	22.9	10.4	22.2	23.8	43.4	27.0
5/8	1/2	-TTP-S10-PP8	38.1	13.0	24.4	11.9	25.4	23.8	43.4	27.0
3/4	1/2	-TTP-S12-PP8	39.9	13.0	24.4	11.9	28.6	27.0	45.2	27.0
3/4	3/4	-TTP-S12-PP12	39.9	13.0	24.4	15.7	28.6	27.0	48.8	34.9
1	1	-TTP-S16-PP16	49.0	14.0	31.2	19.8	38.1	34.9	53.6	41.3

Metric Tube			ISO Parallel Thread (PP)							
T-Tube O.D. (mm)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	Lx	Gx
6	1/8	-TTP-SM6-PP2	27.0	8.1	15.3	4.0	14	12.7	26.4	14.3
6	1/4	-TTP-SM6-PP4	29.0	9.1	15.3	4.8	14	15.9	32.2	19.1
8	1/8	-TTP-SM8-PP2	28.8	8.1	16.2	4.0	16	14.3	27.5	14.3
8	1/4	-TTP-SM8-PP4	29.9	9.1	16.2	5.9	16	15.9	32.2	19.1
10	1/4	-TTP-SM10-PP4	33.5	9.1	17.2	5.9	19	20.6	35.1	19.1
12	3/8	-TTP-SM12-PP6	36.0	9.4	22.8	7.9	22	20.6	37.1	22.2
12	1/2	-TTP-SM12-PP8	38.0	13.0	22.8	9.5	22	23.8	43.5	27.0

Adjustable Male Run Tees

SAE/MS Straight Thread

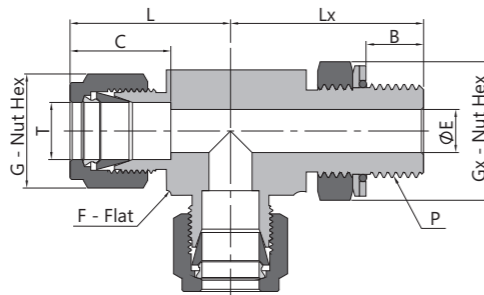
Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.



Fractional Tube			SAE/MS Straight Thread							
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	Lx	Gx
1/4	7/16-20	-TPT-S4-ST7	28.5	9.9	15.2	4.8	14.3	12.7	28.5	14.3
3/8	9/16-18	-TPT-S6-ST9	32.0	11.2	16.8	7.1	17.5	15.9	32.3	17.5
1/2	3/4-16	-TPT-S8-ST12	37.6	12.7	22.9	10.4	22.2	20.6	37.8	22.2
3/4	1 1/16-12	-TPT-S12-ST17	41.4	16.8	24.4	15.7	28.6	27.0	48.8	28.6
1	1 5/16-12	-TPT-S16-ST21	50.5	16.8	31.2	22.4	38.1	34.9	53.6	38.1
1 1/4	1 5/8-12	-TPT-S20-ST26	67.8	16.8	41.1	27.7	47.6	42.9	58.2	47.6
1 1/2	1 7/8-12	-TPT-S24-ST30	78.0	16.8	50.0	34.0	57.2	50.8	60.5	54.0

Adjustable Male Run Tees

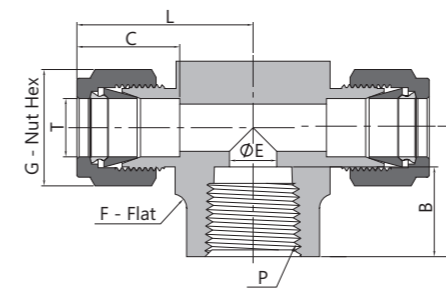
ISO Parallel Thread



Fractional Tube			ISO Parallel Thread (PP)							
T-Tube O.D. (in.)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	Lx	Gx
1/4	1/8	-TPT-S4-PP2	26.9	8.1	15.2	4.1	14.3	12.7	26.4	14.3
1/4	1/4	-TPT-S4-PP4	29.0	9.1	15.2	4.8	14.3	15.9	32.3	19.1
3/8	1/4	-TPT-S6-PP4	30.5	9.1	16.8	5.8	17.5	15.9	32.3	19.1
1/2	3/8	-TPT-S8-PP6	36.1	9.4	22.9	7.9	22.2	20.6	37.1	22.2
1/2	1/2	-TPT-S8-PP8	38.1	13.0	22.9	10.4	22.2	23.8	43.4	27.0
5/8	1/2	-TPT-S10-PP8	38.1	13.0	24.4	11.9	25.4	23.8	43.4	27.0
3/4	1/2	-TPT-S12-PP8	39.9	13.0	24.4	11.9	28.6	27.0	45.2	27.0
3/4	3/4	-TPT-S12-PP12	39.9	13.0	24.4	15.7	28.6	27.0	48.8	34.9
1	1	-TPT-S16-PP16	49.0	14.0	31.2	19.8	38.1	34.9	53.6	41.3

Metric Tube			ISO Parallel Thread (PP)							
T-Tube O.D. (mm)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	Lx	Gx
6	1/8	-TPT-SM6-PP2	27.0	8.1	15.3	4.0	14	12.7	26.4	14.3
6	1/4	-TPT-SM6-PP4	29.0	9.1	15.3	4.8	14	15.9	32.2	19.1
8	1/8	-TPT-SM8-PP2	28.8	8.1	16.2	4.0	16	14.3	27.5	14.3
8	1/4	-TPT-SM8-PP4	29.9	9.1	16.2	5.9	16	15.9	32.2	19.1
10	1/4	-TPT-SM10-PP4	33.5	9.1	17.2	5.9	19	20.6	35.1	19.1
12	3/8	-TPT-SM12-PP6	36.0	9.4	22.8	7.9	22	20.6	37.1	22.2
12	1/2	-TPT-SM12-PP8	38.0	13.0	22.8	9.5	22	23.8	43.5	27.0

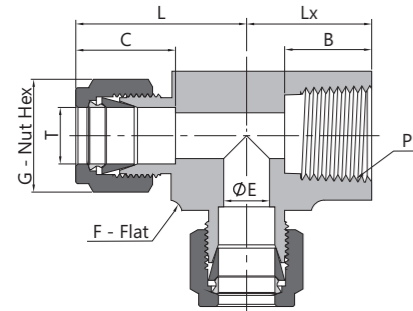
Female Branch Tees



Fractional Tube			NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
1/8	1/8	-TTF-S2-NT2	24.6	12.7	11.1	12.7	2.3	10.4	19.1
3/16	1/8	-TTF-S3-NT2	25.7	13.7	12.7	12.7	3.0	10.4	19.1
1/4	1/8	-TTF-S4-NT2	26.9	15.2	14.3	12.7	4.8	10.4	19.1
1/4	1/4	-TTF-S4-NT4	29.7	15.2	14.3	17.5	4.8	15.0	22.4
5/16	1/8	-TTF-S5-NT2	29.7	16.2	15.9	15.9	6.4	10.4	19.1
3/8	1/4	-TTF-S6-NT4	31.2	16.8	17.5	17.5	7.1	15.0	22.4
3/8	3/8	-TTF-S6-NT6	33.3	16.8	17.5	20.6	7.1	15.0	22.4
3/8	1/2	-TTF-S6-NT8	36.1	16.8	17.5	25.4	7.1	19.8	28.4
1/2	1/4	-TTF-S8-NT4	36.1	22.9	22.2	20.6	10.4	15.0	22.4
1/2	3/8	-TTF-S8-NT6	36.1	22.9	22.2	20.6	10.4	15.0	22.4
1/2	1/2	-TTF-S8-NT8	38.9	22.9	22.2	25.4	10.4	19.8	28.4
5/8	1/2	-TTF-S10-NT8	38.9	24.4	25.4	25.4	12.7	19.8	28.4
3/4	3/4	-TTF-S12-NT12	44.7	24.4	28.6	34.9	15.7	20.6	31.8
7/8	3/4	-TTF-S14-NT12	44.7	25.9	31.8	34.9	18.3	20.6	31.8
1	3/4	-TTF-S16-NT12	49.0	31.2	38.1	34.9	22.4	20.6	31.8
1	1	-TTF-S16-NT16	53.6	31.2	38.1	42.9	22.4	25.4	38.1

Metric Tube			NPT Thread						
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
6	1/8	-TTF-SM6-NT2	27.0	15.3	14	12.7	4.8	10.4	19.0
6	1/4	-TTF-SM6-NT4	29.8	15.3	14	17.5	4.8	15.0	22.4
8	1/8	-TTF-SM8-NT2	29.9	16.2	16	15.9	6.4	10.4	19.0
8	1/4	-TTF-SM8-NT4	30.6	16.2	16	17.5	6.4	15.0	22.4
10	1/4	-TTF-SM10-NT4	33.5	17.2	19	20.6	7.9	15.0	22.4
12	1/8	-TTF-SM12-NT2	36.0	22.8	22	20.6	6.4	10.4	22.3
12	1/4	-TTF-SM12-NT4	36.0	22.8	22	20.6	9.5	15.0	22.4
12	3/8	-TTF-SM12-NT6	36.0	22.8	22	20.6	9.5	15.0	22.4
12	1/2	-TTF-SM12-NT8	38.8	22.8	22	25.4	9.5	19.8	28.5
16	1/2	-TTF-SM16-NT8	38.8	24.4	25	25.4	12.7	19.8	28.4

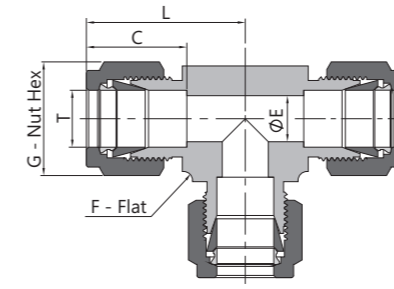
Female Run Tees



Fractional Tube			NPT Thread						
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
1/8	1/8	-TFT-S2-NT2	24.6	12.7	11.1	12.7	2.3	10.4	19.1
3/16	1/8	-TFT-S3-NT2	25.7	13.7	12.7	12.7	3.0	10.4	19.1
1/4	1/8	-TFT-S4-NT2	26.9	15.2	14.3	12.7	4.8	10.4	19.1
1/4	1/4	-TFT-S4-NT4	29.7	15.2	14.3	17.5	4.8	15.0	22.4
5/16	1/8	-TFT-S5-NT2	29.7	16.2	15.9	15.9	6.4	10.4	19.1
3/8	1/4	-TFT-S6-NT4	31.2	16.8	17.5	17.5	7.1	15.0	22.4
1/2	1/4	-TFT-S8-NT4	36.1	22.9	22.2	20.6	10.4	15.0	22.4
1/2	3/8	-TFT-S8-NT6	36.1	22.9	22.2	20.6	10.4	15.0	22.4
1/2	1/2	-TFT-S8-NT8	39.9	22.9	22.2	27.0	10.4	19.8	28.4
5/8	1/2	-TFT-S10-NT8	39.9	24.4	25.4	27.0	12.7	19.8	28.4
3/4	3/4	-TFT-S12-NT12	44.7	24.4	28.6	34.9	15.7	20.6	31.8
7/8	1/2	-TFT-S14-NT8	44.7	25.9	31.8	34.9	15.7	19.8	28.4
7/8	3/4	-TFT-S14-NT12	44.7	25.9	31.8	34.9	18.3	20.6	31.8
1	3/4	-TFT-S16-NT12	49.0	31.2	38.1	34.9	22.4	20.6	31.8
1	1	-TFT-S16-NT16	53.6	31.2	38.1	42.9	22.4	25.4	38.1

Metric Tube			NPT Thread						
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	Lx
6	1/8	-TFT-SM6-NT2	27.0	15.3	14	12.7	4.8	10.4	19.0
6	1/4	-TFT-SM6-NT4	29.8	15.3	14	17.5	4.8	15.0	22.4
8	1/8	-TFT-SM8-NT2	29.9	16.2	16	15.9	4.8	10.4	19.0
8	1/4	-TFT-SM8-NT4	30.6	16.2	16	17.5	6.4	15.0	22.4
10	1/4	-TFT-SM10-NT4	33.5	17.2	19	20.6	7.9	15.0	22.4
12	1/4	-TFT-SM12-NT4	36.0	22.8	22	20.6	9.5	15.0	22.4
12	3/8	-TFT-SM12-NT6	36.0	22.8	22	20.6	9.5	15.0	23.1
12	1/2	-TFT-SM12-NT8	38.8	22.8	22	25.4	9.5	19.8	28.5
16	1/2	-TFT-SM16-NT8	39.8	24.4	25	27.0	11.9	19.8	28.4

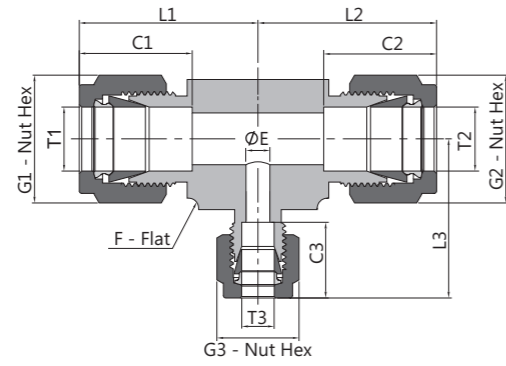
Union Tees



Fractional Tube		Dimension, mm				
T-Tube O.D. (in.)	Basic Ordering Number	L	C	G	F	E
		1/16	-TTT-S1	17.8	8.6	7.9
1/8	-TTT-S2	22.4	12.7	11.1	9.5	2.3
3/16	-TTT-S3	24.4	13.7	12.7	11.1	3.0
1/4	-TTT-S4	26.9	15.2	14.3	12.7	4.8
5/16	-TTT-S5	29.7	16.2	15.9	15.9	6.4
3/8	-TTT-S6	30.5	16.8	17.5	15.9	7.1
1/2	-TTT-S8	36.1	22.9	22.2	20.6	10.4
5/8	-TTT-S10	38.9	24.4	25.4	25.4	12.7
3/4	-TTT-S12	39.9	24.4	28.6	27.0	15.7
7/8	-TTT-S14	44.7	25.9	31.8	34.9	18.3
1	-TTT-S16	49.0	31.2	38.1	34.9	22.4
1 1/8	-TTT-S18	55.1	31.2	46.0	42.9	24.6
1 1/4	-TTT-S20	66.5	41.1	47.6	42.9	27.7
1 1/2	-TTT-S24	78.0	50.0	57.2	50.8	34.0

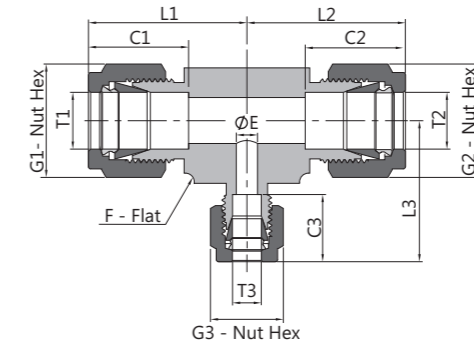
Metric Tube		Dimension, mm				
T-Tube O.D. (mm)	Basic Ordering Number	L	C	G	F	E
		2	-TTT-SM2	22.3	12.9	12
3	-TTT-SM3	22.3	12.9	12	9.5	2.4
4	-TTT-SM4	25.4	13.7	12	12.7	2.4
6	-TTT-SM6	27.0	15.3	14	12.7	4.8
8	-TTT-SM8	29.9	16.2	16	15.9	6.4
10	-TTT-SM10	31.5	17.2	19	17.5	7.9
12	-TTT-SM12	36.0	22.8	22	20.6	9.5
14	-TTT-SM14	38.8	24.4	25	25.4	11.1
15	-TTT-SM15	38.8	24.4	25	25.4	11.9
16	-TTT-SM16	38.8	24.4	25	25.4	12.7
18	-TTT-SM18	38.8	24.4	30	27.0	15.1
20	-TTT-SM20	44.6	26.0	32	34.9	15.9
22	-TTT-SM22	44.6	26.0	32	34.9	18.3
25	-TTT-SM25	49.1	31.3	38	34.9	21.8
28	-TTT-SM28	64.0	36.6	46	42.9	21.8
30	-TTT-SM30	69.9	39.6	50	42.9	26.2
32	-TTT-SM32	72.3	42.0	50	42.9	28.6
38	-TTT-SM38	84.0	49.4	60	50.8	33.7

Reducing Union Tees



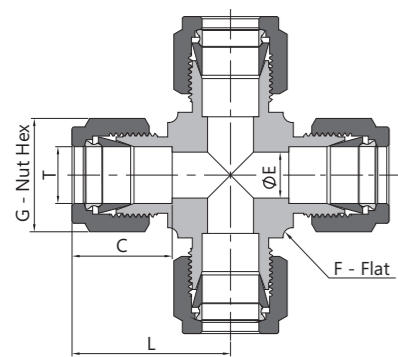
Fractional Tube				Dimension, mm												
T1-Tube O.D. (in.)	T2-Tube O.D. (in.)	T3-Tube O.D. (in.)	Basic Ordering Number	L1	L2	L3	C1	C2	C3	G1	G2	G3	F	E		
1/4	1/4	1/8	-TTT-S4-S4-S2	26.7	26.7	24.4	15.2	15.2	12.7	14.3	14.3	11.1	12.7	2.3		
3/8	1/4	1/4	-TTT-S6-S4-S4	30.5	29.0	29.0	16.8	15.2	15.2	17.5	14.3	14.3	15.9	4.8		
3/8	1/4	3/8	-TTT-S6-S4-S6	30.5	29.0	30.5	16.8	15.2	16.8	17.5	14.3	17.5	15.9	4.8		
3/8	3/8	1/4	-TTT-S6-S6-S4	30.5	30.5	29.0	16.8	16.8	15.2	17.5	14.3	17.5	15.9	4.8		
1/2	1/4	1/4	-TTT-S8-S4-S4	36.1	31.8	31.8	22.9	15.2	15.2	22.2	14.3	14.3	20.6	4.8		
1/2	1/4	1/2	-TTT-S8-S4-S8	36.1	31.8	36.1	22.9	15.2	22.9	22.2	14.3	22.2	20.6	4.8		
1/2	3/8	3/8	-TTT-S8-S6-S6	36.1	33.3	33.3	22.9	16.8	16.8	22.2	17.5	17.5	20.6	7.1		
1/2	3/8	1/2	-TTT-S8-S6-S8	36.1	33.3	36.1	22.9	16.8	22.9	22.2	17.5	22.2	20.6	7.1		
1/2	1/2	1/4	-TTT-S8-S8-S4	36.1	36.1	31.8	22.9	22.9	15.2	22.2	22.2	14.3	20.6	4.8		
1/2	1/2	3/8	-TTT-S8-S8-S6	36.1	36.1	33.3	22.9	22.9	16.8	22.2	22.2	17.5	20.6	7.1		
5/8	3/8	3/8	-TTT-S10-S6-S6	38.9	36.1	36.1	24.4	16.8	16.8	25.4	17.5	17.5	25.4	7.1		
5/8	3/8	1/2	-TTT-S10-S6-S8	38.9	36.1	38.9	24.4	16.8	22.9	25.4	17.5	22.2	25.4	7.1		
5/8	1/2	3/8	-TTT-S10-S8-S6	38.9	38.9	36.1	24.4	22.9	16.8	25.4	22.2	17.5	25.4	7.1		
5/8	1/2	1/2	-TTT-S10-S8-S8	38.9	38.9	38.9	24.4	22.9	22.9	25.4	22.2	22.2	25.4	10.4		
5/8	5/8	3/8	-TTT-S10-S10-S6	38.9	38.9	36.1	24.4	24.4	16.8	25.4	25.4	17.5	25.4	7.1		
5/8	5/8	1/2	-TTT-S10-S10-S8	38.9	38.9	38.9	24.4	24.4	22.9	25.4	25.4	22.2	25.4	10.4		
3/4	3/8	3/8	-TTT-S12-S6-S6	39.6	36.9	36.9	24.4	16.8	16.8	28.6	17.5	17.5	27.0	7.1		
3/4	1/2	3/8	-TTT-S12-S8-S6	39.6	36.9	36.9	24.4	22.9	16.8	28.6	22.2	17.5	27.0	7.1		
3/4	1/2	1/2	-TTT-S12-S8-S8	39.6	36.9	39.6	24.4	22.9	22.9	28.6	22.2	22.2	27.0	10.4		
3/4	5/8	3/8	-TTT-S12-S10-S6	39.6	39.6	36.9	24.4	24.4	16.8	28.6	25.4	17.5	27.0	7.1		
3/4	5/8	1/2	-TTT-S12-S10-S8	39.6	39.6	39.6	24.4	24.4	22.9	28.6	25.4	22.2	27.0	10.4		
3/4	5/8	5/8	-TTT-S12-S10-S10	39.6	39.6	39.6	24.4	24.4	24.4	28.6	25.4	25.4	27.0	12.7		
3/4	3/4	1/4	-TTT-S12-S12-S4	39.6	39.6	35.1	24.4	24.4	15.2	28.6	28.6	14.3	27.0	4.8		
3/4	3/4	3/8	-TTT-S12-S12-S6	39.6	39.6	36.9	24.4	24.4	16.8	28.6	28.6	17.5	27.0	7.1		
3/4	3/4	1/2	-TTT-S12-S12-S8	39.6	39.6	39.6	24.4	24.4	22.9	28.6	28.6	22.2	27.0	10.4		
3/4	3/4	5/8	-TTT-S12-S12-S10	39.6	39.6	39.6	24.4	24.4	24.4	28.6	28.6	25.4	27.0	12.7		
7/8	1/2	3/4	-TTT-S14-S8-S12	44.7	44.7	44.7	25.9	22.9	24.4	31.8	22.2	28.6	34.9	10.4		
7/8	5/8	3/8	-TTT-S14-S10-S6	44.7	44.7	41.9	25.9	24.4	16.8	31.8	25.4	17.5	34.9	7.1		
7/8	3/4	3/8	-TTT-S14-S12-S6	44.7	44.7	41.9	25.9	24.4	16.8	31.8	28.6	17.5	34.9	7.1		
7/8	3/4	1/2	-TTT-S14-S12-S8	44.7	44.7	44.7	25.9	24.4	22.9	31.8	28.6	22.2	34.9	10.4		
7/8	3/4	3/4	-TTT-S14-S12-S12	44.7	44.7	44.7	25.9	24.4	24.4	31.8	28.6	28.6	34.9	15.7		
7/8	7/8	1/4	-TTT-S14-S14-S4	44.7	44.7	40.4	25.9	25.9	15.2	31.8	31.8	14.3	34.9	4.8		
7/8	7/8	3/8	-TTT-S14-S14-S6	44.7	44.7	41.9	25.9	25.9	16.8	31.8	31.8	17.5	34.9	7.1		
1	3/8	3/8	-TTT-S16-S6-S6	49.3	41.9	41.9	31.2	16.8	16.8	38.1	17.5	17.5	34.9	7.1		
1	1/2	1/4	-TTT-S16-S8-S4	49.3	44.7	40.4	31.2	22.9	15.2	38.1	22.2	14.3	34.9	4.8		
1	1/2	3/8	-TTT-S16-S8-S6	49.3	44.7	41.9	31.2	22.9	16.8	38.1	22.2	17.5	34.9	7.1		
1	1/2	1/2	-TTT-S16-S8-S8	49.3	44.7	44.7	31.2	22.9	22.9	38.1	22.2	22.2	34.9	10.4		
1	1/2	1	-TTT-S16-S8-S16	49.3	44.7	49.3	31.2	22.9	31.2	38.1	22.2	38.1	34.9	10.4		
1	5/8	3/8	-TTT-S16-S10-S6	49.3	44.7	41.9	31.2	24.4	16.8	38.1	25.4	17.5	34.9	7.1		
1	3/4	3/8	-TTT-S16-S12-S6	49.3	44.7	41.9	31.2	24.4	16.8	38.1	28.6	17.5	34.9	7.1		
1	3/4	1/2	-TTT-S16-S12-S8	49.3	44.7	44.7	31.2	24.4	22.9	38.1	28.6	22.2	34.9	10.4		
1	3/4	5/8	-TTT-S16-S12-S10	49.3	44.7	44.7	31.2	24.4	24.4	38.1	28.6	25.4	34.9	12.7		
1	3/4	1	-TTT-S16-S12-S16	49.3	44.7	49.3	31.2	24.4	31.2	38.1	28.6	38.1	34.9	15.7		
1	7/8	1/4	-TTT-S16-S14-S4	49.3	44.7	40.4	31.2	25.9	15.2	38.1	31.8	14.3	34.9	4.8		
1	7/8	3/8	-TTT-S16-S14-S6	49.3	44.7	41.9	31.2	25.9	16.8	38.1	31.8	17.5	34.9	7.1		
1	7/8	1/2	-TTT-S16-S14-S8	49.3	44.7	44.7	31.2	25.9	22.9	38.1	31.8	22.2	34.9	10.4		
1	7/8	3/4	-TTT-S16-S14-S12	49.3	44.7	44.7	31.2	25.9	24.4	38.1	31.8	28.6	34.9	12.7		
1	7/8	7/8	-TTT-S16-S14-S14	49.3	44.7	44.7	31.2	25.9	25.9	38.1	31.8	31.8	34.9	18.3		
1	1	1/4	-TTT-S16-S16-S4	49.3	49.3	40.4	31.2	31.2	15.2	38.1	38.1	14.3	34.9	4.8		
1	1	3/8	-TTT-S16-S16-S6	49.3	49.3	41.9	31.2	31.2	16.8	38.1	38.1	17.5	34.9	7.1		
1	1	1/2	-TTT-S16-S16-S8	49.3	49.3	44.7	31.2	31.2	22.9	38.1	38.1	22.2	34.9	10.4		
1	1	5/8	-TTT-S16-S16-S10	49.3	49.3	44.7	31.2	31.2	24.4	38.1	38.1	25.4	34.9	12.7		
1	1	3/4	-TTT-S16-S16-S12	49.3	49.3	44.7	31.2	31.2	24.4	38.1	38.1	28.6	34.9	15.7		
1	1	7/8	-TTT-S16-S16-S14	49.3	49.3	44.7	31.2	31.2	25.9	38.1	38.1	31.8	34.9	18.3		
1 1/4	1 1/4	1	-TTT-S20-S20-S16	67.8	67.8	55.1	41.2	41.2	31.3	47.6	47.6	38.1	42.9	22.4		
1 1/2	1 1/2	1	-TTT-S24-S24-S16	78.7	78.7	60.0	50.0	50.0	31.3	57.2	57.2	38.1	50.8	22.4		

Reducing Union Tees



Metric Tube				Dimension, mm												
T1-Tube O.D. (mm)	T2-Tube O.D. (mm)	T3-Tube O.D. (mm)	Basic Ordering Number	L1	L2	L3	C1	C2	C3	G1	G2	G3	F	E		
3	3	6	-TTT-SM3-SM3-SM6	24.7	24.7	27.0	12.9	12.9	15.3	12	12	14	12.7	2.4		
6	6	3	-TTT-SM6-SM6-SM3	27.0	27.0	25.4	15.3	15.3	12.9	14	14	12	12.7	2.4		
6	6	8	-TTT-SM6-SM6-SM8	28.0	28.0	28.8	15.3	15.3	16.2	14	14	16	14.3	4.8		
8	8	6	-TTT-SM8-SM8-SM6	30.0	30.0	29.0	16.2	16.2	15.3	16	16	14	15.9	4.8		
8	8	12	-TTT-SM8-SM8-SM12	35.2	35.2	36.0	16.2	16.2	22.8	16	16	22	20.6	6.4		
10	10	6	-TTT-SM10-SM10-SM6	31.5	31.5	29.9	17.2	17.2	15.3	19	19	14	17.5	4.8		
10	10	8	-TTT-SM10-SM10-SM8	31.5	31.5	30.7	17.2	17.2	16.2	19	19	16	17.5	6.4		
12	12	6	-TTT-SM12-SM12-SM6	36.0	36.0	31.8	22.8	22.8	15.3	22	22	14	20.6	4.8		
12	12	8	-TTT-SM12-SM12-SM8	36.0	36.0	35.2	22.8	22.8	16.2	22	22	16	20.6	6.4		
12	12	14	-TTT-SM12-SM12-SM14	38.0	38.0	38.0	22.8	22.8	24.4	22	22	25	25.4	9.5		
12	12	18	-TTT-SM12-SM12-SM18	39.8	39.8	39.8	22.8	22.8	24.4	22	22	30	27.0	9.5		
14	14	8	-TTT-SM14-SM14-SM8	38.0	38.0	37.2	24.4	24.4	16.2	25	25	16	25.4	6.4		
14	14	10	-TTT-SM14-SM14-SM10	38.0	38.0	38.0	24.4	24.4	17.2	25	25	19	25.4	7.9		
15	15	12	-TTT-SM15-SM15-SM12	38.8	38.8	38.8	24.4	24.4	22.8	25	25	22	25.4	9.5		
16	8	16	-TTT-SM16-SM8-SM16	38.8	37.2	38.8	24.4	16.2	24.4	25	16	25	25.4	6.4		
16	16	12	-TTT-SM16-SM16-SM12	38.8	38.8	38.9	24.4	24.4	22.8	25	25	22	25.4	9.5		
18	18	8	-TTT-SM18-SM18-SM8	39.8	39.8	39.0	24.4	24.4	16.2	30	30	16	27.0	6.4		
18	18	10	-TTT-SM18-SM18-SM10	39.8	39.8	39.8	24.4	24.4	17.2	30	30	19	27.0	7.9		
18	18	12	-TTT-SM18-SM18-SM12	39.8	39.8	39.8	24.4	24.4	22.8	30	30	22	27.0	9.5		
18	18	14	-TTT-SM18-SM18-SM14	39.8	39.8	39.8	24.4	24.4	24.4	30	30	25	27.0	11.1		
20	20	14	-TTT-SM20-SM20-SM14	44.6	44.6	44.6	26.0	26.0	24.4	32	32	25	34.9	11.1		
22	22	12	-TTT-SM22-SM22-SM12	44.6	44.6	44.6	26.0	26.0	22.8	32	32	22	34.9	9.5		
25	25	12	-TTT-SM25-SM25-SM12	49.1	49.1	44.7	31.3	31.3	22.8	38	38	22	34.9	9.5		

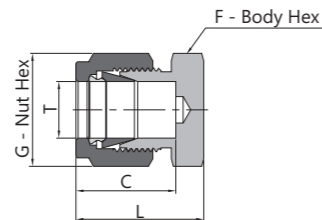
### Union Crosses



Fractional Tube						
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm				
		L	C	G	F	E
1/8	-C-S2	22.4	12.7	11.1	9.5	2.3
3/16	-C-S3	24.4	13.7	12.7	11.1	3.0
1/4	-C-S4	26.9	15.2	14.3	12.7	4.8
5/16	-C-S5	29.7	16.2	15.9	15.9	6.4
3/8	-C-S6	30.5	16.8	17.5	15.9	7.1
1/2	-C-S8	36.1	22.9	22.2	20.6	10.4
5/8	-C-S10	36.3	24.4	25.4	27.0	12.7
3/4	-C-S12	39.9	24.4	28.6	27.0	15.7
7/8	-C-S14	44.7	25.9	31.8	34.9	18.3
1	-C-S16	49.0	31.2	38.1	34.9	22.4

Metric Tube						
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm				
		L	C	G	F	E
3	-C-SM3	22.3	12.9	12	9.5	2.4
4	-C-SM4	25.4	13.7	12	12.7	2.4
6	-C-SM6	27.0	15.3	14	12.7	4.8
8	-C-SM8	29.9	16.2	16	15.9	6.4
10	-C-SM10	33.5	17.2	19	20.6	7.9
12	-C-SM12	36.0	22.8	22	20.6	9.5
16	-C-SM16	37.0	24.4	25	23.8	12.7
18	-C-SM18	38.3	24.4	30	27.0	15.1
20	-C-SM20	44.6	26.0	32	34.9	15.9
22	-C-SM22	44.7	26.0	32	34.9	18.3
25	-C-SM25	49.2	31.3	38	34.9	21.8

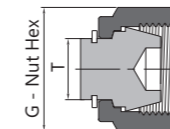
### Caps



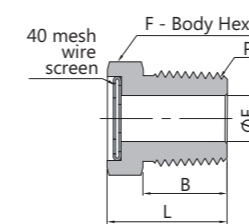
Fractional Tube					
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm			
		L	C	G	F
1/16	-TC-S1	15.0	8.6	7.9	7.9
1/8	-TC-S2	20.1	12.7	11.1	11.1
3/16	-TC-S3	21.3	13.7	12.7	11.1
1/4	-TC-S4	23.4	15.2	14.3	12.7
5/16	-TC-S5	24.4	16.3	15.9	14.3
3/8	-TC-S6	25.7	16.8	17.5	15.9
1/2	-TC-S8	29.2	22.9	22.2	20.6
5/8	-TC-S10	30.0	24.4	25.4	23.8
3/4	-TC-S12	31.5	24.4	28.6	27.0
7/8	-TC-S14	34.0	25.9	31.8	30.2
1	-TC-S16	38.4	31.2	38.1	34.9
1 1/8	-TC-S18	38.4	31.2	46.0	41.3
1 1/4	-TC-S20	53.3	41.1	47.6	44.5
1 1/2	-TC-S24	64.5	50.0	57.2	54.0

Metric Tube					
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm			
		L	C	G	F
2	-TC-SM2	20.1	12.9	12	12
3	-TC-SM3	20.1	12.9	12	12
4	-TC-SM4	21.3	13.7	12	12
6	-TC-SM6	23.1	15.3	14	14
8	-TC-SM8	24.5	16.2	16	15
10	-TC-SM10	26.6	17.2	19	18
12	-TC-SM12	29.1	22.8	22	22
14	-TC-SM14	29.9	24.4	25	24
15	-TC-SM15	29.9	24.4	25	24
16	-TC-SM16	29.9	24.4	25	24
18	-TC-SM18	31.4	24.4	30	27
20	-TC-SM20	34.0	26.0	32	30
22	-TC-SM22	34.0	26.0	32	30
25	-TC-SM25	38.5	31.3	38	35
28	-TC-SM28	48.5	36.6	46	41
30	-TC-SM30	53.4	39.6	50	46
32	-TC-SM32	55.8	42.0	50	46
38	-TC-SM38	65.4	49.4	60	55

### Plugs

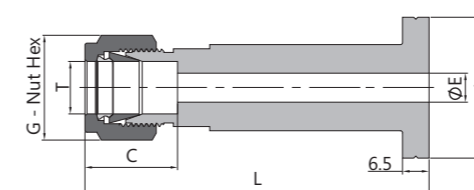


### Vent Protectors



40 mesh 300 series stainless steel wire screen assembly

### Lapped Flange Connectors



- ☆ Standard material is 316 or Monel.
- ☆ The flange ends are used with NPS 1/2 lap joint pipe flanges.
- ☆ The flange ends are dimensioned to meet "ANSI B16.5 Class 2500" flange specifications.
- ☆ The Flange Seal A means surface finish Ra 3.2-6.3 µm, the flange Seal B means Ra 6.3-12.5 µm.

Fractional Tube		
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm
		G
1/16	-TP-S1	7.9
1/8	-TP-S2	11.1
3/16	-TP-S3	12.7
1/4	-TP-S4	14.3
5/16	-TP-S5	15.9
3/8	-TP-S6	17.5
1/2	-TP-S8	22.2
5/8	-TP-S10	25.4
3/4	-TP-S12	28.6
7/8	-TP-S14	31.8
1	-TP-S16	38.1
1 1/4	-TP-S20	47.6
1 1/2	-TP-S24	57.2

Metric Tube		
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm
		G
2	-TP-SM2	12
3	-TP-SM3	12
4	-TP-SM4	12
6	-TP-SM6	14
8	-TP-SM8	16
10	-TP-SM10	19
12	-TP-SM12	22
14	-TP-SM14	25
15	-TP-SM15	25
16	-TP-SM16	25
18	-TP-SM18	30
20	-TP-SM20	32
22	-TP-SM22	32
25	-TP-SM25	38
28	-TP-SM28	46
30	-TP-SM30	50
32	-TP-SM32	50
38	-TP-SM38	60

NPT Thread					
P-NPT Size	Ordering Number	Dimension, mm			
		L	F	B	E
1/8	SS-VPF-NT2	14.2	12.7	9.7	4.8
1/4	SS-VPF-NT4	19.8	14.3	14.2	7.1
3/8	SS-VPF-NT6	20.6	17.5	14.2	10.4
1/2	SS-VPF-NT8	26.2	22.2	19.1	12.7
3/4	SS-VPF-NT12	26.9	27.0	19.2	18.3
1	SS-VPF-NT16	34.8	34.9	23.9	22.4

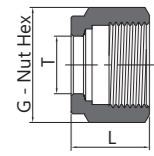
To order brass, replace SS in the ordering number with B  
Example: B-VPF-NT2

Fractional Tube							
T-Tube O.D. (in.)	Flange Seal	Basic Ordering Number	Dimension, mm				
			L	G	C	E	J
1/4	A	-LFC-S4A	80.8	14.3	15.2	4.8	34.5
1/4	B	-LFC-S4B	80.8	14.3	15.2	4.8	34.5
3/8	A	-LFC-S6A	82.9	17.5	16.8	7.1	34.5
3/8	B	-LFC-S6B	82.9	17.5	16.8	7.1	34.5
1/2	A	-LFC-S8A	85.1	22.2	22.9	7.9	34.5
1/2	B	-LFC-S8B	85.1	22.2	22.9	7.9	34.5

Metric Tube							
T-Tube O.D. (mm)	Flange Seal	Basic Ordering Number	Dimension, mm				
			L	G	C	E	J
10	A	-LFC-SM10A	82.6	19	17.2	7.9	34.5
10	B	-LFC-SM10B	82.6	19	17.2	7.9	34.5



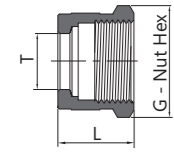
Nuts



Fractional Tube			
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm	
		L	G
1/16	-N-S1	7.9	7.9
1/8	-N-S2	11.9	11.1
3/16	-N-S3	11.9	12.7
1/4	-N-S4	12.7	14.3
5/16	-N-S5	13.5	15.9
3/8	-N-S6	14.2	17.5
1/2	-N-S8	17.5	22.2
5/8	-N-S10	17.5	25.4
3/4	-N-S12	17.5	28.6
7/8	-N-S14	17.5	31.8
1	-N-S16	20.6	38.1
1 1/8	-N-S18	30.8	46.0
1 1/4	-N-S20	31.8	47.6
1 1/2	-N-S24	38.1	57.2

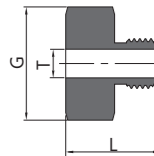
Metric Tube			
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm	
		L	G
2	-N-SM2	11.9	12
3	-N-SM3	11.9	12
4	-N-SM4	11.9	12
6	-N-SM6	12.7	14
8	-N-SM8	13.5	16
10	-N-SM10	15.1	19
12	-N-SM12	17.4	22
14	-N-SM14	17.4	25
15	-N-SM15	17.4	25
16	-N-SM16	17.4	25
18	-N-SM18	17.4	30
20	-N-SM20	17.4	32
22	-N-SM22	17.4	32
25	-N-SM25	20.6	38
28	-N-SM28	30.6	46
30	-N-SM30	32.7	50
32	-N-SM32	34.4	50
38	-N-SM38	40.6	60

Knurled Nuts



To order a knurled nut add K to the nut ordering number.  
Example: B-KN-S4

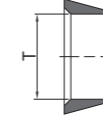
Male Nuts



Fractional Tube			
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm	
		L	G
1/16	-MN-S1	9.7	6.4
1/8	-MN-S2	13.5	9.5
1/4	-MN-S4	15.7	12.7
1/2	-MN-S8	22.1	23.8

Metric Tube			
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm	
		L	G
3	-MN-SM3	13.5	10
6	-MN-SM6	15.7	14
10	-MN-SM10	22.1	22
12	-MN-SM12	22.1	24

Front Ferrules



Fractional Tube	
T-Tube O.D. (in.)	Basic Ordering Number
1/16	-FF-S1
1/8	-FF-S2
3/16	-FF-S3
1/4	-FF-S4
5/16	-FF-S5
3/8	-FF-S6
1/2	-FF-S8
5/8	-FF-S10
3/4	-FF-S12
7/8	-FF-S14
1	-FF-S16
1 1/8	-FF-S18*
1 1/4	-FF-S20*
1 1/2	-FF-S24*

Metric Tube	
T-Tube O.D. (mm)	Basic Ordering Number
2	-FF-SM2
3	-FF-SM3
4	-FF-SM4
6	-FF-SM6
8	-FF-SM8
10	-FF-SM10
12	-FF-SM12
14	-FF-SM14
15	-FF-SM15
16	-FF-SM16
18	-FF-SM18
20	-FF-SM20
22	-FF-SM22
25	-FF-SM25
28	-FF-SM28*
30	-FF-SM30*
32	-FF-SM32*
38	-FF-SM38*

\* Stainless steel front ferrules over 1 in. or 25 mm are PFA coated.

Rear Ferrules

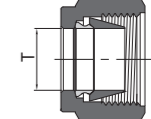


Fractional Tube	
T-Tube O.D. (in.)	Basic Ordering Number
1/16	-RF-S1
1/8	-RF-S2
3/16	-RF-S3
1/4	-RF-S4
5/16	-RF-S5
3/8	-RF-S6
1/2	-RF-S8
5/8	-RF-S10
3/4	-RF-S12
7/8	-RF-S14
1	-RF-S16
1 1/8	-RF-S18*
1 1/4	-RF-S20*
1 1/2	-RF-S24*

Metric Tube	
T-Tube O.D. (mm)	Basic Ordering Number
2	-RF-SM2
3	-RF-SM3
4	-RF-SM4
6	-RF-SM6
8	-RF-SM8
10	-RF-SM10
12	-RF-SM12
14	-RF-SM14
15	-RF-SM15
16	-RF-SM16
18	-RF-SM18
20	-RF-SM20
22	-RF-SM22
25	-RF-SM25
28	-RF-SM28*
30	-RF-SM30*
32	-RF-SM32*
38	-RF-SM38*

\* Stainless steel rear ferrules over 1 in. or 25 mm are PFA coated.

Nuts+Ferrules



Fractional Tube	
T-Tube O.D. (in.)	Basic Ordering Number
1/16	-NFR-S1
1/8	-NFR-S2
3/16	-NFR-S3
1/4	-NFR-S4
5/16	-NFR-S5
3/8	-NFR-S6
1/2	-NFR-S8
5/8	-NFR-S10
3/4	-NFR-S12
7/8	-NFR-S14
1	-NFR-S16
1 1/8	-NFR-S18
1 1/4	-NFR-S20
1 1/2	-NFR-S24

Metric Tube	
T-Tube O.D. (mm)	Basic Ordering Number
2	-NFR-SM2
3	-NFR-SM3
4	-NFR-SM4
6	-NFR-SM6
8	-NFR-SM8
10	-NFR-SM10
12	-NFR-SM12
14	-NFR-SM14
15	-NFR-SM15
16	-NFR-SM16
18	-NFR-SM18
20	-NFR-SM20
22	-NFR-SM22
25	-NFR-SM25
28	-NFR-SM28
30	-NFR-SM30
32	-NFR-SM32
38	-NFR-SM38

Nut-Ferrule Sets



Each Nut-Ferrule Set contains 5 nuts, 5 front ferrules and 5 rear ferrules.

Fractional Tube	
T-Tube O.D. (in.)	Basic Ordering Number
1/16	-NFS-S1
1/8	-NFS-S2
3/16	-NFS-S3
1/4	-NFS-S4
5/16	-NFS-S5
3/8	-NFS-S6
1/2	-NFS-S8
5/8	-NFS-S10
3/4	-NFS-S12

Metric Tube	
T-Tube O.D. (mm)	Basic Ordering Number
2	-NFS-SM2
3	-NFS-SM3
4	-NFS-SM4
6	-NFS-SM6
8	-NFS-SM8
10	-NFS-SM10
12	-NFS-SM12
14	-NFS-SM14
15	-NFS-SM15
16	-NFS-SM16
18	-NFS-SM18

Ferrule Sets

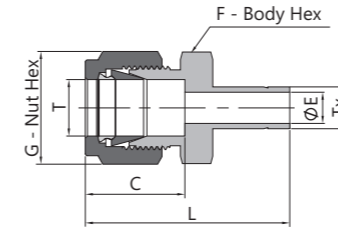


Each Ferrule Set contains 10 front ferrules and 10 rear ferrules.

Fractional Tube	
T-Tube O.D. (in.)	Basic Ordering Number
1/16	-FRS-S1
1/8	-FRS-S2
3/16	-FRS-S3
1/4	-FRS-S4
5/16	-FRS-S5
3/8	-FRS-S6
1/2	-FRS-S8
5/8	-FRS-S10
3/4	-FRS-S12

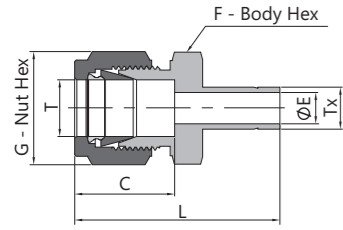
Metric Tube	
T-Tube O.D. (mm)	Basic Ordering Number
2	-FRS-SM2
3	-FRS-SM3
4	-FRS-SM4
6	-FRS-SM6
8	-FRS-SM8
10	-FRS-SM10
12	-FRS-SM12
14	-FRS-SM14
15	-FRS-SM15
16	-FRS-SM16
18	-FRS-SM18

Reducers



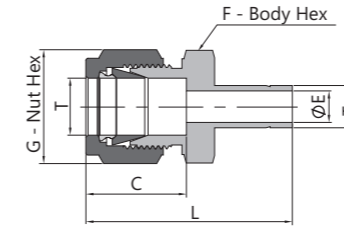
Fractional Tube		Basic Ordering Number	Dimension, mm				
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)		L	C	G	F	E
1/16	1/8	-R-S1-FT2	29.2	8.6	7.9	7.9	1.3
1/16	3/16	-R-S1-FT3	30.0	8.6	7.9	7.9	1.3
1/16	1/4	-R-S1-FT4	31.5	8.6	7.9	7.9	1.3
1/8	1/16	-R-S2-FT1	29.0	12.7	11.1	11.1	0.8
1/8	1/8	-R-S2-FT2	33.5	12.7	11.1	11.1	2.0
1/8	3/16	-R-S2-FT3	34.3	12.7	11.1	11.1	2.3
1/8	1/4	-R-S2-FT4	36.1	12.7	11.1	11.1	2.3
1/8	3/8	-R-S2-FT6	37.6	12.7	11.1	11.1	2.3
1/8	1/2	-R-S2-FT8	44.2	12.7	11.1	14.3	2.3
3/16	1/8	-R-S3-FT2	34.8	13.7	12.7	11.1	2.0
3/16	1/4	-R-S3-FT4	37.1	13.7	12.7	11.1	3.0
1/4	1/8	-R-S4-FT2	36.8	15.2	14.3	12.7	2.0
1/4	3/16	-R-S4-FT3	37.6	15.2	14.3	12.7	3.0
1/4	1/4	-R-S4-FT4	39.1	15.2	14.3	12.7	4.3
1/4	5/16	-R-S4-FT5	39.9	15.2	14.3	12.7	4.8
1/4	3/8	-R-S4-FT6	40.6	15.2	14.3	12.7	4.8
1/4	1/2	-R-S4-FT8	46.2	15.2	14.3	14.3	4.8
1/4	5/8	-R-S4-FT10	48.0	15.2	14.3	17.5	4.8
1/4	3/4	-R-S4-FT12	47.8	15.2	14.3	20.6	4.8
5/16	3/8	-R-S5-FT6	41.9	16.3	15.9	14.3	6.4
5/16	1/2	-R-S5-FT8	47.5	16.3	15.9	14.3	6.4
3/8	1/4	-R-S6-FT4	41.4	16.8	17.5	15.9	4.3
3/8	3/8	-R-S6-FT6	43.2	16.8	17.5	15.9	6.9
3/8	1/2	-R-S6-FT8	48.5	16.8	17.5	15.9	7.1
3/8	5/8	-R-S6-FT10	50.3	16.8	17.5	17.5	7.1
3/8	3/4	-R-S6-FT12	50.3	16.8	17.5	20.6	7.1
1/2	1/4	-R-S8-FT4	45.0	22.9	22.2	20.6	4.3
1/2	3/8	-R-S8-FT6	46.7	22.9	22.2	20.6	6.9
1/2	1/2	-R-S8-FT8	52.3	22.9	22.2	20.6	9.4
1/2	5/8	-R-S8-FT10	53.8	22.9	22.2	20.6	10.4
1/2	3/4	-R-S8-FT12	53.8	22.9	22.2	20.6	10.4
1/2	1	-R-S8-FT16	60.2	22.9	22.2	27.0	10.4
5/8	3/4	-R-S10-FT12	54.6	24.4	25.4	23.8	12.7
5/8	7/8	-R-S10-FT14	56.1	24.4	25.4	23.8	12.7
5/8	1	-R-S10-FT16	61.0	24.4	25.4	27.0	12.7
3/4	3/4	-R-S12-FT12	54.6	24.4	28.6	27.0	14.7
3/4	1	-R-S12-FT16	62.5	24.4	28.6	27.0	15.7
1	1 1/4	-R-S16-FT20	80.5	31.2	38.1	34.9	22.4
1	1 1/2	-R-S16-FT24	89.2	31.2	38.1	41.3	22.4
1	2	-R-S16-FT32	112.5	31.2	38.1	54.0	22.4
1 1/4	1 1/2	-R-S20-FT24	104.1	41.1	57.2	47.6	27.7

Reducers



Metric Tube			Dimension, mm				
T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	L	C	G	F	E
2	3	-R-SM2-MT3	33.5	12.9	12	12	1.7
3	4	-R-SM3-MT4	35.0	12.9	12	12	2.4
3	6	-R-SM3-MT6	36.1	12.9	12	12	2.4
3	10	-R-SM3-MT10	38.4	12.9	12	14	2.4
4	6	-R-SM4-MT6	37.1	13.7	12	12	2.4
6	3	-R-SM6-MT3	36.9	15.3	14	14	1.9
6	8	-R-SM6-MT8	39.9	15.3	14	14	4.8
6	10	-R-SM6-MT10	40.7	15.3	14	14	4.8
6	12	-R-SM6-MT12	46.3	15.3	14	14	4.8
6	18	-R-SM6-MT18	49.6	15.3	14	22	4.8
8	6	-R-SM8-MT6	40.3	16.2	16	15	4.1
8	10	-R-SM8-MT10	42.0	16.2	16	15	6.4
8	12	-R-SM8-MT12	47.6	16.2	16	15	6.4
10	6	-R-SM10-MT6	42.4	17.2	19	18	4.1
10	8	-R-SM10-MT8	43.4	17.2	19	18	5.6
10	12	-R-SM10-MT12	49.8	17.2	19	18	7.9
10	15	-R-SM10-MT15	51.3	17.2	19	18	7.9
10	18	-R-SM10-MT18	51.3	17.2	19	22	7.9
12	6	-R-SM12-MT6	44.9	22.8	22	22	4.1
12	8	-R-SM12-MT8	45.9	22.8	22	22	5.6
12	10	-R-SM12-MT10	46.7	22.8	22	22	7.1
12	16	-R-SM12-MT16	53.8	22.8	22	22	9.5
12	18	-R-SM12-MT18	53.8	22.8	22	22	9.5
12	20	-R-SM12-MT20	56.1	22.8	22	22	9.5
12	22	-R-SM12-MT22	56.1	22.8	22	24	9.5
12	25	-R-SM12-MT25	62.4	22.8	22	27	9.5
16	12	-R-SM16-MT12	53.0	24.4	25	24	8.8
18	12	-R-SM18-MT12	54.6	24.4	30	27	8.8
18	16	-R-SM18-MT16	56.1	24.4	30	27	12.0
18	20	-R-SM18-MT20	57.6	24.4	30	27	15.1
18	22	-R-SM18-MT22	57.6	24.4	30	27	15.1
18	25	-R-SM18-MT25	62.4	24.4	30	27	15.1
20	16	-R-SM20-MT16	57.9	26.0	32	30	12.0
20	18	-R-SM20-MT18	57.9	26.0	32	30	13.9
20	22	-R-SM20-MT22	59.4	26.0	32	30	15.9
20	25	-R-SM20-MT25	64.2	26.0	32	30	15.8
22	18	-R-SM22-MT18	57.9	26.0	32	30	13.9
22	20	-R-SM22-MT20	59.4	26.0	32	30	15.5
22	25	-R-SM22-MT25	64.2	26.0	32	30	18.3
25	18	-R-SM25-MT18	63.1	31.3	38	35	13.9
25	20	-R-SM25-MT20	64.6	31.3	38	35	15.5

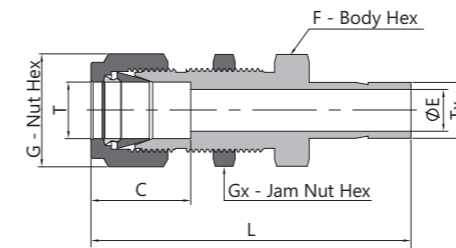
Reducers



Metric Tube			Fractional Tube				
T-Tube O.D. (mm)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm				
			L	C	G	F	E
2	1/8	-R-SM2-FT2	33.5	12.9	12	12	1.7
3	1/8	-R-SM3-FT2	33.5	12.9	12	12	2.0
3	1/4	-R-SM3-FT4	36.1	12.9	12	12	2.4
4	1/4	-R-SM4-FT4	37.1	13.7	12	12	2.4
6	1/8	-R-SM6-FT2	36.9	15.3	14	14	2.0
6	1/4	-R-SM6-FT4	39.2	15.3	14	14	4.4
6	5/16	-R-SM6-FT5	39.9	15.3	14	14	4.8
6	3/8	-R-SM6-FT6	40.7	15.3	14	14	4.8
6	1/2	-R-SM6-FT8	46.3	15.3	14	14	4.8
8	1/4	-R-SM8-FT4	40.3	16.2	16	15	4.4
8	3/8	-R-SM8-FT6	42.0	16.2	16	15	6.4
8	1/2	-R-SM8-FT8	47.6	16.2	16	15	6.4
10	3/8	-R-SM10-FT6	44.2	17.2	19	18	6.8
10	1/2	-R-SM10-FT8	49.8	17.2	19	18	7.9
12	1/2	-R-SM12-FT8	52.3	22.8	22	22	9.3
12	3/4	-R-SM12-FT12	53.8	22.8	22	22	9.5
18	3/4	-R-SM18-FT12	56.1	24.4	30	27	14.7
18	1	-R-SM18-FT16	62.4	24.4	30	27	15.1
25	1	-R-SM25-FT16	69.5	31.3	38	35	20.2

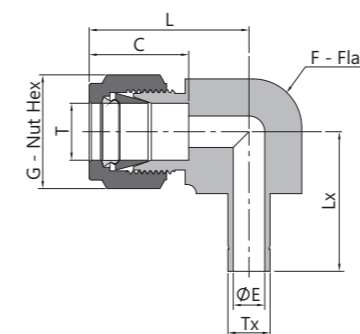
Fractional Tube			Metric Tube				
T-Tube O.D. (in.)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm				
			L	C	G	F	E
1/8	6	-R-S2-MT6	36.1	12.7	11.1	11.1	2.3

Bulkhead Reducers



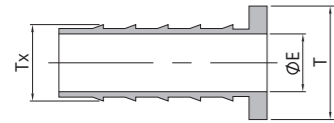
Fractional Tube			Dimension, mm					
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	L	C	G	F	Gx	E
1/8	1/8	-BR-S2-FT2	49.5	12.7	11.1	12.7	12.7	2.0
1/4	1/4	-BR-S4-FT4	55.9	15.2	14.3	15.9	15.9	4.3
3/8	3/8	-BR-S6-FT6	61.2	16.8	17.5	19.1	19.1	6.9
1/2	1/2	-BR-S8-FT8	72.9	22.9	22.2	23.8	23.8	9.4
5/8	5/8	-BR-S10-FT10	75.2	24.4	25.4	27.0	27.0	11.9
3/4	3/4	-BR-S12-FT12	81.5	24.4	28.6	30.2	30.2	14.7
1	1	-BR-S16-FT16	100.3	31.2	38.1	41.3	41.3	20.3

Reducer Elbows



Metric Tube			Dimension, mm					
T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	L	C	G	F	E	Lx
6	6	-LR-SM6-MT6	27.0	15.3	14	12.7	4.6	18.8
12	12	-LR-SM12-MT12	38.1	22.8	22	23.8	8.8	23.4

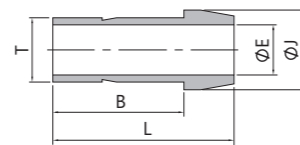
Insert for Soft Plastic Tubings



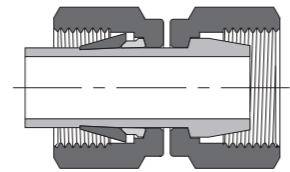
Fractional Tube			
T-Tube O.D. (in.)	Tx-Tube I.D. (in.)	Basic Ordering Number	E (mm)
3/16	1/8	-IN-3-2	2.3
1/4	1/8	-IN-4-2	2.3
1/4	0.17	-IN-4-017	2.8
1/4	3/16	-IN-4-3	3.5
5/16	1/8	-IN-5-2	2.3
5/16	3/16	-IN-5-3	3.0
5/16	1/4	-IN-5-4	4.8
3/8	3/16	-IN-6-3	3.0
3/8	1/4	-IN-6-4	4.8
1/2	1/4	-IN-8-4	4.8
1/2	3/8	-IN-8-6	7.9
5/8	3/8	-IN-10-6	7.9
5/8	1/2	-IN-10-8	11.1
3/4	1/2	-IN-12-8	11.1
3/4	5/8	-IN-12-10	14.2
1	3/4	-IN-16-12	17.5

Metric Tube			
T-Tube O.D. (mm)	Tx-Tube I.D. (mm)	Basic Ordering Number	E (mm)
6	4	-IN-6M-4M	2.8
8	6	-IN-8M-6M	4.4
10	8	-IN-10M-8M	6.4
12	8	-IN-12M-8M	6.4
12	10	-IN-12M-10M	8.3

Port Connectors



1" /25 mm and below

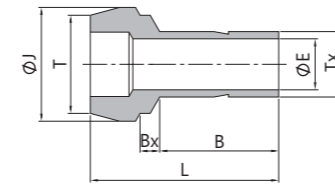


1 1/4" /28 mm and above

Fractional Tube					
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm			
		L	B	E	J
1/16	-P-S1	13.7	10.7	0.8	3.3
1/8	-P-S2	22.4	15.7	2.0	6.1
1/4	-P-S4	24.6	18.8	4.3	9.4
5/16	-P-S5	25.9	20.1	5.6	10.9
3/8	-P-S6	26.2	20.3	6.9	12.7
1/2	-P-S8	35.8	25.9	9.4	15.7
5/8	-P-S10	41.7	28.1	11.9	20.5
3/4	-P-S12	41.9	27.7	14.7	22.1
1	-P-S16	48.0	34.5	20.3	28.4
1 1/4	-P-S20	69.1	50.6	25.9	37.4
1 1/2	-P-S24	84.1	59.4	31.8	45.8

Metric Tube					
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm			
		L	B	E	J
3	-P-SM3	22.2	15.7	1.9	6.0
6	-P-SM6	24.6	18.7	4.1	9.0
8	-P-SM8	25.9	20.0	5.6	11.0
10	-P-SM10	26.1	20.2	7.1	13.1
12	-P-SM12	35.8	26.0	8.8	15.0
15	-P-SM15	37.8	27.6	11.2	19.6
16	-P-SM16	37.8	27.6	12.0	20.6
18	-P-SM18	37.8	27.7	13.9	21.0
20	-P-SM20	39.4	29.2	15.5	24.6
25	-P-SM25	49.3	34.5	19.9	31.2
28	-P-SM28	63.5	48.3	22.5	34.4
30	-P-SM30	67.6	52.2	24.3	37.4
32	-P-SM32	69.7	52.4	26.5	39.4
38	-P-SM38	81.9	61.4	31.6	45.8

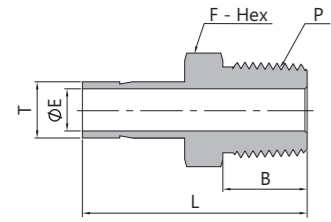
Reducing Port Connectors



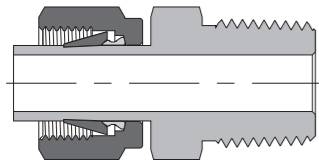
Fractional Tube							
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm				
			L	B	E	Bx	J
1/8	1/16	-P-S2-S1	17.3	8.6	0.8	2.0	6.1
1/4	1/16	-P-S4-S1	18.0	8.6	0.8	3.6	9.4
1/4	1/8	-P-S4-S2	22.6	13.5	2.0	3.3	9.4
3/8	1/8	-P-S6-S2	23.1	13.5	2.0	3.8	12.7
3/8	1/4	-P-S6-S4	24.9	15.7	4.3	3.3	12.7
1/2	1/4	-P-S8-S4	29.2	15.7	4.3	3.8	15.7
1/2	3/8	-P-S8-S6	30.5	17.5	6.9	3.3	15.7
3/4	1/2	-P-S12-S8	37.8	23.1	9.4	3.8	22.1
1	1/2	-P-S16-S8	42.9	24.4	9.4	4.8	28.5
1	3/4	-P-S16-S12	43.7	25.9	14.7	4.1	28.5

Metric Tube							
T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm				
			L	B	E	Bx	J
6	3	-P-SM6-SM3	22.6	13.5	1.9	3.2	9.0
8	6	-P-SM8-SM6	24.7	15.7	4.1	3.1	11.0
10	6	-P-SM10-SM6	25.0	15.7	4.1	3.4	13.1
10	8	-P-SM10-SM8	26.3	17.0	5.6	3.1	13.1
12	6	-P-SM12-SM6	29.6	15.7	4.1	3.6	15.0
12	8	-P-SM12-SM8	29.8	16.8	5.6	3.4	15.0
12	10	-P-SM12-SM10	30.4	17.5	7.1	3.1	15.0
16	12	-P-SM16-SM12	36.2	23.1	8.8	3.4	19.0
28	25	-P-SM28-SM25	56.5	33.0	19.8	8.2	34.3
32	25	-P-SM32-SM25	60.3	33.0	19.8	9.9	39.5
38	25	-P-SM38-SM25	65.8	33.0	19.8	12.3	47.1

Male Adapters



1" and below

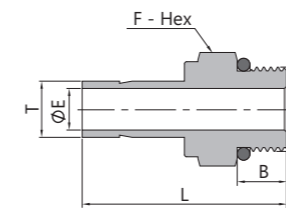
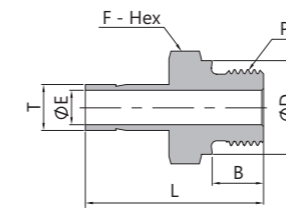
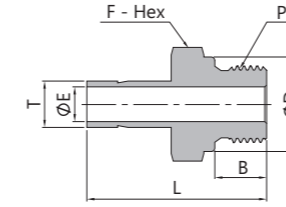


1 1/4" and above

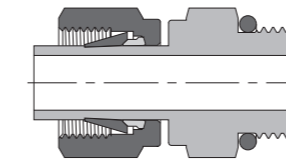
Fractional Tube			NPT Thread			
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/16	1/8	-TA-FT1-NT2	25.4	9.7	0.8	11.1
1/8	1/8	-TA-FT2-NT2	29.5	9.7	2.0	11.1
1/8	1/4	-TA-FT2-NT4	34.8	14.2	2.0	14.3
3/16	1/8	-TA-FT3-NT2	30.2	9.7	3.0	11.1
3/16	1/4	-TA-FT3-NT4	35.6	14.2	3.0	14.3
1/4	1/8	-TA-FT4-NT2	31.8	9.7	4.3	11.1
1/4	1/4	-TA-FT4-NT4	37.1	14.2	4.3	14.3
1/4	3/8	-TA-FT4-NT6	37.8	14.2	4.3	17.5
1/4	1/2	-TA-FT4-NT8	43.4	19.1	4.3	22.2
5/16	1/8	-TA-FT5-NT2	32.8	9.7	4.8	11.1
5/16	1/4	-TA-FT5-NT4	38.1	14.2	5.6	14.3
5/16	3/8	-TA-FT5-NT6	38.9	14.2	5.6	17.5
5/16	1/2	-TA-FT5-NT8	44.2	19.1	5.6	22.2
3/8	1/8	-TA-FT6-NT2	33.5	9.7	4.8	11.1
3/8	1/4	-TA-FT6-NT4	38.9	14.2	6.9	14.3
3/8	3/8	-TA-FT6-NT6	39.6	14.2	6.9	17.5
3/8	1/2	-TA-FT6-NT8	45.2	19.1	6.9	22.2
1/2	1/4	-TA-FT8-NT4	44.5	14.2	7.1	14.3
1/2	3/8	-TA-FT8-NT6	45.2	14.2	9.4	17.5
1/2	1/2	-TA-FT8-NT8	50.8	19.1	9.4	22.2
5/8	1/2	-TA-FT10-NT8	52.3	19.1	11.9	22.2
3/4	1/2	-TA-FT12-NT8	52.3	19.1	11.9	22.2
3/4	3/4	-TA-FT12-NT12	52.3	19.1	14.7	27.0
3/4	1	-TA-FT12-NT16	61.2	23.9	20.7	34.9
1	3/4	-TA-FT16-NT12	58.7	19.1	15.7	27.0
1	1	-TA-FT16-NT16	66.0	23.9	20.3	34.9
1 1/4	1 1/4	-TA-FT20-NT20	80.3	23.9	25.9	44.5
1 1/2	1 1/2	-TA-FT24-NT24	94.5	26.2	31.8	54.0

Fractional Tube			ISO Tapered Thread (RT)			
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/8	1/8	-TA-FT2-RT2	29.5	9.7	2.0	11.1
1/8	1/4	-TA-FT2-RT4	34.8	14.2	2.0	14.3
1/4	1/8	-TA-FT4-RT2	31.8	9.7	4.3	11.1
1/4	1/4	-TA-FT4-RT4	37.1	14.2	4.3	14.3
1/4	3/8	-TA-FT4-RT6	37.8	14.2	4.3	17.5
1/4	1/2	-TA-FT4-RT8	43.4	19.1	4.3	22.2
5/16	1/8	-TA-FT5-RT2	32.8	9.7	4.8	11.1
5/16	1/4	-TA-FT5-RT4	38.1	14.2	5.6	14.3
3/8	1/4	-TA-FT6-RT4	38.9	14.2	6.9	14.3
3/8	3/8	-TA-FT6-RT6	39.6	14.2	6.9	17.5
3/8	1/2	-TA-FT6-RT8	45.2	19.1	6.9	22.2
1/2	1/4	-TA-FT8-RT4	44.5	14.2	7.1	14.3
1/2	3/8	-TA-FT8-RT6	45.2	14.2	9.4	17.5
1/2	1/2	-TA-FT8-RT8	50.8	19.1	9.4	22.2
5/8	3/8	-TA-FT10-RT6	48.5	14.2	9.5	17.5
5/8	1/2	-TA-FT10-RT8	52.3	19.1	11.9	22.2
3/4	3/4	-TA-FT12-RT12	52.3	19.1	14.7	27.0
1	1	-TA-FT16-RT16	66.0	23.9	20.3	34.9

Male Adapters



1" and below



1 1/4" and above

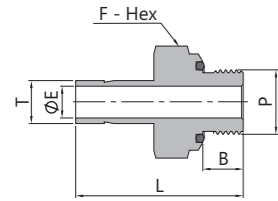
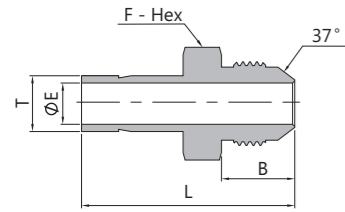
Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.

Fractional Tube			ISO Parallel Thread (RS)				
T-Tube O.D. (in.)	P-RS Size	Basic Ordering Number	Dimension, mm				
			L	B	E	F	D
1/8	1/8	-TA-FT2-RS2	31.0	7.1	2.0	14.3	13.7
1/8	1/4	-TA-FT2-RS4	35.8	11.2	2.0	19.1	17.8
1/4	1/8	-TA-FT4-RS2	33.3	7.1	4.1	14.3	13.7
1/4	1/4	-TA-FT4-RS4	38.1	11.2	4.3	19.1	17.8
3/8	1/8	-TA-FT6-RS2	34.0	7.1	1.3	14.3	13.7
3/8	1/4	-TA-FT6-RS4	39.9	11.2	5.8	19.1	17.8
3/8	3/8	-TA-FT6-RS6	40.6	11.2	6.9	22.2	21.6
3/8	1/2	-TA-FT6-RS8	42.9	14.2	7.1	27.0	25.9
1/2	1/4	-TA-FT8-RS4	45.5	11.2	5.8	19.1	17.8
1/2	3/8	-TA-FT8-RS6	46.2	11.2	7.9	22.2	21.6
1/2	1/2	-TA-FT8-RS8	49.2	14.2	9.4	27.0	25.9
5/8	1/2	-TA-FT10-RS8	50.0	14.2	11.9	27.0	25.9
3/4	3/4	-TA-FT12-RS12	54.9	16.0	14.7	33.3	32.0
1	1	-TA-FT16-RS16	64.5	18.3	20.3	41.3	38.9

Fractional Tube			ISO Parallel Thread (RP)				
T-Tube O.D. (in.)	P-RP Size	Basic Ordering Number	Dimension, mm				
			L	B	E	F	D
1/8	1/8	-TA-FT2-RP2	27.7	7.1	1.3	14.3	13.7
1/8	1/4	-TA-FT2-RP4	33.3	11.2	1.3	19.1	17.8
1/4	1/8	-TA-FT4-RP2	30.2	7.1	4.1	14.3	13.7
1/4	1/4	-TA-FT4-RP4	38.1	11.2	4.6	19.1	17.8
3/8	1/8	-TA-FT6-RP2	34.0	7.1	1.3	19.1	13.7
3/8	1/4	-TA-FT6-RP4	37.3	11.2	6.4	19.1	17.8
3/8	3/8	-TA-FT6-RP6	38.1	11.2	7.1	22.2	21.6
3/8	1/2	-TA-FT6-RP8	42.9	14.2	7.1	27.0	25.9
1/2	1/4	-TA-FT8-RP4	42.9	11.2	6.4	19.1	17.8
1/2	3/8	-TA-FT8-RP6	43.7	11.2	7.9	22.2	21.6
1/2	1/2	-TA-FT8-RP8	49.3	14.2	9.9	27.0	25.9
5/8	1/2	-TA-FT10-RP8	50.0	14.2	11.9	27.0	25.9
3/4	3/4	-TA-FT12-RP12	53.1	16.0	14.7	33.5	32.0
1	1	-TA-FT16-RP16	63.3	18.3	20.3	41.3	38.9

Fractional Tube			SAE/MS Straight Thread			
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/8	5/16-24	-TA-FT2-ST5	30.5	7.6	2.0	11.1
1/4	7/16-20	-TA-FT4-ST7	35.3	9.1	4.3	14.3
3/8	7/16-20	-TA-FT6-ST7	37.1	9.1	5.1	14.3
3/8	9/16-18	-TA-FT6-ST9	38.6	9.9	6.9	17.5
3/8	3/4-16	-TA-FT6-ST12	40.6	11.2	6.9	22.2
1/2	9/16-18	-TA-FT8-ST9	44.2	9.9	7.1	17.5
1/2	3/4-16	-TA-FT8-ST12	46.2	11.2	9.4	22.2
5/8	7/8-14	-TA-FT10-ST14	49.3	12.7	11.9	25.4
3/4	1 1/16-12	-TA-FT12-ST17	53.3	15.0	14.7	31.8
1	1 5/16-12	-TA-FT16-ST21	61.2	15.0	20.3	38.1
1 1/4	1 5/8-12	-TA-FT20-ST26	71.4	15.0	25.9	47.6
1 1/2	1 7/8-12	-TA-FT24-ST30	83.3	15.0	31.8	54.0

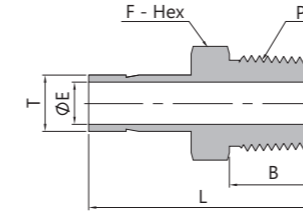
Male Adapters



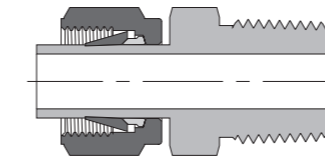
Fractional Tube			37° Flare (AN)			
T-Tube O.D. (in.)	AN Tube Flare Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/4	1/4	-TA-FT4-AN4	37.1	14.0	4.3	12.7
3/8	1/4	-TA-FT6-AN4	38.9	14.0	4.3	12.7
3/8	3/8	-TA-FT6-AN6	39.6	14.2	6.9	15.9
1/2	1/2	-TA-FT8-AN8	48.5	16.8	9.4	20.6
3/4	3/4	-TA-FT12-AN12	56.1	21.8	14.7	28.6
1	1	-TA-FT16-AN16	65.5	23.1	20.3	34.9

Fractional Tube			O-Seal with SAE/MS Straight Thread			
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/8	5/16-24	-TA-FT2-OST5	32.5	8.6	2.0	14.3
3/16	3/8-24	-TA-FT3-OST6	35.1	9.7	3.0	15.9
1/4	7/16-20	-TA-FT4-OST7	39.1	10.4	4.3	19.1
5/16	1/2-20	-TA-FT5-OST8	41.7	11.2	5.6	22.2
3/8	9/16-18	-TA-FT6-OST9	43.2	11.9	6.9	23.8
1/2	3/4-16	-TA-FT8-OST12	49.5	11.9	9.4	28.6

Male Adapters



25 mm and below

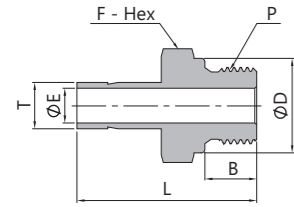


28 mm and above

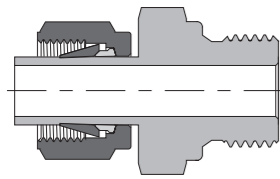
Metric Tube			NPT Thread			
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
3	1/8	-TA-MT3-NT2	29.4	9.7	1.8	12
4	1/8	-TA-MT4-NT2	29.4	9.7	2.0	12
6	1/8	-TA-MT6-NT2	32.8	9.7	4.1	12
6	1/4	-TA-MT6-NT4	38.1	14.2	4.1	14
6	3/8	-TA-MT6-NT6	39.2	14.2	4.1	18
6	1/2	-TA-MT6-NT8	42.1	19.1	4.1	22
8	1/4	-TA-MT8-NT4	39.1	14.2	5.6	14
8	3/8	-TA-MT8-NT6	39.9	14.2	5.6	19
10	1/4	-TA-MT10-NT4	39.9	14.2	7.1	14
10	3/8	-TA-MT10-NT6	40.6	14.2	7.1	18
10	1/2	-TA-MT10-NT8	46.2	19.1	7.1	22
12	1/4	-TA-MT12-NT4	46.5	14.2	7.1	14
12	3/8	-TA-MT12-NT6	46.2	14.2	8.8	18
12	1/2	-TA-MT12-NT8	52.1	19.1	8.8	22
16	1/2	-TA-MT16-NT8	50.8	19.1	12.7	22
16	3/4	-TA-MT16-NT12	51.6	19.1	12.7	27
18	1/2	-TA-MT18-NT8	50.8	19.1	12.7	27
18	3/4	-TA-MT18-NT12	51.6	19.1	14.0	27
20	1/2	-TA-MT20-NT8	51.8	19.1	11.9	22
20	3/4	-TA-MT20-NT12	52.4	19.1	15.1	27
25	1	-TA-MT25-NT16	65.9	23.9	19.8	35
28	1	-TA-MT28-NT16	74.4	23.9	22.2	35
28	1 1/4	-TA-MT28-NT20	76.2	23.9	22.5	46
30	1	-TA-MT30-NT16	79.2	23.9	22.2	41
30	1 1/4	-TA-MT30-NT20	80.0	23.9	24.3	46
32	1 1/4	-TA-MT32-NT20	81.0	23.9	26.5	46
38	1 1/2	-TA-MT38-NT24	92.2	26.2	31.6	55

Metric Tube			ISO Tapered Thread (RT)			
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
3	1/8	-TA-MT3-RT2	29.4	9.7	1.8	12
4	1/8	-TA-MT4-RT2	29.4	9.7	2.0	12
6	1/8	-TA-MT6-RT2	32.8	9.7	4.1	12
6	1/4	-TA-MT6-RT4	38.1	14.2	4.1	14
8	1/4	-TA-MT8-RT4	39.1	14.2	5.6	14
8	3/8	-TA-MT8-RT6	39.9	14.2	5.6	18
10	1/4	-TA-MT10-RT4	39.9	14.2	7.1	14
10	3/8	-TA-MT10-RT6	40.6	14.2	7.1	18
10	1/2	-TA-MT10-RT8	44.5	19.1	7.5	22
12	1/4	-TA-MT12-RT4	46.5	14.2	7.1	16
12	3/8	-TA-MT12-RT6	46.2	14.2	8.8	18
12	1/2	-TA-MT12-RT8	51.8	19.1	8.8	22
16	1/2	-TA-MT16-RT8	50.8	19.1	12.7	22
18	3/4	-TA-MT18-RT12	51.6	19.1	14.0	27
20	3/4	-TA-MT20-RT12	52.4	19.1	15.1	27
25	1	-TA-MT25-RT16	65.9	23.9	19.8	35
28	1	-TA-MT28-RT16	74.7	23.9	22.2	35
28	1 1/4	-TA-MT28-RT20	76.2	23.9	22.5	46
30	1 1/4	-TA-MT30-RT20	80.0	23.9	24.3	46
32	1 1/4	-TA-MT32-RT20	81.0	23.9	26.5	46
38	1 1/2	-TA-MT38-RT24	92.2	26.2	31.6	55

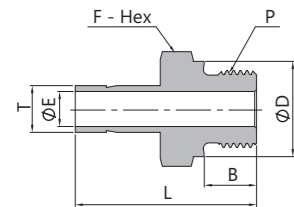
Male Adapters



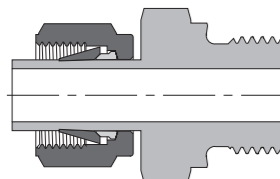
25 mm and below



28 mm and above



25 mm and below

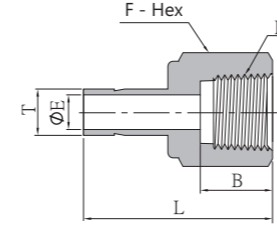


28 mm and above

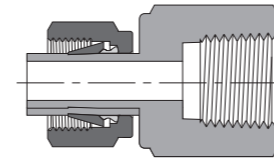
Metric Tube			ISO Parallel Thread (RS)				
T-Tube O.D. (mm)	P-RS Size	Basic Ordering Number	Dimension, mm				
			L	B	E	F	D
3	1/8	-TA-MT3-RS2	31.0	7.1	1.8	14	13.7
4	1/8	-TA-MT4-RS2	31.8	7.1	2.0	14	13.7
6	1/8	-TA-MT6-RS2	34.3	7.1	4.0	14	13.7
6	1/4	-TA-MT6-RS4	39.1	11.2	4.1	19	17.8
8	1/4	-TA-MT8-RS4	40.1	11.2	5.6	19	17.8
10	1/4	-TA-MT10-RS4	40.9	11.2	5.9	19	17.8
10	3/8	-TA-MT10-RS6	41.7	11.2	7.1	22	21.6
10	1/2	-TA-MT10-RS8	44.7	14.2	7.1	27	25.9
12	1/4	-TA-MT12-RS4	46.7	11.2	5.9	19	17.8
12	3/8	-TA-MT12-RS6	47.2	11.2	7.9	22	21.6
12	1/2	-TA-MT12-RS8	50.5	14.2	8.8	27	25.9
16	1/2	-TA-MT16-RS8	50.8	14.2	11.9	27	25.9
18	3/4	-TA-MT18-RS12	55.9	16.0	13.9	35	32.0
20	3/4	-TA-MT20-RS12	57.0	16.0	15.1	33	32.0
25	1	-TA-MT25-RS16	65.1	18.3	19.8	41	38.9
28	1	-TA-MT28-RS16	72.9	18.3	19.8	41	38.9
28	1 1/4	-TA-MT28-RS20	77.0	19.8	22.5	50	49.0
30	1 1/4	-TA-MT30-RS20	80.8	19.8	24.3	50	49.0
32	1 1/4	-TA-MT32-RS20	81.8	19.8	26.5	50	49.0
38	1 1/2	-TA-MT38-RS24	94.5	22.1	31.6	55	54.7

Metric Tube			ISO Parallel Thread (RP)				
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm				
			L	B	E	F	D
3	1/8	-TA-MT3-RP2	31.0	7.1	1.8	14	13.7
4	1/8	-TA-MT4-RP2	31.8	7.1	2.0	14	13.7
6	1/8	-TA-MT6-RP2	33.3	7.1	4.0	14	13.7
6	1/4	-TA-MT6-RP4	38.1	11.2	4.0	19	17.8
8	1/4	-TA-MT8-RP4	38.9	11.2	6.4	19	17.8
10	1/4	-TA-MT10-RP4	38.9	11.2	6.4	19	17.8
10	3/8	-TA-MT10-RP6	39.7	11.2	7.5	22	21.6
10	1/2	-TA-MT10-RP8	42.9	14.2	7.5	27	25.9
12	1/4	-TA-MT12-RP4	43.7	11.2	6.4	19	17.8
12	3/8	-TA-MT12-RP6	44.5	11.2	7.9	22	21.6
12	1/2	-TA-MT12-RP8	49.2	14.2	9.1	27	25.9
16	1/2	-TA-MT16-RP8	50.8	14.2	11.9	27	25.9
18	3/4	-TA-MT18-RP12	53.2	16.0	14.0	33	32.0
20	3/4	-TA-MT20-RP12	54.0	16.0	15.1	33	32.0
25	1	-TA-MT25-RP16	65.1	18.3	19.8	41	38.9
28	1	-TA-MT28-RP16	72.7	18.3	19.8	41	38.9
28	1 1/4	-TA-MT28-RP20	77.3	19.8	22.5	50	49.0
30	1 1/4	-TA-MT30-RP20	80.8	19.8	24.3	50	49.0
32	1 1/4	-TA-MT32-RP20	82.1	19.8	26.5	50	49.0
38	1 1/2	-TA-MT38-RP24	94.5	22.1	31.6	55	54.7

Female Adapters



1" and below

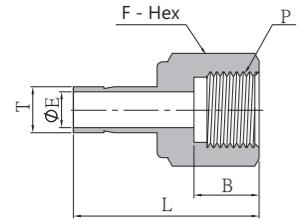


1 1/4" and above

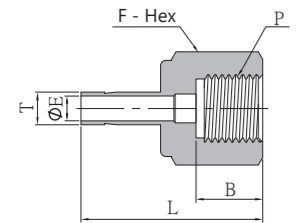
Fractional Tube			NPT Thread			
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/16	1/8	-TAF-FT1-NT2	27.2	10.4	0.8	14.3
1/8	1/8	-TAF-FT2-NT2	31.5	10.4	2.0	14.3
1/8	1/4	-TAF-FT2-NT4	35.3	15.0	2.0	19.1
3/16	1/8	-TAF-FT3-NT2	31.8	10.4	2.9	14.3
3/16	1/4	-TAF-FT3-NT4	35.8	15.0	3.0	19.1
1/4	1/8	-TAF-FT4-NT2	33.0	10.4	4.3	14.3
1/4	1/4	-TAF-FT4-NT4	37.1	15.0	4.3	19.1
1/4	3/8	-TAF-FT4-NT6	39.4	15.0	4.3	22.2
1/4	1/2	-TAF-FT4-NT8	45.5	19.8	4.3	27.0
5/16	1/8	-TAF-FT5-NT2	34.0	10.4	5.6	14.3
5/16	1/4	-TAF-FT5-NT4	37.6	15.0	5.6	19.1
5/16	3/8	-TAF-FT5-NT6	40.4	15.0	5.6	22.2
3/8	1/8	-TAF-FT6-NT2	34.3	10.4	6.9	14.3
3/8	1/4	-TAF-FT6-NT4	38.1	15.0	6.9	19.1
3/8	3/8	-TAF-FT6-NT6	40.4	15.0	6.9	22.2
3/8	1/2	-TAF-FT6-NT8	46.7	19.8	6.9	27.0
1/2	1/4	-TAF-FT8-NT4	43.4	15.0	9.4	19.1
1/2	3/8	-TAF-FT8-NT6	45.5	15.0	9.4	22.2
1/2	1/2	-TAF-FT8-NT8	51.8	19.8	9.4	27.0
5/8	3/8	-TAF-FT10-NT6	47.2	15.0	11.9	22.2
5/8	1/2	-TAF-FT10-NT8	53.1	19.8	11.9	27.0
3/4	1/2	-TAF-FT12-NT8	52.8	19.8	14.7	27.0
3/4	3/4	-TAF-FT12-NT12	54.9	20.6	14.7	33.3
3/4	1	-TAF-FT12-NT16	58.4	25.4	14.7	41.3
7/8	3/4	-TAF-FT14-NT12	56.4	20.6	14.7	33.3
1	3/4	-TAF-FT16-NT12	60.7	20.6	20.3	33.3
1	1	-TAF-FT16-NT16	64.3	25.4	20.3	41.3
1 1/4	1 1/4	-TAF-FT20-NT20	77.7	25.4	25.9	54.0
1 1/2	1 1/2	-TAF-FT24-NT24	88.9	27.7	31.8	60.3

Fractional Tube			ISO Tapered Thread (RT)			
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/4	1/8	-TAF-FT4-RT2	33.0	10.4	4.3	14.3
1/4	1/4	-TAF-FT4-RT4	36.8	15.0	4.3	19.1
3/8	1/4	-TAF-FT6-RT4	38.1	15.0	6.9	19.1
3/8	3/8	-TAF-FT6-RT6	40.4	15.0	6.9	22.2
1/2	1/4	-TAF-FT8-RT4	43.4	15.0	9.4	19.1
1/2	3/8	-TAF-FT8-RT6	45.7	15.0	9.4	22.2
1/2	1/2	-TAF-FT8-RT8	52.1	19.8	9.4	27.0

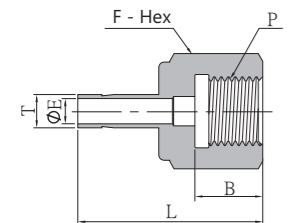
Female Adapters



Fractional Tube			ISO Parallel Thread (RP)			
T-Tube O.D. (in.)	P-RP Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/8	1/8	-TAF-FT2-RP2	29.7	10.2	2.0	14.3
1/4	1/8	-TAF-FT4-RP2	31.8	10.2	4.3	14.3
1/4	1/4	-TAF-FT4-RP4	38.1	15.2	4.3	19.1
3/8	1/4	-TAF-FT6-RP4	39.4	15.2	6.9	19.1
3/8	3/8	-TAF-FT6-RP6	39.9	15.2	6.9	23.8
1/2	3/8	-TAF-FT8-RP6	45.2	15.2	9.7	23.8
1/2	1/2	-TAF-FT8-RP8	49.5	18.2	9.7	27.0

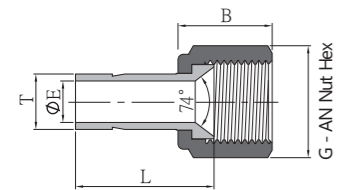


Fractional Tube			ISO Parallel Thread (RG)			
T-Tube O.D. (in.)	P-RG Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/4	1/4	-TAF-FT4-RG4	35.3	12.9	4.3	19.1
3/8	3/8	-TAF-FT6-RG6	39.4	14.2	6.6	23.8
1/2	1/2	-TAF-FT8-RG8	45.7	18.8	7.1	27.0



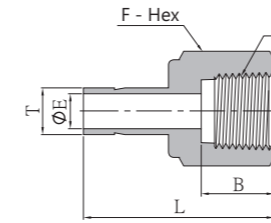
Adapt to Japanese gauge stud.

Fractional Tube			ISO Parallel Thread (RJ)			
T-Tube O.D. (in.)	P-RJ Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/4	1/4	-TAF-FT4-RJ4	35.3	12.9	4.3	19.1
3/8	3/8	-TAF-FT6-RJ6	39.4	14.2	6.6	23.8
1/2	1/2	-TAF-FT8-RJ8	49.3	18.8	7.1	27.0



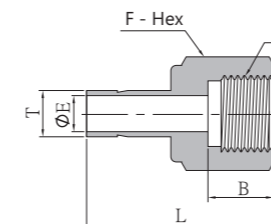
Fractional Tube			AN Thread			
T-Tube O.D. (in.)	AN Tube Flare Size (in.)	Basic Ordering Number	Dimension, mm			
			L	B	E	F
1/8	1/8	-TAF-FT2-AN2	22.4	14.0	2.4	9.5
1/8	1/4	-TAF-FT2-AN4	22.4	15.8	2.4	14.3
1/4	1/4	-TAF-FT4-AN4	24.4	15.8	4.6	14.3
3/8	3/8	-TAF-FT6-AN6	28.1	18.5	7.1	17.5
1/2	1/2	-TAF-FT8-AN8	36.1	21.6	9.9	22.2
3/4	3/4	-TAF-FT12-AN12	37.8	26.2	14.7	31.8

Female Adapters



Metric Tube			NPT Thread			
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
3	1/8	-TAF-MT3-NT2	28.8	10.4	1.3	14
4	1/8	-TAF-MT4-NT2	33.3	10.4	2.0	14
6	1/8	-TAF-MT6-NT2	32.5	10.4	4.1	14
6	1/4	-TAF-MT6-NT4	37.1	15.0	4.1	19
8	1/8	-TAF-MT8-NT2	35.1	10.4	6.4	14
8	1/4	-TAF-MT8-NT4	37.6	15.0	5.6	19
8	3/8	-TAF-MT8-NT6	36.5	15.0	6.4	22
10	1/4	-TAF-MT10-NT4	38.1	15.0	7.1	19
10	3/8	-TAF-MT10-NT6	40.1	15.0	7.1	22
10	1/2	-TAF-MT10-NT8	46.5	19.8	7.1	27
12	1/4	-TAF-MT12-NT4	43.7	15.0	8.8	19
12	3/8	-TAF-MT12-NT6	42.9	15.0	9.1	22
12	1/2	-TAF-MT12-NT8	52.3	19.8	8.8	27
16	1/2	-TAF-MT16-NT8	49.2	19.8	12.7	27
18	3/4	-TAF-MT18-NT12	52.4	20.6	14.0	32
20	1/2	-TAF-MT20-NT8	50.0	19.8	15.0	27
20	3/4	-TAF-MT20-NT12	53.2	20.6	15.1	32
25	1	-TAF-MT25-NT16	66.7	25.4	19.8	41

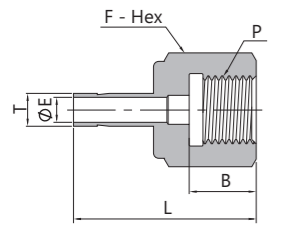
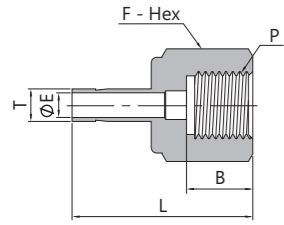
Metric Tube			ISO Tapered Thread (RT)			
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
3	1/8	-TAF-MT3-RT2	27.8	10.4	1.8	14
4	1/8	-TAF-MT4-RT2	28.6	10.4	2.0	14
6	1/8	-TAF-MT6-RT2	33.0	10.4	4.1	14
8	1/4	-TAF-MT8-RT4	37.6	15.0	5.6	19
10	1/4	-TAF-MT10-RT4	38.1	15.0	7.1	19
10	3/8	-TAF-MT10-RT6	36.5	15.0	7.5	22
10	1/2	-TAF-MT10-RT8	41.3	19.8	7.5	27
12	1/4	-TAF-MT12-RT4	40.5	15.0	9.1	19
12	3/8	-TAF-MT12-RT6	43.7	15.0	9.1	22
12	1/2	-TAF-MT12-RT8	46.8	19.8	9.1	27
16	1/2	-TAF-MT16-RT8	48.4	19.8	12.7	27
18	3/4	-TAF-MT18-RT12	52.4	20.6	14.0	32
20	3/4	-TAF-MT20-RT12	53.2	20.6	15.1	32
25	1	-TAF-MT25-RT16	66.7	25.4	19.8	41



Metric Tube			ISO Parallel Thread (RP)			
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
6	1/8	-TAF-MT6-RP2	32.0	10.2	4.1	14
6	1/4	-TAF-MT6-RP4	37.8	15.2	4.1	19
12	1/2	-TAF-MT12-RP8	49.8	18.8	8.8	27

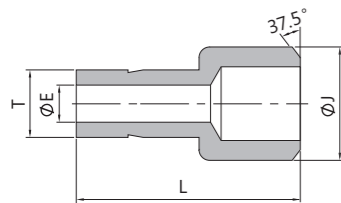


Female Adapters



Adapt to Japanese gauge stud.

Weld adapters

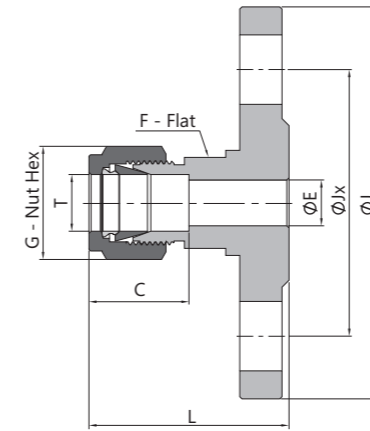


Metric Tube			ISO Parallel Thread (RG)			
T-Tube O.D. (mm)	P-RG Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
3	1/8	-TAF-MT3-RG2	28.6	6.5	1.6	14
3	1/4	-TAF-MT3-RG4	33.5	10.2	1.9	19
4	1/8	-TAF-MT4-RG2	29.4	6.5	2.0	14
6	1/8	-TAF-MT6-RG2	31.0	6.5	4.1	14
6	1/4	-TAF-MT6-RG4	35.3	10.2	4.1	19
6	3/8	-TAF-MT6-RG6	38.4	14.2	4.1	24
6	1/2	-TAF-MT6-RG8	42.9	18.0	4.1	27
8	1/4	-TAF-MT8-RG4	33.0	10.2	5.5	19
8	3/8	-TAF-MT8-RG6	38.9	14.2	5.6	24
8	1/2	-TAF-MT8-RG8	43.7	18.0	5.6	27
10	1/4	-TAF-MT10-RG4	34.5	10.2	5.5	19
10	3/8	-TAF-MT10-RG6	36.1	14.2	6.5	24
10	1/2	-TAF-MT10-RG8	41.1	18.0	7.1	27
12	1/4	-TAF-MT12-RG4	40.1	10.2	5.5	19
12	3/8	-TAF-MT12-RG6	44.7	14.2	6.5	24
12	1/2	-TAF-MT12-RG8	48.8	18.0	7.0	27
16	1/2	-TAF-MT16-RG8	49.0	18.0	7.0	27
18	1/2	-TAF-MT18-RG8	49.3	18.0	7.0	27

Metric Tube			ISO Parallel Thread (RJ)			
T-Tube O.D. (mm)	P-RJ Size	Basic Ordering Number	Dimension, mm			
			L	B	E	F
6	1/4	-TAF-MT6-RJ4	35.3	10.2	4.1	19
6	3/8	-TAF-MT6-RJ6	38.6	15.8	4.1	24
6	1/2	-TAF-MT6-RJ8	42.9	18.0	4.1	27
8	1/4	-TAF-MT8-RJ4	33.0	10.2	5.5	19
8	3/8	-TAF-MT8-RJ6	39.4	15.8	5.6	24
8	1/2	-TAF-MT8-RJ8	43.7	18.0	5.6	27
10	1/4	-TAF-MT10-RJ4	34.5	10.2	5.5	19
10	3/8	-TAF-MT10-RJ6	36.1	15.8	6.5	24
10	1/2	-TAF-MT10-RJ8	41.1	18.0	7.1	27
12	1/4	-TAF-MT12-RJ4	40.1	10.2	5.5	19
12	3/8	-TAF-MT12-RJ6	44.7	15.8	6.5	24
12	1/2	-TAF-MT12-RJ8	48.8	18.0	7.0	27

Fractional Tube			Pipe Weld		
T-Tube O.D. (in.)	Pipe Weld Size	Basic Ordering Number	Dimension, mm		
			L	J	E
1/4	1/4	-WA-FT4-PB4	29.0	13.7	4.3
3/8	1/2	-WA-FT6-PB8	37.1	21.3	6.9
1/2	1/2	-WA-FT8-PB8	42.2	21.3	9.4
1/2	3/4	-WA-FT8-PB12	42.7	26.7	9.4
3/4	3/4	-WA-FT12-PB12	47.5	26.7	14.7

Flange Adapters



- ★ Integrally forged body.
- ★ ANSI flanges comply with ANSI B16.5.
- ★ DIN flanges comply with DIN 2501/2526.
- ★ GB flanges comply with GB/T 9123.1.
- ★ EN flanges comply with EN 1092-1.
- ★ JIS flanges comply with JIS B 2220.

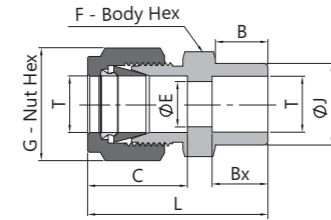
ANSI Flanges				Dimension, mm						
T-Tube O.D. (in.)	ANSI Flange NPS	Class	Basic Ordering Number Raised Face Flange	L	J	Jx	E	C	G	F
				1/4	1/2	150	-FA-S4-F8-150	40.9	88.9	60.5
3/8	1/2	300	-FA-S6-F8-300	45.5	95.3	66.5	7.1	16.8	17.5	20.6
1/2	1/2	150	-FA-S8-F8-150	45.2	88.9	60.5	10.4	22.9	22.2	20.6
1/2	1	150	-FA-S8-F16-150	48.3	108.0	79.2	10.4	22.9	22.2	20.6
1/2	2	150	-FA-S8-F32-150	53.1	152.4	121	10.4	22.9	22.2	20.6
3/4	1	150	-FA-S12-F16-150	50.3	108.0	79.2	15.7	24.4	28.6	31.8
1	1	150	-FA-S16-F16-150	60.5	108.0	79.2	22.4	31.2	38.1	34.9

DIN/GB Flanges, Pressure Class PN 40				Dimension, mm						
T-Tube O.D. (mm)	DIN Flange Size DN	Basic Ordering Number Raised Face Flange	L	J	Jx	E	C	G	F	
			6	25	-FA-SM6-F25-40B1	47.5	115.0	85.0	4.8	15.3
12	15	-FA-SM12-F15-40B1	48.5	95.0	65.0	9.5	22.8	22	20	
12	25	-FA-SM12-F25-40B1	50.5	115.0	85.0	9.5	22.8	22	20	
12	50	-FA-SM12-F50-40B1	55.3	165.0	125.0	9.5	22.8	22	20	
18	15	-FA-SM18-F15-40B1	51.8	95.0	65.0	15.1	24.4	30	32	
18	25	-FA-SM18-F25-40B1	53.8	115.0	85.0	15.1	24.4	30	32	
25	25	-FA-SM25-F25-40B1	64.0	115.0	85.0	21.8	31.3	38	35	

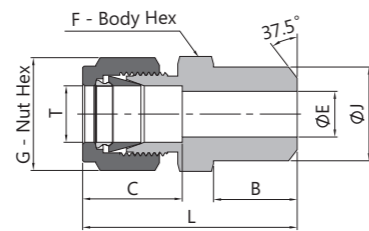
EN Flanges, Pressure Class PN 40				Dimension, mm						
T-Tube O.D. (mm)	EN Flange Size DN	Basic Ordering Number Raised Face Flange	L	J	Jx	E	C	G	F	
			6	25	-FA-SM6-F25E-40B1	47.5	115.0	85.0	4.8	15.3
12	15	-FA-SM12-F15E-40B1	48.5	95.0	65.0	9.5	22.8	22	20	
12	25	-FA-SM12-F25E-40B1	50.5	115.0	85.0	9.5	22.8	22	20	
12	50	-FA-SM12-F50E-40B1	55.3	165.0	125.0	9.5	22.8	22	20	
18	15	-FA-SM18-F15E-40B1	51.8	95.0	65.0	15.1	24.4	30	32	
18	25	-FA-SM18-F25E-40B1	53.8	115.0	85.0	15.1	24.4	30	32	
25	25	-FA-SM25-F25E-40B1	64.0	115.0	85.0	21.8	31.3	38	35	

JIS Flanges, Pressure Class 10K				Dimension, mm						
T-Tube O.D.	JIS Flange Size DN	Basic Ordering Number Raised Face Flange	L	J	Jx	E	C	G	F	
			1/4"	15	-FA-S4-F15-10KRF	42.2	95.0	70.1	4.8	15.2
3/8"	15	-FA-S6-F15-10KRF	43.7	95.0	70.1	7.1	16.8	17.5	20.6	
1/2"	15	-FA-S8-F15-10KRF	46.5	95.0	70.1	10.4	22.9	22.2	20.6	
3/4"	15	-FA-S12-F15-10KRF	48.5	95.0	70.1	15.7	24.4	28.6	31.8	
1"	25	-FA-S16-F25-10KRF	61.0	125.0	89.9	22.4	31.2	38.1	34.9	
12mm	15	-FA-SM12-F15-10KRF	46.5	95.0	70.0	9.5	22.8	22	20	
18mm	15	-FA-SM18-F15-10KRF	48.5	95.0	70.0	15.1	24.4	30	32	
25mm	25	-FA-SM25-F25-10KRF	61.0	125.0	90.0	21.8	31.3	38	35	

Weld Connectors

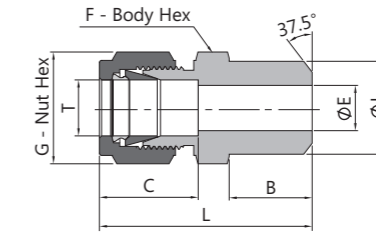


Fractional Tube			Tube Socket Weld						
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							
		L	C	G	F	B	E	Bx	J
1/8	-CW-S2-FS2	29.0	12.7	11.1	11.1	8.6	2.3	2.5	7.9
3/16	-CW-S3-FS3	29.7	13.7	12.7	11.1	9.5	3.3	4.8	10.7
1/4	-CW-S4-FS4	33.5	15.2	14.3	12.7	10.4	4.8	7.1	11.2
3/8	-CW-S6-FS6	37.6	16.8	17.5	15.9	11.9	7.1	7.9	15.7
1/2	-CW-S8-FS8	41.1	22.9	22.2	20.6	11.9	10.4	9.7	19.1
5/8	-CW-S10-FS10	41.9	24.4	25.4	23.8	11.9	12.7	10.4	23.4
3/4	-CW-S12-FS12	43.4	24.4	28.6	27.0	11.9	15.7	11.1	26.7
1	-CW-S16-FS16	52.6	31.2	38.1	34.9	14.2	22.4	15.7	33.3



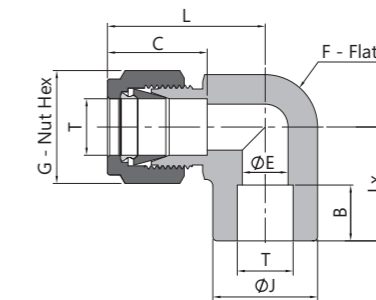
Fractional Tube			Pipe Butt Weld						
T-Tube O.D. (in.)	Pipe Weld Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	J
1/8	1/8	-CW-S2-PB2	30.5	12.7	11.1	11.1	2.3	9.7	10.3
3/16	1/8	-CW-S3-PB2	31.2	13.7	12.7	11.1	3.0	9.7	10.3
1/4	1/8	-CW-S4-PB2	32.8	15.2	14.3	12.7	4.8	9.7	10.3
1/4	1/4	-CW-S4-PB4	37.8	15.2	14.3	14.3	4.8	14.2	13.7
5/16	1/8	-CW-S5-PB2	34.0	16.3	15.9	14.3	5.3	9.7	10.3
5/16	1/4	-CW-S5-PB4	38.6	16.3	15.9	14.3	6.4	14.2	13.7
3/8	1/4	-CW-S6-PB4	39.9	16.8	17.5	15.9	7.1	14.2	13.7
3/8	3/8	-CW-S6-PB6	39.9	16.8	17.5	17.5	7.1	14.2	17.1
3/8	1/2	-CW-S6-PB8	46.2	16.8	17.5	22.2	7.1	19.1	21.3
3/8	3/4	-CW-S6-PB12	47.8	16.8	17.5	27.0	7.1	19.1	26.7
1/2	3/8	-CW-S8-PB6	43.4	22.9	22.2	20.6	10.4	14.2	17.1
1/2	1/2	-CW-S8-PB8	49.0	22.9	22.2	22.2	10.4	19.1	21.3
1/2	3/4	-CW-S8-PB12	50.5	22.9	22.2	27.0	10.4	19.1	26.7
5/8	1/2	-CW-S10-PB8	49.0	24.4	25.4	23.8	12.7	19.1	21.3
3/4	1/2	-CW-S12-PB8	50.5	24.4	28.6	27.0	14.0	19.1	21.3
3/4	3/4	-CW-S12-PB12	50.5	24.4	28.6	27.0	15.7	19.1	26.7
1	1	-CW-S16-PB16	62.2	31.2	38.1	34.9	22.4	23.9	33.4
1 1/4	1 1/4	-CW-S20-PB20	77.2	41.1	47.6	44.5	27.7	23.9	42.2
1 1/2	1 1/2	-CW-S24-PB24	88.9	50.0	57.2	54.0	34.0	26.2	48.3

Weld Connectors



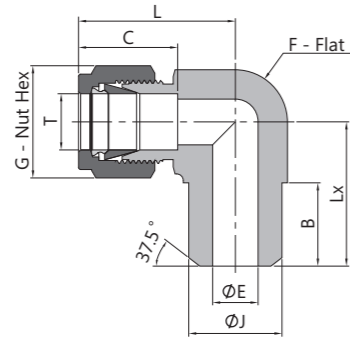
Metric Tube			Pipe Butt Weld						
T-Tube O.D. (mm)	Pipe Weld Size	Basic Ordering Number	Dimension, mm						
			L	C	G	F	E	B	J
3	1/8	-CW-SM3-PB2	30.5	12.9	12	12	2.4	9.7	10.3
4	1/8	-CW-SM4-PB2	31.5	13.7	12	12	2.4	9.7	10.3
6	1/8	-CW-SM6-PB2	32.8	15.3	14	14	4.8	9.7	10.3
6	1/4	-CW-SM6-PB4	37.9	15.3	14	14	4.8	14.2	13.7
8	1/8	-CW-SM8-PB2	34.2	16.2	16	15	5.4	9.7	10.3
8	1/4	-CW-SM8-PB4	38.7	16.2	16	15	6.4	14.2	13.7
8	1/2	-CW-SM8-PB8	45.6	16.2	16	22	6.4	19.1	21.3
10	1/4	-CW-SM10-PB4	40.9	17.2	19	18	7.5	14.2	13.7
10	3/8	-CW-SM10-PB6	40.9	17.2	19	18	7.9	14.2	17.1
10	1/2	-CW-SM10-PB8	46.5	17.2	19	22	7.9	19.1	21.3
12	1/4	-CW-SM12-PB4	43.4	22.8	22	22	7.5	14.2	13.7
12	3/8	-CW-SM12-PB6	43.4	22.8	22	22	9.5	14.2	17.1
12	1/2	-CW-SM12-PB8	49.0	22.8	22	22	9.5	19.1	21.3
14	3/8	-CW-SM14-PB6	44.1	24.4	25	24	10.7	14.2	17.1
15	1/2	-CW-SM15-PB8	49.0	24.4	25	24	11.9	19.1	21.3
16	1/2	-CW-SM16-PB8	49.0	24.4	25	24	12.7	19.1	21.3
18	1/2	-CW-SM18-PB8	50.5	24.4	30	27	13.9	19.1	21.3
30	1 1/4	-CW-SM30-PB20	77.2	39.6	50	46	26.2	23.9	42.2
32	1 1/4	-CW-SM32-PB20	79.6	42.0	50	46	28.6	23.9	42.2
38	1 1/2	-CW-SM38-PB24	91.6	49.4	60	55	33.7	26.2	48.3

Weld Elbows



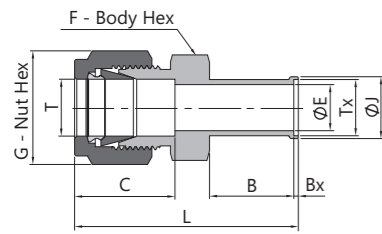
Fractional Tube			Tube Socket Weld						
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							
		L	C	G	F	B	E	Lx	J
1/8	-LW-S2-FS2	16.8	12.7	11.1	9.5	2.5	2.3	16.0	9.7
3/16	-LW-S3-FS3	18.3	13.7	12.7	11.1	4.8	3.3	17.5	11.2
1/4	-LW-S4-FS4	26.9	15.2	14.3	12.7	7.1	4.8	19.6	12.7
3/8	-LW-S6-FS6	30.5	16.8	17.5	15.9	7.9	7.1	23.1	15.7
1/2	-LW-S8-FS8	36.1	22.9	22.2	20.6	9.7	10.4	25.9	20.6
5/8	-LW-S10-FS10	29.5	24.4	25.4	27.0	10.4	12.7	29.5	23.9
3/4	-LW-S12-FS12	39.9	24.4	28.6	27.0	11.2	15.7	29.7	26.9
1	-LW-S16-FS16	49.0	31.2	38.1	34.9	15.7	22.4	36.8	35.1

Weld Elbows



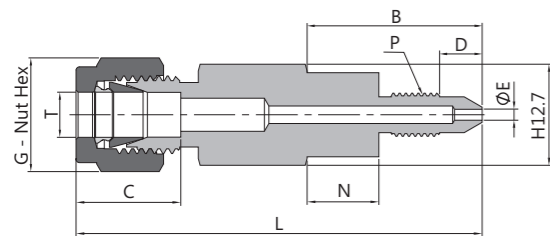
Fractional Tube			Pipe Butt Weld							
T-Tube O.D. (in.)	Pipe Weld Size	Basic Ordering Number	Dimension, mm							
			L	C	G	F	B	E	Lx	J
1/8	1/8	-LW-S2-PB2	23.4	12.7	11.1	11.1	9.7	2.3	18.3	10.3
3/16	1/8	-LW-S3-PB2	25.7	13.7	12.7	12.7	9.7	3.3	18.8	10.3
1/4	1/8	-LW-S4-PB2	26.9	15.2	14.3	12.7	9.7	4.8	18.8	10.3
1/4	1/4	-LW-S4-PB4	26.9	15.2	14.3	12.7	14.2	4.8	23.4	13.7
3/8	1/4	-LW-S6-PB4	30.5	16.8	17.5	15.9	14.2	7.1	25.4	13.7
1/2	3/8	-LW-S8-PB6	34.8	22.9	22.2	19.1	14.2	10.4	28.8	17.1
1/2	1/2	-LW-S8-PB8	36.1	22.9	22.2	20.6	19.1	10.4	33.0	21.3
5/8	1/2	-LW-S10-PB8	36.3	24.4	25.4	23.8	19.1	12.7	35.1	21.3
3/4	3/4	-LW-S12-PB12	39.9	24.4	28.6	27.0	19.1	15.7	36.8	26.7
1	3/4	-LW-S16-PB12	49.3	31.2	38.1	34.9	19.1	22.4	41.9	26.7
1	1	-LW-S16-PB16	49.3	31.2	38.1	34.9	20.6	22.4	46.7	33.4

Automatic Tube Weld Connectors



Fractional Tube			Automatic Tube Weld							
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							
			L	C	G	F	B	E	Bx	J
1/4	1/4	-CW-S4-TB4A	44.2	15.2	14.3	12.7	19.1	4.5	0.5	7.4
3/8	3/8	-CW-S6-TB6A	46.7	16.8	17.5	15.9	19.1	7.8	0.8	10.4
1/2	1/2	-CW-S8-TB8A	50.5	22.9	22.2	20.6	19.1	10.4	1.0	14.0

Calibration Fittings



- ☆ The calibration fittings can be connected directly with the bleed port of the transmitter so that the calibration process can be simplified.
- ☆ Two types are available to fit the bleed ports of the transmitters.

T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							Transmitter Type
			L	B	C	D	E	G	N	
1/4	1/4-28	-FC-S4-1428	42.9	19.8	15.2	10.9	1.5	14.3	-	Honeywell
1/4	5/16-24	-FC-S4-51624	58.9	35.8	15.2	10.2	1.5	14.3	10.4	Rosemount/Foxboro

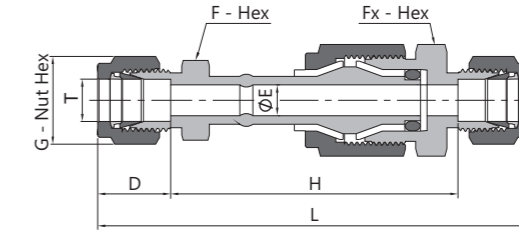
Dielectric Fittings

Materials

component	Material
Insulator	Polyamide-imide
O-Ring	70 Durometer FKM
Backup Ring	Virgin PTFE

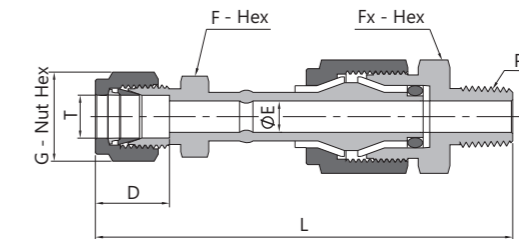
Technical Data

- ☆ Electrical resistance of insulators:  $7 \times 10^8 \Omega$  at 10 volts DC at 70° F (21°C) and 50% relative humidity,  $10 \times 10^6 \Omega$  at 10 volts DC at 100° F (38°C) and 90% relative humidity.
- ☆ Maximum working pressure: 5000 psig (344 bar) at 70° F (21°C).
- ☆ Temperature range: -40° F (-40°C) to 200° F (93°C).



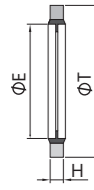
Fractional Tube		Dimension, mm						
T-Tube O.D. (in.)	Basic Ordering Number	L	D	G	H	E	F	Fx
1/4	-DF-S4	95.7	15.2	14.3	65.3	4.8	12.7	20.6
3/8	-DF-S6	99.6	16.8	17.5	65.8	7.1	15.9	20.6
1/2	-DF-S8	106	22.9	22.2	60.2	7.1	20.6	20.6

Metric Tube		Dimension, mm						
T-Tube O.D. (mm)	Basic Ordering Number	L	D	G	H	E	F	Fx
12	-DF-SM12	107	22.8	22	61.7	7.1	22	22



Fractional Tube			NPT Thread					
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm					
			L	D	G	E	F	Fx
3/8	1/4	-DF-S6-NT4	94.7	16.8	17.5	7.1	15.9	22.2

RS Gaskets



The RS gasket provides a seal with male ISO parallel threads. The gasket consists of a fluorocarbon FKM or Buna inner ring bonded to a carbon steel or stainless steel outer ring.

ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm		
		T	E	H
1/8	-2-RS	16.0	10.4	2.0
1/4	-4-RS	20.6	13.7	
3/8	-6-RS	23.9	17.3	
1/2	-8-RS	28.7	21.6	2.5
3/4	-12-RS	35.1	26.9	
1	-16-RS	42.9	33.8	

Metric Thread Size	Basic Ordering Number	Dimension, mm		
		T	E	H
M8 x 1	-M8-RS	13	8.7	1.0
M10 x 1	-M10-RS	16	10.7	1.5
M12 x 1.5	-M12-RS	18	12.7	
M14 x 1.5	-M14-RS	22	14.7	
M16 x 1.5	-M16-RS	24	16.7	
M18 x 1.5	-M18-RS	26	18.7	
M20 x 1.5	-M20-RS	28	20.7	
M22 x 1.5	-M22-RS	30	22.7	2.0
M24 x 1.5	-M24-RS	32	24.7	
M27 x 2	-M27-RS	36	27.2	
M30 x 2	-M30-RS	39	30.7	
M33 x 2	-M33-RS	42	33.7	
M36 x 2	-M36-RS	48	37.0	
M39 x 2	-M39-RS	51	40.0	2.5
M42 x 2	-M42-RS	53	42.7	
M45 x 2	-M45-RS	57	46.0	
M48 x 2	-M48-RS	59	48.7	3.0

Ordering Information

Add the material designator as a prefix to the basic ordering number to complete the ordering number.

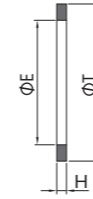
Ring		Designator
Outer	Inner	
Stainless Steel	FKM	SSF
Carbon Steel	FKM	CSF
	Buna-N	CSB

Example:

A RS gasket with a Buna inner ring bonded to carbon steel outer ring provides a seal with 1/8 male ISO parallel thread, the complete ordering number is CSB-2-RS.

RS gasket can be used with RS fitting only.

RP Gaskets



The RP gasket provides a seal with male ISO parallel threads. The RP gasket may be used with a RS fitting.

ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm		
		T	E	H
1/8	-2-RP	15.0	9.9	1.0
1/4	-4-RP	19.1	13.2	1.5
3/8	-6-RP	23.1	16.8	
1/2	-8-RP	26.9	21.1	2.0
3/4	-12-RP	33.0	26.7	
1	-16-RP	40.1	33.2	

Metric Thread Size	Basic Ordering Number	Dimension, mm		
		T	E	H
M8 x 1	-M8-RP	13.2	8.2	1.5
M10 x 1	-M10-RP	15.2	10.2	
M12 x 1.5	-M12-RP	18.2	12.2	2.0
M14 x 1.5	-M14-RP	20.2	14.2	
M16 x 1.5	-M16-RP	22.2	16.2	
M18 x 1.5	-M18-RP	24.2	18.2	
M20 x 1.5	-M20-RP	26.2	20.2	
M22 x 1.5	-M22-RP	28.2	22.2	
M24 x 1.5	-M24-RP	30.2	24.2	2.5
M27 x 2	-M27-RP	33.3	27.2	
M30 x 2	-M30-RP	37.3	30.2	
M33 x 2	-M33-RP	40.3	33.2	
M36 x 2	-M36-RP	43.3	36.2	
M39 x 2	-M39-RP	47.3	39.2	
M42 x 2	-M42-RP	50.3	42.2	
M45 x 2	-M45-RP	53.3	45.2	
M48 x 2	-M48-RP	56.3	48.2	

RG Gaskets

The RG gasket provides a seal on pressure gauges equipped with male ISO parallel threads.

ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm		
		T	E	H
1/4	-4-RG	10.7	7.6	1.8
3/8	-6-RG	14.2	8.6	2.3
1/2	-8-RG	17.8	9.1	2.5

RG Gaskets

Metric Thread Size	Basic Ordering Number	Dimension, mm		
		T	E	H
M10 x 1	-M10-RG	8.3	3.3	1.5
M12 x 1.5	-M12-RG	9.7	5.4	
M14 x 1.5	-M14-RG	11.7	6.4	
M16 x 1.5	-M16-RG	13.7	8.4	
M18 x 1.5	-M18-RG	15.7	10.0	
M20 x 1.5	-M20-RG	17.6	11.4	
M22 x 1.5	-M22-RG	19.6	13.4	
M24 x 1.5	-M24-RG	21.6	14.8	
M27 x 2	-M27-RG	24.0	13.9	2.5
M30 x 2	-M30-RG	27.0	19.5	
M33 x 2	-M33-RG	30.0	21.5	
M36 x 2	-M36-RG	33.0	23.5	
M39 x 2	-M39-RG	36.0	24.5	
M42 x 2	-M42-RG	38.9	29.5	
M45 x 2	-M45-RG	41.9	30.0	
M48 x 2	-M48-RG	44.9	32.5	

RJ Gaskets

The RJ gasket provides a seal on Japanese pressure gauges equipped with male ISO parallel threads.

ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm		
		T	E	H
1/4	-4-RJ	10.9	5.6	1.0
3/8	-6-RJ	13.9	5.6	1.0
1/2	-8-RJ	17.8	5.6	1.0

Ordering Information

Add the material designator as a prefix to the basic ordering number to complete the ordering number.

Material	Designator
Copper	CU
316L SS	6L
Vulcanized Fibre	QB
PTFE	T

Example:

CU-2-RP, 6L-6-RG, QB-M20-RG, T-8-RJ.

O-Rings



O-Rings for Fittings with SAE/MS Straight Threads

SAE/MS Thread Size	Ordering Number	Material
5/16-24	VI9-902-OR	90 Durometer Fluorocarbon FKM
3/8-24	VI9-903-OR	
7/16-20	VI9-904-OR	
1/2-20	VI9-905-OR	
9/16-18	VI9-906-OR	
3/4-16	VI9-908-OR	
7/8-14	VI9-910-OR	
1 1/16-12	VI9-912-OR	
1 3/16-12	VI9-914-OR	
1 5/16-12	VI9-916-OR	
1 5/8-12	VI9-920-OR	
1 7/8-12	VI9-924-OR	

O-Rings for Fittings with O-Seal Pipe Threads

NPT/ISO Thread Size	Ordering Number	Material
1/8	BN7-013-OR	70 Durometer NBR
1/4	BN7-113-OR	
3/8	BN7-116-OR	
1/2	BN7-118-OR	

O-Rings for Adjustable Fittings with ISO Parallel Threads

ISO Parallel Thread Size	Ordering Number	Material
1/8	VI9-502-OR	90 Durometer Fluorocarbon FKM
1/4	VI9-111-OR	
3/8	VI9-113-OR	
1/2	VI9-508-OR	
3/4	VI9-119-OR	
1	VI9-217-OR	

O-Rings for Fittings with O-Seal Straight Threads

SAE/MS Thread Size	Ordering Number	Material
5/16-24	BN7-011-OR	70 Durometer NBR
3/8-24	BN7-012-OR	
7/16-20	BN7-013-OR	
1/2-20	BN7-112-OR	
9/16-18	BN7-113-OR	
3/4-16	BN7-116-OR	
1 1/16-12	BN7-121-OR	
1 5/16-12	BN7-125-OR	

O-Rings for Fittings with Metric Threads

Metric Thread Size	Ordering Number	Material
M14 x 1.5	BN9-M14-OR	90 Durometer NBR
M20 x 1.5	BN9-M20-OR	

Ordering Information

SS - MC - SM12 - NT8 - □ - □ - S

Material	Fitting Type	P1 Type	P1 Size	P2 Type	P2 Size	P3 and P4	Special Application
SS	MC	SM	1	NT	5		NO
S4	BMC	S	2	ONT	6		S
S1	TMC	MT	3	RT	7		
904L	FC	FT	4	RS	8		
A20	BFC		5	RP	9		
Alloy 20	U		6	RG	10		
M	BU		8	RJ	12		
Alloy 400	LM		10	PP	14		
Alloy 600	VM		12	ST	16		
INC	LP		14	OST	17		
Alloy 625	LF		15	AN	18		
A65	LU		16	MS	19		
HC	TMT		18	MG	20		
Alloy C-276	TTM		20	FS	21		
Aluminum	TPT		22	PB	22		
Brass	TTP		24		24		
Carbon Steel	TFT		25		26		
Duplex 2205	TTF		28		27		
Duplex 2507	TTT		30		30		
PTFE	C		32				
Titanium	TC		38				
Nylon	TP		50				

P1 Type: SM Metric Ferrule, S Fractional Ferrule, MT Metric Tube, FT Fractional Tube  
 P1 Size: 1 1/16", 2 1/8" or 2 mm, 3 3/16" or 3 mm, 4 1/4" or 4 mm, 5 5/16", 6 3/8" or 6 mm, 8 1/2" or 8 mm, 10 5/8" or 10 mm, 12 3/4" or 12 mm, 14 7/8" or 14 mm, 15 15 mm, 16 1" or 16 mm, 18 1 1/8" or 18mm, 20 1 1/4" or 20mm, 22 22 mm, 24 1 1/2" or 24mm, 25 25 mm, 28 28 mm, 30 30 mm, 32 2" or 32 mm, 38 38 mm, 50 50 mm  
 P2 Type: NT NPT Thread, ONT O-ring with NPT Thread, RT ISO Tapered Thread, RS ISO Parallel Thread, RP ISO Parallel Thread (Gauge), RJ ISO Parallel Thread (Japanese Gauge), PP Positionable, ISO Parallel Thread, ST SAE/MS Straight Thread, OST O-ring with SAE/MS Straight Thread, AN 37° Flare, MS Male Metric Thread, MG Female Metric Thread, FS Fractional Tube Socket Weld, PB Pipe Butt Weld  
 P2 Size: 5 M5 x 0.8 or 5/16-24, 6 M6 x 1 or 3/8-24, 7 7/16-20, 8 M8 x 1 or 1/2-20, 9 9/16-18, 10 M10 x 1, 12 M12 x 1.5 or 3/4-16, 14 M14 x 1.5 or 7/8-14, 16 M16 x 1.5, 17 1 1/16-12, 18 M18 x 1.5, 19 1 3/16-12, 20 M20 x 1.5, 21 1 5/16-12, 22 M22 x 1.5, 24 M24 x 1.5, 26 1 5/8-12, 27 M27 x 2, 30 1 7/8-12  
 P3 and P4: Specify in the same way as the P2  
 Special Application: NO, S NACE MR0175

P1, P2, P3 and P4 shall be described in the following orders:  
 Ferrule - Tube - NPT Thread - ISO Tapered Thread - ISO Parallel Thread - SAE/MS Straight Thread - 37° Flare - Pipe Butt Weld - Fractional Tube Socket Weld - Others  
 Describe in descending order as per size if the end connection types are the same