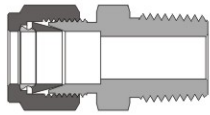


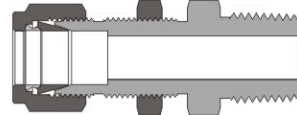


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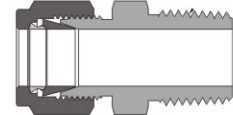
**07** Male Connectors



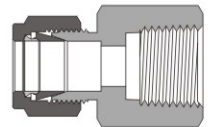
**15** Bulkhead Male Connectors



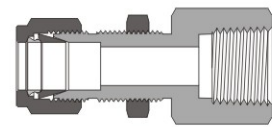
**16** Thermocouple Connectors



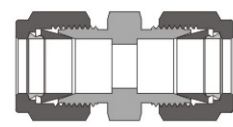
**17** Female Connectors



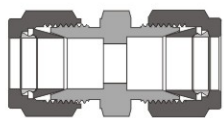
**22** Bulkhead Female Connectors



**23** Unions



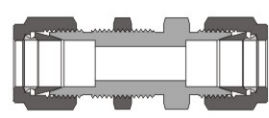
**24** Conversion Unions



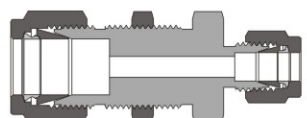
**24** Reducing Unions



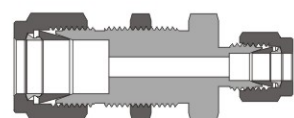
**26** Bulkhead Unions



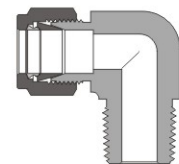
**27** Bulkhead Reducing Unions



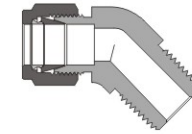
**27** Bulkhead Conversion Unions



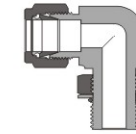
**28** Male Elbows



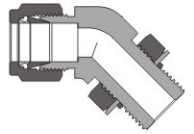
**31** 45 Male Elbows



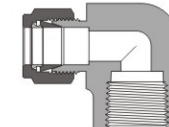
**32** Positionable Male Elbows



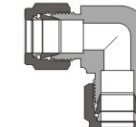
**33** 45° Positionable Male Elbows



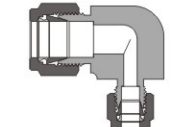
**34** Female Elbows



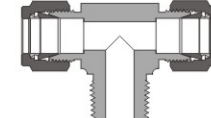
**35** Union Elbows



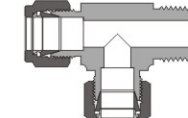
**36** Union Reducing Elbows



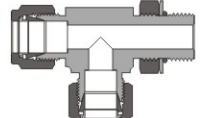
**37** Male Branch Tees



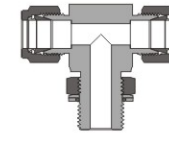
**38** Male Run Tees



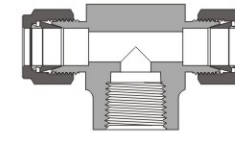
**39** Positionable Male Run Tees



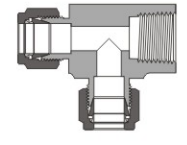
**40** Positionable Male Branch Tees



**41** Female Branch Tees

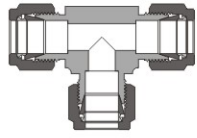


**42** Female Run Tees

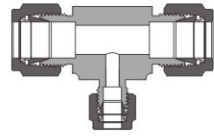


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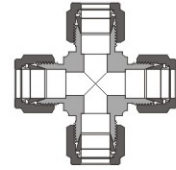
**43** Union tees



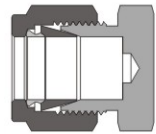
**44** Reducing Union Tees



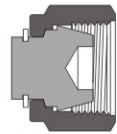
**46** Union Crosses



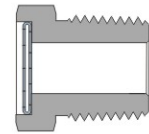
**47** Caps



**48** Plugs



**48** Vent Protectors



**49** Nuts



**49** Knurled Nuts



**49** Male Nuts



**50** Front Ferrule



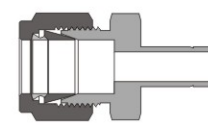
**50** Rear Ferrules



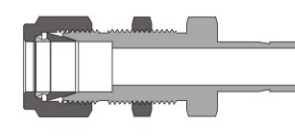
**51** Nuts+Ferrules



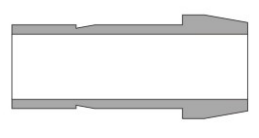
**52** Reducers



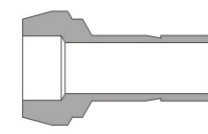
**54** Bulkhead Reducers



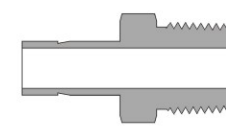
**55** Port Connectors



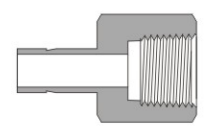
**56** Reducing Port Connectors



**57** Male Adapters



**62** Female Adapters



## Features

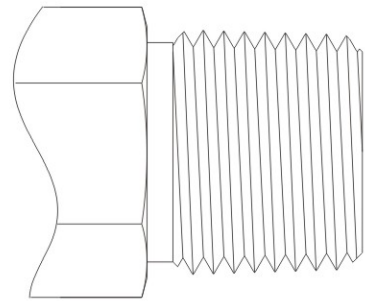
- Sizes range from 1/16" to 1 1/2" and 2 mm to 38 mm.
- Diverse materials and configurations are available.
- Precision machined components ensure perfect deformation of the ferrules and tubing.
- Hardened threads and smoothed surface finishes extend fitting life and prevent sticking of the matching threads.
- Female nut threads are silver-plated to minimize the friction with the body threads.
- Radius junction design with elbows provides smooth flow path.
- Every fitting is stamped with size, material, and heat code.
- Fittings are easy to disconnect and retighten.

## Technical Data

- **Threads**  
**Tapered Threads**  
**NPT Threads (NPT)**  
 Comply with ASME B1.20.1, SAE AS71051, GB/T 12716.

## Thread Data

Thread Size(in.)	Threads/in.(n)	Dia.at Reference Plane			Gauge Length
		Max.Dia.	Pit.Dia.	Min.Dia.	
1/16	27	7.894	7.142	6.389	4.064
1/8		10.242	9.489	8.737	4.102
1/4	18	13.616	12.487	11.358	5.785
3/8		17.055	15.926	14.797	6.096
1/2	14	21.224	19.772	18.321	8.128
3/4		26.569	25.117	23.666	8.618
1	11.5	33.228	31.461	29.694	10.160
1 1/4		41.985	40.218	38.451	10.668
1 1/2		48.045	46.287	44.520	10.668
2		60.092	58.325	56.558	11.065



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

## NPT Thread End Working Pressure

Thread Size(in.)	Stainless Steel and Carbon Steel				Brass			
	Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar
1/16	11330	782	6900	473	5660	391	3400	237
1/8	10300	710	6690	453	5150	350	3290	227
1/4	8240	566	6790	463	4120	278	3400	237
3/8	8030	566	5460	370	4010	276	2670	185
1/2	7930	546	5040	340	3910	267	2470	164
3/4	7520	515	4730	329	3700	257	2370	163
1	5460	381	4530	309	2670	185	2260	154
1 1/4	6180	422	5150	350	3090	206	2570	175
1 1/2	5150	350	4730	319	2570	175	2370	163
2	4010	278	4010	278	1950	133	1950	133

Note: Ratings are 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, BG/T 7306.2

## Thread Data

Thread Size(in.)	Threads/in.(n)	Dia.at Reference Plane			Gauge Length
		Max.Dia.	Pit.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 inches
- Truncation of root and crest are round
- Taper 1:16
- Type of sealing: thread sealant

### ISO Tapered Thread End Working Pressure

ISO tapered thread end working pressures are same with NPT thread end.

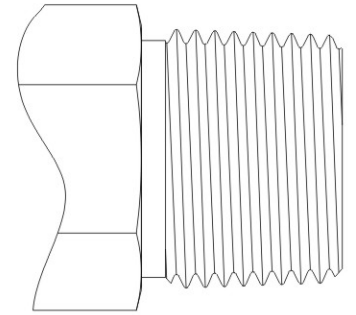
### Straight or Parallel Threads

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

Comply with ISO 228/1, DIN ISO 228/1, JIS B0202-1999, BS 2779, GB/T7307.

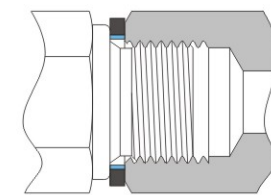
## Thread Data

Thread Size(in.)	Threads/in.(n)	Dia.at Reference Plane		
		Max.Dia.	Pit.Dia.	Min.Dia.
1/16	28	7.723	7.142	6.561
1/8		9.728	9.147	8.566
1/4	19	12.157	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	11	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



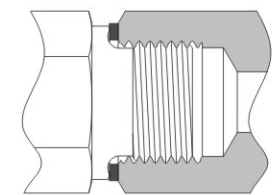
- 55° thread angle
- Pitch measured in inches
- Truncation of root and crest are round

## Types of Sealing



### 1.RS Stud End, RS Gasket and RP Port

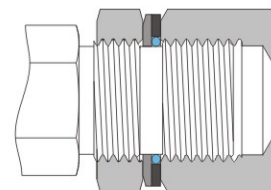
- RP stud end complies with DIN 3852-2 type A
- For RS gasket, see page\*\*
- Rp port complies with DIN 3852-2 type X



### 2.RP Stud End, RP Gasket and RP Port

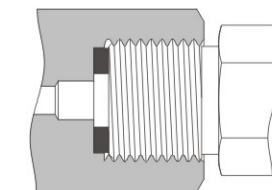
- RP studs end complies with DIN 3852-2 type B
- For RP gasket, see page\*\*
- Rp port complies with DIN 3852-2 type X

Note: The RP gasket may be used with a RS fitting



### 3.PP Stud End and RP Port

- PP stud end with gasket complies with QB/FD 0001.6
- 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\*\*
- BP stud end complies with QB/FD 0001.5

# Tube Fittings

## ISO Parallel Thread End Working Pressure

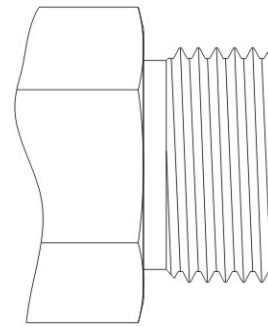
ISO parallel thread end working pressures are the same with NPT thread end.

## SAE/MS Threads (UN,UNJ)

Comply with ASME B1.1, SAE J175,ISO R725.

## Thread Data

Thread Size(in.)	Threads/in.(n)	Basic Dia.		
		Max.Dia.	Pit.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 inches
- Truncation of root and crest are parallel

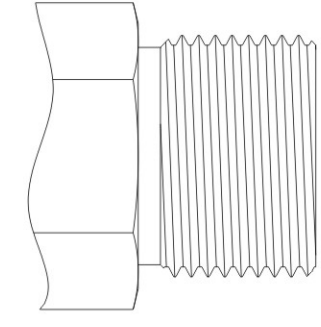
# Tube Fittings

## Metric Threads(M)

Comply with ISO 261,GB/T196.

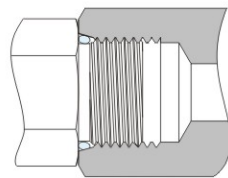
## Thread Data

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



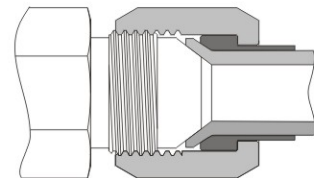
- 60°thread angle
- Pitch measured in mm
- Truncation of root and crest are parallel

## Types of Sealing



### 1.ST Stud End and ISO 11926-1 Port

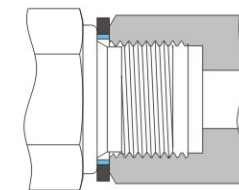
- ST stud end complies with ISO 11926-3
- For O-Ring, see page\*\*



### 2.37 Flare (AN) Stud and Flared Tubing

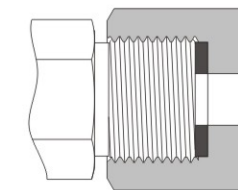
- The type of sealing complies with SAE J514

## Types of Sealing



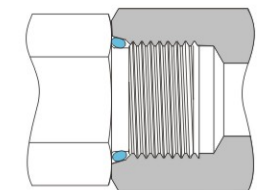
### 1.NRS Stud End, RS-M gasket and MG Port

- MRS stud end complies with DIN 3852-1 type A
- For RS-M gasket, see page\*\*
- MG port complies with QB/FD 0001.16



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

- MS stud end complies with QB-FD 0001.15
- For RG-M gasket, see page\*\*
- MG port complies with QB/FD 0001.16



### 3.MST Stud End and ISO 6149-1 Port

- MST stud end complies with ISO 6149-3
- For O-Ring, see page\*\*

## SAE/MS Thread End Working Pressure

Working Pressures are based on ISO 11926-3

Thread Size(in.)	Stainless Steel and Carbon Steel			
	Nonpositionable		Positionable	
	psig	bar	psig	bar
5/16-24	4568	315	4568	315
3/8-24				
7/16-20				
1/2-20				
9/16-18				
3/4-16	3626	250	3626	250
7/8-14				
1 1/16-12				
1 3/16-12	2900	200	2900	200
1 5/16-12				
1 5/8-12	2320	160	2320	160
1 7/8-12				
2 1/2-12				
2 1/2-12	1813	125	1450	100

## Metric Thread End Working Pressure

1.Working Pressure for MS/MRS Stud and MG Port.

Thread Size(in.)	Stainless Steel and Carbon Steel			
	Male		Female	
	psig	bar	psig	bar
M6×1	12000	825	6900	476
M8×1	11000	759	6700	462
M10×1	10000	690	6500	448
M12×1.5	9000	621	6500	448
M14×1.5	8000	552	6600	455
M16×1.5	7800	538	5800	400
M18×1.5	7800	538	5300	366
M20×1.5	7700	531	5000	345
M22×1.5	7700	531	4900	338
M27×2	7300	503	4600	317
M30×2	6100	421	4500	310
M33×2	5300	366	4400	303
M36×2	5100	352	4000	276
M39×2	5000	345	3900	269
M42×2	6000	414	5000	345
M45×2	5400	372	4700	324
M48×2	5000	345	4600	317

## Working Pressures based on ISO 6149-3

2.Working Pressure for MST Stud.

Thread Size(in.)	Stainless Steel and Carbon Steel			
	Nonpositionable		Positionable	
	psig	bar	psig	bar
M8×1	5800	400	4568	315
M10×1				
M12×1.5				
M14×1.5	4568	315	3626	250
M16×1.5				
M18×1.5				
M20×1.5				
M22×1.5	2900	200	2320	160
M27×2				
M30×2				
M33×2				
M42×2				
M48×2	2320	160	1450	100
M60×2				

**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 maximum temperature of the thread ends may be limited by the thread sealant or,when applicable,the gasket or O-ring material as follow

Component	Material	Minimum Temperature	Maximum Temperature
RS gaskets	Buna N	-22°F (-30°C)	230°F (110°C)
	Fluorocarbon Fkm	-4°F (-20°C)	400°F (204°C)
RP/RG gaskets	Copper	-325°F (-198°C)	800°F (426°C)
	Stainless Steel	-325°F (-198°C)	800°F (426°C)
	Vulcanized Fibre	-76°F (-60°C)	221°F (105°C)
O-rings	Buna N	-22°F (-30°C)	230°F (110°C)
	Fluorocarbon FKM	-4°F (-20°C)	400°F (204°C)

**Working Temperatures**

The tube ends are rated by the maximum working pressure of the FD-LOK tubing, refer to FD-LOK tubing data. The thread ends are rated as above stated. The whole fitting is rated by the smallest value of the ends. The Working Pressure may be limited by the O-rings for the straight threads. The pressure limit for the O-rings is 3000 psig(207 bar).

**Materials**

Materials	Bar Stock	Forgings
316 stainless steel	ASTM A276, ASME SA479, EN 1.4401	ASTM A182, ASME SA182, EN 1.4401
304 stainless steel	ASTM A276, ASME SA479, EN 1.4301	ASTM A182, ASME SA182, EN 1.4301
321 stainless steel	ASTM A276, ASME SA479, EN 1.4401	ASTM A182, ASME SA182, EN 1.4541
Alloy 20	ASTM B473	ASTM B462,
Alloy 400/R-405	ASTM B164, ASME SB164,	ASTM B564, ASME SB564,
Alloy 600	ASTM B166, ASME SB166,	ASTM B564, ASME SB564,
Alloy 625	ASTM B446	ASTM B564, ASME SB564,
Alloy C-276	ASTM B574	ASTM B564,
Aluminum	ASIM B211	ASTM B247,
Brass	ASTM B16/B453	ASTM B283,
Carbon steel	ASIM A108	/
Nylon	ASIM D4066	/
PTFE	ASIM D1710	ASTM D3294,
Duplex 2205	ASIM A479	ASTM A182,
Duplex 2507	ASIM A479	ASTM A182,
Titanium(grade 4)	ASIM B348	ASTM B381,

**Ordering Information**

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

For example

- 1.Male connector with 1/4 in. tube, 1/4 in. NPT thread and 316 stainless steel Material, the complete ordering number is SS-CMS4-NT4.
- 2.Female adapter with 12mm tube,1/4 in. RG thread and Brass Material, the complete ordering number is B-AF-MT12-RG4.

Material	Designator
316 SS	SS
304 SS	S4
321 SS	S1
Alloy 20	C20
Alloy 400/R-405	M
Alloy 600	INC
Alloy 625	625
Alloy C-276	HC
Aluminum	AL
Brass	B
Carbon steel	CS
Nylon	NY
Duplex 2205	DP
Duplex 2507	2607
PTFE	T
Titanium(grade 4)	TI

**Installation Instructions**

- 1.Loosen the nut for 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 11/4 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 3/16in.,2, 3 and 4mm), tighten the nut 3/4 turn with wrench(Fig.2).

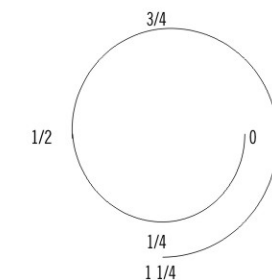


Fig.1

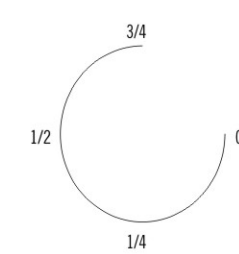


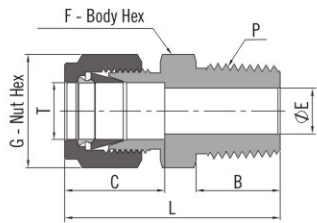
Fig.2

**Cautions**

- 1.DOnot loose or tight fittings when system is pressurized.
- 2.Make sure that the tubing rests firmly on the shoulder of the port.
- 3.Always leave enough length of straight tubing between the tubing bend and the fitting.
- 4.Always use an insert with extremely soft plastic tubing.
- 5.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,tubing must be fully annealde.
- 6.For tubing with wall thickness complies with FD-LOK tubing data sheet,the allowable working pressure of the tube fitting is rated to the maximum working pressure of the tubing, For tubing with other wall thickness,FD-LOK would obtain the allowable working pressure by testing the actual tubing provided by customer.
- 7.Keep the tubing end and surface clean and smooth.
- 8.Always use proper thread sealants on tapered pipe threads, make sure the working temperature not exceeds the limit of the sealants.
- 9.When assemble the tube fitting, hold the body with a wrench and turn the nut instead of hold the nut and turn the body.
- 10.When install a valve with tube fitting end, hold the valve body with a wrench and turn the nut.
- 11.When assemble the fitting to a valve with thread,hold the valve body with wrench and turn the body of the fitting.

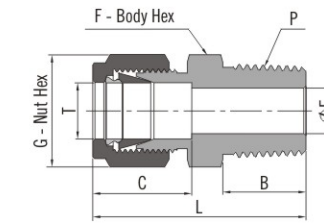
□Dimensions in mm unless otherwise specified, are for reference only and are subject to change.

Male Connectors

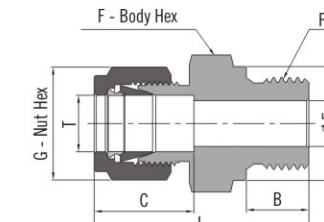


Fractional Tube			NPT Thread							Interchanges with
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
1/16	1/16	-CM-S1-NT1	23.9	9.7	8.6	1.3	7.9	7.9	-100-1-1	
1/16	1/8	-CM-S1-NT2	26.2	9.7	8.6	1.3	7.9	11.1	-100-1-2	
1/16	1/4	-CM-S1-NT4	31.0	14.2	8.6	1.3	7.9	14.3	-100-1-4	
1/8	1/16	-CM-S2-NT1	29.7	9.7	12.7	2.3	11.1	11.1	-200-1-1	
1/8	1/8	-CM-S2-NT2	30.5	9.7	12.7	2.3	11.1	11.1	-200-1-2	
1/8	1/4	-CM-S2-NT4	35.6	14.2	12.7	2.3	11.1	14.3	-200-1-4	
1/8	3/8	-CM-S2-NT6	35.8	14.2	12.7	2.3	11.1	17.5	-200-1-6	
1/8	1/2	-CM-S2-NT8	42.2	19.1	12.7	2.3	11.1	22.2	-200-1-8	
3/16	1/16	-CM-S3-NT1	31.2	9.7	13.7	2.3	12.7	11.1	-300-1-1	
3/16	1/8	-CM-S3-NT2	31.2	9.7	13.7	3.0	12.7	11.1	-300-1-2	
3/16	1/4	-CM-S3-NT4	36.3	14.2	13.7	3.0	12.7	14.3	-300-1-4	
1/4	1/16	-CM-S4-NT1	32.8	9.7	15.2	3.0	14.3	12.7	-400-1-1	
1/4	1/8	-CM-S4-NT2	32.8	9.7	15.2	4.8	14.3	12.7	-400-1-2	
1/4	1/4	-CM-S4-NT4	37.8	14.2	15.2	4.8	14.3	14.3	-400-1-4	
1/4	3/8	-CM-S4-NT6	38.4	14.2	15.2	4.8	14.3	17.5	-400-1-6	
1/4	1/2	-CM-S4-NT8	44.7	19.1	15.2	4.8	14.3	22.2	-400-1-8	
1/4	3/4	-CM-S4-NT12	46.2	19.1	15.2	4.8	14.3	27.0	-400-1-12	
5/16	1/8	-CM-S5-NT4	34.0	9.7	16.3	4.8	15.9	14.3	-500-1-2	
5/16	1/4	-CM-S5-NT6	38.6	14.2	16.3	6.4	15.9	14.3	-500-1-4	
5/16	3/8	-CM-S5-NT6	39.1	14.2	16.3	6.4	15.9	17.5	-500-1-6	
5/16	1/2	-CM-S5-NT8	45.5	19.1	16.3	6.4	15.9	22.2	-500-1-8	
3/8	1/8	-CM-S6-NT2	35.3	9.7	16.8	4.8	17.5	15.9	-600-1-2	
3/8	1/4	-CM-S6-NT4	39.9	14.2	16.8	7.1	17.5	15.9	-600-1-4	
3/8	3/8	-CM-S6-NT6	39.9	14.2	16.8	7.1	17.5	17.5	-600-1-6	
3/8	1/2	-CM-S6-NT8	46.2	19.1	16.8	7.1	17.5	22.2	-600-1-8	
3/8	3/4	-CM-S6-NT12	47.8	19.1	16.8	7.1	17.5	27.0	-600-1-12	
3/8	1	-CM-S6-NT16	47.0	23.9	16.8	7.1	17.5	34.9	-600-1-16	
1/2	1/8	-CM-S8-NT2	38.9	9.7	22.9	4.8	22.2	20.6	-810-1-2	
1/2	1/4	-CM-S8-NT4	43.4	14.2	22.9	7.1	22.2	20.6	-810-1-4	
1/2	3/8	-CM-S8-NT6	43.4	14.2	22.9	9.7	22.2	20.6	-810-1-6	
1/2	1/2	-CM-S8-NT8	49.0	19.1	22.9	10.4	22.2	22.2	-810-1-8	
1/2	3/4	-CM-S8-NT12	50.5	19.1	22.9	10.4	22.2	27.0	-810-1-12	
1/2	1	-CM-S8-NT16	57.2	23.9	22.9	10.4	22.2	34.9	-810-1-16	
5/8	1/4	-CM-S10-NT4	44.2	14.2	24.4	7.1	25.4	23.8	-1010-1-4	
5/8	3/8	-CM-S10-NT6	44.2	14.2	24.4	9.7	25.4	23.8	-1010-1-6	
5/8	1/2	-CM-S10-NT8	49.0	19.1	24.4	11.9	25.4	23.8	-1010-1-8	
5/8	3/4	-CM-S10-NT12	50.5	19.1	24.4	12.7	25.4	27.0	-1010-1-12	
3/4	3/8	-CM-S12-NT6	45.7	14.2	24.4	10.4	28.6	27.0	-1210-1-6	
3/4	1/2	-CM-S12-NT8	50.5	19.1	24.4	11.9	28.6	27.0	-1210-1-8	
3/4	3/4	-CM-S12-NT12	50.5	19.1	24.4	15.7	28.6	27.0	-1210-1-12	
3/4	1	-CM-S12-NT16	57.2	23.9	24.4	15.7	28.6	34.9	-1210-1-16	
7/8	1/2	-CM-S14-NT8	50.5	19.1	25.9	11.9	31.8	30.2	-1410-1-8	
7/8	3/4	-CM-S14-NT12	50.5	19.1	25.9	15.7	31.8	30.2	-1410-1-12	
7/8	1	-CM-S14-NT16	57.2	23.9	25.9	18.3	31.8	34.9	-1410-1-16	
1	1/2	-CM-S16-NT8	57.4	19.1	31.2	11.9	38.1	34.9	-1610-1-8	
1	3/4	-CM-S16-NT12	57.4	19.1	31.2	15.7	38.1	34.9	-1610-1-12	
1	1	-CM-S16-NT16	62.2	23.9	31.2	22.4	38.1	34.9	-200-1-16	
1 1/8	1	-CM-S18-NT16	62.2	23.9	31.2	22.4	46.0	41.3	-1810-1-16	
1 1/4	1	-CM-S20-NT16	77.2	23.9	41.1	22.4	47.6	44.5	-2000-1-16	
1 1/4	1 1/4	-CM-S20-NT20	77.2	23.9	41.1	27.7	47.6	44.5	-2000-1-20	
1 1/2	1 1/2	-CM-S24-NT24	88.9	26.2	50.0	34.0	57.2	54.0	-2400-1-24	

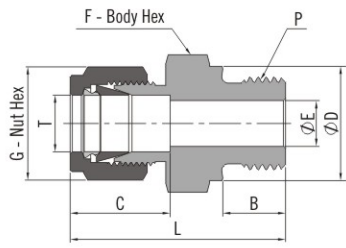
Male Connectors



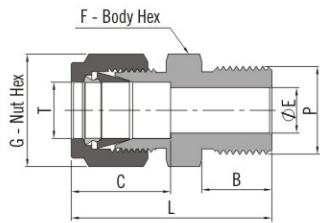
Fractional Tube			ISO Tapered Thread(RT)							Interchanges with
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
1/8	1/8	-CM-S2-RT2	30.5	9.7	12.7	2.3	11.1	11.1	-200-1-2RT	
1/8	1/4	-CM-S2-RT4	35.6	14.2	12.7	2.3	11.1	14.3	-200-1-4RT	
1/4	1/8	-CM-S4-RT2	32.8	9.7	15.2	4.8	14.3	12.7	-400-1-2RT	
1/4	1/4	-CM-S4-RT4	37.8	14.2	15.2	4.8	14.3	14.3	-400-1-4RT	
1/4	3/8	-CM-S4-RT6	38.4	14.2	15.2	4.8	14.3	17.5	-400-1-6RT	
1/4	1/2	-CM-S4-RT8	44.7	19.1	15.2	4.8	14.3	22.2	-400-1-8RT	
5/16	1/8	-CM-S5-RT2	34.0	9.7	16.3	4.8	15.9	14.3	-500-1-2RT	
5/16	1/4	-CM-S5-RT4	38.6	14.2	16.3	6.4	15.9	14.3	-500-1-4RT	
3/8	1/8	-CM-S6-RT2	35.3	9.7	16.8	4.8	17.5	15.9	-600-1-2RT	
3/8	1/4	-CM-S6-RT4	39.9	14.2	16.8	7.1	17.5	15.9	-600-1-4RT	
3/8	3/8	-CM-S6-RT6	39.9	14.2	16.8	7.1	17.5	17.5	-600-1-6RT	
3/8	1/2	-CM-S6-RT8	46.2	19.1	16.8	7.1	17.5	22.2	-600-1-8RT	
3/8	3/4	-CM-S6-RT12	47.8	19.1	16.8	7.1	17.5	27.0	-600-1-12RT	
1/2	1/4	-CM-S8-RT4	43.4	14.2	22.9	7.1	22.2	20.6	-810-1-4RT	
1/2	3/8	-CM-S8-RT6	43.4	14.2	22.9	9.7	22.2	20.6	-810-1-6RT	
1/2	1/2	-CM-S8-RT8	49.0	19.1	22.9	10.4	22.2	22.2	-810-1-8RT	
1/2	3/4	-CM-S8-RT12	50.5	19.1	22.9	10.4	22.2	27.0	-810-1-12RT	
5/8	1/2	-CM-S10-RT8	49.0	19.1	24.4	11.9	25.4	23.8	-1010-1-8RT	
3/4	3/4	-CM-S12-RT12	50.5	19.1	24.4	15.7	28.6	27.0	-1210-1-12RT	
3/4	1	-CM-S12-RT16	57.2	23.9	24.4	15.7	28.6	34.9	-1210-1-16RT	
1	3/4	-CM-S16-RT12	57.4	19.1	31.2	15.7	38.1	34.9	-1610-1-12RT	
1	1	-CM-S16-RT16	62.2	23.9	31.2	22.4	38.1	34.9	-1610-1-16RT	



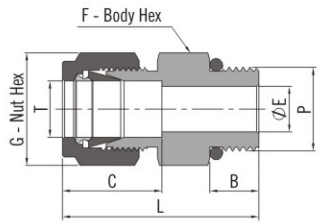
Fractional Tube			ISO Paralle Thread(RS)							Interchanges with
T-Tube O.D. (in.)	P-RS Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F	D	
1/8	1/8	-CM-S2-RS2	33.3	7.1	12.7	2.3	11.1	14.3	13.7	-200-1-2RS
1/8	1/4	-CM-S2-RS4	38.1	11.2	12.7	2.3	11.1	19.1	18.0	-200-1-2RS
1/8	3/8	-CM-S2-RS6	38.9	11.2	12.7	2.3	11.1	22.2	21.8	-200-1-2RS
1/4	1/8	-CM-S4-RS2	35.6	7.1	15.2	4.0	14.3	14.3	13.7	-400-1-2RS
1/4	1/4	-CM-S4-RS4	40.4	11.2	15.2	4.8	14.3	19.1	18.0	-400-1-2RS
1/4	3/8	-CM-S4-RS6	41.1	11.2	15.2	4.8	14.3	22.2	21.8	-400-1-2RS
1/4	1/2	-CM-S4-RS8	43.2	14.2	15.2	4.8	14.3	27.0	25.9	-400-1-2RS
3/8	1/8	-CM-S6-RS2	37.8	7.1	16.8	4.0	17.5	15.9	13.7	-600-1-2RS
3/8	1/4	-CM-S6-RS4	41.9	11.2	16.8	5.9	17.5	19.1	18.0	-600-1-2RS
3/8	3/8	-CM-S6-RS6	42.7	11.2	16.8	7.1	17.5	22.2	21.8	-600-1-2RS
3/8	1/2	-CM-S6-RS8	44.7	14.2	16.8	7.1	17.5	27.0	25.9	-600-1-2RS
1/2	1/4	-CM-S8-RS4	44.7	11.2	22.9	5.9	22.2	20.6	18.0	-810-1-2RS
1/2	3/8	-CM-S8-RS6	45.5	11.2	22.9	7.9	22.2	22.2	21.8	-810-1-2RS
1/2	1/2	-CM-S8-RS8	47.5	14.2	22.9	10.4	22.2	27.0	25.9	-810-1-2RS
3/4	1/2	-CM-S12-RS8	48.8	14.2	24.2	11.9	28.6	27.0	25.9	-1210-1-2RS
3/4	3/4	-CM-S12-RS12	52.1	15.7	24.4	15.7	28.6	34.9	32.0	-1210-1-2RS
1	1/2	-CM-S16-RS8	55.5	14.2	31.4	11.9	38.1	34.9	25.9	-1610-1-2RS
1	3/4	-CM-S16-RS12	57.7	15.7	31.2	16.0	38.1	34.9	32.0	-1610-1-2RS
1	1	-CM-S16-RS16	59.7	18.3	31.2	19.8	38.1	41.3	39.1	-1610-1-2RS



Fractional Tube			ISO Parallel Thread (RP)							
T-Tube O.D. (in.)	P-RP Size (in.)	Basic Ordering Number	Dimension, mm							Interchanges with
			L	B	C	E	G	F	D	
1/8	1/8	-CM-S2-RP2	33.3	7.1	12.7	2.3	11.1	14.3	13.7	-200-1-2RP
1/8	1/4	-CM-S2-RP4	38.1	11.2	12.7	2.3	11.1	19.1	18.0	-200-1-4RP
1/4	1/8	-CM-S4-RP2	35.6	7.1	15.2	4.1	14.3	14.3	13.8	-400-1-2RP
1/4	1/4	-CM-S4-RP4	40.4	11.2	15.2	4.8	14.3	19.1	18.0	-400-1-4RP
1/2	3/8	-CM-S8-RP6	45.5	11.2	22.9	7.9	22.2	22.2	21.8	-810-1-6RP
1/2	1/2	-CM-S8-RP8	47.5	14.2	22.9	10.4	22.2	27.0	25.9	-810-1-8RP
3/4	1/2	-CM-S12-RP8	49.0	14.2	24.4	11.9	28.6	27.0	25.9	-1210-1-8RP
3/4	3/4	-CM-S12-RP12	52.1	15.7	24.4	15.7	28.6	34.9	32.0	-1210-1-12RP
1	1	-CM-S16-RP16	59.7	18.3	31.2	19.8	38.1	41.3	39.1	-1610-1-16RP

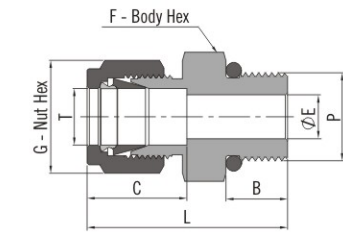


Fractional Tube			ISO Parallel Thread (BP)					
T-Tube O.D. (in.)	P-BP Size (in.)	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
1/4	3/8	-CM-S4-BP6	38.4	14.2	15.2	4.8	14.3	17.5
3/8	3/8	-CM-S6-BP6	39.9	14.2	16.8	7.1	17.5	17.5

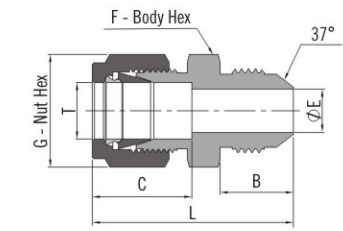


Fractional Tube			SAE/MS Straight Thread						
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm						Interchanges with
			L	B	C	E	G	F	
1/16	5/16-24	-CM-S1-ST5	23.4	7.6	8.6	1.3	7.9	11.1	-100-1-2ST
1/8	5/16-24	-CM-S2-ST5	30.0	7.6	12.7	2.3	11.1	11.1	-200-1-2ST
1/8	7/16-20	-CM-S2-ST7	31.5	9.1	12.7	2.3	11.1	14.3	-200-1-4ST
1/8	9/16-18	-CM-S2-ST9	33.3	9.9	12.7	2.3	11.1	17.5	-200-1-6ST
3/16	3/8-24	-CM-S3-ST6	30.5	7.6	13.7	3.0	12.7	12.7	-300-1-3ST
1/4	5/16-24	-CM-S4-ST5	32.3	7.6	15.2	2.3	14.3	12.7	-400-1-2ST
1/4	7/16-20	-CM-S4-ST7	34.0	9.1	15.2	4.8	14.3	14.3	-400-1-4ST
1/4	9/16-18	-CM-S4-ST9	35.6	9.9	15.2	4.8	14.3	17.5	-400-1-6ST
1/4	3/4-16	-CM-S4-ST12	37.6	11.2	15.2	4.8	14.3	22.2	-400-1-8ST
1/4	7/8-14	-CM-S4-ST14	40.6	12.7	15.2	4.8	14.3	25.4	-400-1-10ST
5/16	1/2-20	-CM-S5-ST8	34.8	9.1	16.3	6.4	15.9	15.9	-500-1-5ST
3/8	7/16-20	-CM-S6-ST7	35.6	9.1	16.8	5.1	17.5	15.9	-600-1-4ST
3/8	9/16-18	-CM-S6-ST9	37.1	9.9	16.8	7.1	17.5	17.5	-600-1-6ST
3/8	3/4-16	-CM-S6-ST12	39.1	11.2	16.8	7.1	17.5	22.2	-600-1-8ST
3/8	7/8-14	-CM-S6-ST14	42.2	12.7	16.8	7.1	17.5	25.4	-600-1-10ST
1/2	9/16-18	-CM-S8-ST9	39.1	9.9	22.9	7.1	22.2	20.6	-810-1-6ST
1/2	3/4-16	-CM-S8-ST12	41.9	11.2	22.9	10.4	22.2	22.2	-810-1-8ST
1/2	7/8-14	-CM-S8-ST14	45.0	12.7	22.9	10.4	22.2	25.4	-810-1-10ST
1/2	1 1/16-12	-CM-S8-ST17	49.0	15.0	22.9	10.4	22.2	31.8	-810-1-12ST
5/8	3/4-16	-CM-S10-ST12	41.9	11.2	24.4	10.7	25.4	23.8	-1010-1-8ST
5/8	7/8-14	-CM-S10-ST14	45.2	12.7	24.4	10.7	25.4	25.4	-1010-1-10ST
3/4	3/4-16	-CM-S12-ST12	46.0	11.2	24.4	10.7	28.6	27.0	-1210-1-8ST
3/4	1 1/16-12	-CM-S12-ST17	49.0	15.0	24.4	15.7	28.6	31.8	-1210-1-12ST
3/4	1 5/16-12	-CM-S12-ST21	49.8	15.0	24.4	16.0	28.6	38.1	-1210-1-16ST
7/8	1 3/16-12	-CM-S14-ST19	49.0	15.0	25.9	18.3	31.8	34.9	-1410-1-14ST
1	1 1/16-12	-CM-S16-ST17	53.3	15.0	31.2	16.8	38.1	34.9	-1610-1-12ST
1	1 5/16-12	-CM-S16-ST21	54.4	15.0	31.2	22.4	38.1	38.1	-1610-1-16ST
1 1/4	1 5/8-12	-CM-S20-ST26	68.3	15.0	41.1	27.7	47.6	47.6	-2000-1-20ST
1 1/2	1 7/8-12	-CM-S24-ST30	77.7	15.0	50.0	34.0	57.2	54.0	-2400-1-24ST

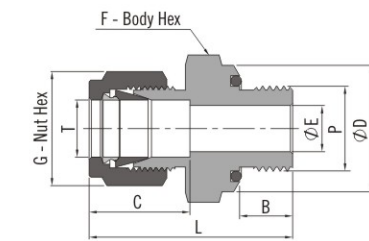
Adapts to SAE J1926-1/ISO 11926-1 straight thread boss and MS 16142 boss.



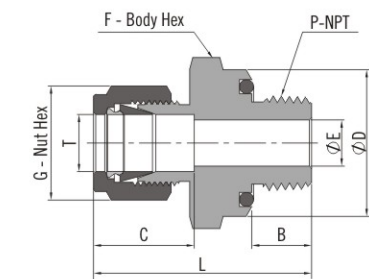
Fractional Tube			Long SAE/MS Straight Thread						
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm						Interchanges with
			L	B	C	E	G	F	
1/4	7/16-20	-CML-S4-ST7	57.4	9.1	15.2	4.8	14.3	14.3	-400-1L-4ST
1/2	3/4-16	-CML-S8-ST12	76.5	11.2	22.9	10.4	22.2	22.2	-810-1L-8ST



Fractional Tube			37 Flare (AN)						
T-Tube O.D. (in.)	AN Tube Flare Size	Basic Ordering Number	Dimension, mm						Interchanges with
			L	B	C	E	G	F	
1/16	1/8	-CM-S1-OR2	27.2	11.4	8.6	1.3	7.9	1.1	-100-6-2-AN
1/8	1/8	-CM-S2-OR2	32.3	11.4	12.7	1.5	11.1	11.1	-200-6-2-AN
1/8	1/4	-CM-S2-OR4	35.1	14.0	12.7	2.3	11.1	12.7	-200-6-4-AN
3/16	3/16	-CM-S3-OR3	33.5	12.2	13.7	2.3	12.7	11.1	-300-6-3-AN
1/4	1/4	-CM-S4-OR4	37.6	14.0	15.2	4.3	14.3	12.7	-400-6-4-AN
5/16	5/16	-CM-S5-OR5	38.4	14.0	16.2	5.8	15.9	14.3	-500-6-5-AN
3/8	1/4	-CM-S6-OR4	39.6	14.0	16.8	4.3	17.5	15.9	-600-6-4-AN
3/8	3/8	-CM-S6-OR6	39.6	14.1	16.8	7.1	17.5	15.9	-600-6-6-AN
1/2	1/2	-CM-S8-OR8	46.0	16.7	22.8	9.9	22.2	20.6	-800-6-8-AN
5/8	5/8	-CM-S10-OR10	49.0	19.3	24.5	12.3	25.4	23.8	-1010-6-10-AN
3/4	3/4	-CM-S12-OR12	53.3	21.9	24.4	15.5	28.6	28.6	-1210-6-12-AN
1	1	-CM-S16-OR16	61.5	23.1	31.2	21.3	38.1	34.9	-1610-6-16-AN



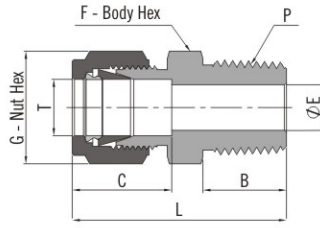
Fractional Tube			O-Seal with SAE/MS Straight Thread							
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							Interchanges with
			L	B	C	E	G	F	D	
1/16	5/16-24	-CM-S1-OR5	26.7	8.6	8.6	1.3	7.9	14.3	14.0	-100-1-OR
1/8	5/16-24	-CM-S2-OR5	32.8	8.6	12.7	2.3	11.1	14.3	14.0	-200-1-OR
3/16	3/8-24	-CM-S3-OR6	34.3	9.7	13.7	3.0	12.7	15.9	15.7	-300-1-OR
1/4	7/16-20	-CM-S4-OR7	38.4	10.4	15.2	4.8	14.3	19.1	18.8	-400-1-OR
5/16	1/2-20	-CM-S5-OR8	40.6	11.2	16.3	6.4	15.9	22.2	21.8	-500-1-OR
3/8	9/16-18	-CM-S6-OR9	42.4	11.9	16.8	7.1	17.5	23.8	23.6	-600-1-OR
1/2	3/4-16	-CM-S8-OR12	46.0	11.9	22.9	10.4	22.2	28.6	28.4	-800-1-OR
3/4	1 1/16-12	-CM-S12-OR17	52.3	14.2	24.4	15.7	28.6	38.1	37.8	-1210-1-OR
1	1 5/16-12	-CM-S16-OR21	58.2	14.2	31.2	22.4	38.1	44.5	44.2	-1610-1-OR



Fractional Tube			O-Seal with NPT Thread							
T-Tube O.D. (in.)	P-NPT Size (in.)	Basic Ordering Number	Dimension, mm							Interchanges with
			L	B	C	E	G	F	D	
1/8	1/8	-CM-S2-ON2	32.8	7.1	8.6	2.3	11.1	19.1	1.8	-200-1-2-OR
1/4	1/8	-CM-S4-ON2	35.1	7.1	15.2	4.8	14.3	19.1	1.8	-400-1-2-OR
1/4	1/4	-CM-S4-ON4	38.4	9.7	15.2	4.8	14.3	23.8	23.6	-400-1-4-OR
3/8	1/4	-CM-S6-ON4	39.9	9.7	16.8	7.1	17.5	23.8	23.6	-600-1-4-OR
3/8	3/8	-CM-S6-ON6	41.4	10.4	16.8	7.1	17.5	28.6	28.4	-600-1-6-OR
3/8	1/2	-CM-S6-ON8	47.0	13.5	16.8	7.1	17.5	33.3	33.0	-600-1-8-OR
1/2	1/2	-CM-S8-ON8	49.8	13.5	22.9	10.4	22.2	33.3	33.0	-810-1-8-OR

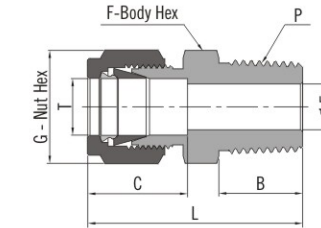


Male Connectors



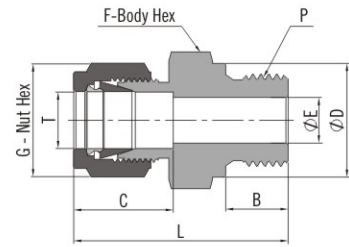
Fractional Tube			NPT Thread							Inter-changes with
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
2	1/8	-CM-SM2-NT2	30.5	9.7	12.9	1.7	12	12	-2MO-1-2	
3	1/8	-CM-SM3-NT2	30.5	9.7	12.9	2.4	12	12	-3MO-1-2	
3	1/4	-CM-SM3-NT4	35.6	14.2	12.9	2.4	12	14	-3MO-1-4	
4	1/8	-CM-SM4-NT2	31.2	9.7	13.7	2.4	12	12	-4MO-1-2	
4	1/4	-CM-SM4-NT4	36.3	14.2	13.7	2.4	12	14	-4MO-1-4	
6	1/8	-CM-SM6-NT2	32.8	9.7	15.3	4.8	14	14	-6MO-1-2	
6	1/4	-CM-SM6-NT4	37.9	14.2	15.3	4.8	14	14	-6MO-1-4	
6	3/8	-CM-SM6-NT6	38.4	14.2	15.3	4.8	14	18	-6MO-1-6	
6	1/2	-CM-SM6-NT8	44.7	19.1	15.3	4.8	14	22	-6MO-1-8	
8	1/8	-CM-SM8-NT2	34.2	9.7	16.2	4.8	16	15	-8MO-1-2	
8	1/4	-CM-SM8-NT4	38.7	14.2	16.2	6.4	16	15	-8MO-1-4	
8	3/8	-CM-SM8-NT6	39.2	14.2	16.2	6.4	16	18	-8MO-1-6	
8	1/2	-CM-SM8-NT8	45.6	19.1	16.2	6.4	16	22	-8MO-1-8	
10	1/8	-CM-SM10-NT2	36.3	9.7	17.2	4.8	19	18	-10MO-1-2	
10	1/4	-CM-SM10-NT4	40.9	14.2	17.2	7.1	19	18	-10MO-1-4	
10	3/8	-CM-SM10-NT6	40.9	14.2	17.2	7.9	19	18	-10MO-1-6	
10	1/2	-CM-SM10-NT8	46.5	19.1	17.2	7.9	19	22	-10MO-1-8	
10	3/4	-CM-SM10-NT12	48.0	19.1	17.2	7.9	19	27	-10MO-1-12	
10	1	-CM-SM10-NT16	54.6	23.9	17.2	7.9	19	35	-10MO-1-16	
12	1/8	-CM-SM12-NT2	38.8	9.7	22.8	4.8	22	22	-12MO-1-2	
12	1/4	-CM-SM12-NT4	43.4	14.2	22.8	7.1	22	22	-10MO-1-4	
12	3/8	-CM-SM12-NT6	43.4	14.2	22.8	9.5	22	22	-10MO-1-6	
12	1/2	-CM-SM12-NT8	49.0	19.1	22.8	9.5	22	22	-12MO-1-8	
12	3/4	-CM-SM12-NT12	50.5	19.1	22.8	9.5	22	27	-12MO-1-12	
14	1/8	-CM-SM14-NT2	38.8	9.7	24.4	4.8	25	24	-14MO-1-2	
14	1/4	-CM-SM14-NT4	44.1	14.2	24.4	7.1	25	24	-14MO-1-4	
14	3/8	-CM-SM14-NT6	44.1	14.2	24.4	9.5	25	24	-14MO-1-6	
14	1/2	-CM-SM14-NT8	49.0	19.1	24.4	11.1	25	24	-14MO-1-8	
14	3/4	-CM-SM14-NT12	50.5	19.1	24.4	11.1	25	27	-14MO-1-12	
15	1/2	-CM-SM15-NT8	49.0	19.1	24.4	11.9	25	24	-15MO-1-8	
15	3/4	-CM-SM15-NT12	50.5	19.1	24.4	11.9	25	27	-15MO-1-12	
15	1	-CM-SM15-NT16	57.1	23.9	24.4	11.9	25	35	-15MO-1-16	
16	1/4	-CM-SM16-NT4	44.1	14.2	24.4	7.1	25	24	-16MO-1-4	
16	3/8	-CM-SM16-NT6	44.1	14.2	24.4	9.5	25	24	-16MO-1-6	
16	1/2	-CM-SM16-NT8	49.0	19.1	24.4	11.9	25	24	-16MO-1-8	
16	3/4	-CM-SM16-NT12	50.5	19.1	24.4	12.7	25	27	-16MO-1-12	
18	3/8	-CM-SM18-NT6	45.6	14.2	24.4	9.5	30	27	-18MO-1-6	
18	1/2	-CM-SM18-NT8	50.5	19.1	24.4	11.9	30	27	-18MO-1-8	
18	3/4	-CM-SM18-NT12	50.5	19.1	24.4	15.1	30	27	-18MO-1-12	
20	1/2	-CM-SM20-NT8	52.3	19.1	26.0	11.9	32	30	-20MO-1-8	
20	3/4	-CM-SM20-NT12	52.3	19.1	26.0	15.9	32	30	-20MO-1-12	
20	1	-CM-SM20-NT16	57.1	23.9	26.0	15.9	32	35	-20MO-1-16	
22	1/2	-CM-SM22-NT8	52.3	19.1	26.0	11.9	32	30	-22MO-1-8	
22	3/4	-CM-SM22-NT12	52.3	19.1	26.0	15.9	32	30	-22MO-1-12	
22	1	-CM-SM22-NT16	57.1	23.9	26.0	18.3	32	35	-22MO-1-16	
25	1/2	-CM-SM25-NT8	57.5	19.1	31.3	11.9	38	35	-25MO-1-8	
25	3/4	-CM-SM25-NT12	57.5	19.1	31.3	15.9	38	35	-25MO-1-12	
25	1	-CM-SM25-NT16	62.3	23.9	31.3	21.8	38	35	-25MO-1-16	
28	1	-CM-SM28-NT16	72.4	23.9	36.6	21.8	46	41	-28MO-1-16	
28	1 1/4	-CM-SM28-NT20	73.1	23.9	36.6	21.8	46	46	-28MO-1-20	
30	1 1/4	-CM-SM30-NT20	77.2	23.9	39.6	26.2	50	46	-30MO-1-20	
32	1 1/4	-CM-SM32-NT20	79.6	23.9	42.0	28.6	50	46	-32MO-1-20	
38	1 1/2	-CM-SM38-NT24	91.6	26.2	49.4	33.7	60	55	-38MO-1-24	

Male Connectors



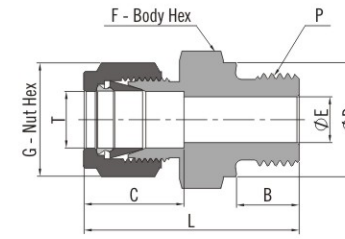
Fractional Tube			ISO Tapered Thread (RT)							Inter-changes with
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
2	1/8	-CM-SM2-RT2	30.5	9.7	12.9	1.7	12	12	-2MO-1-2RT	
3	1/8	-CM-SM3-RT2	30.5	9.7	12.9	2.4	12	12	-3MO-1-2RT	
3	1/4	-CM-SM3-RT4	35.6	14.2	12.9	2.4	12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

Male Connectors

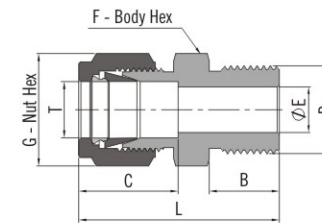


Metric Tube			ISO Paralle Thread(RS)							
T-Tube O.D. (mm)	P-RS Size	Basic Ordering Number	Dimension, mm							Interchanges with
			L	B	C	E	G	F	D	
2	1/8	-CM-SM2-RS2	33.3	7.1	12.9	1.7	12	14	13.7	-2M0-1-2RS
3	1/8	-CM-SM3-RS2	33.3	7.1	12.9	2.4	12	14	13.7	-3M0-1-2RS
3	1/4	-CM-SM3-RS4	38.1	11.2	12.9	2.4	12	19	18.0	-3M0-1-4RS
4	1/8	-CM-SM4-RS2	34.0	7.1	13.7	2.4	12	14	13.7	-4M0-1-2RS
4	1/4	-CM-SM4-RS4	36.0	11.2	13.7	2.4	12	19	18.0	-4M0-1-4RS
6	1/8	-CM-SM6-RS2	35.6	7.1	15.3	4.0	14	14	13.7	-6M0-1-2RS
6	1/4	-CM-SM6-RS4	40.4	11.2	15.3	4.8	14	19	18.0	-6M0-1-4RS
6	3/8	-CM-SM6-RS6	41.1	11.2	15.3	4.8	14	22	21.6	-6M0-1-6RS
6	1/2	-CM-SM6-RS8	44.2	14.2	15.3	4.8	14	27	25.9	-6M0-1-8RS
8	1/8	-CM-SM8-RS2	36.6	7.1	16.2	4.0	16	15	14.5	-8M0-1-2RS
8	1/4	-CM-SM8-RS4	41.4	11.2	16.2	6.4	16	19	18.0	-8M0-1-4RS
8	3/8	-CM-SM8-RS6	42.2	11.2	16.2	6.4	16	22	21.6	-8M0-1-6RS
8	1/2	-CM-SM8-RS8	42.2	14.2	16.2	6.4	16	27	25.9	-8M0-1-8RS
8	3/4	-CM-SM8-RS12	49.5	15.7	16.2	6.4	16	35	32.0	-8M0-1-12RS
10	1/4	-CM-SM10-RS4	42.2	11.2	17.2	5.9	19	19	18.0	-10M0-1-4RS
10	3/8	-CM-SM10-RS6	42.9	11.2	17.2	7.9	19	22	21.6	-10M0-1-6RS
10	1/2	-CM-SM10-RS8	45.0	14.2	17.2	7.9	19	27	25.9	-10M0-1-8RS
12	1/4	-CM-SM12-RS4	44.5	11.2	22.8	5.9	22	22	21.6	-12M0-1-4RS
12	3/8	-CM-SM12-RS6	45.5	11.2	22.8	7.9	22	22	21.6	-12M0-1-6RS
12	1/2	-CM-SM12-RS8	47.5	14.2	22.8	9.5	22	27	25.9	-12M0-1-8RS
12	3/4	-CM-SM12-RS12	52.1	15.7	22.8	9.5	22	35	32.0	-12M0-1-12RS
14	1/4	-CM-SM14-RS4	43.9	11.2	24.4	7.1	25	24	18.0	-14M0-1-6RS
14	3/8	-CM-SM14-RS6	43.9	11.2	24.4	9.5	25	24	21.6	-14M0-1-8RS
14	1/2	-CM-SM14-RS8	47.5	14.2	24.4	11.1	25	27	25.9	-14M0-1-12RS
14	3/4	-CM-SM14-RS12	52.8	15.7	24.4	11.1	25	35	32.0	-14M0-1-2RS
15	3/8	-CM-SM15-RS6	45.5	11.2	24.4	7.9	25	24	21.6	-15M0-1-6RS
15	1/2	-CM-SM15-RS8	47.5	14.2	24.4	11.9	25	27	25.9	-15M0-1-8RS
15	3/4	-CM-SM15-RS12	52.8	15.7	24.4	11.9	25	35	32.0	-15M0-1-12RS
16	3/8	-CM-SM16-RS6	45.5	11.2	24.4	7.9	25	24	21.6	-16M0-1-8RS
16	1/2	-CM-SM16-RS8	47.5	14.2	24.4	11.9	25	27	25.9	-16M0-1-8RS
16	3/4	-CM-SM16-RS12	52.8	15.7	24.4	12.7	25	32	32.0	-16M0-1-12RS
18	1/2	-CM-SM18-RS8	48.8	14.2	24.4	11.9	30	27	25.9	-18M0-1-8RS
18	3/4	-CM-SM18-RS12	52.6	15.7	24.4	15.1	30	35	32.0	-18M0-1-12RS
20	1/2	-CM-SM20-RS8	50.5	14.2	26.0	11.9	32	30	25.9	-20M0-1-8RS
20	3/4	-CM-SM20-RS12	52.6	15.7	26.0	15.9	32	35	32.0	-20M0-1-12RS
22	3/4	-CM-SM22-RS12	52.6	15.7	26.0	15.9	32	35	32.0	-22M0-1-12RS
22	1	-CM-SM22-RS16	54.9	18.3	26.0	18.3	32	41	39.1	-22M0-1-16RS
25	3/4	-CM-SM25-RS12	57.7	15.7	31.3	15.9	38	35	32.0	-25M0-1-12RS
25	1	-CM-SM25-RS16	59.7	18.3	31.3	19.8	38	41	39.1	-25M0-1-16RS
28	1	-CM-SM28-RS16	69.9	18.3	36.6	19.8	46	41	39.1	-28M0-1-16RS
28	1 1/4	-CM-SM28-RS20	72.9	19.8	36.6	21.8	46	50	49.0	-28M0-1-20RS
30	1 1/4	-CM-SM30-RS20	76.7	19.8	39.6	25.0	50	50	49.0	-30M0-1-20RS
32	1 1/4	-CM-SM32-RS20	79.2	19.8	42.0	25.0	50	50	49.0	-32M0-1-20RS
38	1 1/2	-CM-SM38-RS24	90.9	22.1	49.4	31.8	60	55	54.7	-38M0-1-24RS

Male Connectors

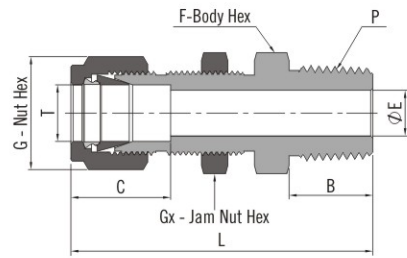


Metric Tube			ISO Paralle Thread(RP)							
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm							Interchanges with
			L	B	C	E	G	F	D	
3	1/8	-CM-SM3-RP2	33.3	7.1	12.9	2.4	12	14	13.8	-3M0-1-2RP
3	1/4	-CM-SM3-RP4	38.1	11.2	12.9	2.4	12	19	18.0	-3M0-1-4RP
4	1/8	-CM-SM4-RP2	34.0	7.1	13.7	2.4	12	14	13.8	-4M0-1-2RP
6	1/8	-CM-SM6-RP2	35.6	7.1	15.3	4.0	14	14	13.8	-6M0-1-2RP
6	1/4	-CM-SM6-RP4	40.4	11.2	15.3	4.8	14	19	18.0	-6M0-1-4RP
6	3/8	-CM-SM6-RP6	41.2	11.2	15.3	4.8	14	22	21.8	-6M0-1-6RP
6	1/2	-CM-SM6-RP8	43.2	14.2	15.3	4.8	14	27	26.0	-6M0-1-8RP
8	1/8	-CM-SM8-RP2	36.5	7.1	16.2	4.0	16	15	13.8	-8M0-1-2RP
8	1/4	-CM-SM8-RP4	41.3	11.2	16.2	5.9	16	19	18.0	-8M0-1-4RP
8	3/8	-CM-SM8-RP6	41.9	11.2	16.2	6.4	16	22	21.8	-8M0-1-6RP
8	1/2	-CM-SM8-RP8	44.1	14.2	16.2	6.4	16	27	26.0	-8M0-1-8RP
10	1/4	-CM-SM10-RP4	42.2	11.2	17.2	5.9	19	19	18.0	-10M0-1-4RP
10	3/8	-CM-SM10-RP6	42.9	11.2	17.2	7.9	19	22	21.8	-10M0-1-6RP
10	1/2	-CM-SM10-RP8	45.0	14.2	17.2	7.9	19	27	26.0	-10M0-1-8RP
12	1/4	-CM-SM12-RP4	45.4	11.2	22.8	5.9	22	22	18.0	-12M0-1-4RP
12	3/8	-CM-SM12-RP6	45.4	11.2	22.8	7.9	22	22	21.8	-12M0-1-6RP
12	1/2	-CM-SM12-RP8	47.5	14.2	22.8	9.5	22	27	26.0	-12M0-1-8RP
12	3/4	-CM-SM12-RP12	52.1	15.7	22.8	9.5	22	35	32.0	-12M0-1-12RP
15	1/2	-CM-SM15-RP8	47.5	14.2	24.4	11.9	25	27	26.0	-15M0-1-8RP
16	3/8	-CM-SM16-RP6	45.4	11.2	24.4	7.9	25	24	21.8	-16M0-1-6RP
16	1/2	-CM-SM16-RP8	47.5	14.2	24.4	11.9	25	27	26.0	-16M0-1-8RP
18	1/2	-CM-SM18-RP8	49.0	14.2	24.4	11.9	25	27	26.0	-18M0-1-8RP
18	3/4	-CM-SM18-RP12	52.3	15.7	24.4	15.1	30	35	32.0	-18M0-1-12RP
20	1/2	-CM-SM20-RP8	50.5	14.2	26.0	11.9	32	30	26.0	-20M0-1-8RP
20	3/4	-CM-SM20-RP12	52.5	15.7	26.0	15.9	32	35	32.0	-20M0-1-12RP
22	3/4	-CM-SM22-RP12	52.8	15.7	26.0	15.9	32	35	32.0	-22M0-1-12RP
22	1	-CM-SM22-RP16	54.5	18.3	26.0	18.3	32	41	39.0	-22M0-1-16RP
25	3/4	-CM-SM25-RP12	57.8	15.7	31.3	15.9	38	35	32.0	-25M0-1-12RP
25	1	-CM-SM25-RP16	59.8	18.3	31.3	19.8	38	41	39.0	-25M0-1-16RP
28	1	-CM-SM28-RP16	69.8	18.3	36.6	19.8	46	41	39.0	-28M0-1-16RP
28	1 1/4	-CM-SM28-RP20	72.9	19.8	36.6	21.8	46	50	49.0	-28M0-1-20RP
30	1 1/4	-CM-SM30-RP20	76.8	19.8	39.6	26.2	50	50	49.0	-30M0-1-20RP
32	1 1/4	-CM-SM32-RP20	79.2	19.8	42.0	28.6	50	50	49.0	-32M0-1-20RP
38	1 1/2	-CM-SM38-RP24	92.1	20.6	49.4	31.8	60	55	54.7	-38M0-1-24RP



Metric Tube			ISO Paralle Thread(BP)					
T-Tube O.D. (mm)	P-BP Size	Basic Ordering Number	Dimension, mm					
			L	B	C	E	G	F
6	1/4	-CM-SM6-BP4	36.9	12.9	15.3	4.8	14	14
6	3/8	-CM-SM6-BP6	39.5	14.2	15.3	4.8	14	18
8	1/8	-CM-SM8-BP2	33.9	9.8	16.2	4.0	16	14
8	1/4	-CM-SM8-BP4	37.0	12.9	16.2	6.4	16	14
8	3/8	-CM-SM8-BP6	39.3	14.2	16.2	6.4	16	18
8	1/2	-CM-SM8-BP8	45.4	18.8	16.2	6.4	16	22
10	1/4	-CM-SM10-BP4	39.5	12.9	17.2	5.9	19	18
10	1/2	-CM-SM10-BP8	46.3	14.2	17.2	7.9	19	22
12	3/8	-CM-SM12-BP6	44.2	14.2	22.8	7.9	22	22
12	1/2	-CM-SM12-BP8	49.0	18.8	22.8	9.5	22	22
14	1/4	-CM-SM14-BP4	42.9	12.9	24.4	5.9	25	24
16	3/8	-CM-SM16-BP6	43.4	14.2	24.4	7.9	25	24
16	1/2	-CM-SM16-BP8	47.9	18.8	24.4	9.5	25	24
18	1/2	-CM-SM18-BP8	49.8	18.8	24.4	11.9	30	27

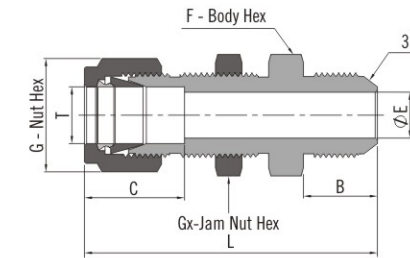
**Bulkhead Male Connectors**



T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
			L	B	C	E	G	F	Gx			
1/16	1/16	-BCM-S1-NT1	30.2	9.7	8.6	1.3	7.9	7.9	7.9	5.2	6.4	-100-11-1
1/16	1/8	-BCM-S1-NT2	32.3	9.7	8.6	1.3	7.9	11.1	7.9	5.2	6.4	-100-11-2
1/8	1/8	-BCM-S2-NT2	46.5	9.7	12.7	2.3	11.1	12.7	12.7	8.3	12.7	-200-11-2
3/16	1/8	-BCM-S3-NT2	48.0	9.7	13.7	3.0	12.7	14.3	14.3	9.9	12.7	-300-11-2
1/4	1/8	-BCM-S4-NT2	49.5	9.7	15.2	4.8	14.3	15.9	15.9	11.5	10.2	-400-11-2
1/4	1/4	-BCM-S4-NT4	54.1	14.2	15.2	4.8	14.3	15.9	15.9	11.5	10.2	-400-11-4
1/4	3/8	-BCM-S4-NT6	54.9	14.2	15.2	4.8	14.3	17.5	15.9	11.5	10.2	-400-11-6
1/4	1/2	-BCM-S4-NT8	60.3	19.1	15.2	4.8	14.3	22.2	15.9	11.5	10.2	-400-11-8
5/16	1/8	-BCM-S5-NT2	52.8	9.7	16.3	4.8	15.9	17.5	17.5	13.1	11.2	-500-11-2
5/16	1/4	-BCM-S5-NT4	57.7	14.2	16.3	6.4	15.9	17.5	17.5	13.1	11.2	-500-11-4
3/8	1/8	-BCM-S6-NT2	52.9	9.7	16.8	4.8	17.5	19.1	19.1	14.7	11.2	-600-11-2
3/8	1/4	-BCM-S6-NT4	57.4	14.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2	-600-11-4
3/8	3/8	-BCM-S6-NT6	57.4	14.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2	-600-11-6
3/8	1/2	-BCM-S6-NT8	63.8	19.1	16.8	7.1	17.5	22.2	19.1	14.7	11.2	-600-11-8
1/2	1/8	-BCM-S8-NT2	58.7	9.7	22.9	4.8	22.2	23.8	23.8	19.4	12.7	-810-11-2
1/2	1/4	-BCM-S8-NT4	63.2	14.2	22.9	7.1	22.2	23.8	23.8	19.4	12.7	-810-11-4
1/2	3/8	-BCM-S8-NT6	63.2	14.2	22.9	9.7	22.2	23.8	23.8	19.4	12.7	-810-11-6
1/2	1/2	-BCM-S8-NT8	68.8	19.1	22.9	10.4	22.2	23.8	23.8	19.4	12.7	-810-11-8
5/8	3/8	-BCM-S10-NT6	66.7	14.2	24.4	9.7	25.4	27.0	27.0	22.6	15.1	-1010-11-6
5/8	1/2	-BCM-S10-NT8	71.5	19.1	24.4	11.9	25.4	27.0	27.0	22.6	15.1	-1010-11-8
3/4	1/2	-BCM-S12-NT8	76.2	19.1	24.4	11.9	28.6	30.2	30.2	25.8	19.8	-1210-11-8
3/4	3/4	-BCM-S12-NT12	76.2	19.1	24.4	15.7	28.6	30.2	30.2	25.8	19.8	-1210-11-12
7/8	3/4	-BCM-S14-NT12	84.1	19.1	25.9	15.7	31.8	33.3	33.3	29.0	23.8	-1410-11-12
1	3/4	-BCM-S16-NT12	88.4	19.1	31.2	15.7	38.1	41.3	41.3	33.7	23.8	-1610-11-12
1	1	-BCM-S16-NT16	93.2	23.9	31.2	22.4	38.1	41.3	41.3	33.7	23.8	-1610-11-16

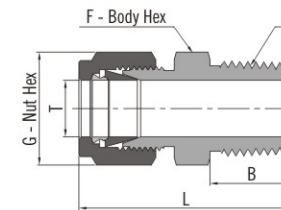
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
			L	B	C	E	G	F	Gx			
6	1/8	-BCM-SM6-NT2	49.6	9.7	15.3	4.8	14	16	16	11.5	10.2	-6M0-11-2
6	1/4	-BCM-SM6-NT4	53.6	14.2	15.3	4.8	14	16	16	11.5	10.2	-6M0-11-4
8	1/8	-BCM-SM8-NT2	52.3	9.7	16.2	4.8	16	18	18	13.1	11.2	-8M0-11-2
8	1/4	-BCM-SM8-NT4	57.5	14.2	16.2	6.4	16	18	18	13.1	11.2	-8M0-11-4
10	1/4	-BCM-SM10-NT4	58.4	14.2	17.2	7.9	19	22	22	16.3	11.2	-10M0-11-4
10	3/8	-BCM-SM10-NT6	58.4	14.2	17.2	7.9	19	22	22	16.3	11.2	-10M0-11-6
10	1/2	-BCM-SM10-NT8	63.1	19.1	17.2	7.9	19	22	22	16.3	11.2	-10M0-11-8
12	1/4	-BCM-SM12-NT4	63.9	14.2	22.8	7.9	22	24	24	19.5	12.7	-12M0-11-4
12	3/8	-BCM-SM12-NT6	63.9	14.2	22.8	9.5	22	24	24	19.5	12.7	-12M0-11-6
12	1/2	-BCM-SM12-NT8	68.8	19.1	22.8	9.5	22	24	24	19.5	12.7	-12M0-11-8

**Bulkhead Male Connectors**

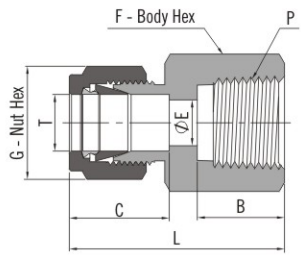


T-Tube O.D. (in.)	AN Tube Flare Size	Basic Ordering Number	Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
			L	B	C	E	G	F	Gx			
1/8	1/8	-BCM-S2-AN2	48.5	11.4	12.7	1.5	11.1	12.7	12.7	8.3	12.7	-200-61-2AN
1/8	1/4	-BCM-S2-AN4	51.8	14.0	12.7	2.3	11.1	15.9	12.7	8.3	12.7	-200-61-4AN
3/16	3/16	-BCM-S3-AN3	50.3	12.2	13.7	2.3	12.7	14.3	14.3	9.9	12.7	-300-61-3AN
1/4	1/4	-BCM-S4-AN4	53.8	14.0	15.2	4.3	14.3	15.9	15.9	11.5	10.2	-400-61-4AN
5/16	5/16	-BCM-S5-AN5	56.1	14.0	16.2	5.8	15.9	17.5	17.5	13.1	14.3	-500-61-5AN
3/8	1/4	-BCM-S6-AN4	57.2	14.0	16.8	4.3	17.5	19.1	19.1	14.7	11.2	-600-61-4AN
3/8	3/8	-BCM-S6-AN6	57.2	14.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2	-600-61-6AN
1/2	1/2	-BCM-S8AN8	65.8	16.8	22.8	9.9	22.2	23.8	23.8	19.4	12.7	-810-61-8AN
5/8	5/8	-BCM-S10-AN10	69.6	19.3	24.4	12.3	25.4	27.0	27.0	22.6	15.1	-1010-61-10AN
3/4	3/4	-BCM-S12-AN12	79.0	21.8	24.4	15.5	28.6	30.2	30.2	25.8	16.8	-1210-61-12AN
1	1	-BCM-S16-AN16	92.5	23.1	31.2	21.3	38.1	41.3	41.3	33.7	19.1	-1610-61-16AN

**Thermocouple Connectors**

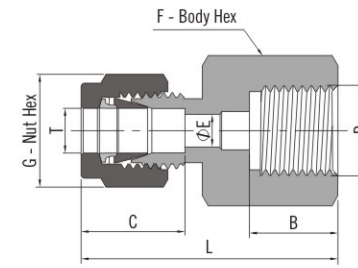


T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm				Interchanges with
			L	B	G	F	
1/16	1/16	-TCM-S1-NT1	23.9	9.7	7.9	7.9	-100-1-1BT
1/16	1/8	-TCM-S1-NT2	26.2	9.7	7.9	11.1	-100-1-2BT
1/16	1/4	-TCM-S1-NT4	31.0	14.2	7.9	14.3	-100-1-4BT
1/8	1/16	-TCM-S2-NT1	29.7	9.7	11.1	11.1	-200-1-1BT
1/8	1/8	-TCM-S2-NT2	30.5	9.7	11.1	11.1	-200-1-2BT
1/8	1/4	-TCM-S2-NT4	35.6	14.2	11.1	14.3	-200-1-4BT
3/16	1/8	-TCM-S3-NT2	31.2	9.7	12.7	11.1	-300-1-2BT
3/16	1/4	-TCM-S3-NT4	36.3	14.2	12.7	14.3	-300-1-4BT
1/4	1/8	-TCM-S4-NT2	32.8	9.7	14.3	12.7	-400-1-2BT
1/4	1/4	-TCM-S4-NT4	37.8	14.2	14.3	14.3	-400-1-4BT
1/4	3/8	-TCM-S4-NT6	38.4	14.2	14.3	17.5	-400-1-6BT
1/4	1/2	-TCM-S4-NT8	44.7	19.1	14.3	22.2	-400-1-8BT
5/16	1/4	-TCM-S5-NT4	28.6	14.2	15.9	14.3	-500-1-4BT
3/8	1/4	-TCM-S6-NT4	39.9	14.2	17.5	15.9	-600-1-4BT
3/8	3/8	-TCM-S6-NT6	39.9	14.2	17.5	17.5	-600-1-6BT
3/8	1/2	-TCM-S6-NT8	46.2	19.1	17.5	22.2	-600-1-8BT
3/8	3/4	-TCM-S6-NT12	47.8	19.1	17.5	27.0	-600-1-12BT
1/2	1/2	-TCM-S8-NT8	49.0	19.1	22.2	22.2	-810-1-8BT
1/2	3/4	-TCM-S8-NT12	50.5	19.1	22.2	27.0	-810-1-12BT
5/8	3/4	-TCM-S10-NT12	50.5	19.1	25.4	27.0	-1010-1-12BT
3/4	3/4	-TCM-S12-NT12	50.5	19.1	28.6	27.0	-1210-1-12BT
1	1	-TCM-S16-NT16	62.2	23.9	38.1	34.9	-1610-1-16BT

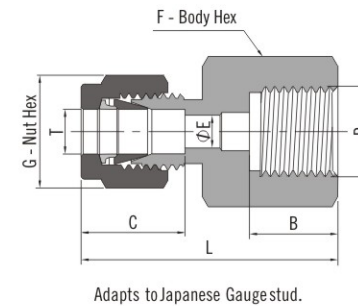


Fractional Tube			NPT Thread							Interchanges with
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
1/16	1/16	-CF-S1-NT1	23.6	9.9	8.6	1.3	7.9	11.1	-100-7-1	
1/16	1/8	-CF-S1-NT2	24.4	10.4	8.6	1.3	7.9	14.3	-100-7-2	
1/8	1/8	-CF-S2-NT2	28.7	10.4	12.7	2.3	11.1	14.3	-200-7-2	
1/8	1/4	-CF-S2-NT4	33.5	15.0	12.7	2.3	11.1	19.1	-200-7-4	
3/16	1/8	-CF-S3-NT2	29.7	10.4	13.7	3.0	12.7	14.3	-300-7-2	
1/4	1/8	-CF-S4-NT2	31.2	10.4	15.2	4.8	14.3	14.3	-400-7-2	
1/4	1/4	-CF-S4-NT4	35.8	15.0	15.2	4.8	14.3	19.1	-400-7-4	
1/4	3/8	-CF-S4-NT6	37.6	15.0	15.2	4.8	14.3	22.2	-400-7-6	
1/4	1/2	-CF-S4-NT8	42.4	19.8	15.2	4.8	14.3	27.0	-400-7-8	
5/16	1/8	-CF-S5-NT2	32.0	10.4	16.3	6.4	15.9	14.3	-500-7-2	
5/16	1/4	-CF-S5-NT4	36.8	15.0	16.3	6.4	15.9	19.1	-500-7-4	
3/8	1/8	-CF-S6-NT2	32.8	10.4	16.8	7.1	17.5	15.9	-600-7-2	
3/8	1/4	-CF-S6-NT4	37.6	15.0	16.8	7.1	17.5	19.1	-600-7-4	
3/8	3/8	-CF-S6-NT6	39.1	15.0	16.8	7.1	17.5	22.2	-600-7-6	
3/8	1/2	-CF-S6-NT8	43.9	19.8	16.8	7.1	17.5	27.0	-600-7-8	
3/8	3/4	-CF-S6-NT12	47.8	20.6	16.8	7.1	17.5	33.3	-600-7-12	
1/2	1/4	-CF-S8-NT4	40.4	15.0	22.9	10.4	22.2	20.6	-810-7-4	
1/2	3/8	-CF-S8-NT6	41.9	15.0	22.9	10.4	22.2	22.2	-810-7-6	
1/2	1/2	-CF-S8-NT8	46.7	19.8	22.9	10.4	22.2	27.0	-810-7-8	
1/2	3/4	-CF-S8-NT12	48.3	20.6	22.9	10.4	22.2	33.3	-810-7-12	
5/8	3/8	-CF-S10-NT6	41.9	15.0	24.4	12.7	25.4	23.8	-1010-7-6	
5/8	1/2	-CF-S10-NT8	46.7	19.8	24.4	12.7	25.4	27.0	-1010-7-8	
3/4	1/2	-CF-S12-NT8	46.7	19.8	24.4	15.7	28.6	27.0	-1210-7-8	
3/4	3/4	-CF-S12-NT12	48.3	20.6	24.4	15.7	28.6	33.3	-1210-7-12	
7/8	3/4	-CF-S14-NT12	49.8	20.6	25.9	18.3	31.8	33.3	-1410-7-12	
1	3/4	-CF-S16-NT12	53.3	20.6	31.2	22.4	38.1	34.9	-1610-7-12	
1	1	-CF-S16-NT16	62.2	25.4	31.2	22.4	38.1	41.3	-1610-7-16	
1 1/4	1 1/4	-CF-S20-NT20	74.7	25.4	41.1	27.7	47.6	54.0	-2000-7-20	
1 1/2	1 1/2	-CF-S24-NT24	83.3	27.7	50.0	36.3	57.2	60.3	-2400-7-24	

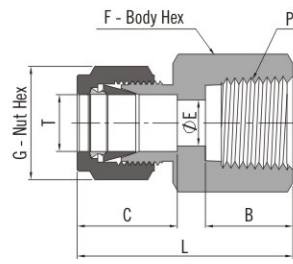
Fractional Tube			ISO Tapered Thread(RT)						Interchanges with
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/4	1/8	-CF-S4-RT2	31.2	10.4	15.2	4.8	14.3	14.3	-400-7-2RT
1/4	1/4	-CF-S4-RT4	35.8	15.0	15.2	4.8	14.3	19.1	-400-7-4RT
1/4	3/8	-CF-S4-RT6	37.6	15.0	15.2	4.8	14.3	22.2	-400-7-6RT
1/4	1/2	-CF-S4-RT8	42.4	19.8	15.2	4.8	14.3	27.0	-400-7-8RT
3/8	1/4	-CF-S6-RT4	37.6	15.0	16.8	7.1	17.5	19.1	-600-7-4RT
3/8	3/8	-CF-S6-RT6	39.1	15.0	16.8	7.1	17.5	22.2	-600-7-6RT
3/8	1/2	-CF-S6-RT8	43.9	19.8	16.8	7.1	17.5	27.0	-600-7-8RT
1/2	1/4	-CF-S8-RT4	40.4	15.0	22.9	10.4	22.2	20.6	-810-7-4RT
1/2	3/8	-CF-S8-RT6	41.9	15.0	22.9	10.4	22.2	22.2	-810-7-6RT
1/2	1/2	-CF-S8-RT8	46.7	19.8	22.9	10.4	22.2	27.0	-810-7-8RT



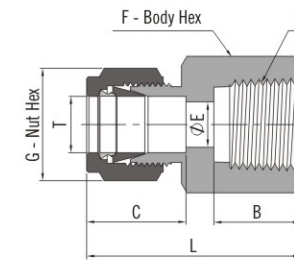
Fractional Tube			ISO Tapered Thread(RG)						Interchanges with
T-Tube O.D. (in.)	P-RG Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/8	1/4	-CF-S2-RG4	35.3	12.9	12.7	2.3	11.1	19.1	-200-7-4RG
1/8	3/8	-CF-S2-RG6	38.7	14.2	12.7	2.3	11.1	23.8	-200-7-6RG
1/4	1/4	-CF-S4-RG4	37.6	12.9	15.2	4.8	14.3	19.1	-400-7-4RG
1/4	3/8	-CF-S4-RG6	37.6	14.2	15.2	4.8	14.3	23.8	-400-7-6RG
1/4	1/2	-CF-S4-RG8	43.4	18.8	15.2	4.8	14.3	27.0	-400-7-8RG
5/16	1/4	-CF-S5-RG4	38.4	12.9	16.3	5.6	15.9	19.1	-500-7-4RG
5/16	3/8	-CF-S5-RG6	39.2	14.2	16.3	6.4	15.9	23.8	-500-7-6RG
5/16	1/2	-CF-S5-RG8	40.9	18.8	16.3	7.1	15.9	27.0	-500-7-8RG
3/8	1/4	-CF-S6-RG4	39.1	12.9	16.8	5.6	17.5	19.1	-600-7-4RG
3/8	3/8	-CF-S6-RG6	38.6	14.2	16.8	6.4	17.5	23.8	-600-7-6RG
3/8	1/2	-CF-S6-RG8	41.9	18.8	16.8	7.1	17.5	27.0	-600-7-8RG
1/2	1/4	-CF-S8-RG4	41.9	12.9	22.9	5.6	22.2	22.2	-810-7-4RG
1/2	3/8	-CF-S8-RG6	44.5	14.2	22.9	6.4	22.2	23.8	-810-7-6RG
1/2	1/2	-CF-S8-RG8	48.3	18.8	22.9	7.1	22.2	27.0	-810-7-8RG



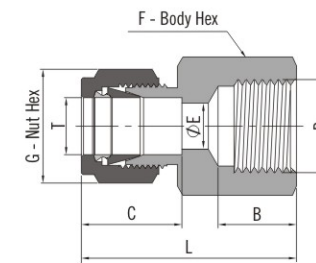
Fractional Tube			ISO Tapered Thread(RJ)						Interchanges with
T-Tube O.D. (in.)	P-RJ Size	Basic Ordering Number	Dimension, mm						
			L	B	C	E	G	F	
1/4	1/4	-CF-S4-RJ4	37.6	12.9	15.2	4.8	14.3	19.1	-400-7-4RJ
1/4	3/8	-CF-S4-RJ6	37.6	15.8	15.2	4.8	14.3	23.8	-400-7-6RJ
1/4	1/2	-CF-S4-RJ8	43.4	18.8	15.2	4.8	14.3	27.0	-400-7-8RJ
5/16	1/4	-CF-S5-RJ4	38.4	12.9	16.3	5.6	15.9	19.1	-500-7-4RJ
5/16	1/2	-CF-S5-RJ8	40.9	18.8	16.3	7.1	15.9	27.0	-500-7-8RJ
3/8	1/4	-CF-S6-RJ4	39.4	12.9	16.8	5.6	17.5	19.1	-600-7-4RJ
3/8	3/8	-CF-S6-RJ6	38.6	15.8	16.8	6.4	17.5	23.8	-600-7-6RJ
3/8	1/2	-CF-S6-RJ8	41.9	18.8	16.8	7.1	17.5	27.0	-600-7-8RJ
1/2	1/4	-CF-S8-RJ4	41.9	12.9	22.9	5.6	22.2	20.6	-810-7-4RJ
1/2	3/8	-CF-S8-RJ6	44.5	15.8	22.9	6.4	22.2	23.8	-810-7-6RJ
1/2	1/2	-CF-S8-RJ8	48.3	18.8	22.9	7.1	22.2	27.0	-810-7-8RJ



Metric Tube			NPT Thread						
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm						Interchanges with
			L	B	C	E	G	F	
3	1/8	-CF-SM3-NT2	28.7	10.4	12.9	2.4	12	14	-3MO-7-2
3	1/4	-CF-SM3-NT4	33.5	15.0	12.9	2.4	12	19	-3MO-7-4
4	1/8	-CF-SM4-NT2	29.7	10.4	13.7	2.4	12	14	-4MO-7-2
6	1/8	-CF-SM6-NT2	31.3	10.4	15.3	4.8	14	14	-6MO-7-2
6	1/4	-CF-SM6-NT4	35.8	15.0	15.3	4.8	14	19	-6MO-7-4
6	3/8	-CF-SM6-NT6	37.7	15.0	15.3	4.8	14	22	-6MO-7-6
6	1/2	-CF-SM6-NT8	42.5	19.8	15.3	4.8	14	27	-6MO-7-8
8	1/8	-CF-SM8-NT2	32.1	10.4	16.2	4.8	16	15	-8MO-7-2
8	1/4	-CF-SM8-NT4	37	15.0	16.2	6.4	16	19	-8MO-7-4
8	3/8	-CF-SM8-NT6	38.5	15.0	16.2	6.4	16	22	-8MO-7-6
8	1/2	-CF-SM8-NT8	43.3	19.8	16.2	6.4	16	27	-8MO-7-8
10	1/8	-CF-SM10-NT2	33.0	10.4	17.2	4.8	19	15	-10MO-7-2
10	1/4	-CF-SM10-NT4	37.8	15.0	17.2	7.9	19	19	-10MO-7-4
10	3/8	-CF-SM10-NT6	39.4	15.0	17.2	7.9	19	22	-10MO-7-6
10	1/2	-CF-SM10-NT8	44.2	19.8	17.2	7.9	19	27	-10MO-7-8
12	1/4	-CF-SM12-NT4	40.3	15.0	22.8	7.9	22	22	-12MO-7-4
12	3/8	-CF-SM12-NT6	41.9	15.0	22.8	9.5	22	22	-12MO-7-6
12	1/2	-CF-SM12-NT8	46.7	19.8	22.8	9.5	22	27	-12MO-7-8
12	3/4	-CF-SM12-NT12	49.7	20.6	22.8	9.5	22	35	-12MO-7-12
14	3/4	-CF-SM14-NT12	49.7	20.6	24.4	11.1	25	35	-14MO-7-12
15	1/2	-CF-SM15-NT8	46.7	19.8	24.4	11.9	25	27	-15MO-7-8
16	3/8	-CF-SM16-NT6	41.9	15.0	24.4	9.5	25	27	-16MO-7-6
16	1/2	-CF-SM16-NT8	46.9	19.8	24.4	11.9	25	27	-16MO-7-8
20	1/2	-CF-SM20-NT8	47.9	19.8	26.0	11.9	32	30	-20MO-7-8
20	3/4	-CF-SM20-NT12	49.7	20.6	26.0	15.9	32	35	-20MO-7-12
22	3/4	-CF-SM22-NT12	49.7	20.6	26.0	15.9	32	35	-22MO-7-12
22	1	-CF-SM22-NT16	57.9	25.4	26.0	18.3	32	41	-22MO-7-16
25	3/4	-CF-SM25-NT12	53.4	20.6	31.3	15.9	38	35	-25MO-7-12
25	1	-CF-SM25-NT16	62.3	25.4	31.3	21.8	38	41	-25MO-7-16

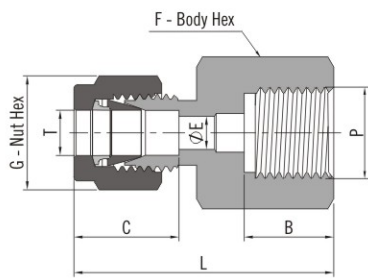


Metric Tube			ISO Tapered Thread(RT)						
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm						Interchanges with
			L	B	C	E	G	F	
3	1/8	-CF-SM3-RT2	28.7	10.4	12.9	2.4	12	14	-3MO-7-2RT
6	1/8	-CF-SM6-RT2	31.3	10.4	15.3	4.8	14	14	-6MO-7-2RT
6	1/4	-CF-SM6-RT4	35.8	15.0	15.3	4.8	14	19	-6MO-7-4RT
6	3/8	-CF-SM6-RT6	36.9	15.0	15.3	4.8	14	22	-6MO-7-6RT
6	1/2	-CF-SM6-RT8	42.5	19.8	15.3	4.8	14	27	-6MO-7-8RT
8	1/8	-CF-SM8-RT2	32.1	10.4	16.2	6.4	16	15	-8MO-7-2RT
8	1/4	-CF-SM8-RT4	37.0	15.0	16.2	6.4	16	19	-8MO-7-4RT
8	3/8	-CF-SM8-RT6	38.5	15.0	16.2	6.4	16	22	-8MO-7-6RT
8	1/2	-CF-SM8-RT8	43.3	19.8	16.2	6.4	16	27	-8MO-7-8RT
10	1/8	-CF-SM10-RT2	33.0	10.4	17.2	4.8	19	18	-10MO-7-2RT
10	1/4	-CF-SM10-RT4	37.8	15.0	17.2	7.9	19	19	-10MO-7-4RT
10	3/8	-CF-SM10-RT6	39.4	15.0	17.2	7.9	19	22	-10MO-7-6RT
10	1/2	-CF-SM10-RT8	44.2	19.8	17.2	7.9	19	27	-10MO-7-8RT
12	1/8	-CF-SM12-RT2	35.5	10.4	22.8	8.3	22	22	-12MO-7-2RT
12	1/4	-CF-SM12-RT4	40.3	15.0	22.8	9.5	22	22	-12MO-7-4RT
12	3/8	-CF-SM12-RT6	41.9	15.0	22.8	9.5	22	22	-12MO-7-6RT
12	1/2	-CF-SM12-RT8	46.7	19.8	22.8	9.5	22	27	-12MO-7-8RT
12	3/4	-CF-SM12-RT12	49.0	20.6	22.8	9.5	22	35	-12MO-7-12RT
15	1/2	-CF-SM15-RT8	46.7	19.8	24.4	11.9	25	27	-15MO-7-8RT
16	1/2	-CF-SM16-RT8	48.4	19.8	24.4	11.9	25	27	-16MO-7-8RT
16	3/4	-CF-SM16-RT12	49.7	20.6	24.4	12.7	25	35	-16MO-7-12RT
20	1/2	-CF-SM20-RT8	47.9	19.8	26.0	11.9	32	30	-20MO-7-8RT
20	3/4	-CF-SM20-RT12	49.7	20.6	26.0	15.9	32	35	-20MO-7-12RT
22	3/4	-CF-SM22-RT12	49.7	20.6	26.0	15.9	32	35	-22MO-7-12RT
22	1	-CF-SM22-RT16	57.9	25.4	26.0	18.3	32	41	-22MO-7-16RT
25	3/4	-CF-SM25-RT12	53.4	20.6	31.3	15.9	38	35	-25MO-7-12RT
25	1	-CF-SM25-RT16	62.3	25.4	31.3	21.8	38	41	-25MO-7-16RT

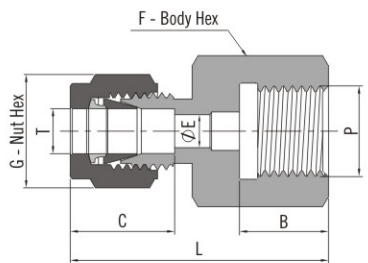


Metric Tube			ISO Tapered Thread(RP)						
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm						Interchanges with
			L	B	C	E	G	F	
6	1/8	-CF-SM6-RP2	33.5	13.0	15.3	4.8	14	14	-6MO-7-2RP
6	1/4	-CF-SM6-RP4	39.4	18.5	15.3	4.8	14	19	-6MO-7-4RP
22	3/4	-CF-SM22-RP12	53.3	25.9	26.0	18.3	32	35	-22MO-7-12RP
25	1	-CF-SM25-RP16	63.9	28.2	31.3	21.8	40	40	-25MO-7-16RP

Female Connectors



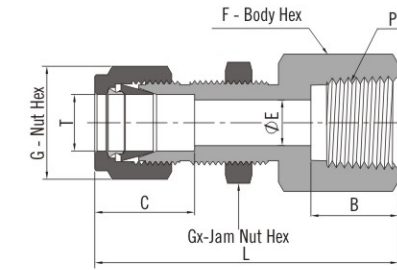
Metric Tube			ISO Tapered Thread(RG)							Interchanges with
T-Tube O.D. (mm)	P-RG Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
3	1/4	-CF-SM3-RG4	35.3	12.9	12.9	2.4	12	19	-3MO-7-4RG	
6	1/4	-CF-SM6-RG4	37.6	12.9	15.3	4.8	14	19	-6MO-7-4RG	
6	3/8	-CF-SM6-RG6	37.6	14.2	15.3	4.8	14	24	-6MO-7-6RG	
6	1/2	-CF-SM6-RG8	43.5	18.8	15.3	4.8	14	27	-6MO-7-8RG	
8	1/4	-CF-SM8-RG4	38.5	12.9	16.2	6.4	16	19	-8MO-7-4RG	
8	3/8	-CF-SM8-RG6	36.2	14.2	16.2	6.4	16	24	-8MO-7-6RG	
8	1/2	-CF-SM8-RG8	41	18.8	16.2	6.4	16	27	-8MO-7-8RG	
10	1/4	-CF-SM10-RG4	39.4	12.9	17.2	5.9	19	19	-10MO-7-4RG	
10	3/8	-CF-SM10-RG6	38.8	14.2	17.2	7.9	19	24	-10MO-7-6RG	
10	1/2	-CF-SM10-RG8	42.1	18.8	17.2	7.9	19	27	-10MO-7-8RG	
12	1/4	-CF-SM12-RG4	41.9	12.9	22.8	5.9	22	22	-12MO-7-4RG	
12	3/8	-CF-SM12-RG6	44.4	14.2	22.8	7.9	22	24	-12MO-7-6RG	
12	1/2	-CF-SM12-RG8	48.2	18.8	22.8	9.5	22	27	-12MO-7-8RG	
20	1/2	-CF-SM20-RG8	54.3	18.8	26.0	11.9	32	30	-20MO-7-8RG	
22	1/2	-CF-SM22-RG8	54.3	18.8	26.0	11.9	32	30	-22MO-7-8RG	



Adapts to Japanese Gauge stud.

Metric Tube			ISO Tapered Thread(RJ)							Interchanges with
T-Tube O.D. (mm)	P-RJ Size	Basic Ordering Number	Dimension, mm							
			L	B	C	E	G	F		
6	1/4	-CF-SM6-RJ4	37.6	12.9	15.3	4.8	14	19	-6MO-7-4RJ	
6	3/8	-CF-SM6-RJ6	37.6	15.8	15.3	4.8	14	24	-6MO-7-6RJ	
6	1/2	-CF-SM6-RJ8	43.5	18.8	15.3	4.8	14	27	-6MO-7-8RJ	
8	1/4	-CF-SM8-RJ4	38.5	12.9	16.2	5.5	16	19	-8MO-7-4RJ	
8	3/8	-CF-SM8-RJ6	36.2	15.8	16.2	6.5	16	24	-8MO-7-6RJ	
8	1/2	-CF-SM8-RJ8	41	18.8	16.2	7.0	16	27	-8MO-7-8RJ	
10	1/4	-CF-SM10-RJ4	39.4	12.9	17.2	5.5	19	19	-10MO-7-4RJ	
10	3/8	-CF-SM10-RJ6	38.8	15.8	17.2	6.5	19	24	-10MO-7-6RJ	
10	1/2	-CF-SM10-RJ8	42.1	18.8	17.2	7.0	19	27	-10MO-7-8RJ	
12	1/4	-CF-SM12-RJ4	41.9	12.9	22.8	5.5	22	22	-12MO-7-4RJ	
12	3/8	-CF-SM12-RJ6	44.4	15.8	22.8	6.5	22	24	-12MO-7-6RJ	
12	1/2	-CF-SM12-RJ8	48.2	18.8	22.8	7.0	22	27	-12MO-7-8RJ	

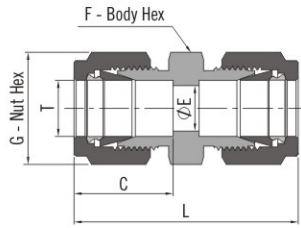
Bulkhead Female Connectors



Fractional Tube			Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	L	B	C	E	G	F	Gx			
1/16	1/16	-BCF-S1-NT1	26.2	9.9	8.6	1.3	7.9	11.1	7.9	5.2	3.2	-100-71-1
1/16	1/8	-BCF-S1-NT2	26.9	10.4	8.6	1.3	7.9	14.3	7.9	5.2	3.2	-100-71-2
1/8	1/8	-BCF-S2-NT2	44.7	10.4	12.7	2.3	11.1	14.3	12.7	8.3	12.7	-200-71-2
1/8	1/4	-BCF-S2-NT4	49.6	15.0	12.7	2.3	11.1	19.1	12.7	8.3	12.7	-200-71-4
3/16	1/8	-BCF-S3-NT2	45.5	10.4	13.7	3.0	12.7	14.3	14.3	9.9	12.7	-300-71-2
1/4	1/8	-BCF-S4-NT2	47.0	10.4	15.2	4.8	14.3	15.9	15.9	11.5	10.2	-400-71-2
1/4	1/4	-BCF-S4-NT4	51.8	15.0	15.2	4.8	14.3	19.1	15.9	11.5	10.2	-400-71-4
1/4	3/8	-BCF-S4-NT6	53.3	15.0	15.2	4.8	14.3	22.2	15.9	11.5	10.2	-4100-71-6
1/4	1/2	-BCF-S4-NT8	58.2	19.8	15.2	4.8	14.3	27.0	15.9	11.5	10.2	-400-71-8
5/16	1/8	-BCF-S5-NT2	49.8	10.4	16.3	6.4	15.9	14.3	17.5	13.1	11.2	-500-71-2
5/16	1/4	-BCF-S5-NT4	60.5	15.0	16.3	6.4	15.9	19.1	17.5	13.1	11.2	-500-71-4
3/8	1/8	-BCF-S6-NT2	50.3	10.4	16.8	7.1	17.5	15.9	19.1	14.5	11.2	-600-71-2
3/8	1/4	-BCF-S6-NT4	55.1	15.0	16.8	7.1	17.5	19.1	19.1	14.5	11.2	-600-71-4
3/8	3/8	-BCF-S6-NT6	56.6	15.0	16.8	7.1	17.5	22.2	19.1	14.5	11.2	-600-71-6
3/8	1/2	-BCF-S6-NT8	61.5	19.8	16.8	7.1	17.5	27.0	19.1	14.5	11.2	-600-71-8
3/8	3/4	-BCF-S6-NT12	65.3	20.6	16.8	7.1	17.5	33.3	19.1	14.5	11.2	-600-71-12
1/2	1/4	-BCF-S8-NT4	60.2	15.0	22.9	10.4	22.2	23.8	23.8	19.4	12.7	-810-71-4
1/2	3/8	-BCF-S8-NT6	61.7	15.0	22.9	10.4	22.2	23.8	23.8	19.4	12.7	-810-71-6
1/2	1/2	-BCF-S8-NT8	66.5	19.8	22.9	10.4	22.2	27.0	23.8	19.4	12.7	-810-71-8
1/2	3/4	-BCF-S8-NT12	68.1	20.6	22.9	10.4	22.2	33.3	23.8	19.4	12.7	-810-71-12
5/8	3/8	-BCF-S10-NT6	62.5	15.0	24.4	12.7	25.4	23.8	27.0	22.6	15.1	-1010-71-6
5/8	1/2	-BCF-S10-NT8	67.3	19.8	24.4	12.7	25.4	27.0	27.0	22.6	15.1	-1010-71-8
3/4	1/2	-BCF-S12-NT8	72.2	19.8	24.4	15.7	28.6	27.0	30.2	25.8	19.8	-1210-71-8
3/4	3/4	-BCF-S12-NT12	73.7	20.6	24.4	15.7	28.6	33.3	30.2	25.8	19.8	-1210-71-12
7/8	3/4	-BCF-S14-NT12	80.8	20.6	25.9	18.3	31.8	33.3	33.3	29.0	23.8	-1410-71-12
1	3/4	-BCF-S16-NT12	84.7	20.6	31.2	22.4	38.1	41.3	41.3	33.7	23.8	-1610-71-12
1	1	-BCF-S16-NT16	93.5	25.4	31.2	22.4	38.1	41.3	41.3	33.7	23.8	-1610-71-16

Fractional Tube			Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	L	B	C	E	G	F	Gx			
6	1/8	-BCF-SM6-NT2	47.2	10.4	15.3	4.8	14	16	16	11.5	10.2	-6MO-71-2
6	1/4	-BCF-SM6-NT4	51.8	15.0	15.3	4.8	14	19	16	11.5	10.2	-6MO-71-4
8	1/8	-BCF-SM6-NT2	49.6	10.4	16.2	4.8	16	18	18	13.1	11.2	-8MO-71-2
10	1/4	-BCF-SM6-NT4	55.2	15.0	17.2	7.9	19	22	22	16.3	11.2	-10MO-71-4
12	3/8	-BCF-SM6-NT6	60.9	15.0	22.8	9.5	22	24	24	19.5	12.7	-12MO-71-6
12	1/2	-BCF-SM6-NT8	66.5	19.8	22.8	9.5	22	27	24	19.5	12.7	-12MO-71-8

Unions



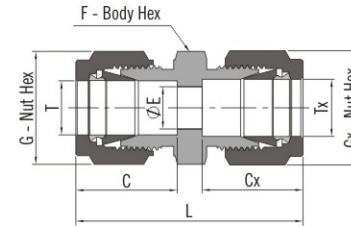
Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm					Inter-changes with
		L	C	G	F	E	
1/16	-U-S1	25.1	8.6	7.9	11.1	1.3	-100-6
1/8	-U-S2	35.6	12.7	11.1	11.1	2.3	-200-6
3/16	-U-S3	37.3	13.7	12.7	12.7	3.0	-300-6
1/4	-U-S4	40.9	15.2	14.3	12.7	4.8	-400-6
5/16	-U-S5	42.9	16.2	15.9	14.3	6.4	-500-6
3/8	-U-S6	45.0	16.8	17.5	15.9	7.1	-600-6
1/2	-U-S8	51.3	22.9	22.2	20.6	10.4	-800-6
5/8	-U-S10	52.1	24.4	25.4	23.9	12.7	-1010-6
3/4	-U-S12	53.6	24.4	28.6	27.0	15.7	-1210-6
7/8	-U-S14	55.1	25.9	31.8	34.9	18.3	-1410-6
1	-U-S16	64.8	31.2	38.1	34.9	22.4	-1610-6
1 1/8	-U-S18	64.8	31.2	44.5	41.3	24.6	-1800-6
1 1/4	-U-S20	92.2	41.1	47.6	44.5	27.7	-2000-6
1 1/2	-U-S24	108	50.0	57.2	54.0	34.0	-2400-6

Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm					Inter-changes with
		L	C	G	F	E	
2	-U-SM2	35.6	12.9	12	12	1.7	-2M0-6
3	-U-SM3	35.3	12.9	12	12	2.4	-3M0-6
4	-U-SM4	37.3	13.7	12	12	2.4	-4M0-6
6	-U-SM6	41.0	15.3	14	14	4.8	-6M0-6
8	-U-SM8	43.2	16.2	16	15	6.4	-8M0-6
10	-U-SM10	46.2	17.2	19	18	7.9	-10M0-6
12	-U-SM12	51.2	22.8	22	22	9.5	-12M0-6
14	-U-SM14	52.0	24.4	25	24	11.1	-14M0-6
15	-U-SM15	52.0	24.4	25	24	11.9	-15M0-6
16	-U-SM16	52.0	24.4	25	24	12.7	-16M0-6
18	-U-SM18	53.5	24.4	30	27	15.1	-18M0-6
20	-U-SM20	55.0	26.0	2	30	15.9	-20M0-6
22	-U-SM22	55.0	26.0	32	30	18.3	-22M0-6
25	-U-SM25	65.0	31.3	38	35	21.8	-25M0-6
28	-U-SM28	85.0	36.6	46	41	21.8	-28M0-6
30	-U-SM30	92.7	39.6	50	46	26.2	-30M0-6
32	-U-SM32	97.3	42.0	50	46	28.6	-32M0-6
38	-U-SM38	113.6	49.4	60	55	33.7	-38M0-6

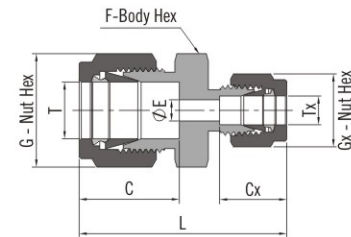
Conversion Unions



Metric Tube to Fractional Tube

T-Tube O.D. (mm)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							Inter-changes with
			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	-3M0-6-2
4	1/8	-U-SM4-S2	36.5	13.7	12	12	2.4	12.7	11.1	-4M0-6-2
4	1/4	-U-SM4-S4	39.4	13.7	12	14	2.4	15.2	14.3	-4M0-6-4
6	1/8	-U-SM6-S2	38.5	15.3	14	14	2.4	12.7	11.1	-6M0-6-2
6	1/4	-U-SM6-S4	41.0	15.3	14	14	4.8	15.2	14.3	-6M0-6-4
6	5/16	-U-SM6-S5	42.3	15.3	14	14	4.8	16.2	15.9	-6M0-6-5
8	1/4	-U-SM8-S4	42.3	16.2	16	15	4.8	15.2	14.3	-8M0-6-4
8	3/8	-U-SM8-S6	44.3	16.2	16	16	6.4	16.8	17.5	-8M0-6-6
10	1/8	-U-SM10-S2	41.8	17.2	19	18	2.4	12.7	11.1	-10M0-6-2
10	1/4	-U-SM10-S4	44.5	17.2	19	18	4.8	15.2	14.3	-10M0-6-4
10	5/16	-U-SM10-S5	45.1	17.2	19	18	6.4	16.2	15.9	-10M0-6-5
10	3/8	-U-SM10-S6	45.9	17.2	19	18	7.1	16.8	17.5	-10M0-6-6
12	5/16	-U-SM12-S5	47.8	22.8	22	22	6.4	16.2	15.9	-12M0-6-5
12	3/8	-U-SM12-S6	49.4	22.8	22	22	7.1	16.8	17.5	-12M0-6-6
12	1/2	-U-SM12-S8	51.2	22.8	22	22	9.5	22.9	22.2	-12M0-6-8
15	1/2	-U-SM15-S8	52.0	24.4	25	24	10.4	22.9	22.2	-15M0-6-8
16	3/8	-U-SM16-S6	52.0	24.4	25	24	12.7	24.4	25.4	-16M0-6-6
18	3/4	-U-SM18-S12	53.5	24.4	30	27	15.1	24.4	28.6	-18M0-6-12
20	1/2	-U-SM20-S8	55.0	26.0	32	30	10.4	22.9	22.2	-20M0-6-8
20	1	-U-SM20-S16	62.8	26.0	32	35	15.9	31.2	38.1	-20M0-6-16
25	1	-U-SM25-S16	65.0	31.3	38	35	21.8	31.2	38.1	-25M0-6-16

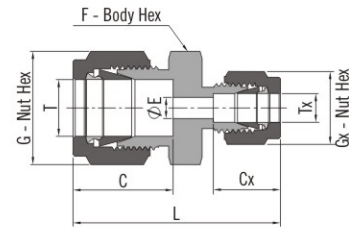
Reducing Unions



Fractional Tube

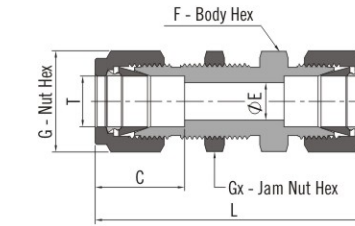
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							Inter-changes with
			L	C	G	F	E	Cx	Gx	
1/8	1/16	-U-S2-S1	31.0	12.7	11.1	11.1	1.3	8.6	7.9	-200-6-1
3/16	1/16	-U-S3-S1	32.3	13.7	12.7	11.1	1.3	8.6	7.9	-300-6-1
3/16	1/8	-U-S3-S2	36.6	13.7	12.7	11.1	2.3	12.7	11.1	-300-6-2
1/4	1/16	-U-S4-S1	34.3	15.2	14.3	12.7	1.3	8.6	7.9	-400-6-1
1/4	1/8	-U-S4-S2	38.6	15.2	14.3	12.7	2.3	12.7	11.1	-400-6-2
1/4	3/16	-U-S4-S3	39.4	15.2	14.3	12.7	3.0	13.7	12.7	-400-6-3
5/16	1/8	-U-S5-S2	39.6	16.2	15.9	14.3	2.3	12.7	11.1	-500-6-2
5/16	1/4	-U-S5-S4	42.2	16.2	15.9	14.3	4.8	15.2	14.3	-500-6-4
3/8	1/16	-U-S6-S1	36.6	16.8	17.5	15.9	1.3	8.6	7.9	-600-6-1
3/8	1/8	-U-S6-S2	40.9	16.8	17.5	15.9	2.3	12.7	11.1	-600-6-2
3/8	1/4	-U-S6-S4	43.2	16.8	17.5	15.9	4.8	15.2	14.3	-600-6-4
3/8	5/16	-U-S6-S5	44.2	16.8	17.5	15.9	6.4	16.2	15.9	-600-6-5
1/2	1/8	-U-S8-S2	45.2	22.8	22.2	20.6	2.3	12.7	11.1	-810-6-2
1/2	1/4	-U-S8-S4	47.0	22.8	22.2	20.6	4.8	15.2	14.3	-810-6-4
1/2	3/8	-U-S8-S6	48.5	22.8	22.2	20.6	7.1	16.8	17.5	-810-6-6
5/8	3/8	-U-S10-S6	49.3	24.4	25.4	23.9	7.1	16.8	17.5	-1010-6-6
5/8	1/2	-U-S10-S8	52.1	24.4	25.4	23.9	10.4	22.8	22.2	-1010-6-8
3/4	1/4	-U-S12-S4	49.3	24.4	28.6	27.0	4.8	15.2	14.3	-1210-6-4
3/4	3/8	-U-S12-S6	50.8	24.4	28.6	27.0	7.1	16.8	17.5	-1210-6-6
3/4	1/2	-U-S12-S8	53.6	24.4	28.6	27.0	10.4	22.8	22.2	-1210-6-8
3/4	5/8	-U-S12-S10	53.6	24.4	28.6	27.0	12.7	24.4	25.4	-1210-6-10
1	1/2	-U-S16-S8	60.5	31.2	38.1	34.9	10.4	22.8	22.2	-1610-6-8
1	3/4	-U-S16-S12	60.5	31.2	38.1	34.9	15.7	24.4	28.6	-1610-6-12

Reducing Unions



Metric Tube		Basic Ordering Number	Dimension, mm								Interchanges with
T-Tube O.D. (mm)	Tx-Tube O.D. (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	-6M0-6-2M	
6	3	-U-SM6-SM3	38.6	15.3	14	14	2.4	12.9	12	-6M0-6-3M	
6	4	-U-SM6-SM4	39.4	15.3	14	14	2.4	23.7	12	-6M0-6-4M	
8	6	-U-SM8-SM6	42.3	16.3	16	15	4.8	15.3	14	-8M0-6-6M	
10	6	-U-SM10-SM6	44.5	17.2	19	18	4.8	15.3	14	-10M0-6-6M	
10	8	-U-SM10-SM8	45.1	17.2	19	18	6.4	16.3	16	-10M0-6-8M	
12	6	-U-SM12-SM6	47.0	22.8	22	22	4.8	15.3	14	-12M0-6-6M	
12	8	-U-SM12-SM8	47.8	22.8	22	22	6.4	16.3	16	-12M0-6-8M	
12	10	-U-SM12-SM10	48.7	22.8	22	22	7.9	17.2	19	-12M0-6-10M	
16	10	-U-SM16-SM10	49.5	24.4	25	24	7.9	17.2	19	-16M0-6-10M	
16	12	-U-SM16-SM12	52.0	24.4	25	24	9.5	22.8	22	-16M0-6-12M	
18	12	-U-SM18-SM12	53.5	24.4	30	27	9.5	22.8	22	-18M0-6-12M	
25	18	-U-SM25-SM18	61.0	31.3	38	35	15.1	24.4	30	-25M0-6-18M	
25	20	-U-SM25-SM20	62.3	31.3	38	35	15.9	26.0	32	-25M0-6-20M	
30	18	-U-SM30-SM18	75.4	39.6	50	46	15.1	24.4	30	-30M0-6-18M	
30	20	-U-SM30-SM20	75.4	39.6	50	46	15.9	26.0	32	-30M0-6-20M	
30	25	-U-SM30-SM25	80.1	39.6	50	46	21.8	31.3	38	-30M0-6-25M	
32	18	-U-SM32-SM18	77.8	42.0	50	46	15.1	24.4	30	-32M0-6-18M	
32	20	-U-SM32-SM20	77.8	42.0	50	46	15.9	26.0	32	-32M0-6-20M	
32	25	-U-SM32-SM25	82.3	42.0	50	46	21.8	31.3	38	-32M0-6-25M	
38	20	-U-SM38-SM20	87.5	49.4	60	55	15.9	26.0	32	-38M0-6-20M	
38	25	-U-SM38-SM25	92.0	49.4	60	55	21.8	31.3	38	-38M0-6-25M	
38	30	-U-SM38-SM30	104.6	49.4	60	55	26.2	39.6	50	-38M0-6-30M	

Bulkhead Unions

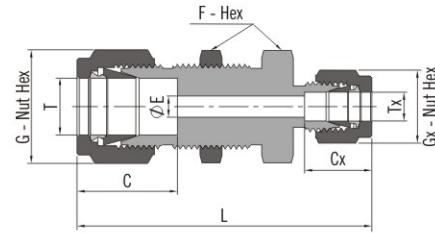


Fractional Tube		Dimension, mm						Panel Hole Size	Max. Panel Thickness	Interchanges with
T-Tube O.D. (in.)	Basic Ordering Number	L	C	E	G	F	Gx			
1/16	-BU-S1	31.5	8.6	1.3	7.9	7.9	7.9	5.2	3.0	-100-61
1/8	-BU-S2	51.3	12.7	2.3	11.1	12.7	12.7	8.3	12.7	-200-61
3/16	-BU-S3	53.6	13.7	3.0	12.7	14.3	14.3	9.9	12.7	-300-61
1/4	-BU-S4	57.7	15.2	4.8	14.3	15.9	15.9	11.5	10.2	-400-61
5/16	-BU-S5	60.7	16.3	6.4	15.9	17.5	17.5	13.1	11.2	-500-61
3/8	-BU-S6	62.2	16.8	7.1	17.5	19.1	19.1	14.7	11.2	-600-61
1/2	-BU-S8	71.1	22.9	10.4	22.2	23.8	23.8	19.4	12.7	-800-61
5/8	-BU-S10	72.6	24.4	12.7	25.4	27.0	27.0	22.6	12.7	-1010-61
3/4	-BU-S12	79.0	24.4	15.7	28.6	30.2	30.2	25.8	16.8	-1210-61
7/8	-BU-S14	84.6	25.9	18.3	31.8	33.3	34.9	29.0	19.1	-1410-61
1	-BU-S16	95.8	31.2	22.4	38.1	41.3	41.3	33.7	19.1	-1610-61
1 1/4	-BU-S20	123.2	41.1	27.8	47.6	47.6	47.6	41.7	19.1	-2000-61
1 1/2	-BU-S24	139.2	50.0	34.0	57.2	57.2	57.2	49.6	19.1	-2400-61

Metric Tube		Dimension, mm						Panel Hole Size	Max. Panel Thickness	Interchanges with
T-Tube O.D. (mm)	Basic Ordering Number	L	C	E	G	F	Gx			
3	-BU-SM3	51.3	12.9	2.4	12	14	14	8.3	12.7	-3M0-61
4	-BU-SM4	53.6	13.7	2.4	12	14	14	9.9	12.7	-4M0-61
6	-BU-SM6	57.7	15.3	4.8	14	16	16	11.5	10.2	-6M0-61
8	-BU-SM8	61.0	16.2	6.4	16	18	18	13.1	11.2	-8M0-61
10	-BU-SM10	62.7	17.2	7.9	19	22	22	16.3	11.2	-10M0-61
12	-BU-SM12	71.0	22.8	9.5	22	24	24	19.5	12.7	-12M0-61
14	-BU-SM14	72.5	24.4	11.1	25	27	27	22.5	12.7	-14M0-61
15	-BU-SM15	72.5	24.4	11.9	25	27	27	22.8	12.7	-15M0-61
16	-BU-SM16	72.5	24.4	12.7	25	27	27	22.8	12.7	-16M0-61
18	-BU-SM18	78.9	24.4	15.1	30	30	30	26.0	16.8	-18M0-61
20	-BU-SM20	84.5	26.0	15.9	32	35	35	29.0	19.0	-20M0-61
25	-BU-SM25	96.0	31.3	21.8	38	41	41	34.0	19.0	-25M0-61
30	-BU-SM30	124.0	39.6	26.2	50	50	50	40.5	19.0	-30M0-61
32	-BU-SM32	128.0	42.0	28.6	50	50	50	42.5	19.0	-32M0-61
38	-BU-SM38	145.0	49.4	33.7	60	60	60	50.5	19.0	-38M0-61



**Bulkhead Reducing Unions**



Fractional Tube												
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
			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	-400-61-2
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	-600-61-4
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	-810-61-4

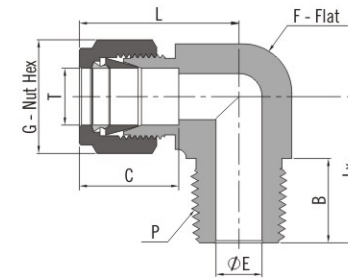
Metric Tube												
T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
			L	C	E	G	F	Cx	Gx			
6	3	-BU-SM6-SM3	55.1	15.3	2.4	14	16	12.9	12	11.5	10.2	-6M0-61-3M
8	6	-BU-SM8-SM6	60.1	16.2	4.8	16	18	15.3	14	13.1	11.2	-8M0-61-6M
12	8	-BU-SM12-SM8	67.6	22.8	6.4	22	24	16.2	16	19.5	12.7	-12M0-61-8M

**Bulkhead Conversion Unions**

Fractional Tube to Metric Tube												
T-Tube O.D. (in.)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
			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	-400-61-6M

Metric Tube to Fractional Tube												
T-Tube O.D. (mm)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							Panel Hole Size	Max. Panel Thickness	Interchanges with
			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	-6M0-61-2
6	1/4	-BU-SM6-S4	57.7	15.3	4.8	14	16	16.8	14.3	11.5	10.2	-6M0-61-4

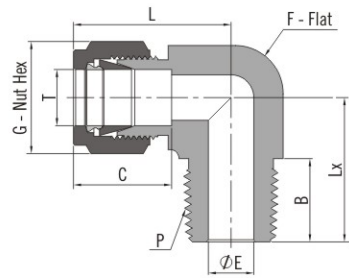
**Male Elbows**



Fractional Tube										NPT Thread	
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with	
			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	-100-2-1	
1/16	1/8	-LM-S1-NT2	19.1	8.6	7.9	11.1	1.3	9.7	17.8	-100-2-2	
1/8	1/16	-LM-S2-NT1	23.6	12.7	11.1	11.1	2.4	9.7	17.8	-200-2-1	
1/8	1/8	-LM-S2-NT2	23.6	12.7	11.1	11.1	2.4	9.7	17.8	-200-2-2	
1/8	1/4	-LM-S2-NT4	24.6	12.7	11.1	12.7	2.4	14.2	23.4	-200-2-4	
3/16	1/8	-LM-S3-NT2	25.4	13.7	12.7	12.7	3.0	9.7	18.8	-300-2-2	
3/16	1/4	-LM-S3-NT4	25.4	13.7	12.7	17.7	3.0	14.2	23.4	-300-2-4	
1/4	1/16	-LM-S4-NT1	26.9	15.2	14.3	12.7	3.0	9.7	18.8	-400-2-1	
1/4	1/8	-LM-S4-NT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8	-400-2-2	
1/4	1/4	-LM-S4-NT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4	-400-2-4	
1/4	3/8	-LM-S4-NT6	29.7	15.2	14.3	17.5	4.8	14.2	26.2	-400-2-6	
1/4	1/2	-LM-S4-NT8	31.8	15.2	14.3	20.6	4.8	19.1	33.0	-400-2-8	
5/16	1/8	-LM-S5-NT2	28.7	16.3	15.9	14.3	4.8	9.7	19.8	-500-2-2	
5/16	1/4	-LM-S5-NT4	28.7	16.3	15.9	14.3	6.4	14.2	24.4	-500-2-4	
5/16	3/8	-LM-S5-NT6	30.5	16.3	15.9	17.5	6.4	14.2	26.2	-500-2-6	
3/8	1/8	-LM-S6-NT2	30.5	16.8	17.5	15.9	4.8	9.7	20.8	-600-2-2	
3/8	1/4	-LM-S6-NT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4	-600-2-4	
3/8	3/8	-LM-S6-NT6	31.2	16.8	17.5	17.5	7.1	14.2	26.2	-600-2-6	
3/8	1/2	-LM-S6-NT8	33.3	16.8	17.5	20.6	7.1	19.1	33.0	-600-2-8	
3/8	3/4	-LM-S6-NT12	37.1	16.8	17.5	27.0	7.1	19.1	36.8	-600-2-12	
1/2	1/4	-LM-S8-NT4	36.1	22.9	22.2	20.6	7.1	14.2	28.2	-810-2-4	
1/2	3/8	-LM-S8-NT6	36.1	22.9	22.2	20.6	9.7	14.2	28.2	-810-2-6	
1/2	1/2	-LM-S8-NT8	36.1	22.9	22.2	20.6	10.4	19.1	33.0	-810-2-8	
1/2	3/4	-LM-S8-NT12	39.9	22.9	22.2	27.0	10.4	19.1	36.8	-810-2-12	
5/8	3/8	-LM-S10-NT6	38.1	24.4	25.4	23.8	9.7	14.2	30.2	-1010-2-6	
5/8	1/2	-LM-S10-NT8	38.1	24.4	25.4	23.8	11.9	19.1	35.1	-1010-2-8	
5/8	3/4	-LM-S10-NT12	39.9	24.4	25.4	27.0	12.7	19.1	36.8	-1010-2-12	
3/4	1/2	-LM-S12-NT8	39.9	24.4	28.6	27.0	11.9	19.1	36.8	-1210-2-8	
3/4	3/4	-LM-S12-NT12	39.9	24.4	28.6	27.0	15.7	19.1	36.8	-1210-2-12	
7/8	3/4	-LM-S14-NT12	44.7	25.9	31.8	34.9	15.7	19.1	41.7	-1410-2-12	
1	3/4	-LM-S16-NT12	49.0	31.2	38.1	34.9	15.7	19.1	41.7	-1610-2-12	
1	1	-LM-S16-NT16	49.0	31.2	38.1	34.9	22.4	23.9	46.5	-1610-2-16	
1 1/4	1 1/4	-LM-S20-NT20	66.5	41.1	47.6	42.9	27.7	23.9	52.4	-2000-2-20	
1 1/2	1 1/2	-LM-S24-NT24	78.0	50.0	57.2	50.8	34.0	26.2	60.5	-2400-2-24	

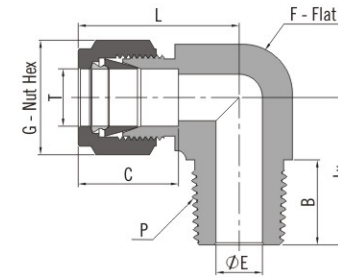
Fractional Tube										ISO Tapered Thread (RT)	
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with	
			L	C	G	F	E	B	Lx		
1/8	1/8	-LM-S2-RT2	23.6	12.7	11.1	11.1	2.4	9.7	17.8	-200-2-2RT	
1/8	1/4	-LM-S4-RT4	24.6	12.7	11.1	12.7	2.4	14.2	23.4	-200-2-4RT	
1/4	1/8	-LM-S4-RT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8	-400-2-2RT	
1/4	1/4	-LM-S4-RT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4	-400-2-4RT	
1/4	3/8	-LM-S4-RT6	29.7	15.2	14.3	17.5	4.8	14.2	26.2	-400-2-6RT	
1/4	1/2	-LM-S4-RT8	31.8	15.2	14.3	20.6	4.8	19.1	33.0	-400-2-8RT	
5/16	1/4	-LM-S5-RT4	28.7	16.3	15.9	14.3	6.4	14.2	24.4	-500-2-4RT	
3/8	1/8	-LM-S6-RT2	30.5	16.8	17.5	15.9	4.8	9.7	20.8	-600-2-2RT	
3/8	1/4	-LM-S6-RT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4	-600-2-4RT	
3/8	3/8	-LM-S6-RT6	31.2	16.8	17.5	17.5	7.1	14.2	26.2	-600-2-6RT	
1/2	3/8	-LM-S8-RT6	36.1	22.9	22.2	20.6	9.7	14.2	27.9	-810-2-6RT	
1/2	1/2	-LM-S8-RT8	36.1	22.9	22.2	20.6	12.0	19.1	33.0	-810-2-8RT	
3/4	1/2	-LM-S12-RT8	39.9	24.4	28.6	27.0	11.9	19.1	36.8	-1210-2-8RT	
1	1	-LM-S16-RT6	49.0	31.2	38.1	34.9	22.4	23.9	46.5	-1610-2-16RT	

Male Elbows



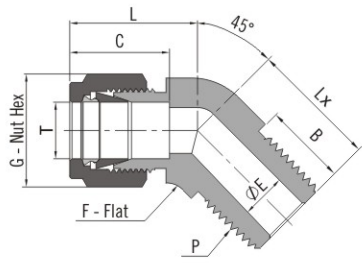
Metric Tube			NPT Thread							
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			L	C	G	F	E	B	Lx	
3	1/8	-LM-SM3-NT2	23.6	12.9	12	11.1	2.4	9.7	17.8	-3MO-2-2
3	1/4	-LM-SM3-NT4	24.6	12.9	12	12.7	2.4	14.2	23.4	-3MO-2-4
4	1/8	-LM-SM4-NT2	25.4	13.7	12	12.7	2.4	9.7	18.8	-4MO-2-2
4	1/4	-LM-SM4-NT4	25.4	13.7	12	12.7	2.4	14.2	23.4	-4MO-2-4
6	1/8	-LM-SM6-NT2	27.0	15.3	14	12.7	4.8	9.7	18.8	-6MO-2-2
6	1/4	-LM-SM6-NT4	27.0	15.3	14	12.7	4.8	14.2	23.4	-6MO-2-4
6	3/8	-LM-SM6-NT6	29.8	15.3	14	17.5	4.8	14.2	26.2	-6MO-2-6
6	1/2	-LM-SM6-NT8	31.8	15.3	14	20.6	4.8	19.1	33.0	-6MO-2-8
8	1/8	-LM-SM8-NT2	28.8	16.2	16	14.3	4.8	9.7	19.8	-8MO-2-2
8	1/4	-LM-SM8-NT4	28.8	16.2	16	14.3	6.4	14.2	24.4	-8MO-2-4
8	3/8	-LM-SM8-NT6	30.6	16.2	16	17.5	6.4	14.2	26.2	-8MO-2-6
8	1/2	-LM-SM8-NT8	32.6	16.2	16	20.6	6.4	19.1	33.0	-8MO-2-8
10	1/8	-LM-SM10-NT2	31.5	17.2	19	17.5	4.8	9.7	21.6	-10MO-2-2
10	1/4	-LM-SM10-NT4	31.5	17.2	19	17.5	7.1	14.2	26.2	-10MO-2-4
10	3/8	-LM-SM10-NT6	31.5	17.2	19	17.5	7.9	14.2	26.2	-10MO-2-6
10	1/2	-LM-SM10-NT8	31.5	17.2	19	20.6	7.9	19.1	33.0	-10MO-2-8
12	1/8	-LM-SM12-NT2	36.0	22.8	22	20.6	4.8	9.7	23.6	-12MO-2-2
12	1/4	-LM-SM12-NT4	36.0	22.8	22	20.6	7.1	14.2	28.2	-12MO-2-4
12	3/8	-LM-SM12-NT6	36.0	22.8	22	20.6	9.5	14.2	28.2	-12MO-2-6
12	1/2	-LM-SM12-NT8	36.0	22.8	22	20.6	9.5	19.1	33.0	-12MO-2-8
12	3/4	-LM-SM12-NT12	39.8	22.8	22	27.0	9.5	19.1	36.8	-12MO-2-12
15	1/2	-LM-SM15-NT8	38.0	24.4	25	23.8	11.9	19.1	35.1	-15MO-2-8
16	1/4	-LM-SM16-NT4	38.0	24.4	25	23.8	7.1	14.2	30.2	-16MO-2-4
16	3/8	-LM-SM16-NT6	38.0	24.4	25	23.8	9.5	14.2	30.2	-16MO-2-6
16	1/2	-LM-SM16-NT8	38.0	24.4	25	23.8	11.9	19.1	35.1	-16MO-2-8
16	3/4	-LM-SM16-NT12	39.8	24.4	25	27.0	12.7	19.1	36.8	-16MO-2-12
18	1/2	-LM-SM18-NT8	39.8	24.4	30	27.0	11.9	19.1	36.8	-18MO-2-8
18	3/4	-LM-SM18-NT12	39.8	24.4	30	27.0	15.1	19.1	36.8	-18MO-2-12
20	1/2	-LM-SM20-NT8	44.6	26.0	32	34.9	11.9	19.1	41.7	-20MO-2-8
20	3/4	-LM-SM20-NT12	44.6	26.0	32	34.9	15.1	19.1	41.7	-20MO-2-12
22	3/4	-LM-SM22-NT12	44.6	26.0	32	34.9	15.9	19.1	41.7	-22MO-2-12
22	1	-LM-SM22-NT16	44.6	26.0	32	34.9	18.3	23.9	46.5	-22MO-2-16
25	3/4	-LM-SM25-NT12	49.1	31.3	38	34.9	15.9	19.0	41.7	-25MO-2-12
25	1	-LM-SM25-NT16	49.1	31.3	38	34.9	21.8	23.9	46.5	-25MO-2-16
30	1 1/4	-LM-SM30-NT20	69.9	39.6	50	42.9	26.2	23.9	53.1	-30MO-2-20
32	1 1/4	-LM-SM32-NT20	72.3	42.0	50	42.9	27.8	23.9	53.1	-32MO-2-20
38	1 1/2	-LM-SM38-NT24	84.0	49.4	60	50.8	33.7	26.2	60.4	-38MO-2-24

Male Elbows



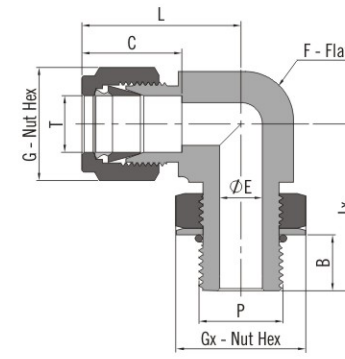
Metric Tube			SO Tapered Thread (RT)							
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			L	C	G	F	E	B	Lx	
3	1/8	-LM-SM3-RT2	23.6	12.9	12	11.1	2.4	9.7	17.8	-3MO-2-2RT
3	1/4	-LM-SM3-RT8	24.6	12.9	12	12.7	2.4	14.2	23.4	-3MO-2-4RT
4	1/8	-LM-SM4-RT2	25.4	13.7	12	12.7	2.4	9.7	18.8	-4MO-2-2RT
4	1/4	-LM-SM4-RT8	25.4	13.7	12	12.7	2.4	14.2	23.4	-4MO-2-4RT
6	1/8	-LM-SM6-RT2	27.0	15.3	14	12.7	4.8	9.7	18.8	-6MO-2-2RT
6	1/4	-LM-SM6-RT4	27.0	15.3	14	12.7	4.8	14.2	23.4	-6MO-2-4RT
6	3/8	-LM-SM6-RT6	29.8	15.3	14	17.5	4.8	14.2	26.2	-6MO-2-6RT
6	1/2	-LM-SM6-RT8	31.8	15.3	14	20.6	4.8	19.1	33.0	-6MO-2-8RT
8	1/8	-LM-SM8-RT2	28.8	16.2	16	14.3	4.8	9.7	19.8	-8MO-2-2RT
8	1/4	-LM-SM8-RT4	28.8	16.2	16	14.3	6.4	14.2	24.4	-8MO-2-4RT
8	3/8	-LM-SM8-RT6	30.6	16.2	16	17.5	6.4	14.2	26.2	-8MO-2-6RT
8	1/2	-LM-SM8-RT8	32.6	16.2	16	20.6	6.4	19.1	33.0	-8MO-2-8RT
10	1/8	-LM-SM10-RT2	31.5	17.2	19	17.5	4.8	9.7	21.6	-10MO-2-2RT
10	1/4	-LM-SM10-RT4	31.5	17.2	19	17.5	7.1	14.2	26.2	-10MO-2-4RT
10	3/8	-LM-SM10-RT6	31.5	17.2	19	17.5	7.9	14.2	26.2	-10MO-2-6RT
10	1/2	-LM-SM10-RT8	33.5	17.2	19	20.6	7.9	19.1	33.0	-10MO-2-8RT
12	1/8	-LM-SM12-RT2	36.0	22.8	22	20.6	4.8	9.7	23.6	-12MO-2-2RT
12	1/4	-LM-SM12-RT4	36.0	22.8	22	20.6	7.1	14.2	28.2	-12MO-2-4RT
12	3/8	-LM-SM12-RT6	36.0	22.8	22	20.6	9.5	14.2	28.2	-12MO-2-6RT
12	1/2	-LM-SM12-RT8	36.0	22.8	22	20.6	9.5	19.1	33.0	-12MO-2-8RT
12	3/4	-LM-SM12-RT12	39.8	22.8	22	27.0	9.5	19.1	36.8	-12MO-2-12RT
14	1/2	-LM-SM14-RT8	38.1	24.4	25	23.8	11.1	19.1	25.1	-14MO-2-8RT
15	1/2	-LM-SM15-RT8	38.1	24.4	25	23.8	11.9	19.1	25.1	-15MO-2-8RT
16	1/4	-LM-SM16-RT4	38.0	24.4	25	23.8	7.1	14.2	30.2	-16MO-2-4RT
16	3/8	-LM-SM16-RT6	38.0	24.4	25	23.8	9.5	14.2	30.2	-16MO-2-6RT
16	1/2	-LM-SM16-RT8	38.0	24.4	25	23.8	11.9	19.1	25.1	-16MO-2-8RT
16	3/4	-LM-SM16-RT12	38.0	24.4	25	27.0	12.7	19.1	36.8	-16MO-2-12RT
18	1/2	-LM-SM18-RT8	39.8	24.4	30	27.0	11.9	19.1	36.8	-18MO-2-8RT
18	3/4	-LM-SM18-RT12	39.8	24.4	30	27.0	15.1	19.1	36.8	-18MO-2-12RT
20	1/2	-LM-SM20-RT8	44.6	26.0	32	34.9	11.9	19.1	41.7	-20MO-2-8RT
20	3/4	-LM-SM20-RT12	44.6	26.0	32	34.9	15.9	19.1	41.7	-20MO-2-12RT
22	3/4	-LM-SM22-RT12	44.6	26.0	32	34.9	15.9	19.1	41.7	-22MO-2-12RT
22	1	-LM-SM22-RT16	44.6	26.0	32	34.9	18.3	23.9	46.5	-22MO-2-16RT
25	3/4	-LM-SM25-RT12	49.1	31.3	38	34.9	15.9	19.1	41.7	-25MO-2-12RT
25	1	-LM-SM25-RT16	49.1	31.3	38	34.9	21.8	23.9	46.5	-25MO-2-16RT
28	1	-LM-SM28-RT16	64.0	36.6	46	42.9	21.8	23.9	53.1	-28MO-2-16RT

45° Male Elbows



Fractional Tube			NPT Thread							
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-100-5-1
1/8	1/8	-VM-S2-NT2	20.8	12.7	11.1	11.1	2.3	9.7	16.8	-200-5-2
3/16	1/8	-VM-S3-NT2	21.6	13.7	12.7	11.1	3.0	9.7	14.7	-300-5-2
1/4	1/8	-VM-S4-NT2	24.6	15.2	14.3	12.7	4.8	9.7	16.5	-400-5-2
1/4	1/4	-VM-S4-NT4	24.6	15.2	14.3	12.7	4.8	14.2	21.1	-400-5-4
5/16	1/8	-VM-S5-NT2	26.1	16.3	15.9	14.3	4.8	9.7	16.8	-500-5-2
3/8	1/8	-VM-S6-NT2	27.9	16.8	17.5	15.9	4.8	9.7	18.3	-600-5-2
3/8	1/4	-VM-S6-NT4	27.9	16.8	17.5	15.9	7.1	14.2	22.9	-600-5-4
3/8	3/8	-VM-S6-NT6	29.2	16.8	17.5	20.6	7.1	19.1	24.1	-600-5-6
1/2	3/8	-VM-S8-NT6	32.0	22.9	22.2	20.6	9.7	19.1	24.1	-810-5-6
5/8	1/2	-VM-S10-NT8	30.7	24.4	25.4	23.8	11.9	19.1	29.7	-1010-5-8
3/4	3/4	-VM-S12-NT12	34.0	24.4	28.6	27.0	15.7	19.1	31.0	-1210-5-12
7/8	3/4	-VM-S14-NT12	40.4	25.9	31.8	31.8	15.7	19.1	32.3	-1410-5-12
1	1	-VM-S16-NT16	40.4	31.2	38.1		22.4	23.9	37.8	-1610-5-16

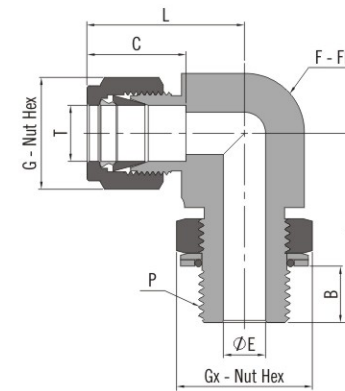
Positionable Male Elbows-SAE/MS Straight Thread



Adapts to SAE J1926-1/ISO 11926-1 straight thread boss and MS 16142 boss.

Fractional Tube			SAE/MS Straight Thread								
T-Tube O.D. (in.)	P-SAE/MS Thread Size	Basic Ordering Number	Dimension, mm							Interchanges with	
			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	-400-2-4ST
1/4	9/16-18	-LP-S4-ST9	30.5	11.2	15.2	14.3	4.8	15.9	32.3	17.5	-400-2-6ST
5/16	1/2-20	-LP-S5-ST8	30.2	9.9	16.3	15.9	5.8	14.3	29.5	15.9	-500-2-5ST
3/8	7/16-20	-LP-S6-ST7	33.3	9.9	16.8	17.5	5.1	15.9	31.5	14.3	-600-2-4ST
3/8	9/16-18	-LP-S6-ST9	32.0	11.2	16.8	17.5	7.1	15.9	32.3	17.5	-600-2-6ST
3/8	3/4-16	-LP-S6-ST12	34.8	12.7	16.8	17.5	7.1	20.6	37.8	22.2	-600-2-8ST
1/2	9/16-18	-LP-S8-ST9	37.6	11.2	22.9	22.2	7.1	20.6	37.5	17.5	-810-2-6ST
1/2	3/4-16	-LP-S8-ST12	37.6	12.7	22.9	22.2	10.4	20.6	37.8	22.2	-810-2-8ST
5/8	7/8-14	-LP-S10-ST14	39.6	14.2	24.4	25.4	12.7	23.8	43.4	25.4	-1010-2-10ST
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	-1210-2-12ST
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	-1410-2-14ST
1	1 5/16-12	-LP-S16-ST21	50.5	16.8	31.2	38.1	22.4	34.9	53.6	38.1	-1610-2-16ST
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	-2000-2-20ST
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	-2400-2-24ST

Positionable Male Elbows-ISO Parallel Thread

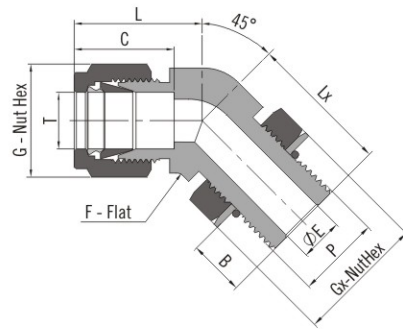


Metric Tube			NPT Thread							
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			L	C	G	F	E	B	Lx	
6	1/8	-VM-SM6-NT2	23.4	15.3	14	12.7	4.8	9.7	16.8	-6M0-5-2
6	1/4	-VM-SM6-NT4	23.4	15.3	14	12.7	4.8	14.3	21.8	-6M0-5-4
8	1/8	-VM-SM8-NT2	24.3	16.2	16	15.9	4.8	9.7	16.8	-8M0-5-2
10	1/4	-VM-SM10-NT4	26.6	17.2	19	17.5	7.9	14.3	24.1	-10M0-5-4
12	3/8	-VM-SM12-NT6	29.1	22.8	22	20.6	9.5	19.1	24.1	-12M0-5-6
12	1/2	-VM-SM12-NT8	30.7	22.8	22	20.6	9.5	19.1	29.7	-12M0-5-8
16	1/2	-VM-SM16-NT8	30.7	24.4	25	23.8	11.9	19.1	29.7	-16M0-5-8

Fractional Tube			ISO Parallel Thread(PP)								
T-Tube O.D. (in.)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							Interchanges with	
			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	-400-2-2PR
1/4	1/4	-LP-S8-PP4	29.0	9.1	15.2	14.3	4.8	15.9	32.3	19.1	-400-2-4PR
3/8	1/4	-LP-S6-PP4	30.5	9.1	16.8	17.5	5.8	15.9	32.3	19.1	-600-2-4PR
3/8	3/8	-LP-S6-PP6	33.3	9.4	16.8	17.5	7.1	20.6	37.1	22.2	-600-2-6PR
1/2	1/4	-LP-S8-PP6	36.1	9.1	22.9	22.2	5.8	20.6	35.1	19.1	-810-2-4PR
1/2	3/8	-LP-S8-PP6	36.1	9.4	22.9	22.2	7.9	20.6	37.1	22.2	-810-2-6PR
1/2	1/2	-LP-S8-PP8	38.1	13	22.9	22.2	10.4	23.8	43.4	27.0	-810-2-8PR
5/8	1/2	-LP-S10-PP8	38.1	13	24.4	25.4	11.9	23.8	43.4	27.0	-1010-2-8PR
3/4	1/2	-LP-S12-PP8	39.9	13	24.4	28.6	11.9	27.0	45.2	27.0	-1210-2-8PR
3/4	3/4	-LP-S12-PP12	39.9	13	24.4	28.6	15.7	27.0	48.8	34.9	-1210-2-12PR
1	3/4	-LP-S16-PP12	49.0	13	31.2	38.1	15.7	34.9	53.3	34.9	-1610-2-12PR
1	1	-LP-S16-PP16	49.0	14	31.2	38.1	19.8	34.9	53.6	41.3	-1610-2-16PR

Metric Tube			ISO Parallel Thread(PP)								
T-Tube O.D. (mm)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm							Interchanges with	
			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	-6M0-2-2PR
6	1/4	LP-SM6-PP4	29.0	9.1	15.3	14	4.8	15.9	32.3	19.1	-6M0-2-4PR
8	1/8	LP-SM8-PP2	28.8	8.1	16.2	16	4.0	14.3	27.4	14.3	-8M0-2-2PR
8	1/4	LP-SM8-PP4	29.9	9.1	16.2	16	5.9	15.9	32.2	19.1	-8M0-2-4PR
10	1/4	LP-SM10-PP4	33.5	9.1	17.2	19	5.9	20.6	35.0	19.1	-10M0-2-4PR
10	3/8	LP-SM10-PP6	33.5	9.4	17.2	19	7.9	20.6	37.1	22.2	-10M0-2-6PR
12	1/4	LP-SM12-PP4	36.0	9.1	22.8	22	5.9	20.6	35.0	19.1	-12M0-2-4PR
12	3/8	LP-SM12-PP6	36.0	9.4	22.8	22	7.9	20.6	37.1	22.2	-12M0-2-6PR
12	1/2	LP-SM12-PP8	36.0	13	22.8	22	9.5	23.8	43.4	27.0	-12M0-2-8PR
12	3/4	LP-SM12-PP12	36.0	13	22.8	22	9.5	27.0	48.8	34.9	-12M0-2-12PR

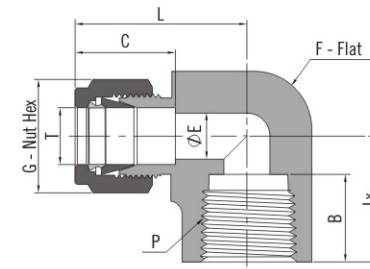
45° Positionable Male Elbows- SAE/MS Straight Thread



Adapts to SAE J1926-1/ISO 11926-1 straight thread boss and MS 16142 boss.

Fractional Tube			SAE/MS Straight Thread									
T-Tube O.D. (in.)	P- SAE/MS Thread Size	Basic Ordering Number	Dimension, mm								Interchanges with	
			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	-400-5-4ST	
3/8	9/16-18	-VP-S6-ST9	27.9	11.2	16.8	17.5	7.1	15.9	28.2	17.5	-600-5-6ST	
1/2	3/4-16	-VP-S8-ST12	32.0	12.7	22.9	22.2	10.4	20.6	32.3	22.2	-810-5-8ST	
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	-1210-5-12ST	
1	1 5/16-12	-VP-S16-ST21	47.5	16.8	31.2	38.1	22.4	34.9	50.5	38.1	-1610-5-16ST	

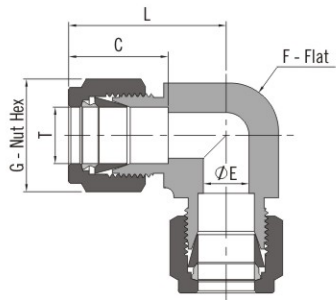
Female Elbows



Fractional Tube			NPT Thread								
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm								Interchanges with
			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	-100-8-1	
1/16	1/8	-LF-S1-NT2	20.6	10.4	8.6	7.9	1.3	14.3	19.1	-100-8-2	
1/8	1/8	-LF-S2-NT2	24.6	10.4	12.7	11.1	2.3	14.3	19.1	-200-8-2	
1/8	1/4	-LF-S2-NT4	27.4	15.0	12.7	11.1	2.3	17.5	22.4	-200-8-4	
3/16	1/8	-LF-S3-NT2	25.4	10.4	13.7	12.7	3.0	12.7	19.1	-300-8-2	
1/4	1/8	-LF-S4-NT2	26.9	10.4	15.2	14.3	4.8	14.3	19.1	-400-8-2	
1/4	1/4	-LF-S4-NT4	29.7	15.0	15.2	14.3	4.8	17.5	22.4	-400-8-4	
1/4	3/8	-LF-S4-NT6	31.8	15.0	15.2	14.3	4.8	20.6	22.4	-400-8-6	
1/4	1/2	-LF-S4-NT8	34.5	19.8	15.2	14.3	4.8	25.4	28.4	-400-8-8	
5/16	1/8	-LF-S5-NT2	28.7	10.4	16.2	15.9	6.4	14.3	19.1	-500-8-2	
5/16	1/4	-LF-S5-NT4	30.5	15.0	16.2	15.9	6.4	17.5	22.4	-500-8-4	
3/8	1/8	-LF-S6-NT2	30.5	10.4	16.8	17.5	7.1	20.6	19.1	-600-8-2	
3/8	1/4	-LF-S6-NT4	31.2	15.0	16.8	17.5	7.1	25.4	22.4	-600-8-4	
3/8	3/8	-LF-S6-NT6	33.3	15.0	16.8	17.5	7.1	23.8	22.4	-600-8-6	
3/8	1/2	-LF-S6-NT8	36.1	19.8	16.8	17.5	7.1	27.0	28.4	-600-8-8	
1/2	1/4	-LF-S8-NT4	36.1	15.0	22.9	22.2	10.4	20.6	22.4	-810-8-4	
1/2	3/8	-LF-S8-NT6	36.1	15.0	22.9	22.2	10.4	22.2	22.4	-810-8-6	
1/2	1/2	-LF-S8-NT8	38.9	19.8	22.9	22.2	10.4	27.0	28.4	-810-8-8	
5/8	3/8	-LF-S10-NT6	38.1	15.0	24.4	25.4	12.7	22.2	22.4	-1010-8-6	
5/8	1/2	-LF-S10-NT8	39.9	19.8	24.4	25.4	12.7	27.0	28.4	-1010-8-8	
3/4	1/2	-LF-S12-NT8	39.9	19.8	24.4	28.6	15.7	27.0	28.4	-1210-8-8	
3/4	3/4	-LF-S12-NT12	44.7	20.6	24.4	28.6	15.7	34.9	31.8	-1210-8-12	
7/8	3/4	-LF-S14-NT12	44.7	20.6	25.9	31.8	18.3	34.9	31.8	-1410-8-12	
1	3/4	-LF-S16-NT12	49.0	20.6	31.2	38.1	22.4	34.9	31.8	-1610-8-12	
1	1	-LF-S16-NT16	50.3	25.4	31.2	38.1	22.4	42.9	38.1	-1610-8-16	

Metric Tube			NPT Thread								
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm								Interchanges with
			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	-6M0-8-2	
6	1/4	-LF-SM6-NT4	29.8	15.0	15.3	14	4.8	17.5	22.4	-6M0-8-4	
8	1/8	-LF-SM8-NT2	28.8	10.4	16.2	16	4.8	14.3	19.1	-8M0-8-2	
8	1/4	-LF-SM8-NT4	30.6	15.0	16.2	16	6.4	17.5	22.4	-8M0-8-4	
10	1/4	-LF-SM10-NT4	33.5	15.0	17.2	19	7.9	20.6	22.4	-10M0-8-4	
10	3/8	-LF-SM10-NT6	33.5	15.0	17.2	19	7.9	20.6	22.4	-10M0-8-6	
10	1/2	-LF-SM10-NT8	36.6	19.8	17.2	19	7.9	25.4	28.5	-10M0-8-8	
12	1/4	-LF-SM12-NT4	36.0	15.0	22.8	22	7.9	20.6	22.4	-12M0-8-4	
12	3/8	-LF-SM12-NT6	36.0	15.0	22.8	22	9.5	20.6	22.4	-12M0-8-6	
12	1/2	-LF-SM12-NT8	39.8	19.8	22.8	22	9.5	25.4	28.4	-12M0-8-8	
16	3/8	-LF-SM16-NT6	39.5	15.0	24.4	25	9.5	27.0	23.6	-16M0-8-6	
16	1/2	-LF-SM16-NT8	39.5	19.8	24.4	25	12.7	27.0	28.5	-16M0-8-8	

Union Elbow Elbows



Fractional Tube

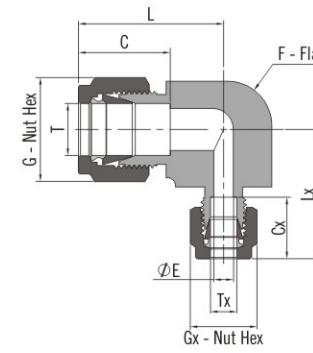
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm					Interchanges with
		L	C	G	F	E	
1/16	-LU-S1	17.8	8.6	7.9	9.5	1.3	-100-9
1/8	-LU-S2	22.4	12.7	11.1	9.5	2.3	-200-9
3/16	-LU-S3	25.4	13.7	12.7	12.7	3.0	-300-9
1/4	-LU-S4	26.9	15.2	14.3	12.7	4.8	-400-9
5/16	-LU-S5	28.7	16.3	15.9	14.3	6.4	-500-9
3/8	-LU-S6	30.5	16.8	17.5	15.9	7.1	-600-9
1/2	-LU-S8	36.1	22.9	22.2	20.6	10.4	-810-9
5/8	-LU-S10	38.1	24.4	25.4	23.8	12.7	-1010-9
3/4	-LU-S12	39.9	24.4	28.6	27.0	15.7	-1210-9
7/8	-LU-S14	44.7	25.9	31.8	34.9	18.3	-1410-9
1	-LU-S16	49.0	31.2	38.1	34.9	22.4	-1610-9
1 1/8	-LU-S18	55.1	31.2	41.3	42.9	24.6	-1810-9
1 1/4	-LU-S20	66.5	41.1	47.6	42.9	27.7	-2000-9
1 1/2	-LU-S24	78.0	50.0	57.2	50.8	34.0	-2400-9

Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm					Interchanges with
		L	C	G	F	E	
3	-LU-SM3	22.3	12.9	12	9.5	2.4	-3M0-9
4	-LU-SM4	25.4	13.7	12	12.7	2.4	-4M0-9
6	-LU-SM6	27.0	15.3	14	12.7	4.8	-6M0-9
8	-LU-SM8	28.8	16.2	16	14.3	6.4	-8M0-9
10	-LU-SM10	31.5	17.2	19	17.5	7.9	-10M0-9
12	-LU-SM12	36.0	22.8	22	20.6	9.5	-12M0-9
14	-LU-SM14	38	24.4	25	23.8	11	-14M0-9
15	-LU-SM15	38.8	24.4	25	23.8	11.9	-15M0-9
16	-LU-SM16	38.8	24.4	25	23.8	12.7	-16M0-9
18	-LU-SM18	39.8	24.4	30	27.0	15.1	-18M0-9
20	-LU-SM20	44.6	26.0	32	34.9	15.9	-20M0-9
22	-LU-SM22	44.6	26.0	32	34.9	18.3	-22M0-9
25	-LU-SM25	49.1	31.3	38	34.9	21.8	-25M0-9
28	-LU-SM28	64.0	36.6	46	42.9	21.8	-28M0-9
30	-LU-SM30	69.9	39.6	50	42.9	26.2	-30M0-9
32	-LU-SM32	72.3	42.0	50	42.9	28.6	-32M0-9
38	-LU-SM38	84.0	49.4	60	50.8	33.7	-38M0-9

NPT Thread

Union Reducing Elbow



Fractional Tube

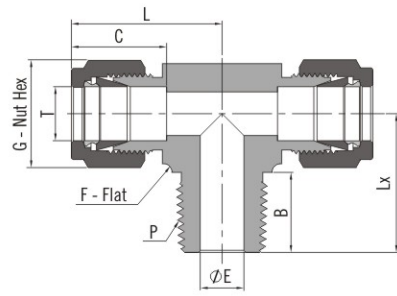
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm							Interchanges with	
			L	C	G	F	E	Cx	Gx		Lx
3/16	1/8	-LU-S3-S2	25.4	13.7	12.7	12.7	2.3	12.7	11.1	24.7	-300-9-2
1/4	1/8	-LU-S4-S2	26.9	15.2	14.3	12.7	2.3	12.7	11.1	25.4	-400-9-2
5/16	1/8	-LU-S5-S2	29.7	16.3	15.9	15.9	2.3	12.7	11.1	26.4	-500-9-2
5/16	1/4	-LU-S5-S4	29.7	16.3	15.9	15.9	4.8	15.2	14.3	29.0	-500-9-4
3/8	1/8	-LU-S6-S2	30.5	16.8	17.5	15.9	2.3	12.7	11.1	26.4	-600-9-2
3/8	1/4	-LU-S6-S4	30.5	16.8	17.5	15.9	4.8	15.2	14.3	29	-600-9-4
3/8	5/16	-LU-S6-S5	30.5	16.8	17.5	15.9	6.4	16.3	15.9	29.7	-600-9-5
1/2	1/4	-LU-S8-S4	36.1	22.9	22.2	20.6	4.8	15.2	14.3	32.2	-810-9-4
1/2	5/16	-LU-S8-S5	36.1	22.9	22.2	20.6	6.4	16.3	15.9	32.5	-810-9-5
1/2	3/8	-LU-S8-S6	36.1	22.9	22.2	20.6	7.1	16.8	17.5	33.6	-810-9-6
5/8	3/8	-LU-S10-S6	38.1	24.4	25.4	23.8	7.1	16.8	17.5	35.6	-1010-9-6
5/8	1/2	-LU-S10-S8	38.1	24.4	25.4	23.8	10.4	22.9	22.2	38.1	-1010-9-8
3/4	1/4	-LU-S12-S4	39.9	24.4	28.6	27.0	4.8	15.2	14.3	35.9	-1210-9-4
3/4	3/8	-LU-S12-S6	39.9	24.4	28.6	27.0	7.1	16.8	17.5	37.4	-1210-9-6
3/4	1/2	-LU-S12-S8	39.9	24.4	28.6	27.0	10.4	22.9	22.2	39.9	-1210-9-8
7/8	1/4	-LU-S14-S4	44.7	25.9	31.8	34.9	4.8	15.2	14.3	40.7	-1410-9-4
1	1/2	-LU-S16-S8	49	31.2	38.1	34.9	10.4	22.9	22.2	44.4	-1610-9-8
1	3/4	-LU-S16-S12	49	31.2	38.1	34.9	15.7	24.4	28.6	44.4	-1610-9-12

SAE/MS Straight Thread

Metric Tube

T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm							Interchanges with	
			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	-8M0-9-6M
10	8	-LU-SM10-SM8	31.5	17.2	19	17.5	6.4	16.2	16	30.5	-10M0-9-8M
12	8	-LU-SM12-SM8	36.0	22.8	22	20.6	6.4	16.2	16	32.6	-12M0-9-8M
14	8	-LU-SM14-SM8	38.8	24.4	25	23.9	6.4	16.2	16	35.4	-14M0-9-8M
14	10	-LU-SM14-SM10	38.8	24.4	25	23.8	7.9	17.2	19	36.4	-14M0-9-10M

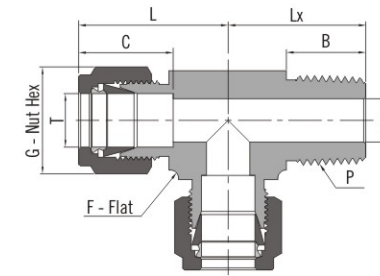
Male Branch Tees



Fractional Tube			NPT Thread							
T-Tube O.D. (in.)	P-NPT Size (in.)	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-200-3TMT
1/8	1/4	-TTM-S2-NT4	24.6	12.7	11.1	12.7	2.3	14.2	23.4	-200-4TMT
3/16	1/8	-TTM-S3-NT2	24.4	13.7	12.7	11.1	3.0	9.7	17.8	-300-3TMT
1/4	1/8	-TTM-S4-NT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8	-400-3TMT
1/4	1/4	-TTM-S4-NT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4	-400-4TMT
5/16	1/8	-TTM-S5-NT2	29.7	16.3	15.9	15.9	4.8	9.7	20.8	-500-3TMT
5/16	1/4	-TTM-S5-NT4	29.7	16.3	15.9	15.9	6.4	14.2	25.7	-500-4TMT
3/8	1/4	-TTM-S6-NT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4	-600-3TMT
3/8	3/8	-TTM-S6-NT6	33.3	16.8	17.5	20.6	7.1	14.2	28.2	-600-6TMT
1/2	3/8	-TTM-S8-NT6	36.1	22.9	22.2	20.6	9.7	14.2	28.2	-810-3TMT
1/2	1/2	-TTM-S8-NT8	36.1	22.9	22.2	20.6	10.4	19.1	33.0	-810-8TMT
5/8	1/2	-TTM-S10-NT8	38.9	24.4	25.4	25.4	11.9	19.1	35.8	-1010-3TMT
3/4	3/4	-TTM-S12-NT12	39.9	24.4	28.6	27.0	15.7	19.1	36.8	-1210-3TMT
7/8	3/4	-TTM-S14-NT12	44.7	25.9	31.8	33.3	15.7	19.1	38.1	-1410-12TMT
1	3/4	-TTM-S16-NT12	49.3	31.2	38.1	33.3	15.7	19.1	42.2	-1610-12TMT
1	1	-TTM-S16-NT16	49.3	31.2	38.1	34.9	22.4	23.9	46.7	-1610-3TMT

Metric Tube			NPT Thread							
T-Tube O.D. (mm)	P-NPT Size (in.)	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-6M0-3TMT
6	1/4	-TTM-SM6-NT4	27.0	15.3	14	12.7	4.8	14.2	23.4	-6M0-4TMT
8	1/8	-TTM-SM8-NT2	29.9	16.2	16	15.9	4.8	9.7	20.8	-8M0-3TMT
8	1/4	-TTM-SM8-NT4	29.9	16.2	16	15.9	6.4	14.2	25.4	-8M0-4TMT
10	1/4	-TTM-SM10-NT4	33.5	17.2	19	20.6	7.9	14.2	28.2	-10M0-3TMT
10	3/8	-TTM-SM10-NT6	33.5	17.2	19	20.6	7.9	14.2	28.2	-10M0-6TMT
12	1/4	-TTM-SM12-NT4	36.0	22.8	22	20.6	7.9	14.2	28.2	-12M0-4TMT
12	3/8	-TTM-SM12-NT6	36.0	22.8	22	20.6	9.5	14.2	28.2	-12M0-3TMT
12	1/2	-TTM-SM12-NT8	36.0	22.8	22	20.6	9.5	19.1	33.0	-12M0-8TMT
16	1/2	-TTM-SM16-NT8	38.8	24.4	25	25.4	11.9	19.1	35.8	-16M0-3TMT

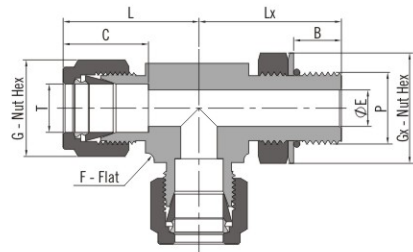
Male Run Tees



Fractional Tube			NPT Thread							
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-200-3TMT
1/8	1/4	-TTM-S2-NT4	24.6	12.7	11.1	12.7	2.3	14.2	23.4	-200-3-4TMT
3/16	1/8	-TTM-S3-NT2	24.4	13.7	12.7	12.7	3.0	9.7	17.8	-300-3TMT
1/4	1/8	-TTM-S4-NT2	26.9	15.2	14.3	12.7	4.8	9.7	18.8	-400-3TMT
1/4	1/4	-TTM-S4-NT4	26.9	15.2	14.3	12.7	4.8	14.2	23.4	-400-3-4TMT
5/16	1/8	-TTM-S5-NT2	29.7	16.3	15.9	15.9	4.8	9.7	20.8	-500-3TMT
5/16	1/4	-TTM-S5-NT4	29.7	16.3	15.9	15.9	6.4	14.2	25.7	-500-3-4TMT
3/8	1/4	-TTM-S6-NT4	30.5	16.8	17.5	15.9	7.1	14.2	25.4	-600-3TMT
3/8	3/8	-TTM-S6-NT6	33.3	16.8	17.5	20.6	7.1	14.2	28.2	-600-3-6TMT
1/2	3/8	-TTM-S8-NT6	36.1	22.9	22.2	20.6	9.7	14.2	28.2	-810-3TMT
1/2	1/2	-TTM-S8-NT8	36.1	22.9	22.2	20.6	10.4	19.1	33.0	-810-3-8TMT
5/8	1/2	-TTM-S10-NT8	38.1	24.4	25.4	23.8	11.9	19.1	35.8	-1010-3TMT
3/4	3/4	-TTM-S12-NT12	39.9	24.4	28.6	27.0	15.7	19.1	36.8	-1210-3TMT
7/8	3/4	-TTM-S14-NT12	44.7	25.9	31.8	33.3	15.7	19.1	38.1	-1410-3-12TMT
1	3/4	-TTM-S16-NT12	49.3	31.2	38.1	33.3	15.7	19.1	42.2	-1610-3-12TMT
1	1	-TTM-S16-NT16	49.3	31.2	38.1	34.9	22.4	23.9	46.7	-1610-3TMT

Metric Tube			NPT Thread							
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-6M0-3TMT
6	1/4	-TTM-SM6-NT4	27.0	15.3	14	12.7	4.8	14.2	23.4	-6M0-3-4TMT
8	1/8	-TTM-SM8-NT2	29.9	16.2	16	15.9	4.8	9.7	20.8	-8M0-3TMT
8	1/4	-TTM-SM8-NT4	29.9	16.2	16	15.9	6.4	14.2	25.4	-8M0-3-4TMT
10	1/4	-TTM-SM10-NT4	33.5	17.2	19	20.6	7.9	14.2	28.2	-10M0-3TMT
10	3/8	-TTM-SM10-NT6	33.5	17.2	19	20.6	7.9	14.2	28.2	-10M0-3-6TMT
12	1/4	-TTM-SM12-NT4	36.0	22.8	22	20.6	7.9	14.2	28.2	-12M0-3-4TMT
12	3/8	-TTM-SM12-NT6	36.0	22.8	22	20.6	9.5	14.2	28.2	-12M0-3TMT
12	1/2	-TTM-SM12-NT8	36.0	22.8	22	20.6	9.5	19.1	33.0	-12M0-3-8TMT
16	1/2	-TTM-SM16-NT8	38.0	24.4	25	23.8	11.9	19.1	35.0	-16M0-3TMT

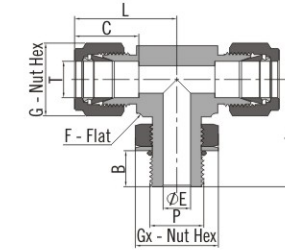
**Positionable Male Run Tees -SAE/MS Threads**



Adapts to SAE J1926-1/ISO 11926-1 straight thread boss and MS 16142 boss.

Fractional Tube			SAE/MS Straight Thread								Inter-changes with
T-Tube O.D. (in.)	P-SAE/MS Thread	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	-400-3TST
3/8	9/16-18	-TPT-S6-ST9	32.0	11.2	16.8	7.1	17.5	15.9	32.3	17.5	-600-3TST
1/2	3/4-16	-TPT-S8-ST12	37.6	12.7	22.9	10.4	22.2	20.6	37.8	22.2	-810-3TST
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	-1210-3TST
1	1 5/16-12	-TPT-S16-ST21	50.5	16.8	31.2	22.4	38.1	34.9	53.6	38.1	-1610-3TST
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	-2000-3TST
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	-2400-3TST

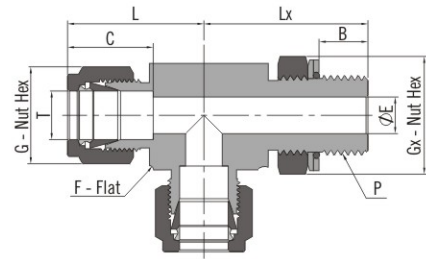
**Positionable Male Branch Tees - SAE/MS Threads**



Adapts to SAE J1926-1/ISO 11926-1 straight thread boss and MS 16142 boss.

Fractional Tube			SAE/MS Straight Thread								Inter-changes with
T-Tube O.D. (in.)	P-SAE/MS Thread	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	-400-3TST
3/8	9/16-18	-TTP-S6-ST9	32.0	11.2	16.8	7.1	17.5	13.9	32.3	17.5	-600-3TST
1/2	3/4-16	-TTP-S8-ST12	37.6	12.7	22.9	10.4	22.2	20.6	37.8	22.2	-810-3TST
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	-1210-3TST
1	1 5/16-12	-TTP-S16-ST21	50.5	16.8	31.2	22.4	38.1	34.9	53.6	38.1	-1610-3TST
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	-2000-3TST
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	-2400-3TST

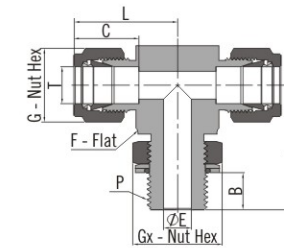
**Positionable Male Run Tees-ISO Parallel Threads**



Fractional Tube			ISO Parallel Thread(PP)								Inter-changes with
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	-400-3TRT
1/4	1/4	-TPT-S4-PP4	29.0	9.1	15.2	4.8	14.3	15.9	32.3	19.1	-400-3-4TRT
3/8	1/4	-TPT-S6-PP4	30.5	9.1	16.8	5.8	17.5	15.9	32.3	19.1	-600-3TRT
1/2	3/8	-TPT-S8-PP6	36.1	9.4	22.9	7.9	22.2	20.6	37.1	22.2	-810-3TRT
1/2	1/4	-TPT-S8-PP8	38.1	13.0	22.9	10.4	22.2	23.8	43.4	27.0	-810-3-8TRT
5/8	1/4	-TPT-S10-PP8	38.1	13.0	24.4	11.9	25.4	23.8	43.4	27.0	-1010-3TRT
3/4	1/4	-TPT-S12-PP8	39.9	13.0	24.4	11.9	28.6	27.0	45.2	34.9	-1210-3-8TRT
3/4	3/4	-TPT-S12-PP12	39.9	13.0	24.4	15.7	28.6	27.0	48.8	27.0	-1210-3TRT
1	1	-TPT-S16-PP16	49.0	14.0	31.2	19.8	38.1	34.9	53.6	41.3	-1610-3TRT

Metric Tube			ISO Parallel Thread(PP)								Inter-changes with
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	-6M0-3TRT
6	1/4	-TPT-SM6-PP4	29.0	9.1	15.3	4.8	14	15.9	32.3	19.1	-6M0-3-4TRT
8	1/8	-TPT-SM8-PP2	28.8	8.1	16.2	4.0	16	14.3	27.5	14.3	-8M0-3TRT
8	1/4	-TPT-SM8-PP4	29.9	9.1	16.2	6.4	16	15.9	32.2	19.1	-8M0-3-4TRT
10	1/4	-TPT-SM10-PP4	33.5	9.1	17.2	5.9	19	20.6	35.1	19.1	-10M0-3TRT
12	3/8	-TPT-SM12-PP6	36.0	9.4	22.8	7.9	22	20.6	37.1	22.2	-12M0-3TRT
12	1/2	-TPT-SM12-PP8	38.0	13.0	22.8	9.5	22	23.8	43.5	27.0	-12M0-3-8TRT

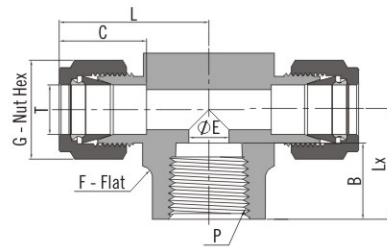
**Positionable Male Branch Tees-ISO Parallel Threads**



Fractional Tube			ISO Parallel Thread(PP)								Inter-changes with
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	-400-3TRT
1/4	1/4	-TTP-S4-PP4	29.0	9.1	15.2	4.8	14.3	15.9	32.3	19.1	-400-3-4TRT
3/8	1/4	-TTP-S6-PP4	30.5	9.1	16.8	5.8	17.5	15.9	32.3	19.1	-600-3TRT
1/2	3/8	-TTP-S8-PP6	36.1	9.4	22.9	7.9	22.2	20.6	37.1	22.2	-810-3TRT
1/2	1/2	-TTP-S8-PP8	38.1	13.4	22.9	10.4	22.2	23.8	43.4	27.0	-810-3-8TRT
5/8	1/2	-TTP-S10-PP8	38.1	13.0	24.4	11.9	25.4	23.8	43.4	27.0	-1010-3TRT
3/4	1/2	-TTP-S12-PP8	39.9	13.0	24.4	11.9	28.6	27.0	45.2	34.9	-1210-3-8TRT
3/4	3/4	-TTP-S12-PP12	39.9	13.0	24.4	15.7	28.6	27.0	48.8	27.0	-1210-3TRT
1	1	-TTP-S16-PP16	49.0	19.0	31.2	19.8	38.1	34.9	53.6	41.3	-1610-3TRT

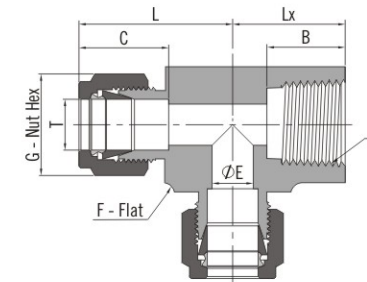
Metric Tube			ISO Parallel Thread(PP)								Inter-changes with
T-Tube O.D. (in.)	P-ISO Parallel Thread Size	Basic Ordering Number	Dimension, mm								
			L	B	C	E	G	F	Lx	Gx	
6	1/8	-TPT-SM6-PP2	27.0	8.1	15.3	4.0	14	12.7	26.4	14.3	-6M0-3TRT
6	1/4	-TPT-SM6-PP4	29.0	9.1	15.3	4.8	14	15.9	32.3	19.1	-6M0-3-4TRT
8	1/8	-TPT-SM8-PP2	28.8	8.1	16.2	4.0	16	14.3	27.5	14.3	-8M0-3TRT
8	1/4	-TPT-SM8-PP4	29.9	9.1	16.2	5.9	16	15.9	32.2	19.1	-8M0-3-4TRT
10	1/4	-TPT-SM10-PP4	33.5	9.1	17.2	5.9	19	20.6	35.1	19.1	-10M0-3TRT
12	3/8	-TPT-SM12-PP6	36.0	9.4	22.8	7.9	22	20.6	37.1	22.2	-12M0-3TRT
12	1/2	-TPT-SM12-PP8	38.0	13.0	22.8	9.5	22	23.8	43.5	27.0	-12M0-3-8TRT

Female Branch Tees



Fractional Tube			NPT Thread							
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-200-3TFT
3/16	1/8	-TTF-S3-NT2	25.7	13.7	12.7	12.7	3.0	10.4	19.1	-300-3TFT
1/4	1/8	-TTF-S4-NT2	26.9	15.2	14.3	12.7	4.8	10.4	19.1	-400-3TFT
1/4	1/4	-TTF-S4-NT4	29.7	15.2	14.3	17.5	4.8	15.0	22.4	-400-3-4TFT
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	-600-3TFT
3/8	3/8	-TTF-S6-NT6	33.3	16.8	17.5	20.6	7.1	15.0	22.4	-600-3-6TFT
3/8	1/2	-TTF-S6-NT8	36.1	16.8	17.5	24.4	7.1	19.8	28.4	-600-3-8TFT
1/2	1/4	-TTF-S8-NT4	36.1	22.9	22.2	20.6	10.4	15.0	22.4	-810-3-4TFT
1/2	3/8	-TTF-S8-NT6	36.1	22.9	22.2	20.6	10.4	15.0	22.4	-810-3TFT
1/2	1/2	-TTF-S8-NT8	38.9	22.9	22.2	25.4	10.4	19.8	28.4	-810-3-8TFT
5/8	1/2	-TTF-S10-NT8	38.9	24.4	25.4	25.4	12.7	19.8	28.4	-1010-3TFT
3/4	3/4	-TTF-S12-NT12	44.7	24.4	28.6	34.9	15.7	20.6	31.8	-1210-3TFT
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	-1610-3-12TFT
1	1	-TTF-S16-NT16	50.3	31.2	38.1	42.9	22.4	25.4	38.1	-1610-3TFT

Female Run Tees



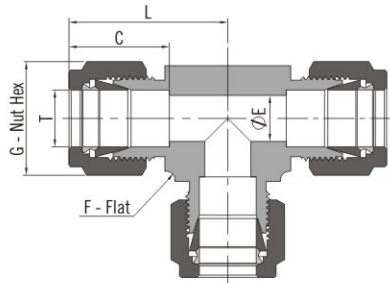
Fractional Tube			NPT Thread							
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			L	C	G	F	E	B	Lx	
1/8	1/8	-TFT-S2-NT2	24.6	12.7	11.1	12.7	2.3	10.4	19.1	-200-3TFT
3/16	1/8	-TFT-S3-NT2	25.7	13.7	12.7	12.7	3.0	10.4	19.1	-300-3TFT
1/4	1/8	-TFT-S4-NT2	26.9	15.2	14.3	12.7	4.8	10.4	19.1	-400-3TFT
1/4	1/4	-TFT-S4-NT4	29.7	15.2	14.3	17.5	4.8	15.0	22.4	-400-4TFT
5/16	1/8	-TFT-S5-NT2	29.7	16.2	15.9	15.9	6.4	10.4	19.1	-500-3TFT
3/8	1/4	-TFT-S6-NT4	31.2	16.8	17.5	17.5	7.1	15.0	22.4	-600-3TFT
1/2	1/4	-TFT-S8-NT4	36.1	22.9	22.2	20.6	10.4	15.0	22.4	-810-3-4TFT
1/2	3/8	-TFT-S8-NT6	36.1	22.9	22.2	20.6	10.4	15.0	22.4	-810-3TFT
1/2	1/2	-TFT-S8-NT8	39.9	22.9	22.2	27.0	10.4	19.8	28.4	-810-3-8TFT
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	-1210-3TFT
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	-1610-3-12TFT
1	1	-TFT-S16-NT16	50.3	31.2	38.1	42.9	22.4	25.4	38.1	-1610-3TFT

Metric Tube			NPT Thread							
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-6M0-3TMT
6	1/4	-TTF-SM6-NT4	29.8	15.3	14	17.5	4.8	15.0	22.4	-6M0-3-4TMT
8	1/8	-TTF-SM8-NT2	29.9	16.2	16	15.9	4.8	10.4	19.0	-8M0-3TMT
8	1/4	-TTF-SM8-NT4	31.2	16.2	16	17.5	6.4	125.0	22.4	-8M0-3-4TMT
10	1/4	-TTF-SM10-NT4	33.5	17.2	19	20.6	7.9	15.0	22.4	-10M0-3-3TMT
10	1/8	-TTF-SM12-NT2	36.0	22.8	22	20.6	6.4	10.4	22.3	-12M0-3-2TMT
12	1/4	-TTF-SM12-NT4	36.0	22.8	22	20.6	7.9	15.0	22.4	-12M0-3-4TMT
12	3/8	-TTF-SM12-NT6	36.0	22.8	22	20.6	9.5	15.0	23.1	-12M0-3TMT
12	1/2	-TTF-SM12-NT8	38.8	22.8	22	25.4	9.5	19.8	28.5	-12M0-3-8TMT
16	1/2	-TTF-SM16-NT8	38.8	24.4	25	27.0	11.9	19.8	28.4	-16M0-3TMT

Metric Tube			NPT Thread							
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm							Interchanges with
			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	-6M0-3TFT
6	1/4	-TFT-SM6-NT4	29.8	15.3	14	17.5	4.8	15.0	22.4	-6M0-3-4TFT
8	1/8	-TFT-SM8-NT2	29.9	16.2	16	15.9	4.8	10.4	19.0	-8M0-3TFT
8	1/4	-TFT-SM8-NT4	30.6	16.2	16	17.5	6.4	15.0	22.4	-8M0-3-4TFT
10	1/4	-TFT-SM10-NT4	33.5	17.2	19	20.6	7.9	15.0	22.4	-10M0-3TFT
12	1/4	-TFT-SM12-NT4	36.0	22.8	22	20.6	9.5	15.0	22.4	-12M0-3-4TFT
12	3/8	-TFT-SM12-NT6	36.0	22.8	22	20.6	9.5	15.0	23.1	-12M0-3TFT
12	1/2	-TFT-SM12-NT8	38.8	22.8	22	25.4	9.5	19.8	28.5	-12M0-3-8TFT
16	1/2	-TFT-SM16-NT8	39.8	24.4	25	27.0	11.9	19.8	28.4	-16M0-3TFT



Union Tees



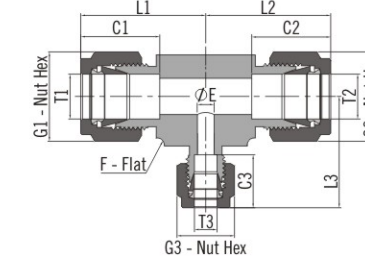
Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm					Interchanges with
		L	C	G	F	E	
1/16	-TTT-S1	17.8	8.6	7.9	9.5	1.3	-100-3
1/8	-TTT-S2	22.4	12.7	11.1	9.5	2.3	-200-3
3/16	-TTT-S3	24.4	13.7	12.7	11.1	3.0	-300-3
1/4	-TTT-S4	26.9	15.2	14.3	12.7	4.8	-400-3
5/16	-TTT-S5	29.7	16.2	15.9	15.9	6.4	-500-3
3/8	-TTT-S6	30.5	16.8	17.5	15.9	7.1	-600-3
1/2	-TTT-S8	36.1	22.9	22.2	20.6	10.4	-810-3
5/8	-TTT-S10	38.9	24.4	25.4	25.4	12.7	-1010-3
3/4	-TTT-S12	39.9	24.4	28.6	27.0	15.7	-1210-3
7/8	-TTT-S14	44.7	25.9	31.8	34.9	18.3	-1410-3
1	-TTT-S16	49.0	31.2	38.1	34.9	22.4	-1610-3
1 1/8	-TTT-S18	55.1	31.2	46.0	42.9	24.6	-1810-3
1 1/4	-TTT-S20	66.5	41.1	47.6	42.9	27.7	-2000-3
1 1/2	-TTT-S24	78.0	50.0	57.2	50.8	34.0	-2400-3

Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm					Interchanges with
		L	C	G	F	E	
2	-TTT-SM2	22.3	12.9	12	9.5	1.7	-2M0-3
3	-TTT-SM3	22.3	12.9	12	9.5	2.4	-3M0-3
4	-TTT-SM4	25.4	13.7	12	12.7	2.4	-4M0-3
6	-TTT-SM6	27.0	15.3	14	12.7	4.8	-6M0-3
8	-TTT-SM8	29.9	16.2	16	15.9	6.4	-8M0-3
10	-TTT-SM10	31.5	17.2	19	17.5	7.9	-10M0-3
12	-TTT-SM12	36.0	22.8	22	20.6	9.5	-12M0-3
14	-TTT-SM14	38.8	24.4	25	25.4	11.1	-14M0-3
15	-TTT-SM15	38.8	24.4	25	25.4	11.9	-15M0-3
16	-TTT-SM16	38.8	24.4	25	25.4	12.7	-16M0-3
18	-TTT-SM18	38.8	24.4	30	27.0	15.1	-18M0-3
20	-TTT-SM20	44.6	26.0	32	34.9	15.9	-20M0-3
22	-TTT-SM22	44.6	26.0	32	34.9	18.3	-22M0-3
25	-TTT-SM25	49.1	31.3	38	34.9	21.8	-25M0-3
28	-TTT-SM28	64.0	36.6	46	42.9	21.8	-28M0-3
30	-TTT-SM30	69.9	39.6	50	42.9	26.2	-30M0-3
32	-TTT-SM32	72.3	42.0	50	42.9	28.6	-32M0-3
38	-TTT-SM38	84.0	49.4	60	50.8	33.7	-38M0-3

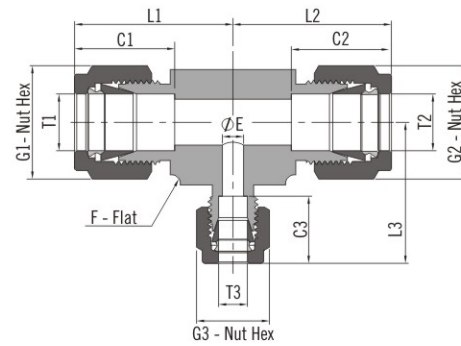
Reducing Union Tees



Fractional Tube

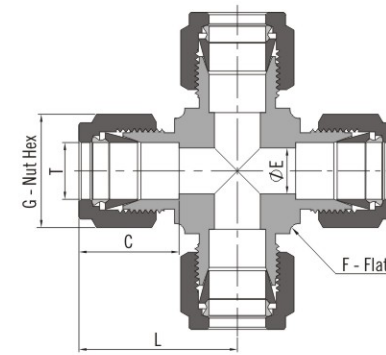
T1-Tube O.D. (in.)	T2-Tube O.D. (in.)	T3-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm											Interchanges with
				L1	L2	L3	C1	C2	C3	G1	G2	G3	F	E	
1/4	1/4	1/8	-TTT-S4-S4-S2	26.7	26.7	24.4	15.2	15.2	12.7	14.3	14.3	11.1	12.7	2.3	
3/8	1/4	1/4	-TTT-S6-S4-S4	30.5	29.0	29.0	16.8	15.2	15.2	17.5	14.3	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	-600-3-4-6
3/8	3/8	1/4	-TTT-S6-S6-S4	30.5	30.5	29.0	16.8	16.8	15.2	17.5	17.5	14.3	15.9	4.8	-600-3-6-4
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	-810-3-8-6
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	-810-3-8-4
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	-1010-3-6-6
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	-1010-3-8-6
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	-1010-3-10-6
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	39.6	36.9	24.4	16.8	16.8	28.6	17.5	17.5	27.0	7.1	-1210-3-6-6
3/4	1/2	3/8	-TTT-S12-S8-S6	39.6	39.6	36.9	24.4	22.9	16.8	28.6	22.2	17.5	27.0	7.1	-1210-3-8-6
3/4	1/2	1/2	-TTT-S12-S8-S8	39.6	39.6	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	22.8	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	-1210-3-12-6
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	-1210-3-12-8
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	44.78	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	31.8	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	17.5	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	22.2	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	25.4	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	28.6	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	-1610-3-12-6
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	31.8	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	38.1	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	-1610-3-16-6
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	-1610-3-16-8
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	-1610-3-16-12
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	-2000-3-20-16
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	-2400-3-24-16

Reducing Union Tees



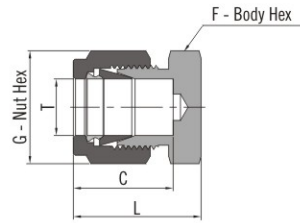
Metric Tube															
T1-Tube O.D. (mm)	T2-Tube O.D. (mm)	T3-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm											Interchanges with
				L1	L2	L3	C1	C2	C3	G1	G2	G3	F	E	
3	3	6	-TTT-SM3-SM3-SM6	24.7	24.7	27.0	12.9	12.9	15.3	12	12	14	12.7	2.4	-3M0-3-3M-6M
6	6	3	-TTT-SM6-SM6-SM3	27.0	27.0	25.4	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	30	29	16.2	16.2	15.3	16	16	14	15.9	4.8	-8M0-3-8M-6M
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	4	-TTT-SM10-SM10-SM4	31.5	31.5	30.0	17.2	17.2	15.2	19	19	14.3	17.5	4.8	-10M0-3-10M-6M
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	-12M0-3-12M-6M
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	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	-15M0-3-15M-12M
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	-16M0-3-16M-12M
16	16	12	-TTT-SM16-SM16-SM12	38.8	38.0	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	-18M0-3-18M-12M
18	18	14	-TTT-SM18-SM18-SM14	39.8	39.8	39.8	2.4	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	-22M0-3-22M-12M
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	-25M0-3-25M-12M

Union Crosses



Fractional Tube							
T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm					Interchanges with
		L	C	G	F	E	
1/8	-C-S2	22.4	12.7	11.1	9.5	2.3	-200-4
3/16	-C-S3	24.4	13.7	12.7	11.1	3.0	-300-4
1/4	-C-S4	26.9	15.2	14.3	12.7	4.8	-400-4
5/16	-C-S5	29.7	16.2	15.9	15.9	6.4	-500-4
3/8	-C-S6	30.5	16.8	17.5	15.9	7.1	-600-4
1/2	-C-S8	36.1	22.9	22.2	20.6	10.4	-810-4
5/8	-C-S10	36.3	24.4	25.4	27.0	12.7	-1010-4
3/4	-C-S12	39.9	24.4	28.6	27.0	15.7	-1210-4
7/8	-C-S14	44.7	25.9	31.8	34.9	18.3	-1410-4
1	-C-S16	49.0	31.2	38.1	34.9	22.4	-1610-4

Metric Tube							
T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm					Interchanges with
		L	C	G	F	E	
3	-C-SM3	22.3	12.9	12	9.5	2.4	-3M0-4
4	-C-SM4	25.4	13.7	12	12.7	2.4	-4M0-4
6	-C-SM6	27.0	15.3	14	12.7	4.8	-6M0-4
8	-C-SM8	29.9	16.2	16	15.9	6.4	-8M0-4
10	-C-SM10	33.5	17.2	19	20.6	7.9	-10M0-4
12	-C-SM12	36.0	22.8	22	20.6	9.5	-12M0-4
16	-C-SM16	37.0	24.4	25	23.8	12.7	-16M0-4
18	-C-SM18	38.3	24.4	30	27.0	15.1	-18M0-4
20	-C-SM20	44.6	26.0	32	34.9	15.9	-20M0-4
22	-C-SM22	44.7	26.0	32	34.9	18.3	-22M0-4
25	-C-SM25	49.2	31.3	38	34.9	21.8	-25M0-4

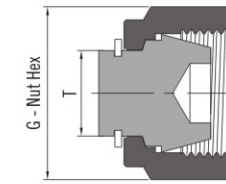


### Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm				Interchanges with
		L	C	G	F	
1/16	-TC-S1	15.0	8.6	7.9	7.9	-100-C
1/8	-TC-S2	20.1	12.7	11.1	11.1	-200-C
3/16	-TC-S3	21.3	13.7	12.7	11.1	-300-C
1/4	-TC-S4	23.4	15.2	14.3	12.7	-400-C
5/16	-TC-S5	24.4	16.3	15.9	14.3	-500-C
3/8	-TC-S6	25.7	16.8	17.5	15.9	-600-C
1/2	-TC-S8	29.2	22.9	22.2	20.6	-800-C
5/8	-TC-S10	30.0	24.4	25.4	23.8	-1010-C
3/4	-TC-S12	31.5	24.4	28.6	27.0	-1210-C
7/8	-TC-S14	34.0	25.9	31.8	30.2	-1410-C
1	-TC-S16	38.4	31.2	38.1	34.9	-1610-C
1 1/8	-TC-S18	38.4	31.2	46.0	41.3	-1810-C
1 1/4	-TC-S20	53.3	41.1	47.6	44.5	-2000-C
1 1/2	-TC-S24	64.5	50.0	57.2	54.0	-2400-C

### Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm				Interchanges with
		L	C	G	F	
2	-TC-SM2	20.1	12.9	12	12	-2M0-C
3	-TC-SM3	20.1	12.9	12	12	-3M0-C
4	-TC-SM4	21.3	13.7	12	12	-4M0-C
6	-TC-SM6	23.1	15.3	14	14	-6M0-C
8	-TC-SM8	24.5	16.2	16	15	-8M0-C
10	-TC-SM10	26.6	17.2	19	18	-10M0-C
12	-TC-SM12	29.1	22.8	22	22	-12M0-C
14	-TC-SM14	29.9	24.4	25	24	-14M0-C
15	-TC-SM15	29.9	24.4	25	24	-15M0-C
16	-TC-SM16	29.9	24.4	25	24	-16M0-C
18	-TC-SM18	31.4	24.4	30	27	-18M0-C
20	-TC-SM20	34.0	26.0	32	30	-20M0-C
22	-TC-SM22	34.0	26.0	32	30	-22M0-C
25	-TC-SM25	38.5	31.3	38	35	-25M0-C
28	-TC-SM28	48.5	36.6	46	41	-28M0-C
30	-TC-SM30	53.4	39.6	50	46	-30M0-C
32	-TC-SM32	55.8	42.0	50	46	-32M0-C
38	-TC-SM38	65.4	49.4	60	55	-38M0-C



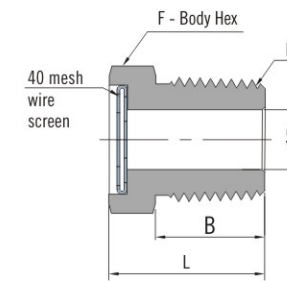
### Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	G	Interchanges with
1/16	-TP-S1	7.9	-100-P
1/8	-TP-S2	11.1	-200-P
3/16	-TP-S3	12.7	-300-P
1/4	-TP-S4	14.3	-400-P
5/16	-TP-S5	15.9	-500-P
3/8	-TP-S6	17.5	-600-P
1/2	-TP-S8	22.2	-800-P
5/8	-TP-S10	25.4	-1010-P
3/4	-TP-S12	28.6	-1210-P
7/8	-TP-S14	31.8	-1410-P
1	-TP-S16	38.1	-1610-P
1 1/4	-TP-S20	47.6	-2000-P
1 1/2	-TP-S24	57.2	-2400-P

### Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	G	Interchanges with
2	-TP-SM2	12	-2M0-P
3	-TP-SM3	12	-3M0-P
4	-TP-SM4	12	-4M0-P
6	-TP-SM6	14	-6M0-P
8	-TP-SM8	16	-8M0-P
10	-TP-SM10	19	-10M0-P
12	-TP-SM12	22	-12M0-P
14	-TP-SM14	25	-14M0-P
15	-TP-SM15	25	-15M0-P
16	-TP-SM16	25	-16M0-P
18	-TP-SM18	30	-18M0-P
20	-TP-SM20	32	-20M0-P
22	-TP-SM22	32	-22M0-P
25	-TP-SM25	38	-25M0-P
28	-TP-SM28	46	-28M0-P
30	-TP-SM30	50	-30M0-P
32	-TP-SM32	50	-32M0-P
38	-TP-SM38	60	-38M0-P

## Vent Protectors

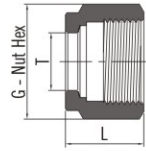


wire screen assembly

P-NPT Size	Ordering Number	Dimension, mm				Interchanges with
		L	F	B	E	
1/8	SS-NPF-NT2	14.2	12.7	9.7	4.8	SS-MD-2
1/4	SS-NPF-NT4	19.8	14.3	14.2	7.1	SS-MD-4
3/8	SS-NPF-NT6	20.6	17.5	14.2	10.4	SS-MD-6
1/2	SS-NPF-NT8	26.2	22.2	19.1	12.7	SS-MD-8
3/4	SS-NPF-NT12	26.9	27.0	19.2	18.3	SS-MD-12
1	SS-NPF-NT16	34.8	34.9	23.9	22.4	

To order brass, replace SS in the Ordering number with B  
Example: B-NPF-NT2

## Nuts



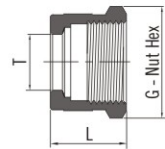
### Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	L	G	Interchanges with
1/16	-N-S1	7.9	7.9	-102-1
1/8	-N-S2	11.9	11.1	-202-1
3/16	-N-S3	11.9	12.7	-302-1
1/4	-N-S4	12.7	14.3	-402-1
5/16	-N-S5	13.5	15.9	-502-1
3/8	-N-S6	14.2	17.5	-602-1
1/2	-N-S8	17.5	22.2	-812-1
5/8	-N-S10	17.5	25.4	-1012-1
3/4	-N-S12	17.5	28.6	-1212-1
7/8	-N-S14	17.5	31.8	-1412-1
1	-N-S16	20.6	38.1	-1612-1
1 1/8	-N-S18	30.8	46.0	-1812-1
1 1/4	-N-S20	31.8	47.6	-2002-1
1 1/2	-N-S24	38.1	57.2	-2402-1

### Metric Tube

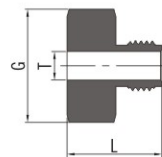
T-Tube O.D. (mm)	Basic Ordering Number	L	G	Interchanges with
2	-N-SM2	11.9	12	-2M2-1
3	-N-SM3	11.9	12	-3M2-1
4	-N-SM4	11.9	12	-4M2-1
6	-N-SM6	12.7	14	-6M2-1
8	-N-SM8	13.5	16	-8M2-1
10	-N-SM10	15.1	19	-10M2-1
12	-N-SM12	17.4	22	-12M2-1
14	-N-SM14	17.4	25	-14M2-1
15	-N-SM15	17.4	25	-15M2-1
16	-N-SM16	17.4	25	-16M2-1
18	-N-SM18	17.4	30	-18M2-1
20	-N-SM20	17.4	32	-20M2-1
22	-N-SM22	17.4	32	-22M2-1
25	-N-SM25	20.6	38	-25M2-1
28	-N-SM28	30.6	46	-28M2-1
30	-N-SM30	32.7	50	-30M2-1
32	-N-SM32	34.4	50	-32M2-1
38	-N-SM38	40.6	60	-38M2-1

## Knurled Nuts



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

## Male Nuts



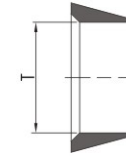
### Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	L	G	Interchanges with
1/16	-MN-S1	9.7	6.4	-1F2-1-GC
1/8	-MN-S2	13.5	9.5	-2F2-1-GC
1/4	-MN-S4	15.7	12.7	-4F2-1
1/2	-MN-S8	22.1	23.8	-8F2-1

### Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	L	G	Interchanges with
3	-MN-SM3	13.5	10	
6	-MN-SM6	15.7	14	
10	-MN-SM10	22.1	22	-10MF2-1
12	-MN-SM12	22.1	24	-12MF2-1

## Front Ferrules



### Fractional Tube

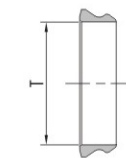
T-Tube O.D. (in.)	Basic Ordering Number	Interchanges with
1/16	-FF-S1	-103-1
1/8	-FF-S2	-203-1
3/16	-FF-S3	-303-1
1/4	-FF-S4	-403-1
5/16	-FF-S5	-503-1
3/8	-FF-S6	-603-1
1/2	-FF-S8	-813-1
5/8	-FF-S10	-1013-1
3/4	-FF-S12	-1213-1
7/8	-FF-S14	-1413-1
1	-FF-S16	-1613-1
1 1/8	-FF-S18*	-1813-1
1 1/4	-FF-S20*	-2003-1
1 1/2	-FF-S24*	-2403-1

\*Over 1 in. and 25 mm stainless steel front ferrules are silver plated.

### Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Interchanges with
2	-FF-SM2	-2M3-1
3	-FF-SM3	-3M3-1
4	-FF-SM4	-4M3-1
6	-FF-SM6	-6M3-1
8	-FF-SM8	-8M3-1
10	-FF-SM10	-10M3-1
12	-FF-SM12	-12M3-1
14	-FF-SM14	-14M3-1
15	-FF-SM15	-15M3-1
16	-FF-SM16	-16M3-1
18	-FF-SM18	-18M3-1
20	-FF-SM20	-20M3-1
22	-FF-SM22	-22M3-1
25	-FF-SM25	-25M3-1
28	-FF-SM28*	-28M3-1
30	-FF-SM30*	-30M3-1
32	-FF-SM32*	-32M3-1
38	-FF-SM38*	-38M3-1

## Rear Ferrules



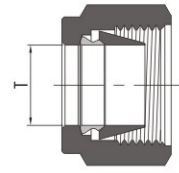
### Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	Interchanges with
1/16	-RF-S1	-104-1
1/8	-RF-S2	-204-1
3/16	-RF-S3	-304-1
1/4	-RF-S4	-404-1
5/16	-RF-S5	-504-1
3/8	-RF-S6	-604-1
1/2	-RF-S8	-814-1
5/8	-RF-S10	-1014-1
3/4	-RF-S12	-1214-1
7/8	-RF-S14	-1414-1
1	-RF-S16	-1614-1
1 1/8	-RF-S18	-1814-1
1 1/4	-RF-S20	-2004-1
1 1/2	-RF-S24	-2404-1

\*Over 1 in. and 25 mm stainless steel rear ferrules are silver plated.

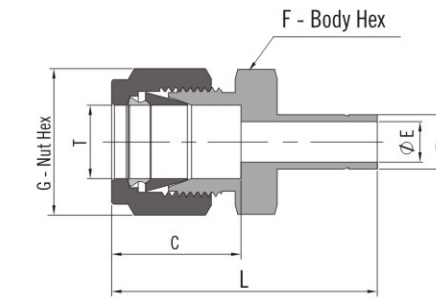
### Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Interchanges with
2	-RF-SM2	-2M4-1
3	-RF-SM3	-3M4-1
4	-RF-SM4	-4M4-1
6	-RF-SM6	-6M4-1
8	-RF-SM8	-8M4-1
10	-RF-SM10	-10M4-1
12	-RF-SM12	-12M4-1
14	-RF-SM14	-14M4-1
15	-RF-SM15	-15M4-1
16	-RF-SM16	-16M4-1
18	-RF-SM18	-18M4-1
20	-RF-SM20	-20M4-1
22	-RF-SM22	-22M4-1
25	-RF-SM25	-25M4-1
28	-RF-SM28*	-28M4-1
30	-RF-SM30*	-30M4-1
32	-RF-SM32*	-32M4-1
38	-RF-SM38*	-38M4-1

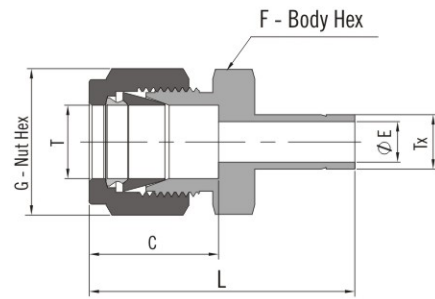


Fractional Tube		
T-Tube O.D. (in.)	Basic Ordering Number	Interchanges with
1/16	-NFR-S1	
1/8	-NFR-S2	
3/16	-NFR-S3	
1/4	-NFR-S4	-400-NFSET
5/16	-NFR-S5	
3/8	-NFR-S6	-600-NFSET
1/2	-NFR-S8	-810-NFSET
5/8	-NFR-S10	
3/4	-NFR-S12	
7/8	-NFR-S14	
1	-NFR-S16	
1 1/8	-NFR-S18	
1 1/4	-NFR-S20	
1 1/2	-NFR-S24	

Metric Tube		
T-Tube O.D. (mm)	Basic Ordering Number	Interchanges with
2	-NFR-SM2	
3	-NFR-SM3	
4	-NFR-SM4	
6	-NFR-SM6	-6MO-NFSET
8	-NFR-SM8	-8MO-NFSET
10	-NFR-SM10	-10MO-NFSET
12	-NFR-SM12	-12MO-NFSET
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	

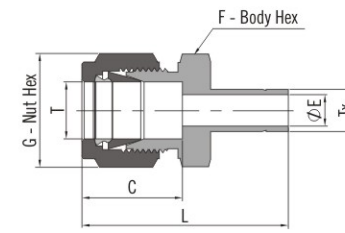


Fractional Tube		Basic Ordering Number	Dimension, mm					Interchanges with
T-Tube O.D. (in.)	Tx-Tube O.D. (in.)		L	C	G	F	E	
1/16	1/8	-R-S1-FT2	29.2	8.6	7.9	7.9	1.3	-100-R-2
1/16	3/16	-R-S1-FT3	30	8.6	7.9	7.9	1.3	-100-R-3
1/16	1/4	-R-S1-FT4	31.5	8.6	7.9	7.9	1.3	-100-R-4
1/8	1/16	-R-S2-FT1	30.0	12.7	11.1	11.1	0.8	-200-R-1
1/8	1/8	-R-S2-FT2	33.5	12.7	11.1	11.1	2.0	-200-R-2
1/8	3/16	-R-S2-FT3	34.3	12.7	11.1	11.1	2.3	-200-R-3
1/8	1/4	-R-S2-FT4	36.1	12.7	11.1	11.1	2.3	-200-R-4
1/8	3/8	-R-S2-FT6	37.6	12.7	11.1	11.1	2.3	-200-R-6
1/8	1/2	-R-S2-FT8	44.2	12.7	11.1	14.3	2.3	-200-R-8
3/16	1/8	-R-S3-FT2	34.8	13.7	12.7	11.1	2.0	-300-R-2
3/16	1/4	-R-S3-FT4	37.1	13.7	12.7	11.1	3.0	-300-R-4
1/4	1/8	-R-S4-FT2	36.8	15.2	14.3	12.7	2.0	-400-R-2
1/4	3/16	-R-S4-FT3	37.6	15.2	14.3	12.7	3.0	-400-R-3
1/4	1/4	-R-S4-FT4	39.1	15.2	14.3	12.7	4.3	-400-R-4
1/4	5/16	-R-S4-FT5	39.9	15.2	14.3	12.7	4.8	-400-R-5
1/4	3/8	-R-S4-FT6	40.6	15.2	14.3	12.7	4.8	-400-R-6
1/4	1/2	-R-S4-FT8	46.2	15.2	14.3	14.3	4.8	-400-R-8
1/4	5/8	-R-S4-FT10	48	15.2	14.3	17.5	4.8	-400-R-10
1/4	3/4	-R-S4-FT12	47.8	15.2	14.3	20.6	4.8	-400-R-12
5/16	3/8	-R-S5-FT6	41.9	16.3	15.9	14.3	6.4	-500-R-6
5/16	1/2	-R-S5-FT8	47.5	16.3	15.9	14.3	6.4	-500-R-8
3/8	1/4	-R-S6-FT4	41.4	16.8	17.5	15.9	4.3	-600-R-4
3/8	3/8	-R-S6-FT6	43.2	16.8	17.5	15.9	6.9	-600-R-6
3/8	1/2	-R-S6-FT8	48.5	16.8	17.5	15.9	7.1	-600-R-8
3/8	5/8	-R-S6-FT10	50.3	16.8	17.5	17.5	7.1	-600-R-10
3/8	3/4	-R-S6-FT12	50.3	16.8	17.5	20.6	7.1	-600-R-12
1/2	1/4	-R-S8-FT4	45.0	22.9	22.2	20.6	4.3	-810-R-4
1/2	3/8	-R-S8-FT6	46.7	22.9	22.2	20.6	6.9	-810-R-6
1/2	1/2	-R-S8-FT8	52.3	22.9	22.2	20.6	9.4	-810-R-8
1/2	5/8	-R-S8-FT10	53.8	22.9	22.2	20.6	10.4	-810-R-10
1/2	3/4	-R-S8-FT12	53.8	22.9	22.2	20.6	10.4	-810-R-12
1/2	1	-R-S8-FT16	60.2	22.9	22.2	27.0	10.4	-810-R-16
5/8	3/4	-R-S10-FT12	54.6	24.4	25.4	23.8	12.7	-1010-R-12
5/8	7/8	-R-S10-FT14	56.1	24.4	25.4	23.8	12.7	-1010-R-14
5/8	1	-R-S10-FT16	61.0	24.4	25.4	27.0	12.7	-1010-R-16
3/4	3/4	-R-S12-FT12	54.6	24.4	28.6	27.0	14.7	-1210-R-12
3/4	1	-R-S12-FT16	62.5	24.4	28.6	27.0	15.7	-1210-R-16
1	1 1/4	-R-S16-FT20	80.5	31.2	38.1	34.9	22.4	-1610-R-20
1	1 1/2	-R-S16-FT24	89.2	31.2	38.1	41.3	22.4	-1610-R-24
1	2	-R-S16-FT32	112.5	31.2	38.1	54.0	22.4	-1610-R-32
1 1/4	1 1/2	-R-S20-FT24	104.1	41.1	57.2	47.6	27.7	-2000-R-24



Metric Tube

T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm					Inter-changes with
			L	C	G	F	E	
2	3	-R-SM2-MT3	35.5	12.9	12	12	1.7	-2M0-R-3M
3	4	-R-SM3-MT4	35.0	12.9	12	12	2.4	-3M0-R-4M
3	6	-R-SM3-MT6	36.1	12.9	12	12	2.4	-3M0-R-6M
3	10	-R-SM3-MT10	38.4	12.9	12	14	2.4	-3M0-R-10M
4	6	-R-SM4-MT6	37.1	13.7	12	12	2.4	-4M0-R-6M
6	3	-R-SM6-MT3	36.9	15.3	14	14	1.9	-6M0-R-3M
6	8	-R-SM6-MT8	39.9	15.3	14	14	4.8	-6M0-R-8M
6	10	-R-SM6-MT10	40.7	15.3	14	14	4.8	-6M0-R-10M
6	12	-R-SM6-MT12	46.3	15.3	14	14	4.8	-6M0-R-12M
6	18	-R-SM6-MT18	49.6	15.3	14	22	4.8	-6M0-R-18M
8	6	-R-SM8-MT6	40.3	16.2	16	15	4.1	-8M0-R-6M
8	10	-R-SM8-MT10	42.0	16.2	16	15	6.4	-8M0-R-10M
8	12	-R-SM8-MT12	47.6	16.2	16	15	6.4	-8M0-R-12M
10	6	-R-SM10-MT6	42.4	17.2	19	18	4.1	-10M0-R-6M
10	8	-R-SM10-MT8	43.4	17.2	19	18	5.6	-10M0-R-8M
10	12	-R-SM10-MT12	49.8	17.2	19	18	7.9	-10M0-R-12M
10	15	-R-SM10-MT15	51.3	17.2	19	18	7.9	-10M0-R-15M
10	18	-R-SM10-MT18	51.3	17.2	19	22	7.9	-10M0-R-18M
12	6	-R-SM12-MT6	44.9	22.8	22	22	4.1	-12M0-R-6M
12	8	-R-SM12-MT8	45.9	22.8	22	22	5.6	-12M0-R-8M
12	10	-R-SM12-MT10	46.7	22.8	22	22	7.1	-12M0-R-10M
12	16	-R-SM12-MT16	53.8	22.8	22	22	9.5	-12M0-R-16M
12	18	-R-SM12-MT18	53.8	22.8	22	22	9.5	-12M0-R-18M
12	20	-R-SM12-MT20	56.1	22.8	22	22	9.5	-12M0-R-20M
12	22	-R-SM12-MT22	56.1	22.8	22	24	9.5	-12M0-R-22M
12	25	-R-SM12-MT25	62.4	22.8	22	27	9.5	-12M0-R-25M
16	12	-R-SM16-MT12	53.0	24.4	25	24	8.8	-16M0-R-12M
18	12	-R-SM18-MT12	54.6	24.4	30	27	8.8	-18M0-R-12M
18	16	-R-SM18-MT16	56.1	24.4	30	27	12	-18M0-R-16M
18	20	-R-SM18-MT20	57.6	24.4	30	27	15.1	-18M0-R-20M
18	22	-R-SM18-MT22	57.6	24.4	30	27	15.1	-18M0-R-22M
18	25	-R-SM18-MT25	62.4	24.4	30	27	15.1	-18M0-R-25M
20	16	-R-SM20-MT16	57.9	26.0	32	30	12	-20M0-R-16M
20	18	-R-SM20-MT18	57.9	26.0	32	30	13.9	-20M0-R-18M
20	22	-R-SM20-MT22	59.4	26.0	32	30	15.9	-20M0-R-22M
20	25	-R-SM20-MT25	64.2	26.0	32	30	15.8	-20M0-R-25M
22	18	-R-SM22-MT18	57.9	26.0	32	30	13.9	-22M0-R-18M
22	20	-R-SM22-MT20	59.4	26.0	32	30	15.5	-22M0-R-20M
22	25	-R-SM22-MT25	64.2	26.0	32	30	18.3	-22M0-R-25M
25	18	-R-SM25-MT18	63.1	31.3	38	35	13.9	-25M0-R-18M
25	20	-R-SM25-MT20	64.6	31.3	40	35	15.5	-25M0-R-20M



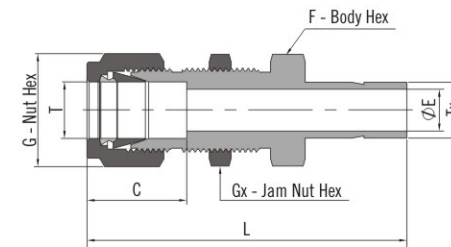
Metric Tube to Fractional Tube

T-Tube O.D. (mm)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm					Inter-changes with
			L	C	G	F	E	
2	1/8	-R-SM2-FT2	33.5	12.9	12	12	1.7	-2M0-R-2
3	1/8	-R-SM3-FT2	33.5	12.9	12	12	2.0	-3M0-R-2
3	1/4	-R-SM3-FT4	36.1	12.9	12	12	2.4	-3M0-R-4
4	1/4	-R-SM4-FT4	37.1	13.7	12	12	2.4	-4M0-R-4
6	1/8	-R-SM6-FT2	36.9	15.3	14	14	2.0	-6M0-R-2
6	1/4	-R-SM6-FT4	39.2	15.3	14	14	4.4	-6M0-R-4
6	5/16	-R-SM6-FT5	39.9	15.3	14	14	4.8	-6M0-R-5
6	3/8	-R-SM6-FT6	40.7	15.3	14	14	4.8	-6M0-R-6
6	1/2	-R-SM6-FT8	46.3	15.3	14	14	4.8	-6M0-R-8
8	1/4	-R-SM8-FT4	40.3	16.2	16	15	4.4	-8M0-R-4
8	3/8	-R-SM8-FT6	42.0	16.2	16	15	6.4	-8M0-R-6
8	1/2	-R-SM8-FT8	47.6	16.2	16	15	6.4	-8M0-R-8
10	3/8	-R-SM10-FT6	44.2	17.2	19	18	6.8	-10M0-R-6
10	1/2	-R-SM10-FT8	49.8	17.2	19	18	7.9	-10M0-R-8
12	1/2	-R-SM12-FT8	52.3	22.8	22	22	9.3	-12M0-R-8
12	3/4	-R-SM12-FT12	53.8	22.8	22	22	9.5	-12M0-R-12
18	3/4	-R-SM18-FT12	56.1	24.4	30	27	4.7	-18M0-R-12
18	1	-R-SM18-FT16	62.4	24.4	30	27	15.1	-18M0-R-16
25	1	-R-SM25-FT16	69.5	31.3	38	35	20.2	-25M0-R-16

Fractional Tube To Metric Tube

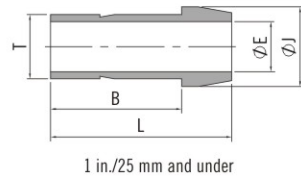
T-Tube O.D. (in.)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm					Inter-changes with
			L	C	G	F	E	
1/8	6	-R-S2-MT2	36.1	12.7	11.1	11.1	2.3	-200-R-6M

Bulkhead Reducers

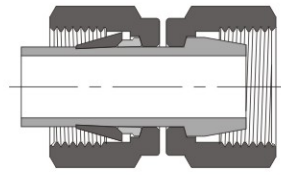


Fractional Tube

T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm						Inter-changes with
			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	-200-R1-2
1/4	1/4	-BR-S4-FT4	55.9	15.2	14.3	15.9	15.9	4.3	-400-R1-2
3/8	3/8	-BR-S6-FT6	61.2	16.8	17.5	19.1	19.1	6.9	-600-R1-2
1/2	1/2	-BR-S8-FT8	72.9	22.9	22.2	23.8	23.8	9.4	-810-R1-2
5/8	5/8	-BR-S10-FT10	75.2	22.4	25.4	27.0	27.0	11.9	-1010-R1-2
3/4	3/4	-BR-S12-FT12	81.5	22.4	28.6	30.2	30.2	14.7	-1210-R1-2
1	1	-BR-S16-FT16	100.3	31.2	38.1	41.3	41.3	20.3	-1610-R1-2



1 in./25 mm and under



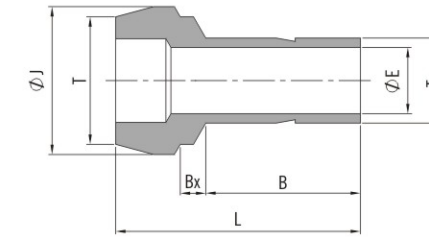
over 1 in./25 mm

Fractional Tube

T-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm				Inter-changes with
		L	B	E	J	
1/16	-P-S1	13.7	10.7	0.8	3.3	-101-PC
1/8	-P-S2	22.4	15.7	2.0	6.1	-201-PC
1/4	-P-S4	24.6	18.8	4.3	9.4	-401-PC
5/16	-P-S5	25.9	20.1	5.6	10.9	-501-PC
3/8	-P-S6	26.2	20.3	6.9	12.7	-601-PC
1/2	-P-S8	35.8	25.9	9.4	15.7	-811-PC
5/8	-P-S10	41.7	28.1	11.9	20.5	-1011-PC
3/4	-P-S12	41.9	27.7	14.7	22.1	-1211-PC
1	-P-S16	48	34.5	20.3	28.4	-1611-PC
1 1/4	-P-S20	69.1	50.6	25.9	37.4	-2000-PC
1 1/2	-P-S24	84.1	59.4	31.8	45.8	-2400-PC

Metric Tube

T-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm				Inter-changes with
		L	B	E	J	
3	-P-SM3	22.2	15.7	1.9	6.0	-3M1-PC
6	-P-SM6	24.6	18.7	4.1	9.0	-6M1-PC
8	-P-SM8	25.9	20.0	5.6	11.0	-8M1-PC
10	-P-SM10	26.1	20.2	7.1	13.1	-10M1-PC
12	-P-SM12	35.8	26.0	8.8	15.0	-12M1-PC
15	-P-SM15	37.8	27.6	11.2	19.6	-15M1-PC
16	-P-SM16	37.8	27.6	12	20.6	-16M1-PC
18	-P-SM18	37.8	27.7	13.9	21.0	-18M1-PC
20	-P-SM20	39.4	29.2	15.5	24.6	-20M1-PC
25	-P-SM25	49.3	34.5	19.9	31.2	-25M1-PC
28	-P-SM28	63.5	48.3	22.5	34.4	-28M1-PC
30	-P-SM30	67.6	52.2	24.3	37.4	-30M1-PC
32	-P-SM32	69.7	52.4	26.5	39.4	-32M1-PC
38	-P-SM38	81.9	61.4	31.6	45.8	-38M1-PC



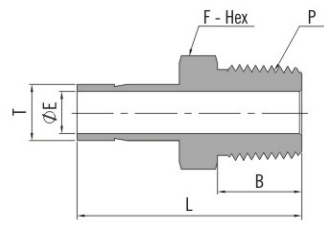
Fractional Tube

T-Tube O.D. (in.)	Tx-Tube O.D. (in.)	Basic Ordering Number	Dimension, mm					Inter-changes with
			L	B	E	Bx	J	
1/8	1/16	-P-S2-S1	17.3	8.6	0.8	2.0	6.1	-201-PC-1
1/4	1/16	-P-S4-S1	18.0	8.6	0.8	3.6	9.4	-401-PC-1
1/4	1/8	-P-S4-S2	22.6	13.5	2	3.3	9.4	-401-PC-2
3/8	1/8	-P-S6-S2	23.1	13.5	2	3.8	12.7	-601-PC-2
3/8	1/4	-P-S6-S4	24.9	15.7	4.3	3.3	12.7	-601-PC-4
1/2	1/4	-P-S8-S4	29.2	15.7	4.3	3.8	15.7	-811-PC-4
1/2	3/8	-P-S8-S6	30.5	17.5	6.9	3.3	15.7	-811-PC-6
3/4	1/2	-P-S12-S8	37.8	23.1	9.4	3.8	22.1	-1211-PC-8
1	1/2	-P-S16-S8	42.9	24.4	9.4	4.8	28.5	-1611-PC-8
1	3/4	-P-S16-S12	43.7	25.9	14.7	4.1	28.5	-1611-PC-12

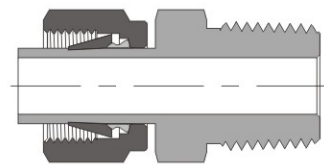
Metric Tube

T-Tube O.D. (mm)	Tx-Tube O.D. (mm)	Basic Ordering Number	Dimension, mm					Inter-changes with
			L	B	E	Bx	J	
6	3	-P-SM6-SM3	22.6	13.5	1.9	3.2	9.0	-6M1-PC-3M
8	6	-P-SM8-SM6	24.7	15.7	4.1	3.1	11.0	-8M1-PC-6M
10	6	-P-SM10-SM6	25.0	15.7	4.1	3.4	13.1	-10M1-PC-6M
10	8	-P-SM10-SM8	26.3	17.0	5.6	3.1	13.1	-10M1-PC-8M
12	6	-P-SM12-SM6	29.6	15.7	4.1	3.6	15.0	-12M1-PC-6M
12	8	-P-SM12-SM8	29.8	16.8	5.6	3.4	15.0	-12M1-PC-8M
12	10	-P-SM12-SM10	30.4	17.5	7.1	3.1	15.0	-12M1-PC-10M
16	12	-P-SM16-SM12	36.2	23.1	8.8	3.4	19.0	-16M1-PC-12M
28	25	-P-SM28-SM25	56.5	33.0	19.8	8.2	34.3	-28M1-PC-25M
32	25	-P-SM32-SM25	60.3	33.0	19.8	9.9	39.5	-32M1-PC-25M
38	25	-P-SM38-SM25	65.8	33.0	19.8	12.3	47.1	-38M1-PC-25M

Male Adapters



1 in. and under

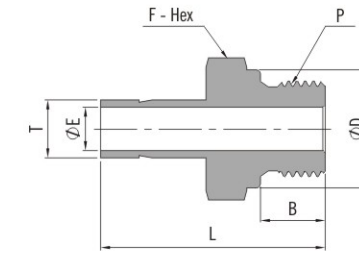


over 1 in.

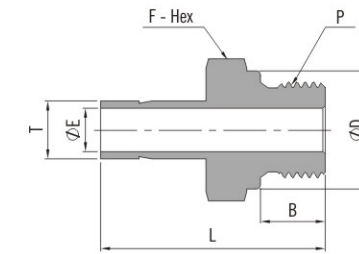
Fractional Tube			NPT Thread				
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm				Interchanges with
			L	B	E	J	
1/16	1/8	-AM-FT1-NT2	25.4	9.7	0.8	11.1	-1-TA-1-2
1/8	1/8	-AM-FT2-NT2	29.5	9.7	2.0	11.1	-2-TA-1-2
1/8	1/4	-AM-FT2-NT4	34.8	14.2	2.0	14.3	-2-TA-1-4
3/16	1/8	-AM-FT3-NT2	30.2	9.7	3.0	11.1	-3-TA-1-2
3/16	1/4	-AM-FT3-NT4	35.6	14.2	3.0	14.3	-3-TA-1-4
1/4	1/8	-AM-FT4-NT2	31.8	9.7	4.3	11.1	-4-TA-1-2
1/4	1/4	-AM-FT4-NT4	37.1	14.2	4.3	14.3	-4-TA-1-4
1/4	3/8	-AM-FT4-NT6	37.8	14.2	4.3	17.5	-4-TA-1-6
1/4	1/2	-AM-FT4-NT8	43.4	19.1	4.3	22.2	-4-TA-1-8
5/16	1/8	-AM-FT5-NT2	32.8	9.7	4.8	11.1	-5-TA-1-2
5/16	1/4	-AM-FT5-NT4	38.1	14.2	5.6	14.3	-5-TA-1-4
5/16	3/8	-AM-FT5-NT6	38.9	14.2	5.6	17.5	-5-TA-1-6
5/16	1/2	-AM-FT5-NT8	44.2	19.1	5.6	22.2	-4-TA-1-8
3/8	1/8	-AM-FT6-NT2	33.5	9.7	4.8	11.1	-6-TA-1-2
3/8	1/4	-AM-FT6-NT4	38.9	14.2	6.9	14.3	-6-TA-1-4
3/8	3/8	-AM-FT6-NT6	39.6	14.2	6.9	17.5	-6-TA-1-6
3/8	1/2	-AM-FT6-NT8	45.2	19.1	6.9	22.2	-6-TA-1-8
1/2	1/4	-AM-FT8-NT4	44.5	14.2	7.1	14.3	-8-TA-1-4
1/2	3/8	-AM-FT8-NT6	45.2	14.2	9.4	17.5	-8-TA-1-6
1/2	1/2	-AM-FT8-NT8	50.8	19.1	9.4	22.2	-8-TA-1-8
5/8	1/2	-AM-FT10-NT8	52.3	19.1	11.9	22.2	-10-TA-1-8
3/4	1/2	-AM-FT12-NT8	52.3	19.1	11.9	22.2	-12-TA-1-8
3/4	3/4	-AM-FT12-NT12	52.3	19.1	14.7	27.0	-12-TA-1-12
3/4	1	-AM-FT12-NT16	61.2	23.9	20.7	34.9	-12-TA-1-16
1	3/4	-AM-FT16-NT12	58.7	19.1	15.7	27.0	-16-TA-1-12
1	1	-AM-FT16-NT16	66	23.9	20.3	34.9	-16-TA-1-16
1 1/4	1 1/4	-AM-FT20-NT20	80.3	23.9	25.9	44.5	-20-TA-1-20
1 1/2	1 1/2	-AM-FT24-NT24	94.5	26.2	31.8	54.0	-24-TA-1-24

Fractional Tube			ISO Tapered Thread(RT)				
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm				Interchanges with
			L	B	E	J	
1/8	1/8	-AM-FT2-RT2	29.5	9.7	2.0	11.1	-2-TA-1-2RT
1/8	1/4	-AM-FT2-RT4	34.8	14.2	2.0	14.3	-2-TA-1-4RT
1/4	1/8	-AM-FT4-RT2	31.8	9.7	4.3	11.1	-4-TA-1-2RT
1/4	1/4	-AM-FT4-RT4	37.1	14.2	4.3	14.3	-4-TA-1-4RT
1/4	3/8	-AM-FT4-RT6	37.8	14.2	4.3	17.5	-4-TA-1-6RT
1/4	1/2	-AM-FT4-RT8	43.4	19.1	4.3	22.2	-4-TA-1-8RT
5/16	1/8	-AM-FT5-RT2	32.8	9.7	4.8	11.1	-5-TA-1-2RT
5/16	1/4	-AM-FT5-RT4	38.1	14.2	5.6	14.3	-5-TA-1-4RT
3/8	1/4	-AM-FT6-RT4	38.9	14.2	6.9	14.3	-6-TA-1-4RT
3/8	3/8	-AM-FT6-RT6	39.6	14.2	6.9	17.5	-6-TA-1-6RT
3/8	1/2	-AM-FT6-RT8	45.2	19.1	6.9	22.2	-6-TA-1-8RT
1/2	1/4	-AM-FT8-RT4	44.5	14.2	7.1	14.3	-8-TA-1-4RT
1/2	3/8	-AM-FT8-RT6	45.2	14.2	9.4	17.5	-8-TA-1-6RT
1/2	1/2	-AM-FT8-RT8	50.8	19.1	9.4	22.2	-8-TA-1-8RT
5/8	3/8	-AM-FT10-RT6	48.5	14.2	9.5	17.5	-10-TA-1-6RT
5/8	1/2	-AM-FT10-RT8	52.3	19.1	11.9	22.2	-10-TA-1-8RT
3/4	3/4	-AM-FT12-RT12	52.3	19.1	14.7	27.0	-12-TA-1-12RT
1	1	-AM-FT16-RT16	66	23.9	20.3	34.9	-16-TA-1-16RT

Male Adapters



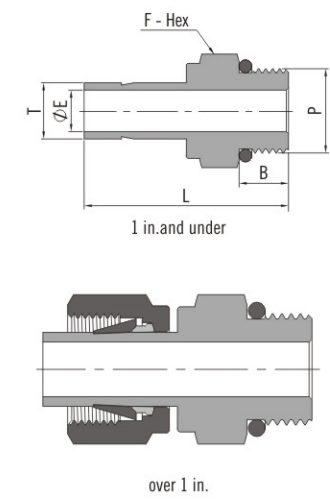
Fractional Tube			ISO Parallel Thread(RS)					
T-Tube O.D. (in.)	P-RS Size	Basic Ordering Number	Dimension, mm					Interchanges with
			L	B	E	F	D	
1/8	1/8	-AM-FT2-RS2	31	7.1	2.0	14.3	13.7	-2-TA-1-2RS
1/8	1/4	-AM-FT2-RS4	35.8	11.2	2.0	19.1	17.8	-2-TA-1-4RS
1/4	1/8	-AM-FT4-RS2	33.3	7.1	4.1	14.3	13.7	-4-TA-1-2RS
1/4	1/4	-AM-FT4-RS4	38.1	11.2	4.3	19.1	17.8	-4-TA-1-4RS
3/8	1/8	-AM-FT6-RS2	34.0	7.1	1.3	14.3	13.7	-6-TA-1-2RS
3/8	1/4	-AM-FT6-RS4	39.9	11.2	5.8	19.1	17.8	-6-TA-1-4RS
3/8	3/8	-AM-FT6-RS6	40.6	11.2	6.9	22.2	21.6	-6-TA-1-6RS
3/8	1/2	-AM-FT6-RS8	42.9	14.2	7.1	27.0	25.9	-6-TA-1-8RS
1/2	1/4	-AM-FT8-RS4	45.5	11.2	5.8	19.1	17.8	-8-TA-1-4RS
1/2	3/8	-AM-FT8-RS6	46.2	11.2	7.9	22.2	21.6	-8-TA-1-6RS
1/2	1/2	-AM-FT8-RS8	49.2	14.2	9.4	27.0	25.9	-8-TA-1-8RS
5/8	1/2	-AM-FT10-RS8	50.0	14.2	11.9	27.0	25.9	-10-TA-1-8RS
3/4	3/4	-AM-FT12-RS12	54.9	16.0	14.7	33.3	32.0	-12-TA-1-12RS
1	1	-AM-FT16-RS16	64.5	18.3	20.3	41.3	38.9	-16-TA-1-16RS



Fractional Tube			ISO Parallel Thread(RP)					
T-Tube O.D. (in.)	P-RP Size	Basic Ordering Number	Dimension, mm					Interchanges with
			L	B	E	F	D	
1/8	1/8	-AM-FT2-RP2	27.7	7.1	1.3	14.3	13.7	-2-TA-1-2RP
1/8	1/4	-AM-FT2-RP4	33.3	11.2	1.3	19.1	17.8	-2-TA-1-4RP
1/4	1/8	-AM-FT4-RP2	30.2	7.1	4.1	14.3	13.7	-4-TA-1-2RP
1/4	1/4	-AM-FT4-RP4	38.1	11.2	4.6	19.1	17.8	-4-TA-1-4RP
3/8	1/8	-AM-FT6-RP2	34.0	7.1	1.3	19.1	13.7	-6-TA-1-2RP
3/8	1/4	-AM-FT6-RP4	37.3	11.2	6.4	19.1	17.8	-6-TA-1-4RP
3/8	3/8	-AM-FT6-RP6	38.1	11.2	7.1	22.2	21.6	-6-TA-1-6RP
3/8	1/2	-AM-FT6-RP8	42.9	14.2	7.1	27.0	25.9	-6-TA-1-8RP
1/2	1/4	-AM-FT8-RP4	42.9	11.2	6.4	19.1	17.8	-8-TA-1-4RP
1/2	3/8	-AM-FT8-RP6	43.7	11.2	7.9	22.2	21.6	-8-TA-1-6RP
1/2	1/2	-AM-FT8-RP8	49.3	14.2	9.9	27.0	25.9	-8-TA-1-8RP
5/8	1/2	-AM-FT10-RP8	50.0	14.2	11.9	27.0	25.9	-10-TA-1-8RP
3/4	3/4	-AM-FT12-RP12	53.1	16.0	14.7	33.5	32.0	-12-TA-1-12RP
1	1	-AM-FT16-RP16	63.3	18.3	20.3	41.3	38.9	-16-TA-1-16RP

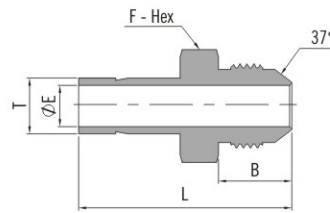


Male Adapters

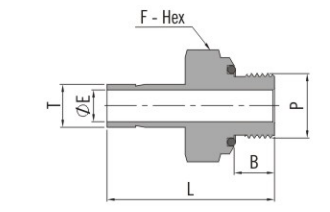


Fractional Tube			SAE/MS Straight Thread					Inter-changes with
T-Tube O.D. (in.)	P-SAE/MS Thread	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
1/8	5/16-24	-AM-FT2-ST5	30.5	7.6	2.0	11.1	-2-TA-1-2ST	
1/4	7/16-20	-AM-FT4-ST7	35.3	9.1	4.3	14.3	-4-TA-1-4ST	
3/8	7/16-20	-AM-FT6-ST7	37.1	9.1	5.1	14.3	-6-TA-1-4ST	
3/8	9/16-18	-AM-FT6-ST9	38.6	9.9	6.9	17.5	-6-TA-1-6ST	
3/8	3/4-16	-AM-FT6-ST12	40.6	11.2	6.9	22.2	-6-TA-1-8ST	
1/2	9/16-18	-AM-FT8-ST9	44.2	9.9	7.1	17.5	-8-TA-1-6ST	
1/2	3/4-16	-AM-FT8-ST12	46.2	11.2	9.4	22.2	-8-TA-1-8ST	
5/8	7/8-14	-AM-FT10-ST14	49.3	12.7	11.9	25.4	-10-TA-1-10ST	
3/4	1 1/16-12	-AM-FT12-ST17	53.3	15.0	14.7	31.8	-12-TA-1-12ST	
1	1 5/16-12	-AM-FT16-ST21	61.2	15.0	20.3	38.1	-16-TA-1-16ST	
1 1/4	1 5/8-12	-AM-FT20-ST26	71.4	15.0	25.9	47.6	-20-TA-1-20ST	
1 1/2	1 7/8-12	-AM-FT24-ST30	83.3	15.0	31.8	54.0	-24-TA-1-24ST	

Adapts to SAE J1926-1/ISO 11926-1 straight thread boss and MS 16142 boss.

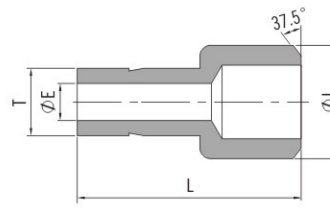


Fractional Tube			AN Union					Inter-changes with
T-Tube O.D. (in.)	AN Tube Flare Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
1/4	1/4	-AM-FT4-AN4	37.1	14.0	4.3	12.7	-4-TA-1-4AN	
3/8	1/4	-AM-FT6-AN4	38.9	14.0	4.3	12.7	-6-TA-1-4AN	
3/8	3/8	-AM-FT6-AN6	39.6	14.2	6.9	15.9	-6-TA-1-6AN	
1/2	1/2	-AM-FT8-AN8	48.5	16.8	9.4	20.6	-8-TA-1-8AN	
3/4	3/4	-AM-FT12-AN12	56.1	21.8	14.7	28.6	-12-TA-1-12AN	
1	1	-AM-FT16-AN16	65.5	23.1	20.3	34.9	-8-TA-1-8AN	



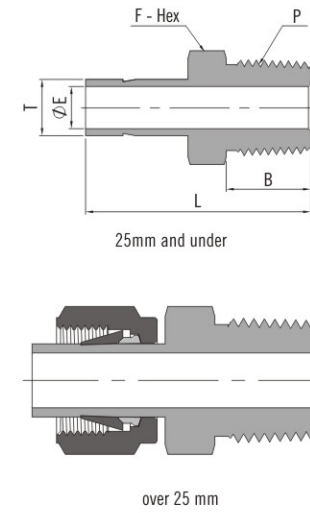
Fractional Tube			O-Seal with SAE/MS Straight Thread					Inter-changes with
T-Tube O.D. (in.)	P-SAE/MS Thread	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
1/8	5/16-24	-AM-FT2-OR5	32.5	8.6	2.0	14.3	-2-TA-1-OR	
3/16	3/8-24	-AM-FT3-OR6	35.1	9.7	3.0	15.9	-3-TA-1-OR	
1/4	7/16-20	-AM-FT4-OR7	39.1	10.4	4.3	19.1	-4-TA-1-OR	
5/16	1/2-20	-AM-FT5-OR8	41.7	11.2	5.6	22.2	-5-TA-1-OR	
3/8	9/16-18	-AM-FT6-OR9	43.2	11.9	6.9	23.8	-6-TA-1-OR	
1/2	3/4-16	-AM-FT8-OR12	49.5	11.9	9.4	28.6	-8-TA-1-OR	

Weld Adapters



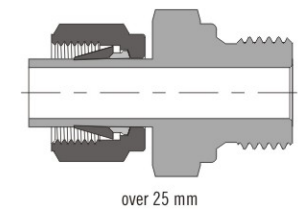
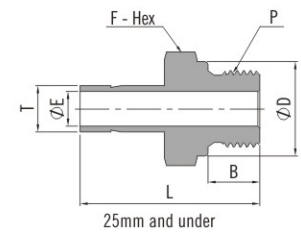
Fractional Tube			Pipe Weld				Inter-changes with
T-Tube O.D. (in.)	Pipe Weld Size	Basic Ordering Number	Dimension, mm				
			L	J	E		
1/4	1/4	-AM-FT4-PB4	29.0	13.7	4.3	-4-TA-1-4W	
3/8	1/2	-AM-FT6-PB8	37.1	21.3	6.9	-6-TA-1-8W	
1/2	1/2	-AM-FT8-PB8	42.2	21.3	9.4	-8-TA-1-84W	
1/2	3/4	-AM-FT8-PB12	42.7	26.7	9.4	-8-TA-1-12W	
3/4	3/4	-AM-FT12-PB12	47.5	26.7	14.7	-12-TA-1-12W	

Male Adapters

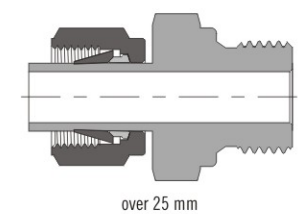
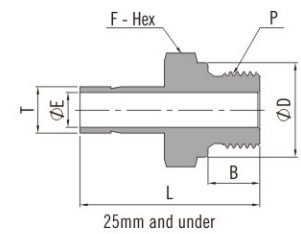


T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm				Inter-changes with
			L	B	E	F	
			3	1/8	-AM-MT3-NT2	29.4	
4	1/8	-AM-MT4-NT2	29.4	9.7	2.0	12	-4-MTA-1-2
6	1/8	-AM-MT6-NT2	32.8	9.7	4.1	12	-6-MTA-1-2
6	1/4	-AM-MT6-NT4	38.1	14.2	4.1	14	-6-MTA-1-4
6	3/8	-AM-MT6-NT6	39.2	14.2	4.1	18	-6-MTA-1-6
6	1/2	-AM-MT6-NT8	42.1	19.1	4.1	22	-6-MTA-1-8
8	1/4	-AM-MT8-NT4	39.1	14.2	5.6	14	-8-MTA-1-4
8	3/8	-AM-MT8-NT6	39.9	14.2	5.6	19	-8-MTA-1-6
10	1/4	-AM-MT10-NT4	39.9	14.2	7.1	14	-10-MTA-1-4
10	3/8	-AM-MT10-NT6	40.6	14.2	7.1	18	-10-MTA-1-6
10	1/2	-AM-MT10-NT8	46.2	19.1	7.1	22	-10-MTA-1-8
12	1/4	-AM-MT12-NT4	46.5	14.2	7.1	14	-12-MTA-1-4
12	3/8	-AM-MT12-NT6	46.2	14.2	8.8	18	-12-MTA-1-6
12	1/2	-AM-MT12-NT8	52.1	19.1	8.8	22	-12-MTA-1-8
16	1/2	-AM-MT16-NT8	50.8	19.1	12.7	22	-16-MTA-1-8
16	3/4	-AM-MT16-NT12	51.6	19.1	12.7	27	-16-MTA-1-12
18	1/2	-AM-MT18-NT8	50.8	19.1	12.7	27	-18-MTA-1-8
18	3/4	-AM-MT18-NT12	51.6	19.1	14.0	27	-18-MTA-1-12
20	1/2	-AM-MT20-NT8	51.8	19.1	11.9	22	-20-MTA-1-8
20	3/4	-AM-MT20-NT12	52.4	19.1	15.1	27	-20-MTA-1-12
25	1	-AM-MT25-NT16	65.9	23.9	19.8	35	-25-MTA-1-16
28	1	-AM-MT28-NT16	74.4	23.9	22.2	35	-28-MTA-1-16
28	1 1/4	-AM-MT28-NT20	76.2	23.9	22.5	46	-28-MTA-1-20
30	1	-AM-MT30-NT16	79.2	23.9	22.2	41	-30-MTA-1-16
30	1 1/4	-AM-MT30-NT20	80.0	23.9	24.3	46	-30-MTA-1-20
32	1 1/4	-AM-MT32-NT20	81.0	23.9	26.5	46	-32-MTA-1-20
38	1 1/2	-AM-MT38-NT24	92.2	26.2	31.6	55	-38-MTA-1-24

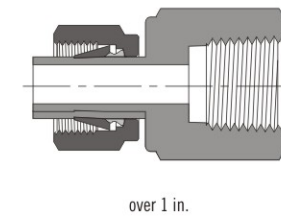
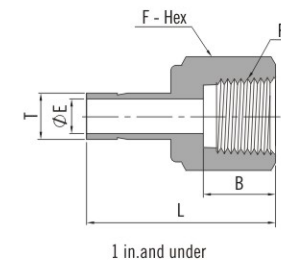
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm				Inter-changes with
			L	B	E	J	
			3	1/8	-AM-MT3-RT2	29.4	
4	1/8	-AM-MT4-RT2	29.4	9.7	2.0	12	-4-MTA-1-2RT
6	1/8	-AM-MT6-RT2	32.8	9.7	4.1	12	-6-MTA-1-2RT
6	1/4	-AM-MT6-RT4	38.1	14.2	4.1	14	-6-MTA-1-4RT
6	3/8	-AM-MT6-RT6	39.1	14.2	5.6	14	-6-MTA-1-6RT
8	1/4	-AM-MT8-RT4	39.1	14.2	5.6	18	-8-MTA-1-4RT
8	3/8	-AM-MT8-RT6	39.9	14.2	5.6	18	-8-MTA-1-6RT
10	1/4	-AM-MT10-RT4	39.9	14.2	7.1	14	-10-MTA-1-4RT
10	3/8	-AM-MT10-RT6	40.6	14.2	7.1	18	-10-MTA-1-6RT
10	1/2	-AM-MT10-RT8	44.5	19.1	7.5	22	-10-MTA-1-8RT
12	1/4	-AM-MT12-RT4	46.5	14.2	7.1	16	-12-MTA-1-4RT
12	3/8	-AM-MT12-RT6	46.2	14.2	8.8	18	-12-MTA-1-6RT
12	1/2	-AM-MT12-RT8	51.8	19.1	8.8	22	-12-MTA-1-8RT
16	1/2	-AM-MT16-RT8	50.8	19.1	12.7	22	-16-MTA-1-8RT
18	3/4	-AM-MT18-RT12	51.6	19.1	14.0	27	-18-MTA-1-12RT
20	3/4	-AM-MT20-RT12	52.4	19.1	15.1	27	-20-MTA-1-12RT
25	1	-AM-MT25-RT16	65.9	23.9	19.8	35	-25-MTA-1-16RT
28	1	-AM-MT28-RT16	74.7	23.9	22.2	35	-28-MTA-1-16RT
28	1 1/4	-AM-MT28-RT20	76.2	23.9	22.5	46	-28-MTA-1-20RT
30	1 1/4	-AM-MT30-RT20	80.0	23.9	24.3	46	-30-MTA-1-20RT
32	1 1/4	-AM-MT32-RT20	81.0	23.9	26.5	46	-32-MTA-1-20RT
38	1 1/2	-AM-MT38-RT24	92.2	26.2	31.6	55	-38-MTA-1-24RT



Metric Tube			ISO Parallel Thread(RS)					Inter-changes with
T-Tube O.D. (mm)	P-RS Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F	D	
3	1/8	-AM-MT3-RS2	31.0	7.1	1.8	14	13.7	-3-MTA-1-2RS
4	1/8	-AM-MT4-RS2	31.8	7.1	2.0	14	13.7	-4-MTA-1-2RS
6	1/8	-AM-MT6-RS2	34.3	7.1	4.1	14	13.7	-6-MTA-1-2RS
6	1/4	-AM-MT6-RS4	39.1	11.2	5.6	19	17.8	-6-MTA-1-4RS
8	1/4	-AM-MT8-RS4	40.1	11.2	5.9	19	17.8	-8-MTA-1-4RS
10	1/4	-AM-MT10-RS4	40.9	11.2	7.1	19	17.8	-10-MTA-1-4RS
10	3/8	-AM-MT10-RS6	41.7	11.2	7.1	22	21.6	-10-MTA-1-6RS
10	1/2	-AM-MT10-RS8	44.7	14.2	5.9	27	25.9	-10-MTA-1-8RS
12	1/4	-AM-MT12-RS4	46.7	11.2	6.4	19	17.8	-12-MTA-1-4RS
12	3/8	-AM-MT12-RS6	47.2	11.2	8.8	22	21.6	-12-MTA-1-6RS
12	1/2	-AM-MT12-RS8	50.5	14.2	9.1	27	25.9	-12-MTA-1-8RS
16	1/2	-AM-MT16-RS8	50.8	14.2	11.9	27	25.9	-16-MTA-1-8RS
18	3/4	-AM-MT18-RS12	55.9	16.0	13.9	35	32.0	-18-MTA-1-12RS
20	3/4	-AM-MT20-RS12	57.9	16.0	15.1	33	32.0	-20-MTA-1-12RS
25	1	-AM-MT25-RS16	65.1	18.3	19.8	41	38.9	-25-MTA-1-16RS
28	1	-AM-MT28-RS16	72.9	18.3	19.8	41	38.9	-28-MTA-1-16RS
28	1 1/4	-AM-MT28-RS20	77.0	19.8	22.5	50	49.0	-28-MTA-1-20RS
30	1 1/4	-AM-MT30-RS20	80.8	19.8	24.3	50	49.0	-30-MTA-1-20RS
32	1 1/4	-AM-MT32-RS20	81.8	19.8	26.5	50	49.0	-32-MTA-1-20RS
38	1 1/2	-AM-MT38-RS24	94.5	22.1	31.6	55	54.7	-38-MTA-1-24RS

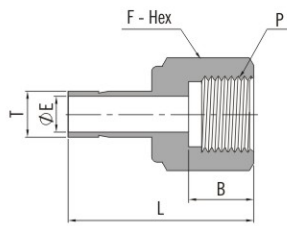


Metric Tube			ISOP Thread(RP)					Inter-changes with
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F	D	
3	1/8	-AM-MT3-RP2	31.0	7.1	1.8	14	13.7	-3-MTA-1-2RP
4	1/8	-AM-MT4-RP2	31.8	7.1	2.0	14	13.7	-4-MTA-1-2RP
6	1/8	-AM-MT6-RP2	33.3	7.1	4.0	14	13.7	-6-MTA-1-2RP
6	1/4	-AM-MT6-RP4	38.1	11.2	4.0	19	17.8	-6-MTA-1-4RP
8	1/4	-AM-MT8-RP4	38.9	11.2	6.4	19	17.8	MTA-1-4RP
10	1/4	-AM-MT10-RP4	38.9	11.2	6.4	19	17.8	-10-MTA-1-4RP
10	3/8	-AM-MT10-RP6	39.7	11.2	7.5	22	21.6	-10-MTA-1-6RP
10	1/2	-AM-MT10-RP8	42.9	14.2	7.5	27	25.9	-10-MTA-1-8RP
12	1/4	-AM-MT12-RP4	43.7	11.2	6.4	19	17.8	-12-MTA-1-4RP
12	3/8	-AM-MT12-RP6	44.5	11.2	7.9	22	21.6	-12-MTA-1-6RP
12	1/2	-AM-MT12-RP8	49.2	14.2	9.1	27	25.9	-12-MTA-1-8RP
16	1/2	-AM-MT16-RP8	50.8	14.2	11.9	27	25.9	-16-MTA-1-8RP
18	3/4	-AM-MT18-RP12	53.2	16.0	14.0	33	32.0	-18-MTA-1-12RP
20	3/4	-AM-MT20-RP12	54.0	16.0	15.1	33	32.0	-20-MTA-1-12RP
25	1	-AM-MT25-RP16	65.1	18.3	19.8	41	38.9	-25-MTA-1-16RP
28	1	-AM-MT28-RP16	72.7	18.3	19.8	41	38.9	-28-MTA-1-16RP
28	1 1/4	-AM-MT28-RP20	77.3	19.8	22.5	50	49.0	-28-MTA-1-20RP
30	1 1/4	-AM-MT30-RP20	80.8	19.8	24.3	50	49.0	-30-MTA-1-20RP
32	1 1/4	-AM-MT32-RP20	82.1	19.8	26.5	50	49.0	-32-MTA-1-20RP
38	1 1/2	-AM-MT38-RP24	94.5	22.1	31.6	55	54.7	-38-MTA-1-24RP

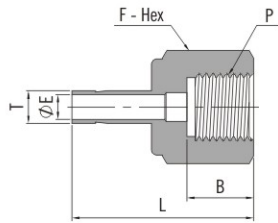


Fractional Tube			NPT Thread				Inter-changes with
T-Tube O.D. (in.)	P-NPT Size	Basic Ordering Number	Dimension, mm				
			L	B	E	F	
1/16	1/8	-AF-FT1-NT2	27.2	10.4	0.8	14.3	-1-TA-7-2
1/8	1/8	-AF-FT2-NT2	31.5	10.4	2.0	14.3	-2-TA-7-2
1/8	1/4	-AF-FT2-NT4	35.3	15.0	2.0	19.1	-2-TA-7-4
3/16	1/8	-AF-FT3-NT2	31.8	10.4	2.9	14.3	-3-TA-7-2
3/16	1/4	-AF-FT3-NT4	35.8	15.0	3.0	19.1	-3-TA-7-4
1/4	1/8	-AF-FT4-NT2	33	10.4	4.3	14.3	-4-TA-7-2
1/4	1/4	-AF-FT4-NT4	37.1	15.0	4.3	19.1	-4-TA-7-4
1/4	3/8	-AF-FT4-NT6	39.4	15.0	4.3	22.2	-4-TA-7-6
1/4	1/2	-AF-FT4-NT8	45.5	19.8	4.3	27.0	-4-TA-7-8
5/16	1/8	-AF-FT5-NT2	34.0	10.4	5.6	14.3	-5-TA-7-2
5/16	1/4	-AF-FT5-NT4	37.6	15.0	5.6	19.1	-5-TA-7-4
5/16	3/8	-AF-FT5-NT6	40.4	15.0	5.6	22.2	-5-TA-7-6
3/8	1/8	-AF-FT6-NT2	34.3	10.4	6.9	14.3	-6-TA-7-2
3/8	1/4	-AF-FT6-NT4	38.1	15.0	6.9	19.1	-6-TA-7-4
3/8	3/8	-AF-FT6-NT6	40.4	15.0	6.9	22.2	-6-TA-7-6
3/8	1/2	-AF-FT6-NT8	46.7	19.8	6.9	27.0	-6-TA-7-8
1/2	1/4	-AF-FT8-NT4	43.4	15.0	9.4	19.1	-8-TA-7-4
1/2	3/8	-AF-FT8-NT6	45.5	15.0	9.4	22.2	-8-TA-7-6
1/2	1/2	-AF-FT8-NT8	51.8	19.8	9.4	27.0	-8-TA-7-8
5/8	3/8	-AF-FT10-NT6	47.2	15.0	11.9	22.2	-10-TA-7-6
5/8	1/2	-AF-FT10-NT8	53.1	19.8	11.9	27.0	-10-TA-7-8
3/4	1/2	-AF-FT12-NT8	52.8	19.8	14.7	27.0	-12-TA-7-8
3/4	3/4	-AF-FT12-NT12	54.9	20.6	14.7	33.3	-12-TA-7-12
3/4	1	-AF-FT12-NT16	58.4	25.4	14.7	41.3	-12-TA-7-16
7/8	3/4	-AF-FT14-NT12	56.4	20.6	14.7	33.3	-14-TA-7-12
1	3/4	-AF-FT16-NT12	60.7	20.6	20.3	33.3	-16-TA-7-12
1	1	-AF-FT16-NT16	64.3	25.4	20.3	41.3	-16-TA-7-16
1 1/4	1 1/4	-AF-FT20-NT20	77.7	25.4	25.9	54.0	-20-TA-7-20
1 1/2	1 1/2	-AF-FT24-NT24	88.9	27.7	31.8	60.3	-24-TA-7-24

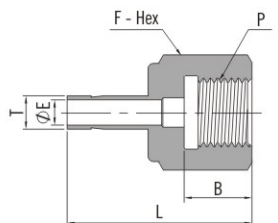
Fractional Tube			ISO Tapered Thread(RT)				Inter-changes with
T-Tube O.D. (in.)	P-RT Size	Basic Ordering Number	Dimension, mm				
			L	B	E	F	
1/4	1/8	-AF-FT4-RT2	33.0	10.4	4.3	14.3	-4-TA-7-2RT
1/4	1/4	-AF-FT4-RT4	36.8	15.0	4.3	19.1	-4-TA-7-4RT
3/8	1/4	-AF-FT6-RT4	38.1	15.0	6.9	19.1	-6-TA-7-4RT
3/8	3/8	-AF-FT6-RT6	40.4	15.0	6.9	22.2	-6-TA-7-6RT
1/2	1/4	-AF-FT8-RT4	43.4	15.0	9.4	19.1	-8-TA-7-4RT
1/2	3/8	-AF-FT8-RT6	45.7	15.0	9.4	22.2	-8-TA-7-6RT
1/2	1/2	-AF-FT8-RT8	52.1	19.8	9.4	27.0	-8-TA-7-8RT



Fractional Tube			ISO Parallel Thread(RP)					Inter-changes with
T-Tube O.D. (in.)	P-RP Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
1/8	1/8	-AF-FT2-RP2	29.7	10.2	2.0	14.3	-2-TA-7-2RP	
1/4	1/8	-AF-FT4-RP2	31.8	10.2	4.3	14.3	-4-TA-7-2RP	
1/4	1/4	-AF-FT4-RP4	38.1	15.2	4.3	19.1	-4-TA-7-4RP	
3/8	1/4	-AF-FT6-RP4	39.4	15.2	6.9	19.1	-6-TA-7-4RP	
3/8	3/8	-AF-FT6-RP6	39.9	15.2	6.9	23.8	-6-TA-7-6RP	
1/2	3/8	-AF-FT8-RP6	45.2	15.2	9.7	23.8	-8-TA-7-6RP	
1/2	1/2	-AF-FT8-RP8	49.5	18.2	9.7	27.0	-8-TA-7-8RP	

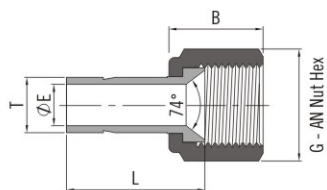


Fractional Tube			ISO Parallel Thread(RG)					Inter-changes with
T-Tube O.D. (in.)	P-RG Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
1/4	1/4	-AF-FT4-RG4	35.3	12.9	4.3	19.1	-4-TA-7-4RG	
3/8	3/8	-AF-FT6-RG6	39.4	14.2	6.6	23.8	-6-TA-7-6RG	
1/2	1/2	-AF-FT8-RG8	45.7	18.8	7.1	27.0	-8-TA-7-8RG	

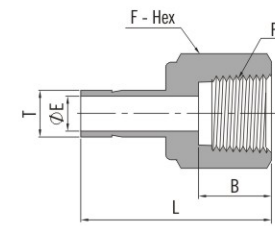


Fractional Tube			ISO Parallel Thread(RJ)					Inter-changes with
T-Tube O.D. (in.)	P-RJ Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
1/4	1/4	-AF-FT4-RJ4	35.3	12.9	4.3	19.1	-4-TA-7-4RJ	
3/8	3/8	-AF-FT6-RJ6	39.4	14.2	6.6	23.8	-6-TA-7-6RJ	
1/2	1/2	-AF-FT8-RJ8	49.3	18.8	7.1	27.0	-8-TA-7-8RJ	

Adapts to Japanese Gauge Ports.



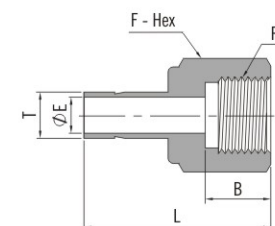
Fractional Tube			Flared Tubing					Inter-changes with
T-Tube O.D. (in.)	AN Tube Flare Size	Basic Ordering Number	Dimension, mm					
			L	Lx	E	G		
1/8	1/8	-AF-FT2-AN2	22.4	14.0	2.4	9.5	-200-A-2ANF	
1/8	1/4	-AF-FT2-AN4	22.4	15.8	2.4	14.3	-200-A-4ANF	
1/4	1/4	-AF-FT4-AN4	24.4	15.8	4.6	14.3	-400-A-4ANF	
3/8	3/8	-AF-FT6-AN6	28.1	18.5	7.1	17.5	-600-A-6ANF	
1/2	1/2	-AF-FT8-AN8	36.1	21.6	9.9	22.2	-810-A-8ANF	
3/4	3/4	-AF-FT12-AN12	37.8	26.2	14.7	31.8	-1210-A-12ANF	



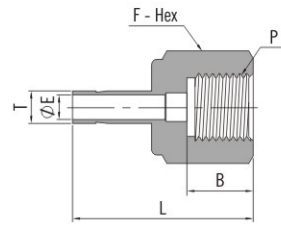
Metric Tube			NPT Thread					Inter-changes with
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
3	1/8	-AF-MT3-NT2	28.8	10.4	1.3	14	-3-MTA-7-2	
4	1/8	-AF-MT4-NT2	33.3	10.4	2.0	14	-4-MTA-7-2	
6	1/8	-AF-MT6-NT2	32.5	10.4	4.1	14	-6-MTA-7-2	
6	1/4	-AF-MT6-NT4	37.1	15.0	4.1	19	-6-MTA-7-4	
8	1/8	-AF-MT8-NT2	35.1	10.4	6.4	14	-8-MTA-7-2	
8	1/4	-AF-MT8-NT4	37.6	15.0	5.6	19	-8-MTA-7-4	
8	3/8	-AF-MT8-NT6	36.5	15.0	6.4	22	-8-MTA-7-6	
10	1/4	-AF-MT10-NT4	38.1	15.0	7.1	19	-10-MTA-7-4	
10	3/8	-AF-MT10-NT6	40.1	15.0	7.1	22	-10-MTA-7-6	
10	1/2	-AF-MT10-NT8	46.5	19.8	7.1	27	-10-MTA-7-8	
12	1/4	-AF-MT12-NT4	43.7	15.0	8.8	19	-12-MTA-7-4	
12	3/8	-AF-MT12-NT6	42.9	15.0	9.1	22	-12-MTA-7-6	
12	1/2	-AF-MT12-NT8	52.3	19.8	8.8	27	-12-MTA-7-8	
16	1/2	-AF-MT16-NT8	49.2	19.8	12.7	27	-16-MTA-7-8	
18	3/4	-AF-MT18-NT12	52.4	20.6	14.0	32	-18-MTA-7-12	
20	1/2	-AF-MT20-NT8	50.0	19.8	15.0	27	-20-MTA-7-8	
20	3/4	-AF-MT20-NT12	53.2	20.6	15.1	32	-20-MTA-7-12	
25	1	-AF-MT25-NT16	66.7	25.4	19.8	41	-25-MTA-7-16	

Metric Tube			ISO Parallel Thread(RT)					Inter-changes with
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
3	1/8	-AF-MT3-RT2	27.8	10.4	1.8	14	-3-MTA-7-2RT	
4	1/8	-AF-MT4-RT2	28.6	10.4	2.0	14	-4-MTA-7-2RT	
6	1/8	-AF-MT6-RT2	33.0	10.4	4.1	14	-6-MTA-7-2RT	
8	1/4	-AF-MT8-RT4	37.6	15.0	5.6	19	-8-MTA-7-4RT	
10	1/4	-AF-MT10-RT4	38.1	15.0	7.1	19	-10-MTA-7-4RT	
10	3/8	-AF-MT10-RT6	36.5	15.0	7.5	22	-10-MTA-7-6RT	
10	1/2	-AF-MT10-RT8	41.3	19.8	7.5	27	-10-MTA-7-8RT	
12	1/4	-AF-MT12-RT4	40.5	15.0	9.1	19	-12-MTA-7-4RT	
12	3/8	-AF-MT12-RT6	43.7	15.0	9.1	22	-12-MTA-7-6RT	
12	1/2	-AF-MT12-RT8	46.8	19.8	9.1	27	-12-MTA-7-8RT	
16	1/2	-AF-MT16-RT8	48.4	19.8	12.7	27	-16-MTA-7-8RT	
18	3/4	-AF-MT18-RT12	52.4	20.6	14.0	32	-18-MTA-7-12RT	
20	3/4	-AF-MT20-RT12	53.2	20.6	15.1	32	-20-MTA-7-12RT	
25	1	-AF-MT25-RT16	66.7	25.4	19.8	41	-25-MTA-7-16RT	

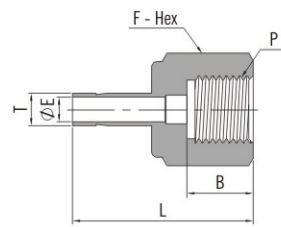
Metric Tube			ISO Parallel Thread(RP)					Inter-changes with
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
6	1/8	-AF-MT6-RP2	32.0	10.2	4.1	14	-6-MTA-7-2RP	
6	1/4	-AF-MT6-RP4	37.8	15.2	4.1	19	-6-MTA-7-4RP	
12	1/2	-AF-MT12-RP8	49.8	18.8	8.8	27	-12-MTA-7-8RP	



Female Adapters



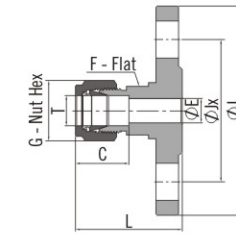
Metric Tube			ISO Parallel Thread(RG)					Inter-changes with
T-Tube O.D. (mm)	P-RG Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
3	1/8	-AF-MT3-RG2	28.6	6.5	1.6	14	-3-MTA-7-2RG	
3	1/4	-AF-MT3-RG4	33.5	10.2	1.8	19	-3-MTA-7-4RG	
4	1/8	-AF-MT4-RG2	29.4	6.5	2.0	14	-4-MTA-7-2RG	
6	1/8	-AF-MT6-RG2	31.0	6.5	4.1	14	-6-MTA-7-2RG	
6	1/4	-AF-MT6-RG4	35.3	10.2	4.1	19	-6-MTA-7-4RG	
6	3/8	-AF-MT6-RG6	38.4	14.2	4.1	24	-6-MTA-7-6RG	
6	1/2	-AF-MT6-RG8	42.9	18.0	4.1	27	-6-MTA-7-8RG	
8	1/4	-AF-MT8-RG4	33.0	10.2	5.5	19	-8-MTA-7-4RG	
8	3/8	-AF-MT8-RG6	38.9	14.2	5.6	24	-8-MTA-7-6RG	
8	1/2	-AF-MT8-RG8	43.7	18.0	5.6	27	-8-MTA-7-8RG	
10	1/4	-AF-MT10-RG4	34.5	10.2	7.5	19	-10-MTA-7-4RG	
10	3/8	-AF-MT10-RG6	36.1	14.2	7.5	24	-10-MTA-7-6RG	
10	1/2	-AF-MT10-RG8	41.1	18.0	7.5	27	-10-MTA-7-8RG	
12	1/4	-AF-MT12-RG4	40.1	10.2	9.1	19	-12-MTA-7-4RG	
12	3/8	-AF-MT12-RG6	44.7	14.2	9.1	22	-12-MTA-7-6RG	
12	1/2	-AF-MT12-RG8	48.8	18.0	9.1	27	-12-MTA-7-8RG	
16	1/2	-AF-MT16-RG8	49.0	18.0	12.7	27	-16-MTA-7-8RG	
18	1/2	-AF-MT18-RG8	49.3	18.0	14.0	27	-18-MTA-7-8RG	
18	3/4	-AF-MT18-RG12	53.2	22.4	14.0	33	-18-MTA-7-12RG	
20	3/4	-AF-MT20-RG12	54.0	22.4	15.1	33	-20-MTA-7-12RG	
25	1	-AF-MT25-RG16	67.5	30.2	19.8	41	-25-MTA-7-16RG	



Adapts to Japanese Gauge Ports.

Metric Tube			ISO Parallel Thread(RJ)					Inter-changes with
T-Tube O.D. (mm)	P-RJ Size	Basic Ordering Number	Dimension, mm					
			L	B	E	F		
6	1/4	-AF-MT6-RJ4	35.3	10.2	4.1	19	-6-MTA-7-4RJ	
6	3/8	-AF-MT6-RJ6	38.6	15.8	4.1	24	-6-MTA-7-6RJ	
6	1/2	-AF-MT6-RJ8	42.9	18.0	4.1	27	-6-MTA-7-8RJ	
8	1/4	-AF-MT8-RJ4	33.0	10.2	5.5	19	-8-MTA-7-4RJ	
8	3/8	-AF-MT8-RJ6	39.4	15.8	5.6	24	-8-MTA-7-6RJ	
8	1/2	-AF-MT8-RJ8	43.7	18.0	5.6	27	-8-MTA-7-8RJ	
10	1/4	-AF-MT10-RJ4	34.5	10.2	5.5	19	-10-MTA-7-4RJ	
10	3/8	-AF-MT10-RJ6	36.1	15.8	6.5	24	-10-MTA-7-6RJ	
10	1/2	-AF-MT10-RJ8	41.1	18.0	7.1	27	-10-MTA-7-8RJ	
12	1/4	-AF-MT12-RJ4	40.1	10.2	5.5	19	-12-MTA-7-4RJ	
12	3/8	-AF-MT12-RJ6	44.7	15.8	6.5	24	-12-MTA-7-6RJ	
12	1/2	-AF-MT12-RJ8	48.8	18.0	7.1	27	-12-MTA-7-8RJ	

Flange Adapters



Features:

- Integrally machined forging.
- ANSI flanges are complu with ANSI B16.5.
- DIN flanges are comply with DIN 2501/2526.
- GB flanges are comply with GB/T9123.1.
- EN flanges are comply with EN 1092-1.
- JIS flanges are comply with JIS B 2220.

ANSI Flanges

T-Tube O.D. (in.)	ANSI Flange NPS	Class	Ordering Number Raised Face Flange	Dimension, mm							Inter-changes with
				L	J	Jx	E	C	G	F	
1/4	1/2	150	-FA-S4-F8-150	40.9	88.9	60.5	4.8	15.2	14.3	20.6	-400-F8-150
3/8	1/2	300	-FA-S6-F8-300	45.5	95.3	66.5	7.7	16.8	17.5	20.6	-600-F8-300
1/2	1/2	150	-FA-S8-F8-150	45.2	88.9	60.5	10.4	22.9	22.2	20.6	-810-F8-150
1/2	1	150	-FA-S8-F16-150	48.3	108.0	79.2	10.4	22.9	22.2	20.6	-810-F16-150
1/2	2	150	-FA-S8-F32-150	53.1	152.4	121	10.4	22.9	22.2	20.6	-810-F32-150
3/4	1	150	-FA-S12-F16-150	50.3	108.0	79.2	15.7	24.4	28.6	31.8	-1210-F16-150
1	1	150	-FA-S16-F16-150	60.5	108.0	79.2	22.4	31.2	38.1	34.9	-1610-F16-150

DIN Flanges, Pressure Class PN 40/GB Flanges, Pressure Class PN4.0MPa

T-Tube O.D. (mm)	DIN Flange Size DN	Ordering Number Raised Face Flange	Dimension, mm							Inter-changes with
			L	J	Jx	E	C	G	F	
6	25	-FA-SM6-F25-40C	47.5	115.0	85.0	4.8	15.3	14	20	-6M0-F25M-40-C
12	15	-FA-SM12-F15-40C	48.5	95.0	65.0	9.5	22.8	22	20	-12M0-F15M-40-C
12	25	-FA-SM12-F25-40C	50.5	115.0	85.0	9.5	22.8	22	20	-12M0-F25M-40-C
12	50	-FA-SM12-F50-40C	55.3	165.0	125.0	9.5	22.8	22	20	-12M0-F50M-40-C
18	15	-FA-SM18-F18-40C	51.8	95.0	65.0	15.1	24.4	30	32	-18M0-F15M-40-C
18	25	-FA-SM18-F18-40C	53.8	115.0	85.0	15.1	24.4	30	32	-18M0-F25M-40-C
25	25	-FA-SM25-F25-40C	64.0	115.0	85.0	21.8	31.3	38	35	-25M0-F25M-40-C

EN Flanges, Pressure Class PN 40

T-Tube O.D. (mm)	EN Flange Size DN	Ordering Number Raised Face Flange	Dimension, mm							Inter-changes with
			L	J	Jx	E	C	G	F	
6	25	-FA-SM6-F25-40B1	47.5	115.0	85.0	4.8	15.3	14	20	-6M0-F25E-40-B1
12	15	-FA-SM12-F15-40B1	48.5	95.0	65.0	9.5	22.8	22	20	-12M0-F15E-40-B1
12	25	-FA-SM12-F25-40B1	50.5	115.0	85.0	9.5	22.8	22	20	-12M0-F25E-40-B1
12	50	-FA-SM12-F50-40B1	55.3	165.0	125.0	9.5	22.8	22	20	-12M0-F50E-40-B1
18	15	-FA-SM18-F15-40B1	51.8	95.0	65.0	15.1	24.4	30	32	-18M0-F15E-40-B1
18	25	-FA-SM18-F25-40B1	53.8	115.0	85.0	15.1	24.4	30	32	-18M0-F25E-40-B1
25	25	-FA-SM25-F25-40B1	64.0	115.0	85.0	21.8	31.3	38	35	-25M0-F25E-40-B1

JIS Flanges, Pressure Class 10k

T-Tube O.D.	JIS Flange Size DN	Ordering Number Raised Face Flange	Dimension, mm							Inter-changes with
			L	J	Jx	E	C	G	F	
1/4" in	15	-FA-S4-F15-10KRF	42.2	95.0	70.1	4.8	15.2	14.3	20.6	-400-F15A-10K-RF
3/8" in	15	-FA-S6-F15-10KRF	43.7	95.0	70.1	7.1	16.8	17.5	20.6	-600-F15A-10K-RF
1/2" in	15	-FA-S8-F15-10KRF	46.5	95.0	70.1	10.4	22.9	22.2	20.6	-810-F15A-10K-RF
3/4" in	15	-FA-S12-F15-10KRF	48.5	95.0	70.1	15.7	24.4	28.6	31.8	-1210-F15A-10K-RF
1" in	25	-FA-S16-F25-10KRF	61.0	125.0	89.9	22.4	31.2	38.1	34.9	-1610-F25A-10K-RF
12 mm	15	-FA-S12-F15-10KRF	46.5	95.0	70.0	9.5	22.8	22	20	-12-F15A-10K-RF
18 mm	15	-FA-S18-F15-10KRF	48.5	95.0	70.0	15.1	24.4	30	32	-18-F15A-10K-RF
25 mm	25	-FA-S25-F25-10KRF	61.0	125.0	90.0	21.8	31.3	38	35	-25-F25A-10K-RF