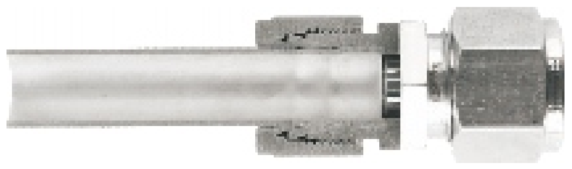
Tube Fittings

XINVAL

Content

Features

- Sizes range from 1/16" to 2" and 2 mm to 50 mm
- Diverse materials and configurations are available
- Precision machined components ensure perfect deformation of the ferrules and tubing
- Hardened threads with smooth surface finish avoid galling and help to extend the fitting service life
- Female nut threads are silver-plated to reduce the friction against the body threads
- Radius junction design for elbows provides smooth flow path
- Every fitting is marked with size, material and heat number
- Fittings are easy to disconnect and retighten



Technical Data

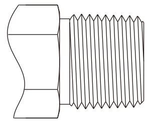
Thread Ends

NPT Threads (NPT)

- Comply with ASME B1.20.1, SAE AS71051.

Thread Data

Thread Size	Thread/in.	Dia. at Reference Plane (mm) Max. Dia.	Pitch Dia.	Min. Dia.	Handtight Engagement (mm)	Threads
1/16	27	7.894	7.142	6.389	4.064	4.32
1/8		10.242	9.489	8.737	4.102	4.36
1/4	18	13.616	12.487	11.358	5.785	4.10
3/8		17.055	15.926	14.797	6.096	4.32
1/2	14	21.224	19.772	18.321	8.128	4.48
3/4		26.569	25.117	23.666	8.618	4.75
1	11.5	33.228	31.461	29.694	10.160	4.60
1 1/4		41.985	40.218	38.451	10.668	4.83
1 1/2		48.054	46.287	44.520	10.668	4.83
2		60.092	58.325	56.558	11.065	5.01



- 60 threadangle
- Pitchmeasuredininch
- Truncationofrootandcrest areparallel
- Taper1:16
- Typeofsealing:threadsealant

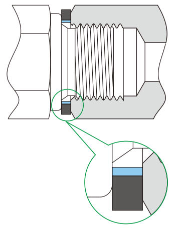
Working Pressures of NPT Thread Ends

Thread Size	316 Stainless Steel and Carbon Steel				Brass			
	Male		Female		Male		Female	
	psig	bar	psig	bar	psig	bar	psig	bar
1/16	11000	757	6700	460	5500	378	3300	227
1/8	10000	690	6500	447	5000	344	3200	220
1/4	8000	551	6600	454	4000	275	3300	227
3/8	7800	537	5300	365	3900	268	2600	179
1/2	7700	530	4900	337	3800	261	2400	165
3/4	7300	502	4600	316	3600	248	2300	158
1	5300	365	4400	303	2600	179	2200	151
1 1/4	6000	410	5000	344	3000	200	2500	172
1 1/2	5000	344	4600	317	2500	172	2300	158
2	3900	268	3900	268	1900	130	1900	130

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

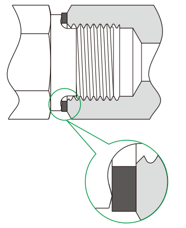
Types of Sealing for ISO Parallel Threads

1. RS Stud End, RS Gasket and RP Port



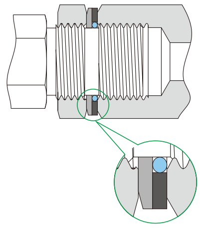
- RS stud end complies with DIN 3852-2 type A
- For RS gasket, see page A-87
- RP port complies with DIN 3852-2 type X

2. RP Stud End, RP Gasket and RP Port



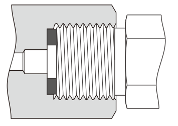
- RP stud end complies with DIN 3852-2 type B
- For RP gasket, see page A-87
- RP port complies with DIN 3852-2 type X

3. PP Stud End and RP Port



- PP Stud end complies with ISO 1179-3
- 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 A-88

Working Pressures of Adjustable ISO Parallel Thread Ends (PP)

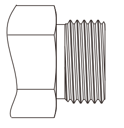
Thread Size	316 Stainless Steel and Carbon Steel psig	bar
1/8	4568	315
1/4		
3/8		
1/2	2320	160
3/4		
1		

SAE/MS Straight Threads (UN, UNJ)

- Comply with ASME B1.1, ISO R725.

Thread Data

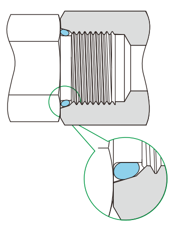
Thread Size	Thread/ in.	Basic Dia. (mm) Max. Dia.	Pitch Dia.	Min. Dia.
5/16-24	24	7.938	7.249	6.792
3/8-24	24	9.525	8.837	8.380
7/16-20	20	11.113	10.287	9.738
1/2-20	20	12.700	11.875	11.326
9/16-18	18	14.288	13.325	12.761
3/4-16	16	19.050	18.019	17.330
7/8-14	14	22.225	21.046	20.262
1 1/16-12	12	26.988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



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

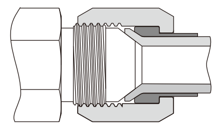
Types of Sealing for SAE/MS Threads

1. ST Stud End and SAE J1926-1 Port



- ST stud end complies with SAE J1926-3
- For O-ring, see page A-89

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



- The type of sealing complies with SAE J514
- Pressures refer to 37° Flared Tube Fittings Catalog

Working Pressures of SAE/MS Thread Ends

Thread Size	316 Stainless Steel and Carbon Steel			
	Non-adjustable		Adjustable	
	psig	bar	psig	bar
5/16-24	5075	350	5075	350
3/8-24				
7/16-20			4568	315
1/2-20				
9/16-18			4060	280
3/4-16	4568	315		
7/8-14	3626	250	3045	210
1 1/16-12				
1 3/16-12	3045	210	2538	175
1 5/16-12				
1 5/8-12	2538	175	2030	140
1 7/8-12				
2 1/2-12	2030	140	1523	105

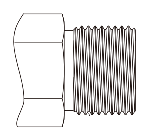
Working pressures are based on SAE J1926-3 at ambient temperature.

Metric Threads (M)

◎ Comply with ISO 261.

Thread Data

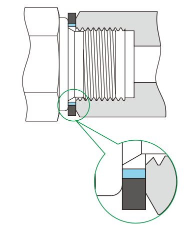
Thread Size	Pitch (mm)	Basic Dia. (mm)		
		Max. Dia.	Pitch Dia.	Min. Dia.
M6 x 1	1	6.000	5.350	4.917
M8 x 1		8.000	7.350	6.917
M10 x 1		10.000	9.350	8.917
M12 x 1.5	1.5	12.000	11.026	10.376
M14 x 1.5		14.000	13.026	12.376
M16 x 1.5		16.000	15.026	14.376
M18 x 1.5		18.000	17.026	16.376
M20 x 1.5		20.000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



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

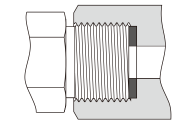
Types of Sealing for Metric Threads

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



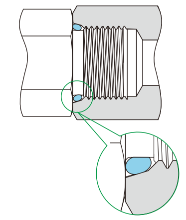
- MRS stud end complies with DIN 3852-1 type A
- For RS-M gasket,see page A-87

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



- For RG-M gasket, see page A-88

3. MST Stud End and ISO 6149-1 Port



- MST stud end complies with ISO 6149-3
- For O-ring, see page A-89

Working Pressures for MST Stud Ends

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

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

◎ Working Temperatures

Thread Ends

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

Component	Material	Minimum Temperature	Maximum Temperature
RS Gasket	Buna N	-13F (-25C)	230F (110C)
	Fluorocarbon FKM	5F (-15C)	400F (204C)
RP/RG Gasket	Copper	-325F (-198C)	400F (204C)
	Stainless Steel	-425F (-254C)	1000F (538C)
RG Gasket	PTFE	-65F (-54C)	450F (232C)
	Vulcanized Fibre	-76F (-60C)	221F (105C)
O-ring	Buna N	-22F (-30C)	230F (110C)
	Fluorocarbon FKM	-4F (-20C)	400F (204C)

Working Pressures

- The maximum working pressures of the tube ends at ambient temperature are determined by the maximum working pressure of the Tubing that is used. Refer to *Tubing* on F-02.
- The maximum working pressures of the thread ends at ambient temperature are stated as above.
- To get the maximum working pressure at elevated temperature, use the maximum working pressure at ambient temperature to multiply the factors in the table of Elevated Temperature Factors on F-14.
- The maximum working pressure of the whole fitting is determined by the end connection with the lowest pressure rating.

Materials

Material	Bar Stock	Forging	Designator
316 stainless steel	ASTM A479, ASME SA479, EN 1.4401	ASTM A182, ASME SA182, EN 1.4401	SS
316L stainless steel	ASTM A479, ASME SA479, EN 1.4404	ASTM A182, ASME SA182, EN 1.4404	6L
304 stainless steel	ASTM A479, ASME SA479, EN 1.4301	ASTM A182, ASME SA182, EN 1.4301	S4
321 stainless steel	ASTM A479, ASME SA479, EN 1.4541	ASTM A182, ASME SA182, EN 1.4541	S1
316Ti stainless steel	ASTM A479, ASME SA479, EN 1.4571	ASTM A182, ASME SA182, EN 1.4571	6T
6Mo (S31254)	ASTM A479	ASTM A182	S12
904L stainless steel	ASTM A479	ASTM A182	904L
Titanium (grade 4)	ASTM B348	ASTM B381	TI
Duplex 2205	ASTM A479	ASTM A182	D5
Super duplex 2507	ASTM A479	ASTM A182	D7
Alloy 20	ASTM A479	ASTM B462	A20
Alloy 400	ASTM B164, ASME SB164	ASTM B564, ASME SB564	M
Alloy 600	ASTM B166, ASME SB166	ASTM B564, ASME SB564	INC
Alloy 625	ASTM B446	ASTM B564, ASME SB564	A65
Alloy 718	ASTM B637	ASTM B637	A78
Alloy 825	ASTM B425	ASTM B564	A85
Alloy C-276	ASTM B574	ASTM B564	HC
Carbon steel	ASTM A108	ASTM A105	CS
Brass	ASTM B16/B453	ASTM B283	B
Nylon	ASTM D4066	/	PA
PTFE	ASTM D1710	/	T

Note: Normal materials in boldface letter can be be supplied rapidly; other materials need make to order, for lead time please contact XINVAL.

Installation Instructions

Tube Fittings up to 1" or 25 mm

Manual Installation

Initial installation

1. Loosen the nut 1/4 turn from finger-tight position.
2. Insert tubing into the tube fitting, make sure that the tubing rests firmly on the shoulder of the port.
3. Finger-tighten the nut.
4. Tighten the nut 1 1/4 turns with wrench while holding the body of the fitting or the valve steady (Fig.1).
   For small-sized fittings (1/16", 1/8" and 3/16", 2 mm, 3 mm and 4 mm), tighten the nut 3/4 turn with wrench (Fig.2).

Re-installation

1. Mark the tube at the back of the nut, mark a line along the nut and fitting body flats.
2. Insert tubing with preset ferrules into the fitting body until the front ferrule seats.
3. Hold the fitting body steady, then rotate the nut with a wrench to the previous pulled-up position as indicated by the marks on the tube and the flats.
4. Tighten the nut slightly with wrench.

Installation with Manual Presetting Tool

Initial installation

1. Hold the presetting tool steady.
2. Install the nut and ferrules onto the presetting tool.
3. Insert tubing into the presetting tool, and make sure the tube rests firmly on the shoulder of the presetting tool.
4. Finger-tighten the nut.
5. Tighten the nut clockwise 1 1/4 turns with wrench (Fig.1); For small-sized fittings (1/16", 1/8" and 3/16", 2 mm, 3 mm and 4 mm), tighten the nut 3/4 turn with wrench (Fig.2).
6. Loosen the nut and insert the tubing with preset ferrules into the fitting body until the front ferrule seats against the fitting body .
7. Tighten the nut with wrench. When you feel a significant increase in resistance, further tighten the nut slightly.

Re-installation

Same as the re-installation steps for manual installation for fittings up to 1" or 25 mm.

Installation with Hydraulic Presetting Tool

Only applicable for tube fittings from 1/2" to 1" and 12 mm - 25 mm.

Initial installation

1. Preset the ferrules onto the tubing using Hydraulic Presetting Tool. For details, refer to Instructions of Hydraulic Presetting Tool.
2. Install the preset assembly (tubing, nut, front and back ferrules) into the fitting body. Finger tight the nut.
3. Further tighten the nut 1/2 turn with a wrench while holding the fitting body steady.

Re-installation

Same as the re-installation steps for manual installation for fittings up to 1" or 25 mm.

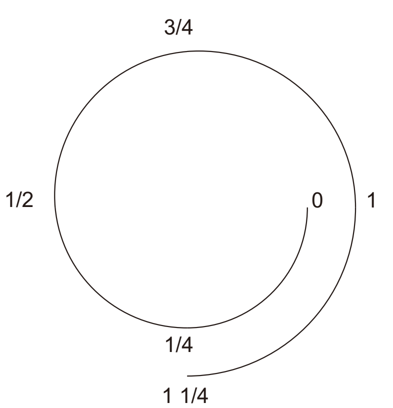


Fig.1

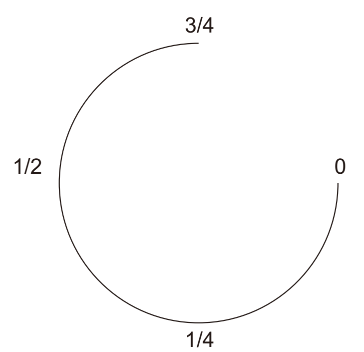


Fig.2

Tube Fittings over 1" or 25 mm

Initial installation

1. Preset the ferrules onto the tubing using Hydraulic Presetting Tool. For details, refer to Instructions of Hydraulic Presetting Tool.
2. Install the preset assembly (tubing, nut, front and back ferrules) into the fitting body. Finger tight the nut.
3. Further tighten the nut 1/2 turn with a wrench while holding the fitting body steady.

Re-installation

Same as the re-installation steps for manual installation for fittings up to 1" or 25 mm.

Plugs

Initial installation

Tighten the plug 1/4 turn from finger-tight position with wrench while holding the body of the fitting steady.
For small-sized fittings (1/16", 1/8" and 3/16", 2 mm, 3 mm and 4 mm), tighten the nut 1/8 turn with wrench.

Re-installation

Tighten the plug slightly with wrench from finger-tight position.

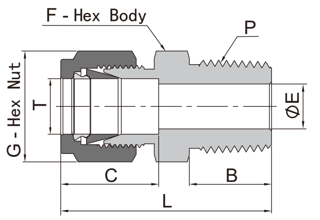
Port Connectors

The initial installation and re-installation for the tube end is the same as those of tube fittings and the non-tube end same as those of the plug.

Cautions:

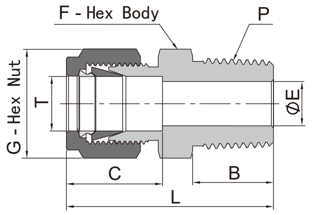
1. Do not loosen or tighten fittings when the system is pressurized.
2. Make sure that the tubing rests firmly on the shoulder of the port.
3. Always leave enough straight length of the tubing for the fittings.
4. Always use an insert for extremely soft plastic tubing.
5. Material of the metal tubing 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, the tubing must be fully annealed.
6. The allowable working pressure of the tube fitting is rated to the maximum working pressure of the corresponding tubing, which can be found in tubing data sheet. For those which can not be found in tubing data sheet, please contact XINVAL Group or our authorized distributors for related information.
7. Keep the tubing end and surface clean and smooth.
8. Always use proper thread sealants on tapered pipe threads. Make sure that its working temperature does not exceed that of the sealants.
9. When assembling the tube fitting, hold the body with a wrench and turn the nut instead of holding the nut.
10. When installing a valve with tube fitting end, hold the valve body with a wrench and turn the nut.
11. When assembling the fitting to a valve with thread, hold the valve body with a wrench and turn the body of the fitting.
12. Gap Inspection Gauge is ONLY accurate for initial installation by manual operation.

Male Connector

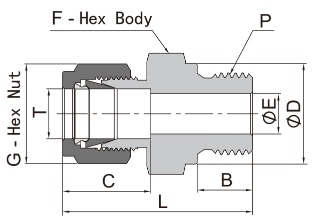


Fractional Tube								NPT Threads
T-Tube (in.)	P-NPT Sizes	Ordering No.	Dimensions, in. (mm)					
			L	B	C	E	G	F
1/16	1/16	-KU-F1-N1	0.94(23.9)	0.38(9.7)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.31(7.9)
1/16	1/8	-KU-F1-N2	1.03(26.2)	0.38(9.7)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.44(11.1)
1/16	1/4	-KU-F1-N4	1.22(31.0)	0.56(14.2)	0.34 8.6)	0.05(1.3)	0.31(7.9)	0.56(14.3)
1/8	1/16	-KU-F2-N1	1.17(29.7)	0.38(9.7)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.44(11.1)
1/8	1/8	-KU-F2-N2	1.20(30.5)	0.38(9.7)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.44(11.1)
1/8	1/4	-KU-F2-N4	1.40(35.6)	0.56(14.2)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.56(14.3)
1/8	3/8	-KU-F2-N6	1.41(35.8)	0.56(14.2)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.69(17.5)
1/8	1/2	-KU-F2-N8	1.66(42.2)	0.75(19.1)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.87(22.2)
3/16	1/16	-KU-F3-N1	1.23(31.2)	0.38(9.7)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.44(11.1)
3/16	1/8	-KU-F3-N2	1.23(31.2)	0.38(9.7)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.44(11.1)
3/16	1/4	-KU-F3-N4	1.43(36.3)	0.56(14.2)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.56(14.3)
1/4	1/16	-KU-F4-N1	1.29(32.8)	0.38(9.7)	0.60(15.2)	0.12(3.0)	0.56(14.3)	0.50(12.7)
1/4	1/8	-KU-F4-N2	1.29(32.8)	0.38(9.7)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.50(12.7)
1/4	1/4	-KU-F4-N4	1.49(37.8)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.56(14.3)
1/4	3/8	-KU-F4-N6	1.51(38.4)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.69(17.5)
1/4	1/2	-KU-F4-N8	1.76(44.7)	0.75(19.1)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)
1/4	3/4	-KU-F4-N12	1.82(46.2)	0.75(19.1)	0.60(15.2)	0.19(4.8)	0.56(14.3)	1.06(27.0)
5/16	1/8	-KU-F5-N2	1.34(34.0)	0.38(9.7)	0.64(16.3)	0.19(4.8)	0.63(15.9)	0.56(14.3)
5/16	1/4	-KU-F5-N4	1.52(38.6)	0.38(9.7)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.56(14.3)
5/16	3/8	-KU-F5-N6	1.54(39.1)	0.56(14.2)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.69(17.5)
5/16	1/2	-KU-F5-N8	1.79(45.5)	0.75(19.1)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.87(22.2)
3/8	1/8	-KU-F6-N2	1.39(35.3)	0.38(9.7)	0.66(16.8)	0.19(4.8)	0.69(17.5)	0.63(15.9)
3/8	1/4	-KU-F6-N4	1.57(39.9)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.63(15.9)
3/8	3/8	-KU-F6-N6	1.57(39.9)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.69(17.5)
3/8	1/2	-KU-F6-N8	1.82(46.2)	0.75(19.1)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.87(22.2)
3/8	3/4	-KU-F6-N12	1.88(47.8)	0.75(19.1)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.06(27.0)
3/8	1	-KU-F6-N16	2.14(54.4)	0.94(23.9)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.37(34.9)
1/2	1/8	-KU-F8-N2	1.53(38.9)	0.38(9.7)	0.90(22.9)	0.19(4.8)	0.87(22.2)	0.81(20.6)
1/2	1/4	-KU-F8-N4	1.71(43.4)	0.56(14.2)	0.90(22.9)	0.28(7.1)	0.87(22.2)	0.81(20.6)
1/2	3/8	-KU-F8-N6	1.71(43.4)	0.56(14.2)	0.90(22.9)	0.38(9.7)	0.87(22.2)	0.81(20.6)
1/2	1/2	-KU-F8-N8	1.93(49.0)	0.75(19.1)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.87(22.2)
1/2	3/4	-KU-F8-N12	1.99(50.5)	0.75(19.1)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.06(27.0)
1/2	1	-KU-F8-N16	2.25(57.2)	0.94(23.9)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.37(34.9)
5/8	1/4	-KU-F10-N4	1.74(44.2)	0.56(14.2)	0.96(24.4)	0.28(7.1)	1.00(25.4)	0.94(23.8)
5/8	3/8	-KU-F10-N6	1.74(44.2)	0.56(14.2)	0.96(24.4)	0.38(9.7)	1.00(25.4)	0.94(23.8)
5/8	1/2	-KU-F10-N8	1.93(49.0)	0.75(19.1)	0.96(24.4)	0.47(11.9)	1.00(25.4)	0.94(23.8)
5/8	3/4	-KU-F10-N12	1.99(50.5)	0.75(19.1)	0.96 (24.4)	0.50(12.7)	1.00(25.4)	1.06(27.0)
3/4	3/8	-KU-F12-N6	1.80(45.7)	0.56(14.2)	0.96(24.4)	0.41(10.4)	1.13(28.6)	1.06(27.0)
3/4	1/2	-KU-F12-N8	1.99(50.5)	0.75(19.1)	0.96(24.4)	0.47(11.9)	1.13(28.6)	1.06(27.0)
3/4	3/4	-KU-F12-N12	1.99(50.5)	0.75(19.1)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.06(27.0)
3/4	1	-KU-F12-N16	2.25(57.2)	0.94(23.9)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.37(34.9)
7/8	1/2	-KU-F14-N8	1.99(50.5)	0.75(19.1)	1.02(25.9)	0.47(11.9)	1.25(31.8)	1.19(30.2)
7/8	3/4	-KU-F14-N12	1.99(50.5)	0.75(19.1)	1.02(25.9)	0.62(15.7)	1.25(31.8)	1.19(30.2)
7/8	1	-KU-F14-N16	2.25(57.2)	0.94(23.9)	1.02(25.9)	0.72(18.3)	1.25(31.8)	1.37(34.9)
1	1/2	-KU-F16-N8	2.26(57.4)	0.75(19.1)	1.23(31.2)	0.47(11.9)	1.50(38.1)	1.37(34.9)
1	3/4	-KU-F16-N12	2.26(57.4)	0.75(19.1)	1.23(31.2)	0.62(15.7)	1.50(38.1)	1.37(34.9)
1	1	-KU-F16-N16	2.45(62.2)	0.94(23.9)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.37(34.9)
1 1/8	1	-KU-F18-N16	2.45(62.2)	0.94(23.9)	1.44(36.7)	0.88(22.4)	1.75(44.5)	1.63(41.3)
1 1/4	1	-KU-F20-N16	3.04(77.2)	0.94(23.9)	1.62(41.1)	0.88(22.4)	1.87(47.6)	1.75(44.5)
1 1/4	1 1/4	-KU-F20-N20	3.04(77.2)	0.94(23.9)	1.62(41.1)	1.09(27.7)	1.87(47.6)	1.75(44.5)
1 1/2	1 1/2	-KU-F24-N24	3.50(88.9)	1.03(26.2)	1.97(50.0)	1.34(34.0)	2.25(57.2)	2.13(54.0)

Male Connector

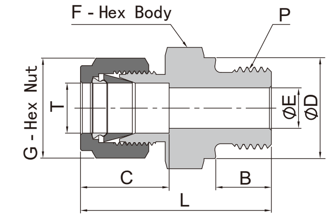


Fractional Tube						ISO Tapered Threads (RT)		
T-Tube (in.)	P-RT Sizes	Ordering No.	Dimensions, in. (mm)					
			L	B	C	E	G	F
1/8	1/8	-KU-F2-RT2	1.20(30.5)	0.38(9.7)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.44(11.1)
1/8	1/4	-KU-F2-RT4	1.40(35.6)	0.56(14.2)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.56(14.3)
1/4	1/8	-KU-F4-RT2	1.29(32.8)	0.38(9.7)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.50(12.7)
1/4	1/4	-KU-F4-RT4	1.49(37.8)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.56(14.3)
1/4	3/8	-KU-F4-RT6	1.51(38.4)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.69(17.5)
1/4	1/2	-KU-F4-RT8	1.76(44.7)	0.75(19.1)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)
5/16	1/8	-KU-F5-RT2	1.34(34.0)	0.38(9.7)	0.64(16.3)	0.19(4.8)	0.63(15.9)	0.56(14.3)
5/16	1/4	-KU-F5-RT4	1.52(38.6)	0.56(14.2)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.56(14.3)
3/8	1/8	-KU-F6-RT2	1.39(35.3)	0.38(9.7)	0.66(16.8)	0.19(4.8)	0.69(17.5)	0.63(15.9)
3/8	1/4	-KU-F6-RT4	1.57(39.9)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.63(15.9)
3/8	3/8	-KU-F6-RT6	1.57(39.9)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.69(17.5)
3/8	1/2	-KU-F6-RT8	1.82(46.2)	0.75(19.1)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.87(22.2)
3/8	3/4	-KU-F6-RT12	1.88(47.8)	0.75(19.1)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.06(27.0)
1/2	1/4	-KU-F8-RT4	1.71(43.4)	0.56(14.2)	0.90(22.9)	0.28(7.1)	0.87(22.2)	0.81(20.6)
1/2	3/8	-KU-F8-RT6	1.71(43.4)	0.56(14.2)	0.90(22.9)	0.38(9.7)	0.87(22.2)	0.81(20.6)
1/2	1/2	-KU-F8-RT8	1.93(49.0)	0.75(19.1)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.87(22.2)
1/2	3/4	-KU-F8-RT12	1.99(50.5)	0.75(19.1)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.06(27.0)
5/8	1/2	-KU-F10-RT8	1.93(49.0)	0.75(19.1)	0.96(24.4)	0.47(11.9)	1.00(25.4)	0.94(23.8)
3/4	3/4	-KU-F12-RT12	1.99(50.5)	0.75(19.1)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.06(27.0)
3/4	1	-KU-F12-RT16	2.25(57.2)	0.94(23.9)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.37(34.9)
1	3/4	-KU-F16-RT12	2.26(57.4)	0.75(19.1)	1.23(31.2)	0.62(15.7)	1.50(38.1)	1.37(34.9)
1	1	-KU-F16-RT16	2.45(62.2)	0.94(23.9)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.37(34.9)

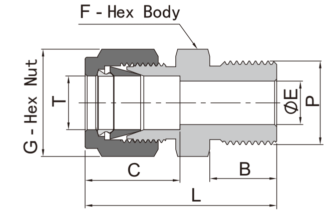


Fractional Tube							ISO Parallel Thread (RS)		
T-Tube (in.)	P-RS Sizes	Ordering No.	Dimensions, in. (mm)						
			L	B	C	E	G	F	D
1/8	1/8	-KU-F2-RS2	1.18(30.0)	0.28(7.1)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.56(14.3)	0.54(13.7)
1/8	1/4	-KU-F2-RS4	1.39(35.3)	0.44(11.2)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.75(19.1)	0.71(18.0)
1/8	3/8	-KU-F2-RS6	1.43(36.3)	0.44(11.2)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.87(22.2)	0.86(21.8)
1/4	1/8	-KU-F4-RS2	1.27(32.3)	0.28(7.1)	0.60(15.2)	0.16(4.0)	0.56(14.3)	0.56(14.3)	0.54(13.7)
1/4	1/4	-KU-F4-RS4	1.48(37.6)	0.44(11.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.75(19.1)	0.71(18.0)
1/4	3/8	-KU-F4-RS6	1.53(38.9)	0.44(11.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)	0.86(21.8)
1/4	1/2	-KU-F4-RS8	1.76(44.7)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	1.06(27.0)	1.02(25.9)
3/8	1/8	-KU-F6-RS2	1.49(37.8)	0.28(7.1)	0.66(16.8)	0.16(4.0)	0.69(17.5)	0.63(15.9)	0.54(13.7)
3/8	1/4	-KU-F6-RS4	1.54(39.1)	0.44(11.2)	0.66(16.8)	0.23(5.9)	0.69(17.5)	0.75(19.1)	0.71(18.0)
3/8	3/8	-KU-F6-RS6	1.59(40.4)	0.44(11.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.87(22.2)	0.86(21.8)
3/8	1/2	-KU-F6-RS8	1.82(46.2)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.06(27.0)	1.02(25.9)
1/2	1/4	-KU-F8-RS4	1.68(42.7)	0.44(11.2)	0.90(22.9)	0.23(5.9)	0.87(22.2)	0.81(20.6)	0.71(18.0)
1/2	3/8	-KU-F8-RS6	1.70(43.2)	0.44(11.2)	0.90(22.9)	0.31(7.9)	0.87(22.2)	0.87(22.2)	0.86(21.8)
1/2	1/2	-KU-F8-RS8	1.93(49.0)	0.56(14.2)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.06(27.0)	1.02(25.9)
3/4	1/2	-KU-F12-RS8	1.93(49.0)	0.56(14.2)	0.96(24.4)	0.47(11.9)	1.13(28.6)	1.06(27.0)	1.02(25.9)
3/4	3/4	-KU-F12-RS12	2.08(52.9)	0.62(15.7)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.31(33.3)	1.26(32.0)
1	1/2	-KU-F16-RS8	2.19(55.5)	0.56(14.2)	1.23(31.2)	0.47(11.9)	1.50(38.1)	1.37(34.9)	1.02(25.9)
1	3/4	-KU-F16-RS12	2.27(57.7)	0.62(15.7)	1.23(31.2)	0.63(16.0)	1.50(38.1)	1.37(34.9)	1.26(32.0)
1	1	-KU-F16-RS16	2.36(59.9)	0.72(18.3)	1.23(31.2)	0.78(19.8)	1.50(38.1)	1.63(41.3)	1.54(39.1)

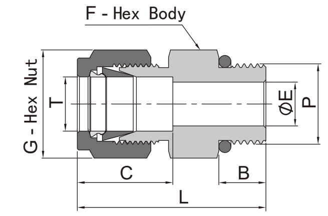
Male Connector



Fractional Tube							ISO Parallel Thread (RP)		
T-Tube (in.)	P-RP Sizes	Ordering No.	Dimensions, in. (mm)						
			L	B	C	E	G	F	D
1/8	1/8	-KU-F2-RP2	1.18(30.0)	0.28(7.1)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.56(14.3)	0.54(13.8)
1/8	1/4	-KU-F2-RP4	1.39(35.3)	0.44(11.2)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.75(19.1)	0.70(17.8)
1/4	1/8	-KU-F4-RP2	1.27(32.3)	0.28(7.1)	0.60(15.2)	0.16(4.1)	0.56(14.3)	0.56(14.3)	0.54(13.8)
1/4	1/4	-KU-F4-RP4	1.48(37.6)	0.44(11.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.75(19.1)	0.70(17.8)
1/2	3/8	-KU-F8-RP6	1.79(45.5)	0.44(11.2)	0.90(22.9)	0.31(7.9)	0.87(22.2)	0.87(22.2)	0.86(21.8)
1/2	1/2	-KU-F8-RP8	1.93(49.0)	0.56(14.2)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.06(27.0)	1.02(25.9)
3/4	1/2	-KU-F12-RP8	1.93(49.0)	0.56(14.2)	0.96(24.4)	0.47(11.9)	1.13(28.6)	1.06(27.0)	1.02(25.9)
3/4	3/4	-KU-F12-RP12	2.08(52.9)	0.62(15.7)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.31(33.3)	1.26(32.0)
1	1	-KU-F16-RP16	2.36(59.9)	0.72(18.3)	1.23(31.2)	0.78(19.8)	1.50(38.1)	1.63(41.3)	1.53(38.8)

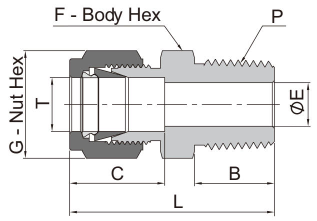


Fractional Tube						ISO Parallel Thread (BP)		
T-Tube (in.)	P-BP Sizes	Ordering No.	Dimensions, in. (mm)					
			L	B	C	E	G	F
1/4	3/8	-KU-F4-BP6	1.51(38.4)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.69(17.5)
3/8	3/8	-KU-F6-BP6	1.57(39.9)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.69(17.5)



Fractional Tube							SAE/MS Threads (ST)		
T-Tube (in.)	P-SAE Sizes	P-SAE/MS Threads	Ordering No.	Dimensions, in. (mm)					
				L	B	C	E	G	F
1/16	2	5/16-24	-KU-F1-ST5	0.92(23.4)	0.30(7.6)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.44(11.1)
1/8	2	5/16-24	-KU-F2-ST5	1.18(30.0)	0.30(7.6)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.44(11.1)
1/8	4	7/16-20	-KU-F2-ST7	1.24(31.5)	0.36(9.1)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.56(14.3)
1/8	6	9/16-18	-KU-F2-ST9	1.31(33.3)	0.39(9.9)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.69(17.5)
3/16	3	3/8-24	-KU-F3-ST6	1.20(30.5)	0.30(7.6)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.50(12.7)
1/4	2	5/16-24	-KU-F4-ST5	1.27(32.3)	0.30(7.6)	0.60(15.2)	0.12(3.0)	0.56(14.3)	0.50(12.7)
1/4	4	7/16-20	-KU-F4-ST7	1.34(34.0)	0.36(9.1)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.56(14.3)
1/4	6	9/16-18	-KU-F4-ST9	1.40(35.6)	0.39(9.9)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.69(17.5)
1/4	8	3/4-16	-KU-F4-ST12	1.48(37.6)	0.44(11.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)
1/4	10	7/8-14	-KU-F4-ST14	1.60(40.6)	0.50(12.7)	0.60(15.2)	0.19(4.8)	0.56(14.3)	1.00(25.4)
5/16	5	1/2-20	-KU-F5-ST8	1.37(34.8)	0.36(9.1)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.63(15.9)
3/8	4	7/16-20	-KU-F6-ST7	1.40(35.6)	0.36(9.1)	0.66(16.8)	0.20(5.1)	0.69(17.5)	0.63(15.9)
3/8	6	9/16-18	-KU-F6-ST9	1.46(37.1)	0.39(9.9)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.69(17.5)
3/8	8	3/4-16	-KU-F6-ST12	1.54(39.1)	0.44(11.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.87(22.2)
3/8	10	7/8-14	-KU-F6-ST14	1.66(42.2)	0.50(12.7)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.00(25.4)
1/2	6	9/16-18	-KU-F8-ST9	1.54(39.1)	0.39(9.9)	0.90(22.9)	0.28(7.1)	0.87(22.2)	0.81(20.6)
1/2	8	3/4-16	-KU-F8-ST12	1.65(41.9)	0.44(11.2)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.87(22.2)
1/2	10	7/8-14	-KU-F8-ST14	1.77(45.0)	0.50(12.7)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.00(25.4)
1/2	12	1 1/16-12	-KU-F8-ST17	1.93(49.0)	0.59(15.0)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.25(31.8)
5/8	8	3/4-16	-KU-F10-ST12	1.65(41.9)	0.44(11.2)	0.96(24.4)	0.42(10.7)	1.00(25.4)	0.94(23.8)
5/8	10	7/8-14	-KU-F10-ST14	1.78(45.2)	0.50(12.7)	0.96(24.4)	0.50(12.7)	1.00(25.4)	1.00(25.4)
3/4	8	3/4-16	-KU-F12-ST12	1.81(46.0)	0.44(11.2)	0.96(24.4)	0.42(10.7)	1.13(28.6)	1.06(27.0)
3/4	12	1 1/16-12	-KU-F12-ST17	1.93(49.0)	0.59(15.0)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.25(31.8)
3/4	16	1 5/16-12	-KU-F12-ST21	1.96(49.8)	0.59(15.0)	0.96(24.4)	0.63(16.0)	1.13(28.6)	1.50(38.1)
7/8	14	1 3/16-12	-KU-F14-ST19	1.93(49.0)	0.59(15.0)	1.02(25.9)	0.72(18.3)	1.25(31.8)	1.37(34.9)
1	12	1 1/16-12	-KU-F16-ST17	2.10(53.3)	0.59(15.0)	1.23(31.2)	0.66(16.8)	1.50(38.1)	1.37(34.9)
1	16	1 5/16-12	-KU-F16-ST21	2.14(54.4)	0.59(15.0)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.50(38.1)
1 1/4	20	1 5/8-12	-KU-F20-ST26	2.69(68.3)	0.59(15.0)	1.62(41.1)	1.09(27.7)	1.87(47.6)	1.87(47.6)
1 1/2	24	1 7/8-12	-KU-F24-ST30	3.06(77.7)	0.59(15.0)	1.97(50.0)	1.34(34.0)	2.25(57.2)	2.13(54.0)

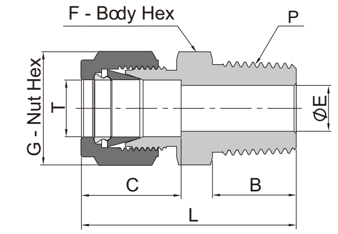
Male Connectors



The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.

Metric Tube								NPT Thread
T-Tube O.D. (mm)	P-NPT Size	Basic Ordering Number	Dimensions, mm (in.)					
			L	B	C	E	G	F
2	1/8	-KU-F2M-N2	30.5(1.20)	9.7(0.38)	12.9(0.51)	1.7(0.07)	12.0(0.47)	12.0(0.47)
3	1/8	-KU-F3M-N2	30.5(1.20)	9.7(0.38)	12.9(0.51)	2.4(0.09)	12.0(0.47)	12.0(0.47)
3	1/4	-KU-F3M-N4	35.6(1.40)	14.2(0.56)	12.9(0.51)	2.4(0.09)	12.0(0.47)	14.0(0.55)
4	1/8	-KU-F4M-N2	31.2(1.23)	9.7(0.38)	13.7(0.54)	2.4(0.09)	12.0(0.47)	12.0(0.47)
4	1/4	-KU-F4M-N4	36.3(1.43)	14.2(0.56)	13.7(0.54)	2.4(0.09)	12.0(0.47)	14.0(0.55)
6	1/8	-KU-F6M-N2	32.8(1.29)	9.7(0.38)	15.3(0.60)	4.8(0.19)	14.0(0.55)	14.0(0.55)
6	1/4	-KU-F6M-N4	37.9(1.49)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	14.0(0.55)
6	3/8	-KU-F6M-N6	38.4(1.51)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	18.0(0.71)
6	1/2	-KU-F6M-N8	44.7(1.76)	19.1(0.75)	15.3(0.60)	4.8(0.19)	14.0(0.55)	22.0(0.87)
8	1/8	-KU-F8M-N2	34.2(1.35)	9.7(0.38)	16.2(0.64)	4.8(0.19)	16.0(0.63)	15.0(0.59)
8	1/4	-KU-F8M-N4	38.7(1.52)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	15.0(0.59)
8	3/8	-KU-F8M-N6	39.3(1.55)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	18.0(0.71)
8	1/2	-KU-F8M-N8	45.6(1.80)	19.1(0.75)	16.2(0.64)	6.4(0.25)	16.0(0.63)	22.0(0.87)
10	1/8	-KU-F10M-N2	36.3(1.43)	9.7(0.38)	17.2(0.68)	4.8(0.19)	19.0(0.75)	18.0(0.71)
10	1/4	-KU-F10M-N4	40.9(1.61)	14.2(0.56)	17.2(0.68)	7.1(0.28)	19.0(0.75)	18.0(0.71)
10	3/8	-KU-F10M-N6	40.9(1.61)	14.2(0.56)	17.2(0.68)	7.9(0.31)	19.0(0.75)	18.0(0.71)
10	1/2	-KU-F10M-N8	46.5(1.83)	19.1(0.75)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)
10	3/4	-KU-F10M-N12	48.0(1.89)	19.1(0.75)	17.2(0.68)	7.9(0.31)	19.0(0.75)	27.0(1.06)
10	1	-KU-F10M-N16	54.6(2.15)	23.9(0.94)	17.2(0.68)	7.9(0.31)	19.0(0.75)	35.0(1.38)
12	1/8	-KU-F12M-N2	38.8(1.53)	9.7(0.38)	22.8(0.90)	4.8(0.19)	22.0(0.87)	22.0(0.87)
12	1/4	-KU-F12M-N4	43.4(1.71)	14.2(0.56)	22.8(0.90)	7.1(0.28)	22.0(0.87)	22.0(0.87)
12	3/8	-KU-F12M-N6	43.4(1.71)	14.2(0.56)	22.8(0.90)	9.5(0.37)	22.0(0.87)	22.0(0.87)
12	1/2	-KU-F12M-N8	49.0(1.93)	19.1(0.75)	22.8(0.90)	9.5(0.37)	22.0(0.87)	22.0(0.87)
12	3/4	-KU-F12M-N12	49.1(1.93)	19.1(0.75)	22.8(0.90)	9.5(0.37)	22.0(0.87)	27.0(1.06)
14	1/8	-KU-F14M-N2	39.9(1.57)	9.7(0.38)	24.4(0.96)	4.8(0.19)	25.0(0.98)	24.0(0.94)
14	1/4	-KU-F14M-N4	44.1(1.74)	14.2(0.56)	24.4(0.96)	7.1(0.28)	25.0(0.98)	24.0(0.94)
14	3/8	-KU-F14M-N6	44.1(1.74)	14.2(0.56)	24.4(0.96)	9.5(0.37)	25.0(0.98)	24.0(0.94)
14	1/2	-KU-F14M-N8	49.0(1.93)	19.1(0.75)	24.4(0.96)	11.1(0.44)	25.0(0.98)	24.0(0.94)
14	3/4	-KU-F14M-N12	49.1(1.93)	19.1(0.75)	24.4(0.96)	11.1(0.44)	25.0(0.98)	27.0(1.06)
15	1/2	-KU-F15M-N8	49.0(1.93)	19.1(0.75)	24.4(0.96)	11.9(0.47)	25.0(0.98)	24.0(0.94)
15	3/4	-KU-F15M-N12	50.5(1.99)	19.1(0.75)	24.4(0.96)	11.9(0.47)	25.0(0.98)	27.0(1.06)
15	1	-KU-F15M-N16	57.1(2.25)	23.9(0.94)	24.4(0.96)	11.9(0.47)	25.0(0.98)	35.0(1.38)
16	1/4	-KU-F16M-N4	44.1(1.74)	14.2(0.56)	24.4(0.96)	7.1(0.28)	25.0(0.98)	24.0(0.94)
16	3/8	-KU-F16M-N6	44.1(1.74)	14.2(0.56)	24.4(0.96)	9.5(0.37)	25.0(0.98)	24.0(0.94)
16	1/2	-KU-F16M-N8	49.0(1.93)	19.1(0.75)	24.4(0.96)	11.9(0.47)	25.0(0.98)	24.0(0.94)
16	3/4	-KU-F16M-N12	50.5(1.99)	19.1(0.75)	24.4(0.96)	12.7(0.5)	25.0(0.98)	27.0(1.06)
18	3/8	-KU-F18M-N6	45.6(1.80)	14.2(0.56)	24.4(0.96)	9.5(0.37)	30.0(1.18)	27.0(1.06)
18	1/2	-KU-F18M-N8	50.5(1.99)	19.1(0.75)	24.4(0.96)	11.9(0.47)	30.0(1.18)	27.0(1.06)
18	3/4	-KU-F18M-N12	50.5(1.99)	19.1(0.75)	24.4(0.96)	15.1(0.59)	30.0(1.18)	27.0(1.06)
20	1/2	-KU-F20M-N8	52.3(2.06)	19.1(0.75)	26.0(1.02)	11.9(0.47)	32.0(1.26)	30.0(1.18)
20	3/4	-KU-F20M-N12	52.3(2.06)	19.1(0.75)	26.0(1.02)	15.9(0.63)	32.0(1.26)	30.0(1.18)
20	1	-KU-F20M-N16	57.1(2.25)	23.9(0.94)	26.0(1.02)	15.9(0.63)	32.0(1.26)	35.0(1.38)
22	1/2	-KU-F22M-N8	52.3(2.06)	19.1(0.75)	26.0(1.02)	11.9(0.47)	32.0(1.26)	30.0(1.18)
22	3/4	-KU-F22M-N12	52.3(2.06)	19.1(0.75)	26.0(1.02)	15.9(0.63)	32.0(1.26)	30.0(1.18)
22	1	-KU-F22M-N16	57.1(2.25)	23.9(0.94)	26.0(1.02)	18.3(0.72)	32.0(1.26)	35.0(1.38)
25	1/2	-KU-F25M-N8	57.5(2.26)	19.1(0.75)	31.3(1.23)	11.9(0.47)	38.0(1.50)	35.0(1.38)
25	3/4	-KU-F25M-N12	57.5(2.26)	19.1(0.75)	31.3(1.23)	15.9(0.63)	38.0(1.50)	35.0(1.38)
25	1	-KU-F25M-N16	62.3(2.45)	23.9(0.94)	31.3(1.23)	21.8(0.86)	38.0(1.50)	35.0(1.38)
28	1	-KU-F28M-N16	72.4(2.85)	23.9(0.94)	36.6(1.44)	21.8(0.86)	46.0(1.81)	41.0(1.61)
28	1 1/4	-KU-F28M-N20	73.1(2.88)	23.9(0.94)	36.6(1.44)	21.8(0.86)	46.0(1.81)	46.0(1.81)
30	1 1/4	-KU-F30M-N20	77.2(3.04)	23.9(0.94)	39.6(1.56)	26.2(1.03)	50.0(1.97)	46.0(1.81)
32	1 1/4	-KU-F32M-N20	79.6(3.13)	23.9(0.94)	42.0(1.65)	28.6(1.13)	50.0(1.97)	46.0(1.81)
38	1 1/2	-KU-F38M-N24	91.6(3.61)	26.2(1.03)	49.4(1.94)	33.7(1.33)	60.0(2.36)	55.0(2.17)

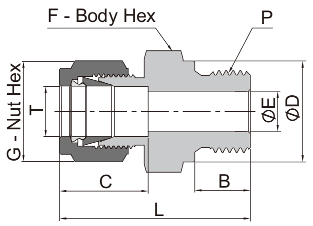
Male Connectors



The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.

Metric Tube								ISO Tapered Thread (RT)
T-Tube O.D. (mm)	P-RT Size	Basic Ordering Number	Dimensions, mm (in.)					
			L	B	C	E	G	F
2	1/8	-KU-F2M-RT2	30.5(1.20)	9.7(0.38)	12.9(0.51)	1.7(0.07)	12.0(0.47)	12.0(0.47)
3	1/8	-KU-F3M-RT2	30.5(1.20)	9.7(0.38)	12.9(0.51)	2.4(0.09)	12.0(0.47)	12.0(0.47)
3	1/4	-KU-F3M-RT4	35.6(1.40)	14.2(0.56)	12.9(0.51)	2.4(0.09)	12.0(0.47)	14.0(0.55)
4	1/8	-KU-F4M-RT2	31.2(1.23)	9.7(0.38)	13.7(0.54)	2.4(0.09)	12.0(0.47)	12.0(0.47)
4	1/4	-KU-F4M-RT4	36.3(1.43)	14.2(0.56)	13.7(0.54)	2.4(0.09)	12.0(0.47)	14.0(0.55)
6	1/8	-KU-F6M-RT2	32.8(1.29)	9.7(0.38)	15.3(0.60)	4.8(0.19)	14.0(0.55)	14.0(0.55)
6	1/4	-KU-F6M-RT4	37.9(1.49)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	14.0(0.55)
6	3/8	-KU-F6M-RT6	38.4(1.51)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	18.0(0.71)
6	1/2	-KU-F6M-RT8	44.7(1.76)	19.1(0.75)	15.3(0.60)	4.8(0.19)	14.0(0.55)	22.0(0.87)
8	1/8	-KU-F8M-RT2	34.2(1.35)	9.7(0.38)	16.2(0.64)	4.8(0.19)	16.0(0.63)	15.0(0.59)
8	1/4	-KU-F8M-RT4	38.7(1.52)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	15.0(0.59)
8	3/8	-KU-F8M-RT6	39.2(1.54)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	18.0(0.71)
8	1/2	-KU-F8M-RT8	45.6(1.80)	19.1(0.75)	16.2(0.64)	6.4(0.25)	16.0(0.63)	22.0(0.87)
10	1/8	-KU-F10M-RT2	36.3(1.43)	9.7(0.38)	17.2(0.68)	4.8(0.19)	19.0(0.75)	18.0(0.71)
10	1/4	-KU-F10M-RT4	40.9(1.61)	14.2(0.56)	17.2(0.68)	7.1(0.28)	19.0(0.75)	18.0(0.71)
10	3/8	-KU-F10M-RT6	40.9(1.61)	14.2(0.56)	17.2(0.68)	7.9(0.31)	19.0(0.75)	18.0(0.71)
10	1/2	-KU-F10M-RT8	46.5(1.83)	19.1(0.75)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)
10	3/4	-KU-F10M-RT12	48.0(1.89)	19.1(0.75)	17.2(0.68)	7.9(0.31)	19.0(0.75)	27.0(1.06)
12	1/8	-KU-F12M-RT2	38.9(1.53)	9.7(0.38)	22.8(0.90)	4.8(0.19)	22.0(0.87)	22.0(0.87)
12	1/4	-KU-F12M-RT4	43.4(1.71)	14.2(0.56)	22.8(0.90)	7.1(0.28)	22.0(0.87)	22.0(0.87)
12	3/8	-KU-F12M-RT6	43.4(1.71)	14.2(0.56)	22.8(0.90)	9.5(0.37)	22.0(0.87)	22.0(0.87)
12	1/2	-KU-F12M-RT8	49.0(1.93)	19.1(0.75)	22.8(0.90)	9.5(0.37)	22.0(0.87)	22.0(0.87)
12	3/4	-KU-F12M-RT12	50.5(1.99)	19.1(0.75)	22.8(0.90)	9.5(0.37)	22.0(0.87)	27.0(1.06)
14	1/8	-KU-F14M-RT2	39.9(1.57)	9.7(0.38)	24.4(0.96)	4.8(0.19)	25.0(0.98)	24.0(0.94)
14	1/4	-KU-F14M-RT4	44.1(1.74)	14.2(0.56)	24.4(0.96)	7.1(0.28)	25.0(0.98)	24.0(0.94)
14	3/8	-KU-F14M-RT6	44.1(1.74)	14.2(0.56)	24.4(0.96)	9.5(0.37)	25.0(0.98)	24.0(0.94)
14	1/2	-KU-F14M-RT8	49.0(1.93)	19.1(0.75)	24.4(0.96)	11.1(0.44)	25.0(0.98)	24.0(0.94)
14	3/4	-KU-F14M-RT12	50.5(1.99)	19.1(0.75)	24.4(0.96)	11.1(0.44)	25.0(0.98)	27.0(1.06)
15	1/2	-KU-F15M-RT8	49.0(1.93)	19.1(0.75)	24.4(0.96)	11.9(0.47)	25.0(0.98)	24.0(0.94)
16	1/4	-KU-F16M-RT4	44.1(1.74)	14.2(0.56)	24.4(0.96)	7.1(0.28)	25.0(0.98)	24.0(0.94)
16	3/8	-KU-F16M-RT6	44.1(1.74)	14.2(0.56)	24.4(0.96)	9.5(0.37)	25.0(0.98)	24.0(0.94)
16	1/2	-KU-F16M-RT8	49.0(1.93)	19.1(0.75)	24.4(0.96)	11.9(0.47)	25.0(0.98)	24.0(0.94)
16	3/4	-KU-F16M-RT12	50.5(1.99)	19.1(0.75)	24.4(0.96)	12.7(0.5)	25.0(0.98)	27.0(1.06)
18	1/2	-KU-F18M-RT8	50.5(1.99)	19.1(0.75)	24.4(0.96)	11.9(0.47)	30.0(1.18)	27.0(1.06)
18	3/4	-KU-F18M-RT12	50.5(1.99)	19.1(0.75)	24.4(0.96)	15.1(0.59)	30.0(1.18)	27.0(1.06)
20	1/2	-KU-F20M-RT8	52.3(2.06)	19.1(0.75)	26.0(1.02)	11.9(0.47)	32.0(1.26)	30.0(1.18)
20	3/4	-KU-F20M-RT12	52.3(2.06)	19.1(0.75)	26.0(1.02)	15.9(0.63)	32.0(1.26)	30.0(1.18)
22	3/4	-KU-F22M-RT12	52.3(2.06)	19.1(0.75)	26.0(1.02)	15.9(0.63)	32.0(1.26)	30.0(1.18)
22	1	-KU-F22M-RT16	57.1(2.25)	23.9(0.94)	26.0(1.02)	18.3(0.72)	32.0(1.26)	35.0(1.38)
25	1/2	-KU-F25M-RT8	57.5(2.26)	19.1(0.75)	31.3(1.23)	11.9(0.47)	38.0(1.50)	35.0(1.38)
25	3/4	-KU-F25M-RT12	57.5(2.26)	19.1(0.75)	31.3(1.23)	15.9(0.63)	38.0(1.50)	35.0(1.38)
25	1	-KU-F25M-RT16	62.3(2.45)	23.9(0.94)	31.3(1.23)	21.8(0.86)	38.0(1.50)	35.0(1.38)
28	1	-KU-F28M-RT16	72.4(2.85)	23.9(0.94)	36.6(1.44)	21.8(0.86)	46.0(1.81)	41.0(1.61)
28	1 1/4	-KU-F28M-RT20	73.1(2.88)	23.9(0.94)	36.6(1.44)	21.8(0.86)	46.0(1.81)	46.0(1.81)
30	1 1/4	-KU-F30M-RT20	77.2(3.04)	23.9(0.94)	39.6(1.56)	26.2(1.03)	50.0(1.97)	46.0(1.81)
32	1 1/4	-KU-F32M-RT20	79.6(3.13)	23.9(0.94)	42.0(1.65)	28.6(1.13)	50.0(1.97)	46.0(1.81)
38	1 1/2	-KU-F38M-RT24	91.6(3.61)	26.2(1.03)	49.4(1.94)	33.7(1.33)	60.0(2.36)	55.0(2.17)

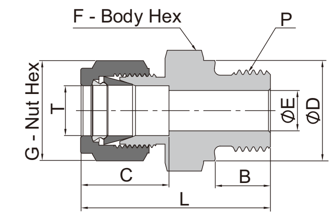
Male Connectors



The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.

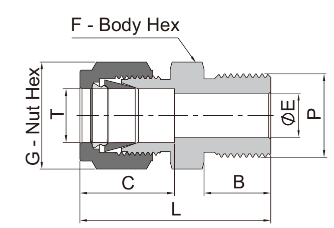
Metric Tube			ISO Parallel Thread (RS)						
T-Tube O.D. (mm)	P-RS Size	Basic Ordering Number	Dimensions, mm (in.)						
			L	B	C	E	G	F	D
2	1/8	-KU-F2M-RS2	30.0(1.18)	7.1(0.28)	12.9(0.51)	1.7(0.07)	12.0(0.47)	14.0(0.55)	13.7(0.54)
3	1/8	-KU-F3M-RS2	30.0(1.18)	7.1(0.28)	12.9(0.51)	2.4(0.09)	12.0(0.47)	14.0(0.55)	13.7(0.54)
3	1/4	-KU-F3M-RS4	35.3(1.39)	11.2(0.44)	12.9(0.51)	2.4(0.09)	12.0(0.47)	19.0(0.75)	18.0(0.71)
4	1/8	-KU-F4M-RS2	30.7(1.21)	7.1(0.28)	13.7(0.54)	2.4(0.09)	12.0(0.47)	14.0(0.55)	13.7(0.54)
4	1/4	-KU-F4M-RS4	36.0(1.42)	11.2(0.44)	13.7(0.54)	2.4(0.09)	12.0(0.47)	19.0(0.75)	18.0(0.71)
6	1/8	-KU-F6M-RS2	32.3(1.27)	7.1(0.28)	15.3(0.60)	4.0(0.16)	14.0(0.55)	14.0(0.55)	13.7(0.54)
6	1/4	-KU-F6M-RS4	37.6(1.48)	11.2(0.44)	15.3(0.60)	4.8(0.19)	14.0(0.55)	19.0(0.75)	18.0(0.71)
6	3/8	-KU-F6M-RS6	38.9(1.53)	11.2(0.44)	15.3(0.60)	4.8(0.19)	14.0(0.55)	22.0(0.87)	21.6(0.85)
6	1/2	-KU-F6M-RS8	44.7(1.76)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	27.0(1.06)	25.9(1.02)
8	1/8	-KU-F8M-RS2	33.2(1.31)	7.1(0.28)	16.2(0.64)	4.0(0.16)	16.0(0.63)	15.0(0.59)	13.7(0.54)
8	1/4	-KU-F8M-RS4	38.5(1.52)	11.2(0.44)	16.2(0.64)	6.4(0.25)	16.0(0.63)	19.0(0.75)	18.0(0.71)
8	3/8	-KU-F8M-RS6	39.8(1.57)	11.2(0.44)	16.2(0.64)	6.4(0.25)	16.0(0.63)	22.0(0.87)	21.6(0.85)
8	1/2	-KU-F8M-RS8	45.6(1.80)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	27.0(1.06)	25.9(1.02)
8	3/4	-KU-F8M-RS12	49.5(1.95)	15.7(0.62)	16.2(0.64)	6.4(0.25)	16.0(0.63)	35.0(1.38)	32.0(1.26)
10	1/4	-KU-F10M-RS4	39.4(1.55)	11.2(0.44)	17.2(0.68)	5.9(0.23)	19.0(0.75)	19.0(0.75)	18.0(0.71)
10	3/8	-KU-F10M-RS6	40.6(1.60)	11.2(0.44)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)	21.6(0.85)
10	1/2	-KU-F10M-RS8	46.5(1.83)	14.2(0.56)	17.2(0.68)	7.9(0.31)	19.0(0.75)	27.0(1.06)	25.9(1.02)
12	1/4	-KU-F12M-RS4	42.6(1.68)	11.2(0.44)	22.8(0.90)	5.9(0.23)	22.0(0.87)	22.0(0.87)	18.0(0.71)
12	3/8	-KU-F12M-RS6	43.1(1.70)	11.2(0.44)	22.8(0.90)	7.9(0.31)	22.0(0.87)	22.0(0.87)	21.6(0.85)
12	1/2	-KU-F12M-RS8	49.0(1.93)	14.2(0.56)	22.8(0.90)	9.5(0.37)	22.0(0.87)	27.0(1.06)	25.9(1.02)
12	3/4	-KU-F12M-RS12	52.8(2.08)	15.7(0.62)	22.8(0.90)	9.5(0.37)	22.0(0.87)	35.0(1.38)	32.0(1.26)
14	1/4	-KU-F14M-RS4	44.2(1.74)	11.2(0.44)	24.4(0.96)	6.4(0.25)	25.0(0.98)	24.0(0.94)	18.0(0.71)
14	3/8	-KU-F14M-RS6	43.9(1.73)	11.2(0.44)	24.4(0.96)	7.9(0.31)	25.0(0.98)	24.0(0.94)	21.6(0.85)
14	1/2	-KU-F14M-RS8	49.0(1.93)	14.2(0.56)	24.4(0.96)	11.1(0.44)	25.0(0.98)	27.0(1.06)	25.9(1.02)
14	3/4	-KU-F14M-RS12	52.8(2.08)	15.7(0.62)	24.4(0.96)	11.1(0.44)	25.0(0.98)	35.0(1.38)	32.0(1.26)
15	3/8	-KU-F15M-RS6	43.9(1.73)	11.2(0.44)	24.4(0.96)	7.9(0.31)	25.0(0.98)	24.0(0.94)	21.6(0.85)
15	1/2	-KU-F15M-RS8	49.0(1.93)	14.2(0.56)	24.4(0.96)	11.9(0.47)	25.0(0.98)	27.0(1.06)	25.9(1.02)
15	3/4	-KU-F15M-RS12	52.8(2.08)	15.7(0.62)	24.4(0.96)	11.9(0.47)	25.0(0.98)	35.0(1.38)	32.0(1.26)
16	3/8	-KU-F16M-RS6	43.9(1.73)	11.2(0.44)	24.4(0.96)	7.9(0.31)	25.0(0.98)	24.0(0.94)	21.6(0.85)
16	1/2	-KU-F16M-RS8	49.0(1.93)	14.2(0.56)	24.4(0.96)	11.9(0.47)	25.0(0.98)	27.0(1.06)	25.9(1.02)
16	3/4	-KU-F16M-RS12	52.8(2.08)	15.7(0.62)	24.4(0.96)	12.7(0.5)	25.0(0.98)	35.0(1.38)	32.0(1.26)
18	1/2	-KU-F18M-RS8	49.0(1.93)	14.2(0.56)	24.4(0.96)	11.9(0.47)	30.0(1.18)	27.0(1.06)	25.9(1.02)
18	3/4	-KU-F18M-RS12	52.8(2.08)	15.7(0.62)	24.4(0.96)	15.1(0.59)	30.0(1.18)	35.0(1.38)	32.0(1.26)
20	1/2	-KU-F20M-RS8	50.5(1.99)	14.2(0.56)	26.0(1.02)	11.9(0.47)	32.0(1.26)	30.0(1.18)	25.9(1.02)
20	3/4	-KU-F20M-RS12	52.8(2.08)	15.7(0.62)	26.0(1.02)	15.9(0.63)	32.0(1.26)	35.0(1.38)	32.0(1.26)
22	3/4	-KU-F22M-RS12	52.8(2.08)	15.7(0.62)	26.0(1.02)	15.9(0.63)	32.0(1.26)	35.0(1.38)	32.0(1.26)
22	1	-KU-F22M-RS16	55.3(2.18)	18.3(0.72)	26.0(1.02)	18.3(0.72)	32.0(1.26)	41.0(1.61)	39.1(1.54)
25	3/4	-KU-F25M-RS12	57.5(2.26)	15.7(0.62)	31.3(1.23)	15.9(0.63)	38.0(1.50)	35.0(1.38)	32.0(1.26)
25	1	-KU-F25M-RS16	60.1(2.37)	18.3(0.72)	31.3(1.23)	19.8(0.78)	38.0(1.50)	41.0(1.61)	39.1(1.54)
28	1	-KU-F28M-RS16	70.1(2.76)	18.3(0.72)	36.6(1.44)	19.8(0.78)	46.0(1.81)	41.0(1.61)	39.1(1.54)
28	1 1/4	-KU-F28M-RS20	73.9(2.91)	19.8(0.78)	36.6(1.44)	21.8(0.86)	46.0(1.81)	50.0(1.97)	49.0(1.93)
30	1 1/4	-KU-F30M-RS20	79.2(312)	19.8(0.78)	39.6(1.56)	26.2(1.03)	50.0(1.97)	50.0(1.97)	49.0(1.93)
32	1 1/4	-KU-F32M-RS20	78.9(3.11)	19.8(0.78)	42.0(1.65)	28.6(1.13)	50.0(1.97)	50.0(1.97)	49.0(1.93)
38	1 1/2	-KU-F38M-RS24	90.8(3.57)	20.6(0.81)	49.4(1.94)	31.8(1.25)	60.0(2.36)	55.0(2.17)	54.7(2.15)

Male Connectors



The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.

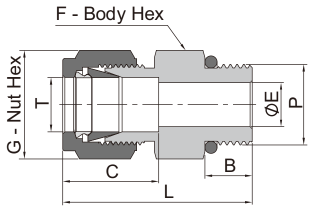
Metric Tube			ISO Parallel Thread (RP)						
T-Tube O.D. (mm)	P-RP Size	Basic Ordering Number	Dimensions, mm (in.)						
			L	B	C	E	G	F	D
3	1/8	-KU-F3M-RP2	30.0(1.18)	7.1(0.28)	12.9(0.51)	2.4(0.09)	12.0(0.47)	14.0(0.55)	13.8(0.54)
3	1/4	-KU-F3M-RP4	35.3(1.39)	11.2(0.44)	12.9(0.51)	2.4(0.09)	12.0(0.47)	19.0(0.75)	18.0(0.71)
4	1/8	-KU-F4M-RP2	30.7(1.21)	7.1(0.28)	13.7(0.54)	2.4(0.09)	12.0(0.47)	14.0(0.55)	13.8(0.54)
6	1/8	-KU-F6M-RP2	32.3(1.27)	7.1(0.28)	15.3(0.60)	4.0(0.16)	14.0(0.55)	14.0(0.55)	13.8(0.54)
6	1/4	-KU-F6M-RP4	37.6(1.48)	11.2(0.44)	15.3(0.60)	4.8(0.19)	14.0(0.55)	19.0(0.75)	18.0(0.71)
6	3/8	-KU-F6M-RP6	38.9(1.53)	11.2(0.44)	15.3(0.60)	4.8(0.19)	14.0(0.55)	22.0(0.87)	21.8(0.86)
6	1/2	-KU-F6M-RP8	44.7(1.76)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	27.0(1.06)	26.0(1.02)
8	1/8	-KU-F8M-RP2	33.3(1.31)	7.1(0.28)	16.2(0.64)	4.0(0.16)	16.0(0.63)	15.0(0.59)	13.8(0.54)
8	1/4	-KU-F8M-RP4	38.5(1.52)	11.2(0.44)	16.2(0.64)	5.9(0.23)	16.0(0.63)	19.0(0.75)	18.0(0.71)
8	3/8	-KU-F8M-RP6	39.8(1.57)	11.2(0.44)	16.2(0.64)	6.4(0.25)	16.0(0.63)	22.0(0.87)	21.8(0.86)
8	1/2	-KU-F8M-RP8	45.6(1.80)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	27.0(1.06)	26.0(1.02)
10	1/4	-KU-F10M-RP4	39.4(1.55)	11.2(0.44)	17.2(0.68)	5.9(0.23)	19.0(0.75)	19.0(0.75)	18.0(0.71)
10	3/8	-KU-F10M-RP6	42.8(1.69)	11.2(0.44)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)	21.8(0.86)
10	1/2	-KU-F10M-RP8	46.5(1.83)	14.2(0.56)	17.2(0.68)	7.9(0.31)	19.0(0.75)	27.0(1.06)	26.0(1.02)
12	1/4	-KU-F12M-RP4	42.6(1.68)	11.2(0.44)	22.8(0.90)	5.9(0.23)	22.0(0.87)	22.0(0.87)	18.0(0.71)
12	3/8	-KU-F12M-RP6	43.1(1.70)	11.2(0.44)	22.8(0.90)	7.9(0.31)	22.0(0.87)	22.0(0.87)	21.8(0.86)
12	1/2	-KU-F12M-RP8	52.1(2.05)	14.2(0.56)	22.8(0.90)	9.5(0.37)	22.0(0.87)	27.0(1.06)	26.0(1.02)
12	3/4	-KU-F12M-RP12	52.8(2.08)	15.7(0.62)	22.8(0.90)	9.5(0.37)	22.0(0.87)	35.0(1.38)	32.0(1.26)
15	1/2	-KU-F15M-RP8	47.5(1.87)	14.2(0.56)	24.4(0.96)	11.9(0.47)	25.0(0.98)	27.0(1.06)	26.0(1.02)
16	3/8	-KU-F16M-RP6	43.9(1.73)	11.2(0.44)	24.4(0.96)	7.9(0.31)	25.0(0.98)	24.0(0.94)	21.8(0.86)
16	1/2	-KU-F16M-RP8	49.0(1.93)	14.2(0.56)	24.4(0.96)	11.9(0.47)	25.0(0.98)	27.0(1.06)	26.0(1.02)
18	1/2	-KU-F18M-RP8	49.0(1.93)	14.2(0.56)	24.4(0.96)	11.9(0.47)	30.0(1.18)	27.0(1.06)	26.0(1.02)
18	3/4	-KU-F18M-RP12	52.8(2.08)	15.7(0.62)	24.4(0.96)	15.1(0.59)	30.0(1.18)	35.0(1.38)	32.0(1.26)
20	1/2	-KU-F20M-RP8	50.5(1.99)	14.2(0.56)	26.0(1.02)	11.9(0.47)	32.0(1.26)	30.0(1.18)	26.0(1.02)
20	3/4	-KU-F20M-RP12	52.8(2.08)	15.7(0.62)	26.0(1.02)	15.9(0.63)	32.0(1.26)	35.0(1.38)	32.0(1.26)
22	3/4	-KU-F22M-RP12	52.8(2.08)	15.7(0.62)	26.0(1.02)	15.9(0.63)	32.0(1.26)	35.0(1.38)	32.0(1.26)
22	1	-KU-F22M-RP16	55.3(2.18)	18.3(0.72)	26.0(1.02)	18.3(0.72)	32.0(1.26)	41.0(1.61)	39.0(1.54)
25	3/4	-KU-F25M-RP12	57.5(2.26)	15.7(0.62)	31.3(1.23)	15.9(0.63)	38.0(1.50)	35.0(1.38)	32.0(1.26)
25	1	-KU-F25M-RP16	60.1(2.37)	18.3(0.72)	31.3(1.23)	19.8(0.78)	38.0(1.50)	41.0(1.61)	39.0(1.54)
28	1	-KU-F28M-RP16	70.1(2.76)	18.3(0.72)	36.6(1.44)	19.8(0.78)	46.0(1.81)	41.0(1.61)	39.0(1.54)
28	1 1/4	-KU-F28M-RP20	73.9(2.91)	19.8(0.78)	36.6(1.44)	21.8(0.86)	46.0(1.81)	50.0(1.97)	49.0(1.93)
30	1 1/4	-KU-F30M-RP20	76.5(3.01)	19.8(0.78)	39.6(1.56)	26.2(1.03)	50.0(1.97)	50.0(1.97)	49.0(1.93)
32	1 1/4	-KU-F32M-RP20	78.9(3.11)	19.8(0.78)	42.0(1.65)	28.6(1.13)	50.0(1.97)	50.0(1.97)	49.0(1.93)
38	1 1/2	-KU-F38M-RP24	89.3(3.52)	20.6(0.81)	49.4(1.94)	31.8(1.25)	60.0(2.36)	55.0(2.17)	54.7(2.15)



The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.

Metric Tube			ISO Parallel Thread (BP)					
T-Tube O.D. (mm)	P-BP Size	Basic Ordering Number	Dimensions, mm (in.)					
			L	B	C	E	G	F
6	1/4	-KU-F6M-BP4	36.9(1.45)	12.9(0.51)	15.3(0.60)	4.8(0.19)	14.0(0.55)	14.0(0.55)
6	3/8	-KU-F6M-BP6	39.5(1.56)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	18.0(0.71)
8	1/8	-KU-F8M-BP2	33.9(1.33)	9.8(0.39)	16.2(0.64)	4.0(0.16)	16.0(0.63)	14.0(0.55)
8	1/4	-KU-F8M-BP4	37.0(1.46)	12.9(0.51)	16.2(0.64)	6.4(0.25)	16.0(0.63)	14.0(0.55)
8	3/8	-KU-F8M-BP6	39.3(1.55)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	18.0(0.71)
8	1/2	-KU-F8M-BP8	45.4(1.79)	18.8(0.74)	16.2(0.64)	6.4(0.25)	16.0(0.63)	22.0(0.87)
10	1/4	-KU-F10M-BP4	39.5(1.56)	12.9(0.51)	17.2(0.68)	5.9(0.23)	19.0(0.75)	18.0(0.71)
10	1/2	-KU-F10M-BP8	46.3(1.82)	18.8(0.74)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)
12	3/8	-KU-F12M-BP6	44.2(1.74)	14.2(0.56)	22.8(0.90)	7.9(0.31)	22.0(0.87)	22.0(0.87)
12	1/2	-KU-F12M-BP8	52.1(2.05)	18.8(0.74)	22.8(0.90)	9.5(0.37)	22.0(0.87)	22.0(0.87)
14	1/4	-KU-F14M-BP4	42.9(1.69)	12.9(0.51)	24.4(0.96)	5.9(0.23)	25.0(0.98)	24.0(0.94)
16	3/8	-KU-F16M-BP6	43.4(1.71)	14.2(0.56)	24.4(0.96)	7.9(0.31)	25.0(0.98)	24.0(0.94)
16	1/2	-KU-F16M-BP8	47.9(1.89)	18.8(0.74)	24.4(0.96)	9.5(0.37)	25.0(0.98)	24.0(0.94)
18	1/2	-KU-F18M-BP8	49.8(1.96)	18.8(0.74)	24.4(0.96)	9.5(0.37)	30.0(1.18)	27.0(1.06)

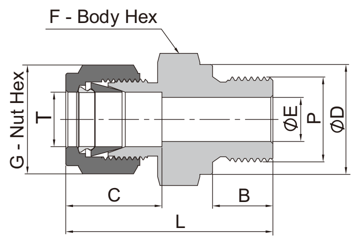
Male Connectors



1. The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.
2. Adapt to straight thread boss of SAE J1926-1, ISO 11926-1 and MS 16142.

Metric Tube — SAE/MS Straight Threads (ST)

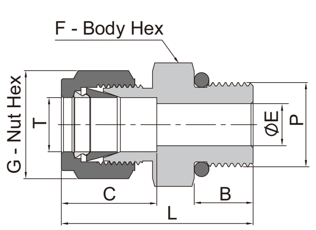
T-Tube O.D. (mm)	P-SAE Nominal Size	P-SAE/MS Thread Specification	Basic Ordering Number	Dimensions, mm (in.)					
				L	B	C	E	G	F
6	6	9/16-18	-KU-F6M-ST9	35.6(1.40)	9.9(0.39)	15.3(0.60)	4.8(0.19)	14.0(0.55)	18.0(0.71)
10	6	9/16-18	-KU-F10M-ST9	37.3(1.47)	9.9(0.39)	17.2(0.68)	7.1(0.28)	19.0(0.75)	18.0(0.71)
10	8	3/4-16	-KU-F10M-ST12	39.4(1.55)	11.2(0.44)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)
12	4	7/16-20	-KU-F12M-ST7	40.6(1.60)	9.1(0.36)	22.8(0.90)	5.2(0.20)	22.0(0.87)	22.0(0.87)
12	6	9/16-18	-KU-F12M-ST9	39.9(1.57)	9.9(0.39)	22.8(0.90)	7.1(0.28)	22.0(0.87)	22.0(0.87)



The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.

Metric Tube — Metric Thread (MRS)

T-Tube O.D. (mm)	P-Metric Thread Size	Basic Ordering Number	Dimensions, mm (in.)						
			L	B	C	E	G	F	D
6	M8 x 1	-KU-F6M-MRS8	33.3(1.31)	8.0(0.31)	15.3(0.60)	3.0(0.12)	14.0(0.55)	14.0(0.55)	12.0(0.47)
6	M10 x 1	-KU-F6M-MRS10	33.3(1.31)	8.0(0.31)	15.3(0.60)	4.0(0.16)	14.0(0.55)	14.0(0.55)	14.0(0.55)
6	M12 x 1.5	-KU-F6M-MRS12	38.2(1.50)	12.0(0.47)	15.3(0.60)	4.8(0.19)	14.0(0.55)	18.0(0.71)	17.0(0.67)
6	M14 x 1.5	-KU-F6M-MRS14	39.7(1.56)	12.0(0.47)	15.3(0.60)	4.8(0.19)	14.0(0.55)	22.0(0.87)	19.0(0.75)
8	M8 x 1	-KU-F8M-MRS8	34.1(1.34)	8.0(0.31)	16.2(0.64)	3.0(0.12)	16.0(0.63)	14.0(0.55)	12.0(0.47)
8	M10 x 1	-KU-F8M-MRS10	34.1(1.34)	8.0(0.31)	16.2(0.64)	5.0(0.20)	16.0(0.63)	14.0(0.55)	14.0(0.55)
8	M12 x 1.5	-KU-F8M-MRS12	40.4(1.59)	12.0(0.47)	16.2(0.64)	6.0(0.24)	16.0(0.63)	18.0(0.71)	17.0(0.67)
8	M14 x 1.5	-KU-F8M-MRS14	40.4(1.59)	12.0(0.47)	16.2(0.64)	6.4(0.25)	16.0(0.63)	19.0(0.75)	19.0(0.75)
10	M12 x 1.5	-KU-F10M-MRS12	40.7(1.60)	12.0(0.47)	17.2(0.68)	6.0(0.24)	19.0(0.75)	18.0(0.71)	17.0(0.67)
10	M14 x 1.5	-KU-F10M-MRS14	39.5(1.56)	12.0(0.47)	17.2(0.68)	7.9(0.31)	19.0(0.75)	19.0(0.75)	19.0(0.75)
12	M16 x 1.5	-KU-F12M-MRS16	45.5(1.79)	12.0(0.47)	22.8(0.90)	9.0(0.35)	22.0(0.87)	22.0(0.87)	21.0(0.83)
12	M20 x 1.5	-KU-F12M-MRS20	47.2(1.86)	14.0(0.55)	22.8(0.90)	9.5(0.37)	22.0(0.87)	25.0(0.98)	25.0(0.98)
12	M22 x 1.5	-KU-F12M-MRS22	47.5(1.87)	14.0(0.55)	22.8(0.90)	9.5(0.37)	22.0(0.87)	27.0(1.06)	27.0(1.06)
14	M14 x 1.5	-KU-F14M-MRS14	44.9(1.77)	12.0(0.47)	24.4(0.96)	8.0(0.31)	25.0(0.98)	24.0(0.94)	19.0(0.75)
14	M20 x 1.5	-KU-F14M-MRS20	48.0(1.89)	14.0(0.55)	24.4(0.96)	11.1(0.44)	25.0(0.98)	27.0(1.06)	25.0(0.98)
16	M20 x 1.5	-KU-F16M-MRS20	48.0(1.89)	14.0(0.55)	24.4(0.96)	12.0(0.47)	25.0(0.98)	25.0(0.98)	25.0(0.98)
18	M20 x 1.5	-KU-F18M-MRS20	48.5(1.91)	14.0(0.55)	24.4(0.96)	12.0(0.47)	30.0(1.18)	27.0(1.06)	25.0(0.98)
20	M20 x 1.5	-KU-F20M-MRS20	50.0(1.97)	14.0(0.55)	26.0(1.02)	12.0(0.47)	32.0(1.26)	30.0(1.18)	25.0(0.98)
22	M24 x 1.5	-KU-F22M-MRS24	50.5(1.99)	14.0(0.55)	26.0(1.02)	15.0(0.59)	32.0(1.26)	30.0(1.18)	28.8(1.13)
25	M27 x 2	-KU-F25M-MRS27	57.5(2.26)	16.0(0.63)	31.3(1.23)	16.8(0.66)	38.0(1.50)	35.0(1.38)	32.0(1.26)

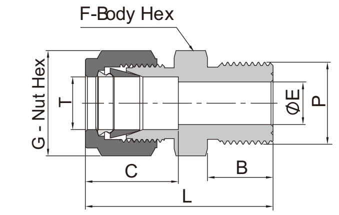


1. The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.
2. Adapt to straight thread boss of ISO 6149-1.

Metric Tube — Metric Thread (MST)

T-Tube O.D. (mm)	P-Metric Thread Size	Basic Ordering Number	Dimensions, mm (in.)					
			L	B	C	E	G	F
6	M14 x 1.5	-KU-F6M-MST14	38.7(1.52)	11.0(0.43)	15.3(0.60)	4.8(0.19)	14.0(0.55)	19.0(0.75)
10	M14 x 1.5	-KU-F10M-MST14	40.0(1.57)	11.0(0.43)	17.2(0.68)	7.5(0.30)	19.0(0.75)	19.0(0.75)
10	M20 x 1.5	-KU-F10M-MST20	47.2(1.86)	14.0(0.55)	17.2(0.68)	7.9(0.31)	19.0(0.75)	27.0(1.06)
12	M14 x 1.5	-KU-F12M-MST14	40.2(1.58)	11.0(0.43)	22.8(0.90)	7.5(0.30)	22.0(0.87)	22.0(0.87)
12	M20 x 1.5	-KU-F12M-MST20	47.2(1.86)	14.0(0.55)	22.8(0.90)	9.5(0.37)	22.0(0.87)	27.0(1.06)

Male Connectors

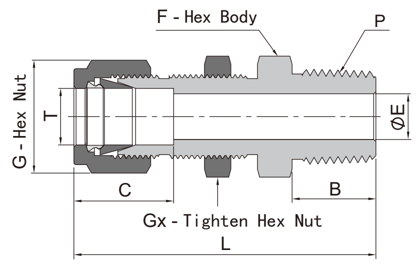


The E dimension refers to the smallest nominal orifice. It might be larger at tapered thread end, straight thread end.

Metric Tube — Metric Thread (MS)

T-Tube O.D. (mm)	P-Metric Thread Size	Basic Ordering Number	Dimensions, mm (in.)					
			L	B	C	E	G	F
6	M6 x 1	-KU-F6M-MS6	32.4(1.28)	8.0(0.31)	15.3(0.60)	2.0(0.08)	14.0(0.55)	14.0(0.55)
6	M8 x 1	-KU-F6M-MS8	35.3(1.39)	9.0(0.35)	15.3(0.60)	3.0(0.12)	14.0(0.55)	14.0(0.55)
6	M10 x 1	-KU-F6M-MS10	34.7(1.37)	11.0(0.43)	15.3(0.60)	4.7(0.19)	14.0(0.55)	14.0(0.55)
6	M12 x 1.5	-KU-F6M-MS12	36.4(1.43)	12.0(0.47)	15.3(0.60)	4.8(0.19)	14.0(0.55)	14.0(0.55)
6	M14 x 1.5	-KU-F6M-MS14	36.5(1.44)	13.0(0.51)	15.3(0.60)	4.8(0.19)	14.0(0.55)	16.0(0.63)
6	M16 x 1.5	-KU-F6M-MS16	38.4(1.51)	14.0(0.55)	15.3(0.60)	4.8(0.19)	14.0(0.55)	18.0(0.71)
6	M18 x 1.5	-KU-F6M-MS18	40.0(1.57)	15.0(0.59)	15.3(0.60)	4.8(0.19)	14.0(0.55)	19.0(0.75)
6	M20 x 1.5	-KU-F6M-MS20	41.7(1.64)	16.0(0.63)	15.3(0.60)	4.8(0.19)	14.0(0.55)	22.0(0.87)
8	M8 x 1	-KU-F8M-MS8	34.5(1.36)	9.0(0.35)	16.2(0.64)	3.0(0.12)	16.0(0.63)	14.0(0.55)
8	M10 x 1	-KU-F8M-MS10	36.6(1.44)	11.0(0.43)	16.2(0.64)	4.7(0.19)	16.0(0.63)	14.0(0.55)
8	M12 x 1.5	-KU-F8M-MS12	36.6(1.44)	12.0(0.47)	16.2(0.64)	6.0(0.24)	16.0(0.63)	14.0(0.55)
8	M14 x 1.5	-KU-F8M-MS14	37.7(1.48)	13.0(0.51)	16.2(0.64)	6.4(0.25)	16.0(0.63)	16.0(0.63)
8	M20 x 1.5	-KU-F8M-MS20	42.5(1.67)	16.0(0.63)	16.2(0.64)	6.4(0.25)	16.0(0.63)	22.0(0.87)
10	M12 x 1.5	-KU-F10M-MS12	38.7(1.52)	12.0(0.47)	17.2(0.68)	6.0(0.24)	19.0(0.75)	18.0(0.71)
10	M14 x 1.5	-KU-F10M-MS14	39.7(1.56)	13.0(0.51)	17.2(0.68)	7.2(0.28)	19.0(0.75)	18.0(0.71)
10	M20 x 1.5	-KU-F10M-MS20	43.5(1.71)	16.0(0.63)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)
12	M12 x 1.5	-KU-F12M-MS12	41.2(1.62)	12.0(0.47)	22.8(0.90)	6.0(0.24)	22.0(0.87)	22.0(0.87)
12	M16 x 1.5	-KU-F12M-MS16	43.2(1.70)	14.0(0.55)	22.8(0.90)	8.4(0.33)	22.0(0.87)	22.0(0.87)
12	M18 x 1.5	-KU-F12M-MS18	44.2(1.74)	15.0(0.59)	22.8(0.90)	9.5(0.37)	22.0(0.87)	22.0(0.87)
12	M20 x 1.5	-KU-F12M-MS20	45.2(1.78)	16.0(0.63)	22.8(0.90)	9.5(0.37)	22.0(0.87)	22.0(0.87)
14	M14 x 1.5	-KU-F14M-MS14	42.5(1.67)	13.0(0.51)	24.4(0.96)	7.2(0.28)	25.0(0.98)	24.0(0.94)
14	M16 x 1.5	-KU-F14M-MS16	43.9(1.73)	14.0(0.55)	24.4(0.96)	8.4(0.33)	25.0(0.98)	24.0(0.94)
14	M20 x 1.5	-KU-F14M-MS20	45.1(1.78)	16.0(0.63)	24.4(0.96)	10.8(0.43)	25.0(0.98)	24.0(0.94)
16	M20 x 1.5	-KU-F16M-MS20	46.1(1.81)	16.0(0.63)	24.4(0.96)	10.8(0.43)	25.0(0.98)	24.0(0.94)
18	M20 x 1.5	-KU-F18M-MS20	47.5(1.87)	16.0(0.63)	24.4(0.96)	10.8(0.43)	30.0(1.18)	27.0(1.06)
18	M22 x 1.5	-KU-F18M-MS22	48.5(1.91)	17.0(0.67)	24.4(0.96)	12.0(0.47)	30.0(1.18)	27.0(1.06)
20	M20 x 1.5	-KU-F20M-MS20	49.5(1.95)	16.0(0.63)	26.0(1.02)	10.8(0.43)	32.0(1.26)	30.0(1.18)
22	M24 x 1.5	-KU-F22M-MS24	50.5(1.99)	17.0(0.67)	26.0(1.02)	14.4(0.57)	32.0(1.26)	30.0(1.18)
25	M27 x 2	-KU-F25M-MS27	57.0(2.24)	18.0(0.71)	31.3(1.23)	16.1(0.63)	38.0(1.50)	35.0(1.38)

Male Bulkhead Connectors



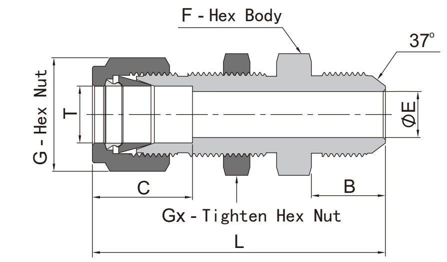
Fractional Tube **NPT** Threads

T-Tube (in.)	P-NPT Sizes	Ordering No.	Dimensions, in. (mm) L	B	C	E	G	F	Gx	Panel Hole Sizes in. (mm)	Max. Panel Thickness in. (mm)
1/16	1/16	-KBU-F1-N1	1.19(30.2)	0.38(9.7)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.31(7.9)	0.31(7.9)	0.20(5.2)	0.25(6.4)
1/16	1/8	-KBU-F1-N2	1.27(32.3)	0.38(9.7)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.44(11.1)	0.31(7.9)	0.20(5.2)	0.25(6.4)
1/8	1/8	-KBU-F2-N2	1.83(46.5)	0.38(9.7)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.50(12.7)	0.50(12.7)	0.33(8.3)	0.50(12.7)
3/16	1/8	-KBU-F3-N2	1.89(48.0)	0.38(9.7)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.56(14.3)	0.56(14.3)	0.39(9.9)	0.50(12.7)
1/4	1/8	-KBU-F4-N2	1.95(49.5)	0.38(9.7)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.63(15.9)	0.63(15.9)	0.45(11.5)	0.40(10.2)
1/4	1/4	-KBU-F4-N4	2.13(54.1)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.63(15.9)	0.63(15.9)	0.45(11.5)	0.40(10.2)
1/4	3/8	-KBU-F4-N6	2.16(54.9)	0.56(14.2)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.69(17.5)	0.63(15.9)	0.45(11.5)	0.40(10.2)
1/4	1/2	-KBU-F4-N8	2.37(60.3)	0.75(19.1)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)	0.63(15.9)	0.45(11.5)	0.40(10.2)
5/16	1/8	-KBU-F5-N2	2.08(52.8)	0.38(9.7)	0.64(16.3)	0.19(4.8)	0.63(15.9)	0.69(17.5)	0.69(17.5)	0.52(13.1)	0.44(11.2)
5/16	1/4	-KBU-F5-N4	2.27(57.7)	0.56(14.2)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.69(17.5)	0.69(17.5)	0.52(13.1)	0.44(11.2)
3/8	1/8	-KBU-F6-N2	2.08(52.9)	0.38(9.7)	0.66(16.8)	0.19(4.8)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	1/4	-KBU-F6-N4	2.26(57.4)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	3/8	-KBU-F6-N6	2.26(57.4)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	1/2	-KBU-F6-N8	2.51(63.8)	0.75(19.1)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.87(22.2)	0.87(22.2)	0.58(14.7)	0.44(11.2)
1/2	1/8	-KBU-F8-N2	2.31(58.7)	0.38(9.7)	0.90(22.9)	0.19(4.8)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
1/2	1/4	-KBU-F8-N4	2.23(56.6)	0.56(14.2)	0.90(22.9)	0.28(7.1)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
1/2	3/8	-KBU-F8-N6	2.49(63.2)	0.56(14.2)	0.90(22.9)	0.38(9.7)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
1/2	1/2	-KBU-F8-N8	2.71(68.8)	0.75(19.1)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
5/8	3/8	-KBU-F10-N6	2.63(66.7)	0.56(14.2)	0.96(24.4)	0.38(9.7)	1.00(25.4)	1.06(27.0)	1.06(27.0)	0.89(22.6)	0.59(15.1)
5/8	1/2	-KBU-F10-N8	2.81(71.5)	0.75(19.1)	0.96(24.4)	0.47(11.9)	1.00(25.4)	1.06(27.0)	1.06(27.0)	0.89(22.6)	0.59(15.1)
3/4	1/2	-KBU-F12-N8	3.00(76.2)	0.75(19.1)	0.96(24.4)	0.47(11.9)	1.13(28.6)	1.19(30.2)	1.19(30.2)	1.02(25.8)	0.66(16.8)
3/4	3/4	-KBU-F12-N12	3.00(76.2)	0.75(19.1)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.19(30.2)	1.19(30.2)	1.02(25.8)	0.66(16.8)
7/8	3/4	-KBU-F14-N12	3.31(84.1)	0.75(19.1)	1.02(25.9)	0.62(15.7)	1.25(31.8)	1.31(33.3)	1.31(33.3)	1.14(29.0)	0.75(19.1)
1	3/4	-KBU-F16-N12	3.48(88.4)	0.75(19.1)	1.23(31.2)	0.62(15.7)	1.50(38.1)	1.63(41.3)	1.63(41.3)	1.33(33.7)	0.75(19.1)
1	1	-KBU-F16-N16	3.67(93.2)	0.94(23.9)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.63(41.3)	1.63(41.3)	1.33(33.7)	0.75(19.1)

Metric Tube **NPT** Threads

T-Tube (mm)	P-NPT Sizes	Ordering No.	Dimensions, mm (in.) L	B	C	E	G	F	Gx	Panel Hole Sizes mm (in.)	Max. Panel Thickness mm (in.)
6	1/8	-KBU-F6M-N2	49.6(1.95)	9.7(0.38)	15.3(0.60)	4.8(0.19)	14.0(0.55)	16.0(0.63)	16.0(0.63)	11.5(0.45)	10.2(0.40)
6	1/4	-KBU-F6M-N4	53.6(2.11)	14.2(0.56)	15.3(0.60)	4.8(0.19)	14.0(0.55)	16.0(0.63)	16.0(0.63)	11.5(0.45)	10.2(0.40)
8	1/8	-KBU-F8M-N2	52.3(2.06)	9.7(0.38)	16.2(0.64)	4.8(0.19)	16.0(0.63)	18.0(0.71)	18.0(0.71)	13.1(0.52)	11.2(0.44)
8	1/4	-KBU-F8M-N4	56.6(2.23)	14.2(0.56)	16.2(0.64)	6.4(0.25)	16.0(0.63)	18.0(0.71)	18.0(0.71)	13.1(0.52)	11.2(0.44)
10	1/4	-KBU-F10M-N4	58.4(2.30)	14.2(0.56)	17.2(0.68)	7.1(0.28)	19.0(0.75)	22.0(0.87)	22.0(0.87)	16.3(0.64)	11.2(0.44)
10	3/8	-KBU-F10M-N6	58.4(2.30)	14.2(0.56)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)	22.0(0.87)	16.3(0.64)	11.2(0.44)
10	1/2	-KBU-F10M-N8	63.1(2.48)	19.1(0.75)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)	22.0(0.87)	16.3(0.64)	11.2(0.44)
12	1/4	-KBU-F12M-N4	63.9(2.52)	14.2(0.56)	22.8(0.90)	7.1(0.28)	22.0(0.87)	24.0(0.94)	24.0(0.94)	19.5(0.77)	12.7(0.50)
12	3/8	-KBU-F12M-N6	63.9(2.52)	14.2(0.56)	22.8(0.90)	9.5(0.37)	22.0(0.87)	24.0(0.94)	24.0(0.94)	19.5(0.77)	12.7(0.50)
12	1/2	-KBU-F12M-N8	68.8(2.71)	19.1(0.75)	22.8(0.90)	9.5(0.37)	22.0(0.87)	24.0(0.94)	24.0(0.94)	19.5(0.77)	12.7(0.50)

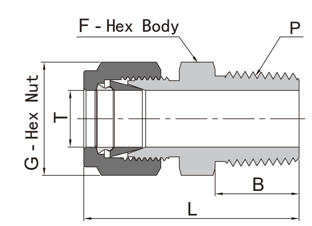
Male Bulkhead Connectors



Fractional Tube 37°Flared **(AN)**

T-Tube (in.)	AN Tube Sizes	Ordering No.	Dimensions, in. (mm) L	B	C	E	G	F	Gx	Panel Hole Sizes in. (mm)	Max. Panel Thickness in. (mm)
1/8	1/8	-KBU-F2-AN2	1.91(48.5)	0.45(11.4)	0.50(12.7)	0.06(1.5)	0.44(11.1)	0.50(12.7)	0.50(12.7)	0.33(8.3)	0.50(12.7)
1/8	1/4	-KBU-F2-AN4	2.04(51.8)	0.55(14.0)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.63(15.9)	0.50(12.7)	0.33(8.3)	0.50(12.7)
3/16	3/16	-KBU-F3-AN3	1.98(50.3)	0.48(12.2)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.56(14.3)	0.56(14.3)	0.39(9.9)	0.50(12.7)
1/4	1/4	-KBU-F4-AN4	2.12(53.8)	0.55(14.0)	0.60(15.2)	0.17(4.3)	0.56(14.3)	0.63(15.9)	0.63(15.9)	0.45(11.5)	0.40(10.2)
5/16	5/16	-KBU-F5-AN5	2.21(56.1)	0.55(14.0)	0.64(16.2)	0.23(5.8)	0.63(15.9)	0.69(17.5)	0.69(17.5)	0.52(13.1)	0.56(14.3)
3/8	1/4	-KBU-F6-AN4	2.25(57.2)	0.55(14.0)	0.66(16.8)	0.17(4.3)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	3/8	-KBU-F6-AN6	2.25(57.2)	0.56(14.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
1/2	1/2	-KBU-F8-AN8	2.59(65.8)	0.66(16.8)	0.90(22.8)	0.39(9.9)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
5/8	5/8	-KBU-F10-AN10	2.74(69.6)	0.76(19.3)	0.96(24.4)	0.48(12.3)	1.00(25.4)	1.06(27.0)	1.06(27.0)	0.89(22.6)	0.59(15.1)
3/4	3/4	-KBU-F12-AN12	3.11(79.0)	0.86(21.8)	0.96(24.4)	0.61(15.5)	1.13(28.6)	1.19(30.2)	1.19(30.2)	1.02(25.8)	0.66(16.8)
1	1	-KBU-F16-AN16	3.64(92.5)	0.91(23.1)	1.23(31.2)	0.84(21.3)	1.50(38.1)	1.63(41.3)	1.63(41.3)	1.33(33.7)	0.75(19.1)

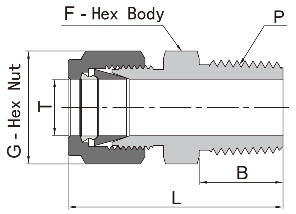
Thermocouple Connectors



Fractional Tube **NPT** Threads

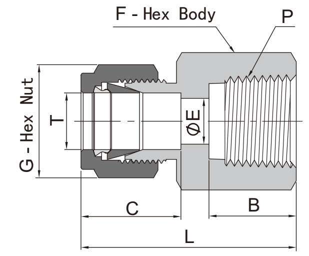
T-Tube (in.)	P-NPT Sizes	Ordering No.	Dimensions, in. (mm) L	B	G	F
1/16	1/16	-KTC-F1-N1	0.94(23.9)	0.38(9.7)	0.31(7.9)	0.31(7.9)
1/16	1/8	-KTC-F1-N2	1.03(26.2)	0.38(9.7)	0.31(7.9)	0.44(11.1)
1/16	1/4	-KTC-F1-N4	1.22(31.0)	0.56(14.2)	0.31(7.9)	0.56(14.3)
1/8	1/16	-KTC-F2-N1	1.17(29.7)	0.38(9.7)	0.44(11.1)	0.44(11.1)
1/8	1/8	-KTC-F2-N2	1.20(30.5)	0.38(9.7)	0.44(11.1)	0.44(11.1)
1/8	1/4	-KTC-F2-N4	1.40(35.6)	0.56(14.2)	0.44(11.1)	0.56(14.3)
3/16	1/8	-KTC-F3-N2	1.23(31.2)	0.38(9.7)	0.50(12.7)	0.44(11.1)
3/16	1/4	-KTC-F3-N4	1.43(36.3)	0.56(14.2)	0.50(12.7)	0.56(14.3)
1/4	1/8	-KTC-F4-N2	1.29(32.8)	0.38(9.7)	0.56(14.3)	0.50(12.7)
1/4	1/4	-KTC-F4-N4	1.49(37.8)	0.56(14.2)	0.56(14.3)	0.56(14.3)
1/4	3/8	-KTC-F4-N6	1.51(38.4)	0.56(14.2)	0.56(14.3)	0.69(17.5)
1/4	1/2	-KTC-F4-N8	1.76(44.7)	0.75(19.1)	0.56(14.3)	0.87(22.2)
5/16	1/4	-KTC-F5-N4	1.52(38.6)	0.56(14.2)	0.63(15.9)	0.56(14.3)
3/8	1/4	-KTC-F6-N4	1.57(39.9)	0.56(14.2)	0.69(17.5)	0.63(15.9)
3/8	3/8	-KTC-F6-N6	1.57(39.9)	0.56(14.2)	0.69(17.5)	0.69(17.5)
3/8	1/2	-KTC-F6-N8	1.82(46.2)	0.75(19.1)	0.69(17.5)	0.87(22.2)
3/8	3/4	-KTC-F6-N12	1.88(47.8)	0.75(19.1)	0.69(17.5)	1.06(27.0)
1/2	1/2	-KTC-F8-N8	1.93(49.0)	0.75(19.1)	0.87(22.2)	0.87(22.2)
1/2	3/4	-KTC-F8-N12	1.99(50.5)	0.75(19.1)	0.87(22.2)	1.06(27.0)
5/8	3/4	-KTC-F10-N12	1.99(50.5)	0.75(19.1)	1.00(25.4)	1.06(27.0)
3/4	3/4	-KTC-F12-N12	1.99(50.5)	0.75(19.1)	1.13(28.6)	1.06(27.0)
1	1	-KTC-F16-N16	2.45(62.2)	0.94(23.9)	1.50(38.1)	1.37(34.9)

Thermocouple Connectors



Metric Tube						NPT Threads
T-Tube (mm)	P-NPT Sizes	Ordering No.	Dimensions, mm (in.)			
			L	B	G	F
2	1/8	-KTC-F2M-N2	30.5(1.20)	9.7(0.38)	12.0(0.47)	12.0(0.47)
3	1/8	-KTC-F3M-N2	30.5(1.20)	9.7(0.38)	12.0(0.47)	12.0(0.47)
3	1/4	-KTC-F3M-N4	35.6(1.40)	14.2(0.56)	12.0(0.47)	14.0(0.55)
4	1/8	-KTC-F4M-N2	31.2(1.23)	9.7(0.38)	12.0(0.47)	12.0(0.47)
4	1/4	-KTC-F4M-N4	36.3(1.43)	14.2(0.56)	12.0(0.47)	14.0(0.55)
6	1/8	-KTC-F6M-N2	32.8(1.29)	9.7(0.38)	14.0(0.55)	14.0(0.55)
6	1/4	-KTC-F6M-N4	37.9(1.49)	14.2(0.56)	14.0(0.55)	14.0(0.55)
6	3/8	-KTC-F6M-N6	38.4(1.51)	14.2(0.56)	14.0(0.55)	18.0(0.71)
6	1/2	-KTC-F6M-N8	44.7(1.76)	19.1(0.75)	14.0(0.55)	22.0(0.87)
8	1/4	-KTC-F8M-N4	38.7(1.52)	14.2(0.56)	16.0(0.63)	15.0(0.59)
8	3/8	-KTC-F8M-N6	39.3(1.55)	14.2(0.56)	16.0(0.63)	18.0(0.71)
8	1/2	-KTC-F8M-N8	45.6(1.80)	19.1(0.75)	16.0(0.63)	22.0(0.87)
10	3/8	-KTC-F10M-N6	40.9(1.61)	14.2(0.56)	19.0(0.75)	18.0(0.71)
10	1/2	-KTC-F10M-N8	46.5(1.83)	19.1(0.75)	19.0(0.75)	22.0(0.87)
10	3/4	-KTC-F10M-N12	48.0(1.89)	19.1(0.75)	19.0(0.75)	27.0(1.06)
10	1	-KTC-F10M-N16	54.6(2.15)	23.9(0.94)	19.0(0.75)	35.0(1.38)
12	3/8	-KTC-F12M-N6	43.4(1.71)	14.2(0.56)	22.0(0.87)	22.0(0.87)
12	1/2	-KTC-F12M-N8	49.0(1.93)	19.1(0.75)	22.0(0.87)	22.0(0.87)
12	3/4	-KTC-F12M-N12	50.5(1.99)	19.1(0.75)	22.0(0.87)	27.0(1.06)
14	1/2	-KTC-F14M-N8	49.0(1.93)	19.1(0.75)	25.0(0.98)	24.0(0.94)
14	3/4	-KTC-F14M-N12	50.5(1.99)	19.1(0.75)	25.0(0.98)	27.0(1.06)
15	3/4	-KTC-F15M-N12	50.5(1.99)	19.1(0.75)	25.0(0.98)	27.0(1.06)
15	1	-KTC-F15M-N16	57.1(2.25)	23.9(0.94)	25.0(0.98)	35.0(1.38)
18	3/4	-KTC-F18M-N12	50.5(1.99)	19.1(0.75)	30.0(1.18)	27.0(1.06)
20	1	-KTC-F20M-N16	57.1(2.25)	23.9(0.94)	32.0(1.26)	35.0(1.38)
22	1	-KTC-F22M-N16	57.1(2.25)	23.9(0.94)	32.0(1.26)	35.0(1.38)

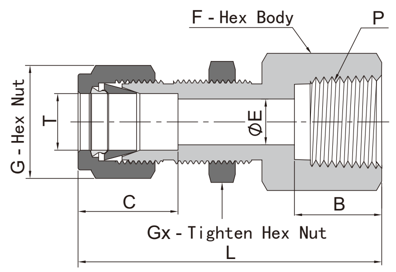
Female Connector



Fractional Tube								NPT Threads
T-Tube (in.)	P-NPT Sizes	Ordering No.	Dimensions, in. (mm)					
			L	B	C	E	G	F
1/16	1/16	-KU-F1-FN1	0.93(23.6)	0.39(9.9)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.44(11.1)
1/16	1/8	-KU-F1-FN2	0.96(24.4)	0.41(10.4)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.56(14.3)
1/8	1/8	-KU-F2-FN2	1.13(28.7)	0.41(10.4)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.56(14.3)
1/8	1/4	-KU-F2-FN4	1.32(33.5)	0.59(15.0)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.75(19.1)
3/16	1/8	-KU-F3-FN2	1.17(29.7)	0.41(10.4)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.56(14.3)
1/4	1/8	-KU-F4-FN2	1.23(31.2)	0.41(10.4)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.56(14.3)
1/4	1/4	-KU-F4-FN4	1.41(35.8)	0.59(15.0)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.75(19.1)
1/4	3/8	-KU-F4-FN6	1.48(37.6)	0.59(15.0)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)
1/4	1/2	-KU-F4-FN8	1.67(42.4)	0.78(19.8)	0.60(15.2)	16.3(4.8)	0.56(14.3)	1.06(27.0)
5/16	1/8	-KU-F5-FN2	1.26(32.0)	0.41(10.4)	0.64(16.3)	16.3(6.4)	0.63(15.9)	0.56(14.3)
5/16	1/4	-KU-F5-FN4	1.45(36.8)	0.59(15.0)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.75(19.1)
3/8	1/8	-KU-F6-FN2	1.29(32.8)	0.41(10.4)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.63(15.9)
3/8	1/4	-KU-F6-FN4	1.48(37.6)	0.59(15.0)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)
3/8	3/8	-KU-F6-FN6	1.54(39.1)	0.59(15.0)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.88(22.2)
3/8	1/2	-KU-F6-FN8	1.73(43.9)	0.78(19.8)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.06(27.0)
3/8	3/4	-KU-F6-FN12	1.88(47.8)	0.81(20.6)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.31(33.3)
1/2	1/4	-KU-F8-FN4	1.59(40.4)	0.59(15.0)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.81(20.6)
1/2	3/8	-KU-F8-FN6	1.65(41.9)	0.59(15.0)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.87(22.2)
1/2	1/2	-KU-F8-FN8	1.84(46.7)	0.78(19.8)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.06(27.0)
1/2	3/4	-KU-F8-FN12	1.90(48.3)	0.81(20.6)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.31(33.3)
5/8	3/8	-KU-F10-FN6	1.65(41.9)	0.59(15.0)	0.96(24.4)	0.50(12.7)	1.00(25.4)	0.94(23.8)
5/8	1/2	-KU-F10-FN8	1.84(46.7)	0.78(19.8)	0.96(24.4)	0.50(12.7)	1.00(25.4)	1.06(27.0)
3/4	1/2	-KU-F12-FN8	1.84(46.7)	0.78(19.8)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.06(27.0)
3/4	3/4	-KU-F12-FN12	1.90(48.3)	0.81(20.6)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.31(33.3)
7/8	3/4	-KU-F14-FN12	1.96(49.8)	0.81(20.6)	1.02(25.9)	0.72(18.3)	1.25(31.8)	1.31(33.3)
1	3/4	-KU-F16-FN12	2.10(53.3)	0.81(20.6)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.37(34.9)
1	1	-KU-F16-FN16	2.45(62.2)	1.00(25.4)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.63(41.3)
1 1/4	1 1/4	-KU-F20-FN20	2.94(74.7)	1.00(25.4)	1.62(41.1)	1.09(27.7)	1.87(47.6)	2.13(54.0)
1 1/2	1 1/2	-KU-F24-FN24	3.30(83.8)	1.09(27.7)	1.97(50.0)	1.34(34.0)	2.25(57.2)	2.37(60.3)

Fractional Tube								ISO Tapered Threads (RT)
T-Tube (in.)	P-RT Sizes	Ordering No.	Dimensions, in. (mm)					
			L	B	C	E	G	F
1/4	1/8	-KU-F4-FRT2	1.23(31.2)	0.41(10.4)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.56(14.3)
1/4	1/4	-KU-F4-FRT4	1.41(35.8)	0.59(15.0)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.75(19.1)
1/4	3/8	-KU-F4-FRT6	1.48(37.6)	0.59(15.0)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)
1/4	1/2	-KU-F4-FRT8	1.67(42.4)	0.78(19.8)	0.60(15.2)	0.19(4.8)	0.56(14.3)	1.06(27.0)
3/8	1/4	-KU-F6-FRT4	1.48(37.6)	0.59(15.0)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)
3/8	3/8	-KU-F6-FRT6	1.54(39.1)	0.59(15.0)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.87(22.2)
3/8	1/2	-KU-F6-FRT8	1.73(43.9)	0.78(19.8)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.06(27.0)
1/2	1/4	-KU-F8-FRT4	1.59(40.4)	0.59(15.0)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.81(20.6)
1/2	3/8	-KU-F8-FRT6	1.65(41.9)	0.59(15.0)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.87(22.2)
1/2	1/2	-KU-F8-FRT8	1.84(46.7)	0.78(19.8)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.06(27.0)

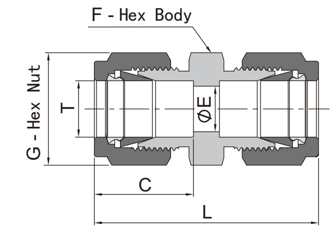
Bulkhead Female Connectors



Fractional Tube											NPT Threads
T-Tube (in.)	P-NPT Sizes	Ordering No.	Dimensions, in. (mm)							Panel Hole Sizes in. (mm)	Max. Panel Thickness in. (mm)
			L	B	C	E	G	F	Gx		
1/16	1/16	-KBU-F1-FN1	1.19(30.2)	0.39(9.9)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.44(11.1)	0.31(7.9)	0.20(5.2)	0.13(3.2)
1/16	1/8	-KBU-F1-FN2	1.20(30.7)	0.41(10.4)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.56(14.3)	0.31(7.9)	0.20(5.2)	0.13(3.2)
1/8	1/8	-KBU-F2-FN2	1.76(44.7)	0.41(10.4)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.56(14.3)	0.50(12.7)	0.33(8.3)	0.50(12.7)
1/8	1/4	-KBU-F2-FN4	1.95(49.6)	0.59(15.0)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.75(19.1)	0.50(12.7)	0.33(8.3)	0.50(12.7)
3/16	1/8	-KBU-F3-FN2	1.79(45.5)	0.41(10.4)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.56(14.3)	0.56(14.3)	0.39(9.9)	0.50(12.7)
1/4	1/8	-KBU-F4-FN2	1.85(47.0)	0.41(10.4)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.63(15.9)	0.63(15.9)	0.45(11.5)	0.40(10.2)
1/4	1/4	-KBU-F4-FN4	2.04(51.8)	0.59(15.0)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.75(19.1)	0.63(15.9)	0.45(11.5)	0.40(10.2)
1/4	3/8	-KBU-F4-FN6	2.10(53.3)	0.59(15.0)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.87(22.2)	0.63(15.9)	0.45(11.5)	0.40(10.2)
1/4	1/2	-KBU-F4-FN8	2.29(58.2)	0.78(19.8)	0.60(15.2)	0.19(4.8)	0.56(14.3)	1.06(27.0)	0.63(15.9)	0.45(11.5)	0.40(10.2)
5/16	1/8	-KBU-F5-FN2	1.96(49.8)	0.41(10.4)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.69(17.5)	0.69(17.5)	0.52(13.1)	0.44(11.2)
5/16	1/4	-KBU-F5-FN4	2.38(60.5)	0.59(15.0)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.75(19.1)	0.69(17.5)	0.52(13.1)	0.44(11.2)
3/8	1/8	-KBU-F6-FN2	1.98(50.3)	0.41(10.4)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	1/4	-KBU-F6-FN4	2.17(55.1)	0.59(15.0)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	3/8	-KBU-F6-FN6	2.23(56.6)	0.59(15.0)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.87(22.2)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	1/2	-KBU-F6-FN8	2.42(61.5)	0.78(19.8)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.06(27.0)	0.75(19.1)	0.58(14.7)	0.44(11.2)
3/8	3/4	-KBU-F6-FN12	2.57(65.3)	0.81(20.6)	0.66(16.8)	0.28(7.1)	0.69(17.5)	1.31(33.3)	0.75(19.1)	0.58(14.7)	0.44(11.2)
1/2	1/4	-KBU-F8-FN4	2.37(60.2)	0.59(15.0)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
1/2	3/8	-KBU-F8-FN6	2.43(61.7)	0.59(15.0)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
1/2	1/2	-KBU-F8-FN8	2.62(66.5)	0.78(19.8)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.06(27.0)	0.94(23.8)	0.76(19.4)	0.50(12.7)
1/2	3/4	-KBU-F8-FN12	2.68(68.1)	0.81(20.6)	0.90(22.9)	0.41(10.4)	0.87(22.2)	1.31(33.3)	0.94(23.8)	0.76(19.4)	0.50(12.7)
5/8	3/8	-KBU-F10-FN6	2.46(62.5)	0.59(15.0)	0.96(24.4)	0.50(12.7)	1.00(25.4)	1.06(27.0)	1.06(27.0)	0.89(22.6)	0.59(15.1)
5/8	1/2	-KBU-F10-FN8	2.65(67.3)	0.78(19.8)	0.96(24.4)	0.50(12.7)	1.00(25.4)	1.06(27.0)	1.06(27.0)	0.89(22.6)	0.59(15.1)
3/4	1/2	-KBU-F12-FN8	2.84(72.2)	0.78(19.8)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.19(30.2)	1.19(30.2)	1.02(25.8)	0.78(19.8)
3/4	3/4	-KBU-F12-FN12	2.90(73.7)	0.81(20.6)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.31(33.3)	1.19(30.2)	1.02(25.8)	0.78(19.8)
7/8	3/4	-KBU-F14-FN12	3.18(80.8)	0.81(20.6)	1.02(25.9)	0.72(18.3)	1.25(31.8)	1.31(33.3)	1.31(33.3)	1.14(29.0)	0.94(23.8)
1	3/4	-KBU-F16-FN12	3.33(84.7)	0.81(20.6)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.63(41.3)	1.63(41.3)	1.33(33.7)	0.94(23.8)
1	1	-KBU-F16-FN16	3.68(93.5)	1.00(25.4)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.63(41.3)	1.63(41.3)	1.33(33.7)	0.94(23.8)

Metric Tube											NPT Threads
T-Tube O.D. (mm)	P-NPT Sizes	Ordering No.	Dimensions, mm (in.)							Panel Hole Sizes mm (in.)	Max. Panel Thickness mm (in.)
			L	B	C	E	G	F	Gx		
6	1/8	-KBU-F6M-FN2	47.2(1.86)	10.4(0.41)	15.3(0.60)	4.8(0.19)	14.0(0.55)	16.0(0.63)	16.0(0.63)	11.5(0.45)	10.2(0.40)
6	1/4	-KBU-F6M-FN4	51.8(2.04)	15.0(0.59)	15.3(0.60)	4.8(0.19)	14.0(0.55)	19.0(0.75)	16.0(0.63)	11.5(0.45)	10.2(0.40)
8	1/8	-KBU-F8M-FN2	49.6(1.95)	10.4(0.41)	16.2(0.64)	6.4(0.25)	16.0(0.63)	18.0(0.71)	18.0(0.71)	13.1(0.52)	11.2(0.44)
10	1/4	-KBU-F10M-FN4	55.2(2.17)	15.0(0.59)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)	22.0(0.87)	16.3(0.64)	11.2(0.44)
12	3/8	-KBU-F12M-FN6	62.9(2.48)	15.0(0.59)	22.8(0.90)	9.5(0.37)	22.0(0.87)	24.0(0.94)	24.0(0.94)	19.5(0.77)	12.7(0.50)
12	1/2	-KBU-F12M-FN8	66.5(2.62)	19.8(0.78)	22.8(0.90)	9.5(0.37)	22.0(0.87)	27.0(1.06)	24.0(0.94)	19.5(0.77)	12.7(0.50)

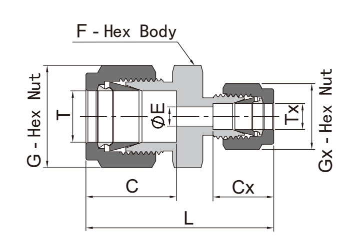
Unions



Fractional Tube						
T-Tube (in.)	Ordering No.	Dimensions, in. (mm)				
		L	C	G	F	E
1/16	-KU-F1	0.99(25.1)	0.34(8.6)	0.31(7.9)	0.31(7.9)	0.05(1.3)
1/8	-KU-F2	1.40(35.6)	0.50(12.7)	0.44(11.1)	0.44(11.1)	0.09(2.3)
3/16	-KU-F3	1.47(37.3)	0.54(13.7)	0.50(12.7)	0.50(12.7)	0.12(3.0)
1/4	-KU-F4	1.61(40.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)
5/16	-KU-F5	1.69(42.9)	0.64(16.2)	0.63(15.9)	0.56(14.3)	0.25(6.4)
3/8	-KU-F6	1.77(45.0)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)
1/2	-KU-F8	2.02(51.3)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)
5/8	-KU-F10	2.05(52.1)	0.96(24.4)	1.00(25.4)	0.94(23.9)	0.50(12.7)
3/4	-KU-F12	2.11(53.6)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.62(15.7)
7/8	-KU-F14	2.19(55.7)	1.02(25.9)	1.25(31.8)	1.19(30.2)	0.72(18.3)
1	-KU-F16	2.55(64.8)	1.23(31.2)	1.5(38.1)	1.37(34.9)	0.88(22.4)
1 1/8	-KU-F18	3.47(88.2)	1.44(36.7)	1.75(44.5)	1.63(41.3)	0.97(24.6)
1 1/4	-KU-F20	3.63(92.2)	1.62(41.1)	1.87(47.6)	1.75(44.5)	1.09(27.7)
1 1/2	-KU-F24	4.25(108.0)	1.97(50.0)	2.25(57.2)	2.13(54.0)	1.34(34.0)

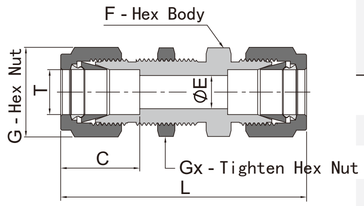
Metric Tube						
T-Tube (mm)	Ordering No.	Dimensions, mm (in.)				
		L	C	G	F	E
2	-KU-F2M	35.6(1.40)	12.9(0.51)	12.0(0.47)	12.0(0.47)	1.7(0.07)
3	-KU-F3M	35.3(1.39)	12.9(0.51)	12.0(0.47)	12.0(0.47)	2.4(0.09)
4	-KU-F4M	37.3(1.47)	13.7(0.54)	12.0(0.47)	12.0(0.47)	2.4(0.09)
6	-KU-F6M	41.0(1.61)	15.3(0.60)	14.0(0.55)	14.0(0.55)	4.8(0.19)
8	-KU-F8M	43.2(1.70)	16.2(0.64)	16.0(0.63)	15.0(0.59)	6.4(0.25)
10	-KU-F10M	46.2(1.82)	17.2(0.68)	19.0(0.75)	18.0(0.71)	7.9(0.31)
12	-KU-F12M	51.2(2.02)	22.8(0.90)	22.0(0.87)	22.0(0.87)	9.5(0.37)
14	-KU-F14M	52.0(2.05)	24.4(0.96)	25.0(0.98)	24.0(0.94)	11.1(0.44)
15	-KU-F15M	52.0(2.05)	24.4(0.96)	25.0(0.98)	24.0(0.94)	11.9(0.47)
16	-KU-F16M	52.0(2.05)	24.4(0.96)	25.0(0.98)	24.0(0.94)	12.7(0.50)
18	-KU-F18M	53.5(2.11)	24.4(0.96)	30.0(1.18)	27.0(1.06)	15.1(0.59)
20	-KU-F20M	55.0(2.17)	26.0(1.02)	32.0(1.26)	30.0(1.18)	15.9(0.63)
22	-KU-F22M	55.0(2.17)	26.0(1.02)	32.0(1.26)	30.0(1.18)	18.3(0.72)
25	-KU-F25M	65.0(2.56)	31.3(1.23)	38.0(1.50)	35.0(1.38)	21.8(0.86)
28	-KU-F28M	85.0(3.35)	36.6(1.44)	46.0(1.81)	41.0(1.61)	21.8(0.86)
30	-KU-F30M	92.7(3.65)	39.6(1.56)	50.0(1.97)	46.0(1.81)	26.2(1.03)
32	-KU-F32M	97.3(3.83)	42.0(1.65)	50.0(1.97)	46.0(1.81)	28.6(1.13)
38	-KU-F38M	113.6(4.47)	49.4(1.94)	60.0(2.36)	55.0(2.17)	33.7(1.33)

Reducing Unions



Fractional Tube									
T-Tube (In.)	Tx-Tube (mm)	Ordering No.	Dimensions, in. (mm)						
			L	C	G	F	E	Cx	Gx
1/8	3	-KU-F2-F3M	1.39(35.2)	0.50(12.7)	0.44(11.1)	0.47(12.0)	0.09(2.3)	0.51(12.9)	0.47(12.0)
1/4	4	-KU-F4-F4M	1.55(39.4)	0.60(15.2)	0.56(14.3)	0.55(14.0)	0.09(2.4)	0.54(13.7)	0.47(12.0)
1/4	6	-KU-F4-F6M	1.62(41.2)	0.60(15.2)	0.56(14.3)	0.55(14.0)	0.19(4.8)	0.60(15.3)	0.55(14.0)
3/8	6	-KU-F6-F6M	1.72(43.7)	0.66(16.8)	0.69(17.5)	0.63(16.0)	0.19(4.8)	0.60(15.3)	0.55(14.0)
3/8	8	-KU-F6-F8M	1.75(44.5)	0.66(16.8)	0.69(17.5)	0.63(16.0)	0.25(6.4)	0.64(16.2)	0.63(16.0)
1/2	6	-KU-F8-F6M	1.88(47.7)	0.90(22.9)	0.87(22.2)	0.87(22.0)	0.19(4.8)	0.60(15.3)	0.55(14.0)
1/2	10	-KU-F8-F10M	1.93(48.9)	0.90(22.9)	0.87(22.2)	0.87(22.0)	0.31(7.9)	0.68(17.2)	0.75(19.0)
1/2	12	-KU-F8-F12M	2.02(51.4)	0.90(22.9)	0.87(22.2)	0.87(22.0)	0.37(9.5)	0.90(22.8)	0.87(22.0)
3/4	12	-KU-F12-F12M	2.13(54.2)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.37(9.5)	0.90(22.8)	0.87(22.0)
3/4	16	-KU-F12-F16M	2.12(53.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.50(12.7)	0.96(24.4)	0.98(25.0)
3/4	18	-KU-F12-F18M	2.11(53.6)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.59(15.1)	0.96(24.4)	1.18(30.0)
1	25	-KU-F16-F25M	2.65(67.4)	1.23(31.2)	1.50(38.1)	1.38(35.0)	0.86(21.8)	1.23(31.3)	1.50(38.0)

Bulkhead Unions



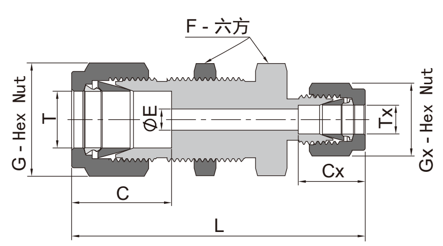
Fractional Tube

Tx-Tube (in.)	Ordering No.	L	C	E	G	F	Gx	Panel Hole Sizes in. (mm)	Max. Panel Thickness in. (mm)
		Dimensions, in. (mm)							
1/16	-KBU-F1	1.24(31.5)	0.34(8.6)	0.05(1.3)	0.31(7.9)	0.31(7.9)	0.31(7.9)	0.20(5.2)	0.12(3.0)
1/8	-KBU-F2	2.02(51.3)	0.50(12.7)	0.09(2.3)	0.44(11.1)	0.50(12.7)	0.50(12.7)	0.33(8.3)	0.50(12.7)
3/16	-KBU-F3	2.11(53.6)	0.54(13.7)	0.12(3.0)	0.50(12.7)	0.56(14.3)	0.56(14.3)	0.39(9.9)	0.50(12.7)
1/4	-KBU-F4	2.27(57.7)	0.60(15.2)	0.19(4.8)	0.56(14.3)	0.63(15.9)	0.63(15.9)	0.45(11.5)	0.40(10.2)
5/16	-KBU-F5	2.39(60.7)	0.64(16.3)	0.25(6.4)	0.63(15.9)	0.69(17.5)	0.69(17.5)	0.52(13.1)	0.44(11.2)
3/8	-KBU-F6	2.45(62.2)	0.66(16.8)	0.28(7.1)	0.69(17.5)	0.75(19.1)	0.75(19.1)	0.58(14.7)	0.44(11.2)
1/2	-KBU-F8	2.80(71.1)	0.90(22.9)	0.41(10.4)	0.87(22.2)	0.94(23.8)	0.94(23.8)	0.76(19.4)	0.50(12.7)
5/8	-KBU-F10	2.86(72.6)	0.96(24.4)	0.50(12.7)	1.00(25.4)	1.06(27.0)	1.06(27.0)	0.89(22.6)	0.50(12.7)
3/4	-KBU-F12	3.11(79.0)	0.96(24.4)	0.62(15.7)	1.13(28.6)	1.19(30.2)	1.19(30.2)	1.02(25.8)	0.66(16.8)
7/8	-KBU-F14	3.35(85.2)	1.02(25.9)	0.72(18.3)	1.25(31.8)	1.38(34.9)	1.38(34.9)	1.14(29.0)	0.75(19.1)
1	-KBU-F16	3.77(95.8)	1.23(31.2)	0.88(22.4)	1.50(38.1)	1.63(41.3)	1.63(41.3)	1.33(33.7)	0.75(19.1)
1 1/4	-KBU-F20	4.85(123.2)	1.62(41.1)	1.09(27.8)	1.87(47.6)	1.87(47.6)	1.87(47.6)	1.64(41.7)	0.75(19.1)
1 1/2	-KBU-F24	5.48(139.2)	1.97(50.0)	1.34(34.0)	2.25(57.2)	2.25(57.2)	2.25(57.2)	1.95(49.6)	0.75(19.1)

Metric Tube

Tx-Tube (mm)	Ordering No.	L	C	E	G	F	Gx	Panel Hole Sizes mm (in.)	Max. Panel Thickness mm (in.)
		Dimensions, mm (in.)							
3	-KBU-F3M	51.3(2.02)	12.9(0.51)	2.4(0.09)	12.0(0.47)	14.0(0.55)	14.0(0.55)	8.3(0.33)	12.7(0.50)
4	-KBU-F4M	53.6(2.11)	13.7(0.54)	2.4(0.09)	12.0(0.47)	14.0(0.55)	14.0(0.55)	9.9(0.39)	12.7(0.50)
6	-KBU-F6M	57.7(2.27)	15.3(0.60)	4.8(0.19)	14.0(0.55)	16.0(0.63)	16.0(0.63)	11.5(0.45)	10.2(0.40)
8	-KBU-F8M	61.0(2.40)	16.2(0.64)	6.4(0.25)	16.0(0.63)	18.0(0.71)	18.0(0.71)	13.1(0.52)	11.2(0.44)
10	-KBU-F10M	63.7(2.51)	17.2(0.68)	7.9(0.31)	19.0(0.75)	22.0(0.87)	22.0(0.87)	16.3(0.64)	11.2(0.44)
12	-KBU-F12M	71.0(2.80)	22.8(0.90)	9.5(0.37)	22.0(0.87)	24.0(0.94)	24.0(0.94)	19.5(0.77)	12.7(0.50)
14	-KBU-F14M	72.5(2.85)	24.4(0.96)	11.1(0.44)	25.0(0.98)	27.0(1.06)	27.0(1.06)	22.5(0.89)	12.7(0.50)
15	-KBU-F15M	72.5(2.85)	24.4(0.96)	11.9(0.47)	25.0(0.98)	27.0(1.06)	27.0(1.06)	22.8(0.90)	12.7(0.50)
16	-KBU-F16M	72.5(2.85)	24.4(0.96)	12.7(0.50)	25.0(0.98)	27.0(1.06)	27.0(1.06)	22.8(0.90)	12.7(0.50)
18	-KBU-F18M	78.9(3.11)	24.4(0.96)	15.1(0.59)	30.0(1.18)	30.0(1.18)	30.0(1.18)	26.0(1.02)	16.8(0.66)
20	-KBU-F20M	84.5(3.33)	26.0(1.02)	15.9(0.63)	32.0(1.26)	35.0(1.38)	35.0(1.38)	29.0(1.14)	19.0(0.75)
25	-KBU-F25M	96.0(3.78)	31.3(1.23)	21.8(0.86)	38.0(1.5)	41.0(1.61)	41.0(1.61)	34.0(1.34)	19.0(0.75)
30	-KBU-F30M	124.0(4.88)	39.6(1.56)	26.2(1.03)	50.0(1.97)	50.0(1.97)	50.0(1.97)	40.5(1.59)	19.0(0.75)
32	-KBU-F32M	128.0(5.04)	42.0(1.65)	28.6(1.13)	50.0(1.97)	50.0(1.97)	50.0(1.97)	42.5(1.67)	19.0(0.75)
38	-KBU-F38M	145.0(5.71)	49.4(1.94)	33.7(1.33)	60.0(2.36)	60.0(2.36)	60.0(2.36)	50.5(1.99)	19.0(0.75)

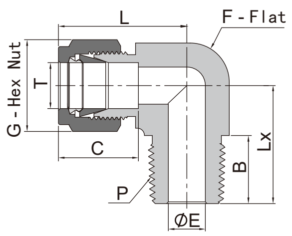
Bulkhead Reducing Unions



Fractional Tube

T-Tube (in.)	Tx-Tube (in.)	Ordering No.	L	C	E	G	F	Cx	Gx	Panel Hole Sizes in. (mm)	Max. Panel Thickness in. (mm)
			Dimensions, in. (mm)								
1/4	1/8	-KBU-F4-F2	2.17(55.1)	0.60(15.2)	0.09(2.3)	0.56(14.3)	0.63(15.9)	0.50(12.7)	0.44(11.1)	0.45(11.5)	0.40(10.2)
3/8	1/4	-KBU-F6-F4	2.39(60.7)	0.66(16.8)	0.19(4.8)	0.69(17.5)	0.75(19.1)	0.60(15.2)	0.56(14.3)	0.58(14.7)	0.44(11.2)
1/2	1/4	-KBU-F8-F4	2.63(66.8)	0.90(22.9)	0.19(4.8)	0.87(22.2)	0.94(23.8)	0.60(15.2)	0.56(14.3)	0.76(19.4)	0.50(12.7)

Male Elbow



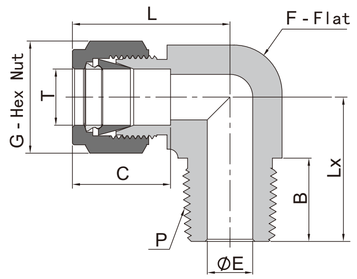
Fractional Tube — **NPT** Threads

T-Tube (in.)	P-NPT Sizes	Ordering No.	L	C	G	F	E	B	Lx
			Dimensions, in. (mm)						
1/16	1/16	-KE-F1-N1	0.75(19.1)	0.34(8.6)	0.31(7.9)	0.44(11.1)	0.05(1.3)	0.38(9.7)	0.70(17.8)
1/16	1/8	-KE-F1-N2	0.75(19.1)	0.34(8.6)	0.31(7.9)	0.44(11.1)	0.05(1.3)	0.38(9.7)	0.70(17.8)
1/8	1/16	-KE-F2-N1	0.93(23.6)	0.50(12.7)	0.44(11.1)	0.44(11.1)	0.09(2.4)	0.38(9.7)	0.70(17.8)
1/8	1/8	-KE-F2-N2	0.93(23.6)	0.50(12.7)	0.44(11.1)	0.44(11.1)	0.09(2.4)	0.38(9.7)	0.70(17.8)
1/8	1/4	-KE-F2-N4	0.97(24.6)	0.50(12.7)	0.44(11.1)	0.50(12.7)	0.09(2.4)	0.56(14.2)	0.92(23.4)
3/16	1/8	-KE-F3-N2	1.00(25.4)	0.54(13.7)	0.50(12.7)	0.50(12.7)	0.12(3.0)	0.38(9.7)	0.74(18.8)
3/16	1/4	-KE-F3-N4	1.00(25.4)	0.54(13.7)	0.50(12.7)	0.50(12.7)	0.12(3.0)	0.56(14.2)	0.92(23.4)
1/4	1/16	-KE-F4-N1	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.12(3.0)	0.38(9.7)	0.74(18.8)
1/4	1/8	-KE-F4-N2	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.38(9.7)	0.74(18.8)
1/4	1/4	-KE-F4-N4	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.56(14.2)	0.92(23.4)
1/4	3/8	-KE-F4-N6	1.17(29.7)	0.60(15.2)	0.56(14.3)	0.69(17.5)	0.19(4.8)	0.56(14.2)	1.03(26.2)
1/4	1/2	-KE-F4-N8	1.25(31.8)	0.60(15.2)	0.56(14.3)	0.81(20.6)	0.19(4.8)	0.75(19.1)	1.30(33.0)
5/16	1/8	-KE-F5-N2	1.13(28.7)	0.64(16.3)	0.63(15.9)	0.56(14.3)	0.19(4.8)	0.38(9.7)	0.78(19.8)
5/16	1/4	-KE-F5-N4	1.13(28.7)	0.64(16.3)	0.63(15.9)	0.56(14.3)	0.25(6.4)	0.56(14.2)	0.96(24.4)
5/16	3/8	-KE-F5-N6	1.20(30.5)	0.64(16.3)	0.63(15.9)	0.69(17.5)	0.25(6.4)	0.56(14.2)	1.03(26.2)
3/8	1/8	-KE-F6-N2	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.19(4.8)	0.38(9.7)	0.82(20.8)
3/8	1/4	-KE-F6-N4	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)	0.56(14.2)	1.00(25.4)
3/8	3/8	-KE-F6-N6	1.23(31.2)	0.66(16.8)	0.69(17.5)	0.69(17.5)	0.28(7.1)	0.56(14.2)	1.03(26.2)
3/8	1/2	-KE-F6-N8	1.31(33.3)	0.66(16.8)	0.69(17.5)	0.81(20.6)	0.28(7.1)	0.75(19.1)	1.30(33.0)
3/8	3/4	-KE-F6-N12	1.46(37.1)	0.66(16.8)	0.69(17.5)	1.06(27.0)	0.28(7.1)	0.75(19.1)	1.45(36.8)
1/2	1/4	-KE-F8-N4	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.28(7.1)	0.56(14.2)	1.11(28.2)
1/2	3/8	-KE-F8-N6	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.38(9.7)	0.56(14.2)	1.11(28.2)
1/2	1/2	-KE-F8-N8	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)	0.75(19.1)	1.30(33.0)
1/2	3/4	-KE-F8-N12	1.57(39.9)	0.90(22.9)	0.87(22.2)	1.06(27.0)	0.41(10.4)	0.75(19.1)	1.45(36.8)
5/8	3/8	-KE-F10-N6	1.50(38.1)	0.96(24.4)	1.00(25.4)	0.94(23.8)	0.38(9.7)	0.56(14.2)	1.19(30.2)
5/8	1/2	-KE-F10-N8	1.50(38.1)	0.96(24.4)	1.00(25.4)	0.94(23.8)	0.47(11.9)	0.75(19.1)	1.38(35.1)
5/8	3/4	-KE-F10-N12	1.57(39.9)	0.96(24.4)	1.00(25.4)	1.06(27.0)	0.50(12.7)	0.75(19.1)	1.45(36.8)
3/4	1/2	-KE-F12-N8	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.47(11.9)	0.75(19.1)	1.45(36.8)
3/4	3/4	-KE-F12-N12	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.62(15.7)	0.75(19.1)	1.45(36.8)
7/8	3/4	-KE-F14-N12	1.76(44.7)	1.02(25.9)	1.25(31.8)	1.37(34.9)	0.62(15.7)	0.75(19.1)	1.64(41.7)
1	3/4	-KE-F16-N12	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.62(15.7)	0.75(19.1)	1.64(41.7)
1	1	-KE-F16-N16	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)	0.94(23.9)	1.83(46.5)
1 1/4	1 1/4	-KE-F20-N20	2.62(66.5)	1.62(41.1)	1.87(47.6)	1.69(42.9)	1.09(27.7)	0.94(23.9)	2.06(52.4)
1 1/2	1 1/2	-KE-F24-N24	3.07(78.0)	1.97(50.0)	2.25(57.2)	2.00(50.8)	1.34(34.0)	1.03(26.2)	2.38(60.5)

Fractional Tube — **ISO** Tapered Threads **(RT)**

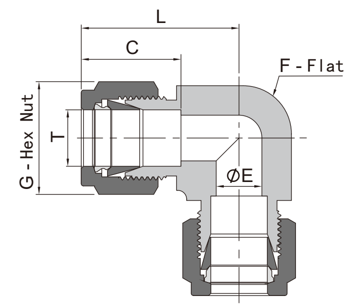
T-Tube (in.)	P-RT Sizes	Ordering No.	L	C	G	F	E	B	Lx
			Dimensions, in. (mm)						
1/8	1/8	-KE-F2-RT2	0.93(23.6)	0.50(12.7)	0.44(11.1)	0.44(11.1)	0.09(2.4)	0.38(9.7)	0.87(22.2)
1/8	1/4	-KE-F2-RT4	0.97(24.6)	0.50(12.7)	0.44(11.1)	0.50(12.7)	0.09(2.4)	0.56(14.2)	0.92(23.4)
1/4	1/8	-KE-F4-RT2	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.38(9.7)	0.74(18.8)
1/4	1/4	-KE-F4-RT4	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.56(14.2)	0.92(23.4)
1/4	3/8	-KE-F4-RT6	1.17(29.7)	0.60(15.2)	0.56(14.3)	0.69(17.5)	0.19(4.8)	0.56(14.2)	1.03(26.2)
1/4	1/2	-KE-F4-RT8	1.25(31.8)	0.60(15.2)	0.56(14.3)	0.81(20.6)	0.19(4.8)	0.75(19.1)	1.30(33.0)
5/16	1/4	-KE-F5-RT4	1.13(28.7)	0.64(16.3)	0.63(15.9)	0.56(14.3)	0.25(6.4)	0.56(14.2)	0.96(24.4)
3/8	1/8	-KE-F6-RT2	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.19(4.8)	0.38(9.7)	0.82(20.8)
3/8	1/4	-KE-F6-RT4	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)	0.56(14.2)	1.00(25.4)
3/8	3/8	-KE-F6-RT6	1.23(31.2)	0.66(16.8)	0.69(17.5)	0.69(17.5)	0.28(7.1)	0.56(14.2)	1.03(26.2)
1/2	3/8	-KE-F8-RT6	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.38(9.7)	0.56(14.2)	1.11(28.2)
1/2	1/2	-KE-F8-RT8	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)	0.75(19.1)	1.30(33.0)
3/4	1/2	-KE-F12-RT8	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.37(9.5)	0.75(19.1)	1.45(36.8)
1	1	-KE-F16-RT16	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)	0.94(23.9)	1.83(46.5)

Male Elbows



Metric Tube									NPT Threads
T-Tube (mm)	**P-NPT** Sizes	Ordering No.	Dimensions, **mm (in.)**						
			L	C	G	F	E	B	Lx
3	1/8	-KE-F3M-N2	23.6(0.93)	12.9(0.51)	12.0(0.47)	11.1(0.44)	2.4(0.09)	9.7(0.38)	17.8(0.70)
3	1/4	-KE-F3M-N4	24.6(0.97)	12.9(0.51)	12.0(0.47)	12.7(0.50)	2.4(0.09)	14.2(0.56)	23.4(0.92)
4	1/8	-KE-F4M-N2	25.4(1.00)	13.7(0.54)	12.0(0.47)	12.7(0.50)	2.4(0.09)	9.7(0.38)	18.8(0.74)
4	1/4	-KE-F4M-N4	25.4(1.00)	13.7(0.54)	12.0(0.47)	12.7(0.50)	2.4(0.09)	14.2(0.56)	23.4(0.92)
6	1/8	-KE-F6M-N2	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)	9.7(0.38)	18.8(0.74)
6	1/4	-KE-F6M-N4	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)	14.2(0.56)	23.4(0.92)
6	3/8	-KE-F6M-N6	29.8(1.17)	15.3(0.60)	14.0(0.55)	17.5(0.69)	4.8(0.19)	14.2(0.56)	26.2(1.03)
6	1/2	-KE-F6M-N8	31.8(1.25)	15.3(0.60)	14.0(0.55)	20.6(0.81)	4.8(0.19)	19.1(0.75)	33.0(1.30)
8	1/8	-KE-F8M-N2	28.8(1.13)	16.2(0.64)	16.0(0.63)	14.3(0.56)	4.8(0.19)	9.7(0.38)	19.8(0.78)
8	1/4	-KE-F8M-N4	28.8(1.13)	16.2(0.64)	16.0(0.63)	14.3(0.56)	6.4(0.25)	14.2(0.56)	24.4(0.96)
8	3/8	-KE-F8M-N6	30.6(1.20)	16.2(0.64)	16.0(0.63)	17.5(0.69)	6.4(0.25)	14.2(0.56)	26.2(1.03)
8	1/2	-KE-F8M-N8	32.6(1.28)	16.2(0.64)	16.0(0.63)	20.6(0.81)	6.4(0.25)	19.1(0.75)	33.0(1.30)
10	1/8	-KE-F10M-N2	31.5(1.24)	17.2(0.68)	19.0(0.75)	17.5(0.69)	4.8(0.19)	9.7(0.38)	21.6(0.85)
10	1/4	-KE-F10M-N4	31.5(1.24)	17.2(0.68)	19.0(0.75)	17.5(0.69)	7.1(0.28)	14.2(0.56)	26.2(1.03)
10	3/8	-KE-F10M-N6	31.5(1.24)	17.2(0.68)	19.0(0.75)	17.5(0.69)	7.9(0.31)	14.2(0.56)	26.2(1.03)
10	1/2	-KE-F10M-N8	33.5(1.32)	17.2(0.68)	19.0(0.75)	20.6(0.81)	7.9(0.31)	19.1(0.75)	33.0(1.30)
12	1/8	-KE-F12M-N2	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	4.8(0.19)	9.7(0.38)	23.6(0.93)
12	1/4	-KE-F12M-N4	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	7.1(0.28)	14.2(0.56)	28.2(1.11)
12	3/8	-KE-F12M-N6	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)	14.2(0.56)	28.2(1.11)
12	1/2	-KE-F12M-N8	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)	19.1(0.75)	33.0(1.30)
12	3/4	-KE-F12M-N12	39.8(1.57)	22.8(0.90)	22.0(0.87)	27.0(1.06)	9.5(0.37)	19.1(0.75)	36.8(1.45)
15	1/2	-KE-F15M-N8	38.0(1.50)	24.4(0.96)	25.0(0.98)	23.8(0.94)	11.9(0.47)	19.1(0.75)	35.1(1.38)
16	1/4	-KE-F16M-N4	38.0(1.50)	24.4(0.96)	25.0(0.98)	23.8(0.94)	7.1(0.28)	14.2(0.56)	30.2(1.19)
16	3/8	-KE-F16M-N6	38.0(1.50)	24.4(0.96)	25.0(0.98)	23.8(0.94)	9.5(0.37)	14.2(0.56)	30.2(1.19)
16	1/2	-KE-F16M-N8	38.0(1.50)	24.4(0.96)	25.0(0.98)	23.8(0.94)	11.9(0.47)	19.1(0.75)	35.1(1.38)
16	3/4	-KE-F16M-N12	39.8(1.57)	24.4(0.96)	25.0(0.98)	27.0(1.06)	12.7(0.50)	19.1(0.75)	36.8(1.45)
18	1/2	-KE-F18M-N8	39.8(1.57)	24.4(0.96)	30.0(1.18)	27.0(1.06)	11.9(0.47)	19.1(0.75)	36.8(1.45)
18	3/4	-KE-F18M-N12	39.8(1.57)	24.4(0.96)	30.0(1.18)	27.0(1.06)	15.1(0.59)	19.1(0.75)	36.8(1.45)
20	1/2	-KE-F20M-N8	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	11.9(0.47)	19.1(0.75)	41.7(1.64)
20	3/4	-KE-F20M-N12	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	15.9(0.63)	19.1(0.75)	41.7(1.64)
22	3/4	-KE-F22M-N12	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	15.9(0.63)	19.1(0.75)	41.7(1.64)
22	1	-KE-F22M-N16	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	18.3(0.72)	23.9(0.94)	46.5(1.83)
25	3/4	-KE-F25M-N12	49.1(1.93)	31.3(1.23)	38.0(1.50)	34.9(1.37)	15.9(0.63)	19.1(0.75)	41.7(1.64)
25	1	-KE-F25M-N16	49.1(1.93)	31.3(1.23)	38.0(1.50)	34.9(1.37)	21.8(0.86)	23.9(0.94)	46.5(1.83)
30	1 1/4	-KE-F30M-N20	69.9(2.75)	39.6(1.56)	50.0(1.97)	42.9(1.69)	26.2(1.03)	23.9(0.94)	53.1(2.09)
32	1 1/4	-KE-F32M-N20	72.3(2.85)	42.0(1.65)	50.0(1.97)	42.9(1.69)	27.8(1.09)	23.9(0.94)	53.1(2.09)
38	1 1/2	-KE-F38M-N24	84.0(3.31)	49.4(1.94)	60.0(2.36)	50.8(2.00)	33.7(1.33)	26.2(1.03)	60.4(2.38)

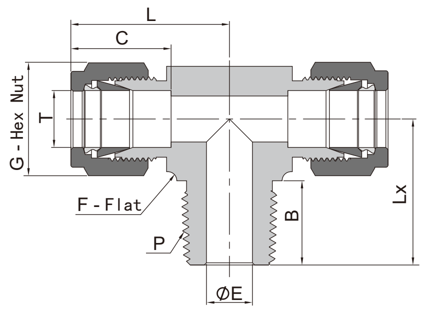
Union Elbows



Fractional Tube						
T-Tube (in.)	Ordering No.	Dimensions, **in. (mm)**				
		L	C	G	F	E
1/16	-KE-F1	0.70(17.8)	0.34(8.6)	0.31(7.9)	0.37(9.5)	0.05(1.3)
1/8	-KE-F2	0.88(22.4)	0.50(12.7)	0.44(11.1)	0.37(9.5)	0.09(2.3)
3/16	-KE-F3	1.00(25.4)	0.54(13.7)	0.50(12.7)	0.50(12.7)	0.12(3.0)
1/4	-KE-F4	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)
5/16	-KE-F5	1.13(28.7)	0.64(16.3)	0.63(15.9)	0.56(14.3)	0.25(6.4)
3/8	-KE-F6	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)
1/2	-KE-F8	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)
5/8	-KE-F10	1.50(38.1)	0.96(24.4)	1.00(25.4)	0.94(23.8)	0.5(12.7)
3/4	-KE-F12	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.62(15.7)
7/8	-KE-F14	1.76(44.7)	1.02(25.9)	1.25(31.8)	1.37(34.9)	0.72(18.3)
1	-KE-F16	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)
1 1/8	-KE-F18	2.63(66.9)	1.44(36.7)	1.75(44.5)	1.69(42.9)	0.97(24.6)
1 1/4	-KE-F20	2.62(66.5)	1.62(41.1)	1.87(47.6)	1.69(42.9)	1.09(27.7)
1 1/2	-KE-F24	3.07(78.0)	1.97(50.0)	2.25(57.2)	2.00(50.8)	1.34(34.0)

Metric Tube						
T-Tube (mm)	Ordering No.	Dimensions, **mm (in.)**				
		L	C	G	F	E
3	-KE-F3M	22.3(0.88)	12.9(0.51)	12.0(0.47)	9.5(0.37)	2.4(0.09)
4	-KE-F4M	25.4(1.00)	13.7(0.54)	12.0(0.47)	12.7(0.50)	2.4(0.09)
6	-KE-F6M	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)
8	-KE-F8M	28.8(1.13)	16.2(0.64)	16.0(0.63)	14.3(0.56)	6.4(0.25)
10	-KE-F10M	31.5(1.24)	17.2(0.68)	19.0(0.75)	17.5(0.69)	7.9(0.31)
12	-KE-F12M	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)
14	-KE-F14M	38.0(1.50)	24.4(0.96)	25.0(0.98)	23.8(0.94)	11.0(0.43)
15	-KE-F15M	38.0(1.50)	24.4(0.96)	25.0(0.98)	23.8(0.94)	11.9(0.47)
16	-KE-F16M	38.0(1.50)	24.4(0.96)	25.0(0.98)	23.8(0.94)	12.7(0.50)
18	-KE-F18M	39.8(1.57)	24.4(0.96)	30.0(1.18)	27.0(1.06)	15.1(0.59)
20	-KE-F20M	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	15.9(0.63)
22	-KE-F22M	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	18.3(0.72)
25	-KE-F25M	49.1(1.93)	31.3(1.23)	38.0(1.5)	34.9(1.37)	21.8(0.86)
28	-KE-F28M	64.0(2.52)	36.6(1.44)	46.0(1.81)	42.9(1.69)	21.8(0.86)
30	-KE-F30M	69.9(2.75)	39.6(1.56)	50.0(1.97)	42.9(1.69)	26.2(1.03)
32	-KE-F32M	72.3(2.85)	42.0(1.65)	50.0(1.97)	42.9(1.69)	28.6(1.13)
38	-KE-F38M	84.0(3.31)	49.4(1.94)	60.0(2.36)	50.8(2.00)	33.7(1.33)

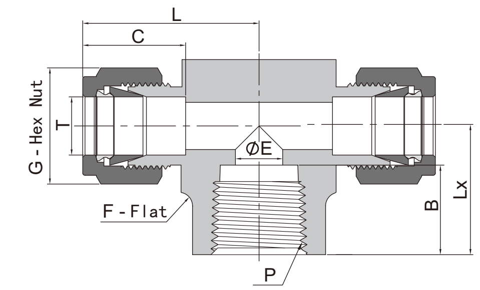
Male Branch Tees



Fractional Tube									NPT Threads
T-Tube (in.)	P-NPT Sizes	Ordering No.	Dimensions, in. (mm)						
			L	C	G	F	E	B	Lx
1/8	1/8	-KT-F2-N2	0.93(23.6)	0.50(12.7)	0.44(11.1)	0.44(11.1)	0.09(2.3)	0.38(9.7)	0.70(17.8)
1/8	1/4	-KT-F2-N4	0.97(24.6)	0.50(12.7)	0.44(11.1)	0.50(12.7)	0.09(2.3)	0.56(14.2)	0.92(23.4)
3/16	1/8	-KT-F3-N2	0.96(24.4)	0.54(13.7)	0.50(12.7)	0.44(11.1)	0.12(3.0)	0.38(9.7)	0.70(17.8)
1/4	1/8	-KT-F4-N2	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.38(9.7)	0.74(18.8)
1/4	1/4	-KT-F4-N4	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.56(14.2)	0.92(23.4)
5/16	1/8	-KT-F5-N2	1.17(29.7)	0.64(16.3)	0.63(15.9)	0.63(15.9)	0.19(4.8)	0.38(9.7)	0.82(20.8)
5/16	1/4	-KT-F5-N4	1.17(29.7)	0.64(16.3)	0.63(15.9)	0.63(15.9)	0.25(6.4)	0.56(14.2)	1.01(25.7)
3/8	1/4	-KT-F6-N4	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)	0.56(14.2)	1.00(25.4)
3/8	3/8	-KT-F6-N6	1.31(33.3)	0.66(16.8)	0.69(17.5)	0.81(20.6)	0.28(7.1)	0.56(14.2)	1.11(28.2)
1/2	3/8	-KT-F8-N6	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.38(9.7)	0.56(14.2)	1.11(28.2)
1/2	1/2	-KT-F8-N8	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)	0.75(19.1)	1.30(33.0)
5/8	1/2	-KT-F10-N8	1.53(38.9)	0.96(24.4)	1.00(25.4)	1.00(25.4)	0.47(11.9)	0.75(19.1)	1.41(35.8)
3/4	3/4	-KT-F12-N12	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.62(15.7)	0.75(19.1)	1.45(36.8)
7/8	3/4	-KT-F14-N12	1.88(47.8)	1.02(25.9)	1.25(31.8)	1.37(34.9)	0.62(15.7)	0.75(19.1)	1.87(47.5)
1	3/4	-KT-F16-N12	1.94(49.3)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.62(15.7)	0.75(19.1)	1.87(47.5)
1	1	-KT-F16-N16	1.94(49.3)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)	0.94(23.9)	1.84(46.7)

Metric Tube									NPT Threads
T-Tube (mm)	P-NPT Sizes	Ordering No.	Dimensions, mm (in.)						
			L	C	G	F	E	B	Lx
6	1/8	-KT-F6M-N2	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)	9.7(0.38)	18.8(0.74)
6	1/4	-KT-F6M-N4	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)	14.2(0.56)	23.4(0.92)
8	1/8	-KT-F8M-N2	29.9(1.18)	16.2(0.64)	16.0(0.63)	15.9(0.63)	4.8(0.19)	9.7(0.38)	20.8(0.82)
8	1/4	-KT-F8M-N4	29.9(1.18)	16.2(0.64)	16.0(0.63)	15.9(0.63)	6.4(0.25)	14.2(0.56)	25.4(1.00)
10	1/4	-KT-F10M-N4	33.5(1.32)	17.2(0.68)	19.0(0.75)	20.6(0.81)	7.1(0.28)	14.2(0.56)	28.2(1.11)
10	3/8	-KT-F10M-N6	33.5(1.32)	17.2(0.68)	19.0(0.75)	20.6(0.81)	7.9(0.31)	14.2(0.56)	28.2(1.11)
12	1/4	-KT-F12M-N4	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	7.1(0.28)	14.2(0.56)	28.2(1.11)
12	3/8	-KT-F12M-N6	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)	14.2(0.56)	28.2(1.11)
12	1/2	-KT-F12M-N8	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)	19.1(0.75)	33.0(1.30)
16	1/2	-KT-F16M-N8	38.8(1.53)	24.4(0.96)	25.0(0.98)	25.4(1.00)	11.9(0.47)	19.1(0.75)	35.8(1.41)

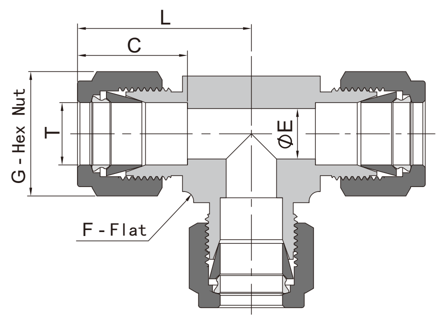
Female Branch Tees



Fractional Tube									NPT Threads
T-Tube (in.)	P-NPT Sizes	Ordering No.	Dimensions, in. (mm)						
			L	C	G	F	E	B	Lx
1/8	1/8	-KT-F2-FN2	0.97(24.6)	0.50(12.7)	0.44(11.1)	0.50(12.7)	0.09(2.3)	0.41(10.4)	0.75(19.1)
3/16	1/8	-KT-F3-FN2	1.01(25.7)	0.54(13.7)	0.50(12.7)	0.50(12.7)	0.12(3.0)	0.41(10.4)	0.75(19.1)
1/4	1/8	-KT-F4-FN2	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.41(10.4)	0.75(19.1)
1/4	1/4	-KT-F4-FN4	1.17(29.7)	0.60(15.2)	0.56(14.3)	0.69(17.5)	0.19(4.8)	0.59(15.0)	0.88(22.4)
5/16	1/8	-KT-F5-FN2	1.17(29.7)	0.64(16.2)	0.63(15.9)	0.63(15.9)	0.25(6.4)	0.41(10.4)	0.75(19.1)
3/8	1/4	-KT-F6-FN4	1.23(31.2)	0.66(16.8)	0.69(17.5)	0.69(17.5)	0.28(7.1)	0.59(15.0)	0.88(22.4)
3/8	3/8	-KT-F6-FN6	1.31(33.3)	0.66(16.8)	0.69(17.5)	0.81(20.6)	0.28(7.1)	0.59(15.0)	0.88(22.4)
3/8	1/2	-KT-F6-FN8	1.42(36.1)	0.66(16.8)	0.69(17.5)	1.00(25.4)	0.28(7.1)	0.78(19.8)	1.12(28.4)
1/2	1/4	-KT-F8-FN4	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)	0.59(15.0)	0.88(22.4)
1/2	3/8	-KT-F8-FN6	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)	0.59(15.0)	0.88(22.4)
1/2	1/2	-KT-F8-FN8	1.53(38.9)	0.90(22.9)	0.87(22.2)	1.00(25.4)	0.41(10.4)	0.78(19.8)	1.12(28.4)
5/8	1/2	-KT-F10-FN8	1.53(38.9)	0.96(24.4)	1.00(25.4)	1.00(25.4)	0.50(12.7)	0.78(19.8)	1.12(28.4)
3/4	3/4	-KT-F12-FN12	1.76(44.7)	0.96(24.4)	1.13(28.6)	1.37(34.9)	0.62(15.7)	0.81(20.6)	1.25(31.8)
7/8	3/4	-KT-F14-FN12	1.76(44.7)	1.02(25.9)	1.25(31.8)	1.37(34.9)	0.72(18.3)	0.81(20.6)	1.25(31.8)
1	3/4	-KT-F16-FN12	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)	0.81(20.6)	1.25(31.8)
1	1	-KT-F16-FN16	2.11(53.6)	1.23(31.2)	1.50(38.1)	1.69(42.9)	0.88(22.4)	1.00(25.4)	1.50(38.1)

Metric Tube									NPT Threads
T-Tube (mm)	P-NPT Sizes	Ordering No.	Dimensions, mm (in.)						
			L	C	G	F	E	B	Lx
6	1/8	-KT-F6M-FN2	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)	10.4(0.41)	19.0(0.75)
6	1/4	-KT-F6M-FN4	29.8(1.17)	15.3(0.60)	14.0(0.55)	17.5(0.69)	4.8(0.19)	15.0(0.59)	22.4(0.88)
8	1/8	-KT-F8M-FN2	29.9(1.18)	16.2(0.64)	16.0(0.63)	15.9(0.63)	6.4(0.25)	10.4(0.41)	19.0(0.75)
8	1/4	-KT-F8M-FN4	30.6(1.2)	16.2(0.64)	16.0(0.63)	17.5(0.69)	6.4(0.25)	15.0(0.59)	22.4(0.88)
10	1/4	-KT-F10M-FN4	33.5(1.32)	17.2(0.68)	19.0(0.75)	20.6(0.81)	7.9(0.31)	15.0(0.59)	22.4(0.88)
12	1/8	-KT-F12M-FN2	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	6.4(0.25)	10.4(0.41)	22.3(0.88)
12	1/4	-KT-F12M-FN4	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)	15.0(0.59)	22.4(0.88)
12	3/8	-KT-F12M-FN6	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)	15.0(0.59)	22.4(0.88)
12	1/2	-KT-F12M-FN8	38.8(1.53)	22.8(0.90)	22.0(0.87)	25.4(1.00)	9.5(0.37)	19.8(0.78)	28.5(1.12)
16	1/2	-KT-F16M-FN8	38.8(1.53)	24.4(0.96)	25.0(0.98)	25.4(1.00)	12.7(0.50)	19.8(0.78)	28.4(1.12)

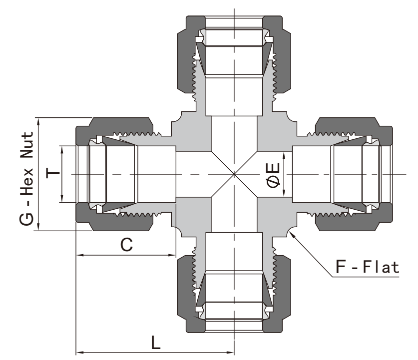
Tees



Fractional Tube						
T-Tube (in.)	Ordering No.	Dimensions, in. (mm)				
		L	C	G	F	E
1/16	-KT-F1	0.70(17.8)	0.34(8.6)	0.31(7.9)	0.37(9.5)	0.05(1.3)
1/8	-KT-F2	0.87(22.2)	0.50(12.7)	0.44(11.1)	0.37(9.5)	0.09(2.3)
3/16	-KT-F3	0.96(24.4)	0.54(13.7)	0.50(12.7)	0.44(11.1)	0.12(3.0)
1/4	-KT-F4	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)
5/16	-KT-F5	1.17(29.7)	0.64(16.2)	0.63(15.9)	0.63(15.9)	0.25(6.4)
3/8	-KT-F6	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)
1/2	-KT-F8	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)
5/8	-KT-F10	1.53(38.9)	0.96(24.4)	1.00(25.4)	1.00(25.4)	0.50(12.7)
3/4	-KT-F12	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.62(15.7)
7/8	-KT-F14	1.76(44.7)	1.02(25.9)	1.25(31.8)	1.37(34.9)	0.72(18.3)
1	-KT-F16	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)
1 1/8	-KT-F18	2.63(66.9)	1.44(36.7)	1.75(44.5)	1.69(42.9)	0.97(24.6)
1 1/4	-KT-F20	2.62(66.5)	1.62(41.1)	1.87(47.6)	1.69(42.9)	1.09(27.7)
1 1/2	-KT-F24	3.07(78.0)	1.97(50.0)	2.25(57.2)	2.00(50.8)	1.34(34.0)

Metric Tube						
T-Tube (mm)	Ordering No.	Dimensions, mm (in.)				
		L	C	G	F	E
2	-KT-F2M	22.3(0.88)	12.9(0.51)	12.0(0.47)	9.5(0.37)	1.7(0.07)
3	-KT-F3M	22.3(0.88)	12.9(0.51)	12.0(0.47)	9.5(0.37)	2.4(0.09)
4	-KT-F4M	25.4(1.00)	13.7(0.54)	12.0(0.47)	12.7(0.50)	2.4(0.09)
6	-KT-F6M	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)
8	-KT-F8M	29.9(1.18)	16.2(0.64)	16.0(0.63)	15.9(0.63)	6.4(0.25)
10	-KT-F10M	31.5(1.24)	17.2(0.68)	19.0(0.75)	17.5(0.69)	7.9(0.31)
12	-KT-F12M	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)
14	-KT-F14M	38.8(1.53)	24.4(0.96)	25.0(0.98)	25.4(1.00)	11.1(0.44)
15	-KT-F15M	38.8(1.53)	24.4(0.96)	25.0(0.98)	25.4(1.00)	11.9(0.47)
16	-KT-F16M	38.8(1.53)	24.4(0.96)	25.0(0.98)	25.4(1.00)	12.7(0.50)
18	-KT-F18M	39.8(1.57)	24.4(0.96)	30.0(1.18)	27.0(1.06)	15.1(0.59)
20	-KT-F20M	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	15.9(0.63)
22	-KT-F22M	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	18.3(0.72)
25	-KT-F25M	49.1(1.93)	31.3(1.23)	38.0(1.50)	34.9(1.37)	21.8(0.86)
28	-KT-F28M	64.0(2.52)	36.6(1.44)	46.0(1.81)	42.9(1.69)	21.8(0.86)
30	-KT-F30M	69.9(2.75)	39.6(1.56)	50.0(1.97)	42.9(1.69)	26.2(1.03)
32	-KT-F32M	72.3(2.85)	42.0(1.65)	50.0(1.97)	42.9(1.69)	28.6(1.13)
38	-KT-F38M	84.0(3.31)	49.4(1.94)	60.0(2.36)	50.8(2.00)	33.7(1.33)

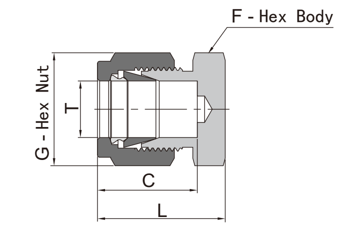
Crosses



Fractional Tube						
T-Tube (in.)	Ordering No.	Dimensions, in. (mm)				
		L	C	G	F	E
1/8	-KC-F2	0.88(22.4)	0.50(12.7)	0.44(11.1)	0.37(9.5)	0.09(2.3)
3/16	-KC-F3	0.96(24.4)	0.54(13.7)	0.50(12.7)	0.44(11.1)	0.12(3.0)
1/4	-KC-F4	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)
5/16	-KC-F5	1.17(29.7)	0.64(16.2)	0.63(15.9)	0.63(15.9)	0.25(6.4)
3/8	-KC-F6	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)
1/2	-KC-F8	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)
5/8	-KC-F10	1.53(38.8)	0.96(24.4)	1.00(25.4)	1.00(25.4)	0.50(12.7)
3/4	-KC-F12	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.62(15.7)
7/8	-KC-F14	1.76(44.7)	1.02(25.9)	1.25(31.8)	1.37(34.9)	0.72(18.3)
1	-KC-F16	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)

Metric Tube						
T-Tube (mm)	Ordering No.	Dimensions, mm (in.)				
		L	C	G	F	E
3	-KC-F3M	22.3(0.88)	12.9(0.51)	12.0(0.47)	9.5(0.37)	2.4(0.09)
4	-KC-F4M	25.4(1.00)	13.7(0.54)	12.0(0.47)	12.7(0.50)	2.4(0.09)
6	-KC-F6M	27.0(1.06)	15.3(0.60)	14.0(0.55)	12.7(0.50)	4.8(0.19)
8	-KC-F8M	29.9(1.18)	16.2(0.64)	16.0(0.63)	15.9(0.63)	6.4(0.25)
10	-KC-F10M	33.5(1.32)	17.2(0.68)	19.0(0.75)	20.6(0.81)	7.9(0.31)
12	-KC-F12M	36.0(1.42)	22.8(0.90)	22.0(0.87)	20.6(0.81)	9.5(0.37)
16	-KC-F16M	37.0(1.46)	24.4(0.96)	25.0(0.98)	23.8(0.94)	12.7(0.50)
18	-KC-F18M	38.3(1.51)	24.4(0.96)	30.0(1.18)	27.0(1.06)	15.1(0.59)
20	-KC-F20M	44.6(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	15.9(0.63)
22	-KC-F22M	44.7(1.76)	26.0(1.02)	32.0(1.26)	34.9(1.37)	18.3(0.72)
25	-KC-F25M	49.2(1.94)	31.3(1.23)	38.0(1.50)	34.9(1.37)	21.8(0.86)

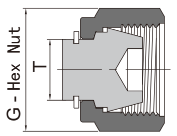
Caps



Fractional Tube					
T-Tube (in.)	Ordering No.	Dimensions, in. (mm)			
		L	C	G	F
1/16	-KCP-F1	0.59(15.0)	0.34(8.6)	0.31(7.9)	0.31(7.9)
1/8	-KCP-F2	0.79(20.1)	0.50(12.7)	0.44(11.1)	0.44(11.1)
3/16	-KCP-F3	0.84(21.3)	0.54(13.7)	0.50(12.7)	0.44(11.1)
1/4	-KCP-F4	0.92(23.4)	0.60(15.2)	0.56(14.3)	0.50(12.7)
5/16	-KCP-F5	0.96(24.4)	0.64(16.3)	0.63(15.9)	0.56(14.3)
3/8	-KCP-F6	1.01(25.7)	0.66(16.8)	0.69(17.5)	0.63(15.9)
1/2	-KCP-F8	1.15(29.2)	0.90(22.9)	0.87(22.2)	0.81(20.6)
5/8	-KCP-F10	1.18(30.0)	0.96(24.4)	1.00(25.4)	0.94(23.8)
3/4	-KCP-F12	1.24(31.5)	0.96(24.4)	1.13(28.6)	1.06(27.0)
7/8	-KCP-F14	1.34(34.0)	1.02(25.9)	1.25(31.8)	1.19(30.2)
1	-KCP-F16	1.51(38.4)	1.23(31.2)	1.50(38.1)	1.37(34.9)
1 1/8	-KCP-F18	1.51(38.4)	1.44(36.7)	1.75(44.5)	1.63(41.3)
1 1/4	-KCP-F20	2.10(53.3)	1.62(41.1)	1.87(47.6)	1.75(44.5)
1 1/2	-KCP-F24	2.54(64.5)	1.97(50.0)	2.25(57.2)	2.13(54.0)

Metric Tube					
T-Tube (mm)	Ordering No.	Dimensions, mm (in.)			
		L	C	G	F
2	-KCP-F2M	20.1(0.79)	12.9(0.51)	12.0(0.47)	12.0(0.47)
3	-KCP-F3M	20.1(0.79)	12.9(0.51)	12.0(0.47)	12.0(0.47)
4	-KCP-F4M	21.3(0.84)	13.7(0.54)	12.0(0.47)	12.0(0.47)
6	-KCP-F6M	23.1(0.91)	15.3(0.60)	14.0(0.55)	14.0(0.55)
8	-KCP-F8M	24.5(0.96)	16.2(0.64)	16.0(0.63)	15.0(0.59)
10	-KCP-F10M	26.6(1.05)	17.2(0.68)	19.0(0.75)	18.0(0.71)
12	-KCP-F12M	29.1(1.15)	22.8(0.90)	22.0(0.87)	22.0(0.87)
14	-KCP-F14M	29.9(1.18)	24.4(0.96)	25.0(0.98)	24.0(0.94)
15	-KCP-F15M	29.9(1.18)	24.4(0.96)	25.0(0.98)	24.0(0.94)
16	-KCP-F16M	29.9(1.18)	24.4(0.96)	25.0(0.98)	24.0(0.94)
18	-KCP-F18M	31.4(1.24)	24.4(0.96)	30.0(1.18)	27.0(1.06)
20	-KCP-F20M	34.0(1.34)	26.0(1.02)	32.0(1.26)	30.0(1.18)
22	-KCP-F22M	34.0(1.34)	26.0(1.02)	32.0(1.26)	30.0(1.18)
25	-KCP-F25M	38.5(1.52)	31.3(1.23)	38.0(1.50)	35.0(1.38)
28	-KCP-F28M	48.5(1.91)	36.6(1.44)	46.0(1.81)	41.0(1.61)
30	-KCP-F30M	53.4(2.10)	39.6(1.56)	50.0(1.97)	46.0(1.81)
32	-KCP-F32M	55.8(2.20)	42.0(1.65)	50.0(1.97)	46.0(1.81)
38	-KCP-F38M	65.4(2.57)	49.4(1.94)	60.0(2.36)	55.0(2.17)

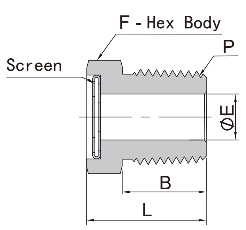
Plugs



Fractional Tube		
T-Tube (in.)	Ordering No.	Sizes in. (mm) G
1/16	-KP-F1	-KP-F2M 0.31(7.9)
1/8	-KP-F2	0.44(11.1)
3/16	-KP-F3	0.50(12.7)
1/4	-KP-F4	0.56(14.3)
5/16	-KP-F5	0.63(15.9)
3/8	-KP-F6	0.69(17.5)
1/2	-KP-F8	0.87(22.2)
5/8	-KP-F10	1.00(25.4)
3/4	-KP-F12	1.13(28.6)
7/8	-KP-F14	1.25(31.8)
1	-KP-F16	1.50(38.1)
1 1/4	-KP-F20	1.87(47.6)
1 1/2	-KP-F24	2.25(57.2)

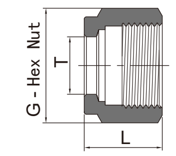
Metric Tube		
T-Tube (mm)	Ordering No.	Sizes mm (in.) G
2		12.0(0.47)
3	-KP-F3M	12.0(0.47)
4	-KP-F4M	12.0(0.47)
6	-KP-F6M	14.0(0.55)
8	-KP-F8M	16.0(0.63)
10	-KP-F10M	19.0(0.75)
12	-KP-F12M	22.0(0.87)
14	-KP-F14M	25.0(0.98)
15	-KP-F15M	25.0(0.98)
16	-KP-F16M	25.0(0.98)
18	-KP-F18M	30.0(1.18)
20	-KP-F20M	32.0(1.26)
22	-KP-F22M	32.0(1.26)
25	-KP-F2M5	38.0(1.50)
28	-KP-F2M8	46.0(1.81)
30	-KP-F3M0	50.0(1.97)
32	-KP-F3M2	50.0(1.97)
38	-KP-F3M8	60.0(2.36)

Vent Protector



NPT Threads					
P-NPT Sizes	Ordering No.	Dimensions, in. (mm) L	F	B	E
1/8	-KVP-N2	0.56(14.2)	0.50(12.7)	0.38(9.7)	0.19(4.8)
1/4	-KVP-N4	0.78(19.8)	0.56(14.3)	0.56(14.2)	0.28(7.1)
3/8	-KVP-N6	0.81(20.6)	0.69(17.5)	0.56(14.2)	0.41(10.4)
1/2	-KVP-N8	1.03(26.2)	0.87(22.2)	0.75(19.1)	0.50(12.7)
3/4	-KVP-N12	1.06(26.9)	1.06(27.0)	0.76(19.2)	0.72(18.3)
1	-KVP-N16	1.37(34.8)	1.37(34.9)	0.94(23.9)	0.88(22.4)

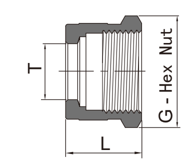
Nuts



Fractional Tube			
T-Tube (in.)	Ordering No.	Dimensions, in. (mm) L	G
1/16	-KN-F1	0.31(7.9)	0.31(7.9)
1/8	-KN-F2	0.47(11.9)	0.44(11.1)
3/16	-KN-F3	0.47(11.9)	0.50(12.7)
1/4	-KN-F4	0.50(12.7)	0.56(14.3)
5/16	-KN-F5	0.53(13.5)	0.63(15.9)
3/8	-KN-F6	0.56(14.2)	0.69(17.5)
1/2	-KN-F8	0.69(17.5)	0.87(22.2)
5/8	-KN-F10	0.69(17.5)	1.00(25.4)
3/4	-KN-F12	0.69(17.5)	1.13(28.6)
7/8	-KN-F14	0.69(17.5)	1.25(31.8)
1	-KN-F16	0.81(20.6)	1.50(38.1)
1 1/8	-KN-F18	1.21(30.8)	1.75(44.5)
1 1/4	-KN-F20	1.25(31.8)	1.87(47.6)
1 1/2	-KN-F24	1.50(38.1)	2.25(57.2)

Metric Tube			
T-Tube (mm)	Ordering No.	Dimensions, mm (in.) L	G
2	-KN-F2M	11.9(0.47)	12.0(0.47)
3	-KN-F3M	11.9(0.47)	12.0(0.47)
4	-KN-F4M	11.9(0.47)	12.0(0.47)
6	-KN-F6M	12.7(0.50)	14.0(0.55)
8	-KN-F8M	13.5(0.53)	16.0(0.63)
10	-KN-F10M	15.1(0.59)	19.0(0.75)
12	-KN-F12M	17.4(0.69)	22.0(0.87)
14	-KN-F14M	17.4(0.69)	25.0(0.98)
15	-KN-F15M	17.4(0.69)	25.0(0.98)
16	-KN-F16M	17.4(0.69)	25.0(0.98)
18	-KN-F18M	17.4(0.69)	30.0(1.18)
20	-KN-F20M	17.4(0.69)	32.0(1.26)
22	-KN-F22M	17.4(0.69)	32.0(1.26)
25	-KN-F2M5	20.6(0.81)	38.0(1.50)
28	-KN-F2M8	30.6(1.20)	46.0(1.81)
30	-KN-F3M0	32.7(1.29)	50.0(1.97)
32	-KN-F3M2	34.4(1.35)	50.0(1.97)
38	-KN-F3M8	40.6(1.60)	60.0(2.36)

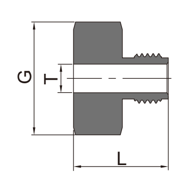
Knurled Nuts



Add“K”in the Nuts ordering No.

eg. : **316-KN-F4-K**

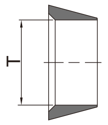
Male Nuts



Fractional Tube			
T-Tube (in.)	Ordering No.	Dimensions, in. (mm) L	G
1/16	-KMN-F1	0.38(9.7)	0.25(6.4)
1/8	-KMN-F2	0.53(13.5)	0.37(9.5)
1/4	-KMN-F4	0.62(15.7)	0.50(12.7)
1/2	-KMN-F8	0.87(22.1)	0.94(23.8)

Metric Tube			
T-Tube (mm)	Ordering No.	Dimensions, mm (in.) L	G
3	-KMN-F3M	13.5(0.53)	10.0(0.39)
6	-KMN-F6M	15.7(0.62)	14.0(0.55)
10	-KMN-F10M	22.1(0.87)	22.0(0.87)
12	-KMN-F12M	22.1(0.87)	24.0(0.94)

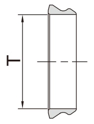
Front Ferrules



Fractional Tube	
T-Tube (in.)	Ordering No.
1/16	-KF-F1
1/8	-KF-F2
3/16	-KF-F3
1/4	-KF-F4
5/16	-KF-F5
3/8	-KF-F6
1/2	-KF-F8
5/8	-KF-F10
3/4	-KF-F12
7/8	-KF-F14
1	-KF-F16
1 1/8	-KF-F18
1 1/4	-KF-F20
1 1/2	-KF-F24

Metric Tube	
T-Tube (mm)	Ordering No.
2	-KF-F2M
3	-KF-F3M
4	-KF-F4M
6	-KF-F6M
8	-KF-F8M
10	-KF-F10M
12	-KF-F12M
14	-KF-F14M
15	-KF-F15M
16	-KF-F16M
18	-KF-F18M
20	-KF-F20M
22	-KF-F22M
25	-KF-F25M
28	-KF-F28M
30	-KF-F30M
32	-KF-F32M
38	-KF-F38M

Rear Ferrules



Fractional Tube	
T-Tube (in.)	Ordering No.
1/16	-KR-F1
1/8	-KR-F2
3/16	-KR-F3
1/4	-KR-F4
5/16	-KR-F5
3/8	-KR-F6
1/2	-KR-F8
5/8	-KR-F10
3/4	-KR-F12
7/8	-KR-F14
1	-KR-F16
1 1/8	-KR-F18
1 1/4	-KR-F20
1 1/2	-KR-F24

Metric Tube	
T-Tube (mm)	Ordering No.
2	-KR-F2M
3	-KR-F3M
4	-KR-F4M
6	-KR-F6M
8	-KR-F8M
10	-KR-F10M
12	-KR-F12M
14	-KR-F14M
15	-KR-F15M
16	-KR-F16M
18	-KR-F18M
20	-KR-F20M
22	-KR-F22M
25	-KR-F25M
28	-KR-F28M
30	-KR-F30M
32	-KR-F32M
38	-KR-F38M

Nuts - Ferrule Sets

The Nut-Ferrule Set contains 1 nut, 1 front ferrule and 1 rear ferrule.

Fractional Tube	
T-Tube (in.)	Ordering No.
1/16	-KNS-F1
1/8	-KNS-F2
3/16	-KNS-F3
1/4	-KNS-F4
5/16	-KNS-F5
3/8	-KNS-F6
1/2	-KNS-F8
5/8	-KNS-F10
3/4	-KNS-F12

Metric Tube	
T-Tube (mm)	Ordering No.
2	-KNS-F2M
3	-KNS-F3M
4	-KNS-F4M
6	-KNS-F6M
8	-KNS-F8M
10	-KNS-F10M
12	-KNS-F12M
14	-KNS-F14M
15	-KNS-F15M
16	-KNS-F16M
18	-KNS-F18M

Please order nut-ferrule sets in multiples of 5 as shown below.

Ferrules Sets

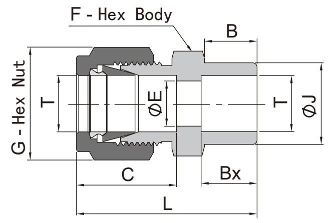
The Ferrule Set contains 1 front ferrule and 1 rear ferrule.

Fractional Tube	
T-Tube (in.)	Ordering No.
1/16	-KFS-F1
1/8	-KFS-F2
3/16	-KFS-F3
1/4	-KFS-F4
5/16	-KFS-F5
3/8	-KFS-F6
1/2	-KFS-F8
5/8	-KFS-F10
3/4	-KFS-F12

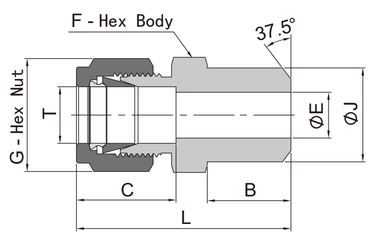
Metric Tube	
T-Tube (mm)	Ordering No.
2	-KFS-F2M
3	-KFS-F3M
4	-KFS-F4M
6	-KFS-F6M
8	-KFS-F8M
10	-KFS-F10M
12	-KFS-F12M
14	-KFS-F14M
15	-KFS-F15M
16	-KFS-F16M
18	-KFS-F18M

Please order ferrule sets in multiples of 10 as shown below.

Weld Connectors

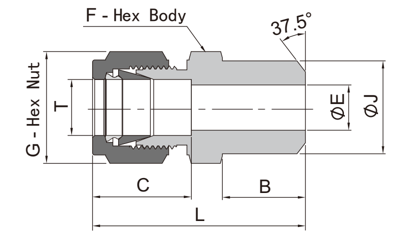


Fractional Tube									**Tube** Weld
T-Tube (in.)	Ordering No.	Dimensions, **in. (mm)**							
		L	**C**	**G**	**F**	**B**	**E**	**Bx**	**J**
1/8	-KU-F2-TS2	1.14(29.0)	0.50(12.7)	0.44(11.1)	0.44(11.1)	0.34(8.6)	0.09(2.3)	0.10(2.5)	0.31(7.9)
3/16	-KU-F3-TS3	1.17(29.7)	0.54(13.7)	0.50(12.7)	0.44(11.1)	0.37(9.5)	0.13(3.3)	0.19(4.8)	0.42(10.7)
1/4	-KU-F4-TS4	1.32(33.5)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.41(10.4)	0.19(4.8)	0.28(7.1)	0.48(12.2)
3/8	-KU-F6-TS6	1.48(37.6)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.47(11.9)	0.28(7.1)	0.31(7.9)	0.62(15.7)
1/2	-KU-F8-TS8	1.62(41.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.47(11.9)	0.41(10.4)	0.50(12.7)	0.75(19.1)
5/8	-KU-F10-TS10	1.65(41.9)	0.96(24.4)	1.00(25.4)	0.94(23.8)	0.47(11.9)	0.50(12.7)	0.41(10.4)	0.92(23.4)
3/4	-KU-F12-TS12	1.71(43.4)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.47(11.9)	0.62(15.7)	0.44(11.1)	1.05(26.7)
1	-KU-F16-TS16	2.07(52.6)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.56(14.2)	0.88(22.4)	0.62(15.7)	1.36(34.5)



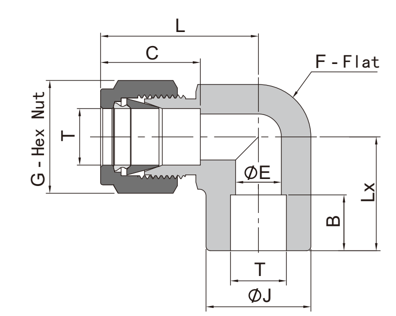
Fractional Tube									**Pipe** Weld
T-Tube (in.)	**Pipe** Weld Sizes	Ordering No.	Dimensions, **in. (mm)**						
			L	**C**	**G**	**F**	**E**	**B**	**J**
1/8	1/8	-KU-F2-PB2	1.20(30.5)	0.50(12.7)	0.44(11.1)	0.44(11.1)	0.09(2.3)	0.38(9.7)	0.41(10.3)
3/16	1/8	-KU-F3-PB2	1.23(31.2)	0.54(13.7)	0.50(12.7)	0.44(11.1)	0.12(3.0)	0.38(9.7)	0.41(10.3)
1/4	1/8	-KU-F4-PB2	1.29(32.8)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.19(4.8)	0.38(9.7)	0.41(10.3)
1/4	1/4	-KU-F4-PB4	1.49(37.8)	0.60(15.2)	0.56(14.3)	0.56(14.3)	0.19(4.8)	0.56(14.2)	0.54(13.7)
5/16	1/8	-KU-F5-PB2	1.34(34.0)	0.64(16.3)	0.63(15.9)	0.56(14.3)	0.21(5.3)	0.38(9.7)	0.41(10.3)
5/16	1/4	-KU-F5-PB4	1.52(38.6)	0.64(16.3)	0.63(15.9)	0.56(14.3)	0.25(6.4)	0.56(14.2)	0.54(13.7)
3/8	1/4	-KU-F6-PB4	1.57(39.9)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.28(7.1)	0.56(14.2)	0.54(13.7)
3/8	3/8	-KU-F6-PB6	1.57(39.9)	0.66(16.8)	0.69(17.5)	0.69(17.5)	0.28(7.1)	0.56(14.2)	0.67(17.1)
3/8	1/2	-KU-F6-PB8	1.82(46.2)	0.66(16.8)	0.69(17.5)	0.87(22.2)	0.28(7.1)	0.75(19.1)	0.84(21.3)
3/8	3/4	-KU-F6-PB12	1.88(47.8)	0.66(16.8)	0.69(17.5)	1.06(27.0)	0.28(7.1)	0.75(19.1)	1.05(26.7)
1/2	3/8	-KU-F8-PB6	1.71(43.4)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.41(10.4)	0.56(14.2)	0.67(17.1)
1/2	1/2	-KU-F8-PB8	1.93(49.0)	0.90(22.9)	0.87(22.2)	0.87(22.2)	0.41(10.4)	0.75(19.1)	0.84(21.3)
1/2	3/4	-KU-F8-PB12	1.99(50.5)	0.90(22.9)	0.87(22.2)	1.06(27.0)	0.41(10.4)	0.75(19.1)	1.05(26.7)
5/8	1/2	-KU-F10-PB8	1.93(49.0)	0.96(24.4)	1.00(25.4)	0.94(23.8)	0.50(12.7)	0.75(19.1)	0.84(21.3)
3/4	1/2	-KU-F12-PB8	1.99(50.5)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.55(14.0)	0.75(19.1)	0.84(21.3)
3/4	3/4	-KU-F12-PB12	1.99(50.5)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.62(15.7)	0.75(19.1)	1.05(26.7)
1	1	-KU-F16-PB16	2.45(62.2)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.88(22.4)	0.94(23.9)	1.31(33.4)
1 1/4	1 1/4	-KU-F20-PB20	3.04(77.2)	1.62(41.1)	1.87(47.6)	1.75(44.5)	1.09(27.7)	0.94(23.9)	1.66(42.2)
1 1/2	1 1/2	-KU-F24-PB24	3.50(88.9)	1.97(50.0)	2.25(57.2)	2.13(54.0)	1.34(34.0)	1.03(26.2)	1.90(48.3)

Weld Connectors



Metric Tube									**Pipe** Weld
T-Tube (mm)	**Pipe** Weld Sizes	Ordering No.	Dimensions, **mm (in.)**						
			L	**C**	**G**	**F**	**E**	**B**	**J**
3	1/8	-KU-F3M-PB2	30.5(1.20)	12.9(0.51)	12.0(0.47)	12.0(0.47)	2.4(0.09)	9.7(0.38)	10.3(0.41)
4	1/8	-KU-F4M-PB2	31.5(1.24)	13.7(0.54)	12.0(0.47)	12.0(0.47)	2.4(0.09)	9.7(0.38)	10.3(0.41)
6	1/8	-KU-F6M-PB2	32.8(1.29)	15.3(0.60)	14.0(0.55)	14.0(0.55)	4.8(0.19)	9.7(0.38)	10.3(0.41)
6	1/4	-KU-F6M-PB4	37.9(1.49)	15.3(0.60)	14.0(0.55)	14.0(0.55)	4.8(0.19)	14.2(0.56)	13.7(0.54)
8	1/8	-KU-F8M-PB2	34.2(1.35)	16.2(0.64)	16.0(0.63)	15.0(0.59)	5.4(0.21)	9.7(0.38)	10.3(0.41)
8	1/4	-KU-F8M-PB4	38.7(1.52)	16.2(0.64)	16.0(0.63)	15.0(0.59)	6.4(0.25)	14.2(0.56)	13.7(0.54)
8	1/2	-KU-F8M-PB8	45.6(1.80)	16.2(0.64)	16.0(0.63)	22.0(0.87)	6.4(0.25)	19.1(0.75)	21.3(0.84)
10	1/4	-KU-F10M-PB4	40.9(1.60)	17.2(0.70)	19.0(0.75)	18.0(0.71)	7.5(0.30)	14.2(0.56)	13.7(0.54)
10	3/8	-KU-F10M-PB6	40.9(1.60)	17.2(0.70)	19.0(0.75)	18.0(0.71)	7.9(0.31)	14.2(0.56)	17.1(0.67)
10	1/2	-KU-F10M-PB8	46.5(1.80)	17.2(0.70)	19.0(0.75)	22.0(0.87)	7.9(0.31)	19.1(0.75)	21.3(0.84)
12	1/4	-KU-F12M-PB4	43.4(1.70)	22.8(0.90)	22.0(0.87)	22.0(0.87)	7.5(0.30)	14.2(0.56)	13.7(0.54)
12	3/8	-KU-F12M-PB6	43.4(1.70)	22.8(0.90)	22.0(0.87)	22.0(0.87)	9.5(0.37)	14.2(0.56)	17.1(0.67)
12	1/2	-KU-F12M-PB8	49.0(1.90)	22.8(0.90)	22.0(0.87)	22.0(0.87)	9.5(0.37)	19.1(0.75)	21.3(0.84)
14	3/8	-KU-F14M-PB6	44.1(1.70)	24.4(0.96)	25.0(0.98)	24.0(0.94)	10.7(0.42)	14.2(0.56)	17.1(0.67)
15	1/2	-KU-F15M-PB8	49.0(1.90)	24.4(0.96)	25.0(0.98)	24.0(0.94)	11.9(0.47)	19.1(0.75)	21.3(0.84)
16	1/2	-KU-F16M-PB8	49.0(1.90)	24.4(0.96)	25.0(0.98)	24.0(0.94)	12.7(0.50)	19.1(0.75)	21.3(0.84)
18	1/2	-KU-F18M-PB8	50.5(2.00)	24.4(0.96)	30.0(1.18)	27.0(1.06)	13.9(0.55)	19.1(0.75)	21.3(0.84)
30	1 1/4	-KU-F30M-PB20	77.2(3.00)	39.6(1.60)	50.0(1.97)	46.0(1.81)	26.2(1.03)	23.9(0.94)	42.2(1.66)
32	1 1/4	-KU-F32M-PB20	79.6(3.10)	42.0(1.70)	50.0(1.97)	46.0(1.81)	28.6(1.13)	23.9(0.94)	42.2(1.66)
38	1 1/2	-KU-F38M-PB24	91.6(3.60)	49.4(1.90)	60.0(2.36)	55.0(2.17)	33.7(1.33)	26.2(1.03)	48.3(1.9)

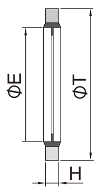
Weld Elbows



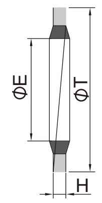
Fractional Tube									**Tube** Weld
T-Tube (in.)	Ordering No.	Dimensions, **in. (mm)**							
		L	**C**	**G**	**F**	**B**	**E**	**Lx**	**J**
1/8	-KE-F2-TS2	0.66(16.8)	0.50(12.7)	0.44(11.1)	0.37(9.5)	0.10(2.5)	0.09(2.3)	0.63(16.0)	0.38(9.7)
3/16	-KE-F3-TS3	0.72(18.3)	0.54(13.7)	0.50(12.7)	0.44(11.1)	0.19(4.8)	0.13(3.3)	0.69(17.5)	0.44(11.2)
1/4	-KE-F4-TS4	1.06(26.9)	0.60(15.2)	0.56(14.3)	0.50(12.7)	0.28(7.1)	0.19(4.8)	0.77(19.6)	0.50(12.7)
3/8	-KE-F6-TS6	1.20(30.5)	0.66(16.8)	0.69(17.5)	0.63(15.9)	0.31(7.9)	0.28(7.1)	0.91(23.1)	0.62(15.7)
1/2	-KE-F8-TS8	1.42(36.1)	0.90(22.9)	0.87(22.2)	0.81(20.6)	0.38(9.7)	0.41(10.4)	1.02(25.9)	0.81(20.6)
5/8	-KE-F10-TS10	1.16(29.5)	0.96(24.4)	1.00(25.4)	1.06(27.0)	0.41(10.4)	0.50(12.7)	1.16(29.5)	0.94(23.9)
3/4	-KE-F12-TS12	1.57(39.9)	0.96(24.4)	1.13(28.6)	1.06(27.0)	0.44(11.2)	0.62(15.7)	1.17(29.7)	1.06(26.9)
1	-KE-F16-TS16	1.93(49.0)	1.23(31.2)	1.50(38.1)	1.37(34.9)	0.62(15.7)	0.88(22.4)	1.45(36.8)	1.38(35.1)

RS, RSD Gaskets

RS



RSD



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

ISO Parallel Thread Sizes	Ordering No.	Dimensions, in. (mm)		
		T	E	H
1/8	-KRS-2	0.63(16.0)	0.41(10.4)	0.08(2.0)
1/4	-KRS-4	0.81(20.6)	0.54(13.7)	
3/8	-KRS-6	0.94(23.9)	0.68(17.3)	
1/2	-KRS-8	1.13(28.7)	0.85(21.6)	0.10(2.5)
3/4	-KRS-12	1.38(35.1)	1.06(26.9)	
1	-KRS-16	1.69(42.9)	1.33(33.8)	
1/8	-KRSD-2	0.58(14.7)	0.47(12)	0.05(1.25)
1/4	-KRSD-4	0.74(18.7)	0.62(15.75)	
3/8	-KRSD-6	0.89(22.7)	0.76(19.25)	
1/2	-KRSD-8	1.05(26.7)	0.93(23.55)	
3/4	-KRSD-12	1.28(32.5)	1.15(29.2)	
1	-KRSD-16	1.56(39.5)	1.42(36.1)	0.08(2)

Metric Thread Sizes	Ordering No.	Dimensions, mm (in.)		
		T	E	H
M8 x 1	-KRS-M8	13.0(0.51)	8.7(0.34)	1.0(0.04)
M10 x 1	-KRS-M10	16.0(0.63)	10.7(0.42)	1.5(0.06)
M12 x 1.5	-KRS-M12	18.0(0.71)	12.7(0.50)	
M14 x 1.5	-KRS-M14	22.0(0.87)	14.7(0.58)	
M16 x 1.5	-KRS-M16	24.0(0.94)	16.7(0.66)	
M18 x 1.5	-KRS-M18	26.0(1.02)	18.7(0.74)	
M20 x 1.5	-KRS-M20	28.0(1.10)	20.7(0.81)	
M22 x 1.5	-KRS-M22	30.0(1.18)	22.7(0.89)	2.0(0.08)
M24 x 1.5	-KRS-M24	32.0(1.26)	24.7(0.97)	
M27 x 2	-KRS-M27	36.0(1.42)	27.7(1.09)	
M30 x 2	-KRS-M30	39.0(1.54)	30.7(1.21)	
M33 x 2	-KRS-M33	42.0(1.65)	33.7(1.33)	
M36 x 2	-KRS-M36	48.0(1.89)	37.0(1.46)	2.5(0.10)
M39 x 2	-KRS-M39	51.0(2.00)	40.0(1.57)	
M42 x 2	-KRS-M42	54.0(2.13)	43.2(1.70)	
M45 x 2	-KRS-M45	57.0(2.24)	46.0(1.81)	3.0(0.12)
M48 x 2	-KRS-M48	60.0(2.36)	49.0(1.93)	

Ordering Information

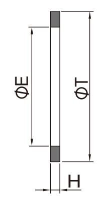
Add the material designator as a prefix to the basic ordering number to complete the ordering number.

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

Example:

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

RP Gaskets



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

ISO Parallel Thread Sizes	Ordering No.	Dimensions, in. (mm)		
		T	E	H
1/8	-KRP-2	0.59(15.0)	0.39(9.9)	0.04(1.0)
1/4	-KRP-4	0.75(19.1)	0.52(13.2)	0.06(1.5)
3/8	-KRP-6	0.91(23.1)	0.66(16.8)	
1/2	-KRP-8	1.06(26.9)	0.83(21.1)	
3/4	-KRP-12	1.30(33.0)	1.05(26.7)	0.08(2.0)
1	-KRP-16	1.58(40.1)	1.31(33.2)	

Metric Sizes	Ordering No.	Dimensions, mm (in.)		
		T	E	H
M8 x 1	-KRP-M8	13.2(0.52)	8.2(0.32)	1.5(0.06)
M10 x 1	-KRP-M10	15.2(0.60)	10.2(0.40)	
M12 x 1.5	-KRP-M12	18.2(0.72)	12.2(0.48)	2.0(0.08)
M14 x 1.5	-KRP-M14	20.2(0.80)	14.2(0.56)	
M16 x 1.5	-KRP-M16	22.2(0.87)	16.2(0.64)	
M18 x 1.5	-KRP-M18	24.2(0.95)	18.2(0.72)	
M20 x 1.5	-KRP-M20	26.2(1.03)	20.2(0.80)	
M22 x 1.5	-KRP-M22	28.2(1.11)	22.2(0.87)	
M24 x 1.5	-KRP-M24	30.2(1.19)	24.2(0.95)	
M27 x 2	-KRP-M27	33.3(1.31)	27.2(1.07)	2.5(0.10)
M30 x 2	-KRP-M30	37.3(1.47)	30.2(1.19)	
M33 x 2	-KRP-M33	40.3(1.59)	33.2(1.31)	
M36 x 2	-KRP-M36	43.3(1.70)	36.2(1.43)	
M39 x 2	-KRP-M39	47.3(1.86)	39.2(1.54)	
M42 x 2	-KRP-M42	50.3(1.98)	42.2(1.66)	
M45 x 2	-KRP-M45	53.3(2.10)	45.2(1.78)	
M48 x 2	-KRP-M48	56.3(2.22)	48.2(1.90)	

RG Gaskets

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

ISO Parallel Thread Sizes	Ordering No.	Dimensions, in. (mm)		
		T	E	H
1/4	-KRG-4	0.42(10.7)	0.30(7.6)	0.07(1.8)
3/8	-KRG-6	0.56(14.2)	0.34(8.6)	0.09(2.3)
1/2	-KRG-8	0.70(17.8)	0.36(9.1)	0.10(2.5)

RG Gaskets

Metric Sizes	Ordering No.	Dimensions, mm (in.)		
		T	E	H
M10 x 1	-KRG-M10	8.3(0.33)	3.3(0.13)	1.5(0.06)
M12 x 1.5	-KRG-M12	9.7(0.38)	5.4(0.21)	2.0(0.08)
M14 x 1.5	-KRG-M14	11.7(0.46)	6.4(0.25)	
M16 x 1.5	-KRG-M16	13.7(0.54)	8.4(0.33)	
M18 x 1.5	-KRG-M18	15.7(0.62)	10.0(0.39)	
M20 x 1.5	-KRG-M20	17.6(0.69)	11.4(0.45)	
M22 x 1.5	-KRG-M22	19.6(0.77)	13.4(0.53)	
M24 x 1.5	-KRG-M24	21.6(0.85)	14.8(0.58)	
M27 x 2	-KRG-M27	24.0(0.95)	16.9(0.67)	2.5(0.10)
M30 x 2	-KRG-M30	27.0(1.06)	19.5(0.77)	
M33 x 2	-KRG-M33	30.0(1.18)	21.5(0.85)	
M36 x 2	-KRG-M36	33.0(1.30)	23.5(0.93)	
M39 x 2	-KRG-M39	36.0(1.42)	24.5(0.96)	
M42 x 2	-KRG-M42	38.9(1.53)	29.5(1.16)	
M45 x 2	-KRG-M45	41.9(1.64)	30.0(1.18)	
M48 x 2	-KRG-M48	44.9(1.77)	32.5(1.28)	

RJ Gaskets

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

ISO Parallel Thread Sizes	Ordering No.	Dimensions, in. (mm)		
		T	E	H
1/4	-KRJ-4	0.43(10.9)	0.22(5.6)	0.04(1.0)
3/8	-KRJ-6	0.55(13.9)	0.22(5.6)	0.04(1.0)
1/2	-KRJ-8	0.70(17.8)	0.22(5.6)	0.04(1.0)

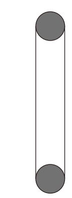
Ordering Information

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

Materials	Code
Copper	CU
316L SS	316L
Vulcanized Fibre	QB
PTFE	T

Vulcanized Fibre and PTFE cannot be used for RP gasket.

O-rings



O-rings for Fittings with SAE/MS Straight Threads

SAE/MS Thread Sizes	Ordering No.	Materials
5/16-24	VI9-902	90 Durometer Fluorocarbon FKM
3/8-24	VI9-903	
7/16-20	VI9-904	
1/2-20	VI9-905	
9/16-18	VI9-906	
3/4-16	VI9-908	
7/8-14	VI9-910	
1 1/16-12	VI9-912	
1 3/16-12	VI9-914	
1 5/16-12	VI9-916	
1 5/8-12	VI9-920	
1 7/8-12	VI9-924	

O-rings for Fittings with O-Seal Pipe Threads

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

Ordering Number Description

316 - KU - F12M - RT8 □ - □ - □

Material

316	316 SS
316L	316L SS
2205	Duplex 2205
2207	Super duplex 2507
B	Brass

Fitting Type

KU	Straight Type Connector
KBU	Bulkhead Male Connector
KTC	Thermocouple Connector
KE	Elbow Type
KV	45° Elbow
KT	Tee Type
KC	Union Cross
KCP	Cap
KP	Plug
KVP	Vent Protector
KN	Female Nut
KMN	Male Nut
KR	Rear Ferrule
KF	Front Ferrule
KNS	Nut-ferrule Sets
KFS	Ferrule Sets

P1 Type

N	NPT Thread Male
FN	NPT Thread Female
F	Ferrule
TF	Tube Port

P1 Size

1	1/16"
2	1/8"
3	3/16"
4	1/4"
5	5/16"
6	3/8"
8	1/2"
10	5/8"
12	3/4"
14	7/8"
16	1"
2M	2 mm
3M	3 mm
4M	4 mm
6M	6 mm
8M	8 mm
10M	10 mm
12M	12 mm
14M	14 mm
16M	16 mm
18M	18 mm
20M	20 mm
22M	22 mm
25M	25 mm

P2 Type

Except the same as the P1, the other type follows:

RT	ISO Tapered Thread
RS	ISO Parallel Thread (For RS Gasket)
RP	ISO Parallel Thread (For RP Gasket)
RG	Female ISO Parallel Thread (For RG Gasket)
RJ	ISO Parallel Thread (For RJ Gasket)
BP	Male ISO Parallel Thread (For RG Gasket)
PP	Positionable, ISO Straight Thread
OST	O-ring with SAE/MS Straight Thread
AN	37° Flare
MS	Metric Thread (For RG-M Gasket)
MRS	Metric Thread (For RS-M Gasket)
MST	O-ring with Metric Thread
TS	Fractional Tube Socket Weld
PB	Pipe Butt Weld

P2 Size

Except the same as the P1, the other size follows:

5	M5×0.8 or 5/16-24 or 5/16"
6	M6×1 or 3/8-24 or 3/8" or 3/8×SCH80 or G3/8
7	7/16-20
8	M8×1 or 1/2-20 or 1/2" or 1/2×SCH80or G1/2
9	9/16-18
10	M10 x 1 or 5/8"
12	M12×1.5 or 3/4-16 or 3/4" or 3/4×SCH80or G3/4
14	M14 x 1.4 or 7/8-14
16	M16×1.5 or 1" or 1×SCH80 or G1
17	1 1/16-12
18	M18 x 1.5
19	1 5/16-12
20	M20×1.5 or 1 1/4" or 1 1/4×SCH80 or G1 1/4
21	1 5/16-12
22	M22 x 1.5
24	M24×1.5 or 1 1/2" or 1 1/2×SCH80 or G1 1/2
26	1 5/8-12
27	M27 x 2
30	1 7/8-12

P3 and P4

Specify in the same way as the P2

Cleaning and Packaging

	GP
SP	SP

P1, P2, P3 and P4 shall be described in the following orders:

- Ferrule - Tube - NPT Thread - ISO Tapered Thread - ISO Parallel Thread - SAE/MS Straight Thread - 37°Flare - Pipe Butt Weld - Fractional Tube Socket Weld - Others
- Describe in descending order as per size if the end connection types are the same
- Describe the end of P1 if all end connections are the same

Cleaning and Packaging :
GP: Standard cleaning and packaging for general industrial procedures
SP: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement as stated in ASTM G93 Level C

P4
P1 P2
P3

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

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